FLUKE®

Process Tools

for industrial instrumentation and electrical technicians

2013 Selection Guide

Look inside for:

- Loop Calibrators
- Pressure Calibrators
- Temperature Calibrators
- Multifunction Process Calibrators
- Documenting Process Calibrators
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- Intrinsically Safe Calibrators

Precision Pressure Gauge Calibrators

Fluke 700G

Portable, high-quality round pressure gauge calibrator for fast and accurate calibration test results.

Fluke 700G Series Precision Pressure Gauge Calibrator

- Nine models ranging from 1 bar to 690 bar (15 psi to 10,000 psi)
- Bright backlit display for easy viewing of pressure measurements
- Rugged, durable design with protective holster
- High accuracy, 0.05% total measurement uncertainty for one year
- Combined with either the 700PTPK pneumatic pump kit or the 700HTPK hydraulic pump kit for a complete measurement and testing solution
- Demand measurement logging to a PC or to internal memory with optional 700G/TRACK software
- Work safely in classified areas known to include explosive gasses; CSA: Class 1, Div2, Groups A–D rating ATEX: rating II 3 G Ex nA IIB T6
- Three–year warranty promises long term value for the investment

www.fluke.com/700G

Model	Range	Resolution	Accuracy	Burst Pressure
700G04	–14 psi to 15 psi –.97 bar to 1 bar	0.001 psi 0.0001 bar		500 psi 34 bar
700G05	–14 psi to 30 psi –.97 bar to 2 bar	0.001 psi 0.0001 bar		500 psi 34 bar
700G06	–12 psi to 100 psi –.83 bar to 6.9 bar	0.01 psi 0.0001 bar		1000 psi 69 bar
700G27	–12 psi to 300 psi –.83 bar to 20 bar	0.01 psi 0.001 bar	Positive pressure ± 0.05 % FS	2000 psi 138 bar
700G07	–12 psi to 500 psi –.83 bar to 34 bar	0.01 psi 0.001 bar		2000 psi 138 bar
700G08	–14 psi to 1000 psi –.97 bar to 69 bar	0.1 psi 0.001 bar	Vacuum ± 0.1 % FS	10000 psi 690 bar
700G29	–14 psi to 3000 psi –.97 bar to 200 bar	0.1 psi 0.01 bar		10000 psi 690 bar
700G30	–14 psi to 5000 psi –.97 bar to 340 bar	0.1 psi 0.01 bar		10000 psi 690 bar
700G31	–14 psi to 10000 psi –.97 bar to 690 bar	1 psi 0.01 bar		15000 psi 1035 bar
Temperature compensation: 15 °C to 35 °C (59 °F to 95 °F) to rated accuracy For temperatures from –10 °C to 15 °C and 35 °C to 55 °C, add .003 % FS/°C				
Media compatibility • 15, 30 psi: any clean dry non–corrosive gas • 100, 300, 1000 psi: any liquids or gases compatible with 316 stainless steel and start above 1000 psi :any non–flammable, non–toxic, non–explosive, non–oxidizing liquid or gas compatible with 316 stainless steel.				
Mechanical specifications				
Dimensions (HxWxD)	12.7 cm x 11.4 cm x 3.7 cm (5 in x 4.5 in x 1.5 in)			
Pressure connection	¼ in NPT Male			
Housing/Weight	Cast ZNAL/0.56 kg (1.22 lb) with holster			
Display	5–1/2 digits, 16.53 mm (0.65 in) high 20–segment bar graph, 0 to 100 %			
Power	Three AA alkaline batteries			
Battery life	1,500 hours without backlight (continuous on), 2,000 hours at slow sample rate			

For full specifications, more product highlights and ordering information visit www.fluke.com/700G

ProcessMeter™ test tools

789

787

1000 V CAT III
600 V CAT IV

(for 789, 787 no CAT IV rating)

Multimeter and Loop Calibrator—all in one

Fluke 789 ProcessMeter™ Test Tool

The Fluke 789 has a display that's twice as large as the 787 and adds a 24 V loop power supply that the 787 does not include.

- 24 V loop power supply
- 20 mA drive into 1200 Ω
- 0 % to 100 % mA Span Check buttons to toggle from 4 mA to 20 mA
- Infrared I/O serial port compatible with FlukeView® Software
- PLUS all the proven 787 features below

Fluke 787 ProcessMeter™ Test Tool

- Simultaneous mA and % of scale readout on mA output
- 25 % manual step plus auto step and auto ramp on mA output
- CAT III, 1000 V safety rated DMM
- Measure volts, amps, resistance, and frequency

www.fluke.com/processmeter

Specifications for Fluke 789 and 787 (18 °C to 28 °C, 1 year)			
Measurement function	**Best accuracy range and resolution**	**(% of reading + count)**	
V dc	400.0 mV, 4.000 V, 40.00 V	0.1 % + 1	
V ac (true–rms) to 500 Hz	400.0 mV, 4.000 V, 40.00 V, 400.0 V, 1000 V	0.7 % + 2	
mA dc	30.000 mA	.05 % + 2	
A dc	1.000 A (0.440 A continuous)	0.2 % + 2	
A ac	1.000 A (0.440 A continuous)	1 % + 2	
Resistance	400.0 Ω, 4.000 k, 40.00 k	0.2 % + 1	
Frequency	199.99 Hz, 1999.9 Hz, 19.999 kHz	.005 % +1 (0.5 Hz to 20 kHz)	
Diode test	789: 2.000 V (shows diode voltage drop)	2 % + 1	
	787: 2.400 V (shows diode voltage drop)		
Continuity	Beeps for resistance < approx. 100 Ω		
Output function	**Range and resolution**	**Drive capability**	**Accuracy (% of span)**
DC current output (internal battery operation)	0.000 mA to 20.000 mA or 4.000 mA to 20.000 mA (selectable at power–up) Over–range to 24.000 mA	789: 24 V compliance or, 1200 Ω @ 20 mA	.05 %
		787: 12 V compliance or, 500 Ω @ 24 mA	
DC current simulate (ext. 24 V loop supply)	0.000 mA, to 20.000 mA or 4.000 mA, to 20.000 mA, (selectable at power–up) Over–range to 24.000 mA	789: 15 V to 48 V	.05 %
		787: 15 V to 30 V	
24 V loop supply	789: minimum 24 V	≥ 24 V @ 24 mA, 1200 Ω (789 only)	
	787: not available		

