

## Platinum Resistance Temperature Transmitter



## 800 SERIES

- Proven 100  $\Omega$  platinum resistance sensor provides reliability, stability and unbeatable performance
- Economical price
- Standard temperature ranges from -40 °F to 120 °F through 50 °F to 400 °F
- Wide variety of temperature ranges and connections
- Quick response time
- 316 Stainless Steel housing
- Burnout protection from 3.3 mA to 23 mA
- Also available with our 1800 Series attachable loop indicator
- CE compliant to suppress RFI, EMI, and ESD

## APPLICATIONS

- Water systems
- Storage tanks
- Industrial machinery and machine tools
- HVAC systems
- Refrigeration systems



Also available with our 1800 Series attachable loop indicator. See [www.noshok.com](http://www.noshok.com) for details.

## SPECIFICATIONS

<b>Output signals</b>	4 mA to 20 mA 2-wire, 0 Vdc to 5 Vdc 3-wire 0 Vdc to 10 Vdc 3-wire, 1 Vdc to 5 Vdc 3-wire
<b>Temperature ranges</b>	Standard ranges from -40 °F to 400 °F
<b>Accuracy</b>	
<b>Measuring element</b>	Class B per EN 60751 (IEC 751)
<b>Output</b>	$\pm[0.30 + 0.005 \cdot  t ]$ °C $\pm 0.5\%$ full scale
<b>Sensor protection</b>	Burnout protected from 3.3 mA to 23 mA
<b>Power requirement*</b>	10 Vdc to 30 Vdc (4 mA to 20 mA, 2-wire) 10 Vdc to 30 Vdc (0 Vdc to 5 Vdc, 3-wire) 10 Vdc to 30 Vdc (1 Vdc to 5 Vdc, 3-wire) 14 Vdc to 30 Vdc (0 Vdc to 10 Vdc, 3-wire)
<b>Load limitations</b>	$\leq (V_{Power} - 10)/0.020$ Amp for 4 mA to 20 mA output $\leq 5,000 \Omega$ for 1 Vdc to 5 Vdc output $\leq 10,000 \Omega$ for 0 Vdc to 10 Vdc output $\leq 4,500 \Omega$ for 0.5 Vdc to 4.5 Vdc output
<b>Wetted materials</b>	316 Stainless Steel
<b>Housing material</b>	316 Stainless Steel
<b>Max. operating pressure</b>	6 mm: 725 psi 8 mm: 1,500 psi
<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>Environmental protection</b>	IP65 according to EN 60529/IEC 529
<b>Electromagnetic rating</b>	CE compliant to EMC norm EN 61326:1997/A1:1998 RFI, EMI and ESD protection
<b>Electrical protection</b>	Reverse polarity, over-voltage and short circuit protection
<b>Weight</b>	Approximately 4 oz.

\* Unregulated



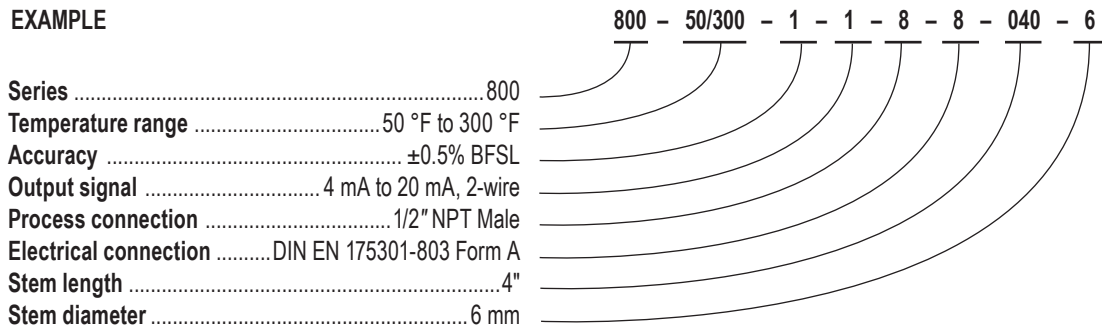
**WARNING:** This product can expose you to chemicals including Chromium (VI) and Nickel, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

Thermowells are recommended for pressure, corrosive fluids and high velocity applications, see pages 48-50.

