PD LOC

Partial Discharge pinpointing system for precise location of PD faults in medium voltage cables

Benefits

- **Precise PD pinpointing in mixed cable networks**
- **Location of faults in joints of single core cables**
- **Easy handling in the field**

Function description

The PD LOC system solves the problem of pinpointing for mixed cables (XLPE / PILC) and for PD in joints of single core cables. The exact location of the joints in the field is generally not known, and these joints cannot be located using audio frequency methods.

The system consists of the PD TX impulse and the receiving and evaluating unit TDR T 30-E PD. The receiving and evaluating unit T 30-E PD consists of an input amplifier for processing the signal and a control unit in the rugged case. The visualisation, which shows the distance of the transmitting unit of the system, happens by the Reflectometer T 30-E, in a menue point, which contains the additional PD LOC software.

The pulse transmitter provides the operating status display, pulse generation, error and overload monitoring, and monitoring of the battery and charger.

The impulse transmitter continuously transmits a sufficiently strong impulse signal into the exposed cable via an inductive coupler.

A mounted coupler, in conjunction with a PD-TX from the PD-LOC-system, enables pulses to be coupled inductively onto exposed cables of a suitable diameter. The coupler can be fastened to the cable with the soft tie supplied. There is an M8 thread nut so that an extension rod can be used. This allows the coupler to be conveniently placed on the cable outside a shaft.

These impulses as well as their reflections from the far end of the cable are recorded and visualized by the T 30-E PD working in a particular operation mode.

The time difference between the incoming reflections 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 OWTS measurement. In many cases, this approach facilitates highly precise positioning of the fault location and, thus, helps to avoid unnecessary and cost-intensive excavation when replacing or fixing a cable.

For cables with very dense copper wire shielding, and when using the system with cables with metal sheath (lead sheath / aluminium sheath), the functionality may be limited or even not possible depending on the quality of the shielding of the cable.

Users that have a normal Teleflex T 30-E can also upgrade it to the PD version. The other normal reflectometer functions are not affected by this upgrade.

Technical data	
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 widths	50 ns, 200 ns, 500 ns, 1 µs
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
Teleflex T 30-E PD	
Additional mode	Transient recorder optimised for PD
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 42 and 64 mm
- Very easy to handle and operate
- 24 hours of operation with one battery charge
- Evaluation identical to the OWTS pre-location
- Cable identification ability

Scope of delivery

Standard set

- Teleflex T 30-E PD
- Cable set VL T 30-E
- Charger LG 12
- Impulse transmitter PD-TX in the rugged case
- Coupler 42 mm
- BNC cable 75 cm
- Adapter BNC on a pole clamp
- Measuring line, 2 m

Optional accessories

- Coupler 64 mm
- LK 12, 12 V vehicle charging cable
- Mounted coupler 36 mm
- Mounted coupler 61 mm
- Upgrade Set T 30-E

SebaKMT · Dr.-Herbert-Iann-Str. 6 · 96148 Baunach/Germany · Tel. +49(0) 95 44 - 6 80
Fax +49(0) 95 44 - 22 73 · sales@sebakmt.com · **www.sebakmt.com**

ISO 9001:2008

dat_pd-loc_en_120914