



Ghost voltage cancellation.



Non-trip earth ground resistance measurement.



Leakage current measurement.



Inrush Current measurement.



Measurement comparison: 3.9A: with RMS clamp - 4.7A: with TRMS clamp
6.1A: correct reading with AC+DC TRMS clamp.

Standard accessories

- **C2065** Three wire cable Red, Black, Green with Shuko plug
- **4324-2** Pair of test tips Red/Black 2/4mm straight banana
- **YABAT0001HTO** Alkaline battery 1.5V, type AAA, IEC LR03, 4 pcs
- **YABRS0002HTO** Carrying bag
- **YAMUM0066HTO** User manual on CD-ROM
- **YAMUM0065HTO** Quick reference guide
- **Calibration certificate** ISO9000

The standard accessories can be different depend on countries.

Technical specifications

DC Voltage

Measurement range: 0.0V ÷ 690.0V
Resolution: 0.1V
Accuracy: ±(0.5%reading + 2digits)

AC TRMS, DC, AC+DC TRMS, LoZ Voltage

Measurement range: 0.5V ÷ 690.0V
Frequency range: 32Hz ÷ 1kHz
Resolution: 0.1V
Accuracy: ±(0.5%reading + 2digits)

AC TRMS Current with Flexible clamp F3000U

Measurement range: 1A ÷ 3000A
Basic resolution: 0.01A
Accuracy: ±(0.5%reading + 2digits)

AC TRMS, DC, AC+DC TRMS Current with Standard clamp

Measurement range: 1mV ÷ 1000mV
Resolution: 1mV
Accuracy: ±(0.5%reading + 2digits)

Inrush current (DIRC) - Flexible clamp F3000U

Measurement range: 1A ÷ 3000A
Basic resolution: 0.01A
Frequency range: 42.5Hz ÷ 69Hz
Accuracy: ±(2.0%reading + 2digits)
Peak response time: 1ms
Max RMS response times: 16.6ms, 20ms, 50ms, 100ms, 150ms, 175ms, 200ms

Inrush current (DIRC) - Standard clamp

Measurement range: 1mV ÷ 1000mV
Resolution: 1mV
Frequency range: 42.5Hz ÷ 69Hz
Accuracy: ±(2.0%reading + 2digits)
Peak response time: 1ms
Max RMS response times: 16.6ms, 20ms, 50ms, 100ms, 150ms, 175ms, 200ms

Resistance and Continuity test

Measurement range: 0.0Ω ÷ 1999Ω
Basic resolution: 0.1Ω
Accuracy: ±(1.0%reading + 5digits)
Buzzer sound: R<30Ω

Voltage / Current Harmonics

Harmonic order: DC, 1st ÷ 25th + THD%
Frequency range: 42.5Hz ÷ 69Hz
Resolution: 0.1V / 0.1A
Basic accuracy: ±(5.0%reading + 10digits)

Phase rotation test with 1-wire method

Measurement range: 100V ÷ 690V
Frequency range: 42.5Hz ÷ 69Hz

Optional accessories

- **F3000U** AC flexible clamp with 30/300/3000A full scales
- **HT96U*** AC current clamp with 1/100/1000A full scales
- **HT97U*** AC current clamp with 10/100/1000A AC full scales
- **HT98U*** DC current clamp with 1000A full scale
- **HT4006** AC/DC current clamp with 40/400A full scales
- **NOCANBA** Hypertac-to-banana adapter

* Adapter NOCANBA required.

Test on RCD protection devices

RCD type: AC, A, General
Trip-out time measurement (ms) / Trip-out current measurement (mA)
L-PE voltage range: 100V ÷ 690V
Frequency range: 42.5Hz ÷ 69Hz
Trip-out time measurement: IΔN selectable among 30mA, 100mA, 300mA
Trip-out current measurement for IΔN of 30mA

Overall earth resistance without RCD tripping

L-PE voltage range: 100V ÷ 690V
Frequency range: 42.5Hz ÷ 69Hz
Test current: <15mA
Measurement range: 1Ω ÷ 1999Ω
Resolution: 1Ω
Accuracy: 5.0%reading + 3Ω

L-N, L-L, L-PE Loop / Line Impedance

L-PE, L-N voltage range: 100V ÷ 690V
Frequency range: 42.5Hz ÷ 69Hz
Test current: 100mA
Measurement range: 0.1Ω ÷ 199.9Ω
Basic accuracy: ±(5.0%reading + 3digits)

