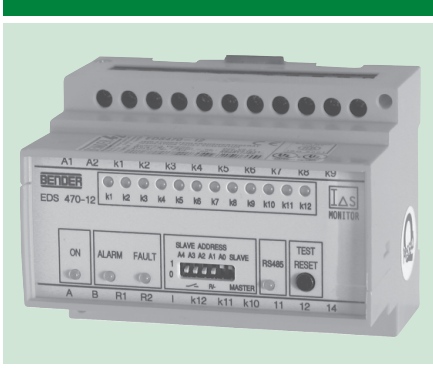


EDS470-12 / EDS473-12

Insulation fault evaluators for EDS systems



EDS47...-12

Device characteristics

- Response sensitivity:
EDS470-12: 5 mA for main circuits
EDS473-12: 0.5 mA for control circuits
- Alarm LED for collective alarm
- Alarm LED k1...k12 for alarm message per channel
- Alarm LED FAULT for FAULT alarm in case of interruption of the CT connection
- Combined TEST and RESET button
- Alarm relay with one potential-free changeover contact
- N/O / N/C operation, selectable
- Memory to store alarm messages
- Transparent dust cover for ingress protection, 45 mm

Product description

The insulation fault evaluator EDS47... in combination with measuring current transformers is intended to be used to evaluate the test current signals generated by the insulation monitoring device IRDH575 or the insulation fault test device PGH47.... Up to 12 measuring current transformers can be connected per device. Up to 59 EDS47... can be interconnected via an RS485 interface (BMS protocol) in one EDS system so that up to 708 subcircuits can be monitored.

Application

Insulation fault evaluator for insulation fault location systems EDS.

Function

After starting insulation fault location via the insulation fault test device PGH47... or the A-ISOMETER® IRDH575, the insulation fault evaluator EDS47... starts scanning each measuring current transformer (channel). During the scanning process, the respective alarm LED k1...k12 lights. If the fault current detected by a measuring current transformer exceeds the response value of 5 mA / 0.5 mA, the respective alarm LED of the LED chain lights continuously and the alarm relay switches. When the response value is not exceeded, the alarm LED extinguishes. When all of the 12 channels have been scanned, insulation fault location starts again and keeps running until it is stopped. The connecting leads between the measuring current transformers and the evaluators are continuously monitored. An alarm message is signalled when a connecting lead is interrupted.

If the fault memory of the EDS47... is activated, the alarm messages of the individual channels remains stored until the RESET button is pressed or an automatic RESET command via the interface is given. If the fault memory is not activated, the alarm message remains stored for the time the fault is present. Eliminating this fault before starting a new scanning cycle eliminates the alarm message too. When several insulation fault evaluators EDS47... exist in one system, all devices are scanned simultaneously.

