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, Φ6, connection wire 2m
EXT-TN-1072532	TF25.200.06 6x150 NTC10k	NTC10k, Pocket L 150mm, Φ6, connection wire 2m
EXT-TN-1072549	TF25.200.06 6x150 NTC20k	NTC20k, Pocket L 150mm, Φ6, connection wire 2m
EXT-TN-1072556	TF25.200.06 6x150 PT1000	PT1000, Pocket L 150mm, Φ6, connection wire 2m
EXT-TN-1072563	TF25.200.06 6x150 TRV1	0...10V, Pocket L 150mm, Φ6, 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	0.25mm²
	Operative temperature	- PVC / HT : -35...100°C - Silicone : -50...180°C - Special silicon : -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
	Weight	30g
Type TRV	Power supply	DC 15-24V(±10%) or AC 24V(±10%)
	Power consumption	Typical 0.45W / 0.8VA
	Measuring range	Adjustable at the transducer TRV1 : -50°C...+50°C
	Output	0...10V, min. load 5kΩ
	Accuracy@21°C	Typical ±1% of measuring range with wire conductor of max. 2m
	Clamps	3 pole (three wire) Terminal screw max 1.5mm²
	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 in any relation with equipment that supports, directly or indirectly, human health or life or with applications that can result in danger for people, animals or real value.
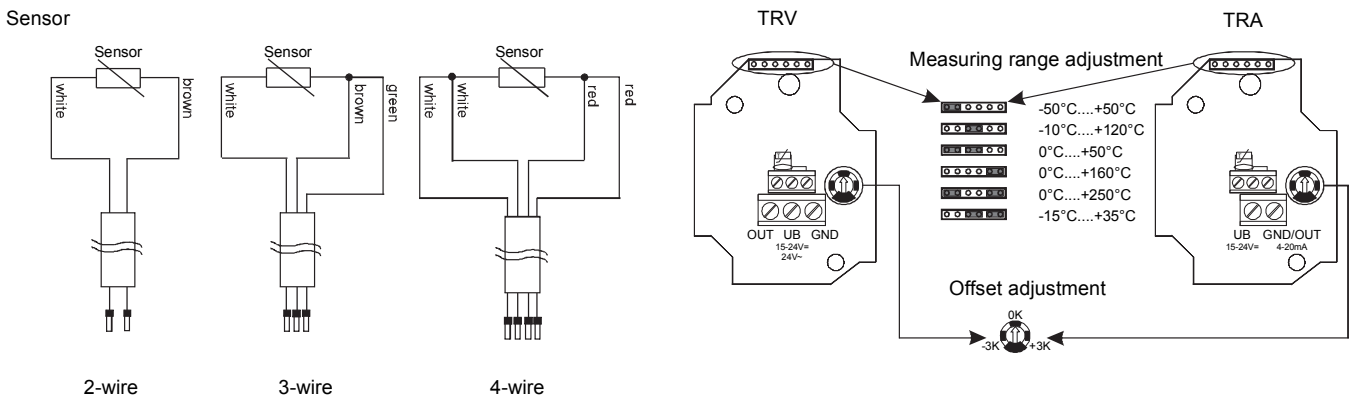
Mounting advice

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 immerision 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.
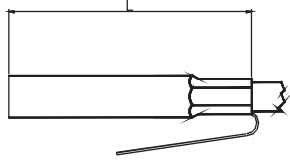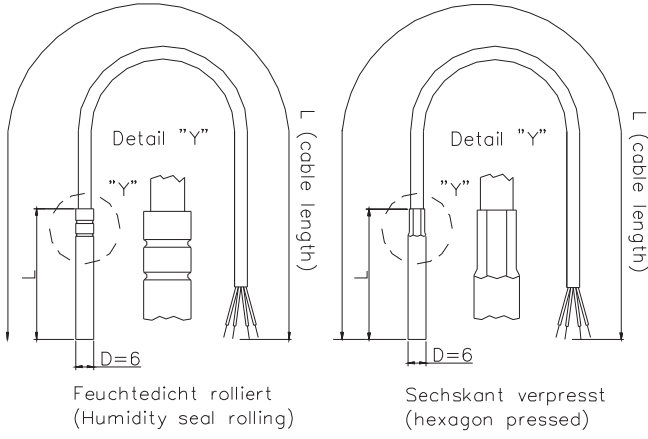
Electrical connection

The devices are constructed for the operation of protective low voltage (SELV). For the electrical connection, the technical data of the corresponding device are valid.
Specially 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. Probably, the same has to be compensated by the following electronics.
Due to the selfheating, the wire current affects the accuracy of the measurement. Thus, the same 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 approximate 2 seconds.

Terminal connection plan

Dimensions (mm)

TF25 sensor

Detail "Y"

"Y"

L (cable length)

D=6

Feuchtedicht rolliert
(Humidity seal rolling)

Detail "Y"

"Y"

L (cable length)

D=6

Sechskant verpresst
(hexagon pressed)

L

TF25 with tension spring

TF25 TRV

58
47

SW24/M20

78
50

45,5
42,5

78