

## DOBLE IN-SERVICE TESTING & ASSESSMENT

# LCM500

Leakage Current Monitor

## FOR THE ASSESSMENT OF IN-SERVICE SURGE ARRESTERS

A surge arrester may be inexpensive, but it has an important role in protecting your transformers. The Doble LCM500 can measure condition while the arrester is still in service, measuring the quality of the metal oxide blocks and helping manage the risk of failure. With the LCM500, it takes less than 15 minutes to establish that your surge arresters are healthy and the transformer is still protected.



### FEATURES

- Portable, battery-operated instrument for regular condition assessment of surge arresters
- Unique identification of each surge arrester makes data management easy
- Instrument can store 1000 surge arrester IDs and measurements performed in the field
- Defines individual surge arrester types including operational parameters
- Software includes possibility to perform evaluation of groups of surge arresters e.g. same type of arresters or alternatively for a region.

### BENEFITS

- Safe and effective assessment of metal oxide surge arresters
- Inspection of a surge arrester takes less than 15 minutes on location and can be performed with the arrester in service
- Can be used for short-term monitoring of one arrester to investigate details in leakage current changes versus time

## LCM500 TECHNICAL SPECIFICATIONS

MECHANICAL	
Dimensions (WxHxD)	47 x 35.7 x 17.6 cm 18.50 x 14.06 x 6.93 in
Weight	7.5 kg / 16.5 lbs
ENVIRONMENTAL	
IP classification	IP67 (closed case) IP40 (open lid)
Operating temperature	-10°C to +50°C / 14°F to 122°F
Storage temperature	-20°C to +70°C / -4°F to 158°F
POWER SUPPLY	
	12 - 18 VDC or 115 - 230 VAC 50 - 60 Hz
Battery	9.6V 2600 mAh
Capacity	8 hours
Charging time	1.5 hours
MEASURING RANGE	
Total arrester leakage current	200 - 16000 µA
Resistive current	0 - 9000 µA
Frequency range	47 - 63 Hz (system voltage 50Hz or 60Hz)
Field probe	0-5Vac
Accuracy	±5 % or ±5 uA
WIRELESS SENSORS	
Battery powered wireless current probe and field antenna	Rechargeable (charges in instrument lid) 9V 500mAh Digital radio communication at 434.075-434.525 MHz* Probes can be set at 16 distinct channels Probes are in addition separated by their serial numbers

\* May vary between countries



## LCM TECHNIQUE

Well-proven and acknowledged monitoring technique using third-order harmonic analysis with compensation. Rated according IEC 60099-5 as the best field monitoring technique for Metal Oxide Surge Arresters (MOSA). LCM500 measurements are automatically normalized to standard ambient temperature (+20°C) and 0.7x rated arrester voltage based on recorded temperature and operating voltage during field measurement. Measurements performed under different conditions can thereby easily be compared.

## PERFORMING FIELD MEASUREMENTS

LCM500 is designed for trending the condition of metal oxide surge arresters. Arrester ID is downloaded from PC software to LCM500 instrument prior to performing inspection of surge arresters. LCM500 can store 1000 arrester IDs. On location choose correct arrester ID and perform measurement. After completion of field measurements stored data are transferred from LCM500 instrument to PC software. You are now ready to perform analysis and plan your next inspection.

## APPLICATION

Doble leakage current monitors can be used to trend the condition of all types of metal oxide surge arresters on an insulated base with one separate grounding system conductor.

## ORDERING INFORMATION

PART #	PRODUCT
TN-25000	LCM500 with case, Clip-on CT, Field Probe, Rod Adapter, power cable and test cables <i>Field Probe rod is not included.</i>
ACCESSORIES	
TN-25156	Field Probe Rod (delivered in separate transport case) <i>Field Probe Rod made of insulating materials.</i>



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