

Temperature

General Purpose Switch

Series **TPR**

Features

- ▶ High accuracy
- ▶ NEMA 4X & IP 65
- ▶ UL, CSA and CE approved
- ▶ Low cost

Applications

- ▶ Heat trace
- ▶ Water equipment
- ▶ Process equipment
- ▶ Machine tools and industrial equipment
- ▶ Freeze protection



General Specifications*

Accuracy:	±4°F
Switch: Type:	Single pole double throw (SPDT), prewired snap action
Rating:	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.
Wetted Parts:	Tin plated copper sensor & capillary
Electrical Connection:	1-1/8" (28mm) hole for 3/4" NPT conduit hub 12", 14 AWG stranded copper wire
Enclosure Rating:	NEMA 4X
Enclosure/Housing:	Polycarbonate (black)

* See Product Configurator for additional options.

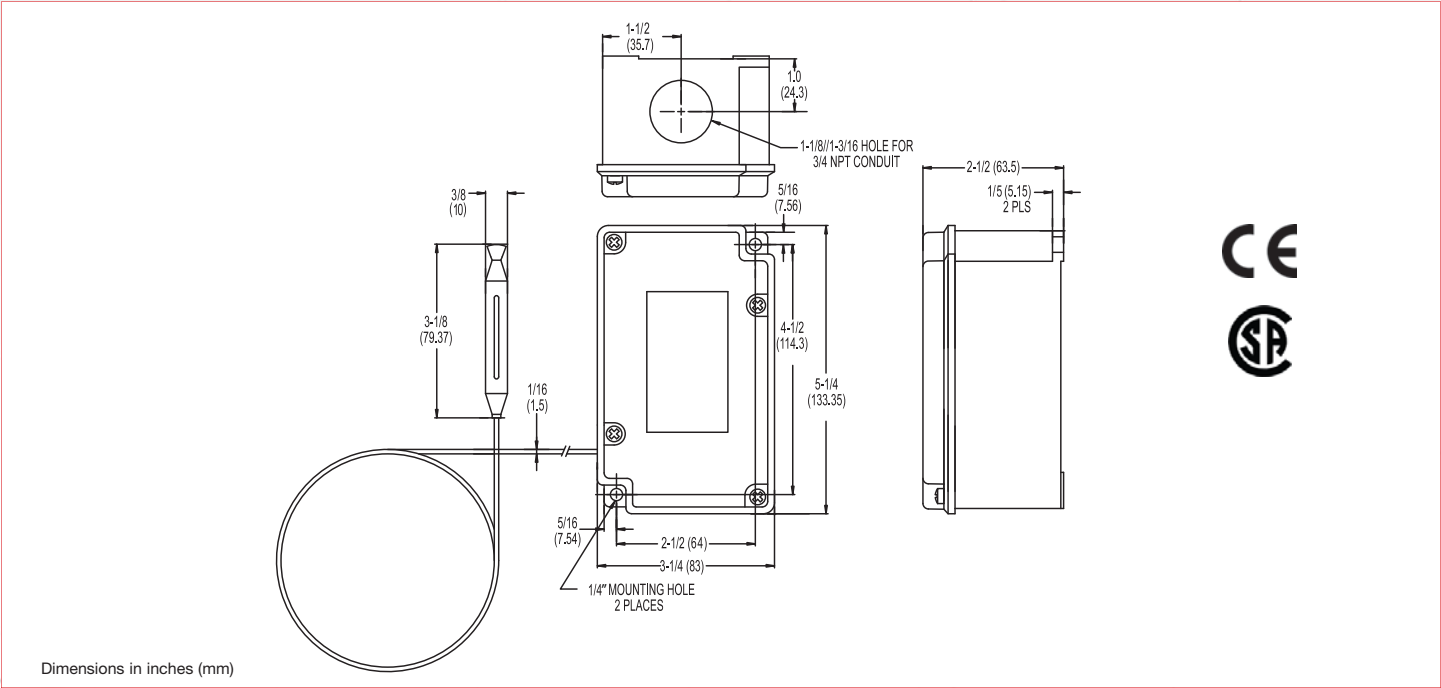
Bulb and Capillary: Bulb:	3-1/8" (79mm), 1/16" (10mm) dia.
Capillary Length:	30" (762mm) or 120" (3048mm)
System Pressure (max):	300 psi without thermowell
Fill:	Silicone oil-filled
Approvals:	UL listed, file E56247 CSA certified, file LR 58658 EN/RFI: to EN 5011
Temperature Range:	-40° to 160°F (-40° to 71°C) Fixed setpoint factory set at 40°F Contact closes on decreasing temperature
Ambient Temperature:	-30° to 140°F (-34° to 60°C)
Vibration:	10 g's 10-500 Hz, MIL-STD 202F
Shock:	50 g's, 10 mS, MIL-STD 901C
Weight:	1.1 lbs. (0.5 kg)

