Media Isolated OEM Pressure Transmitters

Series 7LY...10LY

ANALOG OUTPUTS WITH EXCELLENT EMI RESISTANCE

The “LY” transmitter line benefits from smaller sensor dimensions, crevice-free diaphragms, and low Total Error Band (TEB) performance.

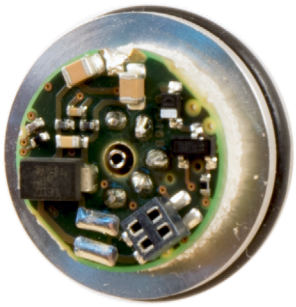
The innovative signal conditioning circuit “learns” thermally-induced zero and span errors during calibration. Then, during operation, bias corrections are applied directly to the analog output signal, with a resolution of 1.5°K, effectively making each correction temperature a calibration temperature. The residual error is therefore determined primarily by the sensor non-linearity.

The “LY” line also boasts excellent resistance to electromagnetic interference. The limits of the CE standard, for both conducted and radiated fields, are bettered by a factor of 10 enabling implementation in hostile EMI environments.

Applicability to a variety of applications is enhanced by a wide selection of pressure ranges, sensor types, and input/output configurations. Material compatibility is ensured by the optional Hastelloy C-276 construction in place of the standard 316L stainless steel, as well as several different o-ring materials.

For more information on the LY-series, or any other Keller product, please contact Keller America, or view the entire Keller catalog at kelleramerica.com.

FEATURES



Nominal diameter as small as Ø 0.590” (15mm).

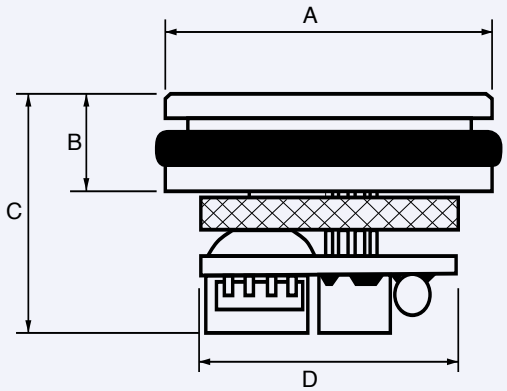
Factory calibrated for guaranteed out-of-the-box performance

Standard 316L stainless steel flush diaphragm

Outstanding EMI resistance

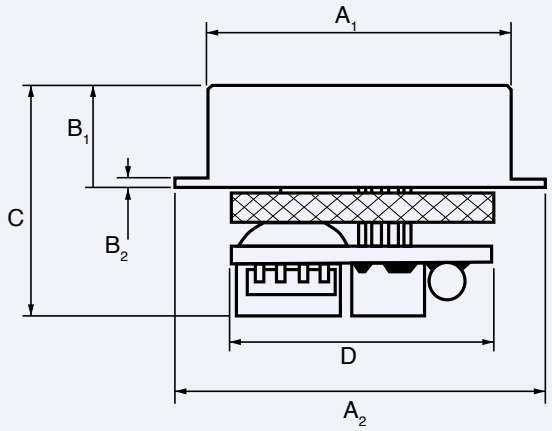
Ranges for 3 to 15,000 PSI full scale

Temperature dependency is automatically corrected.



	A	B	C (max)	D
7LY	0.59” (15mm)	0.196” (5mm)	0.433” (11mm)	0.466” (11.8mm)
7LY HP	0.59” (15mm)	0.314” (8mm)	0.551” (14mm)	0.466” (11.8mm)
9LY	0.749” (19mm)	0.196” (5mm)	0.433” (11mm)	0.583” (14.8mm)
10LY	0.749” (19mm)	0.59” (15mm)	0.709” (18mm)	0.583” (14.8mm)

	A_1	A_2	B_1	B_2	C (max)	D
9FLY	0.669” (17mm)	0.827” (21mm)	0.217” (5.5mm)	0.020” (0.5mm)	0.453” (11.5mm)	0.583” (14.8mm)



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Pressure Ranges[1]	Standard Pressure Ranges (FS) in bar												
7LY (PA, PAA)					5	10	20	50	100	200			
7LY HP (PA)										200	400	600	1000
9LY (PR, PA, PAA)	0.2	0.5	1	2	5	10	20	50	100	200			
9FLY (PR, PA, PAA)	0.2	0.5	1	2	5	10	20	50	100	200			
10LY (PR, PA, PAA)	0.2	0.5	1	2	5	10	20	50	100				
Overpressure	2.5	2.5	3	4	10	20	40	100	200	300	600	900	1100

1. PR - Zero at atmospheric pressure, max. 20 Bar PAA - Zero at vaccuum, ranges 0.5...20 Bar PA - Zero at atmospheric pressure on calibration day, ranges ≥1 Bar

Accuracy

		Error Band[3] 0 - 50° C		Error Band[3] -10 - 80° C	
Pressure Range	Accuracy[2]	Typ.	Max.	Typ.	Max
2 - 1000 bar	± 0.25% FS	± 0.3% FS	± 0.5% FS	± 0.4% FS	± 0.7% FS
0.5 - < 2 bar	± 0.25% FS	± 0.6% FS	± 1.00% FS	± 0.8% FS	± 1.5% FS
0.2 - 0.5 bar	± 0.50% FS	± 2 mbar	± 5 mbar	± 3 mbar	± 7.5 mbar

2. Static accuracy including hysteresis and repeatability
3. Total Error Band (TEB) accuracy combines linearity, hysteresis, repeatability, temperature coefficient, zero tolerance, and span tolerance

Stability

Ranges > 2 bar	0.1% FS typ. 0.2%FS max
Ranges ≤ 2 bar	2 mbar typ. 4 mbar max

Output

7LY, 7LY HP	0.5...4.5 VDC (non-ratiometric)
9LY, 9FLY, 10LY	4...20mA 0...5 VDC 0...10 VDC 0.5...4.5 VDC (non-ratiometric)

Materials

Oil Fill	Standard Silicon, others available
Construction	Std. 316 L Stainless Steel
	Opt. Titanium, Hastelloy C-276
	Fluorocarbon o-ring, others available

Environmental

Operating Temp.	-40...100° C
Compensated Temp.	0...50°C or -10...80°C
EMI	EN 61000-6-2: 2005
	EN 61000-6-3: 2007
	EN 61326-2-3:2006

Electrical

Supply Voltage	
4-20 mA	8...32 VDC
5 VDC	8...32 VDC
10 VDC	13...32 VDC
0.5 - 4.5 VDC (non-ratiometric)	8...32 VDC
Signal output limitation	
4-20 mA	3.2 - 22.3 mA
5 VDC	-0.6 - 5.6 V
10 VDC	-1.2 - 11.2 V
0.5 - 4.5 VDC (non-ratiometric)	0.1 - 4.9 V
Load resistance	
4-20 mA	< (u-8) / 0.025 A
5 VDC	>5kΩ
10 VDC	>5kΩ
0.5 - 4.5 VDC (non-ratiometric)	>5kΩ
Power consumption	
4-20 mA	-----
5 VDC	max. 5 mA
10 VDC	max. 5 mA
0.5 - 4.5 VDC	max. 4 mA
Limiting frequency	2 kHz
Startup Time	(0-99%) < 5ms

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