T1X, T2X, L1X Temperature Switches

Explosion Proof Local Mount & Remote Bulb & Capillary Temperature Switches

Series T1X, T2X, L1X

- Explosion-Proof
- High Accuracy
- Remote, Local or Ambient Sensing
- UL, CSA & ATEX Approved
- NEMA 4, 7, 9 & IP65

Barksdale's L1X, T1X & T2X Series Temperature Switches provide unmatched performance, quality & reliability in a mechanical thermostat – a safe solution for hazardous locations. The single set point L1X & T1X and dual set point T2X, can switch, measure & control temperatures from 50° to 600°F (-45° to 316°C), and meets Class 1, Div. 1 & 2 hazardous location requirements. The optional adjustable differential provides precise control. These switches can be mounted locally for control directly at the source or remotely up to 25 feet. The L1X, T1X & T2X Series are electrically rated for 10 amps @ 125/250 VAC & 3 amps @ 480 VAC. Standard 3 & 6 pin terminal strips simplify installation. The L1X, T1X & T2X Series are rated NEMA 4, 7 & 9 and incorporate stainless steel temperature sensors to handle a wide range of media. Optional thermowells allow the sensor to work in pressurized vessels to 5000 psi. The L1X, T1X & T2X Series are UL listed, CSA approved, and ATEX Certified (ATEX optional) for hazardous zones within the European Community.

T1X, T2X, L1X Temperature Switches

When Temperature Matters, Call Barksdale

For many years, Barksdale temperature switches have been switching, measuring and controlling critical processes throughout the world.

Protect Your Equipment with Barksdale

Barksdale temperature switches prevent damage to heavy industrial equipment by monitoring the temperature of engine fluids and protecting against thermal overloads. Hydraulic power units are protected by controlling the temperature of fluids in systems in reservoirs.

In cold climates, Barksdale temperature switches control heating devices that prevent pipes, valves and fittings from freezing preventing expensive loss and downtime. Barksdale thermostats also control the temperature in process piping to maintain the proper flow of media.

Barksdale temperature switches can be used in a variety of applications:

- Hydraulic Power Units
- Combustion Engines
- Tanks and Reservoirs
- Gearboxes
- Pumps
- Compressors
- Machine Tools and Industrial Equipment
- Farm & Construction Machinery
- Process Equipment

Need Something Special?

If you have special product requirements, we can help. Barksdale specializes in custom design solutions to meet your needs. We have design engineers and technical specialists who are experts in solving your unique temperature problems. Our technology and resources are at your disposal.

Need More Information?

We are only a phone call away.
Toll-Free: 1-800-835-1060.

T1X, T2X, L1X Temperature Switches

General Description

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 Ratings
AC value at 75% Power Factor —10 amps 125, 250 volts AC, 3 amps 480 volts AC. Automatically reset by snap-action of switch.

Performance Characteristics

Accuracy
+/- 1% of mid - 60% of full range. At constant ambient +/- 0.5% of full scale.

Switch
Single Setting: One (1) SPDT Circuit.
Dual Setting: 2 Independent SPDT Circuits.

Adjustment
Tamper Resistant External Adjustment

Local Mount
Immersion Length 2-1/16 inches

Bulb & Capillary
6 and 12 foot length standard. See Operating Characteristics and Ordering Data Chart

Physical

Weight
Single - Approximate 3.0 lbs.
Dual - Approximate 7.0 lbs.

Enclosure/Housing
Designed for Hazardous Locations: Class I, Division 1 & 2
NEMA 4, 7, 9 & IP65 Tamperproof External Adjustment, Enclosed Terminal Strip.

Elect. Connection
Single: 3-Pin Terminal Strip
Dual: 6-Pin Terminal Strip

Wetted Materials
304 Stainless Steel

Approvals/Listings

Underwriters' Laboratories, Inc. and Canadian Standard Assoc.are listed under Temperature indicating and regulating equipment, for use in hazardous locations, Class I, groups B, C and D; Class II, groups E, F and G

UL (standard)
File No. E58658, Guide No. XBDV

CSA (standard)
File No. LR34556,
Guide 400-E-O.8. Class 4868.