Wiring Code

Lead	Circuit
Normally Closed	Blue
Common	Purple
Normally Open	Red

Media Temperature Limits	Factory Preset	Differential (approximate)	Catalog Number
-40 to 160°F (-40 to 71°C)	40°F (4.4°C)	10°F (5.6°C)	TPR-L1N-3X-Q10

Technical Drawing



Product Configurator

Example

T

P

R

-L

1

N

-3X

-Q10

Basic Configurator

T

Temperature switch

Basic Configurator

P

Polycarbonate plastic
NEMA 4X enclosure

Basic Configurator

R

Remote bulb &
capillary

Limit Switch

-L

22 amp @ 125/250/480 VAC; standard

Temperature Range

Range	Fixed Set-point (Decreasing)		Media Temperature Limit (Proof)				Differential (Approx.) Liquid	
	°F	°C	Low	High	Low	High	°F	°C
1	40°	4.4°	-40°	+160°	-40°	+71°	10°	5.6°

Bulb & Capillary Length

-3X

3 foot bulb & capillary sensor

-10X

10 foot bulb & capillary sensor

Wetted Material

N

Tin plated copper
sensor

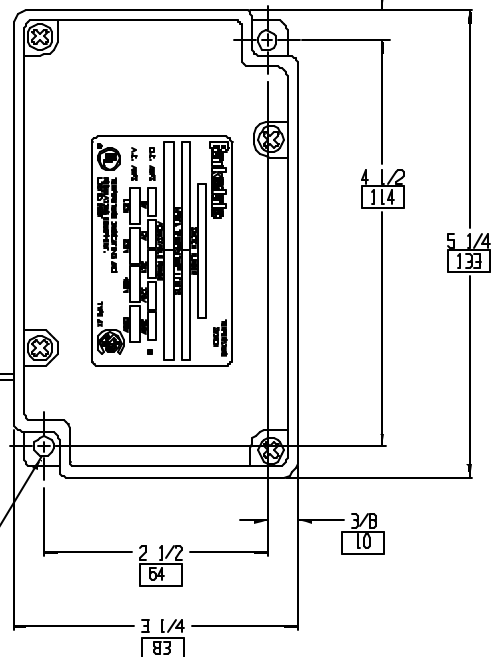
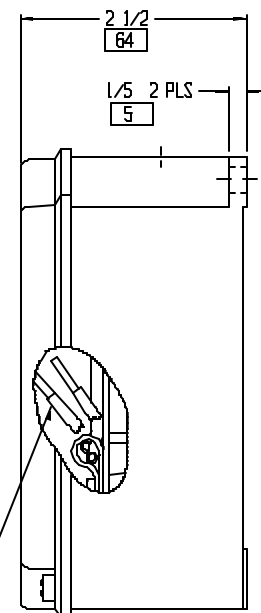
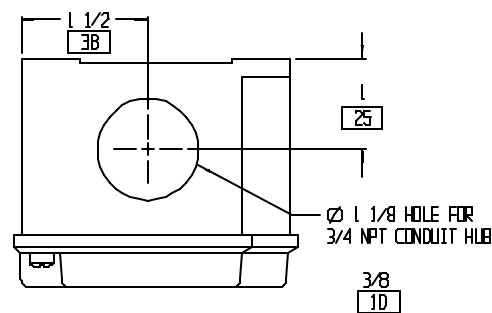
-Q10