For full specifications, more product highlights and ordering information visit www.fluke.com/processmeter

Loop calibrators, milliamp process clamp meters


Fluke 705


Fluke 707


Fluke 715


Fluke 773

www.fluke.com/loop

Fluke 705, 707 and 715 mA Loop Calibrators

- Simultaneous mA and % readout for quick, easy, readings
- Push button 25 % steps for fast, linearity checks
- Output ramp and step modes
- 24 V internal loop supply

Fluke 707 mA Loop Calibrators *adds*

- Quick click front panel selector for fast, one-hand operation

Fluke 715 Volt/mA Calibrator *adds*

- Source voltage to 200 mV or 20 V
- Measure loop current with 0.010 % accuracy and 0.001 mA resolution

Fluke 771 Milliamp Process Clamp Meter

- Measure mA signals for PLC and control system analog I/O
- Measure 4–20 mA output signals from transmitters without breaking the loop
- Resolution and sensitivity to 0.01 mA, accuracy 0.2 %
- Dual backlit display with both mA measurement and percent of span
- Measurement spotlight illuminates hard to see wires in dark enclosures
- Detachable clamp with one meter cable

Fluke 772 Milliamp Process Clamp Meter *adds*

- mA source, simulate and 24 V loop power
- Test mA input devices and troubleshoot 4–20 mA loops

Fluke 773 Milliamp Process Clamp Meter *adds*

- DC voltage source and measure
- Test voltage input devices and measure 24 V loop power supplies
- Advanced troubleshooting functions

Model	Loop Calibrator			Process Milliamp Clamp Meter		
	705	707/707Ex	715	771	772	773
Measure						
V dc	28 V	28 V	25 V			30 V
A dc	24 mA	24 mA	24 mA	99.9 mA	99.9 mA	99.9 mA
Source/Simulate						
V dc			20 V			10 V
mA dc/% scale	24 mA	24 mA	24 mA	24 mA	24 mA	24 mA
mA source; auto step, auto ramp	•	•	•		•	•
Record						
Hold				•	•	•
Features						
24 V loop supply	•	•	•		•	•
Intrinsically safe (ATEX)		707Ex				
Traceable certification	•	•	•			
Accessories[1]	C	C	A/B			

[1]Accessories: A. Compatible with LockPak B. Compatible with ToolPak C. Accepts hanging straps from ToolPak

For full specifications, more product highlights and ordering information visit www.fluke.com/loopcalibrators

Pressure calibrators


717


718


719

www.fluke.com/pressure

Fluke 717 Pressure Calibrator

Now with 11 ranges: 1 psi, 15 psi, 30 psi, 100 psi, 300 psi, 500 psi, 1000 psi, 1500 psi, 3000 psi, 5000 psi and 10k psi

- Measure pressure and vacuum to 0.025 %
- Compatible with non-corrosive gasses and liquids
- Pressure measurement to 10,000 psi/700 bar using one of the 29 Fluke pressure modules
- Measure mA with 0.015 % accuracy, while providing 24 V loop power
- Built-in pressure switch test feature

Fluke 718 Pressure Calibrator

1 psi, 30 psi, 100 psi and 300 psi models available

All of the 717 features, plus:

- Built-in pressure/vacuum hand pump
- Pressure and vacuum measurement accuracy ranges from 0.025 % to 0.05 % (depending on model) of full scale (dry air only).
- Proven cleanout ports reduce pump failures
- Intrinsically safe 718 version available (see page 13)
- Precision pressure adjust vernier
- Variable release rate bleed valve for easy pressure adjustment
- Vacuum to –12 psi (except 718 1G psi unit)

Fluke 719 Electric Pressure Calibrator

All of 718 features above plus:

- Electric pump, create pressure for calibration with the touch of a button
- Fully functional loop calibrator, measure and source mA with best in class 0.015 % accuracy
- Pressure measurement uncertainty of 0.025 %, ideal performance for high accuracy transmitter calibration
- Source mA with simultaneous pressure measurement to test valves and I/Ps
- Programmable pump limit settings protect against damage from over-pressurization
- Proven cleanout ports reduce pump failures
- Built-in pressure switch test feature

Model	Pressure Calibrators		
	717	718/718Ex	719
Measure			
A dc	24 mA	24 mA	24 mA
Pressure	1 psi to 10k psi[1]	1 psi to 300 psi[1]	–12 psi to 100 psi[1]
Source/Simulate			
mA dc/% scale			24 mA
Record			
Min/Max	•	•	•
Hold	•	•	•
Features			
24 V loop supply	•	•	•
Integrated hand pressure pump		•	Electric
Intrinsically safe (ATEX)		718Ex	
Traceable certification	•	•	•
Accessories[2]	A/B	C	C

