

Installation and Operating Instructions for Temperature Sensor TF 29

WG 39/11.09/

Original operating manual E-MBA 374d

Temperature sensors are intended for measuring the temperature of liquids in tanks and processes.

The measuring transducer converts the temperature-dependent resistance of the Pt 100 sensor into a standard analogue current signal of 4 ... 20 mA.

The following instructions should be observed in order to ensure correct operation, operational reliability and a long lifetime of the sensor.

1. Electrical Safety

The sensor may be connected only by a trained and qualified electrician!

Type TF29-.../LC-...

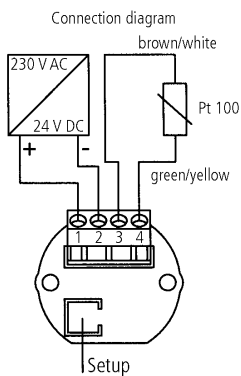
The mounting wrench SL (accessory) is used for opening and closing the terminal casing LC. Take care that the pull-relief, the pressure screw and the cover are tightened securely. Tighten the terminal casing cover until the cover makes a positive connection with the cable gland. This ensures optimum sealing of the casing.

Type TF29-.../BC-...

The terminal casing BK is opened and closed with the mounting wrench SB (accessory). Ensure that the pull relief, the pressure screw for the cable gland and the cover screws are correctly tightened upon assembly. Tighten the terminal casing cover until the cover makes a positive connection with the cable gland. This ensures optimum sealing of the casing.

The measuring transducer is mounted inside the terminal housing of the TF29... and the Pt 100 sensor is connected in the factory as shown in the following connection diagram. The supply voltage (max. 30 V DC) may be connected (as shown in the connection diagram) only by a qualified electrician, who must also lay the necessary cables for this.

2. Technical Data



Input:	Pt 100, EN 60751, 2-wire circuit
Pt 100 measuring current:	≤ 0.5 mA
Output:	4 ... 20 mA
Loop voltage:	7.5 to 30 V DC
Reverse polarity protection:	Yes
Sensor breakage:	> 22 mA ... < 28 mA (typical 24 mA)
Sensor short-circuit:	≤ 3.6 mA
Measuring range:	0 to 100 °C
Ambient temperature at measuring transducer:	-20 to 85 °C
Degree of protection:	IP 65
Burden (R_b) [Ω]:	$R_b = (U_b - 7.5 \text{ V}) : 0.022 \text{ A}$
(covered by supply voltage U_b)	
Reference condition:	24 V DC / approx. 22 °C
EMC:	EN 61326
- interference emission	Class B
- noise immunity	Industrial requirements

3. Operating Conditions

The material of the immersion tube for the temperature sensor must be capable of withstanding the temperature and the chemical effects of the liquid to be monitored.

Operating temperature: max. 100 °C

The terminal housing and the cable should not come into direct contact with the liquid or with hot vapours.

The ambient temperature at the terminal housing may not exceed 50 °C.

The warranty will be invalidated if the above conditions are not observed, if the unit is stripped down or if it is subjected to any unauthorised manipulation.

In the case of a warranty claim, please clean and neutralise the unit and send it post paid to our factory.

These Installation and Operating Instructions are also available in German.

These installation instructions form an integral part of the device and must be kept available throughout the service life of the device.

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