

Intrinsically Safe Fluke 718Ex 30G and 100G Pressure Calibrators

Pump Up the Pressure

Technical Data

The new Fluke 718Ex Intrinsically Safe Pressure Calibrator is a powerful new intrinsically safe, self contained pressure calibration solution that offers:

- ATEX II 1G EEx ia IIC T4 compliance
- I.S. Class I, Division 1 compliance
- Built-in pressure/vacuum hand pump, with vernier and bleed valve
- Pressure measurement to 0.05 % of full span, using an internal pressure sensor
- Pressure measurement to 3,000 psi/200 bar using any of the 8 intrinsically safe Fluke 700PEX Pressure Modules
- Wide range of selectable measurement units for pressure
- Current measurement with 0.02 % accuracy and 0.001 mA resolution
- Pressure switch test function
- Min/Max hold functions
- Compact size and weight
- Simple, push-button user interface
- Rugged and reliable, for field use



Pressure Specifications (internal sensor)

18 °C to 28 °C, one year

Pressure Input		
Range	Resolution	Accuracy
-12-30 psi (-82.7 - 207 kPa)	.001 psi (0.01 kPa)	.05 % FS
-12-100 psi (-82.7 - 690 kPa)	.01 psi (0.01 kPa)	.05 % FS
Temp Coeff. -10 to 18 °C, 28 to 55 °C	+ .01 % of range per °C	
Engineering Units (in Hg)		
PSI, in. H ₂ O (4 °C), in. H ₂ O (20 °C), kPa, cm H ₂ O (4 °C), cm H ₂ O (20 °C), BAR, mBAR, kg/cm ² , mmHg, in Hg		

Media
Gasses (non corrosive)
Overpressure
3 x F.S. on 30G 2 x F.S. on 100G

Ordering information

Model

Fluke-718Ex 30G Pressure Calibrator
Fluke-718Ex 100G Pressure Calibrator

Included accessories

Protective red holster, TL75 test leads, AC72 test clips, Media filter, CD users manuals (English, French, German, Spanish, Italian, Dutch, Norwegian, Danish, Swedish, Finnish, Portuguese, Korean, Chinese, Japanese), Fluke 718Ex CCD control drawing



I.S. Class I Div 1 Groups A-D T4
AEx ia IIC T4



II 1 G EEx ia IIC T4
KEMA 04 ATEX 1061

Ta = -10 °C to +55 °C

Specifications continued

Pressure Display (external modules)

Pressure Module Readout	
Pressure range	Determined by pressure module
Resolution	5 digits
Accuracy	Determined by pressure module
Engineering Units (in Hg)	
PSI, in. H ₂ O (4 °C), in. H ₂ O (20 °C), Kpa, cm H ₂ O (4 °C), cm H ₂ O (20 °C), BAR, mBAR, Kg/cm ² , mmHg, in Hg	

Current Specifications

18 °C to 28 °C, one year

Current Measurement	
Range	0 to 24 mA
Resolution	.001 mA
mA ± 5 °C	.02 % Rdg ± 2 count
Temp Coeff. to 18 °C, to 55 °C	± .005 % of range per °C

Zeroing Modes

Mode	
Gage and differential	Pushing Zero button stores present pressure value as an offset and subtracts it from the displayed value
Absolute	Pushing Zero button causes nominal barometric pressure to be displayed. User corrects to actual barometric pressure with up/down keys. Difference is used as zero offset calibration.

Pressure module specification

(All specifications in % of full span. Specifications reflect a confidence interval of 95 %.)

Model	Range/Resolution	Range (approx)/Resolution	Reference uncertainty (23 ± 3 °C)	Stability (1 year)	Temperature (0 to 50 °C)	Total ¹ uncertainty	High ² side media	Low ² side media	Fitting material	Max over-pressure (x nominal)
Differential										
FLUKE-700P01Ex	10 in. H ₂ O/0.01	2.5 kPa/0.002	0.200	0.050	0.050	0.300	Dry	Dry	316 SS	3x
FLUKE-700P24Ex	15 psi/0.001	103 kPa/0.01	0.025	0.010	0.015	0.050	316 SS	Dry	316 SS	3x
Gage										
FLUKE-700P05Ex	30 psi/0.001	207 kPa/0.01	0.025	0.010	0.015	0.050	316 SS	N/A	316 SS	3x
FLUKE-700P06Ex	100 psi/0.01	690 kPa/0.07	0.025	0.010	0.015	0.050	316 SS	N/A	316 SS	3x
FLUKE-700P27Ex	300 psi / 0.01	2070 kPa / 0.1	0.025	0.010	0.015	0.050	316 SS	N/A	316 SS	3x
FLUKE-700P09Ex	1500 psi/0.1	10 MPa/0.001	0.025	0.010	0.015	0.050	316 SS	N/A	316 SS	2x
Absolute										
FLUKE-700PA4Ex	15 psi/0.001	103 kPa/0.01	0.050	0.010	0.010	0.070	316 SS	N/A	316 SS	3x
High										
FLUKE-700P29Ex	3000 psi/0.1	20.7 M Pa/0.001	0.050	0.010	0.020	0.080	C276	N/A	C276	2x

¹ Total uncertainty, one year for temperature range 0 °C to +50 °C. Total uncertainty, 1.0 % of full span for temperature range -10 °C to 0 °C.

² "Dry" indicates dry air or non-corrosive gas as compatible media. "316 SS" indicates media compatible with Type 316 Stainless Steel. "C276" indicates media compatible with Hastelloy C276.

Environmental and Safety Requirements

Operating temperature	-10 °C to 55 °C
Non-operating temperature	-40 °C to 71 °C
Relative humidity (%RH operating without condensation)	95 % (10 to 30 °C) 75 % (30 to 40 °C) 45 % (40 to 50 °C) 35 % (50 to 55 °C)
Size	8.50 in L x 3.72 in W x 2.60 in D (216 mm L x 94 mm W x 66 mm D)
Weight	35 oz (992 g)
Vibration	Random, 2g, 5-500 Hz
Shock	1 Meter Drop test
EMC	EN61326 2002-02, Criteria C

Operating Modes

Mode	
Measure pressure (using internal sensor)	
Display pressure module reading (automatically selected when pressure module connected)	
Measure current	

Input/Output

Pressure input	1/8 in. NPT pressure fitting
Pressure module input	LEMO connector
Current input	Shrouded banana jacks

Battery

Power	One 9-volt alkaline battery
Battery life	4 to 20 hours, depending on functions used