



## 1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as  $\pm[\% \text{readings} + (\text{dgt} \times \text{resolution})]$  referred to  $18^\circ\text{C} \div 28^\circ\text{C}$ ,  $<75\% \text{RH}$ 

### DC Voltage

Range	Resolution	Accuracy	Input impedance	Overload protection
600.0mV	0.1mV	$\pm(0.8\% \text{rdg} + 8 \text{dgt})$	$>10 \text{M}\Omega$	1500VDC
6.000V	0.001V	$\pm(0.5\% \text{rdg} + 5 \text{dgt})$		
60.00V	0.01V			
600.0V	0.1V	$\pm(0.8\% \text{rdg} + 5 \text{dgt})$		
1500V	1V			

### AC TRMS Voltage

Range	Resolution	Accuracy (*)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	$\pm(1.2\% \text{rdg} + 5 \text{dgt})$ (50 $\div$ 60Hz)	$>9 \text{M}\Omega$	50Hz $\div$ 1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V	$\pm(2.5\% \text{rdg} + 5 \text{dgt})$ (61 $\div$ 1kHz)			
1000V	1V				

(\*) Accuracy specified from 10% to 100% of the measuring range, sinusoidal waveform

Accuracy of PEAK function:  $\pm(10\% \text{reading})$ , Response time of PEAK function: 1msFor a non-sinusoidal waveform, accuracy is:  $\pm(10.0\% \text{rdg} + 20 \text{digits})$ 

Integrated NCV sensor for AC voltage detection: LED on for phase-earth voltage in range 100V - 1000V, 50/60Hz

### AC+DC TRMS Voltage

Range	Resolution	Accuracy (*) (50Hz $\div$ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	$\pm(2.5\% \text{rdg} + 20 \text{dgt})$	$>10 \text{M}\Omega$	50Hz $\div$ 1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V				
1000V	1V				

### AC TRMS Voltage with low impedance (LoZ)

Range	Resolution	Accuracy (*) (50Hz $\div$ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	$\pm(3.0\% \text{rdg} + 20 \text{dgt})$	300k $\Omega$	50Hz $\div$ 1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V				
1000V	1V				

(\*) Accuracy specified from 10% to 100% of the measuring range sinusoidal waveform

For non-sinusoidal waveform, accuracy is:  $\pm(10.0\% \text{rdg} + 20 \text{digits})$ 

### AC+DC TRMS Voltage with low impedance (LoZ)

Range	Resolution	Accuracy (*) (50Hz $\div$ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	$\pm(3.5\% \text{rdg} + 40 \text{dgt})$	$<300 \text{k}\Omega$	50Hz $\div$ 1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V				
1000V	1V				



## DC Current

Range	Resolution	Accuracy	Overload protection
60.00A	0.01A	±(2.0%rdg + 8dgt)	1000ADC/ACrms
600.0A	0.1A		
1000	1A		

## AC TRMS Current / INRUSH Current

Range	Resolution	Accuracy (50Hz ÷ 60Hz)	Overload protection
60.00A	0.01A	±(2.5%rdg + 5dgt)	1000ADC/ACrms
600.0A	0.1A		
1000	1A		

(\*) Accuracy specified from 10% to 100% of the measuring range, Input impedance: > 9MΩ, sinusoidal waveform  
Response time INRUSH function: 100ms

## DC Current by means of standard clamp transducers

Range	Output ratio	Resolution	Accuracy (*)	Overload protection
1000mA	1000mV/1000mA	1mA	±(0.8%rdg + 5dgt)	1000VDC/ACrms
10A	100mV/1A	0.01A		
40A (**)	10mV/1A	0.01A		
100A	10mV/1A	0.1A		
400A (**)	1mV/1A	0.1A		
1000A	1mV/1A	1A		

(\*) Accuracy referred to the sole instrument without transducer; (\*\*) with clamp transducer HT4006

## AC, AC+DC Current by means of standard clamp transducers

Range	Output ratio	Resolution	Accuracy (*)		Overload protection
			(50Hz ÷ 60Hz)	(61Hz ÷ 1kHz)	
1000mA	1V/1mA	1mA	±(0.8%rdg.+5dgt)	±(2.4%rdg+5dgt)	1000VDC/ACrms
10A	100mV/1A	0.01A			
40A (**)	10mV/1A	0.01A			
100A	10mV/1A	0.1A			
400A (**)	1mV/1A	0.1A			
1000A	1mV/1A	1A			

