Schneider Electric

ZLPX Sense

Zone LED Panel and Control units

Installation and commissioning manual

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1 ZLPX Sense zone LED panel and control units

The ZLPX Sense zone LED panel is used for fire brigade as primary information source of the place of alarm in the building. The panel can function as pure display device showing zone specific fire place. The ZLPX Sense can be connected to the FDP panels: FDP221, FDP252 and FDP292.

Figure 1: ZLPX Sense zone LED panel.

Table 1: Technical data of ZLPX Sense zone LED panel

Technical data	
Dimensions (W x H x D)	328 x 417 x 79 mm
Weight	5 kg
Colour	White
Operating Temperature	+ 5°C … +40°C
Humidity	max. RH 95 %
Operating Voltage	19 … 30 VDC
Standby Current	50 mA
Alarm State Current. Max. 50 LEDs “on” at the same time	72 mA

Serial Communication Ports	In: RS485 or RS232 Out: RS485
IP Rating	IP30

Note: *Both 24VDC inputs must be connected.*

Table 2: Current consumption/output

Current consumption/output	
LB200	0.15 mA/active output
OC-100L	6.2 mA/active output
0C-100R+RB20	7.5 mA/active output

1.2 Product codes

Table 3: Product codes

Product	Code	Description
ZLPX Sense	FFS00703849	Zone LED panel with 200 LEDs
ZLPX-IC	FFS00703841	ZLPX Sense controller
LB200	FFS00703842	LED board 200 LEDs
OC-100L	FFS00703843	Open collector output for 100 LEDs
OC-100R	FFS00703844	Open collector output for 100 relays
CCLO	FFS00703845	Connection cable for LED outputs, 3m
COL-10	FFS00703846	10 LEDs cable, 1m
RB20	FFS00703847	Relay board of 20 relays

2 Installation

2.1 Mechanical installation

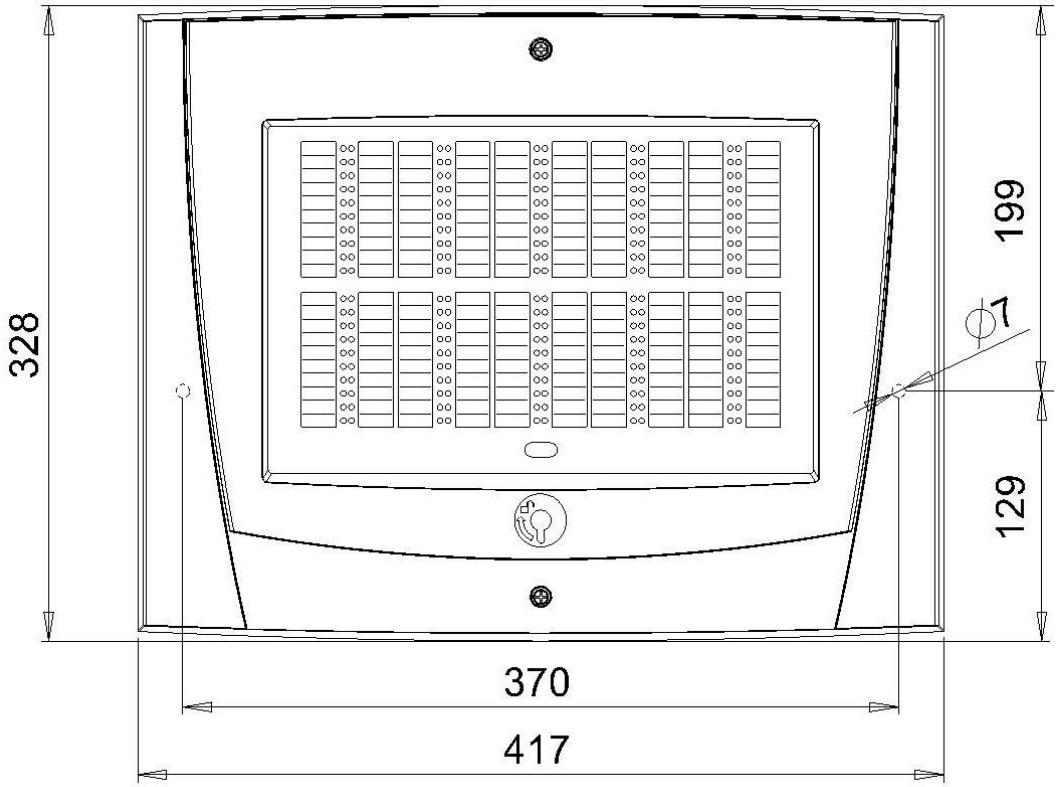

Figure 2: Mechanical installation.

2.2 Zone name label installation

Use Adobe Acrobat Reader and the document ”Zone name definition” 66521547 to name and print a customer specific zone name label. The file 66521547 has been published in www.se-technet.fi.