[1]Either the internal sensor or a Fluke 700 Pressure Module may be used

[2]Accessories: A. Compatible with LockPak B. Compatible with ToolPak C. Accepts hanging straps from ToolPak

For full specifications, more product highlights and ordering information visit www.fluke.com/pressurecalibrators

Deadweight Testers

P3000

P3100/P3200

www.flukecal.com/benchDWT

Model	Media	Number of ranges	Max range	Standard accuracy (%Rdg)	Improved accuracy (% Rdg)
P3011	Gas	Single	-30 inHg (-100 kPa)	0.015	0.008
P3012	Gas	Single	400 inH20 (100 kPa)	0.015	0.008
P3013	Gas	Single	800 inH20 (200 kPa)	0.015	0.008
P3014	Gas	Single	150 psi (1 MPa)	0.015	0.008
P3015	Gas	Single	500 psi (3.5 MPa)	0.015	0.008
P3022	Gas	Dual	400 inH20 (100 kPa)	0.015	0.008
P3023	Gas	Dual	800 inH20 (200 kPa)	0.015	0.008
P3025	Gas*	Dual	500 psi (3.5 MPa)	0.015	0.008
P3031	Gas*	Single	1000 psi (7 MPa)	0.015	0.008
P3032	Gas	Single	2000 psi (14 MPa)	0.015	0.008
P3111	Oil	Single	500 psi (3.5 MPa)	0.015	0.008
P3112	Oil	Single	2000 psi (14 MPa)	0.015	0.008
P3113	Oil	Single	5000 psi (35 MPa)	0.015	0.008
P3114	Oil	Single	10000 psi (70 MPa)	0.015	0.008
P3115	Oil	Single	16000 psi (110 MPa)	0.015	0.008
P3116	Oil	Single	20000 psi (140 MPa)	0.015	0.008
P3123	Oil	Dual	5000 psi (35 MPa)	0.015	0.008
P3124	Oil	Dual	10000 psi (70 MPa)	0.015	0.008
P3125	Oil	Dual	16000 psi (110 MPa)	0.015	0.008
P3211	Water	Single	500 psi (3.5 MPa)	0.015	0.008
P3213	Water	Single	5000 psi (35 MPa)	0.015	0.008
P3214	Water	Single	10000 psi (70 MPa)	0.015	0.008
P3223	Water	Dual	5000 psi (35 MPa)	0.015	0.008
P3224	Water	Dual	10000 psi (70 MPa)	0.015	0.008
P3830	Oil	Single	30000 psi (200 MPa)	0.02	0.015
P3840	Oil	Single	40000 psi (260 MPa)	0.02	0.015
P3860	Oil	Single	60000 psi (400 MPa)	0.02	0.015

*(Liquid lubricated)

Highly accurate, robust and flexible pressure measurement standards capable of calibrating a wide range of instruments.

P3000 Pneumatic Deadweight Testers

- Pressure ranges from vacuum through 2,000 psi (140 bar)
- Accuracy better than 0.015 % of reading. (0.008 % optional)
- Gas operated with optional hand pumps
- Dual vacuum/pressure models available
- Psi, bar, kgf/cm², kPa and MPa ranges available
- Piston/cylinder design provides stability and repeatability

P3100 Hydraulic Deadweight Testers

- Pressure ranges to 20,000 psi (1400 bar)
- 0.015 % of reading accuracy standard (0.008 % optional)
- Single or dual piston formats
- Built-in hand pumps standard
- Mounted spirit level with adjustable feet
- Units can be trimmed to local gravity FOC

P3200 Water Deadweight Testers

- Water operation for improved media compatibility
- Pressure ranges to 10,000 psi (700 bar)
- 0.015 % of reading accuracy standard (0.008 % optional)
- Single or dual piston formats
- Built-in hand pumps standard
- Mounted spirit level with adjustable feet
- Units can be trimmed to local gravity FOC

Benchtop Pressure Calibrators

P5510

P5514

P5515

6532

www.flukecal.com/comparisonpumps
www.flukecal.com/edwt

Models	Media	Range (psig)	Range (MPa)	Uncertainty
6531-7M	oil or water	100 to 1,000	0.7 to 7	±0.02 % rdg
6531-14M	oil or water	200 to 2,000	1.4 to 14	±0.02 % rdg
6531-20M	oil or water	300 to 3,000	2 to 20	±0.02 % rdg
6531-40M	oil or water	600 to 6,000	4 to 40	±0.02 % rdg
6531-70M	oil or water	1,000 to 10,000	7 to 70	±0.02 % rdg
6531-140M	oil or water	2,000 to 20,000	14 to 140	±0.02 % rdg
6531-200M	oil or water	3,000 to 30,000	20 to 200	±0.02 % rdg
6532-70M	oil or water	100 to 10,000	0.7 to 70	±0.02 % rdg
6532-140M	oil or water	200 to 20,000	1.4 to 140	±0.02 % rdg
6532-200M	oil or water	300 to 30,000	2 to 200	±0.02 % rdg
P5510-2M	gas	vacuum to 300	vacuum to 2	**
P5513-20M	gas	vacuum to 3,000	vacuum to 20	**
P5514-70M	oil or water	0 to 10000	0 to 70	**
P5514-70M-EP	oil or water	0 to 10000	0 to 70	**
P5515-140M	oil or water	0 to 20000	0 to 140	**
P5515-140M-EP	oil or water	0 to 20000	0 to 140	**
P3800C	oil	0 to 60000	0 to 400	**

**reference pressure gauge not included-compatible with Fluke 700G (p2)

Precise generation and control for testing pressure measuring instruments against master devices.

