



FoxSec devices
Pocket series

Installation manual

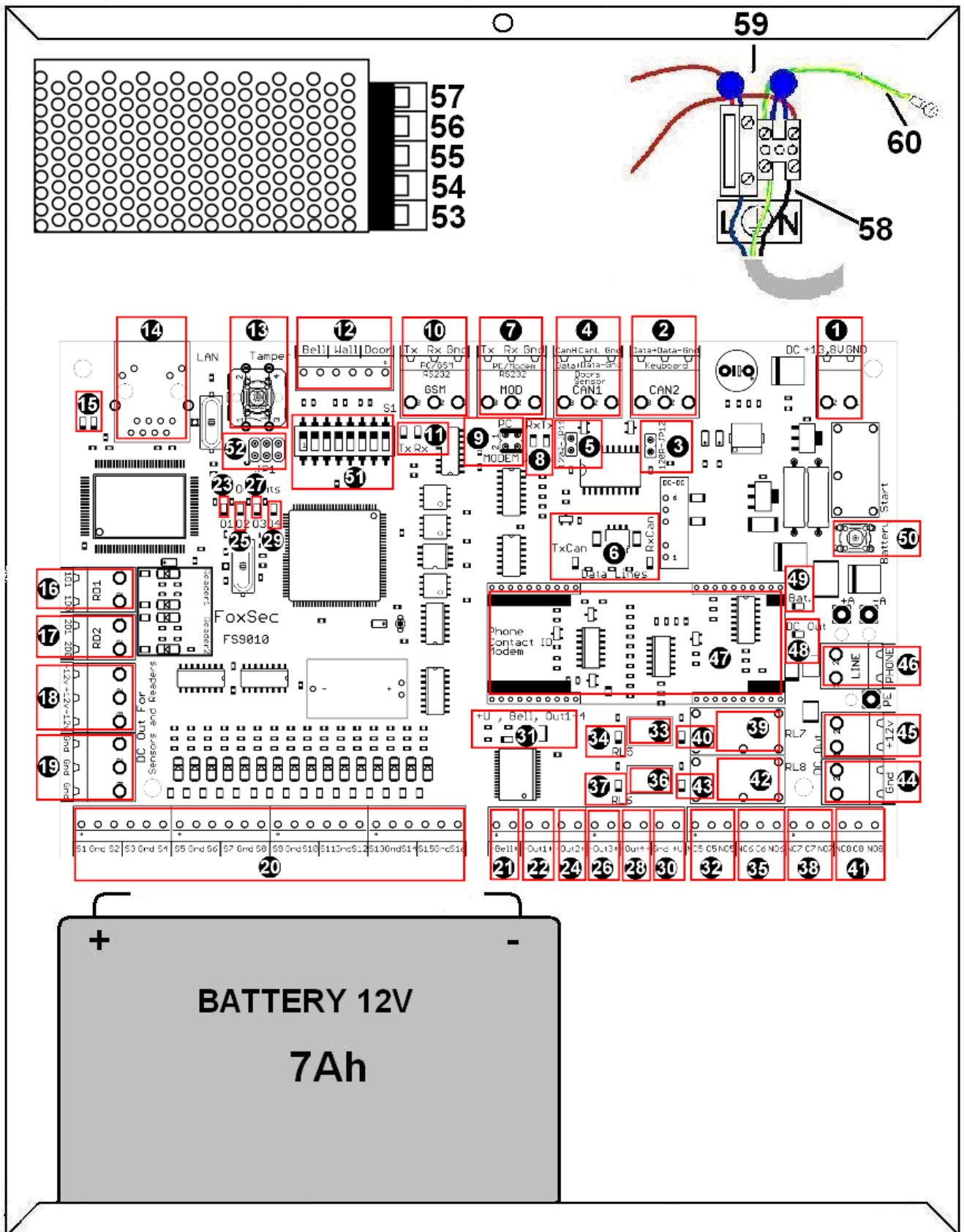
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1. FOXSEC FS9010 PRODUCT



TECHNICAL DEVICE	SPETSIFICATION
Type	FS9010 Security control main unit
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	110X180 mm
Power	100-240VAC 50/60Hz Power supply
Power output supply	13VDC
Power supply max operating current	0.7A
Power supply max output current	1.7A Electronic fuse
Main unit outputs	2X5A, 2X1A relay outputs and 4X transistor output
Main unit inputs	16 PCB inputs.
Tamper switch	Front and back tamper inputs
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	Ethernet, CAN bus, RS485, RS232

1. Input power 12V from power supply
2. Keyboard data line output
3. Keyboard data line jumper for enabling 120 ohm data EOL
4. Access door/Zone expander module data output
5. Access door/Zone expander data line jumper for enabling 120 ohm data EOL
6. Access door/Zone expander/Keypad data supervision LED indicators
7. PC/Contact ID modem RS232 output
8. PC/Modem data line supervision LED indicators
9. PC/Modem data line jumpers for activating PC or Contact ID option
10. PC/GSM modem RS232 output
11. PC/GSM data supervision LED indicators
12. Bell/Door/Wall tamper input
13. Spring tamper button
14. LAN connector
15. Ethernet LED indicators
16. Access door 1 card reader D0 and D1 input
17. Access door 2 card reader D0 and D1 input
18. Power output 12V for card readers and/or for detectors
19. Power output GND for card readers and/or for detectors
20. 16 zone inputs
21. Bell/siren +12VDC and GND output

22. PGM/Transistor output 1 (+12 and GND)
23. PGM/Transistor output 1 status LED indicator
24. PGM/Transistor output 2 (+12 and GND)
25. PGM/Transistor output 2 status LED indicator
26. PGM/Transistor output 3 (+12 and GND)
27. PGM/Transistor output 3 status LED indicator
28. PGM/Transistor output 4 (+12 and GND)
29. PGM/Transistor output 4 status LED indicator
30. +12VDC and GND power output
31. Electronic fuse LED indicator (Bell, out1-4 and +U. If LIT then fuse OK)
32. Relay 5 output (NC C NO)
33. Relay 5
34. Relay 5 output status LED indicator
35. Relay 6 output (NC C NO)
36. Relay 6
37. Relay 6 output status LED indicator
38. Relay 7 output (NC C NO)
39. Relay 7
40. Relay 7 output status LED indicator
41. Relay 8 output (NC C NO)
42. Relay 8
43. Relay 8 output status LED indicator
44. Access door electric lock GND power output
45. Access door electric lock +12VDC power output
46. Contact ID telephone line input
47. Contact ID modem socket
48. Electronic fuse LED indicator (12VDC power output)
49. Battery LED indicator
50. Battery start button
51. PCB DIP switches for enabling/disabling technical options
52. Manufacture programming pins
53. Mains AC Line in
54. Mains AC Neutral in
55. Mains ground PE

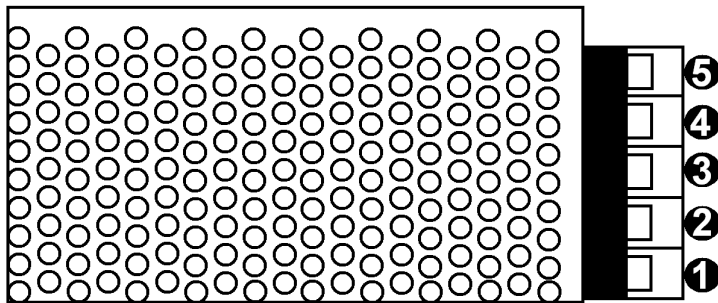
- 56. Output GND
- 57. Output +13VDC
- 58. Mains voltage MMJ 3X1.5 input to fuse terminal 100-240VAC 50/60Hz
- 59. Mains voltage output from fuse terminal to power supply 100-240VAC 50/60Hz
- 60. Mounting box grounding from fuse terminal

1.1 FS9010 MAIN UNIT POWER SUPPLY

FS9010 Main unit power supply is located inside of the installation box. Power supply requires mains 100-240VAC 50/60Hz

Power supply output is 13VDC 1.70A

Internal electronic fuse



- 1. Mains Line AC in
- 2. Mains Neutral AC in
- 3. Mains ground in
- 4. Output GND
- 5. Output +13VDC

Protections: Short circuit / Overload / Over voltage

Safety standard: UL60950-1, TUV EN60950-1 approved

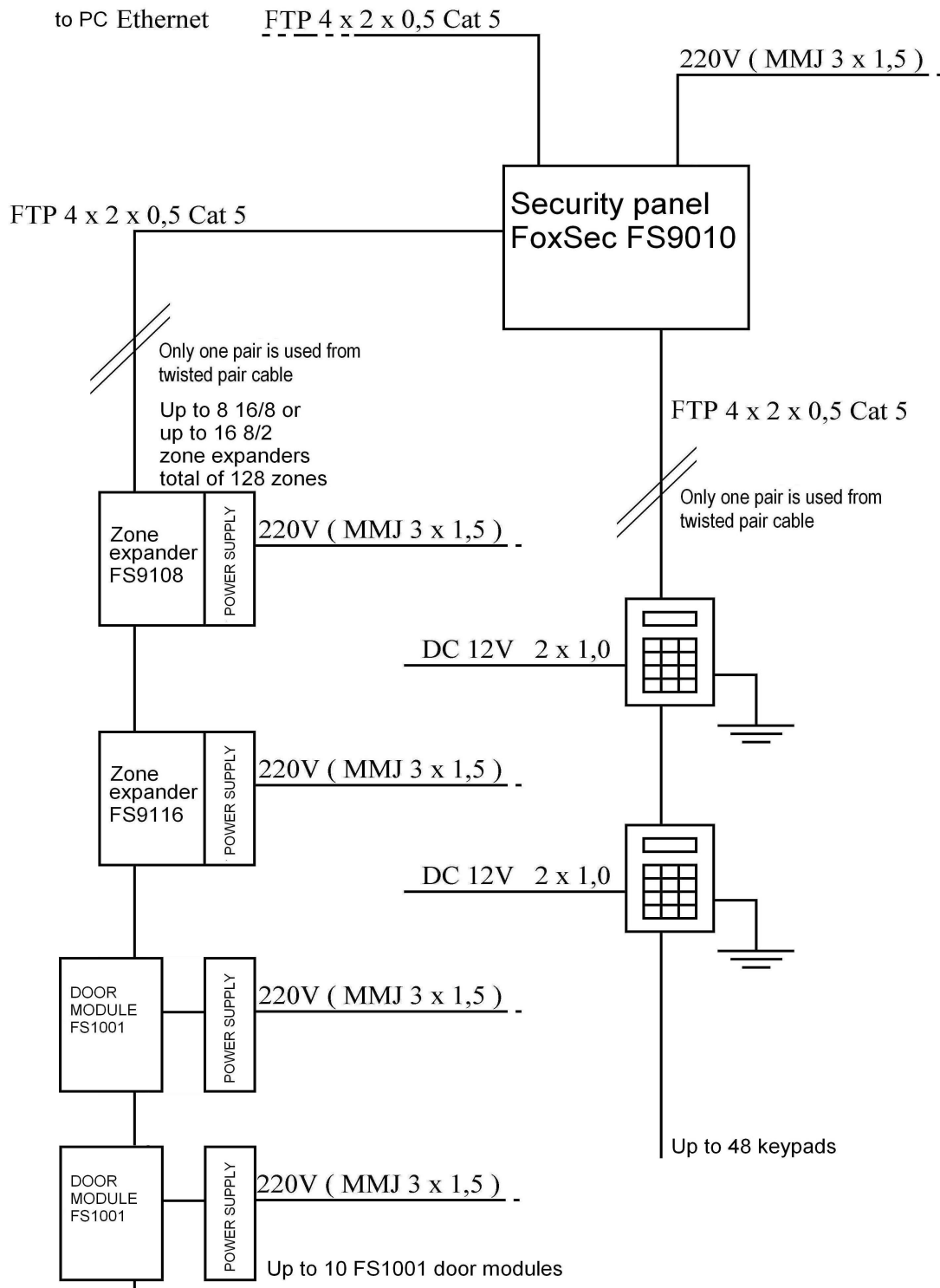
High efficiency, long life and high reliability

Cooling by free air convection

LED indicator for power on

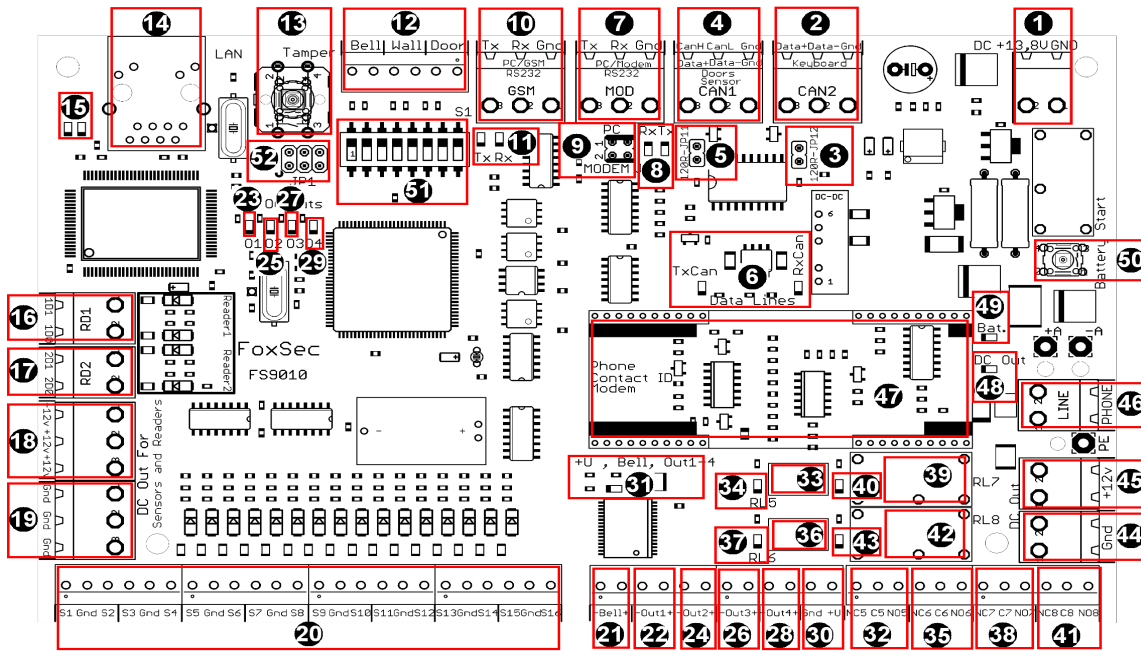
2. FOXSEC BASIC DEVICES WIRING DIAGRAM

Connection diagram for FoxSec devices



For the data connections (SENS, KBD, and DOORS) is used only one twisted pair from FTP CAT5e cable.

3.1 FOXSEC MAIN UNIT FS9010 WIRING DIAGRAM



- Data on the Ethernet is encrypted
- Up to 48 LCD/LED keypads for one main unit
- Up to 128 areas
- Up to 2880 users
- Up to 8 16in/8out or 16 8in/2out zone expander modules. Up to 128 zones.
- Up to 128 output
- Up to 10 access door modules (FS1001) total of 12 access doors for one main unit.
- Up to 2 RS232 connections at the same time (contact ID, GSM module, PC connection)

FS9010 main unit has on-board

16 zone inputs

4 relay outputs

4 transistor outputs

1 siren output

2 main data lines (Sensors, doors and keyboards)

2 RS232 data lines (Contact ID, GSM modem, PC connection over COM port)

3 tamper inputs

2 access doors (optional. Must be enabled from FoxSec conf software)

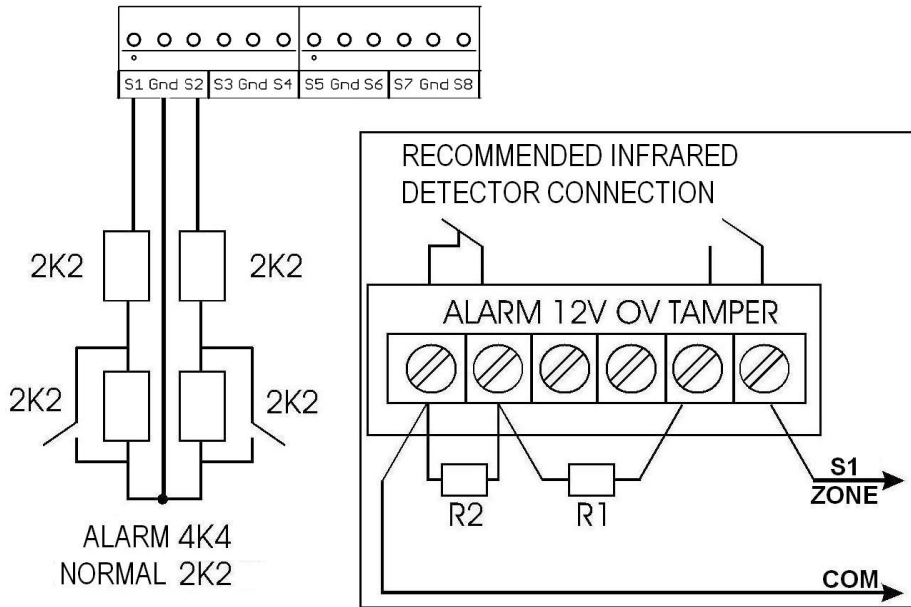
For data communication must be used shielded twisted pair cable (Cat5e, Cat6e)

Data communication cable total lengths:

Keypads CAN2 line total length is up to 1500m

Zone expander/Access door modules CAN1 line total length is up to 1500m

3.1.1 FS9010 MAIN UNIT ZONE INPUTS



FS9010 main unit has 16 on board zone inputs and it is expandable with zone expander modules up to 128 zones for one main unit. Inputs are monitored using dual EOL supervision.

Each input has 4 resistor values:

If resistance is 2.2Kohm then zone is OK (no movement)

If resistance is 4.4Kohm then zone is open (movement)

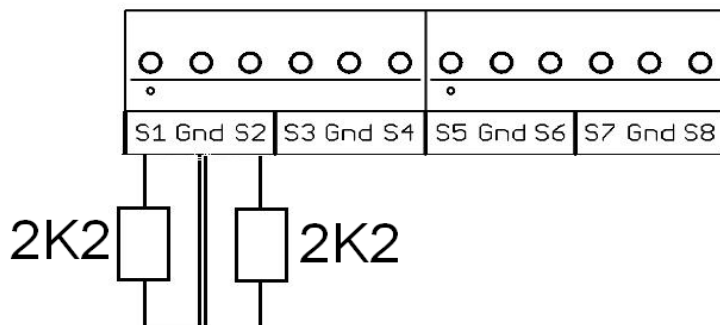
If there is no resistance then zone is disconnected (zone cable broken).

