

Fluke 28 II Ex Intrinsically Safe True-rms Digital Multimeter

FLUKE®

Features



Intrinsic safety plus regulatory approvals

The 28 II Ex carries Ex certifications from the world's leading certification bodies.

28 II Ex I.S. Certifications

- IECEx Ex ia IIC T4 Gb, Ex ia IIC T130 °C Db, I M1 Ex ia I Ma

28 II Ex safety and regulatory compliance

- ISA-82.02.01
- CAN/CSA-C22.2 No. 61010-1-04 /UL61010-1:2004, and TUV 61010-1:2001
- CE



Extreme ruggedness

The Fluke 28 II Ex is the most rugged IS DMM you can buy.

- A completely sealed, IP67 rated case
- Withstands drops up to 10 feet or 3 meters (with holster)
- Dustproof per IEC60529 IP6x
- Waterproof per IEC60529 IPx7
- Meets IEC Overvoltage Electrical Safety Standard No. 61010-1:2001
 - Measurement Category III, 1000V, Pollution Degree 2
 - Measurement Category IV, 600V, Pollution Degree 2
- Reversible holster for added protection of the display when not in use



All the measurement functions of our most popular industrial DMMs.

One tool equips you with all the testing and troubleshooting power you need wherever you go—inside or outside ATEX zones 1,2,21, or 22. No need to carry different meters for different areas, or worry about crossing through an Ex-required zone with a non-Ex rated instrument.

- 4-1/2 digit mode for precise measurements (20,000 counts)
- True-rms ac voltage and current for accurate measurement on nonlinear signals
- Measures up to 1000V and 10A ac and dc (note that Ex zones require reduced measurements)
- Low pass filter ensures accurate voltage and frequency measurements on variable speed motor drives (VSDs)
- Frequency to 200 kHz and % duty cycle to help you diagnose VSDs and switching power supplies
- Resistance, continuity and diode test
- 10,000 µF capacitance range for components and motor caps
- Conductance measurements for high resistance or leakage tests
- Min/Max-Average and Peak capture to record transients and variations automatically
- Relative mode to remove test lead interference on resistance measurements
- Auto and manual ranging for maximum flexibility
- Input Alert protects you by chirping and flashing "Lead when leads are plugged into the wrong inputs"

Easy to use

Important extras keep you productive all day long in less than optimal conditions.

- Backlit keypad buttons provide extra visibility in poorly lit areas, even when you're wearing full PPE
- Large display digits and 2-level bright white backlight also increases visibility
- Long battery life - 400 hours typical without backlight (Alkaline)
- Optional magnetic hanger for easy setup and viewing while freeing your hands for other tasks

Easy to service in the field

Access to the separate battery compartment makes it easy to change batteries or fuses without jeopardizing instrument calibration.

Specifications

Basic Accuracy Specifications

Accuracy specifications are shown as +/- (% of reading + number of digits)

DC voltage	<ul style="list-style-type: none"> • Range 0.1 mV to 1000 V • Accuracy $\pm 0.05\% + 1$
AC voltage	<ul style="list-style-type: none"> • Range: 0.1 mV to 1000 V • Accuracy: $\pm 0.7\% + 4$
DC current	<ul style="list-style-type: none"> • Range: 0.1 μA to 10 A • Accuracy: $\pm 0.2\% + 4$
AC current	<ul style="list-style-type: none"> • Range: 0.1 μA to 10 A • Accuracy: $\pm 1.0\% + 2$
Resistance	<ul style="list-style-type: none"> • Range: Range: 0.1 Ω to 50 MΩ • Accuracy $\pm (0.2\% + 1)$
Conductance	<ul style="list-style-type: none"> • Range: 60.00 nS • Accuracy: $\pm (1.0\% + 10)$
Diode Test	<ul style="list-style-type: none"> • Range: 2.0 V • Accuracy: $\pm (2.0\% + 1)$
Duty Cycle	<ul style="list-style-type: none"> • Range: 0.0 % to 99.9 % • Accuracy: Within $\pm (0.2\% \text{ per kHz} + 0.1\%)$ for rise times $< 1 \mu$s
Display counts	<ul style="list-style-type: none"> • 6000 counts/19,999 counts in high-resolution mode
Capacitance	<ul style="list-style-type: none"> • Range: 10 nF to 9999 μF • Accuracy: $\pm (1.0\% + 2)$
Frequency	<ul style="list-style-type: none"> • Range: 0.5 Hz to 199.99 kHz • Accuracy: $\pm (0.005\% + 1)$
Temperature	<ul style="list-style-type: none"> • Range: -200 $^{\circ}$C to +1090 $^{\circ}$C (-328 $^{\circ}$F to +1994 $^{\circ}$F) • Accuracy: $\pm (1.0\% + 10) ^{\circ}$C [$\pm (1.0\% + 10) ^{\circ}$F]
Peak Capture	<ul style="list-style-type: none"> • Record transients up to 250 μs
Min/Max/Avg Recording	<ul style="list-style-type: none"> • Display signals up to approximately 100 ms

Safety Specifications

Safety certifications:

ATEX	<ul style="list-style-type: none"> • II 2 G Ex ia IIC T4 Gb • II 2 D Ex ia IIIC T130 $^{\circ}$C Db • I M1 Ex ia I Ma
NEC-500	<ul style="list-style-type: none"> • Class I, Div 1, Groups A-D, 130 $^{\circ}$C
IEEx	<ul style="list-style-type: none"> • Ex ia IIC T4 Gb • Ex ia IIIC T130 $^{\circ}$C Db • Ex ia I Ma
GOST R Ex (Pending)	<ul style="list-style-type: none"> • Overvoltage protection: Measurement Category III, 1000V, Pollution Degree 2 • Measurement Category IV, 600V, Pollution Degree 2 • IP rating: IP67

General Specifications

Power	<ul style="list-style-type: none"> • Three AAA batteries • Battery life: 400 hours
Display	<ul style="list-style-type: none"> • LCD, with backlight
External protection	<ul style="list-style-type: none"> • Rubber holster
Warranty	<ul style="list-style-type: none"> • Three years
Size with holster (HxWxL)	<ul style="list-style-type: none"> • 6.35 cm x 10.0 cm x 19.81 cm (2.5 in x 3.93 in x 7.8 in)
Weight with holster	<ul style="list-style-type: none"> • 698.5 g (1.54 lb)