Temperature Switch

Series THR, THL

Features

- High accuracy
- Line or ambient sensing
- NEMA 4X
- UL, CSA and CE approved

Applications

- Heat tracing
- Process equipment
- Machine tools and industrial equipment
- Compressors
- Hydraulic power units
- HVAC systems
- Medical equipment

General Specifications*

Accuracy:	±1% of full scale
Switch: Type: Rating:	 SPDT, prewired snap action 22 amp @ 125/250/480 VAC
Electrical Characteristics:	All models incorporate Underwriters' Laboratories, Inc. and CSA listed single pole double throw snap-action switching elements. Switches may be wired normally open or normally closed.
Electrical Connection:	3/4" NPT female conduit connection. 3 pole terminal block accepts 14-10 AWG wire.
Electrical Ratings:	22 amps @ 125/250/480 VAC
Enclosure Rating:	NEMA 4X
Enclosure/Housing:	Anodized die cast aluminum Green polyurethane coated Other exposed parts: stainless steel
Bulb and Capillary: Material: Bulb: Capillary Length: System Pressure (max): Fill:	 316L stainless steel 7-3/4" (197mm), 5/16" (8mm) dia. 10' (3m), remote mount 300 psi without thermowell Silicone oil-filled

* See Product Configurator for additional options.
** Must specify; close on rising or falling temperature

Approvals:	UL listed, file 56247 CSA certified, file LR 34555 EMI/RFI: to EN 55011
Temperature Range:	15°F - 325°F (-9°C - 163°C)
Ambient Temperature:	See table below (media temperature limit)
Adjustment:	External adjustment knob. Turn clockwise to decrease setpoint
Vibration:	10 g's 10 - 500 Hz, MIL-STD 202F
Shock:	50 g's, 10 mS, MIL-STD 901C
Standard Options: R**(Option): R2 (Option):	 DPST relay switch 22 amp @120/240/277 VAC Relay coil: 120 VAC, 4VA 120/240/277 VAC Relay coil: 240 VAC, 4VA
Weight:	1.9 lbs. (0.9 kg)

Media Temperature Limits	Adjustabl Range	Differential (approximate)	Sensing Location	Catalog Number	Factory Set Point
-40° to 420°F (-40° to 215°C)	25° to 325°F (-4° to 163°C)	10°F (5.6°C)	Line Sensing T-stat	THR-L2S-10X-Q10	125°F ± 5° decreasing
-40° to 160°F (-40° to 71°C)	15° to 140°F (-9° to 60°C)	10°F (5.6°C)	Ambient Sensing T-stat	THL-L1S-X-Q10	40°F ± 4° decreasing

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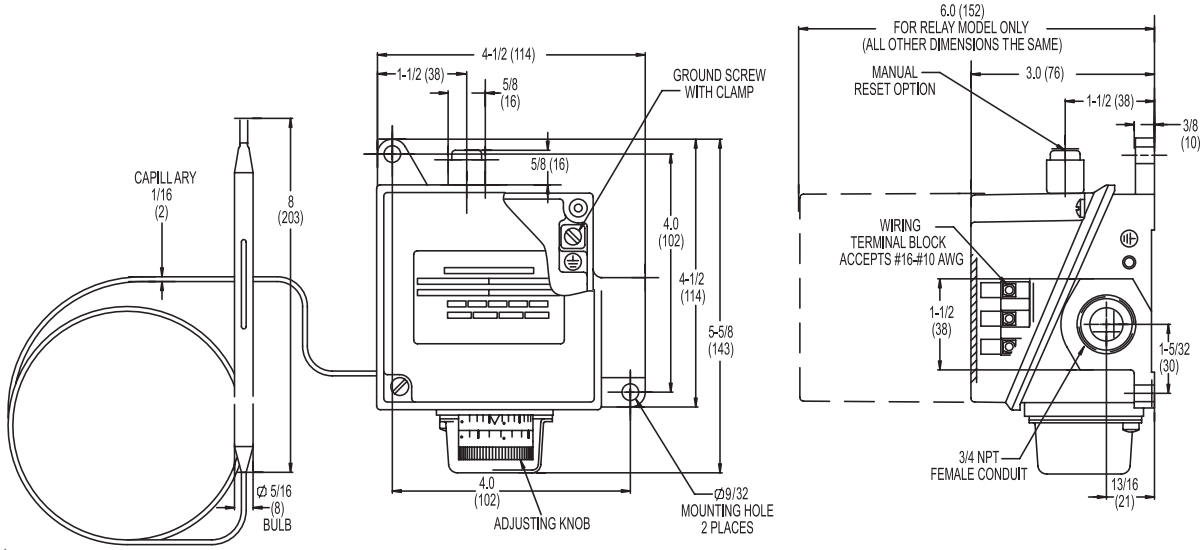
Technical information: Barksdale. Contact Mod-Tronic for selection and availability.

Technical Drawing



Dimensions in inches (mm)

Product Configurator

Example	TH	R	-L	2	S	-10X	-Q10

Base Configurator

TH	Aluminum NEMA 4X enclosure

-Q10

Heat tracing model (standard)

L[1]	Local mount for ambient sensing
R[2]	Remote bulb & capillary

Bulb & Capillary Length; Switch

-X	For THL models (with NEMA 4X enclosure)
-10X	10 ft bulb & capillary for THR models
-10R2X	22A DPST relay[3], 10 ft bulb & capillary for THR models

Limit Switch

-L	22 amp @ 125/250/480 VAC

Temperature Range

Range	Adjustable Range				Media Temperature Limit (Proof)				Differential (Approx.) Liquid	
	°F		°C		°F		°C		°F	°C
	Low	High	Low	High	Low	High	Low	High		
1	+15°	+140°	-9°	+60°	-40°	+160°	-40°	+71°	10°	5.6°
2	+25°	+325°	-4°	+163°	-40°	+420°	-40°	+215°	10°	5.6°

Wetted Material

S	Stainless steel sensor

[1] Use Temperature Range "1" for local sensing applications
[2] Use Temperature Range "2" for remote sensing applications
[3] DPST switch, 22 amps @ 120/240/277 VAC. Relay Coil: 240 Vac, 4 VA. Contacts close on falling temperature.