

1. ELECTRICAL SPECIFICATIONS

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

SAFETY TEST

DMM – DC Voltage

Range [V]	Resolution [V]	Accuracy
3 ÷ 1000	1	\pm (1.0%rdg + 2dgt)

DMM – AC TRMS Voltage

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

Frequency range: 42.5Hz + 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	0.1 ÷ 0.99	0.01	\pm (5%rdg + 5dgt)
	1.0 ÷ 19.9	0.1	
	20 ÷ 100	1	

(*) Accuracy indicatec for $VPN \geq 240V$, $R_{fault} \geq 10\Omega$. Accuracy of R_p and $R(+)$ not declared if $R(+)$ $\geq 0.2M\Omega$ and $R(-)$ $< 0.2M\Omega$
Accuracy of R_p and $R(-)$ not declared if $R(+)$ $< 0.2M\Omega$ 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 $R = 1k\Omega \times V_{nom}$ (with VPN, VPE, VNE= 0)
Managed capacity per poles: 2 μ F

Insulation Resistance (M Ω) –TMR Mode

Test voltage DC [V]	Range [M Ω]	Resolution [M Ω]	Accuracy
250, 500, 1000	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 $R = 1k\Omega \times V_{nom}$ (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 $4 < V_0 < 10V$

GFL (Ground Fault Locator) function

Test voltage DC [V]	Range [M Ω]	Resolution [M Ω]	Accuracy Rp (*)	Position accuracy
250, 500, 1000	0.1 ÷ 0.99	0.01	\pm (5%rdg + 5dgt)	\pm 1module (NMOD \leq 35) \pm 3module (NMOD>35)
	1.0 ÷ 19.9	0.1		
	20 ÷ 100	1		

(*) Accuracy indicatec for $VPN \geq 240V$, $R_{fault} \geq 10\Omega$. Accuracy of R_p and $R(+)$ not declared if $R(+)$ $\geq 0.2M\Omega$ and $R(-)$ $< 0.2M\Omega$
Accuracy of R_p and $R(-)$ not declared if $R(+)$ $< 0.2M\Omega$ 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 $R = 1k\Omega \times V_{nom}$ (with VPN, VPE, VNE= 0)
Managed capacity per poles: 2 μ F
Set limit threshold on measure 0.05M Ω , 0.1M Ω , 0.23M Ω , 0.25M Ω , 0.50M Ω , 1.00M Ω
Number of set modules: 4 + 60

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: **<1.00M Ω**
- > Environmental conditions similar to those in which the fault was reported



OPT (Insulation test with optimizers and MLPE devices)

Test voltage DC [V]	Range [MΩ]	Resolution [MΩ]	Accuracy Rp (*)
100, 250, 500, 1000 (MLPE with RSD)	0.1 ÷ 0.99	0.01	±(5%rdg + 10dgt)
	1.0 ÷ 19.9	0.1	
	20 ÷ 250	1	
100 (MLPE without RSD)	0.1 ÷ 0.99	0.01	
	1.0 ÷ 19.9	0.1	
	20 ÷ 100	1	

(*) Accuracy indicated for VPN ≥ 240V, R_{fault} ≥ 10Ω. Accuracy of Rp and R(+) not declared if R(+) ≥ 0.2MΩ and R(-) < 0.2MΩ
Accuracy of Rp and R(-) not declared if R(+) < 0.2MΩ and R(-) ≥ 0.2MΩ

Open voltage	< 1.25 x nominal test voltage
Short circuit current	< 15mA (peak) for each test voltage
Nominal measured current	> 1mA on R = 1kΩ x V _{nom} (with VPN, VPE, VNE = 0)
Managed capacity per poles:	2μF
Set limit threshold on measure:	0.10MΩ, 0.25MΩ, 0.60MΩ, 1.00MΩ, 100MΩ, 200MΩ (MLPE with RSD) 0.10MΩ, 0.25MΩ, 0.60MΩ, 1.00MΩ, 50MΩ (MLPE with out RSD)
Number optimizers:	1 ÷ 60
Max current in RSD mode:	1A (RSD = Rapid Shut Down function)

FUNCTIONALITY TEST (IVCK)

DC Voltage @ OPC

Range [V]	Resolution [V]	Accuracy
3.0 ÷ 1000.0	0.1	±(1.0%rdg+2dgt)

Minimum VPN voltage to start the test: 15V

IDC Current @ OPC

Range [A]	Resolution [A]	Accuracy
0.10 ÷ 30.00	0.01	±(1.0%rdg+2dgt)

DC Voltage @ STC

Range [V]	Resolution [V]	Accuracy
3.0 ÷ 1000.0	0.1	±(4.0%rdg+2dgt)

