

# Electrical Test & Measurement Instruments





## Features

- ✓ Rated energy output of 750 Joules at each selectable range
- ✓ Pre-location of cable faults distance with integrated TDR, ICM & ARM Methods
- ✓ Automatic cursor at fault point
- ✓ Standard and advanced mode
- ✓ DC Hi-pot, Burn test & SFL up to 12 kV
- ✓ In-built cable route mapping software
- ✓ Cyclical pulse repetition for precise pin-pointing of cable faults
- ✓ 10" LCD touchscreen colour display
- ✓ Maximum measuring range of 100 km
- ✓ Safety interlocks with Emergency OFF for fully protected operation
- ✓ Automatic discharging facility of cable under test
- ✓ The system can operate through Inbuilt auxiliary battery power source.

# COMPAC 12

## Cable Fault Locating System

COMPAC 12 is a compact and rugged system designed for quick and accurate cable fault detection in power cables. Ideal for utilities, industrial plants, and service providers, it combines advanced diagnostic tools for fault pre-location and stabilization in one integrated unit. With up to 12kV voltage capability and 750J energy delivery, COMPAC 12 delivers precision and ease of use, supported by essential safety features like output cable interlock, emergency OFF, and automatic discharge.

### ■ Pre-location Modes:

- **TDR:** Sends a fast-rise pulse, reflects from impedance change, and auto-computes fault distance using set VOP
- **ICM:** Uses current coupler to capture and analyze transient waves generated by a breakdown or flashover at fault point
- **ARM:** Uses an arc reflection filter to lower fault resistance for accurate pre-location

■ **DC Hi-Pot Test:** Checks cable insulation integrity and locates faults using up to 12 kV test voltage and up to 20mA current, with overcurrent trip protection

■ **Sheath Fault Location:** Identifies the sheath fault in underground power cables by applying high voltage up to 12kV DC with a test current of 50mA

■ **Burn/Proof Test:** Uses 12kV DC voltage and up to 50mA current to stabilize unstable cable faults for faster pre-location

## Applications

The COMPAC 12 is ideal for testing, fault location, and diagnostics of underground power cables in diverse electrical networks. It is designed to support maintenance, commissioning, and service operations across a wide range of voltage levels.

### Typical Applications Include:

- **Power Utilities:** Locating and repairing underground cable faults in distribution and transmission networks
- **Industrial plants:** Diagnosing faults in internal power distribution systems
- **Metro rail, airports, and infrastructure projects:** Ensuring uninterrupted operation of underground power supply networks
- **Renewable energy installations:** identifying cable faults in solar farms and wind turbine connections
- **Electrical contractors and service providers:** Portable solution for on-site cable testing, route tracing, and insulation assessment.

## Technical Details

### COMPAC 12

#### Specifications

##### Impulse Mode

|                                             |                                                         |
|---------------------------------------------|---------------------------------------------------------|
| <b>Voltage range</b>                        | 0 - 6 kV / 0 - 12 kV selectable & continuously variable |
| <b>Energy</b>                               | 750 J (full energy at each range)                       |
| <b>Single Impulse</b>                       | Yes                                                     |
| <b>Selectable auto frequency per minute</b> | Programmable                                            |
| <b>ARC module</b>                           | Yes                                                     |
| <b>ARC Stabilization Time</b>               | 20ms approx                                             |
| <b>Indication</b>                           | ON/OFF lamp indication<br>Overheat indication           |

##### DC Test Mode

|                      |                                             |
|----------------------|---------------------------------------------|
| <b>Voltage range</b> | 0 - 12 kV continuously variable (two stage) |
| <b>Current</b>       | 5 / 10 / 20 mA                              |
| <b>Burn Current</b>  | 50 mA at 12 kV                              |

##### Sheath Test

|                |                                 |
|----------------|---------------------------------|
| <b>Voltage</b> | 0 - 12 kV continuously variable |
| <b>Current</b> | 50 mA                           |

##### Prelocator

|                                      |                                                |
|--------------------------------------|------------------------------------------------|
| <b>Maximum measuring range (KM )</b> | 25m - 100 km                                   |
| <b>Prelocation modes</b>             | TDR, ICM, ARM (MIM)                            |
| <b>Resolution</b>                    | 0.1m                                           |
| <b>Bandwidth</b>                     | 400MHz                                         |
| <b>Pulse Width</b>                   | 40ns - 20μs                                    |
| <b>Pulse Amplitude</b>               | 65V                                            |
| <b>VOP (V) m / μs</b>                | 100 - 300 m/μs                                 |
| <b>Display</b>                       | 1200 x 800 px - 10 inch, color touchscreen LCD |
| <b>No of records storage memory</b>  | > 100                                          |
| <b>Communication interface</b>       | USB                                            |
| <b>Control</b>                       | Touchscreen and mousepad                       |

## Technical Details

### COMPAC 12

#### General Parameters

|                                      |                                                                             |
|--------------------------------------|-----------------------------------------------------------------------------|
| <b>Input Power Supply</b>            | 230V AC $\pm$ 10%                                                           |
| <b>Power Frequency</b>               | 50Hz or 60Hz $\pm$ 5% Single Phase                                          |
| <b>Battery (Auxiliary Source)</b>    | Li-ion 25.2V, 8400mH                                                        |
| <b>Battery backup – Approx</b>       | 30 minutes                                                                  |
| <b>Battery type</b>                  | 25.9 V/10.4 Ah Lithium-ion (inbuilt charger, approx. 2-3 hrs recharge time) |
| <b>Earth Discharge</b>               | Soft automatic discharge through in-built solenoid                          |
| <b>Over Load Protection</b>          | Input Current Limiter switch, fast blow fuse in mains and controlled supply |
| <b>Dimensions (H X W X L) Approx</b> | 700mm x 425mm x 620 mm                                                      |
| <b>Weight (Approx)</b>               | 80 Kg                                                                       |
| <b>Protection class</b>              | IP 43                                                                       |

#### Environmental

|                              |                                      |
|------------------------------|--------------------------------------|
| <b>Operating Temperature</b> | -10°C to +55°C                       |
| <b>Storage Temperature</b>   | -5°C to +60°C                        |
| <b>Relative Humidity</b>     | 93% RH at 40°C max. (non-condensing) |

#### Safety

|                          |                                                                            |
|--------------------------|----------------------------------------------------------------------------|
| <b>Safety Protection</b> | Output HV cable interlock, Over Heat protection, Emergency OFF and Keylock |
|--------------------------|----------------------------------------------------------------------------|

#### Standard Accessories

- HV Output Cable with heavy duty clamp - 5 meter
- Mains supply Cable - 10 meter
- Earthing Cable with heavy duty clamp - 5 meter
- Operating manual

#### Essential Associated Equipment

- Cable Fault Pinpointer (to be procured separately)

#### Optional Accessories / Equipments

- Equipment Trolley
- Cable drum (as per requirement)
- Insulation Tester - 5kV/10kV
- Cable Route Tracer

#### Note :

- Standard Warranty : 12 months
- Cable of other lengths shall be available as per requirement
- Handles are not considered in mentioned size
- Pictures are for illustration purposes only
- Specifications can be changed without any notice.

## Contact Details

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