KELLER AMERICA

Highly Precise Pressure Transmitters **Preciseline**™

16-bit internal digital error correction

▶ *Exceptional accuracy over -10 – 80ºC range*

Floating isolated piezoresistive sensor

▶ *Assures stability over extended intervals*

Dual (analog + RS485) outputs standard

▶ *Simplifies interface to control as well as data collection / telemetry systems*

User-programmable analog output

▶ *Provides maximum flexibility with minimum inventories*

The Preciseline by Keller America combines a stable, media-isolated sensor with the most advanced error correction electronics available in such a compact envelope. True 16-bit error correction, updating the analog output at 400Hz, provides real Total Error Band performance that delivers consistent results over a wide range of operating conditions. As well as the analog output, the standard Preciseline provides an RS485 interface, affording the user the ability to monitor both pressure and temperature from up to 128 transmitters on a single bus, in addition to providing a means by which the analog output may be rescaled. Keller America's guaranteed lightning protection makes this transmitter ideal for installation in areas prone to chronic damage due to transients caused by lightning.

Please consult the comparison chart below to determine if the Preciseline series is the best solution for your specific application. Data sheets for Econoline, Valueline, and other products are available upon request or by visiting our website, www.kelleramerica.com.

Product Comparison	**Econoline™**	**Valueline™**	**Preciseline™**
Accuracy	Static (25°C): ±1 or ±0.5% FS TC-Zero: ±0.03% FS / °C TC-Sens: ±0.03% / °C	Static (25°C): ±0.25 or ±0.1% FS TC-Zero: ±0.01% FS / °C TC-Sens: ±0.01% / °C	**±0.2 or ±0.1% FS T.E.B.***
Custom Pressure Ranges	No	Yes	**Yes**
Lowest Pressure Range	15 PSI	2 PSI	**2 PSI**
Highest Pressure Range	10,000 PSI	15,000 PSI	**15,000 PSI**
Field Rangeability	No	No	**Yes**
Analog Output	0.5 – 4.5 VDC 4 – 20 mA	0 – 5 VDC, 0 – 10 VDC 4 – 20 mA	**0 – 5 VDC, 0 – 10 VDC 4 – 20 mA**
Digital Output	N/A	N/A	**RS485**
Wetted Materials	316L SS, Fluorocarbon	316L SS, Fluorocarbon	**316L SS, Fluorocarbon**
Process Connection	¼" NPT male	¼" NPT male	**¼" NPT male**
Electrical Termination	Cable, mini-DIN	Cable, DIN43650, MIL-C-26482	**Cable, DIN43650, MIL-C-26482**
Relative cost	Lowest	Midrange	**Highest**

*see reverse, Note 6.

Addition of Option-009 or internal only protection (standard on all 4-20mA pressure transmitters) increases the minimum-required supply voltage, on account of internal resistance of the surge protectors. In addition, cable resistance* adds to the supply requirement. In order to insure proper system operation, calculate the minimum required supply voltage (at the source) as follows:

For two-part (internal+external) system (recommended):
MINIMUM SUPPLY VOLTAGE = 10.75 + 0.025 (CABLE LENGTH x 0.07) VDC

For internal only protector (standard with 4-20mA output):
MINIMUM SUPPLY VOLTAGE = 9.65 + 0.025 (CABLE LENGTH x 0.07) VDC

*Cable resistance = ~70Ω / 1000ft

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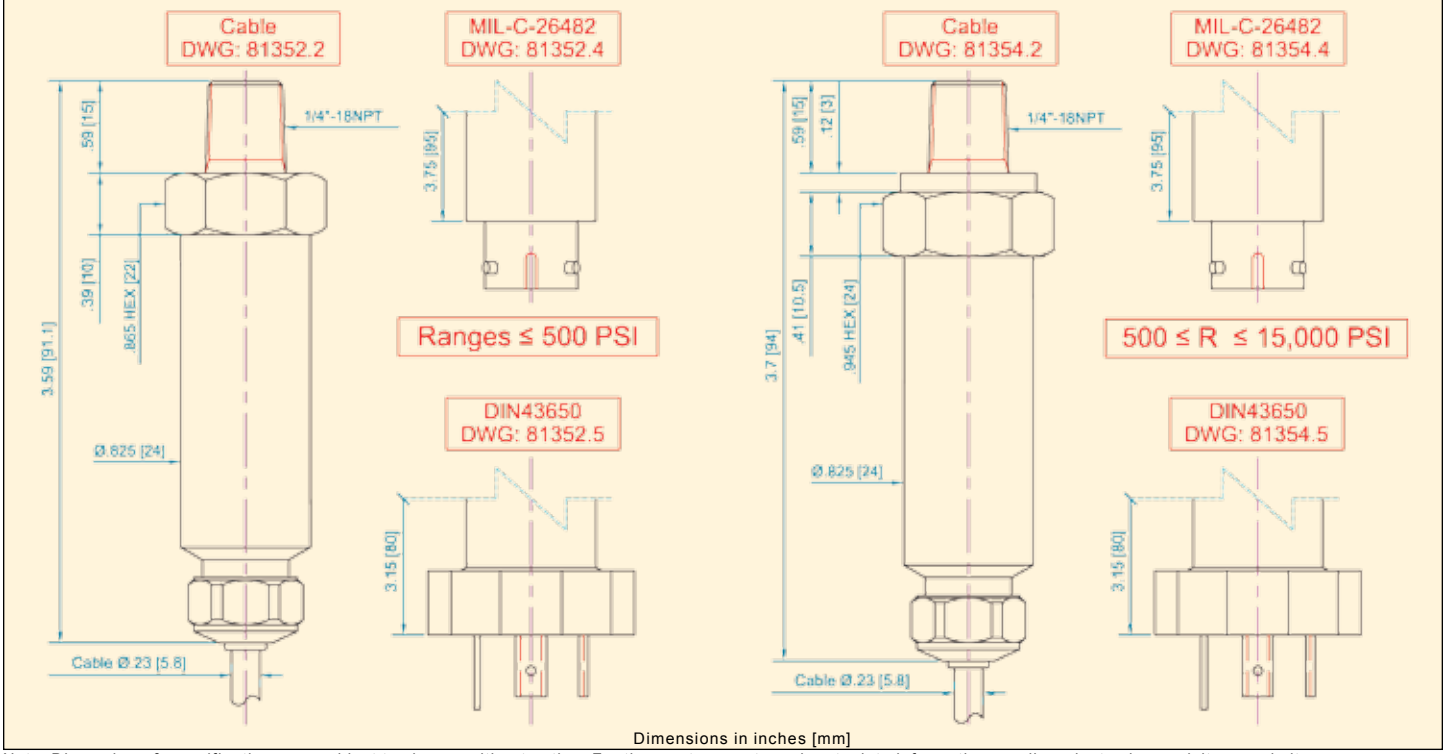
Preciseline