General specifications

General characteristics

Instrument safety: IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033

EMC: IEC/EN61326-1
RCD test: IEC/EN61557-6
Loop L-L, L-N, L-PE, Ra test: IEC/EN61557-3
Phase rotation test: IEC/EN 61557-7
Insulation: double insulation
Pollution degree: 2
Measurement category: CAT IV 600V, CAT III 690V to ground and between inputs

Mechanical characteristics

Dimensions (L x W x H): 175 x 85 x 55mm
Weight (batteries included): 420g
Mechanical protection: IP40

Power supply

Battery type: 4x1.5V alkaline type AAA IEC LR03
Auto Power OFF: after 15min of idleness

Display

Display type: 4 LCD, max 9999 counts, sign, decimal point
backlight and bargraph, polarity indication
Frequency rate: 2times/s



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photo grafica bsh_JUPITER_Est-00



You might think I am just a multimeter...



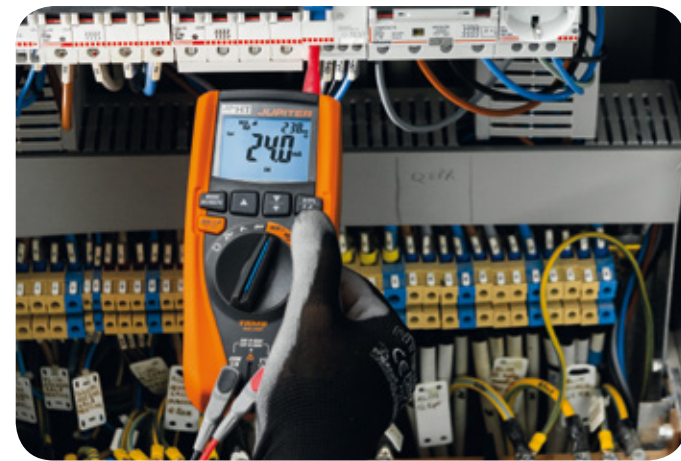
- > **Autorange** measurements with automatic AC/DC detection.
- > **DC, AC TRMS, AC+DC TRMS voltage** up to **690V**.
- > **Low impedance voltage input** to eliminate ghost voltage readings.
- > **DC, AC TRMS, AC+DC TRMS current** by means of external transducer.
- > **Frequency** of voltage and/or current.
- > **Resistance and continuity with buzzer**.
- > **MIN/MAX/PEAK/HOLD** functions.
- > **6000 counts**.



TRMS AC+DC current measurement.



AC current measurement with flexible transducer F3000U.



RCD tripping time and current measurement.



Current harmonic measurement.

My name is Jupiter. Why to choose me? Just because I am out of this world.

- > I am **the only multimeter** capable of testing the **electrical installation safety**.
- > I **compare** each measure with the **limits** provided by the **guidelines**, so to provide a clear **OK** / **NOT OK** result.
- > My functions are available on **high-end instruments** only.
- > I allow a wide range of external transducers to measure **AC TRMS, DC, AC+DC**, and **inrush current**.
- > I am **Portable, Rugged** and **Compact**.



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... but I have a multifunction soul!

RCD

RCD tripping time and current: full control!

RCD tripping time and current.

- > I can measure the **tripping time of RCDs** type **A** and **AC** up to **300mA**** and the **tripping current of RCDs** type **AC** up to **30mA (RAMP test)**.
- > My **AUTO** function makes everything more immediate: my display will show you the **6 consecutive tests (x1/2, x1, x2, x5, 0°, 180°)** for a full RCD check.
- > I will show you an unequivocal **response OK** or **NOT OK**.

Ra

I'm Jupiter... and I'll show you the Earth.

Non-trip earth ground resistance and Line (Loop) impedance.

Loop

> In **TT** systems I measure the **non-trip earth ground resistance**.

> I can identify **incorrect connections** of the protection cable, I can detect dangerous voltages on the metal masses and I constantly keep under control the **contact voltage** in order to prevent dangerous conditions due to an inefficient earthing system.

> I measure the **Line-to-Neutral, Line-to-Line** and **Line-to-Ground impedance** and I calculate the **prospective short-circuit/fault current**.

H/H%
HARMONICS

Harmonics have no secret for me.

Harmonics and THD%.

- > I measure **voltage and current harmonics** showing both numeric and percentage terms.
- > I measure the **THDV%**, and the **THDI%**
- > My function **H₂O** (Higher Harmonic Ordering) sorts harmonics **showing highest values first**, so you can easily size filters and protections.

