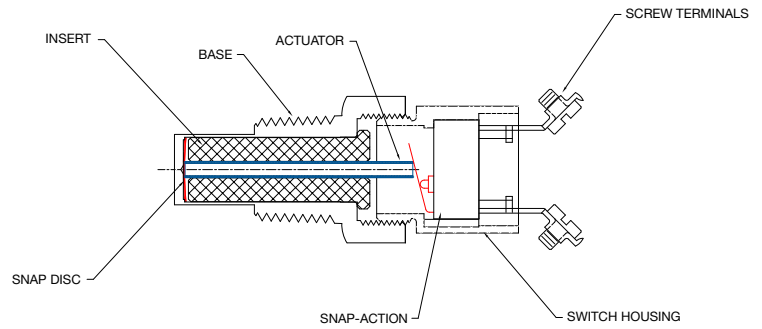
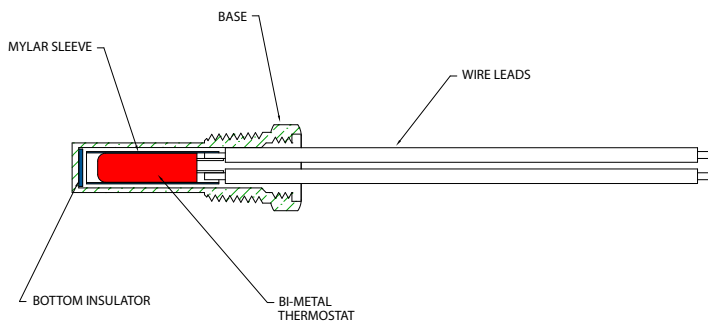


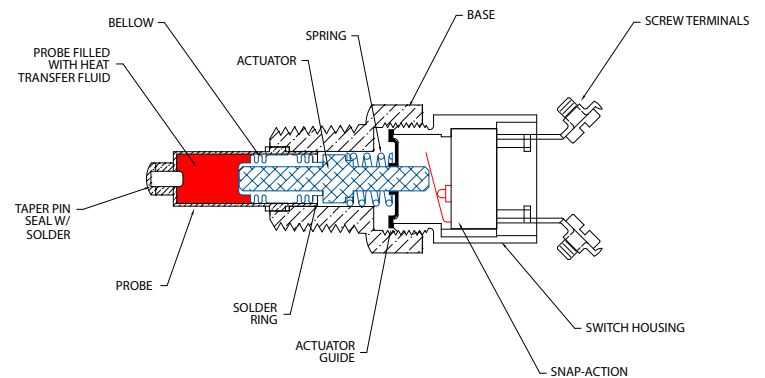
# TEMPERATURE SWITCHES



**SNAP DISC THERMOSTAT DESIGN**

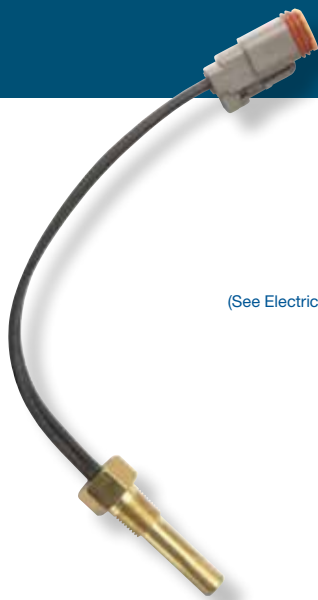


**BI-METAL THERMOSTAT DESIGN**

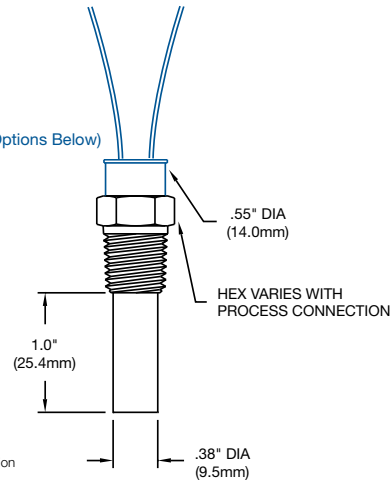


**BELLOWS THERMOSTAT DESIGN**

- Models TT, TD, TM, and HT
- TT – Bi-metal immersion temperature switch for low voltage/low current applications
- TD – Snap disc design for high reliability with shock and vibration
- TM and HT – Bellows design for high reliability with shock and vibration
- Available in a wide range of configurations
- NEMA 4 and 13 available
- 100% tested for accuracy



