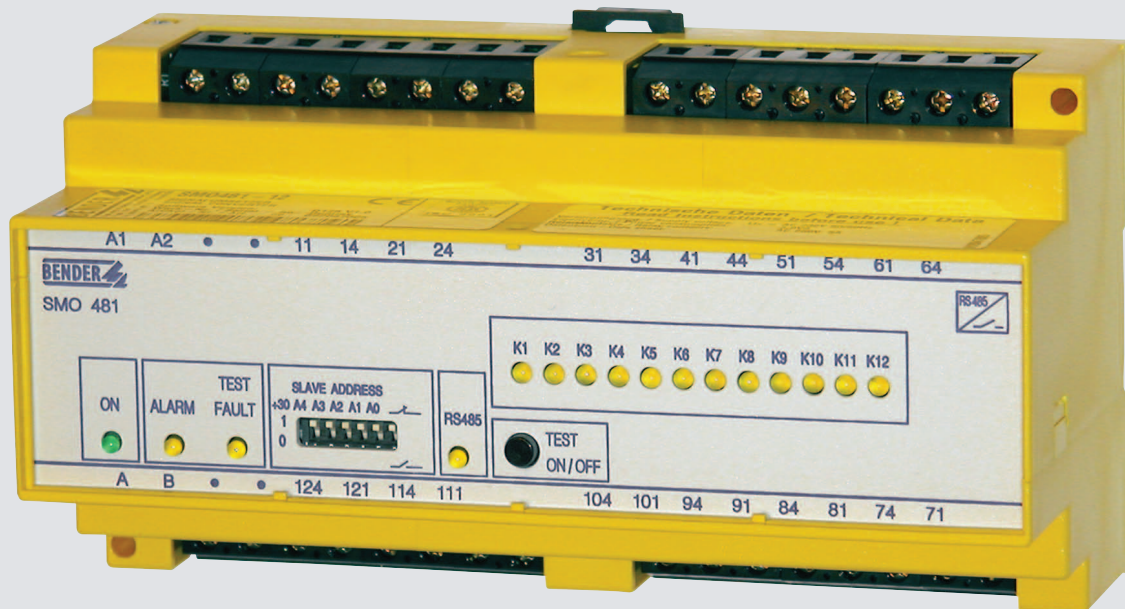


# Signal converter SMO481-12



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## Product description

The signal converter SMO481-12 converts BMS bus switching commands to relay contact messages. The relay contacts are also suitable for very low currents (> 5 mA).

## Application

- To convert BMS switching commands from TM operator panels to relay messages, e.g. for lighting system or device control

## Function

When the signal converter SMO481-12 receives a switching command via the BMS bus, this command will be converted to a relay message.

## Device features

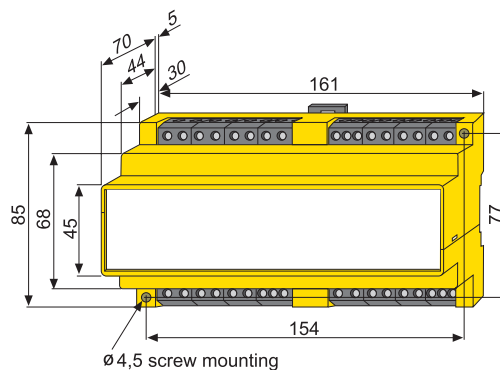
- 12 relay outputs
- Operating mode selectable: N/O or N/C operation.
- LED for each channel
- Test button to check the relay function
- LEDs: Power On, ALARM, TEST/FAULT

## Ordering information

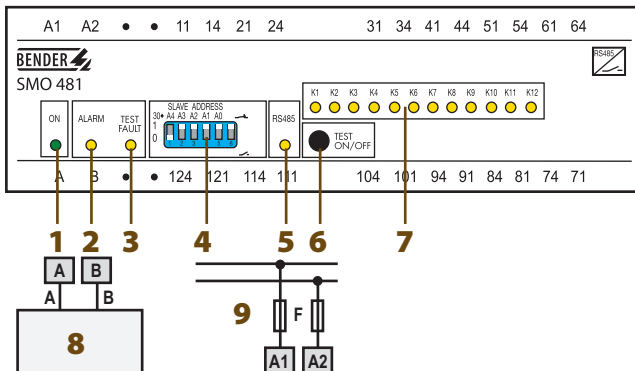
Supply voltage $U_s$	Type	Art. No.
AC 230 V	SMO481-12	B 9204 7005

