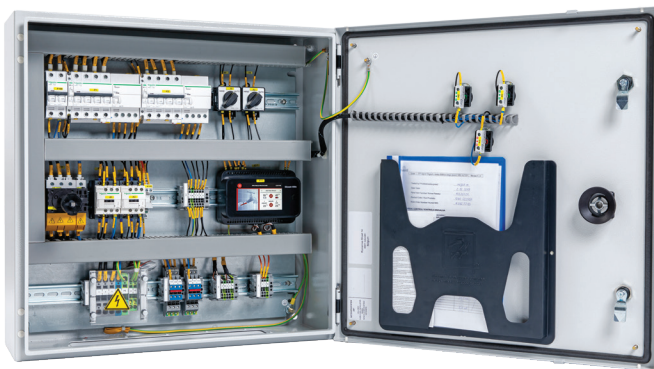


Panels for pipe freeze protection and temperature maintenance and for connection to Building Management System (BMS)

DESCRIPTION



The Raychem SBS control panel range provides a complete solution for Raychem self-regulating heating cables for pipe freeze protection and temperature maintenance. It offers control with a pipe line sensor and / or a PASC (Proportional Ambient Sensing Control) option.

The models in this series control up to 12 heating circuits. To ensure safe operation, the control panel is equipped with circuit breakers (C-type) and 30mA residual current protection for safe operation. The pre-installed Elexant 450c control unit can operate 2 zones with different parameters independently of one another. The Elexant 450c-Modbus is also allowing flexible Modbus connectivity for remote monitoring, configuration, and ease of integration in a Building Management System (BMS).

The control panel is pre-wired and only needs to be connected to a main power supply (400 VAC, 3P/N/PE).

ADVANTAGES

- Fast connection of multiple heating circuits directly to the control panel
- No additional connections or junction boxes required
- Connection of 3–12 heating circuits to a single control panel
- Circuit over-current and RCD protection integrated directly into the control panel
- No separate safety devices required
- Complete system directly from the manufacturer
- The system and components have been selected for optimal use as a pipe freeze protection and temperature maintenance system.
- Collective error / alarm
- The panel is equipped with a RS485 port for Modbus communication to a BMS system which can be used for configuration, monitoring and alarm purposes.

TECHNICAL DATA

| | |
|-------------------------|--|
| Control setting | Each Elexant 450c-Modbus controller can control up to 2 separate groups of 3 circuits with independent parameters and control mode. The pre-installed Elexant 450c-Modbus electronic control with max. 2 sensors makes 2 zone control possible: – Ambient temperature-dependent control in the PASC operation mode and / or – Control with pipe line sensor |
| Voltage Operation panel | 400 VAC 3P/N/PE |
| Voltage Heating circuit | 230 VAC |
| Sensor | NTC-Type is used as ambient temperature sensor (PASC) and/or pipe line sensor |
| Approvals | CE (approval according to IEC 61439) |
| Main switch | According to selected model (32–100 A) |
| RCD | 30 mA |
| Circuit breaker | 16A, C-type, per heating circuit |
| Alarm feature | 1 potential free alarm contact in panel; 1 alarm light in the door |
| Operation mode switch | Auto/Manual Auto = Control in function (standard mode) Manual = all heating circuits switched on (uncontrolled operation) |

COMMUNICATION (ELEXANT 450C-MODBUS)

| | |
|--------------------|--|
| Communication port | RS-485 |
| Type | 2-wire RS-485 |
| Cable | One shielded twisted pair (not included) |
| Length | 1,200 m (4,000 ft.) maximum |
| Quantity | Up to 247 devices per port |
| Data rate | 2400, 4800, 9600, 19200 baud |
| Parity | None, even, odd |
| Stop bits | 1, 2 |
| Protocol | Modbus RTU |

RELATED PRODUCTS

The control panel SBS-FP-xx-16A-MODBUS can be operated with the following Raychem freeze protection heating cables:

10XL2-ZH – 204 meter per heating circuit

15XL2-ZH – 153 meter per heating circuit

26XL2-ZH – 116 meter per heating circuit

31XL2-ZH – 91 meter per heating circuit

FS-C10-2X – 150 meter per heating circuit

(Startup temperature of +5°C minimum. For heating circuits with longer lengths or lower startup temperatures, please contact Chemelex)

INSTALLATION

The panel is supplied with complete circuit and connection diagrams. A qualified electrician must carry out all work on electrical systems in compliance with the applicable regulations and standards.