(See Electrical Options Below)



Shown with PD electrical option

**UL** **CE** **RoHS**

### Features

- Bi-metal immersion temperature switch
- Factory preset temperature
- Direct action contacts/minimum hysteresis
- Gold diffused, fine silver contacts
- Available in a wide range of configurations
- Economical and compact
- NEMA 4, 13

### Operating Specifications

<b>Set Point Range</b>	40° — 300°F	(4° — 149°C)
<b>Set Point Tolerance</b>	±5°F	(2.8°C)
<b>Maximum Temperature</b>	325°F	(163°C)
<b>Current Rating</b>	3 A @ 240 VAC	2 A @ 24 VDC (Resistive)
<b>Probe Length</b>	1"	
<b>Media Connection</b>	Standard: Brass ( <i>Optional: 303 SS, 316 SS</i> )	
<b>Circuit Form</b>	SPST-NO or SPST-NC	
<b>Electrical Connection</b>	See Order Chart Below for Options	
<b>Maximum External Pressure</b>	5000 PSI	
<b>Unit Weight</b>	.09 lbs	
<b>Installation Torque</b>	15 ft lbs	
	Smaller than 3/8" NPT Male = 5 — 10 ft lbs	

**CHECK OUT**  
[nasonptc.com/configure](http://nasonptc.com/configure)  
 to create your own custom CAD file

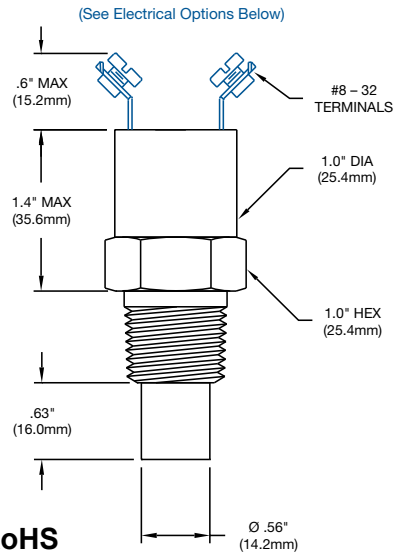
### How to Order (Example: Part Number: **TT - D3A - 100R / WL** \*)

<b>TT</b>		<b>-</b>		<b>D</b>	<b>3</b>	<b>A</b>	<b>-</b>		<b>1</b>	<b>0</b>	<b>0</b>	<b>R</b>	<b>/</b>	<b>WL</b>	<b>*</b>
<b>Probe Length</b>		<b>Media Connection</b>		<b>Circuit Form</b>		<b>Fixed Set Point</b>		<b>Set Point Direction</b>		<b>Electrical Options</b>					
<b>D</b>	1/2"	<b>1</b>	1/2" NPT Male	<b>A</b>	SPST-NO	<b>40°F — 300°F</b>		<b>R</b>	Rising	<b>WL</b>	Wire Leads 6"				
<b>E</b>	3/4"	<b>2</b>	3/8" NPT Male	<b>B</b>	SPST-NC	(5° Increments)		<b>F</b>	Falling	<b>QC</b>	1/4" Spade Connection				
<b>F</b>	1"	<b>3</b>	1/4" NPT Male							<b>WP</b>	Weather Pack				
<b>H</b>	1-1/2"	<b>5</b>	3/4" SAE O-Ring (-8)							<b>MP</b>	Metri-Pack				
<b>J</b>	2"	<b>6</b>	M16 x 1.5							<b>GG</b>	Internal Ground				
		<b>13</b>	1/4" NPT (316SS)												* Defaults to Screw Terminals
		<b>35</b>	M12 x 1.5												
		<b>46</b>	M14 x 1.25												

For more [media connections](#), see pages 32-33.

For all available [optional configurations](#), see page 34.

For more [electrical connections](#), see page 7.



