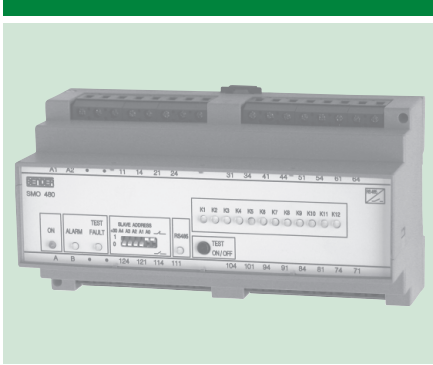


Signal converter SMO480-12



Signal converter SMO480-12

Product description

The signal converter SMO480-12 converts alarm messages from the BMS bus into relay contact signals. The relay contacts are also suitable for very small currents (> 5 mA). One SMO480-12 each must be assigned to **one** device with communication capability.

Application

- For use in EDS, RCMS and MEDICS systems to convert BMS signals to relay contact signals, e. g. for the control of signals and information
- Selective control and / or disconnection of faulty circuits with EDS and RCMS systems
- Transfer of information to central building automation control and building services management systems

Function

The signal converter SMO480-12 must be assigned to an evaluator, e. g. EDS470-12. When the evaluator detects an insulation fault in one channel, this message is transferred to the SMO480-12 via the BMS bus. The SMO480-12 converts this message into a relay message. For this purpose each of the twelve alarm relays of the signal converter must be assigned to an one channel of the evaluator. It is not possible to assign several SMO480-12 to one evaluator.

The alarm relays are assigned to the respective evaluator according to the device address.

Standards

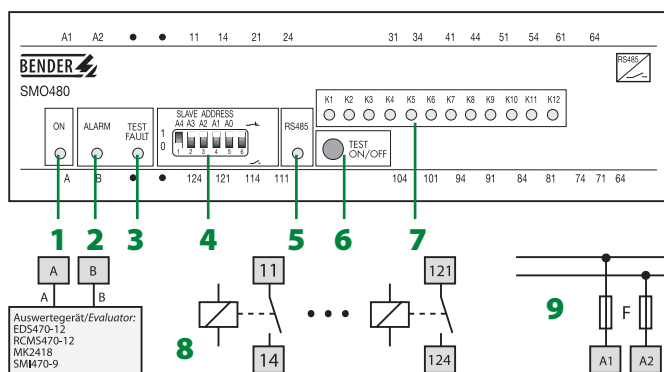
The SMO480-12 series meets the requirements of protective separation for AC 230 V according to EN 50178: 1997-10.

Note: For using the SMO480-12, a BMS bus Master is required.

Device characteristics

- One relay output for each channel of an associated BENDER device with communication capability, such as EDS470-12 or RCMS470-12
- Alarm LED for each channel
- TEST button for relay function
- LEDs: Power On, Alarm, Test/Fault
- RS485 interface (BMS protocol)

Wiring diagram



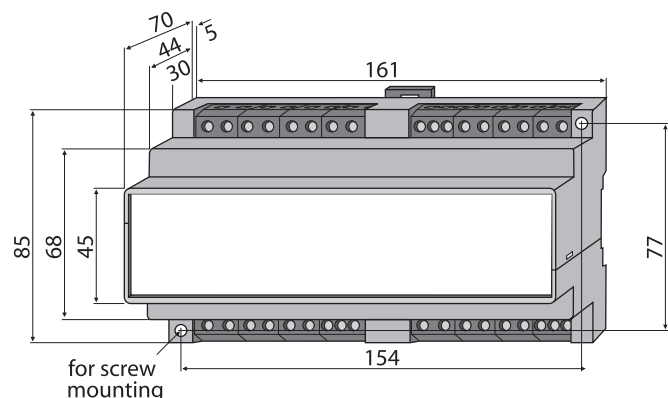
- 1 - Power ON LED
- 2 - ALARM LED: lights when one or several relays respond and in the TEST mode
- 3 - LED "TEST/FAULT": lights when no associated evaluator has been found and lights in the TEST mode
- 4 - DIP switches to set the device address of SMO480-12 (address = parameter value + 30) and the operating principle of the alarm relay
- 5 - LED "RS485": indicates activities on the BMS bus
- 6 - TEST button: switches all alarm relays
- 7 - LED "K1...K12": status indication
- 8 - Alarm relay
- 9 - U_S see ordering details