TECHNICAL DATA PANEL

| | |
|-----------------------|---|
| Color | Textured paint, RAL 7035, light-grey |
| Enclosure | Sheet steel wall-mounted enclosure; IP65 (For indoor installation) |
| Installation location | Exposure temperatures +10°C to +35°C |
| Power supply | 3-phase 400 VAC with N and PE |
| Heating cable | 230 VAC with N and PE : 3 terminals per heating circuit for max. 10 mm ² |

| Panel type | | | SBS-FP-3x16A -MODBUS | SBS-FP-6x16A -MODBUS | SBS-FP-9x16A -MODBUS | SBS-FP-12x16A -MODBUS |
|--|---------|----|-------------------------|-------------------------|-------------------------|--------------------------|
| Max. quantity of heating circuits | | | 3 | 6 | 9 | 12 |
| Quantity of contactors | | | 2 | 2 | 3 | 4 |
| Max. quantity of controllers Elexant 450c-Modbus | | | 1 | 1 | 2 | 2 |
| Max. number of sensors | | | 2 | 2 | 3 | 4** |
| Number of sensors = Heating zones Standard (Max.) | | | 1 (2 Max.) | 1 (2 Max.) | 1 (2-3 Max.*) | 1 (2-4 Max.*) |
| Max. power output kW | | | 11 | 22 | 33 | 44 |
| Circuit breaker on-site max. A | | | 3 pole x 25A | 3 pole x 32A | 3 pole x 63A | 3 pole x 80A |
| Enclosure mounting | | | Wall-mounted | Wall-mounted | Wall-mounted | Wall-mounted |
| Dimension | Width | mm | 600 | 600 | 800 | 800 |
| | Height | mm | 600 | 600 | 800 | 800 |
| | Depth | mm | 210 | 210 | 210 | 210 |
| Weight | Approx. | kg | 32 | 32 | 54 | 56 |

* additional 2nd control unit SBS-FP-MONT-ELEXANT-450c is needed.

** additional 4th sensor (SENSOR-NTC-10M or GM-TA-AS) is needed and needs to be ordered separately.

REFERENCE DATA

| Product name | Item number | Product description |
|--------------------------|-------------|---|
| SBS-FP-3x16A-MODBUS | 1244-022628 | Control panel for max. 3 heating circuits (Including 1 controller Elexant 450c-Modbus, 1 connected NTC sensor and 1 spare sensor inside the panel) |
| SBS-FP-6x16A-MODBUS | 1244-022629 | Control panel for max. 6 heating circuits (Including 1 controller Elexant 450c-Modbus, 1 connected NTC sensor and 1 spare sensor inside the panel) |
| SBS-FP-9x16A-MODBUS | 1244-022630 | Control panel for max. 9 heating circuits (Including 1 controller Elexant 450c-Modbus, 1 connected NTC sensor and 1 spare sensor inside the panel) |
| SBS-FP-12x16A-MODBUS | 1244-022631 | Control panel for max. 12 heating circuits (Including 1 controller Elexant 450c-Modbus, 1 connected NTC sensor and 1 spare sensor inside the panel) |
| SBS-FP-MONT-ELEXANT-450c | 1244-022471 | Optional additional electronic controller Elexant 450c-Modbus for SBS-FP-9x16A-MODBUS or SBS-FP-12x16A-MODBUS, with installation in the control panel; can operate 2-heating zones independently; includes 1 additional connected sensor (this item must be ordered separately) |
| SENSOR-NTC-10M | 1244-015847 | Spare part additional sensor for another heating zone, NTC type (to be ordered separately) |
| GM-TA-AS | 1244-017965 | Spare part ambient sensor in plastic enclosure, NTC type (to be ordered separately) |

Note: customized panels can be ordered, please contact Chemelex.

POSSIBLE ADDITIONAL OPTIONS

- Installation outdoors
- Installation of a heater
- Rain sheet cover
- Lightning protection

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