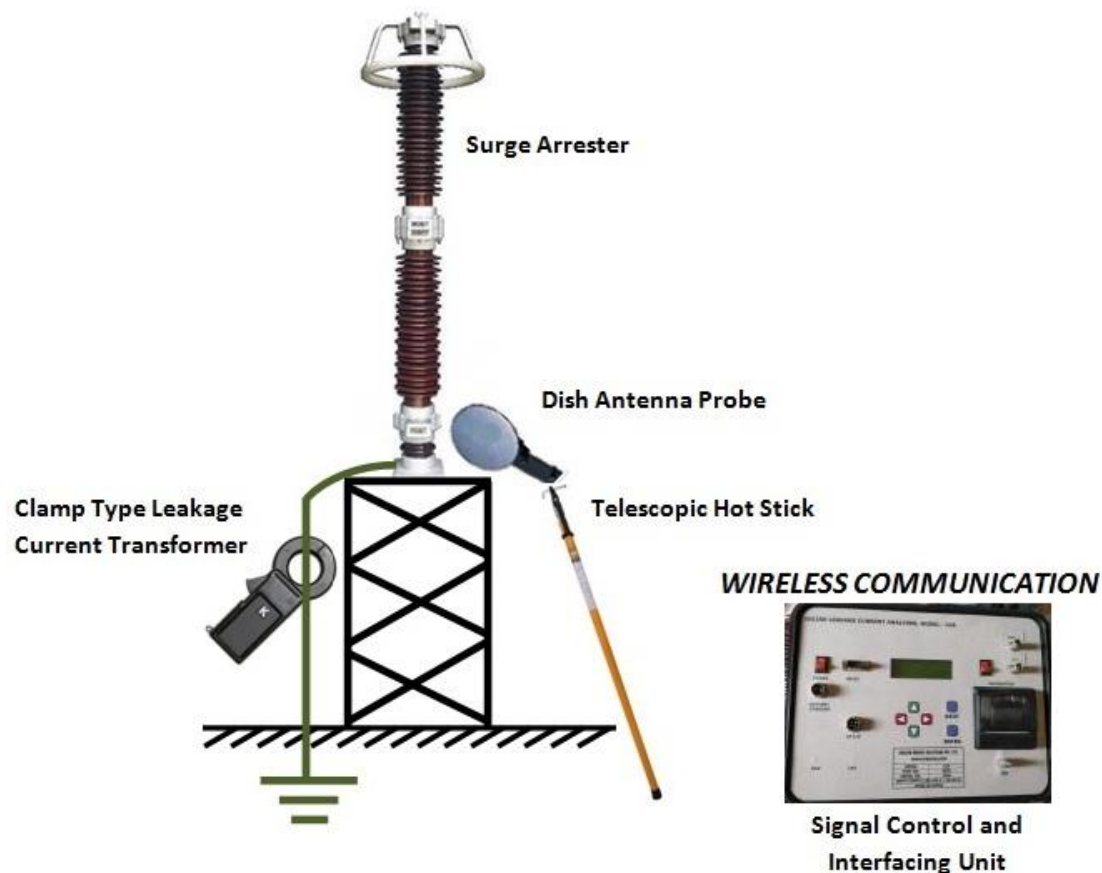


Wireless Leakage Current Analyzer for Online Condition Analysis of Metal Oxide Surge Arrestor

Make - Beacon; Model – LCA



Beacon make **Wireless Leakage Current Analyzer** is a state of the art Portable On-line test system for Condition Monitoring, Residual Life Assessment and Health Check of Metal Oxide Surge / Lightning Arrestors without any interruption of service operation. The system provides immediate assessment of condition of Surge Arrestors through direct display of the 3rd harmonic resistive leakage current and total leakage current in micro-ampere.

Wireless Leakage Current Analyzer has been built for operation, analysis and data measurement in live switchyard conditions. Test results can be viewed directly on the instrument, printout of the results can be taken through inbuilt available printer and further detailed report generation of measured data can be performed by connecting the instrument to laptop or desktop along with the software provided. The system comes as a complete functional unit in a lightweight and rugged carrying case for easy and safe transportation.

Principle of Operation

Wireless Leakage Current Analyzer is based upon well-proven and acknowledged monitoring technique using third-order harmonic analysis with compensation for harmonics in system voltage. The stated technique is rated in accordance with method **B2 of IEC 60099-5** and is the best field monitoring technique for Metal Oxide Surge Arresters. It performs very fast measurement through specially designed and easily mountable, low-noise Wireless Clamp-on CT and Wireless Field Probe.

Applications

The Leakage Current Monitoring of Surge Arrestors has been used since decades to determine short term as well as long term measurements on arresters upto 765kV networks, and is today delivered to power companies and utilities across the globe.

LCA Measurements

The following parameters with Continuous Online Representation are accurately displayed with LCA in charged switchyard conditions:

- ☐ Total Leakage Current
- ☐ Third Harmonic Resistive Leakage Current
- ☐ Field Probe Current
- ☐ Corrected value of Resistive Leakage Current normalized to standard ambient temperature (+20°C) and 70 % of rated arrester voltage based on recorded temperature and operating voltage during field measurement.

This corrected value enables the Measurements performed under different conditions can thereby easily be compared.

Technical Specifications

Total Leakage Current	0 to 20 mA
Third Harmonic Resistive Leakage Current	0 to 20 mA
Field Probe Current	0 to 2 mA / 0 to 10 V AC
Resolution	0.1 μ A (for all above currents)
Accuracy	\pm 1% of reading
IP Classification	IP 67 (Closed Case) IP 40 (Open Lid)

Operating Parameters

Display	Big LCD Screen (4 lines x 20 Characters)
Operating Temperature	-10 °C to +60 °C
Storage Temperature	-20 °C to +70 °C
Humidity	95% RH (Non condensing)
Memory	1000 Results
Communication	USB PC connectivity for data transfer
Printer	In-built thermal paper printer
Mains voltage	110 to 240 VAC, 50/60 Hz (\pm 10%)
Battery	Rechargeable Battery
Capacity for single charge	12 hours approx
Telescopic Hot Stick	Open Length 2.5 m / 4 m / 8 m
Weight	6 kg approx

LCA Features and Benefits

The new LCA System features the following benefits for handling all surge arrester-monitoring needs:

Continuous Monitoring: LCA can be used for continuous monitoring of one or more arresters to investigate details in leakage current changes versus time. LCA can also be provided with solution to include on-line configuration using modem communication between LCA instrument and PC software.

Data Management: LCA is supplied complete with LCA Data Management Software for handling all your surge arrester readings. It defines individual surge arrester types including operational parameters. The Software is easy to operate and supports graphical data representation with capability to perform evaluation on groups of surge arresters such as same type of arresters or alternatively for a region.

Portable: LCA is one of its class battery operated instrument for inspection of surge arresters for condition assessment on a regular basis, thus providing much desired portability for maintenance engineers

Cost effective: Inspection of a surge arrester takes less than 2 minutes on location and can be performed with the arrester in live operation without any disturbance of power distribution or need for any shutdown.

Enclosures LCA

Standard Accessories as a part of the kit includes:

- ☐ Signal Control & Interfacing Unit
- ☐ Data Management Software
- ☐ Wireless Clamp Type Leakage Current Transformer (CT)
- ☐ Wireless Dish Antenna Probe
- ☐ Telescopic Hot Stick (Open Length 2.5 m / 4 m / 8 m)
- ☐ Computer Interface (USB) cable
- ☐ Test and Calibration Certificate
- ☐ User Manual
- ☐ Portable carrying case for all the above