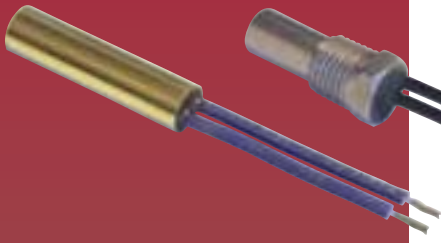


# Immersion Thermostats



## FEATURES

- Factory pre-set fixed temperature
- Normally open or normally closed contact configurations
- Current rating: to 15 Amp @ 120 Vac, 10 Amp @ 250 Vac
- Available temperatures from 0°C to 177°C
- Controlling or limit functionality
- Brass or stainless steel construction
- Pressure ratings up to 7000 psi

## APPLICATIONS

- Food service equipment
- Mold platens
- Electric heaters
- Refrigerators and freezers
- Test pots & temperature control chamber
- Livestock warmers
- Agricultural equipment
- Environmental controls
- Vending machines
- Electric & gas ovens
- Automotive
- Hydraulics

## Immersion Thermostats

Immersion thermostats are thermally sensitive bi-metallic switches housed in a rugged brass or stainless steel case. The switches are manufactured to either make or break an electrical circuit at a factory pre-set temperature and they reset automatically on cooling. Some devices are ideally suited as regulating thermostats, which cycle open and closed more rapidly to maintain a temperature level. Other devices can be used as over-temperature protectors to limit a temperature from exceeding a predetermined value. Thermtrol offers complete design flexibility for custom immersion thermostats by drawing from an extensive inventory of standard components and building the thermostat that is correct for your application. Please contact Thermtrol's sales team for more information.

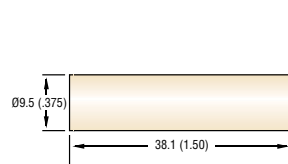
## Regulating Thermostats

**Available Temperature Range: 10°C to 177°C**  
**Standard Set Temperature Tolerance: ± 6°C**  
**Standard Differential: No built-in differential**

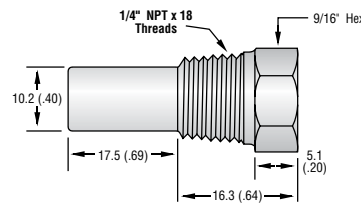
Regulating Thermostats		
Switch Type Code	Contact Capacity	Contact Life
TCC (Normally Closed)	6.0Amps@120Vac	100,000 Cycles
	8.0Amps@12Vdc	5,000 Cycles
	4.0Amps@24Vdc	5,000 Cycles
TCCR (Normally Open)	6.0Amps@120Vac	100,000 Cycles

Gold contact devices available for micro current applications. Contact Thermtrol for more information.

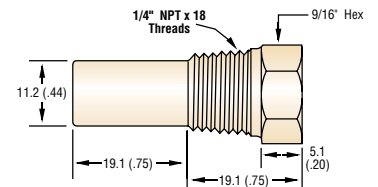
### Regulating Thermostats Housing Styles (Custom Designs Available)



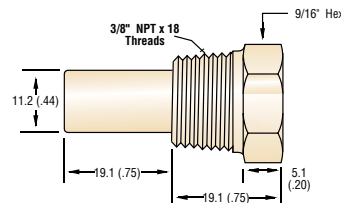
**Style 20** 500 p.s.i.



