Vigilohm for IT / un-earthed networks Mobile Faut Locator Kit

Insulation faults due to earth leakage

In an IT electrical network, even if power supply transformer is insulated from earth, earth leakages may be observed. These faults are detected by the IMD (Insulation Monitoring Device) fitted, and must then be located and managed as quickly as possible.
Effective handling of these faults will ensure continuity of service and operator safety.

Locating insulation faults:

- Alarm generated by an IMD indicating an insulation fault
- Alarm generated by an IFL, if fitted, indicating the affected sub-feeder
- Fault location pinpointed in relation to load and cables.

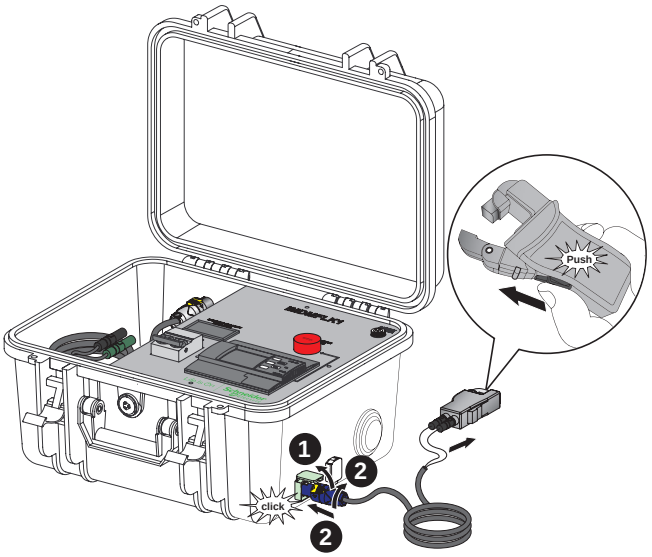
VigilOhm solutions, quick and efficient

MFLK1 fault mobile locating kit

Regardless of the size and complexity of your IT electrical network, the MFLK1 kit and its split toroids are able to efficiently locate the fault, whether it is on a load or on a cable.

The kit comprises a lightweight (7 kg), compact case with three dedicated clamps, and is equipped with a specific fault locator, a long-life battery and also visual and audio alarms. These features make checking the feeders quick and easy, as well as providing high adaptability.

In order to inject an appropriate upstream signal, the MFLK1 kit must be used on a network monitored by an IM400 or mobile IM400*.



The mobile IM400 IMD is available on **request under lease from your CCC, PAE or Schneider Electric reference contact*

Manual locating kit

IMFLK1

CP15 CP100 & CP50

Standards and certifications

Safety standards

- IEC61010-1:2010
- IEC61010-2-032:2012
- IEC61010-2-031:2008
- 600 VRMS, Category III, Pollution degree 2

Standards and certifications

- EN 61326:1998

AC/DC

Functions

- The manual locating kit is used when a continuous insulation fault is detected on the unarthed network by the IMD, and the IFL if present.
- It is able to locate the **continuous fault**, whether it is on the load or on the power supply cable.
- It can be used in addition to continuous IFLs, to home in on the fault source manually.
- It is easily mobile over the network, and ensures continuity of service on the installation while the fault is being located.

Main features

- Portable, with a life of up to 24 h
- Adaptable to the fault type via its calibration
- Independent from the network during measurements, the kit does not need to be physically connected to the electrical installation
- Calibration, and quick and accurate measurement:
  - -15 seconds per measurement, and 45 seconds for calibration
- Monitoring on each feeder, displaying the resistance and capacity by means of the voltage cable
- Visual and audio alarms fitted

Compatible auxiliaries

- The measurements are taken by means of three amp clamps supplied separately: CP15, CP50 and CP100 for cable diameters up to 12 mm, 44 mm and 66 mm.
- Requires network monitoring by an IM400 or XM300 to replace the fitted IMD. | Option of integrating a mobile IM400 in parallel with the fitted IMD |

Application

- Any IT segment (hospitals, industry, energy production, maritime, rail, airports, oil industry, mining, etc.).

Usage

An insulation fault is indicated by the IMD

1. If the network includes automatic IFLs, it displays the network feeder where the insulation fault is located
2. If no IFL monitors the sub-feeders, then install the kit under this feeder to calibrate it
3. Connect the amp clamp to input no.1 (see diagram) via its dedicated cable
4. Calibrate the IMFLK1 by connecting the clamp to the faulty feeder as per the IFL
   Calibration will take approximately 45 seconds
   Once calibrated, the battery will have a life of 24 h for taking the measurements
5. Take the measurements on each sub-feeder with the same clamp, ensuring that the clamp includes all the active cables, excluding the PE

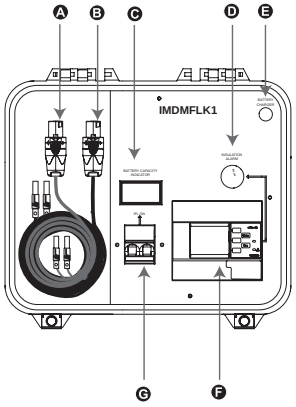
   Each measurement will take approximately 30 seconds

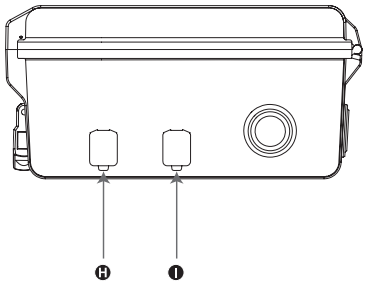
Please refer to the device manuals for more information.

