

2. ELECTRICAL SPECIFICATIONS

Accuracy is calculated as \pm [% readings + (no. of digits) * resolution] at 23°C \pm 5°C, relative humidity <80%RH

DC Voltage

Range (V)	Resolution (V)	Accuracy
3 ÷ 1500	1	\pm (1.0%rdg + 2dgt)

AC TRMS Voltage

Range (V)	Resolution (V)	Accuracy
3 ÷ 1000	1	\pm (1.0%rdg + 3dgt)

Frequency range: 42.5 ÷ 69Hz ; Voltage zeroed for measured values <3V

Insulation Resistance (M Ω) – DUAL Mode

Test voltage DC [V]	Range [M Ω]	Resolution [M Ω]	Accuracy (*)
250, 500, 1000, 1500	0.1 ÷ 0.99	0.01	\pm (5%rdg + 5dgt)
	1.0 ÷ 19.9	0.1	
	20 ÷ 100	1	

(*) Accuracy indicated for $V_{PN} \geq 240V$, $R_{fault} \geq 10M\Omega$. Accuracy of R_p and $R(+)$ not declared if $R(+)$ $\geq 0.2M\Omega$ and $R(-)$ <0.2M Ω

Accuracy of R_p and $R(-)$ not declared if $R(+)$ < 0.2M Ω and $R(-)$ $\geq 0.2M\Omega$

Open voltage <1.25 x nominal test voltage
 Short circuit current <15mA (peak) for each test voltage
 Nominal measured current >1mA on R = 1k Ω x Vnom (with VPN, VPE, VNE= 0)

Insulation Resistance (M Ω) –TIMER Mode

Test voltage DC [V]	Range [M Ω]	Resolution [M Ω]	Accuracy
250, 500, 1000, 1500	0.01 ÷ 9.99	0.01	\pm (5.0%rdg+ 5dgt)
	10.0 ÷ 99.9	0.1	

Open voltage <1.25 x nominal test voltage
 Short circuit current <15mA (peak) for each test voltage
 Nominal measured current >1mA on R = 1k Ω x Vnom (with VPN, VPE, VNE= 0)
 Setting timer: 3s ÷ 999s

Continuity of protection conductors (RPE)

Range [Ω]	Resolution [Ω]	Accuracy
0.00 ÷ 9.99	0.01	\pm (2%rdg + 2dgt)
10.0 ÷ 99.9	0.1	
100 ÷ 1999	1	

Test current: >200mA DC up to 5 Ω (included cables), Resolution 1mA, Accuracy \pm (5.0%rdg + 5dgt)
 Open voltage 4 < V_o < 10V

GFL (Ground Fault Locator) function

Test voltage DC [V]	Range [M Ω]	Resolution [M Ω]	Accuracy (*)	Position accuracy
250, 500, 1000, 1500	0.1 ÷ 0.99	0.01	\pm (5%rdg + 5dgt)	\pm 1module
	1.0 ÷ 19.9	0.1		
	20 ÷ 100	1		

(*) Accuracy indicated for $V_{PN} \geq 240V$, $R_{fault} \geq 10M\Omega$. Accuracy of R_p and $R(+)$ not declared if $R(+)$ $\geq 0.2M\Omega$ and $R(-)$ <0.2M Ω

Accuracy of R_p and $R(-)$ not declared if $R(+)$ < 0.2M Ω and $R(-)$ $\geq 0.2M\Omega$

Open voltage <1.25 x nominal test voltage
 Short circuit current <15mA (peak) for each test voltage
 Nominal measured current >1mA on R = 1k Ω x Vnom (with VPN, VPE, VNE= 0)
 Set limit threshold on measure 0.05M Ω , 0.1M Ω , 0.23M Ω ; Number of set modules: 4 ÷ 35

The GFL function allows obtaining correct results with the following conditions:

- > Test carried out with $V_{test} \geq V_{nom}$ on a single string disconnected from the inverter, from possible arresters and from earth connections
- > Test performed upstream of any blocking diodes
- > **Single fault** of low insulation located at any position in the string
- > **Insulation resistance of the single fault <0.23M Ω**
- > Environmental conditions similar to those in which the fault was reported



2. GENERAL SPECIFICATIONS

DISPLAY AND MEMORY:

Features: graphic COG 128x128pxl with backlight
Memory: max 999 test

POWER SUPPLY:

Battery type: 6x1.5V alkaline batteries type AA LR06 or
6x1.2V rechargeable NiMH batteries type AA LR06
Battery life: > 500 tests (for each functions)
Auto Power OFF: after 5 minutes of idleness

OUTPUT INTERFACE

PC communication port: optical/USB

MECHANICAL SPECIFICATIONS

Dimensions (L x W x H): 235 x 165 x 75mm
Weight (batteries included): 1.2kg
Mechanical protection: IP40

ENVIRONMENTAL CONDITIONS:

Reference temperature: 23°C ± 5°C
Working temperature: 0°C ÷ 40°C
Working humidity: <80%RH
Storage temperature: -10°C ÷ 60°C
Storage humidity: <80%RH
Max height of use: 2000m

REFERENCE GUIDELINES:

Instrument's safety: IEC/EN61010-1, IEC/EN61010-2-030
IEC/EN61010-2-033, IEC/EN61010-2-034
EMC: IEC/EN61326-1
Safety of measurement accessories: IEC/EN61010-031
General: IEC/EN62446
Measurement MΩ IEC/EN 61557-2
Measurement RPE: IEC/EN 61557-4
Insulation: double insulation
Pollution degree: 2
Overvoltage category: CAT III 1500V DC, CAT III 1000V AC
Max 1500V DC, 1000VAC between inputs

This instrument complies with the requirements of the European Low Voltage Directives 2014/35/EU (LVD) and EMC 2014/30/EU

This instrument satisfies the requirements of 2011/65/EU (RoHS) directive and 2012/19/EU (WEEE) directive

