



## 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

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

### APPLICATIONS

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

\* Unregulated

<sup>1</sup> Maximum uncertainty calculated @ maximum span, maximum measurement temperature, and ambient temperature

<sup>2</sup> Maximum uncertainty includes Usensing element, Usensor measurement, Uoutput linearization

<sup>3</sup> Pressure rating may vary based on the process medium, temperature and flow rate



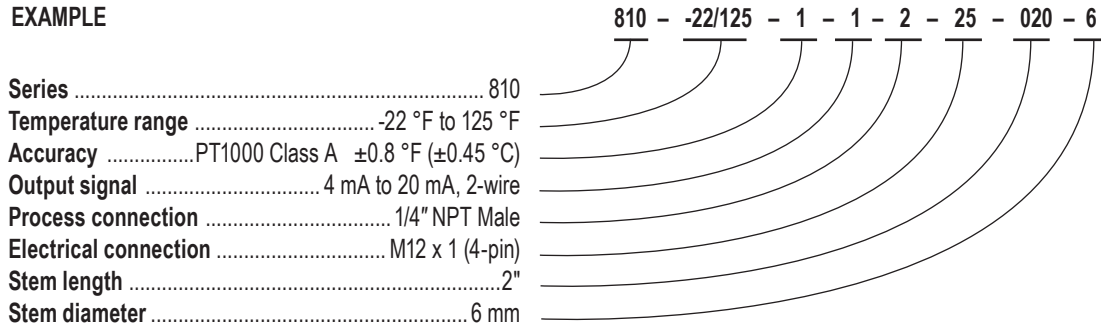
**WARNING:** This product can expose you to chemicals including Chromium (VI) and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

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

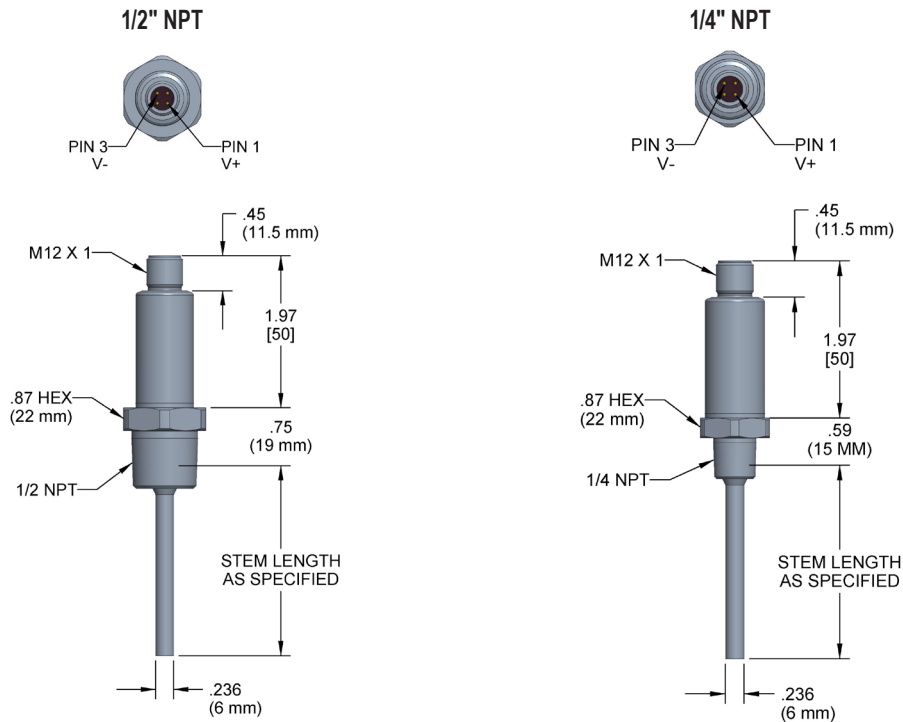
| ORDERING INFORMATION         |  |                                 |                             |
|------------------------------|--|---------------------------------|-----------------------------|
| <b>SERIES</b>                | 810  |                                 |                             |
| <b>TEMPERATURE RANGES</b>    | <b>-22/125</b> -22 °F to 125 °F  | <b>-22/302</b> -22 °F to 302 °F | <b>0/200</b> 0 °F to 200 °F |
|                              | <b>-22/250</b> -22 °F to 250 °F  | <b>0/100</b> 0 °F to 100 °F     | <b>0/300</b> 0 °F to 300 °F |
|                              | (L/H) Custom ranges available on request, specify low and high ranges (70 °F minimum span) |                                 |                             |
| <b>ACCURACY</b>              | 1 PT1000 Class A ±0.8 °F (±0.45 °C)  |                                 |                             |
| <b>OUTPUT SIGNAL</b>         | 1 4 mA to 20 mA, 2-wire  |                                 |                             |
| <b>PROCESS CONNECTIONS</b>   | 2 1/4" NPT Male  | 8 1/2" NPT Male                 |                             |
| <b>ELECTRICAL CONNECTION</b> | 25 M12 x 1 (4-pin)   |                                 |                             |
| <b>STEM LENGTHS</b>          | <b>010</b> 1"  | <b>030</b> 3"                   | <b>080</b> 8"               |
|                              | <b>020</b> 2"  | <b>040</b> 4"                   | <b>120</b> 12"              |
|                              | <b>025</b> 2.5"  | <b>060</b> 6"                   | <b>140</b> 14"              |
| <b>STEM DIAMETER</b>         | 6 6 mm   |                                 |                             |

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

**EXAMPLE**



## 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  |