Certifications

EDS470-12



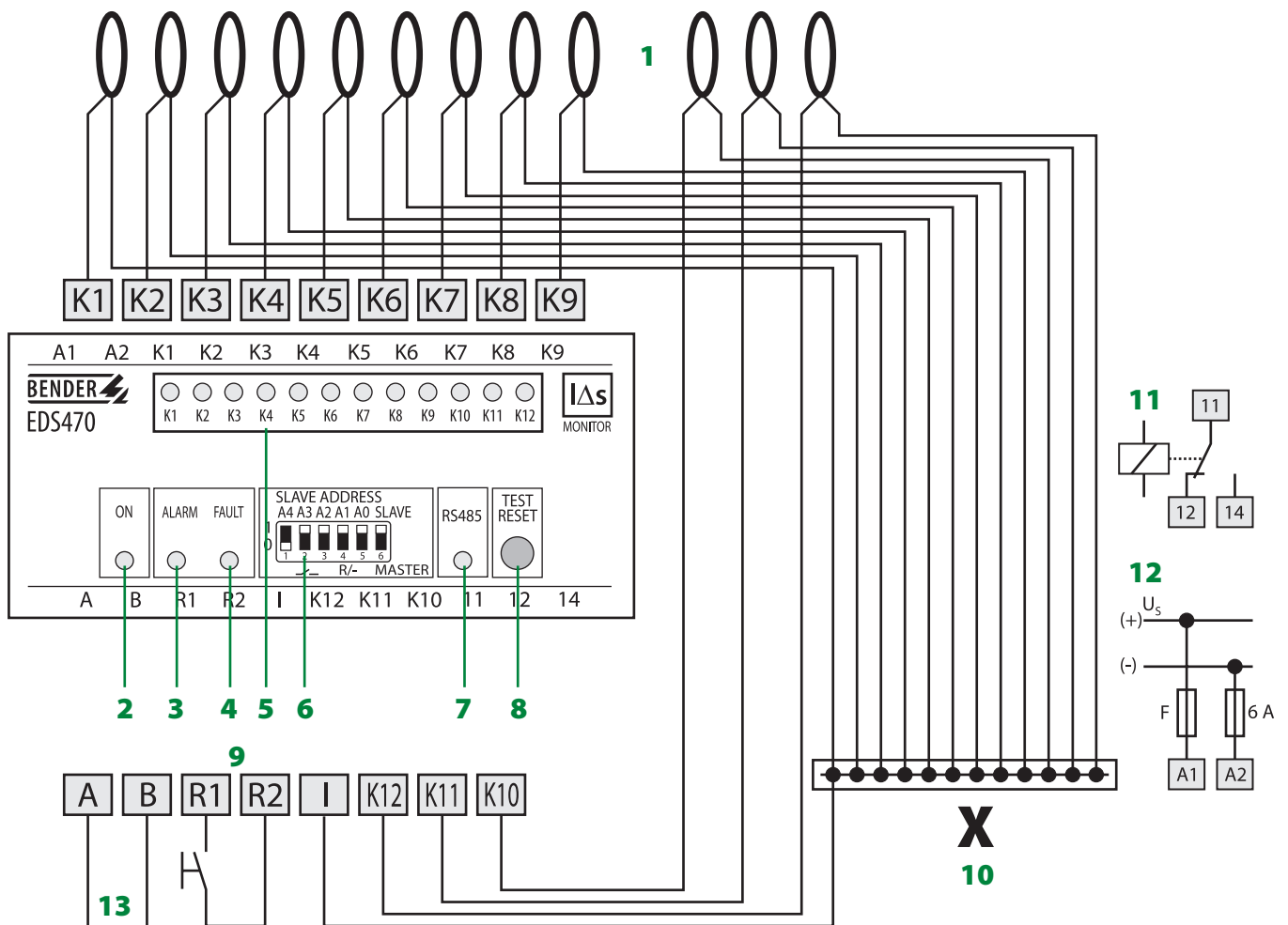
EDS473-12



Technical data

	EDS470	EDS473	EDS470	EDS473
Insulation coordination acc. to IEC 60664-1				
Rated insulation voltage	AC 250 V	AC 250 V	15 g / 11 ms	15 g / 11 ms
Rated impulse voltage / pollution degree	4 kV/3	4 kV/3	40 g / 6 ms	40 g / 6 ms
Voltage ranges				
Nominal system voltage U_n	dependent on PGH47... resp. IRDH575		1 g / 10...150 Hz	1 g / 10...150 Hz
Supply voltage U_s	see ordering details		2 g / 10...150 Hz	2 g / 10...150 Hz
Nominal frequency U_s	50...60 Hz	50...60 Hz	Ambient temperature, during operation	-10 °C...+55 °C
Power consumption	≤ 3 VA	≤ 3 VA	Storage temperature range	-40 °C...+70 °C
Response values				
Response value for test current	DC > 5 mA	DC > 0.5 mA	Climatic class according to IEC 60721-3-3	3K5
Interfaces				
Interface / protocol	RS485 / BMS	RS485 / BMS	Operating mode	continuous operation
Switching elements	1 changeover contact	1 changeover contact	Mounting	any position
Rated contact voltage	AC 250 V / DC 300 V	AC 250 V / DC 300 V	Connection	screw terminals
Electrical endurance	12000 cycles	12000 cycles	Wire cross section, rigid, flexible	0.2...4 mm ² / 0.2...2.5 mm ²
Making capacity	AC / DC 5 A	AC / DC 5 A	Degree of protection, int. components (DIN EN 60529)	IP30
Breaking capacity	2 A, AC 230 V, cos phi=0.4	0.2 A, DC 220 V, L/R=0.04 sec	Degree of protection, terminals (DIN EN 60529)	IP20
			Enclosure / dimension diagram	X470
			Screw fixing	2 x M4
			DIN rail mounting according to	DIN EN 60715 / IEC 60715
			Flammability class	UL94V-0
			Technical manual	TGH 1243
			Weight approx.	400 g

Wiring diagram



- 1 - Measuring current transformer
- 2 - Power On LED
- 3 - Alarm LED, lights up when an insulation fault has been detected in a channel
- 4 - Alarm LED FAULT, lights up in the event of interruption or short-circuit in a current transformer circuit (this function can be deactivated)
- 5 - Alarm LEDs, flash when the respective current transformer circuit is being scanned and light up when an insulation fault has been detected
- 6 - DIP switches to set the device address, the operating principle of the alarm relays, the memory behaviour and MASTER / SLAVE mode
- 7 - RS485 LED, indicates activities on the BMS bus
- 8 - TEST and RESET button: < 1 s = RESET, > 2 s = TEST
- 9 - External TEST and RESET button: press < 1 s = RESET, > 2 s = TEST
- 10 - Terminal strip X for measuring transformer I connections. Maximum length between terminal I and terminal strip X is 25 cm at a cross section of 2.5 mm² (15 cm at a cross section of 1.5 mm²)
- 11 - Alarm relay (collective alarm)
- 12 - U_S see ordering details, 6 A fuse recommended. Note: supply voltage U_S in IT systems requires two fuses.
- 13 - Connection BMS bus

Ordering details

Type	Supply voltage U _S	BMS bus address range	Art. No.
EDS470-12	AC 230 V	2...30	B 9501 2002
EDS470-1213	AC 90...132 V*	2...30	B 9501 2005
EDS470-1221	DC 10.5...80 V*	2...30	B 9501 2006
EDS470-1223	DC 77...286 V*	2...30	B 9501 2010
EDS470E-12	AC 230 V	61...90	B 9501 2016

* absolute values

Type	Supply voltage U _S	BMS bus address range	Art. No.
EDS473-12	AC 230 V	2...30	B 9501 2019
EDS473-1213	AC 90...132 V*	2...30	B 9501 2020
EDS473-1221	DC 10.5...80 V*	2...30	B 9501 2021
EDS473-1223	DC 77...286 V*	2...30	B 9501 2036
EDS473E-12	AC 230 V	61...90	B 9501 2032

* absolute values

1.7