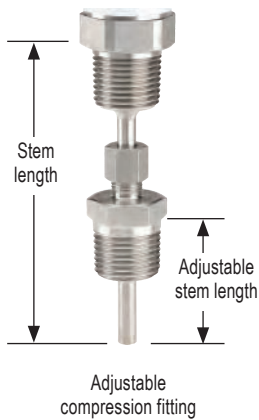
ORDERING INFORMATION				
<b>SERIES</b>	<b>800</b>			
<b>TEMPERATURE RANGES</b>	<b>-40/120</b>	-40 °F to 120 °F	<b>0/200</b>	0 °F to 200 °F
	<b>0/100</b>	0 °F to 100 °F	<b>0/250</b>	0 °F to 250 °F
	<b>0/140</b>	0 °F to 140 °F	<b>20/240</b>	20 °F to 240 °F
<b>ACCURACY</b>	1 Class B + (±0.5% BFSL)			
<b>OUTPUT SIGNALS</b>	<b>1</b>	4 mA to 20 mA, 2-wire	<b>3</b>	1 Vdc to 5 Vdc, 3-wire
	<b>2</b>	0 Vdc to 5 Vdc, 3-wire	<b>5</b>	0 Vdc to 10 Vdc, 3-wire
<b>PROCESS CONNECTIONS</b>	<b>2</b>	1/4" NPT Male	<b>48</b>	1/2" NPT Male w/adjustable compression fitting
	<b>8</b>	1/2" NPT Male		
<b>ELECTRICAL CONNECTIONS</b>	<b>1</b>	DIN EN 175301-803 Form A with 36" cable	<b>14</b>	DIN EN 175301-803 Form A with ISO 4400 1/2" NPT female conduit
	<b>8</b>	DIN EN 175301-803 Form A	<b>25</b>	M12 x 1 (4-pin)
<b>STEM LENGTHS</b>	<b>025</b>	2.5"	<b>060</b>	6"
	<b>040</b>	4"	<b>090</b>	9"
<b>STEM DIAMETERS</b>	<b>6</b>	6 mm	<b>8</b>	8 mm

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

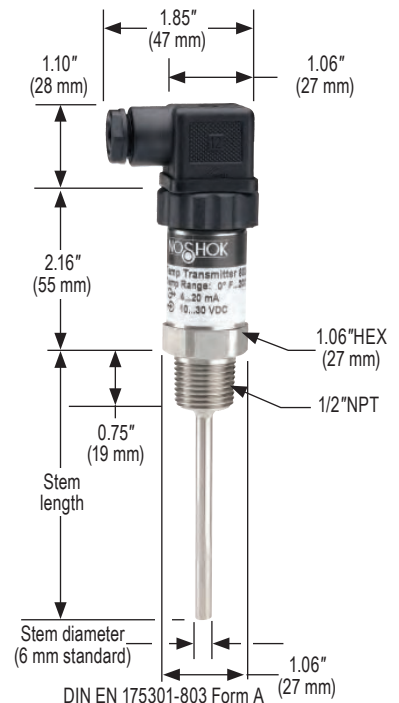
### EXAMPLE



## 800 Series Platinum Resistance Temperature Transmitter



Load Limitations 4 mA to 20 mA output	
V <sub>min</sub>	= 10V + (.020 x RL)
RL	= Loop resistance (Ω)
RS	= Sensor resistance (Ω)
RW	= Wire resistance (Ω)



800 Series	4 mA to 20 mA	
CONNECTION TYPE (CODE)	V+	V-
DIN EN 175301-803 Form A (8 or 14)	1	2
DIN EN 175301-803 Form A w/ Cable (1)	Red	Black
M12 x 1, 4-Pin (25)	1	3

800 Series	0-10 Vdc		
CONNECTION TYPE (CODE)	V+	COMMON	OUTPUT
DIN EN 175301-803 Form A (8 or 14)	1	2	3
DIN EN 175301-803 Form A w/ Cable (1)	Red	Black	White
M12 x 1, 4-Pin (25)	1	3	4