

Fluke 707Ex Intrinsically Safe Loop Calibrator

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

Technical Data

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. The 707Ex features:

- 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.
- 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.
- Innovative output adjustment dial with .001 mA and 0.1 mA resolution.
- HART® compatible resistance is connected in series with the loop supply for compatibility with HART communicators.



ATEX and Factory Mutual Certified

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

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

Temperature Coefficient, -10 to 18 °C, 28 to 55 °C, ± .005 % of range per °C;

¹Max load, 700 Ohms at 20 mA

²Max applied voltage for simulation, 28 V

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 O2 ATEX 0120 X
FM certification: N.I. Class 1, Division 2, Groups A-D
CE certification: EN61010-1 and EN61326
Size, without holster: (H x W x D)
 6.0 in x 2.8 in x 1.6 in
 (152 mm x 70 mm x 41 mm)
Size, with holster: (H x W x D)
 6.4 in x 2.9 in x 1.9 in
 (164 mm x 75 mm x 47 mm)
Weight: 0.28 kg (0.6 lb), with holster and stand: .92 lb (0.42 kg)
Battery: One 9 V alkaline
Battery life: 18 hours typical, at 12 mA into 500 ohms
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)

Ordering information

Model	
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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