Fluke 789 ProcessMeter™



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

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









| 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 | 24 V compliance, | |
| | (selectable at power-up) | or, | 0.05% |
| (Internal battery operation) | Over-range to 24.000 mA | 1,200 Ohms, @ 20 mA | |
| DC Current Simulate | 0.000 to 20.000 mA or 4.000 to 20.000 mA, | 1000 Ohms, | 0.05% |
| (Ext. 24 Volt loop supply) | (selectable at power-up) | @ 20 mA | |
| | 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 $< 18 \circ C \text{ or } > 28 \circ C$) 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 q, 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



S J ELECTRONICS POWER . TEST & MEASUREMENT

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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

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 up and running.

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