FLUKE®

525B Temperature/ Pressure Calibrator

Superior accuracy and functionality in an economical benchtop package

Technical Data

The Fluke 525B Temperature/ Pressure Calibrator gives you a workhorse combination of high accuracy and broad functionality for temperature and pressure instrument calibration. Compact and economical, the 525B has an interface for automated calibration, providing wide workload coverage in instrument shops and calibration labs, as well as in ATE applications.

The 525B is the most accurate Fluke temperature calibrator, sourcing and measuring a complete range of RTDs, thermocouples, and the YSI 400 thermistor. It also measures pressure covering common ranges from 1 inch (6900 Pa) of water up to 10,000 PSI (69 MPa) using the Fluke 700 Series and 525A-P Series Pressure Modules. Plus, the dc voltage and current specifications of the 525B enable you to calibrate other process calibrators and a wide variety of other instruments with accuracy that rivals any calibrator in its price range.

Key features:

- Simulates and measures all ANSI thermocouples, as well as L and U types, and provides cold junction compensation to enable calibration of a wide variety of thermocouple instrumentation.
- Direct input for storage of ITS-90 RTD constants.
- RTD source uncertainties to 0.03 °C.
- Direct measurement of all Fluke 700 Series and 525A-P Series Pressure Modules covering the most common pressure ranges from 1″ H_2O to 10,000 PSI.
- Converts easily to any pressure unit directly from the front panel or through remote communications.
- Sources dc voltage and current for multifunction workload coverage, enabling calibration of data loggers, strip chart recorders, multimeters, and other industrial instruments.
- Supports automation using Fluke's MET/CAL® *Plus* Calibration Management Software or custom automated programs with standard RS-232-C and IEEE-488 interface.
- Eight user programmable setpoints allow quick recall of values for Zero, Span and linearity checks during calibration.
- Programmable setpoint dwell times for automated calibration and troubleshooting.
- Selectable internal or external CJC (Cold junction compensation) provides you with the ability to make exacting thermocouple measurements using remote junctions.
- Easy five-way binding posts for low-loss convenient hookup. Banana plug, screw terminal, spade lug, wraparound terminal, wire pass-through terminal.
- NIST-traceable calibration with data is included.

At home in the cal lab

The 525B is a compact bench instrument well suited for traditional calibration laboratories with a large temperature workload. Its 0 to 100 V output and 0 to 100 mA current capabilities—plus its ability to serve as a highly-accurate pressure standard—make it a versatile performer.

Filling the gap in the instrument shop

In process plant environments, instrument shop technicians responsible for maintaining the equipment pool need to calibrate and repair a wide range of instruments, transmitters, field calibrators, P/I converters, transducers, and temperature probes. With its ability to simulate almost any temperature sensor, precise pressure monitoring capability, and dc voltage and current accuracy rivaling any calibrator in its price range, the 525B fills the gap between lower accuracy handheld field calibrators and more expensive high-end multifunction calibrators.

A good fit for ATE test applications

With precise calibration-grade instrument control enabled via an IEEE bus, the 525B is a hardworking addition to automated test systems in quality and manufacturing test applications requiring capabilities such as voltage and current sourcing, sensor simulation, and temperature monitoring and validation.

Powerful functionality that is easy to use

From start to finish, the 525B is designed for ease of operation. The intuitive front panel design features large keypads and display that help reduce training time and make the 525B comfortable to use even for long periods of time. Plus, you can store frequently used constants for a variety of probes in memory for faster setup on the job.

MET/CAL® *Plus* automates 525B calibration and documentation management

You can use the 525B with Fluke's MET/CAL *Plus* calibration software (V.6.11 or later) to meet the stringent documentation and reporting requirements imposed by quality standards such as ISO 9000. MET/CAL *Plus* is a powerful software environment for creating, editing, testing, and documenting calibration procedures, and for performing automated calibrations.

At the core of MET/CAL *Plus* is MET/TRACK® software, a database management system for test and measurement assets created specifically to manage equipment. It enables you to track the information you need to maintain quality calibrations. And it supports the traceability and record-keeping requirements of modern quality and accreditation standards.

