

Thermotronic LC1

Electronic temperature switch sensor



Since the viscosity of oil changes with the temperature it is clear that the temperature must be controlled. Depending on the application the need to control the temperature can range from keeping minimum or maximum levels, triggering alarm points or emergency shut off. The Thermotronic LC1 has been developed for such applications where both the output as well as the hysteresis must be very precise. Applications with settings close to ambient temperature are such cases. The signal is generated by an DTD (PT 100) and is converted by an electronic circuit into an adjustable output. The hysteresis is fixed to 5 K but can be adjusted to 10 K if required.

For maintenance the electronics and the sensor can be removed from the housing without the need to remove the unit from the power pack. This avoids the need to drain the power pack/reservoir.

- **rugged design**
- **electronics removable for inspection**
- **optional DIN or M 12 connector**
- **cable direction adjustable for DIN connector in 90° steps**
- **elastomer seal**
- **alarm points and hysteresis adjustable**
- **output with adjustable relays to NC or NO**
- **or 4-20 mA analogue output**

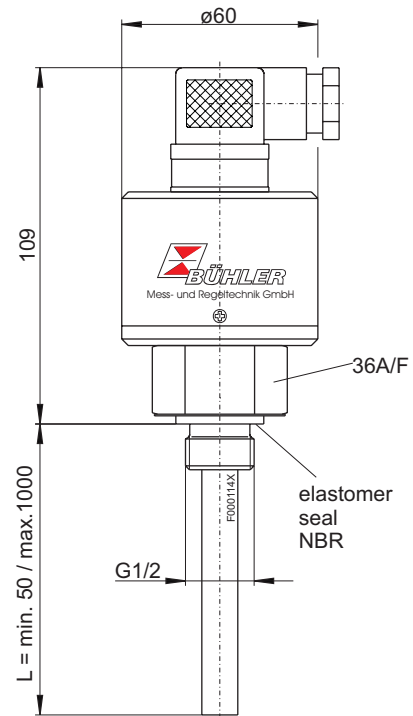
technical data

sensor	PT 100 / electronics	
switching function	NO / NC*	
switch over temperature	from 10 to 90 °C or 15 to 95 °C in steps of 10 K adjustable	
hysteresis	5 K ± 2 K or 10 K ± 3 K	
length of probe	L max. = 1000 mm	
air humidity	max. 95 %	
material of probe	LC1-A = Aluminium anodized LC1-MS = brass LC1-VA = 1.4571 stainless	
operating pressure	LC1-A = 21 bar LC1-MS = 5 bar LC1-VA = 10 bar	
operating temperature	- 15 °C to + 80 °C	
supply voltage	LC1 - ... -230 V	LC1 - ... -24 V ±10 %
max. operating voltage	230 V AC	24 VDC
max. current	1 A	1 A
max. contact rating	50 VA	30 W
accuracy of switch point	± 3 K	± 3 K
out put		4-20 mA**

* NO=normally open / NC=normally closed, all indications at raising temperature

** LC1-MA-MS-24 only

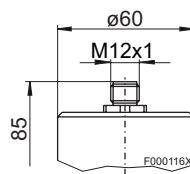
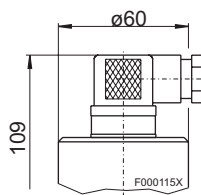
**LC1-MS / LC1-VA /
LC1-MA (connector M12 only)**



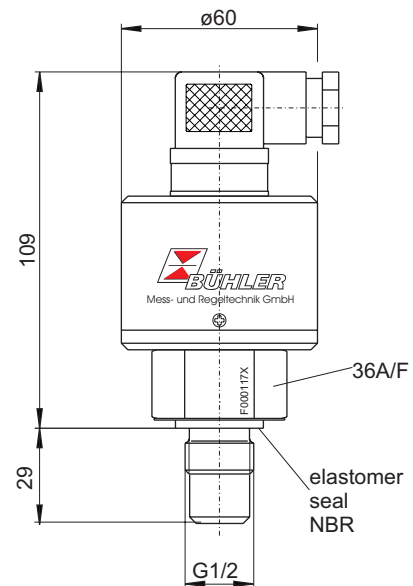
Description of function:

The adjustment of settings is made on a PLC board which features 5 bridges and a selector switch. The temperature settings are adjusted with the selector switch in steps of 10 K within the range of + 10°C up to 90 °C. Changing bridge 1 changes the range to 15 °C up to 95 °C. The bridge 2 and 3 determine the setting of the hysteresis and bridge 5 determines the relay function NO or NC.

connectors	M3 3 pol. + PE DIN 43650	M12 (socket) 4 pol.
protection class	IP 65	IP 67**
cable gland	PG 11	PG 7**
other connectors upon request		** with plug fixed
max. voltage	230 V AC	24 V DC



LC1-A



Ordering informations

part-no.	M3	M12 (socket and plug)	length L=
with connector			
LC1-A-24	1420299	1420799	29 mm
LC1-A-230	1420199	-	29 mm
LC1-MS-24	1420499	1420899	... mm
LC1-MS-230	1420399	-	... mm
LC1-VA-24	1420699	1420999	... mm
LC1-VA-230	1420599	-	... mm
LC1-MA-MS-24	-	1421199	... mm

order example:

you need: brass version, connector type M3, length L= 300 mm, operating voltage 230 V AC, switch point 40 °C, hysteresis 5 K, switch function of relay = break contact (NC)
you order : part-no. = 1420399 LC1 - MS - 230 - 40/5 NC, L = 300 mm.