If resistance is under 1.5Kohm then zone is shorted

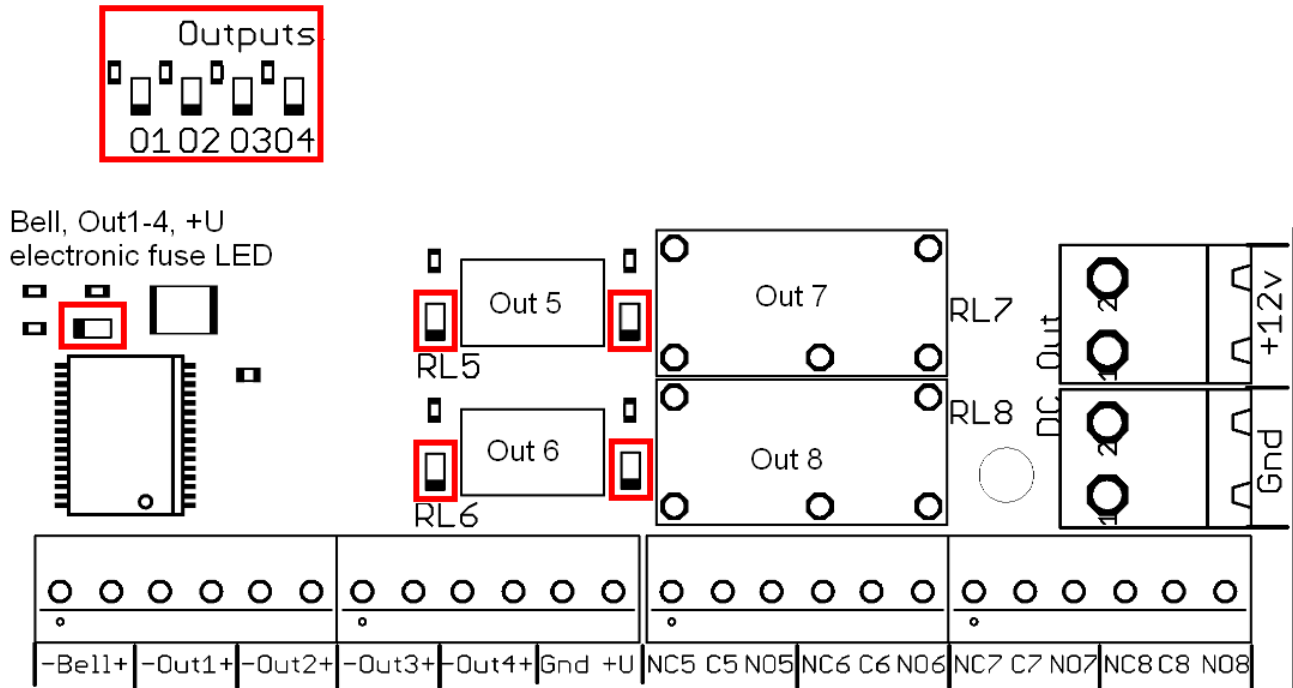
If is in use main unit access door option then:

- **input 1 is for first door status input (also works as an alarm magnetic contact)**
- **input 2 is for first door opening button (must set from FoxSec conf soft as 0ohm value)**
- **input 3 is for second door status input (also works as an alarm magnetic contact)**
- **input 4 is for second door opening button (must set from FoxSec conf soft as 0ohm value)**

- If there are some unused zone inputs then it should be connected with 2,2Kohm resistor.



3.1.2 FS9010 MAIN UNIT OUTPUTS



FS9010 main unit has 4 on-board programmable relay outputs and 4 on-board transistor outputs.

Also FS9010 has on-board bell output.

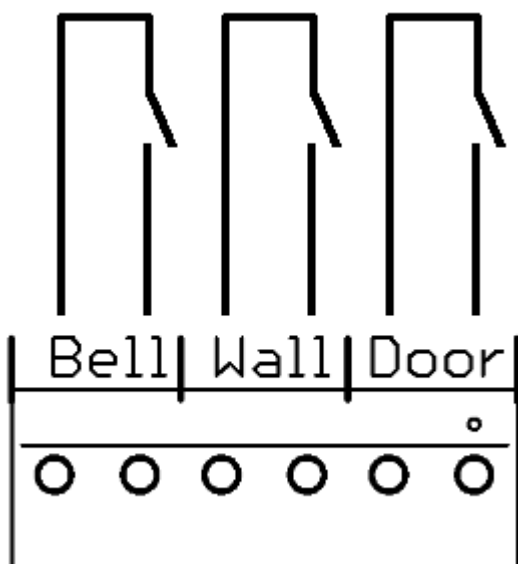
Every output has LED indicator (except bell) that shows output status. If output is activated then LED is ON.

Transistor, bell and +U outputs has on-board electronic fuse with LED indicator.

All outputs are freely programmable with FoxSec conf software.

If is in use main unit access door option then out 7 is for first door and out 8 is for second door electric lock output.

3.1.3 FS9010 MAIN UNIT ANTI TAMPER INPUTS



FS9010 main unit has 3 on-board tamper inputs.

Front tamper becomes active when opening the cabinet.

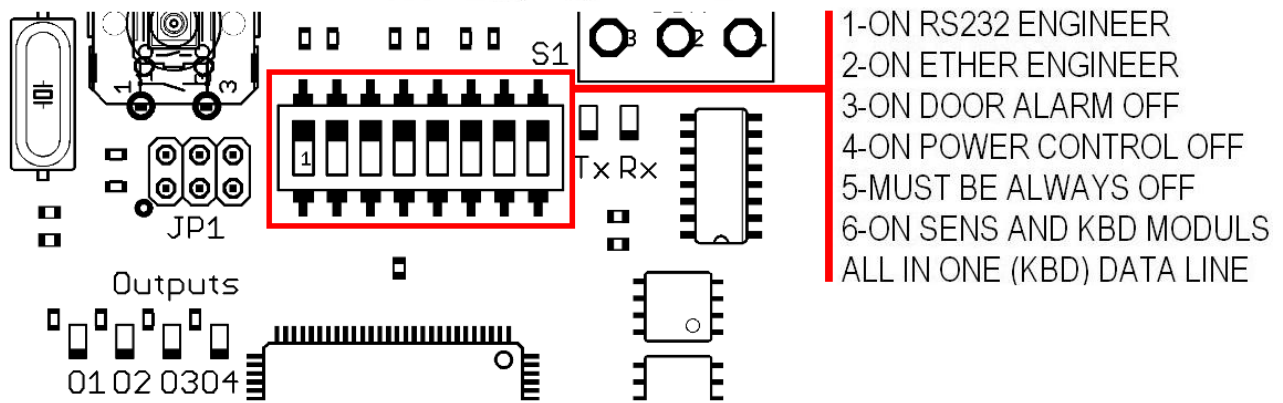
Back tamper becomes active when cabinet is pulled off from wall.

Siren tamper is optional.

Tamper will become active if input is disconnected. If input is shorted then tamper is closed.

If there is no use for tamper switches then those inputs must be shorted.

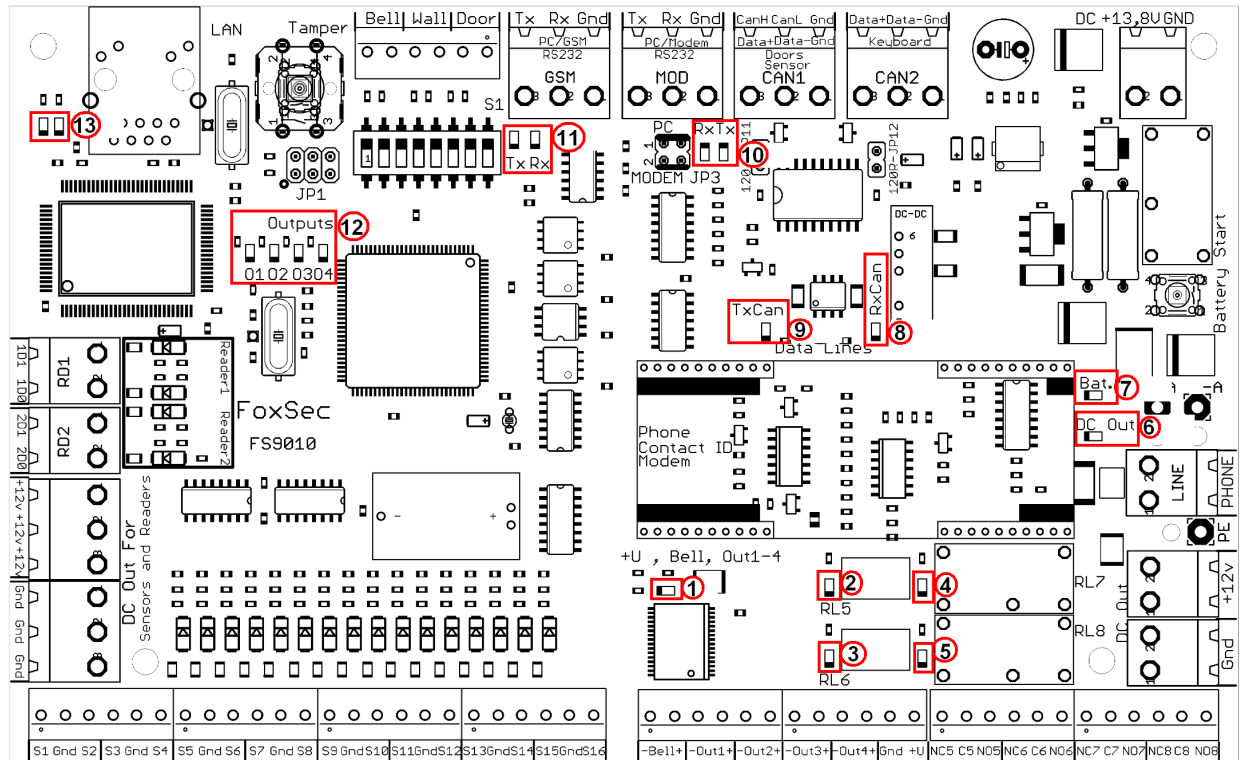
3.1.4 FS9010 MAIN UNIT DIP SWITCHES



FS9010 main unit DIP switches are used for enabling and disabling technical options.

1. If it is ON then it is possible to connect PC to FoxSec through RS232 COM port and monitoring nor will conf software ask for user neither password nor encryption keys. When enabling this then main unit creates an alarm 'engineer on site' and it will be on until switch is turned off. Option is needed when passwords or encryption keys are lost and must create new ones.
2. If it is ON then it is possible to connect PC to FoxSec through Ethernet. Neither monitoring nor will conf software ask for user neither password nor encryption keys. When enabling this then main unit creates an alarm 'engineer on site' and it will be on until switch is turned off.
(Can be connected if Ethernet settings are enabled and working)
3. If enabled then access door module alarms are not shown (door opened too long, door opened by key, etc).
4. If enabled then main unit will not monitor (220VAC) critical limits. If it is OFF then alarm is generated if mains supply is under 190V or above 240V.
5. Must be OFF all the time
6. If it is on then it is possible to connect zone expanders, keypads, output modules to one (CAN 2) data line. Access door controllers must still connect to CAN 1 data line.

3.1.5 FS9010 MAIN UNIT LED INDICATORS



1. Bell, Out1-4 and +U electronic fuse LED indicator. If LED is OFF then fuse is blown
2. Relay 5 output status LED. If on then output is ON (activated)
3. Relay 6 output status LED. If on then output is ON (activated)
4. Relay 7 output status LED. If on then output is ON (activated)
5. Relay 8 output status LED. If on then output is ON (activated)
6. Power output for readers/detectors and for electric locks electronic fuse LED
7. Battery supervision LED
- 8-9. CAN 1 and CAN 2 data line Rx/Tx LEDs (receiving/transmitting data)

If CAN data line RX and TX are ON then it is programmed to main unit at least one keypad and/or zone expander and/or door module and/or output module and all connected devices are communicating with main unit correctly

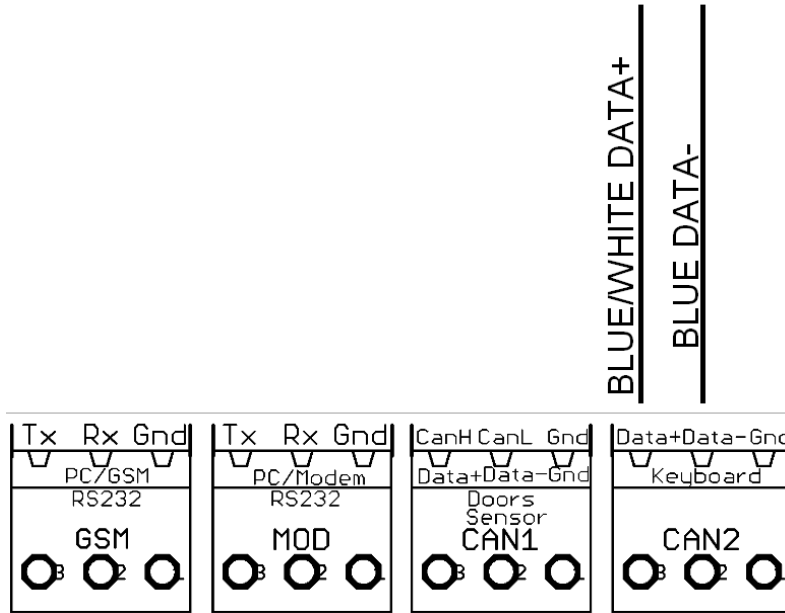
If LEDs are OFF then there are no devices programmed to main unit.

If LEDs blink with even pace then at least one of the programmed devices is not communicating with FoxSec main unit. At startup CAN LEDs are blinking for 1 min because of searching access door modules.

10. PC/Contact ID modem RS232 data supervision LED (Rx and Tx)
11. PC/GSM modem RS232 data supervision LED (Rx and Tx)
12. Transistor 1-4 outputs status LED. If ON then output is ON (activated)
13. LAN (ethernet) supervision LED

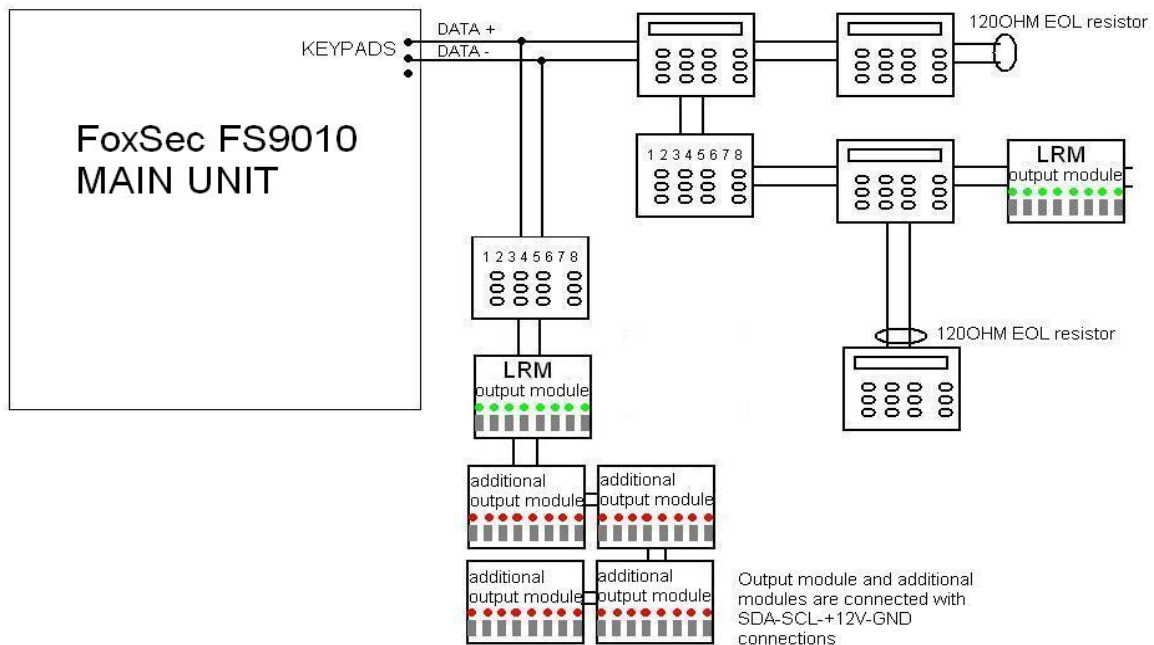
4. KEYPADS AND OUTPUT MODULES

KEYPADS AND OUTPUT MODULES

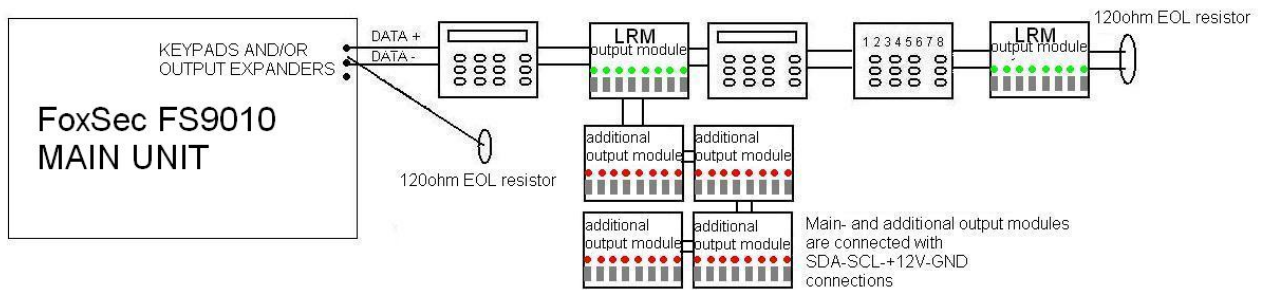


Optically isolated data line for up to 48 LED/LCD keypads and/or 16 main output modules (FS9100/8). Every device has its own unique address and it must be assigned with DIP switch on the device. In one main unit can be both of the LCD and LED keypads. Data line EOL is 2X120OHM and needs to be connected to farthest devices and it is mandatory.

Keypad/output module wiring diagram:



Keypads/output modules can be connected in a row as well:

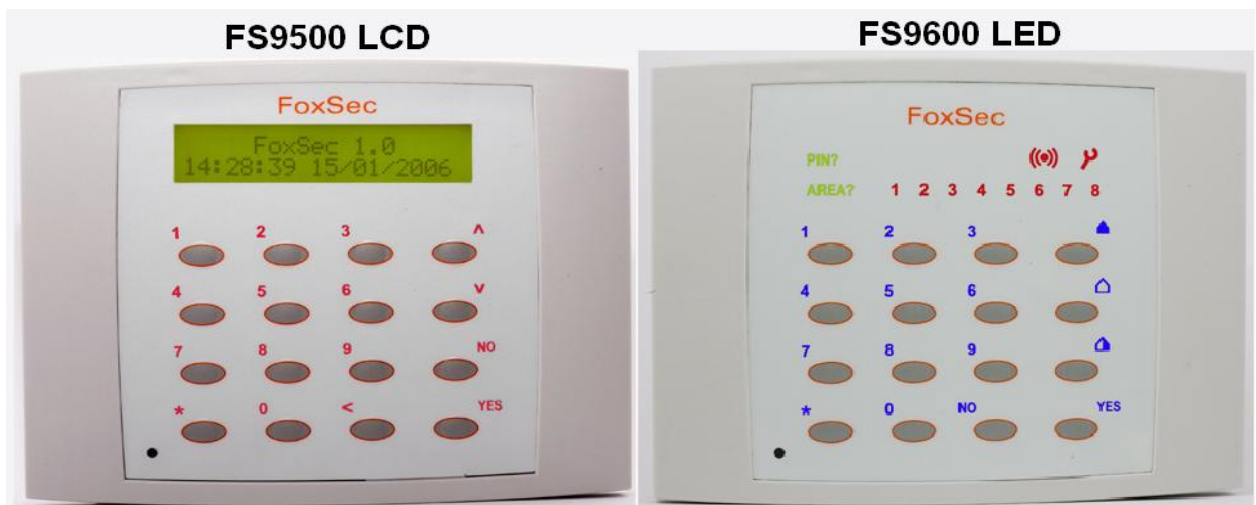
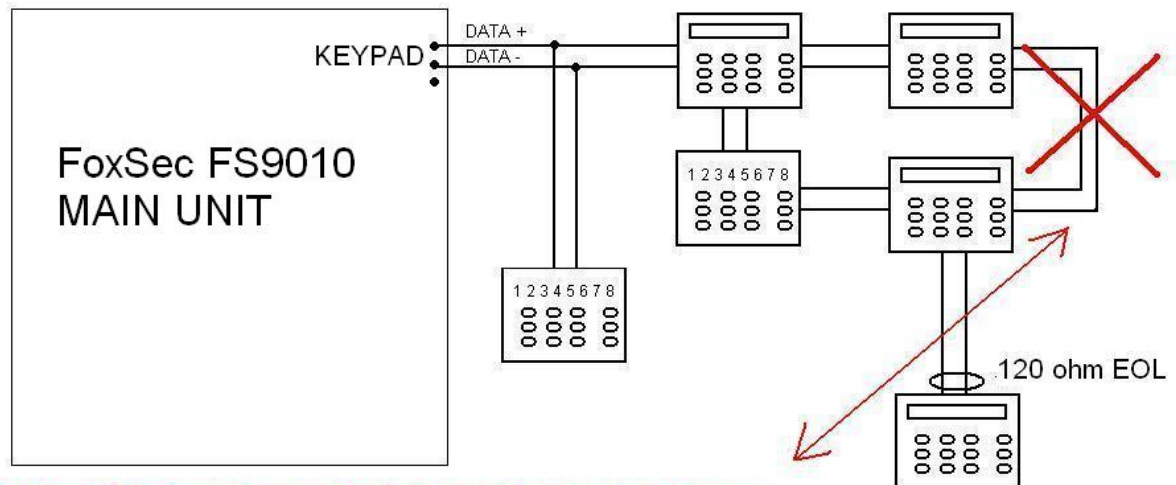