(\*) Accuracy referred to the sole instrument without transducer; (\*\*) with clamp transducer HT4006

## AC TRMS Current by means of flexible clamp transducer (F3000U)

Range	Output ratio	Resolution	Accuracy (*) (50Hz ÷ 400Hz)	Overload protection
30A	100mV/1A	0.01A	±(3.0%rdg.+5dgt)	1000VDC/ACrms
300A	10mV/1A	0.1A		
3000A	1mV/1A	1A		

(\*) Accuracy referred to the sole instrument without transducer ; Accuracy specified from 5% to 100% of the measuring range  
Accuracy of PEAK function: ±(10%reading+20dgt), Response time of PEAK function: 1ms

## Diode test

Function	Test current	Open voltage
	<1.5mA typical	3.3VDC

## Frequenza (electrical circuits)

Range	Resolution	Accuracy	Sensitivity	Overload protection
40.00Hz÷10kHz	0.01Hz ÷ 0.001kHz	±(0.5%rdg)	±2Vrms	1000VDC/ACrms



## Frequency (electronic circuits)

Range	Resolution	Accuracy	Overload protection
60.00Hz	0.01Hz	±(0.2%rdg+5dgt)	1000VDC/ACrms
600.0Hz	0.1Hz		
6.000kHz	0.001kHz		
60.00kHz	0.01kHz		
600.0kHz	0.1kHz		
6.000MHz	0.001MHz		
10.00MHz	0.01MHz		

Sensitivity: >2Vrms (@ 20% ÷ 80% duty cycle) and f<100kHz; >5Vrms (@ 20% ÷ 80% duty cycle) and f>100kHz

## Resistance and Continuity test

Range	Resolution	Accuracy	Buzzer	Overload protection
600.0Ω	0.1Ω	±(1.0%rdg + 10dgt)	≤50Ω	1000VDC/ACrms
6.000kΩ	0.001kΩ	±(0.8%rdg + 5dgt)		
60.00kΩ	0.01kΩ			
600.0kΩ	0.1kΩ			
6.000MΩ	0.001MΩ	±(2.5%rdg + 10dgt)		
60.00MΩ	0.01MΩ			

## Duty Cycle

Range	Resolution	Accuracy
10.0% ÷ 90.0%	0.1%	±(1.2%rdg + 8dgt)

Pulse frequency range: 40Hz ÷ 10kHz, Pulse amplitude: ±5V (100μs ÷ 100ms)

## Capacitance

Range	Resolution	Accuracy	Overload protection
60.00nF	0.01nF	±(3.0%rdg + 20dgt)	1000VDC/ACrms
600.0nF	0.1nF	±(3.0%rdg + 8dgt)	
6.000μF	0.001μF		
60.00μF	0.01μF		
600.0μF	0.1μF		
6000μF	1μF		
60.00mF	0.01mF	±(5.0%rdg + 40dgt)	
100.0mF	0.1mF		

## Temperature with K-type probe

Range	Resolution	Accuracy (*)	Overload protection
-40.0÷600.0°C	0.1°C	±(1.5%rdg + 3°C)	1000VDC/ACrms
601 ÷ 1000°C	1°C		
-40.0°F ÷ 600.0°F	0.1°F	±(1.5%rdg + 5.4°F)	
601°F ÷ 1800°F	1°F		
245.0K ÷ 600.0K	0.1°F	±(1.5%rdg + 3K)	
601K ÷ 1273K	1°F		

(\*) Instrument accuracy without probe ; Specified accuracy with stable environmental temperature at ±1°C



