

Cable temperature sensor  
TF25...

**CYLON**

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11200...

**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: Use contact fluid for better heat transfer between sensor and measuring medium.

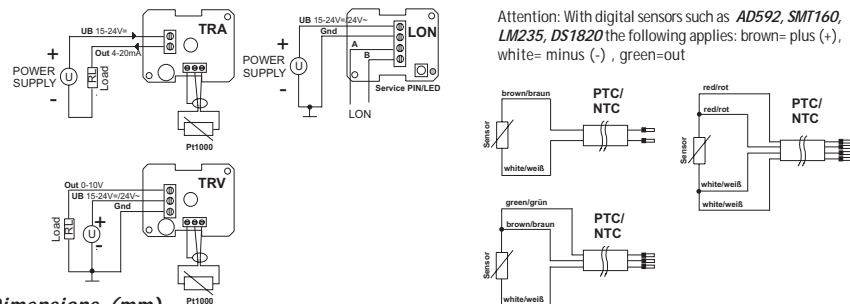
When using our sensing elements in moist rooms or for purposes in refrigeration technic, we recommend our IP67 version.

Please also note the general remarks in our INFORMATION SHEET THK.

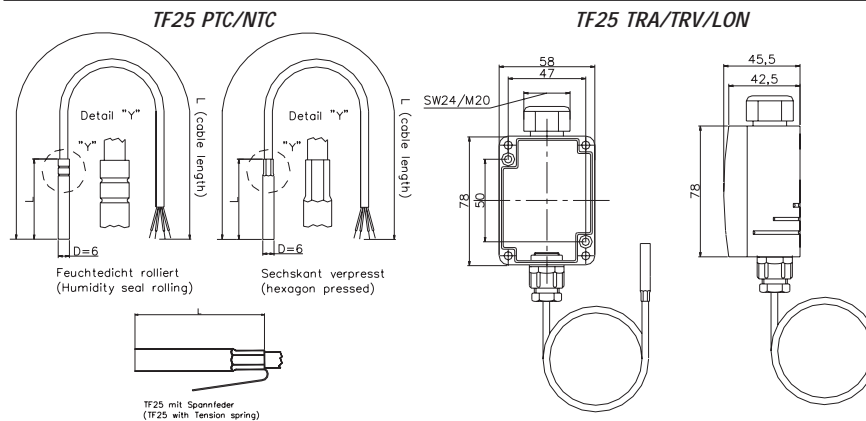
**Optional Accessories:**

- (KL6T) Clamp screw joint G 1/4" for D=6mm with teflon clamping ring, material: stainless steel
- (KL6VA) Calamp screw joint G 1/4" for D=6mm with cutting ring VA, material: stainless steel
- (MF6) Mounting flange for D=6mm
- (THMSDS) Immersion pocket with pressure screw for D=6mm, material: nickel-brass
- (THVADS) Immersion pocket with pressure screw for D=6mm, material: stainless steel

**Terminal Connection Plan**



**Dimensions (mm)**



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**Application**

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 control and display systems. In conjunction with an immersion pocket, also suitable for temperature measurement in liquid fluids (e.g. pipeline systems).

**Types Available**

Model	Type	Method of measurement (output)
TF25	PTC/NTC	passive, resistance
	TRA	active, 4...20mA
	TRV	active, 0...10V
	LON	active, FT110

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#### Norms and Standards

<b>Product safety</b>	EN60730-1 Automatic electr.control devices for domestic use and similar applications
<b>EMV:</b>	EN60730-1 (2000) Interference resistance EN60730-1 (2000) Emitted interference
<b>CE-Conformity:</b>	89/336/EWG Electromagnetic compatibility EMV

#### Technical Data

##### Type PTC/NTC:

<b>Measuring element:</b>	Sensor according to customer's request e.g. PTC, NTC... TF25 up to 400°C: only sensor PT100-3 (three-wire) or PT1000 possible
<b>Measuring range:</b>	Depending on sensor used
<b>Accuracy:</b>	Depending on sensor used, e.g. DIN KL.B+ and sensor wire
<b>Measuring current:</b>	Type. <1mA
<b>Sensor wire L:</b>	1m/2m/4m/6m, other lengths on request, TF25 up to 400°C: only 2m Cable ends with conductor sleeves as standard, Conductor cross-section: 0,25mm <sup>2</sup> , max. operative temperature: PVC/HT: 100°C, Silicone: 180°C, Special silicone: 250°C, Steel braid: 400°C
<b>Sensor bushing:</b>	Stainless steel mat. 1.4571
<b>Mounting lengths L:</b>	50mm/100mm/150mm/200mm/250mm, TF25 up to 400°C: only 50mm
<b>Connection:</b>	2pole (two-wire) 3pole (three-wire), not available with special silicone wire 4pole (four-wire), not available with special silicone wire