H

A

I don't follow a current, I follow them all!

Current measurement.

- > I can measure **DC, AC TRMS, AC+DC TRMS** current by means of external transducer up to **3000A**.
- > With the optional transducer **HT96U***** I can measure the **leakage current**.
- > I can select the time base to measure the **dynamic inrush current** of motors and loads (DIRC function).

Everything in its right... sequence.

Phase sequence.

- > I need just **one lead** to detect the **phase sequence**.

** 30mA, 100mA, 300mA. *** Optional accessory.





1. ELECTRICAL SPECIFICATIONS

Accuracy calculated as [%reading + (num. dgt* resolution)] at 23°C ±5°, <80%HR

DC VOLTAGE (Autorange)

Range [V]	Resolution [V]	Accuracy	Input impedance	Overload protection
0.0 ÷ 690.0	0.1	±(0.5%rdg + 2dgt)	1MΩ	690VDC/ACrms

AC, AC+DC, LoZ TRMS VOLTAGE (Autorange)

Range [V]	Resolution [V]	Frequency range	Accuracy	Overload protection
0.5 ÷ 690.0	0.1	32Hz ÷ 1kHz	±(0.5%rdg + 2dgt)	690VDC/ACrms

Input impedance VAC function: 1MΩ, Input impedance LoZ function: 3.5kΩ

Auto detection DC mode, Max crest factor: 1.5

VOLTAGE/CURRENT FREQUENCY (Autorange)

Range [Hz]	Resolution [Hz]	Accuracy
33.00 ÷ 99.99	0.01	±(0.1%rdg+1dgt)
100.0 ÷ 999.9	0.1	

Voltage range: 0.5V ÷ 690V, Current range: 0.5A ÷ 3000A (Flex clamp F300U), 1mV ÷ 1000mV (STD Clamp)

DC, AC, AC+DC CURRENT (STANDARD RIGID CLAMP) - (Autorange)

Range [mV]	Resolution [mV]	Accuracy
1 ÷ 1000	1	±(0.5%rdg + 2dgt)

Max crest factor: 3, Frequency bandwidth: 1kHz

AC TRMS CURRENT (FLEXIBLE CLAMP F3000U) - (Autorange)

Range [mV]	Resolution [mV]	Accuracy
1 ÷ 3000	1	±(0.5%rdg + 2dgt)

Max crest factor: 3, Frequency bandwidth: 1kHz

INRUSH CURRENT - DC, AC, AC+DC TRMS (STANDARD RIGID CLAMP)

Range [mV]	Resolution [mV]	Accuracy (*)
1 ÷ 1000	1	±(2%rdg + 2dgt)

(*) Accuracy declared for frequency: DC, 42.5 ÷ 69Hz

Max crest factor: 3

Sample frequency: 4kHz

Response time: 1ms (Peak), 16.7ms, 20ms, 50ms, 100ms, 150ms, 200ms (max RMS value)

INRUSH CURRENT - AC TRMS (FLEXIBLE CLAMP F3000U)

Range [mV]	Resolution [mV]	Accuracy (*)
1 ÷ 3000	1	±(2%rdg + 2dgt)

(*) Accuracy declared for frequency: DC, 42.5 ÷ 69Hz

Max crest factor: 3

Sample frequency: 4kHz

Response time: 1ms (Peak), 16.7ms, 20ms, 50ms, 100ms, 150ms, 200ms (max RMS value)

RESISTANCE AND CONTINUITY TEST (Autorange)

Range [Ω]	Resolution [Ω]	Accuracy	Buzzer
0.0 ÷ 199.9	0.1	±(1.0%rdg + 5dgt)	<30Ω
200 ÷ 1999	1		

HARMONIC VOLTAGE AND CURRENT – (Autorange)

Harmonic order	Fundamental frequency	Resolution	Accuracy (*) (not zeroed values)
DC	42.5Hz ÷ 69Hz	0.1V / 0.1A / 0.1%	±(5.0%rdg+20dgt)
1 ÷ 25			±(5.0%rdg+10dgt)
THD%		0.1%	±(10.0%rdg+10dgt)

Accuracy of harmonics amplitudes expressed in % is evaluated considering the accuracy of parameters ratio

(*) Harmonic voltages are zeroed in the followed conditions:

- 1° harmonic: value <0.5V
- DC, 2° to 25° harmonics: harmonic value <0.5% fundamental value or value <0.5V

(*) Harmonic currents are zeroed in the followed conditions:

- 1° harmonic: value <0.5A
- DC, 2° to 25° harmonics: harmonic value <0.5% fundamental value or value <0.5A

LOOP IMPEDANCE L-N, L-L, $R_{a\downarrow}$, $R_{a\downarrow}RCD$ (NO RCD TRIPPING)

L-PE, L-N, L-L Voltage range: 100V ÷ 690V, 42.5 ÷ 69Hz

Test current : (see below table)

Test	Test current	Range [Ω]	Resolution [Ω]	Accuracy
$R_{a\downarrow}RCD$	15mA	1 ÷ 1999	1	-0%, +(5.0% rdg + 3 Ω)
L-N, L-L, $R_{a\downarrow}$	100mA	0.1 ÷ 199.9	0.1	-0%, +(5.0% rdg + 3 Ω)

RCD TESTS (INSTANTANEOUS MOLDED CASE TYPE)


 RCDs type: AC () , A () , General (G)

L-PE, L-N Voltage range: 100V ÷ 690V, 42.5 ÷ 69Hz

 Rated tripping current (I Δ N): 30mA, 100mA, 300mA (see below table)

Tripping time: resolution: 1ms, accuracy: ±(2.0%rdg + 2dgt)

**Tripping times for Molded case RCD
(n.a. = not available function)**

		x 1/2 G	x 1 G	x 5 G	 G	AUTO G		
30mA	AC	300	310	40	310	x1	x5	x½
	A	300	310	40	310	x1	x5	x½
100mA	AC	300	310	n.a.	n.a.	x1	x½	
	A	300	310	n.a.	n.a.	x1	x½	
300mA	AC	300	310	n.a.	n.a.	x1	x½	
	A	300	310	n.a.	n.a.	x1	x½	

Possible combinations and tripping time duration [ms]

TRIPPING CURRENT (Ramp )

Type	I Δ N	Ramp [LCD]	Current value [mA RMS @20ms]	Accuracy
AC	30mA	6.0, 6.5, 7.0 .. 32.5, 33.3	6.0, 6.5, 7.0 .. 32.5, 33.0	- 0%, +5%I Δ N
A	30mA	6.0, 6.5, 7.0 .. 32.5, 33.3	8.5, 9.2, 9.9 .. 46, 46.7	- 0%, +5%I Δ N

PHASE SEQUENCE ROTATION WITH 1-WIRE METHOD (*)

Voltage range [V]	Frequency range
100 ÷ 690	42.5 ÷ 69Hz

(*) Measurement is only carried out by direct contact with metal live parts (not on insulation sheath).



2. GENERAL SPECIFICATIONS

Display:

- 4 LCD, (max 9999 counts), sign, decimal point and bargraph
- Automatic polarity indication
- Backlight
- Refresh frequency: 2/s
- Conversion: TRMS

Features:

- Data HOLD
- MAX/MIN
- PEAK (Voltage and Current), response time = 1ms
- Autorange
- Automatic detection of AC/DC signals
- Auto Power OFF after 15 minutes of idleness

Power supply:

- 4x1.5V alkaline batteries type AAA IEC LR03
- Battery life:
 - V, A, Ω , → approx 132h (backlight OFF)
 - V, A, Ω , → approx 68h (backlight ON)
 - Ra (15mA) → approx 5400 test (backlight ON)
 - Ra (100mA) → approx 13k test (backlight ON)
 - RCD → approx 8600 test (backlight ON)
 - RCD T → approx 160k test (backlight ON)

Mechanical specifications:

- Dimensions (L x W x H): 175 x 85 x 55mm
- Weight (included batteries): 420g
- Mechanical protection: IP40

Environmental conditions:

- Reference temperature: 23°C ± 5°C
- Working temperature: 5°C ÷ 40°C
- Working humidity: <80%RH
- Storage temperature: -20°C ÷ 60°C
- Storage humidity: <80%RH
- Max height of use: 2000m

Reference guidelines:

- Safety: IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033
- RCD test: IEC/EN61557-6
- LOOP P-P, P-N, P-PE, Ra test: IEC/EN61557-3
- Phase sequence rotation: IEC/EN 61557-7
- EMC: IEC/EN61326-1
- Insulation: double insulation
- Pollution degree: 2
- Category of measure: CAT IV 600V, CAT III 690V to ground and between inputs

This product conforms to the prescriptions of the European directive on low voltage 2014/35/EU and to EMC directive 2014/30/EU

This product conforms to the prescriptions of the European directive 2011/65/EU (RoHS) and the European directive 2012/19/EU (WEEE)