## Infrared temperature (only ECLIPSE)

Type of IR sensor	UFPA (80x80pxl, 34 $\mu$ m)
Spectrum response	8 ÷ 14 $\mu$ m
Visual range (FOV) / Lens	21°x 21° / 7.5mm
IFOV (@1m)	4.53mrad
Thermal sensitivity / NETD	<0.1°C (@30°C /86°F) / 100mK
Focusing	automatic
Minimum focus distance	0.5m
Image frequency	50Hz
Temperature readings	°C, °F, K
Available color palettes	5 (Iron, Rainbow, Grey, Reverse grey, Feather)
Laser pointer	class 2 according to IEC 60825-1
Built-in illuminator	white-light LED
Emissivity correction	0.01 ÷ 1.00 in steps of 0.01
Measuring cursors	3 (Fixed, Max Temp., Min Temp.)
Measuring range	-20°C ÷ 260°C (-4°F ÷ 500°F)
Accuracy	±3%reading or ±3°C (±5.4°F) (environmental temperature 10°C ÷ 35°C, object temperature >0°C)




## 2. GENERAL SPECIFICATIONS

### Mechanical characteristics

Dimensions (L x La x H):	280 x 100 x 50mm
Weight (battery included):	505g
Mechanical protection:	IP40
Max conductor size:	40mm

### Power supply

Battery type:	1x7.4V rechargeable Li-ION battery, 1200mAh
Battery charger power supply:	100/240VAC, 50/60Hz, 12VDC, 2A
Low battery indication:	symbol "  " on the display
Recharging time:	approx. 2 hours
Battery duration:	approx. 8 hours (Bluetooth deactivated) approx. 7 hours (active Bluetooth)
Auto power OFF:	after 15 ÷ 60min minutes' idling (may be disabled)

### Display

Characteristics:	color TFT, 6000 dots with bargraph
Sampling frequency:	3times/s
Conversion:	TRMS

### Functions:

- Data HOLD
- MAX/MIN/PEAK(1ms)
- RANGE
- REL
- Laser pointer (only ECLIPSE)
- White LED illuminator:
- Bluetooth connection (BLE 4.0) for connection to mobile devices by using **HTMercury APP**

### Internal memory

Characteristics:	max 128 snapshots (BMP format) max 16 recordings or 34 hours (SI=1s) sampling interval: 1s ÷ 15min duration single recording: max 10 hours
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### Environmental conditions for use

Reference temperature:	18°C ÷ 28°C
Operating temperature:	5°C ÷ 40°C
Allowable relative humidity:	<80%RH
Storage temperature:	-20°C ÷ 60°C
Storage humidity:	<80%RH

### Reference guidelines

Safety:	IEC/EN 61010-1
EMC:	IEC/EN61326-1
Insulation:	double insulation
Pollution degree:	2
Max height of use:	2000m
Measurement category:	CAT IV 600V, CAT III 1000V to ground

**This instrument satisfies the requirements of Low Voltage Directive 2014/35/EU (LVD)  
and of EMC Directive 2014/30/EU  
This instrument satisfies the requirements of European Directive 2011/65/EU (RoHS) and  
2012/19/EU (WEEE)**

# Services d'EURO-INDEX

EURO-INDEX est un fabricant, importateur et distributeur de diverses marques A dans le domaine des instruments de test et de mesure. Nous fournissons également une large gamme de services pour optimiser l'utilisation de ces instruments dans vos activités. Ces services comprennent naturellement l'entretien, la réparation et l'étalonnage des instruments, mais nous proposons aussi une assistance sous forme de formation via notre EURO-INDEX Academy et la location d'instruments.

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## Laboratoire de maintenance et de calibrage

Le laboratoire des Pays-Bas est accrédité RvA selon la norme EN-ISO/IEC 17025. Cette accréditation est valable pour différentes grandeurs, telles que spécifiées dans le champ d'application associé au numéro d'accréditation K105. Les certificats de calibrage RvA sont acceptés à l'international et équivalents à ceux de BELAC.



## Service Mobile

Outre les laboratoires d'étalonnage fixes de Zaventem et de Capelle aan den IJssel, nous disposons également d'un laboratoire itinérant appelé "Service mobile". Nos services peuvent venir vers vous, en offrant une qualité équivalente.

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- Les instruments sont livrés avec leurs accessoires

## EURO-INDEX Academy

- Formations et séminaires
- Vidéos de démonstration et d'instruction
- Notes d'application



Comptoir de service



Entretien, réparation et calibrage



Formations et séminaires



Service Mobile

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