

The **I-V600** model is an **I-V Curve** and functional test verification (Voc, Isc) instrument compliant with IEC/EN60891, IECEN60904-1-2 and IEC/EN62446 guidelines. **I-V600** tests the performance and functionality of **Monofacial** and **Bifacial** PV modules/strings.

I-V CURVE TRACER (PERFORMANCE/ACCEPTANCE TEST)

I-V600 verifies the performance of PV strings in compliance with IEC/EN60891 guideline by tracking the I-V curve on installations **up to 1500VDC** and **40ADC**. Through solar irradiation and temperature measurements of the PV modules (in wireless combination with the **SOLAR03** remote unit), **I-V600** extrapolates the **@STC** curves (**Standard Test Condition**: 1000W/m², 25°C, AM 1.5) comparing them with the ratings provided by the module manufacturer. The large internal database stores up to 1000 different manufacturers and up to 1000 modules associated with each manufacturer directly, easily programmable by touch-screen display.

FUNCTIONAL TEST (IVCK)

I-V600 verifies the functionality of PV strings in accordance with IEC/EN62446 guideline by measuring, with or without solar radiation, the open circuit voltage (Voc) and the short circuit current (Isc) in operating conditions (**@OPC**) **up to 1500VDC** and **40ADC**. By measuring solar radiation and temperature of the PV modules (in wireless combination with the **SOLAR03** remote unit), **I-V600** extrapolates the values **@ STC** (**Standard Test Condition**: 1000W/m², 25°C, AM 1.5) and compares them with the ratings provided by the module manufacturer.

I-V600 EXTENDS THE CHARGE OF THE INTERNAL BATTERIES

To increase the autonomy of the batteries and allow them to be recharged, **I-V600** is equipped with a professional internal **BMS (Battery Management System)** algorithm which automatically recovers energy from the discharge of the module capacities at the end of an I-V test and from the voltage present on the inputs. A valid aid in case you need to carry out many tests in rapid succession.





I-V600

Rel. 1.07 – 17/01/24

Professional I-V curve tracer up to 1500V, 40ADC

Pag 2 of 4

1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as $\pm[\% \text{reading} + (\text{number dgts} \times \text{resolution})]$ at $23^\circ\text{C} \pm 5^\circ\text{C}$, $<80\% \text{RH}$

DMM – Multimeter function – DC Voltage

Range [V]	Resolution [V]	Accuracy
3 ÷ 1500	1	$\pm (1.0\% \text{reading} + 2 \text{dgt})$

I-V CURVE TEST

DC Voltage @ OPC

Range [V]	Resolution [V]	Accuracy (*)
15.0 ÷ 1500.0	0.1	$\pm(0.2\%V_{oc})$

(*) In compliance with IEC/EN60904-1; The measurement starts if $V_{DC} > 15V$ and module capacitance $<30\mu F$

DC Current @ OPC

Range [A]	Resolution [A]	Accuracy (*)
0.20 ÷ 40.00	0.01	$\pm(0.2\%I_{sc})$

(*) In compliance with IEC/EN60904-1; $I_{scmin} = 0.2A$ and module capacitance $<30\mu F$

DC Power @ OPC ($V_{DC} > 30V$)

Range [W]	Resolution [W]	Accuracy
50 ÷ 9999	1	$\pm(1.0\% \text{reading} + 6 \text{dgt})$
10.00k ÷ 59.99k	0.01k	

 $V_{DC} \text{ Voltage} \geq 30V$ and module capacitance $<30\mu F$

DC Voltage @ STC

Range [V]	Resolution [V]	Accuracy
3.0 ÷ 1500.0	0.1	$\pm(4.0\% \text{reading} + 2 \text{dgt})$

DC Current @ STC

Range [A]	Resolution [A]	Accuracy
0.20 ÷ 40.00	0.01	$\pm(4.0\% \text{reading} + 2 \text{dgt})$

DC Power @ STC (referred @ 1 module)

Range [W]	Resolution [W]	Accuracy
50 ÷ 9999	1	$\pm(4.0\% \text{reading} + 2 \text{dgt})$





I-V600

Rel. 1.07 – 17/01/24

Professional I-V curve tracer up to 1500V, 40ADC

Pag 3 of 4

FUNCTIONAL TEST (IVCK)

DC Voltage @ OPC

Range [V]	Resolution [V]	Accuracy (*)
15.0 ÷ 1500.0	0.1	$\pm(0.2\%V_{oc})$

(*) In compliance with IEC/EN60904-1; The measurement starts if VDC > 15V and module capacitance <30 μ F

DC Current @ OPC

Range [A]	Resolution [A]	Accuracy (*)
0.20 ÷ 40.00	0.01	$\pm(0.2\%I_{sc})$

(*) In compliance with IEC/EN60904-1; $I_{scmin} = 0.2A$ and module capacitance <30 μ F

