

PD LOC-SX

Partial discharge pinpointing system to precisely locate PD faults in medium voltage cables



- **Precise PD pinpointing in mixed cable networks as well**
- **Easy to connect**
- **Battery operated transmitter**

DESCRIPTION

The PD Loc is used to precisely locate any identified PD weak spots during an offline PD diagnosis. In most cases, exact joint positions or cable parts are unknown; with help from the PD LOC this problem can be solved and joints or cable parts can be replaced, as part of preventative maintenance programm. This independent of the cable type: it functions on pure PE/XLPE, PILC, EPR as well as on mixed cable types.

The system consists of the PD TX impulse transmitter and the Teleflex SX receiving/evaluating unit (can also be ordered without Teleflex SX). The Teleflex SX unit consists of an input amplifier for processing the signal and a control unit in a rugged case. The visualisation, which shows the distance of the transmitting unit of the system, is shown on the reflectometer.

The pulse transmitter PD-TX can control the pulse width and displays the battery and charging status.

The impulse transmitter continuously transmits a sufficiently strong impulse signal into the exposed cable via an inductive coupler (42 or 64 mm) or test lead.

These impulses and their reflections from the far end of the cable are recorded and visualized by the Teleflex SX working in a particular operation mode.

The time difference from the incoming reflection is used to calculate the distance to the injection point of the impulse which in turn is compared with the results of the previously recorded PD measurement. In many cases, this approach facilitates highly precise positioning of the fault location, helping to avoid unnecessary and cost-intensive excavation when replacing or repairing a cable.

When using the system on cables with a lead, aluminium or dense copper wire sheath, please be aware that the quality of the shielding may limit these devices' functionality.

TECHNICAL DATA*

PD-TX

| | |
|-----------------------------------|--|
| Supply | 12 V ext. vehicle charging cable, mains power supply |
| Operating time | Approx. 24 h with internal Li-Ion battery |
| Pulse repetition frequency | 3.33 Hz |
| Pulse width | 50 ns, 200 ns, 500 ns, 1 μ s |
| Pulse amplitude | 250 V |
| Impulse current | 200 A |
| Output protection | Short circuit proof |
| Protection class | IP 54 |
| Operating temperature | - 10 °C ... + 50 °C |
| Weight | 2 kg |

Coupler

| | |
|-----------------------|----------------------------------|
| Inner diameter | 42 mm standard 64 mm optional |
| Plug connector | BNC |

FEATURES

- Foil keyboard with LED's for selecting the pulse width
- Impulse couplers available in size 42 and 64 mm
- Very easy to handle and operate
- 24 hours of operation with one battery charge
- Evaluation identical to the PD pre-location

SCOPE OF DELIVERY

- Teleflex SX Set
- Impulse transmitter PD-TX in the rugged case
- Coupler 42 mm
- BNC cable 75 cm + BNC Adapter
- Teast lead, 2 m
- Manual

Teleflex SX

| | |
|---|--|
| Range | 20 m ... 1280 km @ v/2 = 80 m/ μ s |
| Pulse width | 20 ns ... 10 μ s |
| Pulse amplitude | 10 ... 50 V |
| Accuracy of the distance measurement | \pm 0,2 % of the measuring range |
| Resolution | 0.1 m @ v/2 80 m/ μ s, 1.0 cm @ v/2 < 40 m/ μ s |
| Sample rate | Up to 400 MHz |
| Gain | - 37 ... + 37 db |
| De-attenuation | 0 ... + 22 dB for ProRange (adjustable 0 ... 100 %) |
| Propagation velocity v/2 | 10 ... 149,9 m/ μ s, ft/ μ s or nvp |
| Dynamic range | > 80 dB |
| Output impedance | 50 Ω |
| Compensation | 10 Ω ... 500 Ω , adjustable |
| ARM trigger | Automatic adaptation by Δ U Trigger or LTH edge trigger |
| ARMslide | 15 measurements in one ARM shot |
| Dead zone | None |
| Voltage proof input | < 400 V, operation only with separation filter |
| Display | 10.4" color TFT XGA 1024x768, touchscreen, 600 cd/m ² , LED-Backlight, dimmable |
| Data storage | 4 GB mSATA for program and data |
| Connectors | Ethernet, USB, BNC, CAN (LON optional) |
| Protection class | IP 65 closed, IP 54 open lid |
| Supply | 110 ... 240 V, 50/60 Hz, 30 VA 10 V ... 17 V DC, 3.8 A |
| Dimensions (W x H x D) | 362 x 195 x 306 mm (option 19", 6 HU) |
| Weight | 10 kg |
| Operation temperature | - 10 °C ... + 50 °C |
| Storage temperature | - 20 °C ... + 60 °C |

ORDER INFORMATION

| Product | Order no. |
|------------------------------|-----------|
| PD LOC incl. Teleflex SX | 820011099 |
| PD LOC excl. Teleflex SX | 1007776 |
| Options: | |
| Coupler 64 mm | 820010407 |
| Vehicle charging cable LK 22 | 90012589 |

* We reserve the right to make technical changes.

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CERTIFICATION ISO

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