MET/TRACK provides you with a variety of standard report formats prepared with Crystal Reports™ Professional, which is included with MET/CAL *Plus*. These report formats cover a wide range of information to help you meet many of your documentation requirements, including those for ISO 9000 and similar quality standards. They report on forward and reverse traceability, allowing you to easily document traceability from any asset to the equipment calibrated. It even includes measurement uncertainty reporting to meet the requirements of ISO/IEC 17025.

Pressure modules

An optional set of external pressure modules provides pressure measurement capability. The 525B can accept either the Fluke 700 Series or the 525A-P pressure modules. Both module types plug directly into the calibrator's front panel Lemo connector; the 525B firmware auto-detects the type and value of the attached module.

World-class temperature and pressure calibration solutions

In addition to the 525B Temperature/Pressure Calibrator, Fluke offers a broad range of solutions in temperature and humidity calibration from its Hart Scientific division and in pressure and flow calibration from DH Instruments, a Fluke company.

Fluke's Hart Scientific division makes everything you need for calibrating temperature sensors including SPRTs, PRTs, thermistors, and thermocouples. Hart's constant temperature baths and dry-block calibrators offer unmatched stability, and their primary temperature standards are used in national metrology institutes around the world. For precision thermometry, Hart thermometer readouts and probes are exceptionally accurate and easy to use, and the 1620A "DewK" temperature and humidity data logger handles your environmental monitoring needs.

DH Instruments, a Fluke Company, offers a range of high-end products focusing on pressure and flow calibrators and standards. More than 30 national measurement institutes rely on DHI pressure standards to establish their pressure references. DHI pressure standards, transfer standards, pressure controller/calibrators and monitors are recognized for their advanced features and the realistic specifications that are the hallmark of a true metrology company.

Calibration service, repair, and support

Fluke provides extensive calibration support and service to maximize the value of your calibration investment. Our worldwide network of Calibration Centers has traceability to national standards. Service and support are just a telephone call or fax away. We offer fast, quality repair and calibration services including a module exchange program, comprehensive training, and full support in setting up your lab.

General specifications

Warm-up time	Twice the time since last warmed up, to a maximum of 30 minutes
Settling time	Less than 5 seconds for all functions and ranges except as noted
Standard interface	Standard, RS-232; IEEE-488 (GPIB)
Temperature performance	Operating: 0 °C to 50 °C Calibration (tcal): 15 °C to 35 °C Storage: -20 °C to 70 °C
Electromagnetic compatibility	Meets CE requirements, including susceptibility
Temperature coefficient	Temperature coefficient for temperatures outside tcal +5 °C is 10 % of the 90 day specification (or 1 year, as applicable) per °C
Relative humidity	Operating: < 80 % to 30 °C, < 70 % to 40 °C, < 40 % to 50 °C Storage: < 95 %, non-condensing
Altitude	Operating: 3,050 m (10,000 ft) maximum Non-operating: 12,200 m (40,000 ft) maximum
Safety	EN 61010 Second, ANSI/ISA-S82.01-1994; CAN/CSA-C22.2 No. 1010.1-92, NRTL
Analog low isolation	20 V
EMC	Designed to comply with IEC 61326-1/1997 (EMC)
Line power	Line voltage (selectable): 100 V/120 V or 220 V/240 V Line frequency: 47 Hz to 63 Hz Line voltage variation: ± 10 % about line voltage setting
Power consumption	15 VA maximum
Dimensions	Height: 13.3 cm (5.25 in) plus 1.5 cm (0.6 in) four feet on bottom Width: 0.75 in standard rack width Depth: 47.3 cm (18.6 in) overall
Weight (without options)	4 kg (9 lb)

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Electrical Specifications

DC Voltage Specifications, Output

Ranges[1]	Absolute Uncertainty, tcal ± 5 °C ± (ppm of output + µV)				Stability	Resolution	Maximum Burden[2]
	90 days		1 year		24 hours, ± 1 °C ± (ppm of output + µV)		
0 to 100.000 mV	25	3	30	3	5 + 2	1 µV	10 mA
0 to 1.00000 V	25	10	30	10	4 + 10	10 µV	10 mA
0 to 10.0000 V	25	100	30	100	4 + 100	100 µV	10 mA
0 to 100.000 V	25	1 mV	30	1 mV	5 + 1 mV	1 mV	1 mA
TC Output							
–10 to 75.000 mV	25	3	30	3	5 + 2	1 µV	10 Ω

Notes:

[1] All outputs are positive only.

