



TECHNOLOGY PRODUCTS
The Total Package



Electrical, Testing, Measuring
& Electrical Safety Equipment

Overview

Technology Products offers a wide range of Electrical Testing, Measuring and Electrical Safety Equipment for Power Plants, Transmission & Distribution Systems, R&D Institutions and Heavy Industries. Established in 1988, Technology Products has come a long way and has carved a niche for itself in Indian Power and Heavy Industries Sector. We offer an exhaustive range of equipment which comprises equipment manufactured by us and from renowned manufacturers being represented by us. Technology Products also Sets up Electrical Laboratories on turn key basis from concept to commissioning.

In order to maintain the quality standards and for our R&D activities a well-equipped laboratory is available at our works with High Voltage Test facilities, Precision Test and Calibration facilities and an advanced machining setup.

We have a team of highly experienced designers, engineers and technicians who have been trained at some of the leading organisations and research facilities in India as well as abroad.



THE FACTORY AT GURGAON



IN-HOUSE LABORATORY

(Electrical, Testing, Measuring &
Electrical Safety Equipment)

High Voltage AC Testing Kits

HV Testing Kits are used for testing of Motors, Generators, Switchgears, Cables, Transformers and other electrical equipment. These are used for testing & commissioning of HV electrical equipment. High Voltage AC Testing Kits are available in ratings from 25KV to 300KV AC in various mA and KVA Ratings.

Features

- The kits are available with Automated as well as Manual Control Panels and Control Desks.
- Automated Controls have microprocessor based controls with touch screen interface and various programmable parameters.



Typical Display Touchscreens

Resin Cast Dry Type Test Transformers available in ratings from 25KV to 150KV. The transformers are highly compact and suitable for field testing requirements.

Oil Filled Test Transformers available in ratings of 50, 70, 100, 150, 200 & 300KV. The transformers are highly compact and have option of tertiary metering winding. Suitable for Laboratory or field use. These are also available in PD Free designs.



High Voltage DC Testing Kits

HV Testing Kits are used for testing of Cables, Switchgears, Generators, Transformers and other electrical equipment. These are used for testing & commissioning of HV electrical equipment. High Voltage DC Testing Kits are available in ratings from 15KV to 300KV DC in various mA and KW Ratings.

Conventional HV DC Testing kit with Transformer – Rectifier Design are available in ratings from 15KV to 200KV and 10 to 200mA.

Ultra Light Compact HV DC Testing kit with SMPS Design are available in ratings of 60KV to 300KV with current ratings of 5mA.



Model TP-605D (60KV, 5mA)



Model TP-1205D (120KV, 5mA)

Primary Current Injection Testing Sets

Primary current injection kits are used to test and commission Circuit Breakers, Bus Bars, CTs, Relays, MCCs, PCCs etc. These are also used for high current injection and simultaneously measuring voltage drops and hot spots in bus-bar joints, Circuit Breaker Contacts etc.

Primary Current Injection Test Sets are available in current ratings from 500A to 10000A and in short time duty as well as continuous operation duty.

Controls are available in Automated as well as Manual versions. The automated controls also have features like CT ratio measurement etc.

Light weight portable kits of 1000A and 2000A with full load operation time of 3 minutes also available for field testing.



Secondary Current Injection Testing Sets

The Secondary Injection Test Sets are used to test static, attracted armature, induction type, thermal & directional relays & CTs etc. These are available in standard ratings from 30A to 200A. AC and DC Voltage outputs are also available as options. High resolution timer of 0.1mS and NO/NC relay interface are also provided for testing relays etc.



Vacuum Circuit Breaker Bottle Test Sets

These compact testing kits are highly suitable to test integrity of VCB Bottles and Interrupters. The kits are microprocessor controlled which precisely analyses the Vacuum Bottles. These are available in standard ratings of 40KV and 60KV to test test Vacuum Bottles upto 11KV and 33KV respectively.



DC Earth Fault Locator Model GFL-T + GFL-R

The DC Earth Fault locator is suitable to test the DC Battery System and Trace Ground Faults. The system is suitable for Power Plants, Sub-Stations upto 765KV and other industries. The system is highly capable in tracing and pin pointing the DC earth faults in a live system without requiring any shut downs. The receiver sensitivity of 1mA and better is capable to trace most complex fault.

Custom built Special Testing Equipment and Test Benches also available on request.



