

# EARTH-FAULT AND SHORT-CIRCUIT INDICATOR

## TYPE EKL3.2 NG

panel-mounted

### General description

The earth-fault and short-circuit indicator can be used in radial networks with one input and ring networks. For earth-fault detection, the network has to be solidly earthed or low resistance-earthed.

The potential-free connections between the short-circuit sensors is done by fibre optic cable. The earth-fault sensor is connected to the display unit by copper cable. The short-circuit sensor can be mounted on screened and unscreened cables. The earth-fault sensor must be mounted on screened cables.

All sensors are divisible and can be retrofitted on the cable. The fault indicators of the NG-Series have a compact design with low installation depth.

The device is powered by an exchangeable lithium battery.



### 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 delay:	The response delay can be set separately for short-circuits and earth-faults.
Optional reset input:	For reset by recovering 230 V AC

### External connectors (figure 1)

Optical terminal:	Connectors for short-circuit sensors L1, L2 and L3
Connectors 1 - 2:	Remote reset input
Connectors 3 - 4:	external blinking lamp (Type BL4.1+BL6)
Connectors 5 - 6:	SCADA remote contact NC
Connectors 7 - 8:	SCADA remote contact NO
Connectors 9 - 10:	Earth-fault sensor
Connectors 11-13:	Reset input for recovering 230 V AC (not for supply)

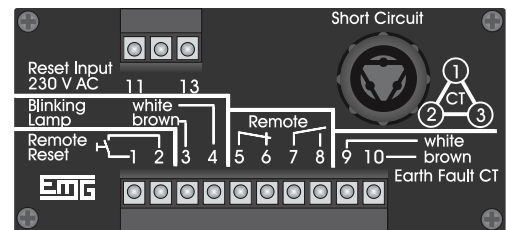
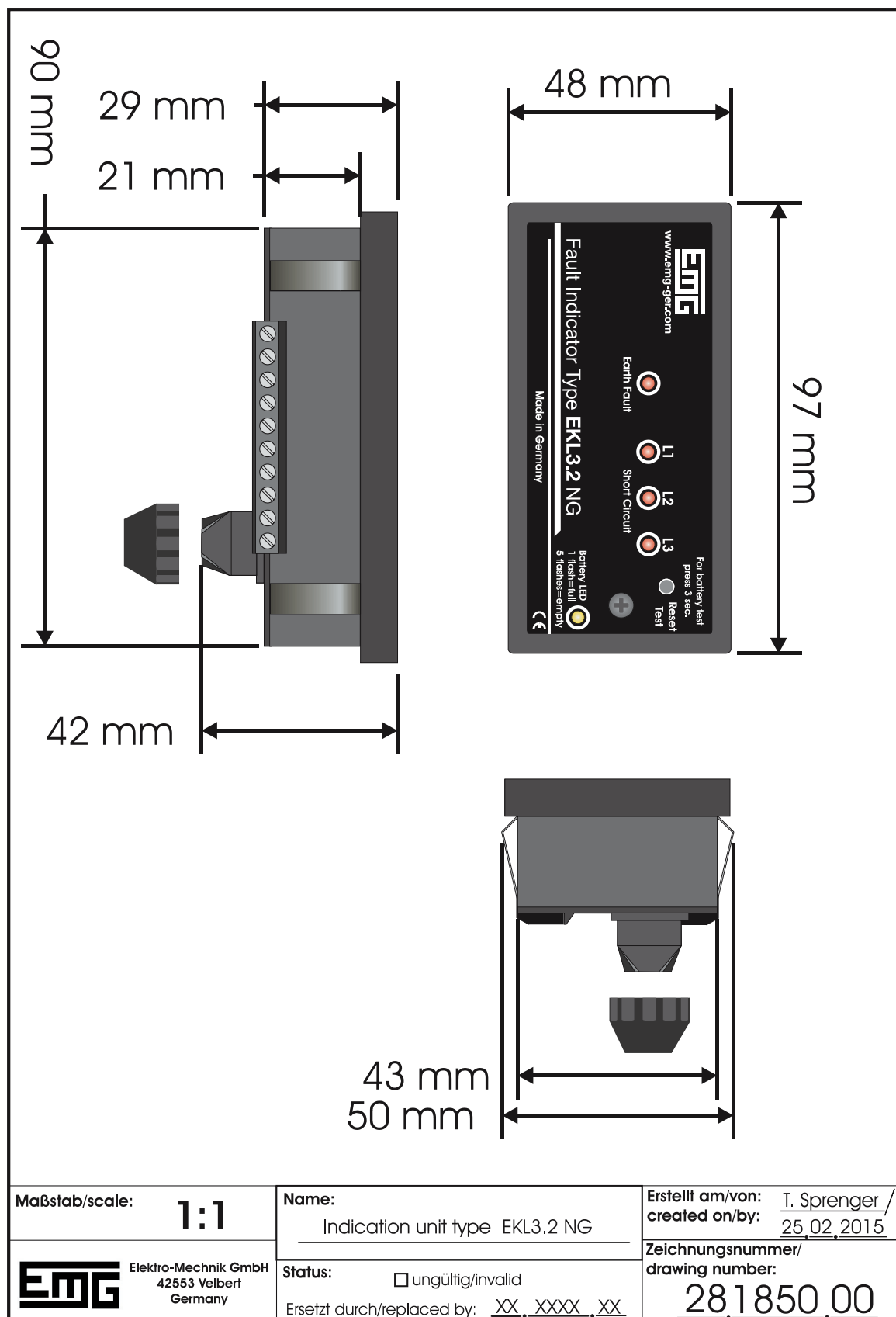