UL US CE RoHS

### Features

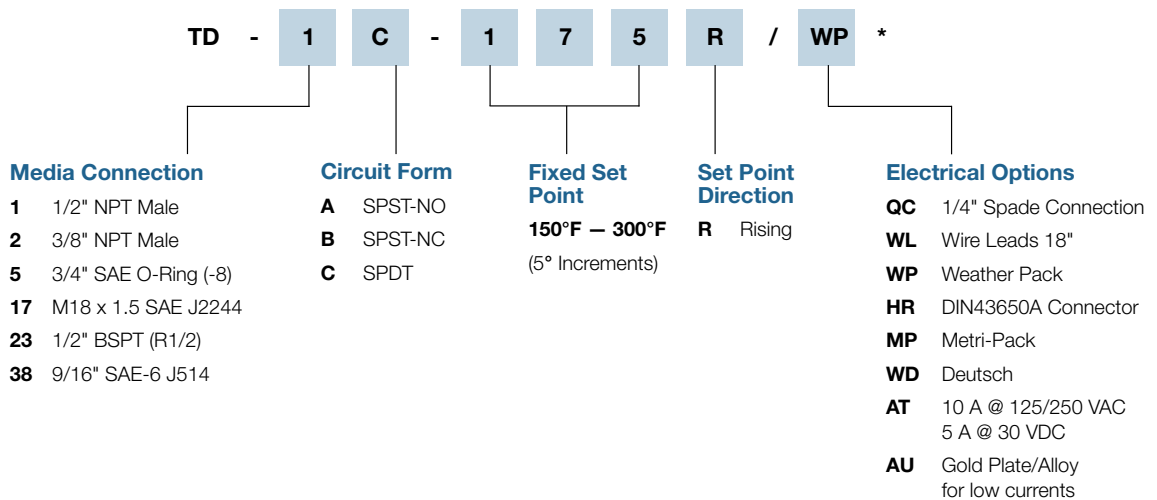
- Utilizes snap disc approach to sense temperature
- High-quality snap-action switch
- Factory preset
- Shock and vibration resistant
- Available in a wide range of configurations
- Economical
- NEMA 4, 13

### Operating Specifications

<b>Set Point Range</b>	150° — 300°F	(65° — 149°C)
<b>Set Point Tolerance</b>	±5°F	(2.8°C)
<b>Maximum Operating Temperature</b>	325°F	(163°C)
<b>Differential</b>	8 — 16°F	
<b>Current Rating</b>	5 A @ 250 VAC	5 A @ 30 VDC (Resistive)
<b>Media Connection</b>	Standard: Brass ( <i>Optional: 303 SS, 316 SS</i> )	
<b>Circuit Form</b>	SPST-NO, SPST-NC or SPDT	
<b>Electrical Connection</b>	See Order Chart Below for Options	
<b>Maximum External Pressure</b>	2500 PSI	
<b>Unit Weight</b>	.21 lbs	
<b>Installation Torque</b>	15 ft lbs	
	Smaller than 3/8" NPT Male = 5 — 10 ft lbs	

**CHECK OUT**  
[nasonptc.com/configure](http://nasonptc.com/configure)  
 to create your own custom CAD file

### How to Order (Example: Part Number: **TD - 1C - 175R / WP**)

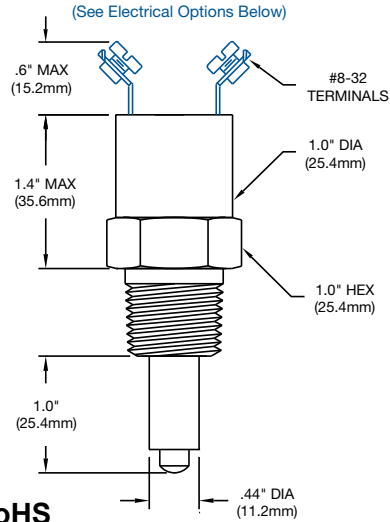


\* Defaults to Screw Terminals

For more [media connections](#), see pages 32-33.

For all available [optional configurations](#), see page 34.

For more [electrical connections](#), see page 7.



