

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.

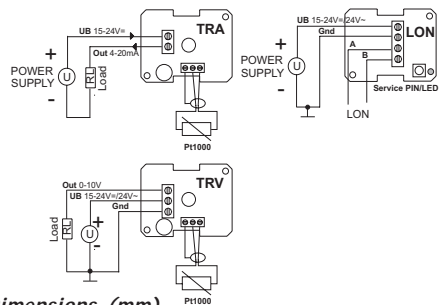
When using our sensing elements in moist rooms or for purposes in refrigeration technic, we recommend our IP67 version.

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

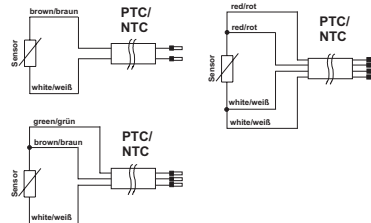
Optional Accessories:

- (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

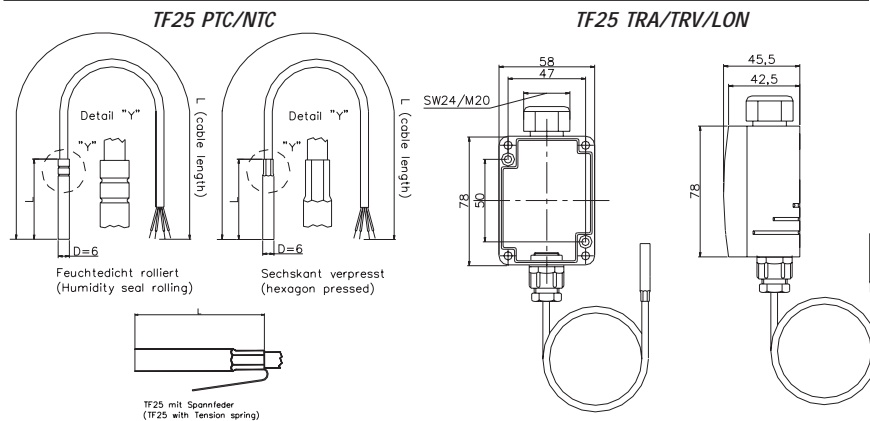
Terminal Connection Plan



Attention: With digital sensors such as **AD592, SMT160, LM235, DS1820** the following applies: brown= plus (+), white= minus (-), green=out



Dimensions (mm)



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, FTT10

Cable temperature sensor
TF25...

Thermokon
Sensortechnik GmbH

Norms and Standards

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

Technical Data

Type PTC/NTC:

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

Type TRA:

Measuring element:	PT1000
Measuring range:	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
Accuracy¹⁾:	Type +/-1% of measuring range with maximum sensor wire of 2m
Measuring current:	<1mA
Operating voltage:	15-24V=
Power consumption:	max. 20mA
Load:	<500 Ohm
Sensor wire L:	1m/2m/4m/6m other lengths on request Cable ends with conductor sleeves as standard, Conductor cross-section: 0,25mm ² , max. operative temperature: PVC/HT: 100°C, Silicone: 180°C, Special silicone: 250°C
Sensor bushing:	Stainless steel Mat. 1.4571
Mounting lengths L:	50mm/100mm/150mm/200mm/250mm
Clamps:	2pole (two-wire) Terminal screw max 1,5mm ²
Housing:	(78mm) Polyamide, Colour white
Temperature max²⁾:	<70°C
Protection:	IP65
Cable entry:	Single cable entry, M20 for conductor with max. D=8mm

Cable temperature sensor
TF25...

Thermokon
Sensortechnik GmbH

Type eTRV:

Measuring element:	PT1000
Measuring range:	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
Accuracy¹⁾:	Typ. +/-1% of measuring range with sensor wire of max. 2 m
Measuring current:	<1mA
Operating voltage:	15-24V= /24V-
Power consumption:	max. 12mA/24V=
Load:	mind. 5kOhm
Sensor wire L:	1m/2m/4m/6m, other lengths on request, Cable ends with conductor sleeves as standard, Conductor cross section: 0,25mm ² , max. operative temperature: PVC/HT: 100°C, Silicone: 180°C, Special silicone: 250°C
Sensor bushing:	Stainless Steel Mat. 1.4571
Mounting lengths L:	50mm/100mm/150mm/200mm/250mm
Clamp:	3pole (three-wire) Terminal screw max 1,5mm ²
Housing:	(78mm) Polyamide, Colour white
Temperature max²⁾:	<70°C
Protection:	IP65
Cable entry:	Single cable entry, M20 for conductor with max. D=8mm

Type LON:

Measuring element:	Digital sensor
Measuring range:	-45°C...+130°C
Accuracy¹⁾:	Type +/-1% of measuring range
Operating voltage:	15-24V= /24V-
Power consumption:	max. 20mA/24V=
Sensor wire L:	1m/2m/4m/6m, other lengths on request, max. length 20m Cable ends are fixed connected with transducer, Conductor cross-section 0,25mm ² , max. operative temperature: Silicone: 180°C
Sensor bushing:	Stainless steel grade 1.4571
Mounting lengths L:	50mm/100mm/150mm/200mm/250mm
Clamps:	4pole (four-wire) Terminal screw max 1,5mm ²
Housing:	(78mm) Polyamide, Colour white
Temperature max²⁾:	<70°C
Protection :	IP65
Cable entry:	Single cable entry, M20 for wire conductor with max. D=8mm Double cable entry, M20 for 2- wire conductor with max. D=7mm

¹⁾ 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.

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