FLUKE®
Calibration

Sales Guide

7526A Precision Process Calibrator

Contents

1. Objective

Get a quick introduction to the key product features, learn about the target industries and customers, see how the 7526A compares with the competition, learn how to perform a step-by-step product demonstration, and learn where to find available marketing materials.

2. Introduction

The Fluke Calibration 7526A, Precision Process Calibrator is a versatile benchtop calibrator designed for calibration of process instrumentation such as temperature and pressure transmitters, RTD and thermocouple readouts, pressure gauges, digital process simulators, data loggers, multimeters, etc.

An isolated measurement channel allows the 7526A to simultaneously source and measure either voltage, current or resistance. Two LCD displays allow the user to view both input and output parameters simultaneously.

2.1. Key Features at-a-glance

- Sources and measures DC voltage, DC current, resistance, RTDs and thermocouples
- Measures pressure up to 10,000 PSI using Fluke 700 or 525A-P series pressure modules
- Measures 4-20 mA loop current
- Sources 24 Vdc transmitter loop power
- Tests pressure & thermal switches with unique automated switch-test function
- Measures thermistors up to 4 kΩ
- Stores up to nine programmable setpoints for each input/output parameter
- Accepts ITS-90 coefficients for accurate SPRT measurements
- Compatible with MET/CAL® Calibration Software

2.2. Product Positioning

The 7526A is positioned in terms of price and performance between more expensive, high-end multi-product calibrators like the Fluke 5080A, and less precise, less versatile handheld field calibrators like Fluke process calibrators. It is capable of calibrating most handheld process calibration instrumentation such as loop calibrators, 3.5 digit DMMs, RTD/thermocouple simulators & readouts. It calibrates temperature and pressure transmitters and can calibrate most Documenting Process Calibrators (2:1 TUR relative to the Fluke 754).

Fluke Calibration 7080A

Fluke Calibration 7526A

Sample 7526A workload

Fluke 726 & 719

2.3. 7526A vs. 525B

The 7526A adds the functions and performance improvements listed in the table below. The 525B will continue to remain available to customers who do not need the additional features of the 7526A. US list price for the 7526A is about 10% higher than the 525B.

Feature/Specification	7526A	525B
Improved thermocouple accuracy	±0.1 °C	±0.16 °C
Switch test function	Yes	No
24 Vdc loop power supply	Yes	No
DC current measure	0 to 50 mA	No

3. Target Customers

The 7526A primarily targets process manufacturers whose functions include: maintaining product quality, reducing waste, improving efficiency and conforming to regulatory standards. To accomplish these goals, field instrumentation used to monitor manufacturing processes must be maintained and calibrated regularly. Most field instrumentation such temperature/pressure transmitters, pressure gauges, RTD & thermocouple calibrators and readouts, and DMMs can be calibrated by the 7526A.

Below is a summary by industry

- Process manufacturers: QA Mgr., QC Inspector, Process Eng., Validation Eng., Compliance Mgr.
- Manufacturing: Mfg. Eng., Asset Mgr., Test Eng., Production Mgr.
- R&D: Design Engineer, Engineering Technician
- 3rd party cal labs: Lab Manager, Calibration Technician

Industry	Applications	Cal Workload
Pharmaceutical/ Bio-tech	Monitor temp/pressure process, monitor freezers/ovens/incubators, freeze-drying, sterilization-in-place (SIP)	Temp/pressure transmitter, pressure gauges, handheld calibrator, temp readout, chart recorder
Food	Monitor process temp, food dryers, monitor cold storage, monitor refrigeration equip, SIP	Temp/pressure transmitter, temp readout, limit alarm, PID controller
Oil & Gas	Monitor pipeline provers, custody transfer	Temp/pressure transmitter, pressure gauges, flow transmitter
Chemicals	Monitor temp/pressure reaction conditions, refrigeration, boilers	Temp/pressure transmitter, limit alarms, pressure gauges
Electronic equip. mfr.	Mfr. electronic devices	Automatic test station
3rd party cal lab	Service industries listed above	All of the above

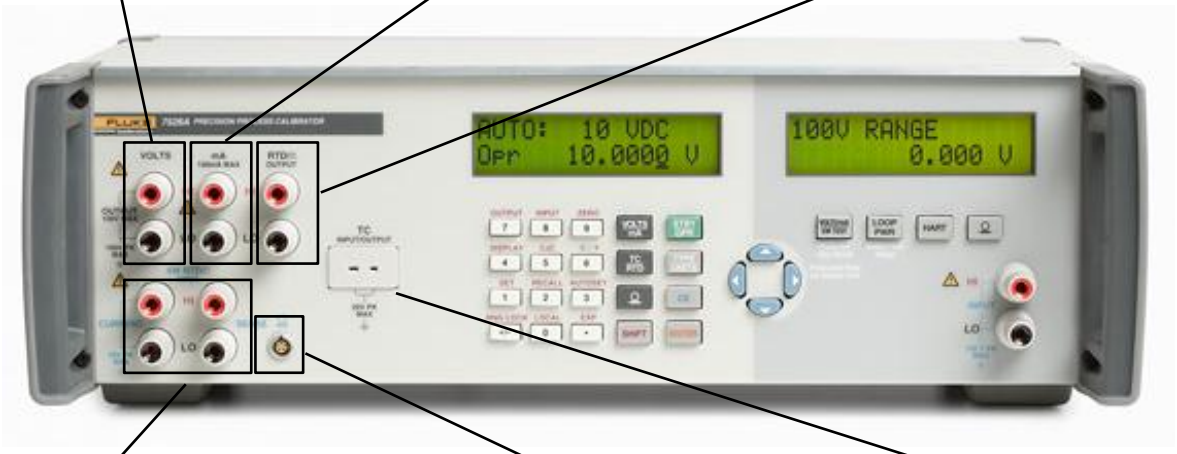
4. Key features

4.1. Features at-a-glance (left side)

DC voltage output terminals
- 0 Vdc to 100 Vdc
- Accuracy: 30 ppm (+3 µV)

