

EARTH-FAULT AND SHORT-CIRCUIT INDICATOR

TYPE **EKL8000 / EKL8001**

surface mounted

General description

The earth-fault and short-circuit indicator type EKL8000 and EKL8001 can be used in radial networks with one input and open-ring networks which are solidly earthed or low resistance earthed.

The potential-free connection between the short-circuit sensors and accordingly the earth-fault sensor to the display unit is done by fibre optic cables. The short-circuit sensors 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 earth-fault and short-circuit indicator type EKL8001 is equipped with two remote contact relays to indicate earth-faults and short-circuits separately.



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.
Type EKL8001:	This indicator is equipped with two remote contact relays to indicate earth-faults and short-circuits separately.
Optional reset input:	For reset by recovering 230 V AC
Optional power supplies:	10-110 V DC or 110 / 230 V AC power supply with optional lithium backup battery

External connectors

Optical terminal: Connectors to short-circuit sensors L1, L2 and L3

Connector 9 - 10: external blinking lamp
(Type BL4.1+BL6)

Connector 10 - 11: Remote reset input

EKL8000:

Connector 13 - 15: SCADA change-over contact
(please refer to figure 2)

EKL8001:

Connector 13 - 14: SCADA NO contact for short-circuit

Connector 14 - 15: SCADA NO contact for earth-fault
(please refer to figure 2)

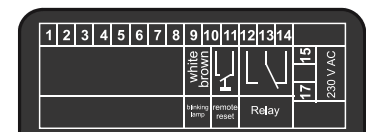


figure 1 - Connectors EKL8000

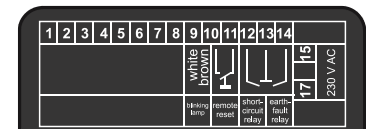


figure 2 - Connectors EKL8001

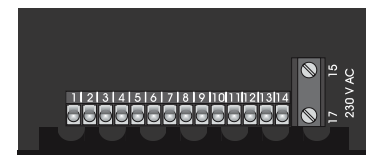
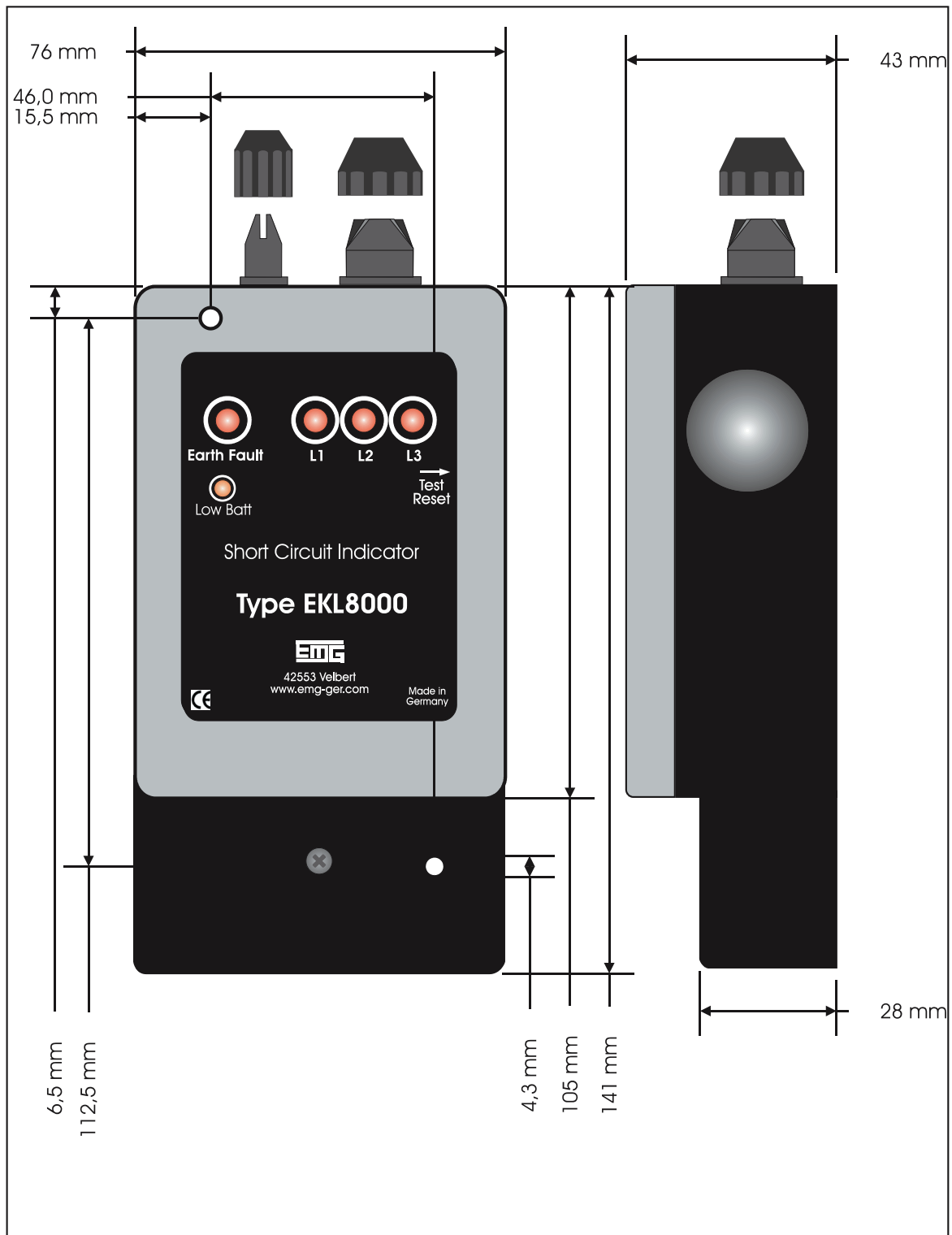



