

METRAVOLT VT 1500

Voltage and Continuity Tester, Ohmmeter with Phase and Phase Sequence Testing, RCD Test

3-447-087-03

1/10.20

- **Voltage tester:** Nominal voltage range
0 ... 1000 V AC / 1500 V DC at frequencies of up to 2 kHz
- **Frequency range:** 16.7 Hz ... 10 kHz < 500 V
16.7 Hz ... 2 kHz > 500 V
- **Display range:** 0.03 V ... 1500 V DC
0.15 V ... 1200 V AC
- **Resistance and continuity tester:** 0.00 ... 999 k Ω , green LED for continuity, buzzer \leq 1.00 k Ω for 5 seconds
- **Phase tester:** With "POL" displays and LED
- **Phase sequence tester:** Yellow LEDs for counterclockwise and clockwise rotation
- **Illuminated display:** Red display illumination for dangerous voltage of greater than 50 V AC / 120 V DC
- Electrode length adjustment: 4 mm / 16 mm
- Measuring point illumination
- Load connection: 40 mA for 10 seconds
- RCD quick test up to 30 mA at 230 V
- Testing for interference voltage
- Meter start-up test



CE

CAT IV

Applications

The METRAVOLT VT 1500 is a 2-pole voltage tester with digital display combined with an integrated continuity, phase and phase sequence tester. It permits safe detection and measurement of AC and DC voltages within a range of 0 to 1000 V AC / 1500 V DC at frequencies of up to 2 kHz.

Resistance within a range of 0 to 999 k Ω can also be measured with the integrated continuity tester. Voltage and resistance values appear in digital format at the LCD.

LEDs and red display illumination also indicate dangerous contact voltage and phase sequence.

Features

Fully Automated Measuring Sequence

The voltage tester is switched on automatically as soon as a voltage of at least 12 V is applied. The respective voltage measuring range and the voltage type are selected automatically.

In the event that interference voltages of greater than 12 V are detected, the instrument switches automatically from the continuity test to the voltage test.

The instrument is switched off automatically approximately 30 seconds after the last measurement in order to extend battery life.

Measured Value Storage

The displayed measured value can be "frozen" at the LCD by pressing the **HOLD** key.

Self-Test and Battery Monitoring

The self-test checks all display elements and instrument functions. A signal is generated automatically if the battery requires replacement.

Battery Display

The battery's momentary charge level is shown at the display by means of a 3-step indicator.

Rugged Housing

The impact-resistant, dust-proof housing makes the instrument virtually indestructible. The display is protected by means of an unbreakable cover. The instrument can be used in the rain thanks to IP 65 protection.

High Safety Levels

Excellent electrical safety is achieved by means of series resistors integrated into both test probes.

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Applicable Regulations and Standards

IEC 61243-3:2014 + Corr.:2015 DIN EN 61243-3 VDE 0682-401:2015-08	Live working – Voltage detectors – Part 3: Two-pole low-voltage type
DIN EN 60529 VDE 0470-1	Test instruments and test procedures – degrees of protection provided by enclosures (IP code)
DIN EN 61326-1 VDE 0843-20-1	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements

Technical Data

Meas. Qty.	Measuring Range ² (auto-ranging)	Resolution	Frequency Range	Intrinsic Uncertainty
U _–	0.10 V ... 19.99 V 20.1 V ... 99.9 V 100 V ... 1500 V	0.01 V 0.1 V 1 V	—	± (1% rdg. + 3 d) ± (1% rdg. + 3 d) ± (1% rdg. + 3 d)
U _~ TRMS	0.10 V ... 19.99 V 20.1 V ... 99.9 V 100 V ... 1200 V		< 500 Hz	± (1% rdg. + 3 d) ± (1% rdg. + 3 d) ± (1% rdg. + 3 d)
U _~ ¹⁾	0.10 V ... 19.99 V 20.1 V ... 99.9 V 100 V ... 1200 V		> 500 Hz:	± (10% rdg. + 3 d)
R	0 ... 999 kΩ	1 kΩ	—	± (5% rdg. + 5 d)

¹⁾ TRMS value, sinusoidal

²⁾ Display as of 0.0 V

Key: rdg. = reading (measured value)

Nominal Conditions of Use

Nominal voltage range	0 ... 1000 V AC / 1500 V DC (auto on as of 12 V)
Overvoltage range (over limit per IEC 61243-3)	> 1000 V AC ... 1200 V AC
Nominal frequency range	16.7 Hz ... 10 kHz < 500 V 16.7 Hz ... 2 kHz > 500 V
Input resistance	Approx. 317 kΩ at 50 V / 50 Hz Approx. 200 kΩ at 1000 V AC Approx. 589 kΩ at 1000 V DC
Current crest value	3.5 mA at 1000 V unswitched < 300 mA at 1000 V switched
On-time t _{on} / Recovery time t _{off}	At 230 V / 400 V unlimited At U _N 2 min. t _{on} / 2 min. t _{off}



Indication of Voltage / Phase / Phase Sequence

Red LED	For voltage
Yellow LED	For phase sequence
2-color backlit LCD	
7-segment characters, 2 lines, 0 ... 1999 digits	

Indication of Resistance / Continuity / Diodes

Green LED	For continuity up to 999 kΩ and diodes
3½-place LCD	For measured kΩ value

LCD

2-color with illumination, backlit

White: Display of voltage value and frequency, extra-low voltage of less than 50 V AC / 120 V DC

Red: Display of voltage value and frequency with symbol, dangerous voltages of greater than 50 V AC / 120 V DC

Display range 0 ... 1999 digits

Power Supply

Battery	2 ea. 1.5 V AAA LR03, auto-off after 30 s without measurement
Battery indicator	Multistep battery level display

Electrical Safety

Measuring category	CAT IV 1000 V per IEC 60664-1 (VDE 0110)
Surge voltage withstand	> 19.2 kV for housing insulation / user > 12.0 kV for circuit between the test probes
Insulation test voltage	6 kV / 5 s – routine test, housing and cable

Electromagnetic Compatibility

EMC directive	2014/30/EU
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Ambient Conditions

Operating temperature	–15 °C ... + 55 °C
Relative humidity	Max. 85%
Elevation	Max. 2000 m

Mechanical Design

Protection	IP 65
Housing	Impact-resistant, dust-proof plastic housing with unbreakable display cover ABS/PC/TPE, snap-in handle, belt clip
Cable	PUR sheathed cable, 1000 V, 1 m, with protective cap
Dimensions	275 x 89 x 35 mm (handle and display unit) 275 x 60 x 35 mm (display unit)
Weight	270 g (including battery)

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Scope of Delivery

- 1 Voltage tester
- 1 Set of operating instructions
- 2 Battery

Order Information

Designation	Type	Article No.
Voltage and continuity tester, ohmmeter with phase and phase sequence testing, RCD test	METRAVOLT VT 1500	M630P

METRAVOLT VT 1500

Voltage and Continuity Tester, Ohmmeter
with Phase and Phase Sequence Testing, RCD Test

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