

# ASHT Series High Performance Pressure & Temperature Transducer



The ASHT Series of High Performance Pressure and Temperature Transducers have been designed for high temperature installations in motorsport and automotive applications; ideal for high precision data acquisition or control systems. These transducers can also be installed directly onto vehicles, or as part of a test stand or dyno.

Offering a high level of reliability and endurance the ASHT is protected against the high vibration, shock and high temperatures found in motorsport. Continuous operation up to 150°C allows for installations in hot zones. With a modular construction and programmable amplifier, this provides a fast delivery time for standard and custom configurations.

Pressure ranges are available between 2 to 400 Bar in either Absolute or Sealed Gauge reference. Industry standard 3-wire electrical connections for the Pressure signal and 2-wires for the Temperature signal allow configuration with most common ECU's and data logging systems. The ASHT Series is race proven in many formulae around the world, offering a cost effective solution for professional engineers.

## Technical Specifications

<b>Pressure Reference</b>	Absolute & Sealed Gauge
<b>Standard Pressure Ranges (Bar)</b>	Low Range: 2, 5, 10, 20 & 50 High Range: 100, 250 & 400
<b>Proof Pressure (Over Range)</b>	300% of Range / 150% of Range
<b>Burst Pressure</b>	>1000% of Range / >300% of Range, to a Max. of 1000 bar
<b>Accuracy</b>	±0.08% FS Combined Linearity & Hysteresis (CNLH) ±0.2% FS Combined Linearity & Hysteresis (CNLH)
<b>Thermal Accuracy</b>	<±0.25% FS TEB within Compensated Range Zero ±0.01% FS/°C (Sensitivity ±0.01% of Reading /°C)
<b>Outputs</b>	Press: 0.5V to 4.5V (±0.5%) Temp: NTC, 2-Wire 10KΩ @ 25°C or 2-Wire PT1000
<b>Supply</b>	5V (±0.5V) Ratiometric or 8-16V d.c.
<b>Operating Temperature Range</b>	-40°C to +150°C
<b>Compensated Temperature Range</b>	0°C to +125°C
<b>Construction</b>	Stainless Steel, fully welded
<b>Electrical Connection</b>	100cm 26AWG, 55 Spec Wire + DR25 Sleeve Or, Hermetic Connector; 8STA1-Y02-05PN170
<b>Process Connection (Thread Size)</b>	Please see Part Number Configurator
<b>Protection Class</b>	IP67 (Cable Option), Hermetic Seal (Connector Option)
<b>EMC Protection &amp; Vibration</b>	EN E50082-1 and Mil-Std-810C, Curve L, 20G
<b>Weight</b>	41g (Cable Option), 33g (Connector Option)

bf1systems adopts a continuous development program which sometimes necessitates specification changes without notice.

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The Competitive Advantage

## Features

- Built-In Temp. Sensor
- Cable or Connector
- 2 to 400 Bar Range
- 150°C Operation
- High Accuracy

## Applications

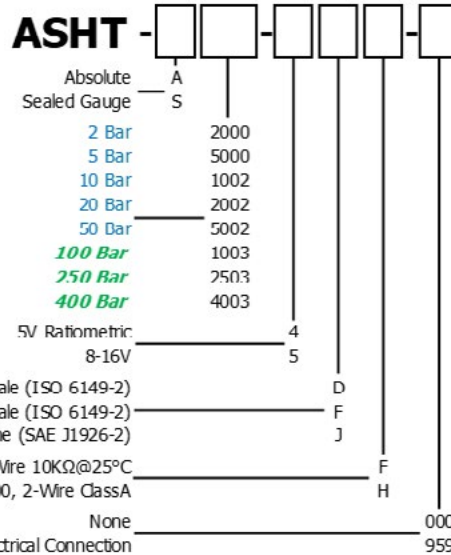
- Coolant
- Brakes
- Water
- Boost
- Fuel
- Oil

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## Part Number Configuration