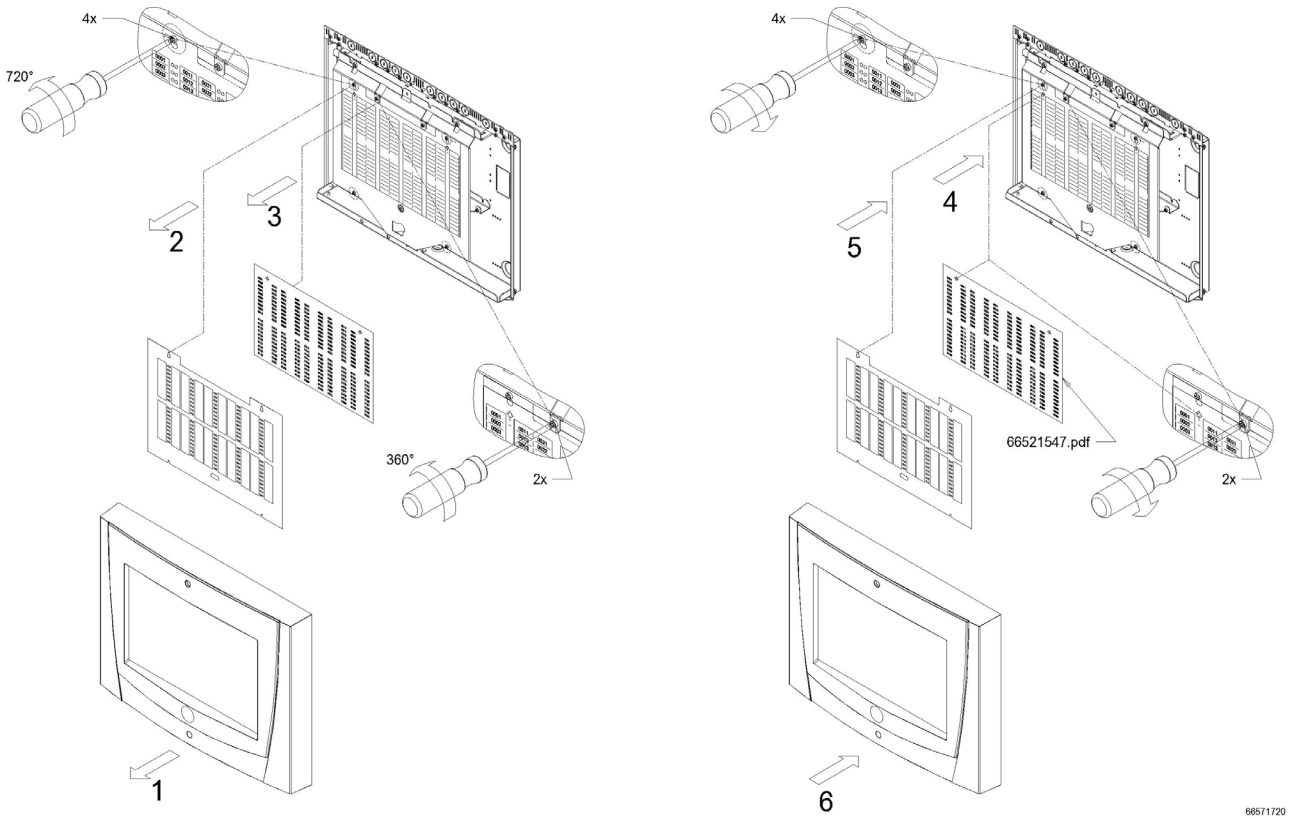

Figure 3: Zone name label installation.

