

Fluke 789 ProcessMeter™

FLUKE®

Double Your Power

The Fluke 787 was the first tool to combine a DMM and a loop calibrator to give process technicians double the power in one tool. Now it's even better, the range is extended with the new Fluke 789 – the ultimate loop calibration multimeter.

The Fluke 789 has a 24-Volt loop supply reducing the need for taking a separate power supply when doing offline transmitter testing. And with its built-in, selectable 250-Ohm Hart® resistor, it also eliminates the need to carry a separate resistor with you.

Now process technicians can do a lot more while carrying a lot less.



New Features of the Fluke 789:

- 24 V Loop power supply
- Very large dual display
- Enhanced backlight with 2 brightness settings
- 1200 Ohm drive capability on mA source
- HART mode setting with loop power and a built-in 250 ohm resistor
- 0% and 100% buttons to toggle between 4 and 20 mA sourcing for a quick span check
- Externally accessible fuses for easy replacement
- Infrared serial I/O port compatible with FlukeView Forms (V2.1) software

These Fluke 789 features are also included in the Fluke 787:

- DMM designed to meet 1000 V EN61010-1 Cat III standards
- Precision 1000 V, 440 mA True-RMS digital Multimeter
- Frequency measurement to 20 kHz
- Min/Max/Average/Hold/Relative modes
- Diode Test and Continuity Beeper
- Simultaneous mA and % of scale readout
- 20 mA DC current source / loop calibrator / simulator
- Manual Step (100%, 25%, Coarse, Fine) plus Auto Step and Auto Ramp
- Externally accessible battery for easy battery changes



LISTED



Measurement Function	Range and Resolution	Best Accuracy (% of reading + LSD)
VDC	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.1% + 1
VAC (true RMS)	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.7% + 2
mADC	30.000 mA	0.05% + 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 ohms, 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	0.005% + 1
Diode Test	2.400 V (shows diode voltage drop)	2% + 1
Continuity	Beeps for resistance < approx 100 ohms	

Output Function	Range and Resolution	Drive Capability	Accuracy (% of span)
DC Current Output	0.000 to 20.000 mA or 4.000 to 20.000 mA (selectable at power-up)	24 V compliance, or, 1,200 Ohms, @ 20 mA	0.05%
(Internal battery operation)	Over-range to 24.000 mA		
DC Current Simulate	0.000 to 20.000 mA or 4.000 to 20.000 mA, (selectable at power-up)	1000 Ohms, @ 20 mA	0.05%
(Ext. 24 Volt loop supply)	Over-range to 24.000 mA		
24 V Loop Supply	Minimum 24 V	250 Ohms @ 20 mA	> 24 V
Current adjustment modes	Manual: Coarse, Fine, 25% and 100% step Automatic: Slow Ramp, Fast Ramp, 25% step		

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

General Specifications:

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

Temperature Coefficient:

0.05 x (specified accuracy) per °C
(for temperatures < 18 °C or > 28 °C)

Relative Humidity: 95% up to 30 °C;
75% up to 40 °C; 45% up to 50 °C; 35%
up to 55 °C

Vibration: Random, 2 g, 5-500 Hz.

Shock: 1 meter drop test

Safety: Designed in accordance with
EN61010, ANSI/ISA S82.01-1994 and
CAN/CSA C22.2 No. 1010.1-92

Over-voltage Category III

Size (HxWxD): 203 x 100 x 50 mm

Weight: 600 g

Battery: Four AA Alkaline battery

Battery Life: 50 hours typical
(measurement), 12 hours typical
(sourcing 12 mA)

Warranty: 3 years

Optional accessories

80T-IR Infrared Temperature Probe

80TK Thermocouple Module

80T-150U Universal Temperature Probe

TL20 / TL22 / TL24 / TL 26 / TL28 /

TL70A / TL40A Test Lead Sets

AC20 / AC80 Clips

TP20 Industrial Test Probes

80i-400 AC Current Clamp

i-410 AC/DC Current Clamp

i-1010 AC/DC Current Clamp

C125 Soft Meter Case

80K-6 and 80K-40 High Voltage Probes

PV350 Pressure Vacuum Module

Fiber Optic Meter FOM

LockPak

ToolPak

Ordering Information

Fluke 789 ProcessMeter

Included Accessories

TL71 Premium Test Lead Set plus

AC72 Alligator Clips

Four AA 9 V alkaline battery (installed)

Users Manual and Quick Reference Guide

Fluke. Keeping your world
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