



thermokon®

Keep in touch with the future



# Products

## 2012·2013

World Edition





## Thermokon at a Glance

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- 1987** Company foundation in Mittenaar
- 1994** New building in Aarstr. 6 in Mittenaar
- 1997** Extension of company building
- 2000** Extension of company building to 2000 sqm office and production space
- 2007** Extension of the building by 600 sqm
- 2011** Another extension of the building by 600 sqm

### Foundation of subsidiaries:

- 1998** Thermokon Components GmbH Austria
- 2002** Thermokon-Danelko Elektronik AB Sweden
- 2011** Thermokon Automation Equipment Co. Ltd., China

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**Managing Directors:** H. Zygan & J. Teichmann    **Number of employees:** 130

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### Export Initiative Energy Efficiency

Thanks to energy-efficient products and services in the field of energy efficiency, Thermokon also contributes internationally to a safe and cost-effective energy supply, which is of paramount importance to the climate protection.

**Thermokon: We build the future – by sensors made in Germany!**



# 25 Years of Energy-efficient Technology at Highest Stage



Thermokon has committed to a responsible use of natural resources and the climate protection. By means of energy-efficient sensors we are contributing actively to a lasting reduction of the CO<sub>2</sub> emission.

## Long-Standing Experience in Technology

Thermokon offers 25 years of international know-how in technology and market experience. Thanks to the core expertise in the field of sensors for heating systems and buildings, our technical know-how can be found in all our products and meets highest demands on technology and quality.

## Strong Export Business

Worldwide presence in the global market is guaranteed by having a headquarter in Germany, branches in Austria, Sweden and China and sales offices as well as various distributors in many parts of the world. Thermokon's portfolio is exported to more than 80 countries.

## Lasting Performance – Continuous Development

Ever since Thermokon was founded, the main pillars of our success in the international market have been a lasting performance and achievement potential as well as continuous further development of our portfolio. Besides new innovative product concepts also redesigns and further developments of existing products towards their marketability are of paramount importance.

## Flexibility, Efficiency, Sustainability

Nowadays, the topic “sustainability” is of paramount importance for strategic corporate planning. In the field of building automation, the idea of “green buildings” is omnipresent and stands for a sustainable and energy-efficient use of existing resources in buildings. Besides flexibility and efficiency, the top requirements on functional buildings are also potentials for energy savings.

*The complete portfolio of Thermokon is designed for intelligent and sustainable buildings which shall make it to premium classifications according to the directives DIN EN 15232, LEED or Green Star.*

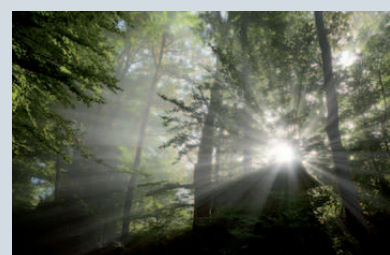
*We are pleased to support our customers to select appropriate products for high energy-efficient buildings.*

## High-Grade Materials – Best Quality

Thanks to a close cooperation with our German partners only high-tensile plastics and stainless steel are used. Last but not least we are guaranteeing best accuracy and compliance with highest safety classes in premium quality which is approved regularly by the certification DIN EN ISO 9001



» Managing Director  
Harald Zygan



# Temperature

High-quality materials, modern production procedures, years of experience: We are producing temperature sensors for the most different applications in the building control, heating, cooling and air-conditioning technology.

	Sensor protection by SI-Protection	P. 66			
<b>TF14</b>	Cable temperature sensor pocketØ 4mm	P. 67	<b>RG03</b>	Duct high-temperature sensor	P. 115
<b>OF14</b>	Surface temperature sensor	P. 73	<b>MWF</b>	Average temperature sensor	P. 117
<b>TF25</b>	Cable temperature sensor pocketØ 6mm	P. 75	<b>SFK01</b>	Screw-in temperature sensor	P. 119
<b>AGS43</b>	Outdoor temperature sensor	P. 83	<b>SFK02</b>	Screw-in temperature sensor	P. 122
<b>AGS54</b>	Outdoor temperature sensor	P. 84	<b>SFK03</b>	Screw-in temperature sensor	P. 127
<b>AGS54ext</b>	Outdoor temperature sensor	P. 85	<b>SFKH01</b>	Screw-in temperature sensor/neck tube	P. 131
<b>VFG54</b>	Pipe contact temperature sensor	P. 88	<b>SFKH02</b>	Screw-in temperature sensor/neck tube	P. 134
<b>AF25</b>	Pipe contact temperature sensor	P. 91	<b>SFKH03</b>	Screw-in temperature sensor/neck tube	P. 139
<b>PR25</b>	Pipe contact temperature sensor	P. 92	<b>RGS03</b>	Screw-in high-temperature sensor	P. 143
<b>AKF10 4mm</b>	Duct temperature sensor pocketØ 4mm	P. 95	<b>TFR</b>	Frost protection thermostat	P. 145
<b>AKF10 7mm</b>	Duct temperature sensor pocketØ 7mm	P. 99	<b>WRF04</b>	Room temperature sensor	P. 146
<b>KFK01 4mm</b>	Duct temperature sensor pocketØ 4mm	P. 105	<b>RDF18</b>	Ceiling temperature sensor	P. 150
<b>KFK01 7mm</b>	Duct temperature sensor pocketØ 7mm	P. 108	<b>RPF40</b>	Room pendulum temperature sensor	P. 151
<b>KFK03</b>	Duct temperature sensor	P. 112	<b>RPF100</b>	Room pendulum temperature sensor	P. 153
			<b>MU-S</b>	Transmitter	P. 155
				Accessory	P. 156

### SI-Protection for Protection of Sensors

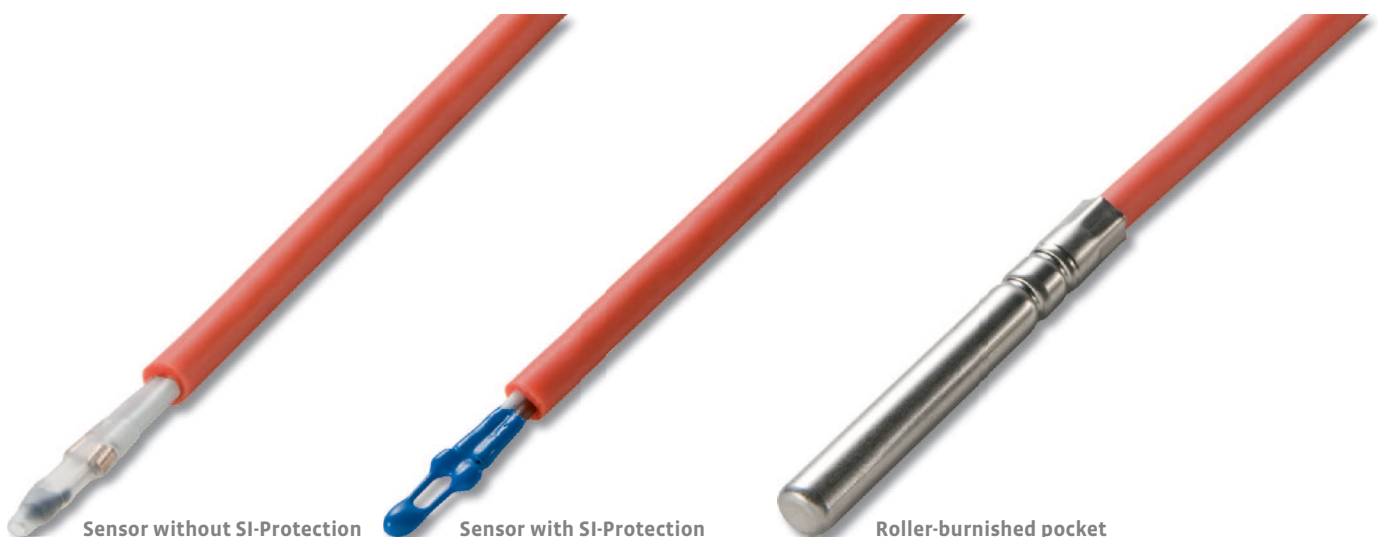
Changes in temperature are causing formation of humidity. Thus, there is a risk that the humidity can permeate in the contact point of the sensor. As a result, the sensor would corrode and oxygenate. Thus, the contact point would become unreliable.

The SI-Protection procedure provides the contact point with epoxy gum and a fluidized bed coating which unites with the insulation material of the wire.

Thus, a complete unit is built protecting the sensor against vibrations and humidity.

By means of this protective coating our temperature sensors can be used in cold water or outdoor applications without any problems, for example.

In addition the roller-burnishing protects the pocket of the sensor against the permeation of humidity.



## Application

For temperature measurement in gaseous media of heating, cooling or air conditioning systems. Designed for locking in control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 300mm
Connection wire	PVC (Standard), Silicone, PTFE Cross section 0,14mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Ambient temperature	PVC: -35°C...+100°C Silicone: -50°C...+180°C PTFE: -80°C...+260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional) (3- and 4-wire not feasible with silicone)
Sensor pocket	Stainless steel 1.4571, Ø=4mm
Protection	Hexagonal pressed (standard): IP54 Roller-burnished: IP67 including SI-Protection (not feasible with PTFE)
Notice	Other sensors and mounting lengths on request

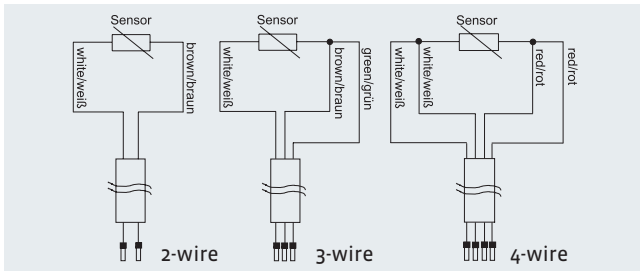
TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 400mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C
Accuracy	±1% of measuring range (with max. 2m connection wire)
Connection wire	Silicone, PTFE (depending on measuring range) Cross section 0,14mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Ambient temperature	-35°C...+70°C (enclosure)
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA
Enclosure	Material PA6, colour pure white, similar to RAL9010
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=4mm
Protection	Hexagonal pressed (standard): IP54 Roller-burnished: IP67 including SI-Protection (not feasible for TRA5 / TRV5 resp. PTFE wire)
Notice	Other mounting lengths on request



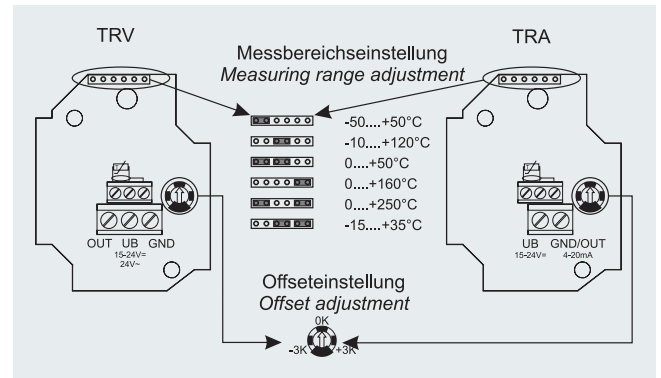
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# » TF14 – Cable Temperature Sensor passive / active

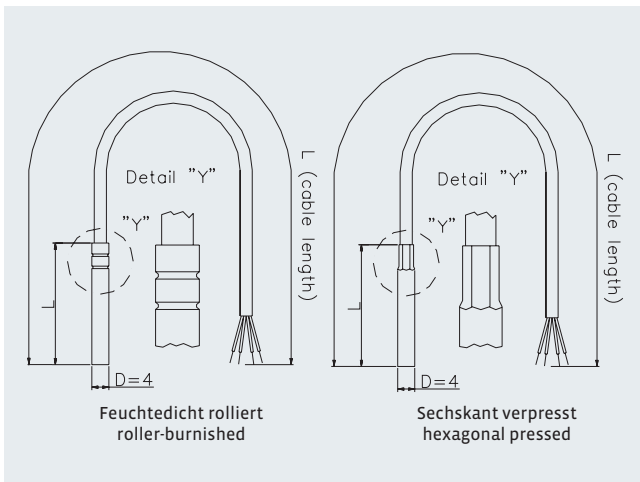
## Connection passive



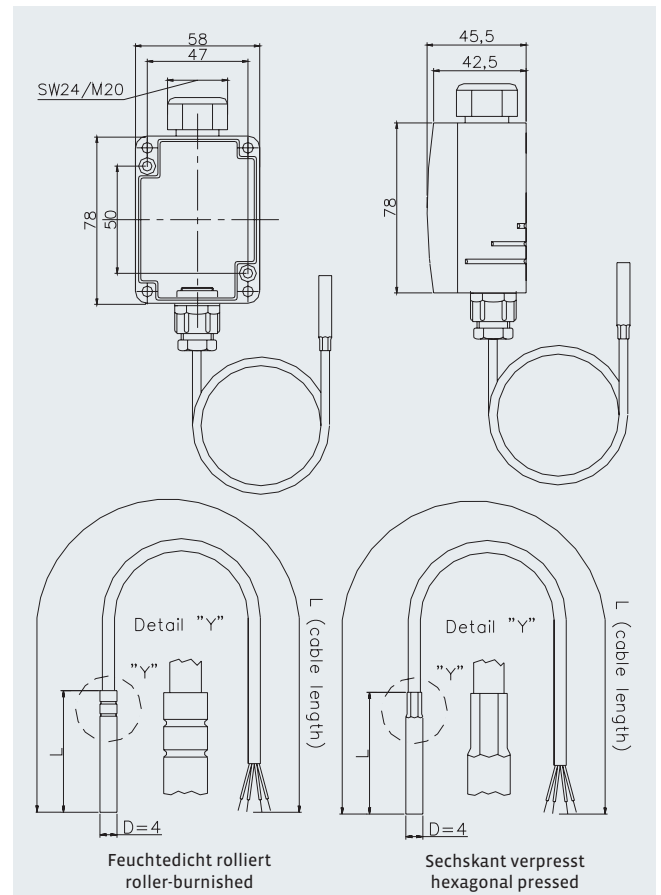
## Connection active



## Dimensional Drawing passive (mm)



## Dimensional Drawing active (mm)



PT100			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100	50mm	64347	
TF14.100.04 4x100 PT100	100mm	57554	
TF14.100.04 4x150 PT100	150mm	57561	