3 ZLPX-IC

3.1 Electrical connections

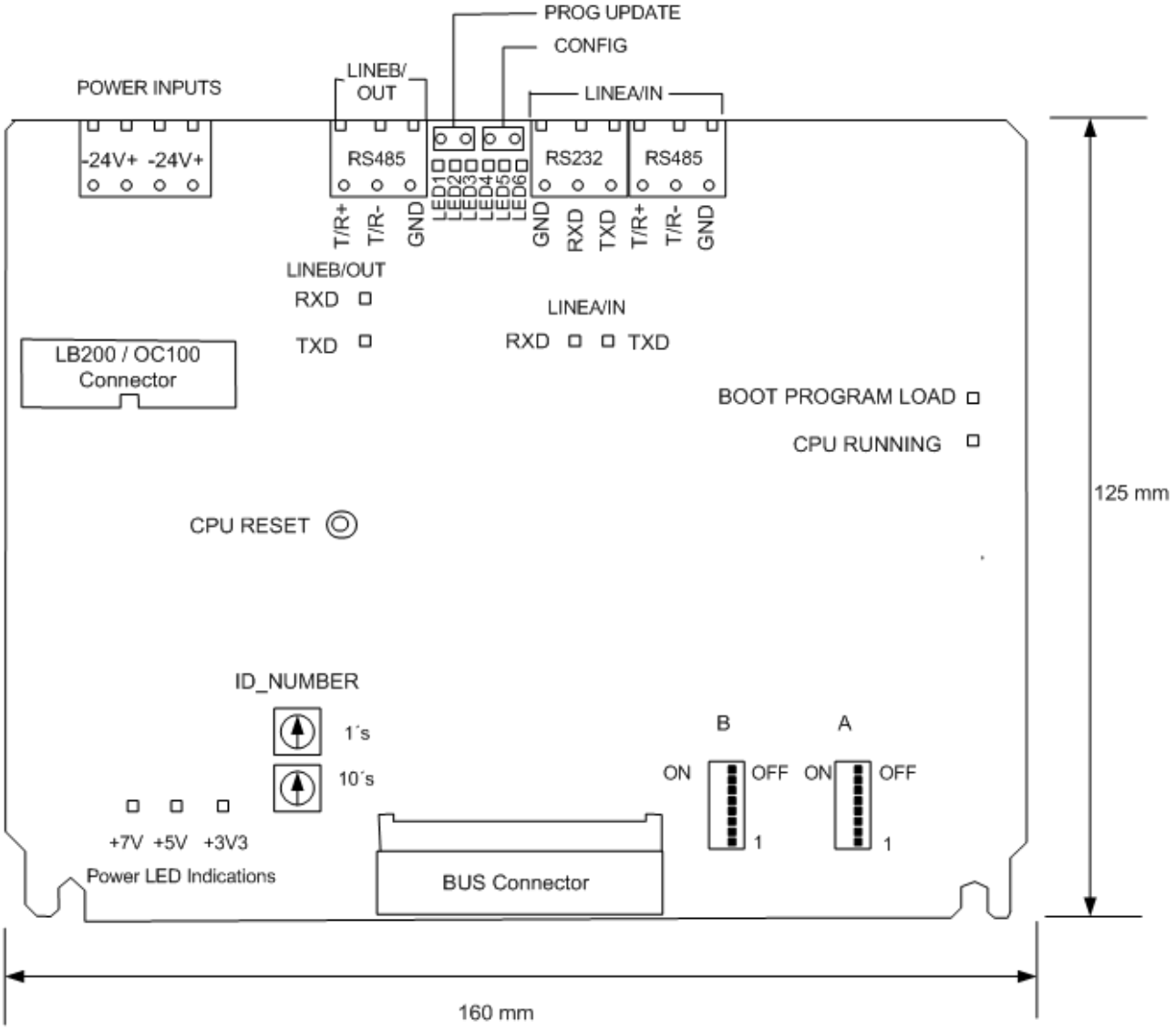

Figure 4: ZLPX-IC electrical connections.

Note: *Both 24VDC inputs must be connected.*

3.2 Settings and LED indications

Table 4: A dip switch

A dip switch		
A	OFF	Not in use
	ON	Not in use
A2	OFF	Not in use
	ON	Not in use
A3	OFF	FDP-panel connection
	ON	ESA/MESA panel connection (message set F or older)
A4	OFF	Not in use
	ON	
A5	OFF	Not in use
	ON	
A6	OFF	Not in use
	ON	
A7	OFF	Not in use
	ON	
A8	OFF	Normal state
	ON	Not in use

Table 5: B dip switch

B dip switch		
B1	OFF	Not in use
	ON	
B2	OFF	Not in use
	ON	
B3	OFF	OUT “B” port not in use
	ON	OUT “B” port in use
B4	OFF	Not in use
	ON	
B5	OFF	Not in use
	ON	
B6	OFF	IN “A” port baud rate 1200
	ON	IN “A” port baud rate 9600
B7	OFF	OUT “B” port baud rate 1200
	ON	OUT “B” port baud rate 9600
B8	OFF	To be “OFF”! Only for service purposes.
	ON	

Table 6: LED indications in normal use

LED indications in normal use		
LED 1	Continuous	Fault in configuration file
	Blinking	Configuration state
LED 2	Continuous	Not in use
	Blinking	
LED 3	Continuous	Power supply input 1 or 2 fault
	Blinking	NA
LED 4	Continuous	IN “A” communication fault
	Blinking	IN “A” HW fault
LED 5	Continuous	OUT “B” communication fault
	Blinking	OUT “B” HW fault
LED 6	Continuous	Not in use
	Blinking	

Note: *LEDs 1-6 in the ZLPX IC are activated in system fault.*

Table 7: LED Indications in start-up condition (10 seconds)

LED indications in start-up condition (10 seconds)		
LED 1	Continuous	Display HW installed
	OFF	Display HW not installed
LED 2	Continuous	Isolated port installed
	OFF	Isolated port not installed
LED 3	Continuous	NA
	OFF	NA
LED 4	Continuous	LED board connector installed
	OFF	LED board connector not installed
LED 5	Continuous	NA
	OFF	NA
LED 6	Continuous	MCO HW installed
	OFF	MCO HW not installed

Table 8: Jumpers for service purposes

Jumper	ON	OFF
Prog update	Program update	Normal use
Config	Configuration state	Normal use

3.3 Configuration

The ZLPX Sense zone LED panel can be used in the FDP fire detection system without any configuration. In this case, the ZLPX Sense shows the same fire alarm information as the FDP panel communicating with the zone LED panel.