P5510 Gas Comparison Test Pump

- Dual pressure/vacuum capability
- Bench mount design
- Built-in hand pump as pressure/vacuum source
- High quality needle valve for fine control
- Test port adapters that require no PTFE tape or wrenches

P5513 Gas Comparison Test Pump

- High pressure pneumatic operation
- Screw press for fine pressure adjustments
- High quality needle valves for fine control
- Test port adapters which require no PTFE tape or wrenches
- Sturdy carrying case with lid

P5514 Hydraulic Comparison Test Pump

- Generates pressures to 10,000 psi (700 bar)
- Bench mounted design
- Operational with a wide range of fluids
- Screw press for fine pressure adjustments

P5515 Hydraulic Comparison Test Pump

- Generates pressures to 20,000 psi (1400 bar)
- Operational with a wide range of fluids
- Built-in hand pump for system priming and large volume applications
- High quality screw press for fine pressure control
- Acrylic reservoir for visibility of fluid level and quality

6531 Electronic Deadweight Tester

- A digital alternative to the traditional deadweight tester
- 0.02 % of reading from 10 % to 100 % of instrument range (10:1 turndown)
- Ranges from 1000 psi (7 MPa) to 30,000 psi (200 MPa)
- Integrated hydraulic pressure generation and control
- Compatible with water and a wide range of oils and other fluids
- Onboard test routines, data storage, and other advanced features

6532 Extended Range Electronic Deadweight Tester

- All the features of model 6531 with extended pressure range for maximum workload coverage
- 0.0 % of reading from 1 % to 100 % of instrument range (100:1 turndown)
- Models with full scale ranges from 10,000 psi (70 MPa) to 30,000 psi (200 MPa)

Precision Temperature/ Pressure Process Calibrator

7526A

www.flukecal.com/7526A

Versatility, precision and value, combined into a single benchtop process calibration tool.

7526A Precision Process Calibrator

The Fluke Calibration 7526A Precision Process Calibrator offers the best balance of economy and accuracy for benchtop calibration of temperature and pressure process instrumentation.

Easily calibrate RTD and thermocouple readouts, pressure gauges, temperature transmitters, digital process simulators, data loggers, multimeters and more.

- Sources and measures dc voltage, current, resistance, RTDs and thermocouples
- Precision pressure measurement using Fluke 700 or 525A-P series pressure modules
- Includes 24 V dc transmitter loop power supply
- Measures 4–20 mA loop current
- Includes automated switch-test function
- Accepts ITS-90 coefficients for accurate SPRT measurements
- Compatible with MET/CAL® Calibration Software

DC Voltage, Output			
Range	**Absolute uncertainty, ± (ppm of output + µV), 1-yr**		**Resolution**
0 to 100 mV	30	3	1 µV
0 to 1 V	30	10	10 µV
0 to 10 V	30	100	100 µV
0 to 100 V	30	1 mV	1 mV
DC Voltage, Isolated Input			
Range	**Absolute uncertainty, ± (ppm of reading + mV), 1-yr**		**Resolution**
0 to 10 V	50	0.2	100 µV
10 V to 100 V	50	2.0	1 mV
DC current, output			
Range[1]	**Absolute uncertainty, ± (ppm of reading + µA), 1-yr**		**Resolution**
0 to 100 mA	50	1	1 µA
[1]For line voltages less than 95 V, ±100 ppm of reading			
DC current, isolated input			
Range	**Absolute uncertainty, ± (ppm of reading + mV), 1-yr**		**Resolution**
0 mA to 50 mA	100	1	0.1 µA
Resistance, output			
Range	**Absolute uncertainty, tcal ± 5 °C, ± Ω, 1-yr**	**Resolution**	**Nominal current**
5 Ω to 400 Ω	0.015	0.001 Ω	1 to 3 mA
5 Ω to 4 kΩ	0.3	0.01 Ω	100 µA to 1 mA

Resistance, Input			
Range	**Absolute uncertainty, ± (ppm of reading + Ω), 1-yr**		**Resolution**
0 Ω to 400 Ω	20	0.004	0.001 Ω
0 Ω to 4 kΩ	20	0.04	0.01 Ω
Sample thermocouple, input/output (does not include all available TC types)[1]			
TC type	**Min**	**Max**	**Absolute uncertainty, tcal ±5 °C, ± (°C), 1-yr**
K	–100 °C	800 °C	0.1
[1]See extended specifications for all TC types (B,C,E,J,K,L,N,R,S,T,U,XK,BP)			
Sample RTD, output (does not include all available RTD types)[1]			
RTD Type	**Temperature Range (°C)**		**Absolute uncertainty, tcal ±5 °C, ± (°C), 1-yr**
	Min	**Max**	
Pt 385, 100 Ω	–200	630	0.05
[1]See extended specifications for all RTD types: Pt-100 (385, 3926, 3916), Pt-200, Pt-500, Pt-1000, Ni-120, Cu-427, SPRT			
Sample RTD, Intput (does not include all available RTD types)[1]			
RTD Type	**Min**	**Max**	**Absolute uncertainty, tcal ±5 °C, ± (°C), 1-yr**
Pt 385, 100 Ω	–80 °C	100 °C	0.020
	100 °C	300 °C	0.024
[1]See extended specifications for all RTD types: Pt-100 (385, 3926, 3916), Pt-200, Pt-500, Pt-1000, Ni-120, Cu-427, SPRT			

