

## Heavy Duty Pressure Transducers

MLH Series, 6 bar to 550 bar | 50 psi to 8000 psi

**32328895**  
Issue B

Datasheet



### DESCRIPTION

The MLH Series Heavy Duty Pressure Transducers combine Application Specific Integrated Circuit (ASIC) technology with a media-isolated, metal diaphragm design. This digitally compensated transducer offers value and performance, making it a suitable pressure sensing solution for demanding applications. Industry standard electrical connectors and pressure ports are offered for enhanced reliability and user flexibility.

The MLH Series has six standard output options:

- Ratiometric: 0.5 Vdc to 4.5 Vdc from 5 Vdc excitation
- Current: 4 mA to 20 mA
- Regulated: 1 Vdc to 6 Vdc
- Regulated: 0.25 Vdc to 10.25 Vdc
- Regulated: 0.5 Vdc to 4.5 Vdc
- Regulated: 1 Vdc to 5 Vdc

### VALUE TO CUSTOMERS

- Total Error Band (TEB) as low as 2 %FSS from -40°C to 125°C: Provides indication of the transducer's true measurement performance over a specified temperature range; small error promotes system uptime and efficiency. (See Figure 1.)
- All metal wetted parts allow for potential use in a wide variety of fluid applications.
- No internal elastomeric seals eliminate O-ring compatibility issues.
- Amplified outputs reduce the need to purchase external amplifiers.
- Input reverse voltage protection guards against mis-wiring.
- Less than 2 ms response time provides more accurate, high speed measurement.

### FEATURES

- Pressure range of 6 bar to 550 bar | 50 psi to 8,000 psi
- $\pm 0.25\%$  full scale accuracy Best Fit Straight Line (BFSL)
- Total Error Band (TEB) as low as 2 %FSS
- Compensated and operating temperature range of -40°C to 125°C [-40°F to 257°F] (see Table 4)
- Less than 2 ms response time
- Fully temperature compensated, calibrated and amplified
- Rated IP65 or better for protection from most harsh environments
- RoHS, CE, UL Component Recognition for USA and Canada: File No. E258956

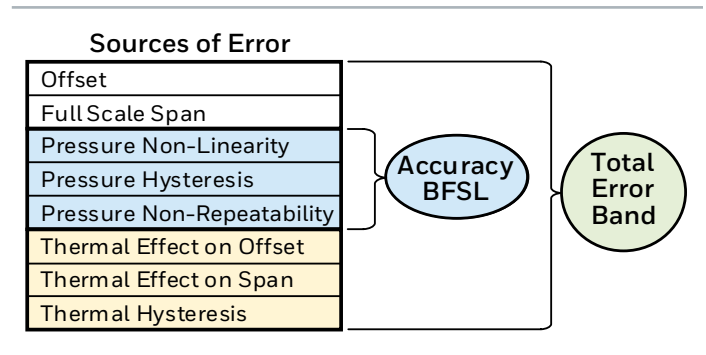
### POTENTIAL APPLICATIONS

- Industrial: Compressors, cylinder tank pressure, HVAC, hydraulics, oil and gas, refrigeration, water distribution
- Transportation: Multiple applications including braking and alternative fuels
- Medical: Anesthesia delivery machines, blood analyzers, chemistry analyzers, gas chromatography, oxygen concentrators, and ventilators

### PORTFOLIO

The MLH Series joins the PX3 Series, PX2 Series, SPT Series heavy duty pressure transducers and the 13 mm Series and 19 mm Series heavy duty pressure transducers.

**Figure 1. Total Error Band (TEB) Definition**



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**Table 1. Pressure Range Specifications<sup>1</sup> (At 25°C [77°F] and at rated excitation unless otherwise specified.)**

bar			psi		
Operating Pressure	Proof Pressure	Burst Pressure	Operating Pressure	Proof Pressure	Burst Pressure <sup>2</sup>
6	18	60	50	150	500
10	30	100	100	300	1000
16	48	160	150	450	1500
25	75	250	200	600	2000
40	80	400	250	750	2500
60	120	600	300	900	3000
100	200	1000	500	1500	5000
160	320	1600	1000	2000	10000
250	500	2068	2000	4000	20000
350	700	2068	3000	6000	30000
500	750	2068	5000	7500	30000
550	825	2068	8000	12000	30000

<sup>1</sup> Comparable metric units follow same proof and burst specifications.

<sup>2</sup> Bonded washer seal used on G 1/8 (DIN 3852-2) port is limited to 25000 psi burst.

**Table 2. Electrical Specifications (At 25°C [77°F] unless otherwise noted.)**

Characteristic	Output Signal					
	Ratiometric A	Current B	Regulated C	Regulated D	Regulated E	Regulated G
Zero output	0.5 Vdc	4 mA	1 Vdc	0.25 Vdc	0.5 Vdc	1 Vdc
Full scale span (FSS)	4 Vdc (0.5 Vdc to 4.5 Vdc)	16 mA (4 mA to 20 mA)	5 Vdc (1 Vdc to 6 Vdc)	10 Vdc (0.25 Vdc to 10.25 Vdc)	4 Vdc (0.5 Vdc to 4.5 Vdc)	4 Vdc (1 Vdc to 5 Vdc)
Excitation	5 Vdc (6 Vdc max.) <sup>1</sup>	9.5 Vdc to 30 Vdc <sup>2</sup>	8 Vdc to 30 Vdc <sup>2</sup>	14 Vdc to 30 Vdc <sup>2</sup>	7 Vdc to 30 Vdc <sup>2</sup>	8 Vdc to 30 Vdc <sup>2</sup>
Supply current	4 mA typ., 8 mA max.	N/A	5 mA typ., 17 mA max.	5 mA typ., 17 mA max.	5 mA typ., 17 mA max.	5 mA typ., 17 mA max.
Source (nominal)	1 mA	N/A	1 mA	1 mA	1 mA	1 mA
Sink (nominal)	1 mA at zero output	N/A	1 mA at zero output	1 mA at zero output	1 mA at zero output	1 mA at zero output
Supply rejection ratio	90 dB	90 dB	90 dB	90 dB	90 dB	90 dB
Output impedance	25 Ohm max.	N/A	25 Ohm max.	25 Ohm max.	25 Ohm max.	25 Ohm max.

<sup>1</sup> Maintains ratiometricity at 5 ±0.25 Vdc excitation. Product can tolerate 6 Vdc excitation without damage.

<sup>2</sup> See Figures 2 and 3 for more information regarding maximum excitation voltage vs. operating temperature.

**Table 3. Pressure Reference Types**

Pressure Reference	Description
Sealed gage <sup>1</sup>	Output is proportional to the difference between applied pressure and a built-in fixed reference to 1 atmA, where the minimum operating pressure is set to 14.7 psiA (1 atmA).
Vented gage (relative) <sup>2</sup>	Transducer measures pressure relative to ambient pressure. Output is proportional to the difference between applied pressure and atmospheric (ambient) pressure, where the minimum operating pressure is set to atmospheric pressure.