If it is necessary to show zone/area-specific fire alarm information only, then the ZLPX Sense panel must be configured. The configuration is done by using the WinFMPX configuration tool and the incoming serial port with the RS232 setting. During the configuration of the ZLPX Sense panel, the communication line to the FDP panel (RS485) must be disconnected.

3.4 Configuration memory erasure

To erase the configuration memory back to the factory defaults, follow these steps:

- Disconnect power from the unit (power inputs PI1 and PI2).
- Set the “config” jumper to “ON”.
- Turn panel ID number switches to E and F (E = 10’s, F=1’s).
- Connect power back.
- Follow the LED number 1:
  - When the LED is blinking quickly, turn dip switch A8 to “ON”.
  - LED number 1 OFF: erasure in progress.
  - LED number 1 ON continuous: erasure is ready.
- Disconnect power, set ID switches back to “0” and remove the “config” jumper.
- Connect power back.
- The unit is starting without configuration data.

3.5 Software update

The panel is set to the software update state by setting the “prog update” jumper to “ON” and restarting the panel (by pushing the CPU reset button). The software update is done by using the PC loader software and the incoming serial port with the RS232 setting. During the software update, the communication line to the FDP panel (RS485) must be disconnected.

4 Electrical connections of OC-100L and OC-100R

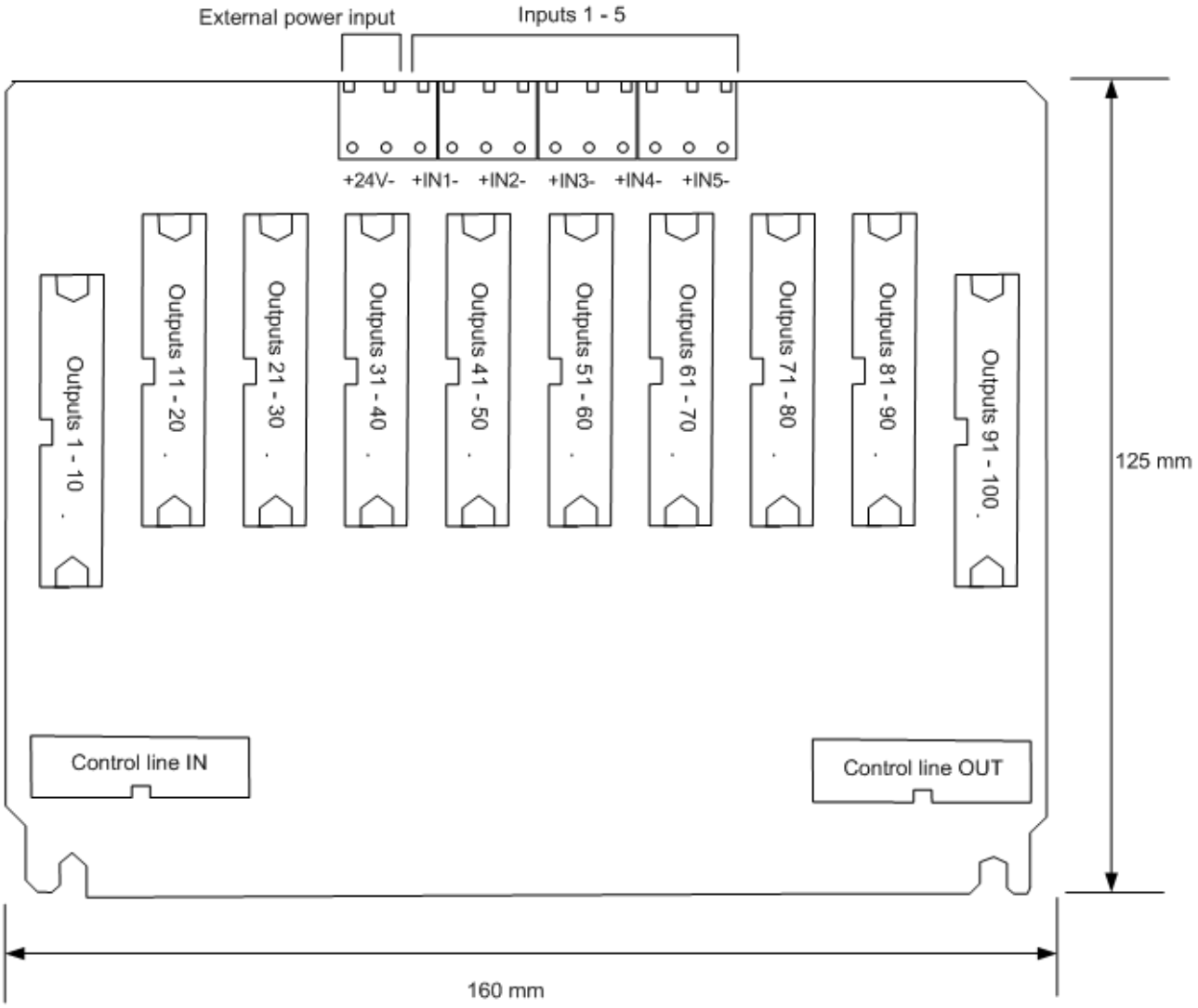

Figure 5: Electrical connections of OC-100L and OC-100R.