PT1000			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000	50mm	69267	
TF14.100.04 4x100 PT1000	100mm	69274	
TF14.100.04 4x150 PT1000	150mm	69281	

Ni1000			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000	50mm	73080	
TF14.100.04 4x100 Ni1000	100mm	73097	
TF14.100.04 4x150 Ni1000	150mm	73103	

NTC1,8k			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC1,8k	50mm	270687	
TF14.100.04 4x100 NTC1,8k	100mm	355797	
TF14.100.04 4x150 NTC1,8k	150mm	233293	

NTC10k			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC10k	50mm	73844	
TF14.100.04 4x100 NTC10k	100mm	73851	
TF14.100.04 4x150 NTC10k	150mm	73868	

NTC20k			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC20k	50mm	73899	
TF14.100.04 4x100 NTC20k	100mm	73905	
TF14.100.04 4x150 NTC20k	150mm	73912	

PT100 1/3 DIN			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100 1/3 DIN	50mm	69106	
TF14.100.04 4x100 PT100 1/3 DIN	100mm	69113	
TF14.100.04 4x150 PT100 1/3 DIN	150mm	69120	

PT1000 1/3 DIN			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000 1/3 DIN	50mm	69427	
TF14.100.04 4x100 PT1000 1/3 DIN	100mm	69434	
TF14.100.04 4x150 PT1000 1/3 DIN	150mm	69441	

Ni1000TK5000			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000TK5000	50mm	73240	
TF14.100.04 4x100 Ni1000TK5000	100mm	73257	
TF14.100.04 4x150 Ni1000TK5000	150mm	73264	

NTC5k			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC5k	50mm	73806	
TF14.100.04 4x100 NTC5k	100mm	73813	
TF14.100.04 4x150 NTC5k	150mm	73820	

NTC10k Precon			100°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC10k Precon	50mm	77002	
TF14.100.04 4x100 NTC10k Precon	100mm	77019	
TF14.100.04 4x150 NTC10k Precon	150mm	77026	

OPTIONS		
TF14 100°C		
PG1		
Description		
Cable length per additional meter 100°C		
Protection IP67 (roller-burnished)		



<b>PT100</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100	50mm	64354	
TF14.100.04 4x100 PT100	100mm	78009	
TF14.100.04 4x150 PT100	150mm	78016	

<b>PT100 1/3 DIN</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100 1/3 DIN	50mm	78207	
TF14.100.04 4x100 PT100 1/3 DIN	100mm	78214	
TF14.100.04 4x150 PT100 1/3 DIN	150mm	78221	

<b>PT1000</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000	50mm	78405	
TF14.100.04 4x100 PT1000	100mm	78443	
TF14.100.04 4x150 PT1000	150mm	78481	

<b>PT1000 1/3 DIN</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000 1/3 DIN	50mm	78603	
TF14.100.04 4x100 PT1000 1/3 DIN	100mm	78641	
TF14.100.04 4x150 PT1000 1/3 DIN	150mm	78689	

<b>Ni1000</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000	50mm	78795	
TF14.100.04 4x100 Ni1000	100mm	78832	
TF14.100.04 4x150 Ni1000	150mm	78870	

<b>Ni1000TK5000</b>			180°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000TK5000	50mm	78993	
TF14.100.04 4x100 Ni1000TK5000	100mm	79037	
TF14.100.04 4x150 Ni1000TK5000	150mm	79075	

<b>NTC1,8k</b>			150°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC1,8k	50mm	256131	
TF14.100.04 4x100 NTC1,8k	100mm	352307	
TF14.100.04 4x150 NTC1,8k	150mm	352291	

<b>NTC5k</b>			150°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC5k	50mm	80200	
TF14.100.04 4x100 NTC5k	100mm	80248	
TF14.100.04 4x150 NTC5k	150mm	76975	

<b>NTC10k</b>			150°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC10k	50mm	80408	
TF14.100.04 4x100 NTC10k	100mm	81443	
TF14.100.04 4x150 NTC10k	150mm	80484	

<b>NTC10k Precon</b>			150°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC10k Precon	50mm	76807	
TF14.100.04 4x100 NTC10k Precon	100mm	76845	
TF14.100.04 4x150 NTC10k Precon	150mm	76883	

<b>NTC20k</b>			150°C
<b>TF14 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF14.100.04 4x50 NTC20k	50mm	80606	
TF14.100.04 4x100 NTC20k	100mm	80644	
TF14.100.04 4x150 NTC20k	150mm	80682	

<b>OPTIONS</b>		
<b>TF14 180°C</b>		
<b>PG1</b>		
<b>Description</b>		
Cable length per additional meter 180°C		
Protection IP67		

PT100			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100	50mm	95563	
TF14.100.04 4x100 PT100	100mm	96126	
TF14.100.04 4x150 PT100	150mm	96195	

PT100 1/3 DIN			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT100 1/3 DIN	50mm	96775	
TF14.100.04 4x100 PT100 1/3 DIN	100mm	96805	
TF14.100.04 4x150 PT100 1/3 DIN	150mm	96843	

PT1000			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000	50mm	97185	
TF14.100.04 4x100 PT1000	100mm	97239	
TF14.100.04 4x150 PT1000	150mm	91510	

PT1000 1/3 DIN			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 PT1000 1/3 DIN	50mm	91633	
TF14.100.04 4x100 PT1000 1/3 DIN	100mm	91671	
TF14.100.04 4x150 PT1000 1/3 DIN	150mm	91718	

Ni1000			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000	50mm	91831	
TF14.100.04 4x100 Ni1000	100mm	91879	
TF14.100.04 4x150 Ni1000	150mm	91916	

Ni1000TK5000			260°C
TF14 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF14.100.04 4x50 Ni1000TK5000	50mm	97338	
TF14.100.04 4x100 Ni1000TK5000	100mm	97376	
TF14.100.04 4x150 Ni1000TK5000	150mm	97413	

## OPTIONS

### TF14 260°C

PG1

#### Description

Cable length per additional meter 260°C 2-wire

3-wire connection 260°C

Cable length per additional meter 260°C 3-wire

4-wire connection 260°C

Cable length per additional meter 260°C 4-wire

## » TF14 – Cable Temperature Sensor active

TRA 1 / TRV 1		-50°C...+50°C			
TF14 – CONNECTION WIRE 1M					PG1
Type		Out	Pocket L	Art. No.	
TF14.100.04 4x50	TRA 1	4-20mA	50mm	341783	
TF14.100.04 4x100	TRA 1	4-20mA	100mm	295239	
TF14.100.04 4x150	TRA 1	4-20mA	150mm	355919	
TF14.100.04 4x50	TRV 1	0-10V	50mm	173520	
TF14.100.04 4x100	TRV 1	0-10V	100mm	173377	
TF14.100.04 4x150	TRV 1	0-10V	150mm	173537	

TRA 3 / TRV 3		0°C...+50°C			
TF14 – CONNECTION WIRE 1M					PG1
Type		Out	Pocket L	Art. No.	
TF14.100.04 4x50	TRA 3	4-20mA	50mm	181884	
TF14.100.04 4x100	TRA 3	4-20mA	100mm	355827	
TF14.100.04 4x150	TRA 3	4-20mA	150mm	355933	
TF14.100.04 4x50	TRV 3	0-10V	50mm	173605	
TF14.100.04 4x100	TRV 3	0-10V	100mm	173612	
TF14.100.04 4x150	TRV 3	0-10V	150mm	173629	

TRA 5 / TRV 5		0°C...+250°C			
TF14 – CONNECTION WIRE 1M					PG1
Type		Out	Pocket L	Art. No.	
TF14.100.04 4x50	TRA 5	4-20mA	50mm	355810	
TF14.100.04 4x100	TRA 5	4-20mA	100mm	355902	
TF14.100.04 4x150	TRA 5	4-20mA	150mm	362467	
TF14.100.04 4x50	TRV 5	0-10V	50mm	114127	
TF14.100.04 4x100	TRV 5	0-10V	100mm	121903	
TF14.100.04 4x150	TRV 5	0-10V	150mm	173704	

TRA 2 / TRV 2		-10°C...+120°C			
TF14 – CONNECTION WIRE 1M					PG1
Type		Out	Pocket L	Art. No.	
TF14.100.04 4x50	TRA 2	4-20mA	50mm	236362	
TF14.100.04 4x100	TRA 2	4-20mA	100mm	168151	
TF14.100.04 4x150	TRA 2	4-20mA	150mm	355926	
TF14.100.04 4x50	TRV 2	0-10V	50mm	150262	
TF14.100.04 4x100	TRV 2	0-10V	100mm	173568	
TF14.100.04 4x150	TRV 2	0-10V	150mm	173575	

TRA 4 / TRV 4		0°C...+160°C			
TF14 – CONNECTION WIRE 1M					PG1
Type		Out	Pocket L	Art. No.	
TF14.100.04 4x50	TRA 4	4-20mA	50mm	186988	
TF14.100.04 4x100	TRA 4	4-20mA	100mm	355834	
TF14.100.04 4x150	TRA 4	4-20mA	150mm	355940	
TF14.100.04 4x50	TRV 4	0-10V	50mm	173650	
TF14.100.04 4x100	TRV 4	0-10V	100mm	173667	
TF14.100.04 4x150	TRV 4	0-10V	150mm	173674	

### OPTIONS

TF14 TRA / TRV	PG1
Description	
LCD	
Cable length per additional meter TRA/TRV 1-4	
Cable length per additional meter TRA/TRV 5	

### ACCESSORIES

TF14	PG1
Description	Art. No.
Mounting flange MF4 (brass)	102438
Mounting flange MF7 flexible (incl. seal inserts for D=4mm / 6mm)	399098



MF4



MF7 flexible

Ordering example 1: TF14.400.04 Ni1000 260°C, 4x100, 4L  
 TF14=type / 400=connection wire 4m / 04=diameter of pocket 4mm  
 Ni1000=sensor Ni1000 / 260°C=temperature up to 260°C  
 4x100=mounting length 100mm / 4L=4-wire connection

Ordering example 2: TF14.200.04 TRV 1, 4x150, IP67  
 TF14=type / 200=connection wire 2m / 04=diameter of pocket 4mm  
 TRV 1=transducer 0-10V, -50°C...+50°C  
 4x150=mounting length 150mm / IP67=protection class IP67

# Surface Temperature Sensor passive / active – OF14 «

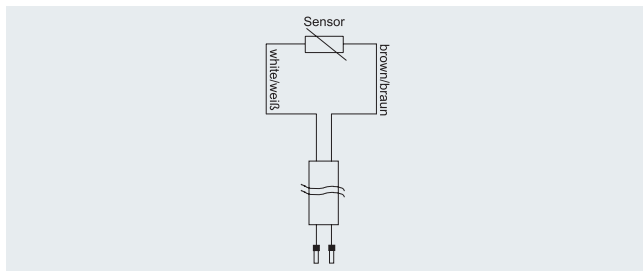
## Application

For temperature measuring on glass facades or the like.  
Designed for locking on control and display systems.

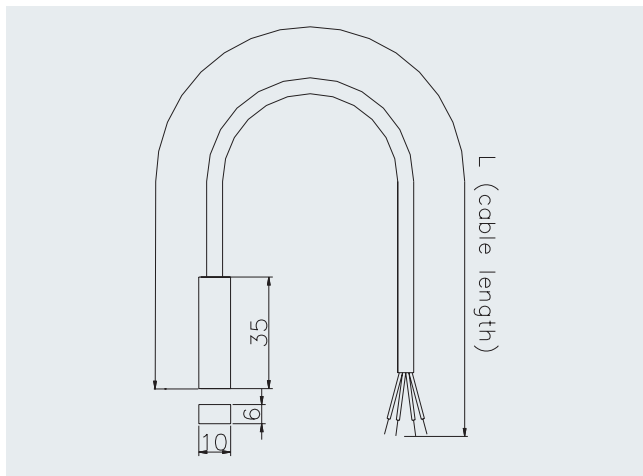
TECHNICAL DATA – PASSIVE OUTPUT	
Measuring range	-20°C...+70°C
Connection wire	PVC, cross section 0,25mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Sensor pocket	Aluminium, L=35mm, B=10mm, H=6mm, mounting at the surface by means of supplied adhesive tape
Protection	SI-Protection
Notice	Other sensors on request



## Connection passive

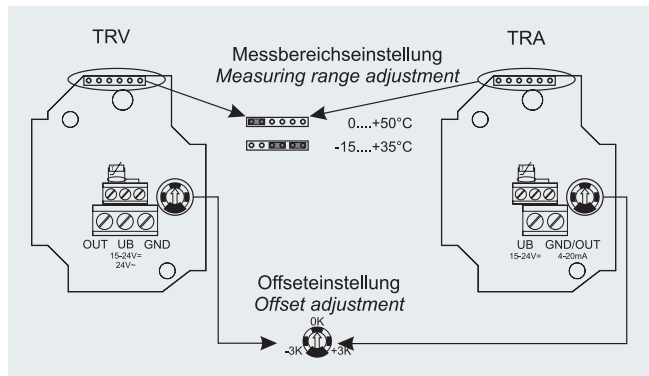


## Dimensional Drawing passive (mm)

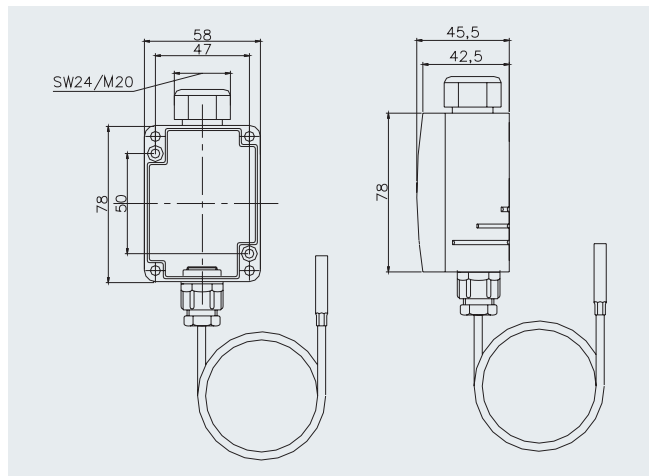


TECHNICAL DATA – ACTIVE OUTPUT	
Measuring range	TRA: 4-20mA / TRV: 0-10V TRA 3 / TRV 3: 0°C...+50°C
Accuracy	±1% of measuring range (with max. 2m connection wire)
Connection wire	PVC, cross section 0,25mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Ambient temperature	-20°C...+70°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA
Enclosure	Material PA6, colour pure white, similar to RAL9010
Cable entry	M20
Sensor pocket	Aluminium, L=35mm, B=10mm, H=6mm, mounting at the surface by means of supplied adhesive tapes
Protection	IP65