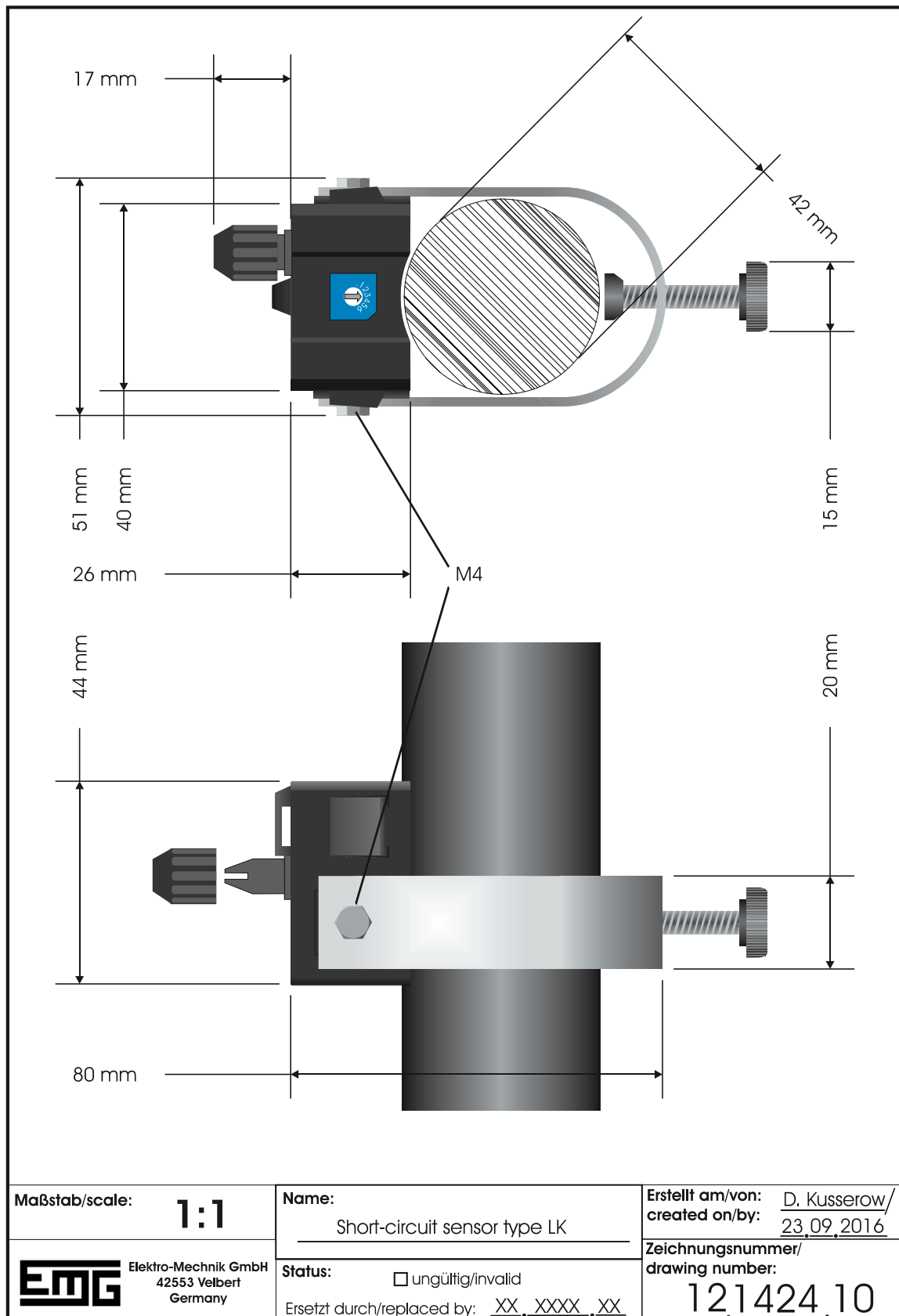
figure 1 - Connectors EKL3.2 NG

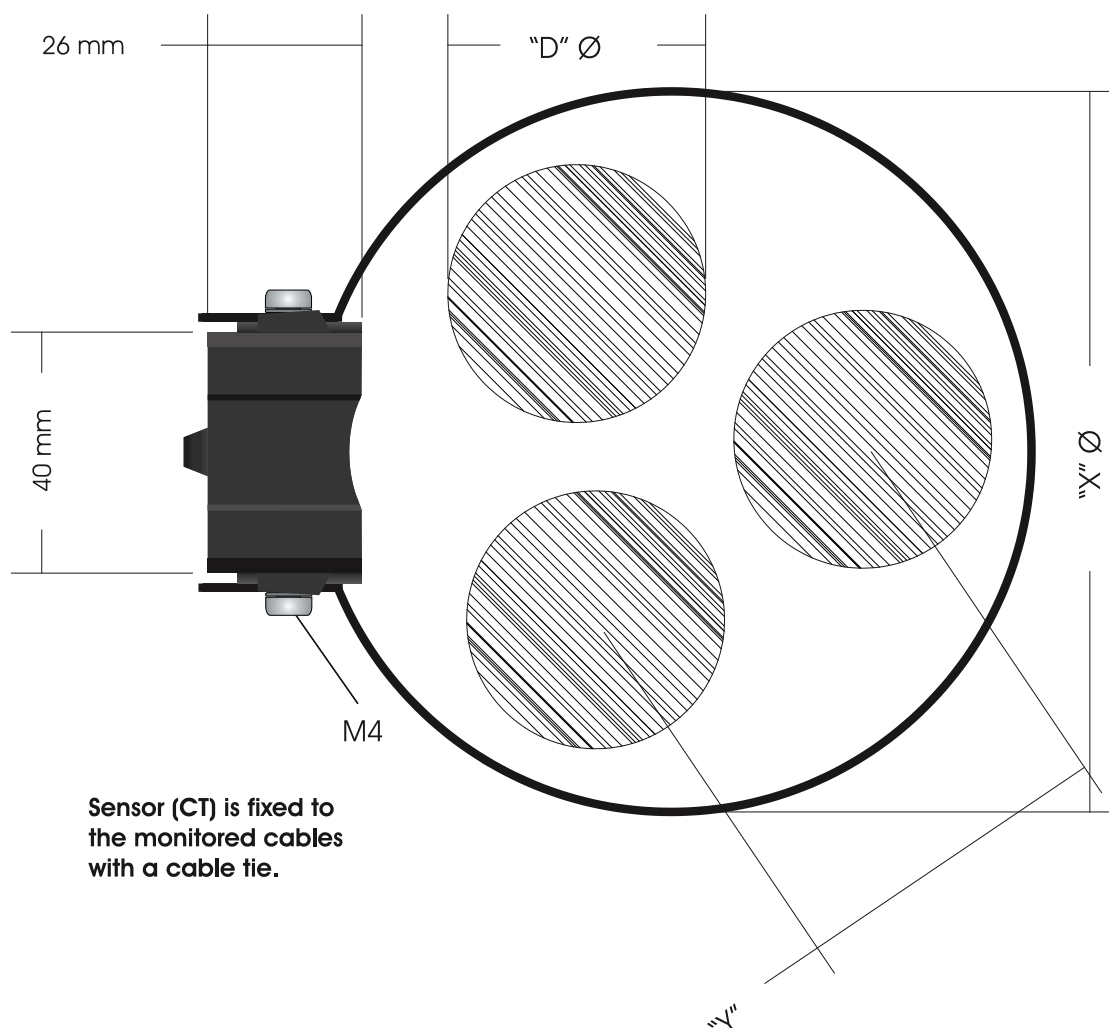
## General data

Subject	Value
short-circuit trip current (phase to phase)	adjustable (at the sensor): 200 / 400 / 500 / 600 / 800 / 1000 / 1200 * A ( $\pm 10\%$ ) or 200 / 300 / 400 / 500 / 600 / 800 / 1000 * A ( $\pm 10\%$ )
earth-fault trip current (phase to ground)	adjustable (at the display unit): 10 / 20 / 30 / 40 / 50 * 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 short-circuit (one common LED for all phases) 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 (+/-1%) hours after fault d) self-acting after recovering of 230 VAC (the 230 VAC connector is only for reset, not for supply!)
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 42 mm (dimensions of the cutout: 92+0.8 x 45+0.6 mm / IEC 61554 / DIN43700)
Protection class: indication unit	IP40
Protection class: sensors	IP67
EMI	according to IEC 1000-4-2, IEC 1000-4-3
internal type test	according to IEEE 495-2007
operation temperature range	-25°C to +70°C
power supply	lithium battery (LiSOCl <sub>2</sub> ) Typ AA / 3.6V / 2600 mAh
SCADA contact	1x NO and 1x NC 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 LK three current transformers for single-core cable diameter: 22-42* mm connection cable length: 3* m (fibre optic cable)
earth-fault sensor (CT)	one earth-fault sensor type SE (copper cable) one current transformer for a three-core cable diameter: 80-100* mm connection cable length: 3* m

\*PLEASE NOTE: other values can be ordered





**Verbindungskabel/connection cable:**

- LIYY 2 x 0,5 mm<sup>2</sup>
- PB-free
- Ø = 5 mm
- length customer specific

Maßstab/scale:

**1:1**

Name:

Earth-fault sensor type SE

Erstellt am/von: D. Kusserow/  
created on/by: 12.05.2016Elektro-Mechnik GmbH  
42553 Velbert  
Germany

Status:

☐ ungültig/invalid

Ersetzt durch/replaced by: XX.XXXX.XX

Zeichnungsnummer/  
drawing number:**121449.05**