

Manufactured by:



# Liona

## Online PD Spot Testing



Liona is an online PD Spot Testing and PD location unit for cables and switchgear with advanced signal processing for detection of partial discharges in high noise environments.

Liona allows users to investigate and locate Partial Discharge sources on live electrical equipment helping to prevent potential faults in middle voltage and high voltage assets. Using the advanced DeCIFer® algorithm by IPEC Ltd to operate in high noise environments, the unit is ideal for reliable and effective PD detection.

The big advantage of preliminary evaluation of the cable condition using the PD online measurement is that one can plan better other diagnostic measurements (e.g. VLF offline diagnostics).

Liona is simple to use for routine operation whilst incorporating more advanced features for the experienced engineer to fully analyse and get a clear picture of discharge activity. The built in reporting system collates the necessary data and information for subsequent detailed analysis where required.

### APPLICATIONS

- PD online Spot-Testing: Typical 5 to 10 minutes per cable: Allows a large number of MV and HV plant items to be tested for PD activities
- Online PD Spot Location: Allows to identify the source of the PD along the cable with the iPD device during normal operation of the cable line
- Monitoring of PD activities during IEC 24-hour commissioning test of MV and HV cables at normal operation voltage
- Periodically monitoring of critical cable lines (e.g. industrial plants) with fixed installed sensors where no direct access during normal operation is possible

### FEATURES

- Non intrusive measurement of PD in MV and HV cables without supply interruption
- Identifying & locating potential problems before faults occur
- Sensitive PD detection in high noise environments due the proven DeCIFer® algorithm
- 4 simultaneous measurement channels
- Accurate cable PD mapping for defect location
- Automatic PD detection and analysis
- Integrated cable length measurement
- Easy reporting
- Integrated battery or mains operation
- Lightweight equipment

## TECHNICAL DATA

Input channels	
Number of channels	4
Sensor types	CC for TEV HFCT for Cable PD (calibrated)
Spike protection	500 V
PD Spot Testing & Cable PD Location	
Cable PD range	5 pC ... 1,000 nC
Test type	PRPD – PD pattern Wave shape analysis
Sampling frequency	100 MS/s
Resolution	14 bit
Noise separation algorithm and PD classification	DeClFer®
Analogue input voltage range	±1.0 V (resolution ±61 µV)
Software modes	PD Test mode (routine and repetitive testing) Scope mode (in-depth investigation)
Triggerring sources	Mains (internal) External (TTL) Auto pulse (Internal) Mains field detector (FM Wireless)
Reporting	On screen, PDF
Communication interfaces	USB 2.0, Ethernet

General	
Input voltage	90 ... 264 V, 47 ... 63 Hz
Internal Battery	Lithium Ion
Battery life	Min. 3 hours
Ambient temperature (operation)	-10 ... 45°C
Storage temperature	-20 ... 60°C
Humidity	0 – 90% RH non-condensing
Dimensions (W x H x D)	ca. 550 x 350 x 225 mm
Weight	13.5 kg
Degree of protection	IP 67 when closed Not rated when open
Languages	English, French, German, Portuguese, Spanish, Russian

CE Compliance	
EMC guideline	98/336/EEC
CE	93/68/EEC

iPD Far end Transponder (optional) For PD location and cable length measurement	
Pulse voltage	500 V
Trigger types	PD, Level, Auto
Battery life	Approx. 12 hours
Dimensions (W x H x D)	190 x 260 x 160 mm
Weight	4 kg

## STANDARD DELIVERY INCLUDES

- On-line PD diagnostic device
- Field detection unit for synchronisation during battery operation
- 4 x HFCT Sensor (High Frequency Current Transformer)
- 2 x TEV Sensor (Capacitive Coupled)
- 4 x 2m RG58 coax cable with BNC terminations
- 4 x 5m RG58 coax cable with BNC terminations
- 4 x in-line BNC connectors
- Power cable
- User manual

## OPTION

- iPD Far end Transponder

## EXAMPLE OT TEST PROTOCOL

### Online PD Test Result



▶ SCAN ME



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