

## Intrinsically Safe Fluke 718Ex 30G, 100G, and 300G 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 Ex 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 switch test function

#### Pressure specifications (internal sensor)

18 °C to 28 °C, one year

| Pressure Input  |                         |          |
|---|-------------------------|----------|
| Range   | Resolution              | Accuracy |
| -12 psi to 30 psi<br>(-82.7 kPa to 207 kPa)   | .001 psi (0.01 kPa)     | .05 % FS |
| -12 psi to 100 psi<br>(-82.7 kPa to 690 kPa)  | .01 psi (0.01 kPa)      | .05 % FS |
| -12 psi to 300 psi<br>(-82.7 kPa to 2068 kPa)   | .01 psi (0.01 kPa)      | .05 % FS |
| Temp Coeff. -10 °C to 18 °C, 28 °C to 55 °C   | + .01 % of range per °C |          |
| Engineering Units (in Hg)   |                         |          |
| PSI, in. H <sub>2</sub> O (4 °C), in. H <sub>2</sub> O (20 °C), kPa, cm H <sub>2</sub> O (4 °C), cm H <sub>2</sub> O (20 °C), BAR, mBAR, kg/cm <sup>2</sup> , mmHg, in Hg |                         |          |
| Media   |                         |          |
| Gasses (non corrosive)  |                         |          |
| Overpressure  |                         |          |
| 3 x F.S. on 30G<br>2 x F.S. on 100G<br>375 PSI on 300G  |                         |          |



#### Ordering information

##### Model

Fluke-718Ex 30G Pressure Calibrator  
Fluke-718Ex 100G Pressure Calibrator  
Fluke-718Ex 300G Pressure Calibrator

##### Included accessories

Protective red holster, TL75 test leads, AC72 test clips, 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 Ex 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 <sub>2</sub> O (4 °C), in. H <sub>2</sub> O (20 °C), Kpa, cm H <sub>2</sub> O (4 °C), cm H <sub>2</sub> O (20 °C), BAR, mBAR, Kg/cm <sup>2</sup> , mmHg, in Hg |                               |

## Current specifications 18 °C to 28 °C, one year

| Current Measurement            |                          |
|--------------------------------|--------------------------|
| Range                          | 0 mA 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 <sup>1</sup> uncertainty | High <sup>2</sup> side media | Low <sup>2</sup> side media | Fitting material | Max over-pressure (x nominal) |
|---------------------|------------------------------|---------------------------|-----------------------------------|--------------------|--------------------------|--------------------------------|------------------------------|-----------------------------|------------------|-------------------------------|
| <b>Differential</b> |                              |                           |                                   |                    |                          |                                |                              |                             |                  |                               |
| FLUKE-700P01Ex      | 10 in. H <sub>2</sub> 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                            |
| <b>Gage</b>         |                              |                           |                                   |                    |                          |                                |                              |                             |                  |                               |
| 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                            |
| <b>Absolute</b>     |                              |                           |                                   |                    |                          |                                |                              |                             |                  |                               |
| 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                            |
| <b>High</b>         |                              |                           |                                   |                    |                          |                                |                              |                             |                  |                               |
| 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                            |

<sup>1</sup> 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.

<sup>2</sup> "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 °C to 30 °C)<br>75 % (30 °C to 40 °C)<br>45 % (40 °C to 50 °C)<br>35 % (50 °C to 55 °C) |
| Size (LxWxD)   | 216 mm x 94 mm x 66 mm (8.50 in x 3.72 in x 2.60 in)   |
| 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 |

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