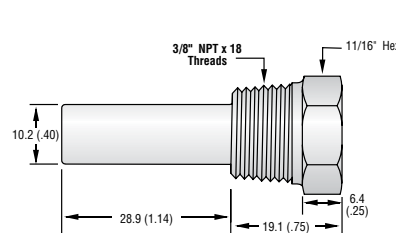
**Style 112S**



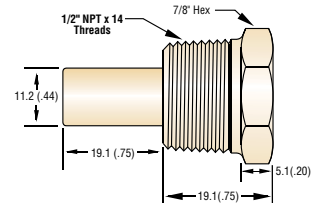
**Style 117**



**Style 123** 1000 p.s.i.



**Style 124S** 2500 p.s.i.



**Style 132** 1000 p.s.i.

## Overtemperature Thermostats

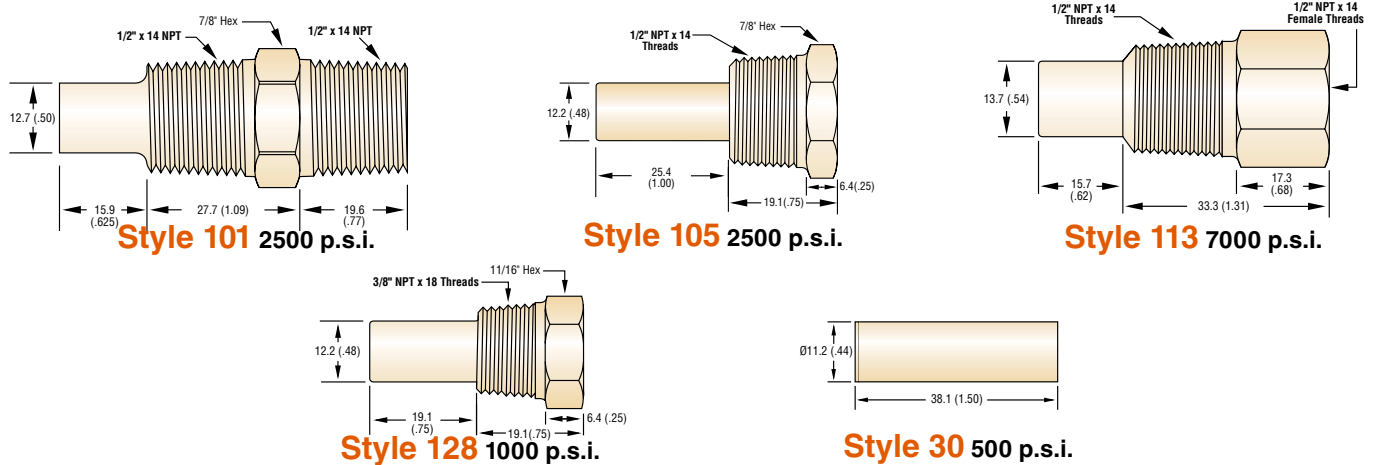
### Standard

Available Temperature Range: 60°C to 170°C  
 Standard Set Temperature Tolerance: ± 10°C  
 Standard Differential: 25°C ± 15°C

#### Standard Thermostats

Switch Type Code	Contact Capacity	Contact Life
TC (Normally Closed)	6.3Amps@ 120Vac/250Vac	6,000 Cycles
TCR (Normally Open)	3.0Amps@ 120Vac/250Vac	6,000 Cycles

#### Standard Housing Styles (Custom Designs Available)



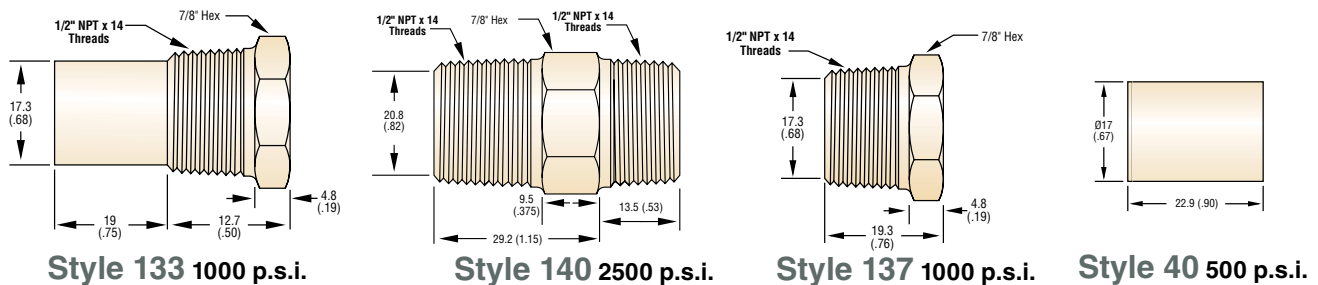
### High Contact Capacity

Available Temperature Range: 5°C to 177°C  
 Standard Set Temperature Tolerance: ± 6°C  
 Standard Differential: 11°C ± 6°C

#### High Contact Capacity Thermostats

Switch Type Code	Contact Capacity	Contact Life
TCD (Normally Closed)	15.0Amps@ 120Vac, 10.0Amps@ 240Vac, 7.2Amps@ 277Vac	100,000 Cycles
	25.0Amps@ 12Vdc, 11.0Amps@ 24Vdc	50,000 Cycles
TCDR (Normally Open)	15.0Amps@ 120Vac, 10.0Amps@ 240Vac, 7.2Amps@ 277Vac	100,000 Cycles
	25.0Amps@ 12Vdc, 11.0Amps@ 24Vdc	50,000 Cycles

