INSTRUMENTS, LLC
Direct Drive Difference
SIERRA PRECISION

Accu-Star Calibrator Pressure Modules

Features

- **Precise Measurements** – **accurate pressure measurements to 0.025% full scale** accuracy – pressure range dependent. Isolated and non-isolated sensors, from 0-0.3 psi to 0-10,000 psi, provide the necessary tools to make that exacting pressure calibration easy!!
- **Temperature Compensation -** accuracy not de-rated over the temperature range of 15-35 Deg C – special temperature compensation circuitry
- **Rugged enclosure –** rugged ABS case permits usage in challenging outdoor applications and environmental conditions
- **Versatile** – 28 standard pressure ranges: **gauge, absolute, vacuum, differential and compound sensors** provide a wide range of pressure measurement solutions

Accu-Star Calibrator and External Pressure Module and Adapter sold separately.

Product Description

The Accu-Star family of external pressure modules make the perfect compliment to those internal pressure sensors provided for by the Accu-Star Digital Pressure Calibrator. 3D offers 28 external pressure modules for the Accu-Star calibrator covering: gauge, vacuum, absolute, compound and differential measurements. These modules are linked up to the Accu-Star calibrator via an optional extern al pressure module adapter – 3D part number: 2001-0092.

Each of the pressure ranges may be displayed in as many as 15 differing engineering units. Water density correction factors of 4° C, 20°C and 60°F can be selected for either water column unit. The choice of engineering unit may be restricted by limitations on resolution of the sensor and/or the instrument display.

The combination of sophisticated precision pressure measurement technology, robust design, ease-of-use, feature set and the wide array of internal sensors and external pressure modules makes the Accu-Star from 3D Instruments the ideal choice for your demanding pressure re monitoring or test and calibration applications.

Accu-Star External Pressure Module Specifications

PSIG Pressure Modules: Isolated design, media – liquids and gases compatible with 316 SS

Part Number	Pressure Range	Accuracy (% Full Scale)	Overpressure (% Full Scale)	Notes
525EX-001	0 to 0.3 psig (0 to 20 mBar)	+/-0.1%	400 %	1,2,5
525EX-004	0 to 1 psig (0 to 67 mBar)	+/-0.05%	400 %	1,2,5
525EX-009	0 to 5 psig (0 to 350 mBar)	+/-0.05%	400 %	1,4,7
525EX-011	0 to 7.2 psig (0 to 500 mBar)	+/-0.06%	300 %	1,3,4
525EX-013	0 to 10 psig (0 to 700 mBar)	+/-0.05%	300 %	1,3,4
525EX-021	0 to 30 psig (0 to 2 Bar)	+/-0.025%	300 %	1,4
525EX-018	0 to 50 psig (0 to 3.5 Bar)	+/-0.03%	300 %	1,4
525EX-023	0 to 100 psig (0 to 7 Bar)	+/-0.025%	300 %	1,4
525EX-024	0 to 150 psig (0 to 10 Bar)	+/-0.035%	200 %	1,4
525EX-026	0 to 300 psig (0 to 20 Bar)	+/-0.025%	200 %	1,4
525EX-027	0 to 500 psig (0 to 34 Bar)	+/-0.025%	200 %	1,4
525EX-029	0 to 1,000 psig (0 to 70 Bar)	+/-0.025%	200 %	1,4
525EX-031	0 to 1,500 psig (0 to 100 Bar)	+/-0.035%	200 %	1,4
525EX-033	0 to 3,000 psig (0 to 200 Bar)	+/-0.05%	200 %	1,4
525EX-035	0 to 5,000 psig (0 to 340 Bar)	+/-0.05%	200 %	1,4
525EX-038	0 to 10,000 psig (0 to 700 Bar)	+/-0.10%	120 %	1,6

Notes:
1.) **Gauge** type measurements are made relative to atmospheric pressure.
2.) **Media compatibility is different** for this sensor – designed for clean, dry, non-corrosive air or gas.
3.) Thermal and pressure hysteresis = 0.0025 psi (0.1724 mBar)
4.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.
5.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.005% of FS/^{0}C.
6.) Accuracy stated from 18^{0}C to 28^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.
7.) Thermal and pressure hysteresis = 0.0030 psi (0.2068 mBar)

Vacuum Pressure Modules: Non-Isolated, compatible media - clean, dry, non-corrosive air or gas

Part Number	Pressure Range	Accuracy (% Full Scale)	Overpressure (% Full Scale)	Notes
522EX-009	0 to -5 psig (0 to -350 mBar)	+/-0.05%	400 %	1,3,4
522EX-015	0 to -15 psig (0 to -1 Bar)	+/-0.05%	300 %	1,2,3

Notes:
1.) **Vacuum** type measurements are made relative to atmospheric pressure.
2.) Thermal and pressure hysteresis = 0.0025 psi (0.1724 mBar)
3.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.
4.) Thermal and pressure hysteresis = 0.0030 psi (0.2068 mBar)

Absolute Pressure Modules: Isolated design, media – liquids and gases compatible with 316 SS

Part Number	Pressure Range	Accuracy (% Full Scale)	Overpressure (% Full Scale)	Notes
52AEX-015	0 to 15 psia (0 to 1 Bar)	+/-0.05%	300 %	1,2,3
52AEX-021	0 to 30 psia (0 to 2 Bar)	+/-0.025%	300 %	1,3
52AEX-018	0 to 50 psia (0 to 3.5 Bar)	+/-0.03%	300 %	1,3
52AEX-023	0 to 100 psia (0 to 7 Bar)	+/-0.025%	300 %	1,3
52AEX-026	0 to 300 psia (0 to 20Bar)	+/-0.025%	200 %	1,3

Notes:
1.) **Absolute** type measurements are made relative to absolute zero.(perfect vacuum)
2.) Thermal and pressure hysteresis = 0.0025 psi (0.1724 mBar)
3.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.

Compound Pressure Modules: Isolated design, media – liquids and gases compatible with 316 SS

Part Number	Pressure Range	Accuracy (% Full Scale)	Overpressure (% Full Scale)	Notes
521EX-021	-15 to 15 psig (-1 to 1 Bar)	+/-0.05%	300 %	1,2,3
521EX-048	-15 to 30 psig (-1 to 2 Bar)	+/-0.025%	300 %	1,3

Notes:
1.) **Compound** type measurements are made relative to atmospheric pressure.
2.) Thermal and pressure hysteresis = 0.0025 psi (0.1724 mBar)
3.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.

Differential Pressure Modules: Non-Isolated, compatible media - clean, dry, non-corrosive air or gas

Part Number	Pressure Range	Accuracy (% Full Scale)	Overpressure (% Full Scale)	Notes
52DEX-009	0 to 5 psid (0 to 350 mBar)	+/-0.05%	400 %	1,2,3,4
52DEX-021	0 to 30 psid (0 to 2 Bar)	+/-0.025%	300 %	1,2,4
52DEX-018	0 to 50 psid (0 to 3.5 Bar)	+/- 0.03%	300 %	1,2,4

Notes:
1.) **Differential** type measurement is a measurement made to the pressure applied to the low-pressure port of the module.
2.) Maximum static pressure = 200 psig (14 Bar)
3.) Thermal and pressure hysteresis = 0.0030 psi (0.2068 mBar); all other psid ranges have no hysteresis
4.) Accuracy is percentage of full scale from 15^{0}C to 35^{0}C. Outside this range but within ops. range, add an additional +/- 0.0015% of FS/^{0}C.

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