UL US CE RoHS

### Features

- Utilizes bellows mechanism to sense temperature
- High-quality snap-action switch
- Factory preset
- Shock and vibration resistant
- Available in a wide range of configurations
- NEMA 4, 13

### Operating Specifications

<b>Set Point Range</b>	40° — 300°F	(4° — 149°C)
<b>Set Point Tolerance</b>	±5°F	(2.8°C)
<b>Maximum Operating Temperature Differential</b>	100°F above set point (325°F max)	
<b>Current Rating</b>	5 A @ 250 VAC	5 A @ 30 VDC (Resistive)
<b>Media Connection</b>	Standard: Brass ( <i>Optional: 303 SS, 316 SS</i> )	
<b>Circuit Form</b>	SPST-NO, SPST-NC or SPDT	
<b>Electrical Connection</b>	See Order Chart Below for Options	
<b>Maximum External Pressure</b>	500 PSI	
<b>Unit Weight</b>	.19 lbs	
<b>Installation Torque</b>	15 ft lbs	
	Smaller than 3/8" NPT Male = 5 — 10 ft lbs	

**CHECK OUT**  
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 to create your own custom CAD file

### How to Order (Example: Part Number: **TM - 6A - 120R / WL** \*)

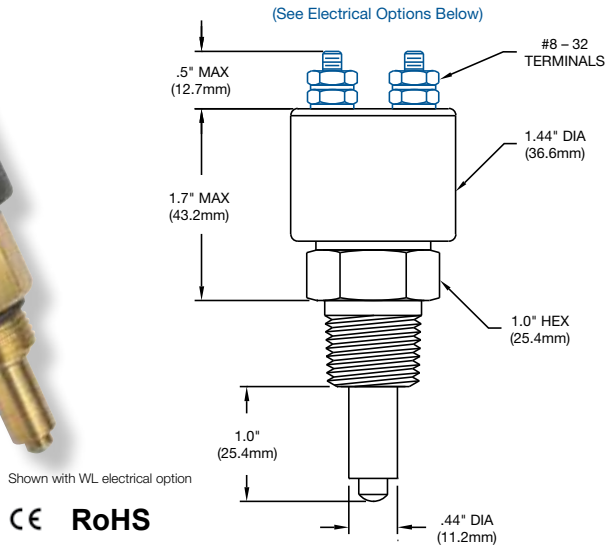
<b>TM</b>	<b>-</b>	<b>6</b>	<b>A</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>0</b>	<b>R</b>	<b>/</b>	<b>WL</b>	<b>*</b>								
		<b>Media Connection</b>				<b>Circuit Form</b>				<b>Fixed Set Point</b>				<b>Set Point Direction</b>				<b>Electrical Options</b>	
		<b>1</b>	1/2" NPT Male			<b>A</b>	SPST-NO			<b>40°F — 300°F</b>			<b>R</b>	Rising			<b>WL</b>	Wire Leads 18"	
		<b>2</b>	3/8" NPT Male			<b>B</b>	SPST-NC			(5° Increments)			<b>F</b>	Falling			<b>QC</b>	1/4" Spade Connection	
		<b>6</b>	M16 x 1.5			<b>C</b>	SPDT									<b>WP</b>	Weather Pack		
		<b>7</b>	1/2" BSPP Male (G1/2)													<b>HR</b>	DIN43650A Connector		
		<b>16</b>	3/8" — 19 BSPT/JIS													<b>MP</b>	Metri-Pack		
		<b>27</b>	M22 x 1.5 SAE J2244													<b>AT</b>	10 A @ 125/250 VAC 5 A @ 30 VDC		
		<b>45</b>	1/2" BSPP 303 SS													<b>GG</b>	Internal Ground		
																<b>AU</b>	Gold Plate/Alloy for low currents		

\* Defaults to Screw Terminals

For more [media connections](#), see pages 32-33.

For all available [optional configurations](#), see page 34.

For more [electrical connections](#), see page 7.