## Connection active



## Dimensional Drawing active (mm)



## » OF14 – Surface Temperature Sensor passive / active

PASSIVE	
OF14 – CONNECTION WIRE 1M	
Type	Art. No.
OF14.100.06 PT100	132596
OF14.100.06 PT100 1/3 DIN	167307
OF14.100.06 PT1000	114851
OF14.100.06 PT1000 1/3 DIN	219303
OF14.100.06 Ni1000	113922
OF14.100.06 Ni1000TK5000	141864
OF14.100.06 NTC1,8k	356541
OF14.100.06 NTC5k	351263
OF14.100.06 NTC10k	190367
OF14.100.06 NTC10k Precon	165006
OF14.100.06 NTC20k	147736
OF14.100.06 LM235Z	216760

ACTIVE – TRA 3 / TRV 3		
OF14 – CONNECTION WIRE 1M		
Type	Out	Art. No.
OF14.100.06 TRA 3	4-20mA	204965
OF14.100.06 TRV 3	0-10V	192767

0°C...+50°C

### OPTIONS

OF14	PG1
Description	

Cable length per additional meter

#### Ordering example 1: OF14.100.06 NTC20k

OF14=type / 100=connection wire 1m / 06=diameter of pocket 6mm  
NTC20k=sensor NTC20k

#### Ordering example 2: OF14.200.06 TRV 3

OF14=type / 200=connection wire 2m / 06=diameter of pocket 6mm  
TRV 3=transducer 0-10V, 0°C...+50°C

# Cable Temperature Sensor passive / active / LON – TF25 «

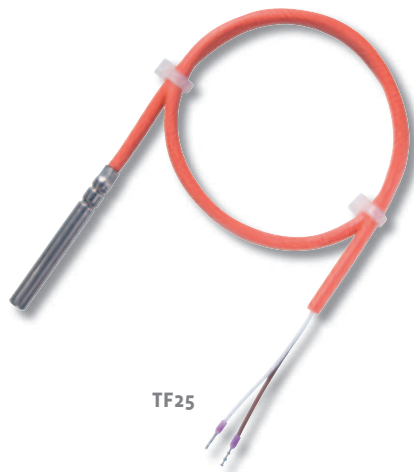
## Application

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

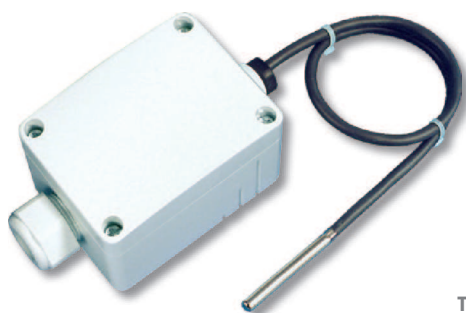


TECHNICAL DATA- PASSIVE OUTPUT	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm
Connection wire	Cross section 0,25mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m TF25 400°C PT100: Standard 3-wire 2m TF25 400°C PT1000: Standard 2-wire 2m
Ambient temperature	PVC: -35°C...+100°C Silicone: -50°C...+180°C Special silicone: -60°C...+250°C GI/GI-V2A: -50°C...+400°C
Connection	2-wire (standard), 3-wire, 4-wire (optional) (3- and 4- wire not feasible with special silicone)
Sensor pocket	Stainless steel 1.4571, Ø=6mm
Protection	Hexagonal pressed (standard): IP54 Roller-burnished: IP67 with SI-Protection
Notice	Double sensor feasible (e.g. 2xPT100) Other Sensors and mounting lengths on request

TECHNICAL DATA – AKTIVE OUTPUT / LON	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 2/TRV 2: -10°C...+120°C TRA 3/TRV 3: 0°C...+50°C TRA 4/TRV 4: 0°C...+160°C TRA 5/TRV 5: 0°C...+250°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Connection wire	Silicone, special silicone (depending on measuring range) Cross section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Ambient temperature	-35°C...+70°C (enclosure)
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA LON: typ. 0,5W/1,7VA
Enclosure	Material PA6, colour pure white, similar to RAL9010
Cable entry	M20 (TRA/TRV) M20 single or double (LON)
Sensor pocket	Stainless steel 1.4571, Ø=6mm, Ø=6,5mm (LON)
Protection	Hexagonal pressed (standard): IP54 Roller-burnished: IP67 including SI-Protection Enclosure: IP65
Notice	Use of an immersion pocket not feasible with LON sensors Other lengths on request



TF25

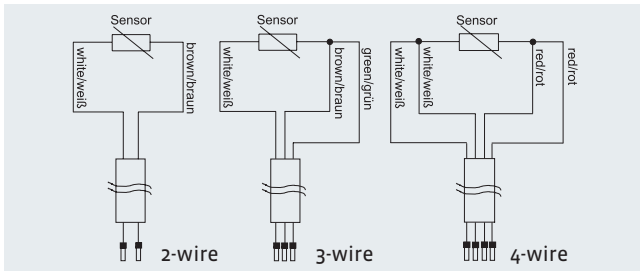


TF25 TRA / TRV / LON

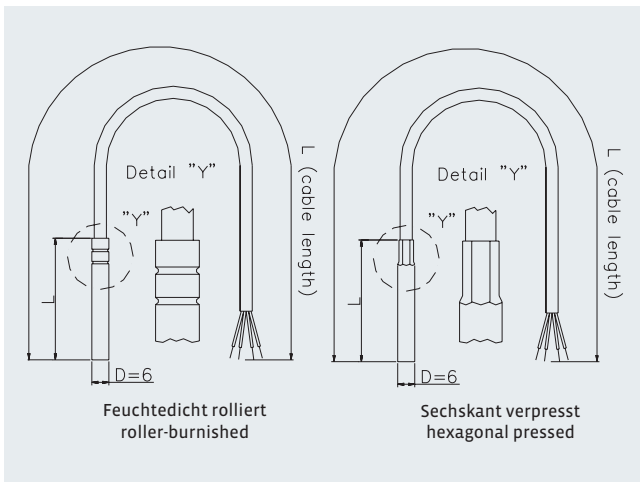
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# » TF25 – Cable Temperature Sensor passive / active / LON

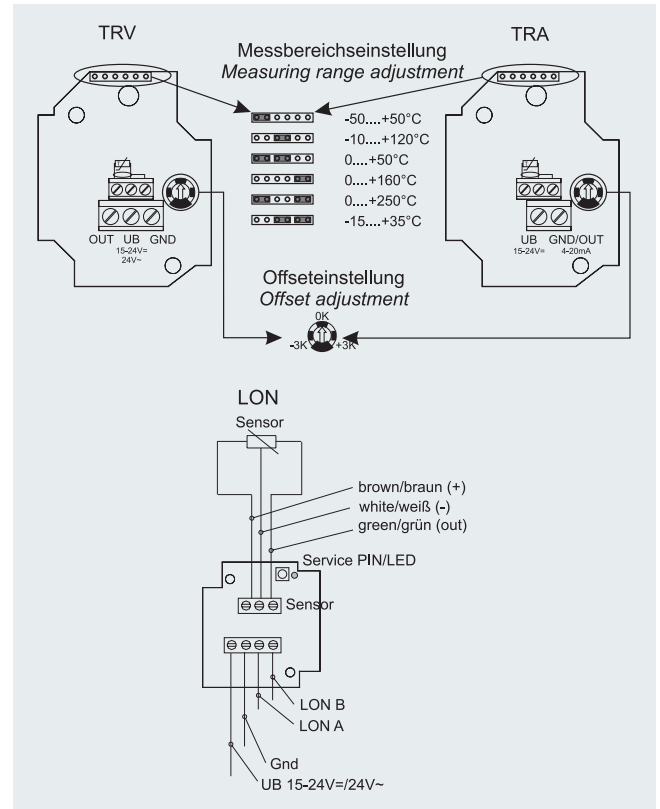
## Connection passive



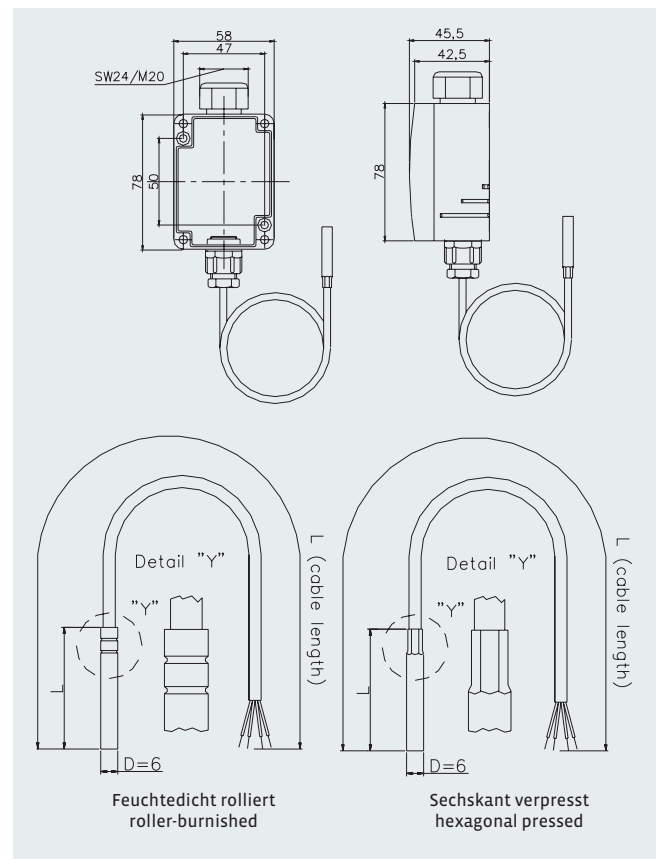
## Dimensional Drawing passive (mm)



## Connection active / LON



## Dimensional Drawing active / LON (mm)



PT100			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100	50mm	35019	
TF25.100.06 6x100 PT100	100mm	35026	
TF25.100.06 6x150 PT100	150mm	35033	

PT1000			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000	50mm	35484	
TF25.100.06 6x100 PT1000	100mm	35491	
TF25.100.06 6x150 PT1000	150mm	35507	

Ni1000			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000	50mm	26116	
TF25.100.06 6x100 Ni1000	100mm	26154	
TF25.100.06 6x150 Ni1000	150mm	388221	

NTC1,8k			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC1,8k	50mm	233309	
TF25.100.06 6x100 NTC1,8k	100mm	258272	
TF25.100.06 6x150 NTC1,8k	150mm	26192	

NTC10k			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC10k	50mm	41539	
TF25.100.06 6x100 NTC10k	100mm	41812	
TF25.100.06 6x150 NTC10k	150mm	40723	

NTC20k			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC20k	50mm	41546	
TF25.100.06 6x100 NTC20k	100mm	41829	
TF25.100.06 6x150 NTC20k	150mm	40730	

PT100 1/3 DIN			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100 1/3 DIN	50mm	25799	
TF25.100.06 6x100 PT100 1/3 DIN	100mm	35255	
TF25.100.06 6x150 PT100 1/3 DIN	150mm	35262	

PT1000 1/3 DIN			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000 1/3 DIN	50mm	35729	
TF25.100.06 6x100 PT1000 1/3 DIN	100mm	35736	
TF25.100.06 6x150 PT1000 1/3 DIN	150mm	35743	

Ni1000TK5000			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000TK5000	50mm	26352	
TF25.100.06 6x100 Ni1000TK5000	100mm	26390	
TF25.100.06 6x150 Ni1000TK5000	150mm	388238	

NTC5k			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC5k	50mm	41522	
TF25.100.06 6x100 NTC5k	100mm	41805	
TF25.100.06 6x150 NTC5k	150mm	40716	

NTC10k Precon			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC10k Precon	50mm	41300	
TF25.100.06 6x100 NTC10k Precon	100mm	41348	
TF25.100.06 6x150 NTC10k Precon	150mm	41386	

KTY81-110			100°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-110	50mm	42819	
TF25.100.06 6x100 KTY81-110	100mm	42857	
TF25.100.06 6x150 KTY81-110	150mm	42895	



<b>KTY81-121</b>			100°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-121	50mm	42826	
TF25.100.06 6x100 KTY81-121	100mm	42864	
TF25.100.06 6x150 KTY81-121	150mm	42901	

<b>KTY81-122</b>			100°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-122	50mm	42833	
TF25.100.06 6x100 KTY81-122	100mm	42871	
TF25.100.06 6x150 KTY81-122	150mm	42918	

<b>KTY81-210</b>			100°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-210	50mm	42840	
TF25.100.06 6x100 KTY81-210	100mm	42888	
TF25.100.06 6x150 KTY81-210	150mm	42925	

<b>LM235Z</b>			100°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 LM235Z	50mm	43786	
TF25.100.06 6x100 LM235Z	100mm	43823	
TF25.100.06 6x150 LM235Z	150mm	43861	

## OPTIONS

<b>TF25 100°C</b>	<b>PG1</b>
<b>Description</b>	
Cable length per additional meter 2-wire 100°C	
3-wire connection 100°C	
Cable length per additional meter 3-wire 100°C	
4-wire connection 100°C	
Cable length per additional meter 4-wire 100°C	
Protection class IP67	
Connection box with 2 cable entries	
Tension spring	

<b>PT100</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100	50mm	52771	
TF25.100.06 6x100 PT100	100mm	52788	
TF25.100.06 6x150 PT100	150mm	52795	