[2] Remote sensing is not provided. Output resistance is < 1Ω.

Ranges	Noise	
	Bandwidth 0.1 to 10 Hz ± (ppm of output + µV p-p)	Bandwidth 10 Hz to 10 kHz (µV rms)
0 to 100.000 mV	1 µV	6 µV
0 to 1.00000 V	10 µV	60 µV
0 to 10.0000 V	100 µV	600 µV
0 to 100.000 V	10 ppm+1 mV	20 mV

DC Current Specifications, Output

Ranges[1]	Absolute Uncertainty tcal ± 5 °C ± (ppm of output + mA)				Resolution	Maximum Compliance Voltage	Maximum Inductive Load
	90 days		1 year				
0 to 100.000 mA	40	1	50	1	1 µA	12 V	100 mH

Note:

[1] All outputs are positive only.

Ranges	Noise	
	Bandwidth 0.1 to 10 Hz p-p	Bandwidth 10 Hz to 10 kHz rms
0 to 100.000 mA	2000 nA	20 µA

Resistance Specifications, Output

Ranges[1]	Absolute Uncertainty tcal ± 5°C, ± Ω		Resolution	Allowable Current[2]
	90 days	1 year		
5 to 400.00 Ω	0.012	0.015	0.001 Ω	1 to 3 mA
5 to 4.0000 kΩ	0.25	0.3	0.01 Ω	100 µA to 1 mA

Notes:

[1] Continuously variable from 0 to 4 kΩ.

[2] For currents lower than shown, the floor adder increases by $Floor_{(new)} = Floor_{(old)} \times I_{min}/I_{actual}$.
For example, a 500 µA stimulus measuring 100 Ω has a floor uncertainty of 0.015 Ω x 1 mA/500 µA = 0.03 Ω.

Resistance Specifications, Input

Ranges[1]	Absolute Uncertainty tcal ± 5°C, ± (ppm of output + Ω)				Resolution	Stimulus Current
	90 days		1 year			
5 to 400.00 Ω	20	0.0035	20	0.004	0.001 Ω	1 mA
5 to 4.00000 kΩ	20	0.0035	20	0.004	0.01 Ω	0.1 mA

Note:

[1] 4–wire mode.

Thermocouple Specification, Output and Input

TC Type	Range (°C)		Absolute Uncertainty tcal ± 5 °C, ± (°C)[1] Output/Input	
	Minimum	Maximum	90 days	1 year
B	600 °C 800 °C 1000 °C 1550 °C	800 °C 1000 °C 1550 °C 1820 °C	0.42 °C 0.39 °C 0.40 °C 0.44 °C	0.46 °C 0.39 °C 0.40 °C 0.45 °C
C	0 °C 150 °C 650 °C 1000 °C 1800 °C	150 °C 650 °C 1000 °C 1800 °C 2316 °C	0.25 °C 0.21 °C 0.23 °C 0.38 °C 0.63 °C	0.30 °C 0.26 °C 0.31 °C 0.50 °C 0.84 °C
E	-270 °C -100 °C -25 °C 350 °C 650 °C	-100 °C -25 °C 350 °C 650 °C 1820 °C	0.38 °C 0.16 °C 0.14 °C 0.14 °C 0.16 °C	0.50 °C 0.18 °C 0.15 °C 0.16 °C 0.21 °C
J	-270 °C -100 °C -25 °C 120 °C 1000 °C	-100 °C -30 °C 150 °C 760 °C 1200 °C	0.20 °C 0.18 °C 0.14 °C 0.14 °C 0.18 °C	0.27 °C 0.20 °C 0.16 °C 0.17 °C 0.23 °C
K	-270 °C -100 °C -25 °C 120 °C 1000 °C	-100 °C -25 °C 120 °C 1000 °C 1372 °C	0.25 °C 0.19 °C 0.14 °C 0.19 °C 0.30 °C	0.33 °C 0.22 °C 0.16 °C 0.26 °C 0.40 °C
L	-200 °C -100 °C 800 °C	-100 °C 800 °C 900 °C	0.37 °C 0.26 °C 0.17 °C	0.37 °C 0.26 °C 0.17 °C
N	-270 °C -100 °C -25 °C 120 °C 410 °C	-100 °C -25 °C 120 °C 410 °C 1300 °C	0.33 °C 0.20 °C 0.16 °C 0.14 °C 0.21 °C	0.40 °C 0.24 °C 0.19 °C 0.18 °C 0.27 °C
R	-50 °C 250 °C 400 °C 1000 °C	250 °C 400 °C 1000 °C 1760 °C	0.58 °C 0.34 °C 0.31 °C 0.30 °C	0.58 °C 0.35 °C 0.33 °C 0.40 °C
S	0 °C 250 °C 1000 °C 1400 °C	250 °C 1000 °C 1400 °C 1750 °C	0.56 °C 0.36 °C 0.30 °C 0.35 °C	0.56 °C 0.36 °C 0.37 °C 0.46 °C
T	-270 °C -150 °C 0 °C 120 °C	-150 °C 0 °C 120 °C 400 °C	0.51 °C 0.18 °C 0.13 °C 0.12 °C	0.63 °C 0.24 °C 0.16 °C 0.14 °C
U	-200 °C 0 °C	0 °C 600 °C	0.56 °C 0.27 °C	0.56 °C 0.27 °C
mV	-10 to 75.000 mV			