### Features

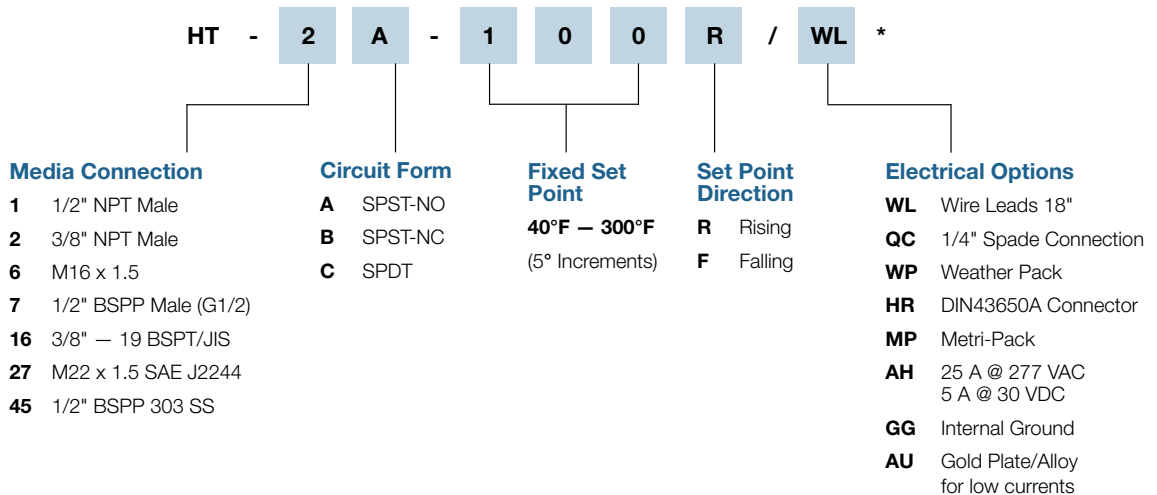
- Utilizes bellows mechanism to sense temperature
- High-quality snap-action switch
- Factory preset
- Shock and vibration resistant
- Available in a wide range of configurations
- NEMA 4, 13

### Operating Specifications

<b>Set Point Range</b>	40° — 300°F	(4° — 149°C)
<b>Set Point Tolerance</b>	±5°F	(2.8°C)
<b>Maximum Operating Temperature Differential</b>	100°F above set point (325°F max)	
<b>Current Rating</b>	10 A @ 125/250 VAC	5 A @ 30 VDC
<b>Media Connection</b>	Standard: Brass ( <i>Optional: 303 SS, 316 SS</i> )	
<b>Circuit Form</b>	SPST-NO, SPST-NC or SPDT	
<b>Electrical Connection</b>	See Order Chart Below for Options	
<b>Maximum External Pressure</b>	500 PSI	
<b>Unit Weight</b>	.23 lbs	
<b>Installation Torque</b>	15 ft lbs	
	Smaller than 3/8" NPT Male = 5 — 10 ft lbs	

**CHECK OUT**  
[nasonptc.com/configure](http://nasonptc.com/configure)  
 to create your own custom CAD file

### How to Order (Example: Part Number: HT - 2A - 100R / WL)

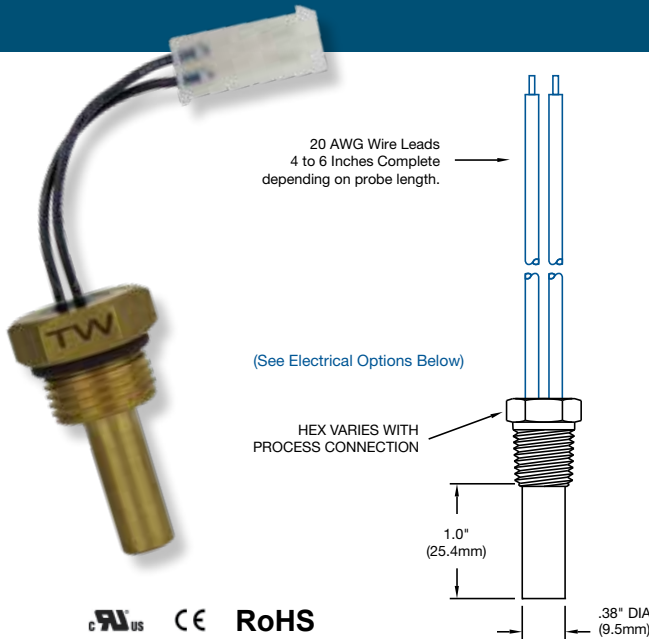


\* Defaults to Screw Terminals

For more [media connections](#), see pages 32-33.

For all available [optional configurations](#), see page 34.

For more [electrical connections](#), see page 7.



