

1. ELECTRICAL SPECIFICATIONS – LEAKAGE, AUX SECTION

Accuracy is indicated as $\pm$ (% readings + no. of digits*resolution) at 23 °C $\pm$ 5 °C, <80%RH

LEAKAGE - Leakage current (by HT96U optional clamp transducer)

FS clamp AC (A)	Resolution	Accuracy
1	0.1mA	$\pm(1.0\%rdg + 20dgt)$
1 < FS <10	0.01A	
10 $\leq$ FS <100	0.1A	
100 $\leq$ FS <1000	1A	

AUX - Environmental parameters (with optional probes)

Parameter	Range	Resolution	Accuracy
Temperature [°C]	-20°C ÷ 80°C	0.1 °C	$\pm(2.0\%rdg+2dgt)$
Temperature [°F]	-4°F ÷ 176°F	0.1 °F	
Relative humidity [%RH]	0 ÷ 100%RH	0.1%RH	
DC output voltage	0.1mV ÷ 1.0V	0.1mV	
Illuminance [Lux] (*) Accuracy of HT53 lux probe is according to Class AA	0.001Lux ÷ 20.00 Lux (*)	0.001 ÷ 0.02 Lux	
	0.1 Lux ÷ 2000 Lux (*)	0.1 ÷ 2 Lux	
	1 Lux ÷ 20 kLux (*)	1 ÷ 20 Lux	



2. ELECTRICAL SPECIFICATIONS – PQA SECTION

AC TRMS Voltage (L-N)

Range [V]	Resolution [V]	Accuracy
15.0 ÷ 380.0	0.1V	$\pm(1.0\%rdg + 1dgt)$

Allowed crest factor: $\leq 1,5$; Frequency: 42 ÷ 69.0 Hz

Connection to external TV: TV ratio selectable in the range 30 ÷ 3000

AC TRMS Voltage (L-L)

Range [V]	Resolution [V]	Accuracy
15.0 ÷ 660.0	0.1V	$\pm(1.0\%rdg + 1dgt)$

Allowed crest factor: $\leq 1,5$; Frequency: 42 ÷ 69.0 Hz

Connection to external TV: TV ratio selectable in the range 30 ÷ 3000

Frequency

Range [Hz]	Resolution [Hz]	Accuracy
DC, 42 ÷ 69.0	0.01	$\pm(2.0\%rdg + 2dgt)$

Allowed voltage: 15.0 ÷ 660V ; Allowed current: 5%FS clamp ÷ FS clamp

DC/ AC TRMS Current (STD clamp)

FS clamp	Range [A]	Resolution [A]	Accuracy
$\leq 10A$	5% FS ÷ 9.99	0.01	$\pm(1.0\%rdg + 3 dgt)$
$10A \leq FS \leq 300$	5% FS ÷ 299.9	0.1	
$300A \leq FS \leq 3000$	5% FS ÷ 2999	1	

Range: 5 ÷ 999.9 mV; Values under 5mV are zeroed

Allowed crest factor: ≤ 3 ; Frequency: 42 ÷ 69.0 Hz

AC TRMS Current (FLEX clamp – 300A AC)

Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.085 ÷ 85.0	42 ÷ 69.0	8.5 μ V	$\pm(0.5\%rdg+0.17\%FS)$	10V

Allowed crest factor ≤ 3 , Values under 1A are zeroed

AC TRMS Current (FLEX clamp – 3000A AC)

Range [mV]	Frequency [Hz]	Resolution	Accuracy	Overload protection
0.425 ÷ 255.0	42 ÷ 69.0	85 μ V	$\pm(0.5\%rdg+0.17\%FS)$	10V

Allowed crest factor ≤ 3 , Values under 10A are zeroed

DC Power

FS clamp	Range [kW]	Resolution [kW]	Accuracy
$\leq 10A$	0.000 ÷ 9.999	0.001	$\pm(2.0\%rdg + 7dgt)$
	10.00 ÷ 99.99	0.01	
$10A \leq FS \leq 200$	0.00 ÷ 99.99	0.01	
	100.0 ÷ 999.9	0.1	
$200A \leq FS \leq 1000$	0.0 ÷ 999.9	0.1	
	1000 ÷ 9999	1	

Active power (@ 230V, $I > 5\%FS$, $\cos\phi \geq 0.5$, $f=50.0Hz$)

FS clamp	Range [kW]	Resolution [kW]	Accuracy
$\leq 10A$	0.000 ÷ 9.999	0.001	$\pm(2.0\%rdg + 7dgt)$
	10.00 ÷ 99.99	0.01	
$10A \leq FS \leq 200$	0.00 ÷ 99.99	0.01	
	100.0 ÷ 999.9	0.1	



$200A \leq FS \leq 1000$	$0.0 \div 999.9$ $1000 \div 9999$	0.1 1	
$1000A \leq FS \leq 3000$	$0 \div 9999$	1	

Reactive power (@ 230V, $I > 5\%FS$, $\cos\phi < 0.9$, $f=50.0Hz$)