DC current output terminals
- 0 mA to 100 mA
- Accuracy: 50 ppm

RTD/Ω output terminals (two-wire)
- 5 Ω to 4 kΩ,
- Accuracy: ± 0.05 ºC, –200 to 630 ºC

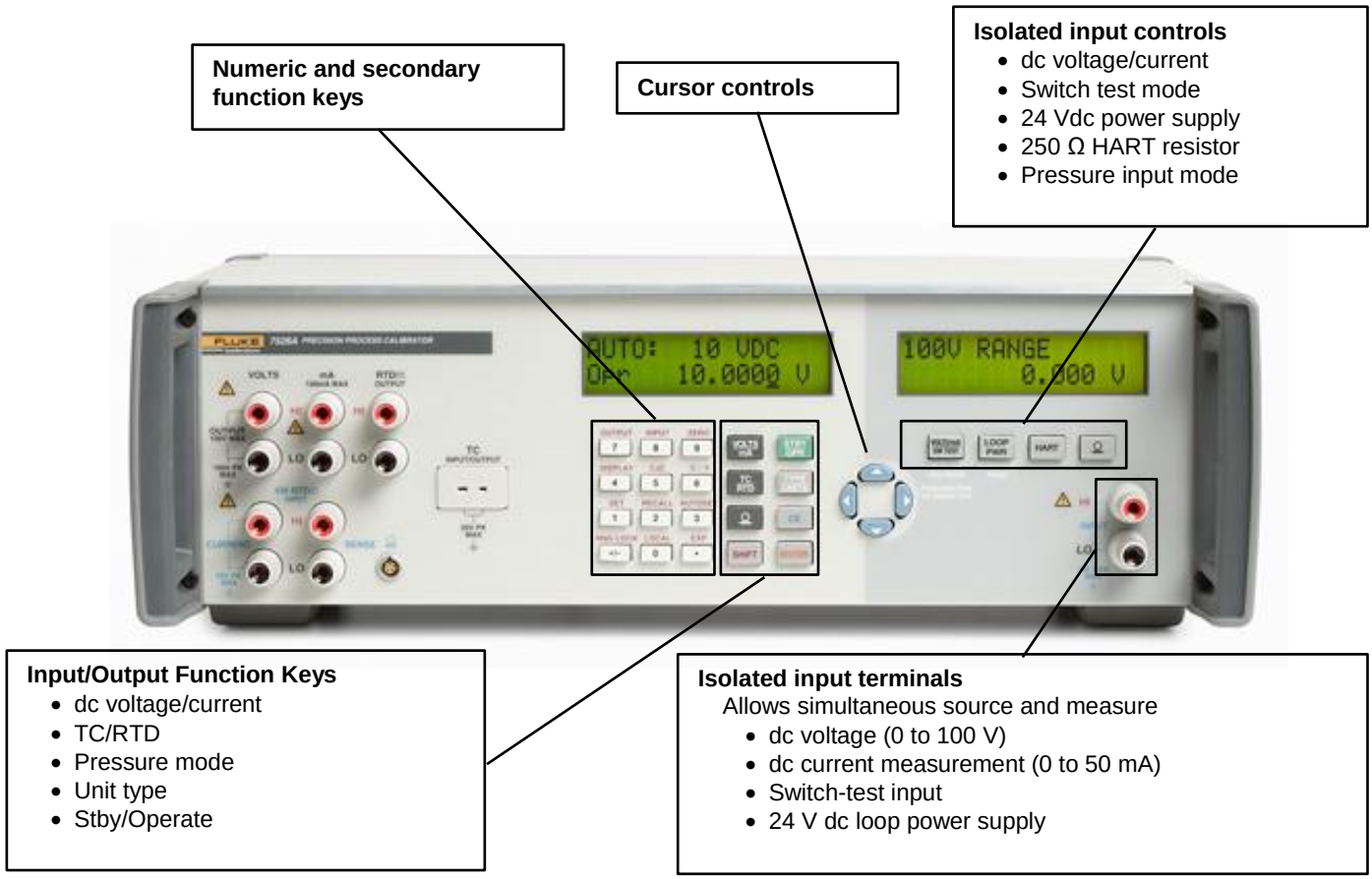


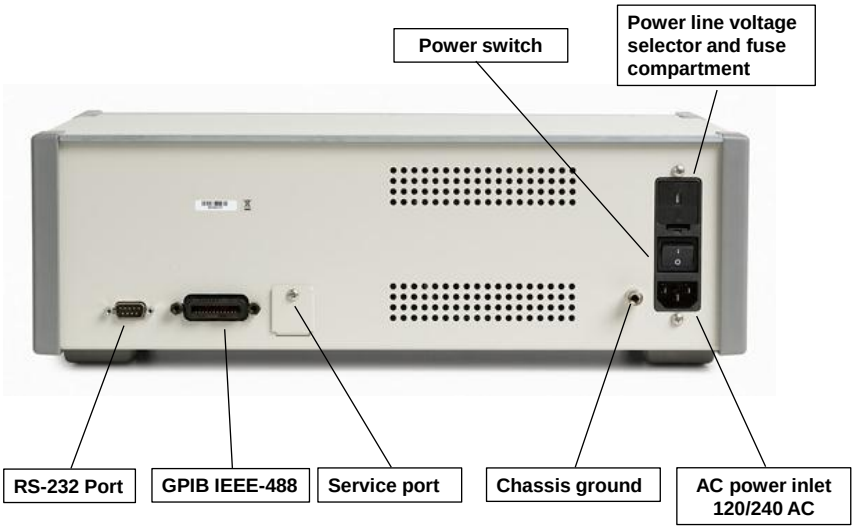
Four-wire RTD/Ω input terminals
- Accuracy: ±0.02 °C
- Pt 385, 100 Ω, –80 to 100 ºC

Isolated pressure module input
- Accepts Fluke 700 & 525A series pressure modules

Thermocouple input/output terminal
- Accuracy: ± 0.1 ºC
- –100 to 800 ºC (type K)

4.2. Features at-a-glance (right side)





Standard PC interface includes RS-232 and IEEE-488. A USB to serial adapter cable in included as standard.

