

# PTSC-EP Series

## Enhanced Combined Pressure Temperature Transducers



### Description

The PTSC-EP series is an enhanced version of the standard PTSC-EP series combined pressure temperature sensor. Designed to withstand harsh environments and meet the demanding requirements of the aerospace and naval industries, its significantly reduced weight and small design makes it ideal for applications where space and weight are critical.

The PTSC-EP grade includes EMI/RFI protection and is operational under extreme vibration and mechanical shock, in environments contaminated with fuels, oils and solvents and has an extended temperature range of -55°C to +125°C.



### PTSC-EP Series Specifications

Performance	
<b>Pressure</b>	
Accuracy	≤ ±0.5% at RT
Non linearity	≤ 0.15% FS
Lifetime Drift (1000h, +125 °C)	≤ 0.5% FS
TEB (-40 °C to +125 °C)	≤ 2.5% FS
TEB (0 °C to +85 °C)	≤ 1.0% FS
Proof pressure	2 x FS pressure
Burst pressure	3 x FS pressure
Pressure response	< 1 ms
<b>Temperature</b>	
RTD operating range	-200 +600 °C
RTD compensated range	-50 +600 °C
Accuracy	PT100 / PT1000 Class B
Temp response time <sup>1)</sup>	< 2s

Environmental Specifications	
Low Temp (Storage)	-55 °C DO-160G Section 4.5.1
Low Temp (Operating)	-55 °C DO-160G Section 4.5.2
High Temp (Storage)	+125 °C IEC 60068-2-2
High Temp (Operating)	+125 °C IEC 60068-2-2
Shock	40G 11ms Half Sine 3-axis MIL-STD-810G, Method 516.6
Vibration	Random: 15 to 2000 Hz @ approx. 50G (peak) MIL-STD-810G, Method 514.6

Altitude (Storage)	45000 feet per MIL-STD-810G CHG-1, Method 500.6-P.I
Altitude (Operating)	45000 feet per MIL-STD-810G CHG-1, Method 500.6-P.II
Salt Fog	MIL-STD-810G CHG-1, Method 509.6
Sealing	IP67, IEC-60529

Electrical Specifications	
Supply voltage <sup>2)</sup>	0.5-4.5V Output, 9-32VDC 2-10V Output, 12-32VDC
Output temperature <sup>2)</sup>	PT100 / PT1000
Current consumption	< 10mA
Reverse voltage protection	Yes
Electrical interface <sup>3)</sup>	D38999/20WB98PN
Bonding	see details <sup>4)</sup>
RTD max current	PT100 : 1.4mA
	PT1000 : 0.4mA

Mechanical Specifications	
Material <sup>5)</sup>	Al7075T7651
Finish <sup>6)</sup>	Anodizing per MIL-A-8625 Type 3 Class 2
Sealing	PTFE
Pressure port	See ordering information
Weight	35g (Aluminum body)
Lock/Safety Wire	Applicable
Mounting Torque	Aluminum : 2.5Nm
	Stainless Steel : 5Nm