<b>PT100 1/3 DIN</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100 1/3 DIN	50mm	57493	
TF25.100.06 6x100 PT100 1/3 DIN	100mm	57509	
TF25.100.06 6x150 PT100 1/3 DIN	150mm	57516	

<b>PT1000</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000	50mm	58247	
TF25.100.06 6x100 PT1000	100mm	58254	
TF25.100.06 6x150 PT1000	150mm	58261	

<b>PT1000 1/3 DIN</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000 1/3 DIN	50mm	58483	
TF25.100.06 6x100 PT1000 1/3 DIN	100mm	58490	
TF25.100.06 6x150 PT1000 1/3 DIN	150mm	58506	

<b>Ni1000</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000	50mm	58728	
TF25.100.06 6x100 Ni1000	100mm	58735	
TF25.100.06 6x150 Ni1000	150mm	58742	

<b>Ni1000TK5000</b>			180°C
<b>TF25 – CONNECTION WIRE 1M</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000TK5000	50mm	58964	
TF25.100.06 6x100 Ni1000TK5000	100mm	58971	
TF25.100.06 6x150 Ni1000TK5000	150mm	58988	

NTC1,8k			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC1,8k	50mm	259484	
TF25.100.06 6x100 NTC1,8k	100mm	282611	
TF25.100.06 6x150 NTC1,8k	150mm	388252	

NTC5k			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC5k	50mm	59404	
TF25.100.06 6x100 NTC5k	100mm	59411	
TF25.100.06 6x150 NTC5k	150mm	59428	

NTC10k			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC10k	50mm	59466	
TF25.100.06 6x100 NTC10k	100mm	59473	
TF25.100.06 6x150 NTC10k	150mm	59480	

NTC10k Precon			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC10k Precon	50mm	59718	
TF25.100.06 6x100 NTC10k Precon	100mm	59725	
TF25.100.06 6x150 NTC10k Precon	150mm	59732	

NTC20k			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 NTC20k	50mm	59527	
TF25.100.06 6x100 NTC20k	100mm	59534	
TF25.100.06 6x150 NTC20k	150mm	59541	

KTY81-110			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-110	50mm	68031	
TF25.100.06 6x100 KTY81-110	100mm	68048	
TF25.100.06 6x150 KTY81-110	150mm	68055	

KTY81-121			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-121	50mm	68093	
TF25.100.06 6x100 KTY81-121	100mm	68109	
TF25.100.06 6x150 KTY81-121	150mm	68166	

KTY81-122			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-122	50mm	68154	
TF25.100.06 6x100 KTY81-122	100mm	68161	
TF25.100.06 6x150 KTY81-122	150mm	68178	

KTY81-210			150°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 KTY81-210	50mm	68215	
TF25.100.06 6x100 KTY81-210	100mm	68222	
TF25.100.06 6x150 KTY81-210	150mm	68239	

LM235Z			120°C
TF25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
TF25.100.06 6x50 LM235Z	50mm	143042	
TF25.100.06 6x100 LM235Z	100mm	141024	
TF25.100.06 6x150 LM235Z	150mm	387521	

## OPTIONS

TF25 180°C	PG1
<b>Description</b>	
Cable length per additional meter 2-wire	
3-wire connection 180°C	
Cable length per additional meter 3-wire 180°C	
4-wire connection 180°C	
Cable length per additional meter 4-wire 180°C	
Protection class IP67	
Connection box with 2 cable entries	
Tension spring	

PT100		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100	50mm	167406	
TF25.100.06 6x100 PT100	100mm	209731	
TF25.100.06 6x150 PT100	150mm	205658	

PT100 1/3 DIN		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT100 1/3 DIN	50mm	195478	
TF25.100.06 6x100 PT100 1/3 DIN	100mm	345835	
TF25.100.06 6x150 PT100 1/3 DIN	150mm	388276	

PT1000		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000	50mm	168717	
TF25.100.06 6x100 PT1000	100mm	209724	
TF25.100.06 6x150 PT1000	150mm	388283	

PT1000 1/3 DIN		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 PT1000 1/3 DIN	50mm	356749	
TF25.100.06 6x100 PT1000 1/3 DIN	100mm	356756	
TF25.100.06 6x150 PT1000 1/3 DIN	150mm	388290	

Ni1000		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000	50mm	151863	
TF25.100.06 6x100 Ni1000	100mm	182430	
TF25.100.06 6x150 Ni1000	150mm	388306	

Ni1000TK5000		250°C	
TF25 – CONNECTION WIRE 1M		PG1	
Type	Pocket L	Art. No.	
TF25.100.06 6x50 Ni1000TK5000	50mm	150781	
TF25.100.06 6x100 Ni1000TK5000	100mm	157018	
TF25.100.06 6x150 Ni1000TK5000	150mm	388313	

OPTIONS	
TF25 250°C	
PG1	
<b>Description</b>	
Cable length per additional meter 2-wire 250°C	
Protection class IP67	
Connection box with 2 cable entries	
Tension spring	

PT100		400°C	
TF25 – CONNECTION WIRE 2m		PG1	
Type	Pocket L	Art. No.	
TF25.200.06 6x50 PT100 3-wire	50mm	166195	

PT1000		400°C	
TF25 – CONNECTION WIRE 2m		PG1	
Type	Pocket L	Art. No.	
TF25.200.06 6x50 PT1000	50mm	166201	

OPTIONS	
TF25 400°C	
PG1	
<b>Description</b>	
Cable length per additional meter 2-wire 400°C	

# Cable Temperature Sensor active / LON – TF25 «

TRA 1 / TRV 1				-50°C...+50°C	
TF25 – CONNECTION WIRE 1M					PG1
Type	Out	Pocket L	Art. No.		
TF25.100.06 6x50 TRA 1	4-20mA	50mm	132923		
TF25.100.06 6x100 TRA 1	4-20mA	100mm	204828		
TF25.100.06 6x150 TRA 1	4-20mA	150mm	356787		
TF25.100.06 6x200 TRA 1	4-20mA	200mm	356879		
TF25.100.06 6x250 TRA 1	4-20mA	250mm	356954		
TF25.100.06 6x50 TRV 1	0-10V	50mm	121279		
TF25.100.06 6x100 TRV 1	0-10V	100mm	290685		
TF25.100.06 6x150 TRV 1	0-10V	150mm	237277		
TF25.100.06 6x200 TRV 1	0-10V	200mm	164641		
TF25.100.06 6x250 TRV 1	0-10V	250mm	357012		

TRA 2 / TRV 2				-10°C...+120°C	
TF25 – CONNECTION WIRE 1M					PG1
Type	Out	Pocket L	Art. No.		
TF25.100.06 6x50 TRA 2	4-20mA	50mm	134224		
TF25.100.06 6x100 TRA 2	4-20mA	100mm	179676		
TF25.100.06 6x150 TRA 2	4-20mA	150mm	356800		
TF25.100.06 6x200 TRA 2	4-20mA	200mm	356886		
TF25.100.06 6x250 TRA 2	4-20mA	250mm	356961		
TF25.100.06 6x50 TRV 2	0-10V	50mm	134545		
TF25.100.06 6x100 TRV 2	0-10V	100mm	147415		
TF25.100.06 6x150 TRV 2	0-10V	150mm	259231		
TF25.100.06 6x200 TRV 2	0-10V	200mm	356923		
TF25.100.06 6x250 TRV 2	0-10V	250mm	146791		

TRA 3 / TRV 3				0°C...+50°C	
TF25 – CONNECTION WIRE 1M					PG1
Type	Out	Pocket L	Art. No.		
TF25.100.06 6x50 TRA 3	4-20mA	50mm	120715		
TF25.100.06 6x100 TRA 3	4-20mA	100mm	141963		
TF25.100.06 6x150 TRA 3	4-20mA	150mm	356831		
TF25.100.06 6x200 TRA 3	4-20mA	200mm	356893		
TF25.100.06 6x250 TRA 3	4-20mA	250mm	206860		
TF25.100.06 6x50 TRV 3	0-10V	50mm	141697		
TF25.100.06 6x100 TRV 3	0-10V	100mm	270984		
TF25.100.06 6x150 TRV 3	0-10V	150mm	214087		
TF25.100.06 6x200 TRV 3	0-10V	200mm	356930		
TF25.100.06 6x250 TRV 3	0-10V	250mm	240079		

TRA 4 / TRV 4				0°C...+160°C	
TF25 – CONNECTION WIRE 1M					PG1
Type	Out	Pocket L	Art. No.		
TF25.100.06 6x50 TRA 4	4-20mA	50mm	133111		
TF25.100.06 6x100 TRA 4	4-20mA	100mm	151245		
TF25.100.06 6x150 TRA 4	4-20mA	150mm	242363		
TF25.100.06 6x200 TRA 4	4-20mA	200mm	356909		
TF25.100.06 6x250 TRA 4	4-20mA	250mm	221306		
TF25.100.06 6x50 TRV 4	0-10V	50mm	175005		
TF25.100.06 6x100 TRV 4	0-10V	100mm	234733		
TF25.100.06 6x150 TRV 4	0-10V	150mm	356855		
TF25.100.06 6x200 TRV 4	0-10V	200mm	195201		
TF25.100.06 6x250 TRV 4	0-10V	250mm	357029		

TRA 5 / TRV 5				0°C...+250°C	
TF25 – CONNECTION WIRE 1M					PG1
Type	Out	Pocket L	Art. No.		
TF25.100.06 6x50 TRA 5	4-20mA	50mm	198882		
TF25.100.06 6x100 TRA 5	4-20mA	100mm	361668		
TF25.100.06 6x150 TRA 5	4-20mA	150mm	356848		
TF25.100.06 6x200 TRA 5	4-20mA	200mm	357630		
TF25.100.06 6x250 TRA 5	4-20mA	250mm	356992		
TF25.100.06 6x50 TRV 5	0-10V	50mm	199629		
TF25.100.06 6x100 TRV 5	0-10V	100mm	356770		
TF25.100.06 6x150 TRV 5	0-10V	150mm	356862		
TF25.100.06 6x200 TRV 5	0-10V	200mm	356947		
TF25.100.06 6x250 TRV 5	0-10V	250mm	357036		

LON				
TF25 – CONNECTION WIRE 1M				
Type	Out	Pocket L	Art. No.	
TF25.100.06 6,5x50 LON	FTT	50mm	95440	

OPTIONS				
TF25 TRA / TRV / LON				
Description				
LCD (only TRA / TRV)				
Cable length per additional meter TRA/TRV 1-4				
Cable length per additional meter TRA/TRV 5				
Protection class IP67				
Tension spring				

## ACCESSORIES

TF25

PG1

Description	Art. No.	
<b>Immersion pockets brass nickel-plated with pressure screw</b>		
<b>Type</b>	<b>Mounting length</b>	
THMSDS50	50mm	247368
THMSDS100	100mm	247399
THMSDS200	200mm	247405
<b>Immersion pockets stainless steel with pressure screw</b>		
THVADS50	50mm	247313
THVADS100	100mm	247337
THVADS200	200mm	247344
<b>Mounting flanges</b>		
MF6 (brass)		3407
MF7 flexible (incl. seal inserts for D=4mm / 6mm)		399098



THVADS



MF6



MF7 flexible

**Ordering example 1: TF25.100.06 Ni1000TK5000 250°C, 6x100**  
 TF25=type / 100=connection wire 1m / 06=diameter of pocket 6mm  
 Ni1000TK5000=sensor Ni1000TK5000 / 250°C=temperature up to 250°C  
 6x100=mounting length 100mm

**Ordering example 2: TF25.400.06 TRA 2, 6x100, 4L, Spf, IP67**  
 TF25=type / 400=connection wire 4m / 06=diameter of pocket 6mm  
 TRA 2=transducer 4-20mA, -10°C...+120°C  
 6x100=mounting length 100mm / 4L=4-wire connection  
 Spf=tension spring / IP67=protection class IP67

# Outdoor Temperature Sensor passive – AGS43 «

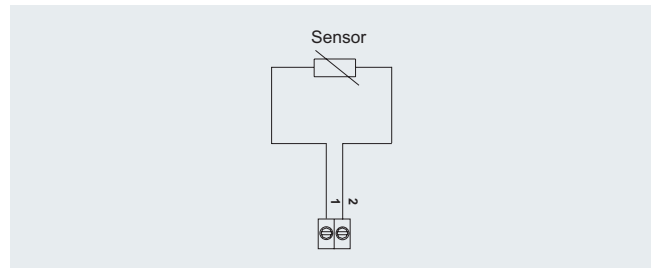
## Application

For temperature measuring in outdoor areas, cold stores and greenhouses, production plants and warehouses. Designed for locking on control and display systems.

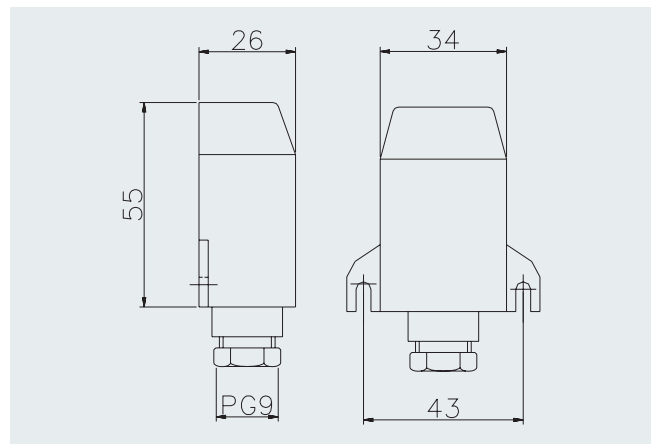
TECHNICAL DATA	
Ambient temperature	-35°C...+90°C (enclosure)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white, similar to RAL9010
Cable entry	PG9
Protection	IP43
Notice	Other sensors on request



## Connection

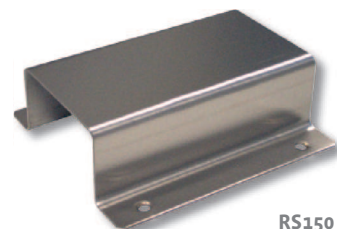


## Dimensional Drawing (mm)



PASSIVE	
AGS43	PG1
Type	Art. No.
AGS43 without sensor	133128
AGS43 PT100	116749
AGS43 PT100 1/3DIN	25027
AGS43 PT1000	25034
AGS43 PT1000 1/3 DIN	25041
AGS43 Ni1000	25058
AGS43 Ni1000TK5000	25065
AGS43 FeT	25089
AGS43 NTC1,8k	132855
AGS43 NTC5k	25119
AGS43 NTC10k	25126
AGS43 NTC10k Precon	25164
AGS43 NTC20k	25133
AGS43 KTY81-110	25188
AGS43 KTY81-121	25195
AGS43 KTY81-122	25201
AGS43 KTY81-210	25218
AGS43 LM235Z	25232

ACCESSORIES	
AGS43	PG1
Description	Art. No.
Rawlplugs and screws (2 pcs. each)	102209
Sun-/rain protection RS150	103329



RS150



# » AGS54 – Outdoor Temperature Sensor passive

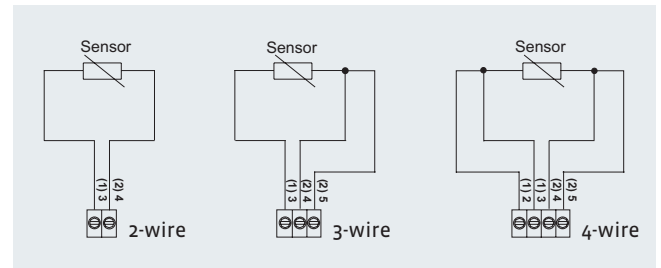
## Application

For temperature measuring in outdoor areas, in cold stores and greenhouses, production plants and warehouses. Designed for locking on control and display systems.