Main output modules are connected to main unit through CAN 2 data line

CANH and CANL (DATA+ and DATA-) connection

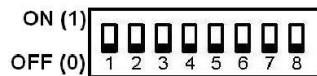
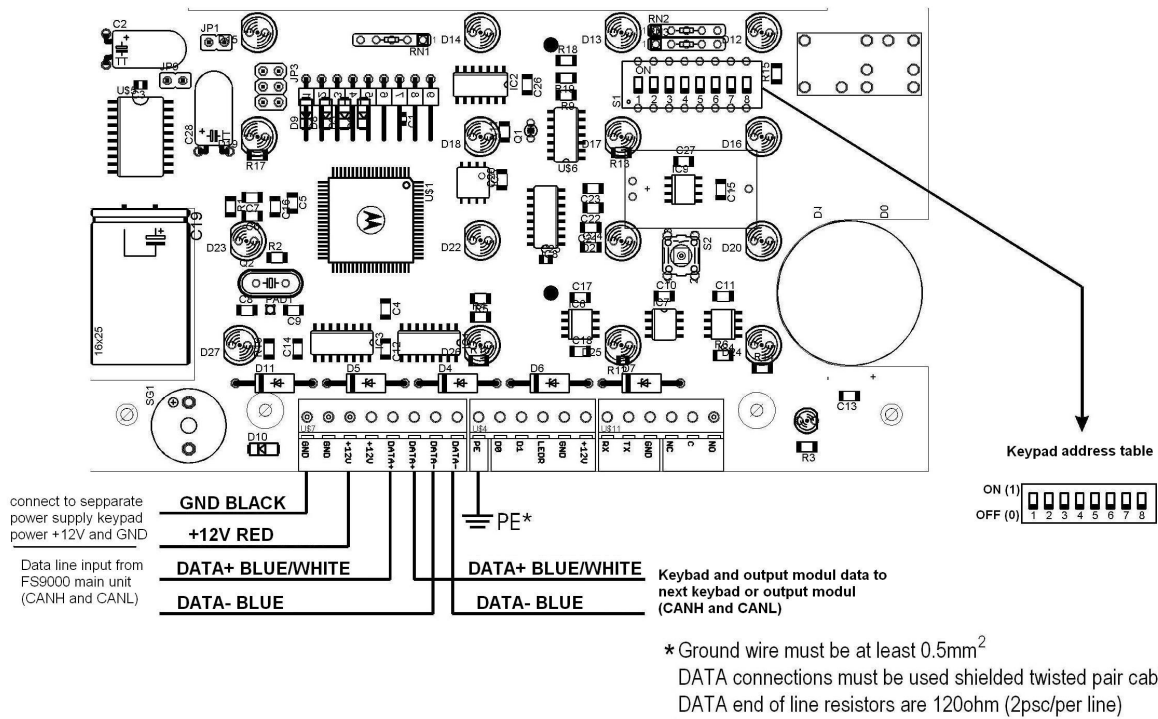
Main and additional output modules are connected between one selves SDA-SCL+12V-GND connection.

!!! This kind of connection is forbidden!!!



4.1 KEYPAD FS9500LCD AND FS9600LED WIRING DIAGRAM

FOXSEC KEYPAD WIRING DIAGRAM



NB!!! Addressing device always check DIP switch ON and OFF positions

SWITCH POSITION	yyyy0000	yyyy1000	yyyy0100	yyyy1100	yyyy0010	yyyy1010	yyyy0110
0000XXXX					64	80	96
1000XXXX					65	81	97
0100XXXX					66	82	98
1100XXXX					67	83	99
0010XXXX					68	84	100
1010XXXX					69	85	101
0110XXXX					70	86	102
1110XXXX					71	87	103
0001XXXX				56	72	88	104
1001XXXX				57	73	89	
0101XXXX				58	74	90	
1101XXXX				59	75	91	
0011XXXX				60	76	92	
1011XXXX				61	77	93	
0111XXXX				62	78	94	
1111XXXX				63	79	95	

Keypads must be connected to FS9010 through CAN 2 Keyboard data line.

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m.

Keypad power should be taken from separate power supply or from main output module power supply. For keypads, it is important to use separate grounding wire with at least 0.5 mm²

CAN 2 data line EOL is 2X120OHM and must be connected to farthest devices

LCD and LED keypad wiring diagram is identical.

- It is possible to include card reader for the keypad (internal or external)

D0 = reader data0 (green)

D1 = reader data1 (white)

LEDR = reader red led (most readers don't have that wire)

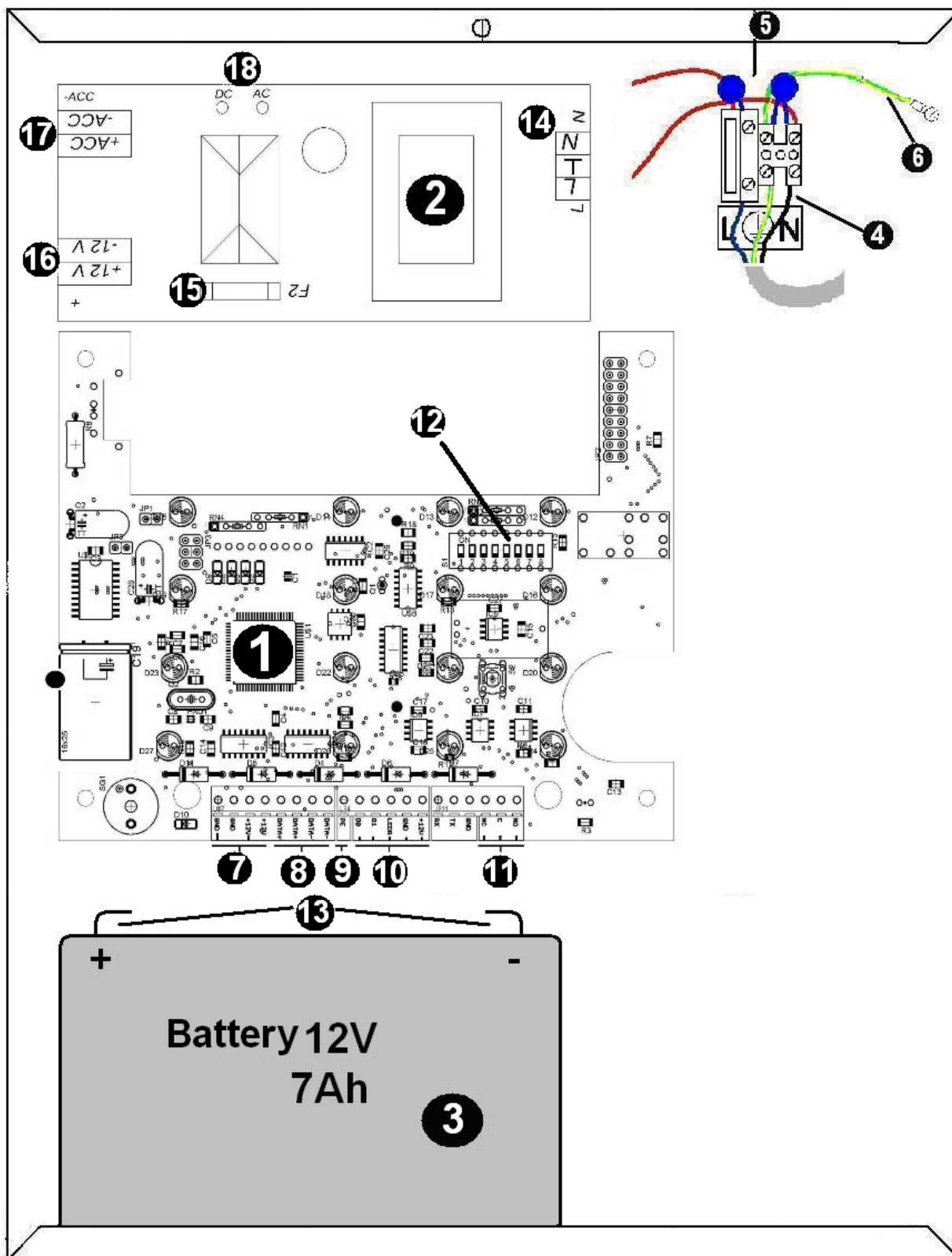
GND = reader -12V power (black)

+12V = reader +12V power (red)

It is possible to attach voltage free relay to keypad (by manufacturer). Connectors are NO-C-NC

4.2 FS9150 RF MODULE. PRODUCT

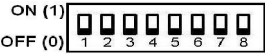
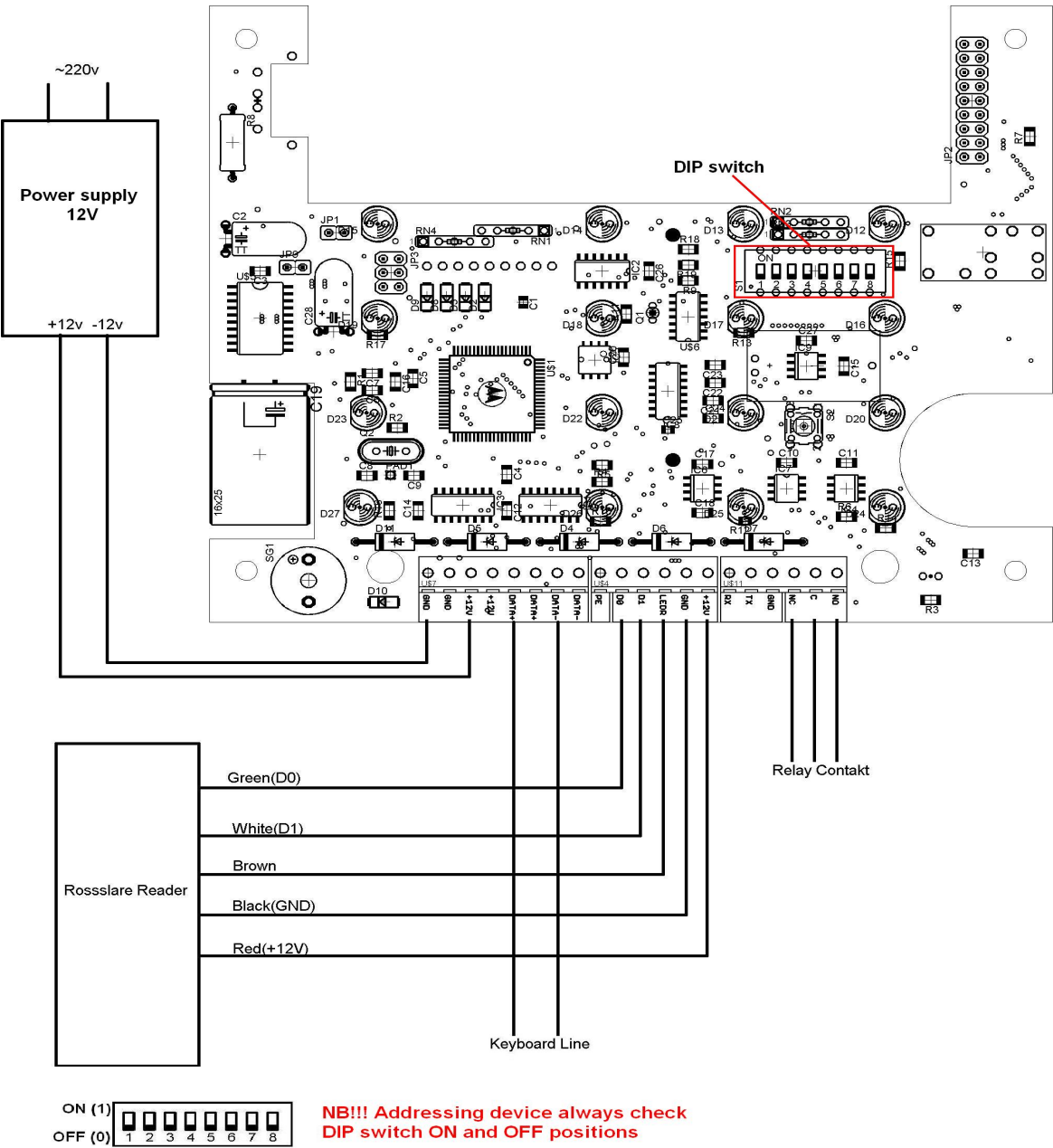
FS9150 RF MODULE



1. **FS9150 RF metal mounting box**
2. **Power supply 220V +-10% AC 1.25A / power output 12VDC 1.25A**
3. **Battery 12V recommended capacity 7Ah**
4. Mains voltage MMJ 3X1.5 input to fuse terminal 220/230VAC
5. Mains voltage output from fuse terminal to power supply 220/230VAC
6. Mounting box grounding from fuse terminal
7. FS9150 RF power input 12VDC
8. FS9150 RF data line connector
9. FS9150 RF grounding connector
10. Rosslare AY-L23C card reader inputs
11. Relay output
12. Addressing DIP switches (must use keypad addressing table)
13. Battery 12V connectors
14. Power supply mains input from fuse terminal
15. Power supply output power fuse 1.25A
16. Power supply output power +12 and GND 1.25A
17. Battery 12V connectors
18. LEDS indicate existing mains and battery supply

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9150 RF module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	111X137 mm
Power	220/230VAC transformer
Transformer input supply	220/230VAC
Transformer output supply	14VDC
Transformer max operating current	1.25A
Transformer max output current	1.25A
FS9150 RF output	1 X 5A relay output
Tamper switch	Spring tamper
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus
Remote control frequency	433.92 MHz

4.2.1 FS9150 RF WIRING DIAGRAM



**NB!!! Addressing device always check
DIP switch ON and OFF positions**

SWITCH POSITION	yyyy0000	yyyy1000	yyyy0100	yyyy1100	yyyy0010	yyyy1010	yyyy0110
0000XXXX					64	80	96
1000XXXX					65	81	97
0100XXXX					66	82	98
1100XXXX					67	83	99
0010XXXX					68	84	100
1010XXXX					69	85	101
0110XXXX					70	86	102
1110XXXX					71	87	103
0001XXXX				56	72	88	104
1001XXXX				57	73	89	
0101XXXX				58	74	90	
1101XXXX				59	75	91	
0011XXXX				60	76	92	
1011XXXX				61	77	93	
0111XXXX				62	78	94	
1111XXXX				63	79	95	

FS9150 RF allows arming and disarming with access card and/or with remote control. For this kind of arming/disarming must have a card reader. It depends on the card reader for using access card or remote control. Both access card and remote control can not be used on one FS9150RF but is possible to use if there are two or more FS9150RF modules installed.

NB! Card reader is optional device and is not part of the product by default.

If necessary then on the FS9150 can be used one relay output (system output) as well. FS9150 RF must be connected to the system through CAN 2 data line.

Every FS9150 RF module has its own unique address and it must be assign with DIP switch on every device. In one main unit there can be total of 48 LCD/LED/FS9150RF all together. Data line EOL is 2X120OHM and it must be placed two farthest devices. For data line must be used shielded twisted pair cable (Cat5e, Cat6e) and total length is 1500m.

FS9150 RF. FS9150RF power must be taken from separate power supply or from main output module power supply.

There are 4 different kinds of remote controls.

4.2.2 FS9150 RF MODULE AY-L23C READER AND REMOTE CONTROLS



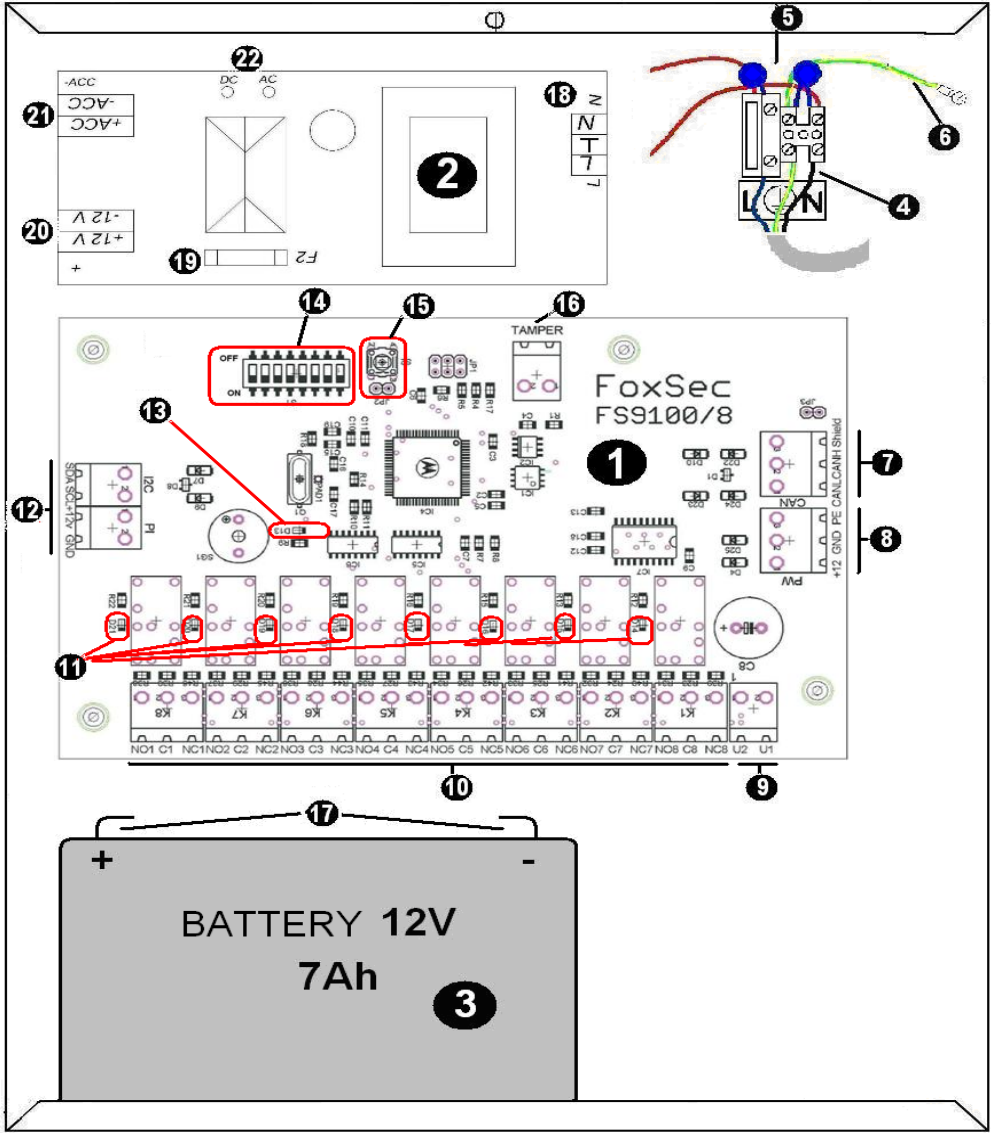
For one FS9150RF can be used all of those remote controls

NB! Remote controls and access cards are optional and are not included by default.

