



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 °F to 400 °F
- 50 °F to 1,100 °F
- 50 °F to 750 °F
- 300 °F to 1,100 °F

Protective Cover Option

- Made of a thermoplastic polyurethane (TPU) material which is resistant to oil, grease and abrasion
- Protects the sensor while maintaining clear viewing and rotation of the display
- The elastic properties of the material allows set point programming without having to remove the cover
- Increases environmental protection to IP67 for indoor and outdoor use



850 SERIES

- Utilizes PT100 technology to provide continuous temperature monitoring, electronic temperature switching, and transmission of analog output of 4-20 mA while providing local digital indication
- Allows for one or two switching outputs as well as an optional analog output
- Two buttons on top allow simple adjustment of the temperature set points, reset points, switching functions and the measuring range of the optional analog output
- Wide measuring range (between -300 °F and 1,100 °F / -200 °C and 600 °C) covers the majority of temperature measuring and switching applications
- 1/2" NPT male standard connection, 1/4" NPT optional
- A variety of stem lengths are available for maximum versatility (also available with adjustable insertion lengths)
- A version with tapered stem is also available for rapid response times
- Durable stainless steel housing and wetted parts
- The housing and replaceable measuring insert are screwed together to allow the exchange of the measuring insert without opening the connection to the process

SPECIFICATIONS

Temperature ranges	Standard ranges from -300 °F to 1,100 °F (-200 °C to 600 °C) Selectable display for °F or °C
Temperature sensor	Platinum resistor (PT100 2-wire, Class B)
Wetted materials	316Ti Stainless steel
Housing material	Stainless steel
Working pressure	6 mm Stem Diameter; 600 psi 8 mm Stem Diameter; 1,500 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 lb. depending on stem length

* Unregulated power supply

ORDERING INFORMATION			
SERIES	850		
SWITCH FUNCTIONS	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	-50/400 -50 °F to 400 °F 32/750 32 °F to 750 °F	32/1100 32 °F to 1,100 °F -300/1100 -300 °F to 1,100 °F	
ELECTRICAL CONNECTION	2 M12 x 1 (4-pin)		
STEM LENGTHS	025 2.5" 040 4"	060 6" 090 9"	120 12"
STEM DIAMETERS	3 Tapered from 6 mm - 3 mm tip	6 6 mm	8 8 mm
OPTION	PC Protective Cover (IP67)		

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

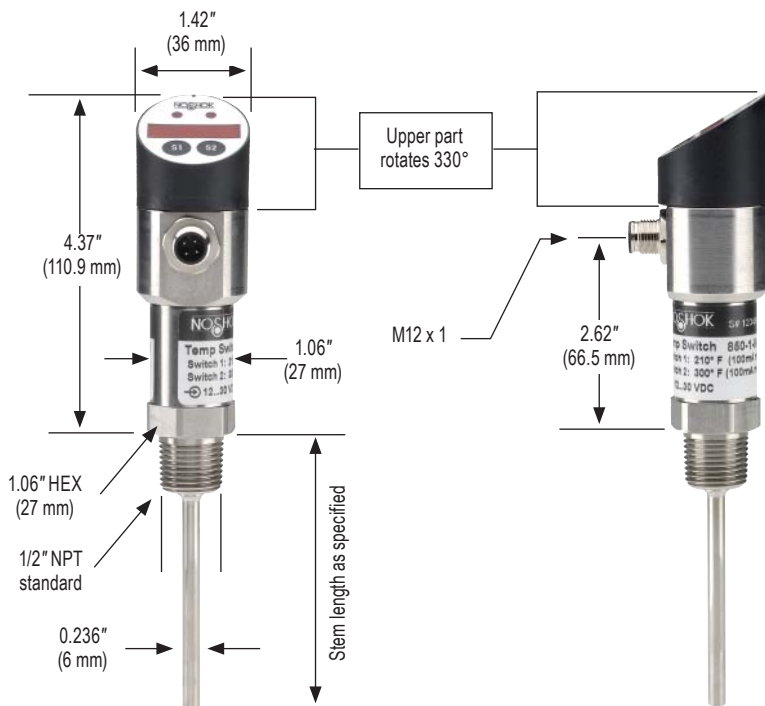
EXAMPLE

850 - 1 - 2 - -50/400 - 2 - 025 - 6 - PC

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 6 mm
Option..... Protective cover

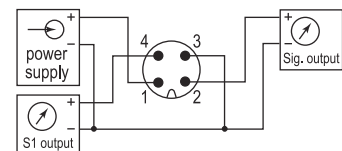
Additional Ordering Information Switch Set Point(s) (please specify)

Outline Dimensions



Wiring Diagrams

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



2 switching output (M12 x 1)
p-switching

