

VOLTCRAFT

VOLTCRAFT – TOP PERFORMANCE IN EVERY WAY

For more than 40 years, our product range has been dynamically adapting to the constant changes in the industry. We commit to offering first-class quality to our customers while delivering an excellent cost-performance ratio. This philosophy remains the cornerstone of Voltcraft's success.

VC252 DIGITAL MULTIMETER

UK
CA CE

Item no. 2576861

A robust CAT III 600 V digital multimeter for professional, industrial and do-it-yourself applications.

FEATURES

- CAT III 600 V measuring category
- Complies with EN 61010-1 and EN 61010-2-033
- Measures direct and alternating voltages up to 600 V
- Measures direct and alternating currents up to 10 A
- Measures frequency from 10 Hz to 10 MHz (max. 20 Vrms)
- Measures capacitance up to 40 mF
- Measures resistances up to 40 M Ω
- Continuity tests (<10 Ω acoustic)
- Diode tests



TECHNICAL DATA

| | |
|--------------------------------|--|
| Display | 4000 Counts (digits) |
| Measurement interval | approx. 2-3 measurements/second |
| AC measurement method | True RMS, AC-coupled |
| Test lead length | approx. 90 cm |
| Measuring impedance | ≥10 MΩ (400 mV: ≥100 MΩ) |
| Measuring terminal clearance | 19 mm (COM-V) |
| Low battery indicator | Battery voltage <3.6 ±0.2 V |
| “Dangerous voltage” indicator | ≥30 V/AC-DC |
| “Range exceeded” alarm | ≥600 V/AC-DC, ≥10 A/AC-DC |
| “OL” (overload) alarm | ≥610 V/AC-DC, ≥10,10 A/AC-DC or measurement >4000 counts |
| Automatic power-off | after approx.15 minutes (can be manually disabled) |
| Current consumption (auto off) | <50 μA |
| Operating voltage | 3 x AAA 1.5 V batteries |
| Operating conditions | 0 to +40 °C (<75 % RH) |
| Operating altitude | max. 2000 m above sea level |
| Storage temperature | -10 °C to +50 °C |
| Weight | approx. 375 g |
| Dimensions (L x W x H) | 190 x 90 x 43 mm |
| Measuring category | CAT III 600 V |
| Pollution degree | 2 |
| Operating environment | Indoor use |
| Safety regulations | EN 61010-1 and EN61010-2-033 |
| F1 FUSE | ø6.35×32 mm, FF 10 A, H 600 V, breaking capacity: 10 kA |
| F2 FUSE | ø5×20 mm, FF 2.5 A, H 700V, breaking capacity: min. 300 A |

Direct voltage (V/DC)

| Range | Resolution | Accuracy |
|--|------------|-------------|
| 40.00 mV* | 0.01 mV | ±(1.2% + 8) |
| 400.0 mV* | 0.1 mV | ±(0.9% + 8) |
| 4.000 V | 0.001 V | ±(0.9% + 4) |
| 40.00 V | 0.01 V | |
| 400.0 V | 0.1 V | |
| 600 V | 1 V | ±(1.3% + 7) |
| Only available in “mV” mode Specified measuring range: 5–100 % of the measuring range 600 V overload protection; Impedance: 10 MΩ (mV: ≤100 MΩ) The multimeter may display ≤5 counts if a measuring input is short-circuited. | | |

Direct voltage (V/DC) LoZ

| Range | Resolution | Accuracy |
|--|------------|-------------|
| 4.000 V | 0.001 V | ±(1.7% + 7) |
| 40.00 V | 0.01 V | |
| 400.0 V | 0.1 V | |
| 600 V | 1 V | |
| Specified measuring range: 5–100 % of the measuring range 600 V overload protection; Impedance: 400 kΩ (max. 250 V, 3 secs) The multimeter may display ≤5 counts if a measuring input is short-circuited. After using the LoZ feature, leave the multimeter for 1 minute before using it again. | | |

