

Fluke 787 and 789 ProcessMeter™ Test Tools

Safety rated multimeters with mA source

True-rms



Fluke 789

Fluke 789 ProcessMeter

With the Fluke 789 ProcessMeter, process technicians can do a lot more while carrying a lot less.

Key Fluke 789 features:

- 24 V loop power supply
- HART mode setting with loop power (adds 250 ohm resistor)
- Double-sized, dual display
- 20 mA drive into 1200 ohms
- Backlight with two brightness settings
- 0 to 100 % mA Span Check buttons to toggle between 4 and 20 mA
- Infrared I/O serial port compatible with FlukeView® Forms Software
- Improved battery power with four AA batteries
- CAT IV 600 V safety-rated
- Plus all the proven 787 features

Fluke 787 ProcessMeter

- Simultaneous mA and % of scale readout on mA output
- 25 % Manual Step plus Auto Step and Auto Ramp on mA output
- Min/Max/Average/Hold/Relative modes
- Externally accessible battery for easy changes
- CAT III 1000 V safety-rated, true-rms multimeter



(Fluke 789 only)

In-field valve positioner checks:

Application note

(Literature code 2041342)

Valve positioners open and close with a 4 to 20 mA signal applied. This application note explains how to adjust these valves so they open and close correctly.



Want to read more? Download this and other application notes at www.fluke.com/library

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Specifications - 787 and 789 ProcessMeter

Measurement Function	Best Accuracy Range and Resolution	% of reading + LSD)	
V dc	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.1 % + 1	
V dc (true-rms)	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.7 % + 2	
mA dc	30.000 mA	.05 % + 2	
A dc	1.000 A (0.440 A continuous)	0.2 % + 2	
A ac	1.000 A (0.440 A continuous)	1 % + 2	
Resistance	400.0 Ω, 4.000 k, 40.00 k, 400.0 k, 4.0 M, 40 M	0.2 % + 1	
Frequency (0.5 Hz to 20 kHz)	199.99 Hz, 1999.9 Hz, 19.999 kHz	.005 % + 1	
Diode Test	789: 2.000 V (shows diode voltage drop) 787: 2.400 V (shows diode voltage drop)	2 % + 1 2 % + 1	
Continuity	Beeps for resistance < approx. 100 ohms		
Output Function	Range and Resolution	Drive Capability	Accuracy (% of span)
DC current output (Internal battery operation)	0.000 to 20.000 mA or 4.000 to 20.000 mA (selectable at power-up) Over-range to 24.000 mA	789: 24 V compliance or, 1,200 Ohms, @ 20 mA 787: 12 V compliance or, 500 Ohms, @ 20 mA	.05 % .05 %
DC current simulate (Ext. 24 Volt loop supply)	0.000 to 20.000 mA or 4.000 to 20.000 mA, (selectable at power-up) Over-range to 24.000 mA	1000 Ohms, @ 20 mA	.05 %
24 V loop supply	789: Minimum 24 V 787: not available	250 Ohms @ 20 mA	> 24 V
Current adjustment modes	Manual: Coarse, Fine, 25 % and 100 % step (100 % step 789 only) Automatic: Slow Ramp, Fast Ramp, 25 % step		

Temperature range of 18 °C to 28 °C, for one year after calibration

Maximum voltage applied between any jack and earth ground: 1000 V rms Storage temperature: -40 °C to 60 °C
Operating temperature: -20 °C to 55 °C Relative humidity: 95 % up to 30 °C; 75 % up to 40 °C; 45 % up to 50 °C; 35 % up to 55 °C
Safety: Designed in accordance with EN61010, ANSI/ISA S82.01-1994 and CAN/CSA C22.2 No. 1010.1-92 Over-voltage CAT III
Size (HxWxD)/weight (787 with holster): 52 mm x 98 mm x 201 mm (2.06 in x 3.86 in x 7.93 in)/638 g (1.4 lbs)
Size (HxWxD)/weight (789): 50 mm x 100 mm x 203 mm (1.97 in x 3.94 in x 8.00 in)/600 g (1.3 lbs)

Recommended accessories - 787 and 789 ProcessMeter



TL220
SureGrip Industrial Test Lead Set
See page 45



ToolPak
Meter Hanging Kit
See page 55



80T-150U
Universal Temperature Probe
See page 53



C125
Meter Case
See page 54



PV350
Pressure Vacuum Module
See page 49

For more information and detailed specifications, go to www.fluke.com/processmeters

Included accessories

Fluke-789 ProcessMeter:

TL71 Premium Safety-Designed Test Lead Set plus alligator clips, 4 AA alkaline batteries (installed), product overview and users manual (CD-ROM) in 14 languages.

Fluke-787 ProcessMeter:

Protective Yellow Holster with test lead storage, TL75 Safety-Designed Test Lead Set plus alligator clips, one 9V alkaline battery (installed), product overview and users manual (CD-ROM) in 14 languages.

Ordering information

Fluke-789 ProcessMeter
Fluke-787 ProcessMeter