Total of remote controls are limited by the buttons assigned to users. Every button is one user who can arm or disarm. Total of users are 2880 and it includes all PIN, remote control and access card users.

5.1 FS9100/8 MAIN OUTPUT MODULE IN METAL ENCLOSURE. PRODUCT

FS9100/8 main output expander module in metal enclosure



FS9100/8 MAIN OUTPUT EXPANDER MODUL ADDRESS TABLE

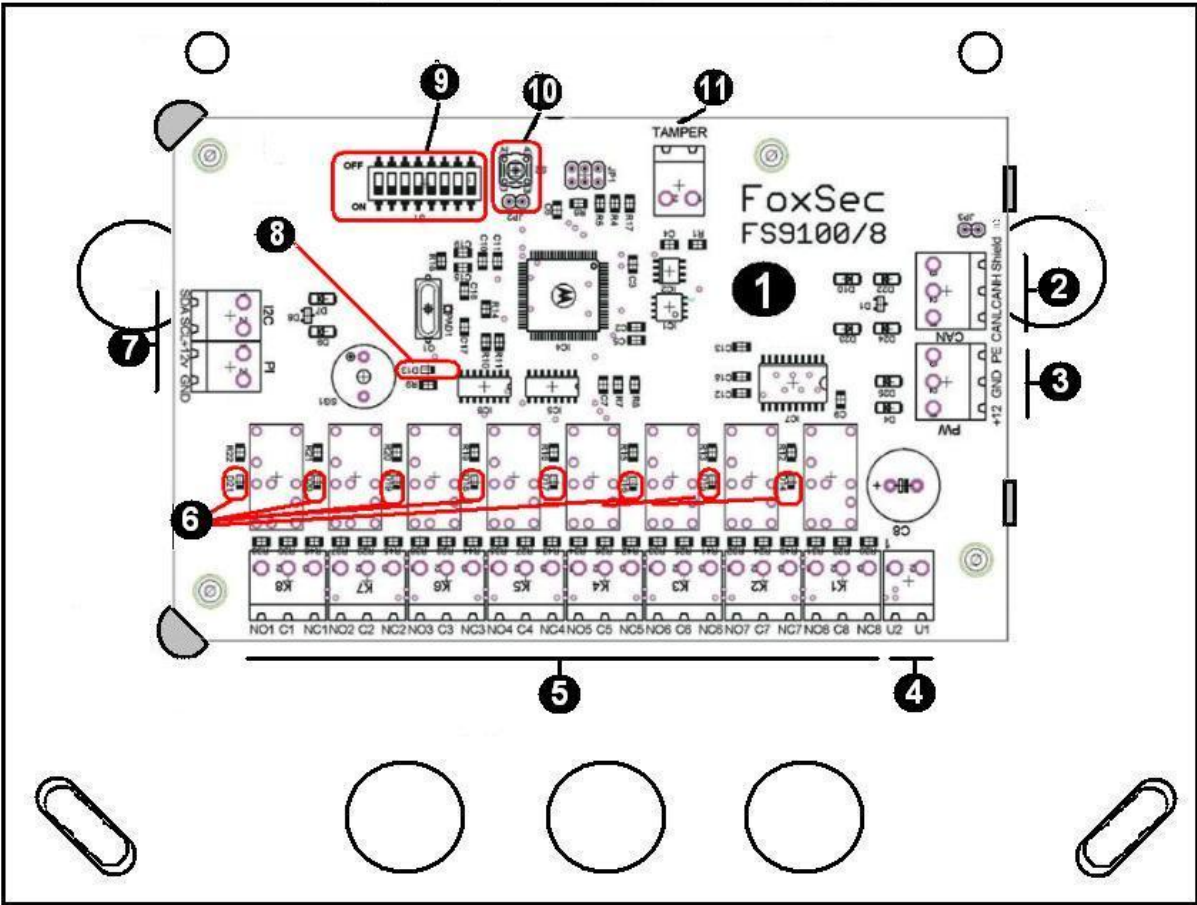
Address	ON (1) OFF (0)									Address								
	1	2	3	4	5	6	7	8			1	2	3	4	5	6	7	8
32	0	0	0	0	0	1	0	0		44	0	0	1	1	0	1	0	0
33	1	0	0	0	0	1	0	0		45	1	0	1	1	0	1	0	0
34	0	1	0	0	0	1	0	0		46	0	1	1	1	0	1	0	0
35	1	1	0	0	0	1	0	0		47	1	1	1	1	0	1	0	0
36	0	0	1	0	0	1	0	0		48	0	0	0	0	1	1	0	0
37	1	0	1	0	0	1	0	0		49	1	0	0	0	1	1	0	0
38	0	1	1	0	0	1	0	0		50	0	1	0	0	1	1	0	0
39	1	1	1	0	0	1	0	0		51	1	1	0	0	1	1	0	0
40	0	0	0	1	0	1	0	0		52	0	0	1	0	1	1	0	0
41	1	0	0	1	0	1	0	0		53	1	0	1	0	1	1	0	0
42	0	1	0	1	0	1	0	0		54	0	1	1	0	1	1	0	0
43	1	1	0	1	0	1	0	0		55	1	1	1	0	1	1	0	0

1. **FS9100/8 Main output module in metal enclosure**
2. **Power supply 220V +-10% AC 1.25A / power output 12VDC 1.25A**
3. **Battery 12V recommended capacity 7Ah**
4. Mains voltage MMJ 3X1.5 input to fuse terminal 220/230VAC
5. Mains voltage output from fuse terminal to power supply 220/230VAC
6. Mounting box grounding from fuse terminal
7. FS9100/8 data line
8. FS9100/8 power input 12VDC
9. Power output 12VDC
10. Freely programmable voltage free relay outputs
11. LED indicators shows output status
12. Additional output module FS9100/8.8 connector
13. Data line supervision LED indicators
14. FS9100/8 addressing DIP switches
15. Tamper switch for plastic enclosure and disable jumpers
16. FS9100/8 metal enclosure tamper switch
17. Battery 12V connectors
18. Mains in from fuse terminal
19. Power supply output fuse 1.25A
20. Power output +12 and GND 1.25A
21. Battery 12V connectors
22. LEDS indicate existing mains and battery supply

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9100/8 Main output module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	111X160 mm
Power	220/230VAC power supply
Transformer input supply	220/230VAC
Transformer output supply	14VDC
Transformer max operating current	1.25A
Transformer max output current	1.25A
FS9150 RF output	8 X 5A voltage free relay output
Tamper switch	Separate input for tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus, I2C

5.2 FS9100/8 MAIN OUTPUT MODULE IN PLASTIC ENCLOSURE. PRODUCT

FS9100/8 Main output expander module in plastic enclosure



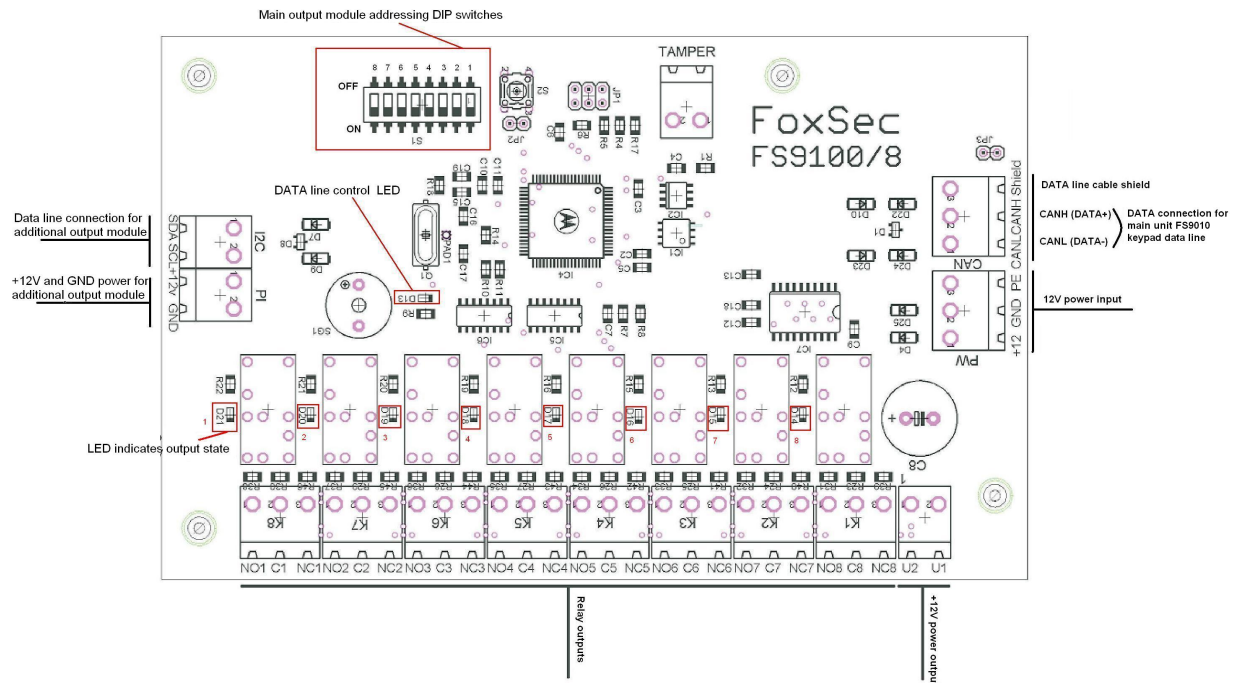
FS9100/8 MAIN OUTPUT EXPANDER MODUL ADDRESS TABLE

Address	ON (1) OFF (0) 1 2 3 4 5 6 7 8								Address								
	1	2	3	4	5	6	7	8		1	2	3	4	5	6	7	8
32	0	0	0	0	0	1	0	0	44	0	0	1	1	0	1	0	0
33	1	0	0	0	0	1	0	0	45	1	0	1	1	0	1	0	0
34	0	1	0	0	0	1	0	0	46	0	1	1	1	0	1	0	0
35	1	1	0	0	0	1	0	0	47	1	1	1	1	0	1	0	0
36	0	0	1	0	0	1	0	0	48	0	0	0	0	1	1	0	0
37	1	0	1	0	0	1	0	0	49	1	0	0	0	1	1	0	0
38	0	1	1	0	0	1	0	0	50	0	1	0	0	1	1	0	0
39	1	1	1	0	0	1	0	0	51	1	1	0	0	1	1	0	0
40	0	0	0	1	0	1	0	0	52	0	0	1	0	1	1	0	0
41	1	0	0	1	0	1	0	0	53	1	0	1	0	1	1	0	0
42	0	1	0	1	0	1	0	0	54	0	1	1	0	1	1	0	0
43	1	1	0	1	0	1	0	0	55	1	1	1	0	1	1	0	0

1. **FS9100/8 main output module in plastic enclosure**
2. FS9100/8 data line
3. FS9100/8 power input 12VDC
4. Power output 12VDC
5. Freely programmable voltage free relay outputs
6. LED indicators shows output status
7. Additional output module FS9100/8.8 connector
8. Data line supervision LED indicators
9. FS9100/8 addressing DIP switches
10. Tamper switch for plastic enclosure and disable jumpers
11. FS9100/8 metal enclosure tamper switch

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9100/8 Main output module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	150X230X40 mm
Environmental class	IP 20
PCB dimensions	111X160 mm
Power	12-14VDC Power supply
Output module outputs	8 X 5A voltage free relay output
Tamper switch	Spring tamper or separate input for tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus, I2C

5.3 MAIN OUTPUT MODULE WIRING DIAGRAM



Main output modules are connected to FS9010 through CAN 2 data line

CANH and CANL (DATA+ and DATA-).

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m

Main output module power +12 and GND should be taken from separate power supply or from keypad power supply for not ruin optically isolated data lines.

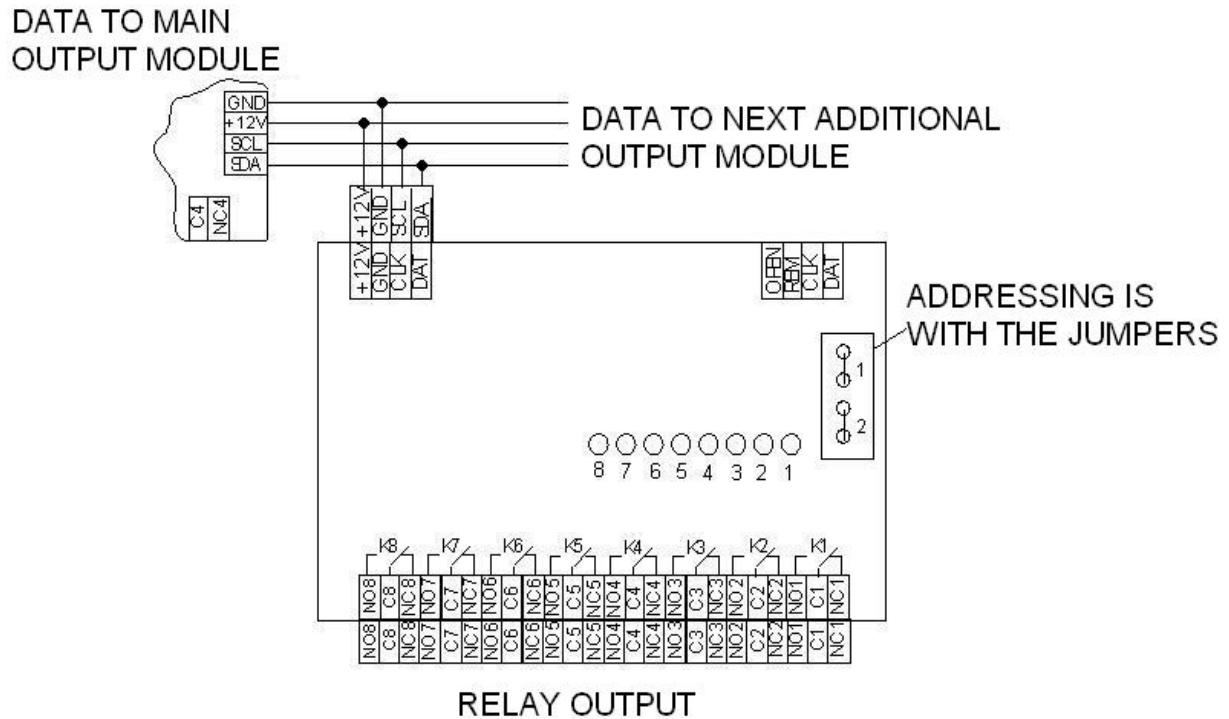
Additional output modules are connected to main output module through SDA-SCL-+12V-GND connectors.

There can be up to 4 additional output modules attached to one main output module.

All outputs are voltage free relay outputs and can be choose between NO (normally open) or NC (normally closed) contacts.

All outputs have LED indicators that show output status. If LED is lit then output is ON (powered). On the main output module PCB has also data supervision LED indicator. If led is ON then there is NO connection between FS9010 and main output module. If led blinks then there is connection.

5.3.1 FS9100/8.8 ADDITIONAL OUTPUT MODULE WIRING DIAGRAM



Additional output modules are connected to main output module through SDA-SCL-+12V-GND connectors. Every output has LED indicator that shows output status. If LED is lit then output is ON (powered). If LED is OFF then output is in normal position.

ALL OUTPUTS ARE VOLTAGE FREE RELAY OUTPUTS.

Additional output modules addressing is with 2 jumpers.

Addresses:

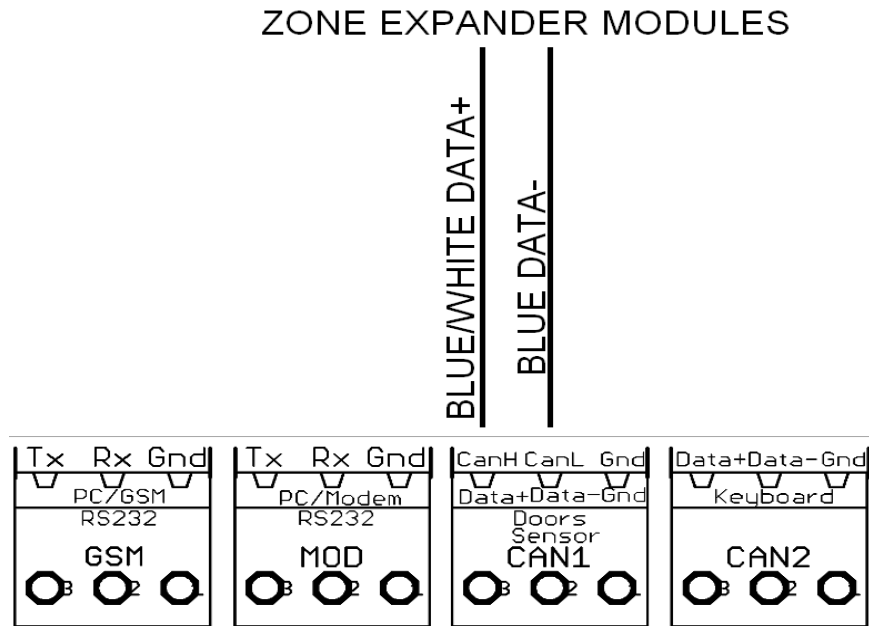
1= IF JUMPER 1 AND 2 ARE SHORTED

2= IF JUMPER 1 IS SHORTED AND 2 IS DISCONNECTED

3= IF JUMPER IS DISCONNECTED AND 2 IS SHORTED

4= IF JUMPER 1 AND 2 ARE DISCONNECTED

6. ZONE EXPANDER MODULES



Zone expander modules are connected with the FS9010 through CAN 1 data line CANH and CANL (DATA+ and DATA-).

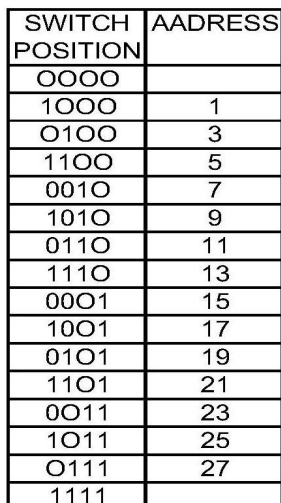
Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 2000m

Zone expander module power must be taken from separate power supply or from another zone expander module power supply for not ruin optically isolated data lines.

