



Customer Service and Product  
Quality Are Our No.1 Priority

## Terwin 5000 Series Melt Pressure / Temperature Transducers and Transmitters



### Description:

The Terwin 5000 Series melt pressure / temperature transducers / transmitters utilise hydraulic transmission between the sensing diaphragm that is in contact with the melt and the strain gauge assembly that produces an electrical output.

Models are available with either nominal 3.33mV/V output (transducer), 4-20mA DC or 0-10V DC (transmitter) conditioned outputs. All outputs utilise industry standard 80% calibration.

Available pressure ranges are 0-500psi through 0-30,000psi (0-35 bar through 2,000 bar). Other units of pressure measurement, such as kg/cm<sup>2</sup> or MPa etc., are available if required.

Standard thread size is ½"-20UNF, however optional European sizes such as M18 x 1.5mm, M14 x 1.5mm and Japanese sizes PF3/8 and PF3/4 are also available.

Available with a selection of stem lengths: 3", 6", 9", 12", 15" & 18".

Optional fill materials are available.

### Features:

- ✓ Low cost.
- ✓ Proven sensor design.
- ✓ High performance.
- ✓ Accuracy better than  $\pm 0.5\%$ .
- ✓ Terwin *Extru-Max*<sup>™</sup> diaphragm as standard.
- ✓ Internal 80% negative shunt calibration.
- ✓ Compatible with most competitor models

### Benefits:

- ✓ Superior abrasion resistance
- ✓ Reliable, repeatable pressure measurement
- ✓ Wide variety of pressure ranges
- ✓ Optional stems lengths
- ✓ Optional thread sizes

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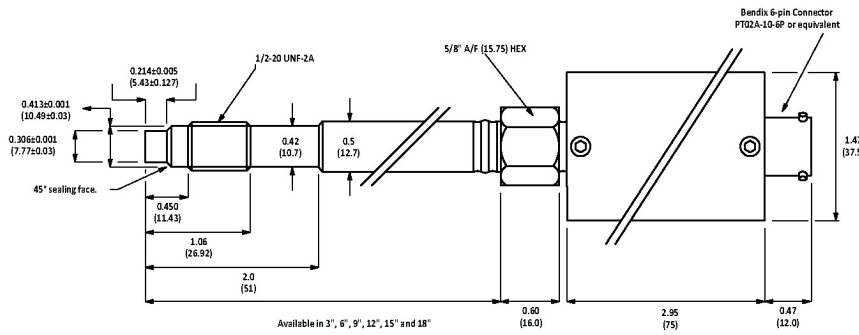


# Terwin 5000 Series Melt Pressure / Temperature Transducers and Transmitters

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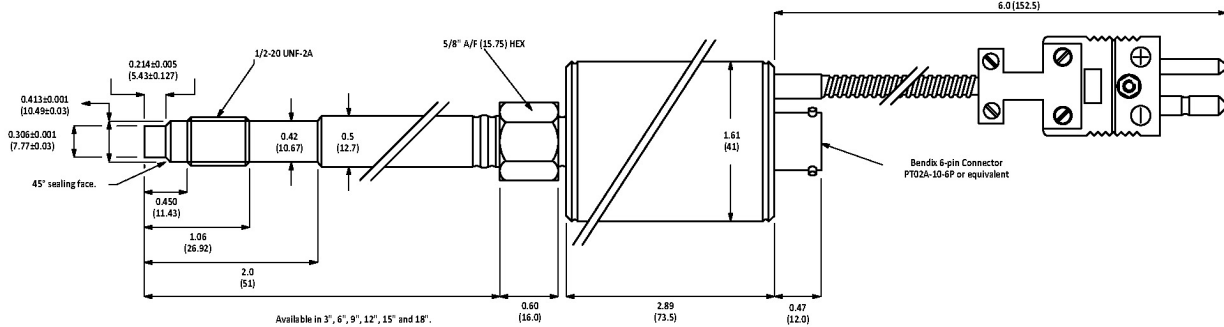
All dimensions mm's (inches)

**MODEL 51**  
Pressure



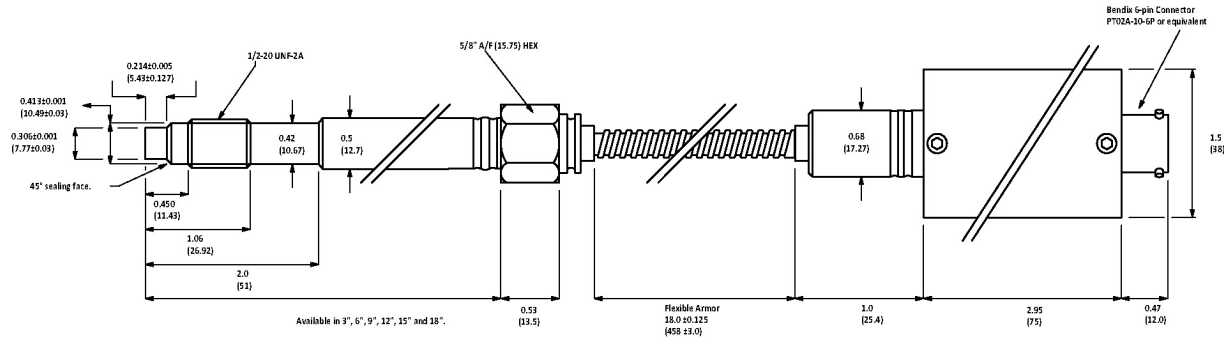
Available in 3", 6", 9", 12", 15" and 18"