4.3. Standby / Operate mode

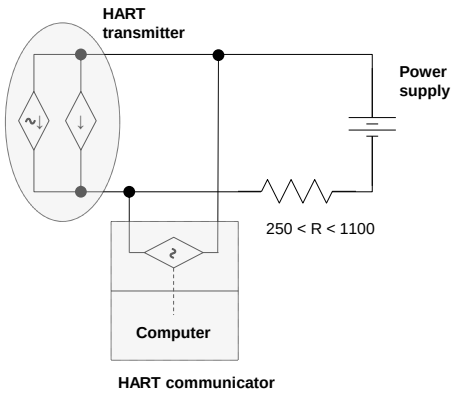
STBY/OPR
- In **Standby mode**, changes to the output value are not applied until you select the Operate mode
- In **Operate mode**, each change to the output value is applied immediately
- Voltages more than 30 V are not applied. The mode automatically reverts to Standby for safety

- In **Thermocouple mode**, move through the thermocouple types (including millivolts)
- In **RTD/Ohms mode**, move through the RTD types (including ohms)
- In **Pressure mode**, move through the pressure units

Select a secondary function from the numeric keypad

4.4. HART Communications and Loop Power

HART
- Enables a 250 Ω internal resistor
- Without the loop resistance in place, the DC power supply would “short out” the communicator’s AC voltage signal
- The presence of a loop resistor in the circuit prevents the DC power supply from “loading” the AC voltage signal by the communicator.
- Some minimum loop impedance is needed so that the HART signal can be ‘seen’ or ‘read’ by a HART master, like a HART communicator or HART modem.



LOOP PWR
- Turns on an internal 24 Vdc power supply in series with the current measurement circuit
- Used to power 4 – 20 mA transmitters

4.5. Thermocouple Source and Measure

The 7526A sources and measures all common thermocouple types and can display basic millivolts from -10.0 to 75.0 mV. See the extended specifications for the accuracy of each thermocouple type of a given temperature range.

Thermocouple types include: B, C, E, J, K, L, N, R, S, T, U, XK, and BP.

4.6. Internal or External CJC

The 7526A allows the user to select internal or external cold junction compensation for thermocouple temperature measurements. When external compensation is selected, XCJC is shown on the second line of the display. This mode simply disables the internal CJC and the 7526A will no longer monitor room temperature at the junction. When the internal CJC is disabled, an ice bath is used as a temperature source for the cold junction.

4.7. RTD Source and Measure

The 7526A both sources and measures most common types of RTDs and PRTs. The user can store CVD coefficients for up to five different probes and ITS-90 coefficients for one SPRT calibrated from –200 °C to 660 °C.

RTD and thermistor types include:

- Pt 385 100 Ω, 200 Ω, 500 Ω, 1000 Ω
- Pt 3926 100 Ω
- Pt 3916 (JIS) 100 Ω
- Ni120 120 Ω
- Cu 427 (Minco) 10 Ω
- YSI 400 thermistor

Although not listed above, an SPRT with a nominal resistance of 25.5 Ω can be measured when defined using ITS-90 coefficients.

4.8. Preset Setpoints

Nine preset output setpoints can be stored and recalled for each output mode, including:

- Voltage
- Current
- Each thermocouple type, including millivolts
- Each of the five RTD definitions

The setpoints can be recalled individually or can be cycled up and down with a user-defined dwell time at each setpoint. The automatic cycle feature starts at setpoint number 1 and steps to a user-specified end setpoint number. It then goes back down in reverse sequence and cycles through the

sequence again. If the automatic cycle feature is used, the order of the setpoints must be stored in the desired sequence from setpoint 1 to the end setpoint.

4.9. Switch Test Mode

To enter the Switch Test mode, the user presses and holds the Volts/mA key (right side of calibrator) for three seconds. After connecting the switch to the calibrator, the user cycles the switch over its range, first in one direction and then in the other. The 7526A will record the measured parameter where the switch changes state and displays the value. After cycling the switch both up and down, the calibrator will automatically display the "deadband," or the range over which the switch does not actuate.

4.10. Pressure Measurement

The 7526A automatically recognizes either a Fluke 700 or 525A series pressure module when connected and automatically selects the appropriate range. Both displays show pressure at the same time but different units of measure can be displayed if desired.

4.10.1. 525A Series Pressure Modules

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 T0 0 psi/0.0001	-34 kPa/0.001	0.008 % FS