Note:

[1] Does not include thermocouple wire error.

RTD and Thermistor Specification, Output

RTD Type	Range (°C)		Absolute Uncertainty tcal ± 5 °C, ± (°C)[1]	
	Minimum	Maximum	90 days	1 year
Pt 385, 100 Ω	-200 °C	-80 °C	0.03 °C	0.04 °C
	-80 °C	0 °C	0.04 °C	0.05 °C
	0 °C	100 °C	0.04 °C	0.05 °C
	100 °C	300 °C	0.03 °C	0.04 °C
	300 °C	400 °C	0.04 °C	0.04 °C
	400 °C	630 °C	0.04 °C	0.05 °C
	630 °C	800 °C	0.04 °C	0.05 °C
Pt 3926, 100 Ω	-200 °C	-80 °C	0.03 °C	0.04 °C
	-80 °C	0 °C	0.03 °C	0.04 °C
	0 °C	100 °C	0.03 °C	0.04 °C
	100 °C	300 °C	0.03 °C	0.04 °C
	300 °C	400 °C	0.03 °C	0.04 °C
	400 °C	630 °C	0.04 °C	0.05 °C
Pt 3916, 100 Ω	-200 °C	-190 °C	0.03 °C	0.03 °C
	-190 °C	-80 °C	0.03 °C	0.04 °C
	-80 °C	0 °C	0.03 °C	0.04 °C
	0 °C	100 °C	0.03 °C	0.04 °C
	100 °C	260 °C	0.03 °C	0.04 °C
	260 °C	300 °C	0.03 °C	0.04 °C
	300 °C	400 °C	0.03 °C	0.04 °C
	400 °C	600 °C	0.04 °C	0.05 °C
	600 °C	630 °C	0.04 °C	0.05 °C
Pt 385, 200 Ω	-200 °C	-80 °C	0.31 °C	0.38 °C
	-80 °C	0 °C	0.32 °C	0.38 °C
	0 °C	100 °C	0.33 °C	0.39 °C
	100 °C	260 °C	0.33 °C	0.39 °C
	260 °C	300 °C	0.36 °C	0.43 °C
	300 °C	400 °C	0.36 °C	0.43 °C
	400 °C	600 °C	0.42 °C	0.50 °C
	600 °C	630 °C	0.42 °C	0.50 °C
Pt 385, 500 Ω	-200 °C	-80 °C	0.13 °C	0.15 °C
	-80 °C	0 °C	0.13 °C	0.15 °C
	0 °C	100 °C	0.13 °C	0.16 °C
	100 °C	260 °C	0.14 °C	0.17 °C
	260 °C	300 °C	0.14 °C	0.17 °C
	300 °C	400 °C	0.15 °C	0.18 °C
	400 °C	600 °C	0.16 °C	0.19 °C
	600 °C	630 °C	0.16 °C	0.19 °C
Pt 385, 1000 Ω	-200 °C	-80 °C	0.06 °C	0.07 °C
	-80 °C	0 °C	0.06 °C	0.08 °C
	0 °C	100 °C	0.07 °C	0.08 °C
	100 °C	260 °C	0.07 °C	0.08 °C
	260 °C	300 °C	0.07 °C	0.09 °C
	300 °C	400 °C	0.07 °C	0.09 °C
	400 °C	600 °C	0.08 °C	0.09 °C
	600 °C	630 °C	0.08 °C	0.09 °C
Ni 120, 120 Ω	-80 °C	0 °C	0.02 °C	0.02 °C
	0 °C	100 °C	0.02 °C	0.02 °C
	100 °C	260 °C	0.01 °C	0.02 °C
Cu 427, 10 Ω[2]	-100 °C	260 °C	0.30 °C	0.38 °C
YSI 400	15 °C	50 °C	0.005 °C	0.007 °C