## Dimension diagram X480

Dimensions are given in mm

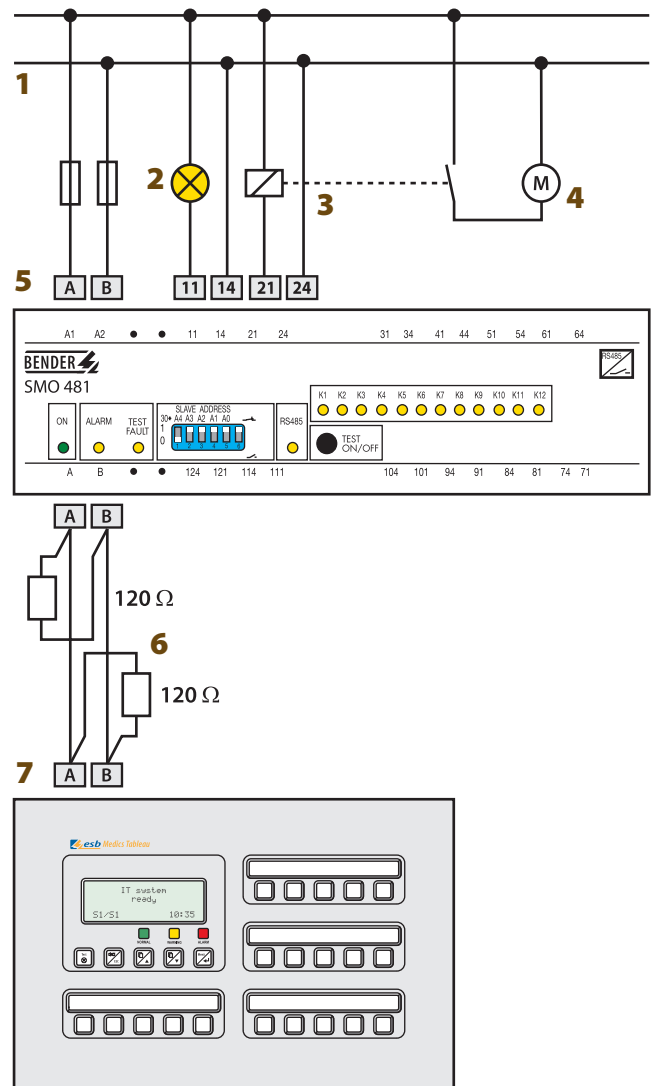


Operating elements



- 1 - LED "ON": operation indicator
- 2 - LED "ALARM": lights whilst one (or several) relays respond and during the test mode.
- 3 - LED "TEST/FAULT": LED lights during the test mode and flashes when an impermissible address has been selected.
- 4 - DIP switch, to set the device address of SMO482-12 (address = parameter value + 30) and the operating mode of the alarm relay.
- 5 - LED "RS-485": lights in case of activities on the BMS bus
- 6 - "TEST ON/OFF" button: pressing the test button once: will change over the operating mode of all alarm relays, pressing the test button once again: will change over from the test mode to the normal operating condition.
- 7 - LED "K1...K12": LED lights whilst respective relay responds
- 8 - Connection to TM operator panel
- 9 -  $U_s$  see ordering information, short-circuit protection for supply voltage  $U_s$ , 6 A fuse recommended, Note: Supply voltage  $U_s$  in the IT system requires two fuses

Wiring diagram



- 1 -  $U_s$  see ordering information
- 2 - Load (direct control)
- 3 - Relay to control load 4
- 4 - Load
- 5 - Signal converter SMO481-12
- 6 - Terminating resistors BMS bus
- 7 - TM operator panel

## Technical data

### Insulation coordination acc. to IEC 60664-1

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

### Supply voltage

Supply voltage $U_S$	AC 230 V
Frequency range $U_S$	50...60 Hz
Operating range $U_S$	0.8...1.15 x $U_S$
Power consumption	≤ 8 VA

### Displays

LEDs	16 (ON, Alarm, TEST/FAULT, RS-485, K1...K12)
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### Operating elements

Button	TEST ON/OFF
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### Interface

Interface/protocol	RS-485/BMS
Baud rate	9.6 kbit/s
Cable length	≤ 1200 m
Recommended cable (shielded, shield connected to PE on one side)	min. J-Y(St)Y 2 x 0.6
Terminating resistor (connectable via DIP switch)	120 Ω (0.25 W)
Device address, BMS bus	30 + (1...30)
Factory setting device address	30 + 1;

### Switching elements

Number	12 x 1 N/O contacts
Operating principle	N/C operation/N/O operation selectable
Factory setting	N/O operation

### Contact data acc. to IEC 60947-5-1

Rated operational voltage $U_e$	AC 230 V/DC 220 V
Rated operational current $I_e$	AC 5 A/DC 0.2 A
Utilization category	AC 14/DC 12
Electrical service life, number of cycles	10.000
Minimum contact load	1 mA at AC/DC > 10 V

### Environment/EMC

EMC immunity	acc. to EN 61000-6-2
EMC emission	acc. to EN 61000-6-4
Classification of climatic conditions acc. to IEC 60721	
Stationary use	3K5
transport	2K3
storage	1K4
Operating temperature	-25...+55 °C
Classification of mechanical conditions acc. to IEC 60721	
Stationary use	3M4
transport	2M2
storage	1M3

### Connection

Connection	13 x 1 N/O contacts
Connection properties	
rigid/flexible/conductor sizes	0.2...4/0.2...2.5 mm <sup>2</sup> /AWG 22...12
flexible with ferrule, without/with plastic sleeve	0.25...2 mm <sup>2</sup>
Stripping length	8 mm
Tightening torque	0.5 Nm

### Other

Operating mode	continuous operation
Mounting	any position
Degree of protection, internal components (IEC 60529)	
	IP 30
Degree of protection, terminals (IEC 60529)	
	IP 20
Type of enclosure/dimension diagram	X470
Screw mounting	2 x M4
DIN rail mounting acc. to	IEC 60715
Flammability class	UL94V-0
Operating manual	BP108011
Weight	≤ 580 g



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