Electrical Safety Equipment

Technology Products manufactures Insulated Sticks in accordance to IEC 855 (Foam Filled) and IEC 1235 (Hollow) to be used with our various Safety Equipment and Live Line Working Equipment. The Insulated sticks conforms to dielectric strength of 100KV/feet. These are available in various configurations and diameters. The length of the sticks can be easily extended by connecting one after another using convenient snap fitting mechanism. All the safety equipment have been type tested as per various IEC/IS standards to ensure the reliability and safety in field.



Insulated Sticks

High Voltage Detector: Model TP-S9 Series

Live Line Indicator

These are used to check presence of voltage in HV installations before approaching them for safety reasons. Available in ranges from 240V to 33KV , and upto 765KV. These are available in both Contact and Field Proximity designs. The presence of voltage is indicated by loud audible buzzer and bright LEDs which are also visible in day time. The Detectors are Type Tested as per IEC 61243 / IS standard.

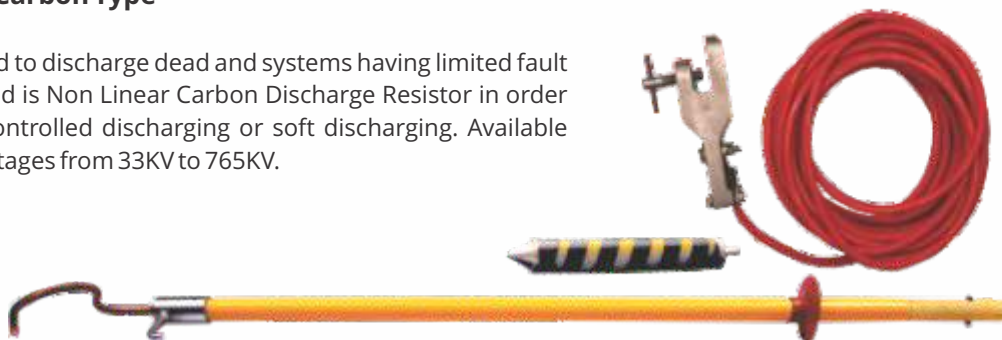
33KV Voltage Detectors are provided with insulated sticks of 1.25m length and extended ranges are available upto 765KV having length of 7.5m.



Discharge Rods: Model TP-DR Series

Non Linear Carbon Type

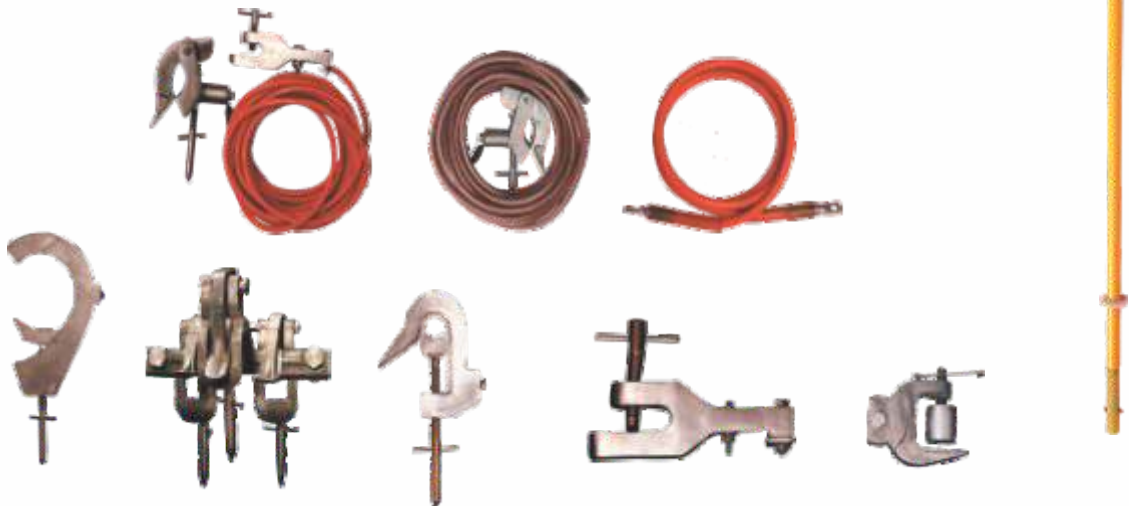
These are used to discharge dead and systems having limited fault levels. Included is Non Linear Carbon Discharge Resistor in order to facilitate controlled discharging or soft discharging. Available for system voltages from 33KV to 765KV.