Table 9: Input descriptions

Input descriptions	
Input 1	Activates all outputs for 5 seconds
Inputs 2-5	Not in use
External power input	Normally not in use

5 Electrical connections of RB-20

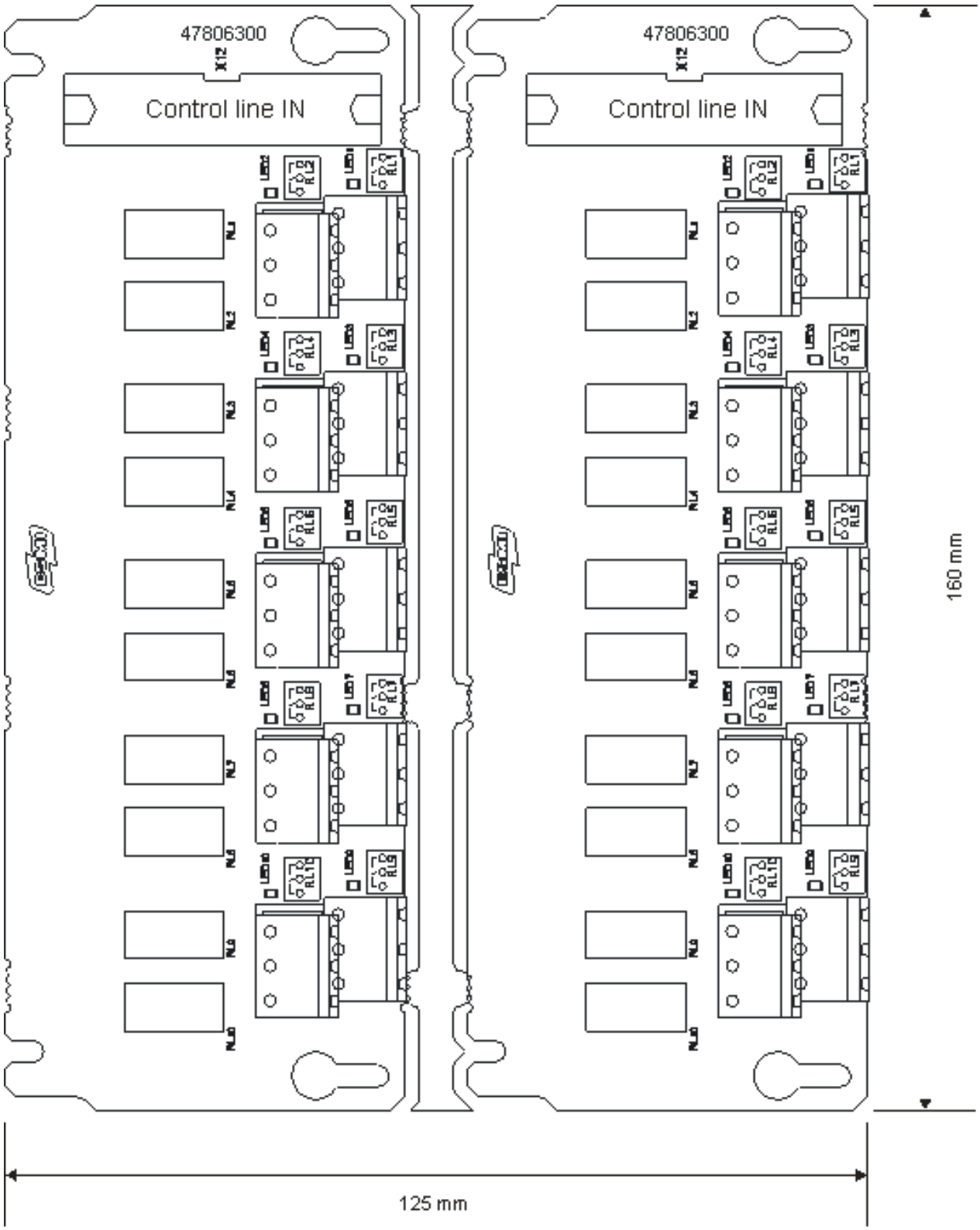

Figure 6: Electrical connections of RB-20.