ATEX (optional)
EX models are ATEX certified per ISSeP 03 ATEX 121 & maked as follows:
CE 0081 II2 GD EEx d IIC T6 T85° C

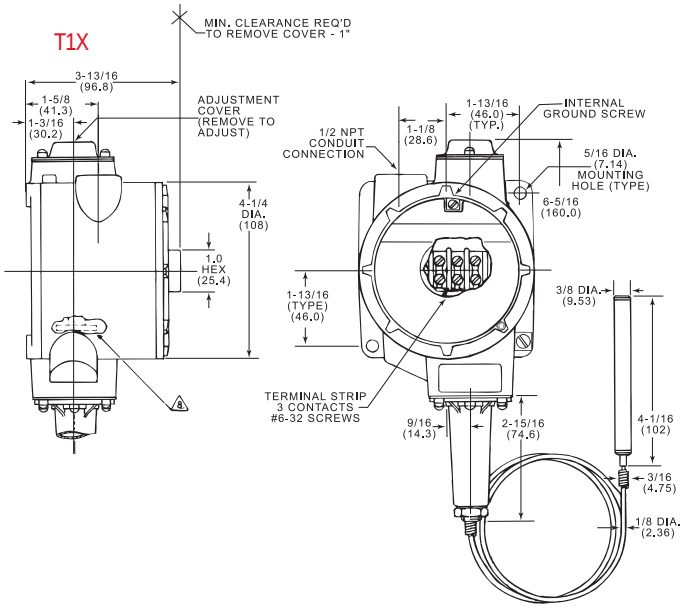
Environmental

Temperature Range
See Operating Characteristics and Ordering Data Chart

Wiring Code

Lead	Circuit 1	Circuit 2
Normally Closed	Blue	Orange
Common	Purple	Brown
Normally Open	Red	Yellow

T1X



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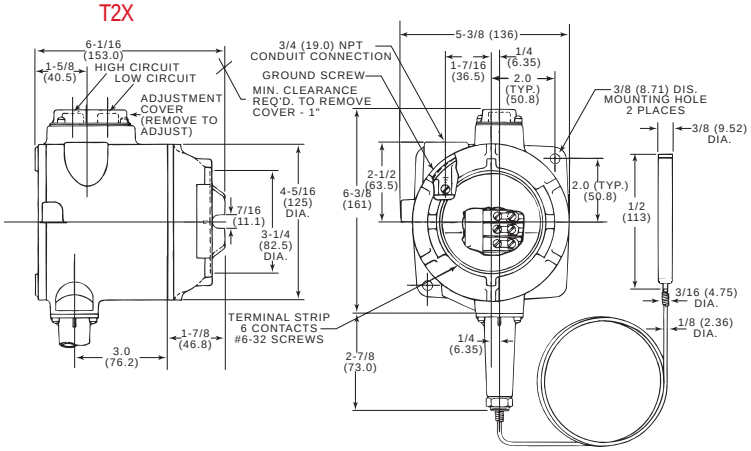
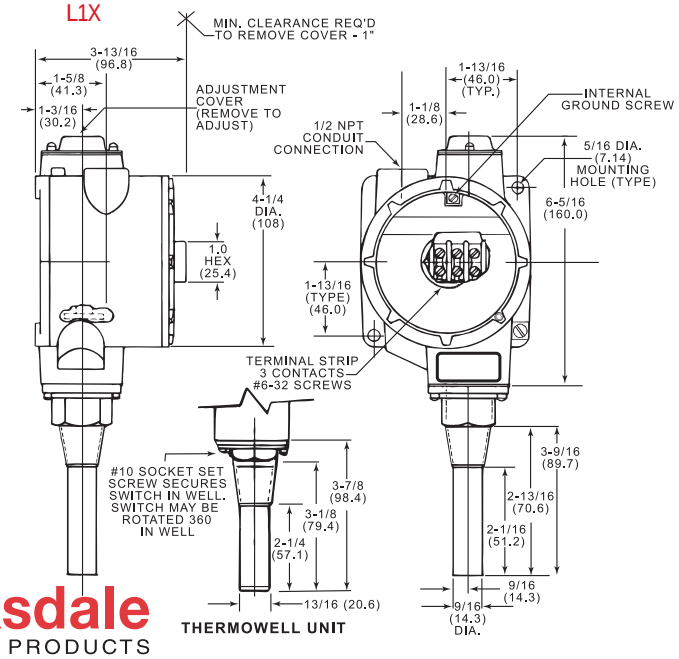