4.10.2. 700 Series Pressure Modules

	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

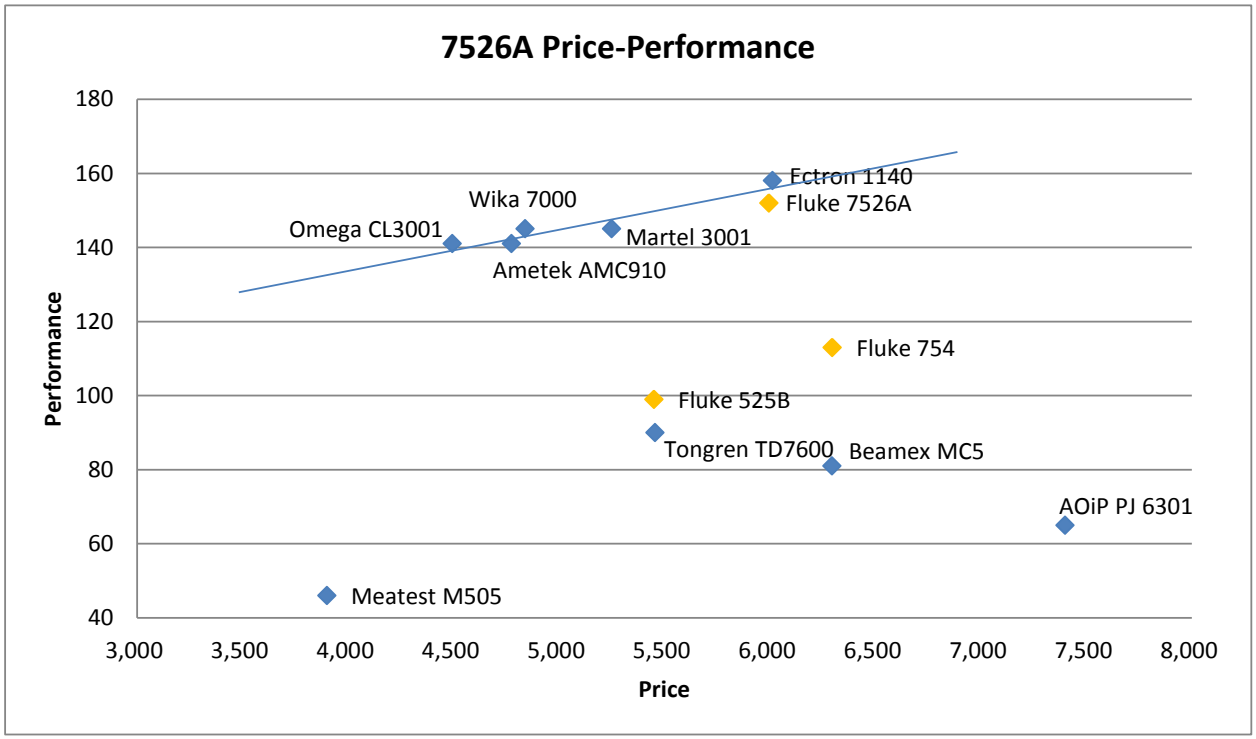
5. Competitive comparison

5.1. Key specs/feature comparison

Competitive Comparison

Make/Model		TC meas. accuracy (type K @ 0 C)	RTD meas. accurcy (pt 385 @ 0 °C)	Switch test	24V loop supply	DCV, input accuracy	DCV, output accuracy	DCI, input accuracy	DCI, output range	DCI, output accuracy	Resistance input accuracy	Resistance output accuracy
Fluke 7526A		0.10 °C	0.02 °C	yes	yes	0.005% + 0.2 uV	0.003% + 1 mV	0.005% + 1uA	0 to 100 mA	0.005 % +1uA	0.004% + 2 mΩ	0.015 Ω
Fluke 525B		0.16 °C	0.02 °C	no	no	no	0.003% + 1 mV	no	0 to 100 mA	0.005 % +1uA	0.02 Ω	0.015 Ω
Martel 3001		0.14 °C	0.02 °C	no	yes	0.005% + 0.2 uV	0.003% + 1 mV	0.005% + 1uA	0 to 100 mA	0.005 % +1uA	0.004% + 2 mΩ	0.015 Ω
Ametek AMC910		0.14 °C	0.02 °C	no	yes	0.005% + 0.2 uV	0.003% + 1 mV	0.005% + 1uA	0 to 100 mA	0.005 % +1uA	0.004% + 2 mΩ	0.015 Ω
Omega CL3001		0.14 °C	0.02 °C	no	yes	0.005% + 0.2 uV	0.003% + 1 mV	0.005% + 1uA	0 to 100 mA	0.005 % +1uA	0.004% + 2 mΩ	0.015 Ω
Wika Mensor CED7000		0.14 °C	0.02 °C	no	yes	0.005% + 0.2 uV	0.003% + 1 mV	0.005% + 1uA	0 to 100 mA	0.005 % +1uA	0.004% + 2 mΩ	0.015 Ω
Fluke 754		0.3 °C	0.07 °C	yes	no	0.02% + 50 uV	0.01% + 50 uV	0.01% + 20 uA	22 mA	0.02% + 0.007 mA	0.1% + 10Ω	0.02% + 0.02 Ω
Beamex MC5		0.1 °C (no CJC)	0.06 °C	yes	yes	0.02%	0.02%	0.02%	0 to 25 mA	0.02%	0.02% + 3.5 mΩ	0.04% + 3.5 mΩ
AOiP PJ 6301		0.3 °C	n/a	no	no	0.015% + 500 uV	0.015% + 500 uV	0.02% + 0.6uA	0 to 60 mA	0.02% + 0.8uA	0.01 % + 80 mΩ	0.01 % + 100 mΩ
Tongren TD7600 (to be discontinued)		0.2 °C	0.2 °C	no	no	0.009%	0.009%	0.010%	1 to 100 mA	0.01% = 7uA	0.002% + 30 mΩ	0.8 Ω
Meatest M505		0.1% + 1 °C	0.1% + 0.5 °C	no	no	0.1% + 1 digit	0.05% + 0.1%	0.1% + 1 digit	0 to 22 mA	0.05% + 0.1%	no	0.1% + 0.5 Ω
Ectron 1140		0.08 °C	n/a	no	no	0.0025%	0.0025%	no	no	no	no	no

5.2. Price vs. Performance



NOTE: Accuracy is weighted higher than features. Explains why the DPCs, which include for example a documenting capability, are positioned below the 7526A.

