

EARTH-FAULT AND SHORT-CIRCUIT INDICATOR TYPE EKS3.2

panel-mounted

General description

The earth-fault and short-circuit indicator can be used in radial networks with one input and open-ring networks which are solidly earthed or low resistance-earthed. The connections between the short-circuit sensors and accordingly the earth-fault sensors to the display unit are done by cable. All sensors must be mounted on screened cables. The sensors are divisible and can be retrofitted on the cable.



Features and Options

- Permanent earth-faults: Indication of permanent earth-faults by double blinking of the earth-fault LED.
- 2nd short-circuit pass-through: Indication of a second short-circuit passing through by double blinking of the respective short-circuit LED.
- Separate response delays: The response delay for short-circuits and earth-faults can be adjusted individually.
- Sensor reset: Sensor reset on recovering net current, enabled by DIP switch
- Optional two relays: The indicator can be equipped with two remote contact relays to indicate earth-faults and short-circuits separately.
- Optional reset input: For reset by recovering auxiliary voltage supply (V DC or V AC)
- Optional power supplies: 10-110 V DC or 110 / 230 V AC power supply with optional lithium backup battery

External connectors

- Connector 1 - 2: short-circuit sensor L1
- Connector 3 - 4: short-circuit sensor L2
- Connector 5 - 6: short-circuit sensor L3
- Connector 7 - 8: earth-fault sensor
- Connector 9 - 10: external blinking lamp (Type BL3.1+BL4.1)
- Connector 10 - 11: Remote reset input
- Connector 13 - 15: SCADA change-over contact (please refer to figure 1)

Optional two relays:

- Connector 12- 13: SCADA remote contact for short-circuit
- Connector 14- 15: SCADA remote contact for earth-fault
- Connector 16 - 17: Optional power supply (AC or DC)