L1X



Barksdale CONTROL PRODUCTS

T1X, T2X, L1X Temperature Switches

Explosion Proof Temperature Switches Configurator

Series T1X, T2X, L1X

Enclosure & Sensor	H	Hermetically Sealed Limit Switch Class 1 Div. 2, Hazardous Location
	T	Remote Bulb & Capillary
	L	Local Mount
Switching	1	Single switch SPDT
	2	Dual switch 2 independent SPDT
	X	Nema 4, 7, 9 & IP65 Explosion Proof Enclosure
Limit Switch Class	-H	10 amps @ 125, 250 VAC, 3 amps @ 480 VAC (Standard)
	-B	10 amps @ 125, 250, 480 VAC, 2 amps @ 600 VAC
	-GH	1.0 amps @ 125 VAC, Gold Contact limit switch
	-G	10 amps @ 125, 250, 480 VAC, 2 amps @ 600 VAC, Manual Reset (See Note below)
	-L	15 amps @ 125, 250 & 480 VAC
	-M	10 amps @ 125, 250 VAC, 3 amps @ 480 VAC., 0.5 amps @ 125 VDC & 0.25 amps @ 250 VD
	-S	10 amps @ 125, 250 & 480 VAC, Adjustable Differential
	-AA	4 amps @ 125, 250 VAC, Hermetically Sealed
	-HH	5 amps @ 125, 250 VAC, Hermetically Sealed
	-CC	10 amps @ 125, 250 VAC, Hermetically Sealed
	-GH	1 amps @ 125, 250 VAC, Gold Contact Hermetically Sealed
Sensor Range	251	Range See Chart
Sensor Material	S	304 Stainless Steel Sensor
Bulb & Capillary Length		Blank = 6 foot (Standard) and if Local Mount
	-12	12 foot
	-25	25 Foot Stainless Steel with Armor
Options		Blank if not required
	-A	302 Stainless Steel Armor
	-RD	Manual Reset (Must use when selecting "G" Limit Switch option)
Thermowell	-WS	316 Stainless Steel Local Mount Thermowell
	-EX	ATEX Certified only.
	-SXXXX	Factory Pre-set - Consult Factory

Example:		T	1	X	G	251	S	12	A	RD			
Example:		L	1	X	-H	203	S				-WS		

*** NOTE #1**: When selecting the manual reset option on dual setting switches (T2X), the manual reset limit switch will be on the high circuit. The low circuit limit switch must be specified by the customer.

NOTE #2: Changing limit switch will effect dead-band; See sales drawing.

T1X and T2X Operating Characteristics: Remote Bulb & Capillary

Range	Adjustable Range °F Low	°F High	°C Low	°C High	Media Temperature Limit (Proof) °F Low	°F High	°C Low	°C High	Differential (Approx.) Liquid °F	°C	Calibrated Dial Adjustment
154	-50°	+150°	-45	+66	-100°	+200°	-73°	+93°	1° to 2°	.5° to 1.1°	Calibrated
251	+50°	+250°	+10°	+121°	-100°	+300°	-73°	+149°	1° to 2°	.5° to 1.1°	5° Subdivision
351	+150°	+350°	+66°	+350°	-100°	+400°	-73°	+209°	1° to 2°	.5° to 1.1°	200° Span
601	+300°	+440°	+149°	+227°	0°	+650°	-18°	+343°	2° to 4°	1.1° to 2.2°	5° Subdivision 140° Span
603	+320°	+600°	+160°	+316°	0°	+650°	-18°	+343°	2° to 4°	1.1° to 2.2°	10° Subdivision 280° Span

L1X Operating Characteristics: Local Mount

Range	Adjustable Range °F Low	°F High	°C Low	°C High	Media Temperature Limit (Proof) °F Low	°F High	°C Low	°C High	Differential (Approx.) Liquid °F	°C	Calibrated Dial Adjustment
201	-50°	+75°	-45°	+24°	-100°	+250°	-73°	+121°	1° to 3°	.5° to 1.6°	Calibrated
202	+15°	+140°	+9°	+60°	-100°	+250°	-73°	+121°	1° to 3°	.5° to 1.6°	2° Subdivision
203	+75°	+200°	+24°	+93°	-100°	+250°	-73°	+121°	1° to 3°	.5° to 1.6°	125° Span
351	+100°	+225°	+38°	+107°	-100°	+400°	-73°	+205°	1° to 3°	.5° to 1.6°	
204	-50°	+200°	-45°	+93°	-100°	+250°	-73°	+121°	1° to 3°	1.6° to 3.3°	5° Subdivision
354	+100°	+350°	+38°	+177°	-100°	+400°	-73°	+205°	1° to 3°	1.6° to 3.3°	250° Span
454	+150°	+450°	+66°	+232°	0°	+500°	-18°	+343°	3° to 6°	1.6° to 3.3°	10° Subdivision 300° Span

NOTE: changing limit switch will effect dead band; See sales drawing

Barksdale
CONTROL PRODUCTS
3211 Fruitland Avenue • Los Angeles, CA 90058 • ☎ 800-835-1060 • Fax: 323-589-3463 • www.barksdale.com