

Platinum Resistance Temperature Transmitter



800 SERIES

- Proven 100 Ω 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

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 for details.

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

SPECIFICATIONS

Output signals	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
Temperature ranges	Standard ranges from -40 °F to 400 °F
Accuracy	
Measuring element	Class B per EN 60751 (IEC 751)
Output	$\pm[0.30 + 0.005 \cdot t]$ °C $\pm 0.5\%$ BFSL
Sensor protection	Burnout protected from 3.3 mA to 23 mA
Power requirement*	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)
Load limitations	$\leq (V_{Power} - 10)/0.020$ 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
Wetted materials	316 Stainless Steel
Housing material	316 Stainless Steel
Max. operating pressure	6 mm: 725 psi 8 mm: 1,500 psi
Ambient temperature	-40 °F to 185 °F (-40 °C to 85 °C)
Storage temperature	-40 °F to 185 °F (-40 °C to 85 °C)
Environmental protection	IP65 according to EN 60529/IEC 529
Electromagnetic rating	Built to suppress RFI, EMI and ESD protection
Electrical protection	Reverse polarity, over-voltage and short circuit protection
Weight	Approximately 4 oz.

* Unregulated



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	800				
TEMPERATURE RANGES	-40/120	-40 °F to 120 °F	0/200	0 °F to 200 °F	25/125 25 °F to 125 °F
	0/100	0 °F to 100 °F	0/250	0 °F to 250 °F	50/300 50 °F to 300 °F
	0/140	0 °F to 140 °F	20/240	20 °F to 240 °F	50/400 50 °F to 400 °F
ACCURACY	1 Class B + (±0.5% BFSL)				
OUTPUT SIGNALS	1	4 mA to 20 mA, 2-wire	3	1 Vdc to 5 Vdc, 3-wire	
	2	0 Vdc to 5 Vdc, 3-wire	5	0 Vdc to 10 Vdc, 3-wire	
PROCESS CONNECTIONS	2	1/4" NPT Male			48 1/2" NPT Male w/adjustable compression fitting
	8	1/2" NPT Male			
ELECTRICAL CONNECTIONS	1	DIN EN 175301-803 Form A with 36" cable			14 DIN EN 175301-803 Form A with ISO 4400 1/2" NPT female conduit
	8	DIN EN 175301-803 Form A			25 M12 x 1 (4-pin)
STEM LENGTHS	025	2.5"			060 6" 120 12"
	040	4"			090 9"
STEM DIAMETERS	6	6 mm			8 8 mm

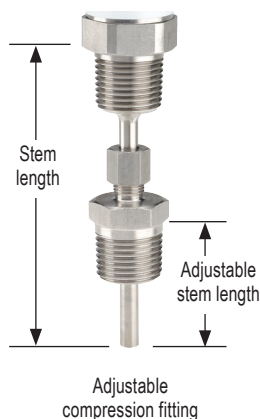
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

EXAMPLE

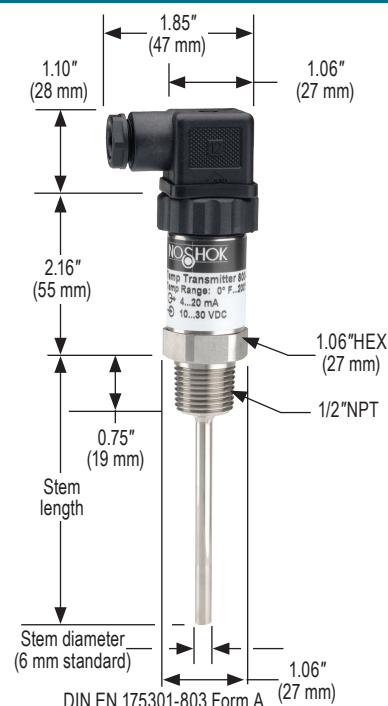
Series	800
Temperature range	50 °F to 300 °F
Accuracy	±0.5% BFLS
Output signal	4 mA to 20 mA, 2-wire
Process connection	1/2" NPT Male
Electrical connection	DIN EN 175301-803 Form A
Stem length	4"
Stem diameter	6 mm

800 - 50/300 - 1 - 1 - 8 - 8 - 040 - 6

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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)



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