### Features

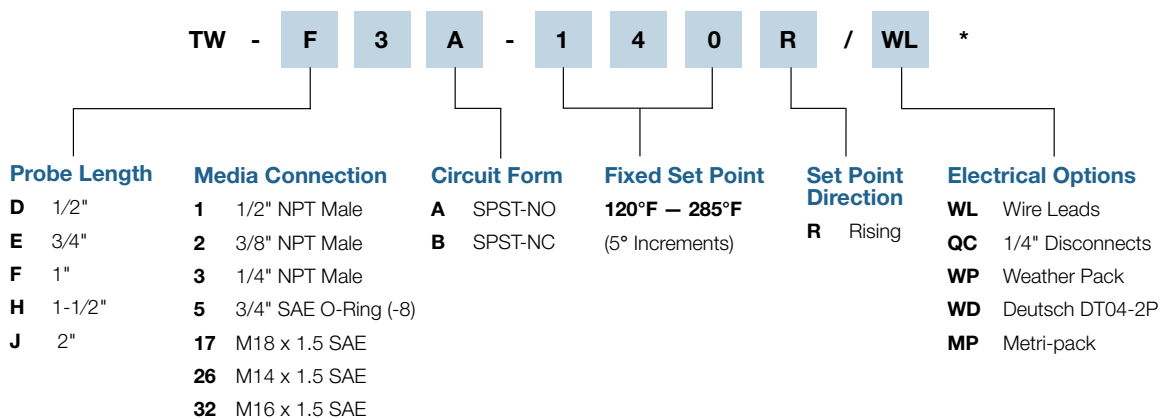
- Snap action immersion temperature switch
- Factory preset temperature
- Hysteresis built in
- Available in a wide range of configurations
- Economical and compact
- NEMA 4, 13

### Operating Specifications

<b>Set Point Range</b>	120° – 285°F	(50° – 140°C)
<b>Set Point Tolerance</b>	±5°F	(2.8°C)
<b>Maximum Temperature</b>	325°F	(163°C)
<b>Current Rating</b>	10 A @ 120 VAC	5 A @ 240 VDC    4 A @ 12VDC
<b>Differential</b>	30%C of the set point ( <i>nominal</i> )	
<b>Cycle Life</b>	10,000 cycles ( <i>Depending on amp draw</i> )	
<b>Probe Length</b>	1.0" standard	
<b>Media Connection</b>	Standard: Brass ( <i>Optional: 303 SS, 316 SS</i> )	
<b>Circuit Form</b>	Normally close or normally open	
<b>Electrical Connection</b>	Wire leads standard - See options below	
<b>Maximum External Pressure</b>	5000 PSI	

**CHECK OUT**  
[nasonptc.com/configure](http://nasonptc.com/configure)  
 to create your own custom CAD file

### How to Order (Example: Part Number: **TW - F3A - 140R / WL** \*)



For more [media connections](#), see pages 32-33.

For all available [optional configurations](#), see page 34.

For more [electrical connections](#), see page 7.

## Temperature Switches

Option	Base Thread Size*	TD	TM/HT	TT Model Probe Code					
				D 1/2" Probe	E 3/4" Probe	F 1" Probe	G 1-1/4" Probe	H 1-1/2" Probe	J 2" Probe
1	1/2 NPT Male	•	•	•	•	•	•	•	•
2	3/8 NPT Male	•	•	•	•	•		•	•
3	1/4 NPT Male			•	•	•		•	•
4	3/8 NPT (1PC)		•						
5	3/4 — 16 SAE O-Ring (-8) J514	•	•	•	•	•		•	•
6	M16 x 1.5 NON SAE		•	•	•	•			•
7	1/2 BSPP (G1/2)	•	•		•				•
8	1/2 NPT (1PC)		•						
9	3/8 NPT (Short) NON SAE		•						
10	M14 x 1.5 (Nickel Plated) NON SAE				•				
11	M14 x 1.5 NON SAE				•	•			
12	1/2 NPT (Nickel Plated)		•			•	•		
13	1/4 NPT (316SS)			•	•	•			
14	1/2 BSPP Extended		•						
15	3/4 — 16 SAE O-Ring (-8) Short J514		•						
16	3/8 — 19 BSPT (R3/8)	•	•	•			•		
17	M18 x 1.5 SAE J2244/3 O-Ring	•	•	•	•	•			
18	1/4 NPT (Nickel Plated)			•	•				
19	1/2 NPT (316SS-1PC)		•						
20	1/2 NPT (Very Short)		•						
21	3/8 NPT (Very Short)		•						
22	M16 x 1.5 45° Flare				•				
23	1/2 BSPT (R1/2)	•	•			•			
24	1/2 NPT (316SS)					•			
25	3/8 NPT (Nickel Plated) 1PC		•						
26	M14 x 1.5 SAE J2244/3 O-Ring			•	•	•			
27	M22 x 1.5 SAE J2244/3 O-Ring	•	•			•			
28	1/4 — 19 BSPT (R1/4)				•				
29	3/8 — 19 BSPP (G3/8)				•			•	

\*Call Nason at 800.229.4955 if you don't see the media connection that fits your application. **Note:** Consult factory for materials and stock.

