SIEMENS

SPC42xx/43xx/52xx/53xx/63xx

Installation & Configuration Manual

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Security Products

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1 Meaning of symbols

There are several symbols in the document:

Symbol	Description
~~SPC4xxx~~	Not available for SPC42xx, SPC43xx.
IP	Only available for SPC controller with IP interface (SPC43xx/SPC53xx/SPC63xx).
⌂	Not available for installation type Domestic.
ⓤ	Only available in unrestricted mode.
(!)	Find further information about Security Grade, Region or Mode in text.
△	See Appendix for further information.

2 Security

2.1 Target group

The instructions in this documentation are directed at the following target group:

Target readers	Qualification	Activity	Condition of the equipment
Installation personnel	Technical training for building or electrical installations.	Assembles and installs the hardware components on site.	Individual components that need to be assembled and installed.
Operational startup personnel	Has appropriate technical training with regard to the tasks and the products, devices or systems to be put in service.	Puts the device or system which is readily assembled and installed on site into service.	New, readily assembled and installed device or modified device.

2.2 General safety instructions

⚠	⚠ WARNING
	Before starting to install and work with this device, please read the Safety Instructions. This device shall only be connected to power supplies compliant to EN60950-1, chapter 2.5 ("limited power source").

2.2.1 General information

- Keep this document for later reference.
- Always pass this document on together with the product.
- Please also take into account any additional country-specific, local safety standards or regulations concerning project planning, operation and disposal of the product.

Liability claim

- Do not connect the device to the 230 V supply network if it is damaged or any parts are missing.
- Do not make any changes or modifications to the device unless they are expressly mentioned in this manual and have been approved by the manufacturer.
- Use only spare parts and accessories that have been approved by the manufacturer.

2.2.2 Transport

Unit damage during transport

- Keep the packaging material for future transportation.
- Do not expose the device to mechanical vibrations or shocks.

2.2.3 Setup

Radio interference with other devices in the environment / EMS

- When handling modules that are susceptible to electrostatic discharge, please observe the ESD guidelines.

Damage due to unsuitable mounting location

- The environmental conditions recommended by the manufacturer must be observed.
  See Technical Data.
- Do not operate the device close to sources of powerful electromagnetic radiation.

Danger of electrical shock due to incorrect connection

- Connect the device only to power sources with the specified voltage. Voltage supply requirements can be found on the rating label of the device.
- Ensure that the device is permanently connected to the electricity supply; a readily accessible disconnect device must be provided.
- Ensure that the circuit that the device is connected to is protected with a 16 A (max.) fuse. Do not connect any devices from other systems to this fuse.
- This device is designed to work with TN power systems. Do not connect the device to any other power systems.
- Electrical grounding must meet the customary local safety standards and regulations.
- Primary supply cables and secondary cables should be routed such that they do not run in parallel or cross over or touch one anther inside the housing.
- Telephone cables should be fed into the unit separately from other cables.

Risk of cable damage due to stress

- Ensure that all outgoing cables and wires are sufficiently strain-relieved.

2.2.4 Operation

Dangerous situation due to false alarm

- Make sure to notify all relevant parties and authorities providing assistance before testing the system.
- To avoid panic, always inform all those present before testing any alarm devices.

Danger of explosion or burn hazard if the battery is improperly installed

- When inserting new batteries make sure the battery poles are correctly positioned.
- Use only batteries that have been approved by the manufacturer (type: sealed cell valve-regulated).
- Do not shorten the battery pins.
- Do not expose the battery to fire or high temperatures.
- Do not disassemble the battery.
- Discard used batteries according to local regulations.
- Make sure to insert the battery correctly and to fasten the battery strap or clip provided for this purpose.

2.2.5 Service and maintenance

Danger of electrical shock during maintenance

- Maintenance work must only be carried out by trained specialists.
- Always disconnect the power cable and other cables from the main power supply before performing maintenance.

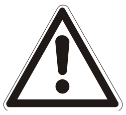
Danger of electrical shock while cleaning the device

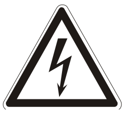
- Do not use liquid cleaners or sprays that contain alcohol, spirit or ammonia.

2.3 Meaning of written warning notices

Signal Word	Type of Risk
DANGER	Danger of death or severe bodily harm.
WARNING	Possible danger of death or severe bodily harm.
CAUTION	Danger of minor bodily injury or property damage
IMPORTANT	Danger of malfunctions

2.4 Meaning of hazard symbols

	⚠ WARNING
	Warning of hazard area

	⚠ WARNING
	Warning of dangerous electrical voltage

3 Directives and standards

3.1 EU directives

This product complies with the requirements of the European Directives 2004/108/EC “Directive of Electromagnetic Compatibility” and 2006/95/EC “Low Voltage Directive”. The EU declaration of conformity is available to the responsible agencies at:

Siemens AB
Building Technologies Division
International Headquarters
Fire Safety & Security Products
Postal Address
P.O. Box 1275
SE-171 24 Solna, Sweden

European Directive 2004/108/EC „Electromagnetic Compatibility”

Compliance with the European Directive 2004/108/EC has been proven by testing according to the following standards:

emc emission	EN 55022 Class B
emc immunity	EN 50130-4

European Directive 2006/95/EC „Low-Voltage Directive”

Compliance with the European Directive 2006/95/EC has been proven by testing according to the following standard:

Safety	EN 60950-1

3.1.1 Conformity to EN50131 Standard

Specific information in relation to EN 50131 requirements can be found in the following sections in this document.

EN50131 Requirement	SPC Installation & Configuration Manual
Operating temperature and humidity range	Technical data SPC4000 [→ 19] Technical data SPC5000 [→ 21] Technical data SPC6000 [→ 23]
Weights and dimensions	Technical data SPC4000 [→ 19] Technical data SPC5000 [→ 21] Technical data SPC6000 [→ 23]
Fixing details	Mounting system equipment [→ 27]

EN50131 Requirement	SPC Installation & Configuration Manual
Installation, commissioning and maintenance instructions, including terminal identifications	Mounting system equipment [➔ 27] Controller hardware [➔ 36]
Type of interconnections (refer to 8.8);	Technical data SPC4000 [➔ 19] Technical data SPC5000 [➔ 21] Technical data SPC6000 [➔ 23] Wiring the X-Bus Interface [➔ 40]
Details of methods of setting and unsetting possible (see 11.7.1 to 11.7.3 and Tables 23 to 26);	User programming via the keypad Areas – Setting/Unsetting [➔ 169] Configuring a keyswitch expander [➔ 198] Configuring a wireless fob [➔ 72] Triggers [➔ 239]
Serviceable parts	Technical data SPC4000 [➔ 19] Technical data SPC5000 [➔ 21] Technical data SPC6000 [➔ 23]
Power supply requirement if no integrated PS	See installation instructions for SPCP33x and SPCP43x Expander PSUs.
Where PS is integrated, the information required by EN 50131-6:2008, Clause 6	Technical data SPC4000 [➔ 19] Technical data SPC5000 [➔ 21] Technical data SPC6000 [➔ 23]
Maximum number of each type of ACE and expansion device.	Wiring the X-Bus Interface [➔ 40] Technical data SPC4000 [➔ 19] Technical data SPC5000 [➔ 21] Technical data SPC6000 [➔ 23]
Current consumption of the CIE and each type of ACE and expansion device, with and without an alarm condition.	See relevant installation instructions.
Maximum current rating of each electrical output	Technical data SPC4000 [➔ 19] Technical data SPC5000 [➔ 21] Technical data SPC6000 [➔ 23]
Programmable functions provided	Engineer programming via the keypad [➔ 75] Engineer programming via the browser [➔ 116]
How indications are made inaccessible to level 1 users when level 2, 3 or 4 user is no longer accessing the information (see 8.5.1)	Keypad user interface [➔ 57] Standard keypad settings [➔ 85] Comfort keypad settings [➔ 86] Configuring an Indicator Expander [➔ 196]
Masking/reduction of range signals/messages processed as “fault” or “masking” events (see 8.4.1, 8.5.1 and Table 11);	System Options [➔ 155] Wiring the zone inputs [➔ 51] SIA Codes [➔ 274] PIR masking is always reported as a zone masked event (SIA - ZM). Additionally, anti-mask can cause an alarm, tamper, trouble or no additional action depending on configuration

EN50131 Requirement	SPC Installation & Configuration Manual
	Current defaults of PIR addition effect: **Ireland** Unset - None Set - Alarm **UK, Europe, Sweden, Swiss, Belgium** Unset - Tamper Set - Alarm
Prioritization of signal and message processing and indications (see 8.4.1.2, 8.5.3);	Standard keypad display [→ 59] Comfort keypad display [→ 63]
Minimum number of variations of PIN codes, logical keys, biometric keys and/or mechanical keys for each user (see 8.3);	User PIN combinations [→ 281]
Method of time-limiting internal WD for level 3 access without level 2 authorization (see 8.3.1);	Not supported - Engineer cannot access system without permission.
Number and details of disallowed PIN codes (see 8.3.2.2.1);	Automatic inhibits [→ 282]
Details of any biometric authorization methods used (see 8.3.2.2.3);	Not applicable
Method used to determine the number of combinations of PIN codes, logical keys, biometric keys and/or mechanical keys (see 11.6);	User PIN combinations [→ 281]
Number of invalid code entries before user interface is disabled (see 8.3.2.4);	Access PINs [→ 282]
Details of means for temporary authorization for user access (see 8.3.2);	User Menus – Grant Access
if automatic setting at pre-determined times provided, details of pre-setting indication and any automatic over-ride of prevention of set (see 8.3.3, 8.3.3.1);	Areas – Setting/Unsetting [→ 169]
Details of conditions provided for the set state (see 8.3.3.4);	Setting and unsetting the system Standard keypad configuration [→ 85] Comfort keypad configuration [→ 86] Outputs [→ 184] Zone types [→ 285]
Notification of output signals or messages provided (see 8.6);	Outputs [→ 184] Areas – setting/unsetting [→ 169] User rights [→ 131]
Other output configurations to interface with I&HAS components (see 8.2);	Outputs [→ 184] Zone types [→ 285] Test [→ 103] Keypad user interface [→ 57]
Criteria for automatic removal of “soak test” attribute (see 8.3.9);	Timers [→ 159]

EN50131 Requirement	SPC Installation & Configuration Manual
Number of events resulting in automatic inhibit	Automatic Inhibits [→ 282]
If ACE is Type A or Type B (see 8.7) and whether portable or moveable (see 11.14);	All devices are hardwired and powered by system PSUs. Refer to relevant technical data on PSUs.
Component data for non-volatile memory components (see Table 30, step 6);	See user documentation for SPCK420/421 and SPCK620/623 keypads.
Life of memory support battery (see 8.10.1);	N/A. Stored in non-volatile memory.
Optional functions provided (see 4.1);	Engineer programming via the keypad Engineer programming via the browser [→ 116]
Additional functions provided (see 4.2, 8.1.8);	Grade - Unrestricted [→ 152] Policies – System options [→ 155]
Access levels required to access such additional functions provided;	User configuration (keypad) [→ 109] User configuration (browser) [→ 129]
Details of any programmable facility that would render an I&HAS non-compliant with EN 50131-1:2006, 8.3.13 or compliant at a lower security grade, with instruction on consequent removal of compliance labeling (see 4.2 and 8.3.10).	Grade - Unrestricted [→ 152] Policies – System options [→ 155] EN50131 Compliance [→ 292]

4 Technical Data

4.1 SPC4000

Programmable areas	4
Max. number of user codes	32
Remote controls	Up to 32 (1 per user)
Wireless Panic Alarm	Up to 32
Event memory	1'000 intrusion events, 1'000 access events
Number of on-board zones	8
Max. number of hardwired zones	32
Max. number of wireless zones	32 (take away wired zones)
EOL resistor	Dual 4k7 (default), other resistor combinations configurable
Number of on-board relays	1 strobe (30 VDC / 1 A resistive switching current)
Number of on-board open coll.	2 internal / external bell, 3 freely programmable (each max. 400 mA resistive switching current, supplied via auxiliary output)
Firmware	V3.x
Door capacity	Max. 4 entry doors or 2 entry/exit doors
Number of card reader	Max. 4
Radio module	SPC4221: integrated SiWay RF receiver (868 MHz) SPC4320.220: Optional (SPCW111), SPC4320.320: Optional (SPCW110)
Verification	4 verification zones with max. 4 IP-cameras and 4 audio devices.
Video	Up to 16 pre / 16 post event images (by JPEG resolution 320 x 240, max. 1 frame / sec.)
Audio	Up to 60 sec. pre / 60 sec. post audio recording
Field bus 1)	X-BUS on RS-485 (307 kb/s)
Number of field devices 2)	Max. 11 (4 keypads, 4 door-expanders, 5 input/output expanders)
Connectable field devices	Keypads: SPCK42x, SPCK62x Door expanders: SPCA210, SPCP43x Expanders with I/O: SPCE65x, SPCE45x, SPCP33x, SPCE110, SPCE120, SPCV32x
Interfaces	1 X-BUS (1 spur), 1 RS232 (to X-10 controller), 1 USB (PC connection), 1 SPC Fast Programmer, SPC43xx: Additionally 1 Ethernet (RJ45)

Tamper contact	Front spring tamper, 2 auxiliary tamper contact inputs
Power supply	Type A (per EN50131-1)
Mains voltage	230 VAC, + 10%/ -15%, 50 Hz
Mains fuse	250 mA T (replaceable part on mains terminal block)
Power consumption	SPC42xx: Max. 160 mA at 230 VAC SPC43xx: Max. 200 mA at 230 VAC
Operating current	SPC42xx Controller: Max. 160 mA at 12 VDC SPC43xx Controller: Max. 200 mA at 12 VDC
Quiescent current	SPC42xx Controller: Max. 140 mA at 12 VDC (165 mA with PSTN, 270 mA with GSM, 295 mA with PSTN & GSM) SPC43xx Controller: Max. 170 mA at 12 VDC (195 mA with PSTN, 300 mA with GSM, 325 mA with PSTN & GSM)
Output voltage	11-14 VDC in normal conditions (mains powered and fully charged battery), min. 9.5 VDC when powered by secondary device (before system shut down to battery deep discharge protection)
Low voltage trigger	7.5 VDC
Overvoltage protection	15.7 VDC
Peak to Peak ripple	Max. 5 % of output voltage
Auxiliary power (nominal)	Max. 750 mA at 12 VDC
Battery type	SPC422x/4320: YUASA NP7-12FR (7 Ah), Battery not supplied
Battery charger	SPC422x/4320: Max. 72h to 80% of battery capacity
Battery protection	Current limited to 1 A (fuse protected), deep discharge protection at 10.5 VDC +/- 3 % (fault at deep discharge voltage + 0.5 VDC)
Software update	On-site and remote upgrade for controller and peripherals
Calibration	No calibration checks required (calibrated at manufacturing)
Servicable parts	No serviceable parts
Operating temperature	0 ~ +40 °C
Relative humidity	Max. 90 % (non condensing)
Colour	RAL 9003 (signal white)
Weight	SPC422x/4320: 4.500 kg
Dimensions (W x H x D)	SPC422x/4320: 264 x 357 x 81 mm
Housing	SPC4320.320: Small metal housing (1.2 mm mild steel) SPC422x.220: Small housing with metal base (1.2 mm mild steel) and plastic lid
Housing can contain up to	SPC422x/4320: 1 additional expander (size 150 mm x 82 mm)

1) Max. 400 m between devices / cable types IYSTY 2 x 2 x Ø 0.6 mm (min.), UTP cat5 (solid core) or Belden 9829.

2) More I/O expanders can be addressed instead of a keypad or door expander, but number of programmable inputs / outputs cannot exceed specified system limits.

4.2 SPC5000

Programmable areas	16
Max. number of user codes	256
Remote controls	Up to 256 (1 per user)
Wireless Panic Alarm	Up to 127
Event memory	10'000 intrusion events, 10'000 access events
Number of on-board zones	8
Max. number of hardwired zones	128
Max. number of wireless zones	120 (take away wired zones)
EOL resistor	Dual 4k7 (default), other resistor combinations configurable
Number of on-board relays	1 strobe (30 VDC / 1 A resistive switching current)
Number of on-board open coll.	2 internal / external bell, 3 freely programmable (each max. 400 mA resistive switching current, supplied via auxiliary output)
Firmware	V3.x
Door capacity	Max. 16 entry doors or 16 entry/exit doors
Number of card reader	Max. 32
Radio module	Optional (SPCW110)
Verification	8 verification zones with max. 4 IP-cameras and 8 audio devices.
Video	Up to 16 pre / 16 post event images (by JPEG resolution 320 x 240, max. 1 frame / sec.)
Audio	Up to 60 sec. pre / 60 sec. post audio recording
Field bus 1)	X-BUS on RS-485 (307 kb/s)
Number of field devices 2)	Max. 48 (16 keypads, 16 door-expanders, 16 input/output expanders)
Connectable field devices	Keypads: SPCK42x, SPCK62x Door expanders: SPCA210, SPCP43x Expanders with I/O: SPCE65x, SPCE45x, SPCP33x,

	SPCE110, SPCE120, SPCV32x
Interfaces	2 X-BUS (2 spurs or 1 loop), 2 RS232 (to X-10 controller or external communication), 1 USB (PC connection), 1 SPC Fast Programmer, SPC53xx: Additionally 1 Ethernet (RJ45)
Tamper contact	Front spring tamper, 2 auxiliary tamper contact inputs
Power supply	Type A (per EN50131-1)
Mains voltage	230 VAC, + 10%/ -15%, 50 Hz
Mains fuse	250 mA T (replaceable part on mains terminal block)
Power consumption	SPC53xx: Max. 200 mA at 230 VAC
Operating current	SPC53xx Controller: Max. 200 mA at 12 VDC
Quiescent current	SPC53xx Controller: Max. 170 mA at 12 VDC (195 mA with PSTN, 300 mA with GSM, 325 mA with PSTN & GSM)
Output voltage	11-14 VDC in normal conditions (mains powered and fully charged battery), min. 9.5 VDC when powered by secondary device (before system shut down to battery deep discharge protection)
Low voltage trigger	7.5 VDC
Overvoltage protection	15.7 VDC
Peak to Peak ripple	Max. 5 % of output voltage
Auxiliary power (nominal)	Max. 750 mA at 12 VDC
Battery type	SPC5320: YUASA NP7-12FR (7 Ah), SPC5330: YUASA NP17-12FR (17 Ah), Battery not supplied
Battery charger	SPC5320: Max. 72h, SPC5330: Max. 24h to 80% of battery capacity
Battery protection	Current limited to 1 A (fuse protected), deep discharge protection at 10.5 VDC +/- 3 % (fault at deep discharge voltage + 0.5 VDC)
Software update	On-site and remote upgrade for controller and peripherals
Calibration	No calibration checks required (calibrated at manufacturing)
Servicable parts	No serviceable parts
Operating temperature	0 ~ +40 °C
Relative humidity	Max. 90 % (non condensing)
Colour	RAL 9003 (signal white)

Weight	SPC5320: 4.500 kg SPC5330: 6.100 kg
Dimensions (W x H x D)	SPC5320: 264 x 357 x 81 mm SPC5330: 326 x 415 x 114 mm
Housing	SPC5320: Small metal housing SPC5330: Hinged metal housing, (1.2 mm mild steel)
Housing can contain up to	SPC5320: 1 additional expander, SPC5330: 4 additional expanders (size 150 mm x 82 mm)

1) Max. 400 m between devices / cable types IYSTY 2 x 2 x Ø 0.6 mm (min.), UTP cat5 (solid core) or Belden 9829.

2) More I/O expanders can be addressed instead of a keypad or door expander, but number of programmable inputs / outputs cannot exceed specified system limits.

4.3 SPC6000

Programmable areas	60
Max. number of user codes	512
Remote controls	Up to 512 (1 per user)
Wireless Panic Alarm	Up to 120
Event memory	10'000 intrusion events, 10'000 access events
Number of on-board zones	8
Max. number of hardwired zones	512
Max. number of wireless zones	120 (take away wired zones)
EOL resistor	Dual 4k7 (default), other resistor combinations configurable
Number of on-board relays	1 strobe (30 VDC / 1 A resistive switching current)
Number of on-board open coll.	2 internal / external bell, 3 freely programmable (each max. 400 mA resistive switching current, supplied via auxiliary output)
Firmware	V3.x
Door capacity	Max. 64 entry doors or 32 entry/exit doors
Number of card reader	Max. 64
Radio module	Optional (SPCW110)
Verification	16 verification zones with max. 4 IP-cameras and 16 audio devices.

Video	Up to 16 pre / 16 post event images (by JPEG resolution 320 x 240, max. 1 frame / sec.)
Audio	Up to 60 sec. pre / 60 sec. post audio recording
Field bus 1)	X-BUS on RS-485 (307 kb/s)
Number of field devices 2)	Max. 128 (32 keypads, 32 door-expanders, 64 input/output expanders)
Connectable field devices	Keypads: SPCK42x, SPCK62x Door expanders: SPCA210, SPCP43x Expanders with I/O: SPCE65x, SPCE45x, SPCP33x, SPCE110, SPCE120, SPCV32x
Interfaces	2 X-BUS (2 spurs or 1 loop), 2 RS232 (to X-10 controller or external communication), 1 USB (PC connection), 1 SPC Fast Programmer, SPC63xx: Additionally 1 Ethernet (RJ45)
Tamper contact	Front spring tamper, 2 auxiliary tamper contact inputs
Power supply	Type A (per EN50131-1)
Mains voltage	230 VAC, + 10%/ -15%, 50 Hz
Mains fuse	250 mA T (replaceable part on mains terminal block)
Power consumption	SPC63xx: Max. 200 mA at 230 VAC
Operating current	SPC63xx Controller: Max. 200 mA at 12 VDC
Quiescent current	SPC63xx Controller: Max. 170 mA at 12 VDC (195 mA with PSTN, 300 mA with GSM, 325 mA with PSTN & GSM)
Output voltage	11-14 VDC in normal conditions (mains powered and fully charged battery), min. 9.5 VDC when powered by secondary device (before system shut down to battery deep discharge protection)
Low voltage trigger	7.5 VDC
Overvoltage protection	15.7 VDC
Peak to Peak ripple	Max. 5 % of output voltage
Auxiliary power (nominal)	Max. 750 mA at 12 VDC
Battery type	SPC6330: YUASA NP17-12FR (17 Ah), Battery not supplied
Battery charger	SPC6330: Max. 24h to 80% of battery capacity
Battery protection	Current limited to 1 A (fuse protected), deep discharge protection at 10.5 VDC +/- 3 % (fault at deep discharge voltage + 0.5 VDC)
Software update	On-site and remote upgrade for controller and peripherals
Calibration	No calibration checks required (calibrated at manufacturing)
Servicable parts	No serviceable parts

Operating temperature	0 ~ +40 °C
Relative humidity	Max. 90 % (non condensing)
Colour	RAL 9003 (signal white)
Weight	SPC6330: 6.100 kg
Dimensions (W x H x D)	SPC6330: 326 x 415 x 114 mm
Housing	SPC6330: Hinged metal housing (1.2 mm mild steel)
Housing can contain up to	SPC6330: 4 additional expanders (size 150 mm x 82 mm)

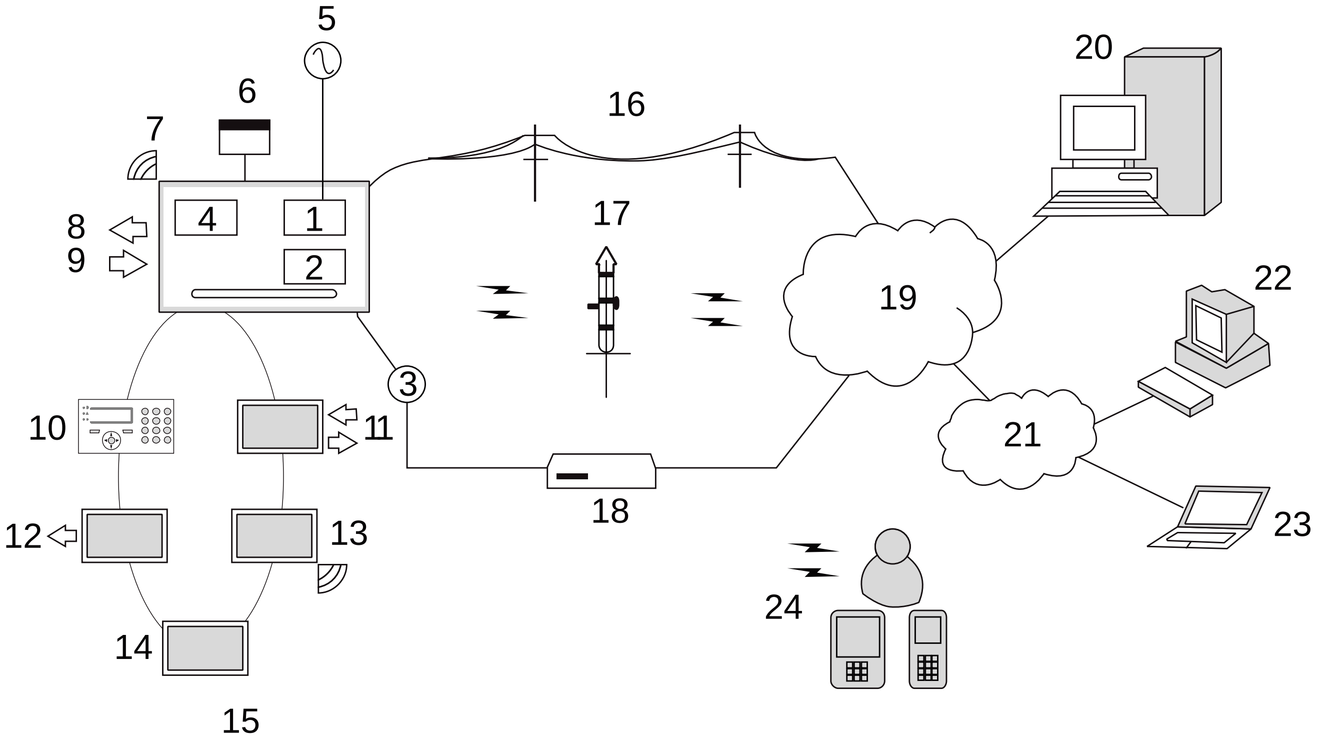
1) Max. 400 m between devices / cable types IYSTY 2 x 2 x Ø 0.6 mm (min.), UTP cat5 (solid core) or Belden 9829.

2) More I/O expanders can be addressed instead of a keypad or door expander, but number of programmable inputs / outputs cannot exceed specified system limits.

5 Introduction

The SPC series controller is a true hybrid controller with 8 on-board wired zones that communicate with intruder devices.

The flexible design of the controller allows the functional components (PSTN/GSM/RF) to be mixed and matched, improving the capability of the system. Using this approach, an installer can ensure that an efficient installation with minimal wiring is achieved.



Overview

1	PSTN	13	Wireless expander
2	GSM	14	PSU
3	Ethernet	15	Loop configuration
4	RF	16	PSTN network
5	AC mains	17	GSM network
6	Battery 12 V	18	Broadband router
7	Wireless receiver (24)	19	Network
8	Wired outputs (6)	20	Central
9	Wired inputs (8)	21	LAN/WLAN
10	Keypads	22	Service desk
11	IO expander	23	Remote user
12	Output	24	Mobile interfaces

6 Mounting system equipment

6.1 Mounting a G2 enclosure

The SPC G2 enclosure is supplied with a metallic cover. The cover is attached to the base of the enclosure by 2 securing screws located on the top and bottom of the front cover.

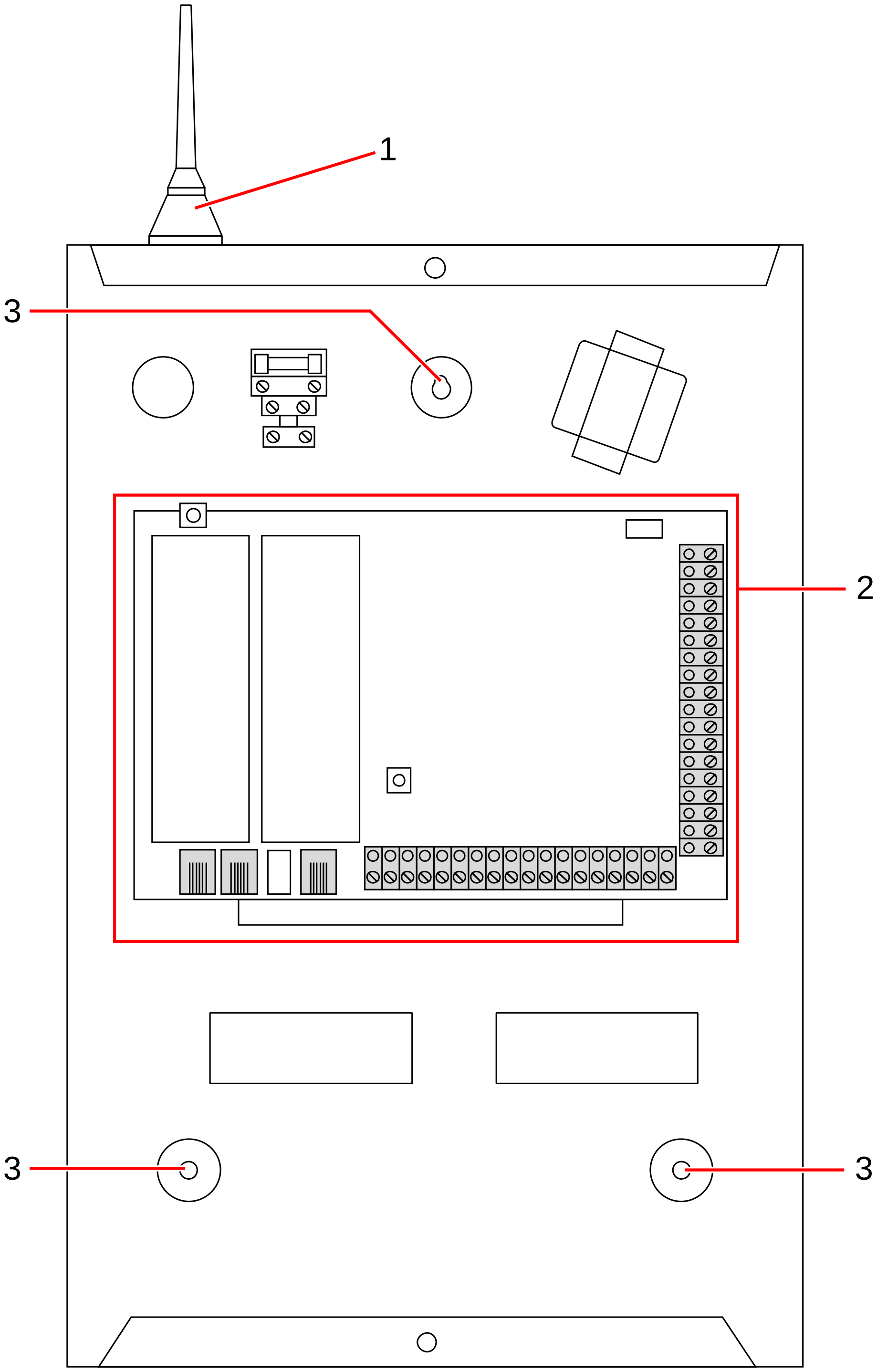
To open the enclosure, remove both screws with the appropriate screwdriver and lift the cover directly from the base.

The G2 enclosure contains the controller PCB (**P**rinted **C**ircuit **B**oard) mounted on 4 support pillars. An optional input/output module can be mounted directly beneath the controller PCB. A battery with capacity of 7 Ah max. can be accommodated below the controller.

An optional external antenna must be fitted to enclosures with metallic lid if the wireless functionality is required. If an antenna is fitted to the unit, it must be enabled in the firmware.

The SPC G2 enclosure provides 3 screw holes for wall mounting the unit.

To wall mount the enclosure, remove the cover and locate the initial fixing screw hole at the top of the cabinet. Mark the position of this screw hole on the desired location on the wall and drill the initial screw hole. Screw the unit to the wall and mark the position of the bottom 2 screw hole positions with the unit vertically aligned.



Standard enclosure

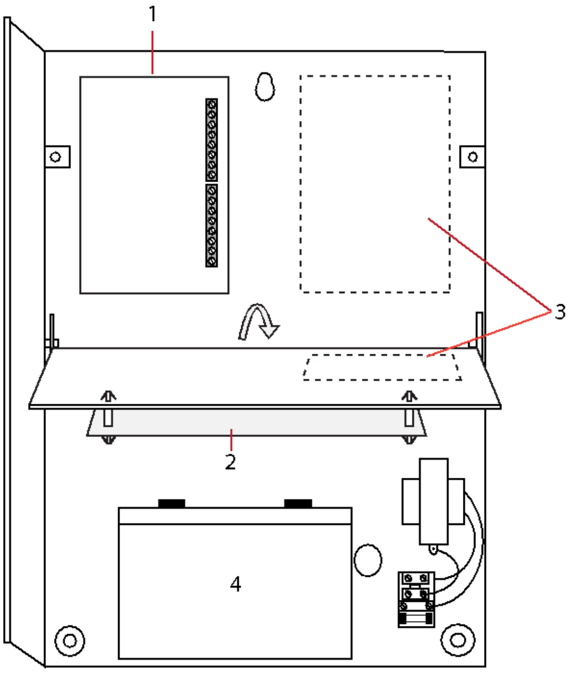
1	Wireless antenna
2	SPC controller
3	Wall mounting screw holes

6.2 Mounting a G3 enclosure

The SPC G3 enclosure is supplied with a metallic or plastic front cover. The cover is attached to the base of the enclosure by hinges and secured with one screw on the right hand side of the front cover.

To open the enclosure, remove the screws with the appropriate screwdriver and open the front cover.

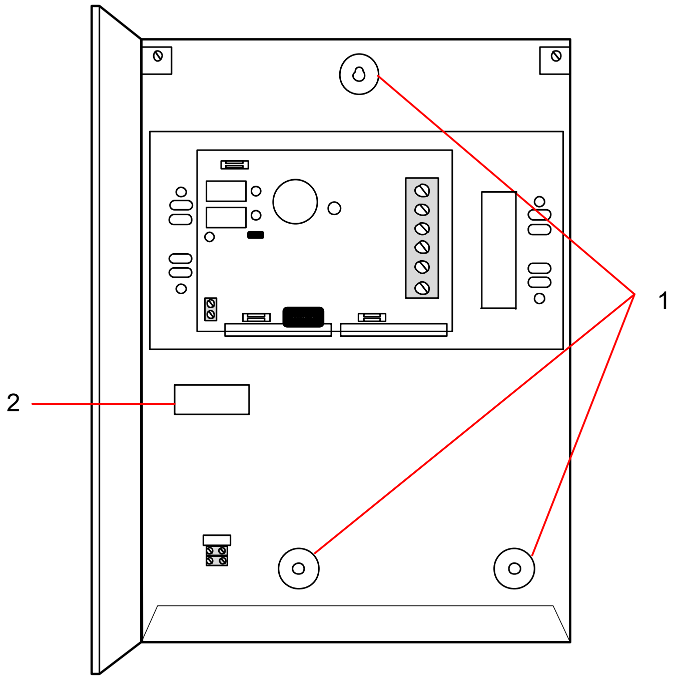
The G3 enclosure contains the controller PCB (Printed Circuit Board) mounted on a hinged mounting bracket. Expanders and PSUs can be mounted on the underside of the hinged mounting bracket and also on the back wall of the enclosure underneath the mounting bracket.



1	Expanders/PSU
2	Controller
3	Expanders/PSU
4	Battery

An optional external antenna must be fitted to enclosures with metallic lid if the wireless functionality is required. If an antenna is fitted to the unit, it must be enabled in the firmware.

The SPC G3 enclosure provides 3 screw holes for wall mounting the unit. (see item 1 below)



To wall mount the enclosure:

1. Open the cover and locate the initial fixing screw hole at the top of the cabinet.
2. Mark the position of this screw hole on the desired location on the wall and drill the initial screw hole.
3. Screw the unit to the wall and mark the position of the bottom 2 screw hole positions with the unit vertically aligned.

Back Tamper Requirements

A back tamper switch on a Grade 3 panel is a mandatory requirement for compliance with EN50131 approval. The back tamper switch is required for SSF Larmklass 2 and EN Alarm Grade 3.

The back tamper switch is delivered with SPC panels in Grade 3 cabinets or is available as an optional extra with a mounting kit (SPCY130). EN50131 G3 panels (SPCxx3x.x20) are supplied with a back tamper kit as standard.

6.2.1 Mounting a Back Tamper Kit

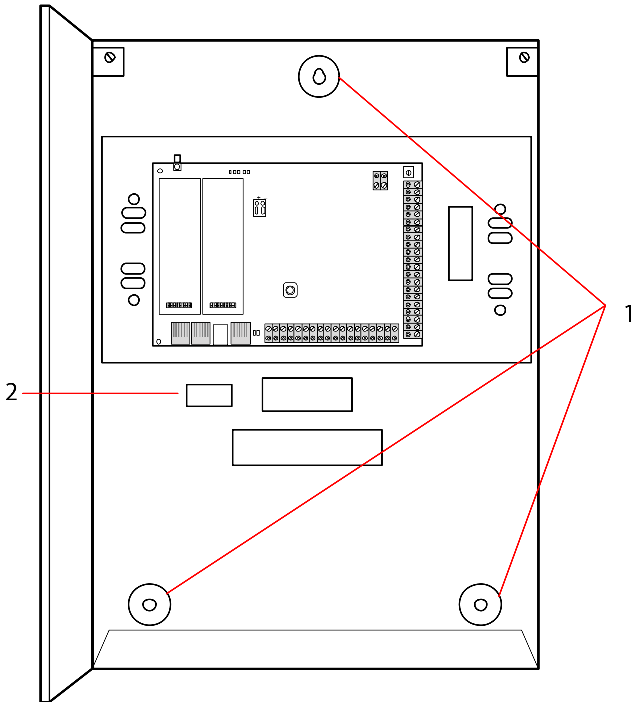
The SPC back tamper kit provides SPC control panels and power supplies with the option of having back tamper as well as front tamper.

The back tamper kit comprises the following parts:

- Tamper switch
- Leads for connecting the back tamper switch to the controller
- Wall fixing plate

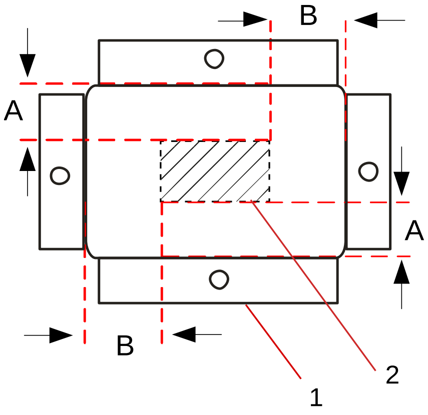
Mounting the Wall Fixing Plate

1. Mount the SPC in the appropriate position on the wall using all three fixings (see item 1 below).



2. Draw a line around the inside of the back tamper cut out (See item 2 above) to provide a guide for the wall plate on the fixing wall. Remove the enclosure from the wall.

3. Place the wall plate (See item 1 below) on the wall centering it precisely around the rectangle previously drawn (See item 2 below).



4. Ensure all four flanges on the wall plate are flush with the wall.

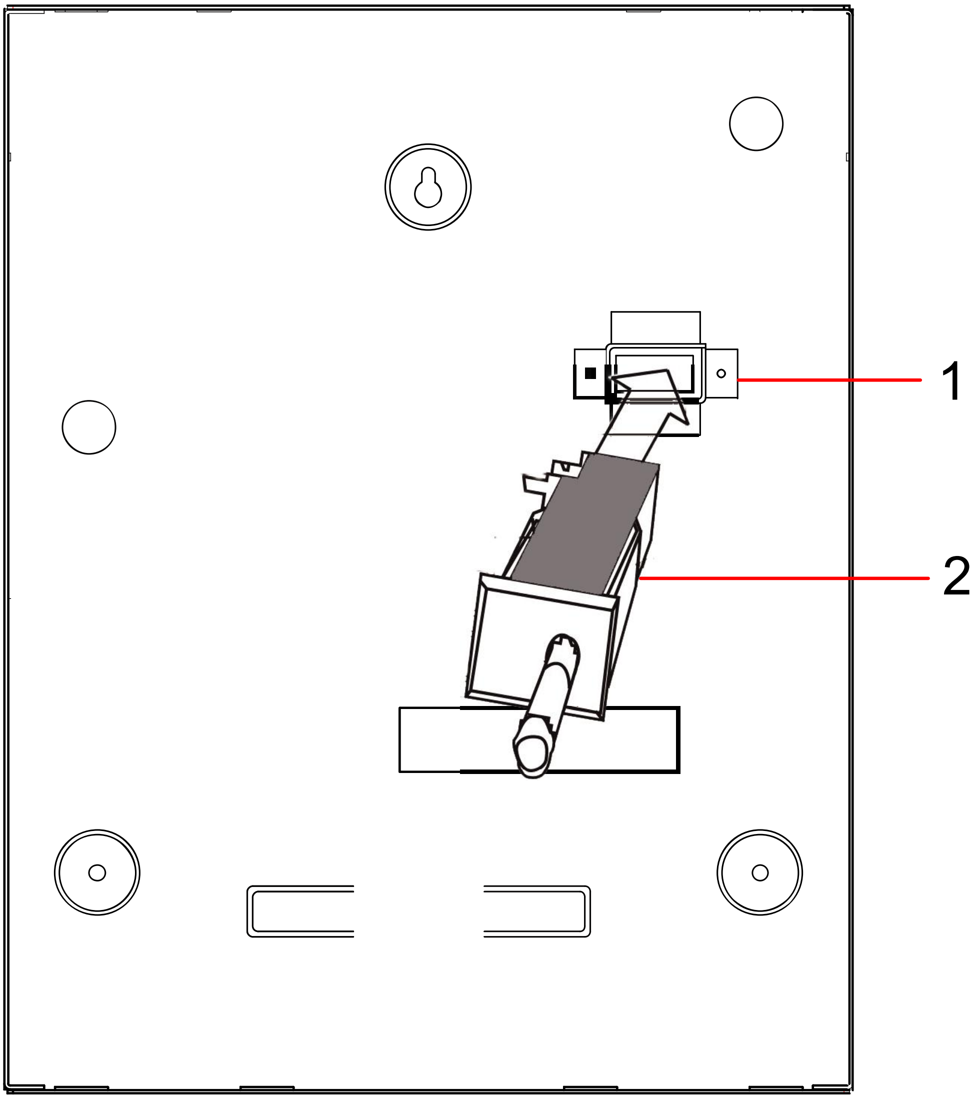
5. Mark the four fixings on the wall plate.

6. Drill and use suitable screws (max. 4 mm) for the wall substrate.

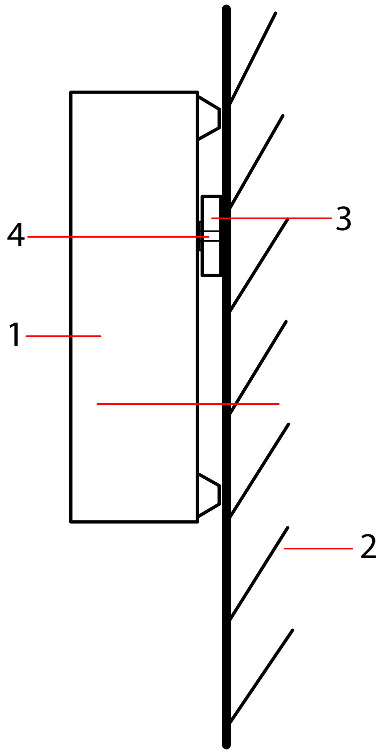
7. Fit the wall plate to the wall.

Fitting the Back Tamper Switch

1. Insert the tamper switch (See item 2 below) into the back of the enclosure so that the plunger faces outwards (See item 1 below).



2. Fit the enclosure back onto the wall using the three fixings previously removed (See item 2 below). Visually check to ensure there is a flush finish between the wall plate and the enclosure metalwork.



1	Enclosure	3	Wall Fixing Plate
2	Wall	4	Tamper Switch

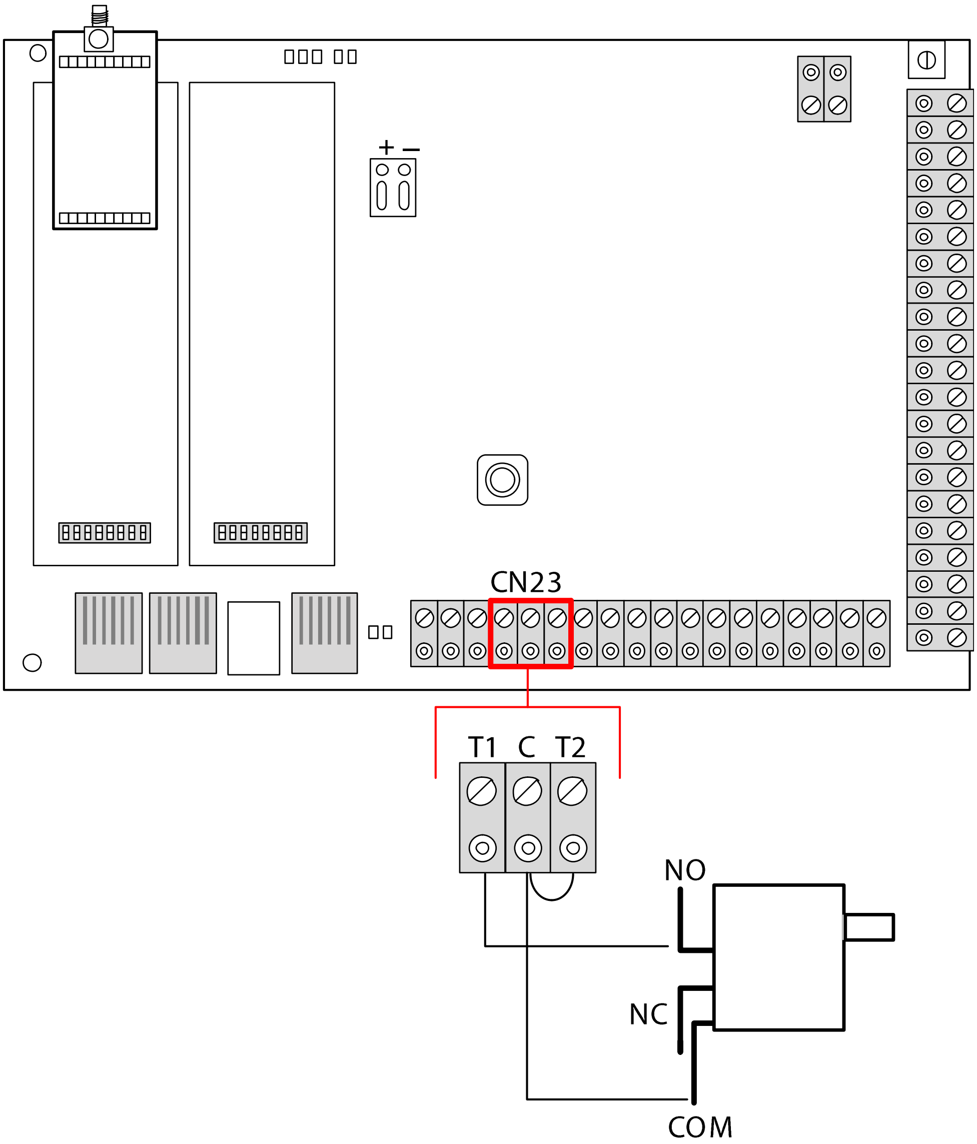
⚠ WARNING

If the wall fixing plate is not accurately aligned then the enclosure will not sit properly on its fixings.

Wiring the Back Tamper Switch to the Control Panel

All control panels have spare inputs configured as tamper inputs that are designed for wiring the tamper switch and do not require any programming.

This tamper switch will be referred to as 'Aux Tamper 1' by the system.



1. Connect NO on the tamper switch to T1 on the controller.
2. Connect COM on the tamper switch to C on the controller. Ensure the T2 jumper is not removed.
3. When the tamper switch is wired, the controller can be commissioned in the normal manner.

6.3 Battery installation

For EN50131 compliance the battery needs to be retained within the housing to stop movement. This is achieved by bending out the flaps in the rear of the Hinged Enclosure so that the battery is retained.

If a 7 Ah battery is used then the battery is biased to the left of the cabinet and bottom flap is bent to meet the battery.

If a 17 Ah battery is used then the battery is biased to the right of the cabinet and middle flap is bent to meet the battery.

The battery flaps should be bent carefully as not to damage the battery. If any signs of a damaged battery exist or any leakage of the electrolyte then the battery should be discarded as per the current regulations and a new battery fitted.

6.4 Mounting a keypad

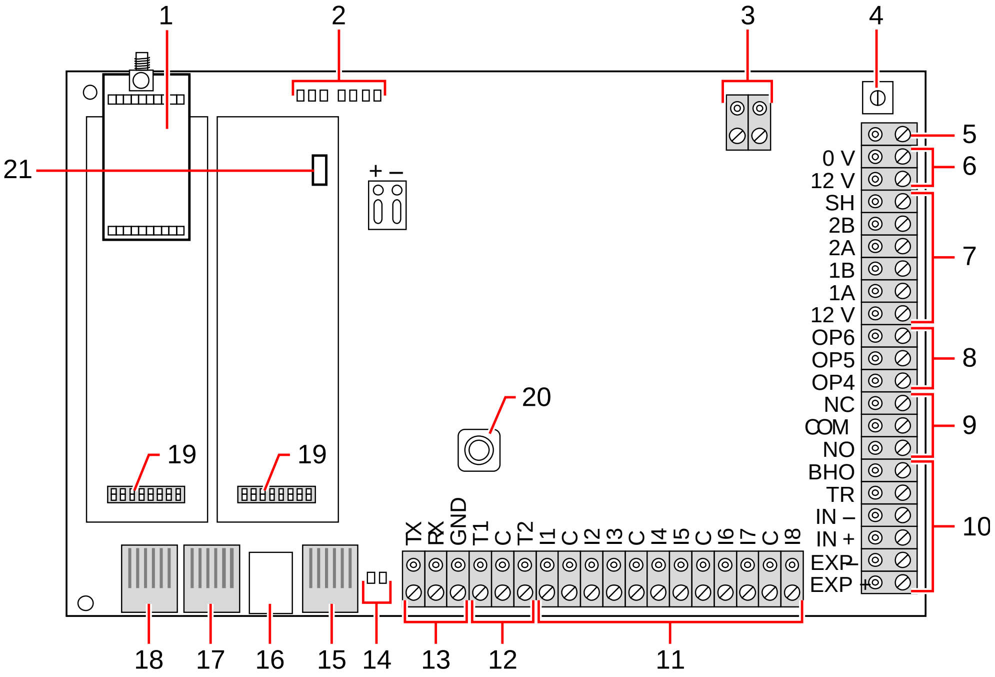
Please refer to corresponding installation instruction.

6.5 Mounting an expander

Please refer to corresponding installation instruction.

7 Controller hardware

The SPC controller provides 8 on-board wired zones and optional wireless zones that communicate with intruder devices using the new European standard wireless frequency 868 MHz, providing greater security from interference and jamming. For larger applications the SPC system components can be mixed and matched to expand both the wired and wireless zones. This offers unmatched flexibility in cost effective design and efficient installation with minimal wiring.



Controller board

1	Optional wireless module	The controller PCB can be factory fitted with a wireless module for use with wireless (868 MHz) sensors.
2	SPC status LEDs	These 7 LEDs display the status of various system parameters as described on page [→ 269].
3	AC power input	The mains AC input voltage is applied to this 2-pin connection via a transformer contained in the SPC enclosure. The earth lead from the mains supply is wired to a connection point on the metal cabinet.
4	Reset button	● To reset the controller: – Press this switch once. ● To reset the programming settings to default and reboot the controller: – Hold down the button until you are asked if a factory reset is desired. – Select YES to reset to factory defaults. – Select NO and then YES to 'Reset Users' to delete all users and default the engineer code (reset to 1111) while keeping all other settings. **Note:** This feature is not available if engineer lockout is enabled.
5	Earth connection terminal	This terminal is not required and should not be connected.

6	Auxiliary 12 V output	The SPC controller provides an auxiliary 12 V DC output that can be used to supply power to expanders and devices such as latches, bells, etc. See page [→ 270]. The maximum deliverable current is 750 mA. **Please Note**: The amount of current drawn is subject to the amount of time to be held up under battery conditions.
7	X-BUS interface	This is the SPC communications bus used to network expanders together on the system. See page [→ 40]. SPC4000 only has 1 X-BUS interface.
8	On-board outputs	Outputs OP4, OP5, and OP6 are 12 V open collector resistive outputs that share a 400 mA current rating with the auxiliary 12 V output. If the outputs are not connected to the 12 V of the controller and are powered from an external power source the 0 V of the power source needs to be connected to the controller 0 V and the external power source cannot exceed 12 V.
9	Relay output	The SPC controller provides a 1 A, single-pole, changeover relay that can be used to drive the strobe output on the external bell.
10	Internal bell / external bell	Internal and external bell outputs (INT+, INT-, EXT+, EXT-) are resistive outputs with a 400 mA current rating. The BHO (**B**ell **H**old **O**ff), **TR** (**T**amper **R**eturn), and EXT outputs are used to connect an external bell to the controller. The INT+ and INT- terminals are used to connect to internal devices such as an internal sounder. See page [→ 54].
11	Zone inputs	The controller provides 8 on-board zone inputs that can be monitored using a variety of supervision configurations. These configurations can be programmed from system programming. The default configuration is **D**ual **E**nd **o**f **L**ine (DEOL) using resistor values of 4K7. See page [→ 51].
12	Tamper terminals	The controller provides 2 additional tamper input terminals that can be connected to auxiliary tamper devices to provide increased tamper protection. These terminals should be shorted when not in use.
13	Serial port 2 terminal block ~~4000~~	Serial port 2 terminal block (TX, RX, GND) may be used to interface to an external modem or PC terminal program. Serial port 2 shares a communications channel with the back-up modem. If a back-up modem is installed, ensure that no devices are connected to this serial port.
14	IP Ethernet connectivity LEDs	The 2 Ethernet LEDs indicate the status of the Ethernet connection. The left LED indicates data activity on the Ethernet port; the right LED indicates the Ethernet link is active.
15	IP Ethernet interface	The Ethernet interface provides for the connection of a PC to the controller for the purposes of programming the system.
16	USB interface	This USB interface is used to access browser programming or a terminal program.
17	Serial port 2 ~~4000~~	This RS232 serial port may be used to interface to an external modem or PC terminal program. Serial port 2 shares a communications channel with the back-up modem. If a back-up modem is installed, ensure no devices are connected to this serial port.
18	Serial port 1	This RS232 serial port may be used to interface to an X10 protocol device.
19	Optional plug-in modules	A primary (left slot) and back-up (right slot) module can be connected to the controller. These modules can be GSM or PSTN modems offering increased communication functionality. The back-up modem should not be connected if serial port 2 interface is connected to an external modem or other device.
20	Front tamper	This on-board front tamper (switch & switch) provides the cabinet tamper protection.

21	Battery selector	J12: Fit jumper for 17 Ah battery use and remove for 7 Ah battery. **Please Note**: This selector is only available on 2.3 revision controller PCB.

8 Door Controller

The two door controller can handle up to two doors and two card readers. Configuration of the operation mode is done via the two door I/Os. Each of the two door I/Os is responsible for the functionality of two inputs and one output of the door controller. A specific door number can be assigned to a door I/O, which gives the inputs and output predefined functionality. If no door number is assigned to neither of the door I/Os (option “Zones” is selected), the inputs and outputs of the door controller can be used like inputs and outputs on the control panel. Thus, no access functionality is available on this two door controller.

If a door number is assigned only to the first door I/O of the two door controller, the first reader is used as entry reader for this door. If a second reader is available, it is used as exit reader for the configured door. Two inputs and one output have predefined functionality and two inputs and one output can be configured by the user. Additionally, the door position sensor input of the first door can be used as intrusion zone but only with limited functionality.

If a door number is assigned to each of the the two door I/Os, the two doors are handled independently. The first card reader is used as entry reader for the first door and the second card reader is used as entry reader for the second door. All inputs and outputs have predefined functionality. The door position sensor inputs of the two doors can additionally be used as intrusion zones but only with limited functionality.

Each free zone number can be assigned to the zones. But the assignment is not fix. If number 9 was assigned to a zone, the zone and an input expander with the address 1 is connected to the X-Bus (which is using the zone numbers 9-16).The assigned zone from the two door controller will be moved to the next free zone number. Configuration will be adapted accordingly.

9 Wiring the system

9.1 Wiring the X-BUS interface

The X-BUS interface provides for the connection of expanders to the controller. The X-BUS can be wired in a number of different configurations depending on the installation requirements. The X-BUS interface baud rate is 307 kb.

NOTICE

The X-BUS is an RS-485 bus with a baud rate of 307 kb. The full performance is only supported in loop [→ 41] and spur [→ 42] wiring configuration (best signal quality due to daisy chain of isolated sections with 1 transmitter / 1 receiver and balanced terminating resistors on each end).

The performance in star [→ 43] or multi-drop [→ 43] configuration wiring is limited due to non optimal conditions of the RS-485 bus specification (reduced signal quality due to multiple receivers / transmitters in parallel with unbalanced terminating resistors).

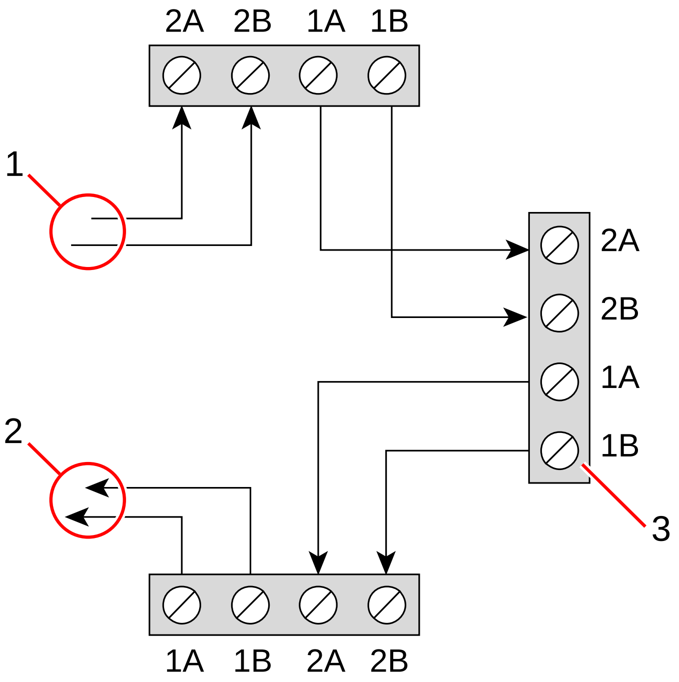
NOTICE

It’s strongly recommended to use loop [→ 41] or spur [→ 42] configuration.

The table below shows the maximum distances between controller / expander or expander / expander for all cable types in loop and spur configuration.

Cable Type	Distance
CQR standard alarm cable	200 m
UTP Category: 5 (solid core)	400 m
Belden 9829	400 m
IYSTY 2 x 2 x 0.6 (min)	400 m

Each device has 4 terminals (1A, 1B, 2A, 2B) for connection to expanders via the X-BUS cable. The controller initiates a detection procedure on power up to determine the number of expanders connected on the system and the topology in which they are connected.



Wiring expander

1	Previous expander
2	Next expander
3	SPC controller

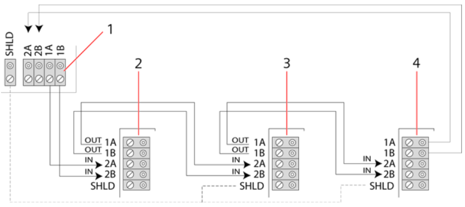
Most expanders are equipped with additional terminals 3A/3B and 4A/4B for branch expander wiring. See page [→ 49] for instructions on branch expander wiring.

9.1.1 Loop configuration

ℹ	*NOTICE*
	~~4000~~ The SPC42xx/43xx doesn't support loop configuration (only 1 X-BUS port).

ℹ	*NOTICE*
	All expanders/keypads are fitted with a termination jumper by default. In loop configuration it's imperative to have these jumpers fitted.

The loop (or ring) cabling method offers the highest security by providing fault tolerant communications on the X-BUS. All keypads and expanders are supervised and in case of a X-BUS fault or break, the system continues to operate and all detectors are monitored. This is achieved by connecting 1A, 1B on the controller to 2A, 2B on the first keypad or expander. The wiring continues with connection 1A, 1B to 2A, 2B on the next expander and so on to the last keypad or expander. The last connection is 1A, 1B of the last expander to 2A, 2B of the controller. See wiring configuration in the figure below.



Loop configuration

1	Controller
2-4	Expanders

9.1.2 Spur configuration

ℹ	***NOTICE***
	SPC52xx/53xx/63xx supports 2 spurs (2 X-BUS ports). SPC42xx/43xx supports 1 spur (1 X-BUS port).

ℹ	***NOTICE***
	All expanders/keypads are fitted with a termination jumper by default. In spur configuration it is imperative to have these jumpers fitted.

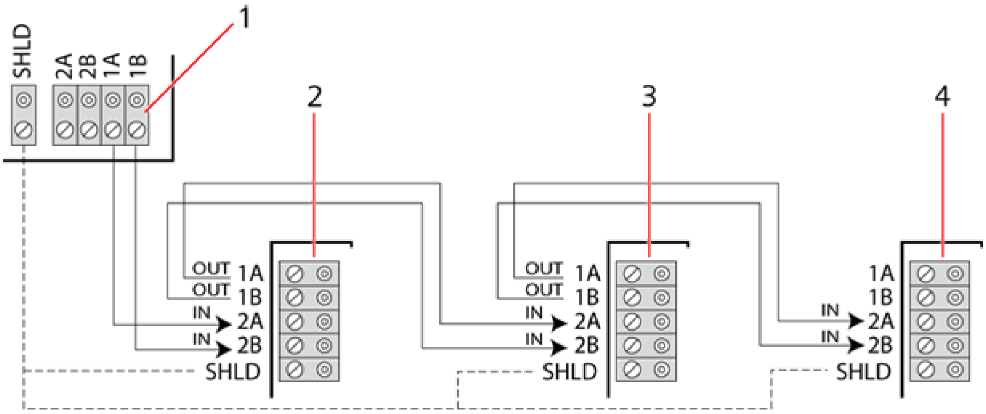
The spur (or open loop) cabling method offers a high level of fault tolerance and may be more convenient on certain installations. In the case of a X-BUS fault or break, all expanders and detectors up to the fault continue to be supervised.

In this configuration, the SPC controller uses a single the X-BUS port (1A/1B or 2A/2B) to support a group of expanders. See wiring configuration in the figure below. The last expander in an open loop configuration is not wired back to the controller and can be identified by the fast LED flashing light (one flash every 0.2 seconds approx) when in Full Engineer programming.

In automatic mode, the expander numbering commences at the expander nearest to the controller and ends with the expander connected farthest from the controller. E.g. if 6 expanders are connected in an open loop configuration, then the nearest expander on the X-BUS connection is expander 1, the second nearest expander is 2, etc. ending with the expander wired farthest from the controller, which is expander 6.

All expanders/keypads are fitted with termination jumpers, as default, allowing termination on all the devices. This is imperative for the spur (chain) configuration, as the jumper acts as a resisting terminator cancelling echoes on the line.

Within the loop wiring configuration all expanders/keypads are fitted with a jumper, as default, allowing termination on the device.



Spur configuration

1	Controller
2-4	Expanders

9.1.3 Star and multi-drop configuration

ℹ	***NOTICE***
	Please read the section for wiring examples [→ 47] and the section Shielding [→ 48] before starting the installation.

The star and multi-drop cabling methods enables takeover of existing wirings with four-core cables in small buildings (typically homes) with low electrical noise environment. These wiring methods are limited to the specifications below:

	SPC42xx/SPC43xx	SPC52xx/SPC53xx/SPC63xx
Max. expanders/keypads	8	16 (8 per X-BUS port)
Total cable length	200 m	200 m

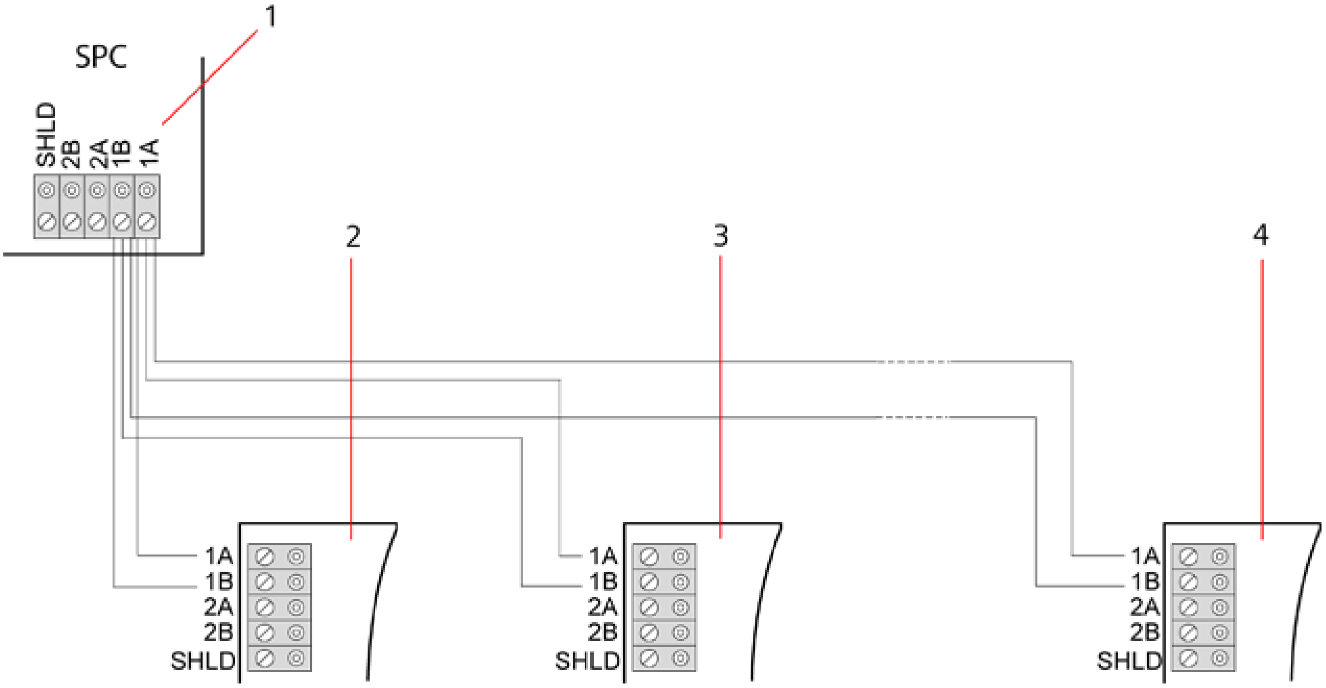
ℹ	***NOTICE***
	The performance in star or multi-drop configuration wiring is limited due to non optimal conditions of the RS-485 bus specification (reduced signal quality due to multiple receivers/transmitters in parallel with unbalanced terminating resistors).

Star configuration

	NOTICE
ℹ	All expanders/keypads are fitted with a termination jumper by default. In star configuration it's imperative to **remove** these jumpers.

A star configuration is established when multiple expanders are wired back to the same X-BUS port on the SPC controller. Depending on controller type 2 ports may exist (1A/1B, 2A/2B), however only one port (1A/1B) is to be used on each keypad or expander.

In the case of a X-BUS break the single will be disconnected, all other expanders and detectors continues to be supervised. A short in the cable renders all expanders disabled.



Star configuration

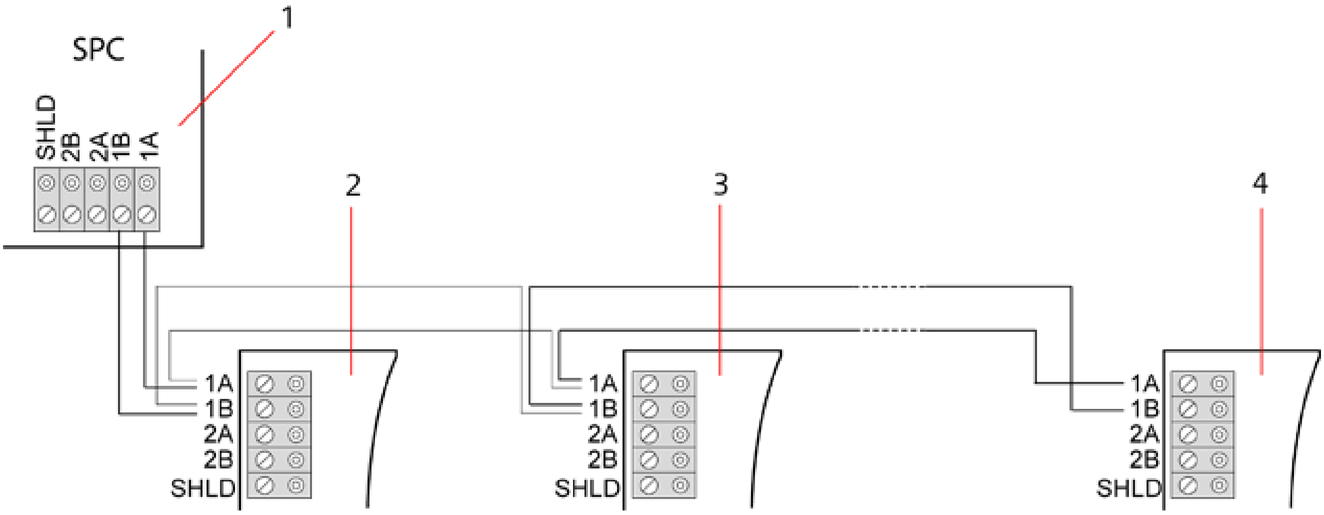
1	SPC Controller
2-4	Expanders

Multi-drop configuration

	NOTICE
ℹ	All expanders/keypads are fitted with a termination jumper by default. In multi-drop configuration it's imperative to **remove** these jumpers with exception of last keypad or expander.

The multi-drop configuration varies in that each expander uses the same communication channel as it wires onto the next expander, with all expanders using the same input channel. See multi-drop configuration in the second figure.

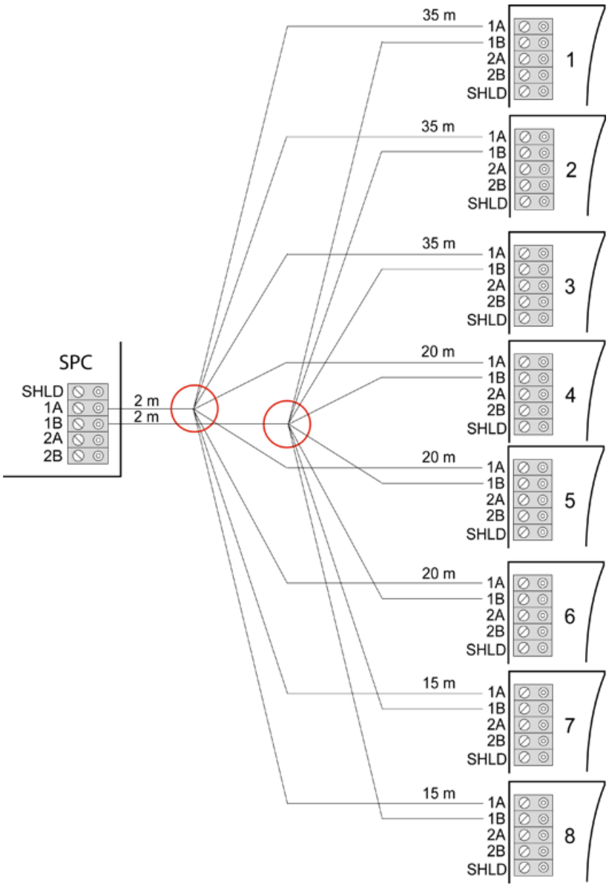
In the case of a X-BUS break, all expanders and detectors up to the fault continues to be supervised. A short in the cable renders all expanders disabled.



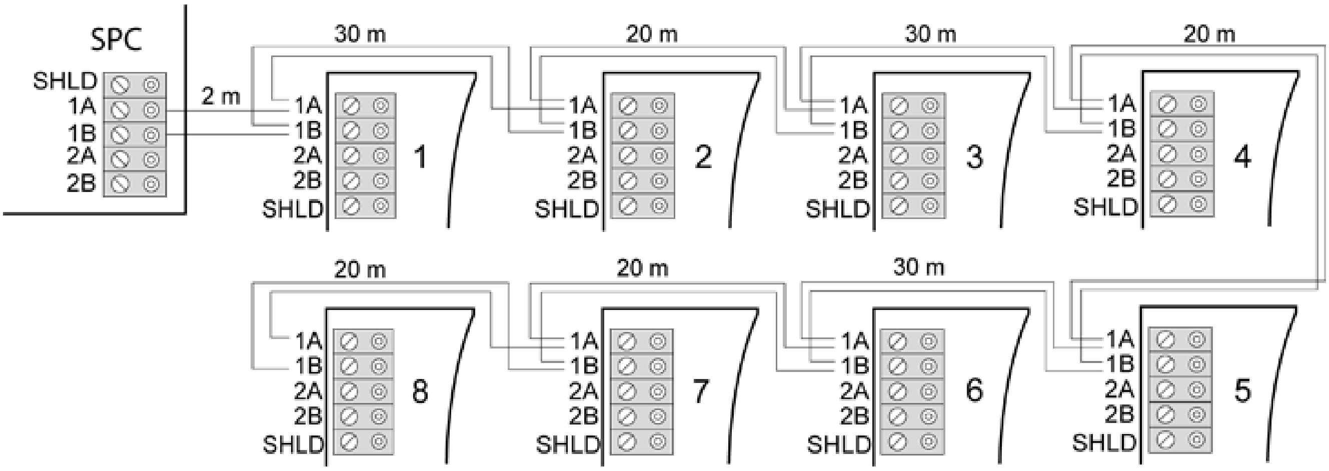
Multi-drop configuration

1	SPC controller
2-4	Expanders

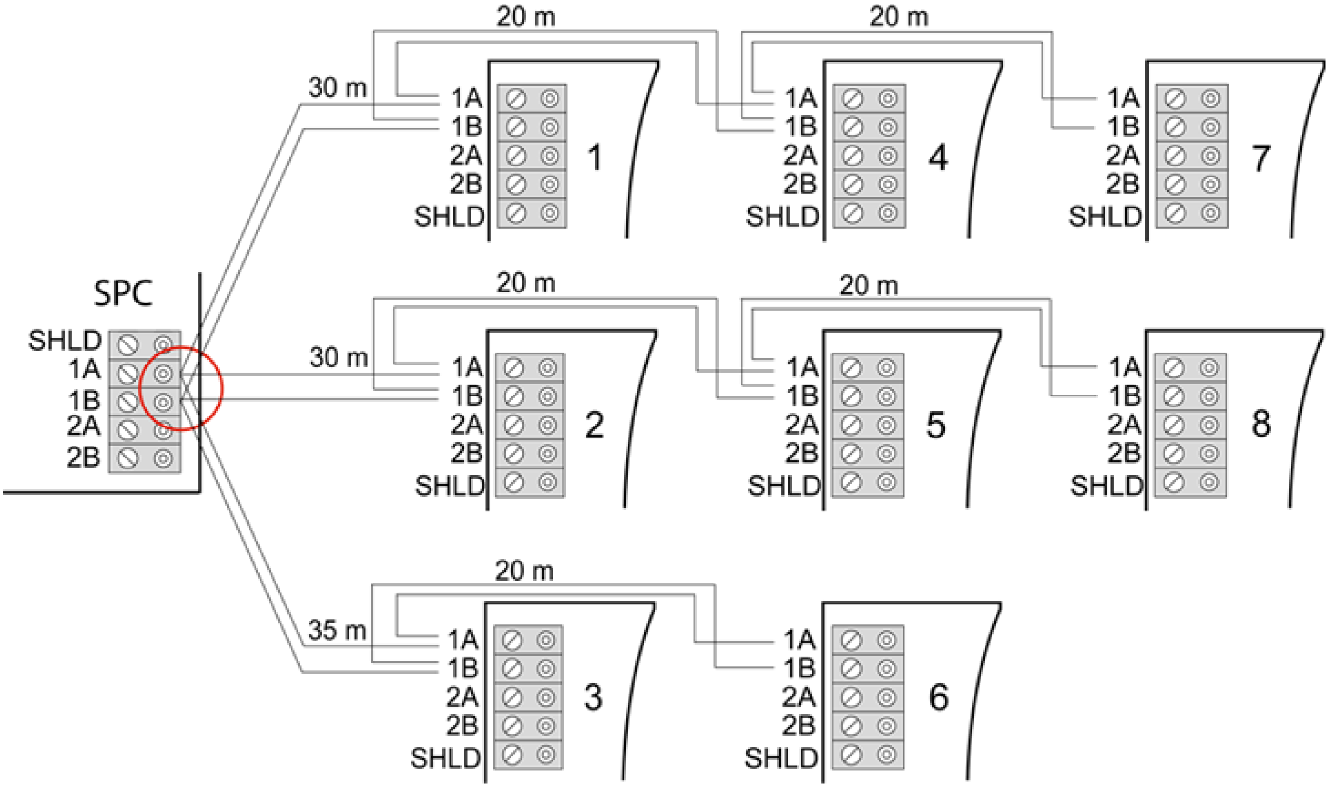
9.1.3.1 Examples of correct wiring



Star wiring



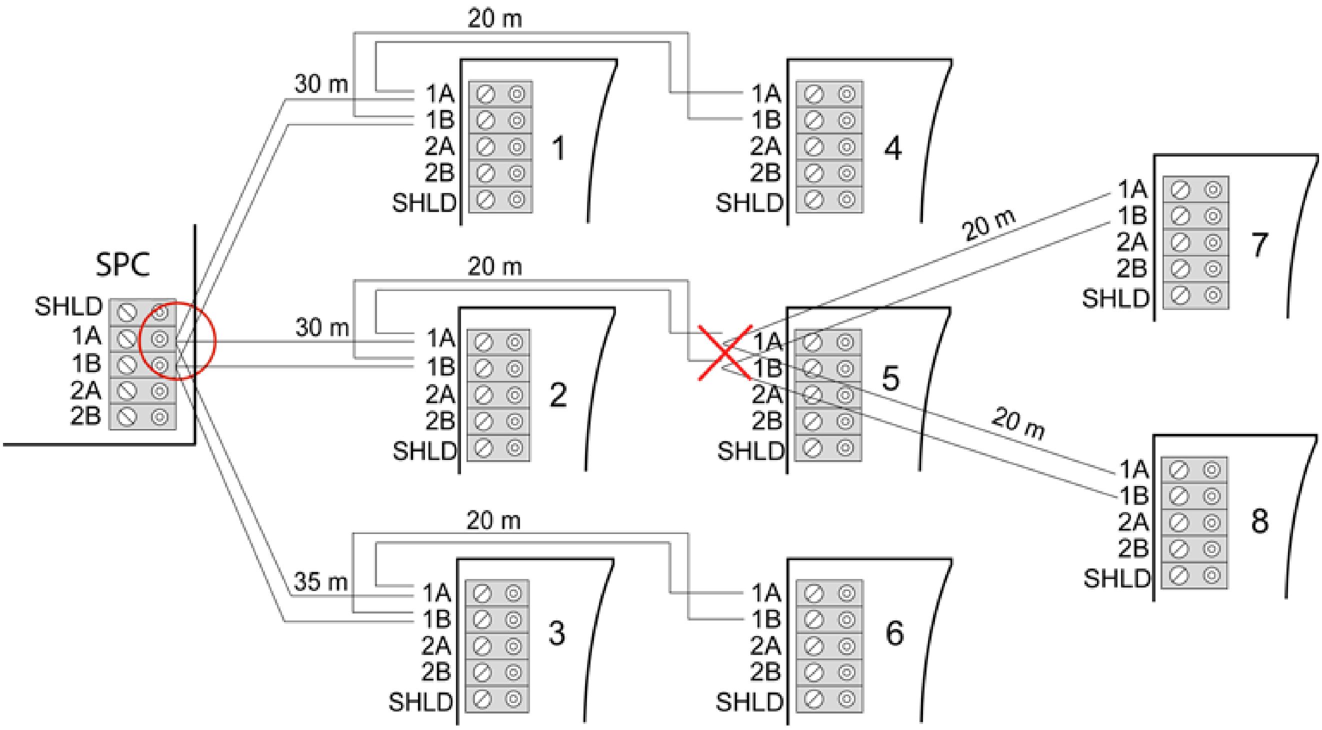
Multi-drop wiring



Mixed wiring

9.1.3.2 Examples of incorrect wiring

	NOTICE
	A mix of star and multi-drop configuration is only allowed if the star point is at the controller X-BUS port. In this case, all expanders/keypads must be wired in multi-drop configuration without any other star points in the wiring.



Not allowed wiring with a second star point

ℹ	*NOTICE*
	If the mix of star and multi-drop configuration is not properly wired the reduced signal quality may lead to slow reaction time of connected devices (e.g. keypad operation) or even loss of communication to devices. If such behavior is observed a wiring in loop OR star configuration is strongly recommended.

9.1.4 Shielding

⚠ The shielding terminals (SHLD) should only be used for cables types with shielding (e.g. Belden 9829). If shielding is required (i.e. sites with high electric field interference): connect the cable shield to the SHLD terminals on the controller and all networked expanders. If the shield needs to be connected to earth then a cable needs to be connected from the SHLD terminal on the controller to the chassis earth stud. Do NOT earth the SHLD terminal on any of the expanders.

ℹ	*NOTICE*
	For star and multi-drop wiring It’s not recommended to use shielded cables due to disadvantageous electrical characteristics (higher capacitance) in star and multi-drop wiring configuration. However, if shielding is required (i.e. sites with high electric field interference) a new wiring in proper spur or loop configuration with appropriate installation cable configuration has to be done.

9.1.5 Cable Map

Identification and numbering order for expanders and keypads differ depending on automatic or manual addressing of the expanders. For information on manual and automatic configuration, see page [→ 82].

For a system with manual addressing, expanders and keypads have a separate numbering sequence and are defined by the engineer manually. I.e., expanders are numbered 01, 02, 03, and so on as desired. Using same numbers, keypads may be numbered as desired.

In the manual configuration, the system automatically allocates zones to each expander. For this reason, devices with no zones, such as 8 output expanders should be addressed last.

For a system with automatic addressing, expanders and keypads belong to the same numbering group and are assigned by the controller. I.e., expanders and keypads are together numbered 01, 02, 03, in the order that they are detected relative to the location of the controller.

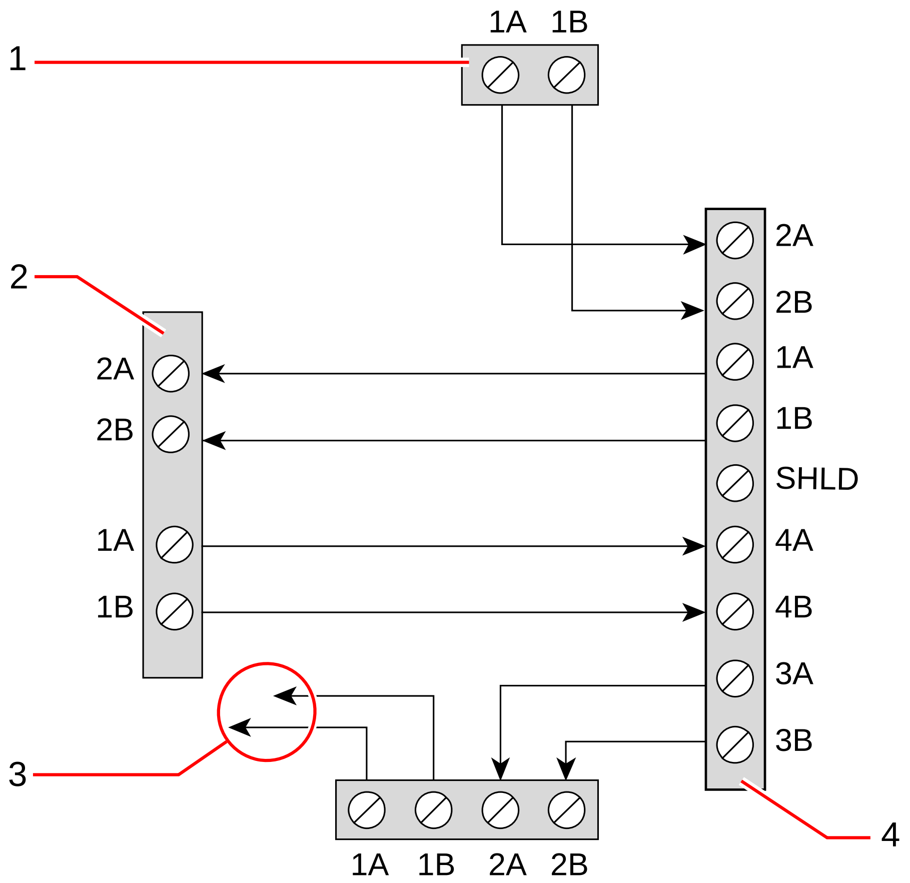
9.2 Wiring of branch expander

The wiring of the X-BUS interface with 8 terminals 1A/1B to 4A/4B provides for the connection of an additional branch expander.

If the branch is not used then the terminals 1A/1B are used to connect to the next expander/keypad. Terminals 3A/3B and 4A/4B are then not used.

The following modules have branch expander wiring capability (additional terminals 3A/B and 4A/B):

- 8 Input / 2 Output Expander
- 8 Output Expander
- PSU Expander
- Wireless Expander
- 2-door Expander



Wiring of a branch expander

1	Previous expander
2	Expander connected to branch
3	Next expander
4	Expander with branch

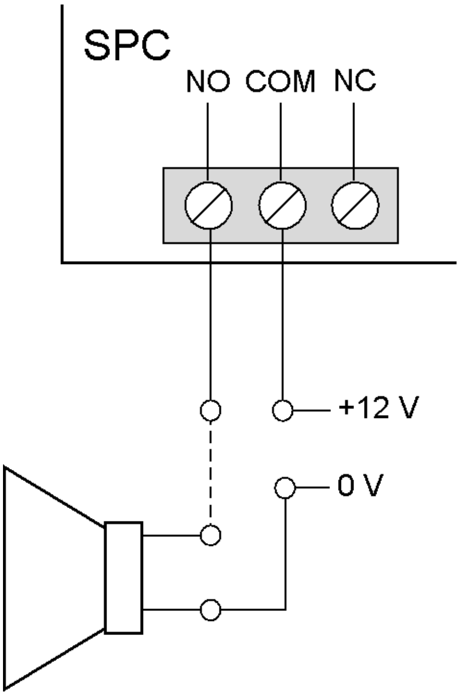
9.3 Wiring the system ground

0V of Smart PSU's, Keypads and Expanders must be connected to the SPC controller 0V (System GND).

9.4 Wiring the relay output

The SPC controller has one on-board 1 A single pole changeover relay that can be assigned to any of the SPC system outputs. This relay output can switch a rated voltage of 30 V DC (non-inductive load).

When the relay is activated the common terminal connection (COM) is switched from the **N**ormally **C**losed terminal (NC) to the **N**ormally **O**pen terminal (NO).



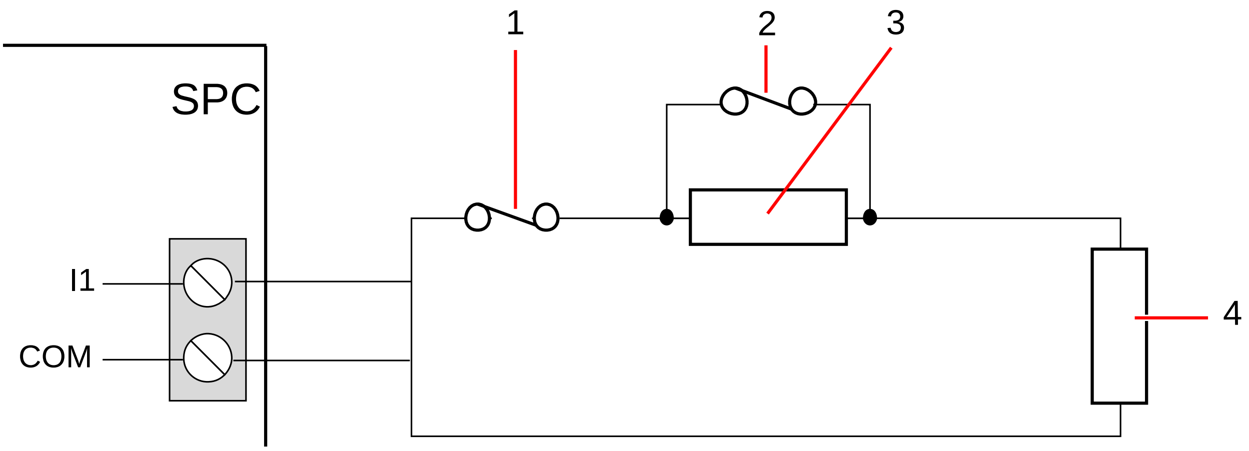
Standard wiring

NO	Normally open terminal
COM	Common terminal connection
NC	Normally closed terminal

9.5 Wiring the zone inputs

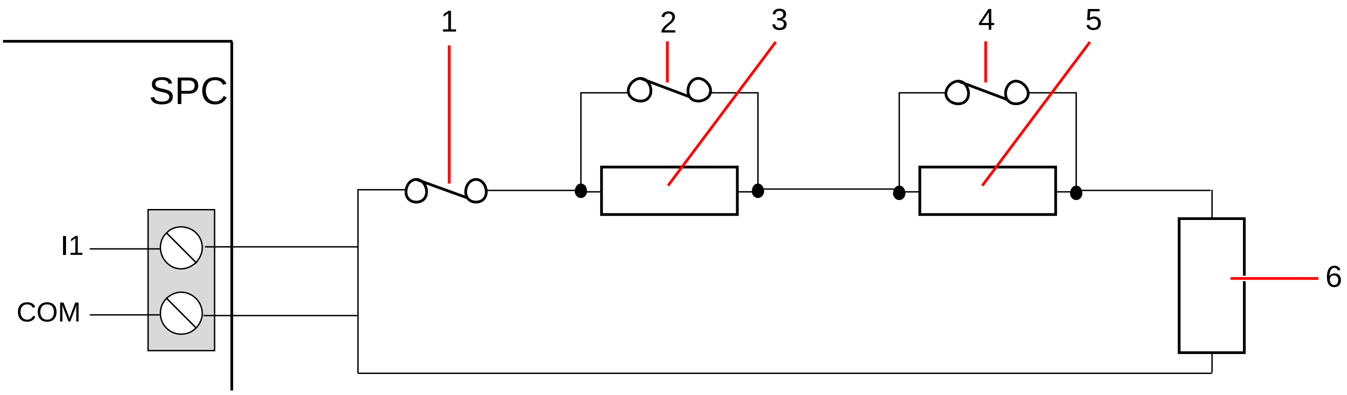
The SPC controller has 8 on-board zone inputs. By default these inputs are monitored using end of line supervision. The installer can choose from any of the following configurations when wiring the inputs:

- No End of Line (NEOL)
- Single End of Line (SEOL)
- Dual End of Line (DEOL)
- Anti-masking PIR



Default configuration (DEOL 4K7)

1	Tamper
2	Alarm
3	EOL 4K7
4	EOL 4K7



Anti-Masking PIR configuration

1	Tamper
2	Alarm
3	EOL 1K
4	Anti-Masking
5	EOL 2K2
6	EOL IK

The following table shows the resistance ranges associated with each configuration.

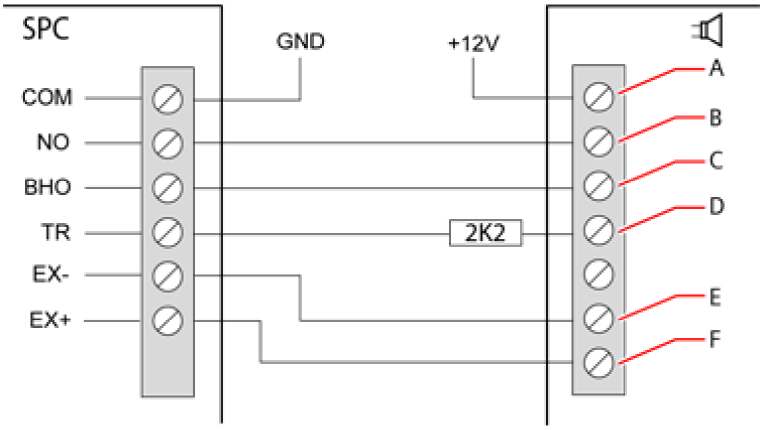
Range	Value	Status		Range	Value	Status

None	<100	Closed		3K3 3K3	<100	Short
	>300	Open			300 <-> 9K9	Closed
1K	<100	Short			4K5 <-> 9K0	Open
	300 <-> 9K0	Closed			>10K	Discon
	>10K			3K9 8K2	<100	Short
2K2	<100	Short			300 <-> 10K6	Closed
	300 <-> 9K0	Closed			8K5 <->14K0	Open
	>10K				>15K	Discon
4K7	<100	Short		4K7 2K2	<100	Short
	300 <-> 9K0	Closed			300 <-> 2K9	Closed
	>10K	Open			4K8 <-> 14K0	Open
1K0 470R	<100	Short			>15K	Discon
	300-600	Closed		4K7 4K7	<100	Short
	1K6 <-> 9K0	Open			300-6K1	Closed
	>10K	Discon			7K5 <-> 14K0	Open
1K 1K	<100	Short			>15K	Discon
	300 <-> 1K3	Closed		5K6 5K6	<100	Short
	1K1<-> 9K0	Open			300 <-> 7K3	Closed
	>10K	Discon			8K9 <-> 14K0	Open
2K2, 2K2	<100	Short			>15K	Discon
	300 <-> 2K8	Closed		6K8 4K7	<100	Short
	3K5 <-> 9K0	Open			300 <-> 6K1	Closed
	>10K	Discon			9K2 <-> 14K0	Open
2K7, 8K2	<100	Short			>15K	Discon
	300 <-> 2K8	Closed		MPIR 2K2 1K1 1K1	<100	Short
	3K5 <-> 9K0	Open			300 <-> 1K3	Closed
	>10K	Discon			1K6 <-> 2K5	Open
3K0, 3K0	<100	Short			2K7 <-> 14K0	Mask
	300 <-> 3K9	Closed			>15K	Discon
	4K5 <-> 9K0	Open				
	>10K	Discon				

9.6 Wiring an external SAB bell

On an external bell to the SPC controller board the relay output is wired to the strobe input with **B**ell **H**old **O**ff (BHO) and **T**amper **R**eturn (TR) connected to their respective inputs on the external bell interface.

A resistor (2K2) is pre-fitted on the controller board between the BHO and TR terminals. When wiring an external bell, connect this resistor in series from the TR terminal on the controller to the TR terminal on the external bell interface.