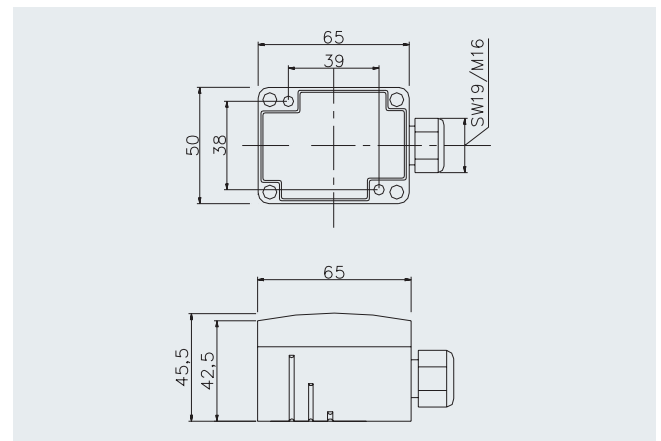
TECHNICAL DATA	
Ambient temperature	-35°C...+90°C (enclosure)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Protection	IP65
Notice	Other sensors on request



## Connection passive



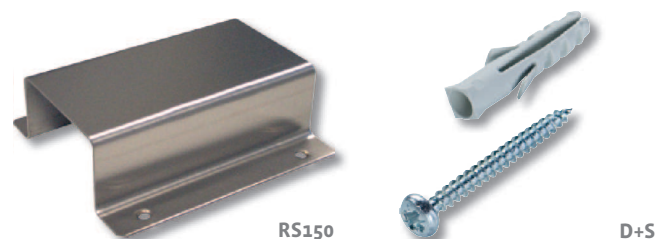
## Dimensional Drawing (mm)



PASSIVE	
AGS54	PG1
Type	Art. No.
AGS54 without sensor	199902
AGS54 PT100	25263
AGS54 PT100 1/3DIN	25270
AGS54 PT1000	25287
AGS54 PT1000 1/3 DIN	25294
AGS54 Ni1000	25300
AGS54 Ni1000TK5000	25317
AGS54 FeT	25331
AGS54 NTC1,8k	132534
AGS54 NTC5k	25362
AGS54 NTC10k	25379
AGS54 NTC10k Precon	25416
AGS54 NTC20k	25386
AGS54 KTY81-110	25430
AGS54 KTY81-121	25447
AGS54 KTY81-122	25454
AGS54 KTY81-210	25461
AGS54 LM235Z	25485

OPTIONS	
AGS54	PG1
Description	
Aluminium enclosure	

ACCESSORIES	
AGS54	PG1
Description	Art. No.
Rawplugs and screws (2 pcs. each)	102209
Sun-/rain protection RS150	103329



# Outdoor Temperature Sensor passive / active / LON – AGS54ext «

## Application

For temperature measuring in outdoor areas, cold stores and greenhouses, production plants and warehouses. The sensor is sealed in an external pocket to enable a faster response to temperature changes. Designed for locking on control and display systems.



TECHNICAL DATA – PASSIVE OUTPUT	
Ambient temperature	-35°C...+90°C (enclosure)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=6mm/ L=25mm
Protection	IP65
Notice	Other sensors on request

TECHNICAL DATA – ACTIVE OUTPUT / LON	
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 3/TRV 3: 0°C...+50°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Ambient temperature	-35°C...+70°C (enclosure)
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA LON: typ. 0,5W/1,7VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M20 (TRA/TRV) M20 single or double (LON)
Sensor pocket	Stainless steel 1.4571, Ø=6mm/ L=25mm
Protection class	IP65 with SI-Protection
Notice	Also available with display (on request)

Enclosure -50°C available (on request)



AGS54ext



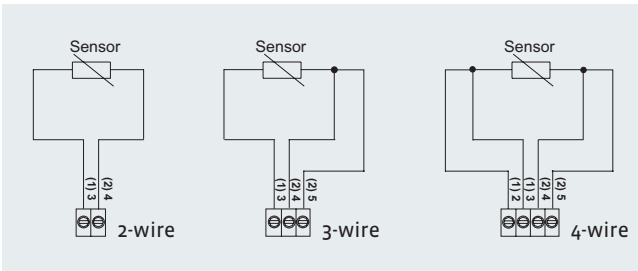
AGS54ext LCD

Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

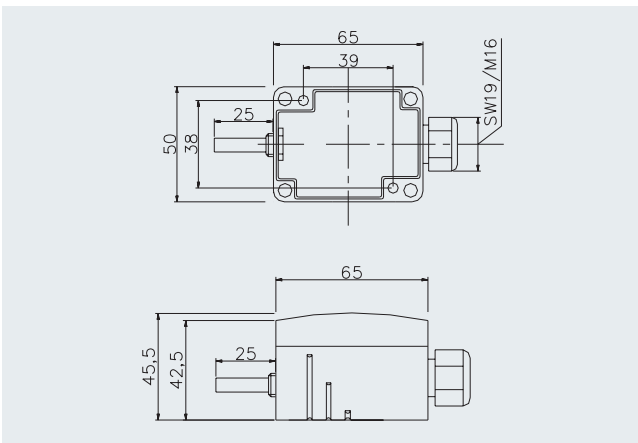


# » AGS54ext – Outdoor Temperature Sensor passive / active / LON

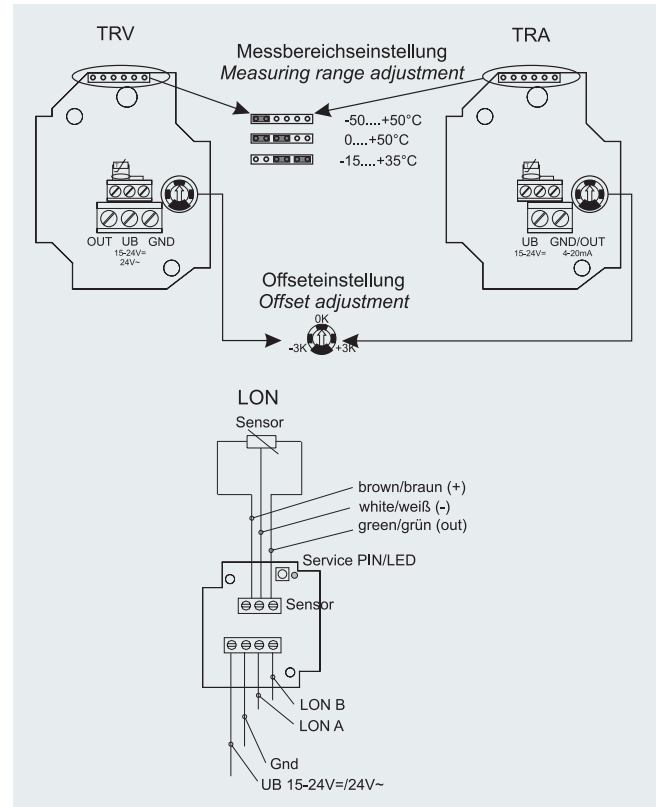
## Connection passive



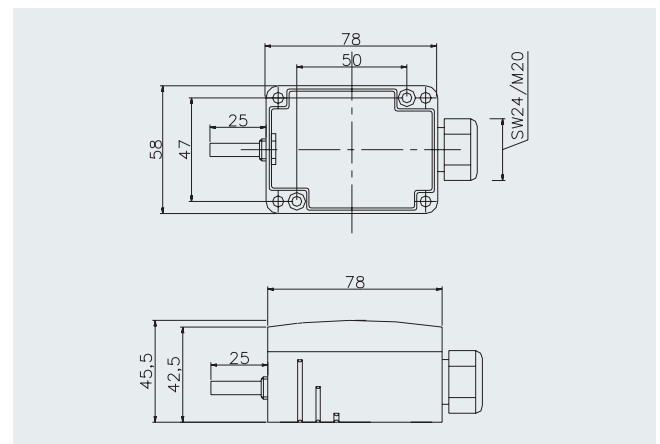
## Dimensional Drawing passive (mm)



## Connection active / LON



## Dimensional Drawing active / LON (mm)



# Outdoor Temperature Sensor passive / active / LON – AGS54ext «

## PASSIVE

AGS54ext		PG1
Type	Art. No.	
AGS54ext PT100	25539	
AGS54ext PT100 1/3DIN	25546	
AGS54ext PT1000	25553	
AGS54ext PT1000 1/3 DIN	25560	
AGS54ext Ni1000	25577	
AGS54ext Ni1000TK5000	25584	
AGS54ext FeT	25607	
AGS54ext NTC1,8k	247665	
AGS54ext NTC5k	25638	
AGS54ext NTC10k	25645	
AGS54ext NTC10k Precon	25683	
AGS54ext NTC20k	25652	
AGS54ext KTY81-110	25706	
AGS54ext KTY81-121	25713	
AGS54ext KTY81-122	25720	
AGS54ext KTY81-210	25737	
AGS54ext LM235Z	25751	

## ACTIVE – TRA 1 / TRV 1

-50°C...+50°C

AGS54ext		PG1
Type	Out	Art. No.
AGS54ext TRA 1	4-20mA	111034
AGS54ext TRV 1	0-10V	108997

## AKTIV – TRA 3 / TRV 3

0°C...+50°C

AGS54ext		PG1
Type	Out	Art. No.
AGS54ext TRA 3	4-20mA	111041
AGS54ext TRV 3	0-10V	111027

## LON

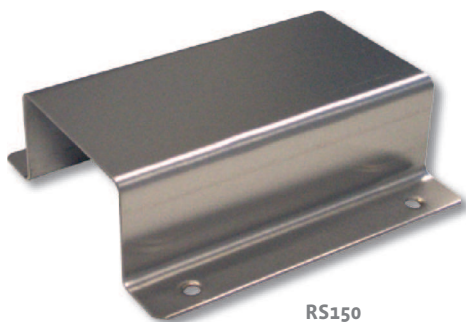
AGS54ext		PG1
Type	Out	Art. No.
AGS54ext LON	FTT	25775

## OPTION

AGS54ext TRA / TRV		PG1
Description		
LCD		

## ACCESSORIES

AGS54ext		PG1
Description	Art. No.	
Rawlplugs and screws (2 pcs. each)	102209	
Sun/rain protection RS150	103329	



RS150



D+S

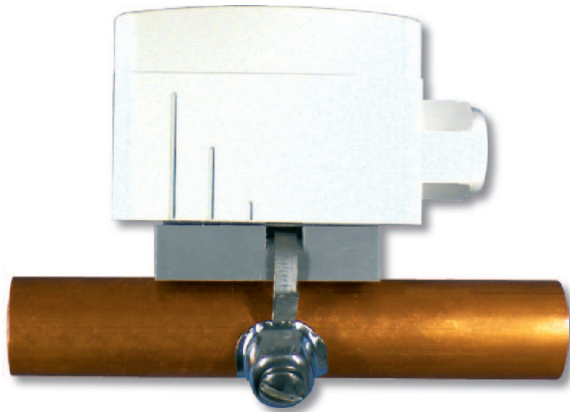
## » VFG54 – Pipe Contact Temperature Sensor passive / active / LON

### Application

For temperature detection on pipes and arched surfaces. Designed for locking on control and display systems.



