



SERIES 800

HIGH PERFORMANCE PLATINUM RESISTANCE TEMPERATURE TRANSMITTERS

The NOSHOK Series 800 temperature transmitter provides an unbeatable level of performance at an economical price. Using the proven reliability and stability of 100 ohm platinum resistance technology, this transmitter offers a broad array of choices for the OEM and user alike.

A rigorous test and inspection process is performed on all NOSHOK temperature transmitters prior to shipment to further ensure 100% “out of the box” reliability.

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 1000 °F
Accuracy	Class B per EN 60751 (IEC 751)
Measuring Element	±[0.30 +0.005* t] °C
Output	±0.5% Full Scale
Sensor protection	Burnout protected from 3.3 mA to 23 mA
Power supply	10 Vdc to 30 Vdc for 4 mA to 20 mA, 0 Vdc to 5 Vdc, unregulated, 1 Vdc to 5 Vdc 12 Vdc to 30 Vdc for 0 Vdc to 10 Vdc, unregulated
Load limitations	≤ (VPower -10)/0.020 Amp for 4 mA to 20 mA output ≤ 5,000 Ω for 1 Vdc to 5 Vdc output ≤ 10,000 Ω for 0 Vdc to 10 Vdc output ≤ 4,500 Ω for 0.5 Vdc to 4.5 Vdc output
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)
Environmental rating	IP65 according to EN 60529/IEC 529
Electromagnetic rating	CE compliant to EMC norm EN 61326:1997/A1:1998 RFI, EMI and ESD protection
Electrical protection	Reverse polarity, over-voltage and short circuit protection
Weight	Approximately 4 oz.

FEATURES

- Proven platinum 100 ohm sensor
- Maximum reliability
- Wide variety of temperature ranges and connections
- CE compliant
- Quick response time

APPLICATIONS

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



Also available with our 1800 Series Attachable Loop Indicator. See page 42 for more information.



Optional USB programmable output

ORDERING INFORMATION								
SERIES 800								
TEMPERATURE RANGES	-40/120°F 25/125°F 0/140°F	-40/120 25/125 0/140	0/200°F 20/240°F 0/250°F	0/200 20/240 0/250	0/300°F 50/300°F 50/500°F	0/300 50/300 50/500	0/750°F 0/1000°F	0/750 0/1000
Other ranges available on special request								
ACCURACY	1 Class B + (±0.5 % BFSL)							
OUTPUT SIGNALS	1 4 mA to 20 mA, 2-wire 2 0 Vdc to 5 Vdc, 3-wire 3 1 Vdc to 5 Vdc, 3-wire 5 0 Vdc to 10 Vdc, 3-wire 34 4 mA to 20 mA, 2-wire, USB programmable							
PROCESS CONNECTIONS	2 1/4 " NPT male		8 1/2 " NPT male					
	48 1/2 " NPT male w/Adjustable Compression Fitting							
ELECTRICAL CONNECTIONS	1 36 " cable (connected to option 8)		8 Hirschmann (DIN EN 175301-803 Form A)		14 Hirschmann connection w/ISO 4400 1/2 " NPT conduit			
STEM LENGTH	025 2.5 inch		060 6 inch		120 12 inch			
	040 4 inch		090 9 inch					
STEM DIAMETER	3 Tapered from 6mm - 3mm tip		6 6 mm		8 8 mm			

