

Fluke 707Ex Intrinsically Safe Loop Calibrator

The fast, one-handed tool for loop checks in Ex zones



The 707Ex is an intrinsically safe loop calibrator for use in explosion endangered areas. The Fluke 707Ex is certified in accordance with the ATEX directive (Ex II 2 G Eex ia IIC T4) in Zones 1 and 2. The 707Ex is also certified to operate in accordance with Factory Mutual N.I. Class 1, Division 2 areas Group A-D.

- Large display and simple, quick-click push rotary button for easy one-handed operation.
- Simultaneous mA and % readout for quick, easy, interpretation of readings.
- mA accuracy of 0.015%, superior to other loop calibrators.
- 1 μ A resolution for mA source, simulate and measure.
- Push button with 25% steps for fast, easy linearity checks.
- 0-100% "span check" for fast confirmation of zero and span.
- Selectable slow ramp, fast ramp, and step ramp to provide smooth outputs for valve slewing and loop functional tests.
- Internal loop supply, so you can power and read a transmitter at the same time without carrying a DMM.
- Measures V dc to 28 V.
- Single 9 V battery that is easily changed.
- 0-20 mA or 4-20 mA default start up modes.
- Innovative output adjustment dial with 1 μ A and 100 μ A resolution.
- HART® compatible resistance is connected in series with the loop supply for compatibility with HART communicators.

Specifications

Summary Specifications (18° to 28°C, one year)

Function	Range	Resolution	Accuracy
Voltage measure	0 to 28 V	0.001 V	\pm (0.015% Rdg + 2 counts)
mA measure	0 to 24 mA	0.001 mA	\pm (0.015% Rdg + 2 LSD)
mA source ¹	0 to 24 mA	0.001 mA	\pm (0.015% Rdg + 2 LSD)
mA simulate ²	0 to 24 mA	0.001 mA	\pm (0.015% Rdg + 2 LSD)
Loop supply	24 V dc	n/a	24 V \pm 1 V dc, no load

Temperature Coefficient, -10 to 18 °C, 28 to 55 °C, \pm .005% of range per °C;
¹ Max load, 700 Ohms at 20 mA
² Max applied voltage for simulation, 28V

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General Specifications

Maximum voltage	28 volts
Non-operating temperature	-30 to 60 °C
Operating temperature	-10 to 50 °C
Relative humidity	0 to 95% (0 to 30 °C); 0 to 75% (30 to 40 °C); 45% up to 50 °C
Operating altitude	3,000 meters max.
Shock and vibration	Per MIL-T-28800 for a Class 2 Instrument
Safety	CSA C22.2 No. 1010.1: 1992
EMC	EN50082-1:1992 and EN55022:1994 Class B
ATEX Certification	Ex II 2 G Eex ia IIC T4 Zones 1 and 2, ZELM 02 ATEX 0120 X
FM Certification	N.I. Class 1, Division 2, Groups A-D
CE certification	EN61010-1 and EN61326
Size (HxWxD)	152 mm x 70 mm x 41 mm (6.0 in x 2.8 in x 1.6 in)
Size (HxWxD) with Holster	164 mm x 75 mm x 47 mm (6.4 in x 2.9 in x 1.9 in)
Weight	224 g (8 oz) 350 g (12.3 oz); With Holster
Battery	One 9 V alkaline
Battery life	18 hours typical, at 12 mA
Warranty	1 year



Operating Modes

Measure current
Measure current/Loop power
Measure voltage
Simulate current; manual adjust; scroll up/down
Simulate current; 25% steps; 0 - 100% steps
Simulate current; Auto ramp (smooth/step)
Source current; manual adjust; scroll up/down
Source current; 25% steps; 0 - 100% steps
Source current; Auto ramp (smooth/step)

ATEX Certified

Fluke. *Keeping your world up and running.*

Ordering Information

Fluke-707Ex Intrinsically Safe Loop Calibrator

Each calibrator includes: Safety designed test leads, alligator test Clips, Holster, Instruction manual on CD (English, French, German, Spanish, Italian, Dutch, Norwegian, Danish, Swedish, Finnish, Portuguese, Korean, Chinese, Japanese), 707Ex CCD Content Control Drawing, CE, CSA, FM and ATEX markings.

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