FLUKE®

Fluke 28II Ex

Intrinsically Safe True-rms Digital Multimeter

Intrinsically Safe. Intrinsically Fluke.

The 28II Ex: the most rugged intrinsically

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.

FLUKE®

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

USA

- Class I Zone 1 AEx ia IIC T4
- Class II Zone 21 AEx iaD T130°C

USA and Canada

- Class I, Division 1, Groups ABCD
- Class I, Division 2, Groups ABCD
- Class II, Division 1, Groups EFG
- Class III

Australia, New Zealand, Brazil, Russia and European countries

- See "Safety Specifications" on back page

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

Classified to the following standards:

- Intrinsically Safe Apparatus and Associated Apparatus for Use in Class I, II, and III, Division I, Hazardous (Classified) Locations (UL 913, Seventh Edition, Revised 2011/09/23)
- Standard for Explosive Atmospheres – Part 0 – General Requirements (UL 60079-0, Fifth Edition, Issued 2009/10/21)
- UL Standard for Safety Electrical Apparatus for Explosive Gas Atmospheres Part 11: Intrinsic Safety ‚i' (UL 60079-11, Third Edition, Revised 2011/05/05)
- Electrical Apparatus for Use in Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations – General Requirements (ISA 61241-0, Issued: 2006/07/13 (R2006))
- Electrical Apparatus For Use In Zone 20, Zone 21 and Zone 22 Hazardous (Classified) Locations – Protection By Intrinsic Safety ‚id' (ISA 61241-11, Issued: 2007/01/29 (R2011))
- Non-Incendive Electrical Equipment for Use in Class I and II, Division 2 and Class III, Divisions 1 and 2 Hazardous (Classified) Locations (ISA 12.12.01, Issue:2011/01/01)
- Intrinsically Safe and Non-Incendive Equipment for Use in Hazardous Locations; Consumer and Commercial Products; General Instruction No 1 (CSA C22.2 No. 157, Issue: 1992/01/01 (R2012))
- Electrical Apparatus for Explosive Gas Atmospheres Part 0: General Requirements (CSA C22.2 No. 60079-0, Issued: 2007/03/01)
- Electrical Apparatus for Explosive Gas Atmospheres Part 11: Intrinsic Safety "i" (CSA E60079-11, Issued: 2002/03/01 (R2011)
- Enclosures for Use in Class II Groups E, F, and G Hazardous Locations General Instruction No 1 (CSA C22.2 No. 25, 1966/09/01 (R2004)
- Non-Incendive Electrical Equipment for Use in Class I, Division 2 Hazardous Locations; General Instruction No 1 (CSA C22.2 No. 213, Issue: 1987/03/01 (R2004)

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 the IS zones listed above. 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 ± (% of reading + number of digits)

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

General specifications

Power	Three AAA batteries Battery life: 400 hours
Display	LCD, with backlight
Data storage	Peak transient capture 250 µS 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)

Safety specifications

Safety certifications	ATEX	II 2 G Ex ia IIC T4 Gb II 2 D Ex ia IIIC T130 °C Db I M1 Ex ia I Ma
	NEC-500, NEC-505	USA Class I Zone 1 AEx ia IIC T4 Class II Zone 21 AEx iaD T130°C USA and Canada Class I, Division 1, Groups ABCD Class I, Division 2, Groups ABCD Class II, Division 1, Groups EFG Class III Ex ia IIC Temperature Class T4
	IEC Ex	Ex ia IIC T4 Gb Ex ia IIIC T130 °C Db Ex ia I Ma
	GOST	Ex ia IIC T4 Gb X Ex ia IIIC T130°C Db X (IP6X) Ex ia I Ma X
	ANZEx **ANZEx**	Ex ia I Ma
	PCEC	中国石油和化学工业防爆信息网 (pending) China's Explosion-Proof Information Net for Petrol and Chemical Industry Ex ia IIC T4 Gb Ex ia IIIC T130°C DB
	INMETRO	IEx Ex ia IIC T4 Gb
Overvoltage protection	Measurement Category III, 1000V, Pollution Degree 2 Measurement Category IV, 600V, Pollution Degree 2	
IP rating	IP67	

Ordering information

Fluke 28II Ex Intrinsically Safe True-rms Multimeter

Fluke. *The Most Trusted Tools in the World.*

Fluke Corporation
PO Box 9090, Everett, WA 98206 U.S.A.

Fluke Europe B.V.
PO Box 1186, 5602 BD
Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116
In Europe/M-East/Africa +31 (0) 40 2675 200 or
Fax +31 (0) 40 2675 222
In Canada (800)-36-FLUKE or
Fax (905) 890-6866
From other countries +1 (425) 446-5500 or
Fax +1 (425) 446-5116
Web access: http://www.fluke.com