

# Fluke 721 Precision Pressure Calibrator

## Pressure calibration and temperature measurement for custody transfer applications

The Fluke 721 Precision Pressure Calibrator with dual isolated pressure sensors is the ideal tool for gas custody transfer applications allowing you to take simultaneous static and differential pressure measurements with a single tool.



## Technical Data

### Product highlights

The 721 can be configured by selecting either a 16 PSI (1.1 bar) or 36 psi (2.48 bar) low pressure sensor then add any of 7 high pressure ranges including 100, 300, 500, 1000, 1500, 3000 or 5000 psi (6.9, 20, 24.5, 69, 103.4, 200, 345 bar).

- Ideal for gas flow calibration (custody transfer) applications
- Two isolated, stainless steel, pressure sensors with 0.025 % accuracy
- Pt100 RTD input for temperature measurement, (probe optional)
- Measures 4 to 20 mA signals
- Internal 24 V loop power supply can power a transmitter under test
- Measure up to 30 V dc, check 24 V loop power supplies
- Extend pressure measurement range with connection to external 700 series pressure modules (29 ranges)
- Large backlit graphic display can display up to three inputs simultaneously
- Store five instrument setups for recall and use

## Specifications 1-year

|                |                                                     | Low pressure sensor                         |                          |                       | High pressure sensor                         |                        |                                           |                      |                       |
|----------------|-----------------------------------------------------|---------------------------------------------|--------------------------|-----------------------|----------------------------------------------|------------------------|-------------------------------------------|----------------------|-----------------------|
| Model          | Description                                         | Range sensor 1                              | Resolution sensor 1      | Accuracy sensor 1     | Range sensor 2                               | Resolution sensor 2    | Accuracy sensor 2                         |                      |                       |
| Fluke-721-1601 | Dual Sensor Pressure Calibrator, 16 PSIG, 100 PSIG  | -14 psi to +16 psi<br>-0.97 bar to 1.1 bar  | 0.001 psi,<br>0.0001 bar | 0.025 % of full scale | -12 psi to +100 psi<br>-0.83 bar to 6.9 bar  | 0.01 psi<br>0.0001 bar | 0.025 % of full scale                     |                      |                       |
| Fluke-721-1603 | Dual Sensor Pressure Calibrator, 16 PSIG, 300 PSIG  |                                             |                          |                       | -12 psi to +300 psi<br>-0.83 bar to 20 bar   | 0.01 psi<br>0.001 bar  |                                           |                      |                       |
| Fluke-721-1605 | Dual Sensor Pressure Calibrator, 16 PSIG, 500 PSIG  |                                             |                          |                       | -12 psi to +500 psi<br>-0.83 bar to 34.5 bar | 0.01 psi<br>0.001 bar  |                                           |                      |                       |
| Fluke-721-1610 | Dual Sensor Pressure Calibrator, 16 PSIG, 1000 PSIG |                                             |                          |                       | 0 psi to +1000 psi<br>0.00 bar to 69 bar     | 0.1 psi<br>0.001 bar   |                                           |                      |                       |
| Fluke-721-1615 | Dual Sensor Pressure Calibrator, 16 PSIG, 1500 PSIG |                                             |                          |                       | 0 psi to +1500 psi<br>0.00 bar to 103.4 bar  | 0.1 psi<br>0.001 bar   |                                           |                      |                       |
| Fluke-721-1630 | Dual Sensor Pressure Calibrator, 16 PSIG, 3000 PSIG |                                             |                          |                       | 0 psi to +3000 psi<br>0.00 bar to 200 bar    | 0.1 psi<br>0.01 bar    |                                           |                      |                       |
| Fluke-721-1650 | Dual Sensor Pressure Calibrator, 16 PSIG, 5000 PSIG | -14 psi to +36 psi<br>-0.97 bar to 2.48 bar |                          |                       |                                              |                        | 0 psi to +5000 psi<br>0.00 bar to 345 bar | 0.1 psi<br>0.01 bar  | 0.035 % of full scale |
| Fluke-721-3601 | Dual Sensor Pressure Calibrator, 36 PSIG, 100 PSIG  |                                             |                          |                       | -12 to +100 psi<br>-0.83 bar to 6.9 bar      | .01 psi<br>0.0001 bar  | 0.025% of full scale                      |                      |                       |
| Fluke-721-3603 | Dual Sensor Pressure Calibrator, 36 PSIG, 300 PSIG  |                                             |                          |                       | -12 psi to +300 psi<br>-0.83 bar to 20 bar   | 0.01 psi<br>0.001 bar  |                                           |                      |                       |
| Fluke-721-3605 | Dual Sensor Pressure Calibrator, 36 PSIG, 500 PSIG  |                                             |                          |                       | -12 psi to +500 psi<br>-0.83 bar to 34.5 bar | 0.01 psi<br>0.001 bar  |                                           |                      |                       |
| Fluke-721-3610 | Dual Sensor Pressure Calibrator, 36 PSIG, 1000 PSIG |                                             |                          |                       | 0 psi to +1000 psi<br>0.00 bar to 69 bar     | 0.1 psi<br>0.001 bar   |                                           |                      |                       |
| Fluke-721-3615 | Dual Sensor Pressure Calibrator, 36 PSIG, 1500 PSIG |                                             |                          |                       | 0 psi to +1500 psi<br>0.00 bar to 103.4 bar  | 0.1 psi<br>0.01 bar    |                                           |                      |                       |
| Fluke-721-3630 | Dual Sensor Pressure Calibrator, 36 PSIG, 3000 PSIG |                                             |                          |                       | 0 psi to +3000 psi<br>0.00 bar to 200 bar    | 0.1 psi<br>0.01 bar    |                                           | 0.035% of full scale |                       |
| Fluke-721-3650 | Dual Sensor Pressure Calibrator, 36 PSIG, 5000 PSIG | 0 psi to +5000 psi<br>0.00 bar to 345 bar   |                          |                       | 0.1 psi<br>0.01 bar                          |                        |                                           |                      |                       |