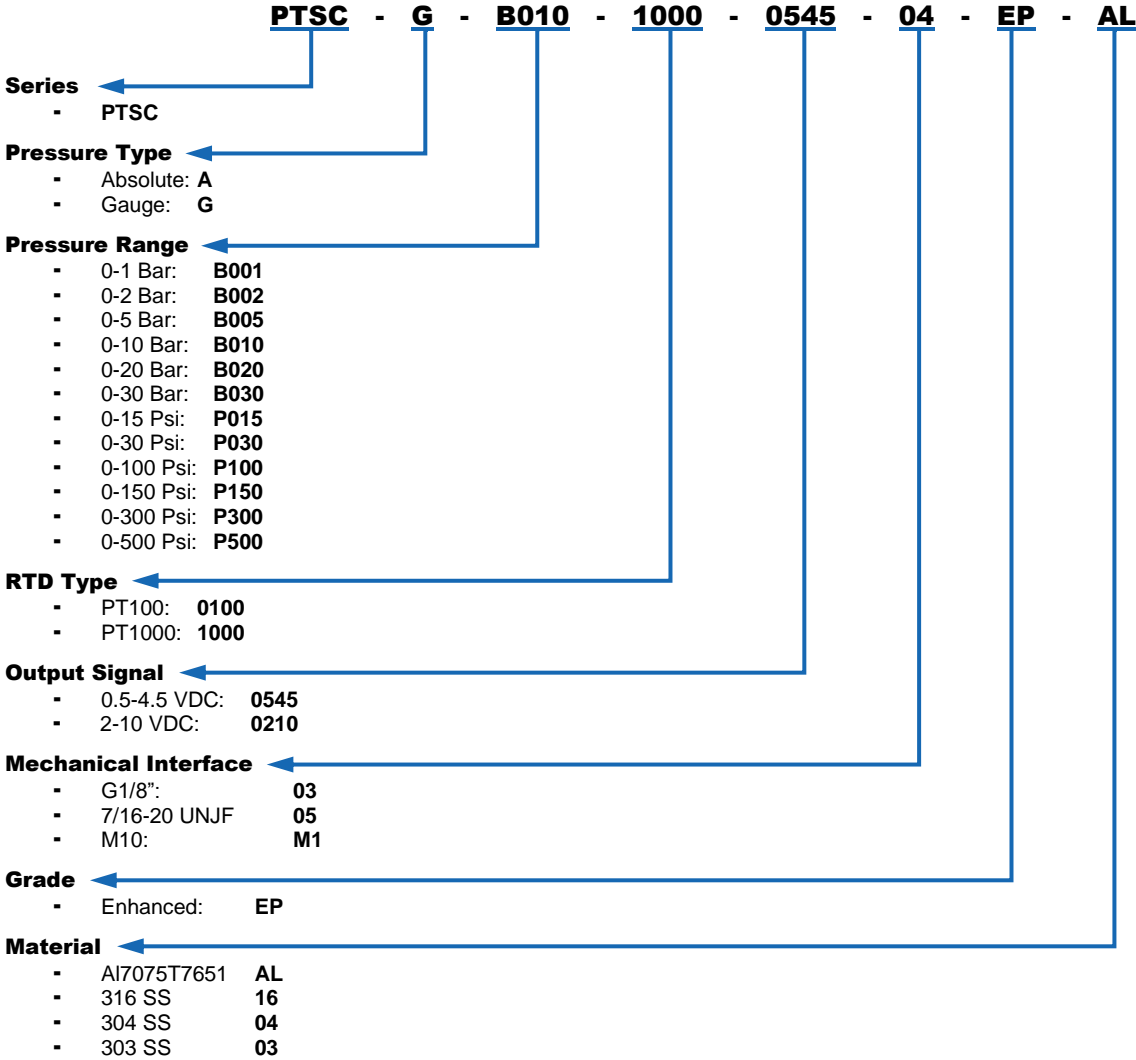
1) For aluminum material. Dependent on material.  
2) Please contact us for custom solutions.  
3) For details see electrical interface section on page 3. For different connector materials contact us.  
4) Enclosure and connector offers full and continuous protection from EMI/RFI effects.  
5) For production in different materials please contact us.  
6) Anodizing only for Al7075T7651 material.

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### Ordering Information



Typical ordering example: Gauge, 10 bar pressure, PT1000 RTD, 0.5-4.5 output signal, M10 mechanical interface, Enhanced grade, A17075T7651 material: **PTSC-G-B010-1000-0545-M1-EP-AL**

For stock and price inquiry please contact us at: [sales@taelco.com](mailto:sales@taelco.com) or [www.taelco.com/en/contact-us/](http://www.taelco.com/en/contact-us/)  
Shipping, customs fees etc. are not included in the price quotation. TAE LCO is not responsible for customs clearance.

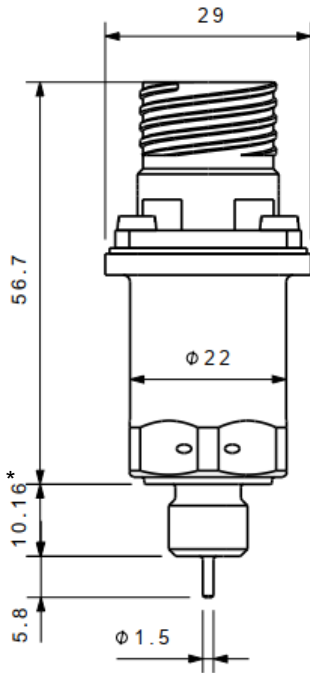
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### Dimensions and Interfaces

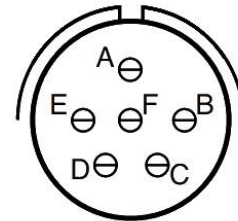
#### Housing & Pressure Interface



#### Electrical Interface (I/F)

The electrical I/F is a D38999/20WB98PN compatible circular connector.

Connector Pin Out	
Supply +	A
Pressure Signal	B
GND	C
Temp Signal	D
Temp Signal	E
No Connect (NC)	F



\*) For 7/16-20 UNJF thread interface. Please contact us about details for different thread interfaces.

## Revision History

Revision	Reasons for Revision	Issue Date
REV B	<ul style="list-style-type: none"><li>Added mounting torque information to Mechanical Specifications table.</li><li>Added footnote about thread interface to Housing &amp; Mechanical Interface section.</li><li>Removed G1/4", R1/4", R1/8" mechanical interfaces from Ordering information section.</li></ul>	08.10.2024
REV A	<ul style="list-style-type: none"><li>First revision.</li></ul>	12.09.2024

## Notice and Disclaimer

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