

SCOPE

SA 10i Leakage Current Meter For Surge Arresters



Design your maintenance strategy to achieve optimum
Surge Arrestor (LA) performance with...
...SA 10i

The Product

SA 10i: Leakage Current Meter For Surge Arresters

SA 10i the Leakage Current Meter from SCOPE T&M is a State of the Art, hand held, on-line test system for Residual Life Assessment of Surge Arresters. The instrument measures and directly displays the values of peak (I_{peak}) and RMS (I_{rms}) of total leakage current and calculates & displays resistive element of the total leakage current in surge arrestors connected in either 50Hz or 60Hz AC systems. The SA 10i can be pre-loaded with the LA identity (LA Identification, Type, Serial Number, Location, Rated Voltage etc.) and tests conducted on the same ID of the Arresters are saved under its own created library. Trend analysis software; SAData picks up this data and files it in a similar fashion on a PC. This analysis software enables the user to take a decision to repair/replace the arresters considering safety limits.

SA 10i is designed and manufactured by SCOPE T&M Pvt. Ltd., India, for reliable operation in high-noise live HV switchyard environments.

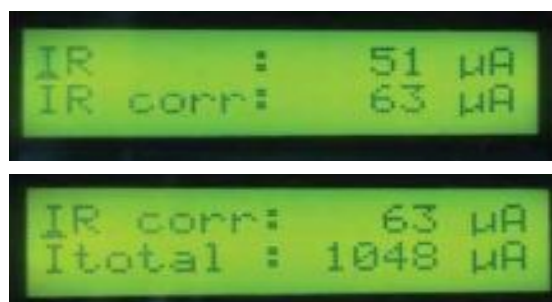


The Measurement

SA10i measures resistive leakage current as per IEC standard 60099 – 5 – B1. According to IEC 60099 – 5– B1, harmonics are generated in the leakage current in LA because of the non-linear voltage current characteristics of the arresters. According to the standard, 3rd harmonic content depends on the magnitude of the resistive current flowing through LA.

SA10i reads the leakage current flowing through the earth conductor of arrester and calculates third order harmonics current from it. This current is shown as resistive current.

A specially designed clamp on CT is used to read total leakage current flowing through the earth conductor of LA. The Peak and RMS values of total leakage current is shown on the display. The device has an in-built temperature sensor to measure ambient temperature and displays it. Also as system voltage and ambient temperature keeps on varying; SA 10i applies correction factors for system voltage correction and also temperature correction to get corrected resistive leakage current.



Special Features

- This hand held SA10i is CE Certified, simple, lightweight, portable, feature-rich and affordable.
- Measures 3rd harmonic resistive current, and the peak and RMS of total leakage current of surge arrestors connected in either 50Hz or 60Hz AC systems.
- In built temperature measurement facility enables calculation of temperature compensated leakage currents
- Correction of results to rated voltage of LA to eliminate effect of change in system voltage.
- Up to 1000 test records with date and time stamp on test results are stored in the in-built memory
- The SA 10i is powered by easily available re-chargeable Lithium-ion batteries. It works for a day's testing needs on a single charge. It also displays the battery status, like % of charge and low battery indication
- The SA 10i is a switchyard compatible instrument. This makes the instrument extremely convenient to use.
- USB communication port to transfer data to PC and Windows based PC Downloading & Analysis Software.
- Data Management, Analysis and Trending through SData software

SData : PC Downloading & Analysis software



SData is windows based software that enables creating folders of LA Identity details on PC and uploading the same to instrument as well as downloading of test results from instrument to PC. This ensures that library of various LA ID's is generated in software. Once you create & upload the LA ID to instrument, all result taken on that LA will be stored under same ID folder even when they are downloaded to PC. It ensures structured storage of results of even huge nos. of LAs. Instrument can be connected to PC in plug-n-play mode through USB port saving time.

Trend Analysis for trending of historical data of a specific LA over specified period can be done to predict the healthiness of a LA. The report generation for the tests taken is also possible. This report can be exported to various formats like PDF, Excel, Word, HTML, etc. and also can be printed. You can add operator name and any additional notes if you want to add.

Benefits

- Online measurement enables effective measurement of leakage current
- Simple tool to assess the residual life of Lightning arrester
- Get early warning of LA failure and cascading effects
- Battery operation enables measurement in absence of AC supply
- Suits equally to utilities, OEM's, Test labs as well as testing and commissioning companies

Specifications

Parameters	SA 10i
Total Leakage Current Range (Peak and RMS)	100 μ A to 10mA
3rd Harmonic Resistive leakage current Range (Peak and RMS)	1 μ A to 10mA
Resolution	1 μ A
Accuracy	Value $\pm$ 5%
Inputs	External Clamp-on CT
Display	2 line x 16 character backlit LCD
Compensation	Automatic for Noise & Temperature
Temperature sensor	Inbuilt silicon thermometer
Temperature range	0 to 99°C
PC Connectivity	Yes
Memory	for storage of 1000 results
Power supply	7.4V / 1150mAh, Internal rechargeable battery
Battery charging	100-270V AC, 50 / 60Hz $\pm$ 10%, 1 Phase
Dimension	190 x 129 x 50mm
Instrument Weight	1.5 kg

Accessories

Standard		
	Description	Quantity
	Low noise, Clamp-on CT with inner diameter and jaw opening of 40mm	1 Set
	Test Lead Set carrying Charger, CT cable - 2m, and Master Earthing cable - 2m	1 Set
	SADData - Data management and analysis Software	1 No.
	Instruction Manual	1 No.
	Elegant Carrying Case	1 No.
Optional		
	Large size low noise clamp on CT with inner diameter and jaw opening of 80mm	1 No.



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