

### Description

The TSC-EP series is an enhanced 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 TSC-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.



### TSC-EP Series Specifications

Performance	
<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>	< 3s

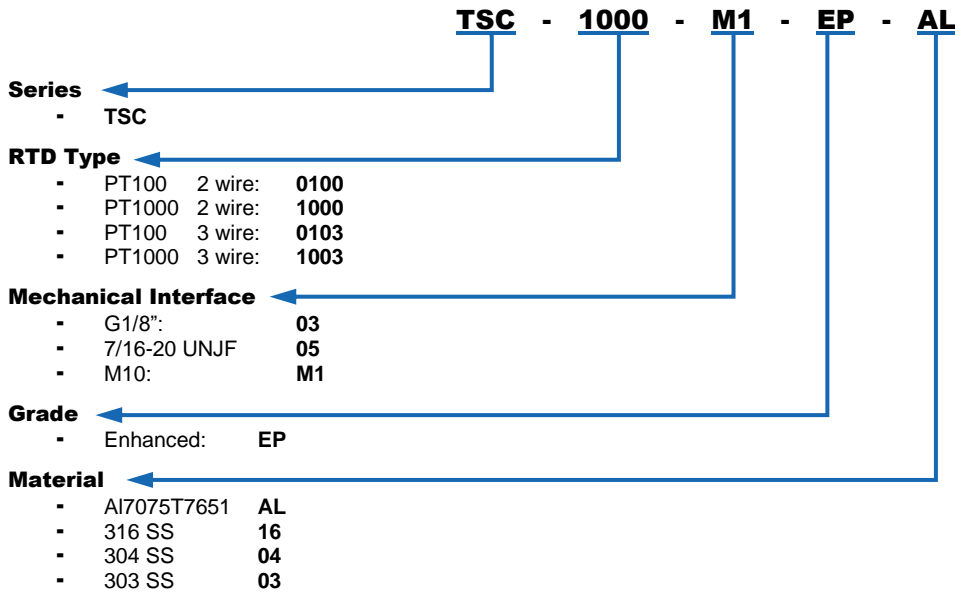
Environmental Specifications	
Low Temp (Storage)	-55 °C DO-160G Section 4.5.1
Low Temp (Operating)	-55 °C DO-160G Section 4.5.2
High Temp (Storage)	+125 °C IEC 60068-2-2
High Temp (Operating)	+125 °C IEC 60068-2-2
Shock	40G 11ms Half Sine 3-axis MIL-STD-810G, Method 516.6
Vibration	Random: 15 to 2000 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	
Output temperature <sup>2)</sup>	PT100 / PT1000
Electrical interface <sup>3)</sup>	MS3112-A8-3P
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
Weight	15g
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.

**Ordering Information**

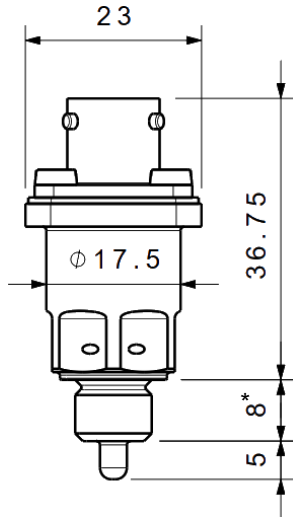


Typical ordering example: PT1000 RTD, M10 mechanical interface, Enhanced grade, AI7075T7651 material:  
**TSC-1000-M1-EP-AL**

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.

**Dimensions and Interfaces**

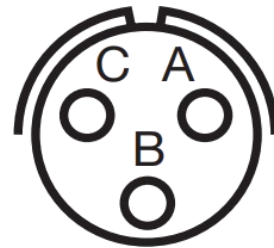
**Housing & Mechanical Interface**



**Electrical Interface (I/F)**

The electrical I/F is a MS3112-A8-3P compatible circular connector.

Connector Pin Out	
Temp Signal 1	A
Temp Signal 2	B
No Connect (2 wire)	C
Temp Signal 2 (3 wire)	



\*) For M10 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>• Changed header title to "Enhanced Temperature Transducers".</li><li>• Added mounting torque information to Mechanical Specifications table.</li><li>• Changed weight in Mechanical Specifications table.</li><li>• Removed sealing from 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>	02.10.2024
REV A	<ul style="list-style-type: none"><li>• First revision.</li></ul>	12.09.2024

## Notice and Disclaimer

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