5.3. How the 7526A wins

Feature	Benefit
Improved TC accuracy	Can calibrate DPCs (2:1 TUR) and nearly all handheld temperature & pressure calibrators
Switch test (Unique to 7526A)	Increased workload. Not every temperature source, such as a drywell, includes a switch-hold function. Pressure sources do not.
Simultaneous source and measure	Calibrate more DUTs in less time. See results of an adjustment immediately.
Met/Cal compatible	Write automated procedures, create reports.
Value	Costs less than a DPC, highly versatile, precise but competitively priced.
Fluke expertise, support & training	Brand loyalty. Expertise is evident in the performance of a Fluke Calibration products, service and training—all of which keeps customers coming back.

6. Product demonstration

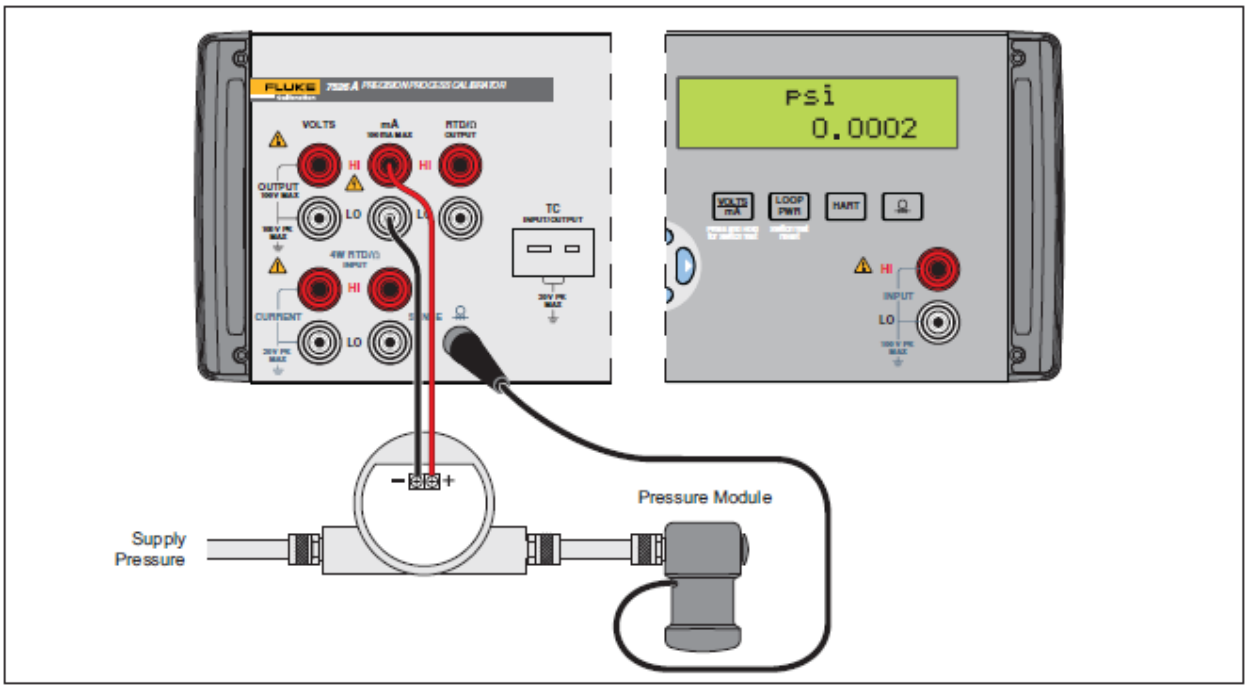
What you decide to demonstrate will depend largely on the type of demo kit you purchased and the applicable accessories you have on hand. Due to its versatility, the 7526A can be easily demonstrated using common items you likely have in the office such as a 3.5 digit DMM, a temperature indicator or thermometer readout, a handheld pressure pump and pressure module, a common RTD or just about any thermocouple type with a mini-jack termination. Configuring the 7526A is intuitive and the Users Manual includes a section on applications (chapter 4) that illustrates how to connect most DUTs to the 7526A. Before doing any customer demonstration, ensure beforehand that you have all the necessary test leads to interface the DUT and the calibrator. The examples below are just a sampling of what you might consider for a customer demonstration.

6.1. Current/Pressure (I/P) Transmitter

Required items include:

- Pressure source
- Pressure transmitter
- Pressure module
- Test leads

In this example, the 7526A will source a 4-20 mA current to a pressure transmitter. The 7526A measures the corresponding pressure from the pressure module.



1. Disconnect test leads from external devices.

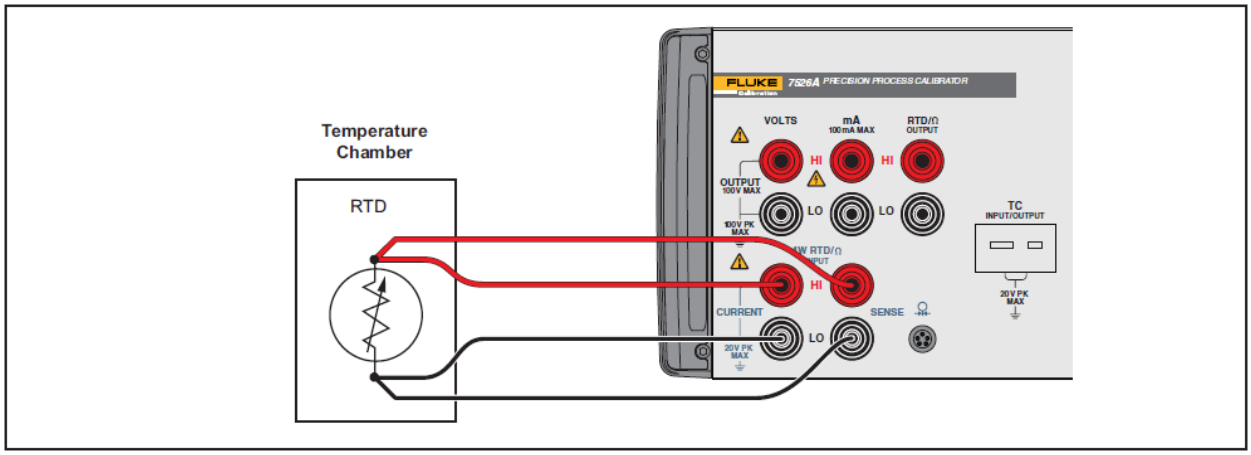
2. Select current output on the primary display (left side) by pressing Volts/mA to select dc voltage and current mode.
3. If dc voltage mode is shown, push the key again to go to dc current mode.
4. Use the numeric keypad to type the necessary output value and push ENTER.
5. Select pressure input on the isolated display (right side) by pressing the pressure key.
6. If necessary, push the pressure key again to cycle through the pressure units until the desired unit is shown.
7. Attach the pressure module to the pressure source. Connect the Lemo connector from the pressure module to the pressure measurement input of the 7526A.
8. Connect the transmitter to the calibrator as shown in the illustration.
9. Press the STBY/OPR key to source current to the transmitter.
10. To verify and calibrate the transmitter, refer to the transmitter documentation.

