

VOLTAGE INDICATOR

TYPE SPA-ES

panel-mounted

General Description

The voltage indicator type SPA-ES can be used in medium voltage networks with a rated voltage of 5 kV to 36 kV. The function of the device is a permanent indication of the voltage status of the monitored conductors. The indication of the voltage is done by a permanent blinking of one LED per phase. The type SPA-ES is connected to the capacitive pickup of a bushing or insulator. The display unit has to be adapted to the capacitance of the bushing or insulator. For the operation of the display device, an auxiliary power supply is required.

If the voltage is present, one LED per conductor is blinking. If the voltage of a conductor drops, the respective LED stops blinking.

Additionally the device is equipped with relays to remotely indicate the voltage status via change-over contacts. It is possible to select the characteristics of the relay contacts (factory pre-set). If the device is equipped with three relays the voltage status of each phase can be remotely indicated. If one or two relays are equipped the remote indication of the voltage status is bundled. It can be selected whether the relays operate if there is a voltage drop on one phase or if there is a voltage drop on all phases.



figure 1 - Housing of indication unit

Features and Options

Power supply options:

- a) External power supply of 12V DC - 110V DC
- b) External power supply of 230V AC

Remote indication options:

- a) One/Two relays for indication of no voltage on all phases
- b) One/Two relays for indication of no voltage on one phase
- c) Three relays for indication of no voltage for each phase

External connectors

Connector 1 - 2: connection to bushing or insulator L1
 Connector 3 - 4: connection to bushing or insulator L2
 Connector 5 - 6: connection to bushing or insulator L3
 Connector 7 - 9: 1 or 2 relay version: not connected
 3 relay version: SCADA change-over contact L1

Connector 10 - 12: 1 or 2 relay version: SCADA change-over contact L1, L2 and L3

3 relay version: SCADA change-over contact L2

Connector 13 - 15: 1 relay version: not connected
 2 relay version: SCADA change-over contact L1, L2 and L3
 3 Relais: SCADA change-over contact L3

Connector 16 - 17: External power supply

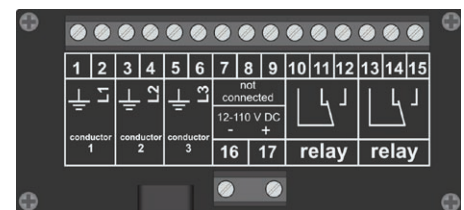
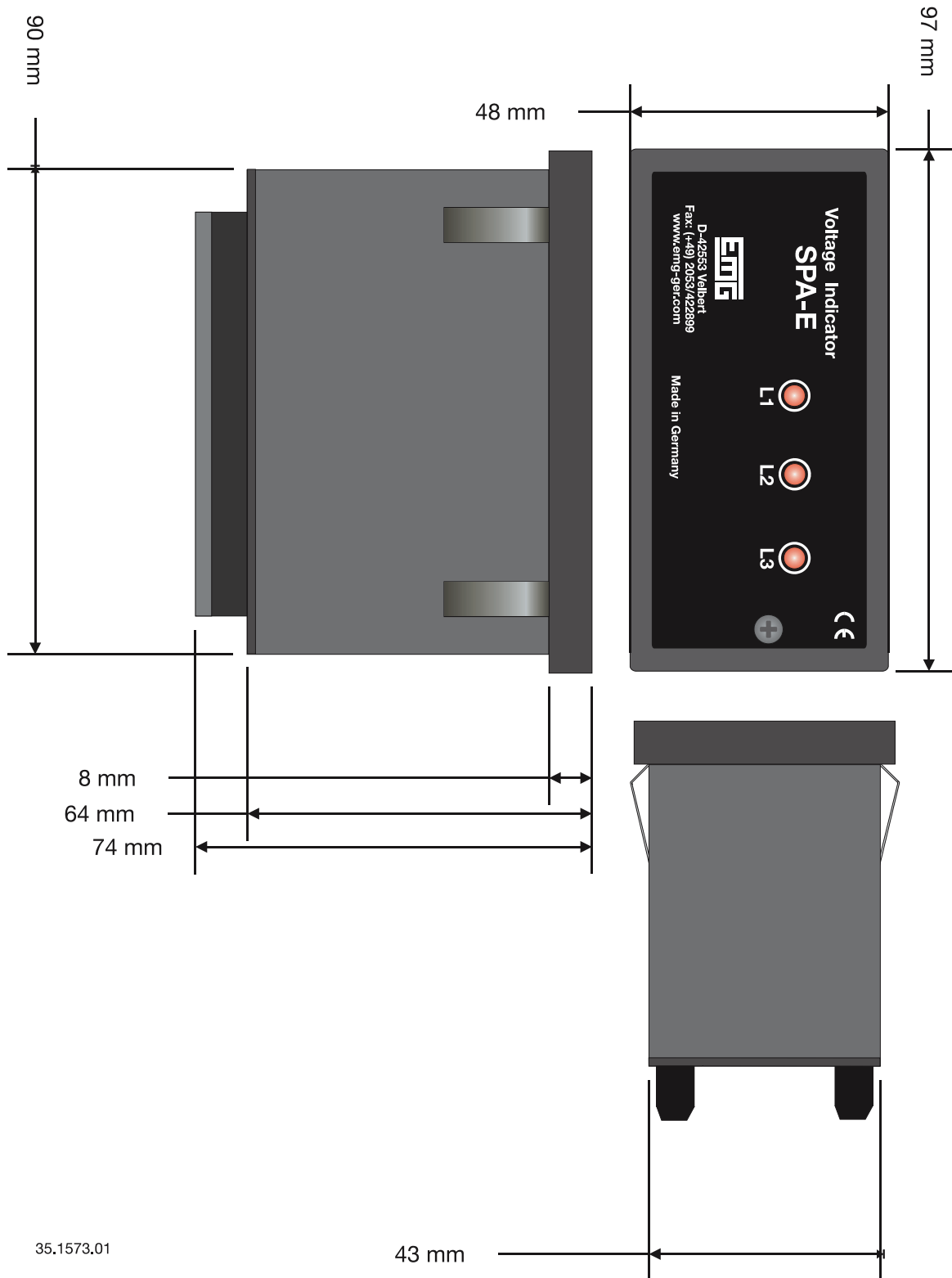


figure 2 - Connectors (2 relay version)

General Data

Subject	Value
voltage ranges	5 kV - 36 kV
indication of voltage	The presence of voltage on each conductor is indicated by a permanent blinking of the respective LED
flashing frequency	1 blink per second
indication unit	suitable for panel installation
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
power supply	a) External power supply of 12V DC - 110V DC or b) External power supply of 230V AC (Power supply should be independent of the monitored network.)
SCADA contact	a) 1 relay: 1x change-over contact b) 2 relay: 2x change-over contacts c) 3 relay: 3x change-over contacts max. 230 V AC / max. 2 A / max. 30 W The relay(s) of options a) and b) can be configured to switch status on one of the following conditions: - voltage must have dropped on all phases - voltage has dropped on one phase The relays of option c) represent the status per phase. In case of a voltage drop on one phase, the respective relay switches state.
operation temperature range	-20°C to +70°C

*PLEASE NOTE: other values can be ordered



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43 mm