**MODEL 52**  
Pressure & Temperature



Available in 3", 6", 9", 12", 15" and 18"

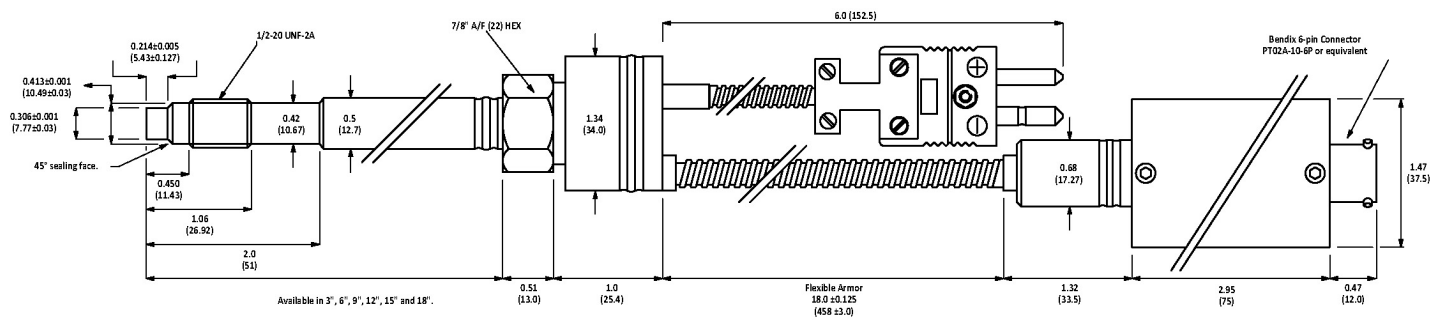
**MODEL 53**  
Pressure



Available in 3", 6", 9", 12", 15" and 18"

Flexible Armor  
18.0 ±0.125  
(458 ±3.0)

**MODEL 54**  
Pressure & Temperature

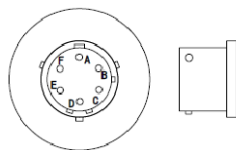


Available in 3", 6", 9", 12", 15" and 18"

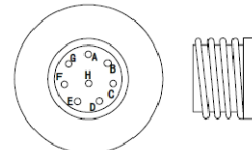
Flexible Armor  
18.0 ±0.125  
(458 ±3.0)

**Industry Standard Connectors:**

**6-Pin (D6)**  
(Standard)



**8-Pin (D8)**  
(Optional)



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## Terwin 5000 Series Melt Pressure / Temperature

### Transducers and Transmitters

#### 5000 Series Ordering Codes

51 - 6 - M - J - Y - D6 - 7M5 - A - OIL - H - M18 - SPXXX

MODEL:		CODE:
51	Rigid stem	51
52	Rigid stem + temperature sensor	52
53	Rigid stem + flexible capillary	53
54	Rigid stem + flexible capillary + temperature sensor	54
STEM LENGTH:		CODE:
3 inches (76.2mm)		3
6 inches (152.4mm)		6
9 inches (228.6mm)		9
12 inches (305.0mm)		12
15 inches (381.0mm)		15
18 inches (457.2mm)		18
Other (contact sales)		TBA
PRESSURE OUTPUT SIGNAL:		CODE:
3.33mV/V (standard)		M
4-20mA DC (2-wire + calibration pair)		A
0-10V DC (4-wire + calibration pair)		V
TEMPERATURE SENSOR (52 + 54 Series ONLY)		CODE:
None		X
"J" I/C (standard)		J
"K" C/A		K
PT100		P
ARMoured CAPILLARY LENGTH (53 + 54 Series ONLY)		CODE:
None		Y
18 inches (standard)		18
36 inches etc		36 etc
CONNECTOR TYPE:		CODE:
PT02A-10-6P (6-Pin bayonet)		D6
PC02E-12-8P (8-Pin threaded)		D8
½"-14NPT Threaded Process Connector With Flying Lead		NPT
Non-Standard (contact sales)		TBA