| General specifications    |                                                                                                    |
|---------------------------|----------------------------------------------------------------------------------------------------|
| Instrument setup recall   | Last used on power-up                                                                              |
| Environmental             | Operating temperature -10 °C to +50 °C<br>Storage temperature (without batteries) -20 °C to +60 °C |
| Altitude                  | 2,000 meters                                                                                       |
| Ingress protection        | IP-40                                                                                              |
| Power requirements        | 6.0 v dc                                                                                           |
| Battery life              | >35 hours, typical usage                                                                           |
| Batteries required        | (4) Standard AA cells                                                                              |
| Dimensions (HxWxD)        | 7.9" X 4.3" X 2.3" (20 cm X 11 cm X 5.8 cm)                                                        |
| Weight                    | 0.3539 kg (1 lb 3 oz)                                                                              |
| Connectors/ports pressure | Two, 1/8 in NPT, 700P Series Pressure Module; RTD Probe                                            |

| Electrical and temperature measurement 1-year                                                      |                                        |                  |                                                                                                                                     |
|----------------------------------------------------------------------------------------------------|----------------------------------------|------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| Function                                                                                           | Range                                  | Resolution       | Accuracy                                                                                                                            |
| mA measure                                                                                         | 0 to 24 mA                             | 0.001 mA         | ±0.015% of rdg<br>±0.002mA                                                                                                          |
| VDC measure                                                                                        | 0 to 30 VDC                            | 0.001V           | ±0.015% of rdg<br>±0.002V                                                                                                           |
| *Temperature measure (RTD/ Ohms)                                                                   | -40 °C to 150 °C<br>(-40 °F to 302 °F) | 0.01 °C, 0.01 °F | ±0.015% of rdg<br>±0.02 ohms;<br>±0.1°C (±0.2°F)<br>±0.25 degC (±0.45 degF) combined uncertainty when using 720 RTD probe accessory |
| Loop power supply                                                                                  | 24V                                    | N/A              | 24 mA @ 24V                                                                                                                         |
| *Temperature measurement requires optional Fluke-720RTD Pt-100 RTD probe available as an accessory |                                        |                  |                                                                                                                                     |

| Temperature effect                                         |
|------------------------------------------------------------|
| No effect on accuracy on all functions from 15 °C to 35 °C |
| Add ± 0.002 % F.S./°C for temps outside of 15 °C to 35 °C  |

**Available pressure engineering units**

|                                                  |
|--------------------------------------------------|
| psi, bar, mbar, kPa, kgcm <sup>2</sup> ,         |
| cmH <sub>2</sub> O@4°C, cmH <sub>2</sub> O@20°C, |
| mH <sub>2</sub> O@4°C, mH <sub>2</sub> O@20°C,   |
| inH <sub>2</sub> O@4°C, inH <sub>2</sub> O@20°C, |
| inH <sub>2</sub> O@60°F, mmHg@0°C,               |
| inHg@0°C, ftH <sub>2</sub> O@4°C,                |
| ftH <sub>2</sub> O@20°C, ftH <sub>2</sub> O@60°F |

## Ordering information

|                       |                                                       |
|-----------------------|-------------------------------------------------------|
| <b>Fluke-721-1601</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 100 PSIG  |
| <b>Fluke-721-1603</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 300 PSIG  |
| <b>Fluke-721-1605</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 500 PSIG  |
| <b>Fluke-721-1610</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 1000 PSIG |
| <b>Fluke-721-1615</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 1500 PSIG |
| <b>Fluke-721-1630</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 3000 PSIG |
| <b>Fluke-721-1650</b> | Dual Sensor Pressure Calibrator<br>16 PSIG, 5000 PSIG |
| <b>Fluke-721-3601</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 100 PSIG  |
| <b>Fluke-721-3603</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 300 PSIG  |
| <b>Fluke-721-3605</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 500 PSIG  |
| <b>Fluke-721-3610</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 1000 PSIG |
| <b>Fluke-721-3615</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 1500 PSIG |
| <b>Fluke-721-3630</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 3000 PSIG |
| <b>Fluke-721-3650</b> | Dual Sensor Pressure Calibrator<br>36 PSIG, 5000 PSIG |
| <b>Fluke-720RTD</b>   | RTD Probe for 721 and 719Pro                          |
| <b>Fluke-720URTD</b>  | Universal RTD adapter for<br>Fluke-721 and 719Pro     |

**Included:**

- Soft case
- Four (4) AA batteries
- Manual
- Traceable calibration certificate
- Test leads

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**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 2675 200 or  
Fax +31 (0) 40 2675 222  
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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