

# MEASURING IMPEDANCE

## LDM-5



The PD measuring impedance LDM-5 belongs to the PD measuring systems of LDIC based on either the PD detectors LDD-5 / LDD-6 / LDS-6 or the Differential LEMKE PROBE LDP-5. It is applicable for standardized PD measurements according to IEC 60270.

Using the usual PD test circuit first the LDM-5 has to be connected to the ground using the connector "Ground". In general it is recommended to use a copper foil, connecting the LDM-5 on one hand to the test area ground and on the other hand to the LDD-5 / LDD-6 / LDS-6, for which the special connector at one side of the LDM-5 is intended. In this way the influence of external noises may be reduced essentially. The input "Test Object" can be connected either to the grounding lead of the test object or to the coupling capacitor, as recommended in IEC 60270. The output "PD Pulses" has to be connected via a 50  $\Omega$  measuring cable to the input of the PD detectors LDD-5 / LDD-6 / LDS-6.

The LDM-5 is designed for PD-signal transmission covering a bandwidth above 30 MHz at 50  $\Omega$  matching resistance. So, for instance, a combination of a PD detection with a PD fault location is possible which seems especially advantageously for power cable testing.

On request by the customer an additional option is available, which allows not only the detection of PD pulses but even the decoupling of the HV test voltage signal, derived from the coupling capacitor (type LDM-5/U).

**Important Note:** The measuring impedance LDM-5 and LDM-5/U include a fast over-voltage protection for limitation of transient over-voltages due to not expected breakdowns of the test object. The protection capability is specified for a total capacity of the measuring circuit  $\leq 1$  nF and a test voltage below 100 kV. Different specifications for higher voltages and measuring circuit capacities are possible on request and shall be matched to the special application of the customer.

### Specification

Pulse impedance	50 $\Omega$
Pulse rise time	< 15 ns
Upper frequency limit	> 30 MHz
Maximum power frequency current (except option for voltage measurement)	5 A