DC Voltage @ STC

Range [V]	Resolution [V]	Accuracy
3.0 ÷ 1500.0	0.1	$\pm(4.0\%reading+2dgts)$

DC Current @ STC

Range [A]	Resolution [A]	Accuracy
0.20 ÷ 40.00	0.01	$\pm(4.0\%reading+2dgts)$



HT ITALIA SRL
Via della Boaria, 40
48018 - Faenza (RA) - Italy
T +39 0546 621002 | F +39 0546 621144
M vendite@ht-instruments.com | ht-instruments.com

WHERE
WE ARE





2. GENERAL SPECIFICATIONS

DISPLAY AND MEMORY

Characteristics:	Color TFT, capacitive touch screen, 7", 800x480pxl
Type of memory:	Memory card, max 32GB (not expandable)
Module database:	ca. 63,000 saved modules
Storable data:	9999 test IVCK or I-V curve

POWER SUPPLY:

Internal power supply:	8x1.5V alkaline battery type LR6, AA or 8x1.2V rechargeable battery NiMH type LR6, AA
External power supply:	100-440VAC/15VDC, 50/60Hz CAT IV 300V (use only HT adapter)
Battery charging algorithm:	via inputs P1, C1, P2, C2
Battery charging system (BMS):	energy recovered from I-V curve measurements
Consumption:	8W
Low battery indication:	"  " symbol shown on the display
Charging time:	approx. 4 hours
Battery life (@ 0°C ÷ 40°C):	8 hours in the following conditions: ➤ Battery capacity: 2000mAh ➤ PV string voltage: 800V ➤ Work cycles: 80 measurements/hour ➤ Instrument connected to the modules for 30s/measurement ➤ Instrument disconnected for 15s/measurement
Auto Power OFF:	1 ÷ 10min selectable (disabling)

OUTPUT INTERFACE

PC interface:	USB-C and WiFi
Interface with SOLAR03:	Bluetooth connection (up to 100m in free space)

MECHANICAL CHARACTERISTICS

Dimensions (L x W x H):	336 x 300 x 132mm (13 x 12 x 5in)
Weight (included batteries):	5.5kg (11lb)
Mechanical protection:	IP40 (open case), IP67 (closed case)

ENVIRONMENTAL CONDITIONS OF USE

Reference temperature:	23°C ± 5°C (73°F ± 41°F)
Operating temperature:	-10°C ÷ 50°C (14°F ÷ 122°F)
Operating humidity:	<80%RH
Storage temperature:	-20°C ÷ 60°C (-4°F ÷ 140°F)
Storage humidity:	<80%RH
Max. height of use:	2000m (6562ft)

REFERENCE GUIDELINES

Safety:	IEC/EN61010-1, IEC/EN61010-2-030,
EMC:	IEC/EN61326-1
Safety measurement accessories:	IEC/EN61010-031
I-V Test:	IEC/EN60891, IECEN60904-1-2
IVCK Test:	IEC/EN62446, IECEN60904-1-2
Insulation:	double insulation
Pollution degree:	2
Radio:	ETSI EN300328, ETSIEN301489-1, ETSIEN301489-17
Measurement category:	CAT III 1500VDC, max 1500VDC between inputs

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



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 EURO-INDEX Academy en verhuur van instrumenten.

Geautoriseerd Service Centrum

EURO-INDEX b.v. is van alle vertegenwoordigde merken een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument, evenals de certificering (ATEX, EN50379, etc.) blijven intact.

Kalibratielaboratorium

Het laboratorium in Nederland beschikt over een RvA accreditatie naar EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij accreditatienummer K105. RvA kalibratiecertificaten zijn internationaal geaccepteerd en is gelijkwaardig aan BELAC.



Mobiele Service

Naast de vaste kalibratielaboratoria in Zaventem en Capelle aan den IJssel beschikken wij ook over een laboratorium 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. Via een gratis webportal (mijnkws.be) heeft u altijd en overal beschikking over uw kalibratiecertificaten.

Verhuur van meetinstrumenten

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

EURO-INDEX Academy

- Trainingen, seminars en workshops
- Demonstratie- en instructievideo's
- Application notes



Servicebalie



Onderhoud, reparatie en kalibratie



Trainingen en seminars



Mobiele Service

Wijzigingen voorbehouden EURO-INDEX® VL 23001



BELGIË
Leuvensesteenweg 607
1930 Zaventem
T: 02 - 757 92 44
F: 02 - 757 92 64
sales@euro-index.be
www.euro-index.be

NEDERLAND
Rivium 2e straat 12
2909 LG Capelle a/d IJssel
T: +31 - (0)10 - 2 888 000
F: +31 - (0)10 - 2 888 010
verkoop@euro-index.nl
www.euro-index.nl