Alternating voltage (V/AC)

| Range | Resolution | Accuracy |
|---|------------|-------------|
| 40.00 mV | 0.01 mV | ±(1.4% + 5) |
| 400.0 mV | 0.1 mV | |
| 4.000 V | 0.001 V | ±(1.3% + 4) |
| 40.00 V | 0.01 V | |
| 400.0 V | 0.1 V | |
| 600 V | 1 V | ±(1.9% + 7) |
| Only available in "mV" mode Specified measuring range: 5–100 % of the measuring range Frequency range: 45–400 Hz; 600 V overload protection; Impedance: 10 MΩ (mV: ≤100 MΩ) The multimeter may display 5 counts if a measuring input is short-circuited. | | |
| TrueRMS peak (Crest Factor (CF)) ≤3 CF to 600 V TrueRMS peak for non-sinusoidal signals plus tolerance CF >1.0 - 2.0 + 3% CF >2.0 - 2.5 + 5% CF >2.5 - 3.0 + 7% | | |

Alternating voltage (V/AC) LoZ

| Range | Resolution | Accuracy |
|---|------------|-------------|
| 4.000 V | 0.001 V | ±(2.2% + 7) |
| 40.00 V | 0.01 V | |
| 400.0 V | 0.1 V | |
| 600 V | 1 V | |
| Specified measuring range: 5–100 % of the measuring range Frequency range: 45–400 Hz; 600 V overload protection; Impedance: 10 MΩ (mV: ≤100 MΩ) The multimeter may display 5 counts if a measuring input is short-circuited. After using the LoZ feature, leave the multimeter for 1 minute before using it again. | | |
| TrueRMS peak (Crest Factor (CF)) ≤3 CF to 600 V TrueRMS peak for non-sinusoidal signals plus tolerance CF >1.0 - 2.0 + 3% CF >2.0 - 2.5 + 5% CF >2.5 - 3.0 + 7% | | |

Direct current (A/DC)

| Range | Resolution | Accuracy |
|---|------------|-------------|
| 400.0 μA | 0.1 μA | ±(0.9% + 7) |
| 4000 μA | 1 μA | |
| 40.00 mA | 0.01 mA | |
| 400.0 mA | 0.1 mA | |
| 4.000 A | 0.001 A | ±(1.3% + 7) |
| 10.00 A | 0.01 A | ±(1.5% + 7) |
| 600 V overload protection Fuses: μA/mA = 2x 0.55 A/240 V resettable, 1x F2 2.5 A/700 V ceramic 10 A = High-performance FF 10 A/600 V ceramic fuse ≤ 6 A = continuous measurement, >6 A = max. 30 secs at intervals of 15 minutes The multimeter may display 3 counts when a measuring input is open | | |

Alternating current (A/AC)

| Range | Resolution | Accuracy |
|---|-------------|------------------|
| 400.0 μ A | 0.1 μ A | $\pm(1.3\% + 4)$ |
| 4000 μ A | 1 μ A | |
| 40.00 mA | 0.01 mA | |
| 400.0 mA | 0.1 mA | |
| 4.000 A | 0.001 A | $\pm(1.5\% + 4)$ |
| 10.00 A | 0.01 A | $\pm(1.8\% + 7)$ |
| 600 V overload protection Fuses: μ A/mA = 2x 0.55 A/240 V resettable, 1x F2 2.5 A/700 V ceramic 10 A = High-performance FF 10 A/600 V ceramic fuse ≤ 6 A = continuous measurement, >6 A = max. 30 secs at intervals of 15 minutes The multimeter may display 3 counts when a measuring input is open | | |
| TrueRMS peak (Crest Factor (CF)) ≤ 3 CF over the entire range TrueRMS peak for non-sinusoidal signals plus tolerance CF $>1.0 - 2.0$ + 3% CF $>2.0 - 2.5$ + 5% CF $>2.5 - 3.0$ + 7% | | |