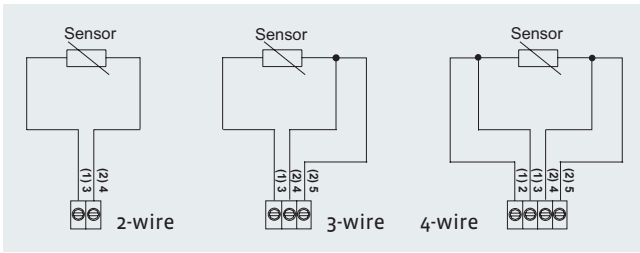
TECHNICAL DATA – PASSIVE OUTPUT	
Ambient temperature	-35°C...+90°C (enclosure)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Brass, spring mounted sensor contact
Protection	IP65
Notice	Other sensors on request



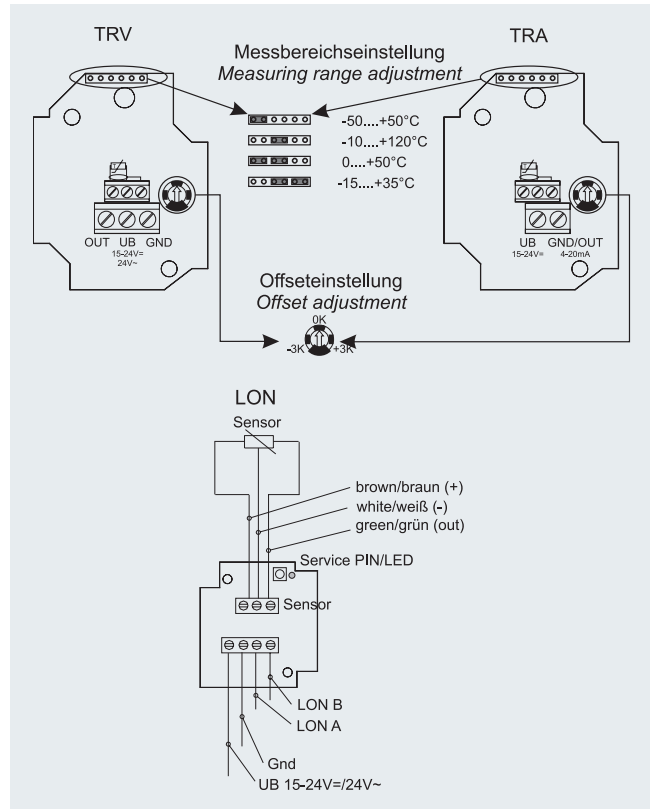
TECHNICAL DATA – ACTIVE OUTPUT / LON	
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 2/TRV 2: -10°C...+120°C TRA 3/TRV 3: 0°C...+50°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Ambient temperature	-25°C...+70°C (enclosure)
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA LON: max. 20mA/24V= typ. 0,5W/1,7VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16 (TRA/TRV) M20 single and double (LON/LCD)
Sensor pocket	Brass, spring mounted sensor contact
Protection	IP65

# Pipe Contact Temperature Sensor passive / active / LON – VFG54 «

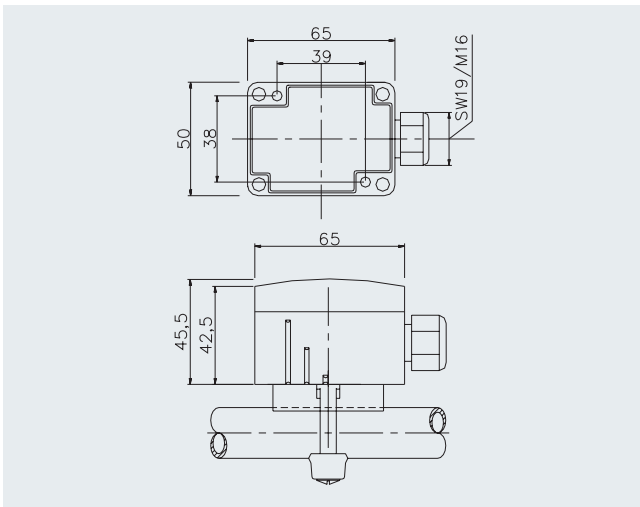
## Connection passive



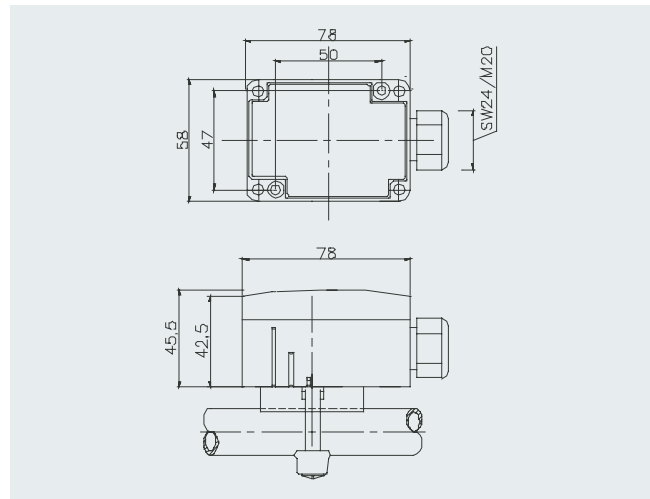
## Connection active / LON



## Dimensional Drawing passive / active (mm)



## Dimensional Drawing LON / LCD (mm)



## » VFG54 – Pipe Contact Temperature Sensor passive / active / LON

PASSIVE	
VFG54	PG1
Type	Art. No.
VFG54 PT100	30236
VFG54 PT100 1/3DIN	30243
VFG54 PT1000	30250
VFG54 PT1000 1/3 DIN	30267
VFG54 Ni1000	30274
VFG54 Ni1000TK5000	30281
VFG54 FeT	30304
VFG54 NTC1,8k	132558
VFG54 NTC5k	30335
VFG54 NTC10k	30342
VFG54 NTC10k Precon	30380
VFG54 NTC20k	30359
VFG54 KTY81-110	30403
VFG54 KTY81-121	30410
VFG54 KTY81-122	30427
VFG54 KTY81-210	30434
VFG54 LM235Z	30458

ACTIVE – TRA 1 / TRV 1		-50°C...+50°C
VFG54	PG1	
Type	Out	Art. No.
VFG54 TRA 1	4-20mA	111096
VFG54 TRV 1	0-10V	111058

ACTIVE – TRA 2 / TRV 2		-10°C...+120°C
VFG54	PG1	
Type	Out	Art. No.
VFG54 TRA 2	4-20mA	111102
VFG54 TRV 2	0-10V	111065

ACTIVE – TRA 3 / TRV 3		0°C...+50°C
VFG54	PG1	
Type	Out	Art. No.
VFG54 TRA 3	4-20mA	111119
VFG54 TRV 3	0-10V	111089

LON	
VFG54	PG1
Type	Out Art. No.
VFG54 LON	FTT 98144

OPTION	
VFG54 TRA / TRV	PG1
Description	
LCD	

ACCESSORIES	
VFG54	PG1
Description	Art. No.
Tightening strap 2" with contact fluid	102254
Tightening strap 900mm with contact fluid	102315



Tightening strap / Syringe with contact fluid

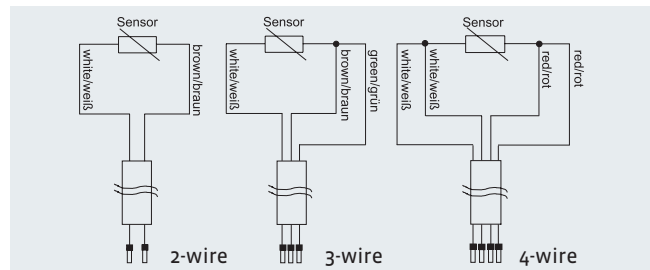
# Pipe Contact Temperature Sensor passive – AF25 «

## Application

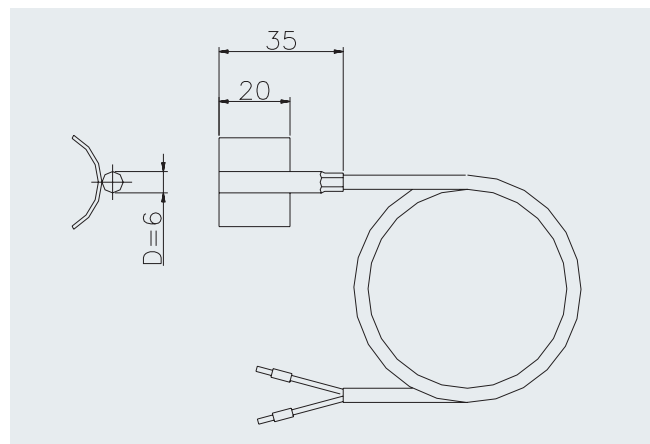
For temperature detection on pipes and arched surfaces.  
Designed for locking on control and display systems.

TECHNICAL DATA	
Ambient temperature	-35°C...+100°C
Connection wire	PVC, cross section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Sensor pocket	Brass, Ø=6mm / L=35mm, with soldered pre-bent brass plate
Protection	SI-Protection
Notice	Other sensors on request

## Connection passive



## Dimensional Drawing (mm)



ACCESSORIES	
AF25	PG1
Description	Art. No.
Tightening strap 2" with contact fluid	102254
Tightening strap 900mm with contact fluid	102315



Tightening strap / Syringe with contact fluid

Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

PASSIVE	
AF25 - CONNECTION WIRE 1M	PG1
Type	Art. No.
AF25.100.06 PT100	81610
AF25.100.06 PT100 1/3 DIN	46411
AF25.100.06 PT1000	54263
AF25.100.06 PT1000 1/3 DIN	54300
AF25.100.06 Ni1000	54348
AF25.100.06 Ni1000TK5000	54386
AF25.100.06 NTC1,8k	241687
AF25.100.06 NTC5k	54461
AF25.100.06 NTC10k	92005
AF25.100.06 NTC10k Precon	92043
AF25.100.06 NTC20k	141994

OPTION	
AF25	PG1
Description	
Cable length per additional meter	

## » PR25 – Pipe Contact Temperature Sensor passive / active

### Application

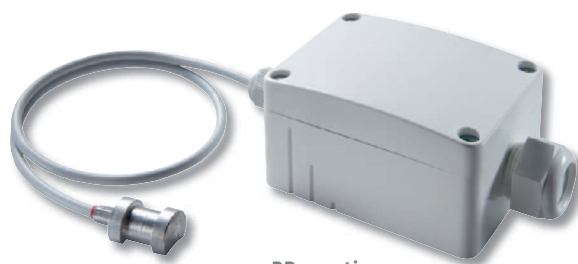
For temperature detection on pipes and arched surfaces.  
Designed for locking on control and display systems.

#### TECHNICAL DATA – PASSIVE OUTPUT

Ambient temperature	-35°C...+100°C, with silicone wire up to 180°C
Connection wire	PVC (standard) or silicone, Cross section 0,25mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Sensor pocket	Aluminium, $\varnothing=11\text{mm}$ / L=28mm
Protection	SI-Protection
Notice	Other sensors on request



PR25 passive



PR25 active

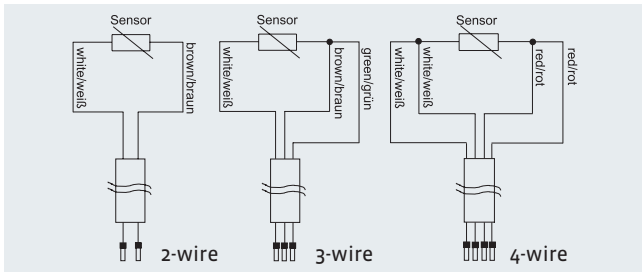
#### TECHNICAL DATA – ACTIVE OUTPUT

Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 2/TRV 2: -10°C...+120°C TRA 3/TRV 3: 0°C...+50°C TRA 4/TRV 4: 0°C...+160°C
Accuracy	±1% of measuring range (at max. 2m connection wire)
Connection wire	Silicone, cross section 0,25mm <sup>2</sup> / L=1m, other standard lengths 2m, 4m, 6m
Ambient temperature	-35°C...+70°C (enclosure)
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) 0 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Enclosure	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Aluminium, $\varnothing=11\text{mm}$ / L=28mm
Protection	SI-Protection

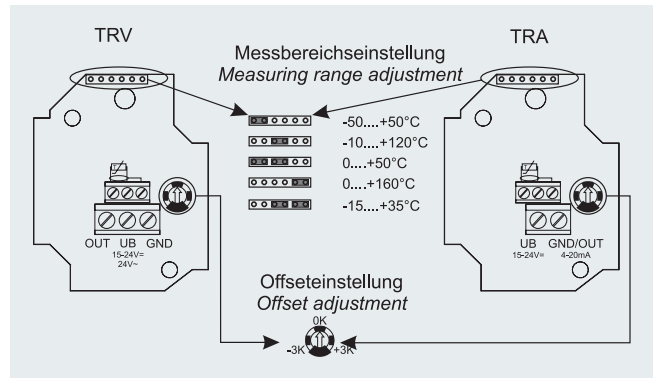
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# Pipe Contact Temperature Sensor passive / active – PR25 «

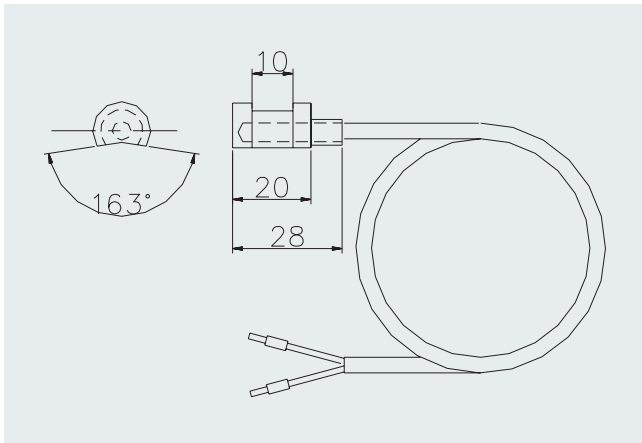
## Connection passive



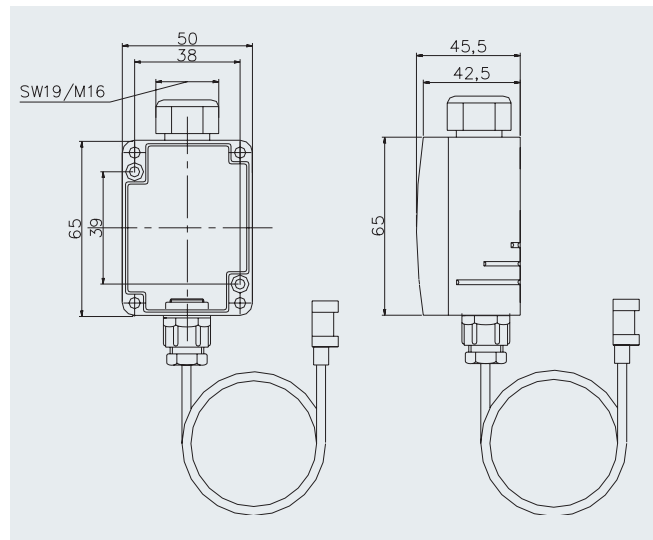
## Connection active



## Dimensional Drawing passive (mm)



## Dimensional Drawing active (mm)





## » PR25 – Pipe Contact Temperature Sensor passive / active

PASSIVE			100°C
PR25 – CONNECTION WIRE 1M			PG1
Type	Pocket L	Art. No.	
PR25.100.11 PT100	28mm	81696	
PR25.100.11 PT100 1/3 DIN	28mm	94771	
PR25.100.11 PT1000	28mm	94894	
PR25.100.11 PT1000 1/3 DIN	28mm	94931	
PR25.100.11 Ni1000	28mm	94979	
PR25.100.11 Ni1000TK5000	28mm	95686	
PR25.100.11 NTC1,8k	28mm	287128	
PR25.100.11 NTC5k	28mm	95761	
PR25.100.11 NTC10k	28mm	95808	
PR25.100.11 NTC10k Precon	28mm	95846	
PR25.100.11 NTC20k	28mm	362641	
PR25.100.11 KTY81-110	28mm	95884	
PR25.100.11 KTY81-121	28mm	95921	
PR25.100.11 KTY81-210	28mm	96003	
PR25.100.11 LM235Z	28mm	96089	