Notes:

[1] 2-wire output.

[2] Based on MINCO Application Aid No. 18.

RTD and Thermistor Specification, Input

RTD Type	Range (°C)		Absolute Uncertainty tcal ± 5 °C, ± (°C)[1]	
	Minimum	Maximum	90 days	1 year
Pt 385, 100 Ω	–200 °C	–80 °C	0.011 °C	0.012 °C
	–80 °C	0 °C	0.018 °C	0.020 °C
	0 °C	100 °C	0.018 °C	0.020 °C
	100 °C	300 °C	0.027 °C	0.030 °C
	300 °C	400 °C	0.031 °C	0.035 °C
	400 °C	630 °C	0.042 °C	0.047 °C
	630 °C	800 °C	0.050 °C	0.057 °C
Pt 3926, 100 Ω	–200 °C	–80 °C	0.011 °C	0.011 °C
	–80 °C	0 °C	0.014 °C	0.015 °C
	0 °C	100 °C	0.018 °C	0.019 °C
	100 °C	300 °C	0.026 °C	0.029 °C
	300 °C	400 °C	0.031 °C	0.034 °C
	400 °C	630 °C	0.041 °C	0.046 °C
Pt 3916, 100 Ω	–200 °C	–190 °C	0.006 °C	0.006 °C
	–190 °C	–80 °C	0.011 °C	0.012 °C
	–80 °C	0 °C	0.014 °C	0.015 °C
	0 °C	100 °C	0.018 °C	0.019 °C
	100 °C	260 °C	0.025 °C	0.028 °C
	260 °C	300 °C	0.026 °C	0.029 °C
	300 °C	400 °C	0.031 °C	0.034 °C
	400 °C	600 °C	0.040 °C	0.045 °C
	600 °C	630 °C	0.042 °C	0.047 °C
Pt 385, 200 Ω	–200 °C	–80 °C	0.008 °C	0.009 °C
	–80 °C	0 °C	0.012 °C	0.013 °C
	0 °C	100 °C	0.015 °C	0.017 °C
	100 °C	260 °C	0.020 °C	0.022 °C
	260 °C	300 °C	0.050 °C	0.053 °C
	300 °C	400 °C	0.053 °C	0.057 °C
	400 °C	600 °C	0.070 °C	0.075 °C
	600 °C	630 °C	0.071 °C	0.076 °C
Pt 385, 500 Ω	–200 °C	–80 °C	0.007 °C	0.008 °C
	–80 °C	0 °C	0.019 °C	0.020 °C
	0 °C	100 °C	0.023 °C	0.025 °C
	100 °C	260 °C	0.030 °C	0.033 °C
	260 °C	300 °C	0.032 °C	0.035 °C
	300 °C	400 °C	0.037 °C	0.041 °C
	400 °C	600 °C	0.047 °C	0.052 °C
	600 °C	630 °C	0.048 °C	0.053 °C
Pt 385, 1000 Ω	–200 °C	–80 °C	0.011 °C	0.012 °C
	–80 °C	0 °C	0.014 °C	0.015 °C
	0 °C	100 °C	0.019 °C	0.020 °C
	100 °C	260 °C	0.025 °C	0.028 °C
	260 °C	300 °C	0.027 °C	0.030 °C
	300 °C	400 °C	0.030 °C	0.034 °C
	400 °C	600 °C	0.041 °C	0.045 °C
	600 °C	630 °C	0.042 °C	0.047 °C
PtNi 385, 120 Ω (Ni120)	–80 °C	0 °C	0.009 °C	0.010 °C
	0 °C	100 °C	0.010 °C	0.011 °C
	100 °C	260 °C	0.011 °C	0.012 °C
Cu 427, 10 Ω[2]	–100 °C	260 °C	0.067 °C	0.069 °C
YSI 400	15 °C	50 °C	0.005 °C	0.007 °C
SPRT	–200 °C	660 °C	0.05 °C	0.06 °C