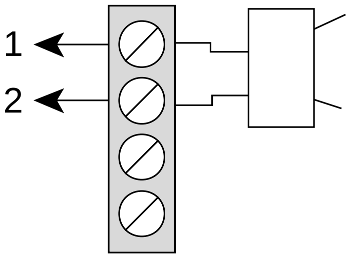


External bell wiring

A	Strobe +
B	Strobe –
C	Hold off
D	Tamper return
E	Bell -
F	Bell +

9.7 Wiring an internal sounder

To wire an internal sounder to the SPC controller connect the IN+ and IN– terminals directly to the 12 V sounder input.



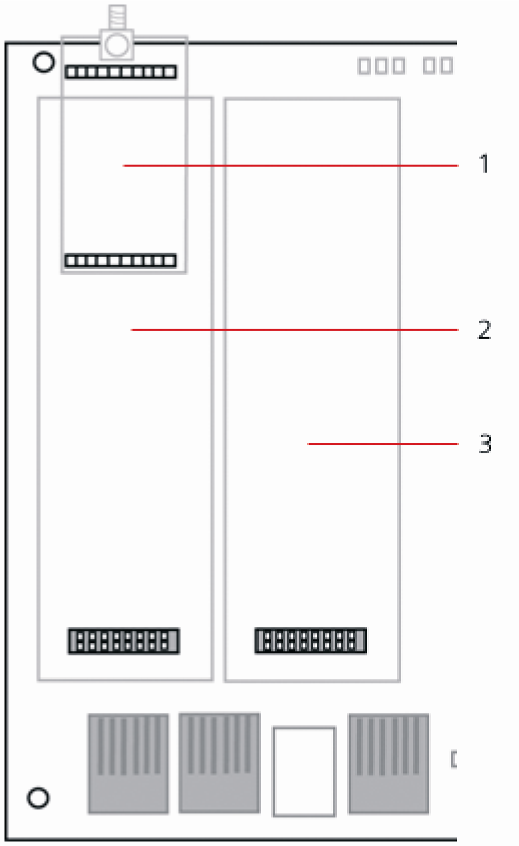
Internal sounder wiring (12 V)

IN–	IN– (SPC controller)
IN+	IN+ (SPC controller)

9.8 Installing plug-in modules

2 modems (PSTN or GSM) may be installed on the controller board to increase functionality. The picture below shows the 2 slots available for each modem, the primary (left) slot and the back-up (right) slot.

If both modem slots are available, always install the plug-in module in the primary slot; the system always attempts to make PSTN or GSM calls on a modem installed on the primary slot before attempting to use the back-up slot.



Plug-in modules

1	Wireless receiver slot
2	Primary modem slot
3	Back-up modem slot

For installation please refer to the corresponding Installation Instruction.

10 Powering up the SPC controller

The SPC controller has two power sources, the mains supply and the integral standby battery. A qualified electrician should undertake connection to the mains and the mains supply should be connected from a spur that can be isolated. See Page [→ 283] for full details of conductor sizes / fuse ratings etc.

The SPC should be powered from the mains first and then the internal standby battery. For compliance to EN only one battery should be fitted of the appropriate capacity.

10.1 Powering from battery only

It is recommended that when powering a system from battery only, the battery should be in a fully charged state (>13.0 V). The system will not power up when using a battery with less than 12 V and no mains is applied.

ℹ	*NOTICE*
	The battery will continue to power the system until deep discharge level (10.5 V to 10.8 V) has been detected. The time duration that the system will hold up on battery will depend on the external loading and Ah rating of the battery.

11 Keypad user interface

11.1 SPCK420/421

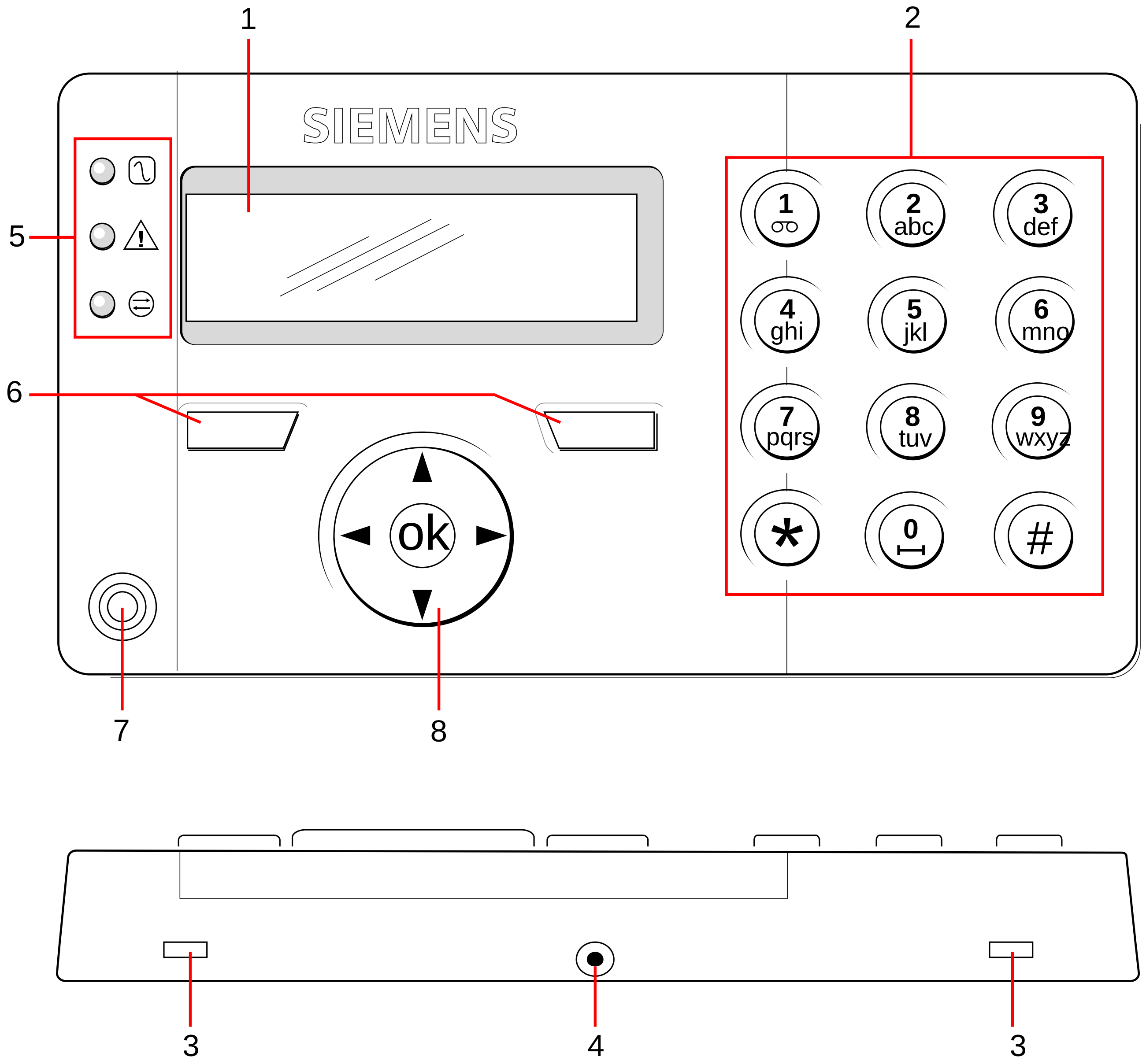
11.1.1 Introduction

The keypad is a wall-mounted interface that allows:

- **Engineers** to program the system through the Engineer Programming menus (password protected) and to set/unset the system; a user can control the system on a day-to-day basis.
- **Users** to enter User Programming menus (password protected), and to perform operational procedures (set/unset) on the system. (Please refer to the SPCK420/421 User Manual for more details of user programming.)

The keypad unit includes an integral front tamper switch and has a 2 line x 16 character display. It features an easy-to-use navigation key to assist in locating required programming options, and has 2 context sensitive soft keys (left and right) for selecting the required menu or program setting. 3 LEDs on the keypad provide an indication of AC power, system alerts, and communications status.

The standard keypad may be factory fitted with a Portable ACE (PACE) proximity device reader (see page [→ 280]).



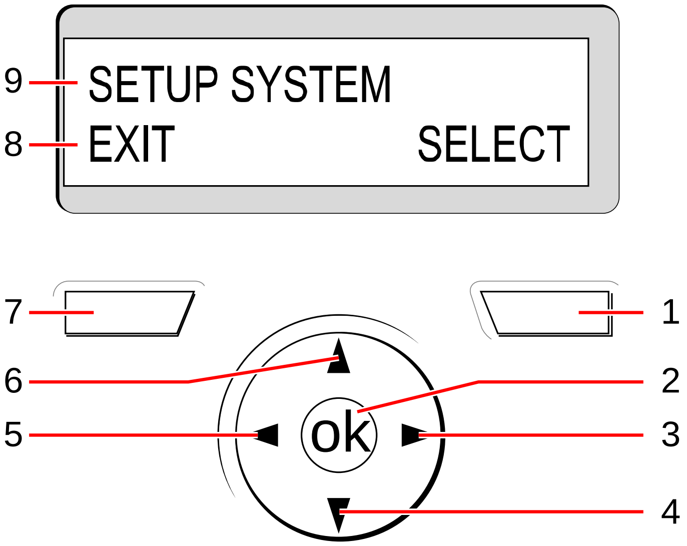
LCD keypad

1	LCD display	The keypad display (2 lines x 16 characters) shows all alert and warning messages and provides a visual interface for programming the system (engineer programming only). The display can be adjusted for contrast and under which conditions the backlight comes on.
2	Alphanumeric keys	Alphanumeric keypad allow for both text and numeric data entry during programming. Alphabetic characters are selected by applying the appropriate number of key presses. To switch between upper and lower case characters, press the hash (#) key. To enter a numeric digit, hold down the appropriate key for 2 seconds.
3	Leverage access tabs	The leverage access tabs provide access to the keypad back assembly clips. Users can unhinge these clips from the front assembly by inserting a 5mm screwdriver into the recesses and pushing gently.
4	Back assembly securing screw	This screw secures the front and back assemblies on the keypad. This screw must be removed to open the keypad.

5	LED status indicators	The LED status indicators provide information on the current status of the system as detailed in the table below.
6	Soft function keys	The left and right soft function keys are context sensitive keys to navigate through menus/programming.
7	Proximity device receiver area	If the keypad has been fitted with a proximity device receiver (see page [→ 280]), users should present the Portable ACE Fob to within 1 cm of this area to SET/UNSET the system.
8	Multi-functional navigation Key	The multi-functional navigation key in combination with the keypad display provides an interface for programming the system.

LED		**Status**
AC mains (Green)	∿	Indicates the presence or failure of the mains supply FLASHING: AC mains fault detected STEADY: AC mains OK
System alert (Yellow)	⚠	Indicates a system alert FLASHING: System alert detected; display indicates the location and nature of alert. If the system is SET, then NO indication is given of system alerts OFF: No alert detected; If a keypad is assigned to more than one area, LED does not indicate an alert condition if any of those areas is SET
X-BUS Status (Red)	⇔	Indicates the status of the X-BUS communications when in FULL ENGINEER programming Flashes regularly: (once every 1.5 seconds approx) indicates communications status is OK Flashes quickly: (once every 0.25 seconds approx) indicates the keypad is the last expander on the X-BUS If the keypad is being installed for the first time and power is supplied to it before a connection to the controller X-BUS interface is made, the LED remains in the ON state

11.1.2 Using the keypad interface



Keypad display

1	RIGHT SOFT	This key is used to select the option presented on the right side of the bottom

	KEY	line display. Possible values are: → SELECT to select the option displayed on the top line → ENTER to enter the data displayed on the top line → NEXT to view the next alert after the one displayed on the top line → CLEAR to clear the alert displayed on the top line → SAVE to save a setting
2	OK	The OK button acts as a SELECT key for the menu option displayed on the top line and also as an ENTER/SAVE key for data displayed on the top line.
3	▶	In Programming mode, the right arrow key advances the user through the menus in the same way as pressing the SELECT option (right soft key). In data entry mode, press this key to move the cursor one position to the right.
4	▼	In Programming mode, the down arrow key moves the user to the next programming option in the same menu level. Continually press this key to scroll through all programming options available on the current menu level. In alphanumeric mode, press this key over an upper case character to change the character to lower case. When alerts are displayed, the down arrow key moves the user to the next alert message in the order of priority. (See Prioritization of Display Messages below)
5	◀	In Programming mode, the left arrow key returns the user to the previous menu level. Pressing this key when in the top menu level exits the user from programming. In data entry mode, press this key to move the cursor one position to the left.
6	▲	In Programming mode, the up arrow key moves the user to a previous programming option in the same menu level. Continually press this key to scroll through all programming options available on the current menu level. In Alphanumeric mode, press this key over a lower case character to change the character to upper case.
7	LEFT SOFT KEY	This key is used to select the option presented on the left side of the bottom line display. Possible values are: → EXIT to exit programming → BACK to return to previous menu
8	BOTTOM LINE OF DISPLAY	In the IDLE state, this line is blank. In Programming mode, this line displays options available to the user. These options align over the left and right soft keys for selection as required.
9	TOP LINE OF DISPLAY	In the IDLE state, displays the current date and time. In Programming mode, this line displays one of the following: → The programming feature to be selected → The current setting of the selected feature → The nature of the current alert during an alert condition. (See Prioritization of Display Messages below)

Prioritization of display messages

Trouble messages and alerts are displayed on the keypad in the following order:

- **Zone**
  - Alarms
  - Tamper
  - Trouble
- **Area Alerts**
  - Fail to set

  - Entry time out
  - Code tamper
- **System Alerts**
  - Mains
  - Battery
  - PSU fault
  - Aux fault
  - External bell fuse
  - Internal bell fuse
  - Bell tamper
  - Cabinet tamper
  - Aux tamper 1
  - Aux tamper 2
  - Wireless jamming
  - Modem 1 fault
  - Modem 1 line
  - Modem 2 fault
  - Modem 2 line
  - Fail to communicate
  - User panic
  - XBUS cable fault
  - XBUS communications fault
  - XBUS mains fault
  - XBUS battery fault
  - XBUS power supply fault
  - XBUS fuse fault
  - XBUS tamper fault
  - XBUS antenna fault
  - XBUS wireless jamming
  - XBUS panic
  - XBUS fire
  - XBUS medical
  - XBUS Power supply link
  - Engineer restore Required
- **System information**
  - Soaked zones
  - Open zones
  - Area state
  - Low battery (sensor)
  - Sensor lost
  - WPA Low battery
  - WPA lost
  - WPA Test overdue
  - Camera offline
  - Reboot

– Hardware fault
– Aux over current
– Battery low

11.1.3 Data entry on the keypad

Entering data and navigating the menus on the SPC keypad is facilitated through the use of the programming interface. The use of the interface for each type of operation is detailed below.

Entering numeric values

In Numeric Entry mode, only the numeric digits (0 - 9) can be entered.

- To move the position of the cursor one character to the left and right respectively, press the left and right arrow keys.
- To exit from the feature without saving, press the BACK menu key.
- To save the programmed setting press ENTER or OK.

Entering text

In Text Entry mode, both alphabetic characters (A-Z) and numeric digits (0 – 9) can be entered.

- To enter an alphabetic character, press the relevant key the required number of times.
- To enter a language specific special character (ä, ü, ö…) press button 1.
- To enter a space + special characters (+, -./[ ]…) press button 0.
- To enter a digit, hold the relevant key down for 2 seconds and release.
- To move the position of the cursor one character to the left and right respectively, press the left and right arrow keys.
- To exit from the feature without saving, press BACK.
- To save the programmed setting press ENTER or OK.
- To change the case of an alphabetic character, press the up/down arrow keys when the character is highlighted by the cursor.
- To toggle between upper and lower case for all subsequent characters, press the hash (#) key.
- To delete character to the left of the cursor, press the star key(*).

Selecting a programming option

In navigation mode, the Engineer/User selects one of a number of pre-defined programming options from a list.

- To scroll through the list of options available for selection, press the up and down arrow keys.
- To exit from the feature without saving, press BACK.
- To save the selected option, press SAVE or OK.

11.2 SPCK620/623

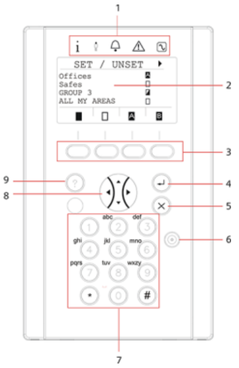
11.2.1 Introduction

The keypad is a wall-mounted interface that allows:

- Engineers to program the system through the Engineer Programming menus (password protected) and to set/unset the system; a user can control the system on a day-to-day basis.
- Users to enter User Programming menus (password protected), and to perform operational procedures (set/unset) on the system. (Please refer to the SPC620/623 User Manual for more details of user programming)

The SPCK620 is equipped with soft keys and large graphical LCD for easy operation. The functionality can be enhanced with key switch expander SPCE110 or indication expander SPCE120.

The SPCK623 is equipped with a proximity card reader (125 kHz EM 4102) for easy user access, soft keys, large graphical LCD and voice annunciation support. The functionality can be enhanced with key switch expander SPCE110 or indication expander SPCE120.



1	LED status indicators	The LED status indicators provide information on the current status of the system as detailed in the table below.
2	LCD display	The keypad display shows all alert and warning messages and provides a visual interface for programming the system (engineer programming only). (See Display Message Prioritization below) The display can be configured under which conditions the backlight comes on.
3	Soft function keys	Context sensitive keys to navigate through menus/programming.
4	Enter key	Confirm display or input.
5	Back menu key	● Go back in the menu Reset buzzers, siren and alarms in the memory.
6	Proximity device receiver area	Only SPCK 623: If the keypad has been fitted with a proximity device receiver, users should present the Portable ACE Fob to within 1 cm of this area.
7	Alphanumeric keys	Alphanumeric keypad allow for both text and numeric data entry during programming. Alphabetic characters are selected by applying the appropriate number of key presses. To switch between upper and lower case characters, press the hash (#) key.

		To enter a numeric digit, hold down the appropriate key for 2 seconds.
8	Multi-functional navigation key	Navigation through menus and to scroll through alert messages. (See Display Message Prioritization below)
9	Information key	Displays information.

Prioritization of display messages

Trouble messages and alerts are displayed on the keypad in the following order:

- **Zone**
  - Alarms
  - Tamper
  - Trouble
- **Area Alerts**
  - Fail to set
  - Entry time out
  - Code tamper
- **System Alerts**
  - Mains
  - Battery
  - PSU fault
  - Aux fault
  - External bell fuse
  - Internal bell fuse
  - Bell tamper
  - Cabinet tamper
  - Aux tamper 1
  - Aux tamper 2
  - Wireless jamming
  - Modem 1 fault
  - Modem 1 line
  - Modem 2 fault
  - Modem 2 line
  - Fail to communicate
  - User panic
  - XBUS cable fault
  - XBUS communications fault
  - XBUS mains fault
  - XBUS battery fault
  - XBUS power supply fault
  - XBUS fuse fault
  - XBUS tamper fault
  - XBUS antenna fault

- XBUS wireless jamming
- XBUS panic
- XBUS fire
- XBUS medical
- XBUS Power supply link
- Engineer restore Required

- **System information**
  - Soaked zones
  - Open zones
  - Area state
  - Low battery (sensor)
  - Sensor lost
  - WPA Low battery
  - WPA lost
  - WPA Test overdue
  - Camera offline
  - Reboot
  - Hardware fault
  - Aux over current
  - Battery low

11.2.2 LED description

Description	Symbol	Color	Operation	Description
Information	i	Blue	On	The system or area cannot be set. Forced setting is possible (faults or open zones can be inhibited).
			Flashing	The system or area cannot be set or forced set (faults or open zones cannot be inhibited).
			Off	The system or area can be set.
		Amber	Flashing	Engineer is on site.
User	i	Green	On	Assigned area is unset.
			Flashing	Assigned area is Partset A / B
			Off	Assigned area is fullset
Alarm	🔔	Red	On	Alarm
			Flashing	-
			Off	No alarm
Alert	⚠	Amber	On	-
			Flashing	Trouble

			Off	No trouble
Mains	∿	Green	On	System ok
			Flashing	Mains fault
			Off	No bus connection

ℹ *NOTICE*

The LED indications for information, area status, alarm and fault is deactivated in idle state of the keypad. A valid user PIN has to be entered. It is configurable if the power indication can be seen in idle state.

11.2.3 Viewing mode description

There are 2 viewing modes (automatic):

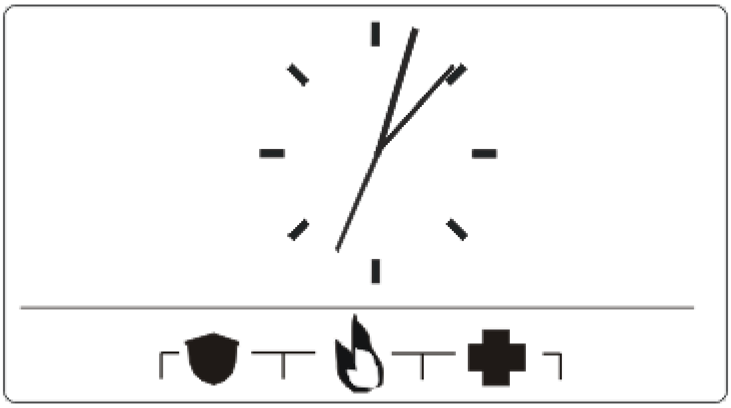
- Multi area view: User has access to several areas. Displaying the areas is done via area groups. If no area group is configured, only the general group “All my areas” is displayed.
- Single area view: The user has only rights for 1 area. In the single area view, only one area is displayed in large fonts and can be controlled directly.

ℹ *NOTICE*

The rights of a user can be restricted by the user settings or the settings of the keypad the user is logging in to. Only if the user and the keypad that is being used for logging in have the right for an area, the area is displayed. If the user has the right for several areas but the keypad has only the right for one area, the user will also see the single area view.

11.2.4 Function keys in idle state

Emergency Keys

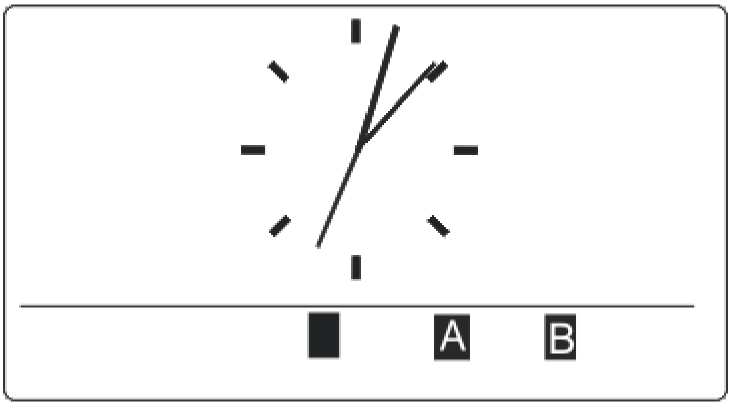


Depending on configuration emergency keys are displayed. A simultaneous pressing of the keys activates an emergency call.

🛡	Panic Alarm
🔥	Fire alarm
✚	Medical Alarm

The activated process depends on the system configuration. Please ask the installer for details.

Direct Settings



Depending on configuration the direct set option is displayed. A forced set / part set without PIN is possible of the area the keypad is assigned to.

12 Starting the system

!	⚠ CAUTION
	The SPC system must be installed by an authorised installation engineer.

1. Wire the keypad to the X-BUS interface on the controller.
2. Enter Engineer Programming by entering the default Engineer PIN (1111). For more details, see Engineering PINs [→ 68].

12.1 Engineer modes

The SPC system works under 2 programming modes for authorised installation engineers: Full and Soft. In the browser, log off is only permitted in Soft Engineer mode.

Full Engineer Mode

All alerts, faults and tampers must first be isolated or cleared before exit from the Full Engineer mode is allowed.

Full Engineer mode provides extensive programming functionality. However, programming in Full Engineer mode disables all alarm settings, reports and output programming for the system. For full review of Full Engineer menu options, refer to page [→ 75].

[Soft] Engineer mode

Soft Engineer mode provides fewer programming functions and does not affect any outputs programmed in the system. For full review of [Soft] Engineer menu options, refer to page [→ 74].

12.1.1 Engineer PINs

The start up Engineer default programming PIN is ‘1111’.

If an installation is changed from Grade 2 to Grade 3 at any time after start-up, all PINs are prefixed with a 0. Therefore, the default Engineer PIN will be ‘01111’.

Increasing the number of digits for the PIN (see System Options [→ 153]) will add the relevant number of zeros to the front of an existing PIN (for example, 001111 for a 6 digit PIN)

12.2 Programming tools

Keypad

The keypad is quick onsite navigation of menus and programming. The authorised installation engineer must set initial default configurations using the keypad.

Programming of proximity card/device reader and assignment to users also must be done using the keypad.

SPC Pro

SPC Pro is a SDK application providing the ability to program configurations on or offline. SPC Pro programming provides additional advanced communication and X10 functionality not found on the keypad.

SPC Pro is compatible with COM ports only. Modems using the USB and modem port are not detected by SPC Pro.

SPC Pro may perform firmware upgrades.

12.2.1 Fast Programmer

The SPC Fast Programmer is a portable storage device that provides the engineer with the ability to upload and download configuration files in a quick and convenient manner. Fast Programmer can be used in conjunction with all of the above programming tools. For more details, see page [➔ 143].

Fast Programmer may perform firmware upgrades.

12.3 Configuring start-up settings

The following start-up settings can be changed at a later time when programming the system functionality.

If powering up the panel the version number of the SPC system will be displayed on the keypad.

Prerequisite:

▷ To initialize the start-up configuration press the reset button on the PCB for at least 6 s.

1. Press a key on the keypad.
2. Choose your LANGUAGE.
3. Enter the DATE and TIME.
4. Choose the appropriate REGION.
5. Choose a TYPE of installation:
   - DOMESTIC: is appropriate for home use (houses and apartments).
   - COMMERCIAL: provides additional zone types and commercial zone default descriptions for the first 8 zones.
   - FINANCIAL: is specific for banks and other financial institutions and includes features such as auto-setting, time locks, interlock groups and a seismic zone type.

For more details of default zone descriptions see Domestic, Commercial and Financial mode default settings [➔ 273].

6. Choose the X-BUS addressing mode:

- MANUAL: is suggested for all kind of installations, especially when doing a preconfiguration.
- AUTO: is not recommended, only with the exception of very small installations.

7. Choose the installation topology: LOOP (Ring) or SPUR (Chain).

   ⇨ The system scans for the quantity of keypads, expanders, door controllers and available zone inputs.

8. Press NEXT for scanning all the X-BUS devices.

   ⇨ PROGRAMMING MODE will be displayed.

⇨ The Start-up setting is complete.

1. Check the alerts in the menu SYSTEM STATUS > ALERTS. Otherwise you will not be allowed to exit the Engineer Mode.
2. Configure the system by keypad, SPC Pro or web browser.

See also

🗎 Domestic, Commercial and Financial mode default settings [→ 273]

12.4 Creating system users

By default the SPC system only allows engineer access on the system. The engineer must create a user profile to allow on-site users to set, unset, and perform basic operations on the system as required. The system allows all user PINs within the code range i.e. if a 4 digit code is used then all user PINs between 0000 and 9999 would be permissible.

ℹ Only a MANAGER type user has the ability to grant manufacturer access to the system (i.e. allow a firmware upgrade of the panel). If a user is typically going to be upgrading firmware remotely, create a MANAGER type user for that purpose.

To create a user:

1. Enter the Engineer Programming PIN (Default PIN is 1111. See Engineering PINs [→ 68]).
2. Scroll to USERS.
3. Press SELECT.

   ⇨ The option to ADD a user is displayed.

4. Press SELECT.

   ⇨ The system generates and displays next available user name.

5. Press SELECT to use the default name and numbers displayed, or use the keypad to enter a customized user name.
6. Press SELECT.

   ⇨ There are 3 types of users available: STANDARD USER, MANAGER, or LIMITED USER.

7. Scroll to the preferred user type and press SELECT.

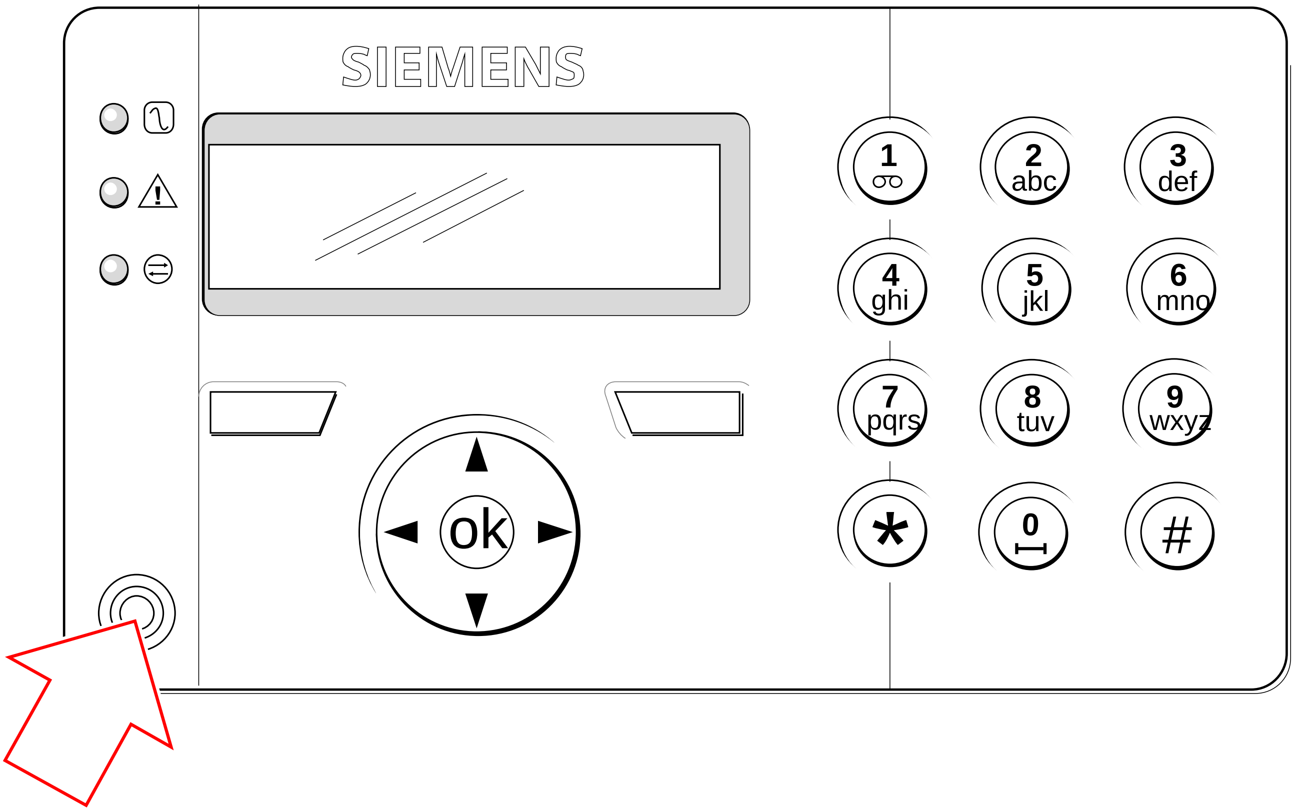
➪ The system generates a default code for the new user.

8. Press SELECT to use the default PIN.
   - OR -
   Enter a new user PIN and press SELECT.

➪ The keypad confirms that the new user has been created.

12.5 Programming the portable ACE

The SPC keypad can be configured with a proximity card/device reader. Users whose profiles are configured as such may remotely set or unset the system, as well as conduct programming, depending on the level of profile. When a proximity device has been programmed on the keypad, the user has the ability to set or unset the system or enter the user programming by presenting the device within 1 cm of the receiver area on the keypad.



Receiver area on the keypad

To program a portable ACE on the keypad:

1. Enter the Engineer Programming PIN. (Default PIN is 1111. See Engineer PINs [→ 68])
2. Scroll to USERS.
3. Press SELECT.
4. Select EDIT and select USER1 from the list.
5. Scroll to PACE and press SELECT.
6. Toggle for ENABLE and DISABLE of the PACE functionality.

   ➪ The keypad flashes PRESENT PACE on the top line display.

7. Position the PACE fob within 1 cm of the receiver area on the keypad.

⇨ The keypad indicates that the device has been registered by displaying PACE CONFIGURED.

To disable a portable ACE on the system:

1. Enter the Engineer Programming PIN. (Default PIN is 1111. See Engineering PINs [→ 68])
2. Scroll to USERS.
3. Press SELECT.
4. Select EDIT and select USER1 from the list.
5. Scroll to PACE and press SELECT.
6. Toggle to DISABLED.

⇨ The keypad indicates UPDATED.

12.6 Configuring 868 MHz wireless FOB devices

If an 868 MHz wireless receiver module is installed on the keypad or controller, a wireless fob device can be programmed via the keypad. Users whose profiles are configured as such may set/unset or partset the system by pressing the appropriate button on the device.

To program a wireless fob device on the system:

1. Enter the Engineer Programming PIN (Default PIN is 1111. See Engineering PINs [→ 68]).
2. Using the up/down arrow keys, scroll to the USERS option.
3. Press SELECT.
4. Select the EDIT option and press SELECT.
5. Scroll to the preferred user and press SELECT.
6. Scroll to the RF FOB option and press SELECT.
7. Toggle the setting to ENABLED and press SELECT.

   ⇨ The message PRESS KEY ON FOB flashes on the top line.
8. Position the fob to within 8 meters of the keypad and press one of the keys.

⇨ The message FOB CONFIGURED displays to indicate that the device has been registered.

To disable the wireless fob device on the system:

1. Enter the Engineer Programming PIN (Default PIN is 1111. See Engineering PINs [→ 68]).
2. Using the up/down arrow keys, scroll to the USERS option.
3. Select the EDIT option and press SELECT.
4. Scroll to the preferred user and press SELECT.
5. Scroll to the RF FOB option and press SELECT.

If no 868MHz wireless receiver is detected on the system, the RF FOB option is not displayed in the keypad menu.

6. Toggle to DISABLED and press SAVE.

1	Unset	3	Outputs
2	Fullset	4	Partset

Number of RF fobs per user: Only one fob device can be programmed for each user. To change fob devices among users, repeat the programming procedure for any new devices. Old fob devices become available for use by different users.

Force setting with the RF fob: It is NOT possible to force set the system with an RF fob even if the user assigned to the fob has the ability to force set. Force setting is only possible at the keypad.

12.6.1 Clearing alerts using the wireless FOB Device

Alerts on the SPC system are normally cleared using the keypad RESTORE option. Clearing alerts can also be performed by using the wireless fob device.

When an active alert is displayed on the keypad when the system is UNSET, the alert can be cleared or restored by pressing the UNSET key on the wireless fob five seconds after the system has been unset.

To enable this functionality, the KEYFOB RESTORE variable must be enabled:

1. Scroll to FULL ENGINEER > VARIABLES.
2. Press SELECT.
3. Scroll to KEYFOB RESTORE and press SELECT.
4. Toggle the setting to ENABLED and press SAVE.

13 Soft Engineer programming via the keypad

This section provides [Soft] Engineer programming options using the LCD keypad.

For each menu option, the keypad must be in Engineer programming:

1. Enter a valid Engineer PIN (Default Engineer PIN is 1111. For more details, see Engineering PINs [→ 68]).
2. Using the up/down arrow keys, scroll to the desired programming option.
3. To select a programming option using the keypad digits, enter the Engineer programming PIN plus the digit as shown in the table below.

⇨ Upon completion of the programming options, the keypad displays UPDATED momentarily.

1	SETTING	Performs an Unset, Fullset or Partset on the system. See page
2	INHIBIT	Displays a list of the Inhibited zones on the system. See page
3	ISOLATE	Allows the engineer to isolate zones on the system. See page [→ 108]
4	EVENT LOG	Displays a list of the most recent events on the system. See page [→ 108]
5	ACCESS LOG	Displays a list of the most recent access to the system. See page
6	CHANGE ENG PIN	Allows the engineer to change the engineer PIN. See page [→ 108]
7	USERS	Allows the engineer to add, edit or delete users. See page [→ 108]
8	ENGINEER SMS	Allows the engineer to enable or disable SMS functionality. See page [→ 113]
9	SET DATE/TIME	Allows the engineer to set the date and time. See page [→ 114]
10	INSTALLER TEXT	Allows the engineer to program the installer details and configure whether these are displayed on the keypad. See page [→ 114]
11	DOOR CONTROL	Allows the engineer to control doors. See page [→ 114].
12	FULL ENGINEER	Allows the engineer to program engineer options e.g. to trigger alarms on the system. See page [→ 75]

14 Engineer programming via the keypad

This section provides [Full] Engineer programming options using the LCD keypad

For each menu option, the keypad must be in Full Engineer programming:

1. Enter a valid Engineer PIN (Default Engineer PIN is 1111. For more details, see Engineering PINs [→ 68]).
2. Press SELECT for FULL ENGINEER programming.
3. Using the up/down arrow keys, scroll to the desired programming option.
4. To select a programming option using the keypad digits, as shown in the table below.
5. A quick select function is implemented. Press # to select a parameter (e.g. a zone attribute). The selected parameter is displayed with a * (e.g. *Inhibit).

⇨ Upon completion of the programming options, the keypad displays UPDATED momentarily.

1	OPTIONS	7	ZONES	13	ISOLATE	19	X10
2	TIMERS	8	DOORS	14	EVENT LOG	20	SET DATE/TIME
3	AREAS	9	OUTPUTS	15	ACCESS LOG	21	INSTALLER TEXT
4	AREA GROUPS	10	COMMUNICATIONS	16	CHANGE ENG PIN	22	DOOR CONTROL
5	XBUS	11	TEST	17	USERS		
6	WIRELESS	12	UTILITIES	18	ENG SMS		

14.1 SYSTEM STATUS

The System Status feature displays all faults on the system.

To view these faults:

1. Scroll to SYSTEM STATUS.
2. Press SELECT.

⇨ A list of the alerts, isolations or open zones will be displayed.

ℹ	*NOTICE*
	Users cannot exit from FULL ENGINEER programming if any fault conditions exist. The first fault will display on the keypad when you attempt to leave engineer mode. You can view and isolate all faults within the System Status menu under Alerts and Open Zones.

14.2 OPTIONS

1. Scroll to OPTIONS and press SELECT.
2. Scroll to the desired programming option:

➪ The programming options displayed in the OPTIONS menu vary depending on the security grade of the system (see right column)

Variable	Description	Default
SECURITY GRADE	Determines the Security Grade of the SPC Installation. ● GRADE 2: Conforms to Security Grade 2 requirements. ● GRADE 3: Conforms to Security Grade 3 requirements. ● ENGINEER CONFIG: Unrestricted	Grade: 2 Country: n/a
REGION	Determines the specific regional requirements that the installation complies with. Options are UK, IRELAND, EUROPE, SWEDEN, SWITZERLAND, BELGIUM	
APPLICATION	Determines whether SPC is being installed for use in a commercial business or a private residence. Choose between COMMERCIAL (see page [→ 251]), DOMESTIC (see page [→ 250]) or FINANCIAL.	Domestic

Refer to the section System Options [→ 155] for more details of the following OPTIONS.

PARTSET A	RENAME TIMED ACCESS to E/EXIT E/EXIT to ALARM LOCAL	
PARTSET B	RENAME TIMED ACCESS to E/EXIT E/EXIT to ALARM LOCAL	
CALL ARC MESSAGE	DISPLAY MESSAGE (ENABLED/DISABLED)	
CONFIRMATI ON	DD243: GARDA.	
AUTO RESTORE	ENABLED/DISABLED	
KEYFOB RESTORE	ENABLED/DISABLED	
USER DURESS	DISABLED PIN +1 PIN +2	
RETRIGGER	ENABLED/DISABLED	
BELL ON 1ST	ENABLED/DISABLED	

BELL ON FTS	ENABLED/DISABLED	
STROBE ON FTS	ENABLED/DISABLED	
ALARM ON EXIT	ENABLED/DISABLED Only available in ENGINEER CONFIG mode as setting is not in accordance with EN50131.	
LANGUAGE	SYSTEM LANGUAGE IDLE STATE :LANGUAGE	
PIN DIGITS	4 DIGITS 5 DIGITS 6 DIGITS 7 DIGITS 8 DIGITS	
CODED RESTORE	ENABLED/DISABLED	
WEB ACCESS	ENABLED/DISABLED Allows/restricts access to the web browser.	
OPEN ZONES	ENABLED/DISABLED	
ALLOW ENGINEER	ENABLED/DISABLED	
ALLOW MANUFACT. *	ENABLED/DISABLED	
SHOW STATE	ENABLED/DISABLED	
EOL RESISTANCE	NONE SINGLE EOL DUAL EOL ANTIMASKING PIR	
SMS AUTH MODE	PIN ONLY CALLER ID ONLY PIN + CALLER ID SMS PIN ONLY SMS PIN + CALLER ID	
PACE AND PIN	ENABLED/DISABLED	
RESTORE ON UNSET	ENABLED/DISABLED	
ENGINEER RESTORE	ENABLED/DISABLED	
OFFLINE TAMPER	ENABLED/DISABLED	
ENGINEER LOCK	ENABLED/DISABLED If enabled, system cannot be reset using yellow button on controller unless an engineer code is input on the keypad.	

ENGINEER LOCK	ENABLED/DISABLED	
SECURE PIN	ENABLED/DISABLED	
CLOCK	AUTOMATIC DST MAINS TIME SYNC	
SUSPICION AUDIBLE	ENABLED/DISABLED	
SHOW CAMERAS	ENABLED/DISABLED	
SEIS TEST ON SET	ENABLED/DISABLED	
ALERT FORBID SET	ENABLED/DISABLED	
ANTIMASK SET	DISABLED TAMPER FAULT ALARM	
ANTIMASK UNSET	DISABLED TAMPER FAULT ALARM	
RETRIGGER DURESS	ENABLED/DISABLED	
RETRIGGER PANIC	ENABLED/DISABLED	
RF OUTPUT	000-999 SECS	
TIME SYNC LIMIT	000-999 SECS	
SILENCE AUD VER.	ENABLED/DISABLED	

* Not available for SPC42xx, SPC43xx.

14.3 TIMERS

1. Scroll to TIMERS and press SELECT.
2. Scroll to the desired programming option:

Timers

Designation of the functions in the following order:

- 1st row: Web/SPC Pro
- 2nd row: Keypad

Timer	Description	Default
Internal Bells INT BELL TIME	Duration that internal sounders will sound when alarm is activated. (1 – 15 minutes: 0 = never))	15 min.
External Bells EXT BELL TIME	Duration that external sounders will sound when alarm is activated. (1 – 15 minutes; 0 = never)	15 min.
Ext. Bell Delay EXT BELL DELAY	This will cause a delayed activation of the external bell. (0 – 600 seconds)	0 sec.
Ext. Bell Strobe STROBE TIME	Duration that the strobe output will be active when an alarm is activated. (1 – 15 minutes; 0 = indefinitely)	15 min.
Chime CHIME TIME	Number of seconds that a chime output will activate, when a zone with chime attribute opens. (1 – 10 seconds)	2 sec.
Double Knock DKNOCK DELAY	The maximum delay between activation's of zones with the double attribute, which will cause an alarm. (1 – 99 seconds)	10 sec.
Soak SOAK DAYS	The number of days a zone remains under soak test before it automatically returns to normal operation. (1 – 99 days)	14 days
Mains Delay MAINS SIG DELAY	The time after a mains fault has been detected before an alert is activated by the system. (0 – 60 minutes)	0 min.
Dialer Delay DIALER DELAY	When programmed, the dialler delay initiates a predefined delay period (0 -30 seconds) before the system dials out to an Alarm Receiving Centre (ARC). This is specifically designed to reduce unwarranted responses from Alarm Receiving Centres and the constabulary. In the event of a subsequent zone being tripped the dialler delay period is ignored and the dialler dials out immediately. (0 – 30 seconds)	30 sec.
Keypad Timeout KEYPAD TIMEOUT	The number of seconds that an RKD will wait for key entry before it leaves the current menu. (10 – 300 seconds)	30 sec.
Keypad Language KEYPAD LANGUAGE	The duration a keypad will wait in idle before switching language to default (0 - 9999 seconds; 0 = never).	10 secs
Engineer Access ENGINEER ACCESS	The timer for the Engineer access starts as soon as the user enables the Engineer Access. (0 – 999 minutes. '0' indicates no time limitation for system access)	0 min.
Bell on Fullset FULLSET BELL	Activates the external bell momentarily to indicate a full set condition. (0 – 10 seconds)	0 sec.
Strobe on Fullset FULLSET STROBE	Activates the strobe on the external bell momentarily to indicate a full set condition. (0 – 10 seconds)	0 sec.
Final Exit FINAL EXIT	The Final Exit time is the number of seconds that arming is delayed after a zone programmed with the final exit attribute is closed. (1 – 45 seconds)	7 sec.
Tech. delay TECH. DELAY	Number of seconds to delay triggering of tech. zones with tech. delay attribute. (0 – 9999 seconds)	0 sec.
Fail To Set FAIL TO SET	Number of seconds to display fail to set message on keypads (0 until valid PIN is entered). (0 – 999 seconds)	10 sec.
Confirm CONFIRM TIME	● **Note:** Only available when Security Grade is 'Unrestricted' and 'DD243' is selected for 'Confirmation' variable. (See System Options [➔ 153]) This timer applies to the alarm confirmation feature and is	30 min.

Timer	Description	Default
	defined as the maximum time between alarms from two different non overlapping zones that will cause a confirmed alarm. (30 – 60 minutes)	
Exit* EXIT TIME (!)	The time period allowed for the user to exit the building after setting the system. The exit time will be counted down at the keypad as the buzzer beeps to indicate to the user that the system will arm when the exit timer reaches zero.	45 sec.
Entry* ENTRY TIME (!)	The time period allowed for the user to UNSET the alarm after opening an entry/exit zone of an armed system.	45 sec.
Frequent FREQUENT (!)	This attribute only applies to Remote Maintenance. The number of hours a zone must open within if the zone is programmed with the **Frequent use** attribute. (1 – 9999 hours)	336 hours (2 weeks)
Fire Pre-alarm FIRE PRE-ALARM	Number of seconds to wait before reporting file alarm for zones with ‘Fire pre-alarm’ attribute set. (1 – 999 seconds) See Editing a Zone [➔ 164].	30 sec.
Fire recognition FIRE RECOGNITION	Extra time to wait before reporting file alarm for zones with ‘Fire pre-alarm’ and ‘Fire Recognition’ attributes set. (1 – 999 seconds) See Editing a Zone [➔ 164].	120 sec.
Alarm abort ALARM ABORT	Time after a reported alarm in which an alarm abort message can be reported. (0 – 999 seconds))	30 sec.
Seismic Test Interval SEISMIC AUTOTEST	The average period between seismic sensor automatic tests (12 – 240 hours) **Note:** To enable automatic testing, the **Automatic Sensor Test** attribute must be enabled for a seismic zone.	168 hours.
Seismic Test Duration SEISMIC TEST DUR	Maximum time (in seconds) that a seismic sensor takes to trigger an alarm in response to the 'Seismic Test' output. (3 - 120 seconds)	30 sec.
RF Output Time RF OUTPUT	The time that the RF output will remain active on the system. (0 – 999 seconds)	0 sec.
Time Sync Limit TIME SYNC LIMIT	Time synchronisation only takes place if system time and update time are outside this limit.	0 sec.

*NOTE: Entry and Exit timers are displayed on this page if the function (multiple) Areas is not activated. If the function is activated, the Entry and Exit timers for each area are located in the Area Configuration.

ⓘ Default times are dependent upon the Engineer configuration. The default times denoted may or may not be allowable and is dependent on the configuration by the engineer

14.4 AREAS

1. Scroll to AREAS and press SELECT.
2. Scroll to the desired programming option:

ADD	For Domestic and Commercial Mode, the area type defaults to Standard. In Financial Mode, select area type STANDARD, ATM, VAULT or ADVANCED. Enter the name of the area and the preferred entry/exit time.
EDIT	Edit the following settings: ● DESCRIPTION ● ENTRY EXIT – ENTRY TIMER – EXIT TIMER – NO EXIT TIMER – FOB ENTRY ACTIVE ● PARTSET A/B – ENABLED/DISABLED ● LINKED AREAS – AREA – FULLSET – FULLSET ALL – PREVENT FULLSET – PREVENT FULLSET ALL – UNSET – UNSET ALL – PREVENT UNSET – PREVENT UNSET ALL ● SCHEDULE – CALENDAR – AUTOMATIC SET/UNSET – TIME LOCKED – VAULT ACCESS ● REPORTING – EARLY TO SET – LATE TO SET – EARLY TO UNSET – LATE TO UNSET ● SET/UNSET – WARNING TIME – USER CANCEL – USER DELAY – KEYSWITCH – DELAY INTERVAL – DELAY LIMIT – DELAYED UNSET – UNSET DURATION – INTERLOCK – DUAL PIN ● RF OUTPUT
DELETE	Select the area to be deleted.

See Adding / Editing an area [→ 165] for further details on these options.

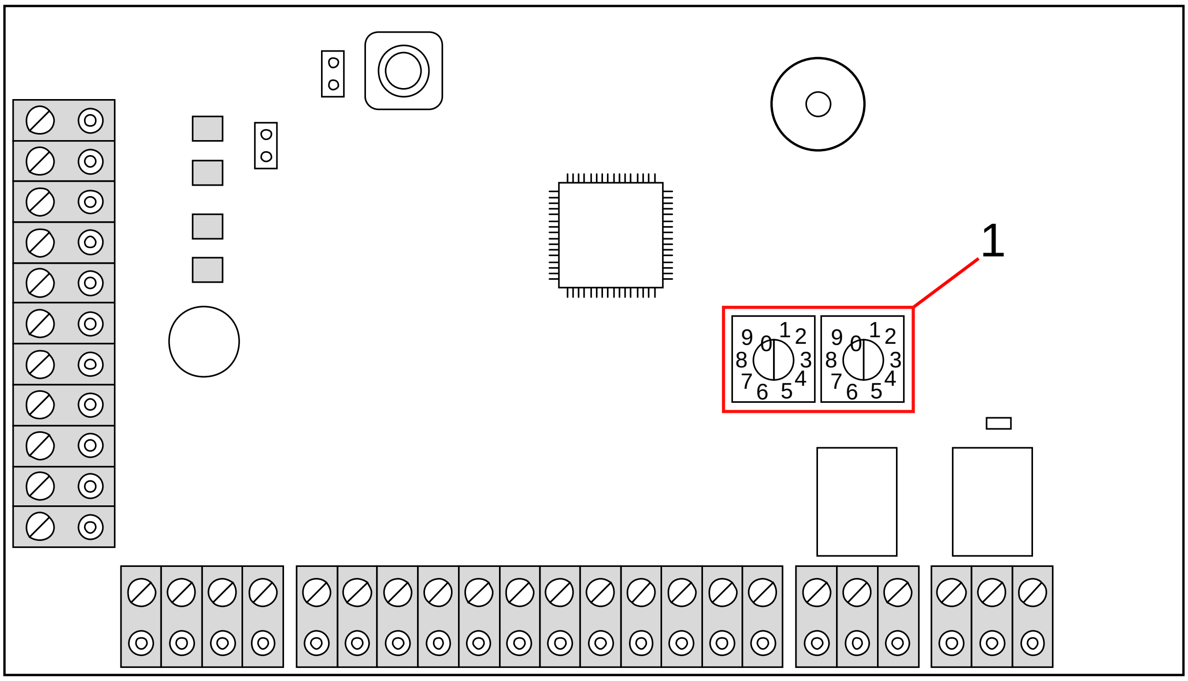
14.5 X-BUS

1. Scroll to XBUS and press SELECT.
2. Scroll to the desired programming options as shown below.

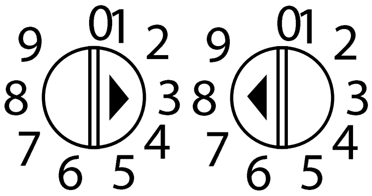
14.5.1 X-Bus addressing

Expanders, keypads and subsequent zones may be configured, located and monitored, with the steps provided in this section. X-BUS settings such as type, communication times and retries are also accessed within this menu.

The figure below shows each rotary switch with an arrow symbol pointing to a number for identification (i.e. 3, 8). The right switch is the first unit digit and the left switch is the 10s digit. The expander in the figure below is identified as 38.



Rotary switches

1	 Rotary switches identifying expander as 38

For a system with automatic addressing, expanders and keypads belong to the same numbering sequence. E.g. expanders and keypads are automatically numbered 01, 02, 03, etc., by the controller in the order in which they are detected, e.g. its relevant location to controller. In this configuration, zones are allocated to each input expander.

Automatically addressed expanders are not supported by SPC41xx.

14.5.2 RECONFIGURE

ℹ	*NOTICE*
	A reconfigure only applies to wired zones on an expander. Wireless zones on an expander and controller zones will not be brought online after a reconfigure. To bring controller zones online, you must apply a zone type other than ‘Unused’ using the zones menu on the keypad or web browser.

If the system has a mixture of expander types (with and without rotary switches) then the system can only be automatically reconfigured. If the system has all expanders with rotary switches, the system can still be automatically reconfigured and the system will ignore the rotary switches and auto addresses all the expanders on the system.

To reconfigure keypads/expanders:

1. Scroll to RECONFIGURE.
2. Press SELECT.
   ⇨ The number of online keypads is displayed.
3. Press NEXT.
   ⇨ The number of online expanders is displayed.
4. Press NEXT
   ⇨ The number of online zones is displayed.
5. Press BACK to exit.

14.5.3 KEYPADS/EXPANDERS/DOOR CONTROLLERS

ℹ	*NOTICE*
	You must upgrade to version 1.1 of firmware before adding door controllers. With earlier firmware versions, the door controllers are seen by the panel as normal I/O expanders and doors must be added manually.

14.5.3.1 LOCATE

To locate a keypad/expander/door controller:

1. Scroll to KEYPADS, EXPANDER or DOOR CONTROLLER and press SELECT.
2. Scroll to LOCATE and press SELECT.
3. Scroll to the expander/keypad/door controller to be located and press SELECT.

⇨ The selected device beeps and the LED flashes allowing Engineer to locate it.

4. Press BACK to exit.

⇨ Locate keypads using the same menus and following the keypad choice instead of expander.

14.5.3.2 MONITOR

To obtain an overview of the keypads/expanders/door controller connected to the system:

1. Scroll to KEYPADS, EXPANDER or DOOR CONTROLLER and press SELECT.
2. Scroll to MONITOR and press SELECT.
3. Scroll to desired Monitor programming option.
4. Press SELECT.

   ⇨ A list of detected keypads/expanders is displayed.
5. Scroll through the list and press SELECT on preferred expander/keypad/door controller.

   ⇨ Parameters and details, if applicable, are displayed for editing as shown in the table below.
6. Press BACK to exit.

STATUS	Online or offline
S/N	Serial number (used to track and identify)
VER	Firmware version
POWER	Power parameters: real-time voltage and current readings
BATTERY	Battery voltage: battery voltage level (PSU expanders only)
INPUT STATE	State of each zone input associated with an expander as follows: C: Closed, O: Open, D; Disconnected, S: Short (Expanders with inputs only)

14.5.3.3 EDIT KEYPADS

To edit keypads:

1. Scroll to KEYPADS > EDIT.
2. Press SELECT.
3. Scroll to the device to be edited and press SELECT.

   ⇨ The configuration settings for a standard keypad and comfort keypad are described in the sections below.
4. Press BACK to exit the menu.

Standard Keypad Settings

Configure the following settings for the keypad.

Description	Enter a unique description to identify the keypad.
Function Keys (in idle state)	
Panic	Select Enable, Disable or Enabled Silent. If enabled, panic alarm is activated by pressing the 2 soft keys together.
Visual Idications	
Backlight	Select when keypad backlight is on. Options are: - On after key is pressed; Always on; Always off..
Indicators	Enable or disable the LED's on the keypad.
Setting state	Select if setting state should be indicated in idle mode.
Audible Indications	
Buzzer	Enable or disable the buzzer on the keypad.
Partset Buzzer	Enable or disable buzzer during exit time on Partset.
Keypress	Select if the speaker volume for the key presses should be activated.
Deactivation	
Calendar	Select if the keypad should be limited by calendar. See Calendar [→ 236].
Mapping gate	Select if keypad should be limited by a mapping gate.
Keyswitch	Select if keypad should be limited by a keyswitch.
PACE Entry	Tick this box to disable the keys on the keypad during the entry time when a PACE is configured on the keypad.
Areas	
Location	Select the secured area where the keypad is located.
Areas	Select which areas can be controlled through keypad.
Options	
Delay Fullset	Select to configure a delayed set across all keypads. The location of the keypad is ignored and all areas will perform a full exit time count down.

ℹ	*NOTICE*
	An area should be assigned to a keypad only if the keypad is inside the assigned area, and if an entry/exit route is defined. If an area is assigned, when the particular area is set or unset then entry and exit timers are used (if configured). Other features related to entry/exit routes also become available. If no area is assigned, the area is set or unset immediately and other entry/exit features are not available

Comfort Keypad Settings

Configure the following settings for the comfort keypad.

Description	Enter a unique description to identify the keypad.
Function Keys (in idle state)	
Panic	Select Enable, Disable or Enabled Silent. If enabled, panic alarm is activated by pressing F1 and F2 soft keys together.
Fire	Enable to allow fire alarm to be activated by pressing F2 and F3 soft keys together.
Medical	Enable to allow medical alarm to be activated by pressing F3 and F4 soft keys together.
Fullset	Enable to allow Fullset to be activated by pressing F2 key twice.
Partset A	Enable to allow Partset A to be activated by pressing F3 key twice.
Partset B	Enable to allow Partset B to be activated by pressing F4 key twice.
Visual indications	
Backlight	Select when keypad backlight is on. Options are: - On after key is pressed; Always on; Always off.
Backlight Intensity	Select the intensity of illumination of the backlight. Range 1 - 8 (High).
Indicators	Enable or disable the LED's on the keypad.
Setting state	Enable if setting state should be indicated in idle mode. (LED)
Logo	Enable if logo should be visible in idle mode.
Analog Clock	Select position of clock if visible in idle mode. Options are Left Aligned, Center Aligned, Right Aligned or Disabled.
Emergency Keys	Enable if Panic, Fire and Medical function keys should be indicated in the LCD display.
Direct Set	Enable if Fullset/Partset function keys should be indicated in the LCD display.
Audible indications	
Alarms	Select speaker volume for alarm indications or disable sound.
Entry/Exit	Range is 0 – 7 (Max volume)
Chime	Select speaker volume for entry & exit indications or disable sound.
Keypress	Range is 0 – 7 (Max volume)
Voice Annunciation	Select speaker volume for chime or disable sound.
Partset Buzzer	Range is 0 – 7 (Max volume)
Deactivation	
Calendar	Select if the keypad should be limited by calendar. See Calendar.
Mapping gate	Select if keypad should be limited by a mapping gate.

Keyswitch	Select if keypad should be limited by a keyswitch.
PACE Entry	Tick this box to disable the keys on the keypad during the entry time when a PACE is configured on the keypad.
Areas	
Location	Select the secured area where the keypad is located.
Areas	Select which areas can be controlled through keypad.
Options	
Delay Fullset	Select to configure a delayed set across all keypads. The location of the keypad is ignored and all areas will perform a full exit time count down.

ℹ *NOTICE*

An area should be assigned to a keypad only if the keypad is inside the assigned area, and if an entry/exit route is defined. If an area is assigned, when the particular area is set or unset then entry and exit timers are used (if configured). Other features related to entry/exit routes also become available. If no area is assigned, the area is set or unset immediately and other entry/exit features are not available.

14.5.3.4 EDIT EXPANDERS

To edit expanders:

1. Scroll to EXPANDERS > EDIT.
2. Press SELECT.
3. Scroll to the device to be edited and press SELECT.
   ⇨ Parameters and details, if applicable, are displayed for editing as shown in the table below.
4. Press BACK to exit the menu.

LOCATE	BUZZER, LED
MONITOR	STATUS (ONLINE/OFFLINE), SERIAL NUMBER, VERSION, POWER, INPUT STATE, PSU, AUX FUSE, ADDRESS INFO (MANUAL/AUTOMATIC)
EDIT	DESCRIPTION INPUT>SELECT ZONE KEYPAD (Indicator Expander Only) FUNCTION KEYS (Indicator Expander Only) LED ALWAYS (Indicator Expander Only) MODE (LINKED/FLEXIBLE) (Indicator Expander Only) VISUAL INDICATIONS (FLEXIBLE MODE) (Indicator Expander Only) AUDIO INDICATIONS (FLEXIBLE MODE) (Indicator Expander Only)

	DEACTIVATION (FLEXIBLE MODE) (Indicator Expander Only) LOCATION (Keyswitch Expander Only) LATCH (Keyswitch Expander Only) VISUAL INDICATION (Keyswitch Expander Only) DEACTIVATION (Keyswitch Expander Only) FUNCTION KEYS (Keyswitch Expander Only) AUX. CHANNEL (Audio Expander Only) VOLUME LIMIT (Audio Expander Only)

For naming and identifying, expanders are allocated zones (in groupings of 8) with subsequent identities of 1 to 512. (The greatest number in zone identification is 512.) Therefore, any expander named or identified by a number greater than 63 has no allocated zones.

14.5.3.5 EDIT DOOR CONTROLLERS

For further information about Door controller see page [➞ 39].

1. Scroll to DOOR CONTROLLERS > EDIT.
2. Press SELECT.
3. Scroll to the device to be edited and press SELECT.

⇨ Parameters and details, if applicable, are displayed for editing as shown in the table below.

DESCRIPTION	Name of the door controller
DOORS	Configuration of Door I/O 1 & Door I/O 2.
READERS	Configuration of Reader Profiles

To edit a DOOR I/O:

1. Scroll to DOORS.
2. Press SELECT.
3. Scroll to the DOOR I/O to be edited and press SELECT.

⇨ Parameters and details, if applicable, are displayed for editing as shown in the table below.

ZONES	No access functionality is realized. The inputs and outputs can be used normally.
DOOR 1 – DOOR 64	The selected door number is assigned to the DOOR I/O.

If the option “ZONES” is selected for a DOOR I/O the two inputs of this door I/O must be configured:

To edit the two zones of a DOOR I/O:

1. Scroll to the DOOR I/O to be edited and press SELECT

   ⇨ The option “Zones” is selected.

2. Press SELECT.
3. Select which Zone should be edited (DPS or DRS zone).
4. Press SELECT.

⇨ Parameters and details, if applicable, are displayed for editing as shown in the table below.

UNASSIGNED	This zone is not assigned and can not be used.
ZONE 1 – ZONE 512	The zone which is edited is assigned to this zone number. If the zone is assigned to a specific zone number, it can be configured like a normal zone.

ℹ The zones can be assigned to each free zone number. But the assignment is not fix. If the zone was assigned to zone number 9 and an input expander with the address 1 is connected to the X-Bus (which is using the zone numbers 9-16) the assigned zone from the two door controller will be moved to the next free zone number. The configuration will be adapted accordingly.

To edit a READER PROFILE:

1. Scroll to READERS.
2. Press SELECT.
3. Scroll to the READER to be edited and press SELECT.

⇨ Select any of the following profiles for the reader:

1	For readers with a green and a red LED.
2	For SIEMENS readers with a yellow LED (AR618X).
3	Profile 3 is used with HID readers that send a PIN to the panel as a card reading with a predefined site code (0)
4	Profile 4 is used with HID readers that send a PIN to the panel as a card reading with a predefined site code (255).

See also

🗎 Door Controller [→ 39]

14.5.4 ADRESSING MODE

X-BUS addressing can be configured in one of the 2 following ways:

Automatic addressing

Automatic addressing can be done with a combination of rotary switch and without rotary switch expanders. With automatic addressing, the controller over-rides rotary switches and automatically assigns expanders and keypads in the system unique IDs in sequential order

Manual addressing

Manual addressing allows manual determination of each expander/keypad ID in a system. All devices should be installed where required and each ID set manually using the rotary switches.

If 2 devices of a kind (e.g. expanders) are set to same ID, upon configuration, both expanders beep and the flashing LED indicates conflict. Reset the switches and the system rescans.

On a device, if both rotary switches are set to zero (0, 0), the full configuration becomes an automatic addressing configuration.

To select the ADDRESS MODE:

1. Scroll to ADDRESS MODE.
2. Press SELECT.
3. Toggle for appropriate address mode: AUTOMATIC or MANUAL
4. Press SELECT to update the setting.

14.5.5 XBUS TYPE

To program the X-BUS type from the keypad:

1. Scroll to XBUS TYPE.
2. Press SELECT.
3. Scroll to select desired configuration:
   - LOOP
   - SPUR
4. Press SELECT to update the setting.

14.5.6 BUS RETRIES

To program the number of times the system attempts to retransmit data on the X-BUS interface before a communications fault is generated:

1. Scroll to BUS RETRIES.
2. Press SELECT.
3. Enter the preferred number of times the system retransmits data.
4. Press SELECT to update the setting.

14.5.7 COMMS TIMER

To designate the length of time before a communication fault is recorded:

1. Scroll to COMMS TIMER.
2. Press SELECT.
3. Enter the preferred time setting.
4. Press ENTER to update the setting.

14.6 WIRELESS

1. Scroll to WIRELESS and press SELECT.
2. Scroll to the desired programming option:

SENSORS	It may be necessary to change the type of sensor enrolled on the system if the sensor type was incorrectly identified in the enrolment process. If no wireless detectors are enrolled, the keypad displays NO ACTIVE SENSORS. The following options are available for sensors: ● ADD See ADD SENSORS [→ 91] ● EDIT (Change zone assignment) See EDIT SENSORS (ZONE ASSIGNMENT) [→ 92] ● REMOVE Select the device or sensor to be deleted.
WPA	Add, edit or remove a WPA (Wireless Personal Alarm). ● ADD See ADD WPA [→ 92] ● EDIT See EDIT WPA [→ 93] ● REMOVE Select the WPA to be deleted.
EXTERNAL ANTENNA	Enable or disable the external antenna.
SUPERVISION	Enable or disable tamper supervision.
FILTER LOW SIGNAL	Enable or disable the filter low signal (RF strengths 0 and 1).
DETECT RF JAM	Enable or disable the RF JAM.
RFFOB PANIC	Enable or disable the RFFob Panic or enable silent mode for the RFFob Panic.
WPA TEST SCHEDULE	Enter a maximum period (in days) between WPA tests. Max is 365 days.
PREVENT SET TIME	Enter a time in minutes after which, if the sensor or WPA fails to report, a setting is prevented for an area where the wireless zone is. Max is 720 minutes.
DEVICE LOST TIME	Enter the number of minutes after which the wireless device is reported as lost if it fails to report within this timeframe. (Min is 20 and max is 720 minutes)

14.6.1 ADD SENSORS

To add a wireless sensor device:

1. Scroll to ADD and press SELECT.
   ⇨ The prompt ACTIVATE ENROL is displayed.
2. Press SELECT.

⇨ The top line of the display flashes the text ACTIVATE DEVICE.

3. Activate the wireless device between 3 and 5 times in succession to allow the keypad receiver to detect the wireless transmission of the device.

   ⇨ The display indicates that the device has been detected by flashing the text FOUND SENSOR. The device TYPE and ID information is displayed alternately.

4. Press ENROL.

⇨ A prompt to select the zone type is displayed.

1. Press SELECT.
2. Scroll to the required zone type and press SELECT.

ℹ To add a device by TAMPER ENROL, scroll to this option in step 2. The enrolment process is identical except a prompt to define an area type is displayed before the zone type prompt.

14.6.2 EDIT SENSORS (ZONE ASSIGNMENT)

It may be necessary to change the zone assignment of sensor enrolled on the system.

To change the zone assignment of a wireless detector:

1. Scroll to EDIT and press SELECT.
2. Scroll to the sensor to be changed and press SELECT.
3. Scroll to ZONE.
4. Scroll to the appropriate zone number (only unoccupied zone numbers are displayed).
5. Press SELECT.

14.6.3 ADD WPA

!	*NOTICE*
	You can only configure a WPA or check its status on the keypad if there is a wireless module fitted on the panel or any of its expanders and the panel is licensed for the type of module(s) fitted.

A WPA is not assigned to a user. Usually, a WPA is shared by several people, for example, security guards working in shifts or, alternatively, WPAs may be permanently attached to a surface such as under a desk or behind a till.

A maximum of 128 WPAs is allowed per panel.

To configure a WPA with the keypad:

1. Select WIRELESS and then WPA.
2. Select ADD to add a WPA.

3. Select MANUALLY to manually enter a WPA ID.
   The ID can also be entered automatically by the panel by selecting the LEARN WPA option. One of the WPAs buttons must be pressed when the ACTIVATE WPA message is displayed, in order for the panel to identify the WPA. The panel will not accept a WPA if it's ID is a duplicate of a currently configured WPA.
4. Exit the ADD menu and select the EDIT menu to configure the WPA.

14.6.4 EDIT WPA

To configure a WPA with the keypad:

1. Select WIRELESS and then WPA.
2. Select EDIT to configure a WPA.

DESCRIPTION	Enter a description to uniquely identify the WPA.
TRANSMITTER ID	Enter the WPA Id. The panel will not accept a WPA if it's ID is a duplicate of a currently configured WPA.
BUTTON ASSIGNMENT	Use this section to assign functions to button combinations. Available functions are Panic, Holdup and Suspicion. More than one button combination can be selected for the same function. For example: ● Yellow - Suspicion● ● Red + Green – Holdup ● For Commercial or Domestic installations, the default is: Red + Green – Panic **Note:** If no function is assigned to a button combination, it is still possible use that combination by using a trigger. See Triggers [→ 239]
SUPERVISE	The WPA may be configured to send periodic supervision signals. If supervision is enabled on the WPA (with the jumper), the WPA sends out a supervision message about every 7.5 minutes. The time between messages is randomized to decrease the chances of collision with other WPAs. The supervision function also needs to be enabled on the panel for the particular WPA for correct supervision operation. If the panel does not get a supervision signal, it raises an alarm that is shown in the keypad and logged. If supervision is not enabled, the WPA sends out a supervision message about every 24 hours to transmit the WPA battery status to the panel. This message is also randomized to decrease the chances of collision with other WPAs. Select ENABLE if supervision has been enabled for that particular WPA.

See also

Triggers [→ 239]

Configuring WPA Timers [→ 91]

Testing a WPA from the Keypad [→ 106]

14.7 ZONES

1. Scroll to ZONES and press SELECT.
2. Scroll to the desired zone (ZONE 1-x).
3. Scroll to the desired programming option:

DESCRIPTION	Used to help identify the zone: enter a specific and descriptive name.
ZONE TYPE	Determines the zone type. See page [→ 285].
ATTRIBUTES	Determines the attributes of the zone. See page [→ 287].
TO AREA	Determines which zone is mapped to which area. This menu option is only displayed if multiple areas are defined on the system. Selecting this feature allows users to build a set of zones that are identified with a particular area in the building.

ℹ The number and type of attributes displayed in the keypad menus for a particular zone vary depending on the type of zone that is selected. See page.

14.8 DOORS

14.8.1 DOORS

1. Scroll to DOORS and press SELECT.
2. Scroll to the door to be programmed and press SELECT.
3. Parameters and details, if applicable, are displayed for editing as shown in the table below.

Door inputs

Each door has 2 inputs with predefined functionality. These two inputs, the door position sensor and the door release switch can be configured.

Zone	The door position sensor input can be used for the intrusion part as well. If the door position sensor input is used also for the intrusion part, the zone number it is assigned to has to be selected. If the door position sensor is used only for the access part, the option “UNASSIGNED” has to be selected. If the door position sensor is assigned to an intrusion zone, it can be configured like a normal zone but only with limited functionality (e.g. not all zone types are selectable). If an area or the system is set with the card reader, the door position sensor input has to be assigned to a zone number and to the area or the system which have to be set.
Description	Description of the zone the door position sensor is assigned to.
Zone Type	Zone type of the zone the door position sensor is assigned to (not all zones types are available).
Zone attributes	The attributes for the zone the door position sensor is assigned to can be modified.
Area	The area the zone and the card reader are assigned to. (If the card reader is used for setting & unsetting, this area will be set / unset).
Door Position	The resistor used with the door position sensor. Choose the used resistor value / combination.
DPS Normal	Select if the door release switch is to be a normally open or normally

Open	closed input.
Door Release	The resistor used with the door release switch. Choose the used resistor value / combination.
DRS Normal Open	Select if the door release switch is a normally open input or not.

Each free zone number can be assigned to the zones but the assignment is not fixed. If the number ‘9’ is assigned to a zone, the zone and an input expander with the address ‘1’ is connected to the X-Bus (which is using the zone numbers 9-16). The assigned zone from the two door controller will be moved to the next free zone number. Configuration will be adapted accordingly.

Door Groups

The different doors can be assigned to door groups. This is needed if one of the following functionalities is activated:

- Custodian
- Soft Passback
- Prevent Passback
- Interlock

Door attributes

If no attribute is activated, a valid card **or** a PIN can be used.

Attribute	Description
Void	The card is temporarily blocked.
Door Group	Used when multiple doors are assigned to the same area and/or anti passback, custodian, or interlock functionality is required.
Card and PIN	Card and PIN are required to gain entry.
PIN Only	PIN is required. No card will be accepted.
PIN Code or Card	PIN or card are required to gain entry
PIN to Exit	PIN is required on exit reader. Door with entry and exit reader is required.
PIN to Set/Unset	PIN is required to set and unset the linked area. The card has to be presented before the PIN is entered.
Unset outside	Panel/area will unset, when card is presented at entry reader.
Unset inside	Panel/area will unset, when card is presented at exit reader.

Attribute	Description
Fullset outside	Panel/area will fullest, when card is presented twice at entry reader.
Fullset inside	Panel/area will fullest, when card is presented twice at exit reader.
Emergency	Door lock opens if a fire alarm is detected within the assigned area.
Escort	The escort feature enforces privileged card holders to escort other card holders through specific doors. If this feature is assigned to a door, a card with the “escort right” has to be presented first, to allow other cardholders without this right to open the door. The time period in which cardholders are able to present their cards after a card with escort right was presented, can be configured per door.
Prevent Passback*	Anti-passback should be enforced on the door. All doors must have entry and exit readers and must be assigned to a door group. In this mode, cardholders must use their access card to gain entry into and exit from a defined door group. If a valid cardholder has presented his access card to enter a door group and not presented the card to exit it, the cardholder is in breach of the Anti-Passback rules. Next time the cardholder attempts to enter the same door group, a hard Anti-Passback alarm will be raised and the cardholder will not be permitted entry to the door group.
Soft Passback*	Anti-passback violations are only logged. All doors must have entry and exit readers and must be assigned to a door group. In this mode, cardholders must use their access card to gain entry to and exit from a defined door group. If a valid cardholder has presented his access card to enter a door group and not presented the card to exit it, the cardholder is in breach of the Anti-Passback rules. Next time the cardholder attempts to enter the same door group, a Soft Anti-Passback alarm will be raised. However, the cardholder will still be permitted entry to the door group.
Custodian*	The custodian feature allows a card holder with custodian right (the custodian) to give other cardholders (non-custodians) access to the room. The custodian must be the first to enter the room. The non-custodians are only allowed to enter if the custodian is in the room. The custodian will not be allowed to exit until all non-custodians have left the room.
Door sounder	Door controller PCB mounted sounder sounds on door alarms.
Ignore Forced	Door forced open is not processed.
Interlock*	Only one door in an area will be allowed open at a time. Requires Door Group.
Setting Prefix	Authorisation with prefix (A,B,* or #) key to set system
* Require door group	

Door timers

Timer	Min.	Max.	Description
Access granted	1 s	255 s	The time the lock will remain open after granting access.
Access deny	1 s	255 s	The duration after which the controller will be ready to read the next event after a invalid event.
Door open	1 s	255 s	Duration within which the door must be closed to prevent a “door open too long” alarm.
Door left open	1 min	180 min	Duration within which the door must be closed to prevent a “door left open” alarm.
Extended	1 s	255 s	Additional time after granting access to a card with extended time attribute.
Escort	1 s	30 s	Time period after presenting a card with escort attribute within a user without escort right can access the door.

14.9 OUTPUTS

Each zone type on the SPC system has an associated output type (an internal flag or indicator). When a zone type is activated, i.e. a door or window opens, smoke is detected, an alarm is detected, etc., the corresponding output is activated.

1. Scroll to OUTPUTS and press SELECT.
2. Scroll to CONTROLLER or EXPANDER and press SELECT.
3. Scroll to the expander/output to be programmed and press SELECT.

   ⇨ If the output activations are recorded in the system event log (i.e. enabled, items recorded / disabled, items) the programming options are available as shown in the table below.

NAMES	Used to help identify the output; enter a specific and descriptive name.
OUTPUT TYPE	Determines the output type; see the table in page [→ 98], for a description of output types.
OUTPUT MODE	Determines the style of the output: continuous, momentary or pulsed.
POLARITY	Determines whether the output is activated on a positive or negative polarity.
LOG	Determines if system log is enabled or disabled.

For the output test procedure, see page [→ 105].

14.9.1 Outputs types and output ports

Each output type can be assigned to one of the 6 physical output ports on the SPC controller or to an output on one of the connected expanders. Output types that are not assigned to physical outputs act as indicators of events on the system and may be logged and/or reported to remote central stations if required.

The output ports on the expanders are all single pole relay type outputs (NO, COM, NC); therefore, output devices may need external power sources to activate if they are wired to expander outputs.

The activation of a particular output type depends on the zone type (see page [→ 285]) or alert condition that triggered the activation. If multiple areas are defined on the system then the outputs on the SPC are grouped into system outputs and area outputs; the system outputs are activated to indicate a system wide event (e.g. mains fault) whereas the area outputs indicate events detected in one or more of the defined areas on the system. Each area has its own set of area outputs; if the area is a common area for other areas, then its outputs will indicate the state of all the areas it is common for, including its own state. For example, if Area 1 is common for Area 2 and 3, and Area 2 Ext. Bell is active, then the Area 1 Ext Bell output is also active.

Some output types can only indicate system wide events (no specific area events). Please refer to the table below for further information.

Output Type	Description
External Bell	This output type is used to activate the system external bell and is active when any Area External Bell is active. By default, this output is assigned to the first output on the controller board (EXT+, EXT-). **Note**: An external bell output is automatically activated whenever a zone programmed as an Alarm zone triggers an alarm in Fullset or Partset modes.
External Bell Strobe	This output type is used to activate the strobe on the system external bell and is active when any area strobe is active. By default, this output is assigned to the strobe relay output (Output 3) on the Controller board (NO, COM, NC). **Note**: An external bell strobe output is automatically activated whenever a zone programmed as an alarm zone triggers an alarm in Fullset or Partset modes. The external bell strobe activates on a 'Fail to Set' condition if the strobe on the 'Fail to Set' option is checked in system options.
Internal Bell	This output type is used to activate the internal bell and is active when any area Internal Bell is active. By default, this output is assigned to the second output on the controller board (INT+, INT-). **Note**: An internal bell output is automatically activated whenever a zone programmed as an Alarm zone type triggers an alarm in Fullset or Partset modes. The internal Bell activates on a 'Fail to Set' condition if the Bell on the 'Fail to Set' option is checked in system options.
Alarm	This output turns on following alarm zone activation on the system or from any area defined on the system.
Alarm Confirmed	This output turns on when an alarm has been confirmed. An alarm is confirmed when 2 independent zones on the system (or within the same Area) activate within a set time period).
Panic*	This output turns on following activation of panic alarm zone types from any area. A panic alarm output is also generated if a user duress event is generated or if the panic option for the keypad is enabled.

Hold-up	This output turns on whenever a zone programmed as a Hold-up type zone triggers an alarm from any area
Fire	This output turns on following a fire zone activation on the system (or from any area)
Tamper	This output turns on when a tamper condition is detected from any part of the system
Medical	This output turns on when a medic zone is activated
Fault	This output turns on when a technical fault is detected
Technical	This output follows tech zone activity
Mains Fault*	This output activates when Mains power is removed
Battery Fault*	This output activates when there is a problem with the backup battery. If the battery voltage drops below 11 V this output activates. The ’Restore’ option for this fault is only presented when the voltage level rises to above 11.8 V.
Partset A	This output is activated if the system or any area defined on the system is in Partset A mode
Partset B	This output is activated if the system or any area defined on the system is in Partset B mode
Fullset	This output is activated if the system is in Fullset mode
Fail to set	This output activates if the system or any area defined on the system failed to set; it clears when the alert is restored
Entry/Exit	This output activates if an Entry/Exit type zone has been activated; i.e. a system or area Entry or Exit timer is running
Latch	This output turns on as defined in the system latch output configuration (see Configuring system latch and auto set outputs [➙ 187]). This output can be used to reset latching sensors as smoke or inertia sensors.
Fire Exit	This output turns ON if any Fire-X zones on the system are activated
Chime	This output turns on momentarily when any zone on the system with chime attribute opens
Smoke	This output turns on momentarily when a user unsets the system; it can be used to reset smoke detectors
Walk Test*	This output turns on momentarily when a walk test is operational and a zone becomes active. This output can be used, for example, to activate functional tests of connected detectors (if available).
Auto Set	This output turns on if the Auto Set feature has been activated on the system.
User Duress	This output turns on if a user duress state has been activated (PIN code + 1 has been entered on the keypad)
PIR Masked	This output turns on if there are any masked PIR zones on the system
Zone Omitted	This output turns on if there are any inhibited, isolated, or walk test zones on the system
Fail to Communicate	This output turns on if there is a failure to communicate to the central station
Man Down Test	This output turns on a ‘Man Down’ wireless device which is activated during a ‘Man Down’ test.

Unset	This output is activated if the system is in Unset mode.
Alarm Abort	This output activates if an alarm abort event occurs i.e. when a valid user code is entered via the keypad after a confirmed or unconfirmed alarm. It is used, for example, with external dialers (SIA, CID, FF)
Seismic Test	This output is used to activate a manual or automatic test on a seismic zone. Seismic sensors have a small vibrator that will be attached to the same wall as the sensor and is wired to an output on the panel or one of its expanders. During the test, the panel waits up to 30 seconds for the seismic zone to open. If it does not open, the test fails. If it opens within 30 seconds the panel then waits for the zone to close within 10 seconds. If that doesn’t happen, the test fails. The panel then waits a further 2 seconds before reporting the test result. The result of the test, either manual or automatic, is stored in the system event log
Local Alarm	This output activates on a local intrusion alarm.
RF Output	This output activates when a Fob or WPA button is pressed.
Modem 1 Line Fault	This output activates when there is a line fault on the primary modem..
Modem 1 Failure	This output activates when the primary modem fails.
Modem 2 Line Fault	This output activates when there is a line fault on the secondary modem.
Modem 2 Failure	This output activates when the secondary modem fails.
Battery Low	This output activates when the battery is low,
Entry Status	This output activates if an ‘All Okay’ entry procedure is implemented and there is no alarm generated i.e. the ‘All Okay’ button is pressed within the configured time after the user code is entered.
Warning Status	This output activates if an ‘All Okay’ entry procedure is implemented and a silent alarm generated i.e. the ‘All Okay’ button is not pressed within the configured time after the user code is entered.

**This output type can only indicate system wide events (no area specific events).*

14.10 COMMUNICATION

1. Scroll to COMMUNICATION and press SELECT.
2. Scroll to the desired programming option.

14.10.1 SERIAL PORTS

The serial ports allow older style PCs to be connected to the system or other peripheral equipment like printers.

1. Scroll to SERIAL PORTS.
2. Press SELECT.
3. Scroll to the serial port to be programmed.
4. Select the desired programming option shown in the table below.
5. Press BACK to exit.

TYPE	Determines if type is TERMINAL (system information) or PRINTER (SPC event log)
BAUD RATE	Determines the speed of the communication between the panel and the peripheral equipment. Please note that the baud rate must be set the same as both items of equipment.
DATA BITS	Determines the length of data packet to be transferred between the panel and the peripheral equipment. Please note that the data bits must be set the same for both items of equipment.
STOP BITS	Determines the number of stop bits at the end of the data packet. Please note that the stop bits must be set the same for both items of equipment.
PARITY	Determines the parity (odd/even) of the data packet. Please note that the parity must be set the same for both items of equipment.
FLOW CONTROL	Determines if the data is under hardware (RTS, CTS) or software control (None). Please note that the flow control must be set the same for both items of equipment.

14.10.2 ETHERNET PORTS

To program the Ethernet port:

1. Scroll to ETHERNET PORT.
2. Press SELECT.
   - ⇨ The IP ADDRESS option displays, XXX.XXX.XXX.XXX For single digits, leading zero(s) are required. Ie., 001
3. Press SELECT and enter the preferred IP address.
   - ⇨ When the ENTER key is operated, the system beeps twice and states UPDATED if the IP address is valid. If the IP address is allocated manually, then this must be unique on the LAN or VLAN, connected to panel. A value is not entered if the DCHP option is used.
4. Scroll to IP NETMASK.
5. Press SELECT and enter the IP NETMASK format XXX.XXX.XXX.XXX. (For single digits, leading zero(s) are required. Ie., 001) When the ENTER key is operated, the system beeps twice and states UPDATED if the IP NETMASK is valid.
6. Scroll to GATEWAY. Note the gateway needs to be programmed for access outside the network (for use with the Portal).
7. Press SELECT and enter the GATEWAY format XXX.XXX.XXX.XXX. (For single digits, leading zero(s) are required. Ie., 001) When the ENTER key is operated, the system beeps twice and states UPDATED if the GATEWAY is valid.
8. Scroll to DHCP. The DHCP is enabled if the LAN has a DHCP server to allocate the IP address. The IP address is to be enabled manually. Note the gateway needs to be programmed if the panel needs access outside the network (for Portal service).
9. Press SELECT and enter the GATEWAY format XXX.XXX.XXX.XXX. (For single digits, leading zero(s) are required. Ie., 001)
   - ⇨ When the ENTER key is operated, the system beeps twice and states UPDATED if the GATEWAY is valid.
   - ⇨ The DHCP option is displayed.
10. Toggle between DHCP ENABLED and DISABLED for preferred option.

11. Press SELECT.

14.10.3 MODEMS

The SPC system supports SPC intell-modems for communications with analogue lines and mobile network interfacing for enhanced communications and connectivity. The SPC system must be configured accordingly.

!	*NOTICE*
	Before changing PIN or new SIM card, ensure all power sources are disconnected (AC mains and battery) or card will not be activated.

ℹ	*NOTICE*
	After a factory default, during the process of initial setup of the system with the keypad, the panel detects if it has a primary or backup modem fitted, and if so, it displays its type and automatically enables it (or them) with the default configuration. No other modem configuration is allowed at this stage.

To configure a GSM or PSTN modem:

1. Scroll to MODEMS.
2. Press SELECT.
3. Toggle between PRIMARY and BACKUP for correct modem slot and press SELECT.
   ⇨ The ENABLE MODEM option is displayed.
4. Press SELECT and toggle between ENABLED and DISABLED for the preferred setting and press SELECT.
   ⇨ Modem is enabled/disabled and UPDATED displays.
5. Scroll from this modem menu to MODEM STATUS.
6. Press SELECT to view the status of the modem.
   ⇨ The FIRMWARE VERSION option is displayed.
7. Press SELECT to view the version of firmware.
8. Select GSM PIN or PSTN PIN to enter the PIN code for the SIM card.
9. Select ANSWER MODE to select the mode in which the modem answers incoming calls.
10. Select SMS ENABLE to enable SMS text messages to mobile phones.

ℹ If an incorrect PIN is sent to the SIM card three times, the SIM is blocked. If this happens, it is recommended that the SIM card be removed and unblocked using a mobile phone. If the SIM card is being changed on the GSM module or if a SIM card is being used with a PIN, it is recommended that the PIN code be programmed before it is placed in the SIM holder, to ensure that incorrect PINs are not sent to it. All power should be removed (AC mains and battery) when loading the SIM card into the SIM holder.

14.10.4 CENTRAL STATION

14.10.4.1 ADD

To program the central station settings:

1. Scroll to CENTRAL STATION > ADD.
2. Press SELECT.
3. Select the desired programming option shown in the table below.
4. After programming is complete, the option to make a test call to the station is displayed on the keypad.

ACCOUNT ID	This information should be available from the receiving station and is used to identify users each time a call is made to the ARC
ACCOUNT NAME	Description of the Remote Alarm Receiving Centre
PROTOCOL	The communication protocol to be used (SIA, Contact ID, Fast Format)
1ST PHONE NUMBER	The first number to be dialled to contact the ARC
2ND PHONE NUMBER	The second number to be dialled to contact the ARC; the system only attempts to contact the ARC on this number if the first contact number did not successfully connect
PRIORITY	The modem (primary or back-up) to be used to communicate with the ARC

14.10.5 REMOTE MAINTENANCE

1. Scroll to REMOTE MAINT.>ENABLE REMOTE MAINT
2. Press Select.
3. Toggle between ENABLED and DISABLED.
4. Select the desired programming option shown in the table below.

ID	Remote Maintenance ID. Must match that at SPC Pro (1 - 999999).
PASSWORD	Password for Remote Maintenance. Must match that at SPC Pro.
IN CONN. SETTS.	Incoming Connection Settings. You can enable IN IP ENABLE to allow incoming IP connections from the Remote Maintenance server. If not enabled, only modem connections are possible. Enter the IN TCP/IP PORT on which the panel listens to incoming IP connections from the Remote Maintenance server.
OUT CONN. SETTS	Outgoing Connection Settings. Choose how to make outgoing connections to the Remote Maintenance server from the options DISABLED, OVER MODEM or OVER IP.

14.11 TEST

1. Scroll to TEST and press SELECT.
2. Scroll to the desired programming option.

14.11.1 BELL TEST

To perform a bell test:

1. Scroll to TEST > BELL TEST.
2. Press SELECT.

⇨ When BELL TEST is selected, the following options available: EXTERNAL BELLS, STROBE, INTERNAL BELLS and BUZZER. When each of these options is selected, the device sounds to verify it is operating correctly.

14.11.2 WALK TEST

A walk test ensures that the sensors are operating correctly on the SPC system.

To perform a walk test:

1. Scroll to TEST > WALK TEST.
2. Press SELECT.
3. The display indicates the number of zones to be tested on the system with the text TO TEST XX (where XX is the number of valid walk test zones). Locate the sensor on the first zone and activate it (open the door or window).
   ⇨ The keypad buzzer sounds continuously for approximately 2 seconds to indicate that the zone activation has been detected and the number of zones left to test (displayed on the keypad) decreases.
4. Continue with the remaining zones on the system until all zones have been tested. If a zone activation does not get acknowledged by the system, check the wiring of the sensor and/or replace with another sensor if necessary.

ℹ	*NOTICE*
	All zones can be included in an Engineer walk test.

14.11.3 ZONE MONITOR

The Zone Monitor option displays status information on each of the zones on the system.

To view zone status information:

1. Scroll to TEST > ZONE MONITOR.
2. Press SELECT.
3. Scroll to a preferred zone and press SELECT.
   ⇨ The status of the zone and its associated resistance value is displayed.
4. Press NEXT to locate the zone (e.g. CONTROLLER 1 = first zone on Controller).

⇨ Refer to the table below for correlating status information (valid for Dual EOL resistors).

Zone status	Abbreviation
CLOSED	CL
OPEN	OP
SHORT	SH
DISCONNECTED	DIs

All zones on a system can be monitored for correct operation by performing a monitoring test.

To perform a zone monitoring test:

1. Scroll to ZONE MONITOR.
2. Press SELECT.
3. Scroll to a preferred zone and press SELECT, or enter the zone number directly.
   - ⇨ If the zone is located close to the keypad, the status of the keypad can be viewed as it changes. The Zone status and resistance value displays on the top right.
4. Change the state of the sensor; e.g. for a door contact sensor, open the door.

⇨ The keypad buzzer beeps and the status of the sensor changes from CL (Closed) to OP (Open). The corresponding resistance value changes to a value that depends on the EOL resistance scheme.

It is advisable to check the operation of all zones on the system after installation is complete. To locate the zone select NEXT (bottom right) on the keypad. A zone status value of SH or DI indicates that the zone is shorted or disconnected.

14.11.4 OUTPUT TEST

To perform an output test:

1. Scroll to OUTPUT TEST.
2. Press SELECT.
3. Toggle between CONTROLLER and EXPANDER for preferred option.
4. If testing the controller outputs, scroll to the preferred output and press SELECT. If testing the expander outputs, select the expander and then the output.
   - ⇨ The keypad display indicates the current state of the output on the top line.
5. Toggle the output state ON/OFF.
6. Check that the device connected to the selected output changes state accordingly.

14.11.5 SOAK TEST

A Soak Test provides a method of putting selected zones on test. Zones on soak test do not cause any alarms but are recorded in the event log. Zones on soak test will remain on soak test until the soak test timer expires as in the timers default (14 days).

To perform a soak test:

1. Scroll to SOAK TEST and press SELECT.
2. Toggle between ENABLE SOAK and CANCEL SOAK for preferred option.
3. Scroll to preferred zone and press SELECT.

⇨ A message confirming that the zone is in soak is displayed.

ℹ	*NOTICE*
	All zone types can be included in a Soak test.

14.11.6 AUDIBLE OPTIONS

The audible options are applied as indicators within a walk test.

To set the audible options:

1. Scroll to AUDIBLE OPTIONS.
2. Press SELECT.
3. Scroll to one of the following options: ALL, INT BELL, EXT BELL, KEYPAD
4. Press SAVE.
5. Press BACK to exit.

14.11.7 WPA TEST

!	*NOTICE*
	This test can be only be performed by an engineer or user that has a 'WPA Test' right assigned to them. See User rights [→ 130]

To test the WPA from the keypad:

1. Scroll to WPA TEST and press SELECT.
2. When prompted with ACTIVATE WPA, press the three buttons simultaneously on the WPA.

⇨ If the test succeeded, a WPA *n* OK message will be shown where n is the number of WPA being tested.

1. Repeat the test if required.
2. Press BACK or X to end the test.

See also

🗎 User rights [→ 130]

14.11.8 SEISMIC TEST

To perform a seismic test:

1. Scroll to TEST > SEISMIC TEST.
2. Press SELECT.
3. Select TEST ALL AREAS, or select an individual area to test.
4. If you select an individual area to test, you can select either TEST ALL ZONES or select a specific seismic zone to test.

   ⇨ The message 'SEISMIC TEST' is display on the keypad while the test is being performed,
   ⇨ If the test fails, the message 'SEISMIC FAIL' is displayed. If the "i" or VIEW key is pressed, a list of the failed zones is displayed which can be scrolled through.
   ⇨ If the test succeeds, 'SEISMIC OK' is displayed.

See also Seismic Sensor Testing [➙ 265].

