

Mechanical temperature switches

T1X/T2X

with capillary for hazardous areas

Features

- ▶ Single switch T1X and dual switch T2X with remote sensor
- ▶ 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, SIL2 (IEC 61508)

Adjustment ranges

-45 °C...+66 °C to +160 °C...+316 °C

Applications

Temperature monitoring and control
in chemical industry and 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 page "Accessories" table 1.4
Operation temperature: Housing: Sensor:	-40°C...+75°C (-40°F...167°F) except temp. code 601, 603: -18°C...+75°C (0°F...167°F) 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) resp. a 3/4" NPT conduit connection (T2X) outside.
Protection class:	IP65, NEMA 4 / 7 / 9
Set point adjustment:	Turn adjustment knob clockwise to increase the actuation point
Standards:	The equipment is in conformity with the following harmonised European standards: EN 60014 1977 + A1 to A4 and EN 500120 1977 + A1
Intrinsic safety:	The switches are also suitable for inherent safety applications. In this case we recommend gold contacts. Add "Exi" in case of ordering. Maximum rating according to ATEX: U _{max} = 28 V I _{max} = 50 mA
Approvals:	Ex d, Ex ia, UL, CSA
Weight:	T1X: approx. 2.1 kg; T2X: approx. 2.9 kg

Adjustment ranges

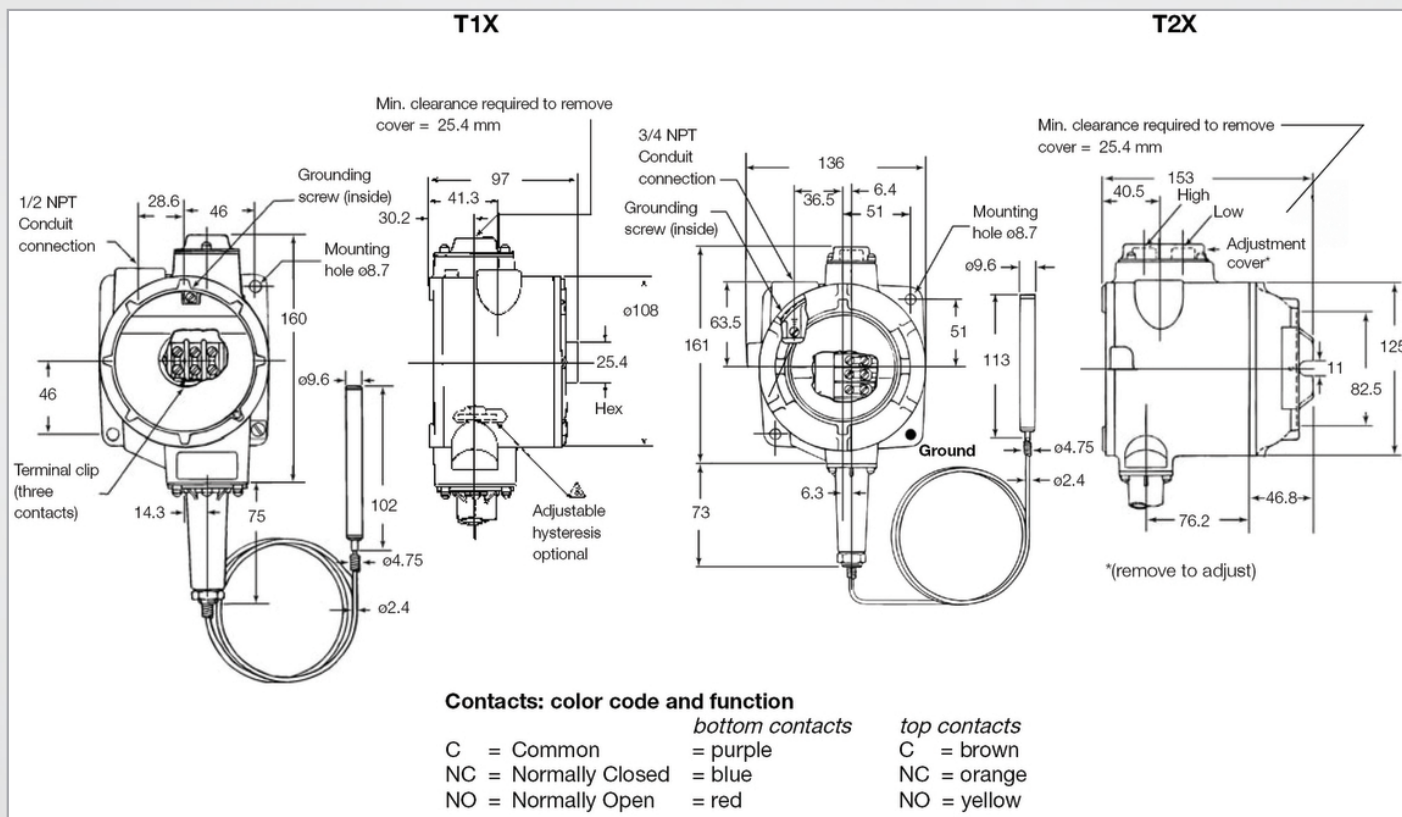
Code adjustment range	Sensor temperature limits (°C)	Adjustment range (°C)	Hysteresis (°C)* for micro switch		
			H, GH	M, GM	S
154	-73 ... +93	-45... +66	0.5... 1.1	1.1... 2.2	2.2... 8.3
251	-73 ... +149	+10... +121	0.5... 1.1	1.1... 2.2	2.2... 8.3
351	-73 ... +205	+66... +177	0.5... 1.1	1.1... 2.2	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

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T1X/T2X

Dimensions (mm / inch)



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	Micro switch with silver contacts	125 250 480	10 10 3	10 10 3	6 to 28	0.50	0.5	Small hysteresis; High AC / low DC loads
M	Micro switch with 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	0.1	0.1	Medium hysteresis
S	Micro switch with silver contacts	480	15	15	125	0.05	0.4	Adjustable hysteresis

Sensor lengths / Options

Sensor lengths	(short term)	Options	(short term)
S-A	1.8 m, armoured, SS (6 foot)	EXI	for intrinsically safe application, Ex ia
S-12-A	3.6 m, armoured, SS (12 foot)	EX	Ex d protection
S-25-A	7.5 m, armoured, SS (25 foot)		

Order Code

Example for order number

Type	Micro switch	Code Adjustment range	Sensor length	Option
T1X	-	GH	-	251
T2X	-	GH	-	S-A
Your order number	-		-	EXI
T_X	-		-	