Heat tracing model

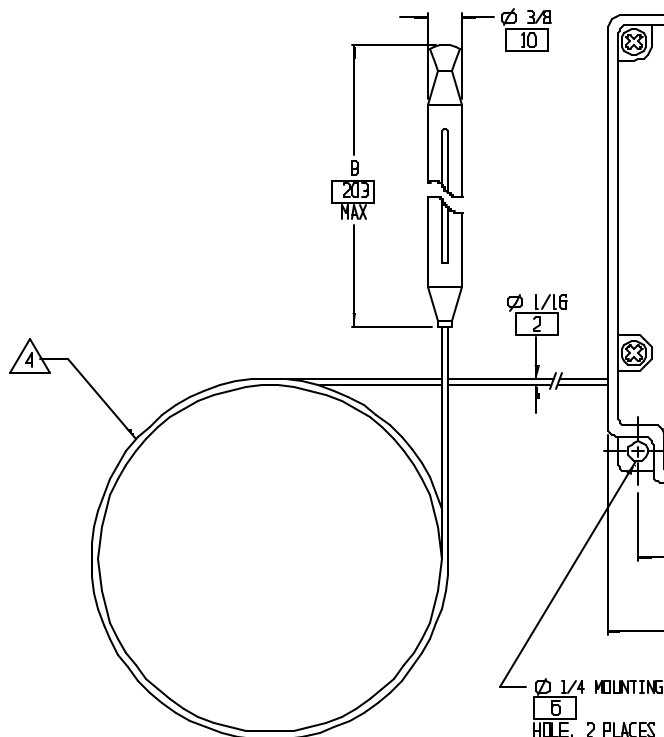
SWITCH NUMBER	CAPILLARY LENGTH	FIXED FACTORY SET POINT	BULB SENSOR EXPOSURE LIMIT (PROOF)	
			F°	C°
TPR-LIN-3X-Q10	30 INCHES	40 ±4°F DECREASING	-40 TO 160	-40 TO 71
TPR-LIN-10X-Q10	120 INCHES			

NAMEPLATE DATA

SWITCH NUMBER	MEDIA TEMPERATURE LIMITS		ADJUSTABLE RANGE		ELECTRICAL		
	F°	C°	F°	C°	AC AMPS		
TPR-LIN-3X-Q10	-40 TO +160°F	-40 TO +71°C	SET AT 40°F DECREASING	SET AT 4.4°C DECREASING	125V	250V	480V
TPR-LIN-10X-Q10					22	22	22



ELECTRICAL RATING (AMPS)			
LIMIT SWITCH CLASS			
	L		
AC 75% PF	125V	22	
	250V	22	
	480V	22	



TWO AWG #14 STRANDED WIRE
12 INCHES LONG
COMMON - PURPLE
NC - BLUE

- SWITCH IS NOT FIELD REPAIRABLE.
- UL LISTED. FILE E58247, CSA CERTIFIED, FILE LR 58658.
- BULB SENSOR AND CAPILLARY MATERIAL: TIN PLATED OVER COPPER.
- DIFFERENTIAL: BASED ON LABORATORY CONDITION OF 70°F AMBIENT CIRCULATING BATH AT APPROXIMATE RATE OF 2°F PER MINUTE CHANGE AND VARIES ACCORDING TO HEATING AND COOLING TEMPERATURE CHANGE RATES OF BULB. (FOR REFERENCE ONLY)
- SWITCH IS FACTORY SET TO CLOSE CONTACTS AT 40 ±4°F ON DECREASING TEMPERATURE (WIRED NORMALLY OPEN). NO FIELD SET POINT ADJUSTABILITY.
- ENCLOSURE: NEMA 4X POLYCARBONATE PLASTIC, COLOR: BLACK. TEMPERATURE EXPOSURE LIMITS: -30 TO 140°F (-34 TO 60°C).

NOTES:

DESIGNED MB DATE 9-27-05	DATE 9-30-05	TEMPERATURE SWITCH FOR ORDINARY AREAS	NEXT ASSEMBLY 981019	00004458 D 3-21-05 00003495 C 3-17-04 0010828 B 9-10-98
APPROVED YK DATE 10-10-06	UNLESS OTHERWISE SPECIFIED	HEAT TRACING LINE FACTORY SET, PLASTIC ENCLOSURE	REFERENCED BY OPN 4204.005	0008541 A 3-19-97 0007858 R 8-27-96
Barksdale Barksdale, Inc. Los Angeles, CA		NEXT SCALE FULL	REV. C	TP-Q10

REV. ☐ TP-Q10