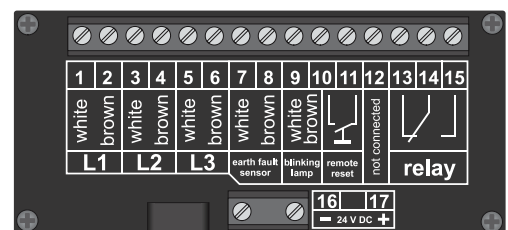


figure 1 - Connectors one relay version

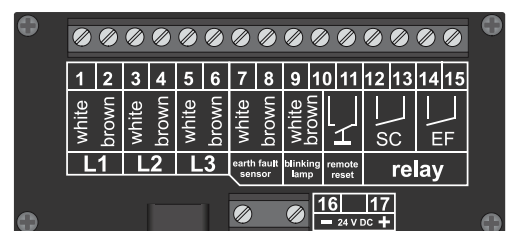
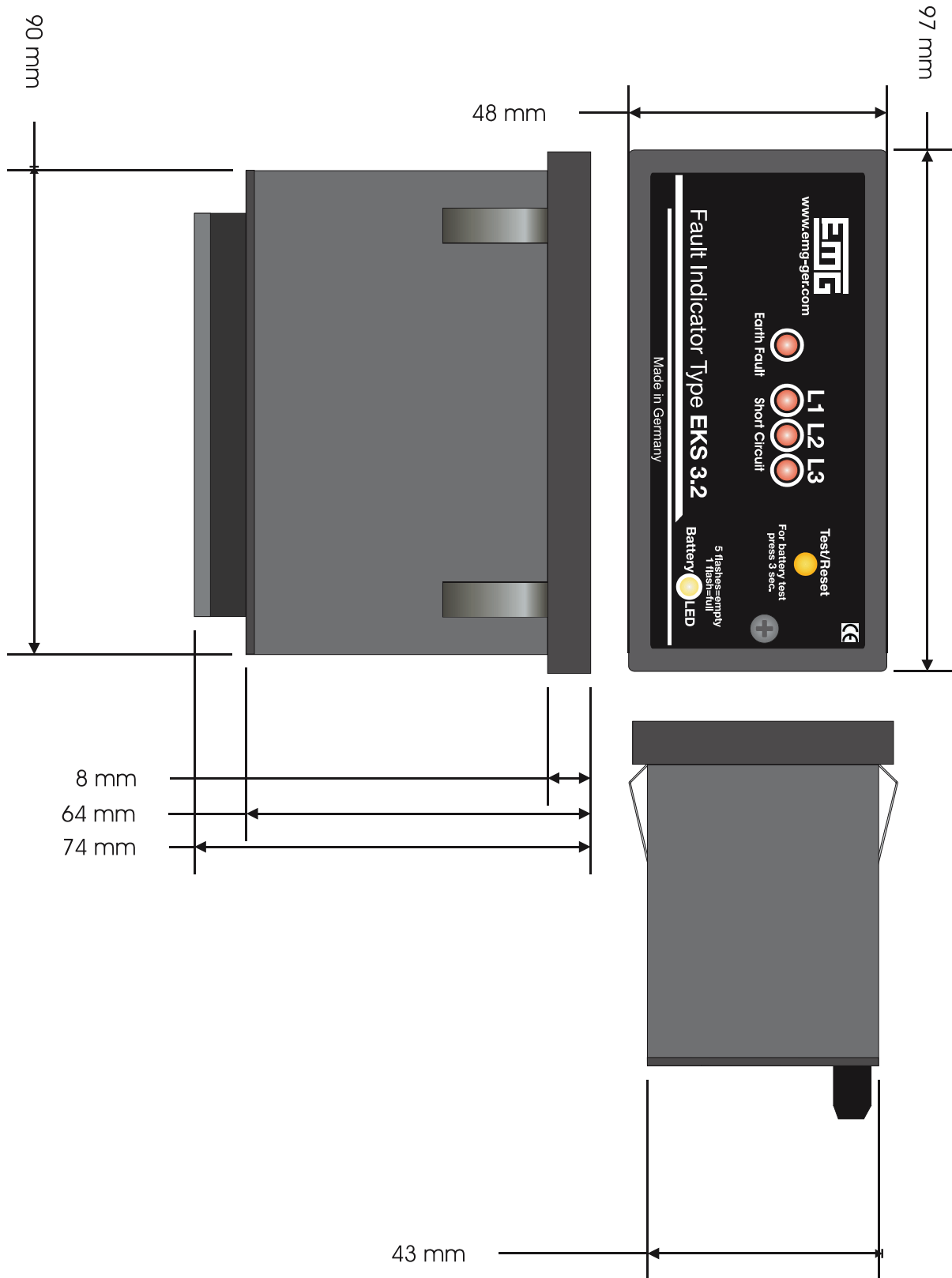