Zone expander 16in/8out can be in one FS9010 up to 8

Zone expander 8in/2out can be in one FS9010 up to 16

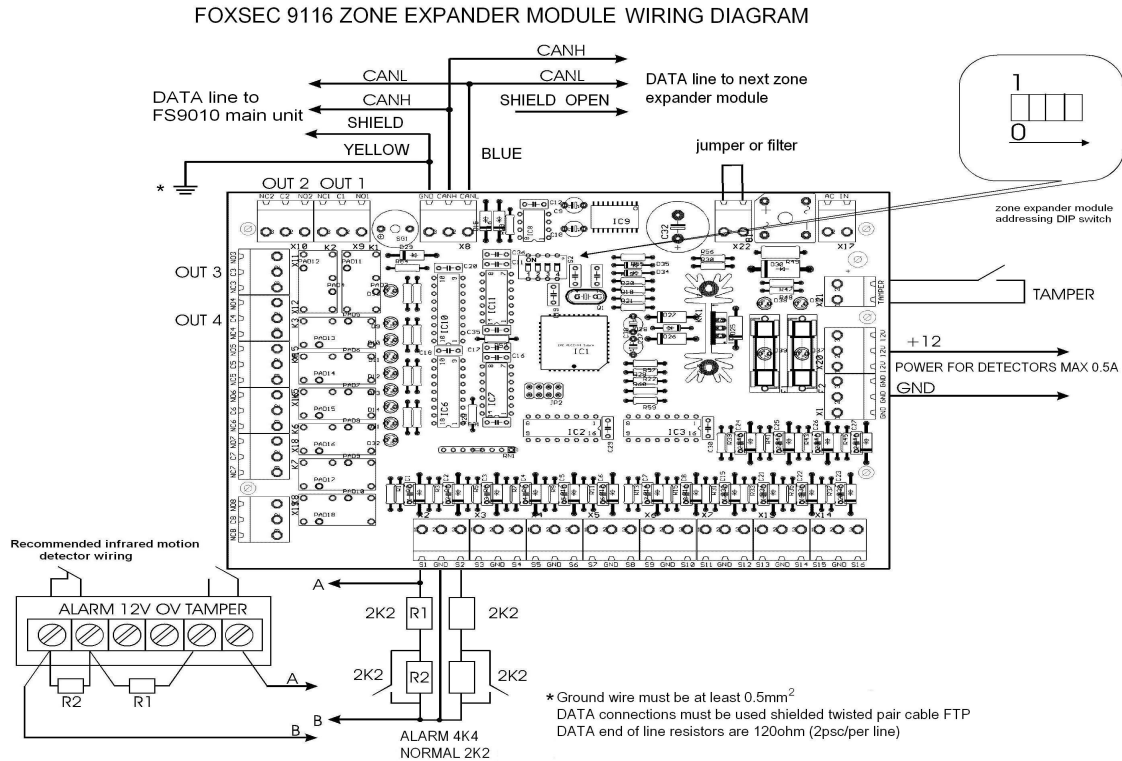
FS9116 zone expander module in metal enclosure



1. **FS9116 zone expander module**
2. **Mains transformer 220V +-10% AC 1.25A / power output 16VAC 1.25A**
3. **Battery 12V recommended capacity 7Ah**
4. Mains MMJ 3X1.5 input to fuse terminal 220/230VAC
5. Mains from fuse terminal to transformer 220/230VAC
6. enclosure grounding from fuse terminal
7. FS9116 power input from transformer 16VAC 1.25A
8. FS9116 enclosure tamper switch input
9. Power output to detectors 12VDC 1A
10. Zone inputs. Must use zone EOL 2X2.2Kohm
11. Freely programmable outputs
12. Data line supervision LED indicator
13. Data line input
14. Power supply noise suppressor connectors
15. **FS9116 addressing DIP switches**
16. 12V power output fuse 1A
17. FS9116 processor and memory fuse 500mA
18. LED indicators for output status
19. Battery 12V connectors. Recommended capacity 7Ah

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9116 Zone expander module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	122X174 mm
Power	220/230VAC transformer
Transformer input supply	220/230VAC
Transformer output supply	16VAC
Transformer max operating current	1.25A
FS9116 max output supply	12VDC 500mA
FS9116 PCB fuse	500mA
FS9116 outputs	2-8 X 5A voltage free relay outputs
FS9116 inputs	16 zone inputs. Monitored 2 X 2.2Kohm
Tamper switch	Separate input for tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus

6.2 ZONE EXPANDER MODULE FS9116 WIRING DIAGRAM



Zone expander modules are connected with the FS9010 through CAN 1 data line CANH and CANL (DATA+ and DATA-).

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m. Zone expander module power must be taken from separate power supply or from another zone expander module power supply for not ruin optically isolated data lines.

For data line EOL must be used 2X120ohm and must be attached two of the farthest devices. Zone expander module power must be taken from its own power supply for not ruin optically isolated data lines. Detectors power +12V and GND must be taken from zone expander power output or from separate power supply.

Zone inputs are monitoring resistors on inputs.

If there is 2.2Kohm then zone is OK (no movement)

If there is 4.4Kohm then zone is tripped (movement)

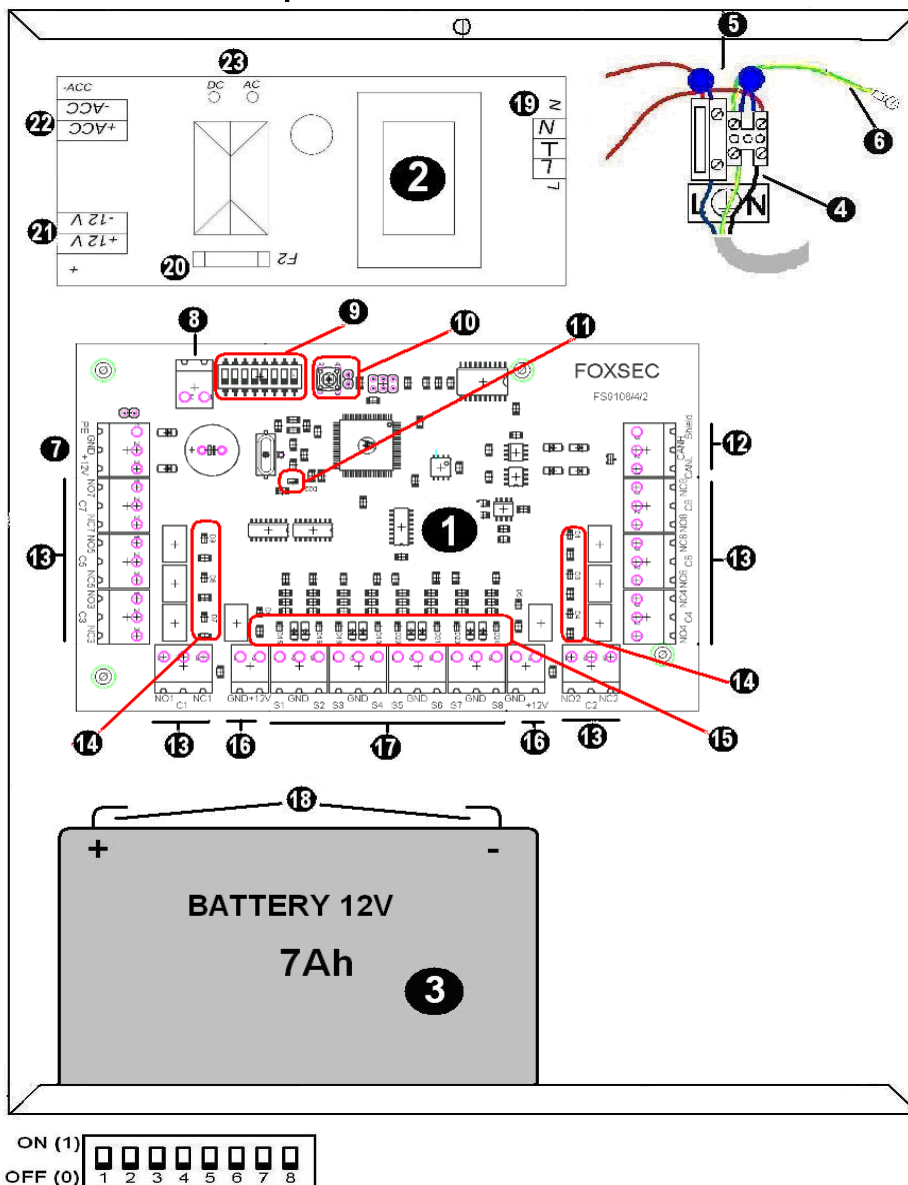
If there is no resistor then zone is disconnected (cable broken)

If there is under 1.5Kohm then zone is shorted.

Zone expander modules also have voltage free outputs. Depends on the expander module up to 8 outputs and all of them has LED indicators that shows output status. If LED is lit then output is ON (powered) if LED is OFF then output is in its normal state. On the expander PCB is data supervision LED that indicates communication between FS9010 and expander module.

6.3 FS9108 ZONE EXPANDER MODULE IN METAL INSTALLATION BOX. PRODUCT

FS9108 zone expander module in metal enclosure



FS9108 addressing table

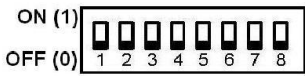
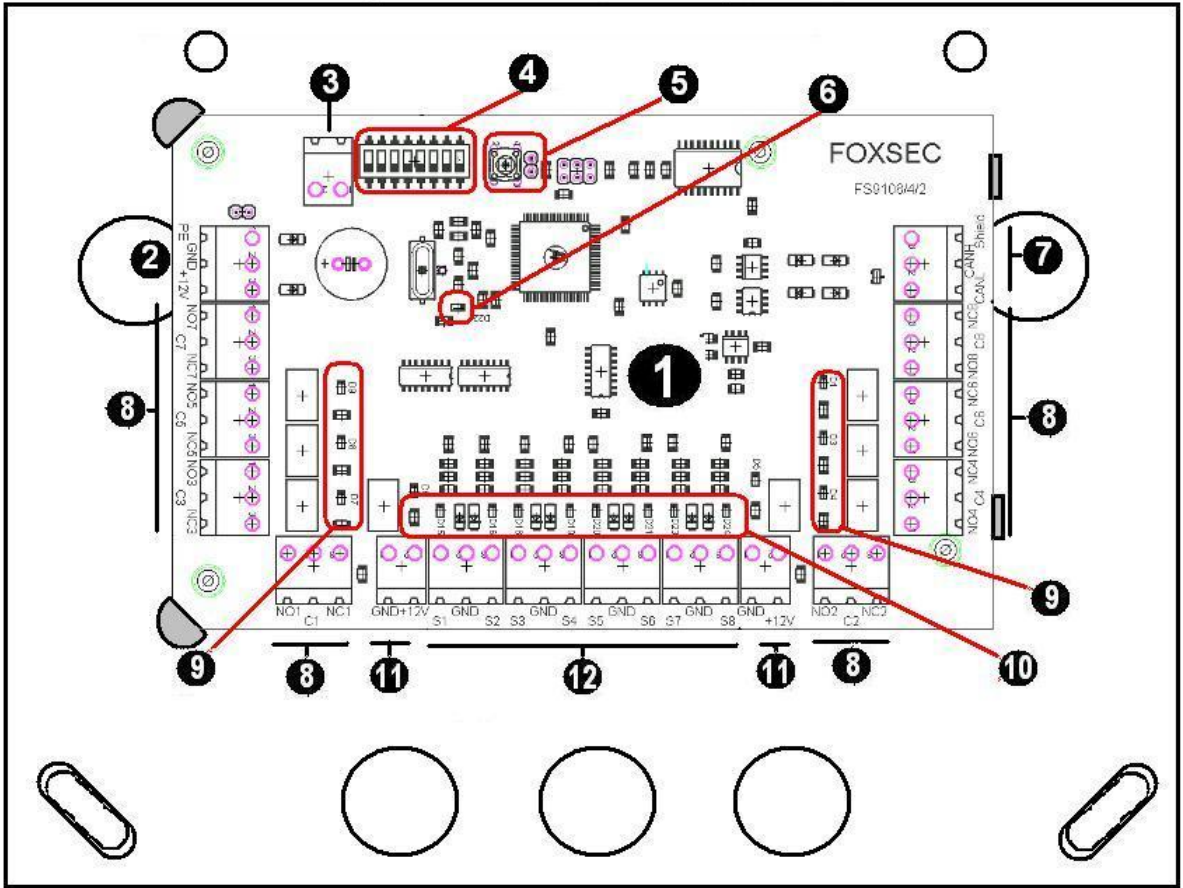
SWITCH POSITION	yyyy0000	yyyy1000
0000XXXX		16
1000XXXX	1	17
0100XXXX	2	18
1100XXXX	3	19
0010XXXX	4	20
1010XXXX	5	21
0110XXXX	6	22
1110XXXX	7	23
0001XXXX	8	24
1001XXXX	9	25
0101XXXX	10	26
1101XXXX	11	27
0011XXXX	12	28
1011XXXX	13	
0111XXXX	14	
1111XXXX	15	

1. **FS9108 zone expander module in metal enclosure**
2. **Power supply 220V +-10% AC 1.25A / power output 12VDC 1.25A**
3. **Battery 12V recommended capacity 7Ah**
4. Mains MMJ 3X1.5 input to fuse terminal 220/230VAC
5. Mains output from fuse terminal to power supply 220/230VAC
6. enclosure grounding from fuse terminal
7. FS9108 power input 12VDC
8. FS9108 enclosure tamper switch input
9. FS9108 addressing DIP switches
10. Tamper switch for plastic enclosure and disable jumpers
11. Data line supervision LED indicators
12. Data line input
13. FS9108 freely programmable voltage free outputs
14. LED indicators shows output status
15. LED indicators shows input status
16. Power output +12V and GND
17. FS9108 zone inputs
18. Battery 12V connectors
19. Mains input from fuse terminal
20. Power supply output power fuse 1.25A
21. Power output +12 and GND 1.25A
22. Battery 12V connectors
23. LEDS indicate existing mains and battery supply

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9108 Zone expander module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	101X161 mm
Power	220/230VAC power supply
Transformer input supply	220/230VAC
Transformer output supply	14VDC
Transformer max operating current	1.25A
FS9108 max output supply	1.25A
FS9108 outputs	2-8 X 1A voltage free relay outputs
FS9108 inputs	8 zone inputs. Monitored 2 X 2.2Kohm
Tamper switch	Separate input for tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus

6.4 FS9108 ZONE EXPANDER MODULE IN PLASTIC INSTALLATION BOX. PRODUCT

FS9108 zone expander module in plastic enclosure



FS9108 addressing table

SWITCH POSITION	yyyy0000	yyyy1000
0000XXXX		16
1000XXXX	1	17
0100XXXX	2	18
1100XXXX	3	19
0010XXXX	4	20
1010XXXX	5	21
0110XXXX	6	22
1110XXXX	7	23
0001XXXX	8	24
1001XXXX	9	25
0101XXXX	10	26
1101XXXX	11	27
0011XXXX	12	28
1011XXXX	13	
0111XXXX	14	
1111XXXX	15	

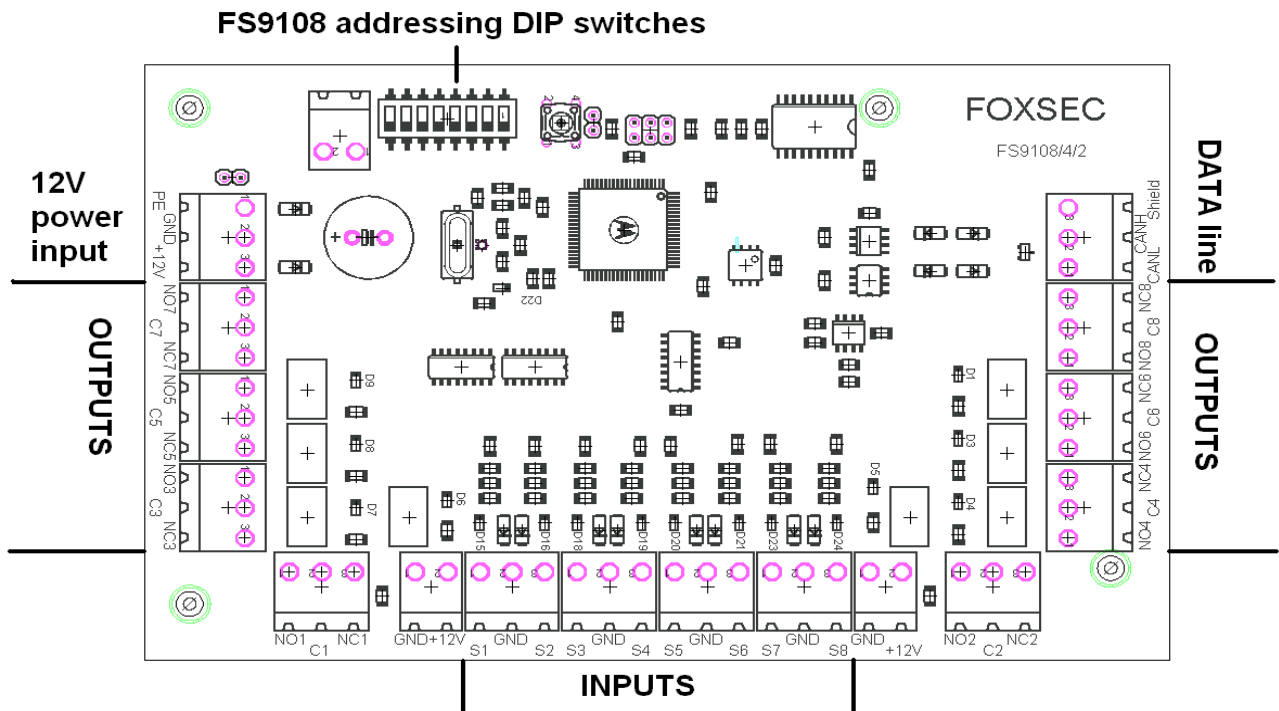
1. FS9108 zone expander module in plastic enclosure

2. FS9108 power input 12V DC
3. FS9108 tamper switch input
4. FS9108 addressing DIP switches
5. Tamper switch for plastic enclosure and disable jumpers
6. Data line supervision LED indicators
7. Data line input
8. FS9108 freely programmable voltage free outputs
9. LED indicators shows output status
10. LED indicators shows input status
11. Power output +12V and GND
12. FS9108 Zone inputs. Must use zone EOL 2X2.2Kohm

NB! Installing FS9108 into the plastic enclosure power must be taken from separate power supply 12VDC.

TECHNICAL DEVICE	SPETSIFICATION
Type	FS9108 Zone expander module
Security grade	Grade 3 PD6662:2004 EN50131-1
Mounting box dimensions	150X230X40 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	101X161 mm
Power	12-14VDC power supply
FS9108 outputs	2-8 X 1A voltage free relay outputs
FS9108 inputs	8 zone inputs. Monitored 2 X 2.2Kohm
Tamper switch	Separate input for tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus

6.4.1 FS9108 ZONE EXPANDER MODULE WIRING DIAGRAM



Zone expander modules are connected with the FS9010 through CAN 1 data line CANH and CANL (DATA+ and DATA-).

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m
Zone expander module power must be taken from separate power supply or from another zone expander module power supply for not ruin optically isolated data lines.

For data line EOL must be used 2X120ohm and must be attached two of the farthest devices.
Zone expander module power must be taken from its own power supply for not ruin optically isolated data lines. Detectors power +12V and GND must be taken from zone expander power output or from separate power supply.

Zone inputs are monitoring resistors on inputs (detectors).

Zone expander module FS9108 has on board LED indicators that show input state.

If there is 2.2Kohm then zone is OK (no movement) LED is OFF

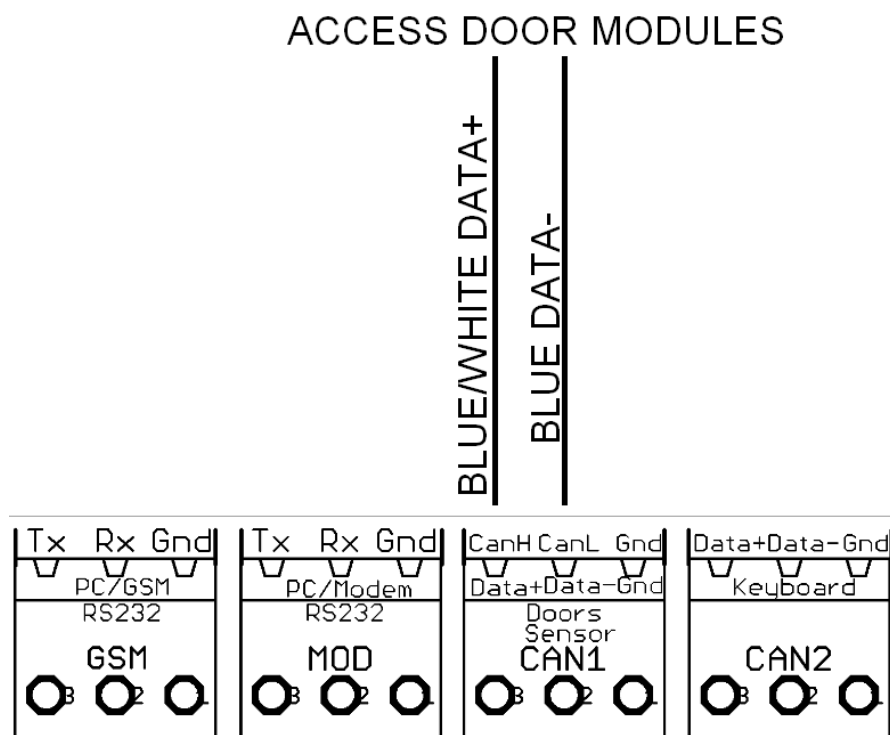
If there is 4.4Kohm then zone is tripped (movement) LED is ON

If there is no resistor then zone is disconnected (cable broken) LED blinks every 1 second

If there is under 1.5Kohm then zone is shorted LED blinks fast.