Field Temperature Sources

9142

6102

www.flukecal.com/914X
www.flukecal.com/micro-baths

9142/9143/9144 Field Metrology Wells

High performance for industrial process environment

- Fast, lightweight, and portable
- Three models covering a temperature range from –25 °C to 660 °C
- Stability to ±0.01 °C
- Built-in two-channel readout for PRT, RTD, thermocouple, 4–20 mA current
- Optional built-in reference thermometer readout

6102/7102/7103 Micro-Baths

World's smallest portable calibration baths

- Calibrate a variety of probe diameters – no sleeves required
- Three models covering a temperature range from –30 °C to 200 °C
- Stability to ±0.015 °C

	Field Metrology Well			Micro-Bath		
	9142	**9143**	**9144**	**6102**	**7102**	**7103**
Range	–25 °C to 150 °C (–13 °F to 302 °F)	33 °C to 350 °C (91 °F to 662 °F)	50 °C to 660 °C (122 °F to 1220 °F)	35 °C to 200 °C (95 °F to 392 °F)	–5 °C to 125 °C (23 °F to 257 °F)	–30 °C to 125 °C (–22 °F to 257 °F)
Display accuracy	±0.2 °C entire range	±0.2 °C entire range	±0.5 °C at 660 °C	±0.25 °C	±0.25 °C	±0.25 °C
Stability	±0.01 °C entire range	±0.03 °C at 350 °C	±0.05 °C at 660 °C	±0.03 °C at 200 °C	±0.015 °C at –5 °C	±0.03 °C at –25 °C
Heating time	25 min: –25 °C to 150 °C	5 min: 33 °C to 350 °C	15 min: 50 °C to 660 °C	40 min: 25 °C to 200 °C	30 min: 25 °C to 100 °C	35 min: 25 °C to 100 °C
Cooling time	15 min: 23 °C to –25 °C	32 min: 350 °C to 33 °C	35 min: 660 °C to 50 °C	35 min: 200 °C to 100 °C	30 min: 25 °C to 0 °C	45 min: 25 °C to –25 °C
Immersion depth	150 mm (5.9 in)	150 mm (5.9 in)	150 mm (5.9 in)	140 mm (5.5 in)	140 mm (5.5 in)	140 mm (5.5 in)
Size (H x W x D)	290 x 185 x 295 mm (11.4 x 7.3 x 11.6 in)	290 x 185 x 295 mm (11.4 x 7.3 x 11.6 in)	290 x 185 x 295 mm (11.4 x 7.3 x 11.6 in)	140 x 260 x 200 mm (5.5 x 10.38 x 8 in)	180 x 310 x 240 mm (7.2 x 12 x 9.5 in)	230 x 340 x 260 mm (9 x 13.2 x 10.5 in)
Weight	8.16 kg (18 lb)	7.3 kg (16 lb)	7.7 kg (17 lb)	4.5 kg (10 lb)	6.8 kg (15 lb)	9.8 kg (22 lb)
Calibration included	NVLAP accredited	NVLAP accredited	NVLAP accredited	Traceable certification	Traceable certification	Traceable certification

Temperature calibrators

712 714 724

www.fluke.com/tempcal

712 RTD Calibrator

- Complete RTD calibration tool
- Measure temperature like a thermometer with RTD sensor
- Simulate RTD outputs
- Rosemount pulsed RTD transmitter compatible
- Operates with seven types of RTDs
- Auto step and auto ramp output function

714 Thermocouple Calibrator

- Full-featured thermocouple calibration tool
- Measure temperature like a thermometer with a TC sensor
- Simulate TC outputs
- Nine types of thermocouples
- Auto step and auto ramp output function
- Calibrate linear TC transmitter with mV source function

724 Temperature Calibrator

- Expertly test all the temperature sensors and transmitters in your plant
- Source and measure TCs and RTDs
- Easy-to-read measure/source back lit screens let you view input and output simultaneously
- Perform fast linearity tests with auto step and auto ramp features
- Power transmitters with internal loop supply
- Store frequently-used test setups for later use

Model	Temperature Calibrators		
	712	714	724
Measure			
V dc		-10 mV to 75 mV	30 V
Resistance	3200 Ω		3200 Ω
A dc			24 mA
Temperature: RTDs	7 types		7 types
Temperature: TCs		9 types	12 types
Source/Simulate			
V dc			10 V
Resistance	3200 Ω		3200 Ω
Temperature: RTDs	7 types		7 types
Temperature: TCs		9 types	12 types
Features			
24 V loop supply			•
Traceable certification	•	•	•
Accessories[1]	A/B	A/B	A/B

[1]Accessories: A. Compatible with LockPak B. Compatible with ToolPak

For full specifications, more product highlights and ordering information visit www.fluke.com/temperaturecalibrators

Multifunction process calibrators

725 726

www.fluke.com/mfc

Fluke 725 and 726 Multifunction Process Calibrator

The Fluke 725 and 726 Multifunction Calibrators are versatile, easy-to-use field calibrators. Use them to test and calibrate almost anything.

- Dual measure/source backlit screens let you view input and output simultaneously
- Perform fast linearity tests with auto-step and ramp
- Power transmitters with internal loop supply
- Store frequently-used test setups for later use
- 725EX intrinsically safe version available
- Measure and source frequency to test sensors and flow transmitters
- Source/simulate mA, TCs and RTDs to calibrate temperature transmitters
- Source and measure pressure using any of the Fluke pressure modules for testing transmitters and gauges
- Source mA with pressure measurement to test valves and I/Ps

Fluke 726 Precision Multifunction Process Calibrator

The Fluke 726 Precision Multifunction Process Calibrator has all the features of the 725 plus twice the accuracy for unsurpassed calibration power.