14.12 UTILITIES

1. Scroll to UTILITIES and press SELECT.
2. Scroll to the desired programming option:

SYS SOFTWARE	To view the current software version.
DEFAULTS	To reset users or return the system to factory setting.
BACKUP CONFIG	To back-up a configuration.
RESTORE CONFIG	To restore a configuration.
FAST PROGRAMMER	● DATA FROM PANEL: Transfer data from the controller to the Fast Programmer. You are prompted to confirm if the new configuration file name is the same as a file name already existing in the fast programmer to prevent configuration files from being overwritten. ● DATA TO PANEL: Transfer data to the controller from the Fast Programmer. ● DELETE FILES: ● FIRMWARE UPGRADE. (Note: If you downgrade the firmware (i.e. install an older version of firmware, the system will default all current configuration settings. ● PERIPHERAL UPGRADE: ● CUSTOM LANGUAGE UPDATE:
SPC PRO	To program the following SPC Pro options: ● ENABLE ACCESS: Determine if SPC Pro is enabled or disabled. ● ENGINEER ACCESS: Determine if engineer access is enabled or disabled. ● PASSWORD: Edit the existing system password. ● IP ENABLE: Enable to connect to the system via IP. ● IP PORT: Select which IP Port SPC Pro/SDK will connect through.

14.13 ISOLATE

Zones, system alerts or alerts from X-BUS devices can be manually isolated from the keypad. Isolating a zone removes that zone from the system until the user de-isolates it.

To isolate zones, system alerts or alerts from X-BUS devices:

1. Scroll to ISOLATE and press SELECT.
2. Scroll to the desired option in the table below and press SELECT.

ZONE	Select the required zone and toggle the setting from NOT ISOLATED to ISOLATED.
SYSTEM	Isolate the desired system alert.
XBUS	Isolate the desired alert from EXPANDERS or KEYPADS: ● XBUS COMMS LOST ● XBUS FUSE FAULT (Expanders only) ● X-BUS TAMPER
VIEW ISOLATIONS	To view a list of the isolated zones, system alerts and X-BUS devices alerts.

14.14 EVENT LOG

Recent events on the system are displayed in the EVENT LOG option. Events flash in one second intervals.

1. Scroll to EVENT LOG and press SELECT.
2. To view an event from a particular date, enter the date with the numeric keys.
   ⇨ The most recent events are displayed on the bottom line of the display. All previous events are displayed for one second in turn.

14.15 CHANGE PIN

To change a PIN:

1. Scroll to CHANGE PIN and press SELECT.
   ⇨ A randomly generated PIN appears.
2. Select new PIN, if acceptable. Or overwrite by entering a new PIN and press ENTER.
   ⇨ If the system is set for 5-digit PIN, a new 5-digit PIN must be entered. The system will not accept a PIN with fewer numbers than it is set to receive
3. Confirm the new PIN, press SAVE.
4. Press BACK to return to the previous screen to amend the PIN.

⇨ During the process if the display times out, the old PIN remains valid.

14.16 USERS

Only Manager type users have the ability to add, edit, or delete users, unless a user profile has this capability assigned to their profile. Managers may add, edit or delete users with these steps:

14.16.1 ADD

To add users to the system:

1. Scroll to USERS > ADD.
   ⇨ Select a user ID from the available IDs on the system.
2. Press SELECT for the default user name and ID or enter a customized user name and press SELECT.
3. Scroll to the preferred user type and press SELECT. User types are STANDARD USER, LIMITED USER, MANAGER or ACCESS.
   ⇨ The system generates a default code for each new user.
4. Press SELECT to accept the default user PIN or enter a new user PIN and press SELECT.

⇨ The keypad confirms that the new user has been created.

14.16.2 EDIT

To edit users on the system:

1. Scroll to USERS > EDIT.
2. Press SELECT.
3. Edit the desired user setting shown in the table below.

Change Name	Edit the current user name
Change Type	Edit the current user type
User Options	Enable or disable available user rights. See User Rights [→ 131].
Change Areas	Enable or disable user access to areas
Valid PIN Days	Enable or disable the PIN days that are valid for this user.
PACE	Enable or disable PACE capability
RF FOB	Enable or disable RF Fob access (wireless keypad, remote control)
MAN-DOWN [MDT]	
SMS Control	Enable or disable the SMS control For further information, see SMS Control
SMS Events	● Add Number ● Delete Number ● Edit Number For further information, see SMS Events.
Access Control	If no card assigned to the user: ● Add Card ● Learn Card If a card assigned to the user:

	● Edit Card – Card Format – Card Number – Site Code – Card Attributes ● Delete Card ● Reset Card For further information, see Access Control.

14.16.2.1 ACCESS CONTROL

One access card can be assigned to each of the users on the control panel.

To configure the access control for a user:

1. Scroll to USERS > EDIT.
2. Press SELECT.
3. Select the user which should be configured and press SELECT.
4. Scroll to ACCESS CONTROL and press SELECT.

The following sections provide programming steps found within the access control option of the selected user.

14.16.2.1.1 ADD CARD manuallyNotReleased

If the card format of the card number is known, the card can be created manually.

Depending on the selected card format the site code of the card is also needed.

1. Scroll to ADD CARD
2. Press SELECT.

⇨ An empty card has been added and can now be edited.

14.16.2.1.2 LEARN CARDNotReleased

ℹ	*NOTICE*
	Only cards with supported card formats can be learned.

If the card number or the card format is not known, the card can be read and its information learned.

1. Scroll to LEARN CARD.
2. Press SELECT.
3. Select the door that the card will be presented.
4. Press SELECT.

ℹ	*NOTICE*
	The new card can be presented at the entry or the exit reader of the selected door.

5. Present the card at a card reader at the selected door.

⇨ The information for the new card is learned.

14.16.2.1.3 EDIT CARDContentReleased

If an access card is already assigned to a user it can be changed via the keypad:

1. Scroll to EDIT CARD.
2. Press SELECT.
3. Edit the desired user setting shown in the table below.
4. Press BACK to exit.

CARD FORMAT	Change the card format of the card. An overview with all supported card formats can be found in the table below.
CARD NUMBER	Enter the card number.
SITE CODE	Enter the site code. Depending on the chosen card format, a site code might not be needed. If a site code is needed, see table below.
CARD ATTRIBUTES	The different card attributes can be activated or deactivated. See table below.
CARD DOORS	Configure the access rights of the user for the different doors. With the keypad only two access levels can be configured: ● No access ● No time limit If a calendar should be used, to control the access rights of a user, the web interface or the SPC Pro configuration software has to be used.

Card attributes

Attribute	Description
Extented Time	Extend door timers when this card is present.
PIN bypass	Access a door without PIN on a door with PIN reader.
Priority	Priority cards are stored locally in the door controllers and will grant access in case of technical fault where door controller loses their communication to the control panel.
Escort	The escort feature enforces privileged card holders to escort other card holders through specific doors. If this feature is enabled on a door, a card with the “escort” right has to be presented first, to allow other cardholders without this right to open the door. The time period in which

Attribute	Description
	cardholders are able to present their cards after a card with escort right was presented, can be configured per door.
Custodian	The custodian feature enforces a card holder with custodian privilege to always be inside a room (door group) when other card holders are inside. The custodian must be the first to enter the room. Only if a custodian is in the room other cardholders are allowed to enter. The cardholder with the custodian right will not be allowed to exit until all non-custodian cards left the room. Identifies this card holder as a custodian. The user with the custodian attribute has to be the first who enters a door group which requires a custodian card holder and has to be the last that is leaving this door group.
Void Card	Check to temporarily disable this card.

Supported card formats

Card format	Side code available	Restrictions
EM4102	No	-
COTAG	No	-
Wiegand 26 bit	Yes	Site code: max. 255 Card number: max. 65535
Wiegand 36 bit	Yes	Site code: max. 32767 Card number: max. 524287
HID 1000	Yes	Site code: max. 4095 Card number: max. 1048575

14.16.2.1.4 DELETE CARDContentReleased

If an access card is no longer needed it can be deleted via the keypad.

1. Scroll to DELETE CARD.
2. Press SELECT.

14.16.2.1.5 RESET CARDNotReleased

If the ‘Prevent Passback’ feature is activated in a room and a user leaves this room without using the exit reader, he is not allowed to enter this room again. The user’s card can be reset to allow him to present his card once without a passback check.

To reset the card via the keypad:

1. Scroll to RESET CARD.
2. Press SELECT.

14.16.3 DELETE

To delete users on the system:

1. Scroll to USERS > DELETE.
2. Press SELECT.
   ➪ A prompt displays, confirming command to delete.
3. Press YES to delete the user.

14.17 ENGINEER SMS

1. Scroll to ENGINEER SMS and press SELECT.
2. Scroll to the desired programming option:

SMS NUMBER	Enter phone number for SMS calls.
REPORTED EVENTS	Identify specific events that are reported via SMS. Options are ALARMS*, ALARM RESTORE, CONFIRMED, FAULT/TAMPER, FAULT RESTORE, MODE CHANGE, EARLY/LATE, INHIBIT ISOLATE, ACCESS CONTROL, OTHER EVENTS.
SMS CONTROL	Enable or disable SMS functionality specific to user (limited to 4 users).
SMS EVENTS ENABLE	Enable or disable SMS calls for specific events (limited to the same 4 users).

!	*NOTICE*
	* PANIC and HOLDUP alarm events are not transmitted via SMS.

14.18 X-10

X10 is a technology that allows peripheral devices, such as lights or appliances, to be controlled by the system and system events can be used to trigger outputs on the X10 devices. The SPC controller provides a dedicated serial port (serial port 1) for interfacing directly with standard X10 equipment.

1. Scroll to X-10 and press SELECT.
2. Scroll to the desired programming option:

ENABLE X-10	To enable or disable the X-10 functionality on the system.
DEVICES	To add, edit, delete or test X-10 devices.

LOGGING	To enable or disable the X-10 logging.

14.19 SET DATE/TIME

The date and time can be manually entered on the system. The time and date information is displayed on the keypad and browser and is used on time-related programming features.

1. Scroll to SET DATE/TIME and press SELECT.
   ⇨ The date displays on the top line of the display.
2. To enter a new date, press the required numeric keys. To move the cursor to the left and right, press the left and right arrow keys.
3. Press ENTER to save the new date.
   ⇨ If an attempt is made to save an invalid date value, the text INVALID VALUE is displayed for 1 second and the user is prompted to enter a valid date.
4. To enter a new time, press the required numeric keys. To move the cursor to the left and right, press the left and right arrow keys.
5. Press ENTER to save the new time.
   ⇨ If an attempt is made to save an invalid time value, the text INVALID VALUE is displayed for 1 second and the user is prompted to enter a valid time.

14.20 INSTALLER TEXT

This setting allows the engineer to enter system information and engineer contact information.

1. Scroll to INSTALLER TEXT and press SELECT.
2. Scroll to the desired programming option:

SYSTEM NAME	Used to help identify the system; use a clear and descriptive name for the installation.
SYSTEM ID	Used to help identify the installation when connected to a central station (max. 10 digits).
INSTALLER NAME	Used for contact purposes.
INSTALLER PHONE	Used for contact purposes.
DISP. INSTALLER	Setting to display installer details can during the idle state.

ℹ The installer contact details programmed in these menu options should also be entered on the keypad pull-down label on completion of the installation.

14.21 DOOR CONTROL

This option allows you to control all the doors of the system.

1. Scroll to DOOR CONTROL and press SELECT.
2. Select the door which should be controlled and press SELECT.
3. Select one of the door states listed below as new door state and press SELECT.

NORMAL	The door is in normal operation mode. A card with the corresponding access rights is needed to open the door.
MOMENTARY	The door is opened only for a timed interval to allow access.
LOCKED	The door is locked. The door remains closed even if a card with the corresponding access rights is presented.
UNLOCKED	The door is unlocked.

15 Engineer programming via the browser

Engineer programming options on the SPC panel can be accessed via any standard web browser on a PC and is PIN protected.

You can access Engineer Programming via the browser by entering the default engineer PIN (1111). For more details, see Engineering PINs [→ 68].

This web server provides access to the complete set of programming features used to install and configure the SPC system.

This programming option should only be provided to authorized installers of the SPC system.

Engineer Programming features on the SPC are divided into the following categories:

Soft Engineer Features

These features can be programmed without requiring the alarm system to be deactivated; they are accessible directly upon entering Engineer mode.

Full Engineer Features

These features require the alarm system to be deactivated before programming can commence; these features are accessible under the Full Engineer menu.

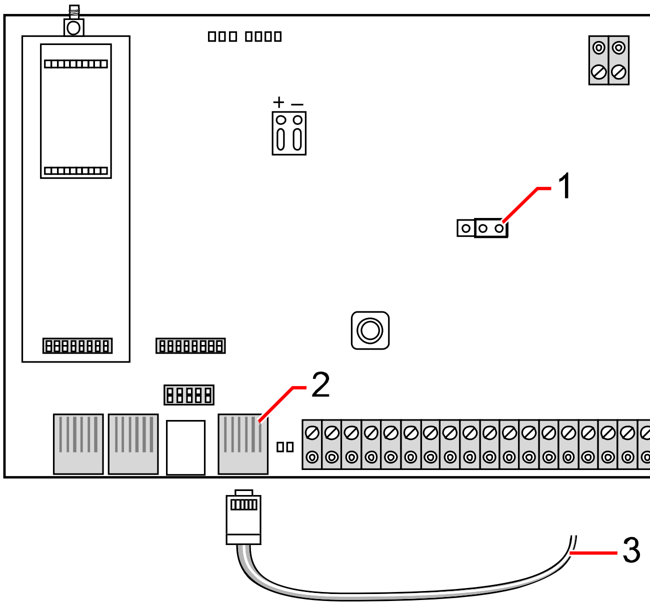
!	*NOTICE*
	If ‘Engineer Exit’ option is enabled in System Options, the engineer is allowed leave Full Engineer mode with alerts active but must acknowledge all alerts listed on the keypad or in the browser before switching from Full Engineer mode to Soft Engineer mode.

The web server on SPC controller can be accessed using either the Ethernet or USB interface.

If programming with a browser interface, click **Save** when making changes. Click **Refresh** to view the current programming values on a web page.

15.1 Ethernet interface

IP



Connect

1	JP9 ~~SPC4xxx~~
2	Ethernet port
3	To Ethernet port on PC

If the SPC Ethernet interface is connected to an existing **L**ocal **A**rea **N**etwork (LAN), please consult the network administrator for that LAN before connecting to the panel. Default IP Address: 192.168.1.100

Connect the cable

- Connect an Ethernet cable from the Ethernet interface on the PC to the Ethernet port on the controller board
  – OR –
  If connecting directly from a PC then a cross over-cable must be used. See page [→ 269].
  ⇨ The LEDs to the right of the Ethernet interface indicate a successful data connection (Right LED on) and Ethernet data traffic (Left LED flashing).

Determine the IP address of the SPC controller

1. Entering the Engineer mode (See Engineering PINs [→ 68]).
2. Using the up/down arrow keys, scroll down COMMUNICATION option and press SELECT.
3. Scroll to ETHERNET PORT and press SELECT.
4. Scroll to IP ADDRESS and press SELECT.

15.2 USB interface

If the panel is reset while the USB cable is connected, the cable must be unplugged and plugged in again.

The USB port on the controller connects to a PC via a standard USB type A to type B cable. Drivers must be installed to make a USB connection from the controller to the PC:

For **Windows XP and 2000**, install using the CD and the following steps:

1. Connect the USB cable from the controller to a USB interface on the PC.
2. Confirm the correct communication port.
   ⇨ The **Found New Hardware** wizard is displayed.
3. Press **Cancel** on the **Found New Hardware** Wizard.

If there are 2 devices, cancel both Wizards before proceeding.

4. Double click the SPC.exe install file to launch installation wizard.
   ⇨ A dialog box regarding Windows certification appears. Siemens deems this acceptable to continue. For further queries, please contact network administrator or a Siemens technician.
5. Click **Continue Anyway**.
6. At the end of the installation process, a window indicates that the installation process is complete.
7. Click **Finish**.

For **Windows Vista**, users with administration privileges can install using the SPC CD and the following steps:

1. Double click the SPC.exe install file.
   ⇨ The installation Wizard appears.
2. Proceed with the wizard instructions.
   ⇨ At the end of the installation process, a window indicates that the installation process is complete.
3. Click **Finish**.
4. Connect the USB cable from the controller to a USB interface on the PC.

When installing, the user must have administration rights in order for installing on the Windows Vista platform.

Using the Start command, set up the new connection on the PC:

1. Select **Connect To > Show All Connections > Create A New Connection**.
2. On the following window, select **Setup an advanced Connection**.
3. On the following window, select **Connect Directly to another computer**.

4. On the following window, choose **Guest**.
5. On the following window, choose the name of the connection.

   ⇨ On the **Select a Device** window, the PC highlights an available serial port for use with the connection. This port should be the COM port that the USB device is using.
6. Click **Next**.
7. On the following window, choose whether this connection is available to all users.
8. Click **Finish**.
9. The PC prompts for username and password for the USB connection. Enter the following details:

   - Username: SPC
   - Passwort: siemens (default)
10. Click **Connect**.

    ⇨ The PC initiates a data link with the controller. When the link has been established, a connection icon appears on the task bar at the bottom of the PC screen.
11. Right-click the link and select **Status**.

    ⇨ A server IP address is displayed in the details window.
12. Enter this address into the address bar of an internet browser using the **h**yper **t**ext **t**ransfer **p**rotocol **s**ecure (e.g. https:\\192.168.5.1).

ℹ Default code should be changed and noted accordingly as Siemens

is unable to retrieve this new code. Forgotten codes are remedied only by a factory default of the system, rendering loss of programming. Programming can be restored if a backup is available.

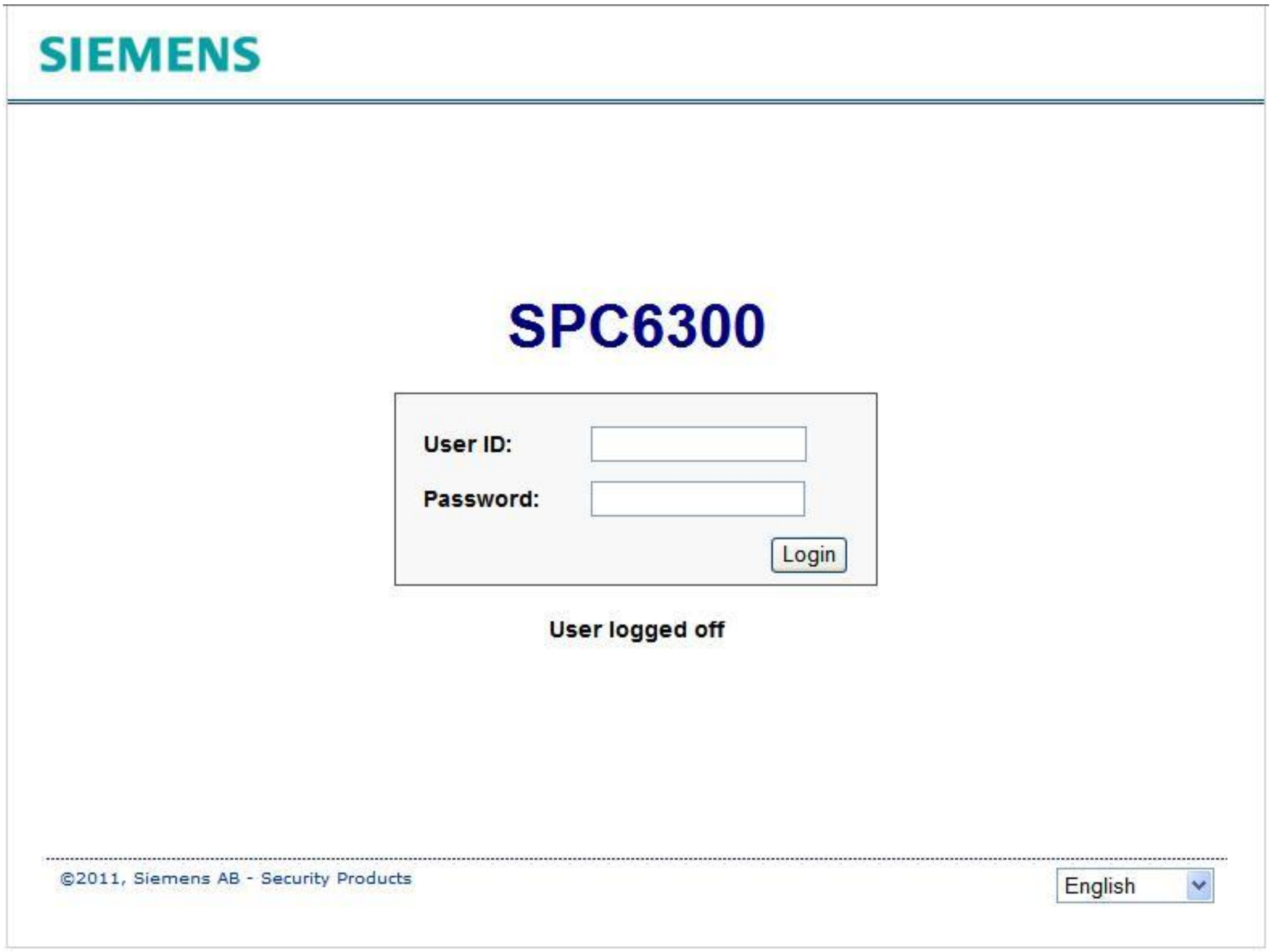
15.3 Logging into the browser

To log into the browser:

1. Once an Ethernet or USB link has been established and the IP address of the controller determined, open the PC browser.
2. Enter the IP address in the address bar using the **h**yper **t**ext **t**ransfer **p**rotocol **s**ecure. See table below.

   ⇨ A window with a security message is displayed.
3. Click **Continue to this website**.

⇨ The login screen is displayed.



1. Enter the following:
   - **User ID**: user or engineer name
   - **Password**: code for the user or engineer
2. Select a language in which to display the browser screens.
3. Click **Login**.

Default settings for WEB server address

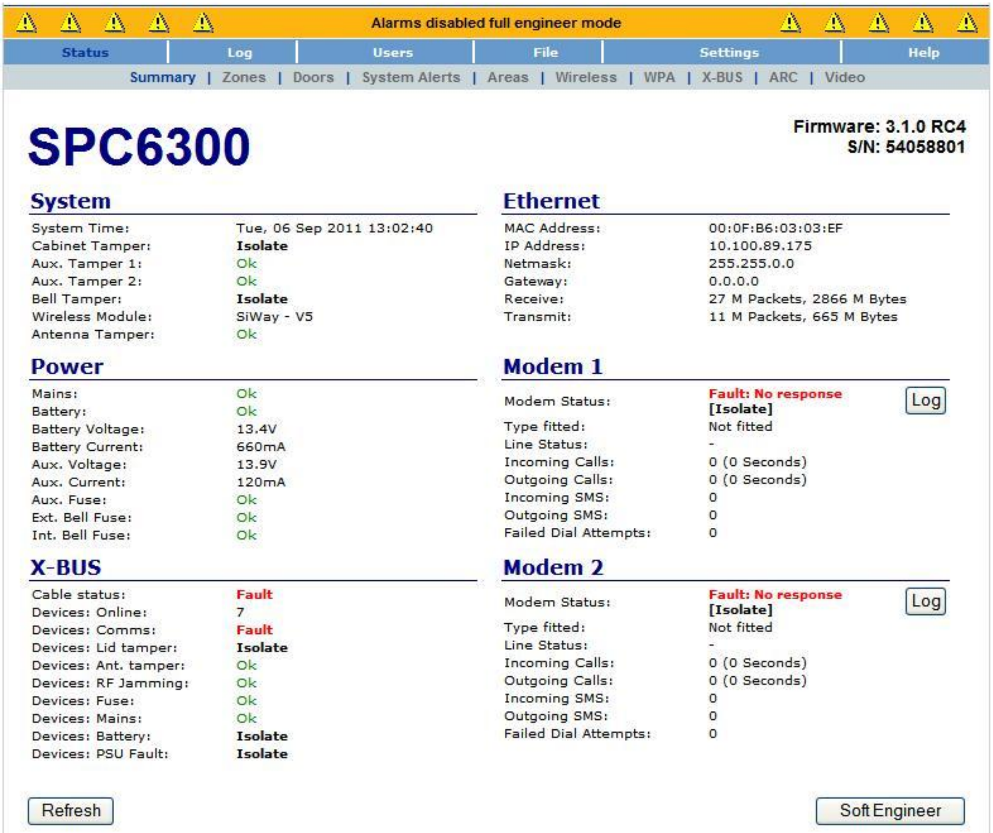
Connection	IP address Web server
Ethernet	192.168.1.100 (default)
RS232 (X10)	192.168.2.1 (fix)
Backup Modem / RS232	192.168.3.1 (fix)
Primary Modem	192.168.4.1 (fix)
USB	192.168.5.1 (fix)

15.4 Panel status

15.4.1 Summary

This page displays the status and summary of the main SPC components, including system, power, X-BUS and communications.

1. Select **Status > Summary**.
2. See tables below for further information.


Alarms disabled full engineer mode
Status | Log | Users | File | Settings | Help
Summary | Zones | Doors | System Alerts | Areas | Wireless | WPA | X-BUS | ARC | Video
Log
Log
Refresh
Soft Engineer

SPC6300

Firmware: 3.1.0 RC4
S/N: 54058801

System

System Time:	Tue, 06 Sep 2011 13:02:40
Cabinet Tamper:	**Isolate**
Aux. Tamper 1:	Ok
Aux. Tamper 2:	Ok
Bell Tamper:	**Isolate**
Wireless Module:	SiWay - V5
Antenna Tamper:	Ok

Ethernet

MAC Address:	00:0F:B6:03:03:EF
IP Address:	10.100.89.175
Netmask:	255.255.0.0
Gateway:	0.0.0.0
Receive:	27 M Packets, 2866 M Bytes
Transmit:	11 M Packets, 665 M Bytes

Power

Mains:	Ok
Battery:	Ok
Battery Voltage:	13.4V
Battery Current:	660mA
Aux. Voltage:	13.9V
Aux. Current:	120mA
Aux. Fuse:	Ok
Ext. Bell Fuse:	Ok
Int. Bell Fuse:	Ok

Modem 1

Modem Status:	**Fault: No response** **[Isolate]**
Type fitted:	Not fitted
Line Status:	-
Incoming Calls:	0 (0 Seconds)
Outgoing Calls:	0 (0 Seconds)
Incoming SMS:	0
Outgoing SMS:	0
Failed Dial Attempts:	0

X-BUS

Cable status:	**Fault**
Devices: Online:	7
Devices: Comms:	**Fault**
Devices: Lid tamper:	**Isolate**
Devices: Ant. tamper:	Ok
Devices: RF Jamming:	Ok
Devices: Fuse:	Ok
Devices: Mains:	Ok
Devices: Battery:	**Isolate**
Devices: PSU Fault:	**Isolate**

Modem 2

Modem Status:	**Fault: No response** **[Isolate]**
Type fitted:	Not fitted
Line Status:	-
Incoming Calls:	0 (0 Seconds)
Outgoing Calls:	0 (0 Seconds)
Incoming SMS:	0
Outgoing SMS:	0
Failed Dial Attempts:	0

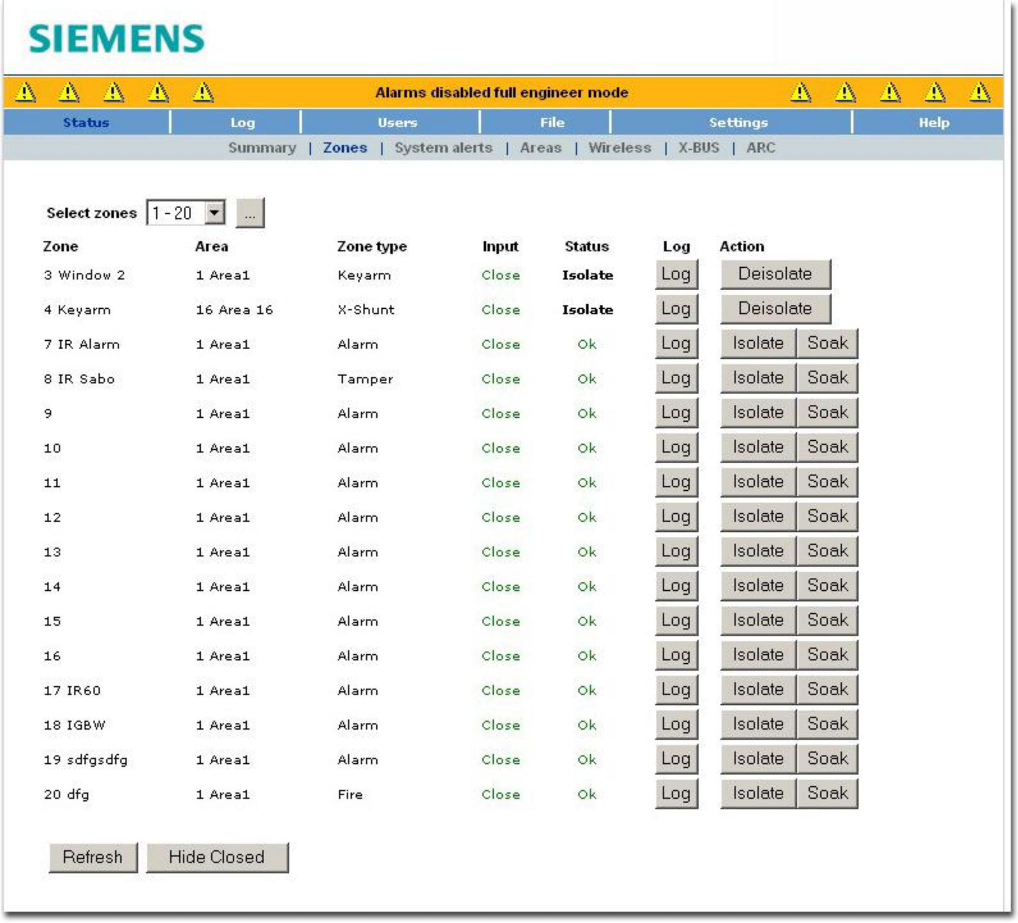
Performable actions

Restore All Alerts Pro	Restores all active alerts on the panel. These alerts messages are displayed in red text opposite the relevant item.
Refresh	Updates any changes in panel status. You must refresh the status window to display the actual panel status at any particular moment.
Full Engineer / Soft Engineer	To toggle between Soft- and Full Engineer modes. Full Engineer mode disables alarms and prevents reporting of events to a central station. For further information please refer to the panel specific SPC Installation&Configuration Manual.

15.4.2 Zones

For configuration see page [→ 164].

1. Select **Status > Zones**.
2. See tables below for further information.


SIEMENS
Status
Log
Users
File
Settings
Help
Summary | Zones | System alerts | Areas | Wireless | X-BUS | ARC
Refresh
Hide Closed

Alarms disabled full engineer mode

Select zones 1 - 20

Zone	Area	Zone type	Input	Status	Log	Action
3 Window 2	1 Area1	Keyarm	Close	Isolate	Log	Deisolate
4 Keyarm	16 Area 16	X-Shunt	Close	Isolate	Log	Deisolate
7 IR Alarm	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
8 IR Sabo	1 Area1	Tamper	Close	Ok	Log	Isolate Soak
9	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
10	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
11	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
12	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
13	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
14	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
15	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
16	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
17 IR60	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
18 IGBW	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
19 sdfgsdfg	1 Area1	Alarm	Close	Ok	Log	Isolate Soak
20 dfg	1 Area1	Fire	Close	Ok	Log	Isolate Soak

Auto Status Refresh Pro	Tick this button to activate an automatically refreshing of the zone summary. This can only be done for all zones, and not for filter zones.
Zone Description	Text description of the zone (max. 16 characters).
Area	Areas to which this zone is assigned.
Zone Type	The type of zone (Alarm, Entry/Exit, etc.).
Input	The detected input state of that zone (Open, Closed, Disconnect, etc.).
Status	The programmed status of that zone – i.e. whether the zone has been isolated, inhibited or in soak mode. A status value of OK means that the zone is programmed to operate normally.

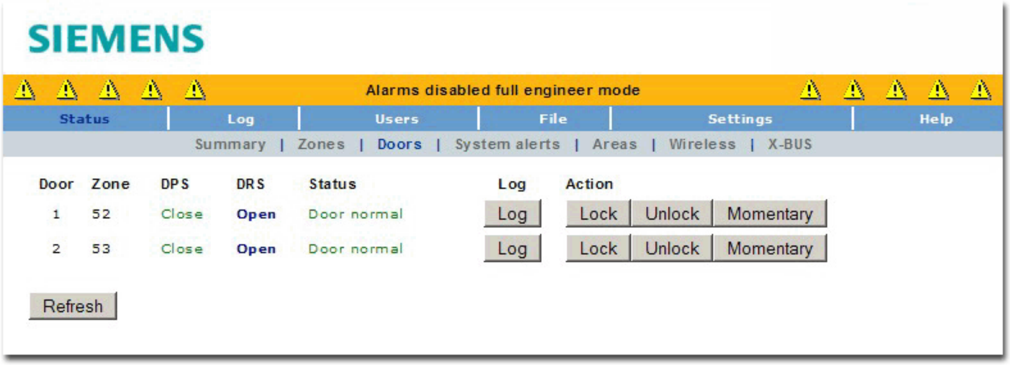
Performable actions

Refresh	Updates the status information displayed for the panel.
Log	Click on the Log button to view a log of the input status of that zone.
Inhibit !	Click this button to inhibit a fault or open zone. The inhibit operation will disable that fault or zone for one arming period only. Inhibit operation is not available in Security Grade EN 50131 Grade 3.
Restore	Click this button to restore the alarm condition of the panel.
Isolate	Zone . Isolating a zone will deactivate that zone until such time as the zone

	is explicitly deisolated again. It is recommended that you exercise caution when isolating zones as those zones will not be active every time the system is SET.
Soak Pro	Highlight a zone and click this button to isolate that zone.
Filter Zones	Select a zone type from the dropdown menu. Only the summary of this zone type will be displayed.

15.4.3 Doors

1. Select **Status > Doors**.
2. See tables below for further information.


SIEMENS
Status
Log
Users
File
Settings
Help
Summary | Zones | Doors | System alerts | Areas | Wireless | X-BUS
Refresh

Alarms disabled full engineer mode

Door	Zone	DPS	DRS	Status	Log	Action
1	52	Close	Open	Door normal	Log	Lock Unlock Momentary
2	53	Close	Open	Door normal	Log	Lock Unlock Momentary

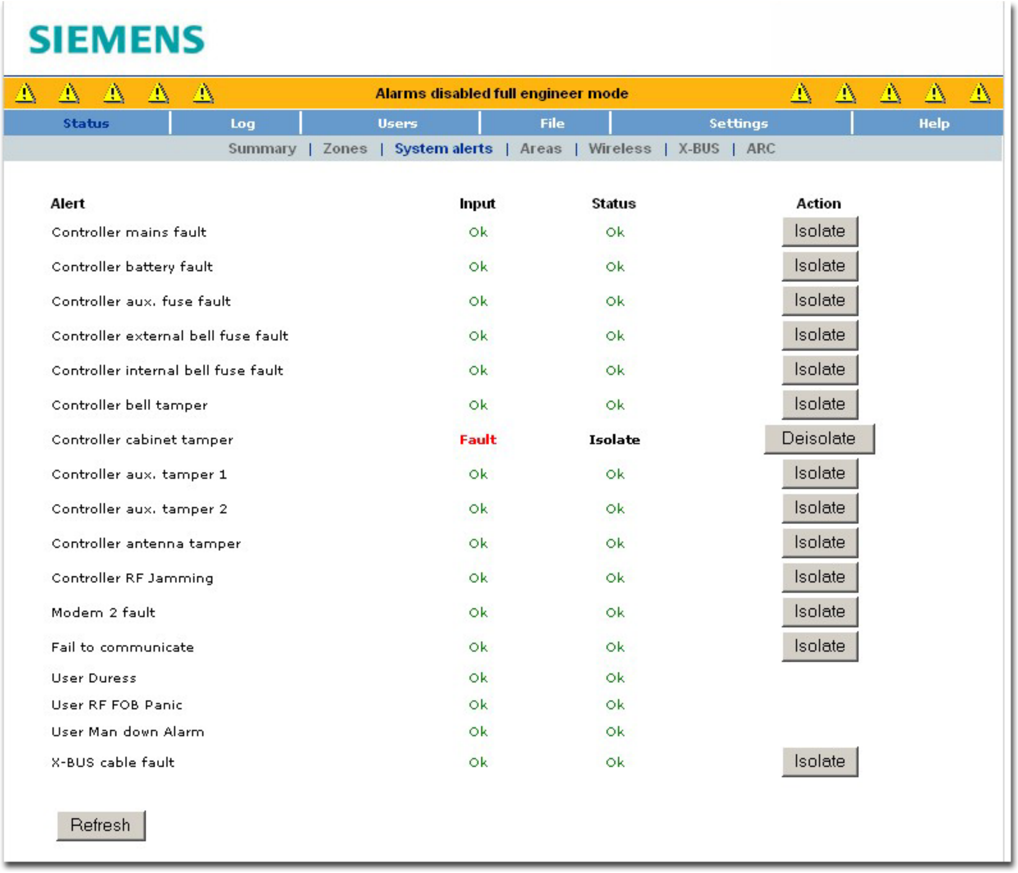
Door	This ID number is a unique identifier for the door.
Zone	The zone number the door position sensor is attached to (only if the door position sensor input is also used as intrusion zone).
Area	The area the door position sensor input and the card reader are assigned to.
DPS	Status of the door position sensor.
DRS	Status of the door release switch.
Status	The status of the door (OK, fault).
Door Mode Pro	Specifies the door operate mode.

Performable actions

Refresh	Updates the door summary.
Log	Displays a log of events for the selected door.
Lock	Locks the selected door.
Unlocked	Unlocks the selected door.
Normal	Returns the door to normal system control.
Momentary	Unlocks the door for one timed interval.

15.4.4 System alerts

1. Select **Status > System Alerts**.
2. See tables below for further information.


SIEMENS
Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Summary | Zones | System alerts | Areas | Wireless | X-BUS | ARC
Refresh

Alert	Input	Status	Action
Controller mains fault	Ok	Ok	Isolate
Controller battery fault	Ok	Ok	Isolate
Controller aux. fuse fault	Ok	Ok	Isolate
Controller external bell fuse fault	Ok	Ok	Isolate
Controller internal bell fuse fault	Ok	Ok	Isolate
Controller bell tamper	Ok	Ok	Isolate
Controller cabinet tamper	Fault	Isolate	Deisolate
Controller aux. tamper 1	Ok	Ok	Isolate
Controller aux. tamper 2	Ok	Ok	Isolate
Controller antenna tamper	Ok	Ok	Isolate
Controller RF Jamming	Ok	Ok	Isolate
Modem 2 fault	Ok	Ok	Isolate
Fail to communicate	Ok	Ok	Isolate
User Duress	Ok	Ok	
User RF FOB Panic	Ok	Ok	
User Man down Alarm	Ok	Ok	
X-BUS cable fault	Ok	Ok	Isolate

Alert	Description of the system alert.
Input	The actual state of the alert that was detected on the panel (OK, Fault).
Status △	The programmed status of the system alert, i.e. whether the alert has been isolated or inhibited. A status value of OK is displayed if the alert condition has not been disabled in any way (see page).

Performable actions

Refresh	Click this button to update the status of the system alerts.
Restore	Click this button to restore an alert on the panel
Inhibit (!)	Click this button to inhibit a fault condition. The inhibit operation will disable that fault or zone for one arming period only. Inhibit operation is not available in Security EN 50131 Grade 3.
Isolate	Click this button to isolate the zone. Isolating a zone will de-activate that zone until such time as the zone is explicitly de-isolated again. It is recommended that you exercise caution when isolating zones as those zones will not be active every time the system is SET.

15.4.5 Areas

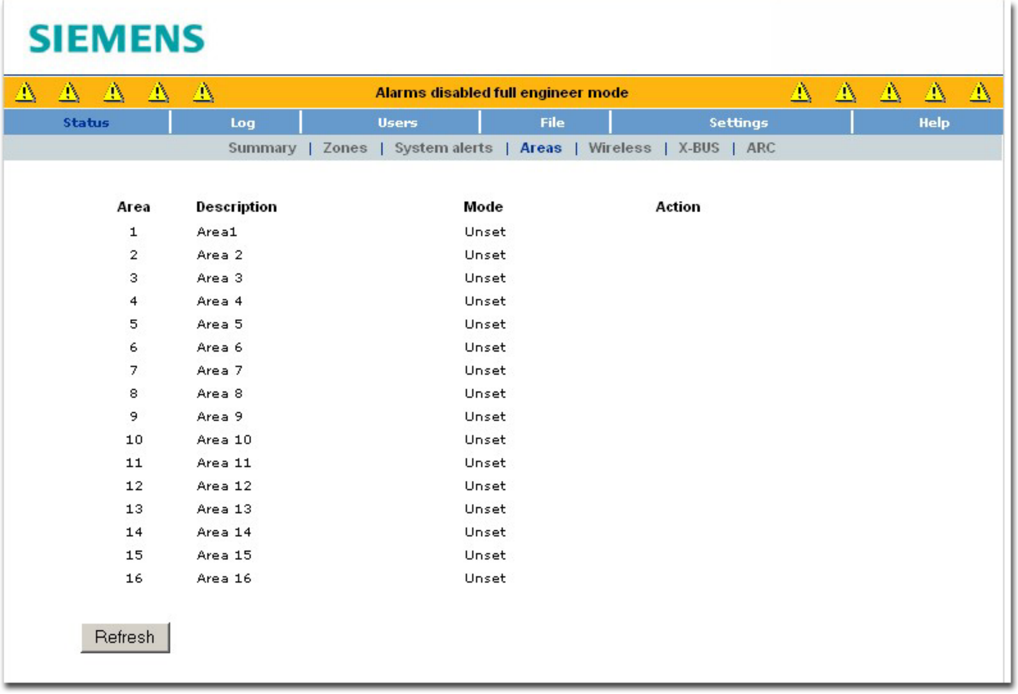
Each area defined on the system and its status is revealed here.

For configuration see page [➔ 165].

1. Select **Status > Areas**.

   ➪ The following window will be displayed.

2. See table below for further information.
3. Click **Refresh**.



SIEMENS
Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Summary | Zones | System alerts | Areas | Wireless | X-BUS | ARC
Refresh

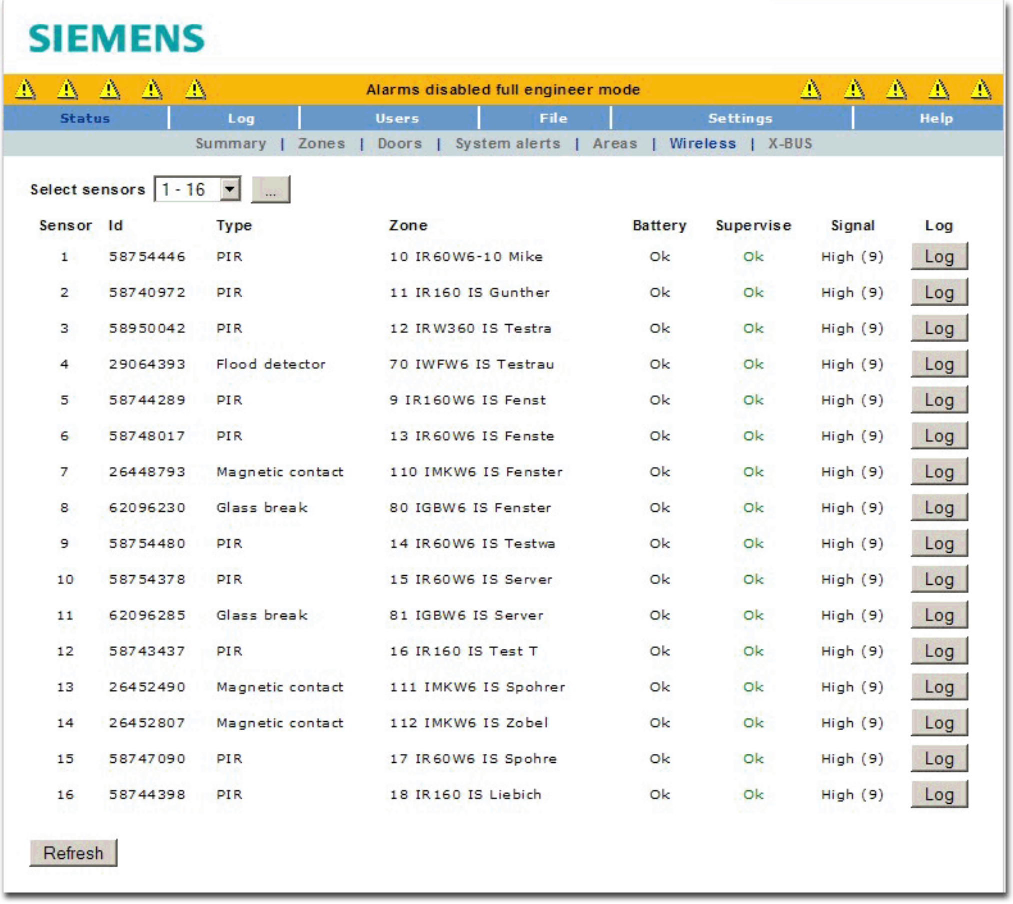
Area	Description	Mode	Action
1	Area1	Unset	
2	Area 2	Unset	
3	Area 3	Unset	
4	Area 4	Unset	
5	Area 5	Unset	
6	Area 6	Unset	
7	Area 7	Unset	
8	Area 8	Unset	
9	Area 9	Unset	
10	Area 10	Unset	
11	Area 11	Unset	
12	Area 12	Unset	
13	Area 13	Unset	
14	Area 14	Unset	
15	Area 15	Unset	
16	Area 16	Unset	

Area	Area number.
Description	Text description of the area (max. 16 characters).
Mode	The current armed mode of the area.

15.4.6 Wireless

Wireless sensor detection (868 MHz) on the SPC panel is provided by wireless receiver modules which may be factory fitted on the keypad or on the controller, or by installing a wireless expander.

1. Select **Status > Wireless**.
2. See table below for further information.


SIEMENS
Alarms disabled full engineer mode
Status | Log | Users | File | Settings | Help
Summary | Zones | Doors | System alerts | Areas | Wireless | X-BUS
Select sensors 1 - 16
...
Refresh

Sensor	Id	Type	Zone	Battery	Supervise	Signal	Log
1	58754446	PIR	10 IR60W6-10 Mike	Ok	Ok	High (9)	Log
2	58740972	PIR	11 IR160 IS Gunther	Ok	Ok	High (9)	Log
3	58950042	PIR	12 IRW360 IS Testra	Ok	Ok	High (9)	Log
4	29064393	Flood detector	70 IWFW6 IS Testrau	Ok	Ok	High (9)	Log
5	58744289	PIR	9 IR160W6 IS Fenst	Ok	Ok	High (9)	Log
6	58748017	PIR	13 IR60W6 IS Fenste	Ok	Ok	High (9)	Log
7	26448793	Magnetic contact	110 IMKW6 IS Fenster	Ok	Ok	High (9)	Log
8	62096230	Glass break	80 IGBW6 IS Fenster	Ok	Ok	High (9)	Log
9	58754480	PIR	14 IR60W6 IS Testwa	Ok	Ok	High (9)	Log
10	58754378	PIR	15 IR60W6 IS Server	Ok	Ok	High (9)	Log
11	62096285	Glass break	81 IGBW6 IS Server	Ok	Ok	High (9)	Log
12	58743437	PIR	16 IR160 IS Test T	Ok	Ok	High (9)	Log
13	26452490	Magnetic contact	111 IMKW6 IS Spohrer	Ok	Ok	High (9)	Log
14	26452807	Magnetic contact	112 IMKW6 IS Zobel	Ok	Ok	High (9)	Log
15	58747090	PIR	17 IR60W6 IS Spohre	Ok	Ok	High (9)	Log
16	58744398	PIR	18 IR160 IS Liebich	Ok	Ok	High (9)	Log

Sensor	The number of the sensor enrolled on the system (1 = first, 2 = second, etc.)
ID	A unique identity number for that sensor.
Type	The type of wireless sensor detected (magnetic contact, inertia/shock, etc.)
Zone	The zone to which the sensor has been enrolled.
Battery	The status of the battery in the sensor (if fitted).
Supervise	The status of the supervisory operation (OK = supervisory signal received, Not Supervised = no supervisory operation).
Signal	The signal strength received from the sensor (01=low, 09=high).

Performable actions

Log	Click to view the wireless sensor Log. See page [→ 126].

15.4.6.1 Log - Wireless sensor X

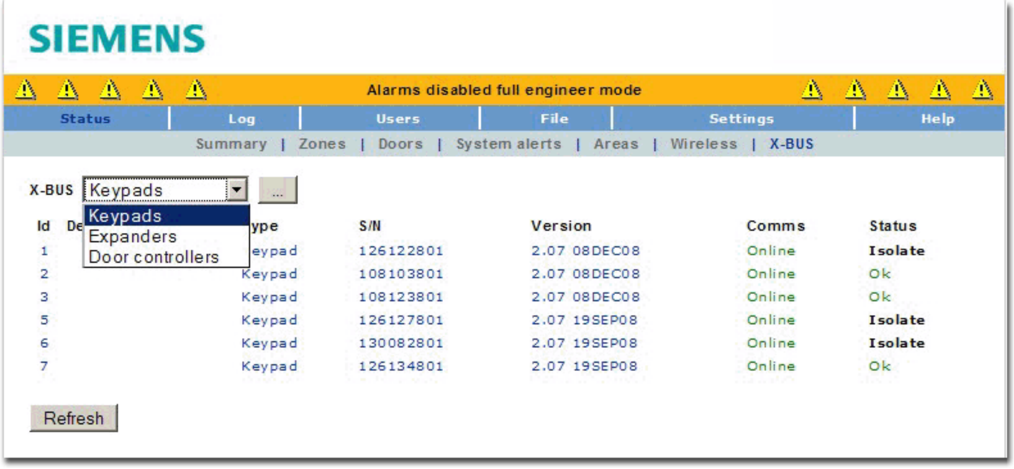
To view a quick log of events for a wireless sensor:

1. Click the **Log** button.
2. See table below for further information.

Date/Time	The date and time of the logged event.
Receiver	The wireless receiver location, i.e. wireless module mounted on the keypad, controller or wireless expander.
Signal	The signal strength received from the sensor (01=low, 09=high).
Status	The physical status of the sensor.
Battery	The status of the battery connected to the sensor (OK, Fault).

15.4.7 X-Bus

The status of the different X-Bus devices can be seen. On opening the page, all detected keypads are listed.


SIEMENS
Alarms disabled full engineer mode
Status | Log | Users | File | Settings | Help
Summary | Zones | Doors | System alerts | Areas | Wireless | X-BUS
X-BUS
Keypads
...
Keypads
Expanders
Door controllers
Refresh

Id	De	ype	S/N	Version	Comms	Status
1		eypad	126122801	2.07 08DEC08	Online	Isolate
2		Keypad	108103801	2.07 08DEC08	Online	Ok
3		Keypad	108123801	2.07 08DEC08	Online	Ok
5		Keypad	126127801	2.07 19SEP08	Online	Isolate
6		Keypad	130082801	2.07 19SEP08	Online	Isolate
7		Keypad	126134801	2.07 19SEP08	Online	Ok

In order to see all detected expanders or door controllers:

- Select one of the following types from the dropdown list.
- Expanders (for programming expanders see page [→ 195]).
- Keypads (for programming keypads see page [→ 189]).
- Door controllers (for programming door controllers see page [→ 200]).

Further status and options

1. Click any of the keypad/expander identifying parameters (ID, description, type, serial number).
2. Further status and options for keypads/expanders provide the following:
   - **Communication**: The physical status (OK, Fault) and the programmed status (OK, Isolated, Inhibited) of the keypad cable connection to the expander.
   - **Cabinet Tamper**: The physical and programmed status of the expander cabinet tamper.
   - **PACE**: Applies only to Keypads with a PACE receiver installed.

- **Panic:** Keypad Panic Alarm status revealed

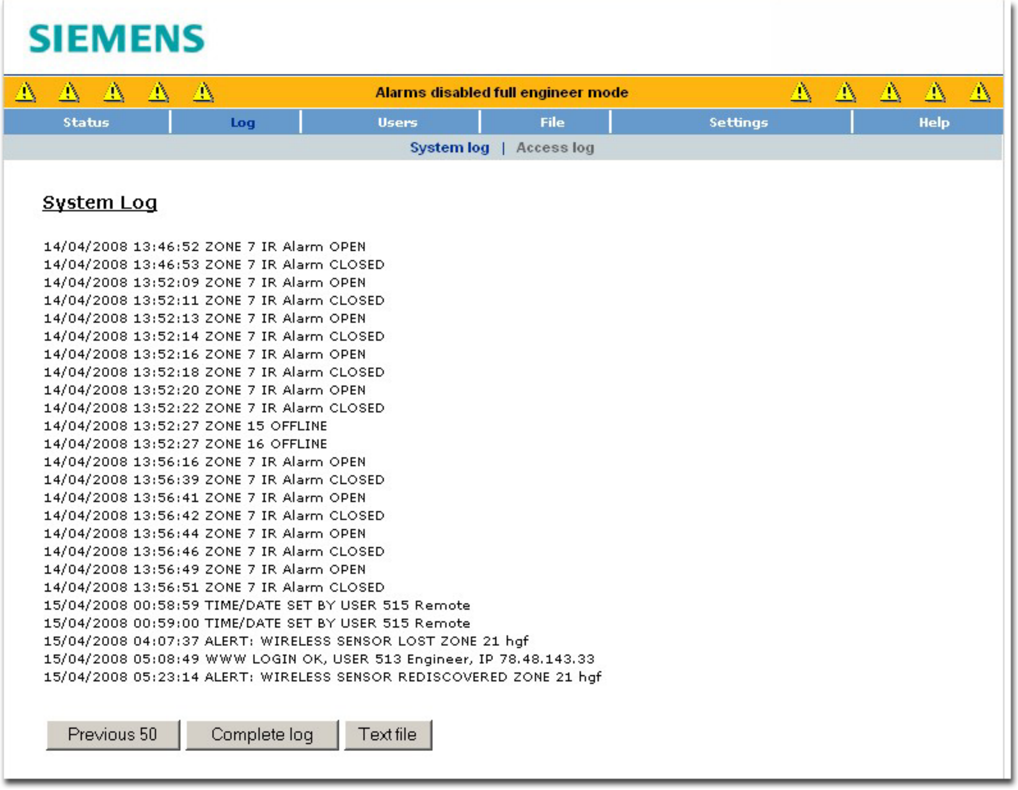
Isolate and deisolate are available actions on these status conditions.

15.4.8 Logs

15.4.8.1 System Log

This log displays all the system events of the SPC system.

1. Select **System Log**.
2. Create a text file of the log by clicking **Text File**.
3. Enable the logging of individual zone state changes enabled by setting the log attribute for that zone in the zone attributes programming page.



System Log

```
14/04/2008 13:46:52 ZONE 7 IR Alarm OPEN
14/04/2008 13:46:53 ZONE 7 IR Alarm CLOSED
14/04/2008 13:52:09 ZONE 7 IR Alarm OPEN
14/04/2008 13:52:11 ZONE 7 IR Alarm CLOSED
14/04/2008 13:52:13 ZONE 7 IR Alarm OPEN
14/04/2008 13:52:14 ZONE 7 IR Alarm CLOSED
14/04/2008 13:52:16 ZONE 7 IR Alarm OPEN
14/04/2008 13:52:18 ZONE 7 IR Alarm CLOSED
14/04/2008 13:52:20 ZONE 7 IR Alarm OPEN
14/04/2008 13:52:22 ZONE 7 IR Alarm CLOSED
14/04/2008 13:52:27 ZONE 15 OFFLINE
14/04/2008 13:52:27 ZONE 16 OFFLINE
14/04/2008 13:56:16 ZONE 7 IR Alarm OPEN
14/04/2008 13:56:39 ZONE 7 IR Alarm CLOSED
14/04/2008 13:56:41 ZONE 7 IR Alarm OPEN
14/04/2008 13:56:42 ZONE 7 IR Alarm CLOSED
14/04/2008 13:56:44 ZONE 7 IR Alarm OPEN
14/04/2008 13:56:46 ZONE 7 IR Alarm CLOSED
14/04/2008 13:56:49 ZONE 7 IR Alarm OPEN
14/04/2008 13:56:51 ZONE 7 IR Alarm CLOSED
15/04/2008 00:58:59 TIME/DATE SET BY USER 515 Remote
15/04/2008 00:59:00 TIME/DATE SET BY USER 515 Remote
15/04/2008 04:07:37 ALERT: WIRELESS SENSOR LOST ZONE 21 hgf
15/04/2008 05:08:49 WWW LOGIN OK, USER 513 Engineer, IP 78.48.143.33
15/04/2008 05:23:14 ALERT: WIRELESS SENSOR REDISCOVERED ZONE 21 hgf
```

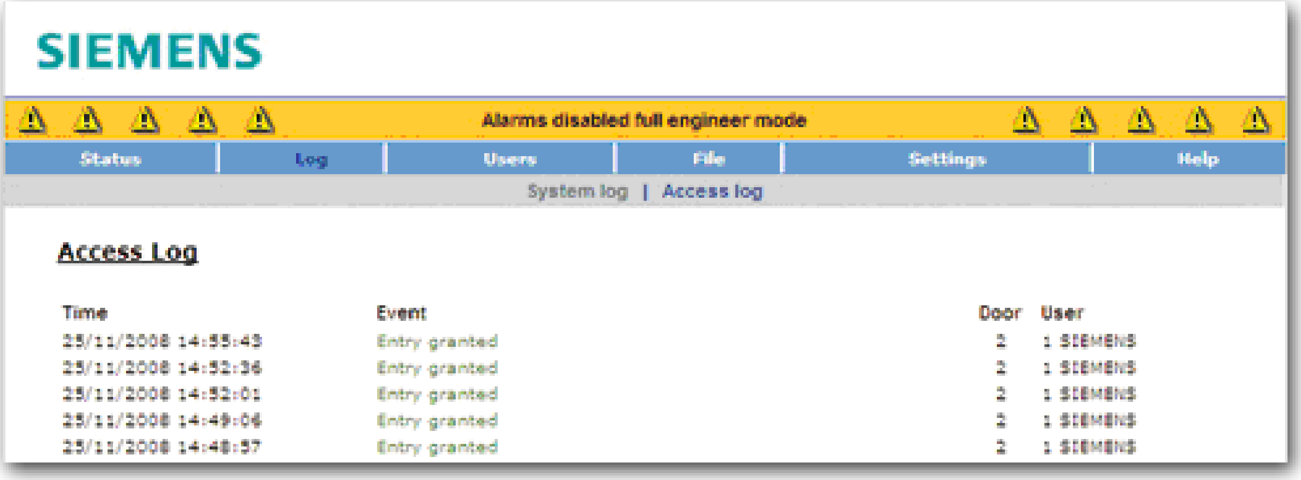
In order to avoid multiple events from the same source filling the log, the SPC system in accordance with standards, permits the logging of only 3 activations of the same zone in the one set period.

15.4.8.2 Access Log

The log provides all the events of the SPC system.

- Select Log > Access log.

⇨ The following window will be displayed:



Access Log

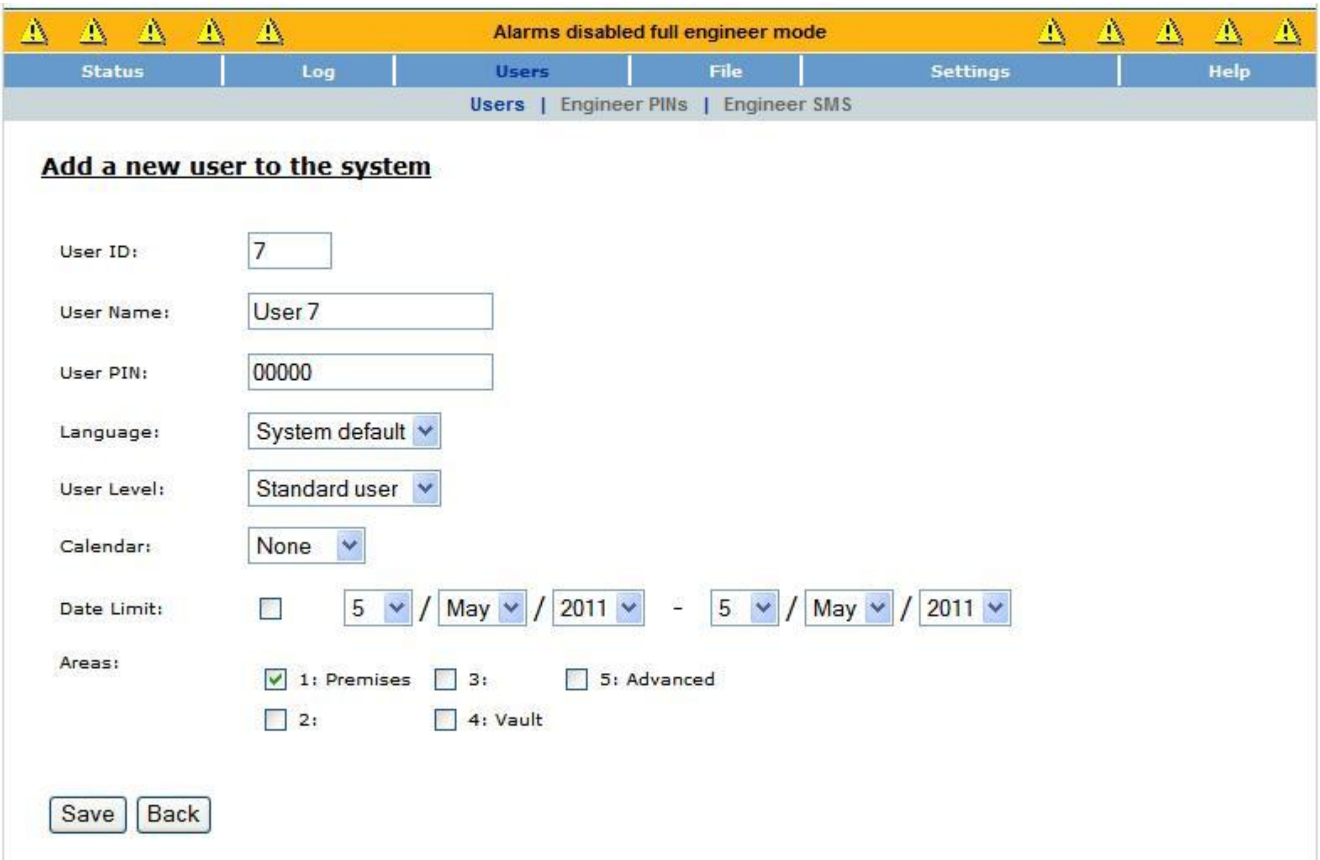
Time	Event	Door	User
25/11/2008 14:55:43	Entry granted	2	1 SIEMENS
25/11/2008 14:52:36	Entry granted	2	1 SIEMENS
25/11/2008 14:52:01	Entry granted	2	1 SIEMENS
25/11/2008 14:49:06	Entry granted	2	1 SIEMENS
25/11/2008 14:48:57	Entry granted	2	1 SIEMENS

15.4.8.3 WPA Log

15.5 Users

15.5.1 Adding / Editing user

- Select **Users** > **Add User**.



Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Users | Engineer PINs | Engineer SMS

Add a new user to the system

User ID: 7

User Name: User 7

User PIN: 00000

Language: System default

User Level: Standard user

Calendar: None

Date Limit: □ 5 / May / 2011 - 5 / May / 2011

Areas: ☑ 1: Premises □ 2: □ 3: □ 4: Vault □ 5: Advanced

1. Enter a user ID that is not currently being used. If you enter an ID that is already used, an ‘ID Unavailable’ message is displayed.
2. Provide a **User Name** (maximum 16 characters and case sensitive).

   ⇨ The system will automatically generate a **User PIN** for each new user.
3. To change this PIN, overwrite the digits shown in this field.
4. Select a **Language** for the user. Keypad menus and SMS events will be displayed in this language for this user. The languages that can be selected are all languages built in to the firmware, any custom languages, and the system default language for the panel.
5. Select appropriate **User Level**:

- Limited: User can set/unset the system.
- Standard: User can set/unset the system and has access to user programming features.
- Manager: User can set/unset the system, has access to user programming features and has manufacture access (i.e. allow a firmware upgrade of the panel).
- Access Control: User can force set the system, control X-10 outputs and doors.

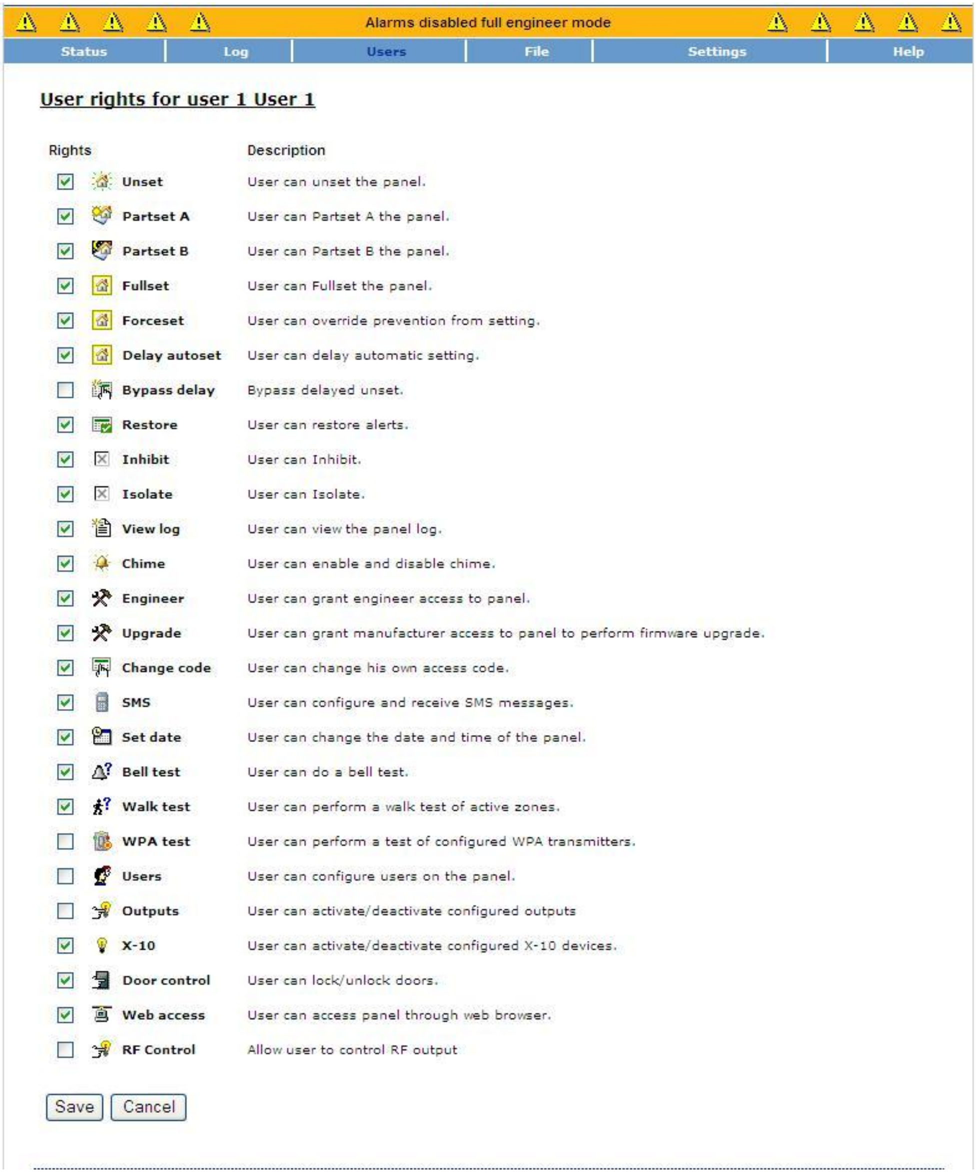
1. Select a predefined calendar that controls this user’s access to the system.
2. You can also limit access to the system for this user by ticking the **Date Limit** box and entering a to and from date in the date fields.
3. Toggle the desired **Area(s)** for limiting user access by location.
4. Click **Save**.

If the user duress feature is enabled (see page) then consecutive user codes (i.e. 2906, 2907) are not permitted, as entering this code from the keypad would activate a user duress event.

15.5.2 User rights

Based on the operational features of the SPC system, users can have rights attributed to their user profiles providing access to some or all of these features. The rights for each user defined on the system can be assigned by the installation engineer.

1. Select **Users > Rights**.



User rights for user 1 User 1

Rights		Description
☑	Unset	User can unset the panel.
☑	Partset A	User can Partset A the panel.
☑	Partset B	User can Partset B the panel.
☑	Fullset	User can Fullset the panel.
☑	Forceset	User can override prevention from setting.
☑	Delay autoset	User can delay automatic setting.
□	Bypass delay	Bypass delayed unset.
☑	Restore	User can restore alerts.
☑	Inhibit	User can Inhibit.
☑	Isolate	User can Isolate.
☑	View log	User can view the panel log.
☑	Chime	User can enable and disable chime.
☑	Engineer	User can grant engineer access to panel.
☑	Upgrade	User can grant manufacturer access to panel to perform firmware upgrade.
☑	Change code	User can change his own access code.
☑	SMS	User can configure and receive SMS messages.
☑	Set date	User can change the date and time of the panel.
☑	Bell test	User can do a bell test.
☑	Walk test	User can perform a walk test of active zones.
□	WPA test	User can perform a test of configured WPA transmitters.
□	Users	User can configure users on the panel.
□	Outputs	User can activate/deactivate configured outputs
☑	X-10	User can activate/deactivate configured X-10 devices.
☑	Door control	User can lock/unlock doors.
☑	Web access	User can access panel through web browser.
□	RF Control	Allow user to control RF output

2. To enable a particular right/feature for a user, check the appropriate box.

User rights

User Profile Default	User type	Description
Fullset	Limited Standard Manager	The FULLSET operation fully sets the alarm system and provides full protection to a building (opening of any alarm zones activates the alarm). On selecting FULLSET, the buzzer sounds and the keypad display counts down the exit time period. Exit the building before this time period has expired. When the exit time period has expired, the system is set and opening of entry/exit zones starts the entry timer. If the system is not Unset before the entry timer expires, the alarm is activated.
Partset A	Standard Manager	The PARTSET A option provides perimeter protection to a building while allowing free movement through the exit and access areas.

User Profile Default	User type	Description
		Zones that have been classified as EXCLUDE A remain unprotected in this mode. By default, there is no exit time; the system sets instantly on selection of this mode. An exit timer can be applied to this mode by enabling the Partset A timed variable.
Partset B	Standard Manager	The PARTSET B option applies protection to all zones except those that have been classified as EXCLUDE B. By default there is no exit time; the system sets instantly on selection of this mode. An exit timer can be applied to this mode by enabling the Partset B timed variable.
Forceset	Standard Manager	The FORCESET option is presented on the keypad display when an attempt is made to set the system while an alarm zone is faulty or still open (the top line of the display shows the open zone). Selecting this option sets the alarm and inhibits the zone for that set period.
Unset	Limited Standard Manager	The UNSET operation unsets the alarm. This menu option is only presented on the keypad after an alarm has been activated and a valid user code has been entered.
Restore	Standard Manager	The RESTORE operation restores an alert condition on the system and clears the alert message associated with that alert condition. An alert condition can only be restored after the zone(s) or fault(s) that triggered the alert condition have been restored to their normal operating state and the RESTORE option in user programming is selected for that zone.
Isolate	Standard* Manager	Isolating a zone deactivates that zone until such time as the zone is de-isolated. All zone types on the SPC controller can be isolated. Use of this feature to deactivate faulty or open zones should be considered carefully; once a zone is isolated, it is ignored by the system and could be overlooked when setting the system in the future, compromising the security of the premises.
Inhibit	Standard Manager	Inhibiting a zone deactivates that zone for one alarm set period. Only alarm, entry/exit, fire exit and line zone types can be inhibited. This is the preferred method of deactivating a faulty or open zone as the fault or open condition is displayed on the keypad each time the system is being set to remind the user to attend to that zone.
Change PIN	Standard Manager	This menu option allows users to change their user PINS [→ 108].
Engineer	Manager	This option allows users to grant access to engineer programming. For Swiss CAT 1 and CAT 2 regional requirements, when Engineer Access is granted, all areas must be unset otherwise the engineer will be denied access.
Set Date / Time	Standard Manager	Use this menu option to program the time and date on the system [→ 114].

User Profile Default	User type	Description
		Ensure the time and date information is accurate; these fields are presented in the event log when reporting system events.
Bell Test:	Standard Manager	User can perform a bell test to test the external bells, strobe, internal bells and buzzer to ensure their correct operation.
Walk Test	Standard Manager	User can perform a walk test to allow for testing of the operation of all alarm sensors on a system.
WPA Test	Standard Manager	User can test a WPA.
View Log	Standard Manager	This menu option displays the most recent event on the keypad display. The event log [→ 108] details the time and date of each logged event.
Chime	Standard Manager	All zones that have the CHIME attribute set generate a short burst of audible tone on the keypad buzzer when they are opened (while the system is unset). This menu option allows for enabling or disabling of the chime feature on all zones.
SMS	Standard* Manager	This feature allows users to set up the SMS messaging service if a modem is installed on the system.
Users	Manager	User can configure user on the panel.
Delay Auto Set	Standard* Manager	User can delay or cancel autosetting..
Bypass Unset Delay	Standard Manager	User can automatically override the Unset Delay. Only available for Financial installations. See Setting/Unsetting [→ 169]
Upgrade	Manager	User can grant manufacturer access to panel to perform firmware upgrade.
X-10	Standard Manager Access Control	User can activate/deactivate configured X-10 devices.
Door Control	Standard* Manager Access Control	User can lock/unlock doors.
Web Access	Standard* Manager	User can access panel through web browser.
View Video/Video in Browser	Standard Manager	User can view video images via the web browser. Note: The Web Access right must also be enabled for this function.
MG Output Control	Standard Manager	User can turn outputs (mapping gates) on and off. See Editing an Ouput [→ 183].
RF Control	Standard Manager Access Control	User can control RF output

User Profile Default	User type	Description
* Functions not enabled by default for this user but can be selected.		

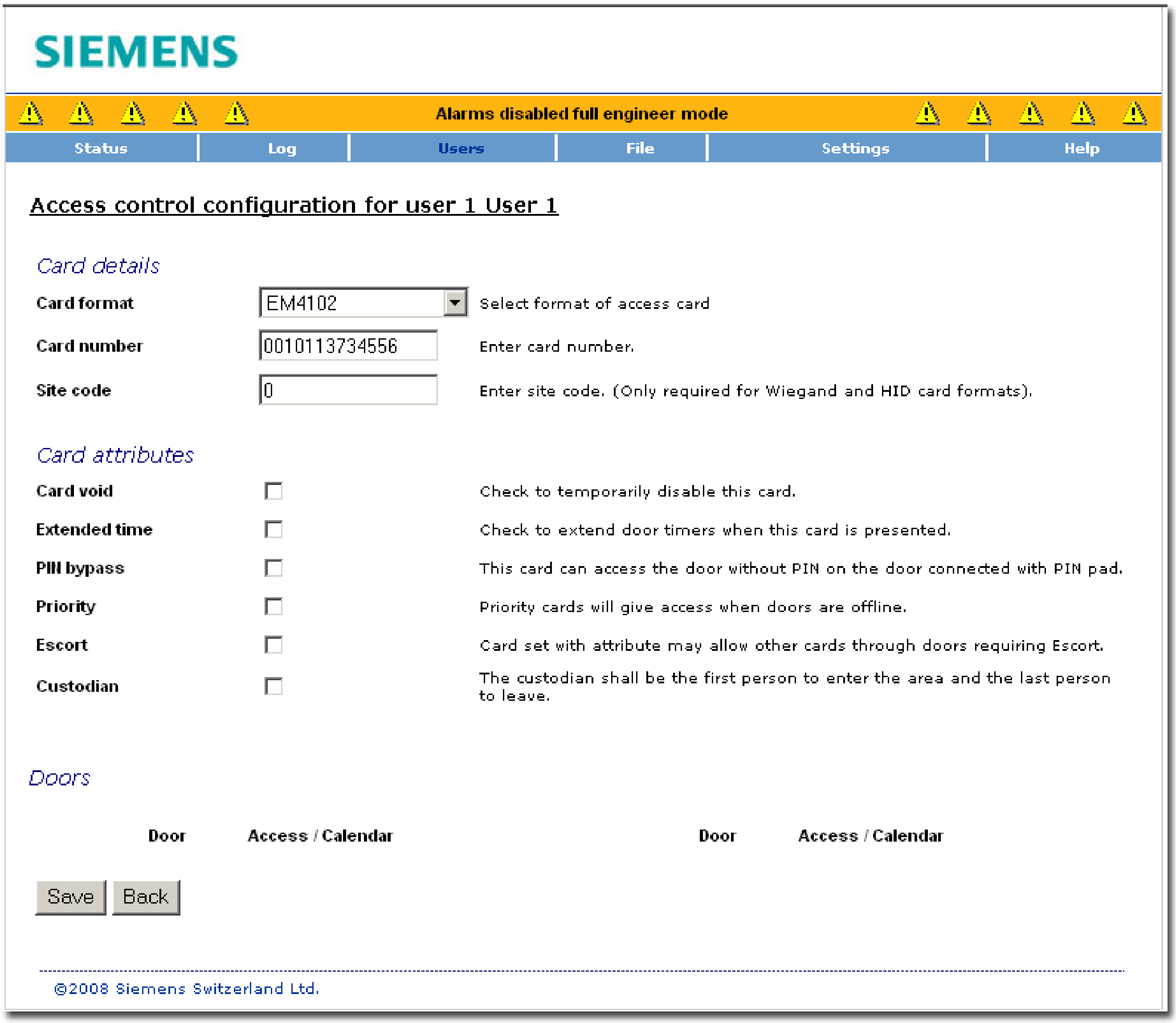
See also

- Adding / Editing an area [→ 165]
- BELL TEST [→ 104]

15.5.3 Access control

To configure the access control for the user:

- Select **Users > Access control**.



Access control configuration for user 1 User 1

Card details

Card format	EM4102	Select format of access card
Card number	0010113734556	Enter card number.
Site code	0	Enter site code. (Only required for Wiegand and HID card formats).

Card attributes

Card void	□	Check to temporarily disable this card.
Extended time	□	Check to extend door timers when this card is presented.
PIN bypass	□	This card can access the door without PIN on the door connected with PIN pad.
Priority	□	Priority cards will give access when doors are offline.
Escort	□	Card set with attribute may allow other cards through doors requiring Escort.
Custodian	□	The custodian shall be the first person to enter the area and the last person to leave.

Doors

Door	Access / Calendar	Door	Access / Calendar

Card format	Change the card format of the card. An overview with all supported card formats can be found in the table below.

Card number	Enter the card number.
Site code	Enter the site code. Depending on the chosen card format, a site code might not be needed. If a site code is needed, see table below.
Card attributes	The different card attributes can be activated or deactivated. See table below.
Doors	Configure the access rights of the user for the different doors. With the keypad only two access levels can be configured: ● No access ● No time limit If a calendar should be used, to control the access rights of a user, the web interface or the SPC Pro configuration software has to be used.

Card attributes

Attribute	Description
Extented Time	Extend door timers when this card is present.
PIN bypass	Access a door without PIN on a door with PIN reader.
Priority	Priority cards are stored locally in the door controllers and will grant access in case of technical fault where door controller loses their communication to the control panel.
Escort	The escort feature enforces privileged card holders to escort other card holders through specific doors. If this feature is enabled on a door, a card with the “escort” right has to be presented first, to allow other cardholders without this right to open the door. The time period in which cardholders are able to present their cards after a card with escort right was presented, can be configured per door.
Custodian	The custodian feature enforces a card holder with custodian privilege to always be inside a room (door group) when other card holders are inside. The custodian must be the first to enter the room. Only if a custodian is in the room other cardholders are allowed to enter. The cardholder with the custodian right will not be allowed to exit until all non-custodian cards left the room. Identifies this card holder as a custodian. The user with the custodian attribute has to be the first who enters a door group which requires a custodian card holder and has to be the last that is leaving this door group.
Void Card	Check to temporarily disable this card.

Supported card formats

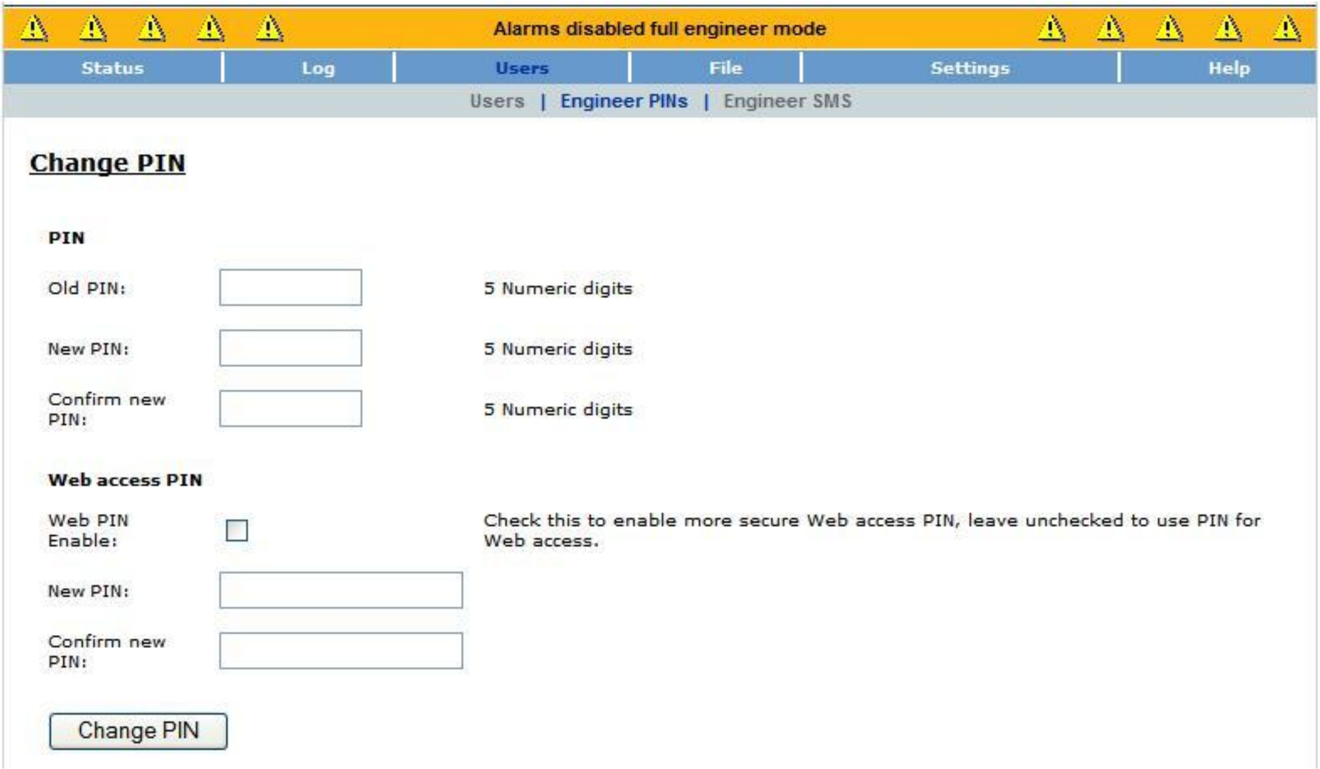
Card format	Side code available	Restrictions
EM4102	No	-
COTAG	No	-

Card format	Side code available	Restrictions
Wiegand 26 bit	Yes	Site code: max. 255 Card number: max. 65535
Wiegand 36 bit	Yes	Site code: max. 32767 Card number: max. 524287
HID 1000	Yes	Site code: max. 4095 Card number: max. 1048575

15.5.4 Changing engineer PIN

- Select **Users > Engineer PINs**.

  ➪ The following window will be displayed.


Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Users | Engineer PINs | Engineer SMS

Change PIN

PIN

Old PIN: 5 Numeric digits

New PIN: 5 Numeric digits

Confirm new PIN: 5 Numeric digits

Web access PIN

Web PIN Enable: □ Check this to enable more secure Web access PIN, leave unchecked to use PIN for Web access.

New PIN:

Confirm new PIN:

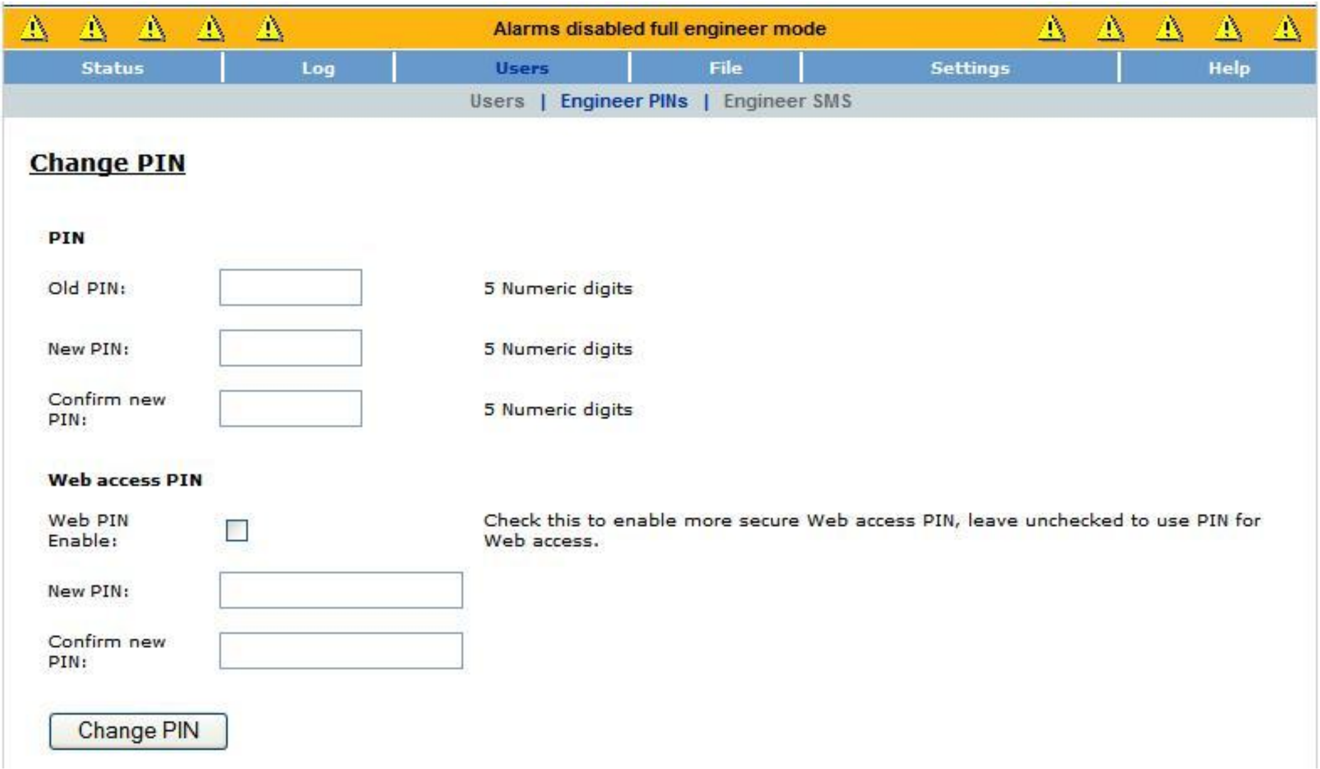
1. Configure the fields as described in the table below.
2. See also Changing engineer web PIN [→ 137]
3. Click on the **Change PIN** button.

Old PIN	Enter the existing Engineer PIN code.
New PIN	Enter the new Engineer PIN code.
Confirm New PIN	Re-enter the New Engineer PIN code.

15.5.5 Changing engineer web PIN

This programming option is provided to allow you to create a separate Engineer PIN for accessing the embedded browser on the panel.

1. Select **Users** > **Engineer PINs**.
   ⇨ The following window will be displayed.
2. Configure the fields as described in the table below.
3. Click **Change PIN** to make the new PIN active.



Alarms disabled full engineer mode

Change PIN

PIN

Old PIN: 5 Numeric digits

New PIN: 5 Numeric digits

Confirm new PIN: 5 Numeric digits

Web access PIN

Web PIN Enable: □ Check this to enable more secure Web access PIN, leave unchecked to use PIN for Web access.

New PIN:

Confirm new PIN:

Web PIN Enable	Click the box to use the new web access PIN to access the browser instead of the existing Engineer PIN code. If left unchecked, the same Engineer PIN can be used to access programming from both the keypad and the embedded browser
New PIN	Enter the new web access PIN (alphabetic characters A-Z, numeric digits 0-9).
Confirm New PIN	Re-enter the new web access PIN.

This PIN is case sensitive - be sure to enter the correct upper or lower case alphabetic characters in your new code.

15.5.6 Engineer SMS

The SPC system allows remote (SMS) messaging on systems with installed modems.

▷ A modem is installed and identified by the system.

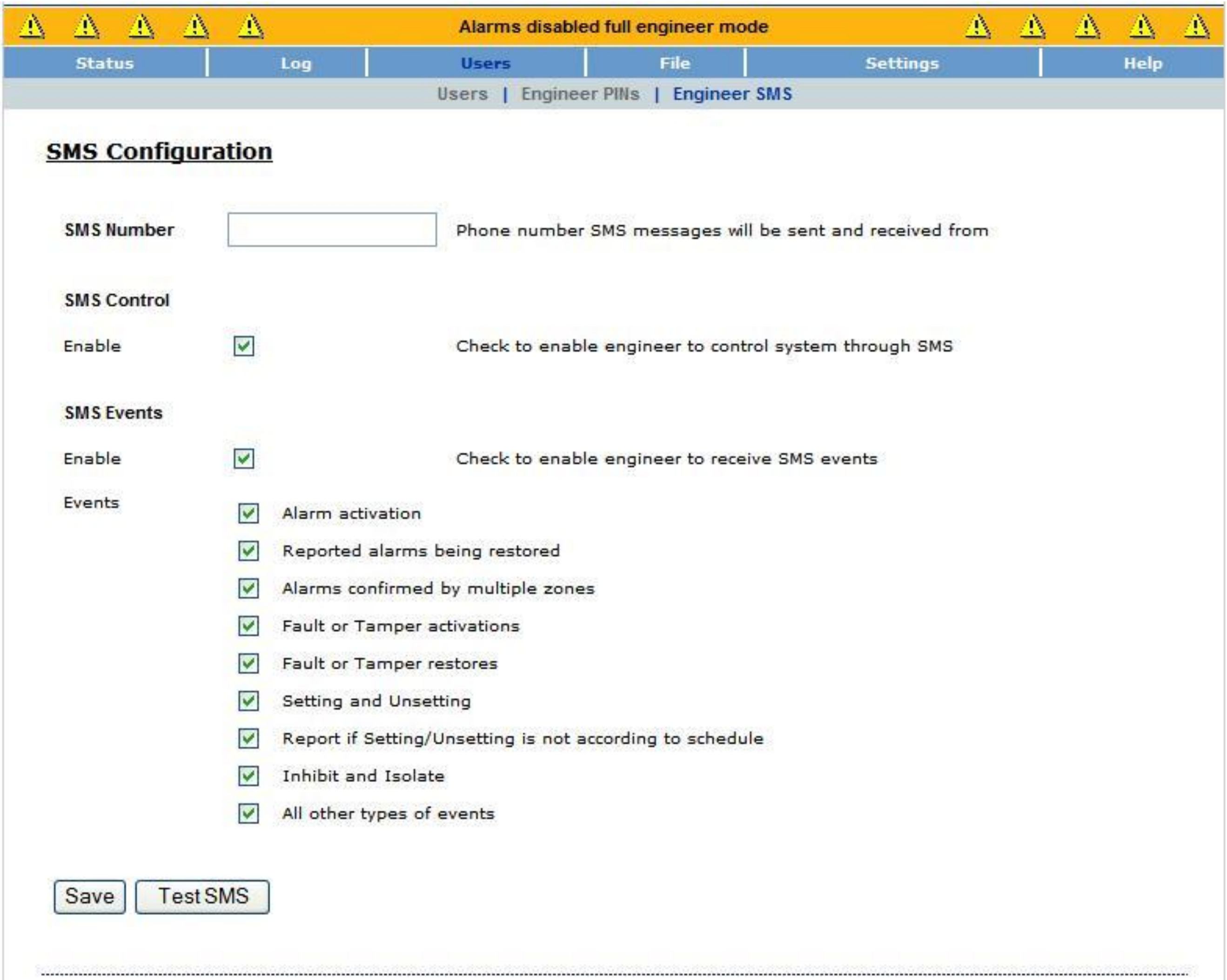
▷ The function **SMS Authentication** is activated. See page [→ 153].

1. Select **Users > Engineer SMS**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.

3. Test if desired.


Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Users | Engineer PINs | Engineer SMS
Save
Test SMS

SMS Configuration

SMS Number [ ] Phone number SMS messages will be sent and received from

SMS Control

Enable ☑ Check to enable engineer to control system through SMS

SMS Events

Enable ☑ Check to enable engineer to receive SMS events

Events
- ☑ Alarm activation
- ☑ Reported alarms being restored
- ☑ Alarms confirmed by multiple zones
- ☑ Fault or Tamper activations
- ☑ Fault or Tamper restores
- ☑ Setting and Unsetting
- ☑ Report if Setting/Unsetting is not according to schedule
- ☑ Inhibit and Isolate
- ☑ All other types of events

SMS Number	Enter the number to which the SMS will be sent (Requires three-digit country code prefix).
SMS Control	Click the box to enable engineer to control panel through SMS.
SMS Events Enable	Click the box to enable engineer to receive SMS events from the panel.
Events	Select the events which the engineer will receive.

!	*NOTICE*
	PANIC and HOLDUP alarm events are not transmitted via SMS.

If the phone line is connected to the PSTN network via a PBX, the appropriate line access digit should be inserted before the called party number. Ensure that **C**alling **L**ine **I**dentity (CLI) is enabled on the line selected to make the call to the SMS network. Consult the PBX administrator for details.