Portable Earthing Equipment: Model TP-PEE Series

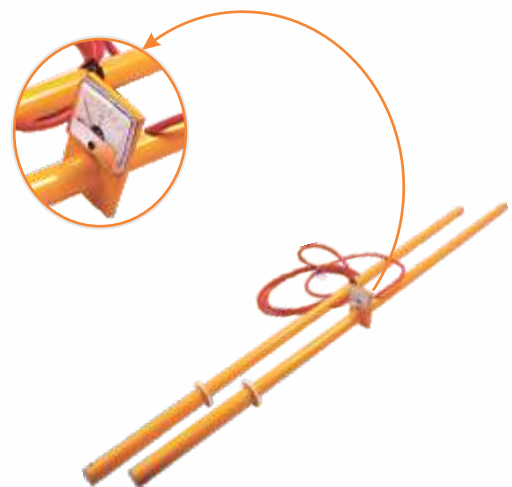
Portable Earthing Equipment are safety equipment designed for discharging & grounding of dead equipment. The system is designed for high fault levels from 7.5KA to 40KA per second so that even if during shut downs, when technicians are on the job, by mistake if the supply is switched ON, the Portable Earthing Equipment saves human life as well as equipment under maintenance. Special Line End & Earth End Clamps alongwith operating socket and earthing lead are used for this equipment. The Line End Clamps, Earth End Clamps & operating sockets are made of very special aluminium alloys which can withstand high short circuit currents. Portable Earthing Equipment is Type Tested as per IEC 1230. The earthing cables are tested for short circuit ratings as per IEC / IS standards.

Using Portable Earthing Equipment, clamps are applied from remote just by turning the insulated operating pole and the operator never comes in contact with any conductor, so it is highly safe system. Using the common operating pole, clamps are applied on each phase one by one.



Phasing Out Sticks

Phasing out sticks are used to phase out two sources of supply directly at high tension level while Direct Measuring KV Meter sticks are used for measuring high voltages without the use of PTs. These are Bipole Type Hand Held with KV Meter. Available in ranges of 15KV and 36KV.



Partial Discharge Pinpointing System AE-150

The AE-150 is designed to efficiently detect and locate faults in oil-filled power transformers. The use of NDB's own and unique denoising algorithms, compliments this superior instrument and demonstrates its undeniable ease of use, the best on the market for on-site and online Partial Discharge testing and pinpointing inside Power transformers.

The AE-150 also has options of Flexible and Rigid UHF Antennas, (for insertion through oil sampling vale of power transformers) and HFCTs.



Portable Partial Discharge Detector XDP-II

The XDP-II is a portable Partial Discharge Detector designed for test and maintenance purposes. Its unique design allows PD detection for a large amount of applications such as MV cable splices, corona effect and electric arcs, offline testing, switchgear testing, etc... The unit is designed to address field, manufacturing factories and Laboratory applications. The XDP-II can be used in accordance to IEC 60270. The XDP-II comes with various type of sensors for Cables, Switchgears, Transformers etc. TEV and Ultrasonic sensors are also available. XDP-II provides a universal platform to cater various PD testing requirements.



Partial Discharge Detector PD-LT

The PD-LT allows online partial discharge detection on cable accessories such as cable head, lightning arrestors, insulators, bushings, for safety and maintenance purposes. The partial discharge level is displayed on the remote display. The Instrument is mounted on an insulated hot stick and the user safely checks the equipment under test maintaining a safe distance.



Partial Discharge Scanner PDS

The PDS allows online partial discharge detection on underground cable accessories and equipment for safety and maintenance purposes. This compact and lightweight instrument is battery operated and can be used on cables in charged condition. The Partial Discharge intensity level is displayed on the instrument with the bargraph.



Transformer Ratio Testers ART-3D

The ART-3D series of Automatic Ratio Testers are precision instruments, designed to measure the turn ratios, phase displacements, excitation currents of single phase and three phase power, distribution and instrument transformers in conformity to the IEEE C57.12.90 & IEC 60076. Now featuring an enhanced test lead design, the ART-3D is the perfect instrument for real-life field usage. ART-3D series also has Anti Induction circuit which makes it suitable for system voltages upto 765KV.



Current Transformer Testers CTTx2 & CTTx5

The CTTx2 & CTTx5 are rugged and easy to use current transformer testers, that offer Automatic and Manual testing modes. These instruments are designed to deliver fast and reliable measurements. Various parameters of the CT like CT Saturation/Excitation, Knee Point (as per ANSI 10/50IEC 60044, IEEE 30, IEEE 45), Ratio, Polarity, Phase Angle and Burden are tested in a short time.



