Mechanical Temperature Switch
T1X/T2X

with capillary for hazardous areas

Features

- Single switch T1X and dual switch T2X with remote sensor and explosion proof housing
- Terminal clip integrated, set point adjustment in °C and °F under tamper protected cover
- Protection class: IP65, NEMA 4 / 7 / 9
- Optional:
  - for T1X: adjustable hysteresis (switch-back difference), S-micro switch
  - Special version for trace heating systems with ratings up to 32 A / 220 V (22/32A / 380 V AC) on request
- Approvals: Ex d, Ex ia, UL, CSA (on request)
- Suitable for SIL2/3 (IEC 61508) acceptance

Adjustment ranges

- -45 °C...+66 °C to +160 °C...+316 °C

Applications

Temperature monitoring and control in

- Chemical industry
- Oil industry
- Offshore

Technical Data

Housing material	Die-cast aluminium, painted
Temperature sensor material	304 stainless steel (1.4301)
Temperature sensor type	Capillary, 1.8 m long (6 foot) (optional 3.6 m and 7.5 m) (12 and 25 foot), armoured. If not equipped with thermowell the sensor may only be used up to 21 bar max.
Operation pressure without thermowell with thermowell	max. 21 bar (max. 300 psi) see accessories datasheet
Operation temperature Housing	-40°C...+75°C (-40°F...167°F) except temp. code 601, 603: -18°C...+75°C (0°F...167°F)
Sensor	see table "Adjustment range" (Sensor temperature limits)
Electrical values	All models are equipped with SPDT contacts
Micro switch type	H, M, GH, GM, S

Electrical connection	From the terminal block through a 1/2" NPT conduit connection (T1X/T1X-Ex) resp. a 3/4" NPT conduit connection (T2X/T2X-EX) outside.
Protection class	IP65, NEMA 4 / 7 / 9
Set point adjustment	Turn adjustment knob clockwise to increase the actuation point
Intrinsically safety	The switches are also suitable for intrinsically safe applications. In this case we recommend gold contacts. Add "Exi" in case of ordering. Maximum rating according to ATEX: Umax = 28 V Imax = 50 mA
Approvals	Ex d, Ex ia, UL, CSA (on request)
Weight	T1X: approx. 2.1 kg; T2X: approx. 2.9 kg

Adjustment ranges

Code adjustment range	Sensor temperature limits (C°)	Adjustment range (°C) [1]	Hysteresis (°C) * for micro switch		
			H, GH	M, GM	S
154	-73 ... +93	-45 ... +66	0.5 ... 1.1	1.1 ... 2.2	2.2 ... 8.3
251	-73 ... +149	+10 ... +121	0.5 ... 1.1	1.1 ... 2.2	2.2 ... 8.3
351	-73 ... +205	+66 ... +177	0.5 ... 1.1	1.1 ... 2.2	2.2 ... 8.3
601	-18 ... +343	+149 ... +227	1.1 ... 2.2	2.2 ... 3.3	1.6 ... 2.7
603	-18 ... +343	+160 ...+316	1.1 ... 2.2	2.2 ... 3.3	1.6 ... 2.7

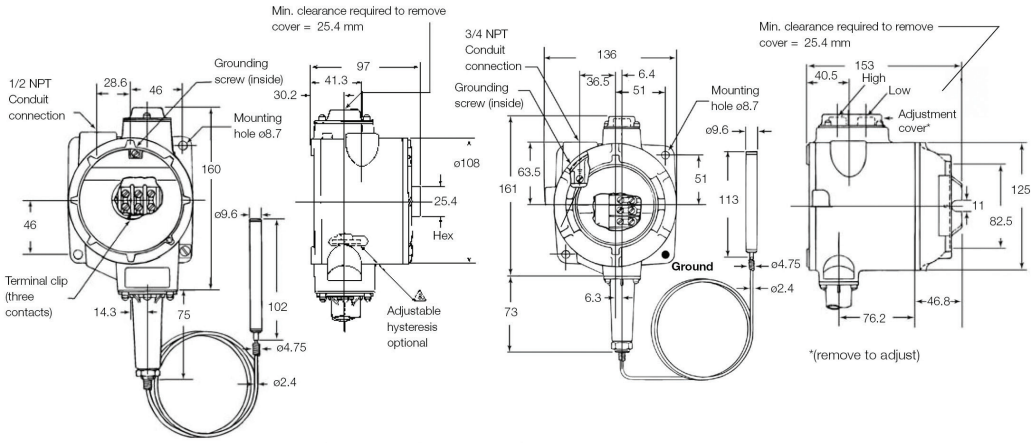
* Dependent on medium
[1] Factory presetting available from -15°C to +175°C

Barksdale® CONTROL PRODUCTS

Mechanical Temperature Switch
T1X/T2X

Dimensions (mm / inch)

T1X **T2X**



Contacts: color code and function

	bottom contacts	*top contacts*
C = Common	= purple	C = brown
NC = Normally Closed	= blue	NC = orange
NO = Normally Open	= red	NO = yellow

Electrical Ratings

Micro switch	Special features	Volt AC 50/60 Hz	Ind. load A	Res. load A	Volt DC	Ind. load A	Res. load A	Comments
H	Silver contacts	125 250 480	10 10 3	10 10 3	6 to 28	0.5	0.5	Small hysteresis; High AC / low DC loads
M	Silver contacts	125 250 480	10 10 3	10 10 3	12 24 250	5.00 1.00 0.25	15.0 2.0 0.4	Medium hysteresis; High AC and DC loads
GH	Micro switch with gold contacts for low voltage and low current (e. g. "Exi")	125	1	1	24	1.00	1.00	Small hysteresis
GM		30	0.1	0.1	30	0.10	0.1	Medium hysteresis
S	Silver contacts	480	15	15	125	0.05	0.4	Adjustable hysteresis

Order Code

Base model**					
T_X					
T1X	Single switch				
T2X	Dual switch				
	Micro switch				
	-H	with silver contacts			
	-M	with silver contacts			
	-GH	with gold contacts			
	-GM	with gold contacts			
	-S	with silver contacts			
		Code Adjustments range			Adjustment range, (°C) - factory presseting available from -15°C to +175°C
		154			-45... +66
		251			+10... +121
		351			+66... +177
		601			+149... +227
		603			+160..+316
			Sensor length		
			S-A		1.8 m, armoured, VA
			S-12-A		3.6 m, armoured, VA
			S-25-A2		7.5 m, armoured, VA
				Options	
				-EX	Ex d protection
				-EXI	for intrinsically safe application, Ex ia
Example					
T2X	-GH	251	S-A	-EXI	

** Standard parts without UL approval