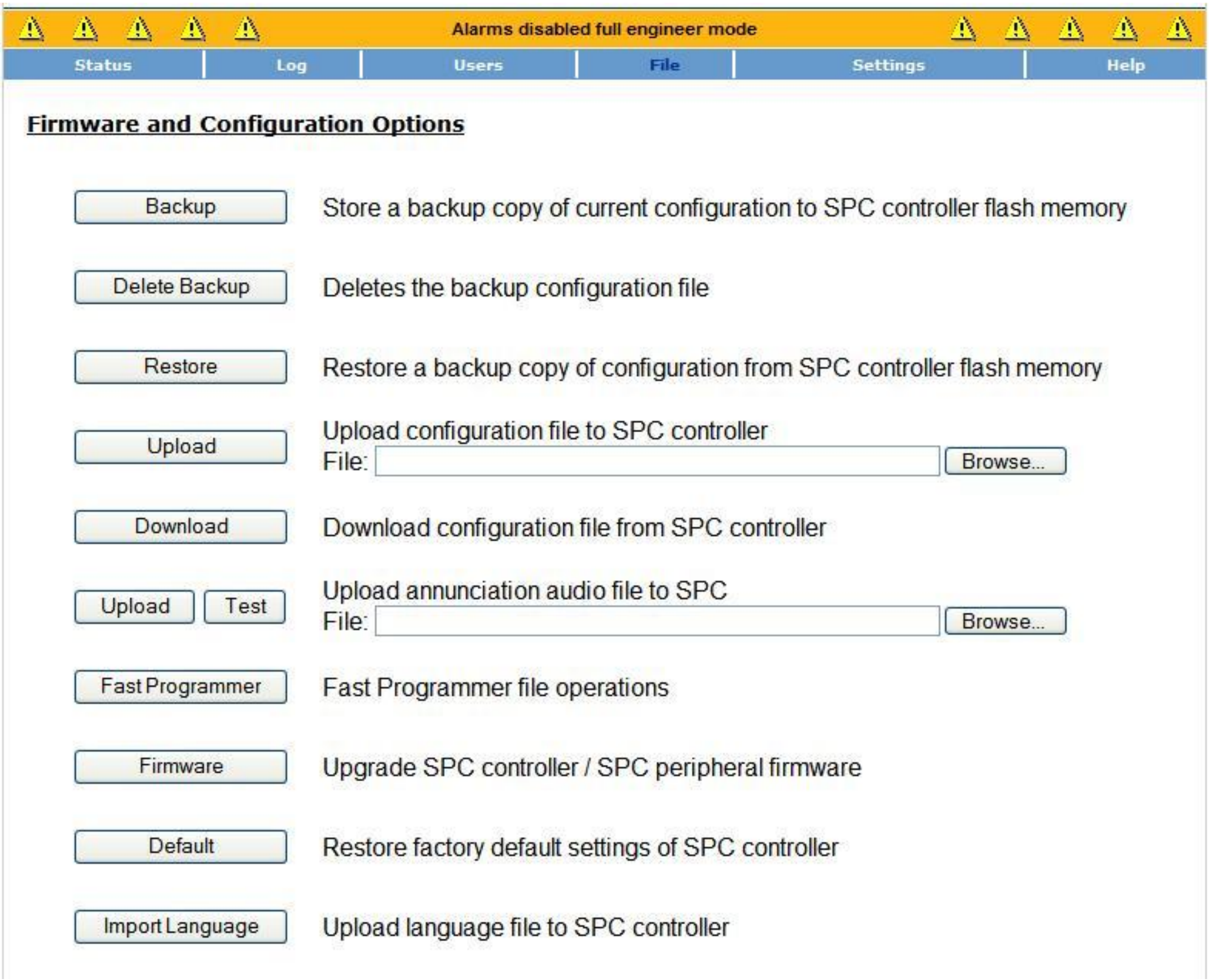
15.6 File Operations

To perform configuration file operations:

1. Select **File**.

   ➪ The following window will be displayed.

2. See table below for further action.



Firmware and Configuration Options

Backup — Store a backup copy of current configuration to SPC controller flash memory

Delete Backup — Deletes the backup configuration file

Restore — Restore a backup copy of configuration from SPC controller flash memory

Upload — Upload configuration file to SPC controller
File: Browse...

Download — Download configuration file from SPC controller

Upload Test — Upload annunciation audio file to SPC
File: Browse...

Fast Programmer — Fast Programmer file operations

Firmware — Upgrade SPC controller / SPC peripheral firmware

Default — Restore factory default settings of SPC controller

Import Language — Upload language file to SPC controller

Backup	Stores a backup copy of the current configuration to flash.
Restore	Restores a backup copy of the current configuration from flash.
Upload	Uploads a configuration file to the controller.
Download	Downloads a configuration file from the controller. **Note**: If an error message appears after clicking the download button, proceed as

	follows: 1. Select **Internet Options** in the Tools menu. 2. Select the **Advanced** tab. 3. Mark the checkbox **Do not save encrypted pages to disk**. 4. Click **Apply**. 5. Click **OK**. 6. Click **Download** again. When downloading a configuration file, the configuration settings are stored in a **.cfg** file. This file can then be uploaded to other controllers to avoid lengthy programming procedures.
Upload / Test	Upload or test an audio file to the SPC. The file must be created by the SPC Pro Audio Manager.
Fast Programmer	Fast Programmer File Operations.
Firmware	Upgrades the controller and peripheral firmware. **Note:** Manufacturer Access is required for this operation. See System Options. [→ 155]
Default	Restores the SPC system to factory defaults. **NOTICE! The IP address is maintained for connecting to the web interface after a factory default from the web page**
Custom Language	A custom language can be created by a customer or local distributor using a translation tool provided by Siemens. This option enables the custom language file to be uploaded. Refer to page ?? for details on how to activate the custom language on the panel. The panel must be licensed for use of custom languages and with other languages other than English. **Note:** This language applies to the panel firmware only and is not available for SPC Pro or SPC Safe.
Policy Text	

15.6.1 Upgrading Firmware

ℹ	*NOTICE*
	Manufacturer Access is required for these operations and when enabled, is available for the completion of both controller and peripheral firmware upgrades. See System Options [→ 155].

Firmware for SPC is contained in two separate files:

- Controller Firmware File
  Contains the firmware for the controller’s CPUs only. Filename has the extension *.fw.
- Peripheral Firmware File
  Contains the firmware for the X-BUS nodes, plus PSTN and GSM modems. .Filename has the extension *.pfw.

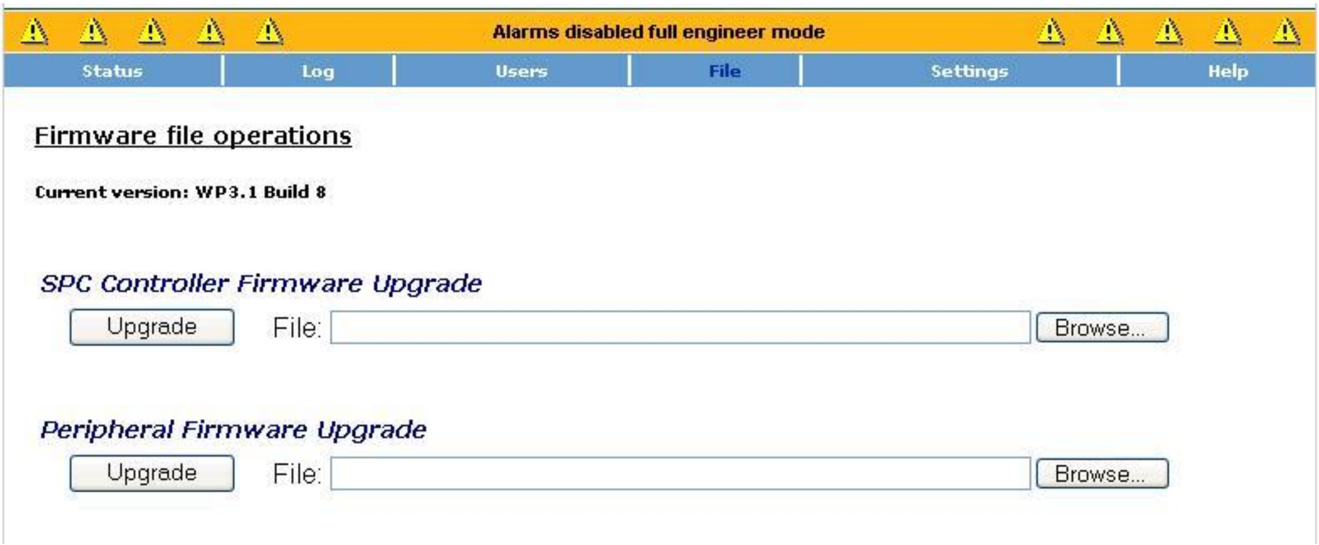
The two files are upgraded separately.

Note: Firmware can also be upgraded using SPC Pro and the Fast Programmer.

To upgrade firmware on the system:

- Select the **Firmware** option from the **File** page.

⇨ The following **Firmware File Operations** page is displayed:



Firmware file operations

Current version: WP3.1 Build 8

SPC Controller Firmware Upgrade

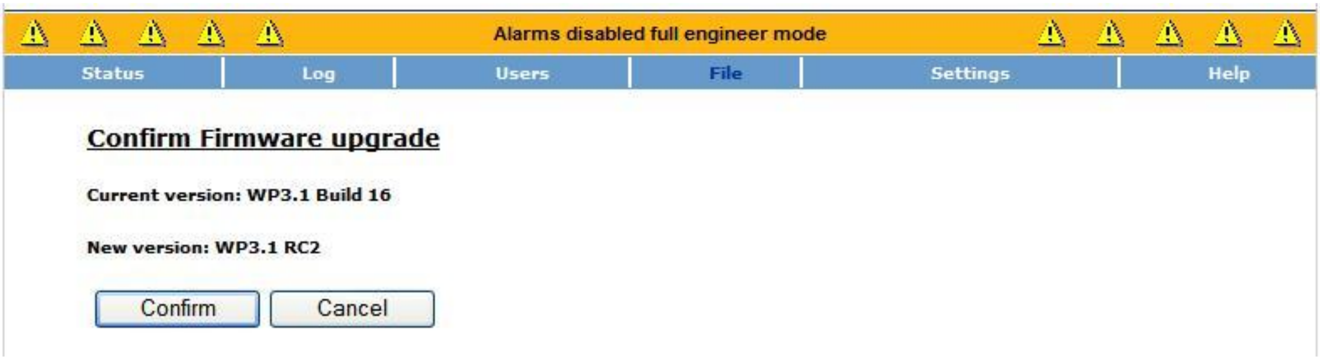
Peripheral Firmware Upgrade

- Select the firmware file to upgrade by clicking the **Browse** button for either the Controller Firmware or Peripheral Firmware, select the firmware file and then click on the appropriate **Upgrade** button.

Controller Firmware Upgrade

The controller firmware file is stored in the controller's (flash) file system until a new controller firmware file is uploaded.

- Click on the **Confirm** button to confirm the upgrade to the new version of the controller firmware.



Confirm Firmware upgrade

Current version: WP3.1 Build 16

New version: WP3.1 RC2

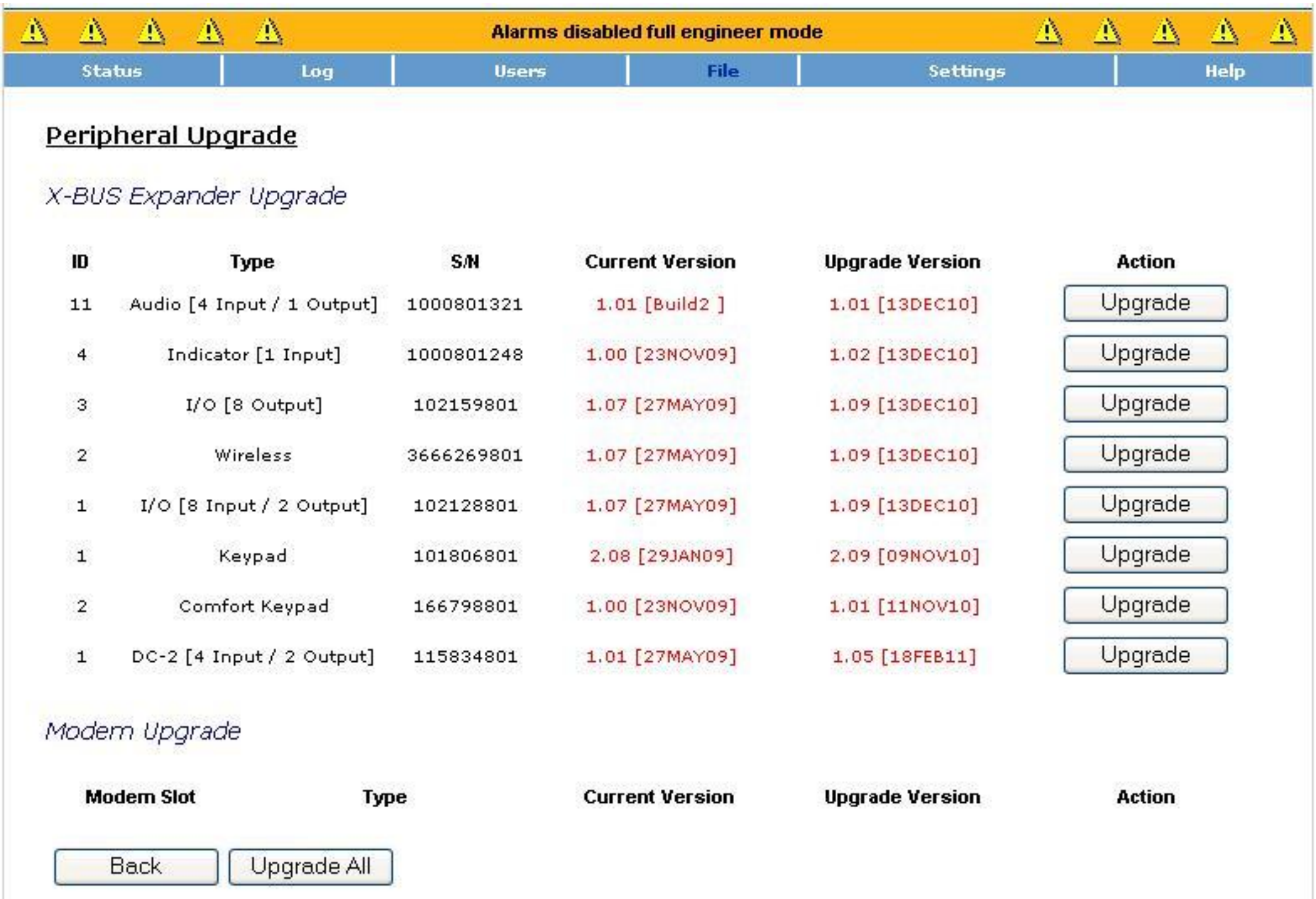
When the controller firmware is upgraded, the system will display a message to indicate that the system is resetting. You must login to the system again to continue operation.

⚠ WARNING

If you downgrade the controller firmware (i.e. install an older version of firmware), the system defaults all current configuration settings.

Peripheral Firmware Upgrade

- The peripheral firmware file is only stored temporarily in the file system. When a new peripheral firmware file is uploaded, the current and new versions of the firmware for each peripheral and modem is displayed as shown:



Alarms disabled full engineer mode

Peripheral Upgrade

X-BUS Expander Upgrade

ID	Type	S/N	Current Version	Upgrade Version	Action
11	Audio [4 Input / 1 Output]	1000801321	1.01 [Build2]	1.01 [13DEC10]	Upgrade
4	Indicator [1 Input]	1000801248	1.00 [23NOV09]	1.02 [13DEC10]	Upgrade
3	I/O [8 Output]	102159801	1.07 [27MAY09]	1.09 [13DEC10]	Upgrade
2	Wireless	3666269801	1.07 [27MAY09]	1.09 [13DEC10]	Upgrade
1	I/O [8 Input / 2 Output]	102128801	1.07 [27MAY09]	1.09 [13DEC10]	Upgrade
1	Keypad	101806801	2.08 [29JAN09]	2.09 [09NOV10]	Upgrade
2	Comfort Keypad	166798801	1.00 [23NOV09]	1.01 [11NOV10]	Upgrade
1	DC-2 [4 Input / 2 Output]	115834801	1.01 [27MAY09]	1.05 [18FEB11]	Upgrade

Modem Upgrade

Modem Slot	Type	Current Version	Upgrade Version	Action

- Click on the **Upgrade** button for the peripherals that require upgrading.

  If the firmware for a peripheral device in the pfw file is older than the existing firmware of that device, a **Downgrade** button is available.

During upgrade, the panel checks if the firmware in the peripheral file supports the particular hardware versions of the installed peripherals and does not allow an upgrade for those peripherals which are not supported.

If the pfw file version differs from the controller version, a warning message is displayed

If the major version number of the firmware available for a device differs from the existing major number of a device a warning message is also displayed.

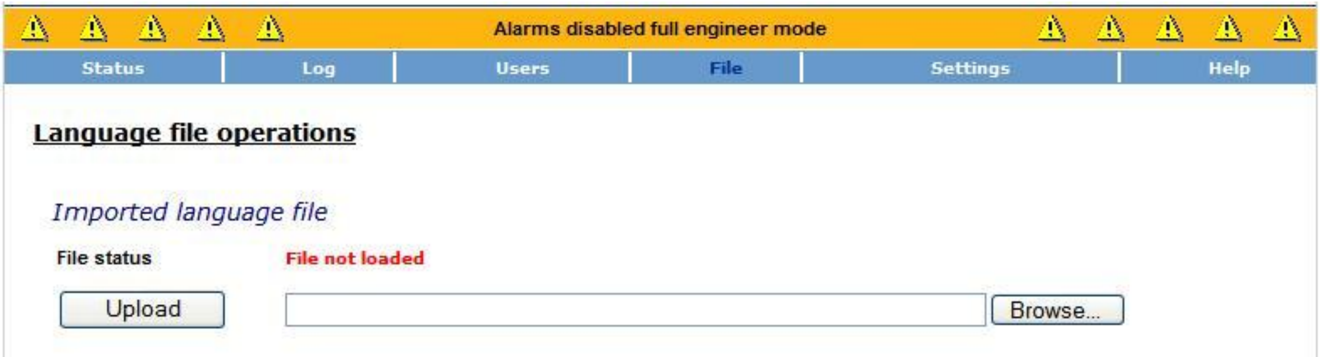
The peripheral firmware can also be upgraded with SPC Pro or using the Fast Programmer [→ 143].

15.6.2 Importing Custom Languages for the Panel

To import a custom language file which is created using the translator tool:

1. Select the **Import Language** option from the **File** page.

   ⇨ The following Language File Operations page is displayed:



Alarms disabled full engineer mode

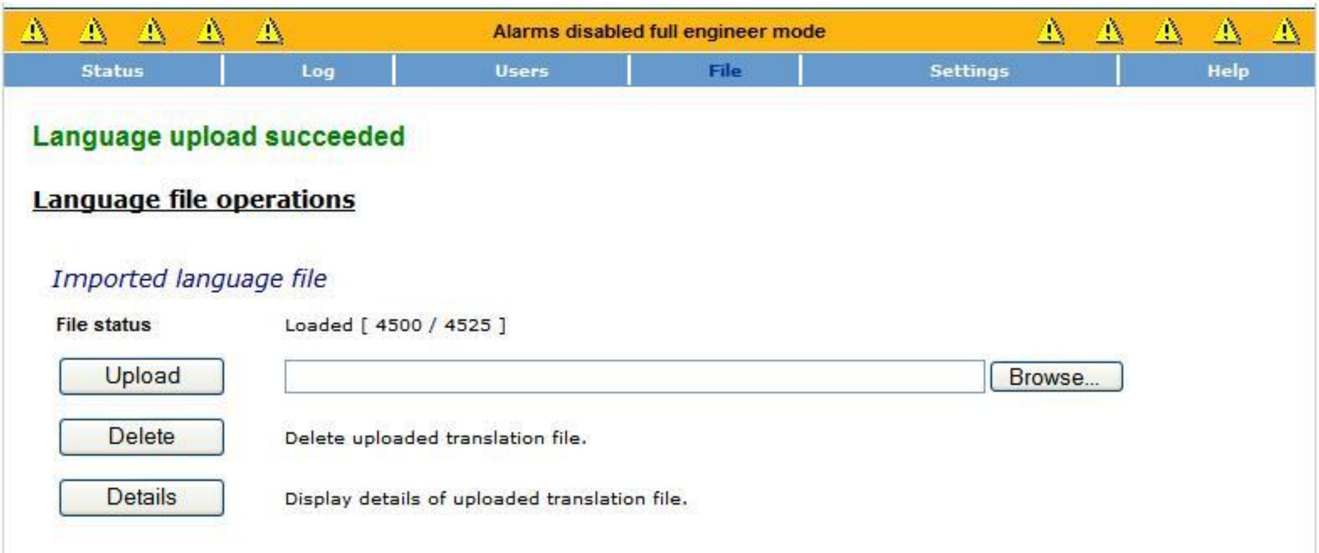
Language file operations

Imported language file

File status File not loaded

2. Click the **Browse** button to select a custom language file.
3. Click on the **Upload** button.

➪ The following page is displayed when the file is imported.



Alarms disabled full engineer mode

Language upload succeeded

Language file operations

Imported language file

File status Loaded [4500 / 4525]

Delete uploaded translation file.

Display details of uploaded translation file.

4. The **File Status** shows how many strings are translated and the total number of strings in the file (**Loaded [xxxx/yyyy]**).
5. Click on the **Details** button to display untranslated strings which are shown in the default language (in this case, English)
6. Click on the **Delete** button to delete the imported translation file.

Language files can also be imported using the Fast Programmer [→ 147].

See Language [→ 163] for details of selecting the panel ‘System’ and ‘Idle State’ languages in the browser.

See OPTIONS [→ 76] for details of selecting the panel ‘System’ and ‘Idle State’ languages on the keypad.

See also

🗎 Using the Fast Programmer [→ 143]

15.6.3 Using the Fast Programmer

The SPC Fast Programmer is a portable storage device that provides the engineer with the ability to upload and download configuration files in a quick and convenient manner. The Fast Programmer has two interfaces located on opposite ends of the device:

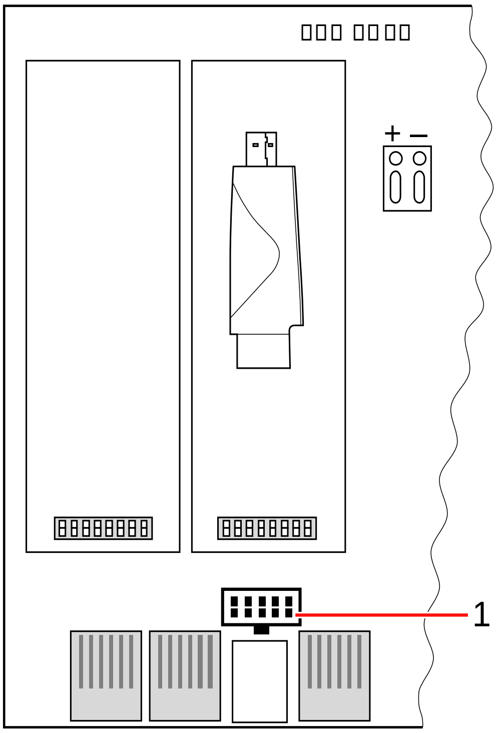
SPC controller interface

This 10-pin serial interface is located at the top of the Fast Programmer and connects directly to the Fast Programmer interface on the controller board. Once connected, the engineer can upload and download files directly from the Fast Programmer via the browser programming interface.

PC USB interface

This USB interface is located at the bottom of the Fast Programmer and connects directly to the USB interface on a PC. Configuration files can only be stored and accessed by using the SPC Pro programming application.

15.6.3.1 Connecting the Fast Programmer to the Controller



Fast Programmer interface

1	Fast Programmer interface

To connect the SPC Fast Programmer to the controller:

1. Open the SPC controller enclosure and locate the Fast Programmer interface. **NOTICE! Do not power down the controller**.
2. Align the Fast Programmer over the Fast Programmer interface on the SPC controller board with the 10-pin serial interface facing down.
3. Ensure the pins match up correctly with the holes in the socket and firmly but gently press into place.

⇨ The LED on the Fast Programmer flashes momentarily as the data is accessed.
CAUTION! Do not remove the Fast Programmer while the LED is flashing.

⇨ The Fast Programmer is now connected to the controller.

ℹ To remove the Fast Programmer - gently pull the device out of the Fast Programmer interface.

15.6.3.2 Installing the Fast Programmer on a PC

For Windows XP and 2000

1. Connect the USB cable from the controller to a USB interface on the PC.
2. Confirm the correct communication Port.

   ⇨ The **Found New Hardware** wizard is displayed.
3. Press **Cancel**.

ℹ If there are 2 devices, cancel both Wizards before proceeding.

---

4. Double click the file SPC.exe.

   ⇨ A dialog box regarding Windows certification appears. Siemens deems this acceptable to continue. For further queries, please contact network administrator or a Siemens technician.
5. Click **Continue Anyway**.

   ⇨ At the end of the installation process, a window indicates that the installation process is complete.
6. Click **Finish**.

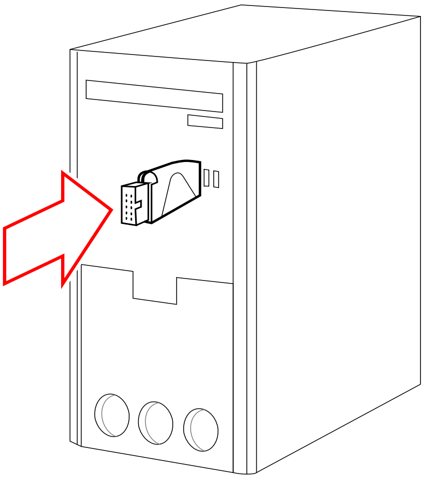
For Windows Vista

▷ You have administration privileges.

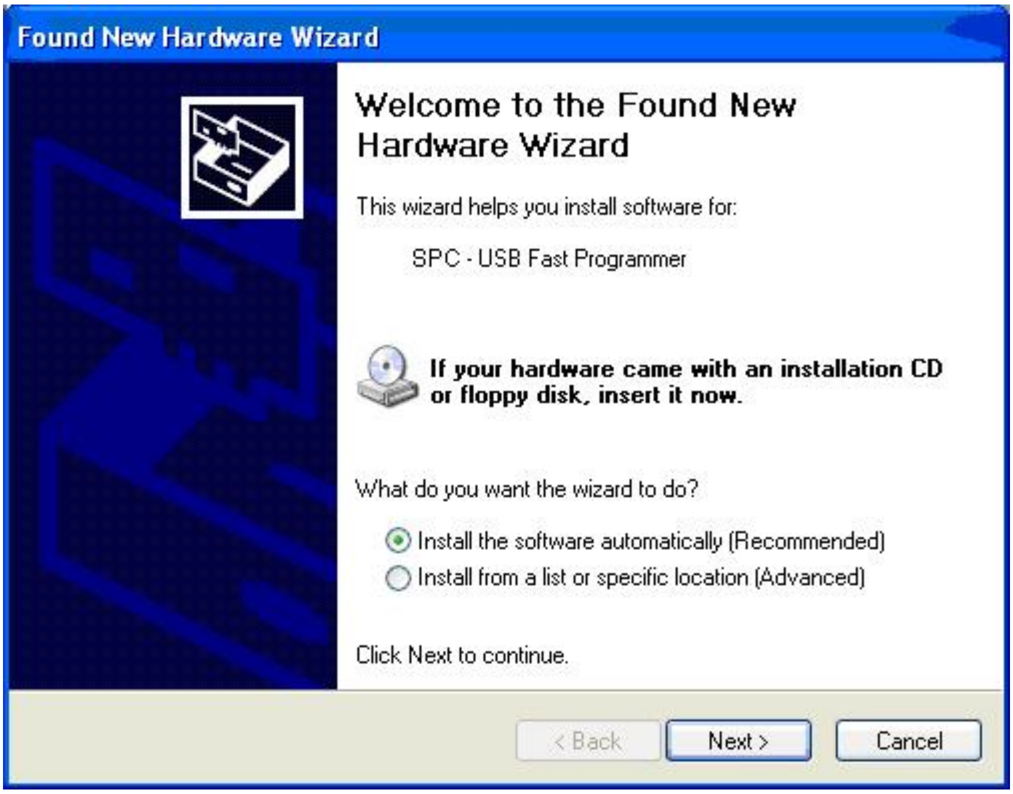
1. Double click the file SPC.exe.

   ⇨ The installation wizard appears.
2. Proceed with the wizard instructions
3. At the end of the installation process, a window indicating that the installation process is complete.
4. Click **Finish** to confirm the completion of the installation.

   ⇨ The SPC Fast Programmer is now installed on the PC. The configuration files can be accessed only by running the SPC Pro programming application
5. Plug the Fast Programmer into the USB port.



6. The following window will be displayed:



Found New Hardware Wizard

Welcome to the Found New Hardware Wizard

This wizard helps you install software for:

SPC - USB Fast Programmer

If your hardware came with an installation CD or floppy disk, insert it now.

What do you want the wizard to do?

● Install the software automatically (Recommended)

○ Install from a list or specific location (Advanced)

Click Next to continue.

7. Click **Next** (the recommended option – **Install the software automatically** - will be selected).

   ➪ The PC will proceed to install the driver software.

   ➪ A window will be displayed during the installation process to indicate that the driver software for the fast programmer has not passed Windows logo testing.

8. Click the option **Continue anyway** to proceed.

   ➪ At the end of the installation process a window indicating that the installation process is complete will be displayed.

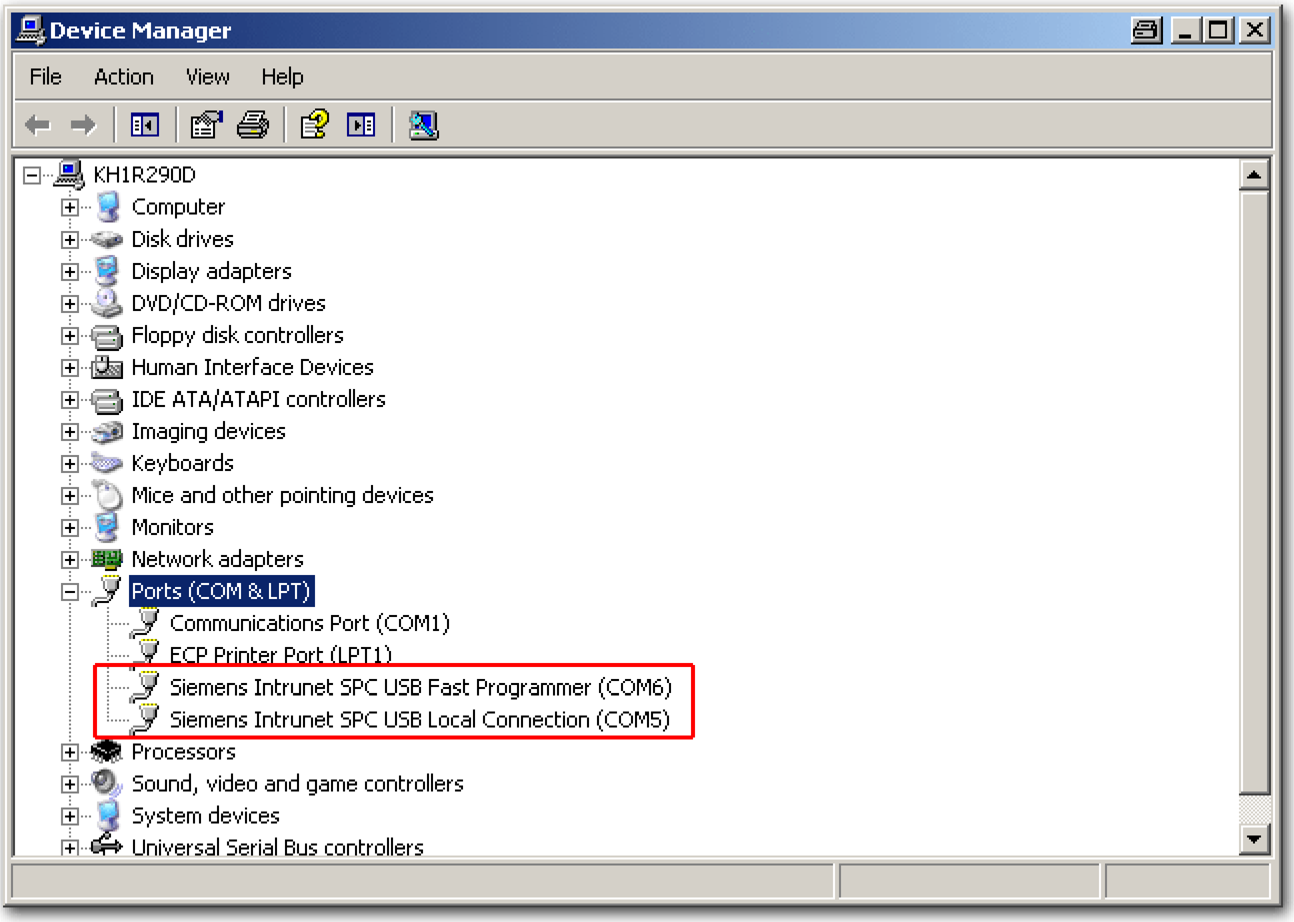
9. Click **Finish**.

➪ The SPC Fast Programmer is installed as a serial port interface on your PC.

View SPC Fast Programmer

- Open the Windows menu **Start > Control panel > System > Device Manager**.

➪ The Fast Programmer driver will be listed under the Ports (COM & LPT) directory as SPC **USB Fast Programmer (COM X)** (X = com port number).



KH1R290D
- Computer
- Disk drives
- Display adapters
- DVD/CD-ROM drives
- Floppy disk controllers
- Human Interface Devices
- IDE ATA/ATAPI controllers
- Imaging devices
- Keyboards
- Mice and other pointing devices
- Monitors
- Network adapters
- Ports (COM & LPT)
  - Communications Port (COM1)
  - ECP Printer Port (LPT1)
  - Siemens Intrunet SPC USB Fast Programmer (COM6)
  - Siemens Intrunet SPC USB Local Connection (COM5)
- Processors
- Sound, video and game controllers
- System devices
- Universal Serial Bus controllers

15.6.3.3 Fast Programmer File Operations

Controller and peripheral firmware upgrades and custom language imports may be done using the Fast Programmer and SPC Pro.

15.6.3.3.1 Accessing the Fast Programmer using the KeypadNotReleased

1. Enter Full Engineer and scroll to UTILITIES > FAST PROGRAMMER.
2. Press SELECT.
3. Scroll and select the desired option:

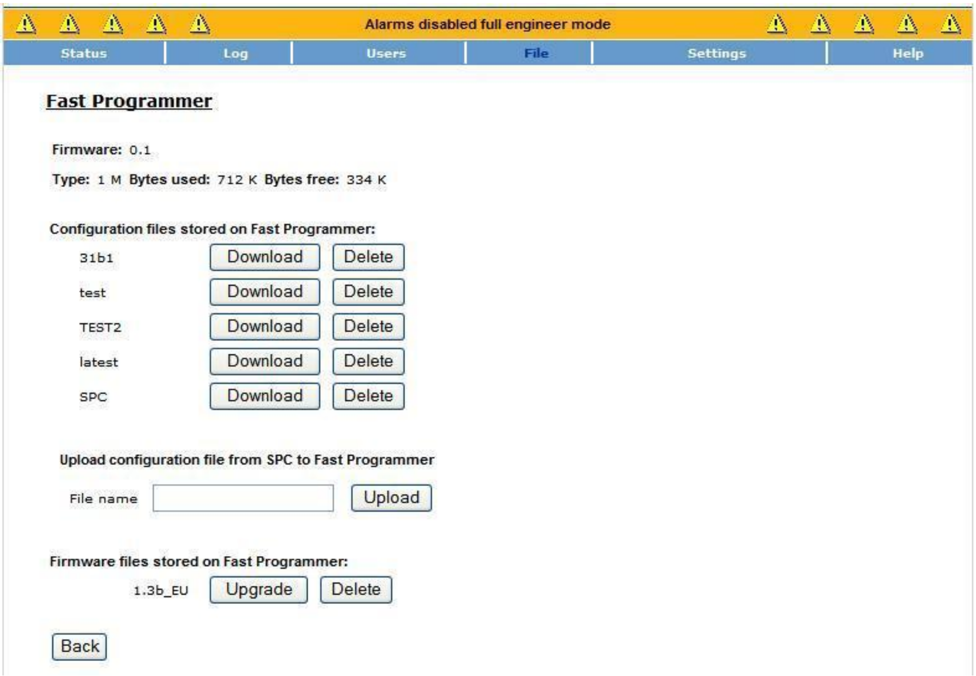
DATA FROM PANEL	Select desired file from list.
DATA TO PANEL	Select desired file from list.
DELETE FILES	Select desired file from list.

FIRMWARE UPGRADE	The panel searches for a valid controller firmware file. Once if finds the firmware file it will allow the user to select and upgrade the panel.
PERIPHERAL UPGRADE	The panel searches for a valid peripheral firmware file. Once if finds the firmware file it will allow the user to select and upgrade the panel
CUSTOM LANGUAGE UPDATES	A list of the language files available on the Fast programmer is displayed. Select the language required and press SELECT to import the file.

15.6.3.3.2 Accessing the Fast Programmer using the BrowserNotReleased

1. Enter Full Engineer in browser programming and select the **Files** programming page.
2. Click **Fast Programmer**.

⇨ The options to upload and download files are displayed.



Fast Programmer

Firmware: 0.1

Type: 1 M Bytes used: 712 K Bytes free: 334 K

Configuration files stored on Fast Programmer:

31b1 Download Delete
test Download Delete
TEST2 Download Delete
latest Download Delete
SPC Download Delete

Upload configuration file from SPC to Fast Programmer

File name Upload

Firmware files stored on Fast Programmer:

1.3b_EU Upgrade Delete

Back

Downloading Configuration Files to the Panel

A list of the configuration files stored on the fast programmer is displayed along with the options to download or delete them.

Uploading Configuration Files to the Fast Programmer

When uploading files from the SPC to the Fast programmer, you will be prompted to delete the existing file on the programmer before the new file can be saved.

To upload a configuration file from the Fast Programmer to the SPC, enter the file name in the file name box and click **Upload**.

For complete details on using the Fast Programmer with SPC Pro, consult the *SPC Pro Configuration Manual*.

Upgrading Firmware

!	*NOTICE*
	Manufacturer Access is required for firmware operations.

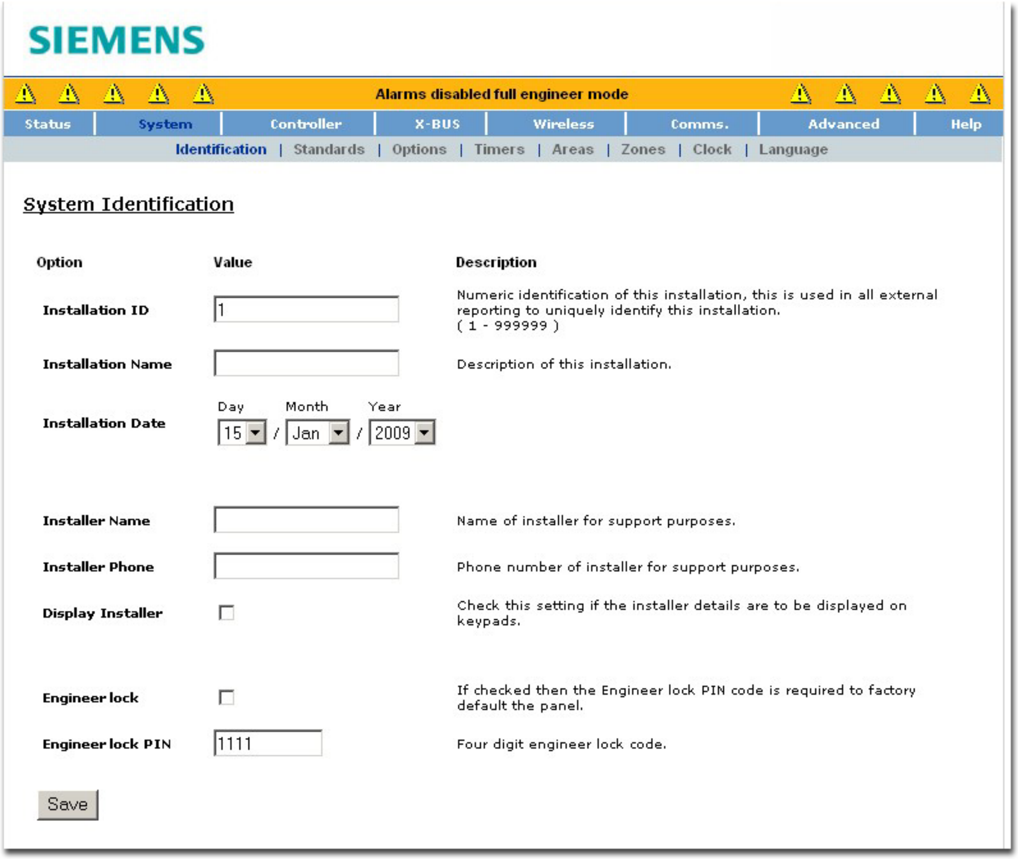
A list of the firmware files stored on the Fast Programmer is displayed.

To upgrade firmware, click on the **Upgrade** button beside the required firmware file.

15.7 Changing system settings

15.7.1 Identification

1. Select **Settings** > **System** > **Identification**.
   ➪ The following window will be displayed.
2. Configure the fields as described in the table below.


SIEMENS
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Identification | Standards | Options | Timers | Areas | Zones | Clock | Language
Save

Alarms disabled full engineer mode

System Identification

Option	Value	Description
Installation ID	1	Numeric identification of this installation, this is used in all external reporting to uniquely identify this installation. (1 - 999999)
Installation Name		Description of this installation.
Installation Date	Day 15 / Month Jan / Year 2009	
Installer Name		Name of installer for support purposes.
Installer Phone		Phone number of installer for support purposes.
Display Installer	☐	Check this setting if the installer details are to be displayed on keypads.
Engineer lock	☐	If checked then the Engineer lock PIN code is required to factory default the panel.
Engineer lock PIN	1111	Four digit engineer lock code.

Installation ID	Enter a unique number for each installation This number identifies the installation (1 – 999999).

Installation Name	Enter the name of the installation. An installation name must be entered before the installation is saved on the system. The installation can be viewed from the keypad.
Installation Date	Select the date from the dropdown menu that the installation was completed.
Installer Name	Enter the name of the person who installed the system (for support purposes).
Installer Phone	Enter the contact phone number of the person who installed the system (for support purposes).
Display Installer	Tick this box to display the installation details on the keypad connected to the panel when in the idle condition.
Engineer Lock	Tick this box to require use of the engineer lock PIN to factory default the panel.
Engineer Lock PIN	Enter value for lock PIN (4 digits).

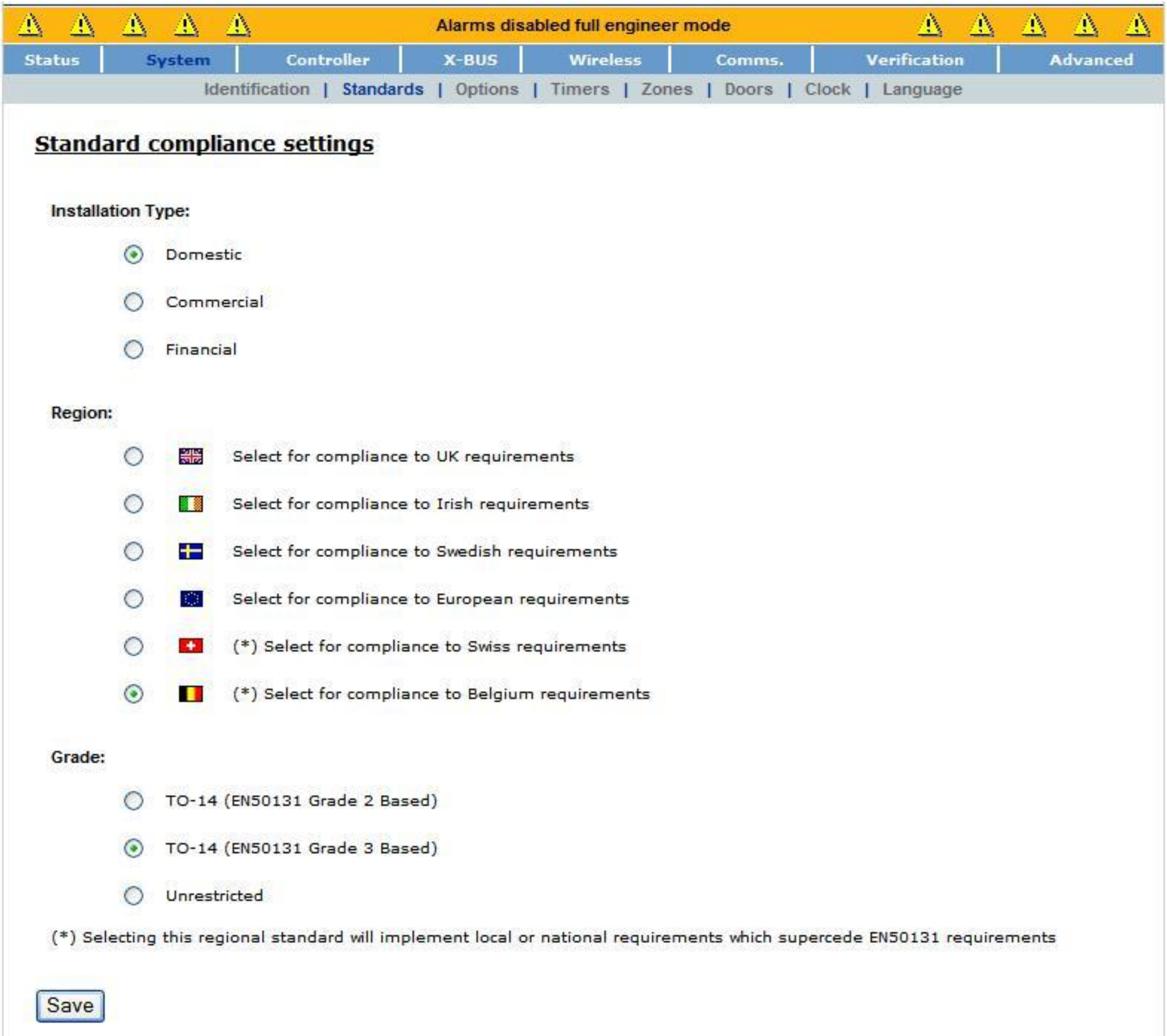
15.7.2 Standards

All alarm systems must comply with defined security standards. Each standard has specific security requirements that apply to the market/country in which the alarm system is installed.

1. Select **Settings > System > Standards**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.



Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Zones | Doors | Clock | Language

Standard compliance settings

Installation Type:

● Domestic
○ Commercial
○ Financial

Region:

○ Select for compliance to UK requirements
○ Select for compliance to Irish requirements
○ Select for compliance to Swedish requirements
○ Select for compliance to European requirements
○ (*) Select for compliance to Swiss requirements
● (*) Select for compliance to Belgium requirements

Grade:

○ TO-14 (EN50131 Grade 2 Based)
● TO-14 (EN50131 Grade 3 Based)
○ Unrestricted

(*) Selecting this regional standard will implement local or national requirements which supercede EN50131 requirements

Installation Type	Select the type of installation. Options are Domestic, Commercial or Financial.
Region	Select the region in which the installation is installed and the regional requirements it complies with. Options are UK, Ireland, Sweden, Europe, Switzerland or Belgium (INCERT)
Grade	Select the Security Grade that applies to the installation. ● Irish and European Regions: – EN50131 Grade 2 – EN50131 Grade 3 – Unrestricted ● UK Region: – PD6662 (EN50131 Grade 2 based) – PD6662 (EN50131 Grade 3 based) – Unrestricted ● Swedish Region: – SSF1014:3 Larmclass 1 – SSF1014:3 Larmclass 2

	– Unrestricted ● Belgium Region: – TO-14 (EN50131 Grade 2 based) – TO-14 (EN50131 Grade 3 based) – Unrestricted ● Switzerland Region: – SWISSI Cat 1 – SWISSI Cat 2 – Unrestricted

Unrestricted Grade

A Security Grade setting of **Unrestricted** does not apply any regionally approved security restrictions to the installation. Instead, the Unrestricted setting enables an engineer to customize the installation by changing security policy options and configuring additional options which do not comply with the selected regional security compliance.

Unrestricted configuration options are denoted in this document by the following symbol: ⓤ

See System Options for details of configuring system policies.

15.7.2.1 Installation type

The installation type determines the type of zones that can be programmed on the panel and the features that will be presented.

You can choose between the following installation types:

- **Domestic**: Suitable for residential installations with one or more areas and a small-to-moderate number of alarm zones. Appropriate Input and Output functions are available for the system configuration.
- **Commercial**: Suitable for business installations with multiple areas and a large number of alarm zones. Extended Input and Output functions such as calendar and autosetting are available.
- **Financial**: Suitable for banks and other financial institutions with vault and ATM environments.

15.7.2.2 Region

The region setting of the system sets the market specific security requirements for the installation in accordance with the Grades.

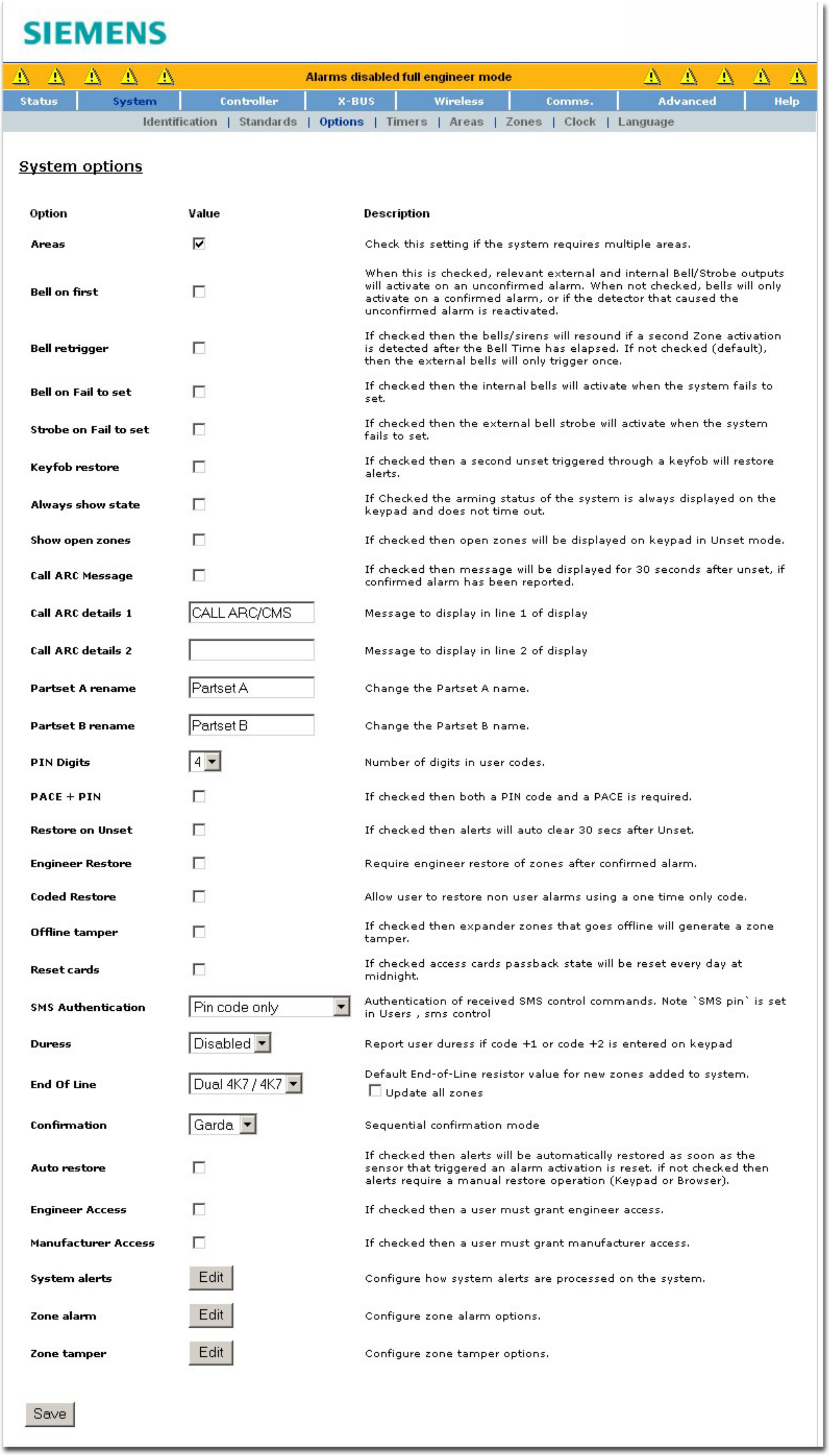
15.7.2.3 Grade

- **EN 50131 Grade 2**: The Grade is defined according the EN Standard in terms of User/Engineer and System rights. For example, an engineer code is required to restore a tamper alarm.
- **EN 50131 Grade 3**: The Grade is defined according the EN Standard in terms of User/Engineer and System rights. For example, an engineer code is required to restore a tamper alarm.

- **Unrestricted**: The system remains compliant to previous grade setting. Once one of the following menu options (System Alert; Zone Alarms and Zone Tamper) is changed, the system is not anymore EN compliant. Any changes away from standards should be noted as deviation and agreed with end customer.

15.7.3 Options

1. Select **Settings > System > Options**.
2. Configure the fields as described in the table below.


SIEMENS
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Identification | Standards | Options | Timers | Areas | Zones | Clock | Language
Edit
Save

Alarms disabled full engineer mode

System options

Option	Value	Description
Areas	☑	Check this setting if the system requires multiple areas.
Bell on first	☐	When this is checked, relevant external and internal Bell/Strobe outputs will activate on an unconfirmed alarm. When not checked, bells will only activate on a confirmed alarm, or if the detector that caused the unconfirmed alarm is reactivated.
Bell retrigger	☐	If checked then the bells/sirens will resound if a second Zone activation is detected after the Bell Time has elapsed. If not checked (default), then the external bells will only trigger once.
Bell on Fail to set	☐	If checked then the internal bells will activate when the system fails to set.
Strobe on Fail to set	☐	If checked then the external bell strobe will activate when the system fails to set.
Keyfob restore	☐	If checked then a second unset triggered through a keyfob will restore alerts.
Always show state	☐	If Checked the arming status of the system is always displayed on the keypad and does not time out.
Show open zones	☐	If checked then open zones will be displayed on keypad in Unset mode.
Call ARC Message	☐	If checked then message will be displayed for 30 seconds after unset, if confirmed alarm has been reported.
Call ARC details 1	CALL ARC/CMS	Message to display in line 1 of display
Call ARC details 2		Message to display in line 2 of display
Partset A rename	Partset A	Change the Partset A name.
Partset B rename	Partset B	Change the Partset B name.
PIN Digits	4	Number of digits in user codes.
PACE + PIN	☐	If checked then both a PIN code and a PACE is required.
Restore on Unset	☐	If checked then alerts will auto clear 30 secs after Unset.
Engineer Restore	☐	Require engineer restore of zones after confirmed alarm.
Coded Restore	☐	Allow user to restore non user alarms using a one time only code.
Offline tamper	☐	If checked then expander zones that goes offline will generate a zone tamper.
Reset cards	☐	If checked access cards passback state will be reset every day at midnight.
SMS Authentication	Pin code only	Authentication of received SMS control commands. Note `SMS pin` is set in Users , sms control
Duress	Disabled	Report user duress if code +1 or code +2 is entered on keypad
End Of Line	Dual 4K7 / 4K7	Default End-of-Line resistor value for new zones added to system. ☐ Update all zones
Confirmation	Garda	Sequential confirmation mode
Auto restore	☐	If checked then alerts will be automatically restored as soon as the sensor that triggered an alarm activation is reset. if not checked then alerts require a manual restore operation (Keypad or Browser).
Engineer Access	☐	If checked then a user must grant engineer access.
Manufacturer Access	☐	If checked then a user must grant manufacturer access.
System alerts	Edit	Configure how system alerts are processed on the system.
Zone alarm	Edit	Configure zone alarm options.
Zone tamper	Edit	Configure zone tamper options.

System Options

The options displayed vary depending on the Security Grade of the system.

	Areas	Enables multiple areas on the panel.
	Bell on First	Enable to activate relevant bells/sirens on an unconfirmed alarm. When this option is disabled, the relevant bells/sirens will only activate on a confirmed alarm or if the detector that caused the unconfirmed alarm is reactivated.
	Bell Retrigger (RETRIGGER)	Enable to resound bells/sirens if a second zone activation is detected (after the bell time has elapsed). If not checked then the external bells will only trigger once.
	Bell on Fail to Set (FTS)	Enable to activate the internal bell if the system fails to set.
	Strobe on Fail to Set (FTS)	Enable to activate the strobe if the system fails to set.
	Keyfob Restore	If enabled, key fob is enabled to restore alerts by pressing the Unset key.
(!)	Always Show State (SHOW STATE)	If enabled, the setting status of the system (Fullset / Partset / Unset) is permanently displayed in the bottom line of the keypad display. If unchecked the setting status will disappear from the keypad display after 7 seconds.
	Show open zones	If enabled, open zones will display on keypad in Unset mode.
	Call ARC Message	If enabled, the ARC message will be displayed for 30 seconds after Unset, if confirmed alarm has been reported..
	Call ARC Line 1	ARC message in line 1 of display (16 chars).
	Call ARC Line 2	ARC message in line 2 of display (16 chars).
	Partset A rename	Enter a new name for your PARTSET A mode (e.g. Night Mode).
	Partset B rename	Enter a new name for your PARTSET B mode (e.g. Floor 1 only).
(!)	Partset Options	Configure the options for PARTSET A/B alarm modes for a single area installation if the function (multiple) **Areas** is not activated. If the function is activated, the Partset options for each area can be configured on the Areas [→ 165] configuration page..
	PIN Digits	Enter the number of digits for user codes (max. 8 digits). Increasing the number of digits will add the relevant number of zeros to the front of an existing code, e.g. an existing user code of 2134 (4 digits) will change to 00002134 if the PIN digits is set to 8.
	PACE + PIN	If enabled, both PACE and PIN are required.
	Secure PIN	If enabled you cannot select your PIN. The PIN will automatically be generated by the panel.
	Restore on Unset	Enable for alerts to auto clear after 30 sec. in Unset mode.

⊍	Engineer Restore	(Impact only if Region "UK" is chosen): If this option is enabled, then the engineer has to restore the confirmed alarms. This option works together with the function "Confirmation".
(!)	Coded Restore	Grade 3 only: A user, who does not have the right to restore an alarm, is able to restore the alarm with this feature. On resetting an alarm, a 6 digit code is required. The user must call the installer to generate a restore code, with which the user is able to restore the alarm.
	Offline Tamper	Enable this for offline expander zones to generate a zone tamper.
	Reset Cards	If enabled, access cards passback state will be reset every day at midnight.
	Duress	Select one of the following Duress codes to activate this function. Code +1 or Code + 2.
⊍	Antimask Set	Select the type of event reported resulting from antimask detection when panel is Set. Options are Disabled, Tamper, Trouble or Alarm. The option can only be configured when the panel is in ‘Unrestricted’ mode. In Grade 2 or 3 mode, the type of event reported is in accordance with the standards for the selected region: ● Ireland and Belgium - Alarm ● All other regions - Alarm
⊍	Antimask Unset	Select the type of event reported resulting from antimask detection when panel is Unset. Options are Disabled, Tamper, Trouble or Alarm. The option can only be configured when the panel is in ‘Unrestricted’ mode. In Grade 2 or 3 mode, the type of event reported is in accordance with the standards for the selected region: ● Ireland and Belgium - Disabled ● All other regions - Tamper
	Suspician Audible	If enabled then WPA Suspicion alerts have audible and visible indicators on the keypad.
Pro	End Of Line (EOL RESISTANCE)	Select the End Of Line termination resistors that will apply to either All zones on the system or New zones added to the system. Tick the Checkbox to enable the appropriate feature.
	Show Offline Cameras	If enabled, offline cameras will be displayed on the keypad in Unset mode.
	Seismic Test on Manual Set	If enabled, all seismic sensors in any area that is being set will be tested before area or system set.
⊍	Confirmation	The Confirmation variable determines when an alarm is deemed to be a confirmed alarm. ● Garda: This will enforce the policies for confirmed alarms required by the Irish Garda. The requirement stipulates that an alarm will be deemed to be a confirmed alarm as soon as a second zone alarm is activated on the system within the one alarm set period. The Garda confirmation option is automatically set whenever the Security grade - Country option is set to Ireland. ● DD243: This will enforce compliance with the UK Police

		requirements, and is a specific requirement for UK Commercial installations. The requirement stipulates that an alarm will only be deemed to be a confirmed alarm if it meets the following condition: After an initial zone alarm has been activated and before the alarm confirmation time has expired, a second zone alarm is activated. The alarm confirmation time must be between 30 and 60 minutes. (See Timers [→ 159]) If a second zone alarm is not activated within the Alarm confirmation time, then the first zone alarm will be inhibited. The DD243 confirmation option is automatically set whenever the Security grade - Country option is set to UK.
	Auto Restore	Enable this feature to automatically restore alerts on the system i.e. when the open zone that triggered an alarm is closed, a manual restore operation on the keypad/browser is not required. If disabled it prevents the user from restoring alerts by resetting the input that triggered the alert.
Ⓤ	Alarm on Exit	If enabled, an alarm is raised if any entry/exit zone is still open when the exit timer expires. If unchecked, the system will fail to set if any entry/exit zone is still open. **Note:** Only available when ‘Unrestricted’ grade is selected in ‘Standard Compliance Settings’, as setting is not in accordance with EN50131.
Ⓤ	Allow Engineer	Enable this feature to ensure that the engineer can only access the system if the user allows it. If disabled, ENABLE ENGINEER menu option on keypad is not available. **Note**: Only available if Security Grade is ‘Unrestricted’. For Grade 2 / 3, user control of engineer access to system is always available.
Ⓤ	Allow Manufacturer	Enable this feature to ensure that the engineer can only access the system if the user allows it. If disabled, ENABLE MANUFACTURER menu option on keypad is not available. **Note**: Only available if Security Grade is ‘Unrestricted’. For Grade 2 / 3, user control of engineer access to system is always available if user type is ‘Manager’.
Web Only Ⓤ	System Alert Policy	This programming option allows you to restrict the user and engineer’s ability to restore, Isolate and inhibit alerts. The manner in which the system reacts to alerts can also be programmed.
Web Only Ⓤ	Zone Alarm Policy	Select whether particular zone alarms can be restored, inhibited or isolated by the user and engineer.
Web Only Ⓤ	Zone Tamper Policy	Select whether particular zone tampers can be restored, inhibited or isolated by the user and engineer.
Web Only Ⓤ	Keypad Display Policy	Select events to be displayed on keypads in both Set and Unset modes.
Web Only Ⓤ	Keypad LED Display Policy	Select which LEDs will be displayed on keypads in both Set and Unset modes.
Web Only Ⓤ	System Policy	Configure engineer login and tamper reporting behavior for system.

Web Only ☝	Timing Policy	Display system timing policy.
Web and SPC Pro Only	Output Configuration	Click on the Edit button to configure latch and autoset output settings [→ 187].
Web Only	Alert Forbid Set	If enabled, a user cannot set an area if there is an area or system alert present on the system. **Note:** This option is only available when the Region selected is Switzerland or Security Grade selected is 'Unrestricted'.
Web and SPC Pro Only	Door Mode Set	Select required user identification to unlock door when area is Set. Options are Default, Card and PIN, Card Or PIN.
Web and SPC Pro Only	Door Mode Unset	Select required user identification to unlock door when area is Unset. Options are Default, Card and PIN, Card Or PIN.
	Retrigger Duress	If enabled, duress alarm will retrigger.
	Retrigger Panic	If enabled, panic alarm will retrigger.
Web and SPC Pro Only	Audio Expander LED	If enabled, audio expander will not turn on LED when microphone active.
☝	Engineer Exit	If enabled, the engineer is allowed to leave Full Engineer mode with alerts active.
Keypad and Web Only	RF Output Time	Enter an amount of time that the RF output will remain active on system. (0 – 999 secs)
Keypad and Web Only	Time Sync Limit	Enter a time limit within which no event will be reported. (0 – 999 secs)
	Silence during Audio ver	If enabled, then the internal and external bells (system and area), the keypad buzzers and annunciation messages on the Comfort Keypad will be silenced during audio verification.
	Override Reader Profile	If enabled, the LED behaviour of readers will be controlled by the panel.
	Idle State Language	Select the language displayed in idle state. ● System Language: Language in which menus and texts on the keypads, the web interface and the event log will be displayed. ● Last Used: Last used language is displayed in idle state.
	SMS Authentication	Select one of the following options: ● PIN Code Only: This is a valid user code. See page. ● Caller ID Only: This is the phone number (including three-digit country prefix code) as configured for user SMS control. SMS control will only be available for configuration by the user when this option is selected. ● PIN and Caller ID ● SMS PIN Code Only This is a valid PIN code configured for the user which is different from the user's login code. SMS controls will only be available for configuration by the user when this option is selected.

		● SMS PIN Code & Caller ID.

See also

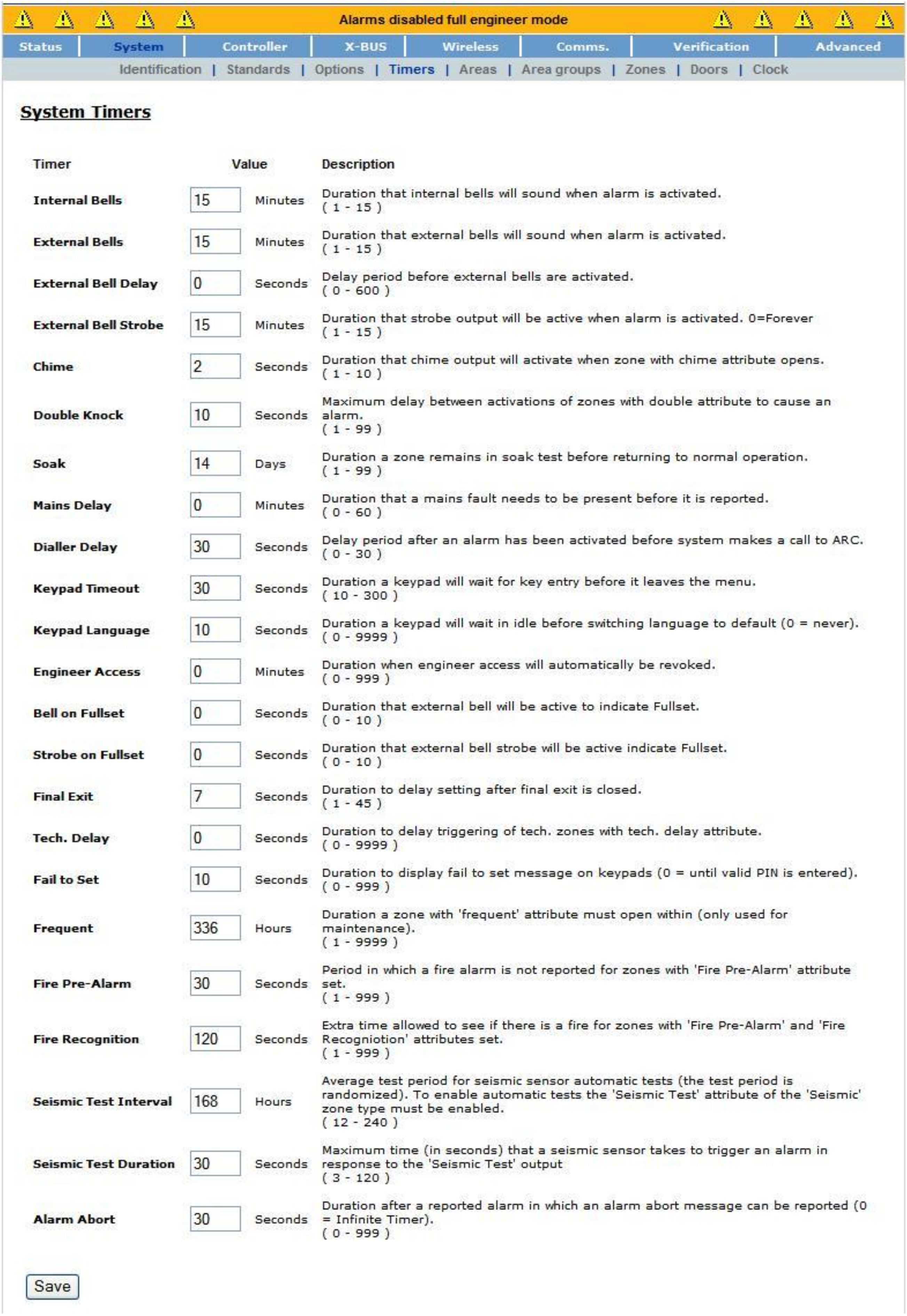
🗎 Standards [→ 150]

15.7.4 Timers

This window gives an overview about identified timer defaults and their description.

These settings, which are only presented when the Security Grade of the system is set to **Unrestricted**, should only be programmed by an authorised installation engineer. Changing settings could render the SPC system noncompliant with security standards. Setting the Security Grade back to EN 50131 Grade 2 or EN 50131 Grade 3 overwrites any changes made on this page.

1. Select **Settings > System > Timers**.
   ⇨ The following window will be displayed.
2. Configure the fields as described in the table below.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock
Save

System Timers

Timer	Value		Description
Internal Bells	15	Minutes	Duration that internal bells will sound when alarm is activated. (1 - 15)
External Bells	15	Minutes	Duration that external bells will sound when alarm is activated. (1 - 15)
External Bell Delay	0	Seconds	Delay period before external bells are activated. (0 - 600)
External Bell Strobe	15	Minutes	Duration that strobe output will be active when alarm is activated. 0=Forever (1 - 15)
Chime	2	Seconds	Duration that chime output will activate when zone with chime attribute opens. (1 - 10)
Double Knock	10	Seconds	Maximum delay between activations of zones with double attribute to cause an alarm. (1 - 99)
Soak	14	Days	Duration a zone remains in soak test before returning to normal operation. (1 - 99)
Mains Delay	0	Minutes	Duration that a mains fault needs to be present before it is reported. (0 - 60)
Dialler Delay	30	Seconds	Delay period after an alarm has been activated before system makes a call to ARC. (0 - 30)
Keypad Timeout	30	Seconds	Duration a keypad will wait for key entry before it leaves the menu. (10 - 300)
Keypad Language	10	Seconds	Duration a keypad will wait in idle before switching language to default (0 = never). (0 - 9999)
Engineer Access	0	Minutes	Duration when engineer access will automatically be revoked. (0 - 999)
Bell on Fullset	0	Seconds	Duration that external bell will be active to indicate Fullset. (0 - 10)
Strobe on Fullset	0	Seconds	Duration that external bell strobe will be active indicate Fullset. (0 - 10)
Final Exit	7	Seconds	Duration to delay setting after final exit is closed. (1 - 45)
Tech. Delay	0	Seconds	Duration to delay triggering of tech. zones with tech. delay attribute. (0 - 9999)
Fail to Set	10	Seconds	Duration to display fail to set message on keypads (0 = until valid PIN is entered). (0 - 999)
Frequent	336	Hours	Duration a zone with 'frequent' attribute must open within (only used for maintenance). (1 - 9999)
Fire Pre-Alarm	30	Seconds	Period in which a fire alarm is not reported for zones with 'Fire Pre-Alarm' attribute set. (1 - 999)
Fire Recognition	120	Seconds	Extra time allowed to see if there is a fire for zones with 'Fire Pre-Alarm' and 'Fire Recogniotion' attributes set. (1 - 999)
Seismic Test Interval	168	Hours	Average test period for seismic sensor automatic tests (the test period is randomized). To enable automatic tests the 'Seismic Test' attribute of the 'Seismic' zone type must be enabled. (12 - 240)
Seismic Test Duration	30	Seconds	Maximum time (in seconds) that a seismic sensor takes to trigger an alarm in response to the 'Seismic Test' output (3 - 120)
Alarm Abort	30	Seconds	Duration after a reported alarm in which an alarm abort message can be reported (0 = Infinite Timer). (0 - 999)

Timers

Designation of the functions in the following order:

- 1st row: Web/SPC Pro
- 2nd row: Keypad

Timer	Description	Default
Internal Bells INT BELL TIME	Duration that internal sounders will sound when alarm is activated. (1 – 15 minutes: 0 = never))	15 min.
External Bells EXT BELL TIME	Duration that external sounders will sound when alarm is activated. (1 – 15 minutes; 0 = never)	15 min.
Ext. Bell Delay EXT BELL DELAY	This will cause a delayed activation of the external bell. (0 – 600 seconds)	0 sec.
Ext. Bell Strobe STROBE TIME	Duration that the strobe output will be active when an alarm is activated. (1 – 15 minutes; 0 = indefinitely)	15 min.
Chime CHIME TIME	Number of seconds that a chime output will activate, when a zone with chime attribute opens. (1 – 10 seconds)	2 sec.
Double Knock DKNOCK DELAY	The maximum delay between activation's of zones with the double attribute, which will cause an alarm. (1 – 99 seconds)	10 sec.
Soak SOAK DAYS	The number of days a zone remains under soak test before it automatically returns to normal operation. (1 – 99 days)	14 days
Mains Delay MAINS SIG DELAY	The time after a mains fault has been detected before an alert is activated by the system. (0 – 60 minutes)	0 min.
Dialer Delay DIALER DELAY	When programmed, the dialler delay initiates a predefined delay period (0 -30 seconds) before the system dials out to an Alarm Receiving Centre (ARC). This is specifically designed to reduce unwarranted responses from Alarm Receiving Centres and the constabulary. In the event of a subsequent zone being tripped the dialler delay period is ignored and the dialler dials out immediately. (0 – 30 seconds)	30 sec.
Keypad Timeout KEYPAD TIMEOUT	The number of seconds that an RKD will wait for key entry before it leaves the current menu. (10 – 300 seconds)	30 sec.
Keypad Language KEYPAD LANGUAGE	The duration a keypad will wait in idle before switching language to default (0 - 9999 seconds; 0 = never).	10 secs
Engineer Access ENGINEER ACCESS	The timer for the Engineer access starts as soon as the user enables the Engineer Access. (0 – 999 minutes. '0' indicates no time limitation for system access)	0 min.
Bell on Fullset FULLSET BELL	Activates the external bell momentarily to indicate a full set condition. (0 – 10 seconds)	0 sec.
Strobe on Fullset FULLSET STROBE	Activates the strobe on the external bell momentarily to indicate a full set condition. (0 – 10 seconds)	0 sec.
Final Exit FINAL EXIT	The Final Exit time is the number of seconds that arming is delayed after a zone programmed with the final exit attribute is closed. (1 – 45 seconds)	7 sec.
Tech. delay	Number of seconds to delay triggering of tech. zones with	0 sec.

Timer	Description	Default
TECH. DELAY	tech. delay attribute. (0 – 9999 seconds)	
Fail To Set FAIL TO SET	Number of seconds to display fail to set message on keypads (0 until valid PIN is entered). (0 – 999 seconds)	10 sec.
Confirm CONFIRM TIME	● **Note:** Only available when Security Grade is ‘Unrestricted’ and ‘DD243’ is selected for ‘Confirmation’ variable. (See System Options [→ 153]) This timer applies to the alarm confirmation feature and is defined as the maximum time between alarms from two different non overlapping zones that will cause a confirmed alarm. (30 – 60 minutes)	30 min.
Exit* EXIT TIME (!)	The time period allowed for the user to exit the building after setting the system. The exit time will be counted down at the keypad as the buzzer beeps to indicate to the user that the system will arm when the exit timer reaches zero.	45 sec.
Entry* ENTRY TIME (!)	The time period allowed for the user to UNSET the alarm after opening an entry/exit zone of an armed system.	45 sec.
Frequent FREQUENT (!)	This attribute only applies to Remote Maintenance. The number of hours a zone must open within if the zone is programmed with the **Frequent use** attribute. (1 – 9999 hours)	336 hours (2 weeks)
Fire Pre-alarm FIRE PRE-ALARM	Number of seconds to wait before reporting file alarm for zones with ‘Fire pre-alarm’ attribute set. (1 – 999 seconds) See Editing a Zone [→ 164].	30 sec.
Fire recognition FIRE RECOGNITION	Extra time to wait before reporting file alarm for zones with ‘Fire pre-alarm’ and ‘Fire Recognition’ attributes set. (1 – 999 seconds) See Editing a Zone [→ 164].	120 sec.
Alarm abort ALARM ABORT	Time after a reported alarm in which an alarm abort message can be reported. (0 – 999 seconds))	30 sec.
Seismic Test Interval SEISMIC AUTOTEST	The average period between seismic sensor automatic tests (12 – 240 hours) **Note:** To enable automatic testing, the **Automatic Sensor Test** attribute must be enabled for a seismic zone.	168 hours.
Seismic Test Duration SEISMIC TEST DUR	Maximum time (in seconds) that a seismic sensor takes to trigger an alarm in response to the 'Seismic Test' output. (3 - 120 seconds)	30 sec.
RF Output Time RF OUTPUT	The time that the RF output will remain active on the system. (0 – 999 seconds)	0 sec.
Time Sync Limit TIME SYNC LIMIT	Time synchronisation only takes place if system time and update time are outside this limit.	0 sec.

*NOTE: Entry and Exit timers are displayed on this page if the function (multiple) Areas is not activated. If the function is activated, the Entry and Exit timers for each area are located in the Area Configuration.

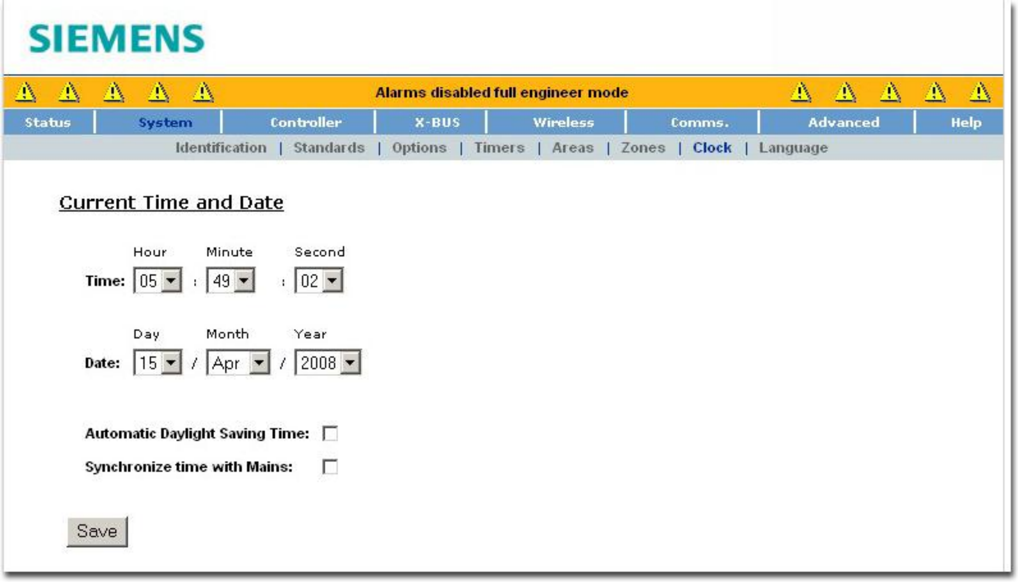
Default times are dependent upon the Engineer configuration. The default times denoted may or may not be allowable and is dependent on the configuration by the engineer

15.7.5 Clock

This window allows to program the date and time on the panel. The controller contains a **R**eal-**T**ime **C**lock (RTC) that is battery backed to preserve the time and date information in the event of power failure.

1. Select **Settings** > **System** > **Clock**.

   ➪ The following window will be displayed.


SIEMENS
Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Identification | Standards | Options | Timers | Areas | Zones | Clock | Language

Current Time and Date

Time: Hour 05 : Minute 49 : Second 02

Date: Day 15 / Month Apr / Year 2008

Automatic Daylight Saving Time: □

Synchronize time with Mains: □

Save

2. Select the **Time** and **Date** from the drop down menus.
3. Configure the following fields:

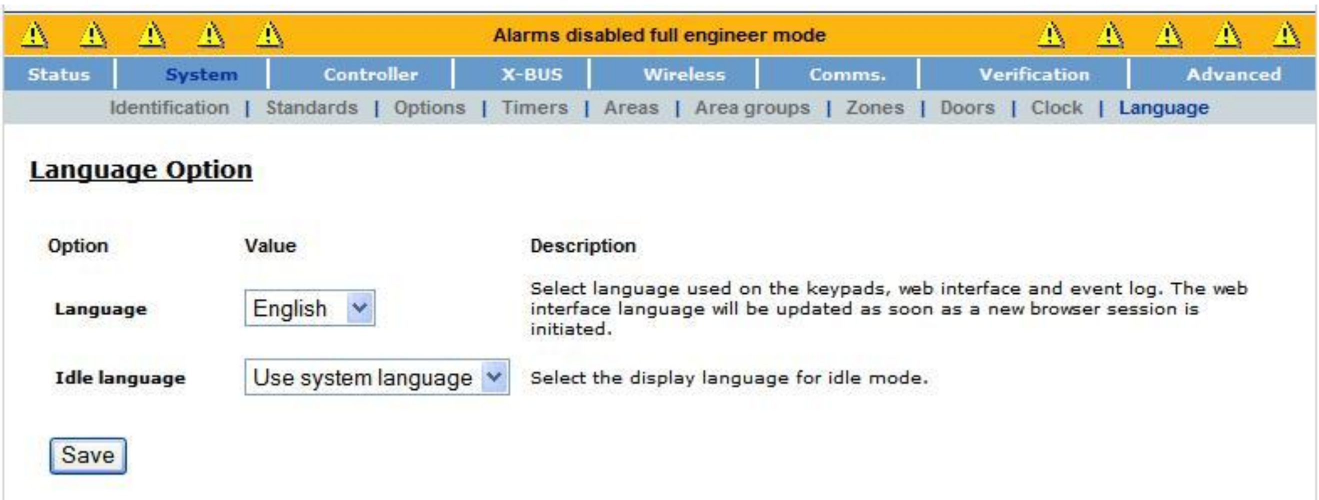
Automatic Daylight Saving Time	If selected, the system will automatically switch to summer time
Synchronize time with Mains	If selected, the RTC synchronizes itself with the sine wave in the power line

The selected time and date will be displayed on the keypad, the web interface and the event log.

15.7.6 Language

- Select **Settings** > **System** > **Language**.

  ➪ The following window is displayed:


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language
Save

Language Option

Option	Value	Description
Language	English	Select language used on the keypads, web interface and event log. The web interface language will be updated as soon as a new browser session is initiated.
Idle language	Use system language	Select the display language for idle mode.

- For the **Language** option, select a language from the dropdown menu.

⇨ This option determines the system language in which the texts and menus on the keypads, the web interface and the event log will be displayed.

- For the **Idle Language** option, select either ‘Use System Language’ or ‘Last Used’.

⇨ Idle Language determines the language which is displayed on the keypads when the panel is in its idle state. If ‘Last Used’ is selected, the language displayed is the language that is associated with the last user login.

See also

- Language [→ 163]
- OPTIONS [→ 76]

15.8 Configuring zones, doors and areas

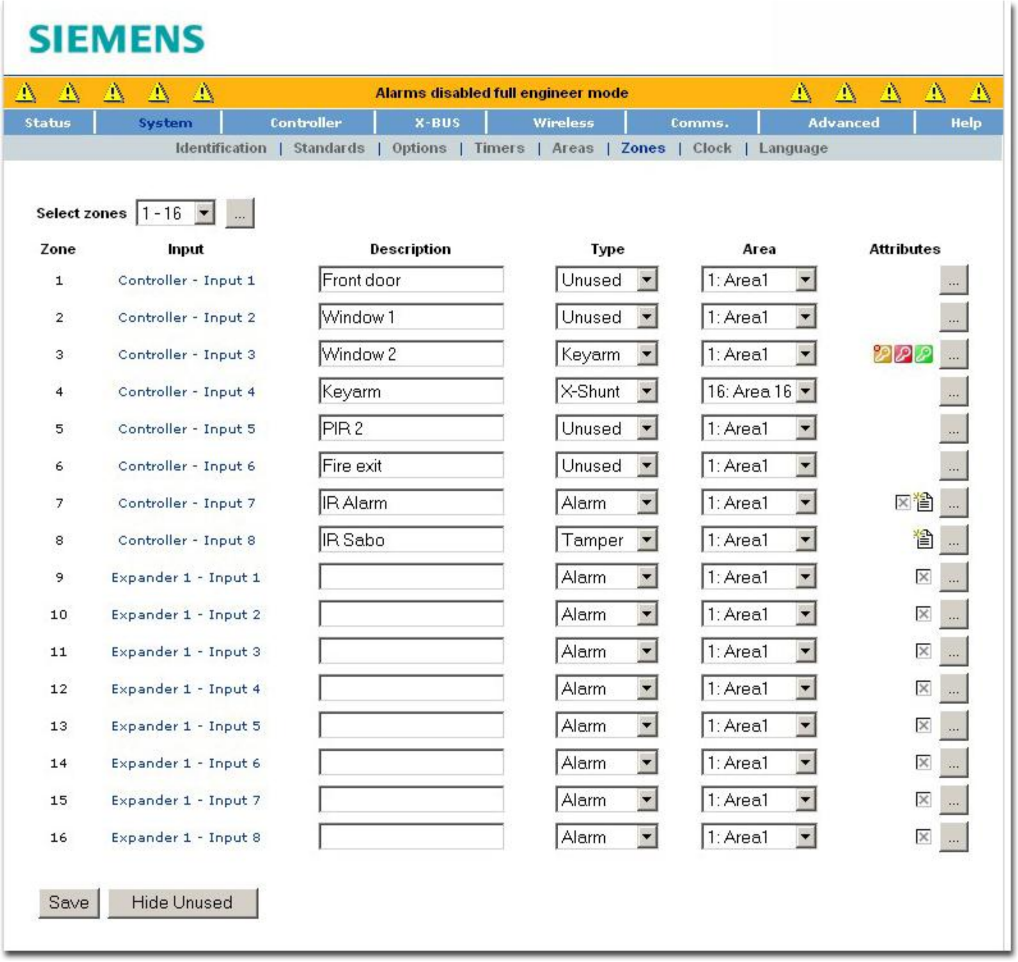
15.8.1 Editing a zone

Engineer and User actions include Log, Isolate/Deisolate and Soak/Desoak for each zone as allowable by the Security Grade EN 50131 Grade 2 and EN 50131 Grade 3.

1. Select **Settings** > **Sytem** > **Zones**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.



SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Identification | Standards | Options | Timers | Areas | Zones | Clock | Language

Select zones 1 - 16

Zone	Input	Description	Type	Area	Attributes
1	Controller - Input 1	Front door	Unused	1: Area1	...
2	Controller - Input 2	Window 1	Unused	1: Area1	...
3	Controller - Input 3	Window 2	Keyarm	1: Area1	...
4	Controller - Input 4	Keyarm	X-Shunt	16: Area 16	...
5	Controller - Input 5	PIR 2	Unused	1: Area1	...
6	Controller - Input 6	Fire exit	Unused	1: Area1	...
7	Controller - Input 7	IR Alarm	Alarm	1: Area1	☒ ...
8	Controller - Input 8	IR Sabo	Tamper	1: Area1	...
9	Expander 1 - Input 1		Alarm	1: Area1	☒ ...
10	Expander 1 - Input 2		Alarm	1: Area1	☒ ...
11	Expander 1 - Input 3		Alarm	1: Area1	☒ ...
12	Expander 1 - Input 4		Alarm	1: Area1	☒ ...
13	Expander 1 - Input 5		Alarm	1: Area1	☒ ...
14	Expander 1 - Input 6		Alarm	1: Area1	☒ ...
15	Expander 1 - Input 7		Alarm	1: Area1	☒ ...
16	Expander 1 - Input 8		Alarm	1: Area1	☒ ...

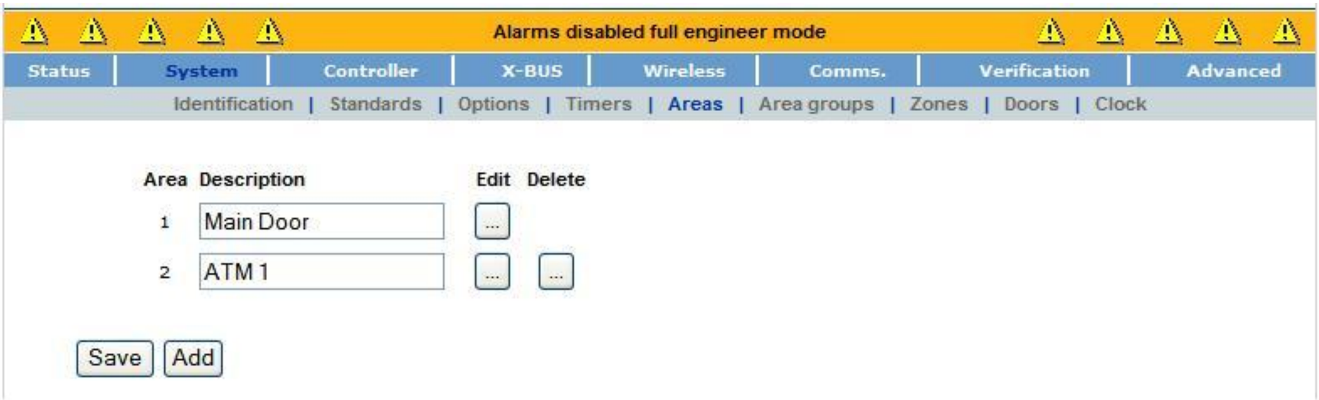
Zone	The number is presented for reference and can not be programmed.
Description	Enter a text (max. 16 characters) that serves to uniquely identify the zone.
Input	The physical input is displayed for reference and is not programmable.
Type	Select a type of zone from the drop down menu (see page [→ 285]).
Area	Only if (multiple) **Areas** is activated. Select an area to which the zone is assigned from the drop down menu.
Calendar Pro !	Select if necessary the desired calendar (see page [→ 236]). For Security Grade 2 / 3 a calendar can be assigned only to zones of type Exit Terminator, Technical, Key Arm, Shunt and X-Shunt. For Security Grade Unrestricted a zone of any type can be associated with a calendar.
Attributes	Tick the relevant checkbox for the zone. Only attributes that apply that type of zone will be presented (see Zone Attributes [→ 287])

15.8.2 Adding / Editing an area

▷ Only if (multiple) **Areas** is activated.

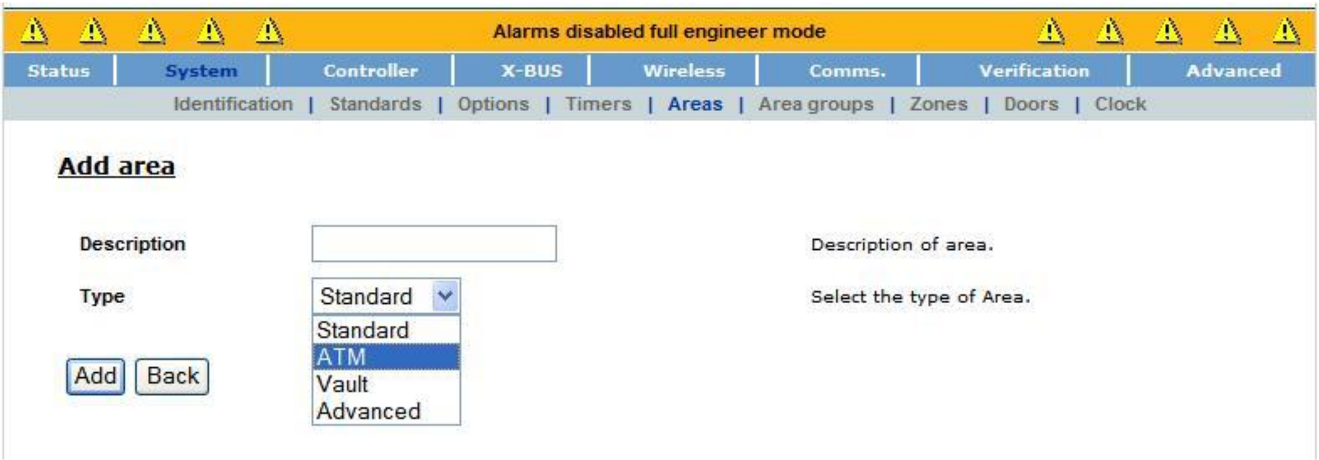
- Select **Settings > System > Areas**.

  ⇨ The following window will be displayed:


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock
Edit
Delete
Save
Add

Area	Description
1	Main Door
2	ATM 1

1. Press **Edit** to edit an existing area.
2. Press **Add** to add a new area. If the Installation Type is *Domestic* or *Commercial*, an area is automatically added and the Edit Area Settings window is displayed.
   Note that the area type for the new area is automatically set to Standard.
   If the Installation Type is *Financial*, the following window is displayed and the area must be added manually.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock
Add
Back
Standard
ATM
Vault
Advanced

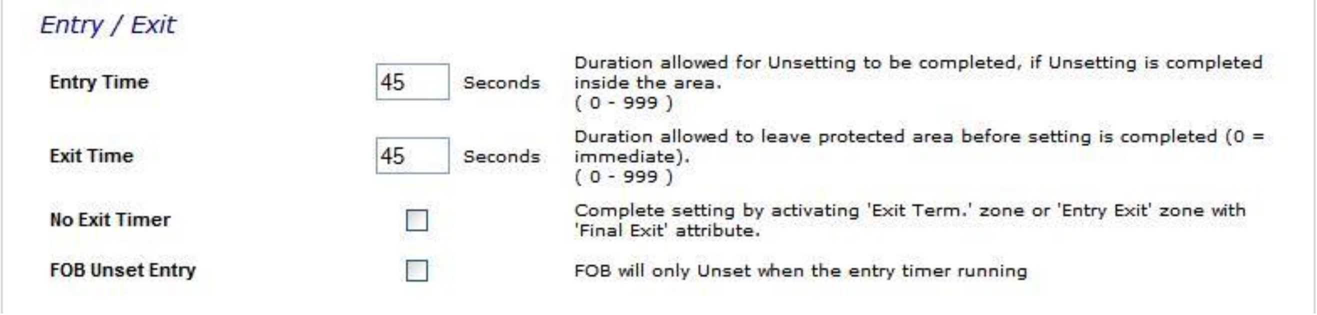
Add area

Description — Description of area.

Type: Standard — Select the type of Area.