Notes:

[1] 4-wire mode. Uncertainties listed do not include probe uncertainties.

[2] Based on MINCO Application Aid No. 18.

700 Series Pressure Modules Specifications

	Model	Range/ Resolution	Range (approx)/ Resolution	Reference[1] uncertainty (23 ± 3 °C)	High[2] side media	Low[2] 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 M Pa/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	150 psi/0.001	103 kPa/0.001	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/0.001	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 M Pa/0.001	0.050 %	C276	N/A	C276
	Fluke 700P30	5000 psi/0.1	34 M Pa/0.001	0.050 %	C276	N/A	C276
	Fluke 700P31	10000 psi/1	69 M Pa/0.007	0.050 %	C276	N/A	C276

[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. For P00 module only, compensated temperature range is 15 °C to 35 °C. [2] "Dry" indicates dry air or non-corrosive gas as compatible media.
"316SS" indicates media compatible with Type 316 Stainless Steel. "C276" indicates media compatible with Hastelloy C276. Use of pressure zero is required prior to measurement or source. Max overpressure specification includes common mode pressure. Modules are CE rated. Metric adapter(s): 1/4" NPr female to male BSP/ISO 1/4-19, tapered thread, included with all modules except P29, P30, and P31, all modules include a NIST traceable certificate and test data.

525A-P Series Precision Pressure Transducers

Type	Model	Range/Resolution	Range/Resolution	Reference Uncertainty (23 ± 3 °C)
Differential	525A-P02	1 psi/0.00001	6900 Pa/0.01	0.008 % FS
Gage	525A-P03	5 psi/0.00001	34 kPa/0.001	0.008 % FS
Gage	525A-P04	15 psi/0.001	103 kPa/0.001	0.008 % FS
Gage	525A-P05	30 psi/0.0001	207 kPa/0.001	0.008 % FS
Gage	525A-P06	100 psi/0.001	690 kPa/0.001	0.008 % FS
Gage	525A-P07	500 psi/0.001	3400 kPa/0.01	0.008 % FS
Gage	525A-P08	1000 psi/0.01	6900 kPa/0.01	0.008 % FS
Gage	525A-P29	3000 psi/0.01	20.7 M Pa/0.0001	0.008 % FS
Absolute	525A-PA4	15 psi/0.0001	103 kPa/0.001	0.008 % FS
Absolute	525A-PA5	30 psi/0.0001	207 kPa/0.001	0.008 % FS
Absolute	525A-PA6	100 psi/0.001	690 kPa/0.001	0.008 % FS
Absolute	525A-PA7	500 psi/0.001	3400 kPa/0.01	0.008 % FS
Absolute	525A-PA8	1000 psi/0.01	6900 kPa/0.01	0.008 % FS
Vacuum	525A-PV4	-15 TO 0 psi/0.0001	-34 kPa/0.001	0.008 % FS

Pressure Measurement

The Calibrator can accept either the Fluke 700 or 525A-P series pressure modules. Pressure modules plug directly into the front panel Lemo connector with the Calibrator firmware autodetecting the type and value of the module you are attaching.