Specifications

Pressure units	PSIG	PSIA	PSIS[1]
Pressure Range (user specified)[2]	Infinite from 0–2 thru 0–500	Infinite from 0–2 thru 0–500	Infinite from 0–500 thru 0–15,000
Zero Point	*Note 2*	*Note 1*	*Note 1*
Proof Pressure	Varies by range, from 10X for 1PSI to 1.1X for 15,000 PSI.		
Supply[5]	*VDC*	8 – 28	13 – 28
Output	*2 wire analog*	4 – 20 mA[10]	
	3 wire analog	0 – 5 VDC	0 – 10 VDC
	4 wire digital	RS485	
Electrical Connection	Standard: 5ft Hytrel-jacketed shielded cable or DIN43650 connector[3] Optional: MIL-C-26482 connector[4]		

Accuracy, T.E.B.[6]	Standard: ±0.2% Optional: ±0.1%
Compensated temp. range	-10 – 80°C
Operating temp. range	-40 – 120°C
Process Connection	1/4 NPT male
Wetted materials	316L SS, Fluorocarbon
Environmental protection	IP68 w/ Cable, IP65 w/ DIN43650 or MIL-C-26482
CE-Conformity	EN50081-1, EN50082-2
Shock	20g (11ms)
Vibration	20g (5 – 2KHz, max. amp. ±3mm) per IEC68-2-6

Dimensions



Dimensions in inches [mm]

Note: Dimensions & specifications are subject to change without notice. For the most accurate and up to date information on all products please visit our website.

Wiring Configuration

Configuration[7,9]	Pin 1 / C / White	Pin 2 / B / Red	Pin 3 / A / Black	D / Blue	F / Yellow
2 Wire (mA)	OUT / GND		+Vcc	RS485A	RS485B
3 Wire (VDC)	GND	+OUT	+Vcc	RS485A	RS485B
4 Wire (RS485 Only)	GND		+Vcc	RS485A	RS485B

Notes:

1. PSIG = Gage; Zero-point referenced to local atmospheric pressure.
PSIA = Absolute; Zero-point set at hard vacuum.
PSIS = Sealed Gage; Zero-point set at 1 bar absolute (14.504 PSIA).

2. Zero-point can be suppressed or elevated for special applications.

3. Mating connector supplied at no extra cost. Does not support RS485.

4. At extra cost, includes mating connector.

5. Nominal values may be higher depending upon cable length.
Cable resistance = ~70Ω / 1000ft.

6. TEB: Total Error Band; Includes the combined effects of non-linearity, hysteresis and non-repeatability as well as thermal dependencies, over the compensated temperature range, expressed as a percentage of the Basic Range. All intermediate ranges are realized by deranging from standard Basic Ranges of 15, 45, 150, 450, 1500, 4500, 14500 PSI.

7. Pins 1, 2 & 3 refer to the DIN style connector. A, B, C... refer to the MIL style connector, and colors refer to the wires inside the cable.

8. Lightning protection only available in units with cable & 4-20mA output.

9. The drain / shield is connected to the transmitter housing. For lightning protection to function properly (4-20mA only) the shield wire must be connected to a good earth ground!

10. Consult reverse side for minimum supply voltage guidelines.

Options & Accessories

- Option-009 Lightning/Surge Protection
- Drying Tube Assembly (Desiccant)
- Bellows Assembly
- Conduit Fitting

Ask Us For Details!