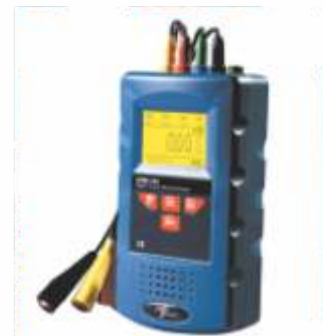
Winding Resistance Tester WRT-10 Series

The WRT-10 & WRT-10D are high performance winding resistance testers designed for large Power Transformers and large motor/generator applications.



Micro-ohmmeter LRM-10 / DRM-10

10 Amp Low Resistance Meter for electrical interconnections integrity testing. The LRM-10/DRM-10 very low resistances measurements from $0.01 \mu\Omega$ to 200Ω are targeted toward verifying the quality contact interfaces in harsh substation environments. The Micro Ohm Meters offers excellent accuracy and repeatability.





High End Breaker Analyser SA100

- 16 Analogue Inputs and 32 Digital Inputs
- Calculated Inputs for Velocity and Acceleration per Travel Input
- Measurement of upto 12 Parallel Contact (P.I.R.) Switching Resistors in a Single Test
- Can dynamically Test 2 Breaks per Phase with both Ends connected to Earth
- Inbuilt 6 Channel DCRM



Compact Breaker Analyser SA100S

- 1 x Independently controlled trip (open) and close Coil Current Inputs
- 6 x Contact status inputs providing timing of upto 3 main contacts and 3 resistive contacts (dry contacts)
- 2 x User configurable input for 'wet' or 'dry' contact timing (24 – 250 V DC or 0VDC)
- Built in printer



Micro Ohm Meter MM100

Output Current : 100 A & 1200 A
Measurement Range : 0 to 1.999 mΩ or 19.99 mΩ
Resolution : 1 or 10 μΩ



Micro Ohm Meter MM200

Output Current : 100 A & 200 A
Measurement Range : 0 to 199.9 μΩ or 0 to 1999 μΩ
Resolution : 0.1 or 1 μΩ

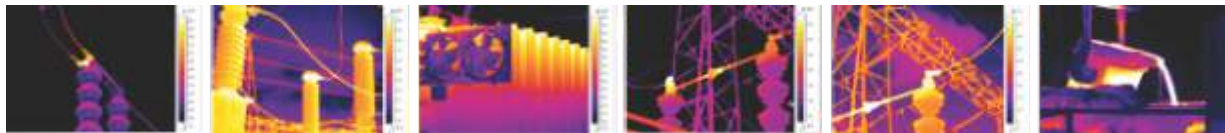


Micro Ohm Meter MM600

Output Current : 600 A (upto 750 A DC)
Measurement Range : 0 to 199.9 μΩ or 0 to 1999 μΩ
Resolution : 0.1 or 10 μΩ



INFRARED THERMAL IMAGING CAMERAS



Entry Level Infrared Camera PK160

- 5 Inch Capacitive Touch Screen
- Additional Integrated Features
- Android 4.0 Platform Open Source and Expandable
- Perfectly intergrates tablet and thermal camera technologies
- Powerful analysis functions
- 8 Mega Pixel HD CCD
- Multifunction USB connector
- Can access the internet through WI-FI connection



Mid Range Infrared Camera Hotfind LR & VR

HotFind series cameras are optimized for use in tough Industrial working environments.

- | | |
|---|---------------------------|
| • 3.5" Tilting LCD | • Various optional lenses |
| • High frame rate in real time | • Duo-vision technology |
| • Extendable temperature range
UPTO 2000°C | • Bluetooth |



Advanced Level Infrared Camera Hotfind-S

- High-speed processing, full-time dynamic image output
- Superior image-Comparable to High end cameras
- New platform upgrade, intelligent and integrated design
- Innovative Hardware with built in memory storage
- Additional Integrated Features Included
- Dual Control-Keypad and Touch Screen
- Anti-drop design
- Newly designed, easy to use, User Interface



High End Infrared Camera G-96

- High resolution 640X480 detector
- 5 inch detachable LCD with remote control
- Measurement Range -20°C to +600°C, up to +2000°C (Optional)
- Thermal video recording
- Motorised & Auto focus lens



CORONA CAMERAS

CoroCAM 6D

The CoroCAM 6D is a development of the CoroCAM Solar Blind UVc imaging System with an emphasis on cost reduction through innovative design.