Resistance

| Range | Resolution | Accuracy |
|---|------------------|------------------|
| 400.0 Ω^* | 0.1 Ω | $\pm(1.3\% + 4)$ |
| 4.000 k Ω^* | 0.001 k Ω | $\pm(1.2\% + 7)$ |
| 40.00 k Ω | 0.01 k Ω | |
| 400.0 k Ω | 0.1 k Ω | |
| 4.000 M Ω | 0.001 M Ω | $\pm(1.5\% + 4)$ |
| 40.00 M Ω | 0.01 M Ω | $\pm(2.7\% + 7)$ |
| 600 V overload protection Measuring voltage: Approx. 1.0 V, measuring current approx. 0.7 mA *Accuracy for measuring range $\leq 400 \Omega$ was calculated after deducting lead resistance from the REL function | | |

Capacitance

| Range | Resolution | Accuracy |
|---|---------------|------------------|
| 4.000 nF | 0.001 nF | $\pm(4.4\% + 9)$ |
| 40.0 nF | 0.01 nF | |
| 400. nF* | 0.1 nF | $\pm(4.4\% + 5)$ |
| 4.000 μ F* | 0.001 μ F | $\pm(4.4\% + 5)$ |
| 40.00 μ F | 0.01 μ F | |
| 400.0 μ F | 0.1 μ F | |
| 4.000 mF | 0.001 mF | |
| 40.00 mF | 0.01 mF | $\pm(7.9\% + 5)$ |
| 600 V overload protection *Accuracy for measuring range ≤ 400 nF only applies when the REL function is used | | |

Frequency "Hz" (electronic)

| Range | Resolution | Accuracy |
|--|------------|------------------|
| ≤ 9.999 Hz* | 0.001 Hz | Not specified |
| 10.00 Hz – 99.99 Hz* | 0.01 Hz | $\pm(0.2\% + 7)$ |
| 100.0 Hz – 999.9 Hz | 0.1 Hz | |
| 1.000 kHz – 9.999 kHz | 0.001 kHz | |
| 10.00 kHz – 99.99 kHz | 0.01 kHz | |
| 100.0 kHz – 999.9 kHz | 0.1 kHz | |
| 1.000 MHz – 9.999 MHz | 0.001 MHz | |
| >10.00 MHz* | 0.01 MHz | Not specified |
| *The specified frequency range is 10.00 Hz - 10 MHz Signal level (without DC component): ≤ 100 kHz: 200 mV – 20 Vrms >100 kHz – <1 MHz: 600 mV – 20 Vrms ≥ 1 MHz – 5 MHz: 600 mV – 20 Vrms ≥ 5 MHz - 10 MHz: 900 mV - 20 Vrms 600 V overload protection | | |

Diode test

| Test voltage | Resolution |
|---|------------|
| Approx. 3.0 V/DC | 0.001 V |
| Overload protection: 600 V; Test voltage: 2 mA. | |

| Range | Load resistance | Resolution | Accuracy |
|---|------------------------|------------|------------------|
| 1.5 V | Approx. 100 Ω | 0.001 V | $\pm(0.9\% + 8)$ |
| 9 V | Approx. 900 k Ω | 0.01 V | |
| 600 V overload protection Fuses: $\mu\text{A}/\text{mA} = 2\text{x } 0.55 \text{ A}/240 \text{ V}$ resettable, 1x F2 2.5 A/700 V ceramic | | | |

Acoustic continuity tester

| Measurement range | Resolution |
|--|--------------|
| 400 Ω | 0.1 Ω |
| $\leq 10 \Omega$ continuous tone; $\geq 100 \Omega$ no tone Overload protection: 600 V Test voltage approx. 1 V Test current $< 1.5 \text{ mA}$ | |

PACKAGE CONTENTS

Digital multimeter // 2x safety test leads with CAT III protective caps // 3x AAA 1.5 V batteries // Operating instructions