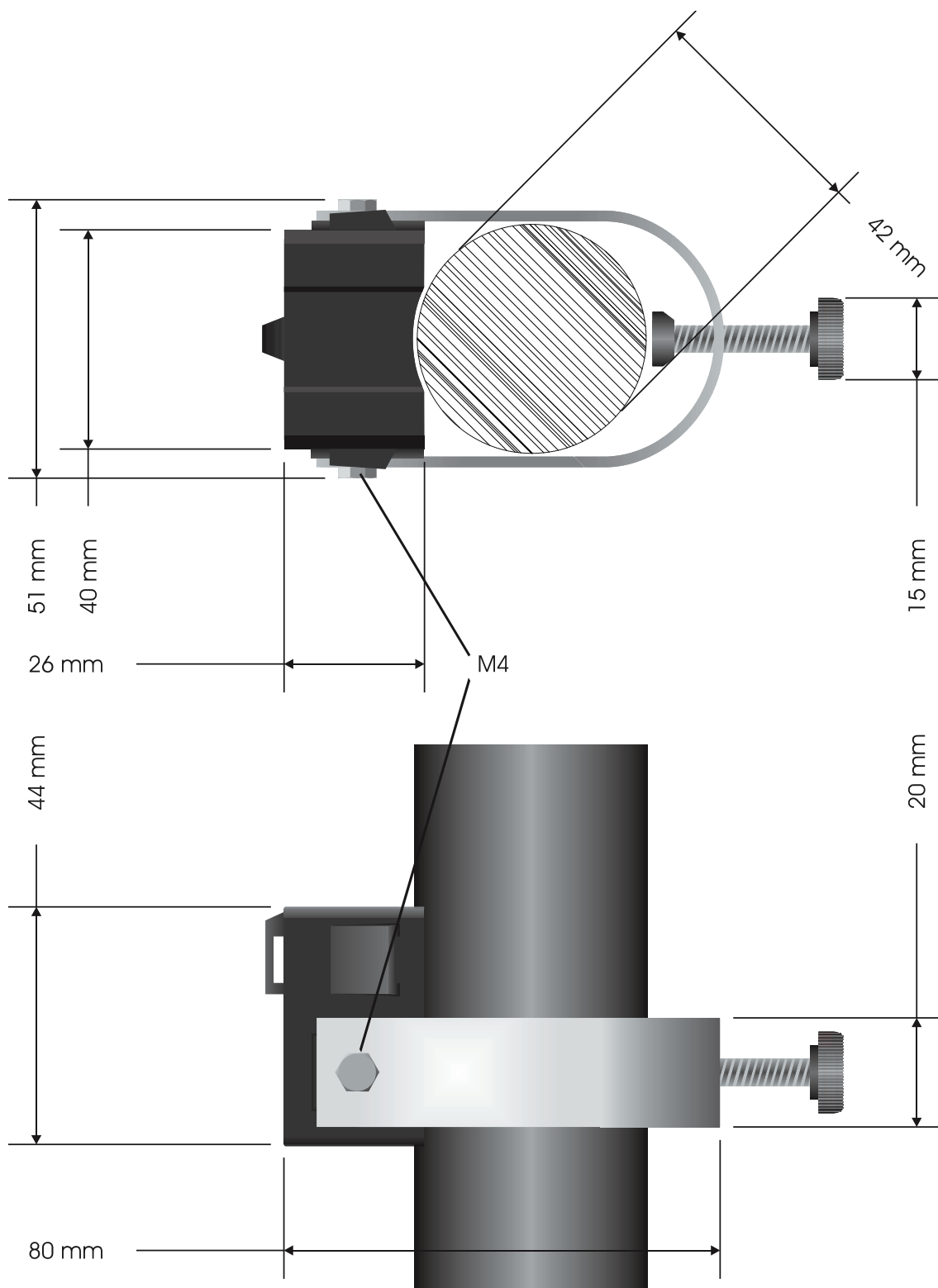
figure 2 - Connectors two relay version

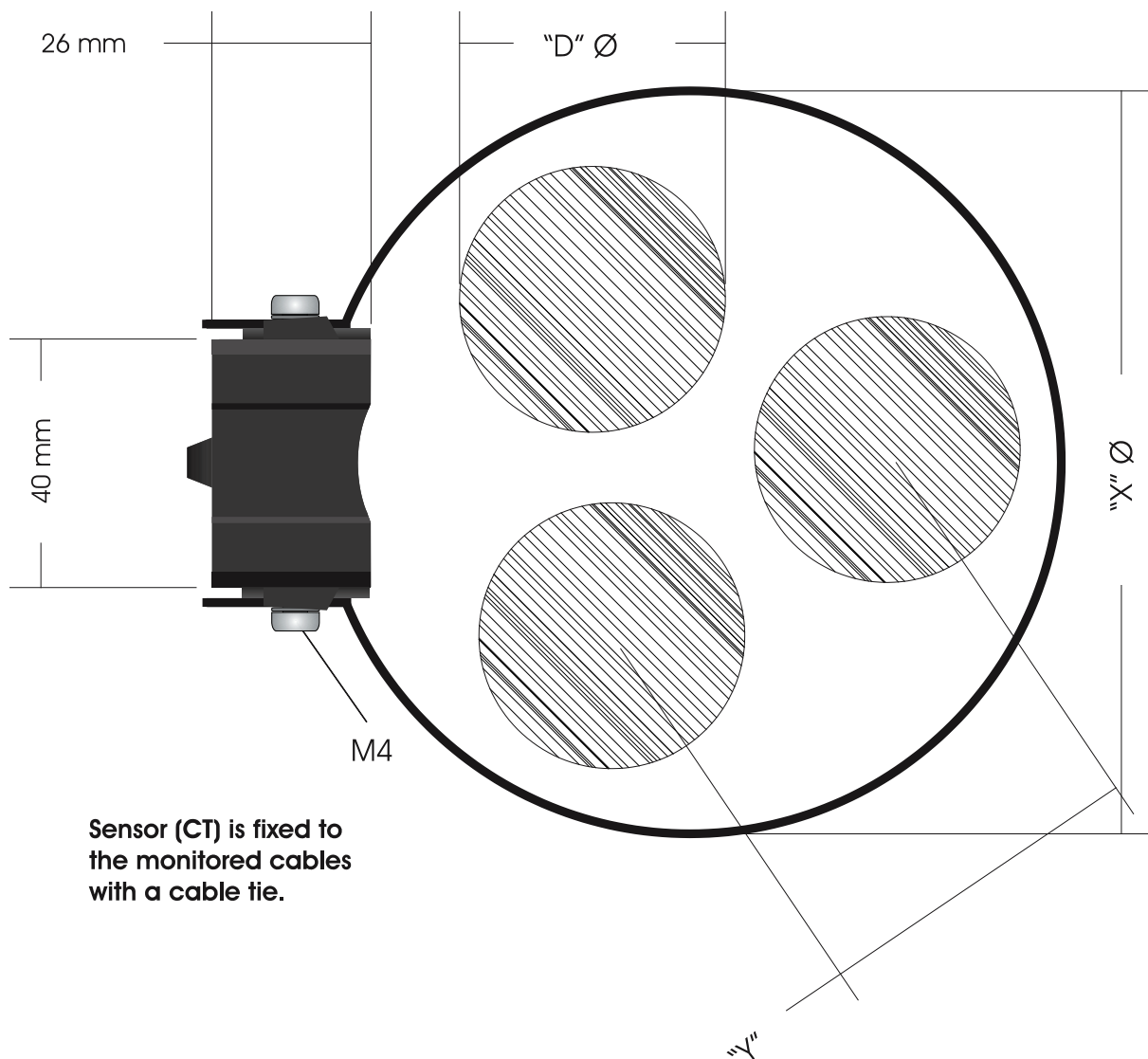
General Data

Subject	Value
short-circuit current (phase to phase)	adjustable: 200 / 400 / 600 / 800 / 1000 * A ($\pm 10\%$)
earth-fault current (phase to ground)	adjustable: 10 / 20 / 40 / 60 / 80 / 100 * A ($\pm 10\%$)
response delay short-circuit	adjustable: 40 / 60 / 80 / 160 * ms
response delay earth-fault	adjustable: 40 / 60 / 80 / 160 * ms
indication unit	suitable for panel installation
indication of a) short-circuit b) earth-fault c) battery	a) one red LED for each phase b) one red LED for earth-fault c) one yellow LED
reset of the indicator	a) manual by push-button b) connection for a potential-free remote reset c) time*: 1 / 2 / 4 / 8 ($\pm 1\%$) hours after fault d) sensor reset after recovering net current (on/off) Optional: e) self-acting after recovering of 230 V AC
on site function test a) function test b) battery test	by push-button a) the button has to be pressed for 1 second b) the button has to be pressed for 3 seconds