Ordering details

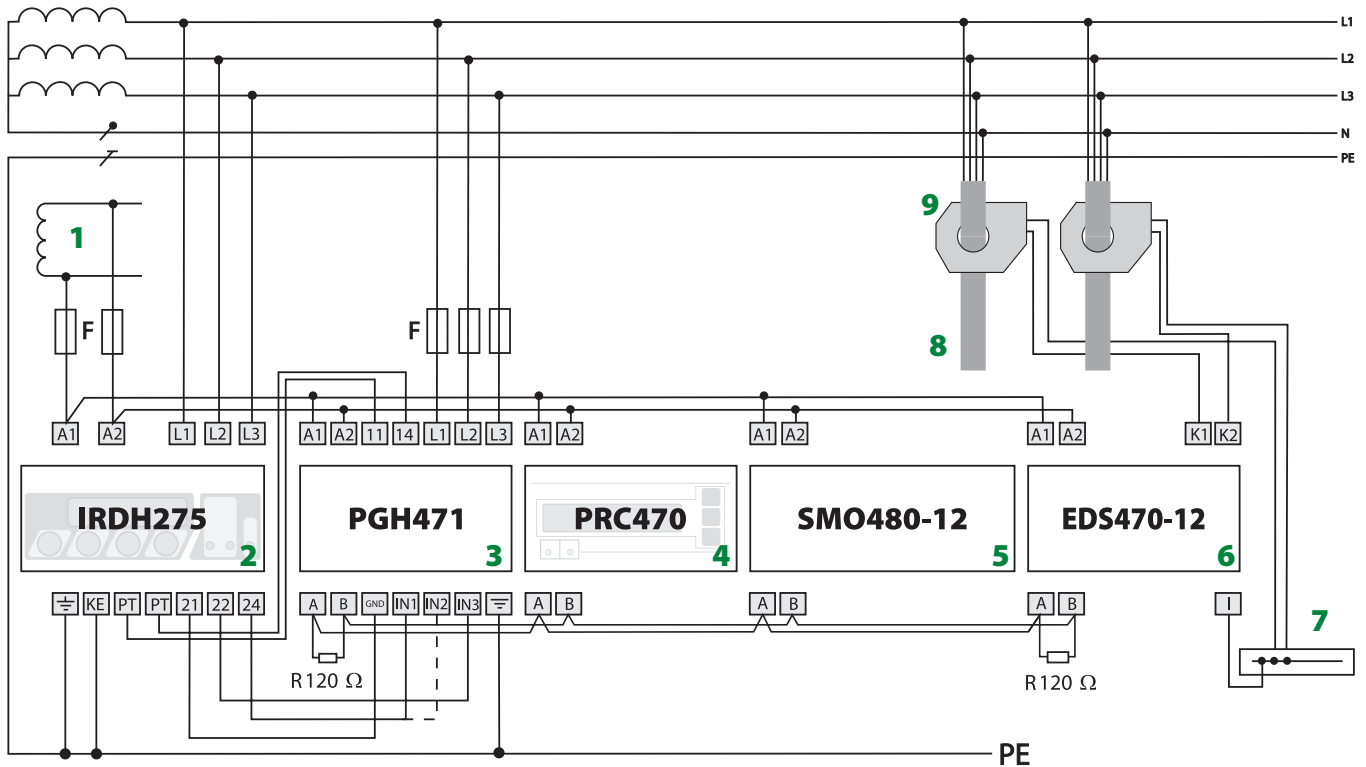
Type	Supply voltage U _S	Art. No.
SMO480-12	AC 230 V	B 9501 2011
SMO480-1213	AC 90...132 V	B 9501 2017

* absolute values

Dimension diagram, enclosure X480 Dimensions in mm



Wiring diagram – signal converter SMO480-12 in an EDS system



- 1 - U_S IT system
- 2 - A-ISOMETER® IRDH275
R_i = 120 kΩ
- 3 - Insulation fault test device PGH471
- 4 - Control and indicating device PRC470
- 5 - Signal converter SMO480-12
- 6 - Evaluator EDS470-12
- 7 - Terminal block for I-connections
- 8 - Subcircuits to the loads
- 9 - Measuring current transformers

Technical data signal converter SMO480-12

Insulation coordination according to IEC 60044-1

Rated voltage / Rated impulse voltage AC 250 V / 3 kV

Voltage ranges

Supply voltage U_S see ordering details
 Operating range / Frequency range of U_S 0.8...1.15 x U_S / 50...60 Hz
 Power consumption ≤ 7 VA

Inputs

Current input DC 0...400 μA
 Permissible current ≤ 0...400 μA
 Rated input resistance approx. 2.5 kΩ

Outputs

Outputs Two outputs with common ground
 Voltage output DC 0...10 V
 Open-circuit voltage ≤ DC 12 V
 Load ≥ 1 kΩ
 Current output DC 0 / 4...20 mA
 Short circuit current ≤ DC 30 mA short-circuit proof
 Load ≤ 500 Ω
 Accuracy at T_u = 23 °C class 0.2
 Temperature coefficient 0.025 % / °C
 Rated rise time T 0.9 50 ms
 Dielectric strength Input / output / supply AC 2500 V

General data

Shock resistance IEC 60068-2-27 (device in operation)	15 g / 11 ms
Bumping IEC 60068-2-29 (during transport)	40 g / 6 ms
Vibration resistance IEC 60068-2-6 (device in operation)	1 g / 10...150 Hz
Vibration resistance IEC 60068-2-6 (device out of operation)	2 g / 10...150 Hz
Ambient temperature (during operation)	-10 °C...+50 °C
Storage temperature range	-40 °C...+70 °C
Climatic category DIN IEC 60721-3-3	3K5
Operating mode	continuous operation
Position	any position
Connection	screw terminals
Cross sectional area of connecting cable, rigid / flexible	0.2...4 mm ² / 0.2...2.5 mm ²
Flexible with ferrules without / with plastic collar	0.25...2.5 mm ²
Degree of protection DIN EN 60529	Internal components IP30 Terminals IP20
Type of enclosure	X480
Enclosure, material	polycarbonate
Screw fixing	2 x M4
DIN rail mounting according to	DIN EN 60715 / IEC 60715
Flammability class	UL94V-0
Instruction leaflet	108005
Weight	approx. 470 g

1.8.2