Zone expander modules also have voltage free outputs. Depends on the expander module up to 8 outputs and all of them has LED indicators that shows output status. If LED is lit then output is ON (powered) if LED is OFF then output is in its normal state. On the expander PCB is data supervision LED that indicates communication between FS9010 and expander module.

7. ACCESS DOOR MODULES



Access door modules are connected with the FS9010 through CAN 1 data line.

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m

Access door module power must be taken from own or separate power supply for not ruin optically isolated data lines.

From access door module power output may power up only electric locks and card readers.

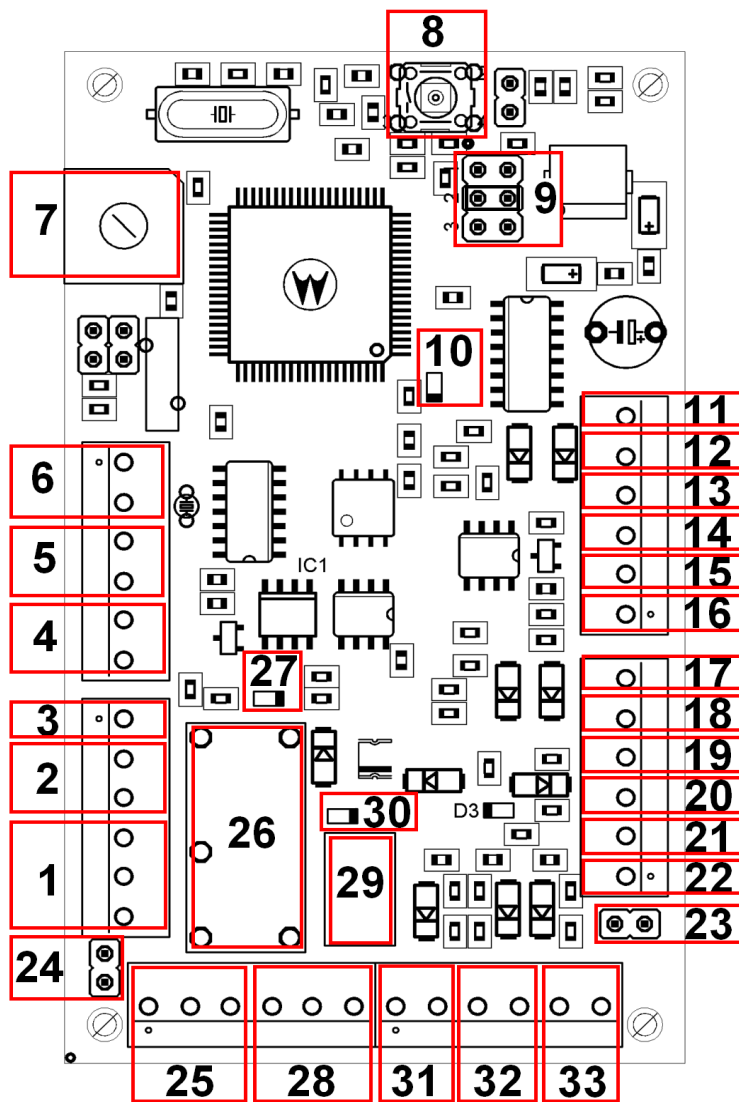
If the sum of all devices current exceeds power supply max output current then must be used additional power supply.

It is forbidden to power up CAN 2 data line devices from access door controller

In one FS9010 main unit CAN 1 data line can be up to 10 access door modules.

TECHNICAL DEVICE	SPETSIFICATION
Type	FS1001 access door module
Security grade	Grade 2 PD6662:2004 EN50131-1
Environmental class	IP 20 Class II Indoor general
PCB dimensions	90X53 mm
Power	10-14VDC power supply
FS1001 outputs	1 X 5A and 1X1A voltage free relay outputs
Tamper switch	Spring tamper switch
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	CAN bus

7.1 FS1001 ACCESS DOOR MODULE WIRING DIAGRAM



Access door modules are connected with FS9010 main unit through CAN 1 data line CANH and CANL (DATA+ and DATA-).

Data line cable should be shielded twisted pair (Cat5e, Cat6e) and total length is up to 1500m.

Access door module power must be taken from separate power supply for not ruin optically isolated data lines.

For data line EOL must be used 2X120ohm and must be attached two of the farthest devices.

FS1001 PCB connectors:

1. GND input
2. +12VDC input
3. Grounding PE
4. Data+ (CANH) from FS9010 main unit

5. Data- (CANL) from FS9010 main unit
6. SDA and SCL data with K6000 elevator module
7. FS1001 addressing switch
8. Tamper switch
9. Middle jumper must be always ON
10. Data (CAN) supervision led. If LED is OFF then there is no power. If LED is ON then no connection with FS9010. If LED blinks fast then FS9010 is communicating with door module. If LED blinks slowly then data line is correct but in FS9010 this module isn't programmed.
11. Entry card reader +12VDC (Red wire)
12. Entry card reader GND (Black wire)
13. Entry card reader data1 (D1 white wire)
14. Entry card reader data0 (D0 green wire)
15. Entry card reader red led
16. Entry card reader green led
17. Exit card reader +12VDC (Red wire)
18. Exit card reader GND (Black wire)
19. Exit card reader data1 (D1 white wire)
20. Exit card reader data0 (D0 green wire)
21. Exit card reader red led
22. Exit card reader green led
23. If jumper is ON then connects PE with GND
24. If jumper is ON then connects +12VDC to relay1 C1
25. Relay 1 (NO C NC) for electric lock. If jumper 24 is connected then on the relay1 common (C) is +12VDC. If jumper 24 is OFF then relay 1 is voltage free.
26. Relay 1
27. Relay 1 status LED indicator. If LED is ON then output1 is active.
28. Relay 2 (NC C NO) optional relay. If normal door then becomes active if door opened too long or if door opened by key. If door as tourniquet then becomes active when going OUT
29. Relay 2
30. Relay 2 status LED indicator. If LED is ON then output2 is active.
31. Magnetic contact for door status. (Door opened/closed)
32. Opening button. If shorted then activates relay 1 (opens door)
33. Not in use

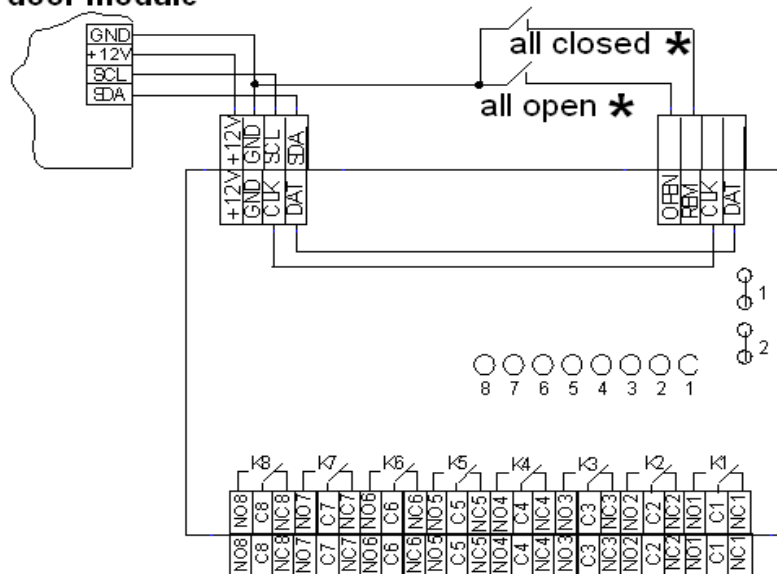
Access door modules are addressable by addressing switch 1-10

NB! Two of the same module addresses CANNOT BE in one system!

It is possible to add to door module elevator module as well. There can be total of 8 K6000 modules. On one door module can be added total of 2 K6000 modules.

7.2 K6000 ELEVATOR MODULE WIRING DIAGRAM

to door module



With elevator module can allow or deny access to floors. If a cardholder has the right to access to the 5th floor then after using access card the 5th floor button will be enabled.

- * If 'all open' connection has been made and then using this option will enable all of the floor buttons (in case of fire)
- * 'all closed' is the same policy but in the other way.

Elevator module addressing is by the 2 pairs of jumpers

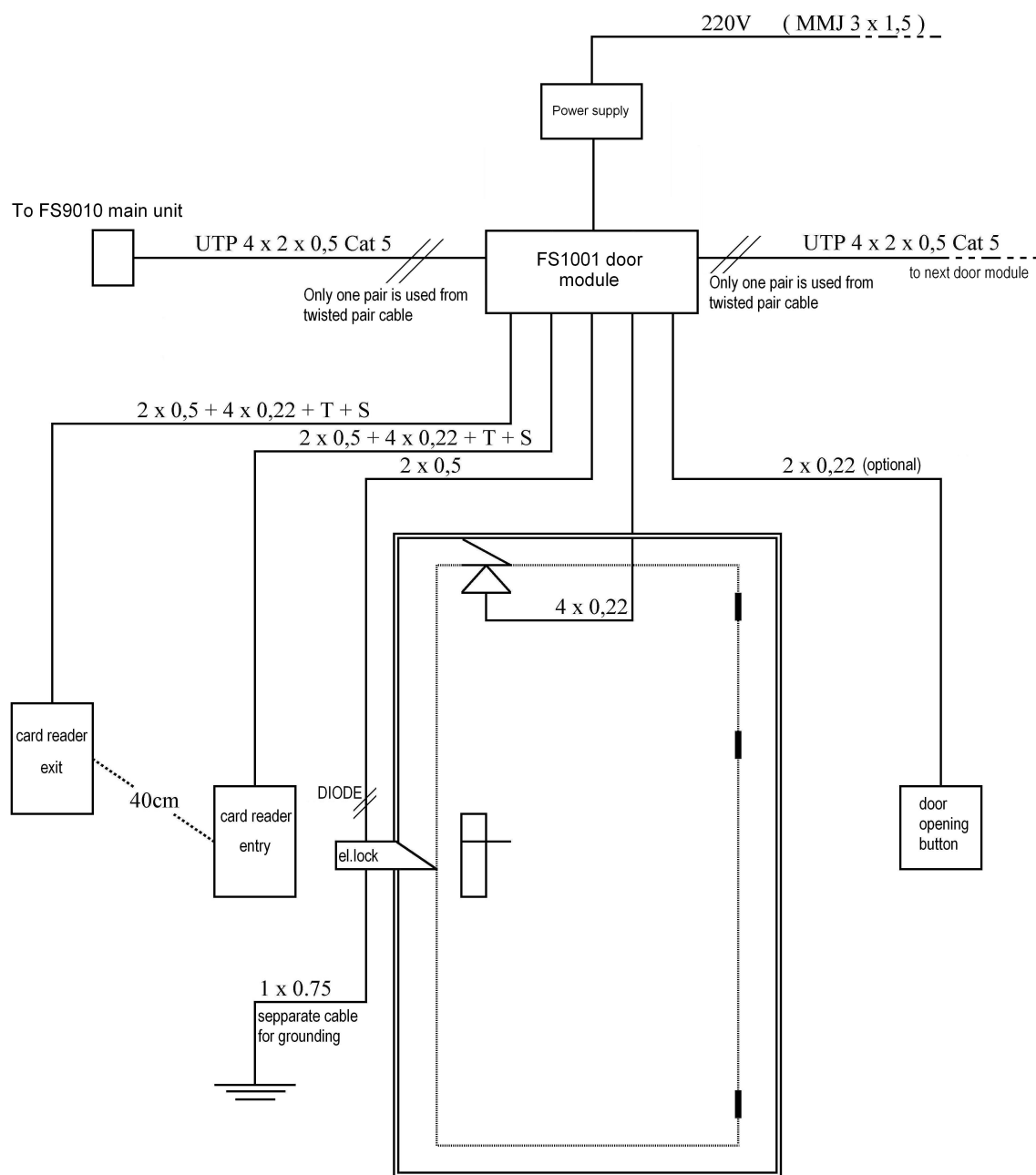
If both pairs are shorted then the address is 1 (floors 1-8)

If jumper pair 1 is shorted and 2 is open then the address is 2 (floors 9-16)

TECHNICAL DEVICE	SPETSIFICATION
Type	K6000 elevator module
Security grade	Grade 2 PD6662:2004 EN50131-1
Mounting box dimensions	300X233X85 mm
Environmental class	IP 20 Class II Indoor general
PCB dimensions	63X93 mm
Power	12-14VDC power supply
Temperature range	-10 °C to +40 °C
Humidity range	0%-80%
Communications	I2C

8. ACCESS CONTROL SYSTEM BASIC WIRING STRUCTURE

Access control device connection diagram



8.1 MOST COMMON CARD READER WIRING DIAGRAMS

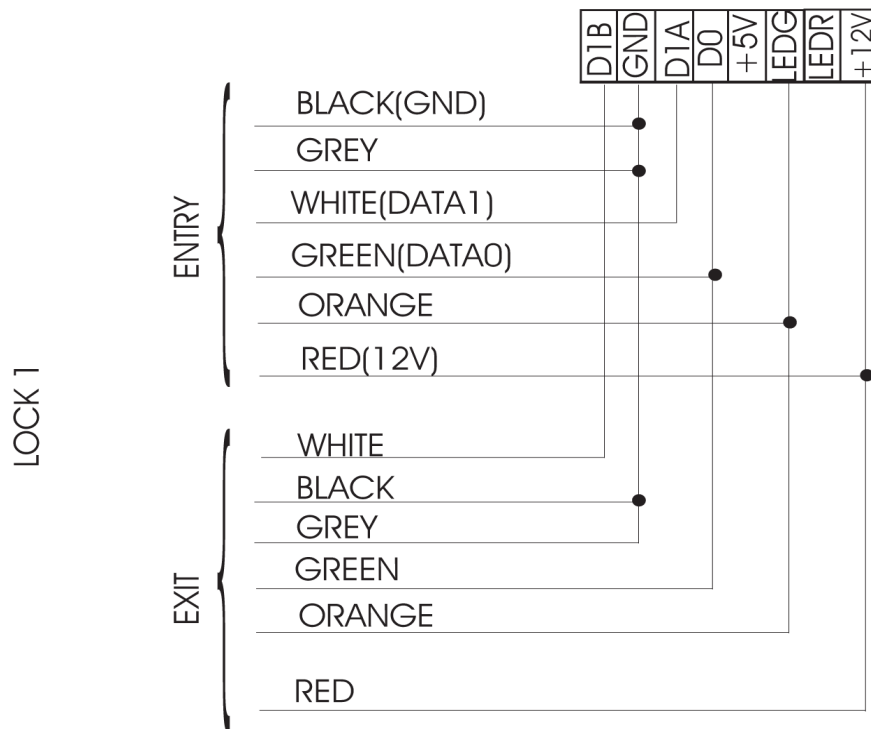
Card reader connections

In wiring diagram is shown only first door IN/OUT card readers. Second door card reader connections are the same as the first one.

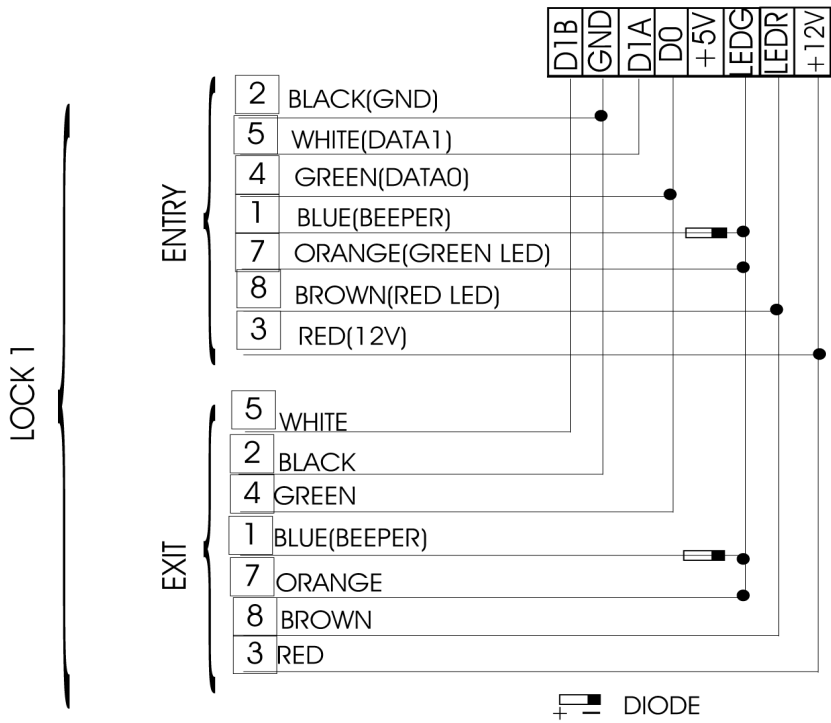
NB! For connecting card reader requires shielded cable and it can be connected to controller mains ground GND.

NB! Two proxy readers can not be closer to each other than 10 times card reading proximity.
Usually it is about 0.5m! If proxy card readers are mounted on a thin wall then it is important to check that the readers are not back to back. If back to back then may happen that after using a card the software shows wrong or both directions at the same time. Helpful can be shielding the readers.