- Precise measurement and calibration source performance, accuracies of 0.01 %
- Voltage input protection design for improved reliability and reduced cost of ownership
- Transmitter error % calculation, interpret calibration results without a calculator
- Memory storage for up to eight calibration results, return stored calibration data from the field
- Frequency totalizer and frequency pulse train source mode for enhanced flowmeter testing
- HART mode inserts 250 ohm resistor in mA measure with loop power and source
- Integrated pressure switch test captures the set, reset and deadband of a switch
- Custom RTD curves, add calibration constants for certified RTD probes for enhanced temperature measurement

Model	Multifunction Process Calibrator	
	725/725Ex	726
Measure		
V dc	30 V	30 V
Resistance	3200 Ω	4000 Ω
A dc	24 mA	24 mA
Frequency	10 kHz	15 kHz
Pressure	29 ranges[1]	29 ranges[1]
Temperature: RTDs	7 types	8 types
Temperature: TCs	12 types	13 types
Source/Simulate		
V dc	10 V	20 V
Resistance	3200 Ω	4000 Ω
mA dc/% scale	24 mA	24 mA
mA source; auto step, auto ramp	•	•
Frequency totalizer		15 kHz
Temperature: RTDs	7 types	8 types
Temperature: TCs	12 types	13 types
Record		
Calibration results		Manual
Remote operation	•	•
Features		
24 V loop supply	•	•
Traceable certification	•	•
Accessories[2]	A/B	A/B

[1]Fluke 700 Pressure Modules required [2]Accessories: A. Compatible with LockPak B. Compatible with ToolPak

For full specifications, more product highlights and ordering information visit www.fluke.com/multifunctioncalibrators

Documenting process calibrators

753

754

HART COMMUNICATION PROTOCOL

Pressure Enabled

www.fluke.com/dpc

Fluke 750 Series Documenting Process Calibrators

If you like the Fluke 740 Series Calibrators you will love these new calibrators. The nearly identical user interface and improved display makes these new calibrators a winner for those used to using the 740 series family.

Improvements include a new brighter and bigger display, HART connectability through the mA terminals, improved test lead set, Li-ion battery, improved accuracy and more.

Added bonus, the 750 series DPCs include the innovative new C799 Field Softcase.

Fluke 753 Documenting Process Calibrator

The 753 Documenting Process Calibrator automates calibration procedures and captures your data. Use the PC interface for downloading procedures, lists, and instructions to the 753 and for uploading data for printing, archiving and analysis.

Features of the Fluke 753 and 754:

- Measure volts, mA, RTDs, thermocouples, frequency, and ohms to test sensors, transmitters and other instruments
- Source/simulate volts, mA, thermocouples , RTDs, frequency, ohms, and pressure to calibrate transmitters
- Power transmitters during test using loop supply with simultaneous mA measurement
- Measure/source pressure using any of 29 Fluke pressure modules
- Measure and source simultaneously with one compact, rugged, reliable tool
- Create and run automated as-found/as-left procedures to satisfy quality programs or regulations. Record and document results
- Use many features like autostep, custom units, user entered values during test, one-point and two-point switch testing, square root DP flow testing, programmable measurement delay etc
- Handling of fast pulsed RTD transmitters and PLCs, with 1 ms response time
- English, French, German, Italian, and Spanish languages
- Three-year warranty

Fluke 754 Documenting Process Calibrator

The 754 includes integrated HART communication capability. This rugged, reliable tool is ideal for calibrating, maintaining, and troubleshooting HART and other instrumentation. Additional 754 features:

- Monitor, control and calibrate HART instrumentation
- Interrogate HART devices to determine type, manufacturer, model and tag-ID
- Read HART PV, smart transmitter digital output
- Make field adjustments to ranging, damping and more
- Change/assign the HART transmitter tag
- Re-configure HART temperature sensor (e.g., TC to RTD)
- Perform HART sensor trim and output trim
- Perform HART loop test
- Control selected Hart Scientific Dry Blocks

The 754 supports these classes of HART instructions:

- Universal commands—such as "read manufacturer and device type," "read primary variable (PV)," or "read current output and percent of span"
- Common practice commands—such as "read multiple variables," "set damping time," or "loop test"
- Device-specific commands on supported transmitters—functions unique to a particular field device, like "sensor trim"

For full specifications, more product highlights and ordering information on the 753 and 754 visit www.fluke.com/documentingprocesscalibrators

Intrinsically safe products

Fluke 707Ex

Fluke 718Ex

Fluke 725Ex

Fluke 700PEX

www.fluke.com/ex

What is "intrinsically safe"?

Intrinsic safety is a protection method employed for potentially explosive atmospheres. Devices that are certified as "intrinsically safe" are designed to be unable to release sufficient energy, by either thermal or electrical means, to cause ignition of flammable gasses. Fluke makes intrinsically safe loop, pressure and documenting process calibrators, plus intrinsically safe pressure modules, with the following safety ratings:

	707Ex: Intrinsically Safe mA Calibrator	718Ex: Intrinsically Safe Pressure Calibrator	725Ex: Intrinsically Safe Multifunction Calibrator	700PEx: Intrinsically Safe Pressure Modules
ATEX certified	II 2 G Ex ia IIC T4	II 1 G Ex ia IIC T4	II 1 G Ex ia IIB 171 °C	II 1 G Ex ia IIC T4
North American Certification	FM APPROVED N.I. Class I, Div 2, Groups A-D T4	CSA US LR 110480 I.S. Class I, Div 1, Groups A-D T4	CSA US LR 110480 I.S. Class I, Div 1, Groups B-D, 171 °C	CSA US 221839 I.S. Class I, Div 1, Groups A-D T4

