

TECHNICAL DATA

# Fluke 28 II Ex Intrinsically Safe True RMS Digital Multimeter



## Key features

- A completely sealed, IP67 rated case
- Withstands drops up to 10 ft or 3 m (with holster)
- Dustproof per IEC 60529 IP6x
- Waterproof per IEC 60529 IPx7
- CAT III 1000 V, CAT IV 600 V
- Reversible holster for added protection of the display when not in use

## Product overview: Fluke 28 II Ex Intrinsically Safe True RMS Digital Multimeter

Now there's an intrinsically safe digital multimeter (DMM) you can use in a wide range of hazardous settings. Whether you work in petroleum, chemical, or pharmaceutical environments, the 28 II Ex gives high-end test and troubleshooting power you need is packed into the most rugged intrinsically safe (IS) DMM Fluke has ever built: drop-proof, waterproof, dust-proof (IP67). The 28 II Ex meets the following certifications:

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**IECEX (International)**

- Ex ia IIC T4 Gb
- Ex ia I Ma



**ATEX (Europe)**

- II 2G Ex ia IIC T4 Gb
- I M1 Ex ia I Ma



**NEC / CEC (North America)**

- Class I, Division 1, Groups A,B,C,D T4
- Class I, Zone 1, AEx ia IIC T4
- Ex ia IIC T4



**PCEC (China)**

- Ex ia IIC T4 Gb



**Simtars (Australia)**

- Ex ia I Ma



**IEx (Brazil)**

- Ex ia IIC T4 Gb



**EAC (Russia)**

- 1Ex ia IIC T4 Gb X
- PO Ex ia I Ma X
- IP6X



## 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 or 2. 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 1000 V 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: Fluke 28 II Ex Intrinsically Safe True RMS Digital Multimeter

Accuracy Specifications		
Accuracy specifications are shown as $\pm$ (% of reading + number of digits)		
DC voltage	<b>Range</b>	0.1 mV to 1000 V
	Accuracy	$\pm(0.05\% + 1)$
AC voltage	<b>Range</b>	0.1 mV to 1000 V
	Accuracy	$\pm(0.7\% + 4)$
DC current	<b>Range</b>	0.1 $\mu$ A to 10 A
	Accuracy	$\pm(0.2\% + 4)$
AC current	<b>Range</b>	0.1 $\mu$ A to 10 A
	Accuracy	$\pm(1\% + 2)$
Resistance	<b>Range</b>	0.1 $\Omega$ to 50 M $\Omega$
	Accuracy	$\pm(0.2\% + 1)$
Conductance	<b>Range</b>	60.00 nS
	Accuracy	$\pm(1.0\% + 10)$
Diode test	<b>Range</b>	2.0 V
	Accuracy	$\pm(2.0\% + 1)$

Duty cycle	<b>Range</b>	0.0% to 99.9%
	Accuracy	Within $\pm(0.2\%$ per kHz + 0.1%) for rise times $<1 \mu\text{s}$
Capacitance	<b>Range</b>	10 nF to 9999 $\mu\text{F}$
	Accuracy	$\pm(1\% + 2)$
Frequency	<b>Range</b>	0.5 Hz to 199.99 kHz
	Accuracy	$\pm(0.005\% + 1)$
Temperature	<b>Range</b>	-200°C to +1090°C (-328°F to +1994°F)
	Accuracy	$\pm(1\% + 10)^\circ\text{C}$ [ $\pm(1\% + 10)^\circ\text{F}$ ]
Display counts	6000 counts/19,999 counts in high-resolution mode	
Peak capture	Record transients up to 250 $\mu\text{s}$	
Min/Max/Avg recording	Display signals up to approximately 100 ms	
Accuracy specifications are shown as $\pm(\%$ of reading + number of digits)		
<b>Safety Certifications</b>		
ATEX	{Ex} II 2G Ex ia IIC T4 Gb	
	{Ex} I M1 Ex ia I Ma	
NEC-500	Class I, Div 1, Groups A-D, 130°C	
IECEX	Ex ia IIC T4 Gb	
	Ex ia I Ma	
GOST R Ex	1Ex ia IIC T4 Gb X	
	PO Ex ia I Ma X	
	IP6X	
<b>General Specifications</b>		
Power	Three AAA batteries	
	Battery life: 400 hours	
Display	LCD, with backlight	
External protection	Rubber holster	
Warranty	Three years	
Size with holster (H x W x L)	6.4 x 10.0 x 19.8 cm (2.5 x 3.9 x 7.8 in)	
Weight with holster	700 g (1.54 lb)	

## Ordering information



### **Fluke 28 II Ex**

Fluke 28 II Ex Intrinsically Safe True RMS Digital Multimeter

Includes:

- Ex-holster
- Alligator clips
- Test leads
- Batteries
- Quick reference guide



**Fluke.** *Keeping your world up and running.*®

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