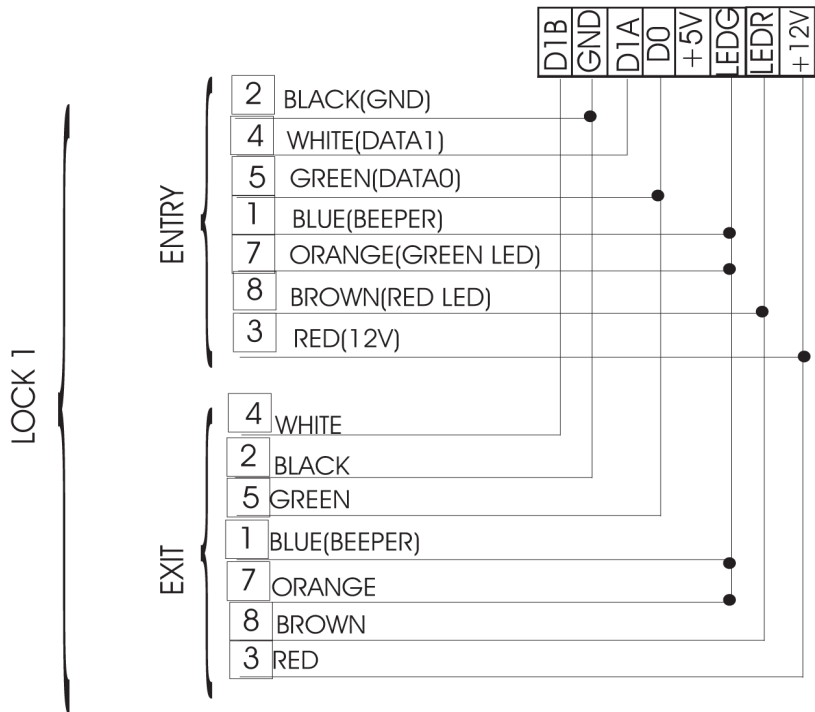
Rosslare Multifomat / FoxSec security reader



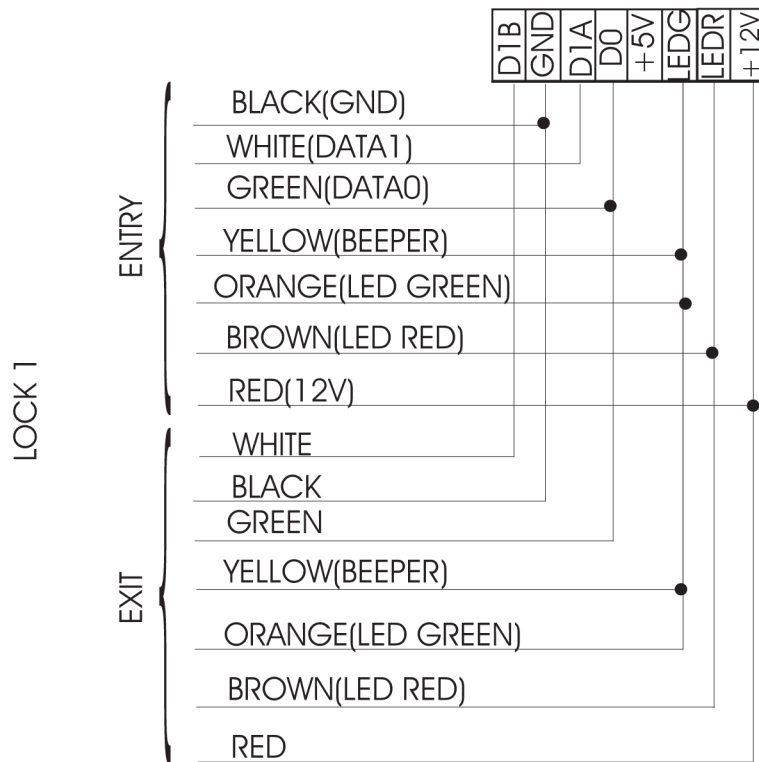
Deister 2 LED option MPX1



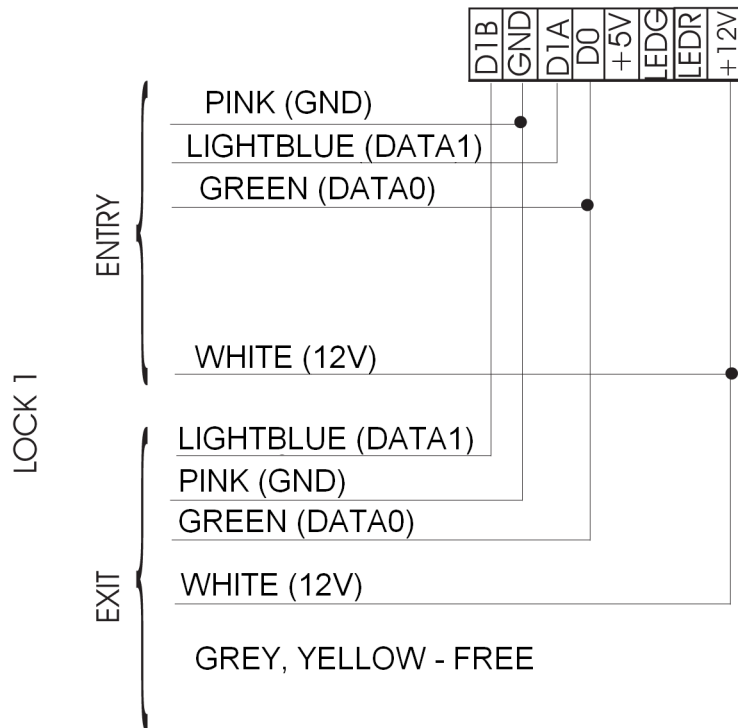
Deister 2 LED option MPX2



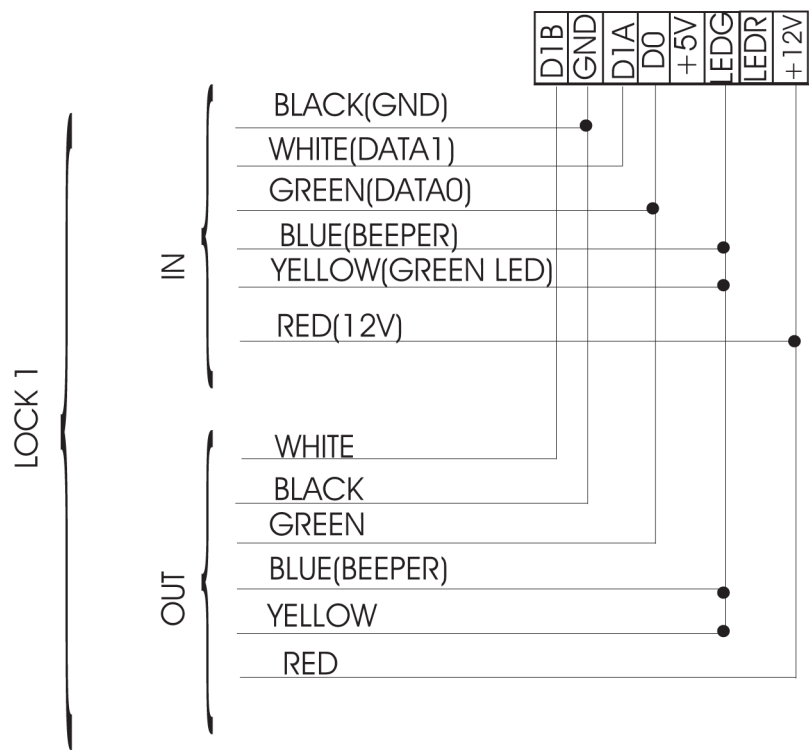
HID 2 LED option



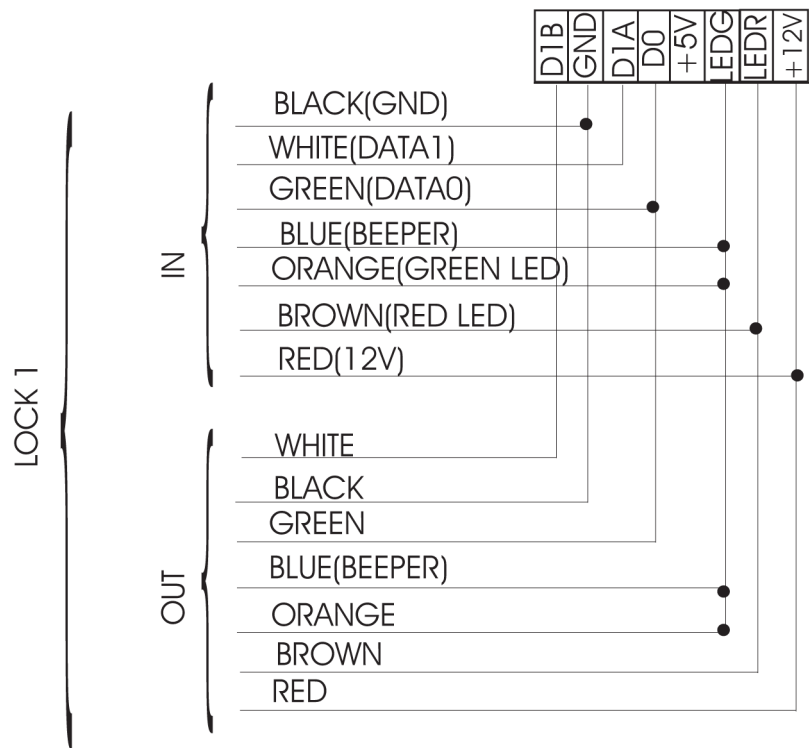
Idesco Access 7A



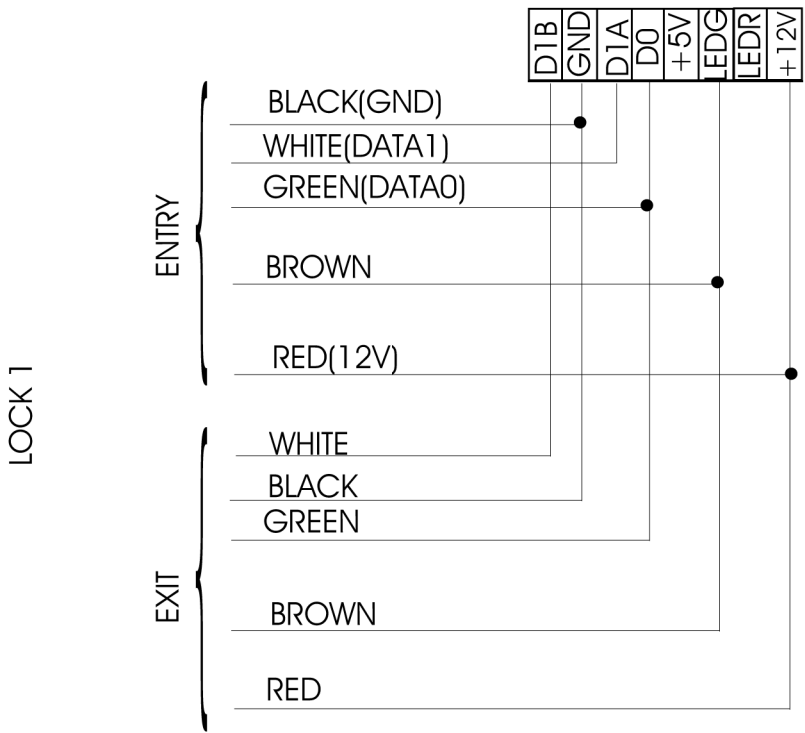
ID-TECK 1 LED option



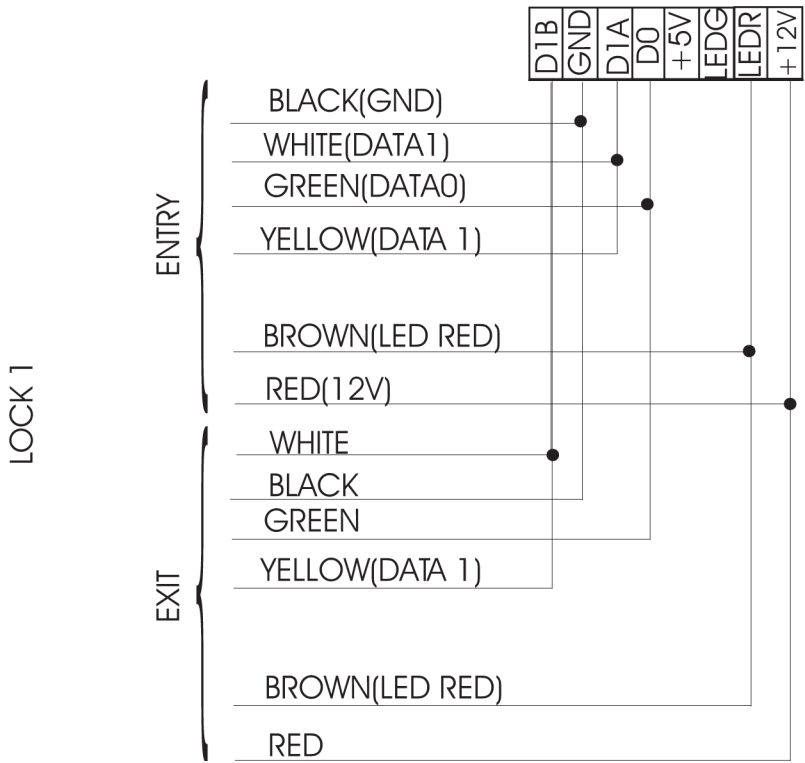
Indala 2 LED option



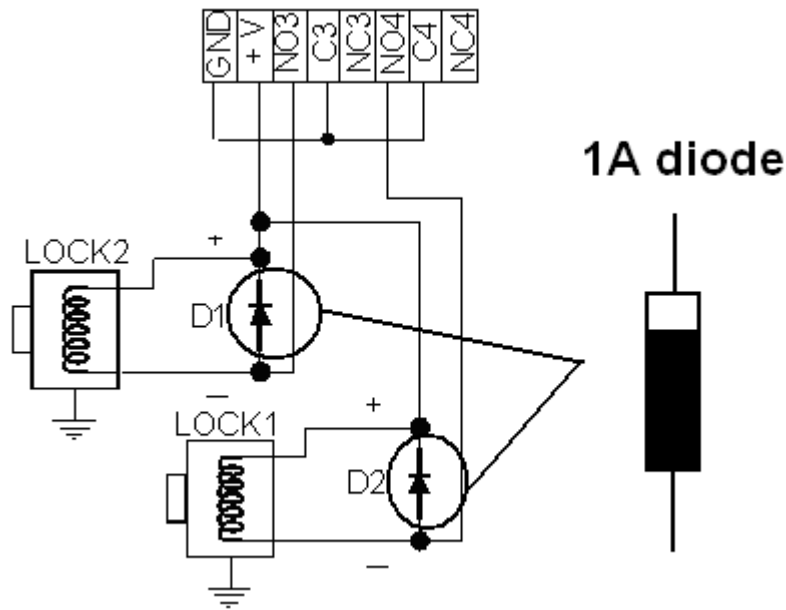
Rosslare AY-CR12, AY-CR11, AY-KR13



Mifare MF7-20



8.2 ELECTRIC LOCK WIRING DIAGRAM

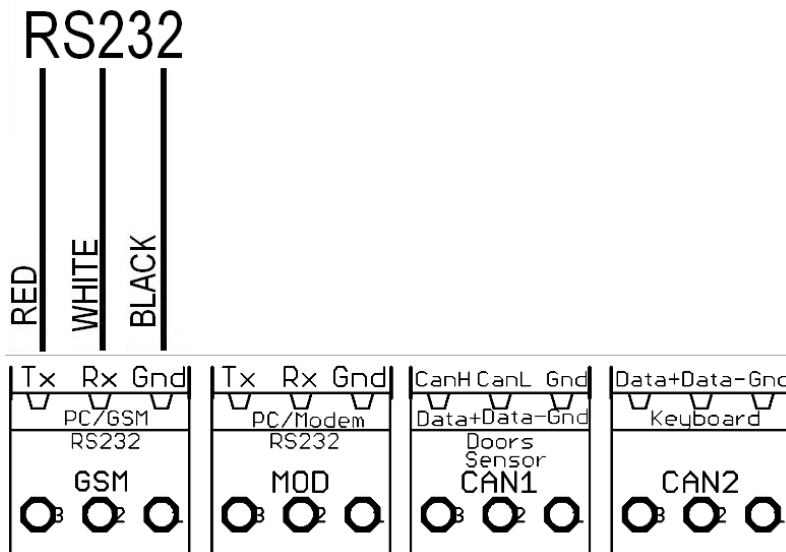


NB! D1, D2 – It is important to connect 1A diode to electric lock connectors!

NB! Diode must be connected right on to the electric lock connectors!

NB! It is important to use separate grounding for electric locks for discharging static!

9. SIEMENS GSM MODEM TC35



NB! Siemens GSM modem is only for transmitting SMS messages

Siemens GSM modem is connected to FS9010 through RS232 cable

RS232 cable is with modem kit.

GSM modem external antenna must be located where GSM operator broadcast area is good.

GSM modem SIM card have to have message centre number inserted previously.

GSM modem SIM card can not be protected by password.

- If GSM modem is in use then at the same time can not use Contact ID or COM port connection with PC.
- **If on the FS9010 PCB DIP switch nr.1 „ON“ then GSM modem does not work.**

With GSM modem can send SMS messages only to one phone number and that can be set in FoxSec conf software. Also in the FoxSec conf has to apply filter to what activates SMS sending.

Options are:

Intruder alarm

Tamper alarm

Alarm restoration

All armed

Bypassing

Part arming

Technical information

Access door information (door opened too long, opened by key etc)



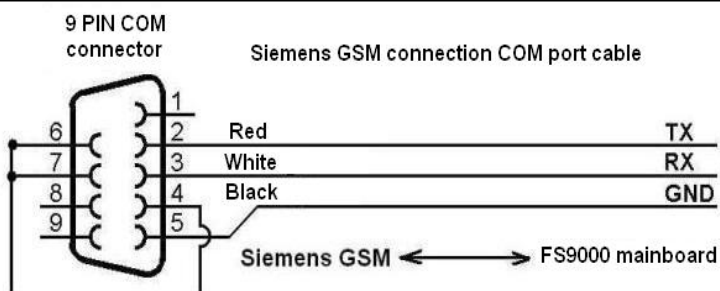
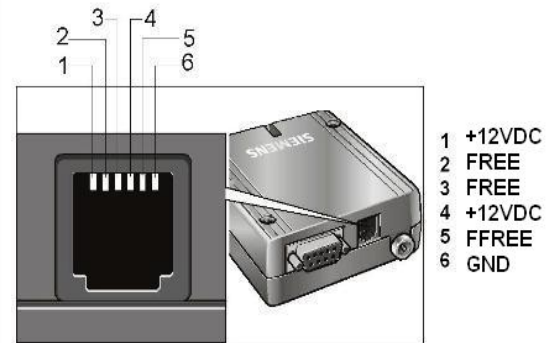
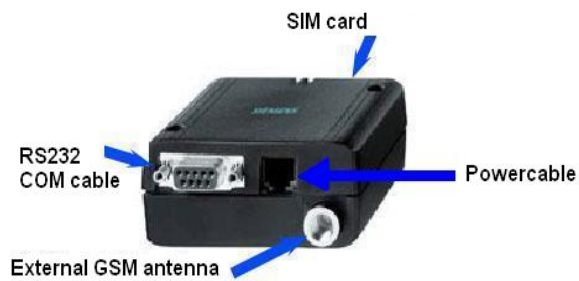
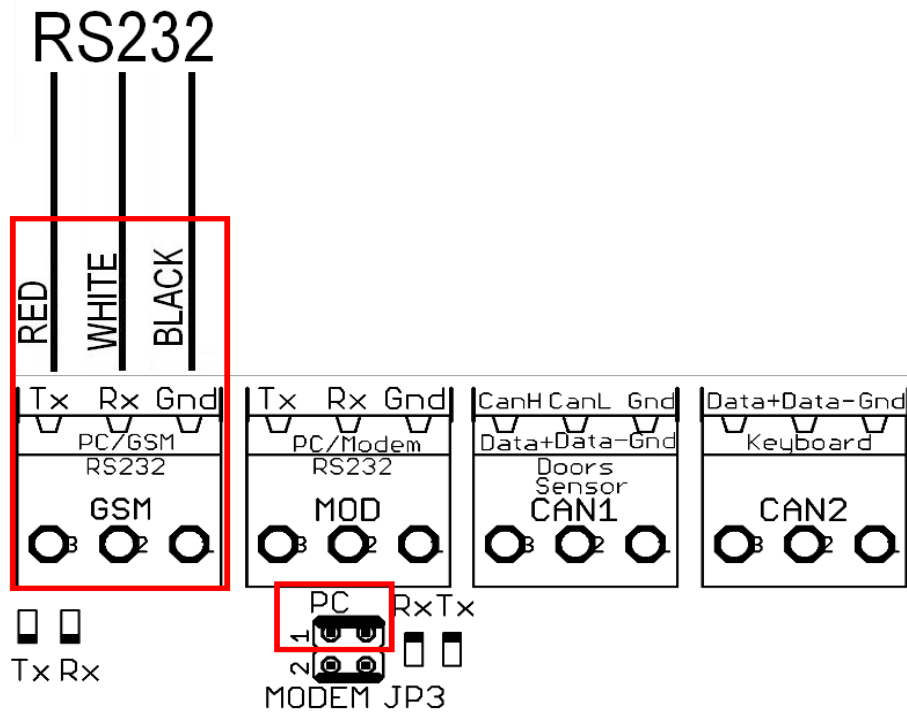
9.1 SIEMENS GSM MODEM TC35 WIRING DIAGRAM

Siemens GSM modem is connected with FS9010 through RS232 COM port cable.

On the FS9010 PCB must set connection type with jumper.

PCB jumper 2 and 4 must be shorted then GSM modem is in use.

