

## New-High Accuracy, Low Cost, Digitally Compensated EMI/RFI Protected Stainless Steel Isolated Pressure Transducer.



SERIES: TDM51/52

### FEATURES

- High Accuracy
- Digitally Compensated
- One-piece Stainless Steel Construction
- Ranges up to 10,000 PSI or 700 BAR
- Amplified Outputs
- Wide Operating Temperature Range
- Direct Replacement For Competitive Units

### APPLICATIONS

- Pumps and Compressors
- Hydraulic/Pneumatic Systems
- Off Road/Mobile Equipment
- Energy and Water Management
- Injection Molding Machines
- Agriculture Equipment
- Train Braking Systems

### DESCRIPTION

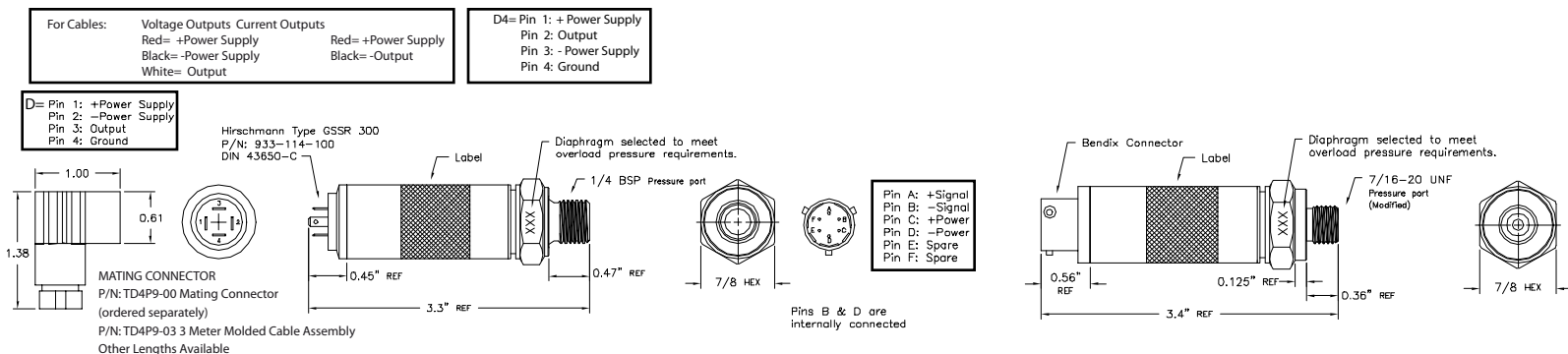
The TDM51 Series (2 x over pressure) and the TDM52 Series (4 x over pressure) pressure transducers set a new price performance standard for low cost, high volume, commercial and industrial applications. This series is suitable for measurement of liquid or gas pressure, even for difficult media such as contaminated water, steam, and mildly corrosive fluids or gases.

The transducer pressure cavity is machined from a solid piece of 17-4 PH stainless steel. The standard version includes a 1/4" NPT pipe thread allowing a leak-proof, all metal sealed system. There are no "o"-rings, welds or organics exposed to the pressure media. The durability is excellent.

Transducers Direct proprietary Microfused technology, derived from demanding aerospace applications, employs micromachined silicon piezoresistive strain gages, fused with high temperature glass to a stainless steel diaphragm. This approach achieves media compatibility simply and elegantly providing an exceptionally stable sensor without the p-n junctions of conventional micromachined sensors.

This product is geared to the OEM customer using medium to high volumes. The standard version is suitable for many applications, but the dedicated design team at our Transducer Engineering Center stands ready to provide a semi-custom design where the volume and application warrants.

### ELECTRICAL CONNECTIONS



Dimensions In Inches And Are Reference Only.



"APPLYING TODAY'S TOOLS WITH YESTERDAY'S EXPERIENCE  
PROVIDING OUR CUSTOMERS THE SOLUTIONS OF TOMORROW."

## SPECIFICATIONS

Performance at 25°C (77°F):

Pressure range	0-25, 50, 75, 100, 250, 500, 1000, 2500, 5000, 7500, 10000 PSI (0-3, 6, 7, 17, 35, 70, 175, 350, 525, 700 BAR)	
Accuracy, % of FS Span (combined linearity, hysteresis and repeatability)	TDM51: +/- 0.25% BSL, max (per ISA S37.2) TDM52: +/- 0.5%	
Media compatibility	17-4 PH stainless steel (optional 316L stainless)	
Pressure cycles	10 million, minimum	
Pressure overload	2 times rated pressure	
Burst pressure	4 times full scale or 20,000 PSI, whichever is less	
Long term stability (1 year)	± 0.25% FS Span (Typical)	
Electrical:	Ratiometric	Non-Ratiometric
Supply voltage	4.75 to 5.25VDC	10 - 30VDC
Supply current	<10mA	<25mA
Output	0.5 to 4.5V, at 5V	1- 5V, three wires 4 - 20mA, two wires 0.1 - 10 vdc, 4 wire
Bandwidth	DC to 1KHz (Typical)	
Load impedance	> 100k Ohms for quoted performance for 4 - 20mA; 0.05(Vsupply-10)k Ohms (maximum)	
Standard connector options	6-pin Bendix, 9.4 Mini DIN Cable Out (Additional connectors available upon request)	

## ENVIRONMENTAL

Operating temperature range	-40° to 100°C (125°C available, consult factory)
Compensated temperature range	-20° to 85°C (125°C available, consult factory)
Total error band (over compensated temperature range)	< ± 1% of FS (75 - 10,000 PSI) < ± 1.5% of FS (25-50 PSI)
Storage temperature range	-45° to 100°C
Shock	50g, 11 msec half sine shock per MIL standard 202F, method 213B, condition A
Vibration	±20g MIL-STD-810C, Procedure 514.2, Figure 514.2-2, curve L
EMI/RFI Immunity	EN 50081-2 EN 50082-2 (10V/M, 26-1000MHz) EN 61326 (Effective July 1, 2001) Humidity 95% RH, condensing

## ORDERING

Series	Output	Pressure Type	Pressure Range	Pressure Port	Electrical Connection	Cable Length	Accuracy
TDM52	O	G	010K	21	D	00	2
TDM51=2X Over Pressure	B= 4-20ma	G = Gauge	0025	03= 1/4" NPT Male	S= Six Pin Bendix	00= None	2= 0.25% (TDM51)
TDM52= 4X Over Pressure	H= 1-5 vdc		0050	09= 7/16" x 20 SAE #4 (J1926-2)	D= 4 pin Mini 9.4 DIN	02= 2 feet	3= 0.5% (TDM52)
	K= 0.5 - 4.5 vdc		0075	21= 7/16" x 20 (Extended Boss)	(pin 1= supply + 2= supply - 3= output)	**	**
	L= 0.1-10 vdc (4-wire)		0100	**	D4= 4 pin Mini 9.4 DIN		
	O= 0-10 vdc (4-wire)		0250		(pin 1= supply + 2= output 3= supply-)		
			1000		C= cable		
			2500				
			4000				
			5000				
			7500				
			010K				

\*\*= Consult factory for further options.

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