PRESSURE RANGE: 0 - (zero to)			
PSI	CODE:	BAR	CODE:
500psi	5C	35bar	35B
1,000psi	1M	70bar	70B
1,500psi	1M5	100bar	100B
3,000psi	3M	200bar	200B
5,000psi	5M	350bar	350B
7,500psi	7M5	500bar	500B
10,000psi	10M	700bar	700B
15,000psi	15M	1,000bar	1000B
20,000psi	20M	1,500bar	1500B
30,000psi	30M	2,000bar	2000B
Non-standard		TBA	
ACCURACY:			CODE:
±0.5% (standard)			A
±0.25%			B
FILL MATERIAL:			CODE:
Mercury			Left blank
Silicon Oil			OIL
Glycerine Oil			GLY
DIAPHRAGM:			CODE:
Terwin <b>Extru-Max™</b> Coating			Left blank
Hastelloy "C276"			H
Other			TBA
THREAD SIZE:			CODE:
1/2"-20UNF-2A			Left blank
M14x1.5mm			M14
M18x1.5mm			M18
PF3/8 (G3/8)			G3/8
PF3/4 (G3/4)			G3/4
Non-standard (contact sales)			TBA
SPECIAL CODE			CODE:
None			Left Blank
Code to be issued by factory			SPXXX

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# Terwin 5000 Series Melt Pressure / Temperature

## Transducers and Transmitters

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### Specifications

<b>Standard Pressure Ranges:</b>	psi	0-5,000	0-7,500	0-10,000	0-15,000
	bar	0-350	0-500	0-700	0-1,000
<b>Available Pressure Ranges</b>	psi	0-500 thru to 0-30,000			
	bar	0-35 thru to 0-2,000			
<b>Combined Error</b>	Within $\pm 0.5\%$ F.R.O. (Optional $\pm 0.25\%$ ) Oil filled units have reduced accuracy of $\pm 1\%$ with optional $\pm 0.5\%$ within standard pressure ranges. Non-standard ranges have an accuracy of $\pm 1.5\%$ .				
<b>Repeatability</b>	Within $\pm 0.1\%$ F.R.O.				
<b>Resolution</b>	Infinite				
<b>Maximum Pressure:</b>	2 x full range or 25,000psi (1,700 bar) which ever is less.				
	On 30,000psi (2,000bar) sensors, the maximum pressure is 35,000psi (2,400 bar).				
<b>Body Material</b>	17PH4 Stainless steel.				
<b>Diaphragm Material</b>	Terwin <b>Extru-Max™</b> Long Life Diaphragm				
<b>Available Fill Materials</b>	Mercury (standard)	Silicon Oil	Glycerine Oil		
<b>Mounting Torque</b>	20ft lbs (27Nm) (240 inch/lbs)				
<b>Standard Thread Size</b>	1/2"-20UNF-2A (standard).				
<b>Available Thread Sizes</b>	M14x1.5mm, M18 x 1.5mm, PF3/8 (G3/8) and PF3/4 (G3/4).				
<b>Electrical Specifications</b>					
<b>Excitation</b>	Transducers: 5-12V D.C.		Transmitters: 15-30V D.C.		
<b>Configuration</b>	Four-arm bonded foil Wheatstone bridge strain gauge				
<b>Bridge Resistance</b>	350 $\Omega$ $\pm 10\%$				
<b>Outputs</b>	Transducers		Transmitters (current)		Transmitters (voltage)
	3.33mV/V D.C. $\pm 10\%$		4-20mA D.C.		0-10V D.C.
<b>Zero Balance</b>	Transducers $\pm 10\%$ F.R.O.		Transmitters $\pm 10\%$ adjustable by customer assessable potentiometer		
<b>Internal Negative Shunt Calibration</b>	Transducers 80% F.S.O. $\pm 0.25\%$		Transmitters 80% F.S.O. $\pm 0.25\%$ adjustable by customer assessable potentiometer		
<b>Electrical Connectors</b>	6-Pin (D6) PT02A-10-6P		8-Pin (D8) PT02E-12-8P		1/2"-NPT direct cable outlet
<b>Integral Temperature Sensors</b>	"J" I/C (standard)		"K" C/A (optional)		PT100 (optional)
<b>Maximum Diaphragm Temperature</b>	Model No:	Mercury Fill	Silicon Fill	Glycerine Fill	
	51/52	350°C / 662°F	200°C / 392°F	180°C / 356°F	
	53/54	450°C / 842°F	250°C / 482°F	220°C / 428°F	
<b>Maximum Strain Gauge Temperature</b>	Transducers	121°C / 250°C.	Transmitters	85°C / 185°F	
<b>Zero Shift Due To Temperature Change</b>	<0.02% F.S.O./°C or <0.01% F.S.O./°F				
<b>Span Shift Due To Temperature Change</b>	<0.02% F.S.O./°C or <0.01% F.S.O./°F				

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