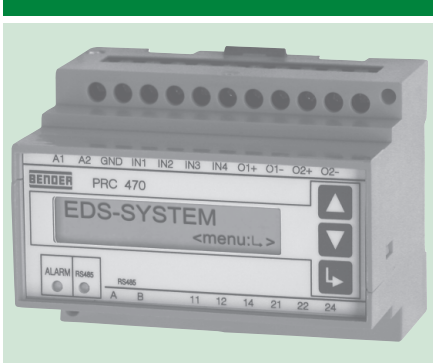


Control and indicating device PRC470



PRC470

Device characteristics

- Indication of alarm messages
- Illuminated LC display / 2 x 16 characters
- Control inputs to start insulation fault location
- Alarm LED, collective alarm
- Alarm LED, indicates activities on the RS485 interface
- Alarm relay with two voltage-free changeover contacts for collective alarm message
- Three function keys for the parameterization of EDS systems
- Test function for testing all connected devices and measuring current transformers

Certifications



Product description

The control and indicating device PRC470 takes over the central display and operating functions in EDS systems. Parameterization of the system is also carried out via this device. Information exchange with all connected devices takes place via the RS485 interface (BMS protocol).

Application

Control and indicating device for EDS insulation fault location systems.

Function

All the parameters for devices connected via the RS485 interface (e. g. EDS47..., PGH47...) can be set: operation mode of the alarm relays (N/O / N/C operation), setting of measuring current transformer types, storage of the alarm messages, duration of insulation fault location, position function etc.

During insulation fault location all faulty subcircuits are subsequently indicated on the LC display. Indicated are the respective insulation fault evaluator, the respective channel, and the determined test current. By assigning the measuring current transformers to the respective circuit the point of fault can easily be localized. The position function allows specific continuous scanning of individual channels for insulation faults.

Standards

The EDS47... series complies with the standards: DIN EN 61557-9 (VDE 0413 part 9): 2000-08, EN 61557-9: 1999, IEC 61557-9: 1999.

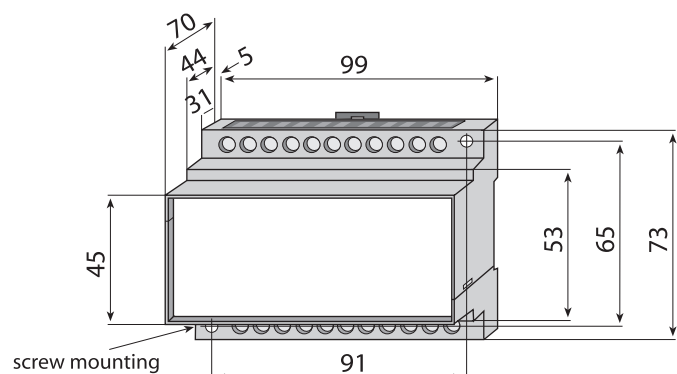
Ordering details

Type	Supply voltage U_S	Art. No.
PRC470	AC 230 V	B 9501 2001
PRC470-13	AC 90...132 V*	B 9501 2004
PRC470-21	DC 10.5...80 V*	B 9501 2007
PRC470-23	DC 77...286 V*	B 9501 2009
PRC470E**	AC 230 V	B 9501 2014

