Instruments

HellermannTyton

JUPITER

Multifunction Multimeter

Features

- TRMS
- AC/DC voltage up to 690V with LoZ input
- Frequency
- Autorange of AC/DC signals
- Automatic polarity indication
- One-lead Phase sequence detection
- PSSC calculation
- Dynamic Inrush currents of motors.
- Tripping time and current of RCDs up to 300mA
- THD% Calculation up to 25th Harmonic
- Earth Ground resistance L-N, L-L, L-E
- 6000 counts

CAT IV 600V

TRMS

1. ELECTRICAL SPECIFICATIONS

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

DC VOLTAGE (Autorange)

Range [V]	Resolution [V]	Accuracy	Imput impedance	Overload protection
0.0 - 690.0	0.1	±0.5% + 2 Digit	1MΩ	690VDC/ACrms

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

Range [V]	Resolution [V]	Frequency range	Accuracy	Overload protection
0.0 - 690.0	0.1	32Hz - 1kHz	0.5%+ 2 Digit	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 + 1 Digit
100.0 · 999.9	0.1	

Voltage range: 0.5V - 690V, Current range: 1mV - 1000mV (STD Clamp)

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

Range [mV]	Resolution [mV]	Accuracy
1 - 1000	1	±0.5% + 2 Digit

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% + 2 Digit

(*) 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% + 5 Digit	<30Ω
200 - 1999	1		

HARMONIC VOLTAGE AND CURRENT – (Autorange)

Harmonic order	Fundamental frequency	Resolution	Accuracy
DC	42.5Hz - 69Hz	0.1V / 0.1A /0.1%	±5.0% + 20 Digit
1 - 25			±5.0% + 10 Digit
THD%		0.1%	±10.0% + 10 Digit

Accuracy of harmonics amplitudes expressed in % is evaluated per 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, RA⏚, RA 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
Ra⏚RCD	15mA	1 - 1999	1	-0%, +5.0% + 3Ω
L-N, L-L, Ra⏚	100mA	0.1 · 199.9	0.1	-0%, +5.0% + 3Ω

RCD TESTS (INSTANTANEOUS MOLDED CASE TYPE)

RCDs type: AC (∿), A (⏦),General (G)
L-PE, L-N Voltage range: 100 - 690V, 42.5 - 69Hz
Rated tripping current: 30mA, 100mA, 300mA (see below table)
Tripping time: resolution: 1ms, accuracy: ±2.0% + 2 Digit

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△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△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△N

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

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. MODEL SPECIFICATION

Power Source	4 x 1.5V AAA Batteries
Standard Accessories	Three wire cable Red, Black, Green with Shuko plug, pair of test test tips
Certificates	IEC/EN61010-1, IEC/EN61010-2-030, IEC/EN61010-2-033, IEC/EN61326-1,

Not Just a Multimeter....

- Compares measurements with limits provided by the guidelines to provide a clear OK/ NOT OK result.
- AC TRMS, DC, AC+DC, and inrush current with external transducers
- Current up to 10A
- MIN/MAX/PEAK/HOLD functions.
- Portable, Rugged and Compact.
- PEAK (Voltage and Current) response time =1ms
- Resistance and continuity with buzzer.
- Auto Power OFF after 15 minutes of idleness
- Backlight display
- Low impedance voltage input to eliminate ghost voltage readings.
- Leakage Current with optional transducer
- Bargraph
- Refresh frequency: 2/s
- Ghost voltage cancellation
- One lead required to detect the phase sequence

Inrush Current measurement

Ghost voltage cancellation

RCD Tripping time and current

- 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).
- AUTO function display will show all 6 consecutive tests (x1/2, x1, x2, x5, 0°, 180°) for a full RCD check.
- Shows an unequivocal response OK or NOT OK.

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

- In TT systems it measures the non-trip earth ground resistance.
- identifies incorrect connections of the protection cable, detects dangerous voltages on the metal masses and constantly keep under control the contact voltage
- Measure the Line-to-Neutral, Line-to-Line and Line-to-Ground impedance and calculates the prospective short-circuit/fault current.

Harmonics and THD%.

- Measures voltage and current harmonics showing both numeric and percentage terms.
- Measures the THDV%, and the THDI%
- The H20 (Higher Harmonic Ordering) function sorts harmonics showing highest values first, so you can easily size filters and protections.

Current Measurement

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

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