- Enter a description for the new area and select an area type from one of the following:
- Standard - Suitable for most areas.
- ATM - Provides settings and defaults relevant to ATMs.
- Vault - Provides settings and defaults relevant to vaults.
- Advanced – Provides all area settings (Standard, ATM and Vault).
- Click on the **Add** button to add the area,
- Configure the settings for each installation type as per the following sections:

15.8.2.1 Entry/Exit



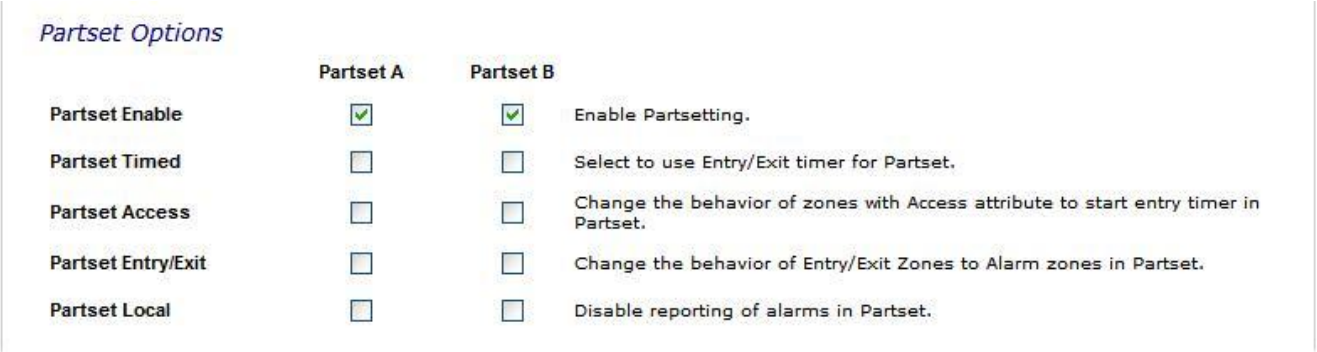
Entry / Exit

Entry Time	45	Seconds	Duration allowed for Unsetting to be completed, if Unsetting is completed inside the area. (0 - 999)
Exit Time	45	Seconds	Duration allowed to leave protected area before setting is completed (0 = immediate). (0 - 999)
No Exit Timer	□		Complete setting by activating 'Exit Term.' zone or 'Entry Exit' zone with 'Final Exit' attribute.
FOB Unset Entry	□		FOB will only Unset when the entry timer running

Configure the following Entry/Exit settings:

Entry time	The time (in seconds) allowed for unsetting to be completed. The entry time applies to all entry/exit zones in that area (default: 45 seconds) See Timers [→ 159].
Exit time	The time (in seconds) allowed for a user to leave a protected area before setting is complete. The exit time applies to all entry/exit zones in that area (default: 45 seconds) See Timers [→ 159].
Disable Exit Time	Select if no exit timer is required and setting is activated by ‘Exit term’ zone or ‘Entry exit’ zone with ‘Final exit’ attribute. See Timers [→ 159].
Fob Unset Entry	If selected, FOB will only unset when entry timer is running.

15.8.2.2 Partset Options



Partset Options

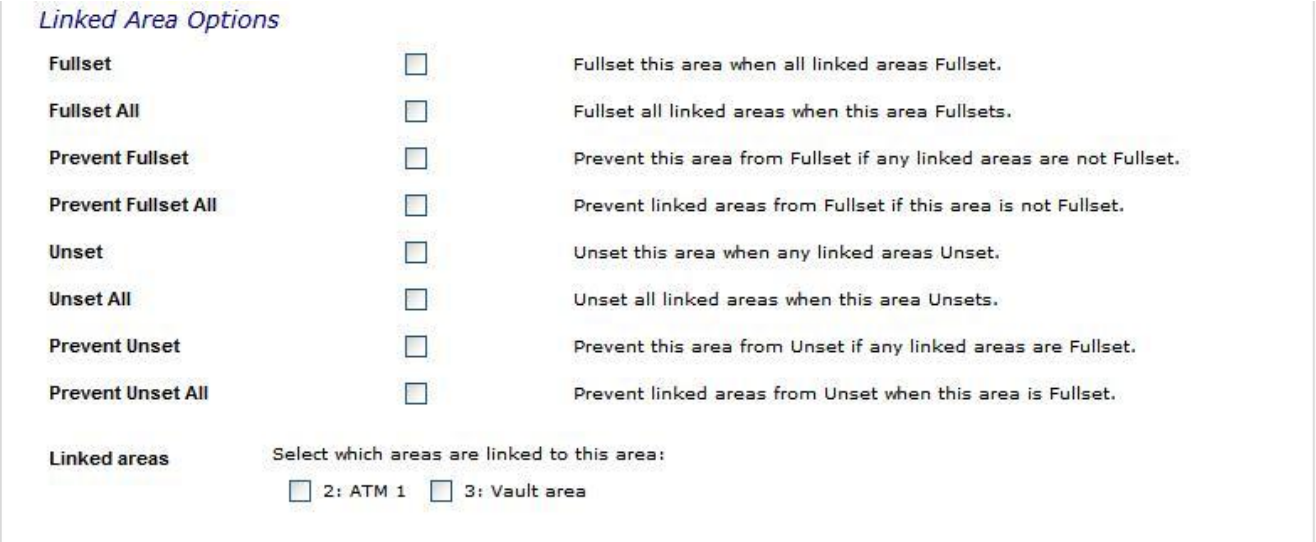
	Partset A	Partset B	
Partset Enable	☑	☑	Enable Partsetting.
Partset Timed	□	□	Select to use Entry/Exit timer for Partset.
Partset Access	□	□	Change the behavior of zones with Access attribute to start entry timer in Partset.
Partset Entry/Exit	□	□	Change the behavior of Entry/Exit Zones to Alarm zones in Partset.
Partset Local	□	□	Disable reporting of alarms in Partset.

Configure the operation of particular zones for both Partset A and Partset B modes as detailed below:

Partset Enable	Enable PartSet for A and B operation as required.
Partset Timed:	Tick the relevant checkbox (Partset A or B) to apply the exit timer to the Partset A or B mode.
Partset Access:	Tick the relevant checkbox to change access zones into entry/exit type zones for either Partset A or B operation. This feature is useful for a domestic installation where a Passive Infrared (PIR) sensor is located in the hallway. If the user partsets the system at night and returns downstairs during the night, he/she may unintentionally activate the PIR sensor in the hallway and trigger the alarm. By setting the partset

	access option, the buzzer will sound for the entry time period when the PIR sensor is activated thereby warning the user that the alarm will activate if no action is taken.
Partset Exit/Entry:	Tick the relevant checkbox to change the behaviour of entry/exit zones to alarm zones when in Partset A or B mode. This feature is useful for a domestic installation when the system has been set in partset mode. If the user partsets the system at night he/she may wish the alarm to activate immediately if the front or back door is opened during the night.
Partset Local:	Tick the relevant checkbox to restrict the reporting of alarms in Partset Mode to local reporting only (No remote reporting).

15.8.2.3 Linked Areas



Linked Area Options

Fullset	□	Fullset this area when all linked areas Fullset.
Fullset All	□	Fullset all linked areas when this area Fullsets.
Prevent Fullset	□	Prevent this area from Fullset if any linked areas are not Fullset.
Prevent Fullset All	□	Prevent linked areas from Fullset if this area is not Fullset.
Unset	□	Unset this area when any linked areas Unset.
Unset All	□	Unset all linked areas when this area Unsets.
Prevent Unset	□	Prevent this area from Unset if any linked areas are Fullset.
Prevent Unset All	□	Prevent linked areas from Unset when this area is Fullset.

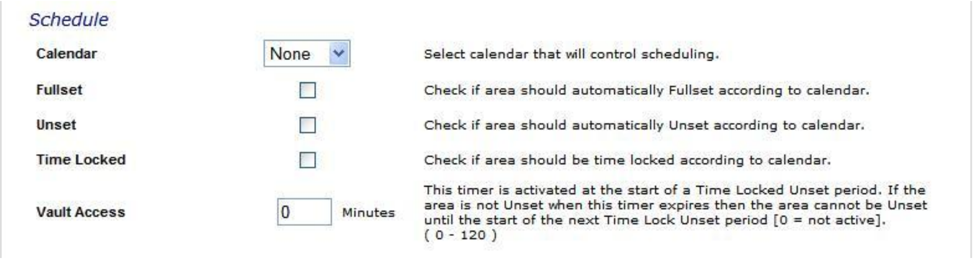
Linked areas — Select which areas are linked to this area:
□ 2: ATM 1 □ 3: Vault area

This section enables you to link areas for setting and unsetting purposes:

Fullset	Fullset this area when all linked areas are Fullset.
Fullset All	Fullset all areas when this area is Fullset.
Prevent Fullset	Prevent this area from Fullset if all linked areas are Fullset.
Prevent Fullset All	Prevent linked areas from Fullset if this area is not Fullset.
Unset	Unset this area when all linked areas are Unset.
Unset All	Unset all areas when this area is Unset.
Prevent Unset	Prevent this area from Unset if any linked areas are Fullset.
Prevent Unset All	Prevent linked areas from Unset if this area is Fullset.

Linked Areas	Click on the areas that you wish to link to this area.

15.8.2.4 Schedule



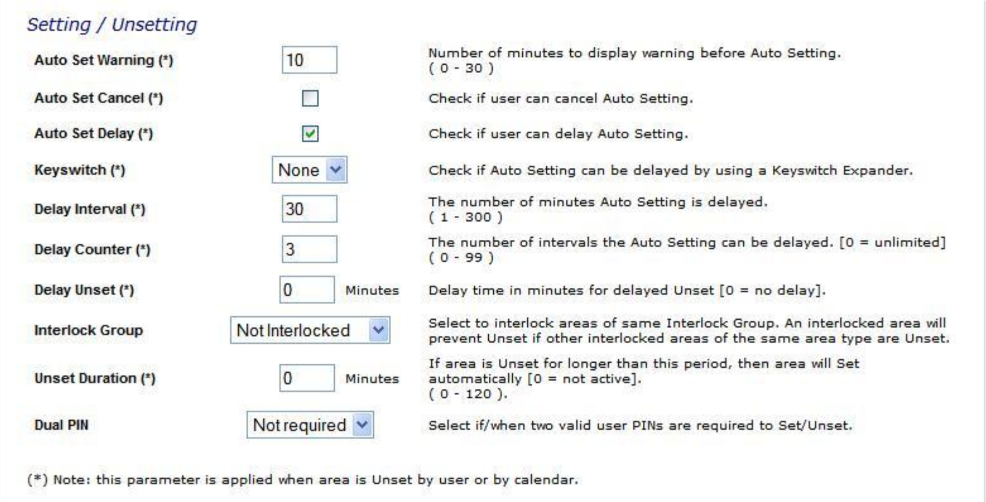
Schedule

Calendar	None	Select calendar that will control scheduling.
Fullset	□	Check if area should automatically Fullset according to calendar.
Unset	□	Check if area should automatically Unset according to calendar.
Time Locked	□	Check if area should be time locked according to calendar.
Vault Access	0 Minutes	This timer is activated at the start of a Time Locked Unset period. If the area is not Unset when this timer expires then the area cannot be Unset until the start of the next Time Lock Unset period [0 = not active]. (0 - 120)

Configure scheduling with the following settings:

Calander	Select a calendar to control scheduling.
Unset	Select if area should automatically Unset as per the time specified in the selected calendar.
Fullset	Select this option to Fullset the area as per the time specified in the selected Calendar. The area will also set when the Unset Duration or Delay Interval has elapsed (See Setting and Unsetting [→ 169] section). If the Unset Duration overlaps the scheduled time, the area will use the calendar settings.
Time Locked	Select this option to time lock the area as per the selected Calendar.
Vault Access	Enter the number of minutes (0 – 120) to activate this timer at the end of a Time Locked Unset period. If the area is not unset after this timer expires, the area cannot be unset until the start of the next Time Locked Unset period.

15.8.2.5 Setting/Unsetting



Setting / Unsetting

Auto Set Warning (*)	10	Number of minutes to display warning before Auto Setting. (0 - 30)
Auto Set Cancel (*)	□	Check if user can cancel Auto Setting.
Auto Set Delay (*)	☑	Check if user can delay Auto Setting.
Keyswitch (*)	None	Check if Auto Setting can be delayed by using a Keyswitch Expander.
Delay Interval (*)	30	The number of minutes Auto Setting is delayed. (1 - 300)
Delay Counter (*)	3	The number of intervals the Auto Setting can be delayed. [0 = unlimited] (0 - 99)
Delay Unset (*)	0 Minutes	Delay time in minutes for delayed Unset [0 = no delay].
Interlock Group	Not Interlocked	Select to interlock areas of same Interlock Group. An interlocked area will prevent Unset if other interlocked areas of the same area type are Unset.
Unset Duration (*)	0 Minutes	If area is Unset for longer than this period, then area will Set automatically [0 = not active]. (0 - 120).
Dual PIN	Not required	Select if/when two valid user PINs are required to Set/Unset.

(*) Note: this parameter is applied when area is Unset by user or by calendar.

The following parameters (with the exception of the Interlock parameter) are only relevant in the following cases:

- A Calendar is selected (see Schedule [→ 169]), or
- **Unset Duration** is enabled (has a value greater than zero), or
- Both of the above conditions are met.

Auto Set Warning	Enter the number of minutes to display a warning before Auto Setting. (0 - 30) Note that the panel sets either at the scheduled time or at the time defined by the Delay Unset parameter. The first warning is displayed at the configured time before the scheduled time. There are further warnings starting at one minute before setting time.
Auto Set Cancel	Enables the user to cancel Auto Setting by entering a code in the keypad.
Auto Set Delay	Enables a user to delay Auto Setting by entering a code in the keypad.
Keyswitch	Enables Auto Setting to be delayed using Keyswitch Expander.
Delay Interval	Enter the number of minutes by which to delay Auto Set. (1 - 300)
Delay Counter	Enter the number of times that Auto Setting can be delayed. (0 – 99: 0 = unlimited)
Delay Unset	Enter the number of minutes by which to delay an Unset. (0 = no delay)
Interlock Group	Select an Interlock Group to assign to this area. Interlocking only allows one area within the group to be Unset at any time. Typically used in ATM areas.
Unset Duration	If area is Unset for longer than this it will Set automatically. (Range 0 – 120 mins: 0 = not active).
Dual PIN	If this option is enabled, two PINs are required to Set or Unset the area with the keypad. Both PINs must belong to users who have the required user right for the operation (Setting or Unsetting). If the second PIN is not entered within 30 seconds, or it is wrong, then the area cannot be Set or Unset.

Late Working Support

An example of using the setting and unsetting parameters is for late working situations where a calendar has been configured for automatic setting of a premises at a particular time but staff may need to work late on occasion and the automatic setting needs to be delayed.

Each delay is determined by the amount configured in the **Delay Interval** parameter, and the **Delay Counter** parameter determines the number of times that setting can be delayed. A user needs the correct value in the **Auto Set Delay** in order to use this feature.

There are three ways to delay setting:

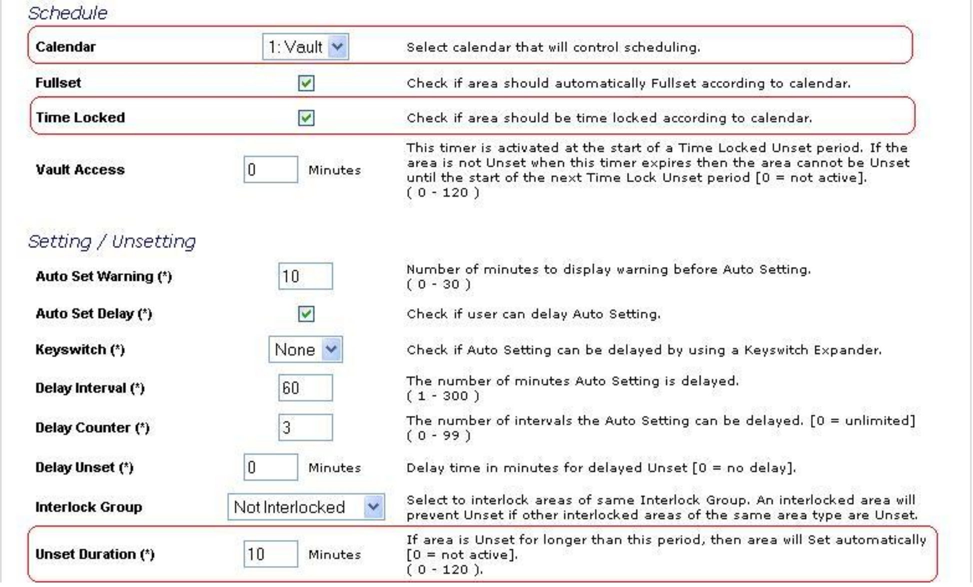
1. Entering the PIN on the keypad.
   DELAY is a menu option on the standard keypad. The buttons at the top of the comfort keypad are used to operate the delay feature
2. Using the keyswitch.
   Turning the key to the right delays setting the system by the configured delay if the maximum number of times that setting can be delayed (**Delay Counter**) has not been exceeded. Turning the key to the left sets the delay to three minutes (non-configurable). This can be done regardless of how many times setting was delayed.
3. Using a FOB, WPA or button which activates a **Delay Autoset** trigger action. (See page 172)

Temporary Unset

To allow a system to be temporarily unset in a time period specified by a calendar, the following three parameters need to be configured:

1. **Calendar**
   A calendar needs to be configured and selected for this area.
2. **Time Locked**
   This box needs to be ticked so that the area can be unset only when allowed as per the configured calendar.
3. **Unset Duration**
   This parameter needs to be set to a value greater than zero to set an upper limit on the time the area will be unset.

The following screen shows these parameters configured with appropriate settings:



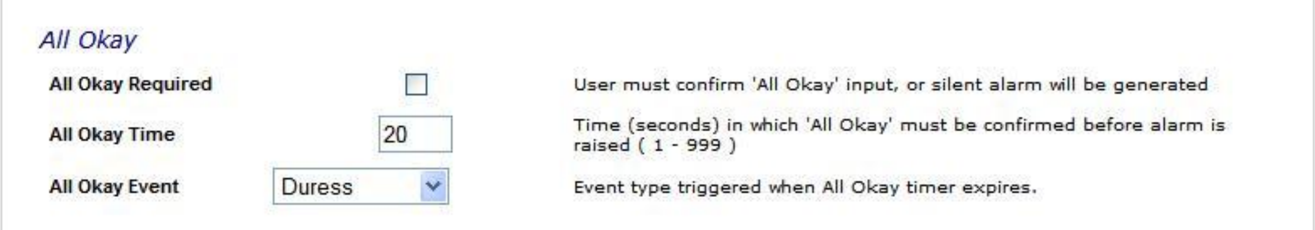
Schedule

Calendar	1: Vault	Select calendar that will control scheduling.
Fullset	☑	Check if area should automatically Fullset according to calendar.
Time Locked	☑	Check if area should be time locked according to calendar.
Vault Access	0 Minutes	This timer is activated at the start of a Time Locked Unset period. If the area is not Unset when this timer expires then the area cannot be Unset until the start of the next Time Lock Unset period [0 = not active]. (0 - 120)

Setting / Unsetting

Auto Set Warning (*)	10	Number of minutes to display warning before Auto Setting. (0 - 30)
Auto Set Delay (*)	☑	Check if user can delay Auto Setting.
Keyswitch (*)	None	Check if Auto Setting can be delayed by using a Keyswitch Expander.
Delay Interval (*)	60	The number of minutes Auto Setting is delayed. (1 - 300)
Delay Counter (*)	3	The number of intervals the Auto Setting can be delayed. [0 = unlimited] (0 - 99)
Delay Unset (*)	0 Minutes	Delay time in minutes for delayed Unset [0 = no delay].
Interlock Group	Not Interlocked	Select to interlock areas of same Interlock Group. An interlocked area will prevent Unset if other interlocked areas of the same area type are Unset.
Unset Duration (*)	10 Minutes	If area is Unset for longer than this period, then area will Set automatically [0 = not active]. (0 - 120).

15.8.2.6 All Okay

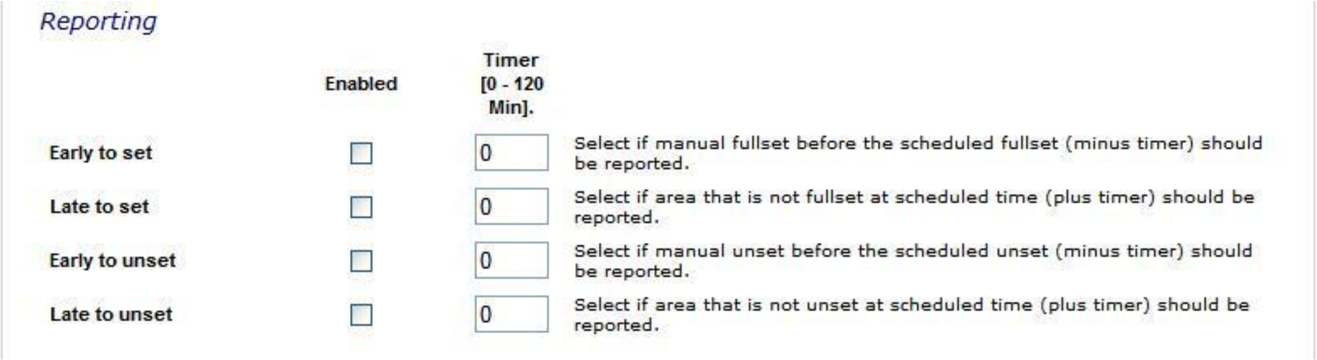


All Okay

All Okay Required	□	User must confirm 'All Okay' input, or silent alarm will be generated
All Okay Time	20	Time (seconds) in which 'All Okay' must be confirmed before alarm is raised (1 - 999)
All Okay Event	Duress	Event type triggered when All Okay timer expires.

All Okay Required	If selected, user must confirm 'All okay' input or silent alarm is generated. See Editing a Zone [→ 164] for details on configuring an 'All Okay' zone input.
All Okay Time	Time (in seconds) in which 'All okay' must be confirmed before alarm is raised. (Range 1 – 999 seconds)
All Okay Event	Select the event type to be sent when the 'All okay' timer expires. Options are Panic (Silent), Panic and Duress.

15.8.2.7 Reporting



Reporting

	Enabled	Timer [0 - 120 Min].	
Early to set	□	0	Select if manual fullset before the scheduled fullset (minus timer) should be reported.
Late to set	□	0	Select if area that is not fullset at scheduled time (plus timer) should be reported.
Early to unset	□	0	Select if manual unset before the scheduled unset (minus timer) should be reported.
Late to unset	□	0	Select if area that is not unset at scheduled time (plus timer) should be reported.

The Reporting configuration settings are applicable for Standard Areas in Commercial and Financial installations only and are only relevant if a calendar has been selected. (See Schedule [→ 169] section)

These settings enable a report to be sent to the Control Centre or nominated personnel if the panel is Set or Unset outside scheduled calendar times.

Early to Set	Enables a report to be sent if the panel is manually Fullset before a scheduled Set and before the number of minutes entered in the Timer field.
Late to Set	Enables a report to be sent if the panel is manually Fullset after a scheduled Set and after the number of minutes entered in the Timer field.
Early to Unset	Enables a report to be sent if the panel is manually Unset before a scheduled Unset and before the number of minutes entered in the

	Timer field.
Late to Unset	Enables a report to be sent if the panel is manually Unset before a scheduled Unset and before the number of minutes entered in the Timer field.

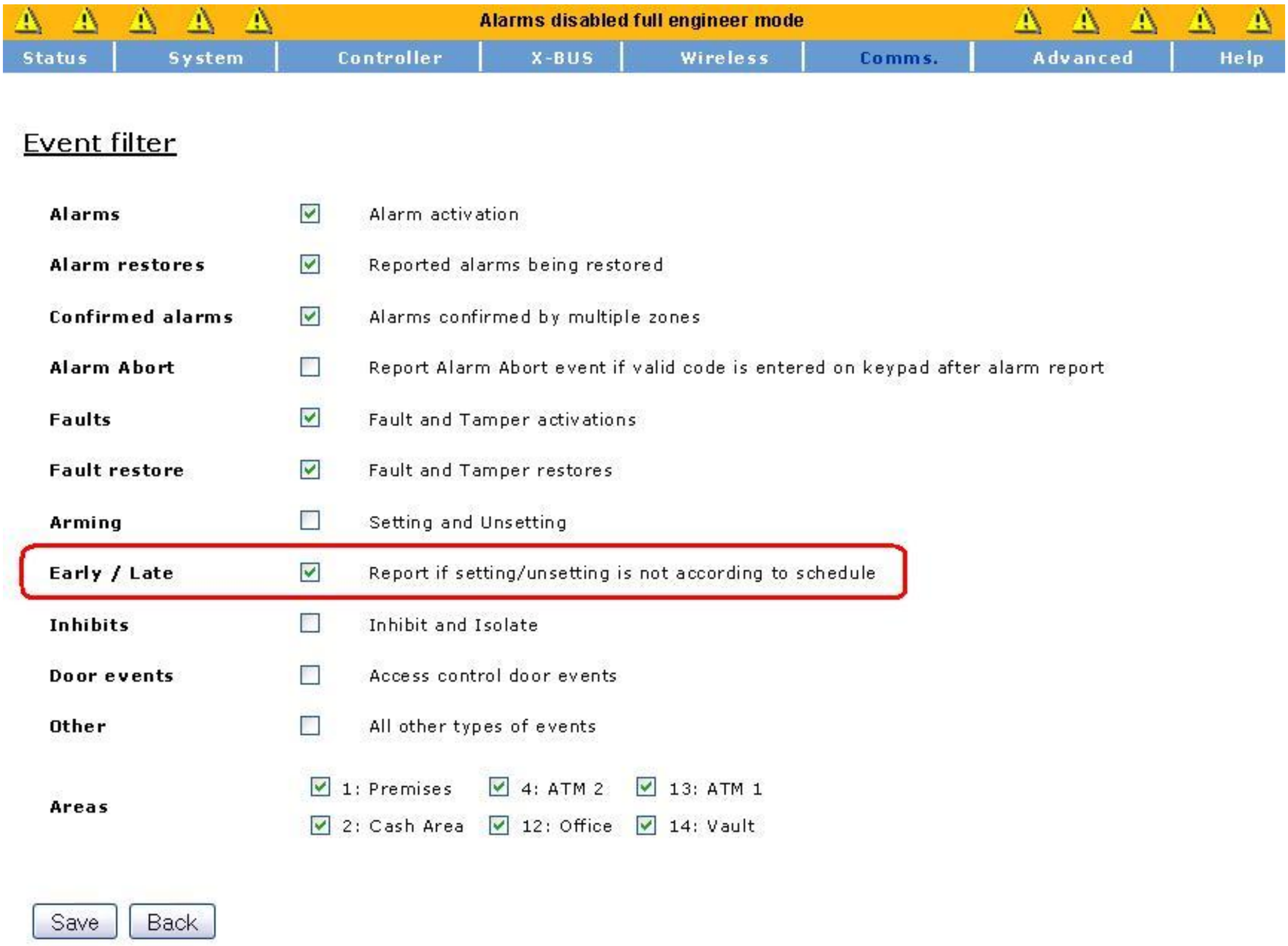
Reporting is done via SMS or to the ARC via SIA and Contact ID. An event is also stored in the system log.

Only events configured for late or early reporting for the area will be reported.

Event reporting must also be enabled for an ARC or SMS, as described in the following sections.

Enabling Reporting of Unusual Setting/Unsetting for an ARC

To configure event reporting for an ARC, select **Comms.>ARC> Edit>Filter** to display the Event Filter page for an ARC.



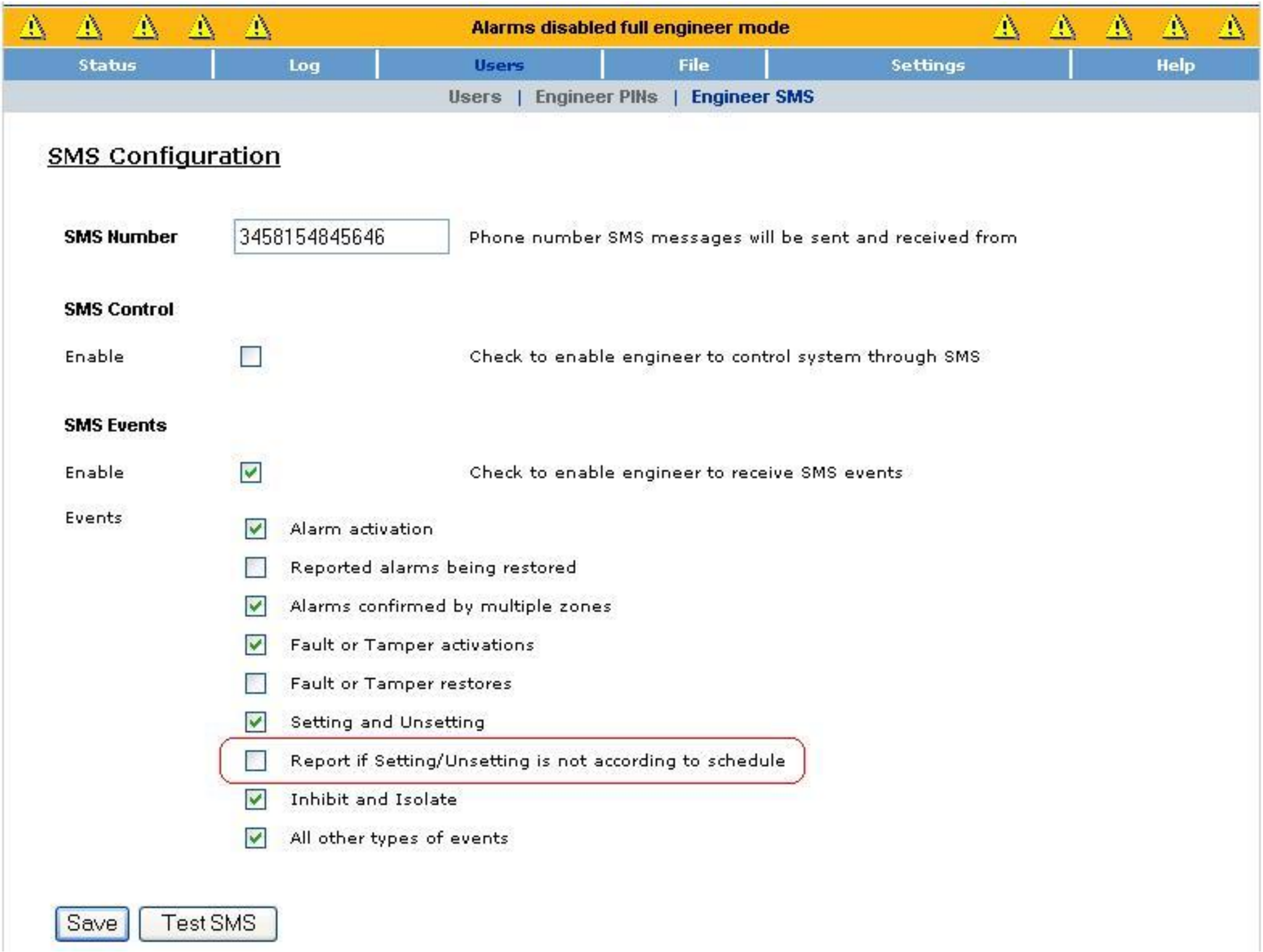
Event filter

Alarms	☑	Alarm activation
Alarm restores	☑	Reported alarms being restored
Confirmed alarms	☑	Alarms confirmed by multiple zones
Alarm Abort	□	Report Alarm Abort event if valid code is entered on keypad after alarm report
Faults	☑	Fault and Tamper activations
Fault restore	☑	Fault and Tamper restores
Arming	□	Setting and Unsetting
Early / Late	☑	Report if setting/unsetting is not according to schedule
Inhibits	□	Inhibit and Isolate
Door events	□	Access control door events
Other	□	All other types of events
Areas	☑ 1: Premises ☑ 2: Cash Area ☑ 4: ATM 2 ☑ 12: Office ☑ 13: ATM 1 ☑ 14: Vault	

The **Early/Late** parameter is enabled to report any setting or unsetting which differs from the schedule.

Enable Reporting of Unusual Setting/Unsetting for SMS

SMS Events can be configured using both Engineer and User configuration pages. For Engineer configuration, select **Users>Engineer SMS**:


Alarms disabled full engineer mode
Status
Log
Users
File
Settings
Help
Users | Engineer PINs | Engineer SMS
Save
Test SMS

SMS Configuration

SMS Number 3458154845646 Phone number SMS messages will be sent and received from

SMS Control

Enable □ Check to enable engineer to control system through SMS

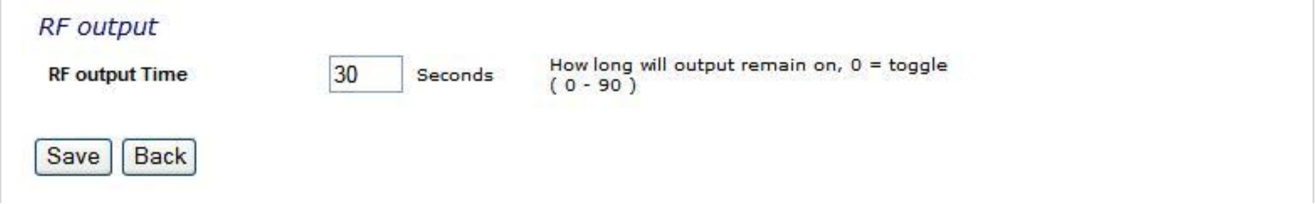
SMS Events

Enable ☑ Check to enable engineer to receive SMS events

Events
- ☑ Alarm activation
- □ Reported alarms being restored
- ☑ Alarms confirmed by multiple zones
- ☑ Fault or Tamper activations
- □ Fault or Tamper restores
- ☑ Setting and Unsetting
- □ Report if Setting/Unsetting is not according to schedule
- ☑ Inhibit and Isolate
- ☑ All other types of events

Enable the setting above to report any setting and unsetting which is not according to schedule.

15.8.2.8 RF Output

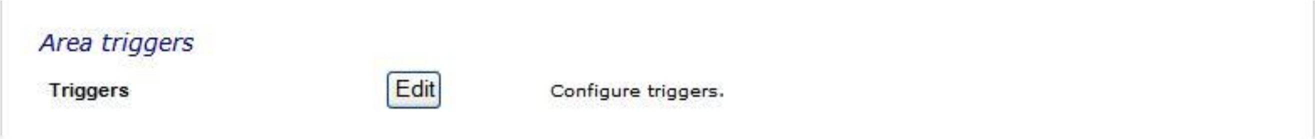


RF output

RF output Time 30 Seconds How long will output remain on, 0 = toggle (0 - 90)

RF Output Time	Enter the number of seconds that the RF Output will remain on for. 0 seconds will toggle the output on and off.

15.8.2.9 Area Triggers

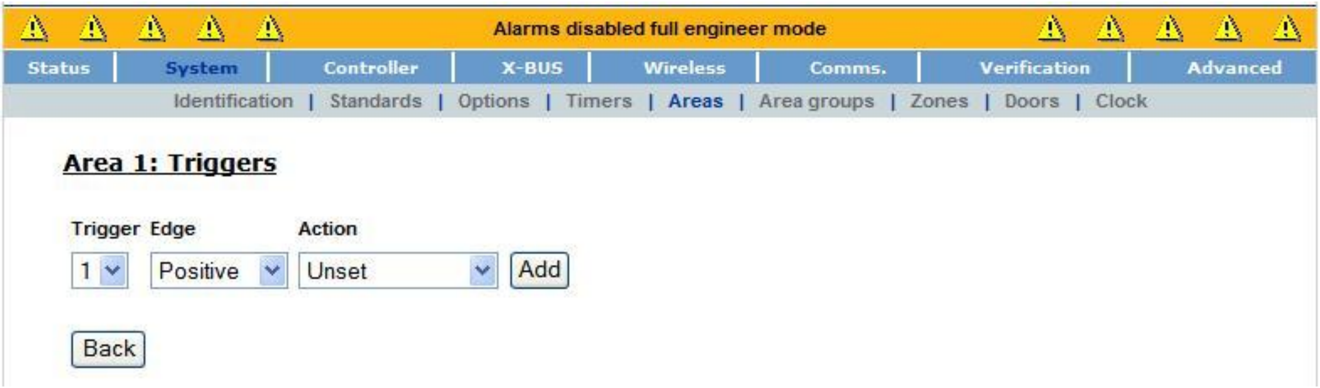


Area triggers

Triggers [Edit] Configure triggers.

The Triggers section is only displayed if triggers have been defined previously. (See section on Triggers)

Click on the **Edit** button to add, edit or delete trigger conditions for the area. The following page is displayed:


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock
Add
Back

Area 1: Triggers

Trigger	Edge	Action
1	Positive	Unset

Configure the trigger for the area using the following parameters:

Trigger	Select a trigger from the drop down list.
Edge	The trigger can activate from either the positive or negative edge of the activation signal.
Action	This is the action that is performed when the trigger is activated. Options are: ● Unset ● Partset A ● Partset B ● Fullset ● Delay autoset This action will delay alarm setting when the autoset timer is running. The trigger will only add time if the Delay Limit has not been exceeded and each trigger activation will delay setting by the time defined in Delay Interval (see section Setting/Unsetting [→ 169]. ● Restore alarms This action will clear all alarms in the configured zone.

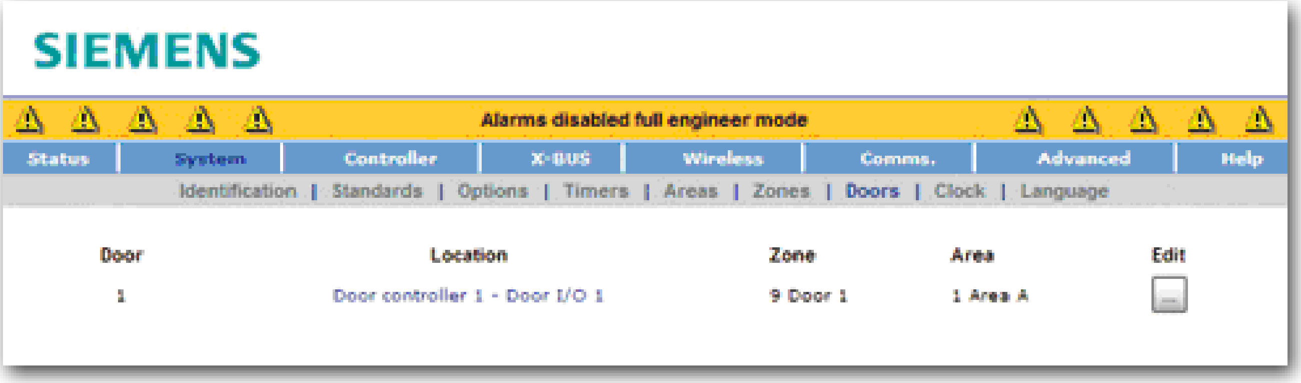
Note: Triggers cannot be configured from a keypad.

See also

Triggers [→ 239]

15.8.3 Editing a door

1. Select **Settings** > **System** > **Doors**.
2. Click the **Edit** button.
3. Configure the fields as described in the table below.


SIEMENS
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Identification | Standards | Options | Timers | Areas | Zones | Doors | Clock | Language

Alarms disabled full engineer mode

Door	Location	Zone	Area	Edit
1	Door controller 1 - Door I/O 1	9 Door 1	1 Area A	

Door inputs

Each door has 2 inputs with predefined functionality. These two inputs, the door position sensor and the door release switch can be configured.

Zone	The door position sensor input can be used for the intrusion part as well. If the door position sensor input is used also for the intrusion part, the zone number it is assigned to has to be selected. If the door position sensor is used only for the access part, the option “UNASSIGNED” has to be selected. If the door position sensor is assigned to an intrusion zone, it can be configured like a normal zone but only with limited functionality (e.g. not all zone types are selectable). If an area or the system is set with the card reader, the door position sensor input has to be assigned to a zone number and to the area or the system which have to be set.
Description	Description of the zone the door position sensor is assigned to.
Zone Type	Zone type of the zone the door position sensor is assigned to (not all zones types are available).
Zone attributes	The attributes for the zone the door position sensor is assigned to can be modified.
Area	The area the zone and the card reader are assigned to. (If the card reader is used for setting & unsetting, this area will be set / unset).
Door Position	The resistor used with the door position sensor. Choose the used resistor value / combination.
DPS Normal Open	Select if the door release switch is to be a normally open or normally closed input.
Door Release	The resistor used with the door release switch. Choose the used resistor value / combination.
DRS Normal Open	Select if the door release switch is a normally open input or not.

Each free zone number can be assigned to the zones but the assignment is not fixed. If the number ‘9’ is assigned to a zone, the zone and an input expander with the address ‘1’ is connected to the X-Bus (which is using the zone numbers 9-16). The assigned zone from the two door controller will be moved to the next free zone number. Configuration will be adapted accordingly.

Door attributes

If no attribute is activated, a valid card **or** a PIN can be used.

Attribute	Description
Void	The card is temporarily blocked.
Door Group	Used when multiple doors are assigned to the same area and/or anti passback, custodian, or interlock functionality is required.
Card and PIN	Card and PIN are required to gain entry.
PIN Only	PIN is required. No card will be accepted.
PIN Code or Card	PIN or card are required to gain entry
PIN to Exit	PIN is required on exit reader. Door with entry and exit reader is required.
PIN to Set/Unset	PIN is required to set and unset the linked area. The card has to be presented before the PIN is entered.
Unset outside	Panel/area will unset, when card is presented at entry reader.
Unset inside	Panel/area will unset, when card is presented at exit reader.
Fullset outside	Panel/area will fullest, when card is presented twice at entry reader.
Fullset inside	Panel/area will fullest, when card is presented twice at exit reader.
Emergency	Door lock opens if a fire alarm is detected within the assigned area.
Escort	The escort feature enforces privileged card holders to escort other card holders through specific doors. If this feature is assigned to a door, a card with the “escort right” has to be presented first, to allow other cardholders without this right to open the door. The time period in which cardholders are able to present their cards after a card with escort right was presented, can be configured per door.
Prevent Passback*	Anti-passback should be enforced on the door. All doors must have entry and exit readers and must be assigned to a

Attribute	Description
	door group. In this mode, cardholders must use their access card to gain entry into and exit from a defined door group. If a valid cardholder has presented his access card to enter a door group and not presented the card to exit it, the cardholder is in breach of the Anti-Passback rules. Next time the cardholder attempts to enter the same door group, a hard Anti-Passback alarm will be raised and the cardholder will not be permitted entry to the door group.
Soft Passback*	Anti-passback violations are only logged. All doors must have entry and exit readers and must be assigned to a door group. In this mode, cardholders must use their access card to gain entry to and exit from a defined door group. If a valid cardholder has presented his access card to enter a door group and not presented the card to exit it, the cardholder is in breach of the Anti-Passback rules. Next time the cardholder attempts to enter the same door group, a Soft Anti-Passback alarm will be raised. However, the cardholder will still be permitted entry to the door group.
Custodian*	The custodian feature allows a card holder with custodian right (the custodian) to give other cardholders (non-custodians) access to the room. The custodian must be the first to enter the room. The non-custodians are only allowed to enter if the custodian is in the room. The custodian will not be allowed to exit until all non-custodians have left the room.
Door sounder	Door controller PCB mounted sounder sounds on door alarms.
Ignore Forced	Door forced open is not processed.
Interlock*	Only one door in an area will be allowed open at a time. Requires Door Group.
Setting Prefix	Authorisation with prefix (A,B,* or #) key to set system
* Require door group	

Door timers

Timer	Min.	Max.	Description
Access granted	1 s	255 s	The time the lock will remain open after granting access.
Access deny	1 s	255 s	The duration after which the controller will be ready to read the next event after a invalid event.
Door open	1 s	255 s	Duration within which the door must be closed to prevent a “door open too long” alarm.
Door left open	1 min	180 min	Duration within which the door must be closed to prevent a “door left open” alarm.

Timer	Min.	Max.	Description
Extended	1 s	255 s	Additional time after granting access to a card with extended time attribute.
Escort	1 s	30 s	Time period after presenting a card with escort attribute within a user without escort right can access the door.

Door calendar

Door locked	Select a calendar which should lock the door during the configured time. No card / pin will be accepted during this time.
Door locked	Select a calendar which should unlock the door. The door will be unlocked during the configured time.

Door triggers

Trigger	Description
Trigger that will lock the door	If the assigned trigger is activated, the door will get locked. No card / PIN will be accepted.
Trigger that will unlock the door	If the assigned trigger is activated, the door will get unlocked. No card / PIN will be needed to open the door.
Trigger that will set the door to normal	If the assigned trigger is activated, the door will get back to normal operation. This is to undo locking / unlocking of the door. A card / will be is needed to open the door.

15.8.3.1 Door Interlock

Door interlock is feature that prevents the remaining doors in an interlock group from opening if any one door in the group is open.

The following are example of how this feature is used:

- In two-doors entry systems used in some banks and other buildings. Usually push buttons or card readers are used to gain entrance, and red and green LEDs show if the door can be opened or not.
- In ATM technical areas connecting ATM doors. Typically all the ATM doors in addition to the door that gives access to the area would be interlocked.

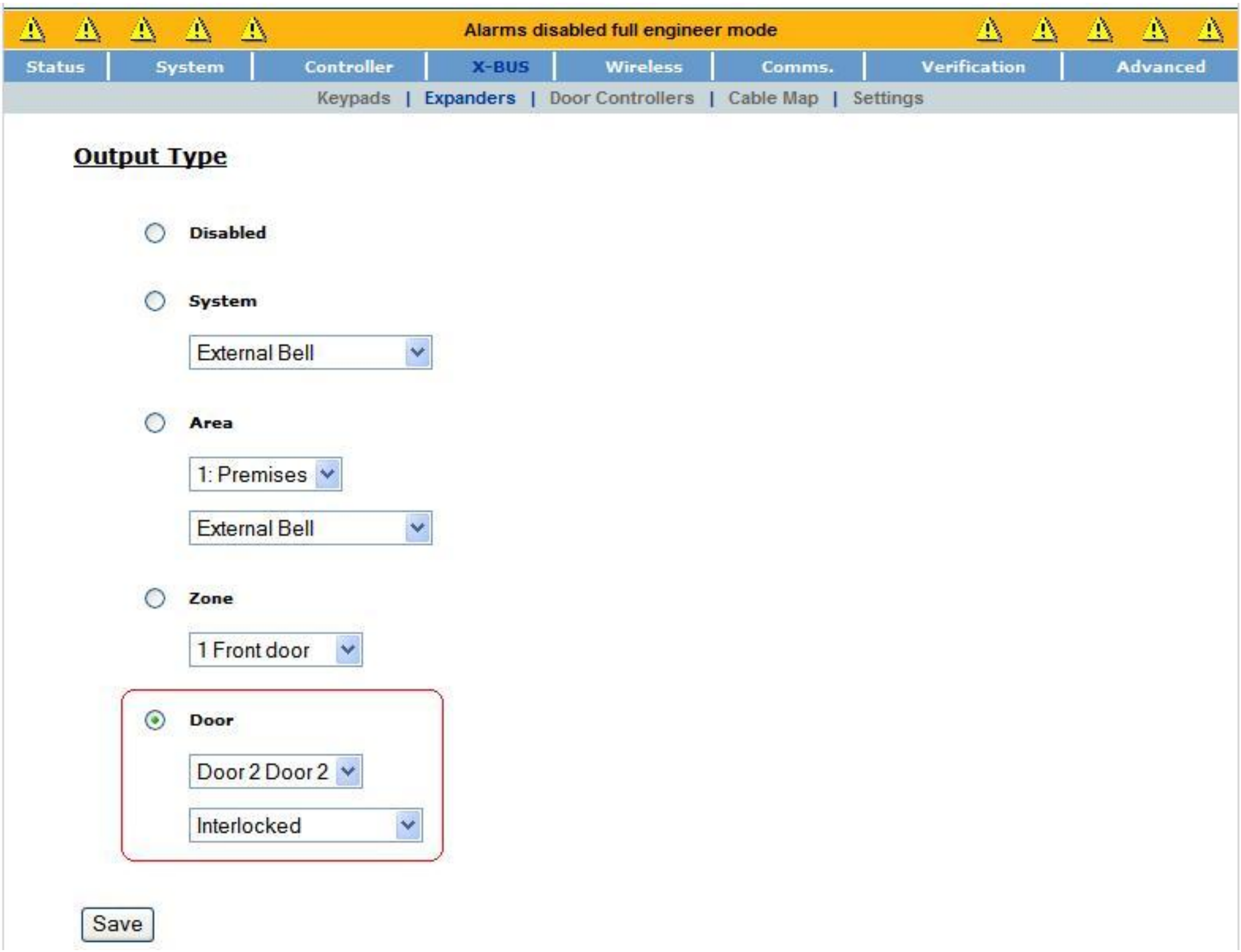
To create a door lock:

1. Create a Door Group. See Editing a door [→ 176].
2. Set the **Interlock** attribute for the required doors in the group. See Editing a door [→ 176].
3. Configure a door output for door interlock operation. This output becomes active for all the doors of the interlock group whenever a door belonging to the

group is open, including the open door itself.
This output could be connected, for example, to a red LED or light to indicate that the door could not be opened, and if inverted could be connected to a green LED or light.

To configure an output for door interlock.

1. In Full Engineer mode, select **Settings>X-BUS>Expanders**.
2. In the **Expander Configuration** page, click on the **Change Type** button for the required output.
3. Select Door as the output type.
4. Select the required door and **Interlocked** as the output type.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings
Save

Output Type

○ Disabled

○ System
External Bell

○ Area
1: Premises
External Bell

○ Zone
1 Front door

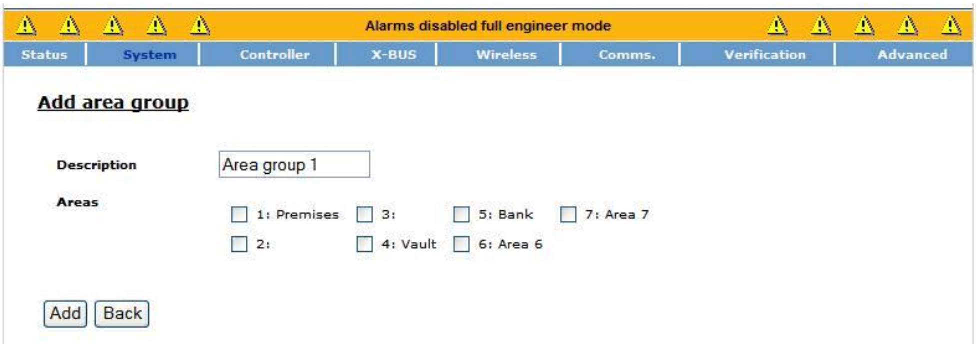
● Door
Door 2 Door 2
Interlocked

15.8.4 Adding an area group

You can use area groups for configuring multiple areas. So the configuration must not be done for every single area.

▷ Only if the option (multiple) **Areas** is activated.

- Select **Settings > System > Area groups**.



Add area group

Description: Area group 1

Areas:
□ 1: Premises □ 3: □ 5: Bank □ 7: Area 7
□ 2: □ 4: Vault □ 6: Area 6

1. Click on the **Add** button.
2. Enter a description for the group.
3. Select the areas that are to be assigned to this group.
4. Click **Add**.

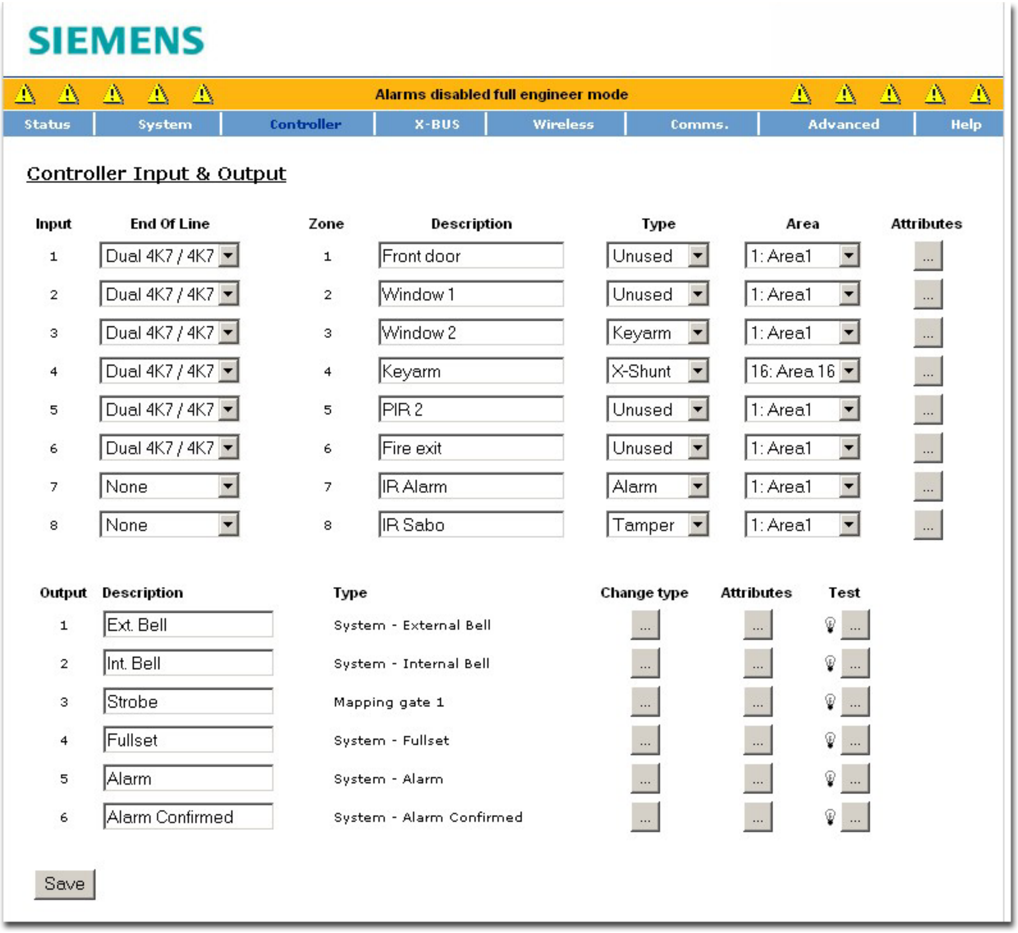
NOTICE

To use the area groups for the Comfort Keypad, activate all Areas in the **Areas** field under **Settings > X-BUS > Keypads > Type: Comfort Keypad**.

15.9 Configuring controller inputs & outputs

15.9.1 Editing an input

1. Select **Settings** > **Controller**.
   ➪ The following window will be displayed.
2. Configure the fields as described in the table below.



Controller Input & Output

Input	End Of Line	Zone	Description	Type	Area	Attributes
1	Dual 4K7 / 4K7	1	Front door	Unused	1: Area1	...
2	Dual 4K7 / 4K7	2	Window 1	Unused	1: Area1	...
3	Dual 4K7 / 4K7	3	Window 2	Keyarm	1: Area1	...
4	Dual 4K7 / 4K7	4	Keyarm	X-Shunt	16: Area 16	...
5	Dual 4K7 / 4K7	5	PIR 2	Unused	1: Area1	...
6	Dual 4K7 / 4K7	6	Fire exit	Unused	1: Area1	...
7	None	7	IR Alarm	Alarm	1: Area1	...
8	None	8	IR Sabo	Tamper	1: Area1	...

Output	Description	Type	Change type	Attributes	Test
1	Ext. Bell	System - External Bell	...	...	...
2	Int. Bell	System - Internal Bell	...	...	...
3	Strobe	Mapping gate 1	...	...	...
4	Fullset	System - Fullset	...	...	...
5	Alarm	System - Alarm	...	...	...
6	Alarm Confirmed	System - Alarm Confirmed	...	...	...

Save

Input	The number is presented for reference and can not be programmed.
End of Line	Select the End of Line (EOL) for the zone input (default: 4K7).
Analyzed Pro	Displays if the sensor is an inertia/shock type sensor
Pulse count Pro	Pulse count programmed on the panel that will trigger an alarm from an inertia / shock sensor.
Gross Attack Pro	The Gross attack programmed on the panel that will trigger an alarm from an inertia/shock sensor
Zone	Number of the zone on the panel
Description	Enter a text describing the input (max. 16 characters). This text will also appear on the browser and keypad.
Type	The type of zone (see page [→ 285]).
Area	Only if (multiple) Areas is activated in menu Panel Settings > System Settings > Options. Select the areas to which this zone has been assigned.
Attributes	An icon in this field indicates that attributes have been programmed for this zone (see page [→ 183]).

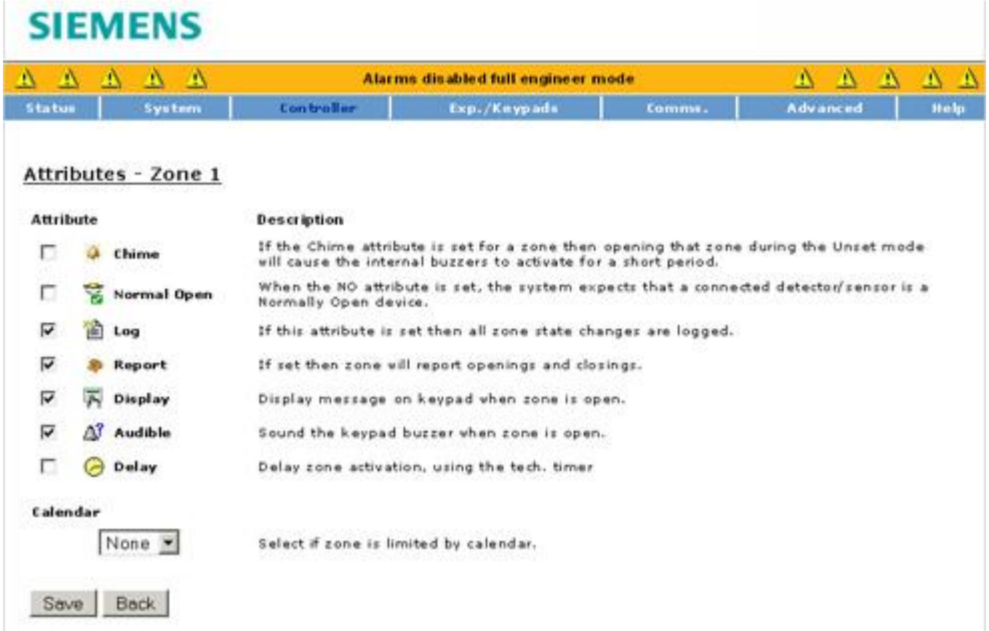
15.9.1.1 Input zones: attributes

Each zone on the SPC can be assigned an attribute that determines the properties of that zone.

To assign an attribute to a zone:

1. Select **Settings** > **Controller** > **Attributes**.

   ➪ The following window will be displayed:



Attributes - Zone 1

Attribute	Description
□ Chime	If the Chime attribute is set for a zone then opening that zone during the Unset mode will cause the internal buzzers to activate for a short period.
□ Normal Open	When the NO attribute is set, the system expects that a connected detector/sensor is a Normally Open device.
☑ Log	If this attribute is set then all zone state changes are logged.
☑ Report	If set then zone will report openings and closings.
☑ Display	Display message on keypad when zone is open.
☑ Audible	Sound the keypad buzzer when zone is open.
□ Delay	Delay zone activation, using the tech. timer

Calendar

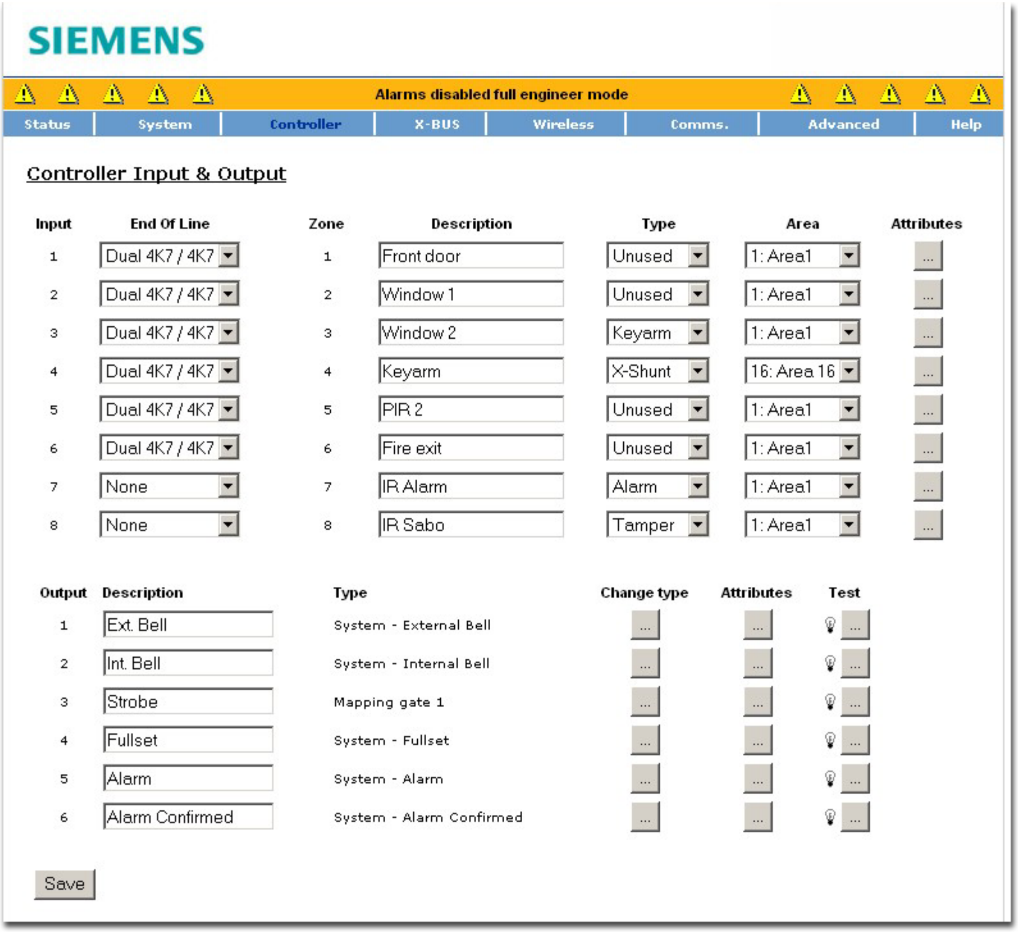
None ▾ Select if zone is limited by calendar.

2. Check the box beside the preferred attribute.

The attributes presented on this page will depend on the type of zone selected. For a list of assignable attributes see page [→ 290].

15.9.2 Editing an output

1. Select **Settings** > **Controller**.
2. Configure the fields as described in the table below.



Controller Input & Output

Input	End Of Line	Zone	Description	Type	Area	Attributes
1	Dual 4K7 / 4K7	1	Front door	Unused	1: Area1	...
2	Dual 4K7 / 4K7	2	Window 1	Unused	1: Area1	...
3	Dual 4K7 / 4K7	3	Window 2	Keyarm	1: Area1	...
4	Dual 4K7 / 4K7	4	Keyarm	X-Shunt	16: Area 16	...
5	Dual 4K7 / 4K7	5	PIR 2	Unused	1: Area1	...
6	Dual 4K7 / 4K7	6	Fire exit	Unused	1: Area1	...
7	None	7	IR Alarm	Alarm	1: Area1	...
8	None	8	IR Sabo	Tamper	1: Area1	...

Output	Description	Type	Change type	Attributes	Test
1	Ext. Bell	System - External Bell	...	...	...
2	Int. Bell	System - Internal Bell	...	...	...
3	Strobe	Mapping gate 1	...	...	...
4	Fullset	System - Fullset	...	...	...
5	Alarm	System - Alarm	...	...	...
6	Alarm Confirmed	System - Alarm Confirmed	...	...	...

Save

Output Type	● **System Output**: Select the type from the dropdown menu. (See Output Types and Output Ports [→ 185]) ● **Area Output**: Only if **(multiple) Areas** is activated in menu **Panel Settings > System Settings > Options**. Select an area and the type of system output for this area. (See Output Types and Output Ports [→ 185]) ● **Zone Mapping**: Select which zone should be mapped. ● **Mapping Gate**: Select which mapping gate should be mapped. ● **Door Output**: Select the door number and the type of system output for the door. (See Output Types and Output Ports [→ 185]) ● **Keyswitch**: Select the node ID for the required keyswitch and the required key position to map to this output.
Description	Enter a text describing the output (max. 16 characters). This text will also appear on the browser and keypad.
Output Configuration	● **Mode**: Select the operational mode. Continuous follows output type; Pulsed toggles on and off when output type is active; Momentary generates a pulse when output type activates. ● **Retrigger**: Tick the box to retrigger momentary outputs. ● **On Time**: Enter the On time that applies to momentary and pulsed outputs. ● **Off Time**: Enter the Off time that applies to pulsed outputs. ● **Invert**: Tick this box to invert the physical output. ● **Log**: Tick this box to log the output state changes to the event log. ● **Calendar**: Select if necessary the desired calendar. See page [→ 236].

See also

🗎 Calendars [→ 236]

15.9.2.1 Outputs types and output ports

Each output type can be assigned to one of the 6 physical output ports on the SPC controller or to an output on one of the connected expanders. Output types that are not assigned to physical outputs act as indicators of events on the system and may be logged and/or reported to remote central stations if required.

The output ports on the expanders are all single pole relay type outputs (NO, COM, NC); therefore, output devices may need external power sources to activate if they are wired to expander outputs.

The activation of a particular output type depends on the zone type (see page [→ 285]) or alert condition that triggered the activation. If multiple areas are defined on the system then the outputs on the SPC are grouped into system outputs and area outputs; the system outputs are activated to indicate a system wide event (e.g. mains fault) whereas the area outputs indicate events detected in one or more of the defined areas on the system. Each area has its own set of area outputs; if the area is a common area for other areas, then its outputs will indicate the state of all the areas it is common for, including its own state. For example, if Area 1 is common for Area 2 and 3, and Area 2 Ext. Bell is active, then the Area 1 Ext Bell output is also active.

Some output types can only indicate system wide events (no specific area events). Please refer to the table below for further information.

Output Type	Description
External Bell	This output type is used to activate the system external bell and is active when any Area External Bell is active. By default, this output is assigned to the first output on the controller board (EXT+, EXT-). **Note**: An external bell output is automatically activated whenever a zone programmed as an Alarm zone triggers an alarm in Fullset or Partset modes.
External Bell Strobe	This output type is used to activate the strobe on the system external bell and is active when any area strobe is active. By default, this output is assigned to the strobe relay output (Output 3) on the Controller board (NO, COM, NC). **Note**: An external bell strobe output is automatically activated whenever a zone programmed as an alarm zone triggers an alarm in Fullset or Partset modes. The external bell strobe activates on a 'Fail to Set' condition if the strobe on the 'Fail to Set' option is checked in system options.
Internal Bell	This output type is used to activate the internal bell and is active when any area Internal Bell is active. By default, this output is assigned to the second output on the controller board (INT+, INT-). **Note**: An internal bell output is automatically activated whenever a zone programmed as an Alarm zone type triggers an alarm in Fullset or Partset modes. The internal Bell activates on a 'Fail to Set' condition if the Bell on the 'Fail to Set' option is checked in system options.
Alarm	This output turns on following alarm zone activation on the system or from any area defined on the system.
Alarm Confirmed	This output turns on when an alarm has been confirmed. An alarm is confirmed when 2 independent zones on the system (or within the same Area) activate within a set time period).

Panic*	This output turns on following activation of panic alarm zone types from any area. A panic alarm output is also generated if a user duress event is generated or if the panic option for the keypad is enabled.
Hold-up	This output turns on whenever a zone programmed as a Hold-up type zone triggers an alarm from any area
Fire	This output turns on following a fire zone activation on the system (or from any area)
Tamper	This output turns on when a tamper condition is detected from any part of the system
Medical	This output turns on when a medic zone is activated
Fault	This output turns on when a technical fault is detected
Technical	This output follows tech zone activity
Mains Fault*	This output activates when Mains power is removed
Battery Fault*	This output activates when there is a problem with the backup battery. If the battery voltage drops below 11 V this output activates. The 'Restore' option for this fault is only presented when the voltage level rises to above 11.8 V.
Partset A	This output is activated if the system or any area defined on the system is in Partset A mode
Partset B	This output is activated if the system or any area defined on the system is in Partset B mode
Fullset	This output is activated if the system is in Fullset mode
Fail to set	This output activates if the system or any area defined on the system failed to set; it clears when the alert is restored
Entry/Exit	This output activates if an Entry/Exit type zone has been activated; i.e. a system or area Entry or Exit timer is running
Latch	This output turns on as defined in the system latch output configuration (see Configuring system latch and auto set outputs [→ 187]). This output can be used to reset latching sensors as smoke or inertia sensors.
Fire Exit	This output turns ON if any Fire-X zones on the system are activated
Chime	This output turns on momentarily when any zone on the system with chime attribute opens
Smoke	This output turns on momentarily when a user unsets the system; it can be used to reset smoke detectors
Walk Test*	This output turns on momentarily when a walk test is operational and a zone becomes active. This output can be used, for example, to activate functional tests of connected detectors (if available).
Auto Set	This output turns on if the Auto Set feature has been activated on the system.
User Duress	This output turns on if a user duress state has been activated (PIN code + 1 has been entered on the keypad)
PIR Masked	This output turns on if there are any masked PIR zones on the system
Zone Omitted	This output turns on if there are any inhibited, isolated, or walk test zones on the system

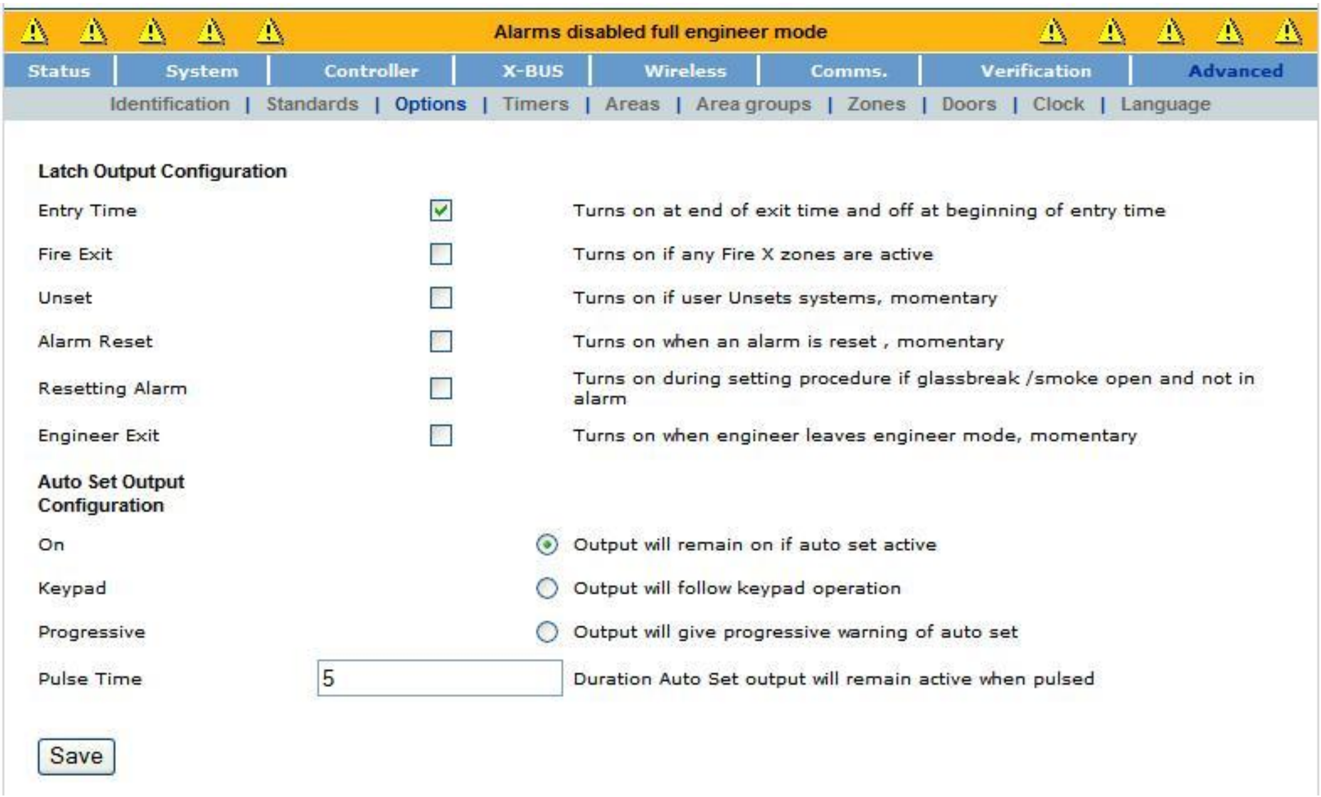
Fail to Communicate	This output turns on if there is a failure to communicate to the central station
Man Down Test	This output turns on a 'Man Down' wireless device which is activated during a 'Man Down' test.
Unset	This output is activated if the system is in Unset mode.
Alarm Abort	This output activates if an alarm abort event occurs i.e. when a valid user code is entered via the keypad after a confirmed or unconfirmed alarm. It is used, for example, with external dialers (SIA, CID, FF)
Seismic Test	This output is used to activate a manual or automatic test on a seismic zone. Seismic sensors have a small vibrator that will be attached to the same wall as the sensor and is wired to an output on the panel or one of its expanders. During the test, the panel waits up to 30 seconds for the seismic zone to open. If it does not open, the test fails. If it opens within 30 seconds the panel then waits for the zone to close within 10 seconds. If that doesn't happen, the test fails. The panel then waits a further 2 seconds before reporting the test result. The result of the test, either manual or automatic, is stored in the system event log
Local Alarm	This output activates on a local intrusion alarm.
RF Output	This output activates when a Fob or WPA button is pressed.
Modem 1 Line Fault	This output activates when there is a line fault on the primary modem..
Modem 1 Failure	This output activates when the primary modem fails.
Modem 2 Line Fault	This output activates when there is a line fault on the secondary modem.
Modem 2 Failure	This output activates when the secondary modem fails.
Battery Low	This output activates when the battery is low,
Entry Status	This output activates if an 'All Okay' entry procedure is implemented and there is no alarm generated i.e. the 'All Okay' button is pressed within the configured time after the user code is entered.
Warning Status	This output activates if an 'All Okay' entry procedure is implemented and a silent alarm generated i.e. the 'All Okay' button is not pressed within the configured time after the user code is entered.

** This output type can only indicate system wide events (no area specific events).*

15.9.3 Configuring system latch and auto set outputs

- Click on the **Edit** button for the **Output Configuration** option in **System Options**.

⇨ The following screen is displayed:


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language

Latch Output Configuration

Entry Time ☑ Turns on at end of exit time and off at beginning of entry time

Fire Exit □ Turns on if any Fire X zones are active

Unset □ Turns on if user Unsets systems, momentary

Alarm Reset □ Turns on when an alarm is reset , momentary

Resetting Alarm □ Turns on during setting procedure if glassbreak /smoke open and not in alarm

Engineer Exit □ Turns on when engineer leaves engineer mode, momentary

Auto Set Output Configuration

On ● Output will remain on if auto set active

Keypad ○ Output will follow keypad operation

Progressive ○ Output will give progressive warning of auto set

Pulse Time 5 Duration Auto Set output will remain active when pulsed

Save

- Select the condition under which the latch output is activated:

Entry Time	Output turns on at the end of Exit time and off at the beginning of Entry time.
Fire Exit	Output turns on if any fire exit zones are active.
Unset	Output turns on if any user unsets system momentary
Alarm Reset	Output turns on if an alarm is reset momentary.
Resetting Alarm	Output turns on during a setting procedure if glass break/smoke open and not in alarm.
Engineer Exit	Output turns on when an engineer exits from Engineer mode momentary.

- Select the behavior of the output.

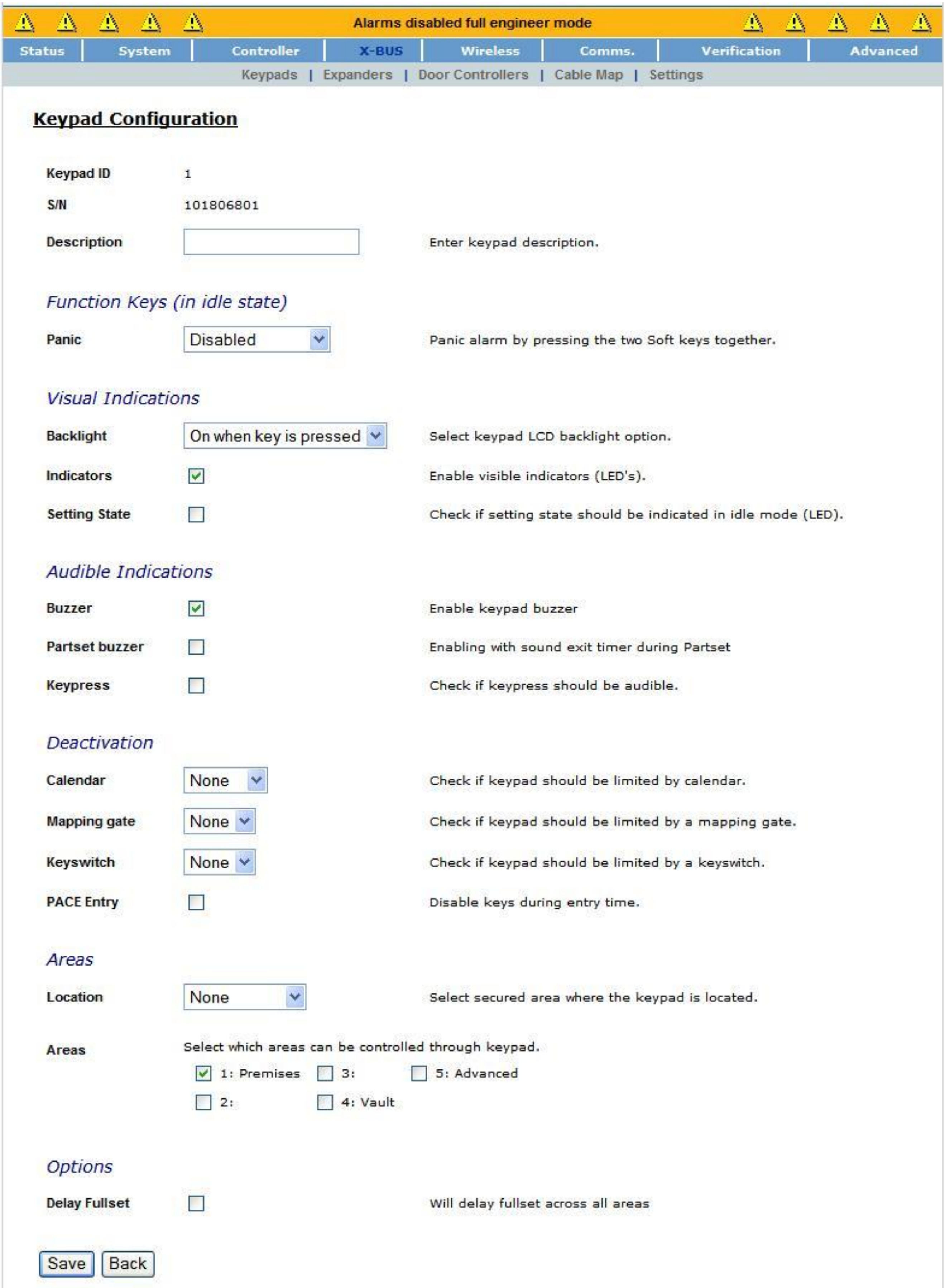
On	Output will remain on if auto set is active.
Keypad	Output will follow keypad operation.
Progressive	Output will give progressive warning of auto set.
Pulse Time	Select the duration that the auto set output will remain active when pulsed.

15.10 X-BUS

15.10.1 Keypads

15.10.1.1 Editing a Standard Keypad

1. Select **Settings > X-Bus > Keypads**.
2. Click one of the standard keypad identifying parameters.
3. Configure the fields as described in the table below.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings

Keypad Configuration

Keypad ID	1	
S/N	101806801	
Description		Enter keypad description.

Function Keys (in idle state)

Panic	Disabled	Panic alarm by pressing the two Soft keys together.

Visual Indications

Backlight	On when key is pressed	Select keypad LCD backlight option.
Indicators	☑	Enable visible indicators (LED's).
Setting State	□	Check if setting state should be indicated in idle mode (LED).

Audible Indications

Buzzer	☑	Enable keypad buzzer
Partset buzzer	□	Enabling with sound exit timer during Partset
Keypress	□	Check if keypress should be audible.

Deactivation

Calendar	None	Check if keypad should be limited by calendar.
Mapping gate	None	Check if keypad should be limited by a mapping gate.
Keyswitch	None	Check if keypad should be limited by a keyswitch.
PACE Entry	□	Disable keys during entry time.

Areas

Location	None	Select secured area where the keypad is located.

Areas — Select which areas can be controlled through keypad.

☑ 1: Premises □ 3: □ 5: Advanced
□ 2: □ 4: Vault

Options

Delay Fullset	□	Will delay fullset across all areas

Description	Enter a unique description to identify the keypad.
Function Keys (in idle state)	
Panic	Select Enable, Disable or Enabled Silent. If enabled, panic alarm is activated by pressing the 2 soft keys together.
Visual Idications	
Backlight	Select when keypad backlight is on. Options are: - On after key is pressed; Always on; Always off..
Indicators	Enable or disable the LED’s on the keypad.
Setting state	Select if setting state should be indicated in idle mode.
Audible Indications	
Buzzer	Enable or disable the buzzer on the keypad.
Partset Buzzer	Enable or disable buzzer during exit time on Partset.
Keypress	Select if the speaker volume for the key presses should be activated.
Deactivation	
Calendar	Select if the keypad should be limited by calendar. See Calendar [→ 236].
Mapping gate	Select if keypad should be limited by a mapping gate.
Keyswitch	Select if keypad should be limited by a keyswitch.
PACE Entry	Tick this box to disable the keys on the keypad during the entry time when a PACE is configured on the keypad.
Areas	
Location	Select the secured area where the keypad is located.
Areas	Select which areas can be controlled through keypad.
Options	
Delay Fullset	Select to configure a delayed set across all keypads. The location of the keypad is ignored and all areas will perform a full exit time count down.

NOTICE

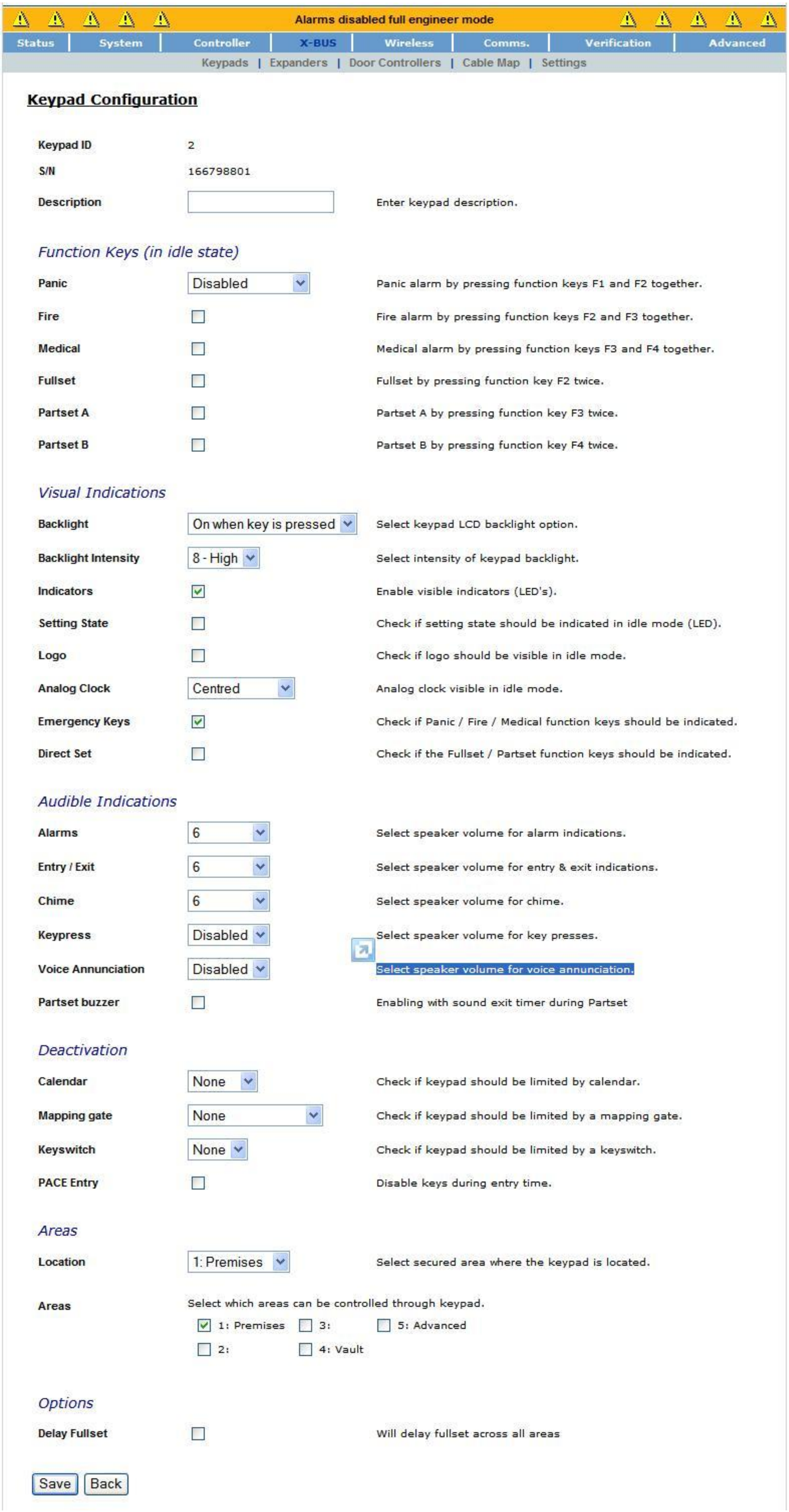
An area should be assigned to a keypad only if the keypad is inside the assigned area, and if an entry/exit route is defined. If an area is assigned, when the particular area is set or unset then entry and exit timers are used (if configured). Other features related to entry/exit routes also become available. If no area is assigned, the area is set or unset immediately and other entry/exit features are not available

See also

🗎 Calendars [→ 236]

15.10.1.2 Editing a Comfort Keypad

1. Select **Settings > X-Bus > Keypads**.
2. Click one of the comfort keypad identifying parameters.
3. Configure the fields as described in the table below.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings
Save
Back

Keypad Configuration

Keypad ID	2	
S/N	166798801	
Description		Enter keypad description.

Function Keys (in idle state)

Panic	Disabled	Panic alarm by pressing function keys F1 and F2 together.
Fire	□	Fire alarm by pressing function keys F2 and F3 together.
Medical	□	Medical alarm by pressing function keys F3 and F4 together.
Fullset	□	Fullset by pressing function key F2 twice.
Partset A	□	Partset A by pressing function key F3 twice.
Partset B	□	Partset B by pressing function key F4 twice.

Visual Indications

Backlight	On when key is pressed	Select keypad LCD backlight option.
Backlight Intensity	8 - High	Select intensity of keypad backlight.
Indicators	☑	Enable visible indicators (LED's).
Setting State	□	Check if setting state should be indicated in idle mode (LED).
Logo	□	Check if logo should be visible in idle mode.
Analog Clock	Centred	Analog clock visible in idle mode.
Emergency Keys	☑	Check if Panic / Fire / Medical function keys should be indicated.
Direct Set	□	Check if the Fullset / Partset function keys should be indicated.

Audible Indications

Alarms	6	Select speaker volume for alarm indications.
Entry / Exit	6	Select speaker volume for entry & exit indications.
Chime	6	Select speaker volume for chime.
Keypress	Disabled	Select speaker volume for key presses.
Voice Annunciation	Disabled	Select speaker volume for voice annunciation.
Partset buzzer	□	Enabling with sound exit timer during Partset

Deactivation

Calendar	None	Check if keypad should be limited by calendar.
Mapping gate	None	Check if keypad should be limited by a mapping gate.
Keyswitch	None	Check if keypad should be limited by a keyswitch.
PACE Entry	□	Disable keys during entry time.

Areas

Location	1: Premises	Select secured area where the keypad is located.

Areas

Select which areas can be controlled through keypad.

☑ 1: Premises □ 3: □ 5: Advanced
□ 2: □ 4: Vault

Options

Delay Fullset	□	Will delay fullset across all areas

Description	Enter a unique description to identify the keypad.
Function Keys (in idle state)	
Panic	Select Enable, Disable or Enabled Silent. If enabled, panic alarm is activated by pressing F1 and F2 soft keys together.
Fire	Enable to allow fire alarm to be activated by pressing F2 and F3 soft keys together.
Medical	Enable to allow medical alarm to be activated by pressing F3 and F4 soft keys together.
Fullset	Enable to allow Fullset to be activated by pressing F2 key twice.
Partset A	Enable to allow Partset A to be activated by pressing F3 key twice.
Partset B	Enable to allow Partset B to be activated by pressing F4 key twice.
Visual indications	
Backlight	Select when keypad backlight is on. Options are: - On after key is pressed; Always on; Always off.
Backlight Intensity	Select the intensity of illumination of the backlight. Range 1 - 8 (High).
Indicators	Enable or disable the LED’s on the keypad.
Setting state	Enable if setting state should be indicated in idle mode. (LED)
Logo	Enable if logo should be visible in idle mode.
Analog Clock	Select position of clock if visible in idle mode. Options are Left Aligned, Center Aligned, Right Aligned or Disabled.
Emergency Keys	Enable if Panic, Fire and Medical function keys should be indicated in the LCD display.
Direct Set	Enable if Fullset/Partset function keys should be indicated in the LCD display.
Audible indications	
Alarms	Select speaker volume for alarm indications or disable sound.
Entry/Exit	Range is 0 – 7 (Max volume)
Chime	Select speaker volume for entry & exit indications or disable sound.
Keypress	Range is 0 – 7 (Max volume)
Voice Annunciation	Select speaker volume for chime or disable sound.
Partset Buzzer	Range is 0 – 7 (Max volume)
Deactivation	
Calendar	Select if the keypad should be limited by calendar. See Calendar.

Mapping gate	Select if keypad should be limited by a mapping gate.
Keyswitch	Select if keypad should be limited by a keyswitch.
PACE Entry	Tick this box to disable the keys on the keypad during the entry time when a PACE is configured on the keypad.
Areas	
Location	Select the secured area where the keypad is located.
Areas	Select which areas can be controlled through keypad.
Options	
Delay Fullset	Select to configure a delayed set across all keypads. The location of the keypad is ignored and all areas will perform a full exit time count down.

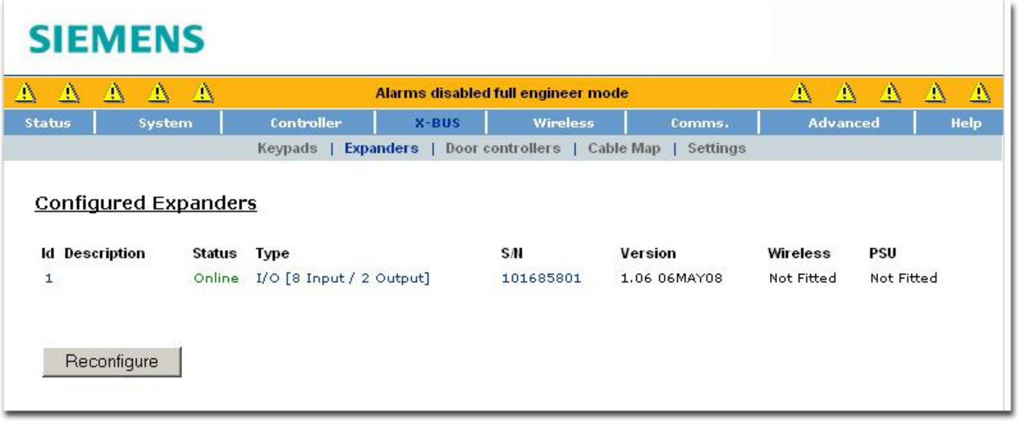
NOTICE

An area should be assigned to a keypad only if the keypad is inside the assigned area, and if an entry/exit route is defined. If an area is assigned, when the particular area is set or unset then entry and exit timers are used (if configured). Other features related to entry/exit routes also become available. If no area is assigned, the area is set or unset immediately and other entry/exit features are not available.

15.10.2 Expanders

1. Select **Settings** > **X-Bus** > **Expanders.**

   ➪ The following window will be displayed:


SIEMENS
Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Keypads | Expanders | Door controllers | Cable Map | Settings
Reconfigure

Configured Expanders

Id	Description	Status	Type	S/N	Version	Wireless	PSU
1		Online	I/O [8 Input / 2 Output]	101685801	1.06 06MAY08	Not Fitted	Not Fitted

2. Click one of the expander identifying parameters.

For naming and identifying:

In loop configuration, each expander is numbered consecutively from the first (expander connected to the 1A 1B on the controller) to the last (expander connected to the 2A 2B on the controller).

Example for SPC63xx: Expanders, when numbered 1 through 63, are allocated zones (in groupings of 8) in subsequent identities of 1 to 512 (the greatest number in zone identification is 512 for). Therefore, any expander named or identified by a number greater than 63 has no allocated zones.

3. Configure the following fields:

Description	For appearance on device LEDs.
Volume Limit	**Audio Expander Only:** Speaker volume for the Audio Expander and satellites (WAC 11). They are all wired in parallel. Note that the speaker on WAC 11 has a potentiometer for fine-tuning the volume. Range is 0 min - 7 max or disabled.
Auxillary Channnel	**Audio Expander Only:** This option should be enabled if satellites (WAC11) are connected to this expander. **Note:** This option, if enabled, powers the satellite microphones. The satellite speakers are always enabled regardless of this setting.
End Of Line	Select the correct End of Line (default: DEOL 4K7). This setting should match the actual wiring of the input on the controller or expander. See page [→ 40].
(Zone) Description	Provide a description for allocated zone.
(Zone) Type	Select the zone type. See page [→ 287].
Area	Select the area.
Attributes	Assign attributes as desired. See page [→ 285].
(Output) Description	Provide description for output line.
Change type	Change the type of output as necessary.
Test	Test the output.

When expanders are added or removed:

- Click **Reconfigure** to implement changes.

