GOSSEN METRAWATT

PROFITEST CLIP
Leakage Current Clamp Meter
for PROFITEST PRIME, PRIME DC, PRIME AC

3-349-979-03
1/2.17

- **Measurement of extremely small leakage and fault current as of 0.1 mA**
- **Direct or differential current measurement up to 10 mA**
- **Especially insensitive to extraneous fields**
- **Measuring category: CAT III 300 V or CAT II 600 V**
- **1 kHz filter per IEC 61557-16**



CE

Applications

The leakage current clamp meter makes it possible to measure alternating current from 0.1 to 10 mA without interrupting any lines by closing the clamp around one of more conductors:

- In measuring category III electrical circuits with up to 300 V, e.g. in building installations between phase conductor and ground
- In measuring category II electrical circuits with up to 600 V, e.g. at operating equipment

Measuring Method

In the case of the direct measuring method, current is measured by closing the clamp around a single conductor. Differential current is measured by closing the clamp around both L and N at the same time.

Applicable Regulations and Standards

IEC 61010-1/ DIN EN 61010-1/ VDE 0411-1	Safety requirements for electrical equipment for measurement, control and laboratory use – General requirements
EN 61010-2-032	Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement
DIN EN 61326-1 VDE 0843-20-1	Electrical equipment for measurement, control and laboratory use –EMC requirements – Part 1: General requirements
EN 60529 VDE 0470-1	Test instruments and test procedures Degrees of protection provided by enclosures (IP code)

Technical Data

Measuring Range	Intrinsic Uncertainty	Operating Error
0.1 mA ... 10 mA AC		
50 Hz … 5 kHz *	5% of rdg.	20% of rdg.
5 kHz ... 1 MHz *	10% of rdg.	

* Cut-off frequency: 1 kHz

Voltage output 100 mV/mA

Reference Conditions

Temperature 21 °C…25 °C
Atmospheric humidity 45% ... 55%
Waveform sinusoidal

Overload Capacity

Max. load current: 30 A AC_{TRMS} continuous

Electrical Safety

Protection category II (protective insulation by means of continuous, double or reinforced insulation
Pollution degree 2
Measuring category per EN 61010 CAT III 300 V, CAT II 600 V
Electromagnetic compatibility EN 61326-1
Protection IP 40

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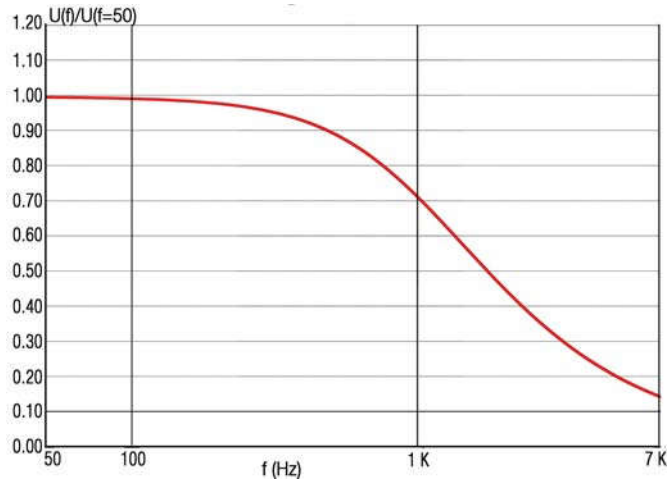
Influencing Quantities and Influence Error

Influencing Quantity / Sphere of Influence	Influence error ± … % Rdg.
Change of position ±30°	1%
Change to supply voltage of ±0.25 V	±2.5%
Temperature fluctuation 0 °C ... +35 °C	Max. ±0.3%
Amount of current at DUT 0 ... 30 A	±2.5%
Low frequency magnetic fields 30 A/m	±15%
Output signal freq. response	Per curve, see below

Frequency Response



Relative magnitude (dB) = $20\log\frac{U(f)}{U(f = 50Hz)}$

Ambient Conditions

Operating temperature	-10 °C ... +45 °C
Storage temperature	-25 °C ... +60 °C
Relative humidity	max. 80%, condensation is ruled out

Mechanical Design

Outside dimensions	62 x 28 x 172 mm
Clamp yoke	40 mm
Jaw opening	25 mm
Connector cable	1.8 m
Measuring connections	via M12 plug for connection to **PROFITEST PRIME**
Supply voltage	5 V DC via M12 plug for connection to **PROFITEST PRIME**
Weight	approx. 200 g

Scope of Delivery

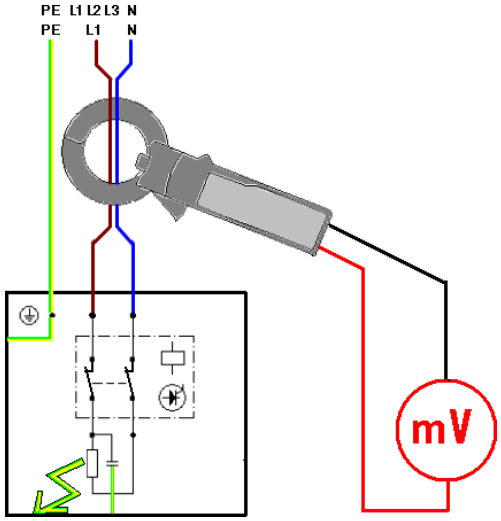
1 Leakage current clamp meter
1 Set of operating instructions

Order Information

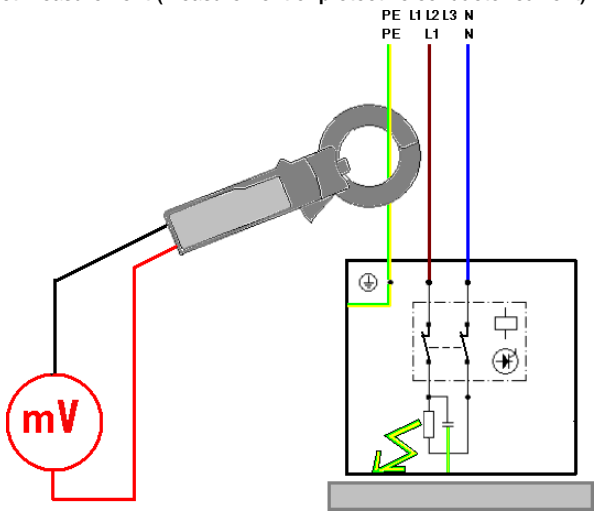
Designation	Type	Article Number
Leakage current clamp meter for **PROFITEST PRIME** tester	PROFITEST CLIP	Z506H

Application Examples

Differential Current Measurement



Direct Measurement (measurement of protective conductor current)



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