

Product overview

Cable sensor for temperature measurement in gaseous media of heating, cooling or air-conditioning systems (e.g. fresh air / exhaust air ducts). Designed for locking on to control and display systems. In conjunction with an immersion pocket, also suitable for temperature measurement in liquid fluids (e.g. pipeline systems).



Types available

Type code	Type	Description
EXT-TN-1070989	TF25.200.06 6x50 NTC10k	NTC10k, Pocket L 50mm, Φ 6, connection wire 2m
EXT-TN-1072532	TF25.200.06 6x150 NTC10k	NTC10k, Pocket L 150mm, Φ 6, connection wire 2m
EXT-TN-1072549	TF25.200.06 6x150 NTC20k	NTC20k, Pocket L 150mm, Φ 6, connection wire 2m
EXT-TN-1072556	TF25.200.06 6x150 PT1000	PT1000, Pocket L 150mm, Φ 6, connection wire 2m
EXT-TN-1072563	TF25.200.06 6x150 TRV1	0...10V, Pocket L 150mm, Φ 6, connection wire 2m

Technical data

Standards	CE conformity	2004/108/EG Electromagnetic compatibility	
	EN conformity	- EN60730-1 (2000) Interference resistance - EN60730-1 (2000) Emitted interference	
General data	Sensor wire L	2m, cable ends with conductor sleeves as standard	
	Conductor cross section	0.25mm ²	
	Operative temperature	- PVC / HT	: -35...100°C
		- Silicone	: -50...180°C
	- Special silicone	: -60...250°C	
Type sensor	Sensor bushing	Stainless steel material 1.4571	
	Diameter	6mm	
	Mounting lengths	150mm	
	Measuring element	According to customer's request	
	Measuring range	Depending on sensor used	
	Accuracy	Depending on sensor used and wire length	
	Measuring current	Typical <1mA	
	Connection	- 2 pole (two wire)	
		- 3 pole (three wire), not available with special silicone	
		- 4 pole (four wire), not available with special silicone	
Type TRV	Weight	30g	
	Power supply	DC 15-24V(\pm 10%) or AC 24V(\pm 10%)	
	Power consumption	Typical 0.45W / 0.8VA	
	Measuring range	Adjustable at the transducer	
		TRV1	: -50°C...+50°C
	Output	0...10V, min. load 5k Ω	
	Accuracy@21°C	Typical \pm 1% of measuring range with wire conductor of max. 2m	
	Clamps	3 pole (three wire)	
		Terminal screw	max 1.5mm ²
	Enclosure	Material polyamide, colour white	
	Protection	IP65 according to EN60529	
	Cable entry	Single entry, M20 for cable max. D=8mm	
	Ambient temperature	-35...70°C	
Transport	-35...70°C / max. 85% RH, non-condensing		
Weight	145g		

Security advice

The installation and assembly of electrical equipment may only be performed by a skilled electrician. The modules must not be used with equipment that supports, directly or indirectly, human health or life or with applications that can result in danger for people or animals.

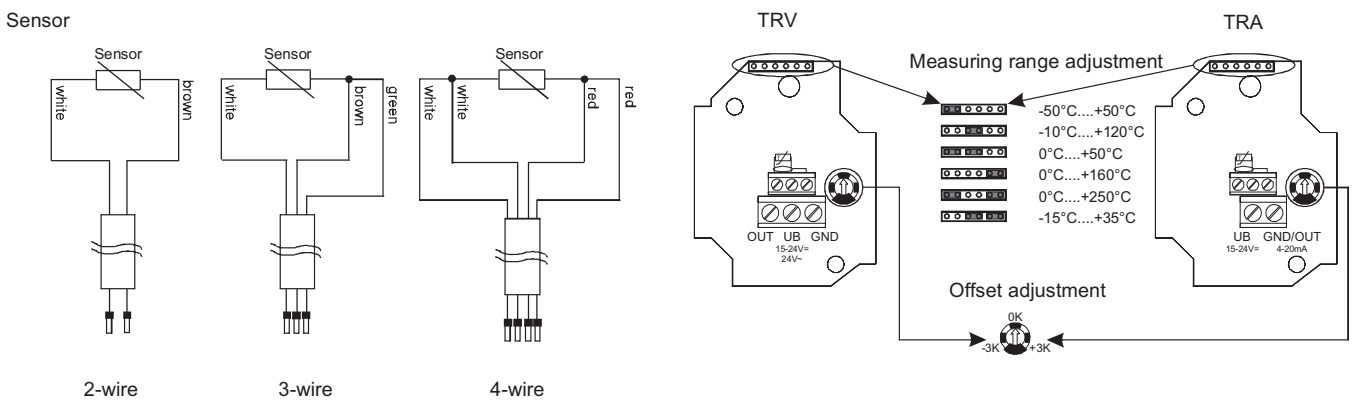
Mounting advice

Depending on the application, the cable temperature sensor is assembled to the air duct by means of a mounting flange respectively a clamp screw joint. Operation of the sensor with an immersion pocket, should use contact fluid for better heat transfer between sensor and measuring medium. When using our sensing elements in moist rooms or for purposes in refrigeration technology, we recommend to use version IP67.

Electrical connection

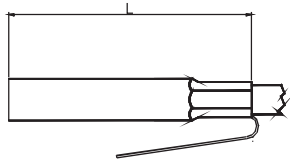
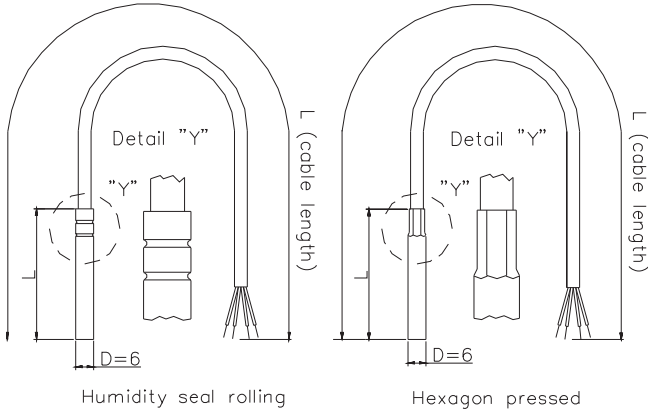
The devices are constructed for the operation of protective low voltage (SELV). For the electrical connection, the technical data of the corresponding device is valid. With regard to passive sensors (e.g. PT100 etc.) in 2 wire conductor version, the wire resistance of the supply wire has to be considered. It is likely that the same has to be compensated by the following electronics. Due to the selfheating, the wire current affects the accuracy of the measurement. Therefore it should not exceed 1mA. Sensing devices with transducer should in principle be operated in the middle of the measuring range to avoid deviations at the measuring end points. The ambient temperature of the transducer electronics should be kept constant. The transducers must be operated at a constant supply voltage. The adjustment of the measuring ranges is made by changing the bonding jumpers (see terminal connection diagram). The output value in the new measuring range is available after approximately 2 seconds.

Terminal connection plan



Dimensions (mm)

TF25 sensor



TF25 with tension spring

TF25 TRV