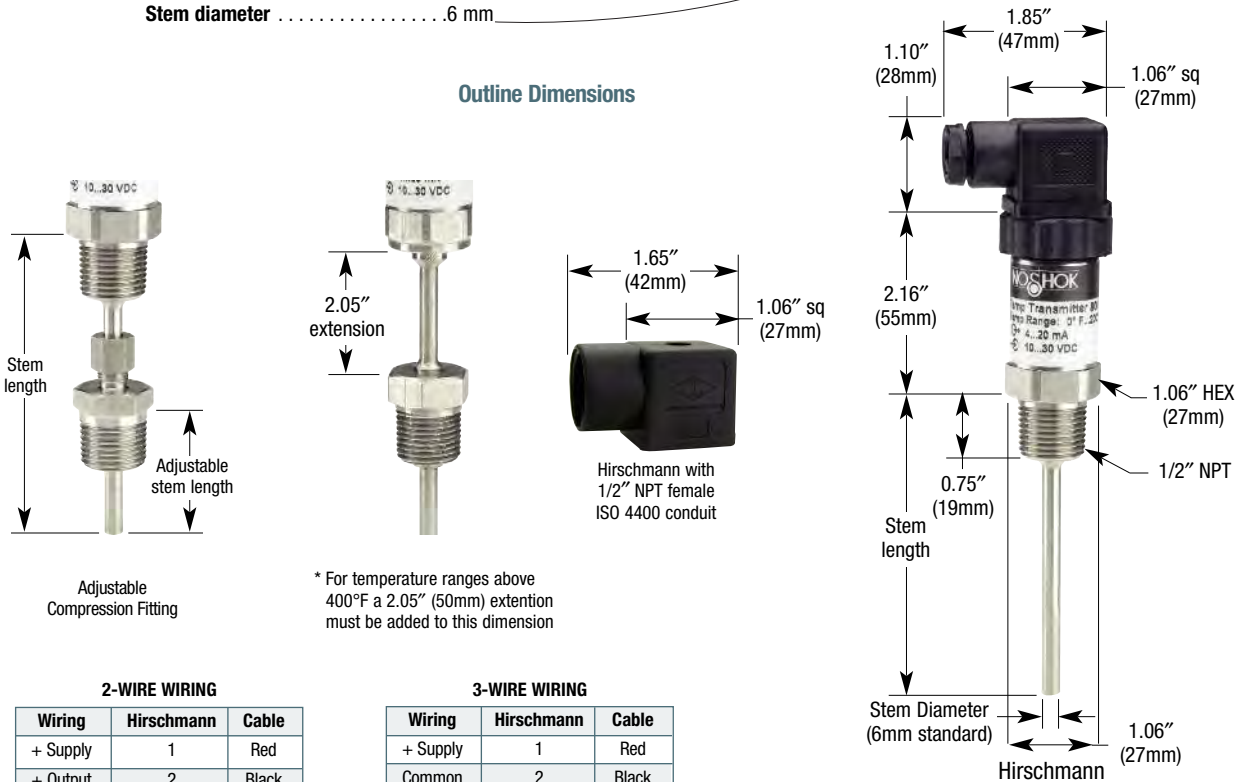
Please consult your local NOSHOK Distributor or NOSHOK, Inc. for availability and delivery information.

EXAMPLE

- Series 800
- Temperature Range 50 °F to 300 °F
- Accuracy ±0.25% BFSL
- Output Signal 4 mA to 20 mA
- Process Connection 1/2 " NPT male
- Electrical Connection Hirschmann
- Stem length 4 inch
- Stem diameter 6 mm

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

Outline Dimensions



Optional thermowells available in 316 SS, 304 SS and Brass.



SERIES 850

With two programmable switching outputs, or one programmable switching output and one programmable analog output

The NOSHOK 850 Temperature Switch measures and displays temperature and has one or two switching outputs as well as an optional analog output. The temperature set points, reset points, switching functions and the measuring range of the optional analog output are simple to adjust via two buttons. All these features and measuring range between -300°F and 1100°F (-200°C and 600°C) cover the majority of temperature measuring and switching tasks. Different process connections, which are also available as adjustable screw connections, underline the versatility of the NOSHOK 850 Series. For fast response times a version with tapered stem is also available. All wetted parts as well as the housing are made of stainless steel. The housing and the replaceable measuring insert are screwed together. This allows the exchange of the measuring insert without opening the connection to the process.

FEATURES

- Compact dimensions
- Simple handling
- Cost effective
- Service-friendly
- Customized solutions

APPLICATIONS

- Mechanical engineering
- Heating and cooling circuits
- Air conditioning technology
- Plant construction
- Environmental technology