Model	Intrinsically Safe Calibrators		
	707Ex	718Ex	725Ex
Measure			
V dc	28 V		30 V
Resistance			3200 Ω
A dc	24 mA	24 mA	24 mA
Frequency			10 kHz
Pressure		30 psi to 300 psi[1]	8 ranges[2]
Temperature: RTDs			7 types
Temperature: TCs			12 types
Source/Simulate			
V dc			10 V
Resistance			3200 Ω
mA dc/% scale	24 mA		24 mA
mA source; auto step, auto ramp	•		•
Frequency			10 kHz
Temperature: RTDs			7 types
Temperature: TCs			12 types
Record			
Min/Max		•	
Hold		•	
Features			
Loop supply	24 V		12 V
Integrated hand pressure pump		•	
Intrinsically safe (ATEX)	•	•	•
Traceable certification	•	•	•

[1]Either the internal sensor or a Fluke 700 Pressure Module may be used
[2]Fluke 700 Pex Pressure Module required

For full specifications, more product highlights and ordering information visit www.fluke.com/ex

700 Series Pressure Calibration Modules

Fluke pressure modules

Fluke offers 29 different pressure modules for use with its pressure, multifunction and documenting process calibrators. Fluke process calibrators in this guide marked with the "Pressure Enabled" symbol display readings from these Precision 700 Series Pressure Modules. Each pressure module includes traceable certification, metric adapter and instruction sheet. A full range of differential, gage, absolute, vacuum, dual and intrinsically safe pressure modules are available, from –15 psi (–103 kPa) to 10,000 psi (69 MPa).

www.fluke.com/pmod

Models	Range/ resolution	Range (approx) resolution	Reference uncertainty (23 ± 3 °C)	Highside media	Low side media	Fitting material
Differential						
Fluke 700P00	1 in. H20/0.001	0.25 kPa/0.0002	0.300 %	Dry	Dry	316 SS
Fluke 700P01*	10 in. H20/0.01	2.5 kPa/0.002	0.200 %	Dry	Dry	316 SS
Fluke 700P02	1 psi/0.0001	6900 Pa/0.7	0.150 %	Dry	Dry	316 SS
Fluke 700P22	1 psi/0.0001	6900 Pa/0.7	0.100 %	316 SS	Dry	316 SS
Fluke 700P03	5 psi/0.0001	34 kPa/0.001	0.050 %	Dry	Dry	316 SS
Fluke 700P23	5 psi/0.0001	34 kPa/0.001	0.025 %	316 SS	Dry	316 SS
Fluke 700P04	15 psi/0.001	103 kPa/0.01	0.025 %	Dry	Dry	316 SS
Fluke 700P24*	15 psi/0.001	103 kPa/0.01	0.025 %	316 SS	Dry	316 SS
Gage						
Fluke 700P05*	30 psi/0.001	207 kPa/0.01	0.025 %	316 SS	N/A	316 SS
Fluke 700P06*	100 psi/0.01	690 kPa/0.07	0.025 %	316 SS	N/A	316 SS
Fluke 700P27*	300 psi/0.01	2070 kPa/0.1	0.025 %	316 SS	N/A	316 SS
Fluke 700P07	500 psi/0.01	3400 kPa/0.1	0.025 %	316 SS	N/A	316 SS
Fluke 700P08	1000 psi/0.1	6900 kPa/0.7	0.025 %	316 SS	N/A	316 SS
Fluke 700P09*	1500 psi/0.1	10 MPa/0.001	0.025 %	316 SS	N/A	316 SS
Absolute						
Fluke 700PA3	5 psi/0.0001	34 kPa/0.001	0.050 %	316 SS	N/A	316 SS
Fluke 700PA4*	15 psi/0.001	103 kPa/0.01	0.050 %	316 SS	N/A	316 SS
Fluke 700PA5	30 psi/0.001	207 kPa/0.01	0.050 %	316 SS	N/A	316 SS
Fluke 700PA6	100 psi/0.01	690 kPa/0.07	0.050 %	316 SS	N/A	316 SS
Vacuum						
Fluke 700PV3	-5 psi/0.0001	-34 kPa/0.001	0.040 %	316 SS	Dry	316 SS
Fluke 700PV4	-15 psi/0.001	-103 kPa/0.01	0.040 %	316 SS	Dry	316 SS
Dual						
Fluke 700PD2	± 1 psi/0.0001	±6900 Pa/0.7	0.150 %	316 SS	Dry	316 SS
Fluke 700PD3	± 5 psi/0.0001	±34 kPa/0.001	0.040 %	316 SS	Dry	316 SS
Fluke 700PD4	± 15 psi/0.001	±103 kPa/0.01	0.025 %	316 SS	Dry	316 SS
Fluke 700PD5	-15/30 psi/0.001	-100/207 kPa/0.01	0.025 %	316 SS	N/A	316 SS
Fluke 700PD6	-15/100 psi/0.01	-100/690 kPa/0.07	0.025 %	316 SS	N/A	316 SS
Fluke 700PD7	-15/200 psi/0.01	-100/1380 kPa/0.1	0.040 %	316 SS	N/A	316 SS
High						
Fluke 700P29*	3000 psi/0.1	20.7 MPa/0.001	0.050 %	C276	N/A	C276
Fluke 700P30	5000 psi/0.1	34 MPa/0.001	0.050 %	C276	N/A	C276
Fluke 700P31	10000 psi/1	69 MPa/0.007	0.050 %	C276	N/A	C276

* Intrinsically safe version available for use with 718Ex and 725Ex.