CoroCAM7

The CoroCAM 7 is a professional grade Solar Blind UVc imaging system ideal for electrical inspections. CoroCAM 7 incorporates a high sensitive detector and a high performance visual camera that provides excellent results.



CoroCAM8

The CoroCAM 8 is a combined thermal IR, solar blind corona and video camera. It features a visible camera, a radiometric thermal IR camera and a solar blind UV camera.



Typical Failures which may happen due to corona or arcing :



Moisture ingress into Bushing



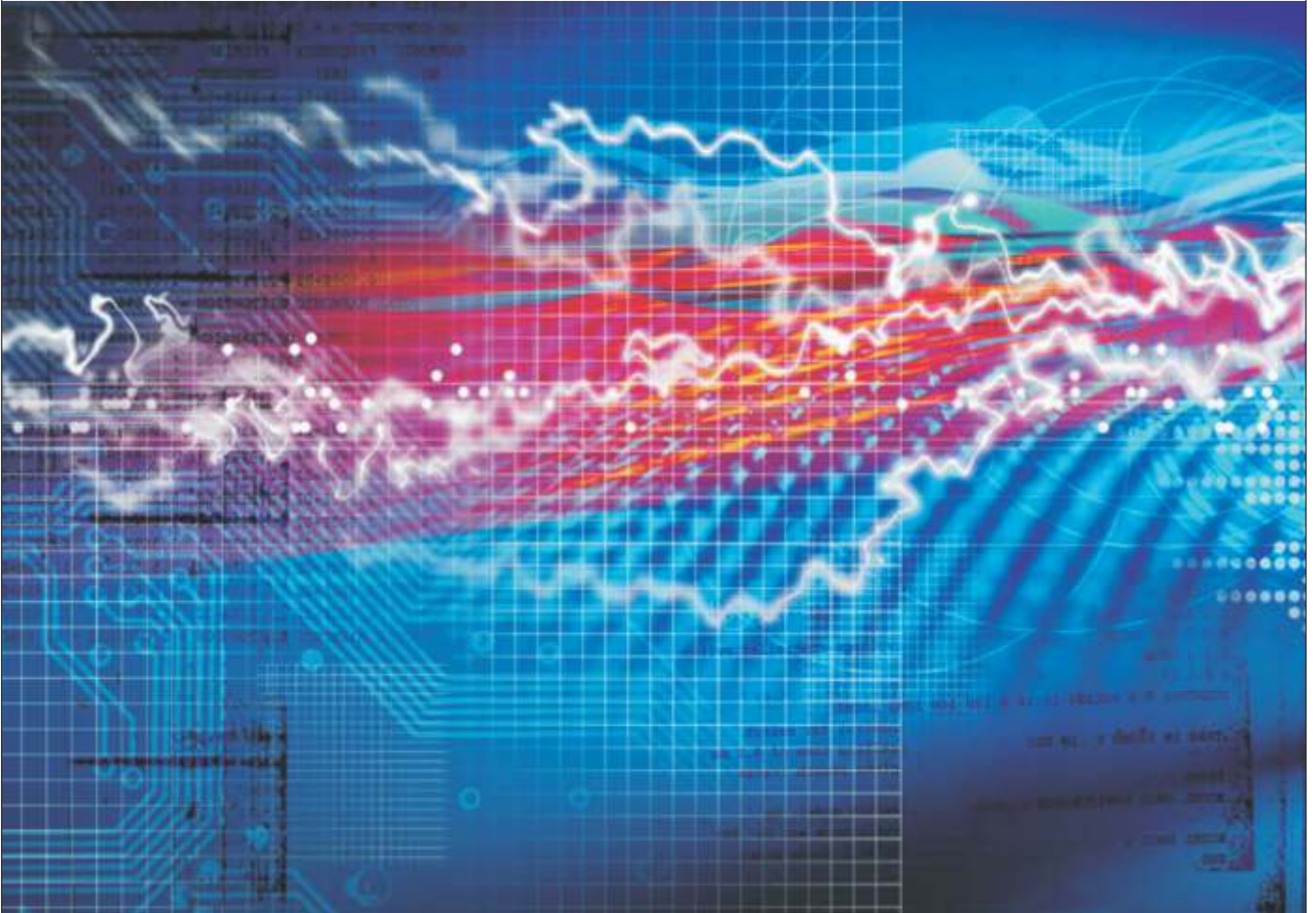
Pin Corrosion



Polymer Damage



Cracks in Polymer



TECHNOLOGY PRODUCTS

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