#### High Contact Capacity Thermostats (Custom Designs Available)



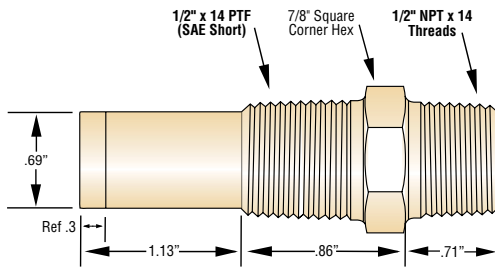
# Immersion Thermostats

## High Temperature High Contact Capacity

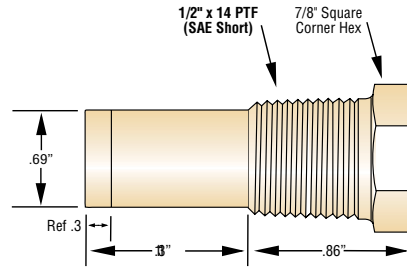
Available Temperature Range: 180°C - 240°C  
 Standard Set Temperature Tolerance: ± 10°C  
 Standard Differential: 25°C ± 10°C

Switch Type Code	Contact Capacity	Contact Life
TCDH (Normally Closed)	15 Amps@120Vac, 10 Amps @ 240Vac	100,000 Cycles
TCDHR (Normally Open)		

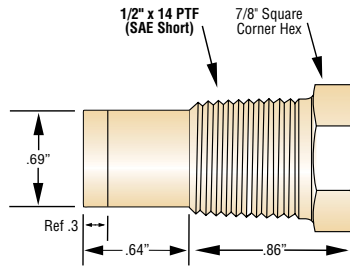
### High Temperature High Contact Capacity Housing Styles



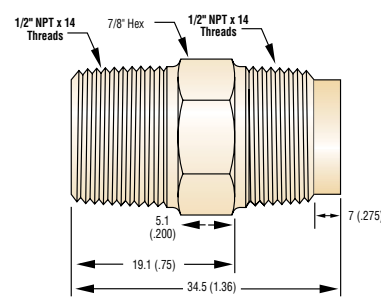
**Style 800** 1000 p.s.i.



**Style 801** 1000 p.s.i.



**Style 802** 1000 p.s.i.



**Style P141**

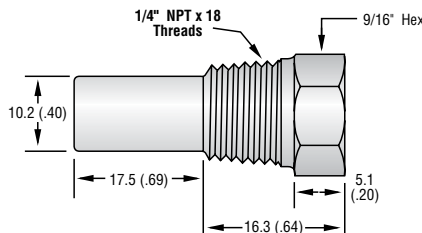
## Miniature Thermostats

Available Temperature Range: 45°C - 150°C  
 Standard Set Temperature Tolerance: ± 10°C  
 Standard Differential: 30°C. Lower temperatures have smaller differential. Consult factory for details.

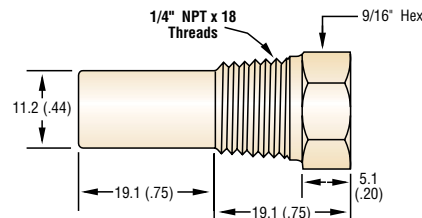
### Miniature Thermostats

Switch Type Code	Contact Capacity	Contact Life
TCM (Normally Closed)	10 Amps@125Vac, 7 Amps @ 250Vac	10,000 cycles
	6 Amps @ 24Vdc	10,000 cycles

### Miniature Thermostat Housing Styles

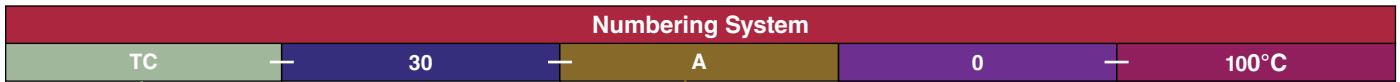


**Style 112S** 2500 p.s.i.



**Style 117** 1000 p.s.i.

## Numbering System



Regulating Thermostats	
Switch Code Type	
<b>TCC</b>	Normally Closed, Open on Rise
<b>TCCR</b>	Normally Open, Close on Rise
TCC/TCCR Housing Style Code	
<b>20</b>	Brass, Cartridge
<b>117</b>	Brass, 1/4" NPT
<b>112S</b>	Stainless #303, 1/4" NPT
<b>123</b>	Brass, 3/8" NPT
<b>124S</b>	Stainless #303, 3/8" NPT
<b>132</b>	Brass, 1/2" NPT