6.2. RTD Measure

Required items include:

- Four-wire RTD (e.g. 5615-9-S)

In this example, a four-wire RTD (although technically incorrect, also referred to as an SPRT) is connected to the 7526A and ITS-90 coefficients are programmed into the calibrator. Using a Fluke Calibration drywell in this demonstration will allow you to cycle the RTD to different setpoint temperatures.



The coefficients A- and B- refer to the A4 and B4 coefficients. These are generated when the SPRT is calibrated at the triple points of argon, mercury, and water. This includes the 83.8058 K (–189 °C) to 273.16 K (0 °C) subrange. Coefficients A, B, and C refer to different coefficients based on which subranges of the SPRT were calibrated. For example, if the 273.15 K (0 °C) to 933.473 K (660 °C) subrange was used, A, B, and C would refer to A7, B7, and C7 whereas if the 273.15 K (0 °C) to 692.67 K (420 °C) subrange was used, A and B would refer to A8 and B8 and C=0.

To key in the deviation coefficients for a custom SPRT:

1. Select RTD measure mode by pressing TC/RTD to select thermocouple and RTD/Ω mode. If thermocouple mode is shown, push the key again to go to RTD/Ω mode. If output mode is shown, push SHIFT and 8 to select input mode.
2. Push TYPE/UNITS until the SPRT type is selected.
3. Push ENTER to show the prompt “SET(1)/RECALL(2)”.
4. Push 1 to select custom SPRT data entry.
5. At the “ENTER MIN TEMP” prompt, key in the minimum temperature limit for the SPRT, and push ENTER.
6. At the "ENTER MAX TEMP" prompt, key in the maximum temperature limit for the SPRT, and push ENTER.
7. At the "ENTER RTPW" prompt, key in the nominal resistance value (RTPW) for the SPRT, and push ENTER.
8. At the "ENTER COEFF A" prompt, key in the first (A) deviation coefficient for the SPRT, and push ENTER. To key in a coefficient that includes an exponent, key in the mantissa, push ENTER and . to select the EXP function, key in the exponent and push ENTER.
9. When prompted, use the same method to key in the second (B), third (C), fourth (A-), and fifth (B-) deviation coefficients.
10. To abort the SPRT entry without stored changes, push TC/RTD.

To use the SPRT:

1. Select RTD measure mode as described above.
2. Push TYPE/UNITS until the SPRT type is selected.
3. Push ENTER to show the prompt "SET(1)/RECALL(2)".
4. Push 2 to recall the SPRT coefficients.

7. Summary specifications

See Extended Specifications for 90-day and 1-year specifications and specifications for all RTD and thermocouple types. Pressure specifications are determined by the module (see section 4.10.1 and 4.10.2 in this Sales Guide for module accuracy). Listed below are 1-year specifications and limited to more common RTD and thermocouple types. General specifications are included on the following page.

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	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 + 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

Summary Specifications (cont.)

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)	

8. Ordering information

Each 7526A includes the calibrator, Users Manual (CD ROM), Getting Started Guide, AC mains cord, thermocouple shorting jumper, traceable report of calibration, USB to serial cable adapter.