## Temperature Switches

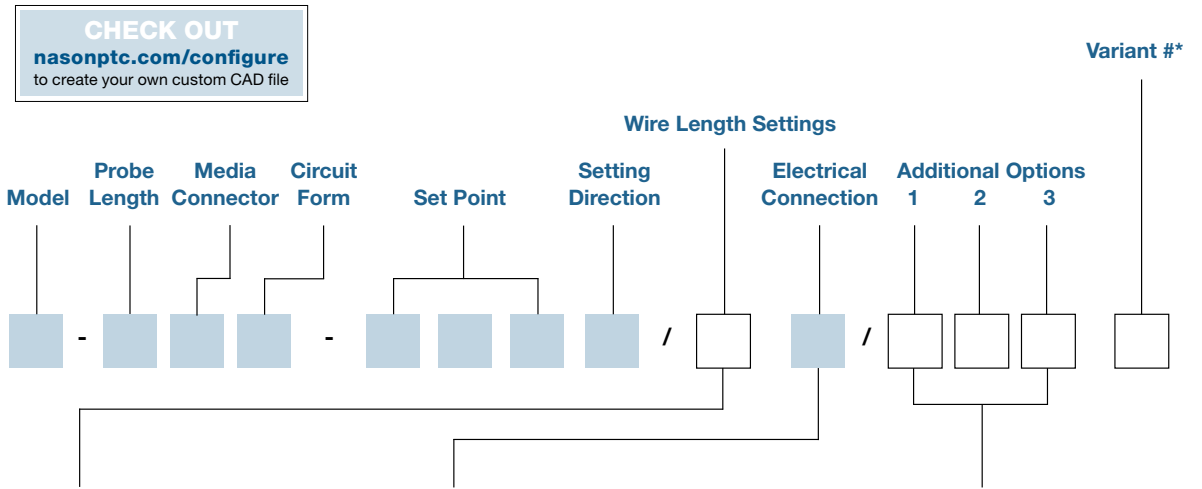
Option	Base Thread Size*	TD	TM/HT	TT Model Probe Code					
				D 1/2" Probe	E 3/4" Probe	F 1" Probe	G 1-1/4" Probe	H 1-1/2" Probe	J 2" Probe
30	3/8 NPT (316SS)			•	•	•			
31	3/4 — 16 UNF (304 SS)		•						
32	M16 x 1.5 (SAE) J2244/3								
33	5/8 — 18 SAE J513 45° Flare			•	•				
34	1/2 NPT (Short) Male		•						
35	M12 x 1.5 SAE J2244/3			•		•			
36	3/4 — 16 SAE O-Ring (Nickel Plated)								
37	M14 x 1.5 Taper Thread								
38	9/16 — 18 SAE J514 O-Ring (-6)	•		•	•	•	•	•	•
39	M16 x 2.0			•					
40	1/2 — 20 UNF SAE J514 O-Ring (-5)			•		•			
41	3/8 — 24 SAE J514 O-Ring (-3)			•					
42	1/8 NPT Male			•		•			
43	1/4 — 19 BSPP (G1/4)			•		•			
44	M16 x 1.5 303 SS					•			
45	1/2 BSPP 303 SS (G1/2)	•	•						
46	M14 x 1.25					•			
47	M16 x 1.5 45° Flare			•		•			
48	7/16 — 20 SAE J514 O-Ring (-4)			•		•			
49	1 1/16 — 12 SAE J514 O-Ring (-12)	•		•					
50	1/8 — 28 BSPT (R1/8)			•					
51	M20X 1.5 Taper								
52	3/8 NPT 303 SS Male								
53	M16 X 1.5 For Washer			•	•	•		•	•
54	M10 X 1.5								
55	1/8 — 28 BSPP (G 1/8)			•					
56	M12 x 1.5 For Washer			•					
57	3/8 — 19 BSPP Washer (G3/8)			•					
58	1/4 — 19 BSPP (G1/4) 316 SS					•			
59	7/8 — 14 SAE J514 O-Ring (-10)		•						
60	3/4 — 16 SAE J514 O-Ring (-8)		•						
61	M10 x 1.0						•		
62	3/4 — 16 for Washer Seal			•					

\*Call Nason at **800.229.4955** if you don't see the media connection that fits your application. **Note:** Consult factory for materials and stock.