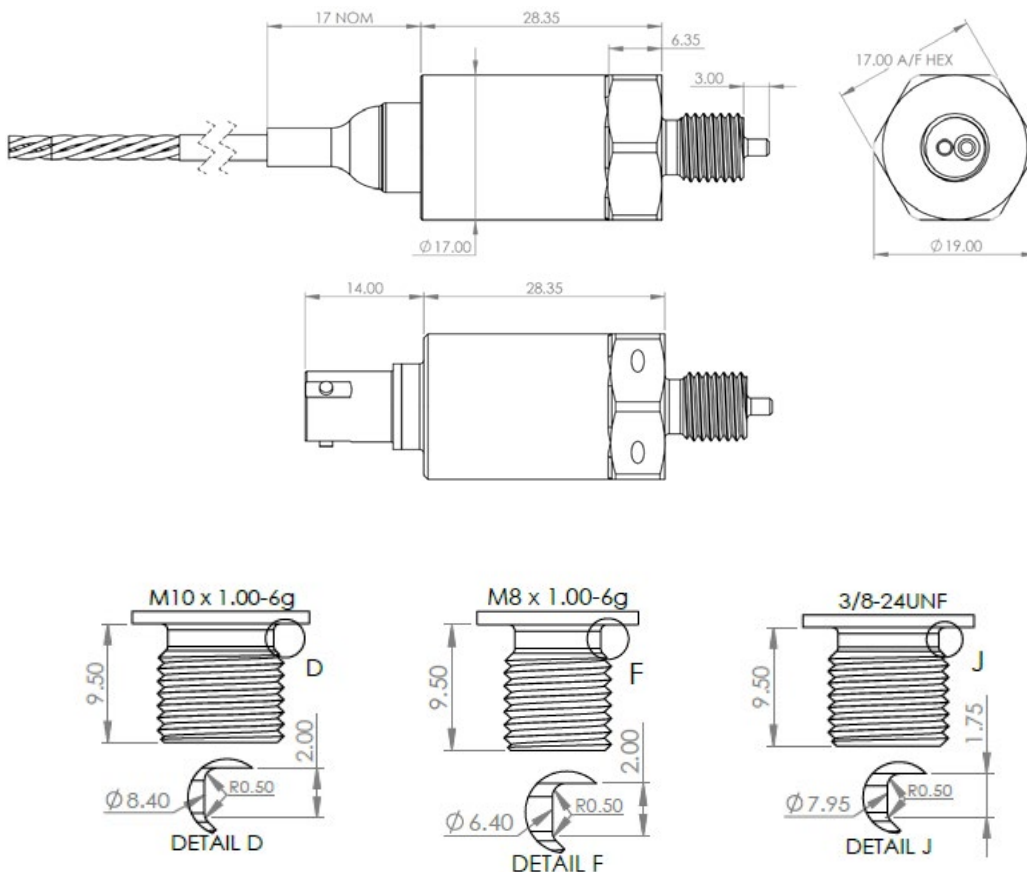
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## Mechanical Details



### Applications

- **Coolant**
- **Brakes**
- **Water**
- **Boost**
- **Fuel**
- **Oil**

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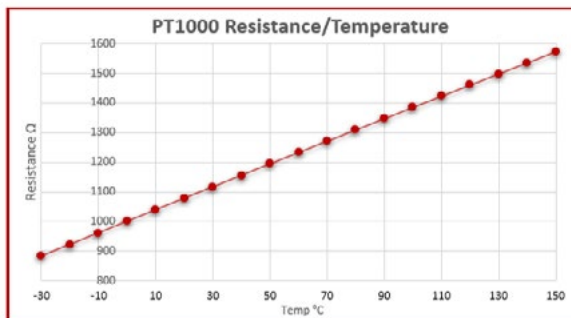
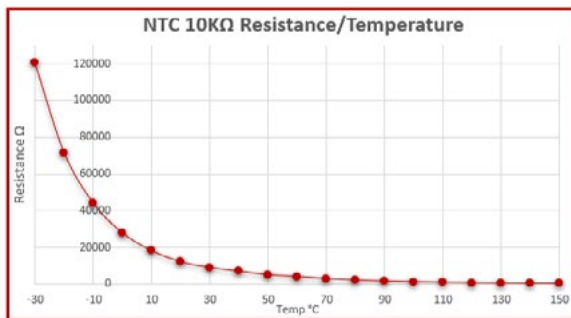
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## Temperature Details

	NTC 10K $\Omega$	PT1000
Temp °C	Output $\Omega$	Output $\Omega$
-30	120370.00	882.20
-20	71668.00	921.60
-10	44087.00	960.90
-0	27936.00	1000.00
10	18187.00	1039.00
20	12136.00	1077.90
25	10000.00	1097.30
30	8284.50	1116.70
40	5774.20	1155.40
50	4120.60	1194.00
60	2967.30	1232.40
70	2181.70	1270.80
80	1628.80	1309.00
90	1233.50	1347.10
100	946.59	1385.10
110	735.47	1422.90
120	578.10	1460.70
130	459.36	1498.30
140	368.75	1535.80
150	298.86	1573.30

## NTC 10K $\Omega$ / PT1000 Temperature Graphs



## Connection Details

Cable Option				
+VE Supply	0V Supply	Output (P)	Output (T)	Output (T)
Red	Black	White	Blue	Green

Hermetic Connector Option				
+VE Supply	0V Supply	Output (P)	Output (T)	Output (T)
Pin 1	Pin 2	Pin 3	Pin	Pin 5

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