Item Number	Item Model	Description	Gross Weight (kg)	Box Dimensions (LxWxH cm)	Country of Origin	UPC Code	ECCN	HTS
Mainframe & Recommended Accessories								
4232116	7526A-156	7526A Precision Process Calibrator, 115V	5	45 x 30 x 15	US	0 95969 64357 3	3A992	9030390100
4232125	7526A-256	7526A Precision Process Calibrator, 230V	5	45 x 30 x 15	US	0 95969 64358 0	3A992	9030390100
4232133	7526A-CASE	7526A Carrying Case	15	80 x 52 x 31	US	0 95969 64359 7	EAR99	3923100000
4233827	Y7526A	7526A Rack Mount Kit	1	30 x 23 x 12	US	0 95969 65448 7	EAR99	9030908861
Fluke 525A Series Pressure Modules								
1631369	525A-P02	PRECISION PRESSURE MODULE, 1 PSID	1.1	25 x 20 x 15	US	0 95969 11130 0	EAR99	9026200000
2429821	525A-P03	PRECISION PRESSURE MODULE, 5 PSI/ 34 KPA	1.1	25 x 20 x 15	US	0 95969 28887 3	EAR99	9026200000
2074781	525A-P04	PRECISION PRESSURE TRANSMITTER, 15 PSI	2.5	13 x 13 x 8	US	0 95969 23807 6	3A992	9026200000
1631378	525A-P05	PRECISION PRESSURE MODULE, 30 PSIG	1.1	25 x 20 x 15	US	0 95969 11131 7	EAR99	9026200000
1631384	525A-P06	PRECISION PRESSURE MODULE, 100 PSIG	1.1	25 x 20 x 15	US	0 95969 11132 4	EAR99	9026200000
1631391	525A-P07	PRECISION PRESSURE MODULE, 500 PSIG	1.1	25 x 20 x 15	US	0 95969 11133 1	EAR99	9026200000
1631406	525A-P08	PRECISION PRESSURE MODULE, 1000 PSIG	1.1	25 x 20 x 15	US	0 95969 11134 8	EAR99	9026200000
1631414	525a-P29	PRECISION PRESSURE MODULE, 3000 PSIG	1.1	25 x 20 x 15	US	0 95969 11135 5	EAR99	9026200000
1631461	525A-PA4	PRECISION PRESSURE MODULE, 15 PSIA	1.1	25 x 20 x 15	US	0 95969 11140 9	EAR99	9026200000
2430741	525A-PA5	PRECISION PRESSURE MODULE, 30PSI/207 KPA	1.1	25 x 20 x 15	US	0 95969 28938 2	EAR99	9026200000
1631423	525A-PA6	PRECISION PRESSURE MODULE, 100 PSIA	1.1	25 x 20 x 15	US	0 95969 11136 2	EAR99	9026200000
1631438	525A-PA7	PRECISION PRESSURE MODULE, 500 PSIA	1.1	25 x 20 x 15	US	0 95969 11137 9	EAR99	9026200000
1631445	525A-PA8	PRECISION PRESSURE MODULE, 1000 PSIA	1.1	25 x 20 x 15	US	0 95969 11138 6	EAR99	9026200000
1631450	525A-PV4	PRECISION PRESSURE MODULE, -15 PSI	1.1	25 x 20 x 15	US	0 95969 11139 3	EAR99	9026200000
Fluke 700 Series Pressure Modules								
667391	FLUKE-700P00	PRESSURE MODULE, 0-1 IN. H20 DIFF	2.1	20 x 20 x 2	US	0 95969 07087 4	EAR99	9026208000
936005	FLUKE-700P01	PRESSURE MODULE, 0-10 IN. H20 DIFF	0.9	33 x 28 x 15	US	0 95969 02211 8	EAR99	9026208000
936013	FLUKE-700P02	PRESSURE MODULE, 0-1 PSID	0.9	33 x 28 x 15	US	0 95969 02212 5	EAR99	9026208000
100138	FLUKE-700P22	PRESSURE MODULE, 0-1 PSID, WET	0.9	33 x 28 x 15	US	0 95969 04287 1	EAR99	9026208000
936018	FLUKE-700P03	PRESSURE MODULE, 0-5 PSID	0.9	33 x 28 x 15	US	0 95969 02213 2	EAR99	9026208000
100146	FLUKE-700P23	PRESSURE MODULE, 0-5 PSID, WET	0.9	33 x 28 x 15	US	0 95969 04288 8	EAR99	9026208000
936021	FLUKE-700P04	PRESSURE MODULE, 0-15 PSID	0.9	33 x 28 x 15	US	0 95969 02214 9	EAR99	9026208000
100153	FLUKE-700P24	PRESSURE MODULE, 0-15 PSID, WET	0.9	33 x 28 x 15	US	0 95969 04289 5	EAR99	9026208000
936026	FLUKE-700P05	PRESSURE MODULE, 0-30 PSIG	0.8	33 x 28 x 15	US	0 95969 02215 6	EAR99	9026208000
936034	FLUKE-700P06	PRESSURE MODULE, 0-100 PSIG	0.8	33 x 28 x 15	US	0 95969 02216 3	EAR99	9026208000
1549399	FLUKE-700P27	PRESSURE MODULE, 300 PSIG	1.3	33 x 28 x 15	US	0 95969 08319 5	EAR99	9026208000
936039	FLUKE-700P07	PRESSURE MODULE, 0-500 PSIG	0.8	33 x 28 x 15	US	0 95969 02217 0	EAR99	9026208000
936042	FLUKE-700P08	PRESSURE MODULE, 0-1000 PSIG	0.8	33 x 28 x 15	US	0 95969 02218 7	EAR99	9026208000
617123	FLUKE-700P09	PRESSURE MODULE 1500PSIG	0.8	33 x 28 x 15	US	0 95969 04791 3	EAR99	9026208000
612207	FLUKE-700PA3	PRESSURE MODULE 0-5PSIA	0.8	33 x 28 x 15	US	0 95969 04619 0	EAR99	9026208000
612215	FLUKE-700PA4	PRESSURE MODULE 0-15PSIA	0.8	33 x 28 x 15	US	0 95969 04620 6	EAR99	9026208000
612223	FLUKE-700PA5	PRESSURE MODULE 0-30PSIA	0.8	33 x 28 x 15	US	0 95969 04621 3	EAR99	9026208000
612231	FLUKE-700PA6	PRESSURE MODULE 0-100PSIA	0.8	33 x 28 x 15	US	0 95969 04622 0	EAR99	9026208000
612249	FLUKE-700PV3	PRESSURE MODULE -5PSID	0.9	33 x 28 x 15	US	0 95969 04623 7	EAR99	9026208000

