TECHNICAL DATA

Fluke 787B and 789 ProcessMeter™



Double the troubleshooting power so you can do more, while carrying a lot less

The Fluke 787B and 789 ProcessMeter™ double troubleshooting capabilities by combining the power of a safety rated digital multimeter and mA loop calibrator into a single, compact test tool. Whether you only need to source and simulate mA, or need a 24V loop power supply, Fluke has a ProcessMeter™ test tool designed specifically to meet your needs. Based on the trusted measurement capabilities of the Fluke 87 DMM, the 787B and 789 add the ability to measure, source and simulate mA with the accuracy and resolution you would expect from a Fluke mA loop calibrator, giving you the ideal tool for troubleshooting and calibrating current loop applications.

With Fluke Connect® mobile app and desktop software compatibility technicians can wirelessly monitor, log, and share data from the field with their team anytime, from anywhere*.

787B and 789 key features

- 20 mA dc current source/measure/simulate
- Simultaneous mA and % of scale readout
- DMM designed to meet 1000 volt IEC 61010 CAT III and 600 V CAT IV standards
- Fluke Connect® compatibility for wireless data logging (with IR3000FC module)*
- 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
- Manual step (100 %, 25 %, Coarse, Fine) plus Auto Step and Auto Ramp
- Externally accessible battery for easy battery changes

789 additional features

- 24 V Loop power supply
- HART mode setting with loop power (adds 250 ohm resistor)

KEY DMM MEASUREMENTS
Measure ac and dc volts, ac and dc current, resistance, continuity, and frequency

KEY mA LOOP FUNCTIONS
20mA current source/simulate, simultaneous mA and % scale readout, and 24 V loop power supply (789 only)

SAFETY RATED FOR INDUSTRIAL APPLICATIONS
CAT IV 600 V/CAT III 1000 V

*Requires Fluke IR3000FC module (not included)
Not all models are available in all countries. Check with your local Fluke representative.

Measurement function	Range and resolution	Best accuracy (% of reading + LSD)
V dc	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.1 % + 1
V ac (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 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	.005 % + 1
Diode test	2.000 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 (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	24 V compliance or, 1,200 ohms, @ 20 mA	.05 %
DC current simulate (Ext. 15 V to 48 V 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*	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
*24 V Loop Supply available on 789 ProcessMeter™ only

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	IEC61010-1, Pollution Degree 2/IEC61010-2-033, CAT IV 600 V/CAT III 1000 V
Size (HxWxL)	50 mm x 100 mm x 203 mm (1.97 in x 3.94 in x 8.00 in)
Weight	600 g (1.3 lbs)
Battery:	Four AA alkaline batteries
Battery life	140 hours typical (measurement), 10 hours typical (sourcing 12 mA)
Warranty	Three years



Ordering information

789 ProcessMeter
787B ProcessMeter

Included

TL71 Premium Test Lead Set plus AC72 Alligator Clips, Four AA alkaline batteries (installed), and Quick Reference Guide

Optional accessories

IR3000FC Fluke Connect® Adapter
80TK Thermocouple Module
TL20 / TL22 / TL24 / TL26 / TL28 / TL40A Test Lead Sets
AC20 / AC80 Clips
TP220 Industrial Test Probes
i400 AC Current Clamp*
i410 AC/DC Current Clamp**
i1010 AC/DC Current Clamp**
C25 / C100 Cases
PV350 Pressure Vacuum Module
TPAK ToolPak Meter Hanging Kit

***Above 50 A ac**

****Above 1 A dc or 20 A ac**

FLUKE®



FLUKE CONNECT®

Preventive maintenance simplified. Rework eliminated.

Save time and improve the reliability of your maintenance data by wirelessly syncing measurements using the Fluke Connect® system.

- Eliminate data-entry errors by saving measurements directly from the tool and associating them with the work order, report or asset record.
- Maximize uptime and make confident maintenance decisions with data you can trust and trace.
- Access baseline, historical and current measurements by asset.
- Move away from clipboards, notebooks and multiple spreadsheets with a wireless one-step measurement transfer.
- Share your measurement data using ShareLive™ video calls and emails.
- 787B and 789 ProcessMeter is part of a growing system of connected test tools and equipment maintenance software. Visit the website to learn more about the Fluke Connect® system.

Find out more at **flukeconnect.com**

Download on the App Store

ANDROID APP ON Google Play



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

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)40 267 5100 or
Fax +31 (0)40 267 5222
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

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For more information call:
In the U.S.A. (800) 443-5853 or
Fax (425) 446-5116
In Europe/M-East/Africa +31 (0)40 267 5100 or
Fax +31 (0)40 267 5222
In Canada (800)-36-FLUKE or
Fax (905) 890-6866
From other countries +1 (425) 446-5500 or
Fax +1 (425) 446-5116
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