AKTIV – TRA 1 / TRV 1				-50°C...+50°C
PR25 – CONNECTION WIRE 1M				PG1
Type	Out	Pocket L	Art. No.	
PR25.100.11 TRA 1	4-20mA	28mm	209434	
PR25.100.11 TRV 1	0-10V	28mm	348348	

AKTIV – TRA3 / TRV 3				0°C...+50°C
PR25 – CONNECTION WIRE 1M				PG1
Type	Out	Pocket L	Art. No.	
PR25.100.11 TRA 3	4-20mA	28mm	348331	
PR25.100.11 TRV 3	0-10V	28mm	275194	

OPTIONS	
PR25 TRA / TRV	PG1
Description	
LCD	
Cable length per additional meter 180°C	

ACCESSORIES	
PR25	PG1
Description	Art. No.
Tightening strap 2" with contact fluid	102254
Tightening strap 900mm with contact fluid	102315

Ordering example 1: PR25.400.11 Ni1000 180°C  
 PR25=type / 400=connection wire 4m / 11=diameter of pocket 11mm  
 Ni1000=sensor Ni1000 / 180°C=temperature up to 180°C

OPTIONS	
PR25 100°C	PG1
Description	
Cable length per additional meter 100°C	
Temperature up to 180°C	
Cable length per additional meter 180°C	

AKTIV – TRA 2 / TRV 2				-10°C...+120°C
PR25 – CONNECTION WIRE 1M				PG1
Type	Out	Pocket L	Art. No.	
PR25.100.11 TRA 2	4-20mA	28mm	195348	
PR25.100.11 TRV 2	0-10V	28mm	263115	

AKTIV – TRA 4 / TRV 4				0°C...+160°C
PR25 – CONNECTION WIRE 1M				PG1
Type	Out	Pocket L	Art. No.	
PR25.100.11 TRA 4	4-20mA	28mm	161220	
PR25.100.11 TRV 4	0-10V	28mm	188432	



Tightening strap 900mm with contact fluid

Ordering example 2: PR25.100.11 TRA 4  
 PR25=type / 100=connection wire 1m / 11=diameter of pocket 11mm  
 TRA 4=transducer 4-20mA, 0°C...+160°C

# Duct Temperature Sensor Ø4mm passive / active – AKF10 «

## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	40mm, 90mm, 140mm, 190mm
Ambient temperature	-35°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=4mm
Protection	IP65, SI-Protection
Notice	Other sensors on request

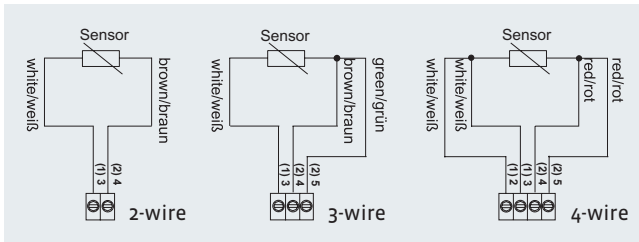
TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	40mm, 90mm, 140mm, 190mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C
Accuracy	±1% of measuring range
Ambient temperature	-35°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16, M20 (LCD)
Sensor pocket	Stainless steel 1.4571, Ø=4mm
Protection	IP65



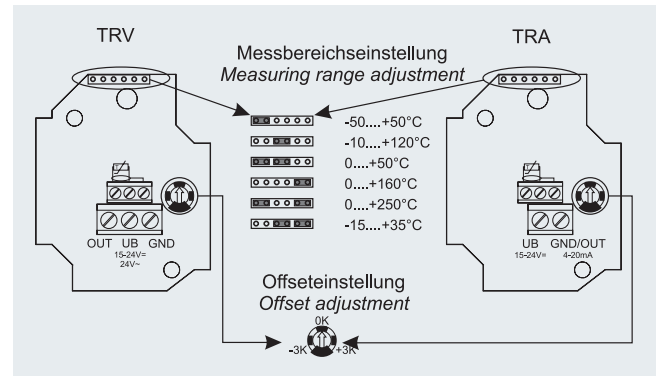
Protection against mechanical overstress  
**SI-Protection**  
humidity and vibration

# » AKF10 – Duct Temperature Sensor Ø4mm passive / active

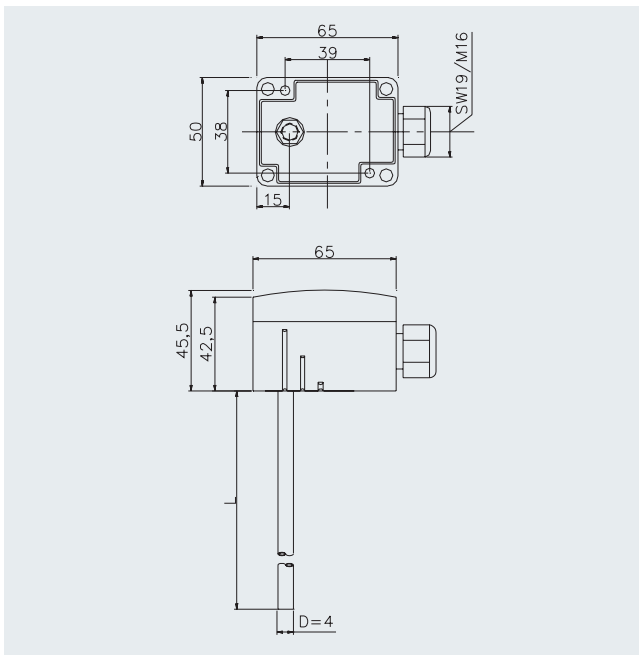
## Connection passive



## Connection active



## Dimensional Drawing passive / active without LCD



PT100		160°C	
AKF10		PG1	
Type	Pocket L	Art. No.	
AKF10.040.04 PT100	40mm	18593	
AKF10.090.04 PT100	90mm	18609	
AKF10.140.04 PT100	140mm	18616	
AKF10.190.04 PT100	190mm	18623	

PT100 1/3 DIN		160°C	
AKF10		PG1	
Type	Pocket L	Art. No.	
AKF10.040.04 PT100 1/3 DIN	40mm	18630	
AKF10.090.04 PT100 1/3 DIN	90mm	18647	
AKF10.140.04 PT100 1/3 DIN	140mm	18654	
AKF10.190.04 PT100 1/3 DIN	190mm	18661	

PT1000		160°C	
AKF10		PG1	
Type	Pocket L	Art. No.	
AKF10.040.04 PT1000	40mm	18678	
AKF10.090.04 PT1000	90mm	18685	
AKF10.140.04 PT1000	140mm	18692	
AKF10.190.04 PT1000	190mm	18708	

PT1000 1/3 DIN		160°C	
AKF10		PG1	
Type	Pocket L	Art. No.	
AKF10.040.04 PT1000 1/3 DIN	40mm	18715	
AKF10.090.04 PT1000 1/3 DIN	90mm	18722	
AKF10.140.04 PT1000 1/3 DIN	140mm	18739	
AKF10.190.04 PT1000 1/3 DIN	190mm	18746	

# Duct Temperature Sensor Ø4mm passive – AKF10 «

Ni1000			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 Ni1000	40mm	18753	
AKF10.090.04 Ni1000	90mm	18760	
AKF10.140.04 Ni1000	140mm	18777	
AKF10.190.04 Ni1000	190mm	18784	

Ni1000TK5000			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 Ni1000TK5000	40mm	18791	
AKF10.090.04 Ni1000TK5000	90mm	18807	
AKF10.140.04 Ni1000TK5000	140mm	18814	
AKF10.190.04 Ni1000TK5000	190mm	18821	

FeT			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 FeT	40mm	348355	
AKF10.090.04 FeT	90mm	348379	
AKF10.140.04 FeT	140mm	134071	
AKF10.190.04 FeT	190mm	348409	

NTC1,8k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 NTC1,8k	40mm	348362	
AKF10.090.04 NTC1,8k	90mm	348386	
AKF10.140.04 NTC1,8k	140mm	348393	
AKF10.190.04 NTC1,8k	190mm	256995	

NTC5k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 NTC5k	40mm	18838	
AKF10.090.04 NTC5k	90mm	18845	
AKF10.140.04 NTC5k	140mm	18852	
AKF10.190.04 NTC5k	190mm	18869	

NTC10k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 NTC10k	40mm	18876	
AKF10.090.04 NTC10k	90mm	18883	
AKF10.140.04 NTC10k	140mm	18890	
AKF10.190.04 NTC10k	190mm	18906	

NTC10k Precon			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 NTC10k Precon	40mm	18999	
AKF10.090.04 NTC10k Precon	90mm	19002	
AKF10.140.04 NTC10k Precon	140mm	19019	
AKF10.190.04 NTC10k Precon	190mm	19026	

NTC20k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.040.04 NTC20k	40mm	18913	
AKF10.090.04 NTC20k	90mm	18920	
AKF10.140.04 NTC20k	140mm	18937	
AKF10.190.04 NTC20k	190mm	18944	

## OPTIONS

AKF10 160°C

PG1

### Description

Temperature up to 260°C

3-wire connection

4-wire connection

## » AKF10 – Duct Temperature Sensor Ø4mm active

TRA 1 / TRV 1				-50°C...+50°C
AKF10				PG1
Type	Out	Pocket L	Art. No.	
AKF10.040.04 TRA 1	4-20mA	40mm	22675	
AKF10.090.04 TRA 1	4-20mA	90mm	22682	
AKF10.140.04 TRA 1	4-20mA	140mm	22699	
AKF10.190.04 TRA 1	4-20mA	190mm	22705	
AKF10.040.04 TRV 1	0-10V	40mm	22873	
AKF10.090.04 TRV 1	0-10V	90mm	22880	
AKF10.140.04 TRV 1	0-10V	140mm	22897	
AKF10.190.04 TRV 1	0-10V	190mm	22903	

TRA 2 / TRV 2				-10°C...+120°C
AKF10				PG1
Type	Out	Pocket L	Art. No.	
AKF10.040.04 TRA 2	4-20mA	40mm	22712	
AKF10.090.04 TRA 2	4-20mA	90mm	22729	
AKF10.140.04 TRA 2	4-20mA	140mm	22736	
AKF10.190.04 TRA 2	4-20mA	190mm	22743	
AKF10.040.04 TRV 2	0-10V	40mm	22910	
AKF10.090.04 TRV 2	0-10V	90mm	22927	
AKF10.140.04 TRV 2	0-10V	140mm	22934	
AKF10.190.04 TRV 2	0-10V	190mm	22941	

TRA 3 / TRV 3				0°C...+50°C
AKF10				PG1
Type	Out	Pocket L	Art. No.	
AKF10.040.04 TRA 3	4-20mA	40mm	22750	
AKF10.090.04 TRA 3	4-20mA	90mm	22767	
AKF10.140.04 TRA 3	4-20mA	140mm	22774	
AKF10.190.04 TRA 3	4-20mA	190mm	22781	
AKF10.040.04 TRV 3	0-10V	40mm	22958	
AKF10.090.04 TRV 3	0-10V	90mm	22965	
AKF10.140.04 TRV 3	0-10V	140mm	22972	
AKF10.190.04 TRV 3	0-10V	190mm	22989	

TRA 4 / TRV 4				0°C...+160°C
AKF10				PG1
Type	Out	Pocket L	Art. No.	
AKF10.040.04 TRA 4	4-20mA	40mm	22798	
AKF10.090.04 TRA 4	4-20mA	90mm	22804	
AKF10.140.04 TRA 4	4-20mA	140mm	22811	
AKF10.190.04 TRA 4	4-20mA	190mm	22828	
AKF10.040.04 TRV 4	0-10V	40mm	22996	
AKF10.090.04 TRV 4	0-10V	90mm	23009	
AKF10.140.04 TRV 4	0-10V	140mm	23016	
AKF10.190.04 TRV 4	0-10V	190mm	23023	

TRA 5 / TRV 5				0°C...+250°C
AKF10				PG1
Type	Out	Pocket L	Art. No.	
AKF10.040.04 TRA 5	4-20mA	40mm	22835	
AKF10.090.04 TRA 5	4-20mA	90mm	22842	
AKF10.140.04 TRA 5	4-20mA	140mm	22859	
AKF10.190.04 TRA 5	4-20mA	190mm	22866	
AKF10.040.04 TRV 5	0-10V	40mm	23030	
AKF10.090.04 TRV 5	0-10V	90mm	23047	
AKF10.140.04 TRV 5	0-10V	140mm	23054	
AKF10.190.04 TRV 5	0-10V	190mm	23061	

OPTIONS	
AKF10 TRA / TRV	PG1
Description	
LCD	

### ACCESSORIES

AKF10		PG1
Description	Art. No.	
Mounting flange MF4 (brass)	102438	
Mounting flange MF7 flexible (incl. seal inserts for D=4mm / 6mm)	399098	



MF4



MF7 flexible

Ordering example 1: AKF10.040.04 PT100 260°C 3L  
 AKF10=type / 040=mounting length 40mm  
 04=diameter of pocket 4mm / PT100=sensor PT100  
 260°C=temperature up to 260°C / 3L=3-wire connection

Ordering example 2: AKF10.190.04 TRV 3  
 AKF10=type / 190=mounting length 190mm  
 04=diameter of pocket 4mm / TRV 3=transducer 0-10V, 0°C...+50°C

# Duct Temperature Sensor Ø7mm passive / active / LON – AKF10 «

## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems. In combination with an immersion pocket also suitable for temperature measuring in liquid mediums (e.g. pipeline systems).



