1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as ±[%readings + (dgt x resolution)] referred to 18°C ÷ 28°C, <75%RH

DC VOLTAGE

Range	Resolution	Accuracy	Input impedance	Overload protection
600.0mV	0.1mV	±(0.8%rdg + 8dgt)	>10MΩ	1500VDC
6.000V	0.001V	±(0.5%rdg + 5dgt)		
60.00V	0.01V			
600.0V	0.1V	±(0.8%rdg + 5dgt)		
1500V	1V			

AC TRMS VOLTAGE

Range	Resolution	Accuracy (*)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	±(1.2%rdg + 5dgt) (50 ÷ 60Hz) ±(2.5%rdg + 5dgt) (61 ÷ 1kHz)	>9MΩ	50Hz÷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
Accuracy of PEAK function: ±(10%reading), Response time of PEAK function: 1ms
For a non-sinusoidal waveform, accuracy is: ±(10.0%rgd + 20digits)
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 ÷ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	±(2.5%rdg + 20dgt)	>10MΩ	50Hz÷1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V				
1000V	1V				

AC TRMS VOLTAGE WITH LOW IMPEDANCE (LOZ)

Range	Resolution	Accuracy (*) (50Hz ÷ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	±(3.0%rdg + 20dgt)	300kΩ	50Hz÷1kHz	1000VDC/ACrms
60.00V	0.01V				
600.0V	0.1V				
1000V	1V				

(*) Accuracy specified from 10% to 100% of the measuring range ssinusoidal waveform
For non-sinusoidal waveform, accuracy is: ±(10.0%rgd + 20digits)

AC+DC TRMS VOLTAGE WITH LOW IMPEDANCE (LOZ)

Range	Resolution	Accuracy (*) (50Hz ÷ 1kHz)	Input impedance	Bandwidth	Overload protection
6.000V	0.001V	±(3.5%rdg + 40dgt)	<300kΩ	50Hz÷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

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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			
60.00MΩ	0.01MΩ	±(2.5%rdg + 10dgt)		

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	±(3.5%rdg + 20dgt)	
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

Type of IR sensor	UFPA (120x120pxl, 17μm)
Spectrum response	8 ÷14μm
Visual range (FOV) / Lens	15.6°x 15.6° / 7.5mm
IFOV (@1m)	2.26mrad
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
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), EMC Directive 2014/30/EU and RED 2014/53/EU
This instrument satisfies the requirements of European Directive 2011/65/EU (RoHS) and 2012/19/EU (WEEE)