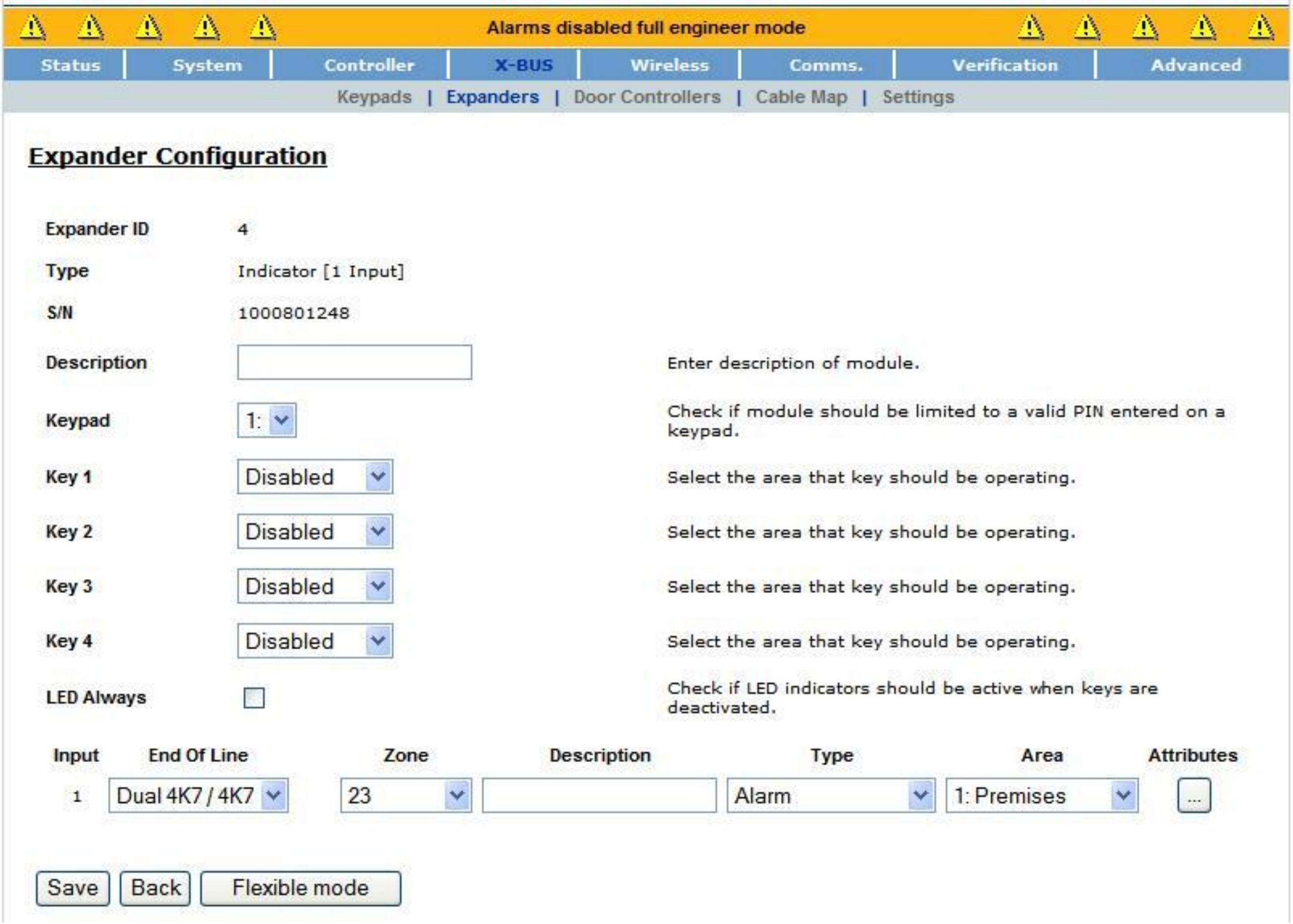
15.10.2.1 Configuring an Indicator Expander

There are 2 possible configuration modes for the indication expander:

- Linked Mode
- Flexible Mode

1. Select **Settings > X-Bus > Expanders**.
2. Click one of the indicator identifying parameters.

⇨ The following screen is displayed for **Linked Mode** configuration.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings
Save
Back
Flexible mode

Expander Configuration

Expander ID	4	
Type	Indicator [1 Input]	
S/N	1000801248	
Description		Enter description of module.
Keypad	1:	Check if module should be limited to a valid PIN entered on a keypad.
Key 1	Disabled	Select the area that key should be operating.
Key 2	Disabled	Select the area that key should be operating.
Key 3	Disabled	Select the area that key should be operating.
Key 4	Disabled	Select the area that key should be operating.
LED Always	□	Check if LED indicators should be active when keys are deactivated.

Input	End Of Line	Zone	Description	Type	Area	Attributes
1	Dual 4K7 / 4K7	23		Alarm	1: Premises	...

Linked Mode

1. Enter a description.
2. Select if indicator module should be limited to a valid code entered on a keypad.
3. Select the areas that are to be controlled by the 4 functions keys.
4. Configure the input.

Flexible Mode

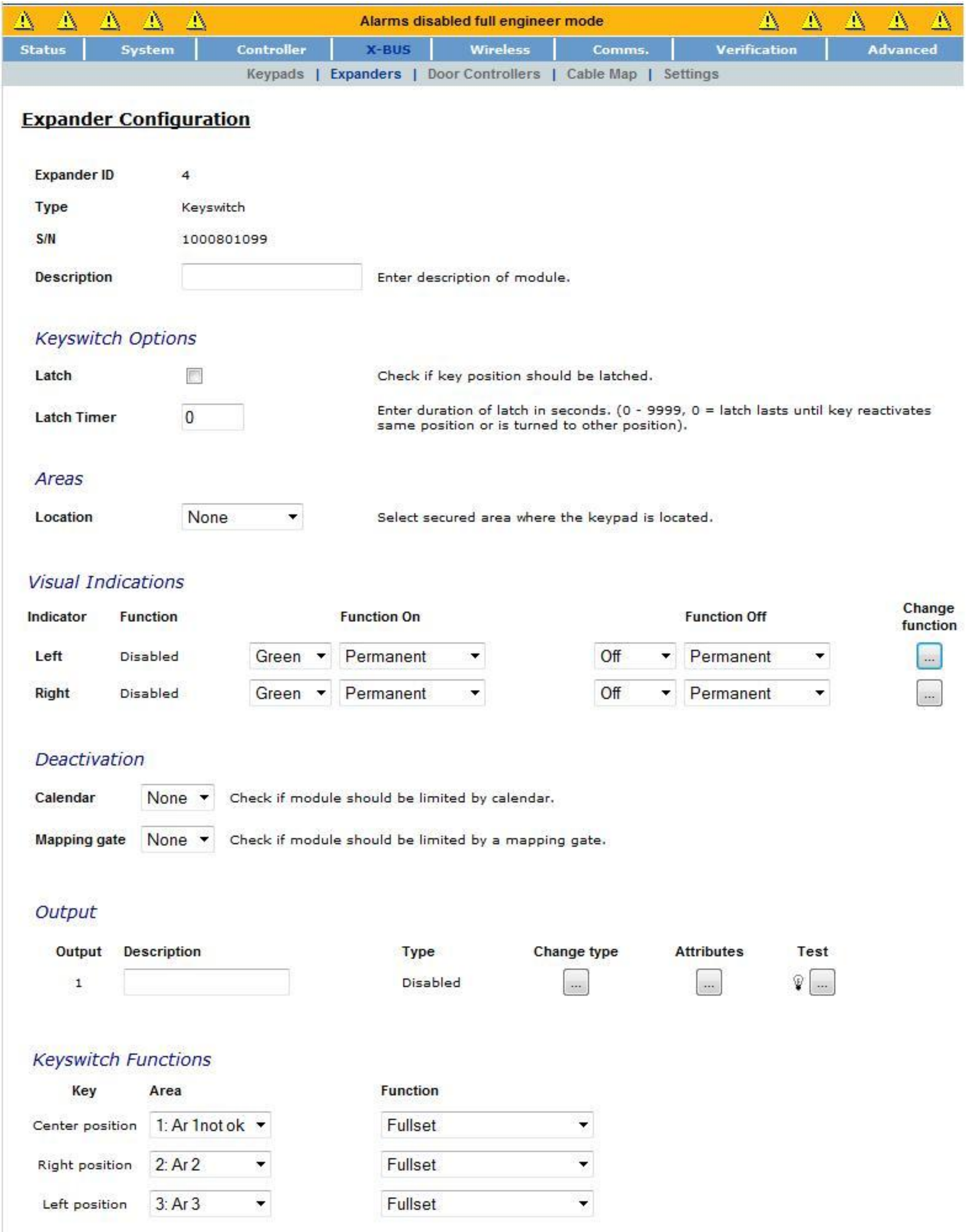
1. Click the **Flexible Mode** button.
2. Configure the fields described in the tables below.
3. Configure the input.

Function Keys	
Area	Select the area is to be controlled by the function key.
Function	Select the function to be performed by this key in this area..
Area	Select an area if the indicator module is located in a secure area.
Visual Indication	

Indicator	There are 8 indicators / LEDs on the right and 8 indicators / LEDs on the left side.
Function	The function that is indicated by this LED.
Function On	Select the colour and the state for every indicator if the selected function is on.
Function Off	Select the colour and the state for every indicator if the selected function is off.
Change function	Press this button to change the function for this indicator. The function can be enabled or used for a system, area, zone or keyswitch.
Audible Indications	
Alarms	Select if the alarms should be audible.
Entry / Exit	Select if entry / exit should be audible.
Key press	Select if keypress should be audible.
Deactivation	
Calendar	Select if indicator expander should be limited by calendar.
Mapping gate	Select if indicator module should be limited by a mapping gate.
Keyswitch	Select if indication module should be limited by a keyswitch.
Keypad	Select if indicator module should be limited to a valid code entered on a keypad.
Card reader	Select if indicator module should not be activated until a valid card/fob is presented to the built-in card reader.

15.10.2.2 Configuring a Keyswitch Expander

1. Select **Settings > X-Bus > Expanders.**
2. Click one of the keyswitch identifying parameters.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings

Expander Configuration

Expander ID	4	
Type	Keyswitch	
S/N	1000801099	
Description		Enter description of module.

Keyswitch Options

Latch	□	Check if key position should be latched.
Latch Timer	0	Enter duration of latch in seconds. (0 - 9999, 0 = latch lasts until key reactivates same position or is turned to other position).

Areas

Location	None	Select secured area where the keypad is located.

Visual Indications

Indicator	Function	Function On		Function Off		Change function
Left	Disabled	Green	Permanent	Off	Permanent	...
Right	Disabled	Green	Permanent	Off	Permanent	...

Deactivation

Calendar	None	Check if module should be limited by calendar.
Mapping gate	None	Check if module should be limited by a mapping gate.

Output

Output	Description	Type	Change type	Attributes	Test
1		Disabled	...	...	...

Keyswitch Functions

Key	Area	Function
Center position	1: Ar 1not ok	Fullset
Right position	2: Ar 2	Fullset
Left position	3: Ar 3	Fullset

- Configure the fields described in the tables below.

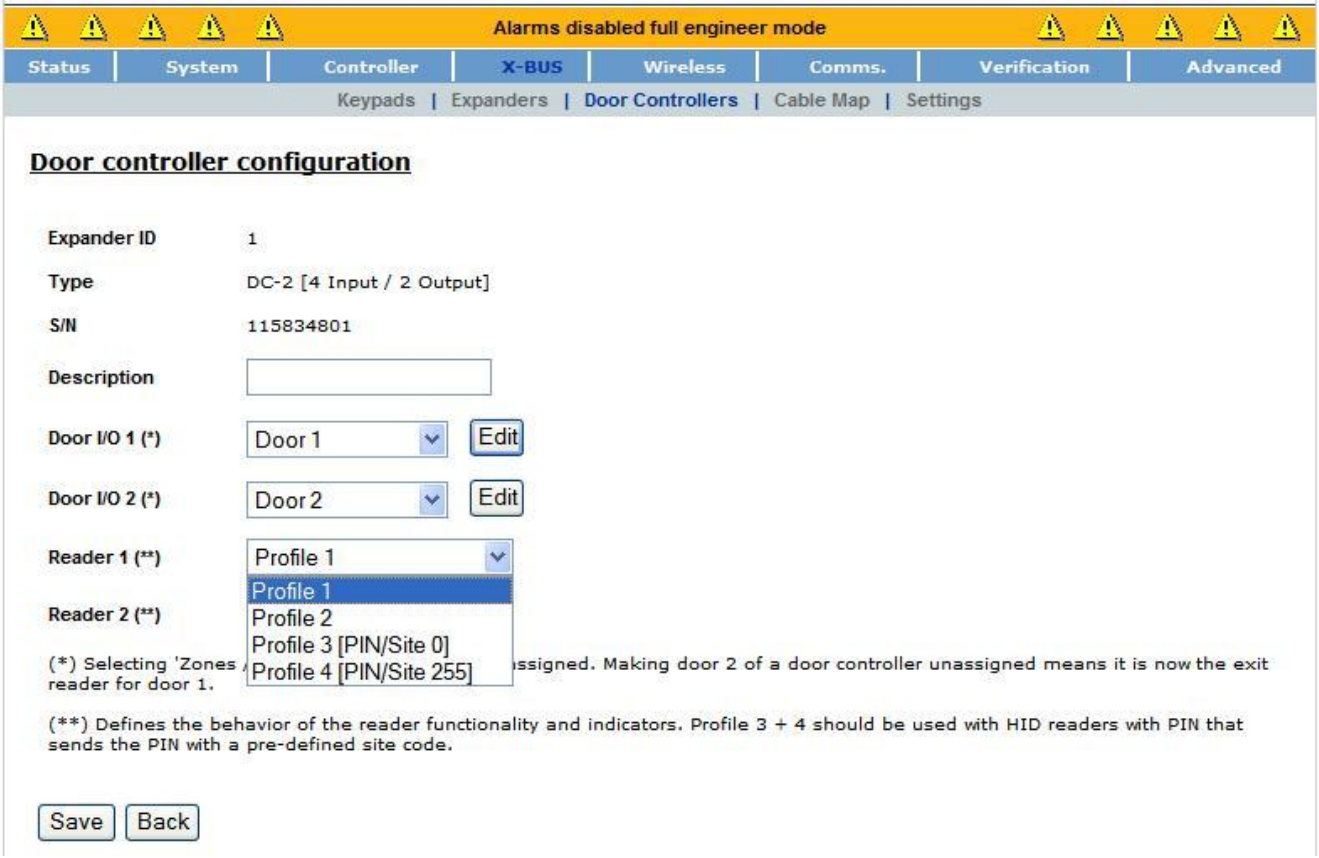
Description	Enter a description for the keyswitch expander.

Key Options	
Latch	Select if key position should be latched.
Latch timer	Enter duration of latch in seconds (0 - 9999, 0 means latch lasts until key is turned the other way).
Areas	
Location	Select the area where the keyswitch is located.
Visual Indications	
Indicator/LED	There is 1 indicator / LED on the right and 1 indicator / LED on the left side.
Function	The function for this indicator / LED.
Function On	Select the colour and the state for every indicator if the selected function is on.
Function Off	Select the colour and the state for every indicator if the selected function is off.
Change function	Press this button to change the function for this indicator. The function can be enabled or used for a system, area, zone or keyswitch.
Deactivation	
Calendar	Select if the keyswitch module should be limited by calendar.
Mapping gate	Select if the keyswitch module should be limited by a mapping gate.
Output	
Output *x*	Configure and text the outputs for the keyswitch. See Outputs [→ 184] for more details
Keyswitch Functions	
Centre, Right and Left Positions	Select the **Function** that that this keyswitch position will perform and the relevant **Area**.

15.10.3 Door Controllers

15.10.3.1 Editing a door controller

1. Select **Settings > X-Bus > Door controller**.
2. Click on one of the blue marked data (e.g. serial number).
3. Configure the fields as described in the table below.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings
Edit
Edit
Profile 1
Profile 2
Profile 3 [PIN/Site 0]
Profile 4 [PIN/Site 255]
Save
Back

Door controller configuration

Expander ID	1
Type	DC-2 [4 Input / 2 Output]
S/N	115834801
Description	
Door I/O 1 (*)	Door 1
Door I/O 2 (*)	Door 2
Reader 1 (**)	Profile 1
Reader 2 (**)	

(*) Selecting 'Zones / ssigned. Making door 2 of a door controller unassigned means it is now the exit reader for door 1.

(**) Defines the behavior of the reader functionality and indicators. Profile 3 + 4 should be used with HID readers with PIN that sends the PIN with a pre-defined site code.

For naming and identifying:

In loop configuration, each expander is numbered consecutively from the first (expander connected to the 1A 1B on the controller) to the last (expander connected to the 2A 2B on the controller).

Example for SPC63xx: Expanders, when numbered 1 through 63, are allocated zones (in groupings of 8) in subsequent identities of 1 to 512 (the greatest number in zone identification is 512). Therefore, any expander named or identified by a number greater than 63 has no allocated zones.

Expander ID	ID of the door controller set with the rotary switches.
Type	Type of the door controller.
S/N	Serial number of the door controller.
Description	Description of the door controller..
Door I/O 1 Door I/O 2	● If a door is assigned to the door I/O, select the corresponding door number. If the two inputs and outputs are configurable, select **Zones / Outputs**. ● If a door number is selected for the door I/O, the door settings can be changed by clicking on the edit button. This is equal to **Settings > Doors**. ● If **Zones / Options** is selected, the two zones and the one output can be configured by clicking the edit button.
Profile 1	For readers with a green and a red LED.
Profile 2	For SIEMENS readers with a yellow LED (AR618X).

Profile 3	Profile 3 is used with HID readers that send a PIN to the panel as a card reading with a predefined site code (0)
Profile 4	Profile 4 is used with HID readers that send a PIN to the panel as a card reading with a predefined site code (255).

Editing Zones/Outputs for a Door I/O

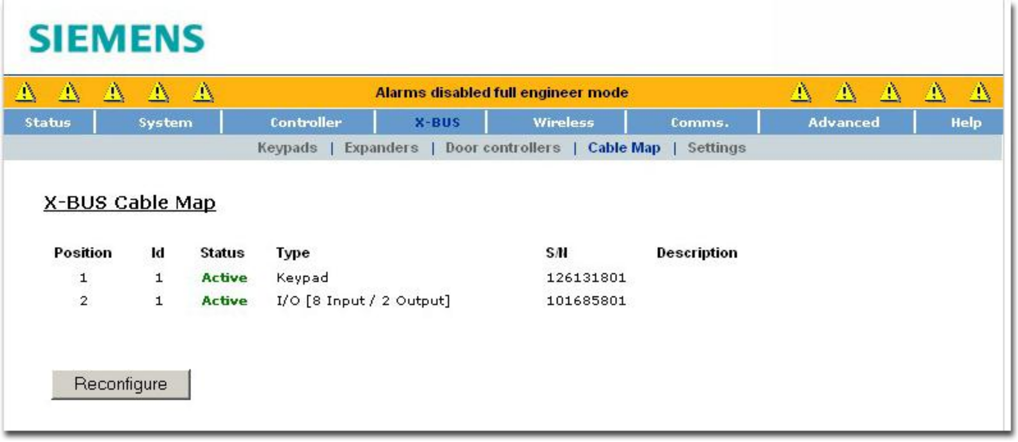
1. Select a Zone/Output for the door I/O.
2. Click the **Edit** button.
3. The 2 inputs and the output belonging to this door I/O can be configured as normal door inputs and outputs. See page [➞ 176].
4. In order to use the inputs, they have to be assigned to a zone number.

15.10.4 Cable Map

For a list of the expanders/keypads in the ordered they are configured on the SPC system:

- Select **Settings > Exp./Keypads > Cable Map**.

  ⇨ The following window will be displayed:


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Keypads | Expanders | Door controllers | Cable Map | Settings
Reconfigure

X-BUS Cable Map

Position	Id	Status	Type	S/N	Description
1	1	Active	Keypad	126131801	
2	1	Active	I/O [8 Input / 2 Output]	101685801	

For more detail on X-BUS interfacing, see page [➞ 40].

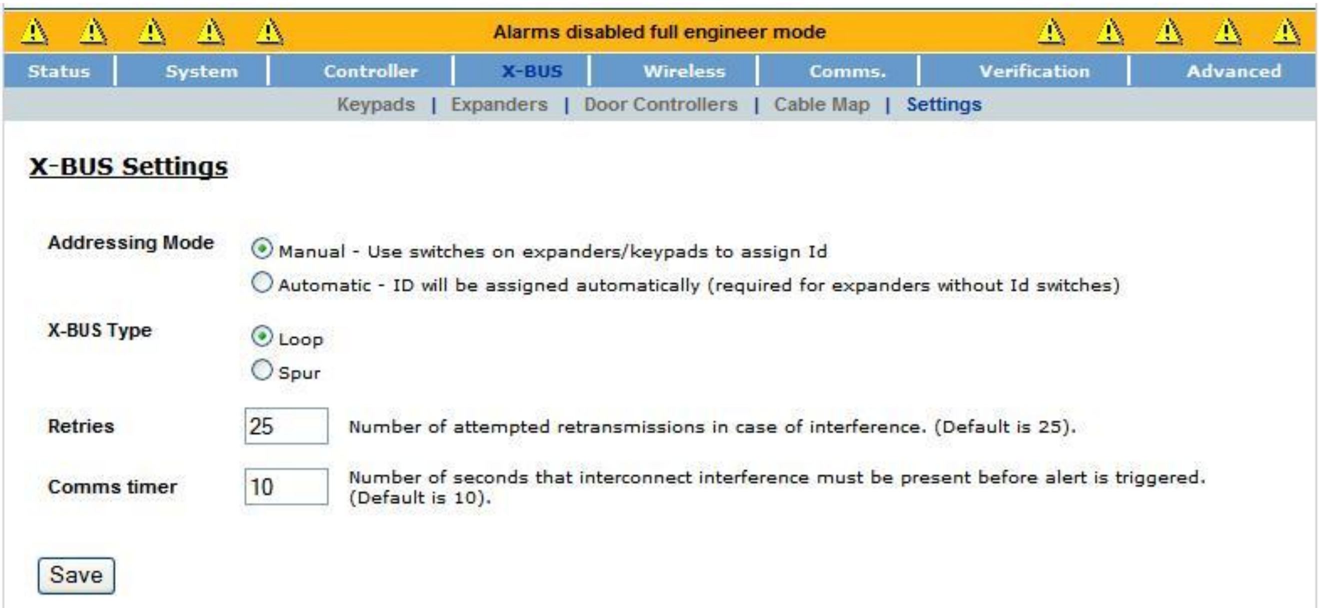
15.10.5 Settings

To configure X-BUS connections:

1. Select **Settings > Exp./Keypads > Settings**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings
Save

X-BUS Settings

Addressing Mode
● Manual - Use switches on expanders/keypads to assign Id
○ Automatic - ID will be assigned automatically (required for expanders without Id switches)

X-BUS Type
● Loop
○ Spur

Retries: 25 — Number of attempted retransmissions in case of interference. (Default is 25).

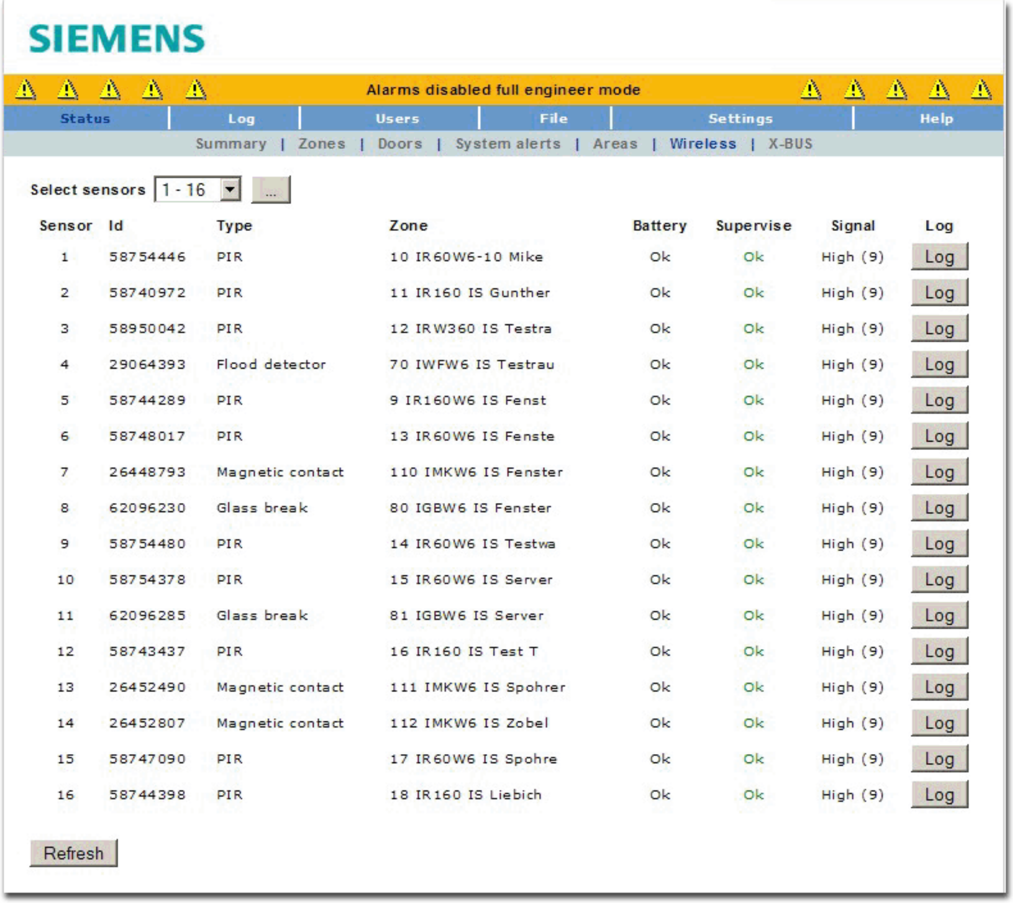
Comms timer: 10 — Number of seconds that interconnect interference must be present before alert is triggered. (Default is 10).

Addressing Mode	Select if expanders/keypads are either manually or automatically addressed on the X-BUS .
X-BUS Type	Select Loop or Spur configuration.
Retries	The number of times the system attempts to re-transmit data on the X-BUS interface before a communications fault is generated.
Comms Timer	The length of time before a communication fault is recorded.

15.11 Wireless

Wireless sensor detection (868 MHz) on the SPC panel is provided by wireless receiver modules which may be factory fitted on the keypad or on the controller, or by installing a wireless expander.

1. Select **Status > Wireless**.
2. See table below for further information.


SIEMENS
Alarms disabled full engineer mode
Status | Log | Users | File | Settings | Help
Summary | Zones | Doors | System alerts | Areas | Wireless | X-BUS

Select sensors 1 - 16 ...

Sensor	Id	Type	Zone	Battery	Supervise	Signal	Log
1	58754446	PIR	10 IR60W6-10 Mike	Ok	Ok	High (9)	Log
2	58740972	PIR	11 IR160 IS Gunther	Ok	Ok	High (9)	Log
3	58950042	PIR	12 IRW360 IS Testra	Ok	Ok	High (9)	Log
4	29064393	Flood detector	70 IWFW6 IS Testrau	Ok	Ok	High (9)	Log
5	58744289	PIR	9 IR160W6 IS Fenst	Ok	Ok	High (9)	Log
6	58748017	PIR	13 IR60W6 IS Fenste	Ok	Ok	High (9)	Log
7	26448793	Magnetic contact	110 IMKW6 IS Fenster	Ok	Ok	High (9)	Log
8	62096230	Glass break	80 IGBW6 IS Fenster	Ok	Ok	High (9)	Log
9	58754480	PIR	14 IR60W6 IS Testwa	Ok	Ok	High (9)	Log
10	58754378	PIR	15 IR60W6 IS Server	Ok	Ok	High (9)	Log
11	62096285	Glass break	81 IGBW6 IS Server	Ok	Ok	High (9)	Log
12	58743437	PIR	16 IR160 IS Test T	Ok	Ok	High (9)	Log
13	26452490	Magnetic contact	111 IMKW6 IS Spohrer	Ok	Ok	High (9)	Log
14	26452807	Magnetic contact	112 IMKW6 IS Zobel	Ok	Ok	High (9)	Log
15	58747090	PIR	17 IR60W6 IS Spohre	Ok	Ok	High (9)	Log
16	58744398	PIR	18 IR160 IS Liebich	Ok	Ok	High (9)	Log

Refresh

Sensor	The number of the sensor enrolled on the system (1 = first, 2 = second, etc.)
ID	A unique identity number for that sensor.
Type	The type of wireless sensor detected (magnetic contact, inertia/shock, etc.)
Zone	The zone to which the sensor has been enrolled.
Battery	The status of the battery in the sensor (if fitted).
Supervise	The status of the supervisory operation (OK = supervisory signal received, Not Supervised = no supervisory operation).
Signal	The signal strength received from the sensor (01=low, 09=high).

Performable actions

Log	Click to view the wireless sensor Log. See page [→ 204].

15.11.1 Log - Wireless sensor X

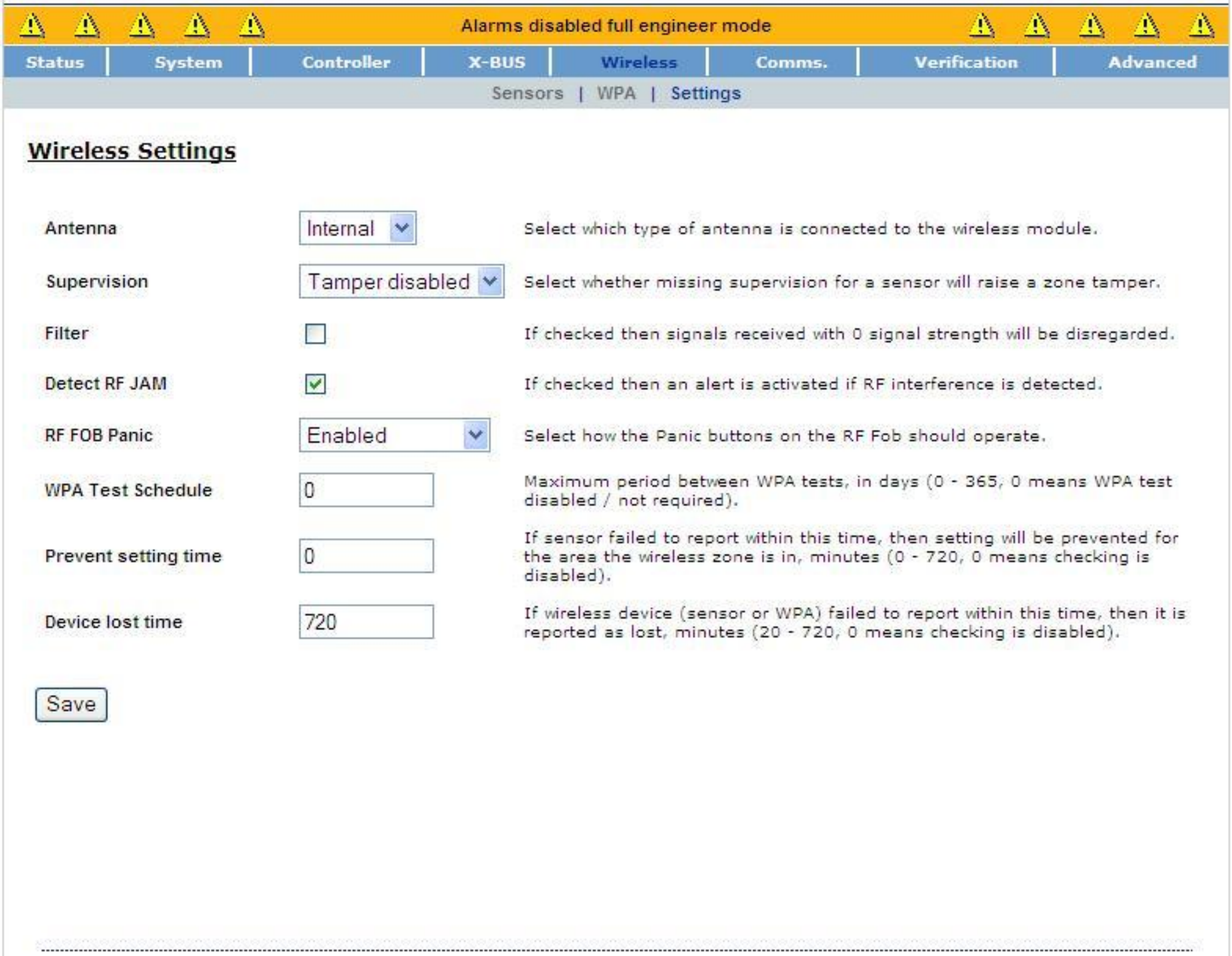
To view a quick log of events for a wireless sensor:

1. Click the **Log** button.
2. See table below for further information.

Date/Time	The date and time of the logged event.
Receiver	The wireless receiver location, i.e. wireless module mounted on the keypad, controller or wireless expander.
Signal	The signal strength received from the sensor (01=low, 09=high).
Status	The physical status of the sensor.
Battery	The status of the battery connected to the sensor (OK, Fault).

15.11.2 Changing wireless settings

1. Select **Settings** > **Wireless** > **Settings**.



Wireless Settings

Antenna	Internal	Select which type of antenna is connected to the wireless module.
Supervision	Tamper disabled	Select whether missing supervision for a sensor will raise a zone tamper.
Filter	□	If checked then signals received with 0 signal strength will be disregarded.
Detect RF JAM	☑	If checked then an alert is activated if RF interference is detected.
RF FOB Panic	Enabled	Select how the Panic buttons on the RF Fob should operate.
WPA Test Schedule	0	Maximum period between WPA tests, in days (0 - 365, 0 means WPA test disabled / not required).
Prevent setting time	0	If sensor failed to report within this time, then setting will be prevented for the area the wireless zone is in, minutes (0 - 720, 0 means checking is disabled).
Device lost time	720	If wireless device (sensor or WPA) failed to report within this time, then it is reported as lost, minutes (20 - 720, 0 means checking is disabled).

2. See table below for further information.

Antenna	Select the type of antenna connected to the wireless module (internal or

	external) from the drop down menu. The type of antenna required for the wireless module depends on the type of wireless module fitted.
Supervision	Select whether a wireless sensor that is reported as missing registers a tamper condition on the signet panel. A wireless sensor is reported as missing when no supervision signal has been received from the sensor for a period greater than the programmed **Wireless Lost** timer. See page [→ 159].
Filter	Tick to filter low strength RF signals.
Detect RF Jam	Tick to activate an alert if RF interference is detected.
RF FOB Panic	Select how the Panic buttons on the RF Fob should operate.
WPA Test Schedule	Enter a maximum period (in days) between WPA tests.
Prevent Setting Time	Enter a time in minutes after which, if the sensor fails to report, a setting is prevented for an area where the wireless zone is.
Device Lost Time	Enter a number of minutes after which the wireless device (sensor or WPA) device is reported as lost.

15.11.3 Configuring a WPA

NOTICE

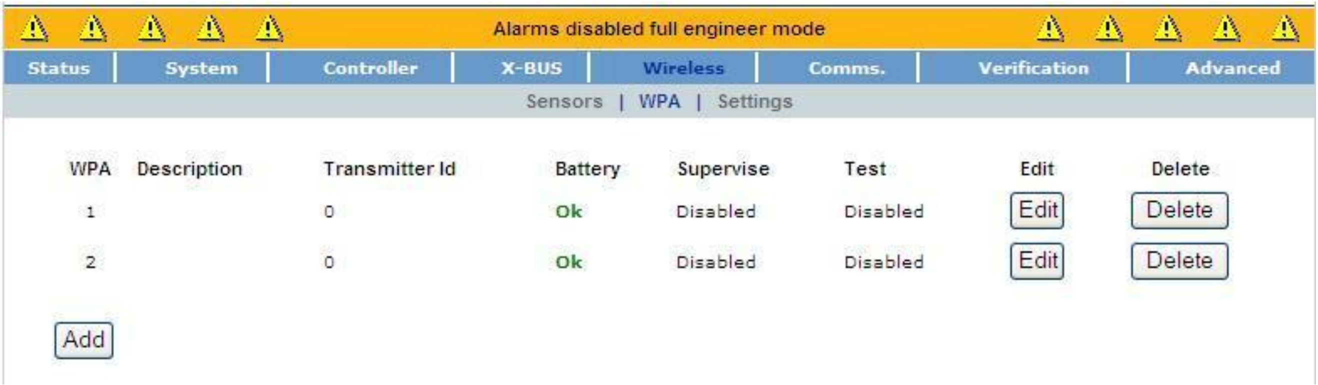
The WPA configuration and status page is displayed only if there is a wireless module fitted on the panel or any of its expanders, and the panel is licensed for the type of module(s) fitted.

A WPA is not assigned to a user. Usually, a WPA is shared by several people, for example, security guards working in shifts or, alternatively, WPAs may be permanently attached to a surface such as under a desk or behind a till.

A maximum of 128 WPAs is allowed per panel.

To configure a WPA from the browser:

- Select Full Engineer mode and select the following options **Settings>Wireless>WPA**.



Alarms disabled full engineer mode

WPA	Description	Transmitter Id	Battery	Supervise	Test	Edit	Delete
1		0	Ok	Disabled	Disabled	Edit	Delete
2		0	Ok	Disabled	Disabled	Edit	Delete

The following items can be checked or configured from this page:

- **Battery Status**

The panel receives the battery status from the WPA in every frame. The battery status can be either OK or Low.

Battery monitoring requires a WPA fitted with the PCB revision E-PC138612 or later.

- **Supervise Status**

  The Supervise status can be any of the following:

  – Fault
  The panel has not received a supervision message from the WPA in the period configured in the Wireless Settings page.

  – Disabled
  Supervision is not configured.

  – OK
  Supervision is transmitting normally.

- **Test Status**

  The Test Status can be any of the following:

  – Overdue
  The WPA has not been tested in the period configured in the Wireless Settings page.

  – Disabled
  Supervision is not configured.

  – OK
  The WPA test is ok.

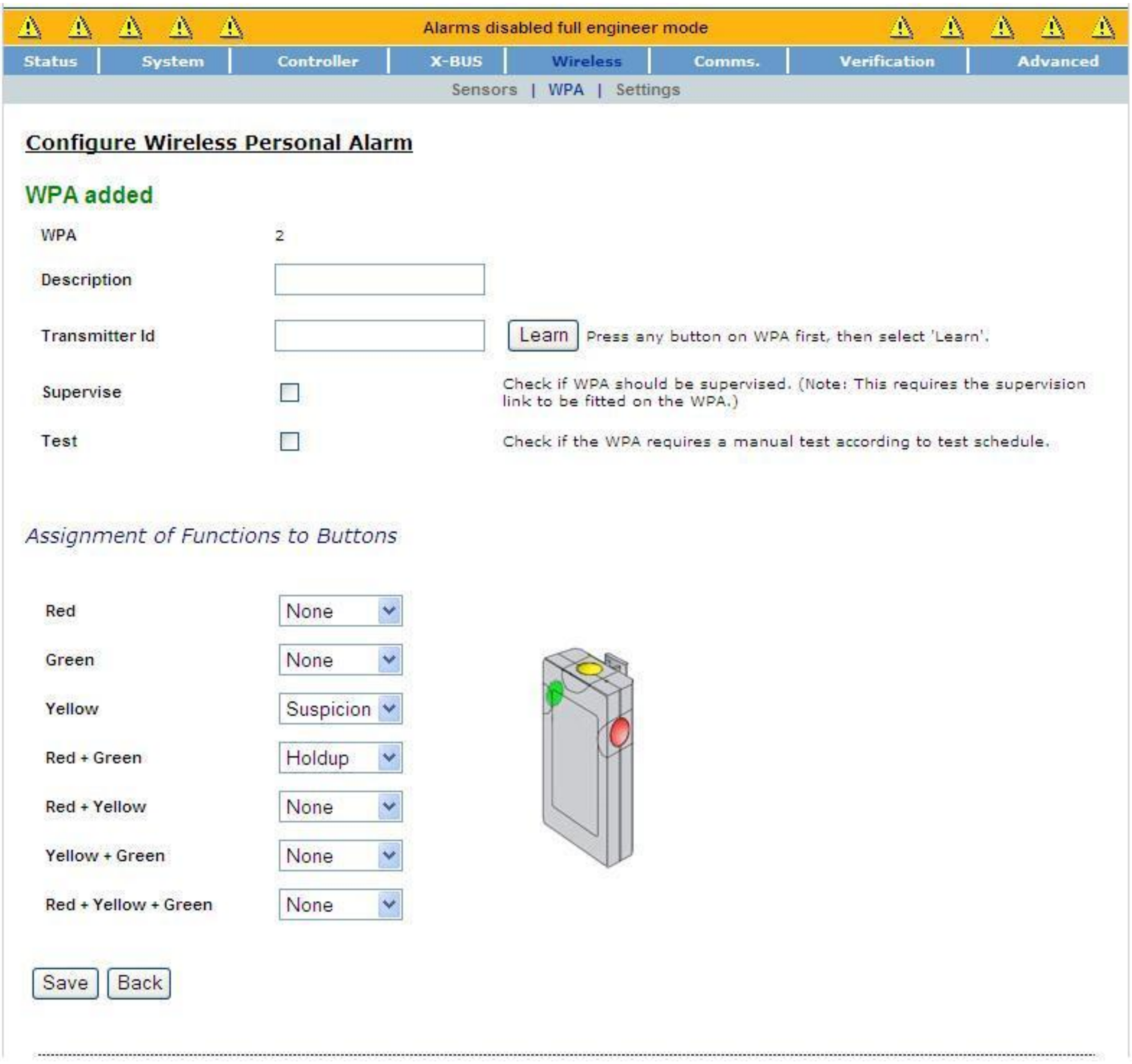
1. Click on the **Edit** button to edit the WPA configuration.
2. Click on the **Delete** button to delete a WPA from the system.

15.11.3.1 Adding a WPA

To add a WPA to the system:

- Click the **Add** button in the main WPA Configuration and Status page.

⇨ The Configure WPA page is displayed for the new WPA.



Configure Wireless Personal Alarm

WPA added

WPA	2	
Description		
Transmitter Id		Learn Press any button on WPA first, then select 'Learn'.
Supervise	□	Check if WPA should be supervised. (Note: This requires the supervision link to be fitted on the WPA.)
Test	□	Check if the WPA requires a manual test according to test schedule.

Assignment of Functions to Buttons

Red	None
Green	None
Yellow	Suspicion
Red + Green	Holdup
Red + Yellow	None
Yellow + Green	None
Red + Yellow + Green	None

- Configure the WPA using the following details:

Description/Name	Enter a Description or Name to uniquely identity a WPA.
Transmitter ID	The transmitter ID is printed on the WPA casing and can be entered manually here. You can also identify the ID remotely by pressing any button on the WPA and then clicking the **Learn** button. The panel automatically enters this ID in this field providing no other WPA is currently defined with it
Supervise	The WPA may be configured to send periodic supervision signals. Supervision is enabled on the WPA with a jumper. The supervision function also needs to be enabled on the panel for the particular WPA for correct supervision operation. If the panel does not get a supervision signal, it raises an alarm that is shown in the keypad and logged. If supervision is not enabled, the WPA sends out a supervision message about every 24 hours to transmit the WPA battery status to the panel. This message is also randomized to decrease the chances of collision with other WPAs. Tick the **Supervise** box if supervision has been enabled for that particular

	WPA.
Test	Tick the **Test** box if a periodic WPA test is required. The timeframe for periodic testing is configured on the Changing wireless settings [➙ 205] page.
Button Assignment	Use this section to assign functions to button combinations. Available functions are Panic, Holdup, Suspicion or RF User Output. More than one combination can be selected for the same function. The screen above shows the defaults for the panel for a Financial installation: ● Yellow - Suspicion ● Red + Green - Holdup For Commercial or Domestic installations, the default is: ● Red + Green - Panic **Note:** If no function is assigned to a button combination, it is still possible to use that combination by using a trigger. See Triggers [➙ 239]

- Click on the **Save** button to save the settings.

See also

🗎 Changing wireless settings [➙ 205]

🗎 Changing wireless settings [➙ 205]

🗎 Triggers [➙ 239]

15.11.3.2 Editing a WPA

To edit a WPA, click the **Edit** button in the main WPA Configuration and Status page.

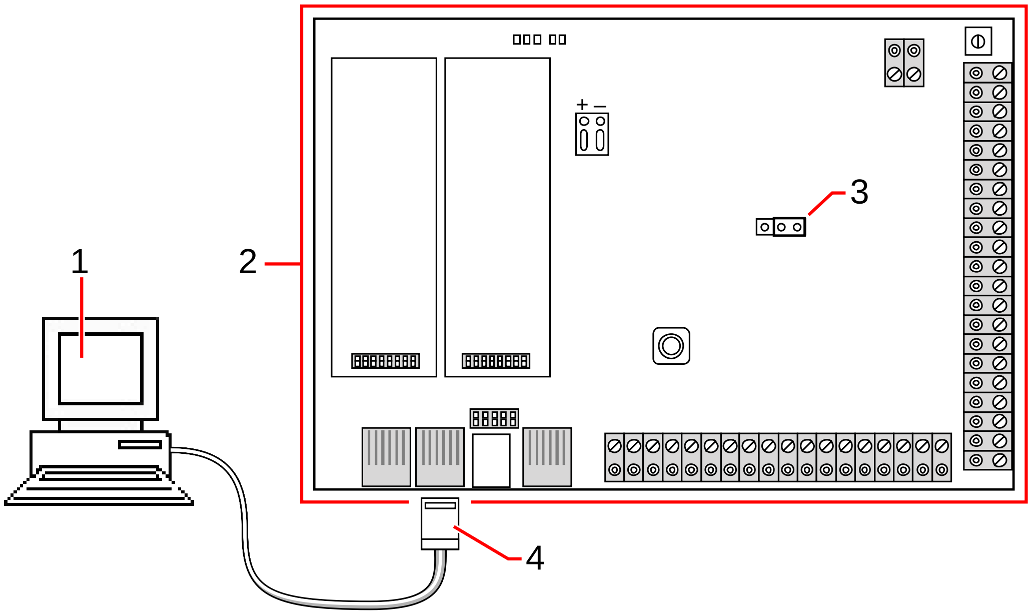
The **Edit** page is similar to the **Add** page except that it does not contain the Learn button for automatically entering the WPA ID.

15.12 Configuring communications

15.12.1 Serial ports

The SPC controller provides 2 serial ports (RS232) that offer the following functionality:

- **X10:** Serial port 1 is a dedicated interface that supports the X10 protocol. This protocol allows for use of the existing power cables of a building to transport control information to X10 devices providing the ability to trigger and monitor these devices via the SPC Controller programming interface.
- **Logging of Events:** The Serial port 2 interface provides the ability to connect to a serial port on a PC or a printer. With this connection, a terminal program can be configured to receive a log of System Events or Access Events from the SPC controller.
- **System Information:** Serial port 2 also provides an interface via a terminal program that allows for the execution of a set of commands to interrogate the controller for specific system information. This facility is available only as a tool for debug and information purposes and should only be used by experienced installers.

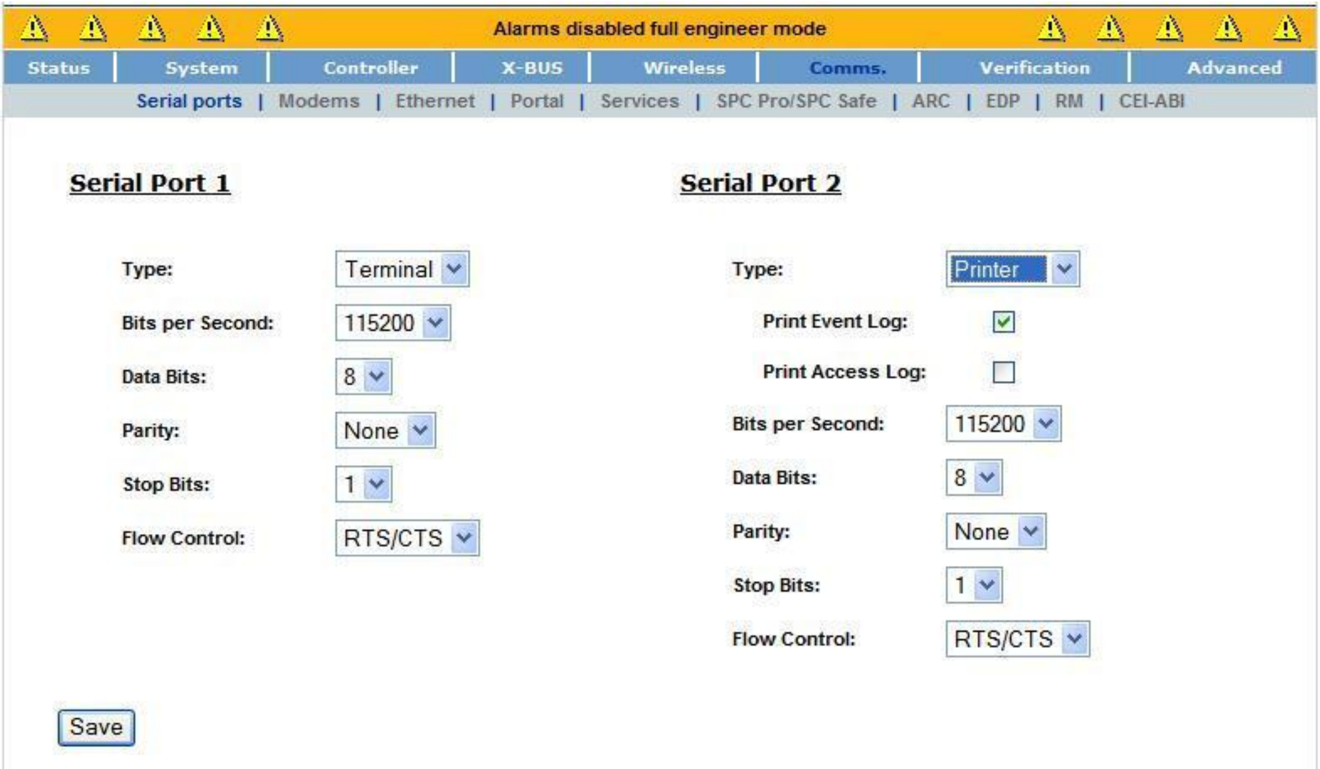


1	PC with serial port running hyperterminal
2	SPC controller
3	JP9 ~~SPC4xxx~~
4	RS232

To configure the serial ports:

- Select **Settings** > **Comms.** > **Serial Ports**.

➩ The following window will be displayed:


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro/SPC Safe | ARC | EDP | RM | CEI-ABI
Save

Serial Port 1

Type: Terminal
Bits per Second: 115200
Data Bits: 8
Parity: None
Stop Bits: 1
Flow Control: RTS/CTS

Serial Port 2

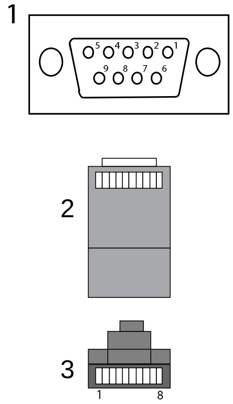
Type: Printer
Print Event Log: ☑
Print Access Log: □
Bits per Second: 115200
Data Bits: 8
Parity: None
Stop Bits: 1
Flow Control: RTS/CTS

The settings displayed will depend on the type of connection that the ports are used for. The settings are described in the following sections:

15.12.1.1 Making a terminal connection to the controller via the serial port

The SPC controller serial port (RS232) can be used to provide access to the embedded web server for Engineer and User Programming.

The following cable is used to make the physical connection from the PC to the controller.



1	Serial Port on the PC
2	Top view of RJ45 port on controller
3	Front view of RJ45 port on controller showing pins 1-8 (L to R)

Pin Connections

RS232 (9 pin) PC Connector	SPC Controller RJ45 Connector
Pin 3	Pin 1
Not Used	Not Used
Not Used	Not Used
Pin 5	Pin 4
Pin 7	Pin 5
Not Used	Not Used
Pin 8	Pin 7
Pin 2	Pin 8

Physically connect the PC to the controller by connecting the DB9 serial port on the PC to the RJ45 interface on the SPC labeled RS232 using cable detailed above

Configuring the serial port on the controller:

1. Enter ENGINEER programming mode on the keypad or browser.
2. Configure Serial Port 2 with the following settings.
   - Bits per second: **115200**
   - Data bits: **8**
   - Parity None: **None**
   - Stop bits: **1**
   - Flow Control None: **None**

Connecting to the controller from the PC (running Windows XP):

1. Select **Programs > Accessories > Communications > HyperTerminal**
2. Enter a name for the new connection.
3. Select the serial port COM1.
4. In the **Port** settings, select the following:
   - Bits per second: **115200**
   - Data bits 8: **8**
   - Parity None: **None**
   - Stop bits 1: **1**
   - Flow Control None: **None**
5. Click **OK** to make the HyperTerminal connection.

   ⇨ If the serial connection has been programmed as TERMINAL, then the HyperTerminal window prompts the user for a Username and password.
6. Enter the following:
   - Username: **Engineer**
   - Password: **1111** (Default)
7. Enter the command “lst” to view a complete list of the commands available at the command prompt.

   ⇨ If the serial port connection type has been programmed as PRINTER, a list of SPC system events is displayed.
8. The Terminal window displays a list of command prompts.

Serial port 2 shares a communications channel with the back-up modem. If a back-up modem is installed, then it must be removed to enable serial communications on this serial port. The Serial Port 2 interface is also available as a terminal block connection (TX, RX, GND).

15.12.1.2 Making a browser connection to the controller via the serial port

1. Physically connect the PC to the controller by connecting the DB9 serial port on the PC to the RJ45 interface on the SPC labeled RS232 using the same cable as for a terminal connection.
2. Configure the serial port on the controller (from the existing IP browser connection or via the keypad).
3. Enter Engineer programming and configure Serial Port 2 to the following settings:
   - Bits per second: **115200**
   - Data bits: **8**
   - Parity None: **None**
   - Stop bits: **1**
   - Flow Control None: **None**

ℹ Serial port 2 shares a communications channel with the back-up modem. If a back-up modem is installed, then it must be removed to enable serial communications on this serial port. The Serial Port 2 interface is also available as a terminal block connection (TX, RX, GND).

Configuring a network connection to the controller (Windows XP)

1. Go to **Control Panel > Network Connections** and click ‘Create a new connection’.
   ⇨ The **New Connection Wizard** is displayed.
2. In the **Network Connection Type** window select ‘Setup’ and ‘Advanced Connection’.
3. In the **Advanced Connection** options, click on ‘Connect directly to another computer’.
4. In the **Host or Guest** window, select ‘Guest’.
5. In the **Connection Name** window, enter a meaningful name for the connection.
6. In the **Select a Device** window, choose a serial port that is not currently in use on the PC.
7. In the **Connection Availability** window, choose ‘Anyone’s Use’.
8. In the **Completing New Connection** window, click on the ‘Finish’ button. Check the box to add a short cut to the desktop.
9. On completing the setup, a logon window will appear on the screen requesting a username and password.
10. Enter the following:
    - Username: SPC
    - Password: siemens (default)

The connection is established and a network icon is displayed on the bottom right of the screen.

1. Right click the connection icon to get the details of the serial port connection.
   ⇨ In the **Details** tab the Server IP address is displayed.
2. Enter this address into the browser using the secure address format e.g. **https:\\ 192.168.3.1** to connect to SPC.

15.12.1.3 Troubleshooting

If the serial connection icon does not appear, check the following:

Baud Rate Setting

The COM port setting on the PC must have the same baud rate setting as the SPC Serial port.

Go to the Connection icon in **Control Panel > Network Connections** and check if the properties maximum speed is set to 115200 bps.

Logon Details

At the PPP logon screen, try using a different username and password. Wait and re-enter SPC and Siemens.

If the Serial connection icon is displayed but the user cannot log on to the browser:

Check the URL

Check that the secure hypertext protocol (https://) is at the start of the URL. Also check that the server IP address of the SPC connection is correct.

15.12.2 Modems

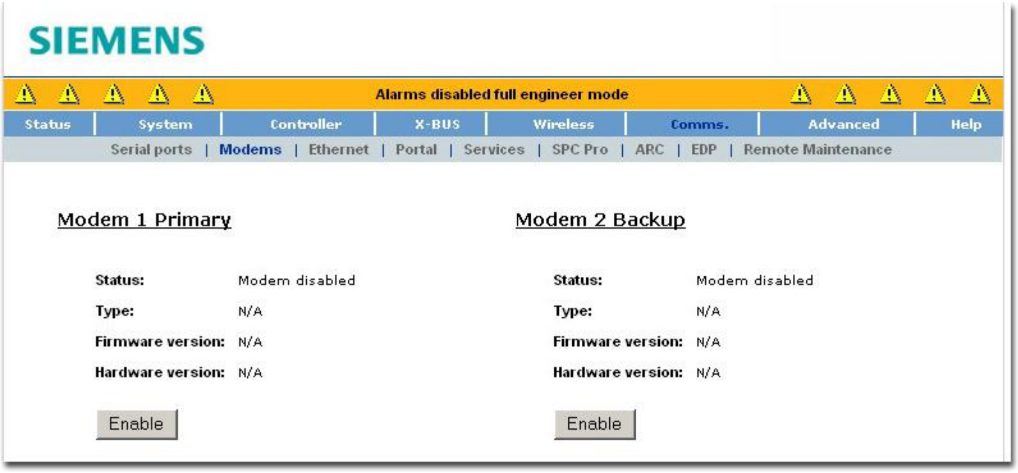
The SPC panel provides two on-board modem interface connectors (primary and backup) that allow you to install PSTN or GSM onto the system.

After a factory default, during the process of initial setup of the system with the keypad, the panel detects if it has a primary or backup modem fitted, and if so, it displays the modem type and automatically enables it (or them) with the default configuration. No other modem configuration is allowed at this stage.

To program the modem(s):

Note: A modem must be installed and identified. (See section Installing plug-in modules [➙ 55])

1. Select **Settings > Comms. > Modems**.
2. Click **Enable** and **Configure**.


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro | ARC | EDP | Remote Maintenance
Enable
Enable

Modem 1 Primary

Status: Modem disabled
Type: N/A
Firmware version: N/A
Hardware version: N/A

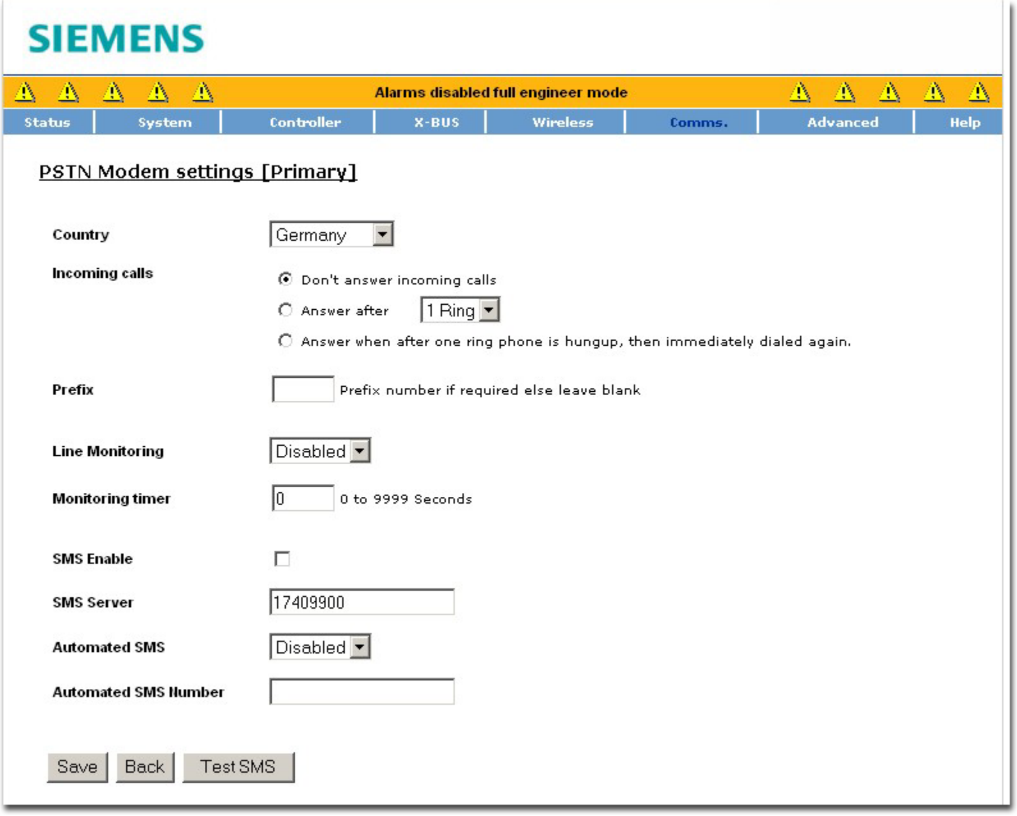
Modem 2 Backup

Status: Modem disabled
Type: N/A
Firmware version: N/A
Hardware version: N/A

SMS detection and configuration is not available unless modems that are configured and enabled.

15.12.2.1 PSTN modem

1. Select **Settings** > **Comms** > **Modems** > **Configure**.
2. Configure the fields as described in the table below.


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Save
Back
Test SMS

PSTN Modem settings [Primary]

Country: Germany

Incoming calls:
● Don't answer incoming calls
○ Answer after 1 Ring
○ Answer when after one ring phone is hungup, then immediately dialed again.

Prefix: Prefix number if required else leave blank

Line Monitoring: Disabled

Monitoring timer: 0 0 to 9999 Seconds

SMS Enable: □

SMS Server: 17409900

Automated SMS: Disabled

Automated SMS Number:

Modem settings

Country	Select the country that the SPC is installed in.

Answer Mode	The modem can be programmed to answer calls based on the following conditions: ● Don’t answer calls: Modem never answers calls. ● Answer after ‘x’ rings: Select the number of rings after which the modem answers the incoming call. ● Confirm party / Hang-up mode: In this mode of operation the calling party calls the modem, hangs up after 1 ring burst only and then immediately re-calls the modem. The SPC system knows to automatically answer the call in this condition.
Prefix	Enter the number required to access a line. (e.g. if connected to a PBX)
Line Monitoring	Enable this feature to monitor the voltage of the line connected to the modem.
Monitor Timer	Select the period (in seconds) for which the line voltage must be seen as being incorrect before the line is deemed by the SPC to be faulty.
SMS Enable	Tick this checkbox to enable the SMS feature on the system. **Note:** The SMS operates using a standard protocol that is used in SMS telephones. Please note that some PSTN operators do not provide the service of SMS over PSTN. For SMS to operate over PSTN the following criteria is required: Caller ID needs to be enabled on the telephone line. Direct telephone line – not through PABX or other comms equipment. Please also note that most Service Providers only allow SMS to a telephone registered in the same country (this is due to billing issues).
SIM PIN	Only for GSM. Enter the PIN for the SIM card installed in the GSM module.
SMS Server Number	Only for PSTN. Enter the phone number of the SMS service provider that is accessible in your location (see table below for PSTN).
Test SMS	Click this button to send a short text message for the purposes of testing the system. **Note:** The SMS test is provided only for the purpose of ensuring the SMS feature is operating correctly. A short text message using alphabetic characters (A-Z) should be used to test this feature.
Automated SMS	Select the timing for automated SMS messages.
Automated SMS #	Enter SMS number to receive automated SMS messages.

The SMS test is provided only for the purpose of ensuring the SMS feature is operating correctly. A short text message using alphabetic characters (A-Z) should be used to test this feature.

When using the SMS message feature over a PSTN line, it is necessary to program the phone number of the SMS service provider that services the area in which the SPC is installed. The SPC system automatically dials this number to contact the SMS server whenever the SMS feature is activated. Calling line identity MUST be enabled on the PSTN line for this feature to operate. Each country will have its own SMS service provider with a unique phone number.

This feature is not released in all countries. Please contact your local supplier for more information (support of feature, recommended service provider).

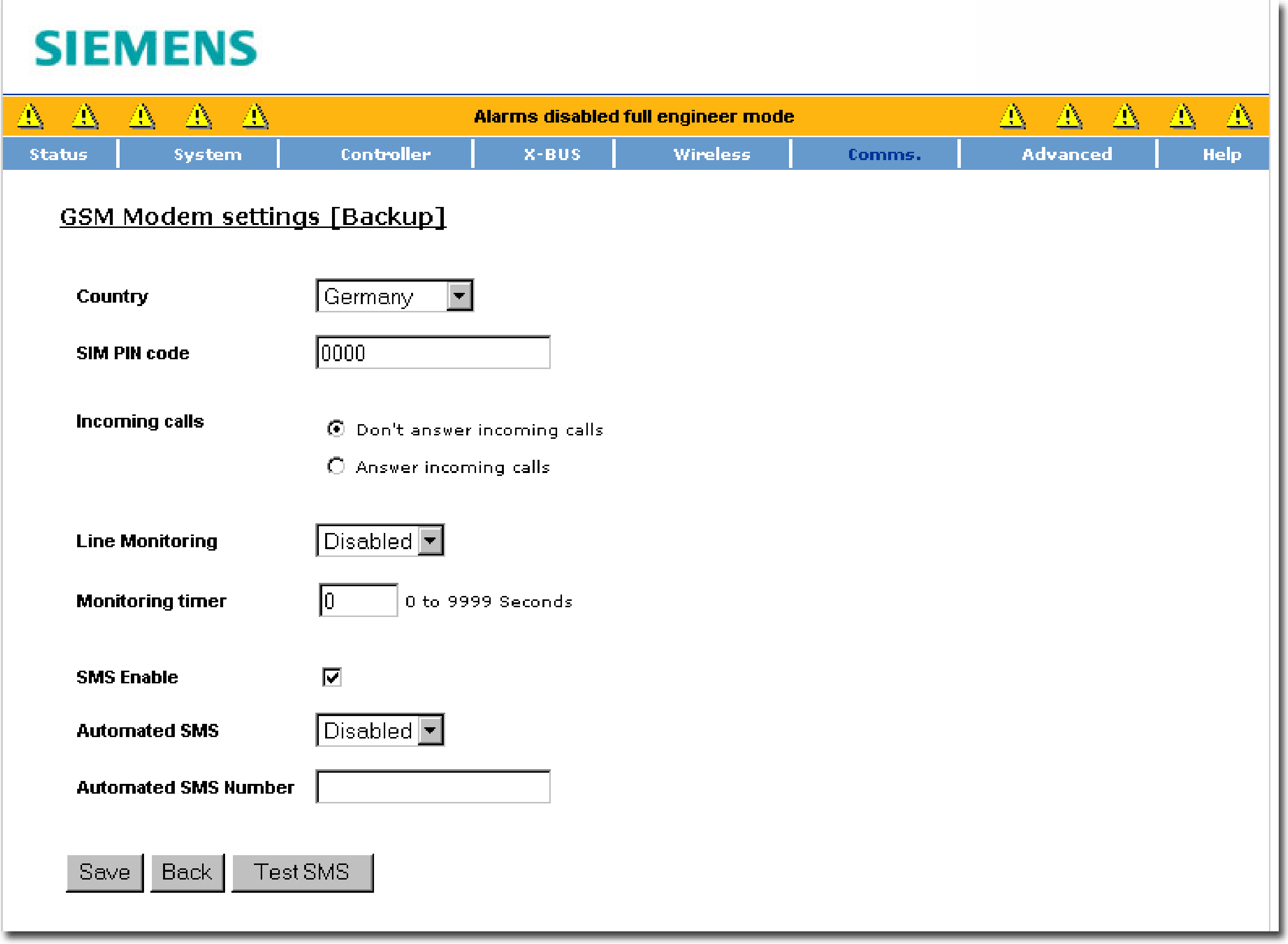
Check with country specific service providers for availability of service and SMS server number.
Some SMS servers may have additional technical requirements for the correct operation of the service. Check with the local SMS service provider for details on these requirements.

15.12.2.2 GSM modem

▷ A GSM modem must be properly installed and functioning correctly.

1. Select **Settings** > **Comms.** > **Modems** > **Configure**.

   ➪ The following window will be displayed:



GSM Modem settings [Backup]

Country: Germany

SIM PIN code: 0000

Incoming calls:
● Don't answer incoming calls
○ Answer incoming calls

Line Monitoring: Disabled

Monitoring timer: 0 — 0 to 9999 Seconds

SMS Enable: ☑

Automated SMS: Disabled

Automated SMS Number:

2. Configure the following fields:

Modem settings

Country	Select the country that the SPC is installed in.
Answer Mode	The modem can be programmed to answer calls based on the following conditions: ● Don't answer calls: Modem never answers calls. ● Answer after 'x' rings: Select the number of rings after which the modem answers the incoming call. ● Confirm party / Hang-up mode: In this mode of operation the calling party calls

	the modem, hangs up after 1 ring burst only and then immediately re-calls the modem. The SPC system knows to automatically answer the call in this condition.
Prefix	Enter the number required to access a line. (e.g. if connected to a PBX)
Line Monitoring	Enable this feature to monitor the voltage of the line connected to the modem.
Monitor Timer	Select the period (in seconds) for which the line voltage must be seen as being incorrect before the line is deemed by the SPC to be faulty.
SMS Enable	Tick this checkbox to enable the SMS feature on the system. **Note:** The SMS operates using a standard protocol that is used in SMS telephones. Please note that some PSTN operators do not provide the service of SMS over PSTN. For SMS to operate over PSTN the following criteria is required: Caller ID needs to be enabled on the telephone line. Direct telephone line – not through PABX or other comms equipment. Please also note that most Service Providers only allow SMS to a telephone registered in the same country (this is due to billing issues).
SIM PIN	Only for GSM. Enter the PIN for the SIM card installed in the GSM module.
SMS Server Number	Only for PSTN. Enter the phone number of the SMS service provider that is accessible in your location (see table below for PSTN).
Test SMS	Click this button to send a short text message for the purposes of testing the system. **Note:** The SMS test is provided only for the purpose of ensuring the SMS feature is operating correctly. A short text message using alphabetic characters (A-Z) should be used to test this feature.
Automated SMS	Select the timing for automated SMS messages.
Automated SMS #	Enter SMS number to receive automated SMS messages.

ℹ The SMS test is provided only for the purpose of ensuring the SMS feature is operating correctly. A short text message using alphabetic characters (A-Z) should be used to test this feature.

15.12.2.3 SMS test

Once the SIM feature is enabled for a modem, a test may be preformed to desired recipient number with a composed message.

1. Enter the mobile phone number (including 3-digit country prefix) in the number field and a short text message in the message box.
2. Click **Send SMS** and verify the message is received on the mobile phone.

ℹ The SMS test is provided only for the purpose of ensuring the SMS feature is operating correctly. A short text message using alphabetic characters (A-Z) should be used to test this feature.

The SMS operates using a standard protocol that is used in SMS telephones. Please note that some PSTN operators do not provide the service of SMS over PSTN. For SMS to operate over PSTN the following criteria is required:

- Caller ID needs to be enabled on the telephone line.
- Direct telephone line – not through PABX or other comms equipment.
- Please also note that most Service Providers only allow SMS to a telephone registered in the same country (this is due to billing issues).

15.12.2.4 SMS feature

The SPC controller allows remote (SMS) messaging on systems with installed modems. Once a modem is installed, the following configurations are necessary for SMS:

- SMS-enabled modem. See page [→ 215].
- SMS Authentication. See page [→ 219].
- Engineer SMS Control. See page [→ 137].
- User SMS Control. See page. [→ 129]

Depending on configurations, features include these SMS abilities:

- Event notification. See page [→ 137].
- Remote Commands (users may be assigned select remote commands. See page [→ 235].

15.12.2.5 SMS system options

Once a modem is installed and the SMS feature enabled, for SMS operations the SPC system must apply the SMS Authentication.

1. Select **Settings > Options**.
2. Select the desired option from the drop-down menu **SMS Authentication**:

- **PIN Code Only**: This is a valid user code. See page [→ 70].
- **Caller ID Only**: This is the phone number (including 3-digit country prefix code) as configured for User SMS Control. Only when this option is selected will the SMS Control be available for configuration by the user.
- **PIN and Caller ID**
- **SMS PIN Code Only**: This is a valid PIN code configured for the user which different from the user's login code. See page [→ 129]. Only when this option is selected will the SMS Controls be available for configuration by the user.
- **SMS PIN Code & Caller ID**

15.12.2.6 SMS Commands

Once the SMS setup and configuration is complete, SMS features may be activated. Commands, depending on SMS configuration are sent using a code or caller ID. The type of code depends on what is set for SMS Authentication. See page [→ 219].

The table below provides all available SMS commands. Subsequent action and response are also provided.

SMS Commands are sent as texts to the phone number of the SIM card on the controller.

For commands using code, the format of the text is the code followed by either a space or a full stop. Where **** is the code and "command" is the command: ****.command or **** command.

For example, the command "HELP" is this text: **** HELP or ****.HELP

COMMANDS (**** = code)			
Using Code	Using Caller ID	Action	Response
**** HELP ****.HELP	HELP	All available commands displayed	All available commands
**** FSET ****.FSET	FSET	Fullset Alarm	Time/date of system set. If applicable, responds with open zones/forceset zones
**** USET ****.USET	USET	Unset Alarm	System Unset
**** SSTA ****.SSTA	SSTA	Status displayed	Status of system and applicable areas
**** XA1.ON ****.XA1.ON		Where X10 device is identified as “A1”, it is triggered on.	Status of “A1”
**** XA1.OFF ****.XA1.OFF		Where X10 device is identified as “A1”, it is triggered off.	Status of “A1”
**** LOG ****.LOG		Up to 10 recent events displayed	Recent events
**** ENGA.ON ****.ENGA.ON	ENG.ON	Enable Engineer access	Engineer status
**** ENGA.OFF ****.ENGA.OFF	ENG.OFF	Disable Engineer access	Engineer status
**** MANA.ON ****.MANA.ON		Enable Manufacturer access	Manufacturer status
**** MANA.OFF ****.MANA.OFF		Disable Manufacturer access	Manufacturer status
**** O5.ON ****.O5.ON		Where mapping gate is identified as “O5”, it is triggered on	Status of “O5”
**** O5.OFF ****.O5.OFF		Where mapping gate is identified as “O5”, it is triggered off	Status of “O5”
****.ASET		Allows Partset A of alarm by SMS	
****.BSET		Allows Partset B of alarm by SMS	
****.CLR		Allows clear alerts by SMS	

For SMS recognition, mapping gate identification uses the format ONNN, where O stands for mapping gate, and NNN are the numeric placeholders, of which not all are necessary.
(Example: O5 for mapping gate 5)

For SMS recognition, X-10 device uses the format: XYNN, where X stands for X-10; Y stands for the alphabetic identity and NN are the available numeric placeholders. (Example: XA1)

The SMS operates using a standard protocol that is used in SMS telephones. Please note that some PSTN operators do not provide the service of SMS over PSTN. For SMS to operate over PSTN the following criteria is required:

- Caller ID needs to be enabled on the telephone line.
- Direct telephone line – not through PABX or other comms equipment.
- Please also note that most Service Providers only allow SMS to a telephone registered in the same country. (This is due to billing issues)

15.12.3 Ethernet

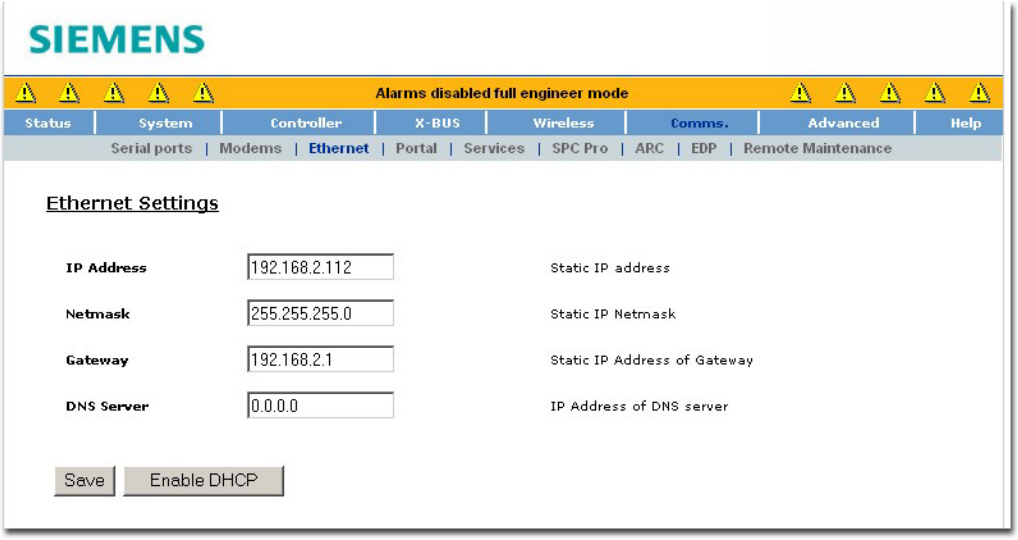
IP

The Ethernet port on the controller can be configured from both the browser and keypad interfaces. An Ethernet connection with the SPC controller can be established using a direct connection or a LAN connection.

1. Select **Settings > Comms > Ethernet**.

   ➪ The following window will be displayed.

2. Configure the fields as described in the table below.


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro | ARC | EDP | Remote Maintenance
Save
Enable DHCP

Ethernet Settings

IP Address	192.168.2.112	Static IP address
Netmask	255.255.255.0	Static IP Netmask
Gateway	192.168.2.1	Static IP Address of Gateway
DNS Server	0.0.0.0	IP Address of DNS server

IP address	Enter the IP address of the panel.
IP Network	Enter the subnet mask that defines the type of network address structure implemented on the Local Area Network (LAN).
Gateway IP Address	Enter the IP address of the IP gateway if one exists. This is the address that IP packets will be routed through when accessing external IP addresses on the internet.
Enable DHCP	Click this Button to enable dynamic address assignment on the panel.

DNS Server	Enter the IP address of the DNS server.

15.12.4 Registering to SPC portal

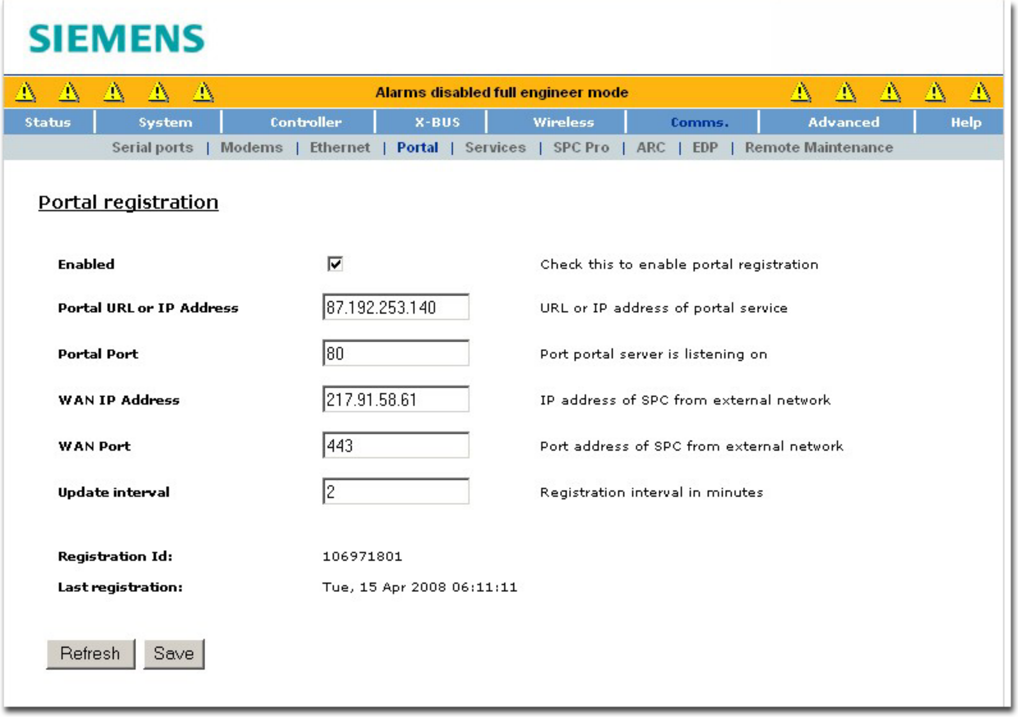
IP

The SPC Portal provides you with the ability to remotely connect via the internet to the embedded web server on the SPC controller without needing to know the WAN IP address of the SPC unit. The SPC portal server is an external server with a fixed IP address that has the ability to listen or 'scan' for SPC controllers on specified port numbers. The default port number that the Portal server listens on is 80 and the default WAN port (the port address of the SPC as seen from the external network) is 443.

1. Select **Settings > Comms. > Portal**.

   ➩ The following window will be displayed.

2. Configure the fields as described in the table below.


SIEMENS
Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro | ARC | EDP | Remote Maintenance
Refresh
Save

Portal registration

Enabled	☑	Check this to enable portal registration
Portal URL or IP Address	87.192.253.140	URL or IP address of portal service
Portal Port	80	Port portal server is listening on
WAN IP Address	217.91.58.61	IP address of SPC from external network
WAN Port	443	Port address of SPC from external network
Update interval	2	Registration interval in minutes

Registration Id: 106971801

Last registration: Tue, 15 Apr 2008 06:11:11

Enabled	Tick this box to enable the Portal Operation.
Portal Port	Enter the Port number that the Portal server is 'listening' on (default: 80).
Portal IP Address	Enter the Fixed IP address of the SPC Portal Service (**87.192.253.140** - contact Siemens for confirmation of this information). The IP address of the Portal server can also be specified as a DNS name instead of numeric IP format. Note this requires a DNS server to be configured under Ethernet settings.
WAN IP address	If your ISP has assigned a fixed IP address for your internet connection then enter it here. If you do not have a fixed IP address then this should be left blank.
WAN Port	Leave this number at the default setting (443) unless instructed to do otherwise by your network manager.

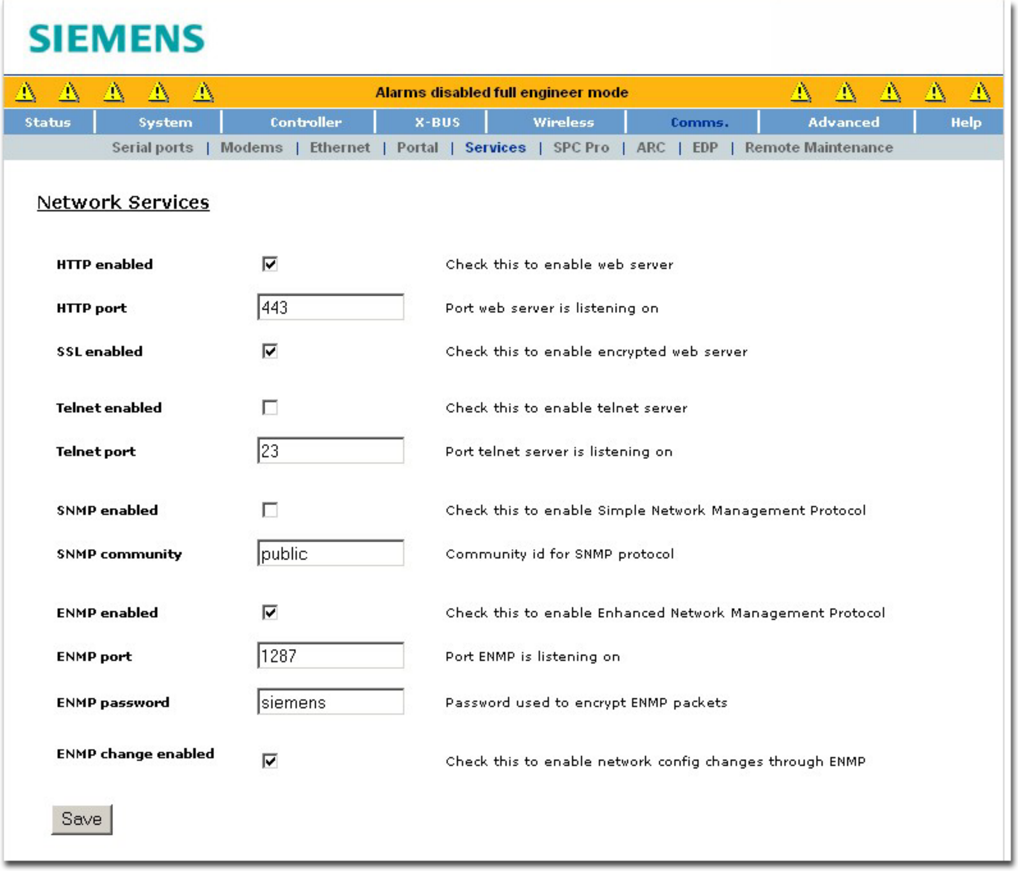
Update Interval	Enter the time interval for registering your portal settings.

15.12.5 Configuring the networking services of the panel

1. Select **Settings** > **Comms.** > **Services**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro | ARC | EDP | Remote Maintenance
Save

Network Services

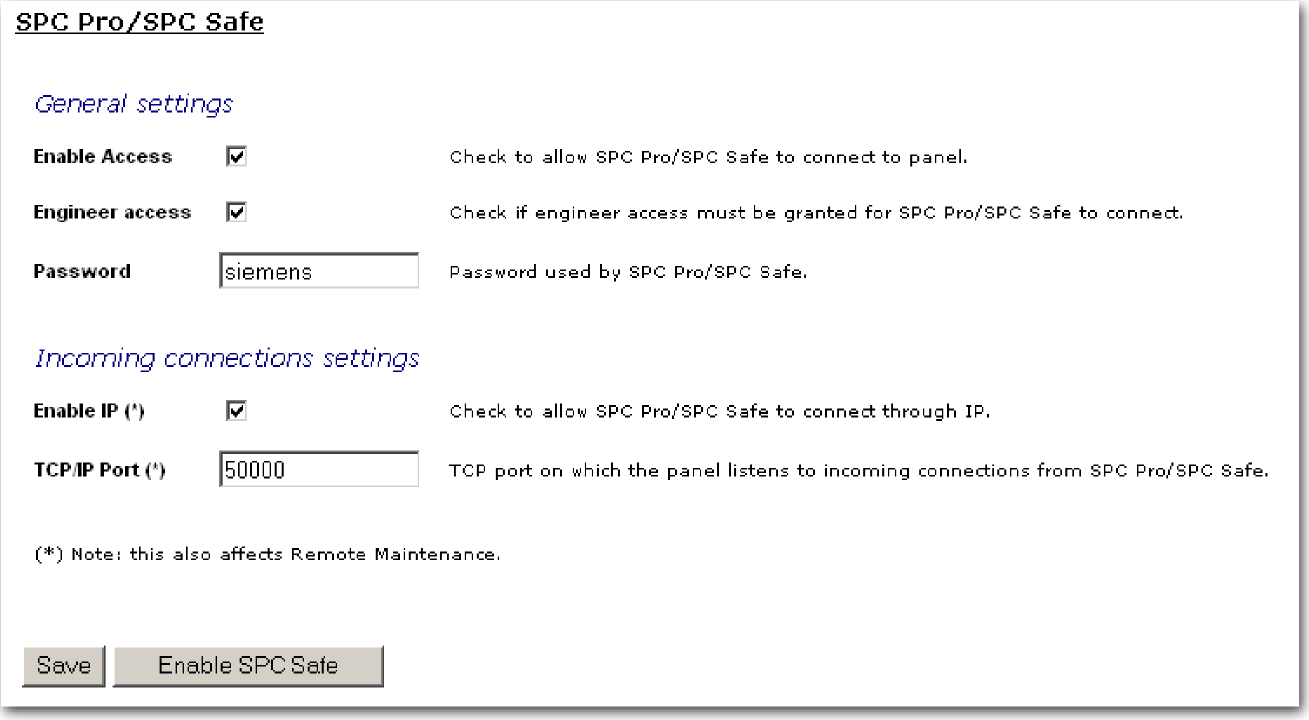
HTTP enabled	☑	Check this to enable web server
HTTP port	443	Port web server is listening on
SSL enabled	☑	Check this to enable encrypted web server
Telnet enabled	□	Check this to enable telnet server
Telnet port	23	Port telnet server is listening on
SNMP enabled	□	Check this to enable Simple Network Management Protocol
SNMP community	public	Community id for SNMP protocol
ENMP enabled	☑	Check this to enable Enhanced Network Management Protocol
ENMP port	1287	Port ENMP is listening on
ENMP password	siemens	Password used to encrypt ENMP packets
ENMP change enabled	☑	Check this to enable network config changes through ENMP

HTTP Enabled	Tick this box to enable the embedded web server on the panel.
HTTP Port	Enter the Port number that the web server is 'listening' on. By default this is set to 443.
SSL Enabled	Tick this box to enable encryption operation on embedded web server. By default this is enabled. With SSL enabled, web pages can only be accessed by using ‘https://’ prefix before typing the IP address.
Telnet Enabled (by default enabled)	Tick this box to enable the Telnet server. **Note**: Using Telnet without a comprehensive knowledge can damage the controller configuration; this should only be used if the user has sufficient knowledge or is being instructed by someone with such knowledge.
Telnet Port	Enter the number of the Telnet port.
SNMP Enabled (by default disabled)	Tick this box to enable Simple Network Management Protocol (SNMP).
SNMP Community (by default set to public)	Enter the Community ID for the SNMP protocol.

ENMP Enabled (by default enabled)	Tick this box to enable Enhanced Network Management Protocol (ENMP).
ENMP Port	Enter the ENMP port number (default: **1287**).
ENMP password	Enter the password for the ENMP protocol (default: siemens).
ENMP change enabled	Check this box to enable network changes to be made with ENMP protocol.

15.12.6 SPC Pro / SPC Safe

1. Select **Settings** > **Comms.** > **SPC Pro/SPC Safe**.
2. Configure the fields as described in the table below.



SPC Pro/SPC Safe

General settings

Enable Access ☑ Check to allow SPC Pro/SPC Safe to connect to panel.

Engineer access ☑ Check if engineer access must be granted for SPC Pro/SPC Safe to connect.

Password siemens Password used by SPC Pro/SPC Safe.

Incoming connections settings

Enable IP (*) ☑ Check to allow SPC Pro/SPC Safe to connect through IP.

TCP/IP Port (*) 50000 TCP port on which the panel listens to incoming connections from SPC Pro/SPC Safe.

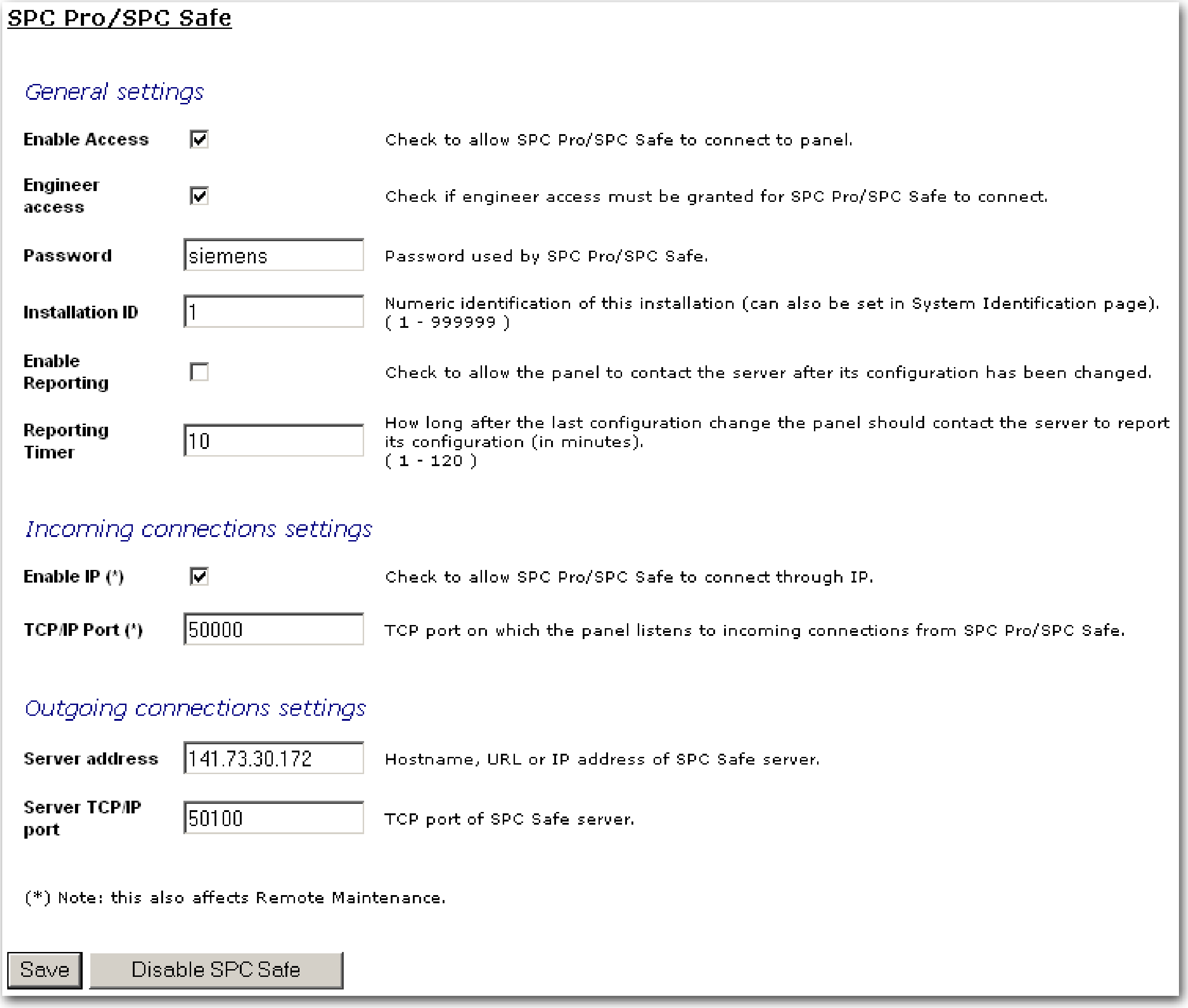
(*) Note: this also affects Remote Maintenance.

Enable	Tick this box to enable SPC Pro to connect to the panel.
Engineer Access	Tick this box if engineer access must be granted to allow SPC Pro to connect to the panel.
Password	Enter the password for SPC Pro connection. The password is checked by the panel every time SPC Pro attempts to connect to it. If the password programmed in this field matches the password programmed on the panel, then the connection will be allowed (default:).
Enable IP	Tick this box to enable a connection to the panel using Internet Protocol (IP).
IP Port	Select the IP port that SPC Pro will use to connect to the panel.

SPC Safe

For further information about configuration of the SPC Safe please refer to the *SPCS410 Installation & Configuration Manual.*

1. Click the **Enable SPC Safe** button.
2. Configure the fields as described in the table below.



SPC Pro/SPC Safe

General settings

Enable Access	☑	Check to allow SPC Pro/SPC Safe to connect to panel.
Engineer access	☑	Check if engineer access must be granted for SPC Pro/SPC Safe to connect.
Password	siemens	Password used by SPC Pro/SPC Safe.
Installation ID	1	Numeric identification of this installation (can also be set in System Identification page). (1 - 999999)
Enable Reporting	☐	Check to allow the panel to contact the server after its configuration has been changed.
Reporting Timer	10	How long after the last configuration change the panel should contact the server to report its configuration (in minutes). (1 - 120)

Incoming connections settings

Enable IP (*)	☑	Check to allow SPC Pro/SPC Safe to connect through IP.
TCP/IP Port (*)	50000	TCP port on which the panel listens to incoming connections from SPC Pro/SPC Safe.

Outgoing connections settings

Server address	141.73.30.172	Hostname, URL or IP address of SPC Safe server.
Server TCP/IP port	50100	TCP port of SPC Safe server.

(*) Note: this also affects Remote Maintenance.

Enable	Tick this box to enable Pro to connect to the panel.
Engineer Access	Tick this box if engineer access must be granted to allow Pro to connect to the panel.
Password	Enter the password for the Pro connection. The password is checked by the panel every time the Pro attempts to connect to it. If the password programmed in this field matches the password programmed on the panel, then the connection will be allowed (default:).
Installation ID	Enter the numeric identification of this installation (can also be set in System Identification page).
Enable Reporting	Check to allow the panel to contact the server after its configuration

	has been changed.
Reporting Timer	Enter the minutes how long after the last configuration change the panel should contact the server to report its configuration (min: 1, max.: 120).
Enable IP	Tick this box to enable a connection to the panel using Internet Protocol (IP).
TCP/IP Port	Enter the IP port that SPC Safe will use to connect to the panel (the IP port of the panel).
Server address	Enter the Hostname, URL or IP address of the SPC Safe server (e.g the IP address of your PC).
Server TCP/IP Port	Enter theTCP port of the SPC server (e.g .the IP port of your PC).