6 Electrical connections of LB-200

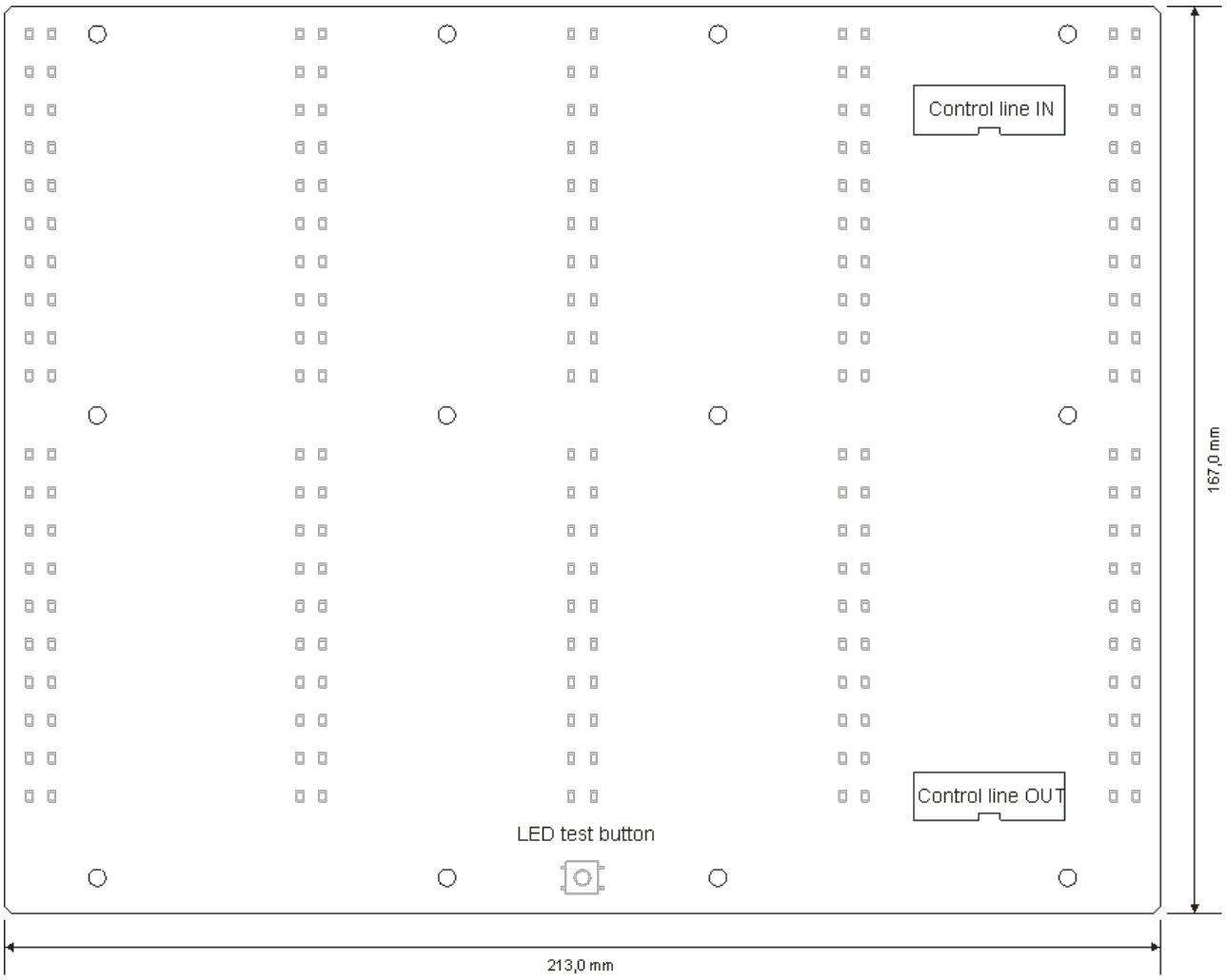

Figure 7: Electrical connections of LB-200.

Note: *By pushing the "LED test button" all LEDs are ON for 5 seconds.*

7 System examples

7.1 Basic system principle with ZLPX Sense panels

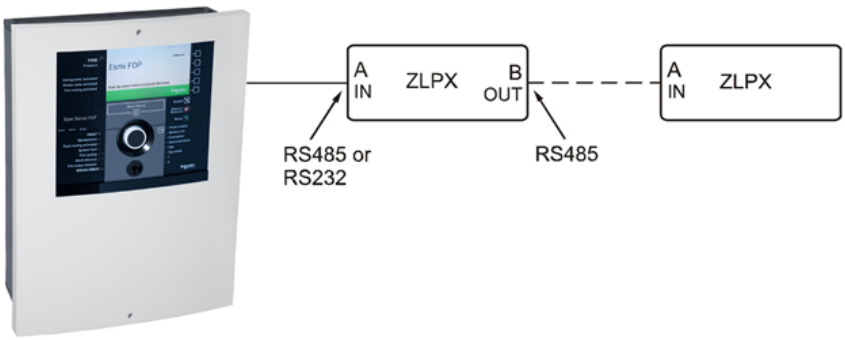

Figure 8: Basic system principle with ZLPX Sense panels.

Note: *The maximum number of ZLPX Sense (and/or ZLPX-IC; FMP, DAP, REP, REPX-OB, MCO, MCOX-OB) units connected to one FDP panel is 16.*

The RS232 setting is used for configuration and software update.

The INFO line in the ZLPX Sense (ZLPX-IC) panel must be disconnected during the ZLPX Sense (ZLPX-IC) configuration.

Note: *The maximum RS485 cable length between 2 devices is 1000 m.*

The maximum RS232 cable length is 10 m.