Range .....Determined by pressure module

Accuracy/Resolution.....Determined by pressure module

Units

PSI .....pounds per square inch
inH2O4°C .....inches of water at 4 degrees Celsius
inH2O20°C.....inches of water at 20 degrees Celsius
cmH2O4°C.....centimeters of water at 4 degrees Celsius
cmH2O20°C .....centimeters of water at 20 degrees Celsius
BAR .....bars
mBAR.....millibars
KPAL .....kilopascals
inHG 0°C .....inches of mercury at 0 degrees Celsius
mmHG 0°C .....millimeters of mercury at 0 degrees Celsius
Kg/cm2.....kilograms per square centimeter

DC Voltage Specifications, Ordering Information

Model	Description	
525B	Temperature/Pressure Calibrator	
Software		
MET/CAL *Plus*	Automated Calibration Software (IEEE-488 and RS-232)	
Accessories		
5520A-525A/ Leads	Thermocouple and test lead set 1 meter TC wire with male mini-plugs, All ANSI, L and U types; TC shorting plug; 1, 80AK-8001 TC adapter; 1, bead thermocouple type K; 1 meter shielded test lead with double banana plugs (M); 2, 30 A test leads, banana type connectors	
Y525	19" Rack Mount Kit	
Fluke 700PD3	Dual Pressure Module	± 5 psi / ± 34 kPa
Fluke 700P31	High Pressure Module	10000 psi/69 M Pa
Fluke 700P22	Differential Pressure Module	1 psi / 6900 Pa
Fluke 700P24	Differential Pressure Module	15 psi / 103 kPa
Fluke 700PD2	Dual Pressure Module	± 1 psi / ± 6900 Pa
Fluke 700P08	Gage Pressure Module	1000 psi / 6900 kPa
Fluke 700PA4	Absolute Pressure Module	15 psi / 103 kPa
Fluke 700P30	High Pressure Module	5000 psi / 34 M Pa
Fluke 700PD7	Dual Pressure Module	-15/200 psi / -100/1380 kPa
Fluke 700P05	Gage Pressure Module	30 psi / 207 kPa
Fluke 700P06	Gage Pressure Module	100 psi / 690 kPa
Fluke 700P29	High Pressure Module	3000 psi / 20.7 M Pa
Fluke 700PD5	Dual Pressure Module	-15 / 30 psi / -100 / 207 kPa
Fluke 700PV3	Vacuum Pressure Module	-5 psi / -34 kPa
Fluke 700P23	Differential Pressure Module	5 psi / 34 kPa
Fluke 700PA5	Absolute Pressure Module	30 psi / 207 kPa

Model	Description	
Accessories continued		
Fluke 700P03	Differential Pressure Module	5 psi / 34 kPa
Fluke 700PD6	Dual Pressure Module	-15/100 psi / -100/690 kPa
Fluke 700P04	Differential Pressure Module	15 psi / 103 kPa
Fluke 700PA6	Absolute Pressure Module	100 psi / 6900 kPa
Fluke 700P01	Differential Pressure Module	10.00 in. H20 / 2.5 kPa
Fluke 700PD4	Dual Pressure Module	± 15 psi / ± 103 kPa
525A-P02	Differential	1 psi/6900 Pa
525A-P03	Gage	5 psi/34 kPa
525A-P04	Gage	15 psi/103 kPa
525A-P05	Gage	30 psi/207 kPa
525A-P06	Gage	100 psi/690 kPa
525A-P07	Gage	500 psi/3400 kPa
525A-P08	Gage	1000 psi/6900 kPa
525A-P29	Gage	3000 psi/20.7 M Pa
525A-PA4	Absolute	15 psi/103 kPa
525A-PA5	Absolute	30 psi/207 kPa
525A-PA6	Absolute	100 psi/690 kPa
525A-PA7	Absolute	500 psi/3400 kPa
525A-PA8	Absolute	1000 psi/6900 kPa
525A-PV4	Vacuum	-15 to 0 psi/-34 kPa
Support		
MET/SUPPORT Gold	Software Support Program, one-year membership	
MET/SUPPORT GLDNW	MET/SUPPORT Gold Program, up to four workstations, one-year membership	

Fluke. *Keeping your world up and running.®*

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