15.12.7 Alarm Reporting Centres (ARCs)

The SPC panel has the facility to communicate information to a remote receiving station when a specific alarm event on the panel has occurred.

These Alarm Reporting Centres must be configured on the panel to allow this remote communication to operate.

15.12.7.1 SIA codes

SIA (Security Industries Association) codes are an industry standard format for reporting detailed information on alarm events to a remote central station. Each code consists of a 2 letter identifier that is interpreted by the central station according to the list below.

An address field (zone or user number) is also included with some of the codes listed to give more accurate information on the event; e.g. the SIA code BA5 refers to a burglary alarm event on Zone 5.

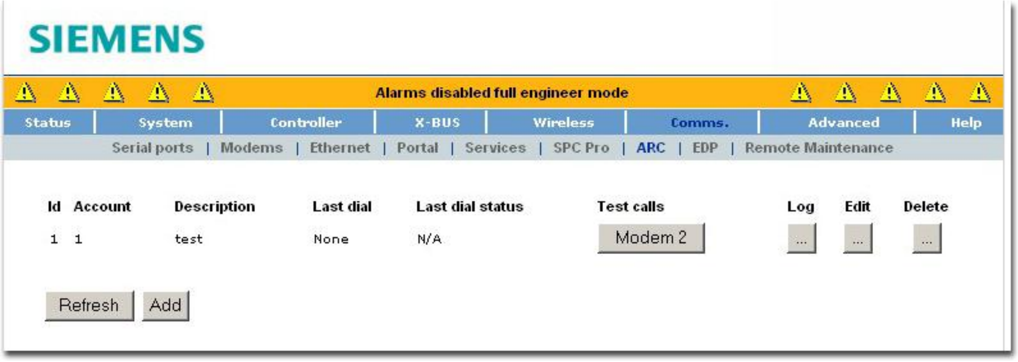
For a full listing of codes, see page [→ 274].

15.12.7.2 Adding / Editing an ARC

▷ A PSTN or GSM modem is installed and functioning correctly.

1. Select **Settings > Comms > ARC**.

   ⇨ The following window will be displayed:



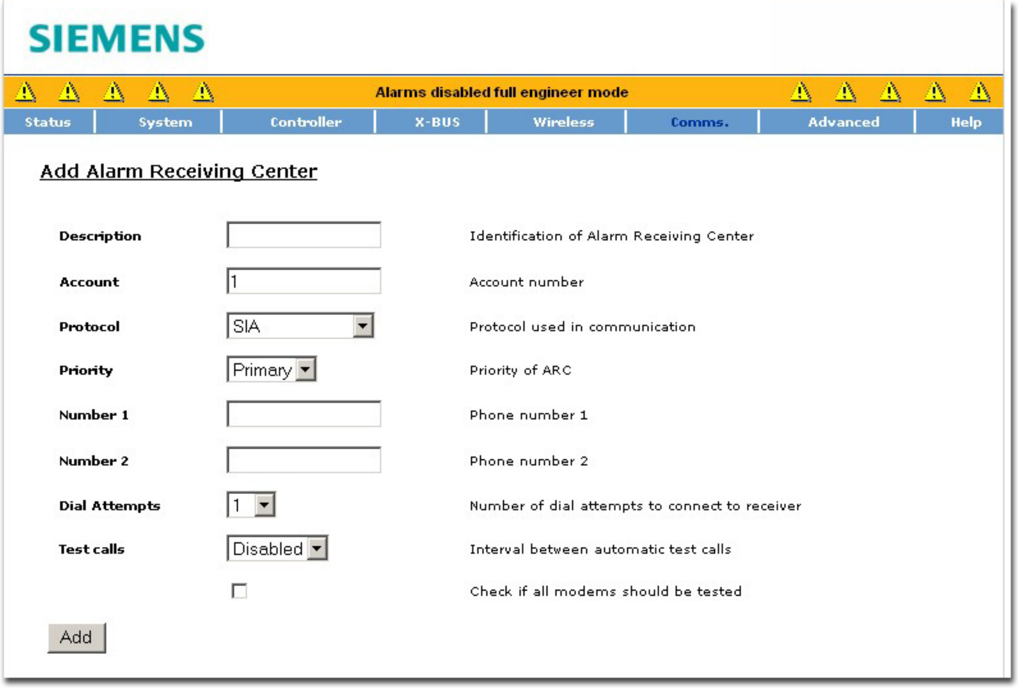
SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Advanced | Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro | ARC | EDP | Remote Maintenance

Id	Account	Description	Last dial	Last dial status	Test calls	Log	Edit	Delete
1	1	test	None	N/A	Modem 2	...	...	...

2. Click **Add**. – OR -
   Click **Edit**.

⇨ The following window will be displayed.

3. Configure the fields as described in the table below.



Add Alarm Receiving Center

Description		Identification of Alarm Receiving Center
Account	1	Account number
Protocol	SIA	Protocol used in communication
Priority	Primary	Priority of ARC
Number 1		Phone number 1
Number 2		Phone number 2
Dial Attempts	1	Number of dial attempts to connect to receiver
Test calls	Disabled	Interval between automatic test calls
	☐	Check if all modems should be tested

Description	Enter a description of the remote Alarm Receiving Centre.
Account	Enter your account number. This information should be available from the receiving station and is used to identify you each time you make a call to the ARC. For a Contact ID account, a maximum of 6 characters is allowed.
Protocol	Enter the communication protocol that you intend to use (SIA, SIA Extended, Contact ID, Fast Format). **Note**: SPC supports the extended SIA protocol. Select this protocol to support additional textual descriptions of the SIA events being sent to the Alarm Receiving Station.
Priority	Select the priority for the ARC in terms of primary or back-up reporting.
Number 1	Enter the first number to be dialled to contact the ARC. This system will always attempt to contact the ARC on this number before attempting another number.
Number 2	Enter the second number to be dialled to contact the ARC. The system will only attempt to contact the ARC on this number if the first contact number did not successfully establish a call.
Dial Attempts	Enter the number of times that the system will attempt to make a call to the receiver. On entering all of the requested details for the ARC, click on the ADD button to enter those details on the system. A list of the configured ARC accounts will be displayed on the browser screen along with the account information, description, protocol, dial-up status and time and date of the last call to the ARC.
Test Calls	Enable the test call by choosing a time interval. This will send out an automatic test call from modem 1 to the primary ARC.
Test All	Check this box if you want to initiate also an automatic test call from modem 2 to the backup ARC.
ARC Modem Test Call 1 Pro	Click this button to send manually a test call from modem 1 to the primary ARC.

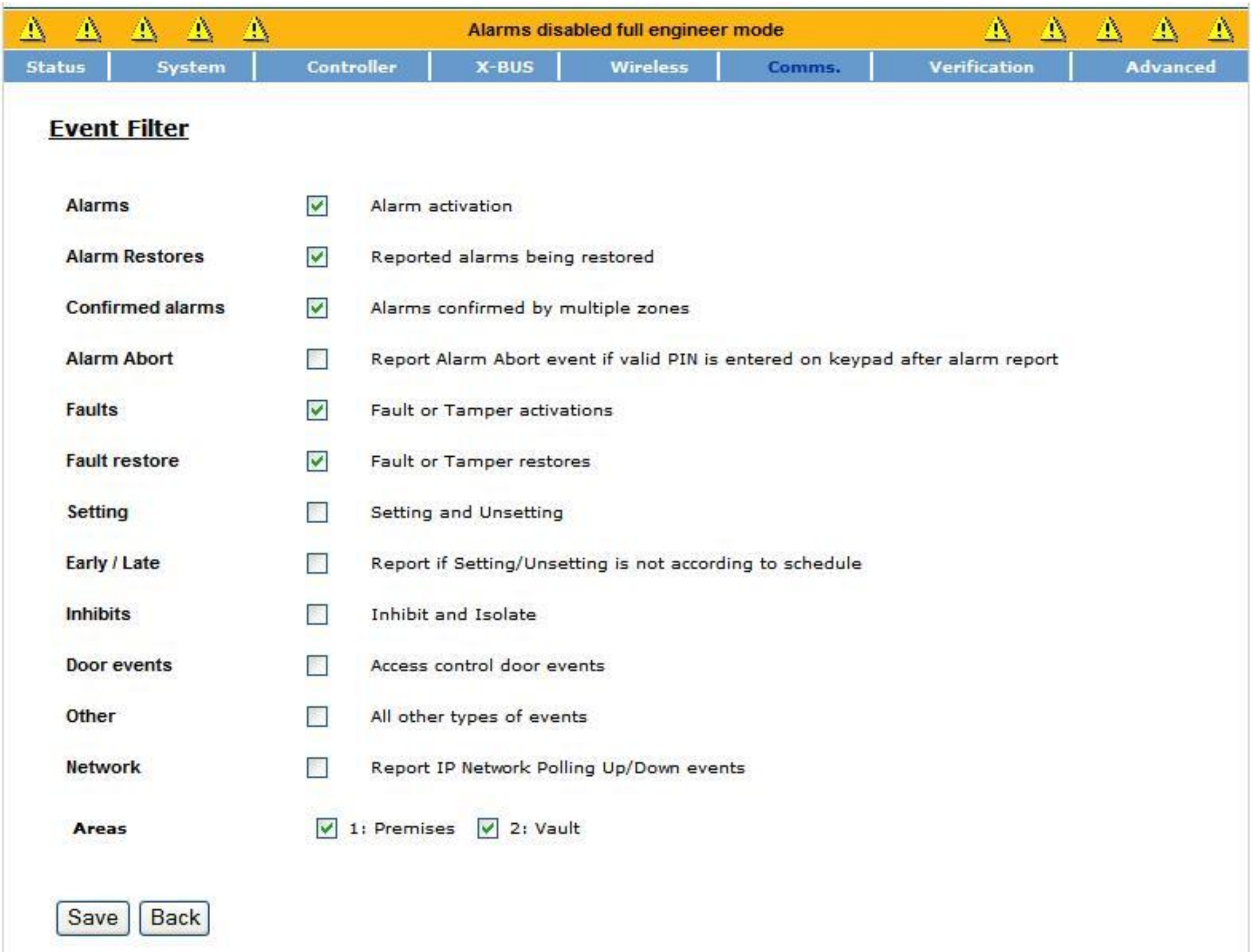
ARC Modem Test Call 2 Pro	Click this button to send manually a test call from modem 2 to the backup ARC.
ARC Log Pro	Click this button to receive a log file. A window with the logs from all automatic and manual test calls will be displayed.

15.12.7.3 Editing an ARC filter

To configure the events on the SPC that will trigger the call to the ARC:

1. Select **Settings** > **Comms.** > **ARC** > **Edit** > **Filter**.

   ➪ The following window will be displayed:



Event Filter

Alarms	☑	Alarm activation
Alarm Restores	☑	Reported alarms being restored
Confirmed alarms	☑	Alarms confirmed by multiple zones
Alarm Abort	□	Report Alarm Abort event if valid PIN is entered on keypad after alarm report
Faults	☑	Fault or Tamper activations
Fault restore	☑	Fault or Tamper restores
Setting	□	Setting and Unsetting
Early / Late	□	Report if Setting/Unsetting is not according to schedule
Inhibits	□	Inhibit and Isolate
Door events	□	Access control door events
Other	□	All other types of events
Network	□	Report IP Network Polling Up/Down events
Areas	☑ 1: Premises ☑ 2: Vault	

2. Configure the following fields:

Check any of the following boxes if you want to initiate a remote call to the ARC to notify it of the particular event.

Alarms	Alarms are activated.
Alarm Restores	System alarms are restored.
Confirmed Alarms	Alarms confirmed by multiple zones

Alarm Abort	Alarm Abort events. Alarms are aborted after a valid user code is entered via the keypad after a confirmed or unconfirmed alarm,
Faults	Faults and tampers are activated.
Fault Restores	Fault or tamper alarms are restored.
Settings	System is Set and Unset.
Early/Late	Unscheduled setting and unsetting of the system.
Inhibits	Inhibit and isolate operations are performed on the system.
Door Events	Door events are activated. Only works with SIA protocol.
Other	All other types of events are detected on the system.
Network	Report IP Network Polling Up/Down events.
Areas	Select specific areas to which above events apply.

By adding a separate Alarm Receiving Centre (ARC) for each area defined on the system and programming each area to report it's own separate ARC receiver, the system can approximate a multi-tenanted system in that a high degree of autonomy is assigned to each area.

15.12.8 EDP Setup

IP

The system has the facility to communicate information to the SPC Com server remotely using Siemens 's own protocol, the EDP (**E**nhanced **D**atagram **P**rotocol). By correctly configuring an EDP receiver on the system, it can be programmed to automatically make data calls to the SPC Com server in a remote location whenever events such as alarm activations, tampers, or arming/disarming occur. The engineer can configure the system to make calls to the remote server via the following routes:

- **PSTN** (PSTN modem required)
- **GSM** (GSM modem required)
- **Internet** (Ethernet interface)

If using the PSTN network, ensure the PSTN modem is properly installed and functioning correctly and that a functioning PSTN line is connected to the A, B terminals on the PSTN modem.

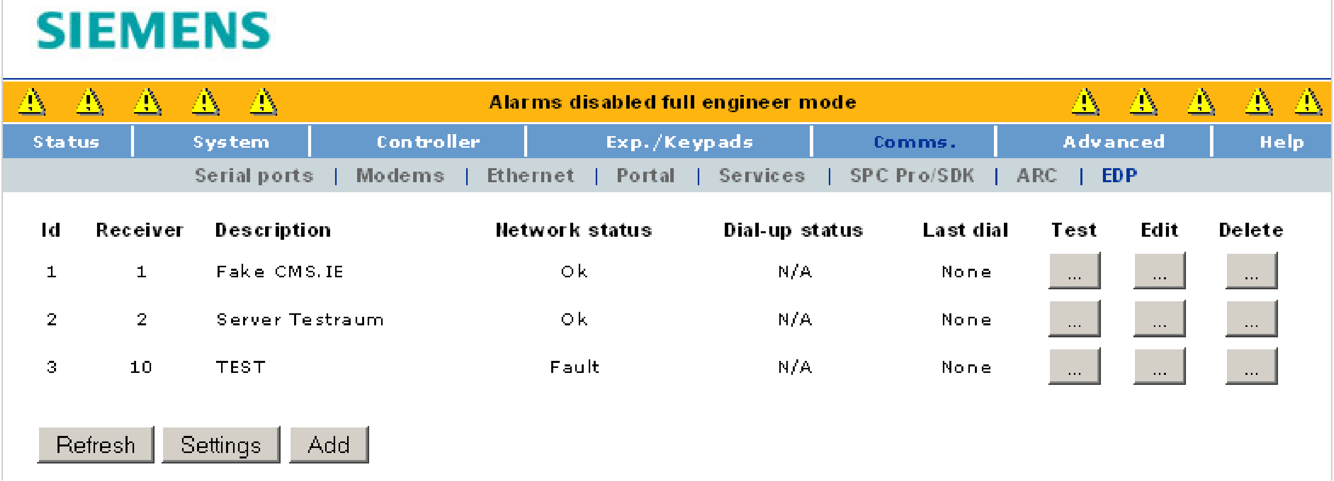
If using the GSM network, ensure the GSM module is properly installed and functioning correctly. An IP connection can be made across the internet to a server with a fixed public IP address.

If an IP connection is required, ensure the Ethernet interface is correctly configured (see page [→ 116]) and that internet access is enabled at the router.

15.12.8.1 Adding an EDP Receiver

1. Select **Settings > Comms > EDP**.

➪ The following window will be displayed:


SIEMENS
Alarms disabled full engineer mode
Status | System | Controller | Exp./Keypads | Comms. | Advanced | Help
Serial ports | Modems | Ethernet | Portal | Services | SPC Pro/SDK | ARC | EDP
Refresh
Settings
Add

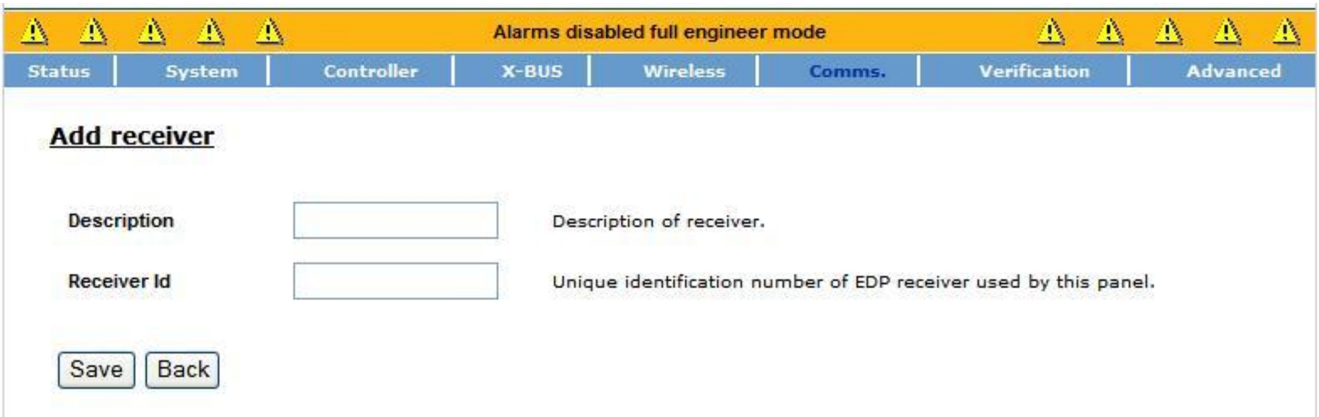
Id	Receiver	Description	Network status	Dial-up status	Last dial	Test	Edit	Delete
1	1	Fake CMS.IE	Ok	N/A	None	...	...	...
2	2	Server Testraum	Ok	N/A	None	...	...	...
3	10	TEST	Fault	N/A	None	...	...	...

Max. 8 receivers can be added to the SPC system.

2. Click on the **Add** button.

   ➪ The following window will be displayed.

3. See table below for further information.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Save
Back

Add receiver

Description — Description of receiver.

Receiver Id — Unique identification number of EDP receiver used by this panel.

Description	Enter a text description of the receiver.
Receiver ID	Enter a unique number which will be used by the EDP to identify the receiver.

See also

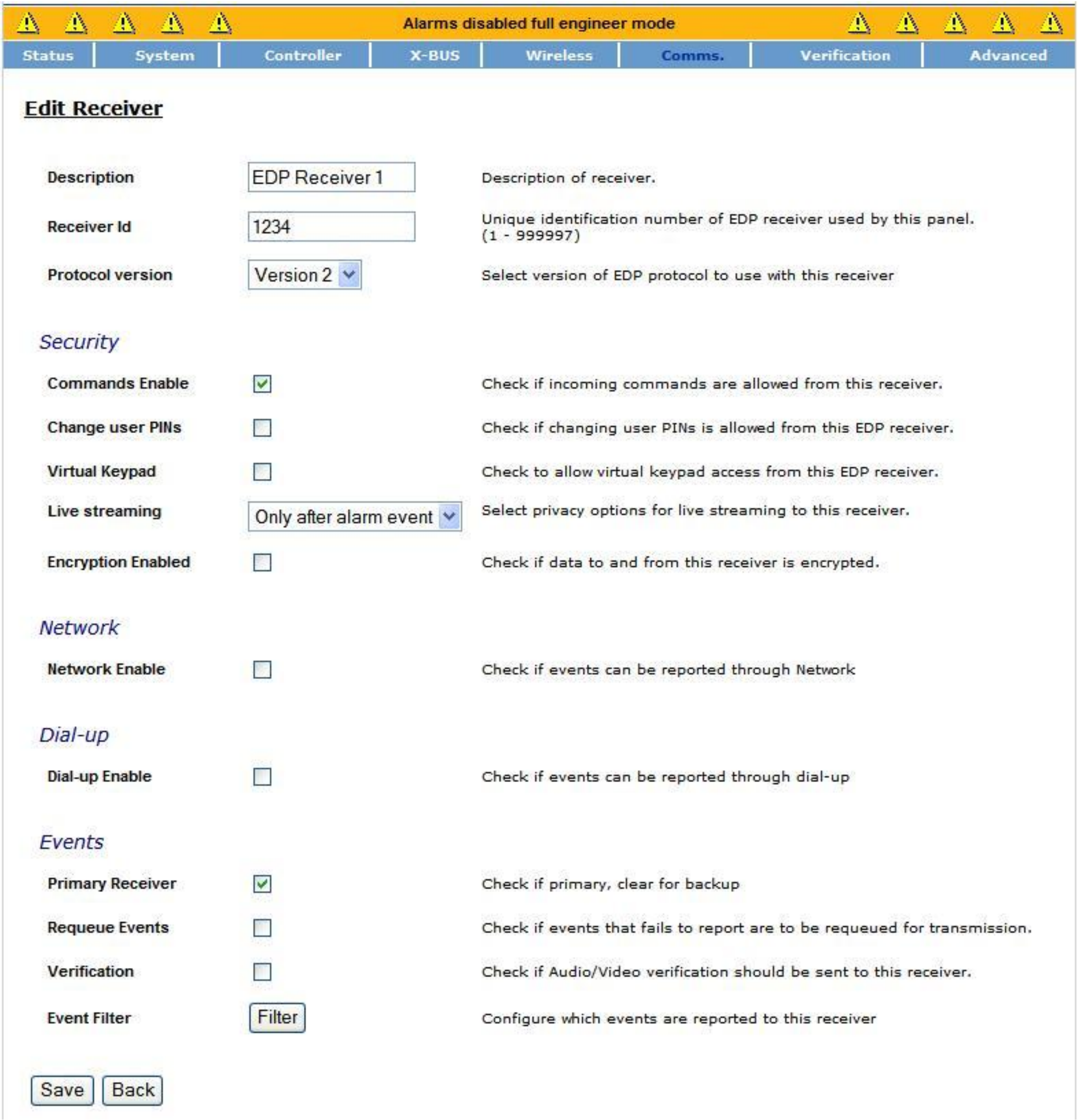
🗎 Editing EDP Receiver Settings [→ 230]

15.12.8.2 Editing EDP Receiver Settings

1. Select **Settings > Comms > EDP > Edit**.

   ➪ The following window will be displayed.

2. Configure the fields as described in the table below.



Edit Receiver

Description: EDP Receiver 1 — Description of receiver.

Receiver Id: 1234 — Unique identification number of EDP receiver used by this panel. (1 - 999997)

Protocol version: Version 2 — Select version of EDP protocol to use with this receiver

Security

Commands Enable ☑ — Check if incoming commands are allowed from this receiver.

Change user PINs □ — Check if changing user PINs is allowed from this EDP receiver.

Virtual Keypad □ — Check to allow virtual keypad access from this EDP receiver.

Live streaming: Only after alarm event — Select privacy options for live streaming to this receiver.

Encryption Enabled □ — Check if data to and from this receiver is encrypted.

Network

Network Enable □ — Check if events can be reported through Network

Dial-up

Dial-up Enable □ — Check if events can be reported through dial-up

Events

Primary Receiver ☑ — Check if primary, clear for backup

Requeue Events □ — Check if events that fails to report are to be requeued for transmission.

Verification □ — Check if Audio/Video verification should be sent to this receiver.

Event Filter: Filter — Configure which events are reported to this receiver

Description	Edit the name of the EDP receiver. Maximum 16 characters.
Receiver ID	Edit the EDP receiver ID. Range is 1 to 999997 (999998 and 999999 are reserved for special purposes)
Protocol Version	Select the EDP protocol version to use with this EDP receiver. Options are Version 1 or Version 2. Version 2 is recommended if supported by the receiver, as it is a more secure protocol.

Security

Commands Enable	Check this box to allow commands to be accepted from the receiver.
Change User PINs	Check this box to allow user PINs to be changed from a remote location. This feature is applicable only if commands are enabled from the receiver.
Encryption Enable	Check this box to enable encryption on data to and from the receiver.
Encryption Key	Enter a hexadecimal key (max. 32 digits) that will be used to encrypt the data. **Note**: The same key will need to be used at the receiver.
Virtual Keypad	Enables access to the panel with a virtual keypad i.e. a PC software module that looks and behaves like an SPC keypad. It is available with the SPC Com client.
Live Streaming/Streaming Mode	Specifies when live streaming of audio and video is available. Options are Never, Always or Only after an alarm event. Default is ‘Only after an alarm event’. **Note:** This setting has obvious privacy implications and therefore should be enabled only where appropriate and subject to local laws and regulations.
Network (Applies to the Ethernet connection only)	
Network Enable	Check this box to allow events to be reported through the network.
Network Protocol	Select the type of network protocol for the receiver. Options are UDP and TCP. TCP is recommended if supported by the receiver.
Network Address	Enter the IP address of the receiver.
Network Port	Enter the IP port that the EDP receiver is listening on.
Always Connected	If enabled the panel will keep a permanent connection to the receiver. If disabled, the panel will only connect to the receiver after an alarm event.
Panel Master	If enabled the panel is master of polling messages. Only applicable to UDP connections.
Polling Interval	Enter the number of seconds between polls.
Polling Trigger	Enter the number of missing polls before a network connection fail is registered. Only applicable to UDP connections.
Dial-up (Applies to the GPRS modem connection only)	
Dial-up Enable	Check this box to report events through a dial-up connection.
Call type	Select type of call to use when dial up is enabled. Select GPRS.
GPRS protocol	Select the transport layer protocol used over the GPRS connection. Options are UDP or TCP. Only applicable if Call Type is GPRS.
GPRS address	Enter the IP address of EDP receiver for GPRS connections. Only applicable if Call Type is GPRS.
GPRS port	Enter the port that the EDP receiver is listening on for GPRS connections Options are UDP or TCP. Only applicable if Call Type is GPRS. Default is 50000.

GPRS Hangup Timeout	Enter the time in seconds after which the GPRS call will hang up. (0 = stay connected until IP connection is up)
GPRS Autoconnect	Check this box to automatically trigger a GPRS call to the server if an IP network fault occurs.
Dial-up on Net Fault	Check this box to report network faults on a dial-up test call.
Dial-up Interval 1*	Enter the number of minutes between dial-up test calls when network link is up.
Dial-up Interval 2*	Enter number of minutes between dial-up test calls when network link is down.
Network Address*	Enter the IP address of the receiver. This is only required if the connection to the EDP receiver is being made over the Ethernet interface. If using one of the on-board modems then leave this field blank.
Phone Number*	Enter the first phone number that the modem(s) will dial to contact the receiver.
Phone Number 2*	Enter a second phone number that the modem(s) will dial in the event that the first number dialled did not result in a call being successfully established.
Events	
Primary Receiver	Check this box to indicate that this is the primary receiver. If unchecked, this is a backup receiver.
Re-queue Events	Check this box if events that failed to report are to be re-queued for transmission
Verification	Check this box if Audio/Video verification is to be sent to this receiver.
Event Filter	Click this button to edit the filter events that will trigger an EDP call. Refer to Editing Events Filter Settings [→ 233].

* EDP dial-up over PSTN is not supported in this release.

See also

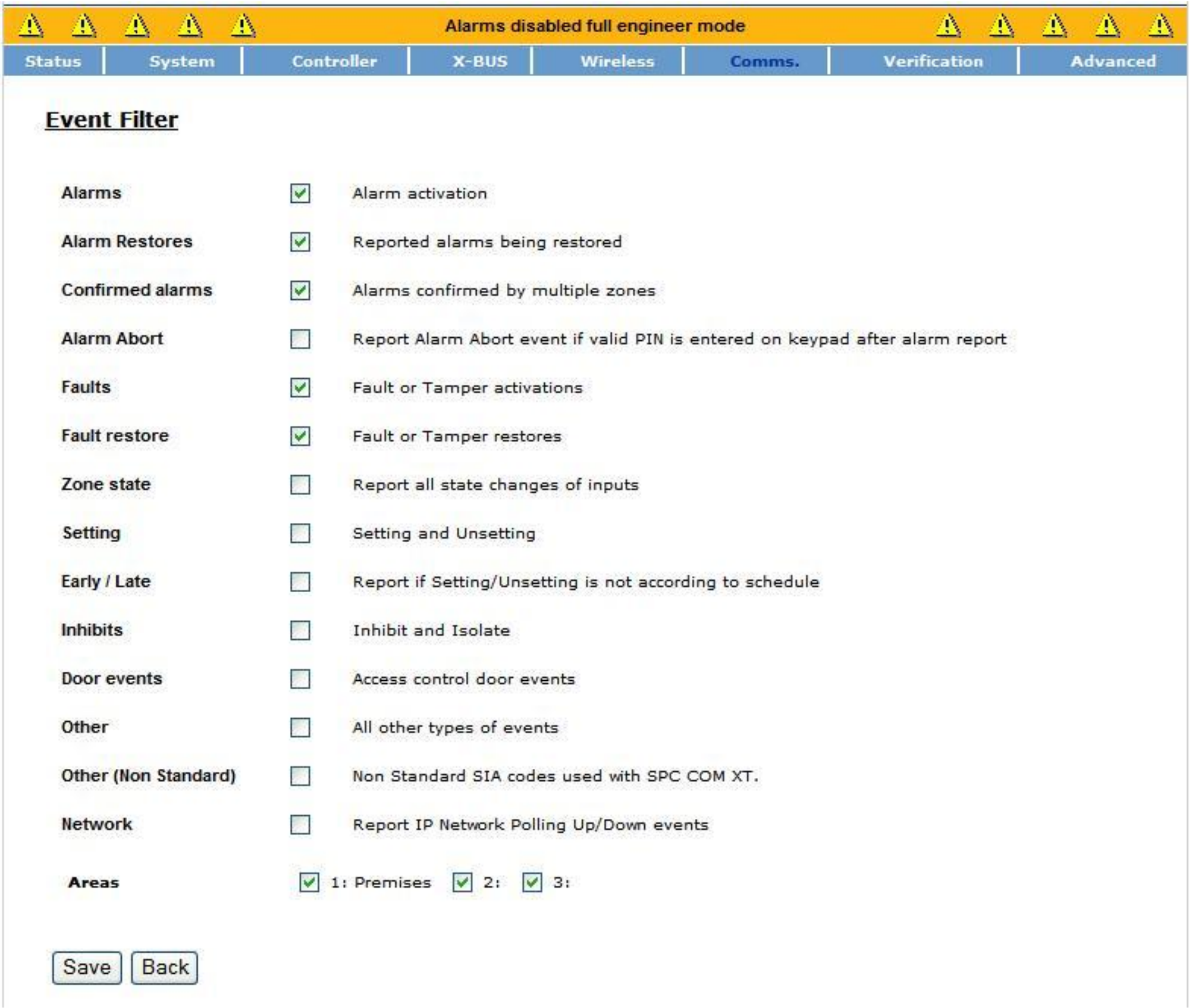
🗎 Engineer SMS [→ 137]

15.12.8.3 Editing Event Filter Settings

1. Select **Settings > Comms > EDP > Edit** > **Filter**

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.



Event Filter

Alarms	☑	Alarm activation
Alarm Restores	☑	Reported alarms being restored
Confirmed alarms	☑	Alarms confirmed by multiple zones
Alarm Abort	□	Report Alarm Abort event if valid PIN is entered on keypad after alarm report
Faults	☑	Fault or Tamper activations
Fault restore	☑	Fault or Tamper restores
Zone state	□	Report all state changes of inputs
Setting	□	Setting and Unsetting
Early / Late	□	Report if Setting/Unsetting is not according to schedule
Inhibits	□	Inhibit and Isolate
Door events	□	Access control door events
Other	□	All other types of events
Other (Non Standard)	□	Non Standard SIA codes used with SPC COM XT.
Network	□	Report IP Network Polling Up/Down events

Areas ☑ 1: Premises ☑ 2: ☑ 3:

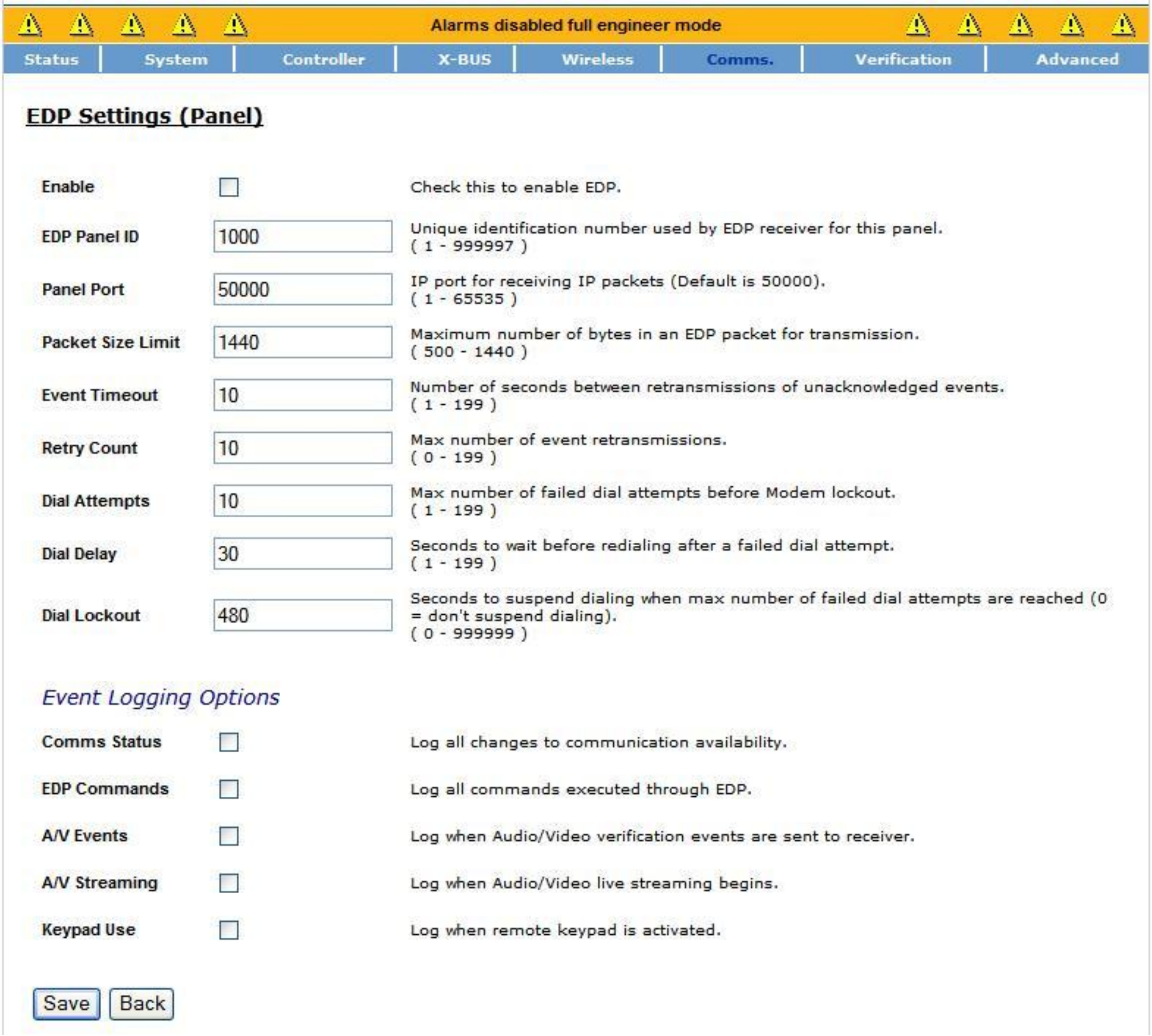
Check any of the following boxes if you want to initiate a remote call to an EDP Receiver to notify it of the particular event.

Alarms	Alarms are activated.
Alarm Restores	System alarms are restored.
Confirmed Alarms	Alarms confirmed by multiple zones
Alarm Abort	Alarm Abort events. Alarms are aborted after a valid user code is entered via the keypad after a confirmed or unconfirmed alarm,
Faults	Faults and tampers are activated.
Fault Restores	Fault or tamper alarms are restored.
Zone state	Report all zone input state changes.
Settings	System is Set and Unset.
Early/Late	Unscheduled setting and unsetting of the system.
Inhibits	Inhibit and isolate operations are performed on the system.

Door Events	Door events are activated. Only works with SIA protocol.
Other	All other types of events are detected on the system.
Other (Non standard)	Non supported SIA codes used with SPC COM XT including Camera Online/Offline events.
Network	Report IP Network Polling Up/Down events.
Areas	Select specific areas to which above events apply.

15.12.8.4 Editing EDP settings

1. Select **Settings > Comms. > EDP > Settings**.
   ⇨ The following window will be displayed.
2. Configure the fields as described in the table below.



EDP Settings (Panel)

Enable	□	Check this to enable EDP.
EDP Panel ID	1000	Unique identification number used by EDP receiver for this panel. (1 - 999997)
Panel Port	50000	IP port for receiving IP packets (Default is 50000). (1 - 65535)
Packet Size Limit	1440	Maximum number of bytes in an EDP packet for transmission. (500 - 1440)
Event Timeout	10	Number of seconds between retransmissions of unacknowledged events. (1 - 199)
Retry Count	10	Max number of event retransmissions. (0 - 199)
Dial Attempts	10	Max number of failed dial attempts before Modem lockout. (1 - 199)
Dial Delay	30	Seconds to wait before redialing after a failed dial attempt. (1 - 199)
Dial Lockout	480	Seconds to suspend dialing when max number of failed dial attempts are reached (0 = don't suspend dialing). (0 - 999999)

Event Logging Options

Comms Status	□	Log all changes to communication availability.
EDP Commands	□	Log all commands executed through EDP.
A/V Events	□	Log when Audio/Video verification events are sent to receiver.
A/V Streaming	□	Log when Audio/Video live streaming begins.
Keypad Use	□	Log when remote keypad is activated.

Enable	Tick this checkbox to enable EDP operation on the system.
EDP Panel ID	Enter a numeric identifier that is used by the EDP Receiver to identify the panel uniquely.
Panel Port	Select the IP port for receiving IP packets. Default is 50000.
Packet Size Limit	Enter the maximum number of bytes in an EDP packet for transmission.
Event timeout	Enter the timeout period (in seconds) between retransmissions of unacknowledged events.
Retry Count	Enter the maximum number or event retransmissions allowed by the system.
Dial Attempts	Enter the maximum number of failed dial attempts accepted by the system before the modem is locked out (prevented from making further attempts to dial). The lockout period is defined in the option Dial Lockout.
Dial Delay	Enter the time period (in seconds) that the system will wait before redialling after a dial attempt has failed.
Dial Lockout	Enter the time period (in seconds) that the system will suspend dialling when the maximum number of failed dial attempts is reached. Enter a value of ‘0’ to continually attempt dialling.

Event Logging Options

Comms Status	Log all communication availability.
EDP Commands	Log all commands executed through EDP.
A/V Events	Log when Audio/Video verification events are sent to Receiver.
A/V Streaming	Log when Audio/Video live streaming begins.
Keypad Use	Log when remote keypad is activated.

15.12.9 Remote Maintenance

For further information please refer to the Remote Maintenance Configuration Manual.

15.13 Configuring advanced settings

15.13.1 Calendars

- Select **Settings > Advanced > Calendars**.

Calendars are used for scheduling time-based control within 2 groups:

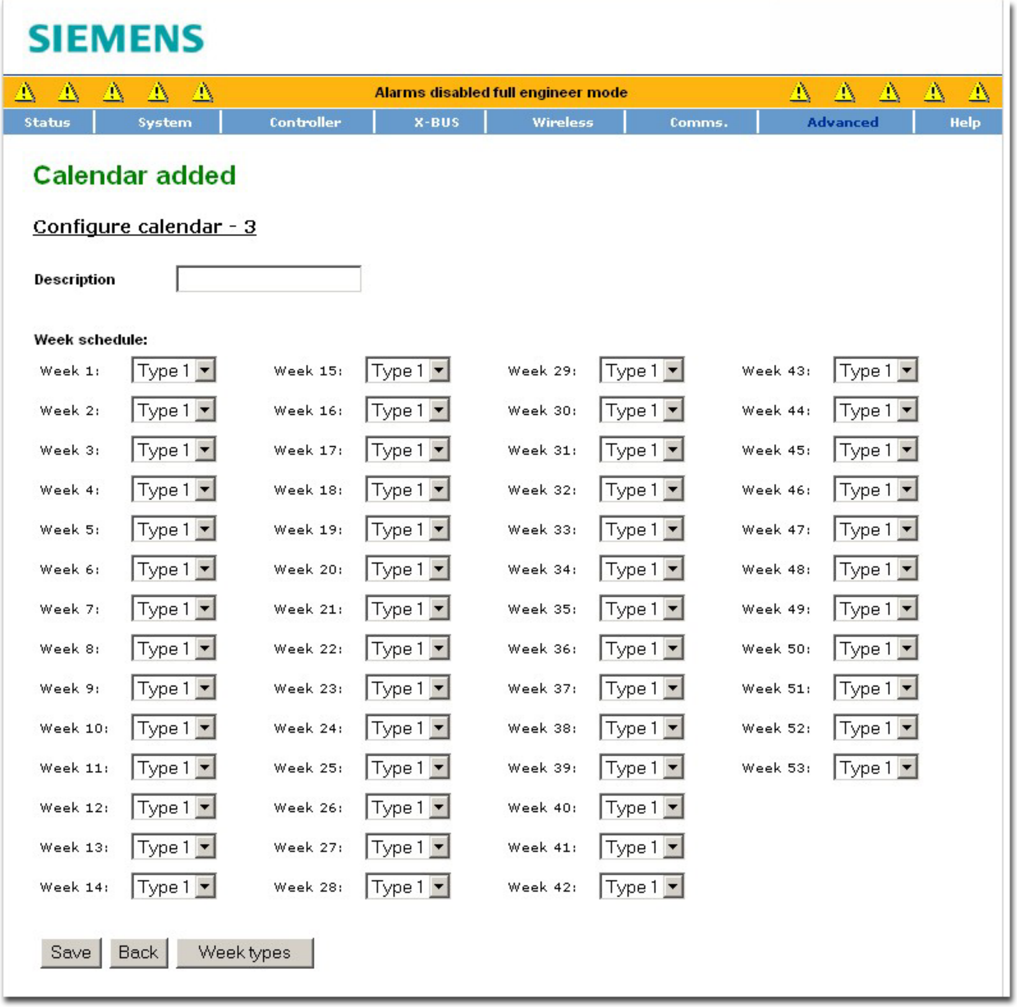
- Autosetting of areas (Automatic Setting and/or Unsetting)
- All other purposes (includes triggers, enabling of users, zones, physical outputs, etc.)

A calendar can be used for multiple purposes with the operations differing based on the classifications above. At any moment in time and as defined in the settings, schedules within the calendar might be “active”. Thus, a calendar is active if its time conditions are satisfied.

15.13.1.1 Adding / Editing a calendar

1. Select **Settings** > **Advanced** > **Calendars** > **Add**.

   ➪ The following window will be displayed:



Alarms disabled full engineer mode

Calendar added

Configure calendar - 3

Description

Week schedule:

Week 1:	Type 1	Week 15:	Type 1	Week 29:	Type 1	Week 43:	Type 1
Week 2:	Type 1	Week 16:	Type 1	Week 30:	Type 1	Week 44:	Type 1
Week 3:	Type 1	Week 17:	Type 1	Week 31:	Type 1	Week 45:	Type 1
Week 4:	Type 1	Week 18:	Type 1	Week 32:	Type 1	Week 46:	Type 1
Week 5:	Type 1	Week 19:	Type 1	Week 33:	Type 1	Week 47:	Type 1
Week 6:	Type 1	Week 20:	Type 1	Week 34:	Type 1	Week 48:	Type 1
Week 7:	Type 1	Week 21:	Type 1	Week 35:	Type 1	Week 49:	Type 1
Week 8:	Type 1	Week 22:	Type 1	Week 36:	Type 1	Week 50:	Type 1
Week 9:	Type 1	Week 23:	Type 1	Week 37:	Type 1	Week 51:	Type 1
Week 10:	Type 1	Week 24:	Type 1	Week 38:	Type 1	Week 52:	Type 1
Week 11:	Type 1	Week 25:	Type 1	Week 39:	Type 1	Week 53:	Type 1
Week 12:	Type 1	Week 26:	Type 1	Week 40:	Type 1		
Week 13:	Type 1	Week 27:	Type 1	Week 41:	Type 1		
Week 14:	Type 1	Week 28:	Type 1	Week 42:	Type 1		

2. Provide description for name of calendar (max. 16 characters)

Week Types

Calendars are configured using Week Types. There is a system maximum number of 64 calendar configurations. Three Week Types may be defined for calendar use. Week Types may be assigned to any week of the year. However, not all weeks must have a Week Type (i.e. a Week Type may be ‘None’).

Each week of the year is assigned an ordinal number. Depending on the fall of days within a month, there may be 52 or 53 weeks in one year. The SPC calendar implementation conforms to the ISO8601international standard.

1. Click **Week Types**.
2. Provide the desired times for setting / unsetting or desired times for triggers. Use time guidelines for Auto Set / Unset (see page [➙ 239]), or for All Other Purposes (see page [➙ 239]).

3. One, two or three weeks may be configured for use: Week Type 1, Week Type 2, and Week Type 3.
4. Click **Save**.
5. Click **Back.**
6. Select the week(s) to be set to a particular calendar week type. For instance a Week Type that is configured for Christmas scheduling would likely occur on or near Week 51.
7. Select the desired week type (ex. Type 2) from the pull down menu for the scheduled week (ex.Week 51).
8. Click **Save**
9. Click **Back**.

Exceptions

Exceptions are configurations that apply exclusively to a period of time, with a start and end date, defined as day/month/year. There is a system maximum of 64 exceptions.

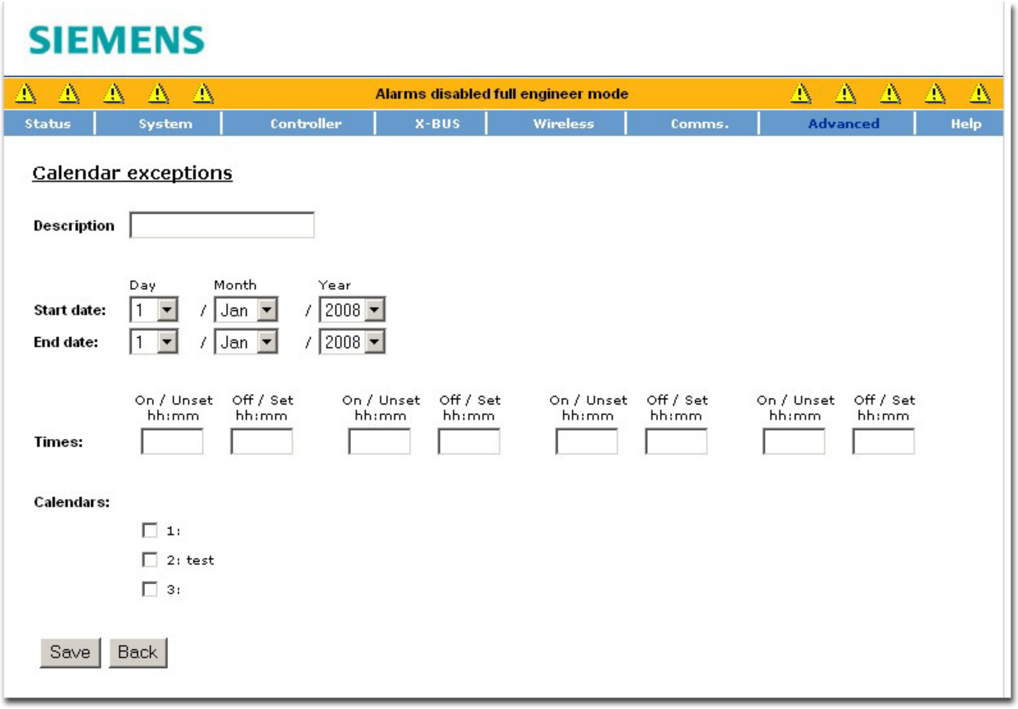
Unlike Week Types, where there are three available types within a calendar, exceptions do not belong to any single calendar, yet are a set of dates assigned to one or more calendars. Exceptions are only effective when assigned to a calendar. When an exception is assigned to a calendar, the dates defined override any configuration for that start and end date period with both dates inclusive.

Time configuration for exceptions mirrors that of weekly configuration. Set times are interpreted according to the calendar selected. Auto-setting times are understood as triggers, while for all other purposes, times are understood as on/off periods.

1. Select **Settings** > **Advanced** > **Calendars** > **Exceptions** > **Add**.

   ➪ The following window will be displayed.

2. Configure the fields as described in the table below.



Calendar exceptions

Description

	Day		Month		Year
Start date:	1	/	Jan	/	2008
End date:	1	/	Jan	/	2008

Times: On / Unset hh:mm, Off / Set hh:mm, On / Unset hh:mm, Off / Set hh:mm, On / Unset hh:mm, Off / Set hh:mm, On / Unset hh:mm, Off / Set hh:mm

Calendars:

☐ 1:
☐ 2: test
☐ 3:

Description	Enter a for name for the exception (16 characters max).
From Date…To	Select the start and end date.
On Time…Off Time	Select the desired times for setting / unsetting or the desired times for triggers. Use time guidelines for auto set / unset (see page [→ 239]), or for all other purposes (see page [→ 239]).
Calendars Assigned to	Select the desired calendar(s) for effect.

15.13.1.2 Auto-Set and Auto-Unset

A calendar can be configured for area auto-sets or auto-unsets.

For any day of the week, a configuration can have a maximum of 4 set times and 4 unset times. Configured times use the 24 hour clock (hh:mm). If the hour is 24, then minutes must be 00, such as midnight is 24:00. It is possible to define a set time without an unset and vice-versa. Configured times trigger the area to either set or unset (provided all conditions are satisfied). Times entered are not considered as a duration of time, rather they are a point in time that said action (set/unset) will occur. If the controller is powered up or reset, the set/unset status is kept and subsequent set or unset times occur according to configuration.

15.13.1.3 All other purposes

Using On/Off, True/False, Active/Inactive states, these configurations are assigned to an output that effectively turns on or off and can be configured for any day of the week. Configurations have a maximum of 4 set times and 4 unset times. Configured times use the 24 hour clock (hh:mm). If the hour is 24, then minutes must be 00, such as midnight is 24:00. Each configuration consists of a pairing of settings for On/Off, True/False, Active/Inactive states. Any one setting without a respective corresponding setting is silently disregarded.

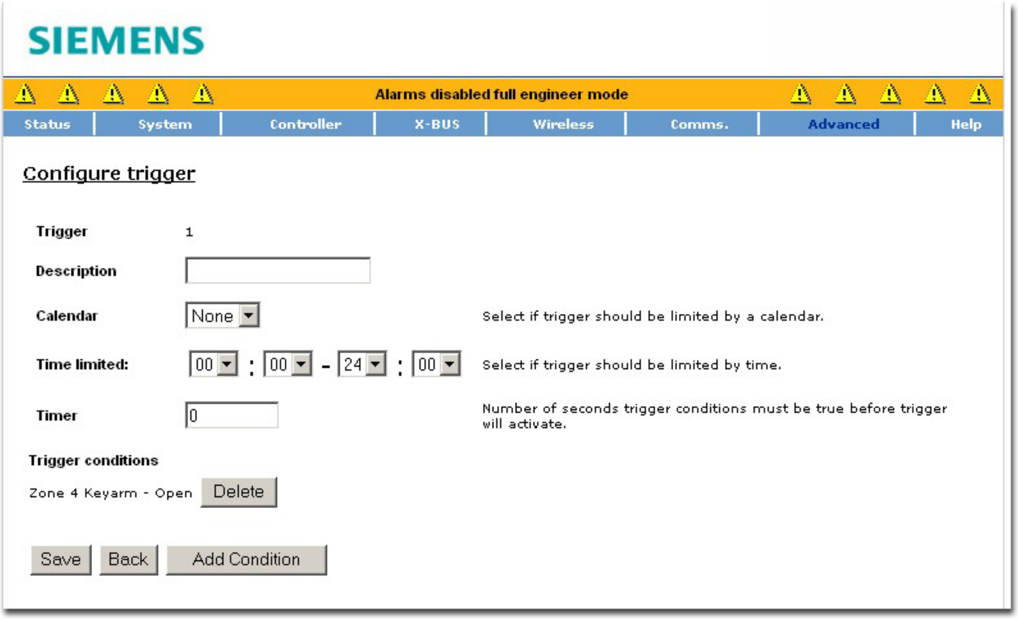
15.13.2 Triggers

A trigger is a system state (e.g. zone closing / time / system event (alarm) etc.) that can be used as inputs to the Cause & Effects. The triggers can be logically assigned together using the logical operators and / or to create user outputs. The system supports up to a maximum of 1000 triggers across all its Cause & Effects system.

1. Select **Settings > Advanced**.

   ⇨ The following window will be displayed.

2. Configure the fields as described in the table below.



Configure trigger

Trigger 1

Description

Calendar None — Select if trigger should be limited by a calendar.

Time limited: 00 : 00 - 24 : 00 — Select if trigger should be limited by time.

Timer 0 — Number of seconds trigger conditions must be true before trigger will activate.

Trigger conditions

Zone 4 Keyarm - Open

Trigger	Trigger will only become active if one of the 2 optional steps (calendar/time limitation) is configured
Description	Enter a text description of the trigger
Active Time (optional)	Enter the number of seconds the trigger conditions must be true before the trigger will activate
Time limited	Select the time of the day between 00:00 and 24:00. The trigger is only in effect during this timeframe. The Start time is inclusive, the end time is exclusive. **Note**: This parameter delays a trigger transition from On to Off only, from Off to On is immediate.
Trigger conditions	The trigger is on upon satisfaction of conditions (i.e. a logical AND operation is performed): **Zone** – the trigger is on if the configured zone is in the configured state, which can be open, closed, short or disconnected. **Door** – the trigger is on if the any of the following door options are configured: Entry granted, Entry denied, Exit granted, Exit denied, Door open too long, Door left open, Door forced open, Door normal, Door Locked, Door unlocked **System** - the trigger is on if the system output is in the configured state, which can be on or off. Possible system outputs are “External Bell”, “Alarm”, etc. **Area** - the trigger is on if the area output is in the configured state, which can be on or off. Possible area outputs are “External Bell”, “Alarm”, etc. **Wireless FOB** – this can be configured for a particular user or for any user. With this configuration, if the configured user (or any user) presses the ‘*’ key on the FOB, it will cause an instantaneous pulse OFF/ON/OFF. This only applies for FOBs that have been registered with the system. **Wireless FOB Panic** - – this can be configured for a particular user or for any user. With this configuration, if the configured user (or any user) presses the ‘*’ key on the FOB Panic, it will cause an instantaneous pulse OFF/ON/OFF. This only applies for FOB Panics that have been registered with the system. **WPA** – the trigger is activated if a button or combination of buttons is pressed. It is possible to assign a trigger condition to all WPAs or just to one specific WPA. When a trigger with a WPA trigger condition is defined, it can be assigned to a mapping gate for many purposes including arming a system, turning on lights or opening a door. **Keypad valid code** – this can be configured for a particular user or for any user. With this configuration, if the configured user (or any user) enters a valid PIN, or presents a configured PACE, it will cause an instantaneous pulse OFF/ON/OFF.

	Indicator – the trigger can be configured for Function keys 1 -4.??? **Time Trigger** –the trigger is on after the specific time period entered in the box provided in the format hh:mm.
Calendar (optional)	Select if necessary the desired calendar. The trigger is only in effect during this calendar. See page [➔ 236].

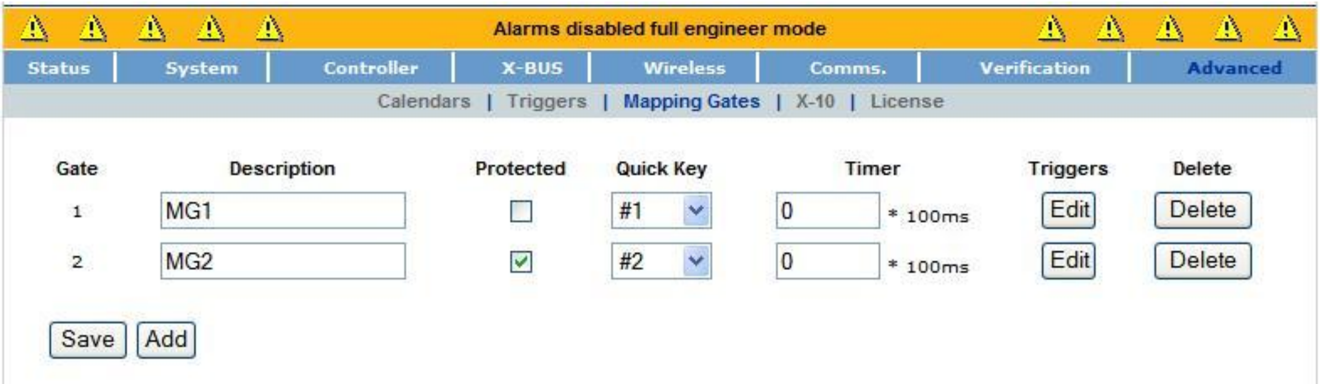
15.13.3 Mapping Gates

Triggers are used with Mapping Gates, which are virtual outputs defined by the user that can be mapped to a physical output. There can be a maximum of 256 Mapping Gates.

For continuous output, when the trigger is a valid user code, both states must be the same, either both negative or both positive.

- Select **Settings** > **Advanced** > **Mapping Gates**.

  ➩ The following window will be displayed.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Calendars | Triggers | Mapping Gates | X-10 | License
Save
Add

Gate	Description	Protected	Quick Key	Timer	Triggers	Delete
1	MG1	☐	#1	0 * 100ms	Edit	Delete
2	MG2	☑	#2	0 * 100ms	Edit	Delete

1. Enter a **Description** for the gate. This is important as no mapping gate number, only the description, is displayed on the **Outputs** user page for turning on and off gates.
2. Tick the **Protected** check box if you do not want to allow users to turn on and off this gate, even if they have the right to do so. A protected gate does not appear in the **Outputs** setting page for users.
3. Select desired **Quick Key**.
   A quick key is a '#' followed by a single digit pressed at the keypad. If a shortcut is configured and is pressed at the keypad, the user is prompted to turn the output on or off.

There may be many outputs activated by one shortcut, both X-10 and Mapping Gates.

4. Add a **Timer** for the gate. Time quantity used is 1/10 of a second.
5. Click on the **Triggers** button to configure triggers for turning the output on and turning it off. In both cases, a positive or negative edge of the trigger needs to be defined. See Triggers [➔ 239] for details of configuring triggers.

6. Click **Add** to add a new gate or **Save** to save the new settings for an existing gate.

See also

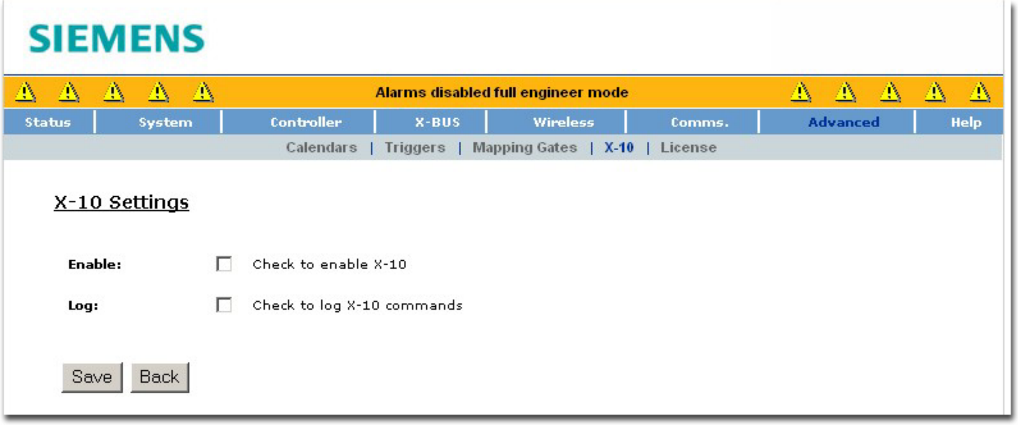
🗎 Triggers [→ 239]

15.13.4 X10 Config - Settings

The X10 settings window allows you to configure the operation of X10 on the panel.

1. Select **Settings** > **Advanced** > **X-10** > **Settings**.

   ⇨ The following window will be displayed:



SIEMENS
Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Calendars | Triggers | Mapping Gates | X-10 | License
Save
Back

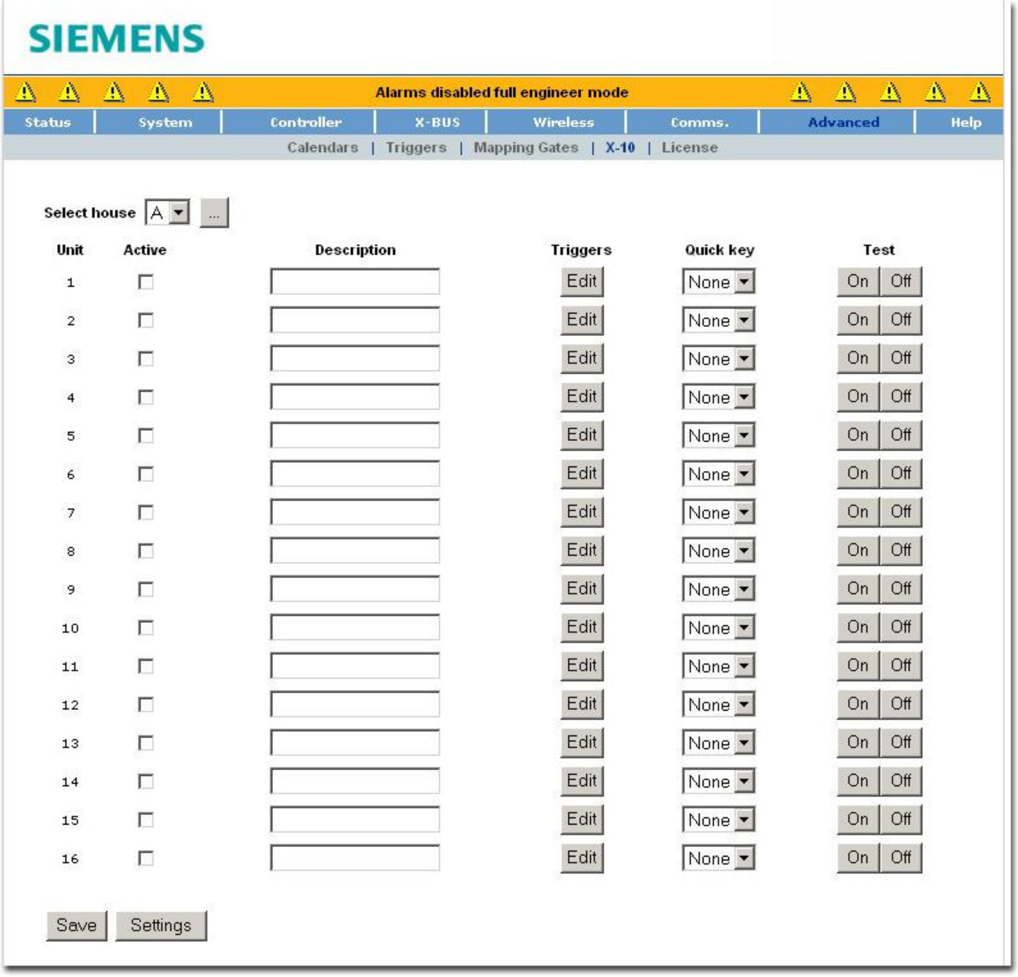
X-10 Settings

Enable: □ Check to enable X-10

Log: □ Check to log X-10 commands

2. Activate the checkbox **Enable** to enable X10 operation on the panel.
3. Activate the checkbox **Log** to enable logging of all X10 events on the panel.
4. Click **Save**.
5. Click an alphabetic tab (A-P) to program X10 device triggers.

   ⇨ A list of programmable device triggers (1-16) will be presented for that alphabetic character:



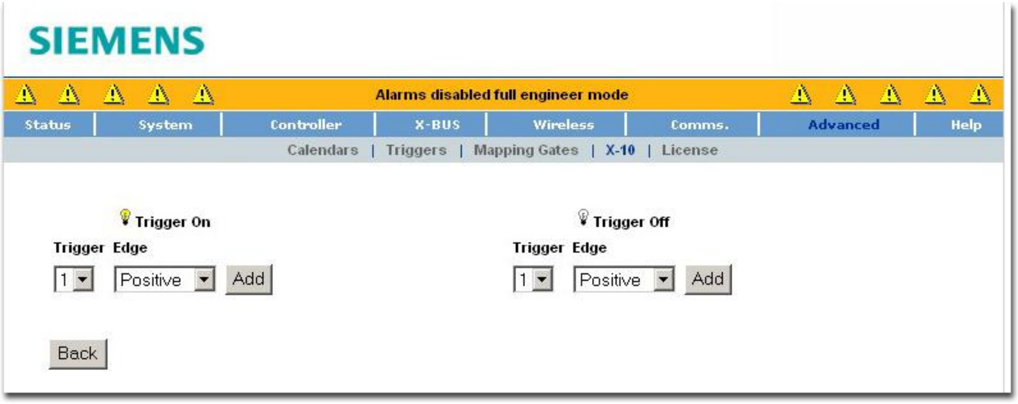
Unit	Active	Description	Triggers	Quick key	Test
1	□		Edit	None	On Off
2	□		Edit	None	On Off
3	□		Edit	None	On Off
4	□		Edit	None	On Off
5	□		Edit	None	On Off
6	□		Edit	None	On Off
7	□		Edit	None	On Off
8	□		Edit	None	On Off
9	□		Edit	None	On Off
10	□		Edit	None	On Off
11	□		Edit	None	On Off
12	□		Edit	None	On Off
13	□		Edit	None	On Off
14	□		Edit	None	On Off
15	□		Edit	None	On Off
16	□		Edit	None	On Off

Unit number	This is the number (1-16) that is assigned to the device.
Active	This field indicates if the device is active or not.
Description	This field displays a description that is used to help identify the device – e.g. downstairs light (16 characters max).
Quick key	This field indicates if the X10 device activation can be toggled by entering a code from the keypad.

To edit a X-10 device

1. Click **Edit**.

   ⇨ The following window will be displayed:


SIEMENS
Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Advanced
Help
Calendars | Triggers | Mapping Gates | X-10 | License
Add
Add
Back

Trigger On

Trigger: 1 Edge: Positive

Trigger Off

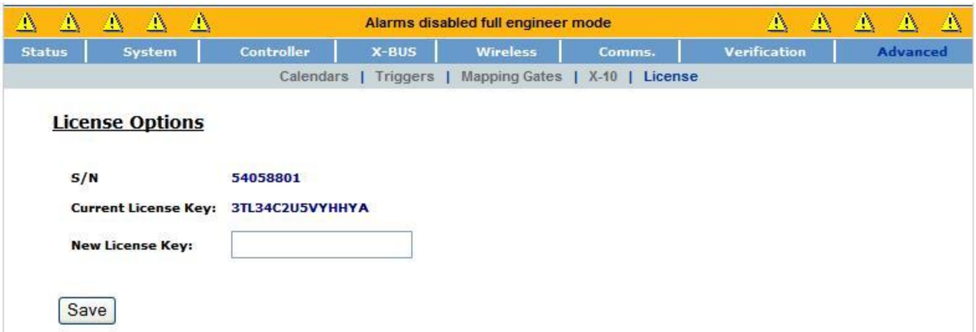
Trigger: 1 Edge: Positive

2. For further programming refer to page [→ 239].

15.13.5 Updating SPC Licenses

The **License Options** feature provides a mechanism for the user to update or add functionality to the SPC system, for example, for migrations, where installed peripherals, which are not licensed for SPC, need to be supported by an SPC controller.

1. Select **Settings** > **Advanced** > **License**.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Calendars | Triggers | Mapping Gates | X-10 | License
Save

License Options

S/N: 54058801

Current License Key: 3TL34C2U5VYHHYA

New License Key:

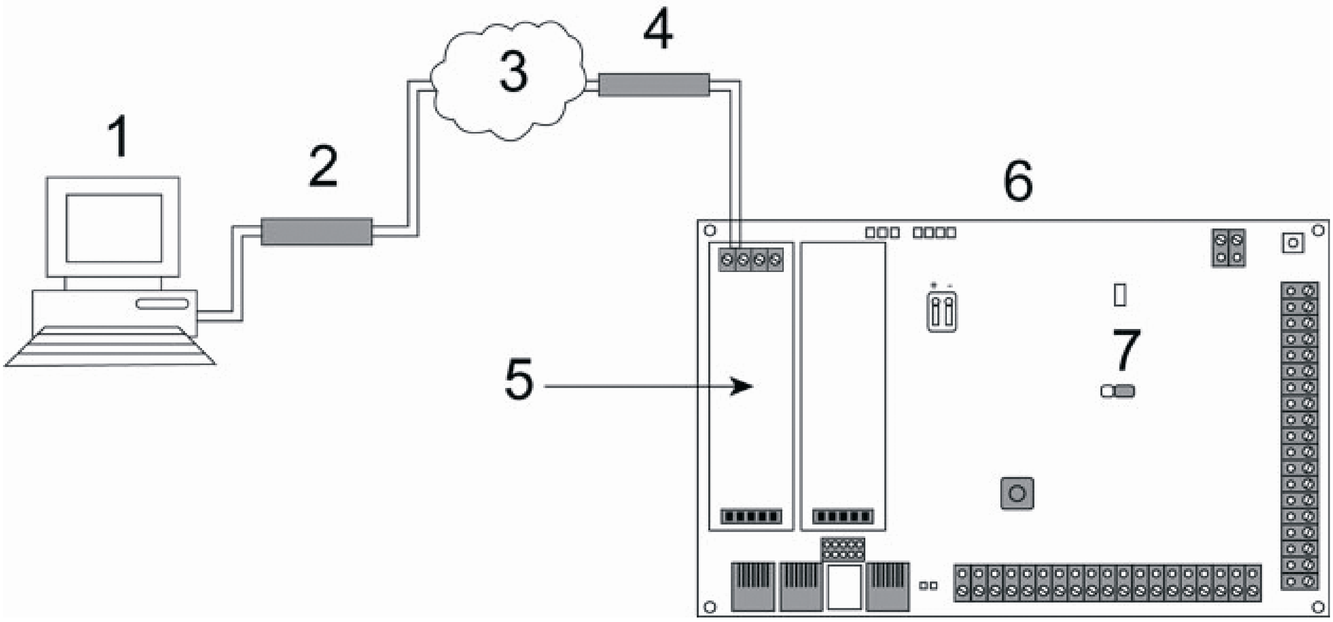
2. Contact technical support with the requested functionality and quote current license key as displayed.

   ⇨ If request is approved, a new license key is issued.

3. Enter the new key in the field provided.

16 Accessing web server remotely

16.1 PSTN connection



PSTN Connection

1	Remote PC with browser
2	PSTN modem
3	PSTN network
4	Telephone line
5	PSTN modem
6	SPC controller
7	JP9 ~~SPC4xxx~~

The web server on the controller can be accessed via a remote connection over a PSTN telephone line. A PSTN module and a PSTN line must be connected to the controller as shown above to provide remote access to the controller.

On the remote side of the connection the user must have a PSTN modem installed on a PC with access to a PSTN line.

To connect remotely to the controller:

1. Install a PSTN modem on the controller (please refer to corresponding installation instruction).
2. Connect the phone line to the A/B screw terminals on the connector at the top of the modem.
3. Enter Engineer programming from the keypad and configure the modem (primary or backup) to answer an incoming call.

4. On the keypad, scroll to **Full Engineer Mode > Comms > Modems**
5. Select the following settings:
   - **Enable Modem:** Set to enabled
   - **Type:** Displays the type of modem (PSTN)
   - **Country Code:** Select the relevant country code (Ireland, UK, Europe)
   - **Answer mode:** Select numbered rings; this tells the modem to wait for a number of rings before answering the incoming call
   - **Modem Rings:** Select the number of rings to allow before answering the call (8 rings max)
6. Create a dial-up connection on the remote PC using the phone number of the telephone line connected to the PSTN module on the controller. The instructions to do this on windows XP operating system are listed below:

On Windows XP:

1. Open the New Connection Wizard by browsing to **Control Panel > Network Connections > Create New Connection** (in the Network Tasks window).
2. In the **Network Connection Type** window, select **Connect to the Internet**.
3. In the **Getting Ready** window, choose **Setup my connection manually**.
4. In the **Internet Connection** window, choose **Connect using Dialup modem**.
5. In the **Connection Name** window enter the connection name e.g. SPC remote connection.
6. In the **Phone Number to Dial** window, enter the phone number of the PSTN line connected to the PSTN modem.
7. In the **Connection Availability** window, choose whether this connection is available to all users.
8. In the **Internet Account Information** window, enter the following details:
   - Username : SPC
   - Password: siemens (default)
   - Confirm Password: siemens

   ⇨ The **Completing the New Connection Wizard** window is displayed.
9. Click **Finish** to save the Dial-up connection to the PC.

Default code should be changed and noted accordingly as Siemens

is unable to retrieve this new code. Forgotten codes are be remedied only by a factory default of the system, rendering loss of programming. Programming can be restored if a backup is available.

To activate this dial-up connection:

- Click on the icon located in the **Control Panel > Network Connections** window.

  ⇨ The PC makes a data call to the PSTN line connected to the SPC PSTN module.

  ⇨ The SPC PSTN module answers the incoming data call after the designated number of rings and establishes an IP link with the remote computer.

  ⇨ The SPC system automatically assigns an IP address to the remote PC.

For some Windows operating systems, a dialog box regarding Windows certification appears. Siemens

deems this acceptable to continue. For further queries, please contact network administrator or a Siemens

technician.

To obtain this IP address:

1. Right click the dial-up icon.
2. Click on the **Details** tab.

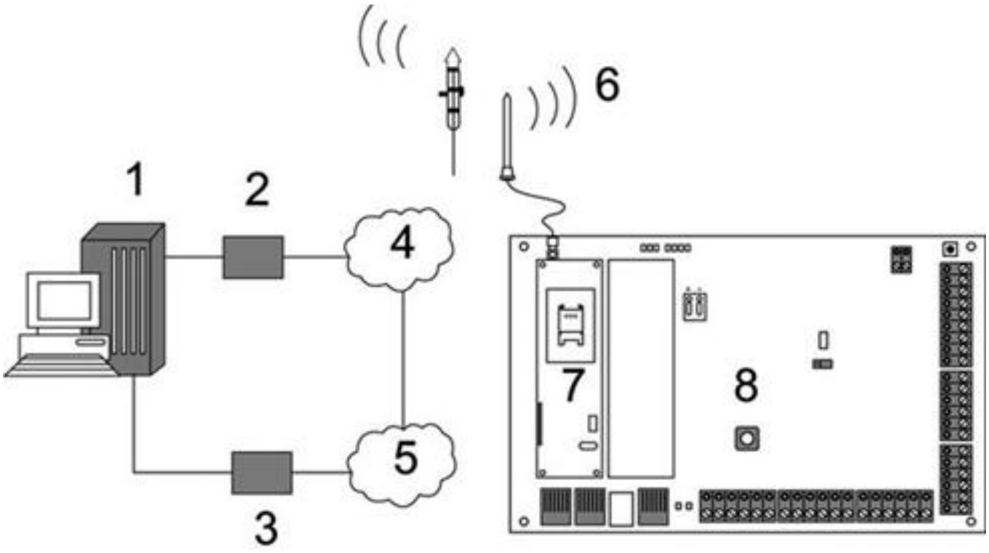
⇨ The IP address is displayed as the Server IP address.

1. Enter this IP address in the address bar of the browser and click.
2. When the Dial-up connection icon is displayed on the task bar of the PC, open the browser and enter the IP address of the SPC.

⇨ The browser logon screen is displayed.

To set up a dial-up connection on another operating system, consult the help menu of that operating system.

16.2 GSM connection



GSM Connection

1	Remote PC with browser
2	GSM modem
3	PSTN modem
4	GSM network
5	PSTN network

6	External antenna
7	GSM modem
8	SPC controller

The web server on the controller can be accessed via a remote connection over the GSM network. A GSM module (with SIM card) must be installed on the controller as shown above to provide remote access to the SPC. The data option of the SIM card must be activated and the data number must be used.

On the remote side of the connection the user must have a PSTN or GSM modem installed on a PC with browser. If a PSTN modem is installed then it must be connected to a working PSTN line.

To connect remotely to the controller:

1. Install a GSM modem on the controller (please refer to corresponding installation instruction).
2. Enter Full Engineer programming from the keypad and configure the modem (primary or backup) to answer an incoming call.
3. On the keypad, scroll to the following menu: FULL ENGINEER > COMMUNICATION > MODEMS, and select the settings listed:

Enable Modem	Set to Modem Enabled.
Type	Displays the type of modem (GSM).
Country Code	Select the relevant country code.
Answer Mode	Select numbered rings; this tells the modem to wait for a number of rings before answering the incoming call.
Modem Rings	Select the number of rings to allow before answering the call (8 rings max).

On Windows XP:

1. Open the New Connection Wizard by browsing to **Control Panel > Network Connections > Create New Connection** (in the Network Tasks window).
2. In the **Network Connection Type** window, select **Connect to the Internet**.
3. In the **Getting Ready** window, choose **Setup my connection manually**.
4. In the **Internet Connection** window, choose **Connect using Dialup modem**.
5. In the **Connection Name** window enter the connection name e.g. SPC remote connection.
6. In the **Phone Number to Dial** window, enter the phone number of the PSTN line connected to the PSTN modem.
7. In the **Connection Availability** window, choose whether this connection is available to all users.
8. In the **Internet Account Information** window, enter the following details:
   - Username : SPC
   - Password: siemens (default)
   - Confirm Password: siemens

   ⇨ The **Completing the New Connection Wizard** window is displayed.

9. Click **Finish** to save the Dial-up connection to the PC.

Default code should be changed and noted accordingly as Siemens

is unable to retrieve this new code. Forgotten codes are be remedied only by a factory default of the system, rendering loss of programming. Programming can be restored if a backup is available.

To activate this dial-up connection:

- Click on the icon located in the **Control Panel > Network Connections** window.
  - ⇨ The PC makes a data call to the PSTN line connected to the SPC PSTN module.
  - ⇨ The SPC PSTN module answers the incoming data call after the designated number of rings and establishes an IP link with the remote computer.
  - ⇨ The SPC system automatically assigns an IP address to the remote PC.

For some Windows operating systems, a dialog box regarding Windows certification appears. Siemens

deems this acceptable to continue. For further queries, please contact network administrator or a Siemens

technician.

To obtain this IP address:

1. Right click the dial-up icon.
2. Click on the **Details** tab.

⇨ The IP address is displayed as the Server IP address.

1. Enter this IP address in the address bar of the browser and click.
2. When the Dial-up connection icon is displayed on the task bar of the PC, open the browser and enter the IP address of the SPC.

⇨ The browser logon screen is displayed.

To set up a dial-up connection on another operating system, consult the help menu of that operating system.

17 Intruder alarm functionality

The SPC system can accommodate 3 distinct modes of intruder alarm operation, **Financial, Commercial** or **Domestic** mode, all of which support multiple areas.

Each area in turn can support 4 different alarm modes. Commercial and Financial mode present more programmable alarm types than Domestic mode. The default zone name and type settings for each mode is listed in page [→ 273].

17.1 Financial mode operation

Financial mode is suitable banking and financial businesses that have special secure areas such as vaults and ATMs.

Each area defined on the system supports the alarm modes listed below.

Alarm Mode	Description
UNSET	Area is disarmed, only alarm zones classified as 24Hour will activate the alarm.
PARTSET A	This mode provides perimeter protection to a building while allowing free movement through the exit and access areas. Zones that have been classified as EXCLUDE A remain unprotected in this mode. By default there is no exit time (the system instantly sets on selection of this mode). An exit timer can be applied to this mode by enabling the Partset A Timed variable.
PARTSET B	This setting mode applies protection to all zones except those that have been classified as EXCLUDE B. By default there is no exit time (the system instantly sets on selection of this mode). An exit timer can be applied to this mode by enabling the Partset B Timed variable.
FULL SET	Area is fully armed; opening of entry/exit zones starts the entry timer. If the alarm is not unset before entry timer expires, the alarm is activated.

17.2 Commercial mode operation

Commercial mode is suitable for business installations with multiple areas and a large number of alarm zones. Each area defined on the system supports the alarm modes listed below.

Alarm Mode	Description
UNSET	Area is disarmed, only alarm zones classified as 24Hour will activate the alarm.
PARTSET A	This mode provides perimeter protection to a building while allowing free movement through the exit and access areas. Zones that have been classified as EXCLUDE A remain unprotected in this mode. By default there is no exit time (the system instantly sets on selection of this mode). An exit timer can be applied to this mode by enabling the Partset A Timed variable.
PARTSET B	This setting mode applies protection to all zones except those that have been classified as EXCLUDE B. By default there is no exit time (the system instantly sets on selection of this mode). An exit timer can be applied to this mode by enabling the Partset B Timed variable.
FULL SET	Area is fully armed; opening of entry/exit zones starts the entry timer. If the alarm

Alarm Mode	Description
	is not unset before entry timer expires, the alarm is activated.

17.3 Domestic mode operation

Domestic mode is suitable for residential installations with one or more areas and a small-to-moderate number of alarm zones. Each area defined on the system supports the alarm modes listed below.

Alarm Mode	Description
UNSET	Area is disarmed, only alarm zones classified as 24Hour will activate the alarm.
PARTSET A	This mode provides perimeter protection to a building while allowing free movement through the exit and access areas (for example front door and hall) Zones which have been classified as EXCLUDE A remain unprotected in this mode. There are no Exit times associated with this mode and protection is applied instantly on selection of this mode.
PARTSET B	This setting mode applies protection to all zones except those that have been classified as EXCLUDE B. By default there is no exit time (the system setting instantly on selection of this mode). An exit timer can be applied to this mode by enabling the Partset B Timed variable.
FULL SET	Area is fully armed, opening of Entry/Exit zone start the Entry timer. If the alarm is not unset before the Entry timer expires then the alarm is activated.

17.4 Full and local alarms

The type of alarms generated by the SPC system can vary depending on the type of zone that triggered the alarm activation. The vast majority of alarms require a visual (strobe) and audible (bell) indication of an intrusion to the premises or building.

By default, the first 3 physical outputs on the SPC controller are assigned to the external bell, internal bell, and external bell strobe. When activated, these 3 outputs together provide sufficient warning of an alarm condition to persons located inside or within the immediate environment of the building or premises where the intrusion has taken place.

Full and local alarms on the SPC activate the following physical outputs:

- Controller Output 1: External Bell
- Controller Output 2: Internal Bell
- Controller Output 3: Strobe

For details on how to wire the bells and strobe see page [→ 40].

A **Full Alarm** activation reports the alarm to the Alarm Receiving Centre (ARC) if one has been configured on the system.

A **Local Alarm** activation does not attempt to call the ARC even if one has already been configured.

A **Silent Alarm** activation does not activate outputs 1 – 3 (no visual or audible indications of the alarm). The alarm event is reported to the ARC. Silent alarms are only generated when alarm zones with the Silent attribute have been opened when the system is set.

18 System examples and scenarios

18.1 When to use a common area

Common areas provide a convenient way of setting multiple areas within a single installation. A user assigned to a common area has the ability to SET ALL areas within that common area (even those areas that have not been assigned to that user). However, the users can only UNSET areas assigned to them.

Common areas should only be used when a single keypad is installed at the primary access location and is shared by all users within the building (defining a common area on a system with multiple keypads in different areas is not recommended).

Scenario: 2 departments of a business (Accounts and Sales) share a common access point (front door)

In this case, create 3 areas on the system (Common Area, Accounts, and Sales). The Common Area must include the main access point (front door). Assign the zones in Accounts to Area 2 and the zones in Sales to Area 3. Install a keypad at the front door and assign it to all 3 areas. Define 2 users (minimum) on the system, one for each department, and assign the users to their respective areas and the common area.

Operation: Setting the system

The Accounts Manager leaves the office at 5 pm. When he enters his code at the keypad, the FULLSET option presents the following 3 sub-menus:

- ALL AREAS: sets all areas assigned to the common area (Common Area, Accounts, and Sales) and any additional areas assigned to the account manager; in this case there are no additional areas. The exit timer for the front door informs the user to exit the building.
- COMMON: sets all areas assigned to the Common Area (Common Area, Accounts and Sales) and starts the exit timer for the front door
- ACCOUNTS: sets the Accounts area only; the Sales area remains unset and access is still permitted through the front door

When the last worker in the Sales department is leaving the building, he/she closes all doors and windows in AREA 3 and enters his/her code at the keypad. The FULLSET option presents the following 3 sub-menus:

- ALL AREAS: sets all areas assigned to the Common Area (Common area, Accounts, and Sales) and any additional areas assigned to the sales worker; in this case there are no additional areas. The exit timer for the front door informs the user to exit the building.
- COMMON: sets all areas assigned to the Common Area (Common Area, Accounts, and Sales) and starts the exit timer for the front door.
- SALES: sets ALL areas assigned to the Common Area (Common area, Accounts and Sales); this is because there are no other unarmed sub-areas on the system

Operation: Unsetting the system

When the Accounts Manager returns to open the building and enters his code on the keypad, the UNSET option presents the following 3 sub-menus:

- ALL AREAS: unsets all areas assigned to the accounts worker (Common Area, Accounts) and any additional area assigned to the accounts worker. In this case there are no additional areas. NOTE: The accounts worker cannot UNSET the Sales area.
- COMMON: unsets ONLY the Common Area (Reception). This provides the option to unarm the reception area only while leaving the Accounts and Sales offices set.
- ACCOUNTS: unsets the Accounts area and the Common Area (Reception). In this case the Sales area remains set while access is still permitted through the front door.

Use of common areas:

- Keyarm zone

If the entry/exit route in the common area is programmed as a keyarm zone, when it is activated all areas in the Common area are SET. Deactivating the keyarm zone UNSETs all areas in the Common Areas.

- Multiple keypads

If areas assigned to the common area have their own keypads for entry/exit, it is important that the exit times associated with those areas provide sufficient time to allow the user to reach the common area exit. This is in case the area being armed is the last un-armed area on the system and therefore will trigger arming of the entire common area.

As a rule it is advisable to use common areas in installations that have only one keypad located at the common access point, i.e. front door access to the entire building.

19 Audio/Video Verification

To set up Audio/Video Verification on an SPC system:

1. Install and configure Audio Expander (s)
2. Install and configure Video Camera(s).
3. Install and configure Audio Equipment.
4. Configure Verification Zone(s).
5. Test audio playback from verification zones.
6. Assign Verification Zone(s) to physical zone(s).
7. Configure Verification Settings.
8. View images from verification zones in web browser or SPC Pro.

!	*NOTICE*
	Keypads and access control may be disabled for several minutes while sending an audio file to the panel, depending on the size of the file.

19.1 Configuring Video

Overview

Cameras are used for video verification. The SPC panel supports a maximum of four cameras. Only IP cameras are supported and the panel must have an Ethernet port.

ℹ	*NOTICE*
	Cameras must not be shared with other CCTV applications.

Cameras can only be configured with the web browser or SPC Pro. Configuration with the keypad is not supported. SPC Pro provides an easier method of configuration and is recommended.

The panel supports two camera resolutions:

- 320X240
  This setting is recommended if you want to view images on the browser)
- 640X480 (with some restrictions).

The following cameras are supported in addition to other generic cameras:

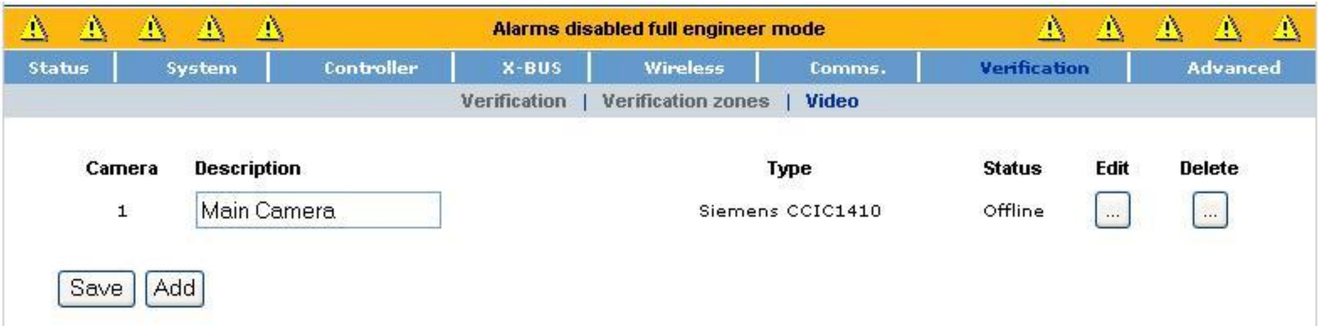
- Siemens CCIC1410 (1/4” VGA IP Colour Camera)
- Siemens CFMC1315 (1/3” 1.3 MP Indoor Dome Colour Camera)

A command string is available as a default to access configuration details for the above cameras directly. Other generic IP cameras require a command string to be entered manually.

Adding Camera

1. Select **Settings>Verification>Video**.

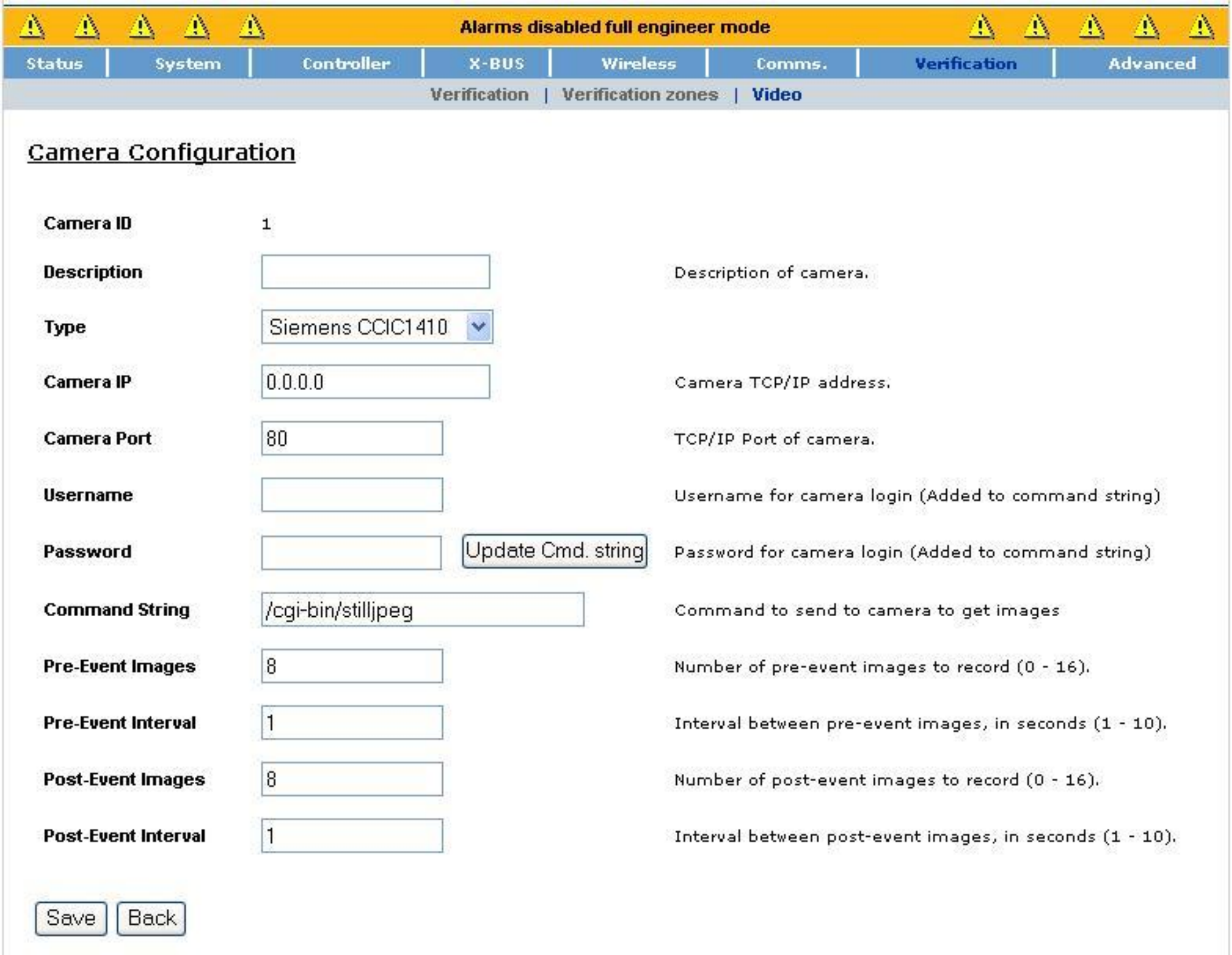
   ⇨ A list of any previously configured cameras is displayed and their online or offline status. A camera is online if an image was obtained from the camera in the previous 10 seconds.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Verification | Verification zones | Video
...
...
Save
Add

Camera	Description	Type	Status	Edit	Delete
1	Main Camera	Siemens CCIC1410	Offline	...	...

2. Click on the **Add** button to add a new camera or the **Edit** button to edit an existing camera.

   ⇨ The following screen is displayed.



Camera Configuration

Camera ID	1	
Description		Description of camera.
Type	Siemens CCIC1410	
Camera IP	0.0.0.0	Camera TCP/IP address.
Camera Port	80	TCP/IP Port of camera.
Username		Username for camera login (Added to command string)
Password		Password for camera login (Added to command string)
Command String	/cgi-bin/stilljpeg	Command to send to camera to get images
Pre-Event Images	8	Number of pre-event images to record (0 - 16).
Pre-Event Interval	1	Interval between pre-event images, in seconds (1 - 10).
Post-Event Images	8	Number of post-event images to record (0 - 16).
Post-Event Interval	1	Interval between post-event images, in seconds (1 - 10).

- Configure the camera with the following parameters:

Camera ID	System generated Camera ID.

