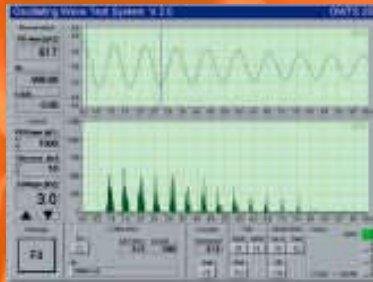
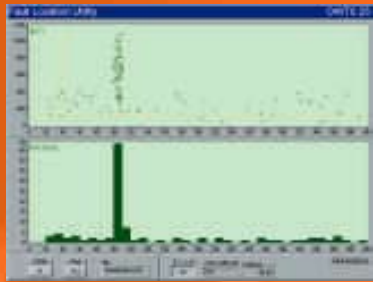


# OWTS - PD Fault Location

Compact PD  
Cable Test Van System



**sebaKMT**



## Compact PD

### Description

The oscillating wave test system OWTS is used to identify, evaluate and locate partial discharge (PD) faults in a cable insulation and in joints and terminations. The system can be used for all types of medium voltage cables. Detailed information of the operational reliability of a cable system can be determined.

The test system can be installed either in a cable test van in combination with a modern, centrally controlled cable test and fault location system (e. g. Compact PD in a 3.5 t vehicle), or can be used as a stand-alone unit.

The cable under test is charged up in a few seconds to a pre selected peak value with a DC voltage. By closing the electronic switch the short circuit of the cable capacitance with the resonant coil leads to a sinusoidal oscillating wave test voltage. Depending on the capacitance of the test object, the oscillating frequency is fixed in a range of 50 Hz up to several 100 Hz.

The voltage level and the test frequency for the cable segment are close to the nominal service conditions, thus all measured PD activities can be effectively evaluated. The oscillating voltage is only in contact with the test object for a few 100 ms and therefore nearly all long-term influences can be neglected. Analysing the decrease of the test voltage, the PD extinction voltage can be determined easily. As a result, critical PD levels responsible for the future status of the cable insulation, can be evaluated.

The OWTS unit is controlled by an industrial PC with an integrated data and signal storage ability. The system automatically evaluates the measured PD data and gives the user detailed information of the cable under test.

### Salient Features

- PD diagnosis under oscillating wave test voltage - electrical field distribution as in nominal service conditions
- PD evaluation possibility and pattern recognition at the nominal voltage level
- Modern industrial PC for system control and user interface
- PD level measurement according to IEC 270 at a band width of 150...650 kHz
- Semi- and fully automatic PD analysing software for defect location with mapping feature
- Calculation of the cable capacitance and the tan delta value of the test object from the characteristic decrease of the voltage wave shape
- Simple to use and easy to handle menu-driven unit for operation of the test sequence
- Compact design; low weight
- Compact PD: combination of OWTS, vlf test unit and the fault location system Compact
- Integrated VLF test system



### Technical Data

Max. output voltage	36 kV DC/25 kVrms
Oscillating current	80 A max
Coil inductivity	0.75 H
Frequency range	50 Hz ... 1 kHz
Capacitance range	0.1µF ... 2µF
DC charging current	12 mA
PD test range	1 pC ... 100 nC
PD bandwidth	150 kHz ... 650 kHz
PD location	150 kHz ... 3 MHz
Dissipation factor	0.001 ... 0.1
Power supply	115/230 V, 50/60 Hz

### Weight and Dimensions

Resonant coil with IGBT switch and PD-testing impedance	65 kg; Ø 500 mm; H 880 mm
Industrial-PC with integrated PCB's; DC-HV Unit	32 kg; 19 inch insert 400 mm x 534 mm x 580 mm h x w x d

### Order Description

Partial discharge- testing- and locating system OWTS

### Scope of Delivery

OWTS hardware (choke; control unit)  
OWTS software incl. TDR - software  
incl. cable set

### Optional Accessory

PD free HV connection cable to be installed in test vehicles

ISO 9001:2000

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Product Range: Instruments and Systems for Fault Location in Power and Telecommunication Networks and for Leak Detection in Water Distribution Systems • Cable and Pipe Locators • Seminars • Service • Contracting  
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Technical data subject to change without notice.

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