

MultiSafe DSP TT1

Telescope voltage tester for light rail systems



The MultiSafe DSP TT1 is a safe equipment for fast voltage testing at overhead lines of light rail systems.

- Precise indication of voltage up to 1000 / 1500 V
- Testing height up to 6,2 meter variable height adjustment
- Highest degree of safety provided by protective resistors within test prod, maximum current under 3,2 mA
- Easy operation with one single push-button, self-test for testing function, protective resistors and proper ground connection



Application

The MultiSafe DSP TT1 is a two-pole telescope voltage tester for voltages up to 1000 V AC / 1500 V DC.

It is particularly suitable to detect quickly and securely voltage at catenary lines of light rail systems.

The voltage tester consists of a telescopic tube with test electrode to be connected to the overhead line, a display part and a contact magnet / contact clamp for the grounded rail.

The display part was designed on the basis of the two-pole voltage tester MultiSafe DSP which is certified by VDE in accordance with EN/IEC 61243-3. A high level of safety is provided by resistor decades that are moulded within the test probe. The current is securely limited to 3,2 mA.

Three readout systems

Unambiguous and rapid recognition of function and result:

- Round red flares for voltage, green square symbol for standby and absence of voltage
- Illuminated display shows precise values, voltage type and polarity
- Acoustic signal > 50 V AC / 120 V DC.



The MultiSafe switches on at 50 V automatically.



MultiSafe DSP TT1M

Protective resistors, function of the voltage tester and the connection between magnet and rail are checked easily and quickly with the self-test.



MultiSafe DSP TT1K
Contact clamp for rail base as an alternative to the contact magnet

Easy operation

Simple test sequence in three steps:

1. Place the contact magnet onto the grounded rail or screw the contact clamp on the rail foot.
2. Perform self-test
3. Pull out the telescopic tube, mount the electrode to overhead line. Perform voltage testing.

Robust design

High-quality elements guarantee function and safety:

- 4-part GRP-telescopic tube with variable height adjustment
- Display part made of impact-proof plastic with break-proof display cover
- Dust- and waterproof
- Solid PUR hose cable with contact magnet or clamp, easily exchangeable

Accessories

(Accessories are not included in scope of delivery)

- Bag with ring bolt and shoulder belt 176 x 24 cm
- Wall holder



Variable locking



Wall holder



Technical data

MultiSafe DSP TT1 Telescope voltage tester for light railway overhead lines

| | |
|--|--|
| Nominal voltage | 50 ... 1000 V AC / 1500 V DC |
| Display range | 50 ... 1000 V AC / 1500 V DC |
| Frequency | 0 ... 500 Hz |
| Indication of voltage | two redundant systems 1. LCD at > 50 V auto-on (accuracy 3% + 5 digit) 2. LEDs at > 50 V Detection of operating mode +/- / ~ |
| Self-test | testing function, protective resistors and ground contact |
| Input resistance | 311 kΩ, therefrom 186 kΩ in the moulded resistance cartridge beneath the test electrode |
| Measurement current | 3,2 mA at 1000 V AC / DC |
| On-time | 15 min |
| Overvoltage category | CAT IV in accordance with IEC 60664-1 (VDE 0110) |
| Surge voltage strength | > 12 kV case insulation to user > 8 kV switching mechanism between test prods |
| Operating temperature | -15°C ... + 55°C |
| Power supply | 9 V-block IEC 6LR61 / 6LF22 / 6LP3146 power saving circuit, automatic switch-off after 30 s without measuring, multi-stage battery indicator |
| Protection category | IP 65, device can be used in moist environments |
| Design | Two-pole voltage tester Display unit DSP: impact-proof, dust-proof plastic casing with unbreakable display cover, Telescope DSP TT1: 4-part telescopic tube made of GRP with integrated PUR spiral line moulded resistor decade, approx. 186 kΩ PUR hose cable with contact magnet/contact clamp |
| Standards | Display unit, function and test procedur EN/IEC 61243-3 Extension and telescopic tube in accordance with EN/IEC 61010-031 Surge voltage strength in accordance with EN/IEC 60071 |
| Dimensions / Weight | 1650 x 120 x 110 mm run-out length up to 5,2 m device incl. line and magnet 2,3 kg device with clamp for the rail foot 2,6 kg |
| Art.-no. | Type / Label |
| 89306 | MultiSafe DSP TT1M (magnet) |
| 84332 | Bag 176 x 24 cm |
| 63042 | Wall holder |
| further designs are available on request | |