Note: *The maximum number of zones in one FDP system is 8000.*

Note: *Due to current consumption, max. 50 zonal outputs/ZLPX-IC card can be activated at the same time.*

Note: *There can be more than one outputs/zone.*

7.2 System example: open collector LED outputs

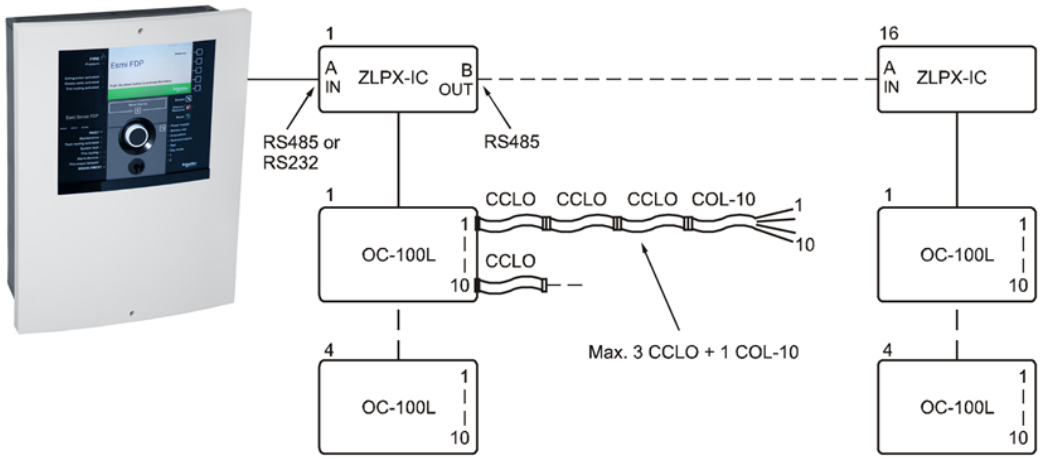

Figure 9: System example: open collector LED outputs.

Note: *The maximum number of ZLPX Sense (and/or ZLPX-IC; FMP, DAP, REP, REPX-OB, MCO, MCOX-OB) units connected to one FDP panel is 16.*

The RS232 setting is used for configuration and software update.

The INFO line in the ZLPX Sense (ZLPX-IC) panel must be disconnected during the ZLPX Sense (ZLPX-IC) configuration.

Note: *The maximum RS485 cable length between 2 devices is 1000 m.*

The maximum RS232 cable length is 10 m.

Note: *The maximum number of zones in one FDP system is 8000.*

If the load taken from the IC board exceeds 1A, then an external power supply input (OC-100I and OC-100R) must be used.

Note: *Due to current consumption, max. 50 zonal outputs/ZLPX-IC card can be activated at the same time.*

Note: *There can be more than one outputs/zone.*

7.3 System example: relay outputs

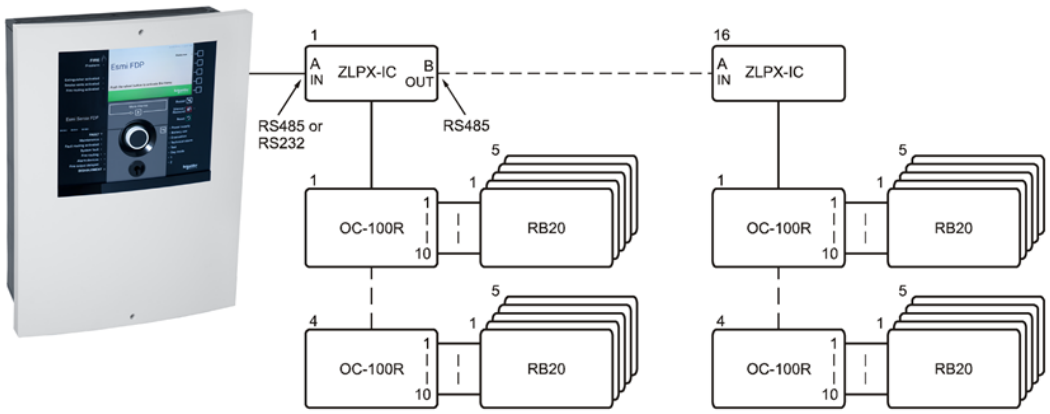

Figure 10: System example: relay outputs.

Note: *The maximum number of ZLPX Sense (and/or ZLPX-IC; FMP, DAP, REP, REPX-OB, MCO, MCOX-OB) units connected to one FDP panel is 16.*

The RS232 setting is used for configuration and software update.

The INFO line in the ZLPX Sense (ZLPX-IC) panel must be disconnected during the ZLPX Sense (ZLPX-IC) configuration.

Note: *The maximum RS485 cable length between 2 devices is 1000 m.*

The maximum RS232 cable length is 10 m.

