Type S9-1
Digital Pressure Instrument

FEATURES

- ***Pressure: Select a range so that the maximum applied pressure will never exceed the rated full-scale pressure.***
- ***Vibration: Excessive vibration could cause loosening of components resulting in loss of instrument accuracy or failure to display valid data.***
- ***Pulsation: Excessive pressure pulsation could result in fatigue failure of the pressure element.***
- ***Temperature: Operation of the instrument in an environment where temperatures are in excess of 65°C (150°F) may result in loss of accuracy of the instrument.***
- ***Process: Pressure boundary materials must be resistant to the process media. Failure to assure compatibility may result in pressure sensing element failure. Instruments used on high-pressure gas, or potentially hazardous service such as oxygen, should be carefully selected in accordance with the recommendation of ANSI B40.7.***

To recognize and foresee the need for greater precision in pressure measurement and to remain on the leading edge of technology was a dream Otto Heise had over half a century ago.

Today, Heise design engineers fulfill that dream by combining state-of-the-art electronics with the latest technology, to produce innovative products, unique in their ability to meet the needs of industry.

The new Heise Series 9 digital pressure instrument is the next generation of precision pressure instrumentation. The system offers a wide variety of feature and benefits now available in one compact, self-contained unit. Functions that have never before been offered together include Unit Select, Tare, Hi-Lo Setpoint and Max/Min Analog and Digital output signals, or both, are offered for greater flexibility. And the time-tried and proven Heise optical sensing techniques provide pressure-related signals in a unique, patented non-contacting manner, to provide real long term accuracies of 0.07% and 0.035% of span with greater stability, repeatability and longer sensor life.

SPECIFICATIONS

Sensor: Solid state non-contacting optical sensor. Diaphragm to 273 psi. Bourdon tube for higher ranges.

Pressure Sensor Material: Element – Inconel 718. Other wetted parts – 316 SS

Pressure Media: Any liquid or gas compatible with wetted parts materials.

Process Connection: ¼ NPT Female for ranges up to 5000 psi – Autoclave F-250-C (Aminco 45-11310) for ranges over 6000 psi.

Accuracy: Percent of span including sensitivity, linearity, repeatability and hysteresis at 70°F (21°C)
Model 901A: ±0.07%
Model 901B: ±0.035%

Sensitivity: Better than ±0.005% span.

Repeatability: Better than ±0.005% span.

Display: Single plane 0.43˝ high LED with decimal point and polarity. 4 or 5 digit display with calibration resolution to one part in 30,000.

Conversion Period: Data display and digital output signal –
250 milliseconds.
Max/Min track memory – 83 milliseconds
Analog output – continuous response

Warm-Up Time: For rated accuracy – less than 5 minutes
For complete stability – less than 30 minutes

Temperature Compensated Range:
Standard: 45° to 95°F (7° to 35°C)
Optional: 20° to 120°F (–7° to 49°C)

Maximum Temperature Effect: Percent of span per °F from reference temperature of 73°F (23°C). ±0.004% of span per °F over temperature compensated span.

Storage Temperature:
–40°F to 180°F (–40° to 82°C).

Overpressure Capability: Note – calibration adjustment may be required after overpressure.
400% of span to 236 psi
100% of span to 500 psi
30% of span to 7500 psi
20% of span to 10,000 psi
10% of span to 30,000 psi

Over/Under Range Indication: Indicated by "**or**" or "**ur**" on the display after exceeding calibrated range by 10% in either direction.

Optional Output Signals:
Digital: Latched Parallel BCD – Tristate
RS-232 baud rate selectable from 2400 to 9600.
Analog: 4-20mA loop control
0-5 Vdc, and 0-10 Vdc.
Accuracy of analog output ±0.2% of span.

Power Supply Input: 100/115/230 Vac nominal ±10%, 50/60Hz.

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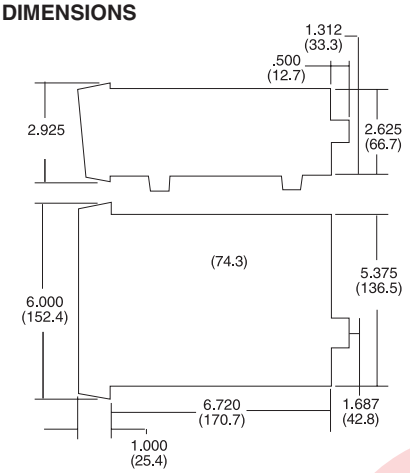
DIMENSIONS



COMPOUND RANGES

psi		Inches Hg	
Pressure	Vacuum	Pressure	Vacuum
2	2	5	5
3	3	10	10
5	5	15	15
10	10	20	30
15	15	30	30
30	15	50	30
50	15	100	30
100	15	150	30
		300	30

Gauge and absolute ranges[1]

	psi	Inches Water	Pascals
Gauge pressure ranges	2	50	kPa
	3	100	20
Gauge pressure ranges / Absolute ranges[2]	5	150	30
	10	200	50
	15	300	60
	20	400	100
	30	500	160
	50	600	250
	60	1000	400
	100	2000	500
		3000	600
			1000
Absolute ranges[2]	150		1600
	200		2500
	300		4000
	400		6000
	500		MPa
	600		10
	800		16
	1000		25
	1500		40
	2000		60
	2500		100
	3000		160
	4000		200
	5000		
	6000		
	10,000		
	15,000		
	20,000		
	25,000		
	30,000		
VACUUM RANGES	5		kPa
	10		20
	15		30
			50
			100

(1)-Nonstandard ranges on application
(2)-Evacuated reference side for barometric compensator

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