

FLUKE®

Fluke 28II Ex Intrinsically Safe True-rms Digital Multimeter

Technical Data

Intrinsically Safe. Intrinsically Fluke.

The 28II Ex: the most rugged intrinsically safe digital multimeter in the world.

Now there's one intrinsically safe digital multimeter (DMM) you can use in IIC (gas) Zone 1 and 2 and IIIC (dust) Zone 21 and 22 areas. Whether you work in petroleum, chemical, or pharmaceutical environments, all the test and troubleshooting power you need is packed into the most rugged intrinsically safe (IS) DMM Fluke has ever built. The Fluke 28II Ex is also water-proof, dust-proof and drop-proof. You'll be equipped to handle any situation, inside and outside of hazardous zones, without compromising compliance or measurement performance.

Intrinsically safe

The new 28II Ex certification allows you to carry the most trusted name in DMM's into most Ex rated areas.

Intrinsically rugged

Tested for drops of up to 3 meters (10 feet), waterproof and dustproof (IEC60529, IP67), this completely sealed and extremely rugged DMM survives the roughest treatment in the harshest environments.

Intrinsically reliable

Like all Fluke DMMs, the 28II Ex delivers the accuracy and measurement performance you depend upon to succeed in your work, day after day.



The 28II Ex: the most rugged and reliable intrinsically safe DMM in the world.

Intrinsic safety and regulatory approvals

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

28II Ex I.S. Certifications

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

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

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

All the measurement functions of Fluke's 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/Avg 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 in sub-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.

Basic accuracy specifications

Accuracy specifications are shown as \pm (% of reading + number of digits)

DC voltage	Range: 0.1 mV to 1000 V Accuracy: $\pm 0.05\% + 1$
AC voltage	Range: 0.1 mV to 1000 V Accuracy: $\pm 0.7\% + 4$
DC current	Range: 0.1 μ A to 10 A Accuracy: $\pm 0.2\% + 4$
AC current	Range: 0.1 μ A to 10 A Accuracy: $\pm 1.0\% + 2$
Resistance	Range: 0.1 Ω to 50 M Ω Accuracy: $\pm (0.2\% + 1)$
Conductance	Range: 60.00 nS Accuracy: $\pm (1.0\% + 10)$
Diode Test	Range: 2.0 V Accuracy: $\pm (2.0\% + 1)$
Duty Cycle	Range: 0.0 % to 99.9 % Accuracy: Within $\pm (0.2\% \text{ per kHz} + 0.1\%)$ for rise times $< 1 \mu$ s
Display counts	6000 counts/19,999 counts in high-resolution mode
Capacitance	Range: 10 nF to 9999 μ F Accuracy: $\pm (1.0\% + 2)$
Frequency	Range: 0.5 Hz to 199.99 kHz Accuracy: $\pm (0.005\% + 1)$
Temperature	Range: -200 °C to +1090 °C (-328 °F to +1994 °F) Accuracy: $\pm (1.0\% + 10) \text{ }^\circ\text{C}$ [$\pm (1.0\% + 10) \text{ }^\circ\text{F}$]

Safety specifications

Safety certifications (pending)	ATEX 	II 2 G Ex ia IIC T4 Gb II 2 D Ex ia IIIC T130 °C Db I M1 Ex ia I Ma
	IEXEx 	Ex ia IIC T4 Gb Ex ia IIIC T130 °C Db Ex ia I Ma
Overvoltage protection	Measurement Category III, 1000V, Pollution Degree 2 Measurement Category IV, 600V, Pollution Degree 2	
IP rating	IP67	

General specifications

Power	Three AAA batteries Battery life: 400 hours
Display	LCD, with backlight
Data storage	Peak transient capture 250 μ S Min/Max/Avg, Reading hold
External protection	Rubber holster
Warranty	Three years
Size (HxWxL) with holster	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	698.5 g (1.54 lb)

Ordering information

Fluke 28II Ex Intrinsically Safe True-rms Multimeter



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