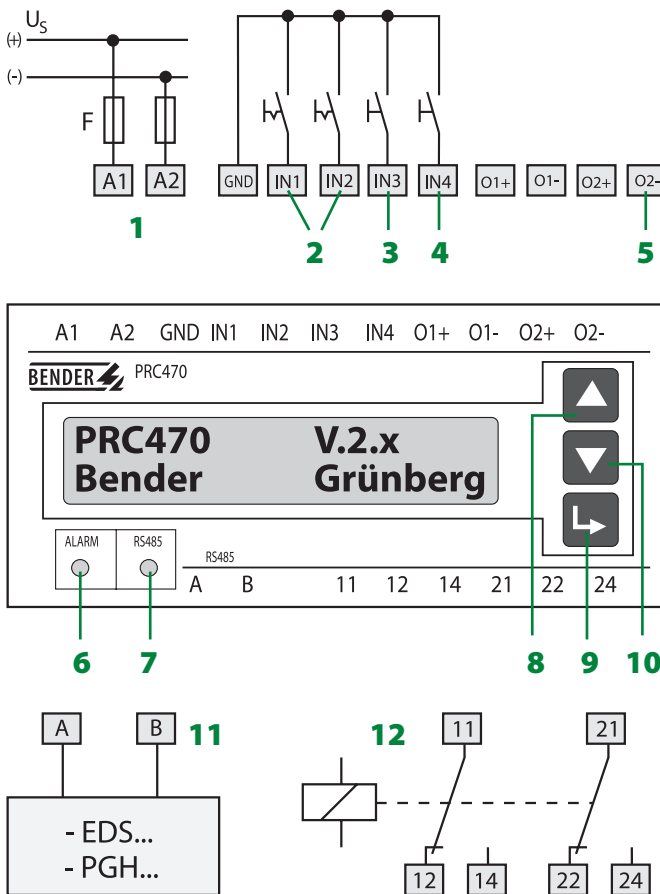
* absolut values

** required for EDS470E-12 and PGH470E

Dimension diagram, enclosure X470 Dimensions in mm



Wiring diagram / operating elements



- 1 - U_S see ordering details, 6 A fuse recommended. Note: supply voltage U_S in IT systems requires two fuses
- 2 - Control inputs EDS470 (EDS473) for system start
- 3 - Connection for external RESET button
- 4 - Connection for external TEST button
- 5 - Optocoupler outputs, no function in standard EDS systems
- 6 - Alarm LED, lights when the thresholds of the response value at one of the insulation fault evaluators (collective alarm) have been exceeded
- 7 - RS485 LED, indicates activities on the RS485 bus
- 8 - Function key "UP"
- 9 - Function key "ENTER"
- 10 - Function key "DOWN"
- 11 - Connection BMS bus
- 12 - Alarm relays switch when a threshold of the response value is exceeded (collective alarm)

Technical data control and indicating device PRC470

Insulation coordination acc. to IEC 60664-1

Rated insulation voltage	AC 250 V
Rated impulse voltage / pollution degree	4 kV / 3

Voltage ranges

Supply voltage U_S	see ordering details
Operating range of U_S	$0.85 \dots 1.15 \times U_S$
Power consumption	≤ 3 VA

Measuring circuit

Tests for EDS systems, selectable	continuously / 1 cycle / 5 min.
Tests for RCMS470 systems	continuously

Inputs

Max. voltage	DC 5 V
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Interfaces

Interface / protocol	RS485 / BMS
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Switching elements

Switching elements	2 changeover contacts
Operating principle	N/O / N/C operation selectable
Rated contact voltage	AC 250 V / DC 300 V
Making capacity	AC / DC 5 A
Breaking capacity	2 A, AC 230 V, $\cos \phi = 0.4$ 0.2 A, DC 220 V, $L/R = 0.04$ s

General data

Shock resistance acc. to IEC 60068-2-27 (device in operation)	15 g / 10 ms
Bumping acc. to IEC 60068-2-29 (during transport)	40 g / 6 ms
Vibration resistance acc. to IEC 60068-2-6 (device in operation)	1 g / 10...150 Hz
Vibration resistance acc. to IEC 60068-2-6 (during transport)	2 g / 10...150 Hz
Ambient temperature, during operation	-10 °C...+55 °C
Storage temperature range	-40 °C...+70 °C
Climatic class according to IEC 60721-3-3	3K5
Operating mode	continuous operation
Mounting	any position
Connection	screw terminals
Wire cross section, rigid, flexible	0.2...4 mm ² / 0.2...2.5 mm ²
Degree of protection, internal components (DIN EN 60529)	IP 30
Degree of protection, terminals (DIN EN 60529)	IP 20
Screw mounting	2 x M4
DIN rail mounting according to	DIN EN 60715 / IEC 60715
Flammability class	UL94V-0
Technical manuals	TGH1243 / TGH1321
Weight approx.	400 g