



810 SERIES

- Proven PT1000 platinum resistance sensor provides reliability, stability and unbeatable performance
- Standard temperature ranges from -22 °F to 302 °F (-30 °C to 150 °C)
- 4 mA to 20 mA transmitter included
- 316 Stainless Steel housing
- CE compliant to suppress RFI, EMI, and ESD
- RoHS compliant

SPECIFICATIONS

Output signal	4 mA to 20 mA, 2-wire	
Temperature ranges	Standard ranges from -22 °F to 302 °F (-30 °C to 150 °C)	
Accuracy	Measuring element	PT1000 Class A
	Temperature sensor	For °F: $\pm[1.8*(0.15 + 0.002 (t - 32) / 1.8)]$ For °C: $\pm(0.15 K + 0.002 t)$ per EN 60751
	Accuracy ^{1, 2}	± 0.80 °F (+- 0.45 °C)
Failure signal	Sensor burnout	≥ 21.0 mA
	Sensor short circuit	≤ 3.6 mA
Power requirement*	10 Vdc to 30 Vdc	
Environmental temperature affect	0.1% of span / 18 °F (10 °C)	
Load limitations	$\leq(\text{Supply Voltage} - 10 \text{ Volts})/0.023 \text{ A}$	
Wetted materials	316 Stainless Steel	
Housing material	316 Stainless Steel	
Ambient temperature	-40°F to 185 °F (-40°C to 85 °C)	
Storage temperature	-40°F to 185 °F (-40°C to 85 °C)	
Electromagnetic rating	CE compliant to EMC norm EN 61326 RFI, EMI and ESD protection	
Electrical protection	Reverse polarity, over-voltage and short circuit protection	
Max. operating pressure	3,915 psi (270 bar) ³	
Environmental protection	IP67	

* Unregulated

¹ Maximum uncertainty calculated @ maximum span, maximum measurement temperature, and ambient temperature

² Maximum uncertainty includes Usensing element, Usensor measurement, Uoutput linearization

³ Pressure rating may vary based on the process medium, temperature and flow rate

APPLICATIONS

- Mobile hydraulics
- Automotive
- Heat exchangers
- HVAC
- Transportation
- Refrigeration controls

Thermowells are recommended for pressure, corrosive fluids and high velocity applications, see pages 46-48.



WARNING: This product can expose you to chemicals including Lead and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov

ORDERING INFORMATION			
SERIES	810		
TEMPERATURE RANGES	-22/125	-22 °F to 125 °F	-22/302 -22 °F to 302 °F
	0/200	0 °F to 200 °F	
	-22/250	-22 °F to 250 °F	0/100 0 °F to 100 °F
	0/300	0 °F to 300 °F	
(L/H) Custom ranges available on request, specify low and high ranges (70 °F minimum span)			
ACCURACY	1	PT1000 Class A	±0.8 °F (±0.45 °C)
OUTPUT SIGNAL	1	4 mA to 20 mA, 2-wire	
PROCESS CONNECTIONS	2	1/4" NPT Male	8 1/2" NPT Male
ELECTRICAL CONNECTION	25	M12 x 1 (4-pin)	
STEM LENGTHS	010	1"	030 3"
	020	2"	040 4"
	025	2.5"	060 6"
STEM DIAMETER	6	6 mm	

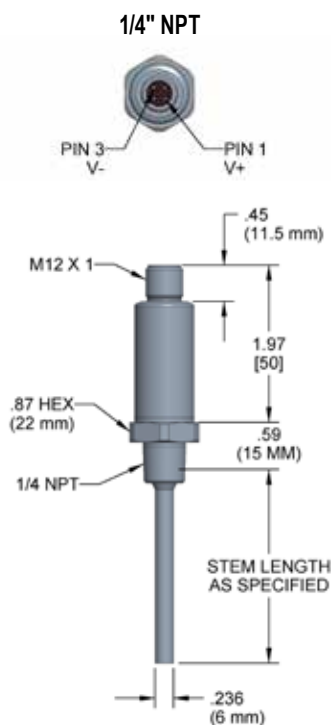
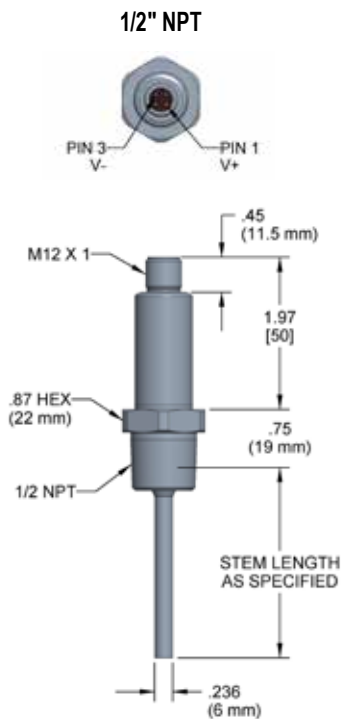
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

EXAMPLE

Series 810
 Temperature range -22 °F to 125 °F
 Accuracy PT1000 Class A ±0.8 °F (±0.45 °C)
 Output signal 4 mA to 20 mA, 2-wire
 Process connection 1/4" NPT Male
 Electrical connection M12 x 1 (4-pin)
 Stem length 2"
 Stem diameter 6 mm

810 - -22/125 - 1 - 1 - 2 - 25 - 020 - 6

810 Series Compact Temperature Transmitter



810 Series	4 mA to 20 mA	
CONNECTION TYPE (CODE)	V+	V-
M12 x 1, 4-Pin (25)	1	3

Load Limitations 4 mA to 20 mA output	
V _{min}	= 10V + (.020 x R _L)
R _L	= Loop resistance (Ω)
	R _L = R _S + R _W
R _S	= Sensor resistance (Ω)
R _W	= Wire resistance (Ω)