Standard Overtemperature Thermostats	
Switch Code Type	
<b>TC</b>	Normally Closed, Open on Rise
<b>TCR</b>	Normally Open, Close on Rise
TC/TCR Housing Style Code	
<b>30</b>	Brass, Cartridge
<b>128</b>	Brass, 3/8" NPT
<b>105</b>	Brass, 1/2" NPT
<b>101</b>	Brass, Dual 1/2" NPT
<b>113</b>	Brass, Dual 1/2" NPT

Overtemperature Thermostats / High Contact Capacity	
Switch Code Type	
<b>TCD</b>	Normally Closed, Open on Rise
<b>TCDR</b>	Normally Open, Close on Rise
TCD/TCDR Housing Style Code	
<b>40</b>	Brass, Cartridge
<b>43</b>	Brass, #10-32 Stud
<b>135</b>	Brass, 1/2" NPT (No extension)
<b>133</b>	Brass, 1/2" NPT
<b>140</b>	Brass, Dual 1/2" NPT

High Temperature High Contact Capacity	
Switch Code Type	
<b>TCDH</b>	Normally Closed, Open on Rise
<b>TCDHR</b>	Normally Open, Close on Rise
TCDH/TCDHR Housing Style Code	
<b>800</b>	Brass, Dual 1/2" PFT/NPT
<b>801</b>	Brass, Dual 1/2" PFT/NPT
<b>802</b>	Brass, 1/2" PTF Short
<b>141</b>	Brass, Dual NPT

Miniature Thermostats	
Switch Code Type	
<b>TCM</b>	Normally Closed, Open on Rise
TCM Housing Style Code	
<b>117</b>	Brass, 1/4" NPT
<b>112S</b>	Stainless #303 1/4" NPT

Collar Code	
<b>1</b>	Mylar Collar (for temp. settings below 135°C)
<b>2</b>	Nomex Collar (for temp. settings above 135°C)
<b>0</b>	No Collar

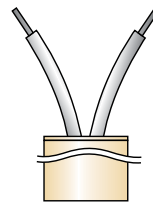
A collar is used as a component of the termination on all units except Stud Mount, Cartridge, and Style 113.

Set Temp. (°C)	
Select from the range of 5°C to 230°C in 5°C increments	

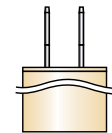
See pages 26, 27 and 28 for temperature availability by product.

Termination Options	
<b>A</b>	Dual Lead Wires
<b>B</b>	Dual 1/4" Male QC Terminals
<b>C</b>	Single Lead Wires (live housing)
<b>D</b>	Single 1/4" Male QC Terminals (live housing)
<b>G</b>	Dual 45° Screw Terminals
<b>H</b>	Single 45° Screw Terminals (live housing)
<b>J</b>	Dual 1/4" QC Terminals with Ground Lead
<b>K</b>	Dual #18 Gauge Leads with Ground Lead

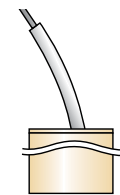
Note: Termination Code A is the only option available for the Cartridge and Stud Mount Housings. All A, C, J, & K termination code thermostat samples will be produced with 6" long, #18 gauge, XLPE 125°C (UL3173) leads.



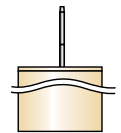
Option A



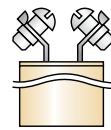
Option B



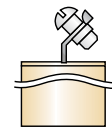
Option C



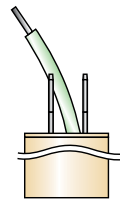
Option D



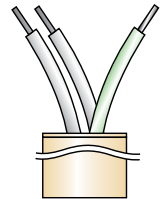
Option G



Option H



Option J



Option K

Note: With the exception of the Cartridge and Stud Mount Housings, all Housing Styles are available Nickel Plated. A suffix of "N" is added to the Housing Style Code to designate this. For example, 128N designates a Nickel Plated Style 128 Housing.