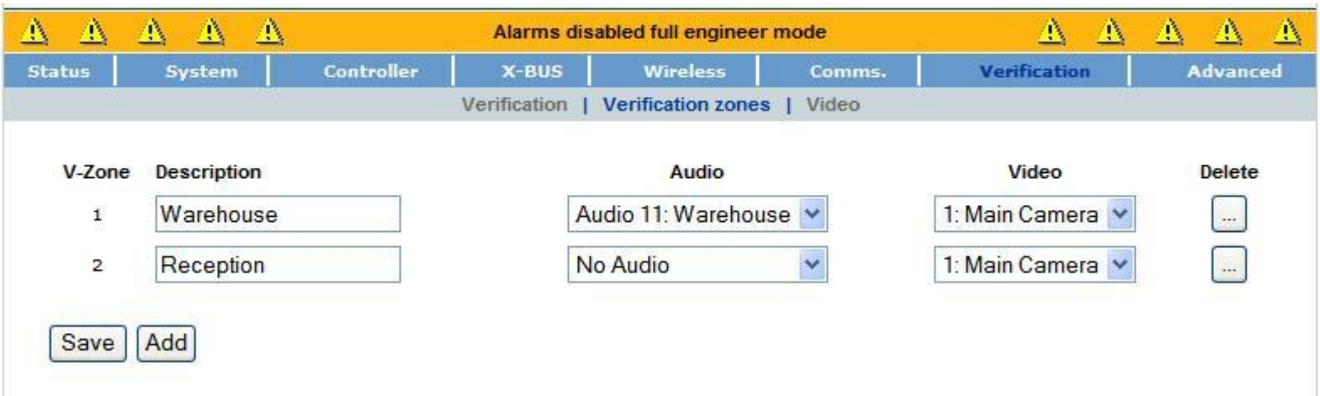
Description	Enter a description to identify this camera.
Type	Select from one of the following camera types: ● Generic ● Siemens CCIC1410 ● Siemens CFMC1315
Camera IP	Enter the IP address of the camera.
Camera Port	Enter the TCP port the camera listens on. Default is 80. **Note:** The CCIC1410 camera can only be used over port 80 only.
Username	Siemens CCIC1410 and CFMC1315 cameras only. Enter a login username for the camera which will be added to the command string below when the **Update Cmd. String** button is pressed.
Password	Siemens CCIC1410 and CFMC1315 cameras only. Enter a login password for the camera which will be added to the command string below when the **Update Cmd. String** button is pressed.
Command String	Enter the command string to be sent to the HTTP server on the camera in order to obtain images. This string should include the user name and password for the camera. Consult the camera documentation for the specific string required for the camera type selected. SPC Pro can configure this automatically if connected to a Siemens CCIC1410 or CFMC1315 camera over a LAN. The default command string for a Siemens CCIC1410 or CFMC1315 camera with no password is "/cgi-bin/stilljpeg".
Pre-event images	Enter the number of pre-event images to record (0 - 16). Default is 8.
Pre-event interval	Enter the time interval, in seconds, between pre-event images (1 - 10). Default is 1 second.
Post-event images	Enter the number of post-event images to record (0 – 16). Default is 8.
Post-event interval	Enter the time interval, in seconds, between post-event images, in seconds (1 - 10). Default is 1 second.

19.2 Configuring Verification Zones

To create a verification zone

1. Go to **Settings>Verification>Verification** zones.

   ⇨ A list of any existing verification zones is displayed.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Verification | Verification zones | Video
Save
Add

V-Zone	Description	Audio	Video	Delete
1	Warehouse	Audio 11: Warehouse	1: Main Camera	...
2	Reception	No Audio	1: Main Camera	...

2. Click on the **Add** button.
1. Enter a **Description** for the zone.
2. Select an **Audio** expander from the drop down list.
3. Select a **Video** from the drop down list.
4. Click on the **Save button**.
5. Assign this verification zone to a physical zone on the SPC system. (See Editing a Zone [→ 164])

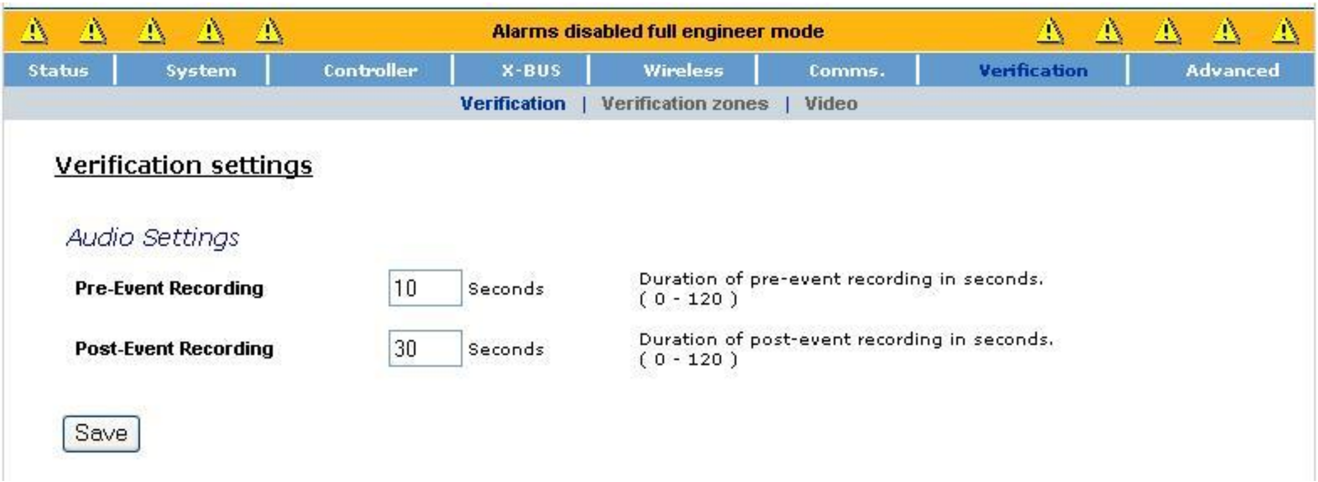
The audio input and output for the verification zone can be tested by the engineer only in SPC Pro.

19.3 Configuring Verification Settings

Note: The following settings apply to all verification zones [→ 256].

- Select **Settings>Verification>Verification**.

  ⇨ The following screen is displayed.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Verification | Verification zones | Video
Save

Verification settings

Audio Settings

Pre-Event Recording 10 Seconds Duration of pre-event recording in seconds. (0 - 120)

Post-Event Recording 30 Seconds Duration of post-event recording in seconds. (0 - 120)

- Configure the following settings.

Pre-event recording	Enter a required duration of pre-event audio recording, in seconds

	(0 - 120). Default is 10.
Post-event recording	Enter a required duration of post-event audio recording, in seconds (0 - 120). Default is 30.

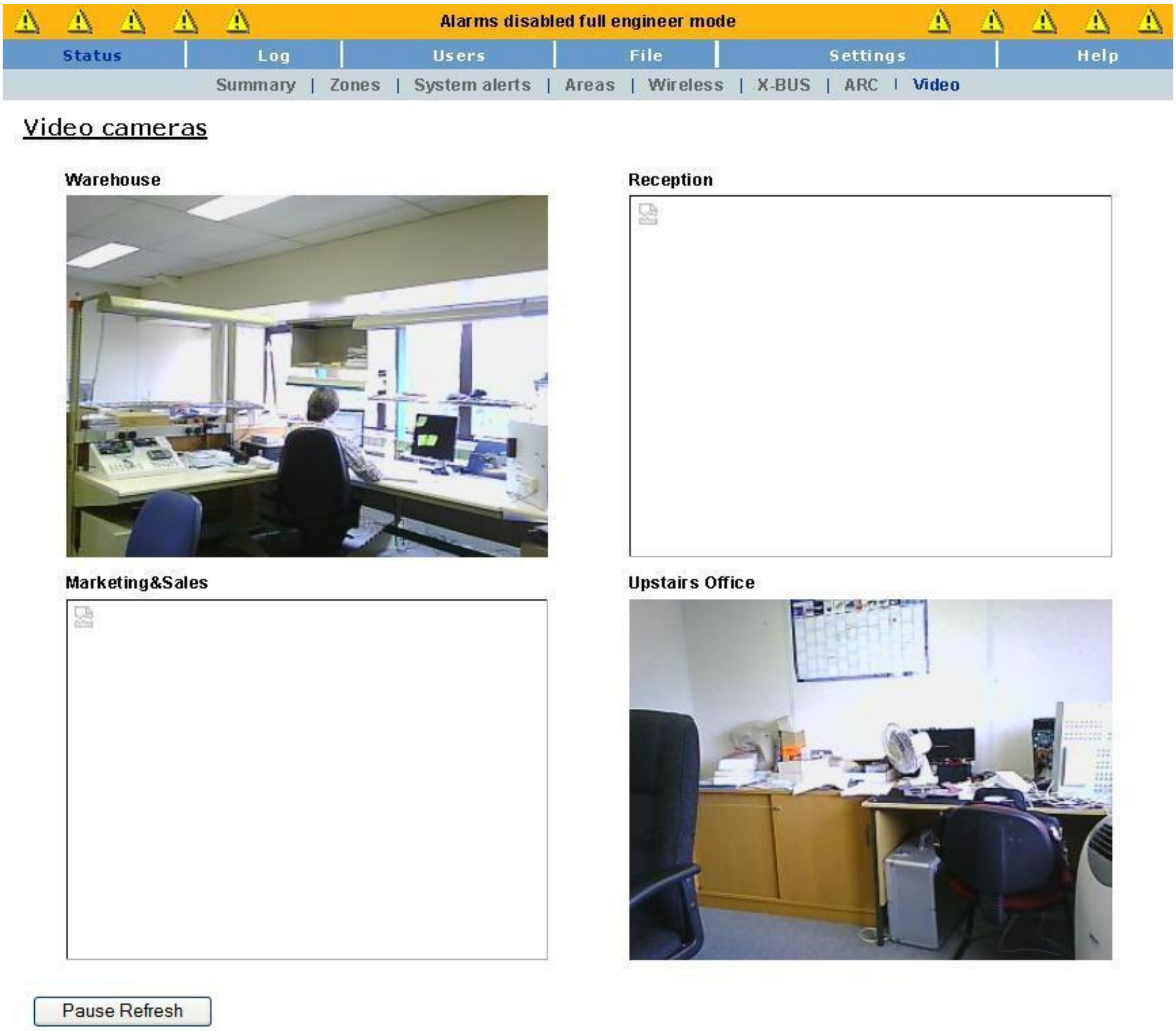
19.4 Viewing Video Images

Video images from the configured cameras can be viewed in the web browser in Full or Soft Engineer modes. This functionality is also available to users that have the View Video right in their profile. (See Setting User Rights [→ 129]) The Web Access right must also be enabled for this functionality.

The View Video right can also be set on the keypad and in SPC Pro (‘Video in Browser’ setting).

To view images:

- In Full Engineer, Soft Engineer and User mode, select **Status>Video**.
  - ⇨ All the configured and operational cameras (up to the maximum of four) are displayed in the **Video Cameras** page. Only two cameras are available in the following example.


⚠ ⚠ ⚠ ⚠ ⚠ Alarms disabled full engineer mode ⚠ ⚠ ⚠ ⚠ ⚠
Status | Log | Users | File | Settings | Help
Summary | Zones | System alerts | Areas | Wireless | X-BUS | ARC | Video
Video cameras
Warehouse
Reception
Marketing&Sales
Upstairs Office
Pause Refresh

The images are automatically refreshed as per the interval settings for the camera. (See Configuring Video [➙ 254])

Click on the **Pause Refresh** button to retain the current image on the screen and pause refreshing. Click on the **Resume Refresh** button to enable the panel to resume refreshing the images.

Note: Ensure that a resolution of 320 x 240 is selected for the cameras that will be displayed in the browser otherwise images may not be displayed correctly. The higher resolution of 640 x 480 can be used for operation with SPC Pro and SPC Com.

See also

- Adding / Editing user [➙ 129]

19.5 Configuring Video

Overview

Cameras are used for video verification. The SPC panel supports a maximum of four cameras. Only IP cameras are supported and the panel must have an Ethernet port.

Cameras can only be configured with the web browser or SPC Pro. Configuration with the keypad is not supported.

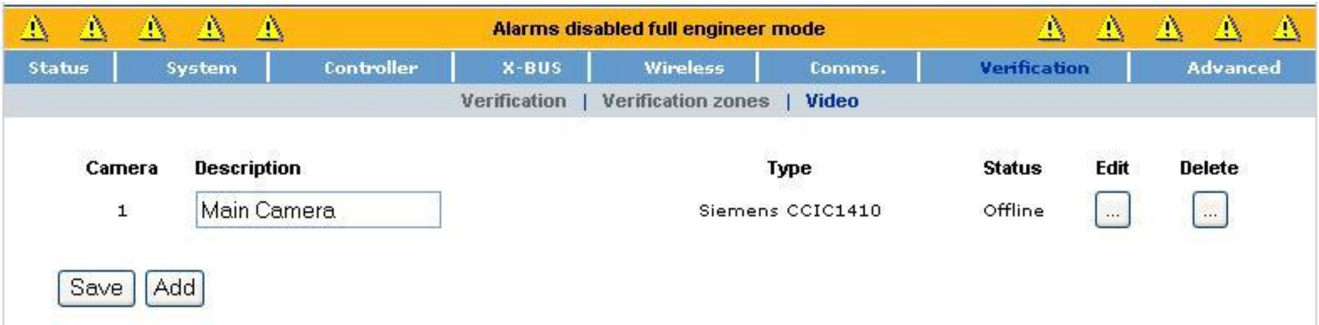
The panel supports two camera resolutions:

- 320X240
  This setting is recommended if you want to view images on the browser)
- 640X480 (with some restrictions).

Adding Camera

1. Select **Settings>Verification>Video**.

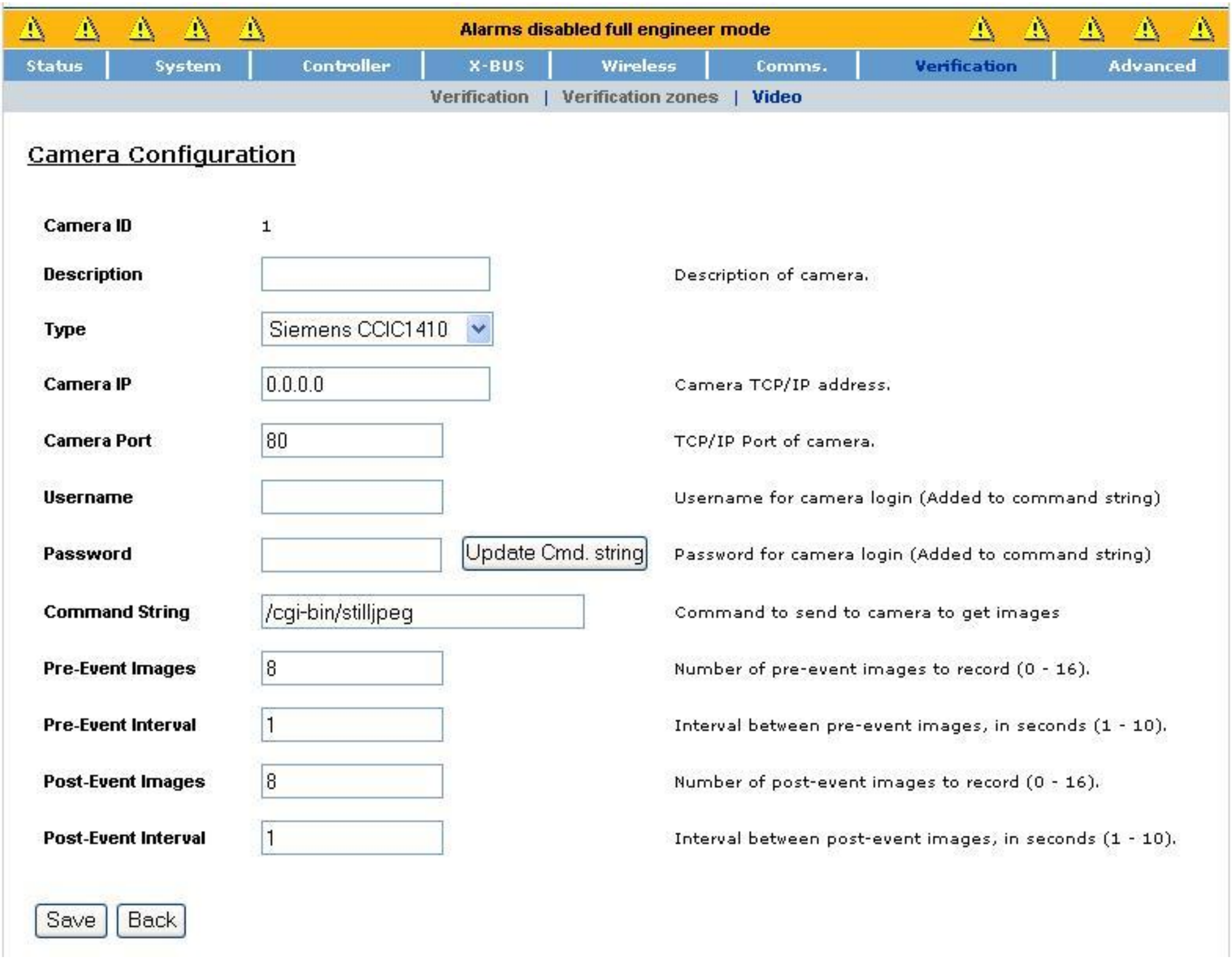
   ⇨ A list of any previously configured cameras is displayed and their online or offline status. A camera is online if an image was obtained from the camera in the previous 10 seconds.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Verification | Verification zones | Video
Save
Add

Camera	Description	Type	Status	Edit	Delete
1	Main Camera	Siemens CCIC1410	Offline	...	...

2. Click on the **Add** button to add a new camera or the **Edit** button to edit an existing camera.

   ⇨ The following screen is displayed.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Verification | Verification zones | Video
Update Cmd. string
Save
Back

Camera Configuration

Camera ID	1	
Description		Description of camera.
Type	Siemens CCIC1410	
Camera IP	0.0.0.0	Camera TCP/IP address.
Camera Port	80	TCP/IP Port of camera.
Username		Username for camera login (Added to command string)
Password		Password for camera login (Added to command string)
Command String	/cgi-bin/stilljpeg	Command to send to camera to get images
Pre-Event Images	8	Number of pre-event images to record (0 - 16).
Pre-Event Interval	1	Interval between pre-event images, in seconds (1 - 10).
Post-Event Images	8	Number of post-event images to record (0 - 16).
Post-Event Interval	1	Interval between post-event images, in seconds (1 - 10).

- Configure the camera with the following parameters:

Camera ID	System generated Camera ID.
Description	Enter a description to identify this camera.
Type	Select from one of the following camera types: ● Generic ● Siemens CCIC1410 ● Siemens CFMC1315
Camera IP	Enter the IP address of the camera.
Camera Port	Enter the TCP port the camera listens on. Default is 80. **Note:** The CCIC1410 camera can only be used over port 80 only.
Username	Siemens CCIC1410 and CFMC1315 cameras only. Enter a login username for the camera which will be added to the command string below when the **Update Cmd. String** button is pressed.
Password	Siemens CCIC1410 and CFMC1315 cameras only. Enter a login password for the camera which will be added to the command string below when the **Update Cmd. String** button is

	pressed.
Command String	Enter the command string to be sent to the HTTP server on the camera in order to obtain images. This string should include the user name and password for the camera. Consult the camera documentation for the specific string required for the camera type selected. SPC Pro can configure this automatically if connected to a Siemens CCIC1410 or CFMC1315 camera over a LAN. The default command string for a Siemens CCIC1410 or CFMC1315 camera with no password is "/cgi-bin/stilljpeg".
Pre-event images	Enter the number of pre-event images to record (0 - 16). Default is 8.
Pre-event interval	Enter the time interval, in seconds, between pre-event images (1 - 10). Default is 1 second.
Post-event images	Enter the number of post-event images to record (0 – 16). Default is 8.
Post-event interval	Enter the time interval, in seconds, between post-event images, in seconds (1 - 10). Default is 1 second.

20 Seismic Sensors

Vibration sensors, also called seismic sensors, are used to detect intrusion attempts by mechanical means, such as drilling or making holes through walls or safes.

Support for seismic sensors is available only if the installation type for the panel is ‘Financial’.

There are several ways to test seismic sensors. The simplest way to test seismic sensors is by hitting a wall or safe and seeing if the zone opens during a walk test. This means of testing is available with all types of seismic sensors.

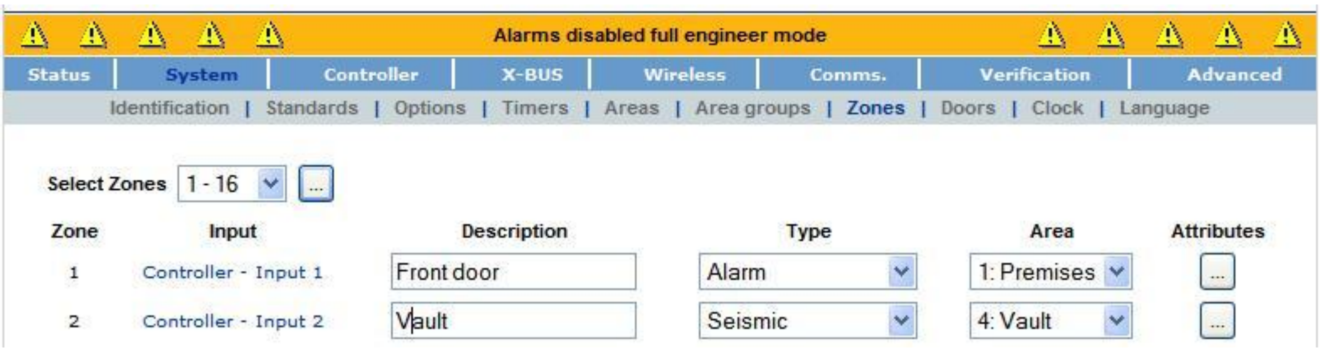
If the seismic sensor is installed with a test transmitter, the following test options are available:

- Manual testing initiated at the keypad or with SPC Pro (not supported by the browser);
- Automatic testing on a periodic basis or when the panel is set using the keypad.

The test transmitter is a small high frequency vibrator that is attached a short distance from the sensor on the same wall. The test transmitter is wired to an output on the panel or an expander.

Configuring Seismic Sensors in the Panel

- Configure a seismic zone. Seismic sensors must be assigned to a zone. (See Editing a Zone [→ 164])



Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language

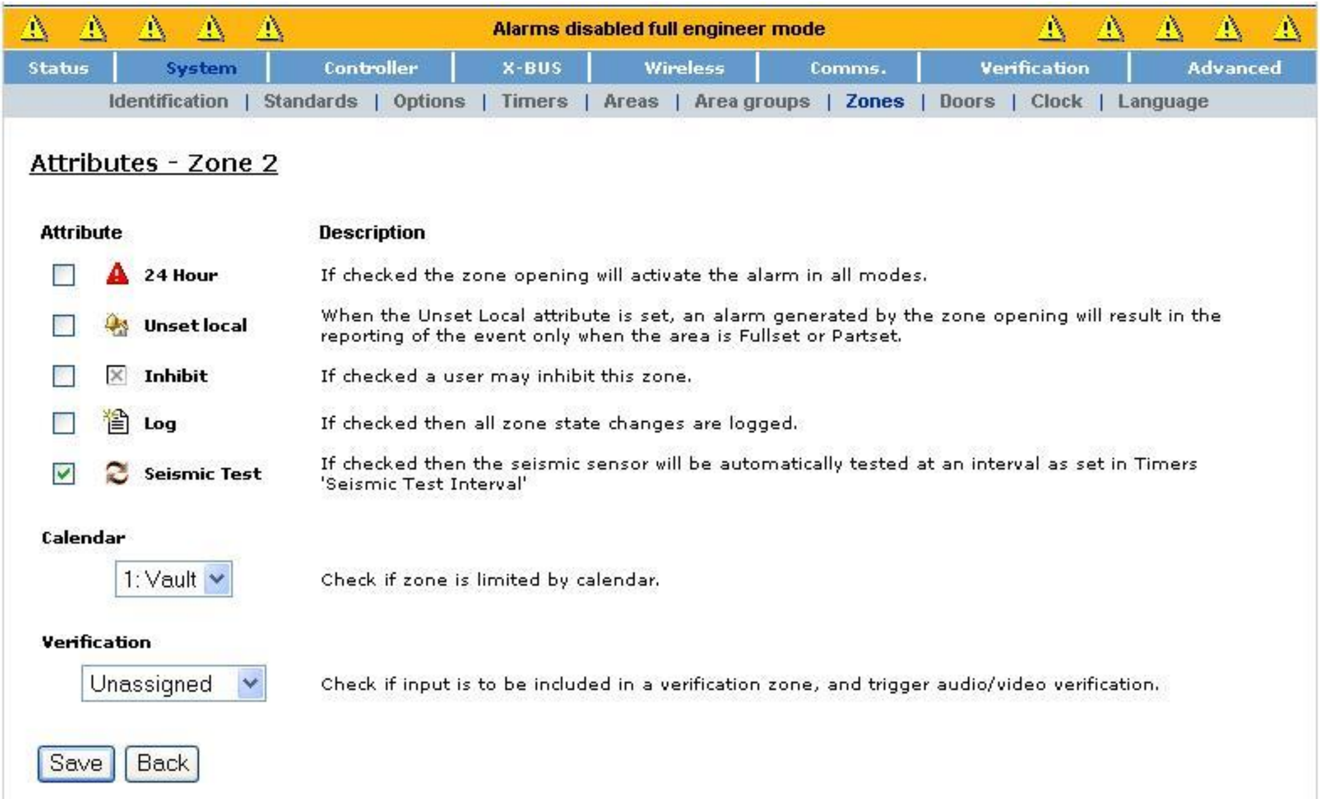
Select Zones 1 - 16

Zone	Input	Description	Type	Area	Attributes
1	Controller - Input 1	Front door	Alarm	1: Premises	...
2	Controller - Input 2	Vault	Seismic	4: Vault	...

Using the Keypad

- Select **FULL ENGINEER->ZONES->(select zone)->ZONE TYPE->SEISMIC**

1. Set the attributes for the zone.
2. Enable automatic testing of the sensor with the **Seismic Test** attribute.


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language
Save
Back

Attributes - Zone 2

Attribute	Description
□ 24 Hour	If checked the zone opening will activate the alarm in all modes.
□ Unset local	When the Unset Local attribute is set, an alarm generated by the zone opening will result in the reporting of the event only when the area is Fullset or Partset.
□ Inhibit	If checked a user may inhibit this zone.
□ Log	If checked then all zone state changes are logged.
☑ Seismic Test	If checked then the seismic sensor will be automatically tested at an interval as set in Timers 'Seismic Test Interval'

Calendar

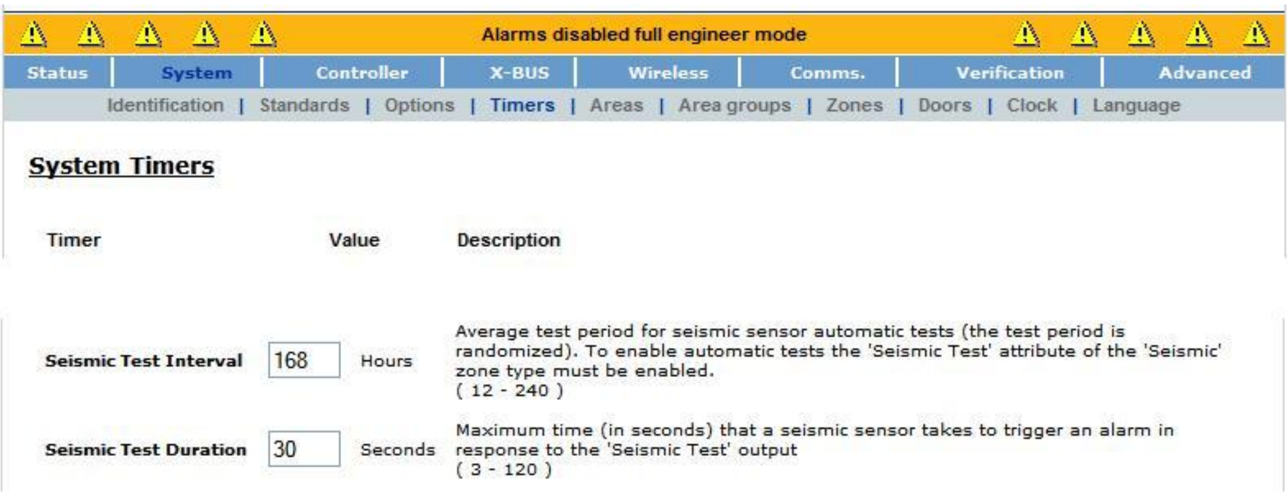
1: Vault — Check if zone is limited by calendar.

Verification

Unassigned — Check if input is to be included in a verification zone, and trigger audio/video verification.

Seismic zones can be controlled by a calendar and can also be assigned to a verification zone.

- Configure timers to specify how often to test seismic zones (default is 7 days) and the duration of the tests. (Automatic Seismic Test zone attribute must be set). (See Timers [➞ 159])


Alarms disabled full engineer mode
Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language

System Timers

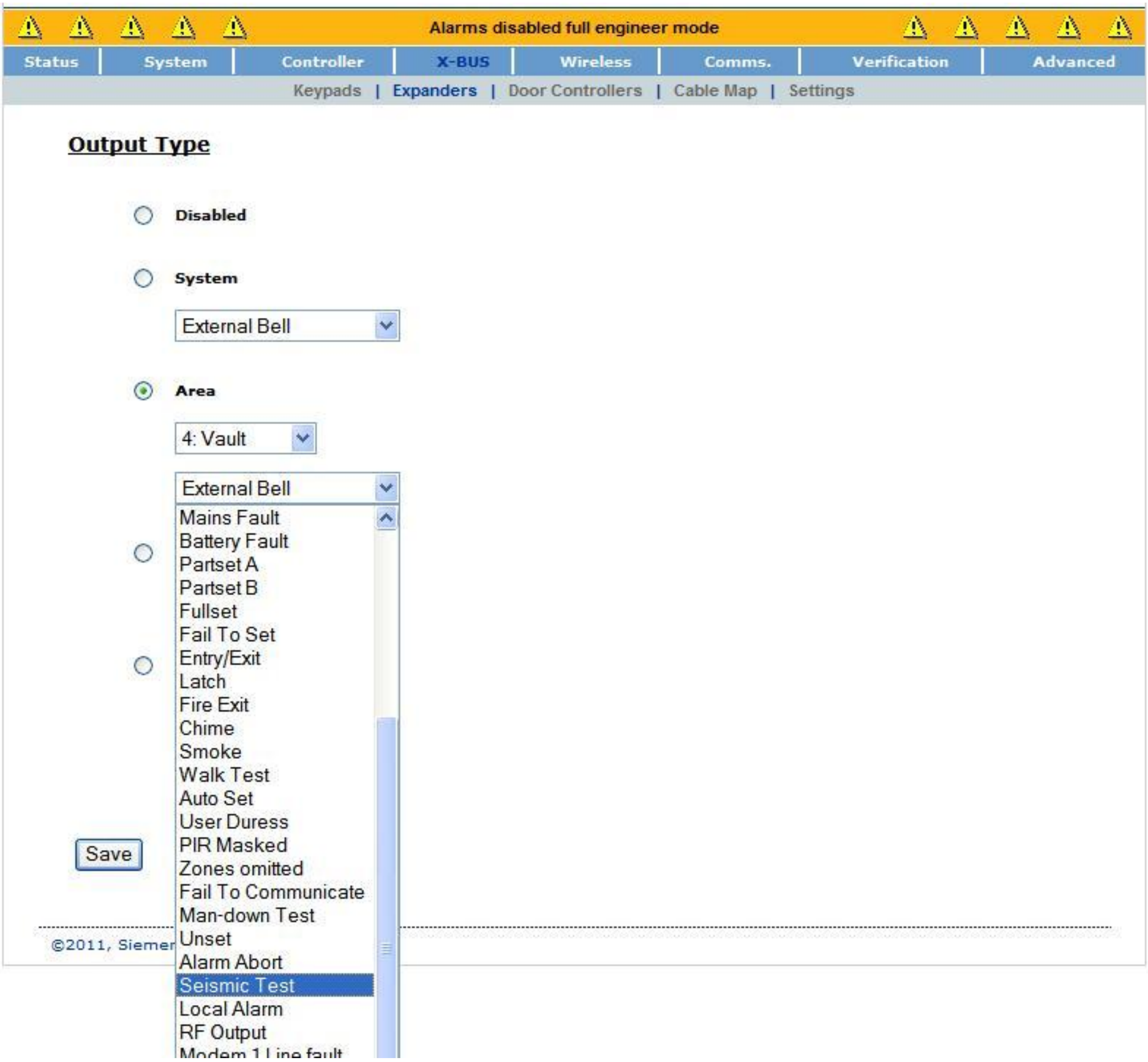
Timer	Value		Description
Seismic Test Interval	168	Hours	Average test period for seismic sensor automatic tests (the test period is randomized). To enable automatic tests the 'Seismic Test' attribute of the 'Seismic' zone type must be enabled. (12 - 240)
Seismic Test Duration	30	Seconds	Maximum time (in seconds) that a seismic sensor takes to trigger an alarm in response to the 'Seismic Test' output (3 - 120)

Using the Keypad

Select **FULL ENGINEER->ZONES->(select zone)->ATTRIBUTES->SEISMIC AUTOTEST**

- Configure an output for testing a seismic zone. (See Output Types and Output Ports [➞ 185])
  The output can be assigned to either the system or an area, if the panel is

configured to use areas as is usually the case in financial environments. The output should only be assigned to the system if the panel does not use areas.



See also

🗎 Editing a zone [→ 164]

20.1 Seismic Sensor Testing

Seismic zones must be configured in order for both manual and automatic tests to be available. The results of either manual or automatic testing are stored in the system event log.

During a seismic test, one or more seismic zones are tested. When a zone is tested, all other zones in the same area are temporarily disabled as there is a single seismic test output per area

20.1.1 Manual and Automatic Test Process

A manual or automatic test operates as follows:

1. The panel activates the Seismic Test Output for the appropriate area(s) in which the seismic zone(s) are to be tested.
2. The panel then waits for all seismic zones under test to open and then verifies that all seismic sensors in the area enter the alarm state within the time configured for the '**Seismic Test Duration'**. Any zone(s) that have not opened within the maximum period are deemed to have failed the test.
3. When all seismic zones in the area are open or the maximum Seismic Test Duration has been reached (whichever comes first), the panel will clear the Seismic Test Output for that area.
4. The panel then waits a fixed time for all seismic detectors in the area to close. Any zone(s) that have not closed are deemed to have failed the test.
5. The panel then waits another fixed period before reporting the test result. The result of the test, either manual or automatic, is stored in the system event log.

The seismic output is normally high, and goes low during tests (i.e. when it is active). If this signal is not suitable for a particular sensor then the physical output can be configured to be inverted.

20.1.2 Automatically Testing Sensors

Seismic sensors are tested either periodically or after the system is set using the keypad.

Periodic Automatic Testing

Periodic automatic tests are performed on all seismic zones for which automatic tests are enabled.

Automatic tests are randomized within the configured test period and are done independently for each area.

All seismic zones in the same area (for which automatic tests are enabled) are tested simultaneously.

The **Seismic Test Interval** configuration option in the Timers [→ 159] menu determines the average test period for seismic sensors automatic tests. The default value is 168 hours (7 days) and the allowed values are in the range 12 – 240 hours.

The test time is random within the specified range +/- 15%. For example, if a test is scheduled every 24 hours, a test may be performed between 20.4 and 27.6 hours after the last test.

A seismic test is performed after a reboot if automatic tests are enabled. If the panel was in Full Engineer mode before reboot, then the test is performed only after the panel is out of Full Engineer mode after a reboot.

If a seismic test fails, a Trouble event is reported (SIA code “BT”). There is also a corresponding Restoration event (SIA code “BJ”).

Automatic Test on Setting

The option **Seismic Test on Set** is configurable in the System Options [→ 153] menu. If enabled, all seismic zones in all areas that are to be set are tested before the usual setting sequence. This applies to keypad operation only.

While the test is being performed, ‘SEISMIC AUTOTEST’ is displayed on the keypad. If the seismic test succeeds, the setting proceeds as normal.

If all areas or an area group or a single area are selected to be set, and a seismic test fails, then ‘SEISMIC FAIL’ will be displayed. Pressing **Return** displays a list of the failed zones which can be scrolled through using the up and down arrow keys.

Depending on the **Inhibit** settings for the failed seismic zones and your user profile, the following can occur:

- If all of the seismic zones that failed the test have the **Inhibit** attribute set, and your user profile user is configured with the **Inhibit** right:

1. Press **Return** on any of the failed zones.

   ⇨ The message “FORCE SET ALL?” is displayed.

2. Press **Return** again to inhibit all seismic zones that failed the test. (Alternatively, go back to the previous menu.)

   ⇨ Setting proceeds as normal.

- If some of the seismic zones that failed the test do not have the **Inhibit** attribute set or your user profile user does not have the **Inhibit** right:
- Press **Return**.

   ⇨ The message ‘FAIL TO SET’ will be displayed and no areas will be set.

There is no automatic seismic test for areas that are auto-set for any reason (for example, areas activated by a calendar or trigger). Likewise there is no automatic seismic test when the system is set with SPC Com, with SPC Pro or the browser. However, there is an automatic seismic test when a virtual keypad is used with SPC Com or SPC Pro.

No event is reported if seismic testing on set fails.

The periodic automatic system test timer restarts after a test is performed after setting.

20.1.3 Manually Testing Sensors

To manually test sensors, select the TEST>SEISMIC TEST option from the TEST menu on the keypad.

A seismic manual test with the keypad can be done by the engineer in Full Engineer mode, and also by a user of type Manager or type Standard:

- An engineer is able to test all sensors in all areas configured in the system using any keypad.
- A user is able to test only the sensors in areas that are both assigned to him and to the particular keypad he is using.

To perform a seismic test in Engineer mode, select FULL ENGINEER ⇒ TEST ⇒ SEISMIC TEST

To perform a seismic test in User mode, select MENUS ⇒ TEST ⇒ SEISMIC TEST

Note: The following instructions apply to both engineer and user modes but please note that only a subset of options may be available to a user.

The following options are available in the SEISMIC TEST menu:

- TEST ALL AREAS
  Tests seismic zones in all available areas if there is more than one area that contains seismic zones.
- ‘*AREA NAME’*
  The names of the areas containing seismic zones are listed individually. When a specific area is selected, the following options are available:

- TEST ALL ZONES
  Test all seismic zones in this area if there is more than one seismic zone.
- '*ZONE NAME'*
  The names of all seismic zones are listed and can be selected for testing individually.

The message 'SEISMIC TEST' is display on the keypad while the test is being performed,

If the test fails, the message 'SEISMIC FAIL' is displayed. If the "i" or VIEW key is pressed, a list of the failed zones is displayed which can be scrolled through.

If the test succeeds, 'SEISMIC OK' is displayed.

Entries are recorded in the event log with the following details:

- user who initiated the test
- result (OK or FAIL)
- area and zone number and name.

No events are reported for manual tests.

21 Appendix

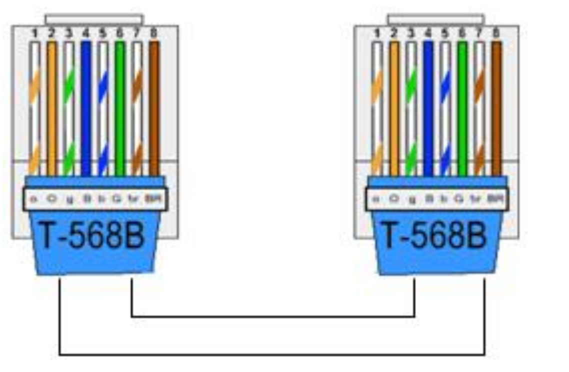
21.1 Network cable connections

IP

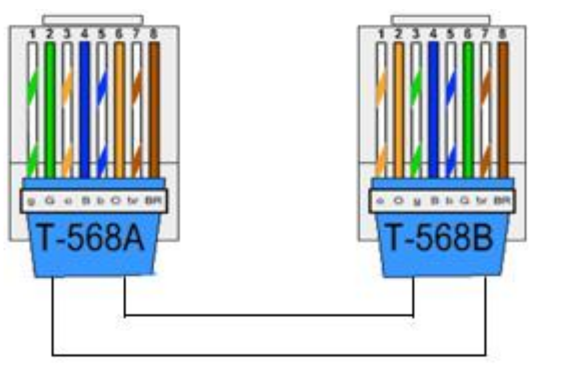
A PC can be connected directly to the Ethernet interface of the SPC controller or via a LAN connection. The tables below show the 2 possible connection configurations.

- If the SPC is connected to an existing network via a hub, then connect a straight through cable from the hub to the SPC and another from the hub to the PC.
- If the controller is not connected to a network (i.e. a hub or switch is not used), then a crossover cable should be connected between the SPC controller and the PC.

Use the straight through cable for connecting the SPC controller to a PC via a hub.

RJ45 PIN	RJ45 PIN	
1 (RX +)	1 (TX +)	
2 (RX -)	2 (TX -)	
3 (TX+)	3 (RX+)	
6 (TX-)	6 (RX-)	

Use the crossover cable for connecting the SPC controller directly to a PC.

RJ45 PIN	RJ45 PIN	
1 (RX +)	3 (TX+)	
2 (RX -)	6 (TX-)	
3 (TX+)	1 (RX +)	
6 (TX-)	2 (RX -)	

21.2 Controller status LEDs

LED	Function
LED 1	Wireless Data FLASHING: wireless data is being received by the wireless module

	OFF: no wireless data is being received
LED 2	Battery Status ON: battery voltage has dropped below the deep discharge level (10.9 V) OFF: battery status OK
LED 3	Mains Supply ON: Mains failure OFF: Mains OK
LED 4	X-BUS Status ON: X-BUS configuration is a loop configuration OFF: X-BUS configuration is an spur configuration FLASHING: Detects end of line Expanders or break in wiring.
LED 5	System Fault ON: a hardware fault has been detected on the board OFF: no hardware fault has been detected
LED 6	Writing to Flash ON: system is writing to flash memory OFF: system is not writing to flash memory
LED 7	Heartbeat FLASHING: system is functioning normally

ON 🟩	OFF □	FLASHING ✳

21.3 Powering expanders from the auxiliary power terminals

The auxiliary 12 V power terminals on the SPC controller
(0 V, 12 V) share a power supply (750 mA) with the Darlington outputs (OP4, OP 5, OP6) enabling connection to a number of external devices and/or expanders to the Controller.

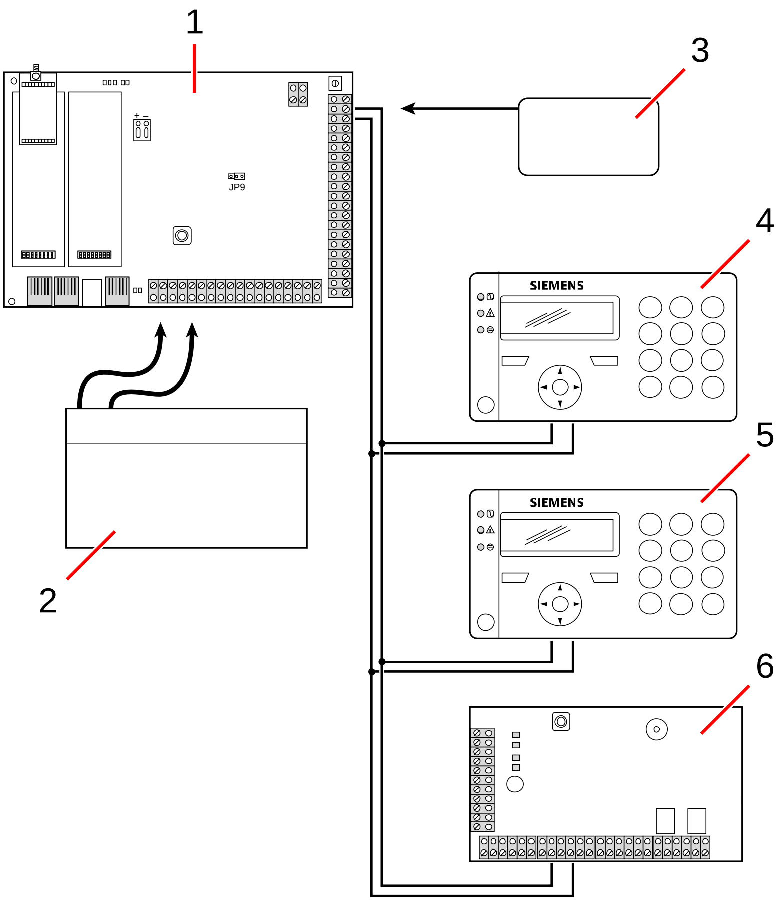
To calculate the number of expanders/keypads that can safely be powered from the auxiliary power terminals, add the total maximum current draw from all of the expanders/keypads to be powered and determine if this total is less than 750 mA.

Please refer to corresponding installation instruction or data sheet of modules, keypads and expanders for current consumption.

Expander 1 Current (mA) + Expander 2 Current (mA) + ….. <750 mA

If the Darlington outputs (OP4, OP5 & OP6) are already powering external devices then the power supplied to these devices from the 750 mA supply must be subtracted to determine the amount of available power from the auxiliary power terminals (0 V 12 V).

If the total maximum current draw from the expanders exceeds 750 mA then a PSU expander should be used to provide additional power.



Powering expanders from the auxiliary power terminals

1	SPC controller
2	Battery
3	Auxiliary 12 V power terminals
4	Keypad
5	Keypad
6	I/O expander

21.4 Calculating the battery power requirements

It is important that adequate stand-by power is available to supply all devices in the event of a mains supply failure. To ensure that enough power is available, always connect the appropriate back-up battery and PSU.

The table below gives an approximation of the maximum load current that can be drawn from each type of battery over the given stand-by periods of 12 hours, 30 hours.

The approximations below assume that the SPC controller PCB is drawing its maximum load (all wired inputs have their EOL resistors fitted) and that the usable output power from the battery is 85 % of its maximum capacity.

0.85 x battery size (Ah)	-	(Icont + Ibell)	=	Imax

Time (hours)				

Battery size = 7 Ah or 17 Ah depending upon SPC enclosure chosen

Time = 12 / 30 h depending upon Security grade

Icont = Quiescent current (in A) for the SPC controller

Ibell = Quiescent current (in A) for the attached external and internal bells

Imax = the maximum current that can be drawn from the controller external Aux output

Amount of current from Aux output using a 7 Ah battery (SPC422x/522x)

COMMS	NONE	PSTN	GSM	PSTN+GSM
Standby time				
12 h	356 mA	331 mA	226 mA	201 mA
30 h	58 mA	33 mA	N / A	N / A

Amount of current from Aux output using a 17 Ah battery (SPC523x)

COMMS	NONE	PSTN	GSM	PSTN+GSM
Standby time				
12 h	750 mA	750 mA	750 mA	750 mA
30 h	342 mA	317 mA	212 mA	187 mA

Amount of current from Aux output using a 7 Ah battery (SPC432x/532x)

COMMS	NONE	PSTN	GSM	PSTN+GSM
Standby time				
12 h	326 mA	301 mA	196 mA	171 mA
30 h	28 mA	N / A	N / A	N / A

Amount of current from Aux output using a 17 Ah battery (SPC533x/633x)

COMMS	NONE	PSTN	GSM	PSTN+GSM
Standby time				
12 h	750 mA	750 mA	750 mA	750 mA

30 h	312 mA	287 mA	182 mA	157 mA

Values listed as N / A indicate that the selected battery does not have the capacity to power the minimum load of just the SPC controller for the given standby time. See page [→ 271] for maximum load of devices and modules.

Only sealed cell valve regulated battery types to be used.

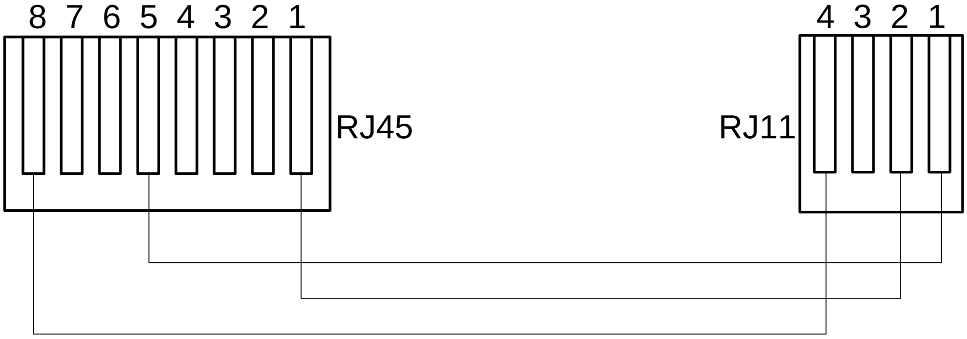
For EN compliance the supplied current needs to be supported by the battery for required stand by time.

21.5 Domestic, Commercial and Financial mode default settings

This table gives the default zone name and types on the controller for each mode of operation. All zones on connected expanders are be categorized as unused until explicitly configured by the installation engineer.

Feature	Domestic mode	Commercial mode	Financial mode
Zone Names			
Controller - Zone 1	Front door	Front door	Front door
Controller - Zone 2	Sitting room	Window 1	Window 1
Controller - Zone 3	Kitchen	Window 2	Window 2
Controller - Zone 4	Upstairs front	PIR 1	PIR 1
Controller - Zone 5	Upstairs rear	PIR 2	PIR 2
Controller - Zone 6	PIR hallway	Fire exit	Fire exit
Controller - Zone 7	PIR landing	Fire alarm	Fire alarm
Controller - Zone 8	Panic button	Panic button	Panic button
Zone Types			
Controller - Zone 1	ENTRY/EXIT	ENTRY/EXIT	ENTRY/EXIT
Controller - Zone 2	ALARM	ALARM	ALARM
Controller - Zone 3	ALARM	ALARM	ALARM
Controller - Zone 4	ALARM	ALARM	ALARM
Controller - Zone 5	ALARM	ALARM	ALARM
Controller - Zone 6	ALARM	FIRE EXIT	ALARM
Controller - Zone 7	ALARM	FIRE	ALARM
Controller - Zone 8	PANIC	PANIC	ALARM

21.6 Wiring of the X10 interface



X10 wiring to the controller

PIN	RJ45	RJ11
TX	8	4
GND	5	1
RX	1	2

21.7 SIA Codes

DESCRIPTION	CODE
AC RESTORAL	AR
AC TROUBLE	AT
BURGLARY ALARM	BA
BURGLARY BYPASS	BB
BURGLARY CANCEL	BC
SWINGER TROUBLE	BD
SWINGER TROUBLE RESTORE	BE
BURGLARY TROUBLE RESTORE	BJ
BURGLARY RESTORAL	BR
BURGLARY TROUBLE	BT
BURGLARY UNBYPASS	BU
BURGLARY VERIFIED	BV
BURGLARY TEST	BX
CLOSING DELINQUENT	CD
FORCED CLOSING	CF

DESCRIPTION	CODE
CLOSE AREA	CG
FAIL TO CLOSE	CI
EARLY TO CLOSE	CK
CLOSING REPORT	CL
AUTOMATIC CLOSING	CP
REMOTE CLOSING	CQ
CLOSING KEYSWITCH	CS
LATE TO OPEN	CT
ACCESS CLOSED	DC
ACCESS DENIED	DD
DOOR FORCED	DF
ACCESS GRANTED	DG
ACCESS DENIED PASSBACK	DI
DOOR LEFT OPEN	DN
ACCESS OPEN	DO
DOOR RESTORAL	DR
REQUEST TO EXIT	DX
EXIT ALARM	EA
EXPANSION TAMPER RESTORE	EJ
EXPANSION MISSING	EM
EXPANSION MISSING RESTORE	EN
EXPANSION RESTORAL	ER
EXPANSION DEVICE TAMPER	ES
EXPANSION TROUBLE	ET
FIRE ALARM	FA
FIRE BYPASS	FB
FIRE CANCEL	FC
FIRE TROUBLE RESTORE	FJ
FIRE RESTORAL	FR
FIRE TROUBLE	FT

DESCRIPTION	CODE
FIRE UNBYPASS	FU
HOLDUP ALARM	HA
HOLDUP BYPASS	HB
HOLDUP TROUBLE RESTORE	HJ
HOLDUP RESTORAL	HR
HOLDUP TROUBLE	HT
HOLDUP UNBYPASS	HU
USER CODE TAMPER	JA
TIME CHANGED	JT
LOCAL PROGRAMMING	LB
MODEM RESTORAL	LR
MODEM TROUBLE	LT
LOCAL PROGRAMMING ENDED	LX
MEDICAL ALARM	MA
MEDICAL BYPASS	MB
MEDICAL TROUBLE RESTORE	MJ
MEDICAL RESTORAL	MR
MEDICAL TROUBLE	MT
MEDICAL UNBYPASS	MU
PERIMETER ARMED	NL
NETWORK LINK IP RESTORE	NR
NETWORK LINK GPRS RESTORE	NR
NETWORK LINK IP FAIL	NT
NETWORK LINK GPRS FAIL	NT
AUTOMATIC OPENING	OA
OPEN AREA	OG
EARLY OPEN	OK
OPENING REPORT	OP
OPENING KEYSWITCH	OS
LATE TO CLOSE	OT

DESCRIPTION	CODE
REMOTE OPENING	OQ
DISARM FROM ALARM	OR
PANIC ALARM	PA
PANIC BYPASS	PB
PANIC TROUBLE RESTORE	PJ
PANIC RESTORAL	PR
PANIC TROUBLE	PT
PANIC UNBYPASS	PU
RELAY CLOSE	RC
REMOTE RESET	RN
RELAY OPEN	RO
AUTOMATIC TEST	RP
POWERUP	RR
REMOTE PROGRAM SUCCESS	RS
DATA LOST	RT
MANUAL TEST	RX
TAMPER	TA
TAMPER BYPASS	TB
TAMPER RESTORAL	TR
TAMPER UNBYPASS	TU
TEST CALL	TX
UNTYPED ALARM	UA
UNTYPED BYPASS	UB
UNTYPED TROUBLE RESTORE	UJ
UNTYPED RESTORAL	UR
UNTYPED TROUBLE	UT
UNTYPED UNBYPASS	UU
BELL FAULT	YA
RF JAM RESTORAL	XH
RF TAMPER RESTORAL	XJ

DESCRIPTION	CODE
RF JAM FAULT	XQ
RF TAMPER	XS
COMMUNICATION FAIL	YC
CHECKSUM FAULT	YF
BELL RESTORED	YH
COMMUNICATION RESTORAL	YK
BATTERY MISSING	YM
PSU TROUBLE	YP
PSU RESTORAL	YQ
BATTERY RESTORAL	YR
COMMUNICATION TROUBLE	YS
BATTERY TROUBLE	YT
WATCHDOG RESET	YW
SERVICE REQUIRED	YX
SERVICE COMPLETED	YZ
SPECIAL SIA EVENTS	
USER DURESS	HA
USER DURESS RESTORE	HR
ENET PANIC ALARM	PA
ENET PANIC RESTORAL	PR
USER PANIC ALARM	PA
ENET FIRE ALARM	FA
ENET FIRE RESTORAL	FR
ENET MEDICAL ALARM	MA
ENET MEDICAL RESTORAL	MR
MDT PANIC	PA
MDT TILT	MA
MDT BELT CLIP	HA
MDT PANIC RESTORE	PR
MDT TILT RESTORE	MR

DESCRIPTION	CODE
MDT BELT CLIP RESTORE	HR
RPA PANIC	PA
RPA PANIC RESTORE	PR
RPA HOLDUP	HA
RPA HOLDUP RESTORE	HR
NON-STANDARD SIA CODES FOR ZONE STATE REPORTING	
ZONE OPEN	ZO
ZONE CLOSE	ZC
ZONE SHORT	ZX
ZONE DISCON	ZD
ZONE MASKED	ZM
OTHER NON-STANDARD SIA CODES	
CAMERA ONLINE	CU
CAMERA OFFLINE	CV

21.8 CID Codes

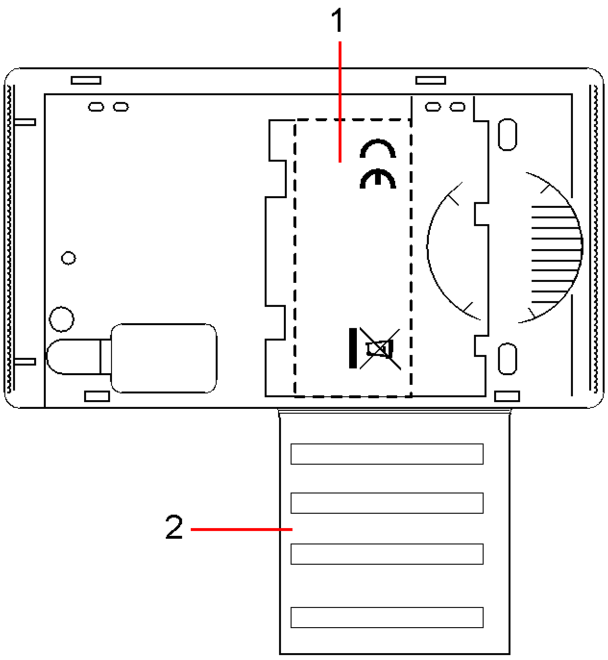
CODE	CID EVENT	DESCRIPTION
100	MEDICAL	Medical and man down alarm and restore.
110	FIRE	
120	PANIC	
121	DURESS	
130	BURGLARY	
134	ENTRYEXIT	
137	TAMPER	Cabinet and auxiliary tamper fail and restore.
139	VERIFIED	Confirmed alarm.
144	SENSOR TAMPER	Zone tamper fail and restore.
150	NON BURGLARY	
300	SYSTEM TROUBLE	PSU fault and restore.
301	AC LOSS	PSU mains fail and restore.
302	BATTERY LOW	

305	RESET	System reset.
311	BATTERY FAIL	PSU battery fail and restore.
312	PSU OVERCURRENT	PSU internal, external and auxiliary fuse fail and restore.
320	SOUNDER	Bell tamper fail and restore.
330	SYSTEM PERIPHERAL TROUBLE	PSU fault and restore.
333	EXP FAIL	X-Bus cable and node communications fault and restore.
338	EXP BATT	X-Bus node battery fault and restore.
341	EXP TAMPER	X-Bus tamper and RF antenna tamper alarm and restore.
342	EXP AC	X-Bus node mains fault and restore.
344	RF JAM	RF jam fault and restore.
351	TELCO 1	Primary modem fault and restore.
352	TELCO 2	Secondary modem fault and restore.
380	SENSOR TROUBLE	
401	OPENCLOSE	Unset, post alarm and fullset.
451	EARLY OPENCLOSE	
453	FAIL TO OPEN	Late to unset.
454	FAIL TO CLOSE	Late to set.
456	EVENT PARTSET	Partset A and B.
461	CODETAMPER	User code tamper.
466	SERVICE	Engineer mode enabled and disabled.
570	BYPASS	Zone inhibited and uninhibited, zone isolated and un-isolated.
601	MANUAL TEST	Modem manual test.
602	AUTO TEST	Modem automatic test.
625	TIME RESET	Time set.

21.9 Overview of keypad types

Keypad type	Model no.	Basic Functionality	Proximity Detection	Audio
Standard Keypad	SPCK420	✓	-	-

Keypad with PACE	SPCK421	✓	✓	-
Comfort Keypad	SPCK620	✓	✓	-
Comfort Keypad with Audio/CR	SPCK623	✓	✓	✓



Keypad Label SPCK420/421/422

1	Label on inside of Keypad
2	Pull-down label for providing installer details. Fill in all relevant details when installation is complete.

21.10 User PIN combinations

The system supports 4, 5, 6, 7 or 8 PIN Digits for each user (User or Engineer PINs). The maximum number of logical combinations/variations for each number of PIN digits can be found in the table below.

Number of digits	Number of variations	Last valid user codes
4	10,000	9999
5	100,000	99999
6	1,000,000	999999
7	10,000,000	9999999
8	100,000,000	99999999

The maximum number of logical combinations/variations is calculated by:

$10^{\text{No of digits}}$ = Number of variations (including the User or Engineer PIN)

The default Engineer PIN is 1111. See Engineer PINs [→ 68] for more details.

21.11 Duress PINs

The last user PIN within each number of digits, i.e. for a 4 digit PIN this would be 9999, a duress PIN is not allowed on this user PIN.

The last user PIN that is allowed to have duress is the number of variations '-2' or '-3' depending if Duress +1 or Duress +2 is used respectively i.e. for a 4 digit user PIN using Duress +1 the total number of variations is 10,000 minus 2 = 9998 which is the last user PIN that can be allocated duress.

If Duress +2 is used then the total number of variations is 10,000 minus 3 = 9997, which is the last user PIN that can be allocated duress. Once a system has been configured for Duress +1 or Duress +2 and users allocated, it **must** not be changed unless all the users are deleted and re-allocated user PINs.

21.12 Automatic inhibits

The system supports automatic inhibits in the following instances.

21.12.1 Zones

When the UK & Commercial are selected (see Standards [→ 150]), the system will provide DD243 functionality. In this instance the system will inhibit zones under the following conditions:

- Entry zone will not cause an alarm signal to the central station and cannot be part of a confirmed alarm and hence will be effectively inhibited as required by DD243.
- If a single zone is triggered and another zone is not triggered within the confirmation time (30 min default) but the first zone is still triggered, then the first zone will be automatically be inhibited and no further alarms will be triggered from this zone during the set period.

21.12.2 Access PINs

For Grade 2 systems: After 10 unsuccessful attempts with the incorrect PIN, the keypad or browser will be disabled for 90 s; after a further 10 attempts with the incorrect PIN, the keypad or browser will be disabled for a further 90 s. Once a correct PIN has been entered, it will reset the counter back to zero allowing for a further 10 attempts before disablement.

For Grade 3 systems: After 10 unsuccessful attempts with the incorrect PIN, the keypad or browser will be disabled for 90 s; after each further attempt with an incorrect PIN the keypad or browser will be disabled for a further 90 s. Once a correct PIN has been entered it will reset the counter back to zero allowing for a further 10 attempts before disablement.

21.12.3 Engineer Access

An Engineer can only access the system if permitted by a ‘Manager’ user type (see ‘Engineer’ attribute in User Rights [→ 130]) and only for a specified time duration (see ‘Engineer Access’ in Timers [→ 159]).

21.12.4 Keypad User Logoff

If no keys are pressed on a keypad for a specific duration (see ‘Keypad Timeout’ in Timers [→ 161]), the user is automatically logged off.

21.13 Wiring of mains cable to the controller

Requirements:

A readily accessible approved disconnect device must be incorporated in the building installation wiring. This must disconnect both phases at the same time. Acceptable devices are switches, circuit breakers, or similar devices

- Minimum size conductor used for connecting mains is 1.5 mm square
- The circuit breakers must have a maximum rating of 16 A

The mains cable is secured to the metal V shaped bend in the base plate via a tie wrap such that the metal bend is between the cable and the tie wrap. Ensure that the tie wrap is applied to the supplementary insulation of the mains cable i.e. the outer PVC cable sleeve. The tie wrap must be pulled extremely tightly such that when the cable is tugged there is no movement in the cable relative to the tie wrap.

The Protective Earthing conductor should be fitted to the terminal block in such a way that if the mains cable should slip in its anchorage, placing a strain on the conductors, the Protective Earthing conductor will be the last item to take the strain.

The mains cable must be an approved type and marked HO5 VV-F or HO5 VVH2-F2.

The plastic tie wrap must be flammability rated V-1.

21.14 Maintenance controller

The system should be serviced in accordance with the service schedule that is in place. The only replaceable parts on the controller are the mains fuse, standby battery and the time & date battery (PCB mounted).

It is recommended that during a service the following be checked:

- The Event Log to check if any standby battery tests have failed since last service – if standby battery tests have failed then the standby battery should be checked.
- The standby battery should be replaced as per the servicing schedule to ensure that it has sufficient capacity to hold the system up for the time defined in the system design. The battery should be physically inspected for any deformation of the casing or any sign of leakage; if any of these conditions exist the battery should be immediately replaced.

ℹ	*NOTICE*
	The new battery should be of the same capacity or greater (up to the maximum the system can accommodate).

- If the main fuse blows then the system should be checked for any reasons. The fuse should be replaced by a fuse with the same rating. The rating is stated on the system label in the rear of the cabinet.
- The time & date onboard PCB lithium battery is only used when the system is left un-powered; in this state that battery has a life of approximately 5 years. The battery should be visually checked once a year and all power removed from the system to ensure that system retains the time & date. If the system does not retain the time and date the battery should be replaced with a new Lithium cell type CR1216.
- All electrical connections should be checked to ensure that the insulation is in place and there is no risk of shorting or becoming disconnected.
- It is also recommended that any firmware update release notes be checked for any additional updates that may improve the security of the system.
- Check all physical mountings are intact. Any broken mountings should be replaced with the same parts.

21.15 Maintenance Smart PSU

The system should be serviced in accordance with the service schedule that is in place. The only replaceable parts on the Smart PSU are the mains fuse and standby battery.

It is recommended that during a service the following be checked:

- The controller Event Log to check if any standby battery tests have failed since last service – if standby battery tests have failed then the standby battery should be checked.
- The standby battery should be replaced as per the servicing schedule to ensure that it has sufficient capacity to hold the system up for the time defined in the system design. The battery should be physically inspected for any deformation of the casing or any sign of leakage; if any of these conditions exist the battery should be immediately replaced.

ℹ	*NOTICE*
	The new battery should be of the same capacity or greater (up to the maximum the system can accommodate).

- Check the LEDs on the PSU control board are in the expected state. See Smart PSU document for LED details.
- If the main fuse blows then the system should be checked for any reasons. The fuse should be replaced by a fuse with the same rating. The rating is stated on the system label in the rear of the cabinet.
- All electrical connections should be checked to ensure that the insulation is in place and there is no risk of shorting or becoming disconnected.
- It is also recommended that any firmware update release notes be checked for any additional updates that may improve the security of the system.
- Check all physical mountings are intact. Any broken mountings should be replaced with the same parts.

21.16 Zone types

The zone types on the SPC system are programmable from both the browser and keypad. The table below gives a brief description of each zone type available on the SPC system. Each zone type activates its own unique output type (an internal flag or indicator) that can then be logged or assigned to a physical output for activation of a specific device if required.

Zone Type	Processing Category	Description
ALARM	Intruder	This zone type is the default zone type setting and is also the most frequently used zone type for standard installations. An Open, Disconnected, or Tamper activation in any mode (except unset) causes an immediate full alarm. In the Unset mode, Tamper conditions are logged, causing the alert message ZONE TAMPER and triggering a local alarm. In Partset A, Partset B and Full Set modes, all activity is logged.
ENTRY/EXIT	Intruder	This zone type should be assigned to all zones on an entry/exit route (i.e. a front door or other access area to the building or premises). This zone type provides an entry and exit time delay. The entry timer controls this delay. When the system is being full set, this zone type provides an exit delay allowing time to vacate an area. The exit timer controls this delay. In Part set A mode, this zone type is inactive.
EXIT TERMINATOR	Intruder	This zone type is used in conjunction with a push button on an exit route and acts as an exit terminator – that is, it provides an infinite exit delay period and will not allow the system to set until the button is pressed.
FIRE	Hold-up	Fire zones are 24-hour zones for fire monitoring and their response is independent of panel operating mode. When any fire zone opens, a full alarm is generated and the FIRE output type is activated. If the ‘Report only’ attribute is set then activation will only be reported to the central station and a Full Alarm will not be generated.
FIRE EXIT	Hold-up	This is a special type of 24-hour zone for use with fire exit doors that should never be opened. In Unset mode, an activation of this zone will trip the Fire-X output, causing alert messages and sounding the keypad buzzer and internal sounder.
LINE	Fault	Telemetry line monitoring input. This is usually used in conjunction with a telephone line health output from an external digital dialer or direct line communication system. When activated, it produces a local alarm in Unset mode and a full alarm in all other modes.
PANIC ALARM	Hold-up	This zone type is active on a 24-hour basis and activated via a panic button. When a Panic zone is activated it will report a Panic event, independent of panel arming mode. All activation’s are logged and reported if log attribute is active. If the SILENT attribute is set then the alarm will be silent (Activation is reported to ARC), otherwise it will generate a Full alarm.
HOLD-UP ALARM	Hold-up	This zone type is active on a 24-hour basis and activated via a button. When a Hold-up zone is activated it will report a Hold-up event, independent of panel arming mode. If the SILENT attribute is set then the alarm will be silent, otherwise it will generate a full alarm. All activations are logged and reported if log attribute is active.
TAMPER	Tamper	When open in the Unset mode, a Local Alarm is generated. If the system is Full Set, a Full alarm is generated. If the Security Grade of the system is set to Grade 3 then an engineer code is required to restore the alarm.
FAULT ZONE	Fault	Fault zones are 24 hour zones that are applicable to a particular device,

		for example, a PIR. The fault zone type triggers the Fault output. An alert is sent to the keypad in Set mode.
TECHNICAL	Intruder	The tech zone controls a dedicated tech zone output. When a tech zone changes state, the tech zone output will follow. That is: ● When the tech zone opens, tech zone o/p triggers on ● When the tech zone closes, tech zone o/p goes off If more than one tech zone has been assigned, the tech zone output will remain on until all tech zones are closed.
MEDICAL	Hold-up	This zone type is used in conjunction with radio or hardwired medical switches. Activation in any mode will: ● Trigger the medical digital communicator output (unless Local attribute is set) ● Cause the panel buzzer to sound (unless Silent attribute is set) ● Display the message Medic Alarm
KEYARM	Intruder	This zone type is normally used in conjunction with a key lock mechanism. A Keyarm zone will SET the System / Area / Common Areas when it is OPENED and will UNSET the System/Area/Common Areas when it is CLOSED. ● If the zone with the keyarm zone type is assigned in an non area system then the keyarm operation will SET/UNSET the system. ● If the zone with the keyarm zone type is assigned to an area then the keyarm operation will SET/UNSET the area. ● If the zone with the keyarm zone type is assigned to a common area then the keyarm operation will SET/UNSET all the areas in the common area. ● If the ‘Open only’ attribute is set then the armed status of the System / Area / Common Areas will toggle on each opening of the key lock. (i.e. Open once to SET the system, Close and Open again to UNSET) ● If the ‘Fullset Enable’ attribute is set then zone activation will only Fullset the system. ● If the ‘Unset Enable’ attribute is set then zone activation will only unset the system. Keyarming will force set the system/area and auto-inhibit any open zones or fault conditions.
SHUNT	Intruder	This zone type is only available in Commercial Mode of operation. Though the Shunt Alarm Zone type can be set in Domestic Mode of operation, it has no effect. This zone type when opened inhibits all zones that have the shunt attribute set. This operation applies for both SET and UNSET modes. As soon as the shunt zone is closed, the zones with the shunt attribute set will become un-inhibited again.
X-SHUNT	Intruder	This zone type is only available in Commercial Mode of operation. A zone programmed with the x-shunt zone type inhibits the next consecutive zone on the system whenever it is opened. This operation applies for both SET and UNSET modes. As soon as the x-shunt zone type is closed the next zone becomes de-inhibited again.
LOCK SUPERVISION	Intruder	Only available in Commercial mode. Used to monitor a door lock. System can be programmed not to set unless door is locked.
SEISMIC	Intruder	Only available if the panel is in Financial mode of operation. Vibration sensors, also called seismic sensors, are used to detect intrusion attempts by mechanical means, such as drilling or making holes through walls or safes.

ALL OKAY	Intruder	This zone type enables a special entry procedure to be implemented using a user code and 'All Okay' input. A silent alarm is generated if an All Okay button is not pressed within a configurable time after a user code is entered. (See Areas [→ 165] for details of 'All Okay' configuration) All Okay uses two outputs, Entry Status (Green LED) and Warning Status (Red LED), to indicate entry status using LEDs on the keypad.
UNUSED	Intruder	Allows a zone to be disabled without the need for each zone to have EOL resistors fitted. Any activation on the zone will be ignored.

21.17 Zone attributes

The zone attributes on the SPC system determine the manner in which the programmed zone types function.

Zone attribute	Description
Access	When the 'Access' attribute on a zone is set, then on opening that zone, an alarm will not be generated if either the entry or exit timer is running. When the system is full set the Access attribute is not active and opening the zone will initiate a full alarm. The 'Access' attribute is most often used for PIR sensors located close to an entry/exit zone. It allows the user free movement within the access area while the entry or exit timer is counting down. The 'Access' attribute is only valid for Alarm zone types. All connected devices (Bells - Internal & External, Buzzers, Strobe) are activated. **NOTE**: An alarm zone with Access attribute can automatically be changed to an entry/exit zone in Partset mode if the Partset Access Option is set.
Exclude A	If the 'Exclude A' attribute on a zone is set, then an alarm will not be generated by that zone opening while the panel is in the Partset A mode. The 'Exclude A' attribute is valid for Alarm zone type and Entry/Exit zones only. A FULL alarm is generated if a zone with the EXCLUDE A attribute is opened while the system is in FULLSET or PARTSET B Mode (Bells - Internal & External, Strobe).
Exclude B	When the 'Exclude B' attribute is set, the zone opening will not generate an alarm while the panel is in the Partset B mode. The 'Exclude B' attribute is valid for Alarm zone type and E/Exit zones only. A FULL alarm is generated if a zone with the EXCLUDE B attribute is opened while the system is in FULLSET or PARTSET A Mode (Bells - Internal & External, Strobe).
24 Hour	If a Zone is assigned the '24 Hour' attribute, then it is active at all times and will cause a full alarm if opened in any mode. This attribute can only be assigned to the ALARM zone type. Generates a FULL Alarm in UNSET, SET and PARTSET modes. **NOTE**: The 24 Hour attribute overrides the settings of any of the other attributes for a particular alarm zone.
Local	When the 'Local' attribute is set, an alarm generated by a zone opening will not result in the external reporting of the event. The 'Local' attribute is valid for Alarm, E/Exit, Fire, Fire Exit and Medic zone types.
Unset Local	When this attribute is set, an alarm generated by the zone opening when the area is fullset or partset will be reported in the usual way. However, if the area is unset there will be only a local alarm i.e keypad buzzer, LED flash and zone display. This attribute is only applicable to Alarm, Fire and Seismic zones.

Double Knock	Use this attribute to deal with troublesome detectors. (i.e. some detectors may generate activation signals spuriously, thereby inadvertently trigger alarms on the system). If the same double knock zone activates twice during the double knock period, then an alarm is generated. Double knock time is set in seconds (see page [→ 159]). Two open actions within that time period will generate an alarm. All open double knock zones are logged when the system is armed.
Chime	When the ‘Chime’ attribute is set for a zone, any opening of the zone during the Unset mode will cause the internal buzzers to activate for a short period (2 seconds approx.). The Chime attribute is valid for Alarm, Entry/Exit, and Tech. zones types.
Inhibit	When the ‘Inhibit’ attribute is set, a user may inhibit this zone. The inhibit operation will disable that fault or zone for one setting period only.
Normal Open	When the ‘Normal Open’ attribute is set, the system expects that a connected detector/sensor is a Normally Open device. (i.e. a sensor is deemed to be activated whenever the contacts are closed on the device).
Silent	If the ‘Silent’ attribute is set then there will be no audio or visual indications of the Alarm. The alarm activation will be sent to the Receiver station. If the system is unset then a warning message is shown on the display.
Log	If this attribute is set then all zone state changes are logged.
Exit Open	If set then zone will be indicated if open during setting.
Frequent	This attribute only applies to Remote Maintenance*. If this attribute is set for a zone, the zone must open for remote service purposes within the defined frequent time period.
End of Line	The End Of Line (EOL) attribute provides a number of input zone wiring configurations on the system.
Analysed	The Analysed Attribute must be set for a zone if that zone is wired with an inertia sensor. The Pulse count and Gross attack values should be programmed for each inertia sensor on the system in accordance with the results of a simple calibration of the device.
Pulse Count	Pulse count trigger level for analysed inertia sensors.
Gross Attack	Gross attack trigger level for analysed inertia sensors
Final Exit	The Final Exit attribute can only be assigned to an Entry/Exit Zone type. Use this attribute to override the standard process of counting down the exit timer whenever the system is full set. When all other entry/exit routes in the premises are closed, fullset the system and close the final exit/entry zone. As soon as the door is closed the Final Exit time will count down to setting the system.
Shunt	A zone with the shunt attribute set will be inhibited whenever a shunt type zone is opened. This provides a mechanism to group the inhibition of zones with the opening of the shunt zone type.
Report Only	This attribute only applies to the FIRE zone type. If this attribute is set, then activation of the fire zone will only report the activation to the central station. No alarms will be generated on site.
Open Only	This attribute only applies to the KEYARM zone type. If set then the setting state of the building will toggle on openings only.
Fullset Enable	This attribute only applies to the KEYARM zone type. If this attribute is set then zone activation will Fullset the system/area. Apply this attribute if it is

	intended that the user should only have the ability to FULLSET the system from a keyarm zone.
Unset Enable	This attribute only applies to the KEYARM zone type. If set then zone activation will Unset the system/area. Apply this attribute if it is intended that the user should only have the ability to UNSET the system from a keyarm zone.
Keyarm Fullset	This attribute only applies to the KEYARM zone type. If set then zone activation will Fullset the system/area.
Keyarm Unset	This attribute only applies to the KEYARM zone type. If set then zone activation will Unset the system/area.
Tech Zone Report	Allows a zone when opened, regardless of the mode to send an alarm to the ARC in FF, CID, SIA and SIA extended. When areas are selected, the alarm will only be sent to the ARC to which the area has been assigned to. This would be a “UA” Unknown Alarm followed by the zone number and text if SIA extended is selected. It will also send an SMS to the end user and engineer if select to do so when the unconfirmed alarm filter is selected.
Tech Zone Display	Allows an opening zone to be displayed on the system keypad. The alert led should also activate. When areas are selected it will only be displayed on the keypad which is assigned to the area in which the zone has been selected. The alert may only be displayed on the keypad when the area is in the unset mode and not in the Part A, Part B and set mode.
Tech Zone Audible	Allows an activated zone to operate the buzzer. This will operate the same as the Tech Zone Display in the different setting modes and on systems with areas.
Tech Zone Delay	Allows the zone to have a programmable delay. The delay is variable from 0 to 9999 seconds and will apply to all Tech Zones. The operation is the same as the Mains Delay timer, if the zone is closed within the delay time, then no alarm is sent to the ARC, no SMS is sent to the user and the Technical Output will not trip. **NOTE**: The Technical Output will not trip until the delay timer has expired.
Armed report only	Openings are reported only in armed mode.
Fire pre-alarm	If enabled and a fire alarm occurs, a Fire Pre-alarm timer is started and internal bells and buzzers are activated. (See Timers [→ 159].) If the alarm is not cancelled within the timer duration, a fire alarm is confirmed, internal and external bells are triggered and an event is sent to ARC.
Fire Recognition	If enabled, a Fire Recognition timer is activated which adds extra time to the Fire Pre-alarm timer duration until a file alarm is reported for the zone. See Timers [→ 159].
Seismic Test/Automatic Sensor Test	A Seismic zone type may be tested manually or automatically. This attribute allows automatic testing to be enabled. Refer to the section on timers [→ 159] for details of how to configure the timer that determines how often the panel tests any seismic zones that have this attribute set. The default value for the timer is 7 days.
Delayed Setting	The ‘Delayed Setting’ attribute is used for Key Arm zones to delay the setting of an area. The delay follows the exit timer for the area to which the key arm is associated.
Verification	Select the configured verification zone to assign to this zone to trigger audio/video verification.

21.18 Applicable attributes to zone types

The following table shows which attributes are applicable to each zone type:

Attribute Type		Access	Exclude A	Exclude B	24 Hour	Local	Unset Local	Double Knock	Chime	Inhibit	NO
	Alarm	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
	Entry/Exit		✓	✓		✓			✓	✓	✓
⊗	Exit Term										✓
	Fire					✓	✓				✓
⊗	Fire Exit					✓				✓	✓
⊗	Line									✓	✓
	Panic										✓
⊗	Holdup										✓
	Tamper										✓
	Tech								✓		✓
	Medical					✓					✓
⊗	Keyarm										✓
	Unused										
⊗	Shunt										✓
⊗	X-Shunt										✓
⊗	Lock Supervision									✓	✓
⊗	Seismic				✓		✓			✓	✓

Attribute Type		Silent	Freq. Use*	Log	EOL	Analyse	Final Exit	Shunt	Report Only	Open Only	Fullset Enable
		✓	✓			✓					
		✓	✓	✓	✓	✓					

⌂		✓	✓	✓							
			✓	✓			✓				
⌂			✓	✓		✓					
⌂			✓	✓							
			✓	✓							
⌂			✓	✓							
			✓	✓							
		✓	✓	✓							
			✓								
⌂		✓	✓	✓				✓	✓	✓	
⌂		✓	✓								
⌂		✓	✓								
⌂			✓								
⌂											

Attribute Type		Key-arm Fullset	Key-arm Unset	Tech Zone Report	Tech Zone Display	Tech Zone Audible	Tech Zone Delay	Armed Report Only	Seismic Test
	Alarm							✓	
	Entry/Exit							✓	
⌂	Exit Term								
	Fire								
⌂	Fire Exit								
⌂	Line								
	Panic								

🏢	Holdup								
	Tamper								
	Tech		✓	✓		✓	✓		
	Medical								
🏢	Keyarm	✓							
	Unused								
🏢	Shunt								
🏢	X-Shunt								
🏢	Lock Supervision								
🏢	Seismic								✓

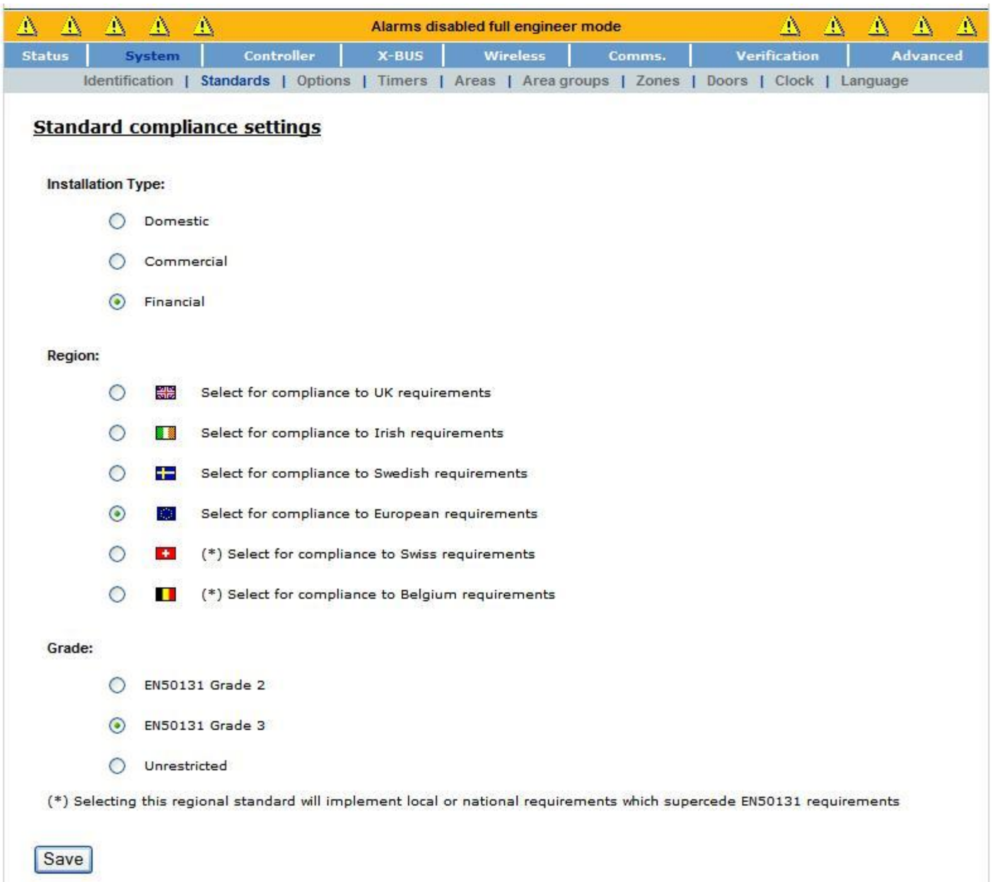
🏢 = Only available in Commercial Mode.

** Only in conjunction with Remote Maintenance.*

21.19 Compliance with EN50131-1 Approvals

Software Requirements

- In **Standards** settings, select **Europe** under **Region** to implement EN50131 requirements.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language
Save

Standard compliance settings

Installation Type:

○ Domestic

○ Commercial

● Financial

Region:

○ Select for compliance to UK requirements

○ Select for compliance to Irish requirements

○ Select for compliance to Swedish requirements

● Select for compliance to European requirements

○ (*) Select for compliance to Swiss requirements

○ (*) Select for compliance to Belgium requirements

Grade:

○ EN50131 Grade 2

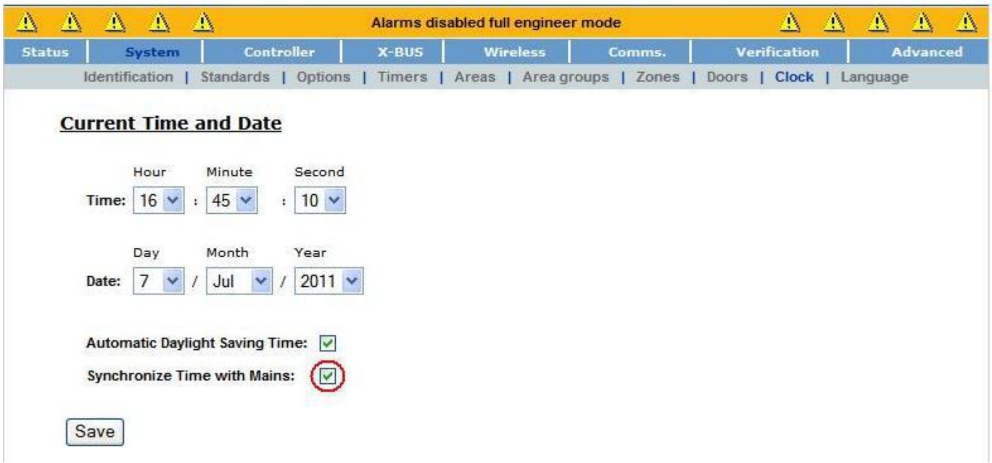
● EN50131 Grade 3

○ Unrestricted

(*) Selecting this regional standard will implement local or national requirements which supercede EN50131 requirements

- Select **Grade 2** or **Grade 3** to implement the grade of EN50131 compliance.

- Select **Synchronization Time with Mains** under **Clock** settings to use mains as clock master.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Identification | Standards | Options | Timers | Areas | Area groups | Zones | Doors | Clock | Language
Save

Current Time and Date

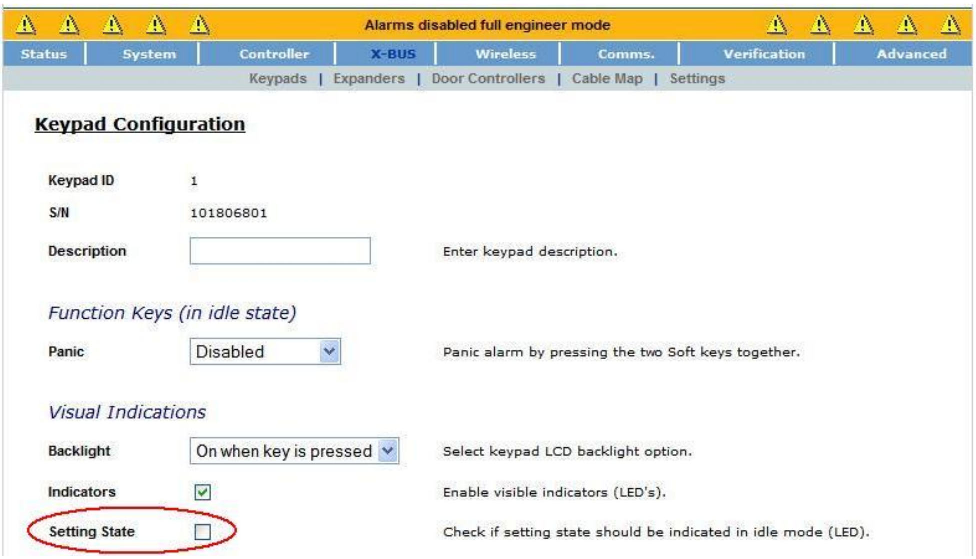
Time: Hour 16 : Minute 45 : Second 10

Date: Day 7 / Month Jul / Year 2011

Automatic Daylight Saving Time: ☑

Synchronize Time with Mains: ☑

- DO NOT select the attribute **Setting State** in the **Keypad** configuration settings for **Visual indications**.


Alarms disabled full engineer mode
Status | System | Controller | X-BUS | Wireless | Comms. | Verification | Advanced
Keypads | Expanders | Door Controllers | Cable Map | Settings

Keypad Configuration

Keypad ID 1

S/N 101806801

Description Enter keypad description.

Function Keys (in idle state)

Panic: Disabled — Panic alarm by pressing the two Soft keys together.

Visual Indications

Backlight: On when key is pressed — Select keypad LCD backlight option.

Indicators ☑ Enable visible indicators (LED's).

Setting State □ Check if setting state should be indicated in idle mode (LED).

Hardware Requirements

- The back tamper kit (SPCY130) must be installed for panels and power supplies for compliance with EN50131 Grade 3.
- EN50131 Grade 3 compliant components must be installed for EN50131 Grade 3 compliant systems.
- Either EN50131Grade 2 or 3 compliant components must be installed for EN50131 Grade 2 compliant systems.

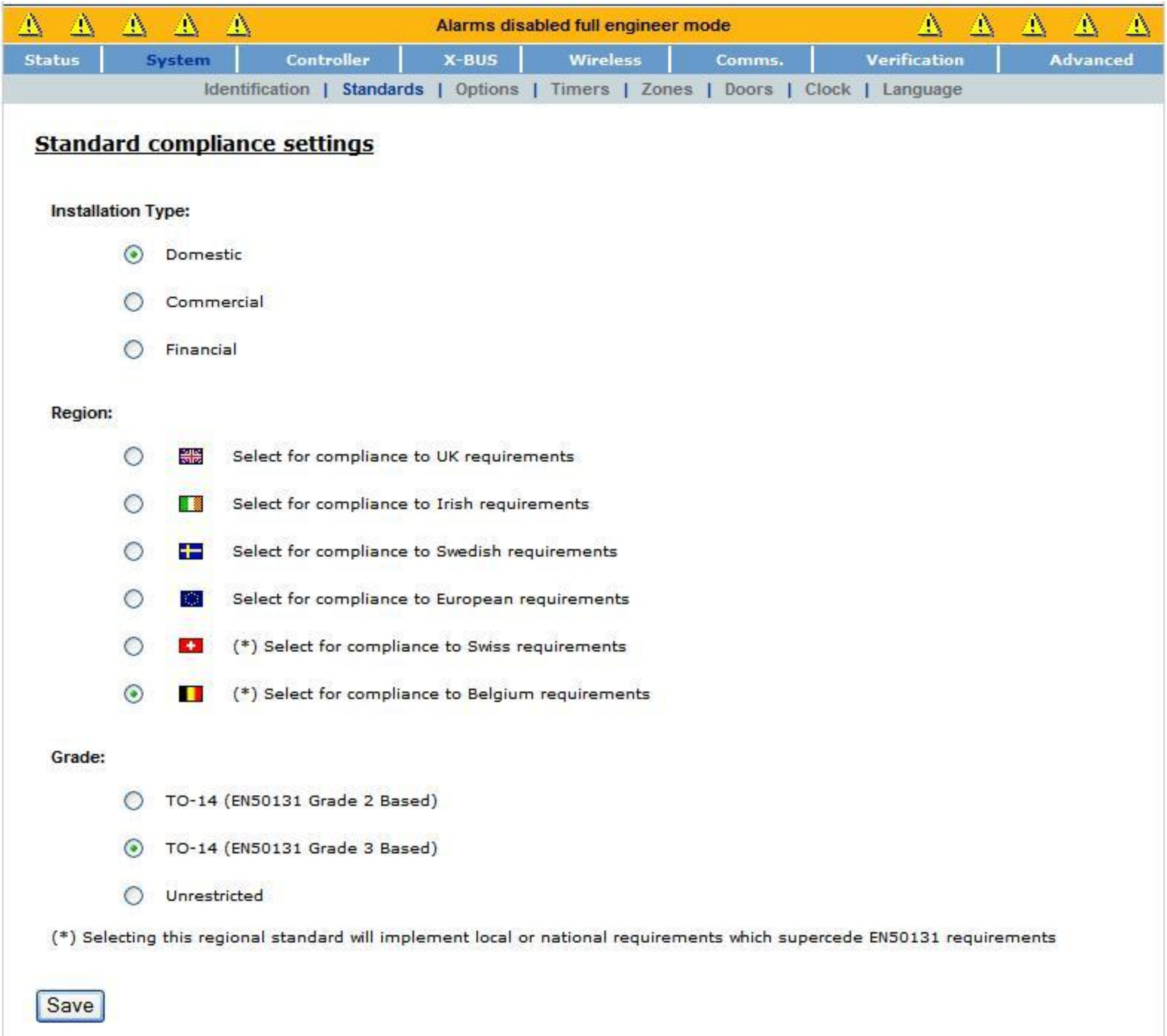
NOTICE

The SPCN110 PSTN module and SPCN130 GSM/GPRS module are tested with EN50131 approved Grade 2 and Grade 3 panels and can be used with these approved panels.

21.20 Compliance with INCERT Approvals

Software Requirements

Selecting Belgium (*) under **Region** implements local or national requirements which supercede EN50131 requirements.



Alarms disabled full engineer mode

Status
System
Controller
X-BUS
Wireless
Comms.
Verification
Advanced
Identification | Standards | Options | Timers | Zones | Doors | Clock | Language

Standard compliance settings

Installation Type:

● Domestic

○ Commercial

○ Financial

Region:

○ Select for compliance to UK requirements

○ Select for compliance to Irish requirements

○ Select for compliance to Swedish requirements

○ Select for compliance to European requirements

○ (*) Select for compliance to Swiss requirements

● (*) Select for compliance to Belgium requirements

Grade:

○ TO-14 (EN50131 Grade 2 Based)

● TO-14 (EN50131 Grade 3 Based)

○ Unrestricted

(*) Selecting this regional standard will implement local or national requirements which supercede EN50131 requirements

Selecting **Grade 2** or **Grade 3** selects EN50131 compliance plus any additional INCERT requirements:

- Only an engineer can restore a tamper. For INCERT, this applies across all grades.
  This is normally only a requirement for Grade III En50131.
- A tamper on an Inhibited / Isolated zone must be sent to an ARC and displayed to the user.
  For INCERT, tampers are processed for isolated zones. On all other standard variations, tampers are ignored on isolated zones.

Hardware Requirements

- The minimum battery capacity for SPC42xx/43xx/52xx/53xx/63xx is 10 Ah / 12 V. If a 10 Ah battery is used, then the battery is biased to the left of the cabinet and the bottom flap is bent to meet the battery.
- Fit jumper (J12) on the battery selector for 17/10 Ah battery use and remove for 7 Ah battery.
- The amount of current from Aux output using a 10 Ah battery for SPC42xx/SPC52xx is:

COMMS Standby time	NONE	PSTN	GSM	PSTN+GSM
12 h	568 mA	543 mA	438 mA	413 mA
24h	214 mA	189 mA	84 mA	59 mA
30 h	143 mA	118 mA	13 mA	N/A
60h	2mA	N/A	N/A	N/A

- The amount of current from Aux output using a 10 Ah battery for SPC43xx/SPC53xx/ SPC63xx is:

COMMS Standby time	NONE	PSTN	GSM	PSTN+GSM
12 h	538 mA	513 mA	408 mA	383 mA
24 h	184 mA	159 mA	54 mA	29 mA
30 h	113 mA	88mA	N/A	N/A
60 h	N/A	N/A	N/A	N/A

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