## Temperature Switch Part Number Configuration

(Complete open boxes only. Shaded boxes should have been previously completed on individual switch pages.)



### Wire Length Settings

- 1** 3" Wire Length
- 2** 6" Wire Length
- 3** 12" Wire Length
- 4** 18" Wire Length
- 5** 24" Wire Length
- 6** 36" Wire Length
- 7** 48" Wire Length
- 8** 60" Wire Length
- 9** Special Wire Length

### Electrical Connection

- HF** DIN43650A 1/2" Conduit (Plug & Receptacle)
- HH** DIN43650A (Plug Only)
- HR** DIN43650A Strain Relief (Plug & Receptacle)
- HP** 9.4mm DIN (Plug Only)
- HM** 9.4mm DIN (Plug & Receptacle)
- MP** Metri-Pack Female 280 Series Sealed (Nason Standard)
- NP** Metri-Pack Male 280 Series Sealed
- CP** Metri-Pack Female 150 Series Sealed
- DP** Metri-Pack Male 150 Series Sealed
- PP** Boot (Military Connector)
- QC** 1/4" Male Spade Quick Connect
- WL** Wire Leads
- WP** Weather Pack (Female)
- TP** Weather Pack (Male)
- EL** 1/2" NPT Male Conduit
- EF** 1/2" NPT Female Conduit
- WD** Deutsch Receptacle (DT04)
- PD** Deutsch Plug (DT06)
- HL** Lighted DIN (Plug & Receptacle)
- ES** M12 - 4PIN
- CL** Sheathed 18 AWG Primaries
- SL** SJO Cable

### Additional Options

- 1. Contacts\*\***
- AT** 10 A @ 125/250 VAC  
5 A @ 30 VDC
- AU** Gold Plate/Alloy (for low currents)
- AH** 25 A @ 277 VAC  
5 A @ 30 VDC
- 2. Ground**
- GG** Internal Ground
- 3. Other**
- VL** Convolute (for wire leads)

\* Variant # identifies this configuration as unique to a specific customer or application.

\*\* Ask about our new environmentally sealed snap-action switch.

### Temperature Switches

So we can better meet your application needs, please take a moment to fill out this operation specifications form. Nason will provide a sample to your specifications.

**1** Media: \_\_\_\_\_

**2** Set Point: Rising \_\_\_\_\_ (°F or °C) Falling \_\_\_\_\_ (°F or °C)

**3** Differential:  Yes  No

**4** Circuit Form:  SPST-NO  SPST-NC  SPDT

**5** Circuit: Electrical  AC \_\_\_\_\_ V  DC \_\_\_\_\_ V

Load (Amps) \_\_\_\_\_  Resistive  Inductive Inrush \_\_\_\_\_

**6** Pressure: System (Normal) \_\_\_\_\_ (Maximum) \_\_\_\_\_

**7** Temperature: System (Normal) \_\_\_\_\_ (Maximum) \_\_\_\_\_ (Minimum) \_\_\_\_\_

Ambient (Normal) \_\_\_\_\_ (Maximum) \_\_\_\_\_ (Minimum) \_\_\_\_\_

**8** Media Connection: \_\_\_\_\_

**9** Electrical Connection: \_\_\_\_\_

**10** Cycles: \_\_\_\_\_ per hour Other (describe): \_\_\_\_\_

**11** Other Special Requirements (attach separate sheet if necessary): \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**12** System:  New Design  Redesign

**13** Application: What will switch control? (Attach circuit diagrams if available) \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**14** Prototype(s) Required by (Date): \_\_\_\_\_

**15** Estimated Annual Usage: \_\_\_\_\_ Target Net Price: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Project Number or Name: \_\_\_\_\_

Name & Title: \_\_\_\_\_ Phone: \_\_\_\_\_

Email Address: \_\_\_\_\_