TEMPERATURE RANGES

- 50 to +400°F
- 50 to +1100°F
- 50 to +750°F
- 300 to +1100°F

SPECIFICATIONS

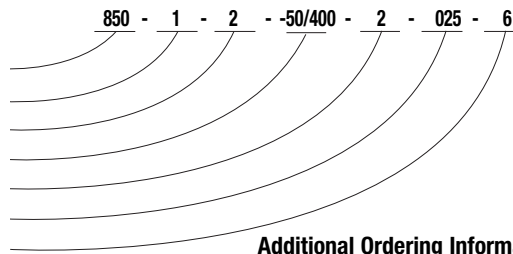
Temperature Ranges	Standard ranges from -300°F to 1100°F (-200°C to 600°C) Selectable display for °F or °C
Temperature Sensor	Platinum resistor (PT100 2-Wire, ClassB)
Wetted Materials	316Ti Stainless steel
Housing Material	Stainless steel
Working Pressure	6 mm Stem Diameter; 600 psi 8 mm Stem Diameter; 1500 psi
Power Supply	12 Vdc to 30 Vdc, unregulated
Power Consumption	≤ 50 mA, without load
Signal Output	4 mA to 20 mA Scaleable from 20-100% of range
Switch Points	Individually adjustable via external control keys
Number	1 or 2 (PNP)
Function	NO / NC; windows-and hysteresis function freely adjustable
Adjustment	Set point: 0.1° steps within temperature range Reset point: 0.1° steps from beginning temperature range until (set point -0.1°)
Switch Rating	100 mA per switch
Electrical Connection	M12 x 1 (4-Pin)
Accuracy	Class B +0.1% of the temperature range
Display	7 Segment-LED, red 4-digit, height 0.3"
Temperature Ranges	
Storage	-22°F to 176°F (-30°C to 80°C)
Ambient	-13°F to 158°F (-25°C to 70°C)
Influence	±0.006% of measuring range per °F
Environmental Protection	NEMA 4; IP65 (IEC 529)
Weight	0.66 lbs. depending on stem length

ORDERING INFORMATION				
SERIES 850				
SWITCH FUNCTION	1	2 N.O. or N.C. Switch-PNP		
	2	1 N.O. or N.C. Switch-PNP (with 4 mA to 20 mA Analog Output)		
PROCESS CONNECTIONS	2	1/4 " NPT Male		8 1/2 " NPT Male
TEMPERATURE RANGES		-50°F to 400°F	-50/400	32°F to 1100°F 32/1100
		32°F to 750°F	32/750	-300°F to 1100°F -300/1100
ELECTRICAL CONNECTIONS	2 M12 x 1 (4-Pin)			
STEM LENGTH	025	2.5 inch	060	6 inch
	040	4 inch	090	9 inch
STEM DIAMETER	3	Tapered from 6mm - 3mm tip		6 6mm 8 8mm

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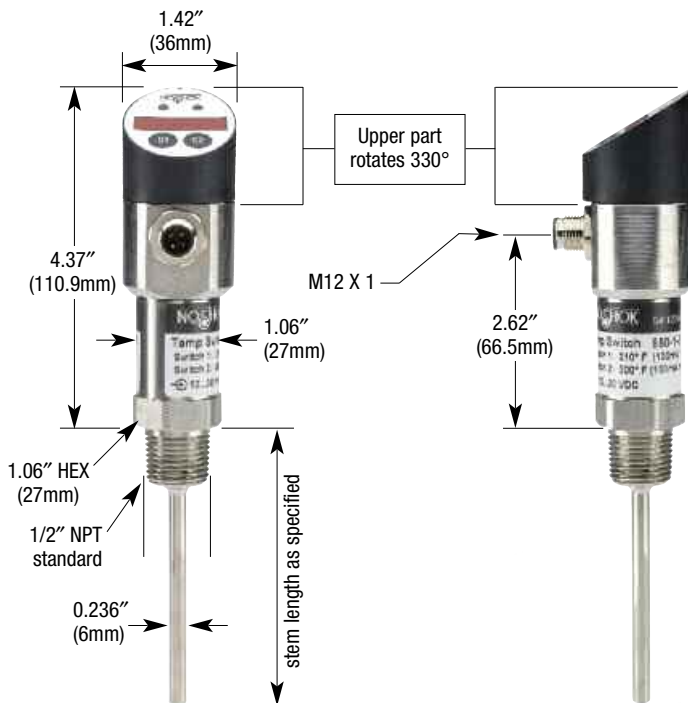
EXAMPLE

Series 850
 Switch Function 2 N.O. or N.C. (PNP)
 Process Connection 1/4 " NPT Male
 Temperature Range -50°F to 400°F
 Electrical Connection M12 x 1 (4-pin)
 Stem Length 2.5"
 Stem Diameter 6mm



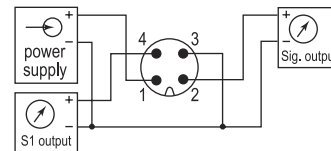
Additional Ordering Information Switch Set Point(s) (please specify)

Outline Dimensions



Wiring Diagrams

1 switching output (M12 x 1) with 4mA to 20 mA Signal p-switching



2 switching output (M12 x 1) p-switching