dimensions: indication unit	(WxHxD) 97 mm x 48 mm x 74 mm (dimensions of the cut out: 92+0.8 x 45+0.6 mm / IEC 61554 / DIN43700)
Protection class: indication unit	IP40
Protection class: sensors	IP67
internal type test	according to IEEE 495-2007
operation temperature range	-25°C to +70°C
power supply	lithium battery (LiSOCl ₂) type AA / 3.6V / 2600 mAh Optional: 10-110 V DC ** Optional: 110 / 230 V AC ** **) can be ordered with lithium backup battery type AA / 3.6V / 2600 mAh
SCADA contact	1x change-over contact Optional: 2x NO (separate earth-fault and short-circuit indication) permanent / wipe contact (100ms) (can be selected on site by a dip switch) max. 230 V AC / max. 2 A / max. 30 W
short-circuit sensor (CT)	three short circuit sensors type SK (current transformers for single-core cable) diameter: 22-42* mm connection cable length: 3* m (copper cable)
earth-fault sensor (CT)	one earth-fault sensor type SE (current transformers for a three-core cable) diameter: 80-100* mm connection cable length: 3* m (copper cable)

*PLEASE NOTE: other values can be ordered





**Verbindungskabel/connection cable:**

- LIYY 2 x 0,5 mm²
- PB-free
- Ø = 5 mm
- length customer specific