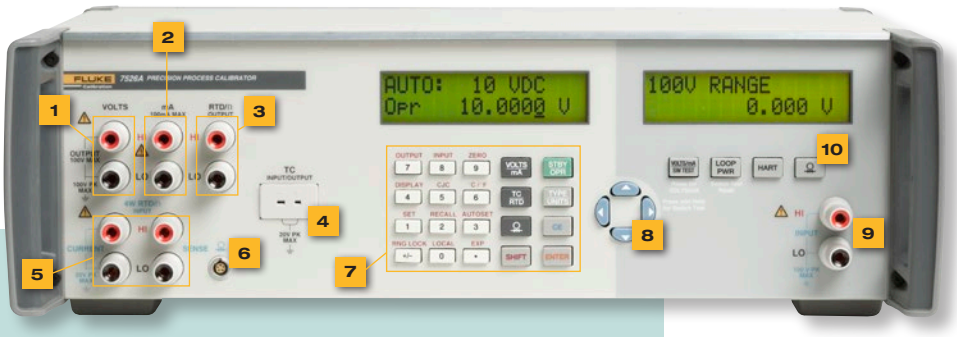
FLUKE®

Calibration

7526A Precision Process Calibrator

Technical Data



7526A at a glance

1. **DC voltage output terminals**
   0 mV to 100 V
   Accuracy: 30 ppm (+3 µV*), 1-year
2. **DC current output terminals**
   0 mA to 100 mA
   Accuracy: 50 ppm, 1-year
3. **RTD/Ω output terminals (two-wire)**
   5 Ω to 4 kΩ
   Accuracy: ± 0.05 °C, –200 °C to 630 °C, (Pt 385, 100 Ω), 1-year
4. **Thermocouple input/output terminal**
   Accuracy: ± 0.1 °C,
   –100 °C to 800 °C (type K), 1-year
5. **Four-wire RTD/Ω input terminals**
   Accuracy: ± 0.02 °C, –80 °C to 100 °C (Pt 385, 100 Ω), 1-year
6. **Isolated pressure module input.**
   Accuracy determined by the pressure modules
7. **Primary input/output controls**
8. **Cursor controls**
9. **Isolated input terminals for dc voltage/current measurement, switch-test input and 24 V dc loop power supply**
10. **Isolated input controls**

*Floor specification increases with range. See Specifications for more information.

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

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

A “best fit” for your process calibration requirements

In today’s competitive global markets with the need to continuously cut manufacturing costs, precise temperature and pressure process control is required to maintain product quality, reduce waste and ensure compliance to regulatory standards. Regular calibration of a wide variety of process measurement instrumentation is required to meet these standards. The 7526A Precision Process Calibrator puts all the necessary tools for process instrumentation calibration into one box. The 7526A simulates and measures nine RTD and thirteen thermocouple types, accurately measures pressure to within 0.008 % of reading when combined with Fluke 525A-P Series Pressure Modules, sources and measures dc voltage from 0 to 100 V to within 0.004 % of reading, sources dc current from 0 mA to 100 mA, accurately measures dc current to within 0.01 % from 0 mA to 50 mA and supplies 24 V dc loop power. Combined with MET/CAL® Calibration Software, the 7526A is an efficient, versatile and affordable calibrator that truly is a best fit for your process calibration requirements.

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Consolidated specifications

DC voltage, output			
Range[1]	**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
TC Output and Input			
–10 mV to 75 mV	30	2	10 Ω

[1] All outputs are positive only unless otherwise noted

DC voltage, isolated input			
Range	**Absolute Uncertainty, ± (ppm of reading + mV), 1-yr**		**Resolution**
0 to 10 V	100	0.2	100 µV
10 V to 100 V	100	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 + µA), 1-yr**		**Resolution**
0 mA to 50 mA	100	1	0.1 µA
0 mA to 24 mA [1][2] (Loop Power)	100	1	0.1 µA

[1] Loop Power: 24 V ±10% [2] HART Resistor: 250 Ω ± 3%

Resistance, output			
Range	**Absolute Uncertainty, tcal ± 5 °C, ± Ohms, 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 accuracy, input/output (does not include all available TC types)[1]			
TC type	**Temperature Range (°C)**		**Absolute Uncertainty, tcal ±5 °C, ± (°C), 1-yr [2]**
	Min	**Max**	
J	–210	1200	0.09
K	–250	1372	0.1
S	–50	1767	0.29
T	–250	400	0.11

[1] See extended specifications for all TC types (B,C,E,J,K,L,N,R,S,T,U,XK,BP)
[2] Best accuracy within specified TC temperature range

Sample RTD and thermistor, 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
YSI 400	15	50	0.007

[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 and thermistor, intput (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	–80	100	0.020
	100	300	0.024
YSI 400	15	50	0.007

[1] See extended specifications for all RTD types: Pt-100 (385, 3926, 3916), Pt-200, Pt-500, Pt-1000, Ni-120, Cu-427, SPRT

General specifications

Standard interface	RS-232, IEEE-488 (GPIB)	
Temperature performance	Operating:	0 °C to 50 °C
	Calibration (tcal):	18 °C to 28 °C
	Storage:	–20 °C to 70 °C
Electromagnetic compatibility	CE: Conforms to EN61326; operation in controlled EM environments	
Temperature coefficient	Temperature coefficient for temperatures outside tcal 5 °C is 10% of the 90-day specification (or 1 year if applicable) per °C	
Relative humidity	Operating:	<80% to 30 °C
		<70% to 40 °C
		<40% to 50 °C
Altitude	Operating:	3,000 m (9,800 ft) max
	Non-operating:	12,200 m (40,000 ft) max
Safety	EN/IEC 61010-1:2010 3rd Edition, UL 61010-1:2012, CAN/CSA 22.2 No. 61010-1-12	
Analog low isolation	20 V	
Line power	120 V~:	100 V to 120 V
	240 V~:	220 V to 240 V
Line frequency	47 Hz to 63 Hz	
Line voltage variation	± 10 % about setting	
Power consumption	15 VA maximum	
Dimensions	Height:	14.6 cm (5.75 in)
	Width:	44.5 cm (17.5 in)
	Depth:	29.8 cm (11.75 in)
Weight (without options)	4.24 kg (9.35 lb)	

Fluke Calibration. *Precision, performance, confidence.™*

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