figure 3 -Connecting terminal

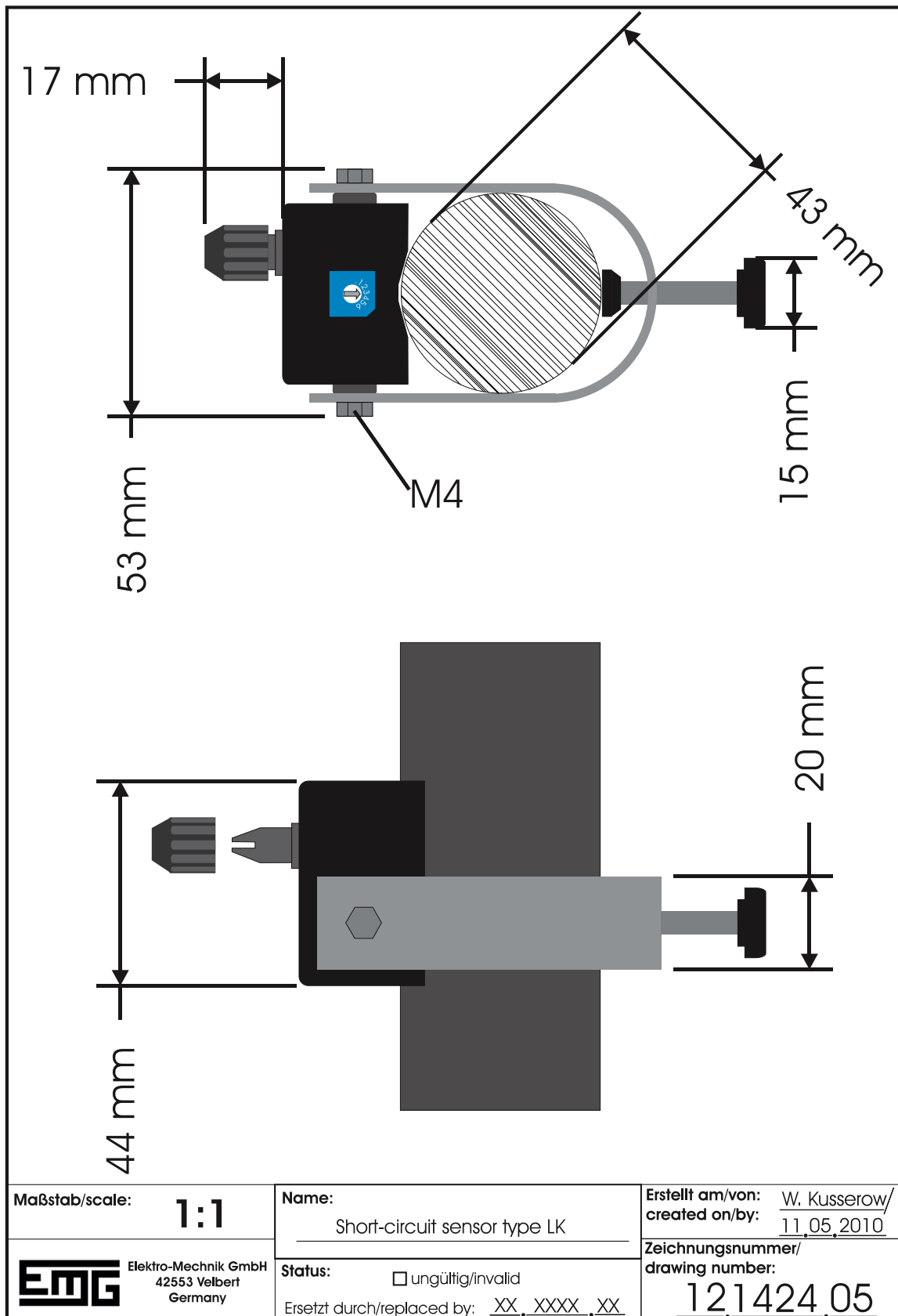
General Data

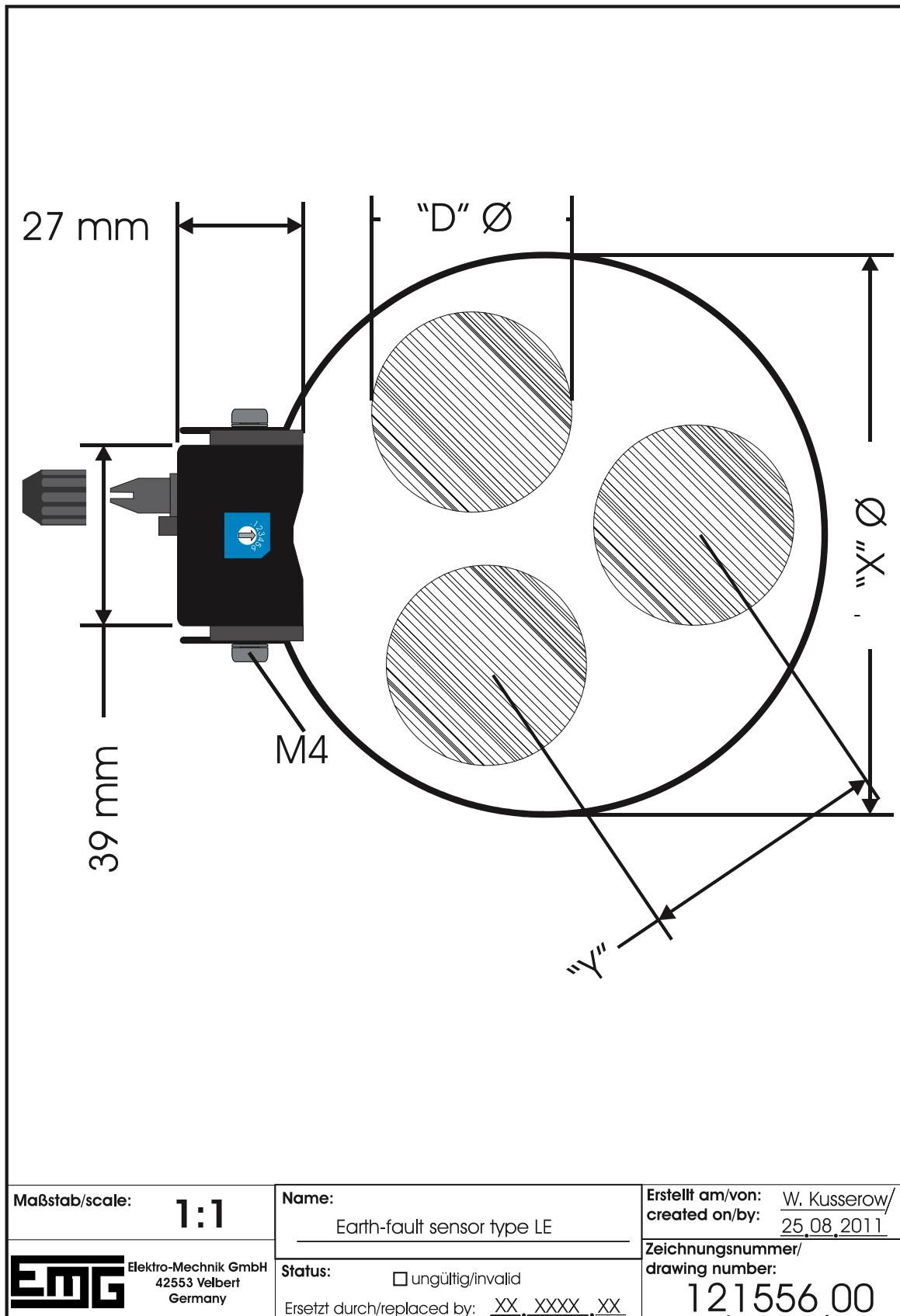
Subject	Value
short-circuit trip current (phase to phase)	adjustable: 200 / 400 / 500 / 600 / 800 / 1000 / 1200 * A ($\pm 10\%$)
earth-fault trip current (phase to ground)	adjustable: 10 / 20 / 30 / 40 / 60 / 80 / 100 * A ($\pm 10\%$)
response delay short-circuit	adjustable: 40 / 60 / 80 / 160 * ms
response delay earth-fault	adjustable: 40 / 60 / 80 / 160 * ms
indication unit	suitable for surface 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 (+/-1%) hours after fault Optional: d) 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) 141mm x 76mm x 43mm