Manual locating kit

IMFLK mobile locating kit

Physical description

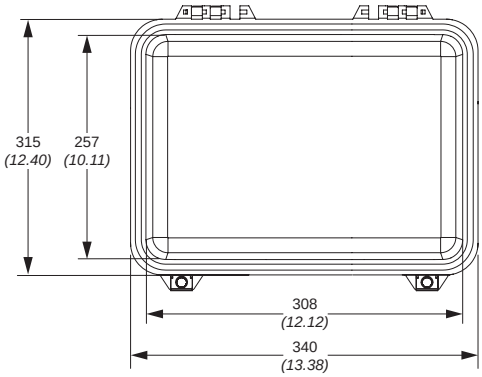


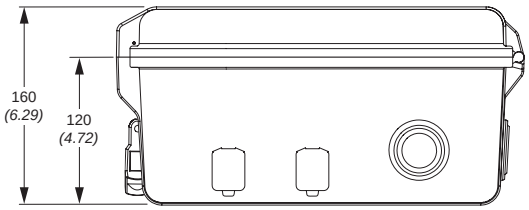


- **A** Connection cable to probes for CP15, CP50 or CP100
- **B** Connection cable to voltage input socket not connected here
- **C** Battery charge level
- **D** LED and buzzer
- **E** Power supply socket
- **F** Fault locator
- **G** On / off switch
- **H** CP15, CP50 and CP100 clamp connectors
- **I** Voltage input socket connector

The IMFLK1 mobile locating kit works in combination with the clamps below. Its compact design, leaktightness and 24-h battery enable it to be easily carried around long networks, and on various types of terrain.

IMFLK1 dimensions

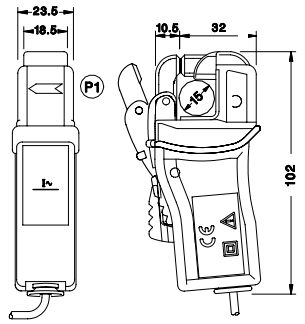


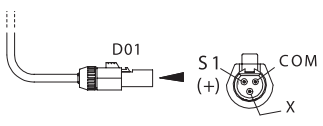


Clamps

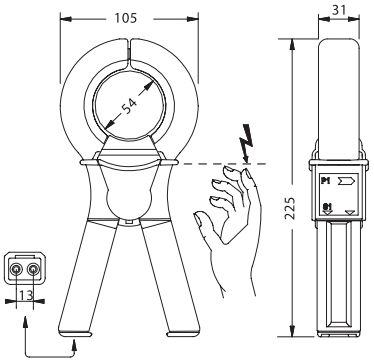
Physical description & Dimensions

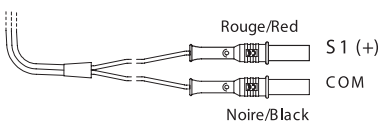
CP15



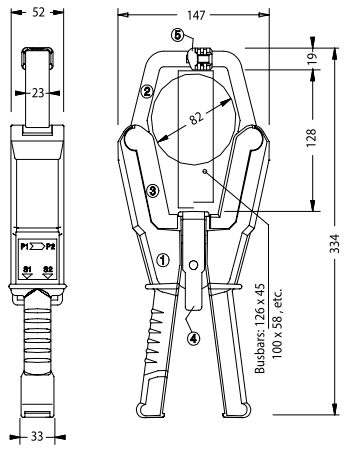


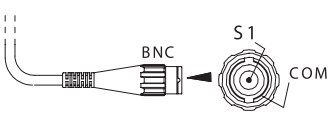
CP50





CP100





General features

Feature	CP15	CP50	CP100
Maximum cable diameter	12 mm	43.5 mm	66 mm
Dimensions	102 x 32.5 x 23.5 mm	225 x 105 x 31 mm	334 x 147 x 52 mm
Weight	0.165 kg	0.650 kg	1.900 kg
Frequency	AC and DC networks		
Operating temperature	-10 to +55°C		
Storage temperature	-20 to +70°C	-40 to +70°C	
Humidity (non-condensed) // leaktightness	15-85%	15-85%	≤ 85%
Operating voltage	600V AC/DC		
Maximum current carried by cable	250 ARMS	1200 ARMS	3600 ARMS

Feature	IMFLK1 combined with the clamps above
As a reminder, the VigilOhm range is entirely dedicated to IT neutral systems	
Type of installation to monitor	< 230V AC/DC, network-connected input voltage < 1000V AC/DC, input voltage without network connection
Compatibility with	IM400 series
Connectible auxiliary	1 clamp, from CP15, CP50 & CP100
Kit life	24 h
Charging time	7 h
Calibration time	45 secs
Measurement time	15 secs
Weight	7 kg
Dimensions	340 x 315 x 160 mm
Operating temperature	-20 to +45°C
Storage temperature	-20 to +60°C
Humidity (non-condensed) // leaktightness	5-95%
Altitude	< 3000 m
Auxiliary power supply (clamp)	24VDC
Consumption	<4W
Network max. capacity	20 µF