FS clamp	Range [kVAr]	Resolution [kVAr]	Accuracy
$\leq 10A$	$0.000 \div 9.999$ $10.00 \div 99.99$	0.001 0.01	$\pm(2.0\%rdg + 7dgt)$
$10A \leq FS \leq 200$	$0.00 \div 99.99$ $100.0 \div 999.9$	0.01 0.1	
$200A \leq FS \leq 1000$	$0.0 \div 999.9$ $1000 \div 9999$	0.1 1	
$1000A \leq FS \leq 3000$	$0 \div 9999$	1	

Power factor / $\cos\phi$ (@ 230V, $I > 5\%FS$)

Range	Resolution	Accuracy
$0.70c \div 1.00 \div 0.70i$	0.01	$\pm(2.0\%rdg + 3dgt)$

Voltage harmonics (@ 230V in 1Ph systems, 400V in 3Ph systems)

Range [%]	Resolution [%]	Order	Accuracy
$0.1 \div 100.0$	0.1	DC, 01 $\div$ 49	$\pm(5.0\%rdg + 5dgt)$

Frequency of fundamental: 42 $\div$ 69.0 Hz

Harmonics are zeroed at the below conditions:

- > DC : DC value $< 0.5\%$ fundamental value or DC value $< 1.0V$
- > 1° Harmonic: value of 1° Harmonic $< 15V$
- > 2nd $\div$ 49th Harmonics: harmonic value $< 0.5\%$ fundamental value or if value $< 1.0V$

Current harmonics

Range [%]	Resolution [%]	Order	Accuracy
$0.1 \div 100.0$	0.1	DC, 01 $\div$ 49	$\pm(5.0\%rdg + 5dgt)$

Frequency of fundamental: 42 $\div$ 69.0 Hz

Harmonics are zeroed at the below conditions:

- > DC : DC value $< 0.5\%$ fundamental value or DC value $< 0.5\%FS$ clamp
- > 1° Harmonic: value of 1° Harmonic $< 0.5\%FS$ clamp
- > 2nd $\div$ 49th Harmonics: harmonic value $< 0.5\%$ fundamental value or if value $< 0.5\%FS$ clamp

Voltage anomalies (L-N, L-PE)

Range [V]	Resolution [V]	Resolution [ms]	Accuracy [V]	Accuracy [ms]
$15.0 \div 380$	0.2	20ms	$\pm(1.0\%rdg + 2dgt)$	$\pm 1cycle$

Voltage anomalies (L-L)

Range [V]	Resolution [V]	Resolution [ms]	Accuracy [V]	Accuracy [ms]
$15.0 \div 660$	0.2	20ms	$\pm(1.0\%rdg + 2dgt)$	$\pm 1cycle$



3. GENERAL SPECIFICATIONS

DISPLAY AND MEMORY:

Features:	TFT, touch screen, color graphic LCD, 320x240mm
Memory AUX, LEAKAGE section:	999 locations, 3 marker levels
Memory PQA section:	8MB (not expanded)
Communication:	Optical-USB and built-in WiFi
Aggregation time (IP) PQA feature:	2s ÷ 30min selectable
Parameters saved PQA feature:	approx. 600
Recording autonomy PQA feature:	approx. 30days (@IP=10min, all parameters)

POWER SUPPLY:

Batteries:	6 x 1.2V(rechargeable) type AA or 6 x 1.5V type AA
Recording autonomy:	approx 43 days (IP=15min) approx 2 days (IP=1min) approx 2 hours (IP=2s)
Recharging time:	approx. 12 hours
External charger:	100-240VAC, 50/60Hz / 15VDC, CAT IV 300V
Auto Power OFF:	after 5 min of idleness (disabled)

MECHANICAL FEATURES:

Dimensions (L x W x H):	225 x 165 x 75mm (9 x 6 x 3in)
Weight (included batteries):	1.2kg (42 ounces)
Mechanical protection:	IP40

WORKING ENVIRONMENTAL CONDITIONS:

Reference temperature:	23°C ± 5°C (73°F ± 41°F)
Working temperature:	0°C ÷ 40°C (32°F ÷ 104°F)
Allowed relative humidity:	<80%RH
Storage temperature:	-10°C ÷ 60°C (14°F ÷ 140°F)
Storage humidity:	<80%RH
Max height of use:	2000m (6562ft)

GENERAL REFERENCE STANDARDS:

Safety of measuring instruments:	IEC/EN61010-1, IEC/EN61010-031, IEC/EN61010-2-032
Product type standard :	IEC/EN61557-1
EMC :	IEC/EN61326-1
Technical documentation :	IEC/EN61187
Insulation :	double insulation
Pollution degree:	2
Measurement category:	CAT IV 300V to ground, CAT III 350V to ground max 600V between inputs

TEST VERIFIES REFERENCE STANDARDS:

Power quality:	EN50160
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This instrument complies with the requirements of the European Low Voltage Directives 2014/35/EU (LVD) and EMC 2014/30/EU and Directive RED 2014/53/EU
This instrument complies with the requirements of the European 2011/65/EU (RoHS) and with the requirements of the European 2012/19/EU (WEEE)





VEGA74

Rel 2.00 of 16/07/24

Professional quality and environmental analyzer

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

WHERE
WE ARE