##### Type TRA:

<b>Measuring element:</b>	PT1000
<b>Measuring range:</b>	TRA1: -50°C...+50°C TRA2: -10°C...+120°C TRA3: 0°C...+50°C TRA4: 0°C...+160°C TRA5: 0°C...+300°C
<b>Accuracy<sup>1)</sup>:</b>	Type +/-1% of measuring range with maximum sensor wire of 2m
<b>Measuring current:</b>	<1mA
<b>Operating voltage:</b>	15-24V=
<b>Power consumption:</b>	max. 20mA
<b>Load:</b>	<500 Ohm
<b>Sensor wire L:</b>	1m/2m/4m/6m other lengths on request Cable ends with conductor sleeves as standard, Conductor cross-section: 0,25mm <sup>2</sup> , max. operative temperature: PVC/HT: 100°C, Silicone: 180°C, Special silicone: 250°C
<b>Sensor bushing:</b>	Stainless steel Mat. 1.4571
<b>Mounting lengths L:</b>	50mm/100mm/150mm/200mm/250mm
<b>Clamps:</b>	2pole (two-wire) Terminal screw max 1,5mm <sup>2</sup>
<b>Housing:</b>	(78mm) Polyamide, Colour white
<b>Temperature max<sup>2)</sup>:</b>	<70°C
<b>Protection:</b>	IP65
<b>Cable entry:</b>	Single cable entry, M20 for conductor with max. D=8mm

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##### Type eTRV:

<b>Measuring element:</b>	PT1000
<b>Measuring range:</b>	TRV1: -50°C...+50°C TRV2: -10°C...+120°C TRV3: 0°C...+50°C TRV4: 0°C...+160°C TRV5: 0°C...+300°C
<b>Accuracy<sup>1)</sup>:</b>	Typ. +/-1% of measuring range with sensor wire of max. 2 m
<b>Measuring current:</b>	<1mA
<b>Operating voltage:</b>	15-24V=/24V-
<b>Power consumption:</b>	max. 12mA/24V=
<b>Load:</b>	mind. 5kOhm
<b>Sensor wire L:</b>	1m/2m/4m/6m, other lengths on request, Cable ends with conductor sleeves as standard, Conductor cross section: 0,25mm <sup>2</sup> , max. operative temperature: PVC/HT: 100°C, Silicone: 180°C, Special silicone: 250°C
<b>Sensor bushing:</b>	Stainless Steel Mat. 1.4571
<b>Mounting lengths L:</b>	50mm/100mm/150mm/200mm/250mm
<b>Clamp:</b>	3pole (three-wire) Terminal screw max 1,5mm <sup>2</sup>
<b>Housing:</b>	(78mm) Polyamide, Colour white
<b>Temperature max<sup>2)</sup>:</b>	<70°C
<b>Protection:</b>	IP65
<b>Cable entry:</b>	Single cable entry, M20 for conductor with max. D=8mm

##### Type LON:

<b>Measuring element:</b>	Digital sensor
<b>Measuring range:</b>	-45°C...+130°C
<b>Accuracy<sup>1)</sup>:</b>	Type +/-1% of measuring range
<b>Operating voltage:</b>	15-24V=/24V-
<b>Power consumption:</b>	max. 20mA/24V=
<b>Sensor wire L:</b>	1m/2m/4m/6m, other lengths on request, max. length 20m Cable ends are fixed connected with transducer, Conductor cross-section 0,25mm <sup>2</sup> , max. operative temperature: Silicone: 180°C
<b>Sensor bushing:</b>	Stainless steel grade 1.4571
<b>Mounting lengths L:</b>	50mm/100mm/150mm/200mm/250mm
<b>Clamps:</b>	4pole (four-wire) Terminal screw max 1,5mm <sup>2</sup>
<b>Housing:</b>	(78mm) Polyamide, Colour white
<b>Temperature max<sup>2)</sup>:</b>	<70°C
<b>Protection :</b>	IP65
<b>Cable entry:</b>	Single cable entry, M20 for wire conductor with max. D=8mm Double cable entry, M20 for 2- wire conductor with max. D=7mm

<sup>1)</sup> Operating voltage 24V= and 21°C (+/-5K) ambient temperature. Please take care, that the transducer should generally be operated in the measuring range centre, as increased deviations could occur on the measuring range end points. In addition, the ambient temperature of the transducer electronics should be kept constant.

<sup>2)</sup> Maximum permissible ambient temperature housing, humidity (without dew permeation) <80%r.F.