IDC Current @ STC

Range [A]	Resolution [A]	Accuracy
0.10 ÷ 30.00	0.01	±(4.0%rdg+2dgt)

Irradiation with connection to HT305 reference cell

Voltage range [mV]	Resolution [mV]	Accuracy (*)
0.00 ÷ 99.99	0.01	±(1.0% rdg + 0.02mV)

Measurement range [W/m ²]	Resolution [W/m ²]	Accuracy (*)
0 ÷ 1400	1	±(1.0%rdg + 1dgt)

(*) Accuracy of instrument without cell

Module temperature with connection to PT305 probe

Resistance range [Ω]	Resolution [Ω]	Accuracy (*)
846 ÷ 1385	0.385	±(1.0%rdg + 3.85Ω)

Measurement range [°C]	Resolution [°C]	Accuracy (*)
-40.0 ÷ 99.9	0.1	±(1.0%rdg + 1°C)

(*) Accuracy of instrument without probe



2. GENERAL SPECIFICATIONS

DISPLAY AND MEMORY

Features:	240x240pxl custom LCD with backlight
Memory:	max 999 test, 3 marker levels
Internal database for PV modules:	max 64 saving modules

POWER SUPPLY

Internal power supply:	6x1.5V alkaline batteries type LR6, AA or 6x1.2V rechargeable NiMH batteries type LR6, AA (External adapter needed for NiMH batteries recharging)
Battery life (@Temp = 20°C):	RPE: >500 Test (RPE \geq 0.1 Ω) GFL, M Ω : >500 test (Riso \geq 1k Ω xVTest) IVCK: >500 test (no SOLAR03)
Auto Power OFF:	after 5 minutes of idleness

OUTPUT INTERFACE

PC communication port:	optical/USB and WiFi
Interface with SOLAR03:	Bluetooth BLE communication (up to 100m/328ft in free space)

MECHANICAL FEATURES

Dimensions (L x W x H):	235 x 165 x 75mm (9 x 6 x 3in)
Weight (batteries included):	1.2kg (25lv)
Mechanical protection:	IP40

ENVIRONMENTAL CONDITIONS

Reference temperature:	23°C \pm 5°C (73°F \pm 41°F)
Working temperature:	-10°C \div 50°C (14°F \pm 122°F)
Working humidity:	<80%RH (without condensation)
Storage temperature:	-10°C \div 60°C (14°F \pm 140°F)
Storage humidity:	<80%RH (without condensation)
Max height of use:	2000m (6562ft)

REFERENCE GUIDELINES

Safety:	IEC/EN61010-1, IEC/EN61010-2-030 IEC/EN61010-2-033, IEC/EN61010-2-034
EMC:	IEC/EN61326-1, IEC/EN61326-2-2
Safety of measurement accessories:	IEC/EN61010-031
IVCK measurements:	IEC/EN62446-1, IEC/EN60891, IEC/EN60904-1-5
M Ω measurement:	IEC/EN61557-2
RPE measurement:	IEC/EN61557-4
Insulation:	double insulation
Pollution degree:	2
Radio:	ETSI EN300328, ETSIEN301489-1, ETSIEN301489-17
Measurement category:	CAT III 1000V to ground Max 1000VAC, 1000VDC between inputs

This instrument complies with the requirements of the European Low Voltage Directives 2014/35/EU (LVD), EMC directive 2014/30/EU and RED 2014/53/EU directive
This instrument satisfies the requirements of 2011/65/EU (RoHS) directive and 2012/19/EU (WEEE) directive



Diensten van EURO-INDEX

EURO-INDEX is fabrikant, importeur en distributeur van diverse A-merken op het gebied van test- en meetinstrumenten. Daarnaast leveren wij een groot aantal diensten om het gebruik van deze instrumenten in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van de instrumenten, maar ook kennisdeling via de EURO-INDEX Academy en verhuur van instrumenten.

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Kalibratielaboratorium

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105.



Kijk voor een overzicht van al onze diensten op euro-index.nl/diensten



Mobiele Service

Naast de vaste kalibratielaboratoria in Capelle aan den IJssel en Zaventem beschikken wij ook over laboratoria op wielen met de naam "Mobiele Service". Dit biedt vertrouwde service en kwaliteit, bij u voor de deur!

KWS®

KWS® is een uniek servicesysteem voor uw meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten. Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app).

Verhuur van meetinstrumenten

- Uitgebreid assortiment
- Nauwkeurigheid aantoonbaar door actueel kalibratiecertificaat
- Deskundig advies
- Complete levering inclusief accessoires

EURO-INDEX Academy

- Trainingen (individueel en klassikaal)
- Cursussen en workshops
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Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Mobiele Service

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