- If GSM modem is in use then at the same time can be used Contact ID or COM port connection with PC on the other RS232 data line
- In one FS9010 can be used only 1 GSM modem
- GSM modem baud rate must be set to 9600 bit/s in Foxsec conf software

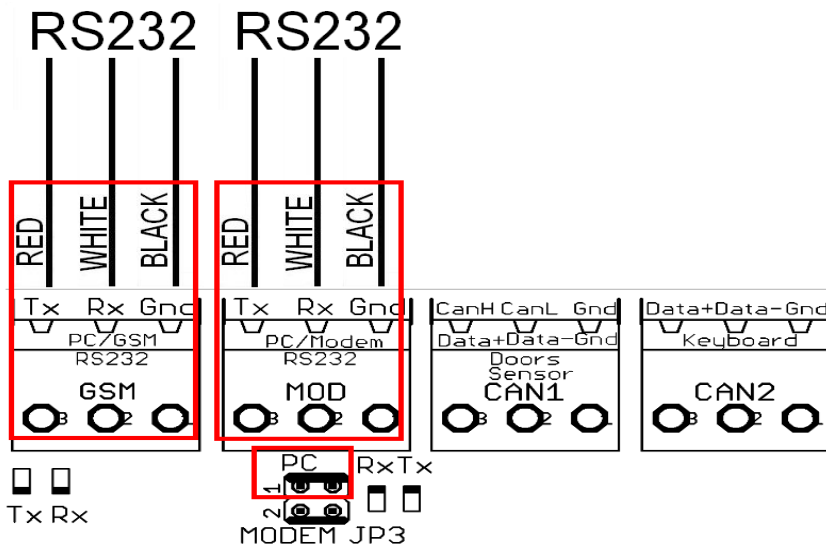


10.1 CONNECTING FOXSEC FS9010 WITH COM PORT

FS9010 can be connected with PC through COM port connection.

For connecting FS9010 through COM port then on the FS9010 PCB have to short jumpers 1 and 3.

- If COM port connection is in use then at the same time CANNOT be used contact ID or GSM modem.



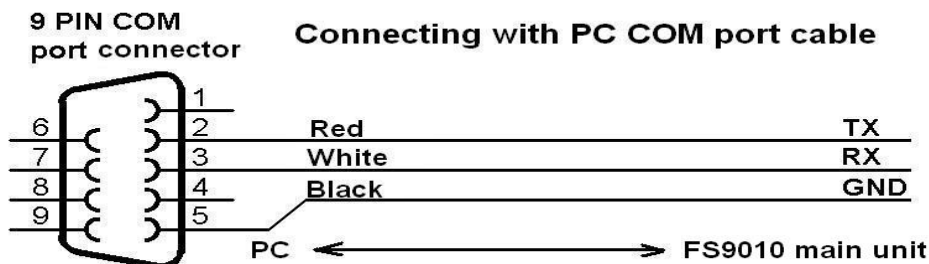
On FS9010 are 2 of RS232 output. Can be used either one to connect with PC. With MOD data line must use jumper. With GSM data line must set COM parameters on FoxSec conf software. For that kind of connections must be used COM port cable that is on the one side 9-pin standard connector and on the other side it is connected right on the FS9010 PCB

COM port baud rate must be set to 57600 bit/s in the FoxSec conf software

Necessary COM port cable is included with FoxSec main unit.

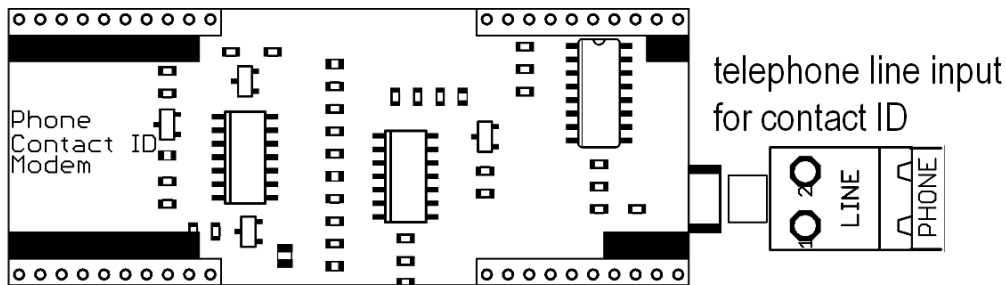
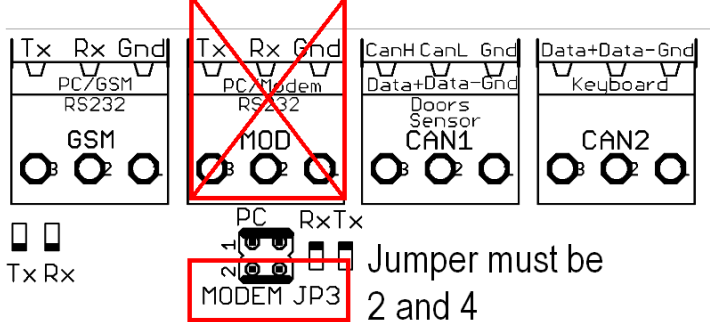
In case of using PC that don't have COM port then it is possible to use USB-COM converter.

For using this kind of connections must be set correct settings in Foxsec conf software.

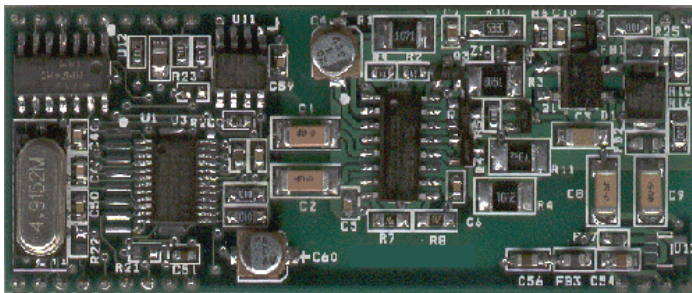


11.1 CONTACT ID

If Contact ID is used then Modem data line can not be used.



Contact ID modem is optional device and it will be attached right on the FS9010 PCB.



Contact ID can be used for transmitting information to central station. (Police, Security Company)

Contact ID works through telephone line (land line) and must be connected to FS9010 PHONE line connectors

On the FS9010 PCB must be shorted jumpers 2 and 4 for activating Contact ID option

Central station numbers, modem filter (alarms, tampers, arming etc) etc must be set in the FoxSec conf software

NB! CANNOT be used with IP phone

- If contact ID is in use then at the same time can be used GSM modem or COM port connection
- If on the FS9010 PCB DIP switch nr1 is "ON" then Contact ID is not working.

12.1 FS DEVICE RECOMENNDED CABLE TYPES

Security system - mains cable – MMJ 3X1.5

Security system - data cable – FTP 4X2X0.5 Cat5e

Security system - keypad power cable – 2X1.0

Security system - keypad grounding cable – 1X0.75

Access system - mains cable – MMJ 3X1.5

Access system - data cable – FTP 4X2X0.5 Cat5e

Access system - card reader cable – 2X0.5+4X0.22+T+S

Access system - opening button cable – 4X0.22

Access system - electric lock cable – 2X0.5

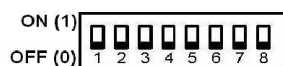
Access system - electrical lock grounding cable – 1X0.75

Access system - magnetic contact (status) cable– 4X0.22

13.1 FS DEVICE ADDRESSING TABLES

FS9010 main unit address must be set from FoxSec conf software

LCD and LED keypad address starts from 56



**NB!!! Addressing device always check
DIP switch ON and OFF positions**

SWITCH POSITION	yyyy0000	yyyy1000	yyyy0100	yyyy1100	yyyy0010	yyyy1010	yyyy0110
0000XXXX					64	80	96
1000XXXX					65	81	97
0100XXXX					66	82	98
1100XXXX					67	83	99
0010XXXX					68	84	100
1010XXXX					69	85	101
0110XXXX					70	86	102
1110XXXX					71	87	103
0001XXXX				56	72	88	104
1001XXXX				57	73	89	
0101XXXX				58	74	90	
1101XXXX				59	75	91	
0011XXXX				60	76	92	
1011XXXX				61	77	93	
0111XXXX				62	78	94	
1111XXXX				63	79	95	

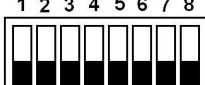
FS9100/8 main output module address starts from 32

FS9100/8 MAIN OUTPUT EXPANDER MODUL ADDRESS TABLE

1 2 3 4 5 6 7 8

ON (1)

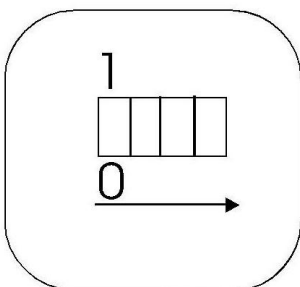
OFF (0)



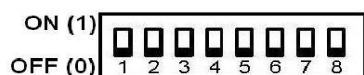
Address	1	2	3	4	5	6	7	8	Address	1	2	3	4	5	6	7	8
32	0	0	0	0	0	1	0	0	44	0	0	1	1	0	1	0	0
33	1	0	0	0	0	1	0	0	45	1	0	1	1	0	1	0	0
34	0	1	0	0	0	1	0	0	46	0	1	1	1	0	1	0	0
35	1	1	0	0	0	1	0	0	47	1	1	1	1	0	1	0	0
36	0	0	1	0	0	1	0	0	48	0	0	0	0	1	1	0	0
37	1	0	1	0	0	1	0	0	49	1	0	0	0	1	1	0	0
38	0	1	1	0	0	1	0	0	50	0	1	0	0	1	1	0	0
39	1	1	1	0	0	1	0	0	51	1	1	0	0	1	1	0	0
40	0	0	0	1	0	1	0	0	52	0	0	1	0	1	1	0	0
41	1	0	0	1	0	1	0	0	53	1	0	1	0	1	1	0	0
42	0	1	0	1	0	1	0	0	54	0	1	1	0	1	1	0	0
43	1	1	0	1	0	1	0	0	55	1	1	1	0	1	1	0	0

FS9116 zone expander module address starts from one (1).

SWITCH POSITION	ADDRESS
0000	
1000	1
0100	3
1100	5
0010	7
1010	9
0110	11
1110	13
0001	15
1001	17
0101	19
1101	21
0011	23
1011	25
0111	27
1111	



FS9108 zone expander module address starts from one (1).



FS9108 addressing table

SWITCH POSITION	yyyy0000	yyyy1000
0000XXXX		16
1000XXXX	1	17
0100XXXX	2	18
1100XXXX	3	19
0010XXXX	4	20
1010XXXX	5	21
0110XXXX	6	22
1110XXXX	7	23
0001XXXX	8	24
1001XXXX	9	25
0101XXXX	10	26
1101XXXX	11	27
0011XXXX	12	28
1011XXXX	13	
0111XXXX	14	
1111XXXX	15	

14.1 BASIC SAFETY REQUIREMENTS

Before using this electrical device read all of the safety instructions and device manual and be sure you understand it clearly. Keep all of the documentation for further use and give it to the next user with the device.

Warning

Some of the FoxSec devices use mains power 230V/50Hz.

Start of operation

Before plugging in the device check to see that the rated mains voltage and mains frequency, as stated on the rating label, match with your power supply.

Environmental protection



Worn out electrical devices contain considerable amounts of valuable raw and plastic materials, which can be recycled.

Only for EU countries:

Newer dispose of electrical devices in your household waste! In accordance with European Guideline 2002/96/EC on used electronic and electric equipment and its implementation in national legal systems, used electrical devices must be collected separately and handed in for environmentally compatible recycling.

14.2 SAFETY PRECAUTIONS

Warning: Read these instructions before use. Pay special attention to the safety information. These instructions are intended for persons having a basic technical knowledge of the operation of electrical devices such as the one described herein. If you have no experience whatsoever with such devices, we strongly recommend that you seek the advice of an experienced person.

Installation and maintenance works can be done only by qualified personnel

Check general requirements.

1. Keep devices area tidy.
Consider environmental conditions. Do not expose the machine to rain. Do not leave device in damp or wet environment.
2. Do not use the device near inflammable liquids or gases.
3. Risk of electric shock! Prevent body contact with earthed objects such as radiators, pipes, cooking stoves or refrigerators when operating this
4. If the device is not in use store it in a cool dry place away of reach of children.
5. Do not overload device. It will work safely and perfectly in stated limits.
6. Do not use the mains cable for any purpose it is not intended for.
7. Disconnect power before servicing.
8. Disconnect power if it is not in use.
9. Use only special installation box and cables for installing the device into outdoor conditions
10. Be alert. Know what you are doing. Set out to work with reason. Do not operate device while under the influence of drugs, alcohol or medication!
11. Before using the device check that it is not broken in any way. In case of discovering a defect on the device, let it check by authorized personnel only.
12. All devices must be installed only places that have enough space to work normally.
13. Use only those additional devices mentioned in this manual. If using other kind of additional devices, main device may not work properly or even broke the device.
14. Let the device maintenance be done by authorized personnel only.

NB! Save these instructions.

14.3 TECHNICAL SPECIFICATIONS

FS9010 main unit installation box

- CE marking
- Environmental class: IP 20 Class II Indoor general
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W) Depth (D)
400X350X180

Zone expander module/output module metal installation box

- CE marking
- Environmental class: IP 20 Class II Indoor general
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W) Depth (D)
300X233X85

Zone expander module/output module plastic installation box

- CE marking
- Environmental class: IP 20 Class II Indoor general
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W) Depth (D)
150X230X40

FS9010 main unit

- CE marking
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)
110X180

FS9500/FS9600 keypads

- CE marking
- Environmental class: IP 20 Class II Indoor general
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W) Depth (D)
130X168X21

FS9500/FS9600 keypads/FS9150RF module

- CE marking
- Environmental class: IP 20 Class II Indoor general
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)
111X137

FS9100/8 main output module

- CE marking
- Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)
111X160

FS9100/8.8 additional output module

- CE marking

Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)

63X93

FS9116 zone expander module

- CE marking

Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)

122X174

FS9108 zone expander module

- CE marking

Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)

101X161

Contact ID

- CE marking

Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W)

26X65

FS9010 power supply

- CE marking

Humidity range: 80% in temperature 20 °C

Dimensions in millimeters Height (H) Width (W) Depth (D)

51X91X29

Important!

Read these instructions before use. Pay special attention to the safety information.

These devices must be installed, maintenance and repaired by authorized personnel only.

Any purpose it is not intended for may cause fatal failure to the system or even but in danger personnel nearby.

14.4 LIMITED WARRANTY

Hardmeier OÜ ("Hardmeier") warrants that the electronical component(s) sold by Hardmeier, or by either a distributor or stocking representative franchised by Hardmeier to sell electronical component(s) manufactured by Hardmeier (the "Electronical Component(s)"), are free from Manufacturing Defects (as defined and as determined below) for a period of one (1) year from the date of sale to the customer, subject to and on the terms and conditions set forth in this Limited Warranty.

Hardmeier will remedy and correct any "Manufacturing Defects," with respect to the Electronical Component(s), during the one (1) year Limited Warranty period, by, at Hardmeier's sole option replacing, at Hardmeier's cost and expense, the Electronical Component(s) with the same or substantially-similar specifications, provided that (in addition to any other requirements or provisions of this Limited Warranty), the customer returns, with all shipping costs pre-paid at the customer's sole expense, the Electronical Component(s) that the customer claims are subject to any Manufacturing Defects according to Hardmeier's Returned Merchandise Authorization procedures, as they may exist from time-to-time.

Hardmeier is the only party authorized to remedy and correct any Manufacturing Defects as provided by this Limited Warranty, and this Limited Warranty does not apply to replacements of Electronical Component(s), or any other corrective or remedial action with respect to the Electronical Component(s), made by any other party.

Definition of "Manufacturing Defects" "Manufacturing Defects" means Hardmeier verified problems or defects resulting from the manufacture, materials, or workmanship of the Electronical Component(s) by Hardmeier that render(s) the Electronical Component(s) unable to function in a manner consistent with and according to the specifications provided by and/or defined by Hardmeier that are applicable to the Electronical Component(s). Furthermore, Hardmeier specifically reserves the right to: (a) determine, in its sole, absolute discretion, whether a "Manufacturing Defect(s)" exists; and (b) decline any claim under this Limited Warranty with respect to an Electronical component that Hardmeier can not verify, in its sole, absolute discretion, was sold to the Limited Warranty claimant either directly by Hardmeier or through a franchised Hardmeier distributor or stocking representative. Notwithstanding the foregoing, and without limiting the foregoing, "Manufacturing Defects" are NOT unconfirmed defects or problems caused by modifications to, or work performed on, the Electronical Components by any party after the sale of the Electronical Components by Hardmeier. In addition, "Manufacturing Defects" are NOT unconfirmed defects or problems caused by utilization of the Electronical Components in a manner inconsistent with the specifications provided and/or defined by Hardmeier that are applicable to the Electronical Component(s), or in any unreasonable manner. Hardmeier reserves the right to void this Limited Warranty, and shall not be obligated to make any replacements or credits of the Credit Amount with respect to the Electronical Component(s) in event that work is performed on the Electronical Component(s) by any party after the sale of the Electronic Components by Hardmeier, or if the Electronical Component(s) are used in a manner inconsistent with the specifications provided and/or defined by Hardmeier that are applicable to the Electronical Component(s), or are used in an unreasonable manner.

EXCEPT AS SET FORTH IN THIS LIMITED WARRANTY, HARDMEIER MAKES NO OTHER WARRANTIES, EITHER EXPRESS OR IMPLIED. FURTHERMORE, HARDMEIER SHALL NOT BE LIABLE FOR ANY DAMAGES (WHETHER CONSEQUENTIAL, INCIDENTAL OR OTHERWISE) FOR ANY BREACH OF THIS LIMITED WARRANTY, EXCEPT FOR HARDMEIER OBLIGATIONS TO REPLACE THE ELECTRONICAL COMPONENT(S), AS ELECTED BY HARDMEIER AT HARDMEIER SOLE OPTION, AND AS MORE PARTICULARLY PROVIDED BY THIS LIMITED WARRANTY, AND SUCH REPLACEMENTS, AS THE CASE MAY BE, SHALL BE THE SOLE REMEDY FOR ANY SUCH BREACH BY HARDMEIER OF THIS LIMITED WARRANTY.

14.5 CERTIFICATES

All of the FoxSec devices have CE marking

CE certificate EVS-EN 50130-4; EN 61000-6-x series; EVS-EN 55022

Electromagnetic compatibility (EMC) Testing and measurement EN 61000-4-2

Radiated, radio-frequency, electromagnetic field immunity test EN 61000-4-3

Electrical fast transient/burst immunity test EN 61000-4-4

Surge immunity test EN 61000-4-5

Immunity to conducted disturbances, induced by radio-frequency fields EN 61000-4-6

Voltage dips, short interruptions and voltage variations immunity tests EN 61000-4-11

Radiated electromagnetic fields tests EN 50147-3

Limitation of Voltage Fluctuations and Flicker EN 61000-3-3

Harmonic current emissions tests EN 61000-3-2

Guidelines to achieving compliance with EC directives for alarm systems CLC/TR 50456:2005

Alarm systems - Alarm transmission systems and equipment CLC/TS 50136-4:2004

Alarm systems and alarm transmission systems and equipment CLC/TS 50136-7:2004

Alarm systems - Combined and integrated alarm systems CLC/TS 50398:2002

Alarm systems - Electromagnetic compatibility EVS-EN 50130-4:2001/A2:2003

Alarm systems - Electromagnetic compatibility EVS-EN 50130-4:2001

Alarm systems - Part 5: Environmental test methods EVS-EN 50130-5:2002

Alarm systems - Intrusion and hold-up systems - System requirements EVS-EN 50131-1:2006

Alarm systems - Intrusion systems - Power supplies EVS-EN 50131-6:2002

Alarm systems - Access control systems for use in security applications EVS-EN 50133-1:2002/A1:2003

Alarm systems - Access control systems for use in security applications EVS-EN 50133-2-1:2002

Alarm systems - Alarm transmission systems and equipment EVS-EN 50136-1-1:2002

Information technology equipment - Safety - General requirements EVS-EN 60950-1:2006

14.6 Declaration

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