

## Introducing the TDM51/52 2 Times or 4 Times Over Pressure, OEM Pressure Transducer for Injection Molding Machines



SERIES: TDM51/52

### FEATURES

- High Accuracy
- 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

- Injection Molding Machines
- Hydraulic/Pneumatic Systems
- Off Road/Mobile Equipment
- Energy and Water Management
- Pumps and Compressors
- 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 4X over pressure version is primarily designed for Injection molding machines.

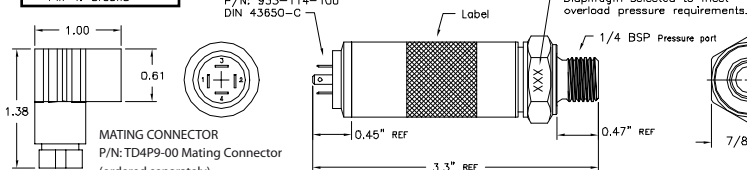
### ELECTRICAL CONNECTIONS

For Cables:	Voltage Outputs	Current Outputs	Red= +Power Supply	Black= -Power Supply	White= Output
	Red= +Power Supply	Black= -Power Supply	White= Output		

D4= Pin 1: + Power Supply
Pin 2: Output
Pin 3: - Power Supply
Pin 4: Ground

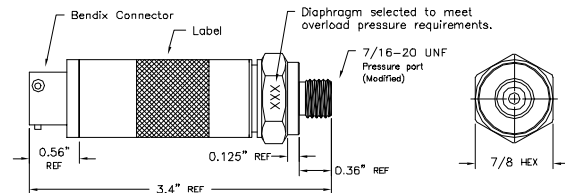
D= Pin 1: +Power Supply
Pin 2: -Power Supply
Pin 3: Output
Pin 4: Ground

Hirschmann Type GSSR 300  
P/N: 933-114-100  
DIN 43650-C



Pin A: +Signal
Pin B: -Signal
Pin C: +Power
Pin D: -Power
Pin E: Spare
Pin F: Spare

Pins B & D are internally connected



Dimensions In Inches And Are Reference Only.

## SPECIFICATIONS

Performance at 25°C (77°F):

Pressure range	0-25, 50, 75, 100, 250, 500, 1000, 2500, 5000, 7500, 10,000 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 (TDM51), 4 times rated pressure (TDM52)	
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 supply	1- 5V, three wires 4 - 20mA, two wires 0.1 - 10 vdc, 4 wire
Response time	DC to 1KHz (1mS) 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 (Additional connectors available)	

## 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) includes all accuracy errors, thermal errors, span and zero tolerances.
Storage temperature range	< ± 1.5% of FS (25-50 PSI) includes all accuracy errors, thermal errors, span and zero tolerances
Shock	-45° to 100°C
Vibration	50g, 11 msec half sine shock per MIL standard 202F, method 213B, condition A ±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 (ratiometric)		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.