- Best-in-class 0.025 % reference uncertainty
- Rugged, chemical resistant packaging
- Temperature compensated using proprietary micro-technology linearized output
- Digital communication to calibrators, no analog losses or errors
- Absolute ranges: 0 to 5 psiA to 0 to 100 psiA (0 to 34 kPa to 0 to 690 kPa)
- Differential: 0 to 1 in H_2O to 0 to 15 psi (0 to 0.25 kPa to 0 to 103 kPa)
- Gage: 0 to 30 psi to 0 to 10,000 psi (0 to 207 kPa to 0 to 10 M kPa)
- Vacuum: 0 to –5 psi to 0 to –15 psi (0 to –34 kPa to 0 to –103 kPa)
- Dual: –1 psi to 1psi to –15 to 200 psi
- Intrinsically safe: 0 to 10 in H_2O to 0 to 3000 psi (0 to 2.5 kPa to 0 to 20.7 M kPa)

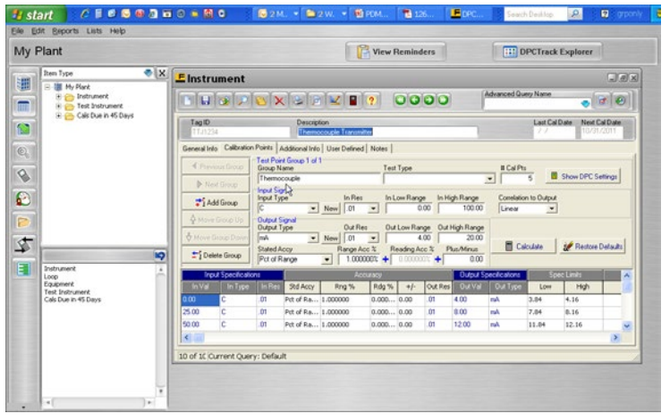
Pressure Enabled

Fluke Process Calibrators in this guide displaying this symbol are Pressure Enabled units and display readings from these Precision 700 Series Pressure Modules. Each pressure module includes traceable certification, metric adapter and instruction sheet.

For full specifications, more product highlights and ordering information visit www.fluke.com/pressure

750SW DPCTrack 2™ Software

FLUKE®



Fluke DPCTrack 2™ is an easy-to-use, single-user, entry-level instrumentation manager. For more sophisticated software, you may wish to investigate products from one of Fluke's software partners below.

www.fluke.com/dpctrack

750SW DPCTrack 2™ Software

DPCTrack 2 Software is a specialized database that can help you manage your instrumentation and address the documentation requirements of quality programs and regulations. With DPCTrack 2™ and a 754 DPC you can:

- Manage your inventory of tags and instruments, schedule for calibration
- Create tag specific procedures with instructions and comment
- Load those procedures to your DPC, and later upload the results to your PC
- Select and execute automated as found/as left procedures in the field, automatically capturing results
- Examine the calibration histories of your tags and instruments and print reports
- Import and export instrument data and procedures as ASCII text
- Import legacy DPC/TRACK

The 753 and 754 includes DPCTrack 2™ Sample software.

Prime Technologies

Meridium

AMS aware™

AMS from Emerson Process Management, (formerly Fisher-Rosemount).

PRM Plant Resource Manager

PRM (Plant Resource Manager) from Yokogawa Electric Corporation.

On Time Support

Cornerstone
The Open Platform for Instrument Management

beamex

INTERGRAPH

These Fluke Process Calibration software partners provide differentiated solutions with connectability to Fluke 753 and 754 Documenting Process Calibrators.

For full specifications, more product highlights and ordering information visit www.fluke.com/process_software

Pressure accessories, batteries

FLUKE®


Fluke 700HTP-2


Fluke 700PTP-1


Fluke 700LTP-1


BP7240 Battery Pack


C799 Soft Field Case

700ILF In Line Filter

www.fluke.com/process_acc

Fluke Fluke 700HTP-2 Hydraulic Test Pump

The Fluke Fluke 700HTP-2 is designed to generate pressures up to 10,000 psi/ 700 bar. Use the Fluke 700PRV-1 adjustable relief valves to limit pressures from 1360 psi to 5450 psi. Use the Fluke 700HTP-2 test hose to connect from the pump to the device under test.

Fluke 700PTP-1 Pneumatic Test Pump

The Fluke 700PTP-1 is a handheld pressure pump designed to generate either vacuum to -11.6 psi/-0.8 bar or pressure to 600 psi/40 bar.

Fluke-700LTP-1 Low Pressure Test Pump

Hand operated pressure pump designed to generate either vacuum to -13 psi/-.90 bar or pressures to 100 psi/6.9 bar. Ideal for low pressure applications requiring accurate low pressure testing.

BP7235 NiMH Battery

Spare battery for 74X calibrators. Have the power to easily run the calibrator for a full day's work.

BP7240 Li-ion Battery

Spare battery for 75X calibrators. Have the power to easily run the calibrator for a full day's work.

C799 Soft Field Case

Large fabric carrying case with multiple compartments, removable handle and shoulder strap. Cutouts to hold one documenting process calibrator, one Fluke Pressure Module, one BC7240 Battery Charger, one spare BP7240 Battery Pack, and test leads.

700ILF In Line Filter

Trap fine particles from atmospheric air, compressed air, and instrument air. It is used with the Fluke 713, 717, or 718 Pressure Calibrators.

To learn more about testing and troubleshooting industrial process controls visit **www.fluke.com/process_webinar** to watch a free webinar or view a video.

Fluke. *The Most Trusted Tools in the World.*

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For full specifications, more product highlights and ordering information visit www.fluke.com/process_acc