612256	FLUKE-700PV4	PRESSURE MODULE -15PSID	0.9	33 x 28 x 15	US	0 95969 04624 4	EAR99	9026208000
612090	FLUKE-700PD2	PRESSURE MODULE +/-1 PSID	0.9	33 x 28 x 15	US	0 95969 04561 2	EAR99	9026208000
612108	FLUKE-700PD3	PRESSURE MODULE +/-5 PSID	0.9	33 x 28 x 15	US	0 95969 04562 9	EAR99	9026208000
606837	FLUKE-700PD4	PRESSURE MODULE, +/-15PSID	0.9	33 x 28 x 15	US	0 95969 04321 2	EAR99	9026208000
612116	FLUKE-700PD5	PRESSURE MODULE -15+30 PSIG	0.8	33 x 28 x 15	US	0 95969 04563 6	EAR99	9026208000
612124	FLUKE-700PD6	PRESSURE MODULE -15+100PSIG	0.8	33 x 28 x 15	US	0 95969 04618 3	EAR99	9026208000
612132	FLUKE-700PD7	PRESSURE MODULE -15+200PSIG	1.6	20 x 20 x 2	US	0 95969 04632 9	EAR99	9026208000
612157	FLUKE-700P29	PRESSURE MODULE,3000PSIG WET	0.8	33 x 28 x 15	US	0 95969 04577 3	EAR99	9026208000
612165	FLUKE-700P30	PRESSURE MODULE,5000PSIG WET	1.1	20 x 20 x 2	US	0 95969 04578 0	EAR99	9026208000
612173	FLUKE-700P31	PRESSURE MODULE,10000PSIG WET	0.8	33 x 28 x 15	US	0 95969 04579 7	EAR99	9026208000
Pumps and Accessories								
2811774	FLUKE-700PTP-1	PNEUMATIC TEST PUMP. -13 TO 600 PSI	1.1	33 x 28 x 15	US	0 95969 39771 1	EAR99	8413200000
2811763	FLUKE-700LTP-1	LOW-PRESSURE TEST PUMP, 100 PSI/7 BAR	1.1	33 x 28 x 15	US	0 95969 39770 4	EAR99	8413200000
2811808	FLUKE-700PRV-1	PRESSURE RELIEF VALVE KIT	0.2	20 x 20 x 2	US	0 95969 39774 2	EAR99	8413200000
Hydraulic Test Pump								
2811795	FLUKE-700HTH-1	HYDRAULIC TEST HOSE, 10,000 PSI/690 BAR	1.0	20 x 20 x 2	DE	0 95969 39773 5	3A992	9026208000
4096855	FLUKE-700HTP-2	HYDRAULIC TEST PUMP, 10,000 PSI/690 BAR	0.8	20 x 20 x 2	US	0 95969 61099 5	3A992	9026208000
700 PMP Pressure Pump								
3345825	FLUKE-71X	HOSE KIT ACCESSORY	0.2	33 x 28 x 15	US	0 95969 47175 6	EAR99	9030908821
1566730	FLUKE-700ILF	IN-LINE FILTER,1 MICRON,100 PSI	2.1	20 x 20 x 2	US	0 95969 08727 8	EAR99	8421990080
Pressure Calibration Kit								
100062	FLUKE-700PCK	PRESSURE MODULE CALIBRATION KIT	1.3	36 x 18 x 13	US	0 95969 04243 7	EAR99	9026906000
Thermocouple Plug Kit								
620119	FLUKE-700TC1	TC MINI-PLUG KIT (TEN TYPES)	1.3	33 x 28 x 15	US	0 95969 05079 1	EAR99	9030908831
620127	FLUKE-700TC2	T/C MINI-PLUG KIT TYPE J,K,T,E,R,S	1.3	33 x 28 x 15	US	0 95969 05080 7	EAR99	9030908831

9. Sales and Marketing Materials

- The following sales and marketing materials are accessible from the 7526A Launch Page found at: http://us.flukecal.com/7526A-Launch

Item	Literature number
Press release	9040274A
Customer brochure	4226314A
Datasheet	4253244B
Extended specifications	4264410A
Catalog pages	9031709A, 9031714A, 9031713A
Product photos	Partner portal
Product announcement	9040272A
Customer training presentation	9040273A
Sales training presentation	9040271A

10. FAQ

Ref#	Question	Answer
1	Can a 25.5 Ω PRT be measured with the 7526A?	Yes, as long as ITS-90 coefficients are used to define the probe
2	Can a 25.5 Ω PRT be used with the standard RTD definitions?	No, a 25.5 Ω PRT can only be used with ITS-90 coefficients.
3	How are the nine programmable setpoints used?	They can be used to quickly recall a frequently used test point or to check the linearity of a device when cycled through a series of setpoints.
4	How are the nine programmable setpoints used?	They can be used to quickly recall a frequently used test point or to check the linearity of a device when cycled through a series of setpoints.
5	Is the standard calibration of the 7526A accredited?	No, it is a traceable calibration to national standards. If an accredited calibration is required, it must be added as a separate line item at order entry. Time-of-purchase calibration models can be found under Ordering Information on the 7526A product webpage.
6	Can the 7526A communicate directly with a HART enabled device?	No, it does not have HART communication capability built into the calibrator. A software package and a HART modem is under development and will be available shortly after launch.
7	What does the HART key in the isolated measurement section do?	It enables a 250 Ω resistor in series with the 4-20 mA current loop. Without the impedance of the resistor, a HART communicator connected in parallel with the current loop would not be able to read the AC signals of the HART communication protocol superimposed on the current loop.
8	Is MET/CAL compatible with the 7526A?	In a manner of speaking, yes. An FSC is in the process of being written now and will be available shortly after launch.
9	Can the 7526A measure negative pressure?	Yes, according to the range of the pressure module. Minimum measurable pressure is –100 kPA (–15 psi).
10	What is the resolution for RTD and TC source and measure?	TC resolution is 0.0 for source and 0.00 for measure at all temperatures, and types for both °C and °F. RTD resolution is 0.00 for source and 0.000 for measure at all temperatures, and types for both °C and °F.
11	What are the differences between the 525B and the 7526A?	The 7526A includes the isolated measurement display which allows simultaneous source and measure, improved TC accuracy (±0.1 °C vs. ±0.16 °C), unique switch test function, 24 Vdc loop power supply, DCV measure and DCI measure.
12	Will the 525B remain active?	Yes, it will be available through the existing ECAL direct channel.