

Mechanical Temperature Switch

L1X

Local mount type for hazardous areas

Features

- Local mount type single switch with 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:
 - Adjustable hysteresis (deadband), S-micro switch
 - Option thermowell: W = Brass
WS = Stainless steel SS316Ti, 1.4571
- Approvals: Ex d, Ex ia, UL, CSA (on request)
- Suitable for SIL2/3 (IEC 61508) acceptance

Adjustment ranges

- -45 °C...+24 °C to +66 °C...+232 °C

Applications

Temperature monitoring and control in

- Industry
- Shipbuilding



Technical Data

Housing material	Die-cast aluminium, painted
Process connection	Standard 1/2" NPT male, option W/WS 3/4" NPT male
Temperature sensor material	Standard: brass / copper, version S: stainless steel (SS304 / 1.4301). If not equipped with thermowell the sensor may only be used up to 21 bar max. For W and WS pressure values refer to accessories data sheet
Operation pressure without thermowell with thermowell	max. 21 bar (max. 300 psi) see accessories data sheet
Operation temperature Housing	-40°C...+75°C (-40°F...167°F) except temperature code 454: -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	1/2" NPT female, internal screw terminal, cable gland in PA, for cable size 6...12 mm is included
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	approx. 2.0 kg

Adjustment ranges

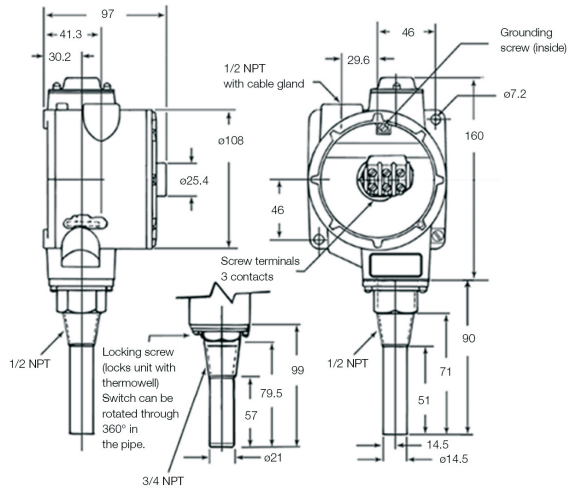
Code adjustment range	Sensor temperature limits (°C)	Adjustment range (°C) ¹	Hysteresis (°C)* for micro switch		
			H, GH	M, GM	S
201	-73 ... +121	-45 ... +24	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
202	-73 ... +121	-9 ... +60	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
203	-73 ... +121	+24 ... +93	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
204	-73 ... +121	-45 ... +93	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
351	-73 ... +205	+38 ... +107	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
354	-73 ... +205	+38 ... +177	0.5 ... 1.6	1.6 ... 3.3	3.3 ... 11.2
454	-18 ... +260	+66 ... +232	1.6 ... 3.3	3.3 ... 5.0	5.5 ... 16.8

* Dependent on medium

¹ Factory presetting available from -15°C to +175°C

L1X

Dimensions (mm / inch)



Contacts: color code and function

C	= Common	= purple
NC	= Normally Closed Contact	= blue
NO	= Normally Open Contact	= red

Vers. without thermowell Vers. with thermowell

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	10	10	6	0.5	0.5	Small hysteresis; High AC / low DC loads
		250	10	10	bis			
		480	3	3	28			
M	Silver contacts	125	10	10	12	5.00	15.0	Medium hysteresis; High AC and DC loads
		250	10	10	24	1.00	2,0	
		480	3	3	250	0.25	0.4	
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	Silver contacts	480	15	15	125	0.05	0.4	Adjustable hysteresis

Order Code

Base model**

L1X

Micro switch	
-H	with silver contacts
-M	with silver contacts
-GH	with gold contacts
-GM	with gold contacts
-S	with silver contacts
Code Adjustment range	
201	-45... +24
202	-9 ... +60
203	+24... +93
204	-45... +93
351	+38 ...+107
354	+38 ...+177
454	+66 ...+232
Sensor material	
---	Brass / copper
S	Stainless steel
Options 1	
-W	Thermowell of brass
-WS	Thermowell of SS (1.4571, SS316 Ti)
Options 2	
-EX	Ex d protection
-EXI	for intrinsically safe application, Ex ia

Example

L1X -GH 202 S -WS -EXI

** Standard parts without UL approval