Note: *The maximum number of zones in one FDP system is 8000.*

Note: *Due to current consumption, max. 50 zonal outputs/ZLPX-IC card can be activated at the same time.*

Note: *There can be more than one outputs/zone.*

7.4 System example: LED board LB200 outputs

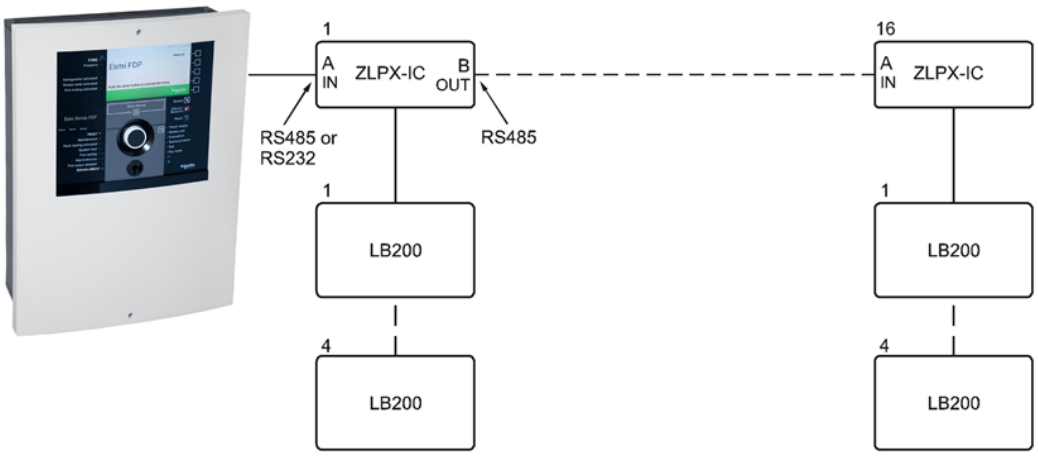

Figure 11: System example: LED board LB200 outputs.

Note: *The maximum number of ZLPX Sense (and/or ZLPX-IC; FMP, DAP, REP, REPX-OB, MCO, MCOX-OB) units connected to one FDP panel is 16.*

The RS232 setting is used for configuration and software update.

The INFO line in the ZLPX Sense (ZLPX-IC) panel must be disconnected during the ZLPX Sense (ZLPX-IC) configuration.

Note: *The maximum RS485 cable length between 2 devices is 1000 m.*

The maximum RS232 cable length is 10 m.

Note: *The maximum number of zones in one FDP system is 8000.*

Note: *Due to current consumption, max. 50 zonal outputs/ZLPX-IC card can be activated at the same time.*

Note: *There can be more than one outputs/zone.*

7.5 System example: mixed outputs

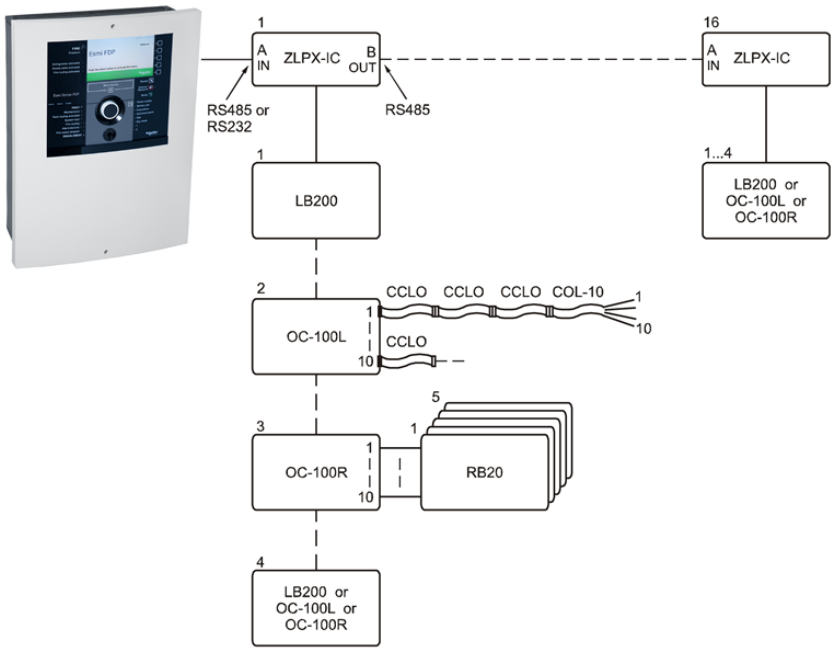

Figure 12: System example: mixed outputs.

Note: *The maximum number of ZLPX Sense (and/or ZLPX-IC; FMP, DAP, REP, REPX-OB, MCO, MCOX-OB) units connected to one FDP panel is 16.*

The RS232 setting is used for configuration and software update.

The INFO line in the ZLPX Sense (ZLPX-IC) panel must be disconnected during the ZLPX Sense (ZLPX-IC) configuration.

Note: *The maximum RS485 cable length between 2 devices is 1000 m.*

The maximum RS232 cable length is 10 m.

Note: *The maximum number of zones in one FDP system is 8000.*

Note: *Due to current consumption, max. 50 zonal outputs/ZLPX-IC card can be activated at the same time.*

Note: *There can be more than one outputs/zone.*