Protection class: indication unit	housing with electronic: IP65 terminal box: IP54
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 with lithium backup battery type AA / 3.6V / 2600 mAh Optional: 110 / 230 V AC with lithium backup battery type AA / 3.6V / 2600 mAh
SCADA contact	EKL8000: 1x change-over contact EKL8001: 2x NO contacts (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 LK (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 LE (current transformers for a three-core cable) diameter: 80-100* mm connection cable length: 3* m (fibre optic cable)

*PLEASE NOTE: other values can be ordered



Maßstab/scale: <p style="font-size: 2em; text-align: center;">1:1</p>	Name: <p style="text-align: center;">EKL8000 Aufbaugerät</p>	Erstellt am/von: <u>W. Kusserow/</u> created on/by: <u>30.03.2011</u>
 Elektro-Mechnik GmbH 42553 Velbert Germany	Status: <input type="checkbox"/> ungültig/invalid Ersetzt durch/replaced by: _____	Zeichnungsnummer/ drawing number: <p style="font-size: 1.5em; text-align: center;">221519.00</p>





Maßstab/scale: **1:1**

Name: Earth-fault sensor type LE

Erstellt am/von: W. Kusserow
 created on/by: 25.08.2011



Elektro-Mechnik GmbH
 42553 Velbert
 Germany

Status: ungültig/invalid
 Ersetzt durch/replaced by: XX, XXXX, XX

Zeichnungsnummer/
 drawing number: **121556.00**