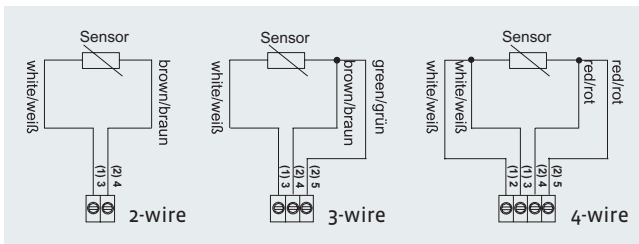
TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	62mm, 135mm, 192mm, 240mm, 320m, 392mm, 465mm
Ambient temperature	-35°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=7mm
Protection	IP65, with SI-Protection
Notice	Other sensors on request

TECHNICAL DATA – ACTIVE OUTPUT / LON	
Mounting lengths	62mm, 135mm, 192mm, 240mm, 320m, 392mm, 465mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Ambient temperature	-35°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA LON: typ. 0,5W/1,7VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16 M20 single and double (LON)
Sensor pocket	Stainless steel 1.4571, Ø=7mm
Protection	IP65, AKF10 LON additionally with SI-Protection

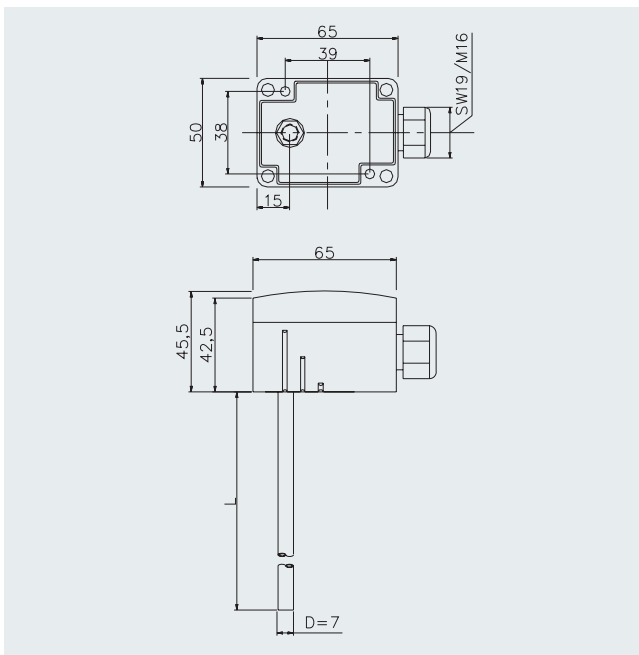


# » AKF10 – Kanaltemperaturfühler Ø7mm passiv / aktiv / LON

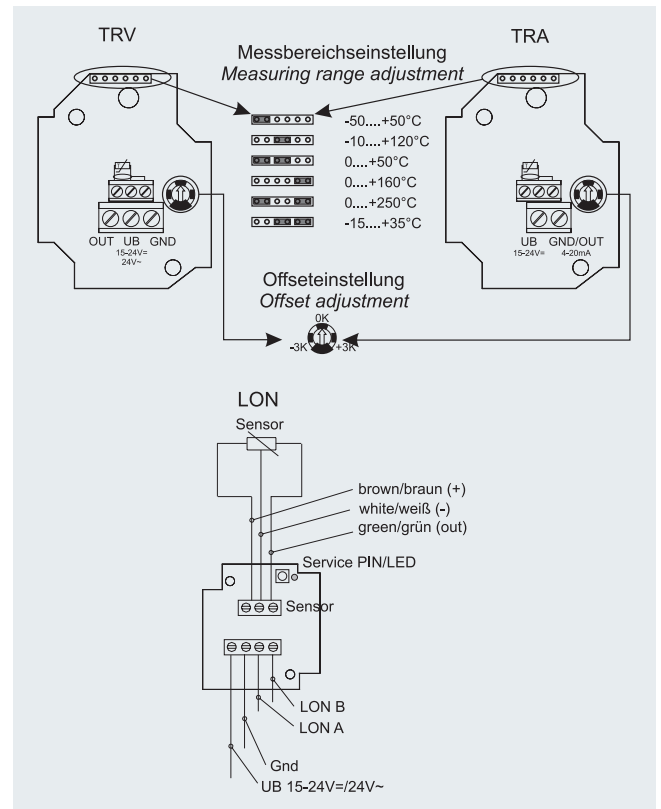
## Connection passive



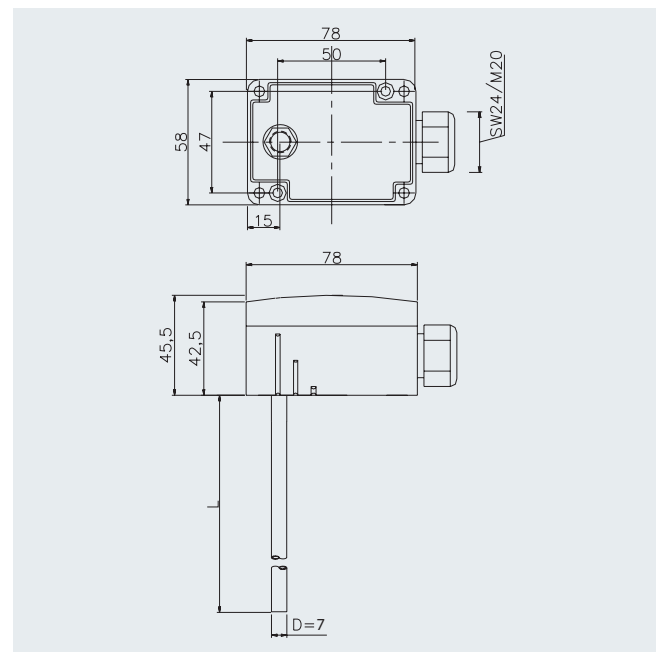
## Dimensional Drawing passive / active (mm)



## Connection active / LON



## Dimensional Drawing LON / LCD (mm)



# Duct Temperature Sensor Ø7mm passive – AKF10 «

PT100			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 PT100	62mm	9133	
AKF10.135.07 PT100	135mm	9140	
AKF10.192.07 PT100	192mm	9157	
AKF10.240.07 PT100	240mm	9164	
AKF10.320.07 PT100	320mm	9171	
AKF10.392.07 PT100	392mm	9188	
AKF10.465.07 PT100	465mm	9195	

PT100 1/3 DIN			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 PT100 1/3 DIN	62mm	9201	
AKF10.135.07 PT100 1/3 DIN	135mm	9218	
AKF10.192.07 PT100 1/3 DIN	192mm	9225	
AKF10.240.07 PT100 1/3 DIN	240mm	9232	
AKF10.320.07 PT100 1/3 DIN	320mm	9249	
AKF10.392.07 PT100 1/3 DIN	392mm	9805	
AKF10.465.07 PT100 1/3 DIN	465mm	9812	

PT1000			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 PT1000	62mm	9829	
AKF10.135.07 PT1000	135mm	9836	
AKF10.192.07 PT1000	192mm	9843	
AKF10.240.07 PT1000	240mm	9850	
AKF10.320.07 PT1000	320mm	9867	
AKF10.392.07 PT1000	392mm	9874	
AKF10.465.07 PT1000	465mm	9881	

PT1000 1/3 DIN			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 PT1000 1/3 DIN	62mm	9898	
AKF10.135.07 PT1000 1/3 DIN	135mm	9904	
AKF10.192.07 PT1000 1/3 DIN	192mm	9911	
AKF10.240.07 PT1000 1/3 DIN	240mm	9928	
AKF10.320.07 PT1000 1/3 DIN	320mm	9935	
AKF10.392.07 PT1000 1/3 DIN	392mm	9942	
AKF10.465.07 PT1000 1/3 DIN	465mm	9959	

Ni1000			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 Ni1000	62mm	9966	
AKF10.135.07 Ni1000	135mm	9973	
AKF10.192.07 Ni1000	192mm	9980	
AKF10.240.07 Ni1000	240mm	9997	
AKF10.320.07 Ni1000	320mm	10009	
AKF10.392.07 Ni1000	392mm	10016	
AKF10.465.07 Ni1000	465mm	10023	

Ni1000TK5000			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 Ni1000TK5000	62mm	10030	
AKF10.135.07 Ni1000TK5000	135mm	10047	
AKF10.192.07 Ni1000TK5000	192mm	10054	
AKF10.240.07 Ni1000TK5000	240mm	10061	
AKF10.320.07 Ni1000TK5000	320mm	10078	
AKF10.392.07 Ni1000TK5000	392mm	10085	
AKF10.465.07 Ni1000TK5000	465mm	10092	

FeT			160°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 FeT	62mm	133579	
AKF10.135.07 FeT	135mm	141567	
AKF10.192.07 FeT	192mm	110747	
AKF10.240.07 FeT	240mm	113700	
AKF10.320.07 FeT	320mm	132718	
AKF10.392.07 FeT	392mm	142199	
AKF10.465.07 FeT	465mm	132404	

NTC1,8k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 NTC1,8k	62mm	242554	
AKF10.135.07 NTC1,8k	135mm	132541	
AKF10.192.07 NTC1,8k	192mm	230117	
AKF10.240.07 NTC1,8k	240mm	190251	
AKF10.320.07 NTC1,8k	320mm	237147	
AKF10.392.07 NTC1,8k	392mm	246989	
AKF10.465.07 NTC1,8k	465mm	256339	



## » AKF10 – Duct Temperature Sensor Ø7mm passive

NTC5k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 NTC5k	62mm	10108	
AKF10.135.07 NTC5k	135mm	10115	
AKF10.192.07 NTC5k	192mm	10122	
AKF10.240.07 NTC5k	240mm	10139	
AKF10.320.07 NTC5k	320mm	10146	
AKF10.392.07 NTC5k	392mm	10153	
AKF10.465.07 NTC5k	465mm	10160	

NTC10k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 NTC10k	62mm	10177	
AKF10.135.07 NTC10k	135mm	10184	
AKF10.192.07 NTC10k	192mm	10191	
AKF10.240.07 NTC10k	240mm	10207	
AKF10.320.07 NTC10k	320mm	10214	
AKF10.392.07 NTC10k	392mm	10221	
AKF10.465.07 NTC10k	465mm	10238	

NTC10k Precon			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 NTC10k Precon	62mm	10382	
AKF10.135.07 NTC10k Precon	135mm	10399	
AKF10.192.07 NTC10k Precon	192mm	10405	
AKF10.240.07 NTC10k Precon	240mm	10412	
AKF10.320.07 NTC10k Precon	320mm	10429	
AKF10.392.07 NTC10k Precon	392mm	10436	
AKF10.465.07 NTC10k Precon	465mm	10443	

NTC20k			150°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 NTC20k	62mm	10245	
AKF10.135.07 NTC20k	135mm	10252	
AKF10.192.07 NTC20k	192mm	10269	
AKF10.240.07 NTC20k	240mm	10276	
AKF10.320.07 NTC20k	320mm	10283	
AKF10.392.07 NTC20k	392mm	10290	
AKF10.465.07 NTC20k	465mm	10306	

LM235Z			120°C
AKF10			PG1
Type	Pocket L	Art. No.	
AKF10.062.07 LM235Z	62mm	10528	
AKF10.135.07 LM235Z	135mm	10535	
AKF10.192.07 LM235Z	192mm	10542	
AKF10.240.07 LM235Z	240mm	10559	
AKF10.320.07 LM235Z	320mm	10566	
AKF10.392.07 LM235Z	392mm	10573	
AKF10.465.07 LM235Z	465mm	10580	

### OPTIONS

#### AKF10 160°C

PG1

#### Description

Temperature up to 260°C

3-wire connection

4-wire connection

# Duct Temperature Sensor Ø7mm active – AKF10 «

TRA 1 / TRV 1		-50°C...+50°C		
AKF10		PG1		
Type	Out	Pocket L	Art. No.	
AKF10.062.07 TRA 1	4-20mA	62mm	21579	
AKF10.135.07 TRA 1	4-20mA	135mm	21586	
AKF10.192.07 TRA 1	4-20mA	192mm	21593	
AKF10.240.07 TRA 1	4-20mA	240mm	21609	
AKF10.320.07 TRA 1	4-20mA	320mm	21616	
AKF10.392.07 TRA 1	4-20mA	392mm	21623	
AKF10.465.07 TRA 1	4-20mA	465mm	21630	
AKF10.062.07 TRV 1	0-10V	62mm	21920	
AKF10.135.07 TRV 1	0-10V	135mm	21937	
AKF10.192.07 TRV 1	0-10V	192mm	21944	
AKF10.240.07 TRV 1	0-10V	240mm	21951	
AKF10.320.07 TRV 1	0-10V	320mm	21968	
AKF10.392.07 TRV 1	0-10V	392mm	21975	
AKF10.465.07 TRV 1	0-10V	465mm	21982	

TRA 2 / TRV 2		-10°C...+120°C		
AKF10		PG1		
Type	Out	Pocket L	Art. No.	
AKF10.062.07 TRA 2	4-20mA	62mm	21647	
AKF10.135.07 TRA 2	4-20mA	135mm	21654	
AKF10.192.07 TRA 2	4-20mA	192mm	21661	
AKF10.240.07 TRA 2	4-20mA	240mm	21678	
AKF10.320.07 TRA 2	4-20mA	320mm	21685	
AKF10.392.07 TRA 2	4-20mA	392mm	21692	
AKF10.465.07 TRA 2	4-20mA	465mm	21708	
AKF10.062.07 TRV 2	0-10V	62mm	21999	
AKF10.135.07 TRV 2	0-10V	135mm	22002	
AKF10.192.07 TRV 2	0-10V	192mm	22019	
AKF10.240.07 TRV 2	0-10V	240mm	22026	
AKF10.320.07 TRV 2	0-10V	320mm	103534	
AKF10.392.07 TRV 2	0-10V	392mm	22040	
AKF10.465.07 TRV 2	0-10V	465mm	22057	

TRA 3 / TRV 3		0°C...+50°C		
AKF10		PG1		
Type	Out	Pocket L	Art. No.	
AKF10.062.07 TRA 3	4-20mA	62mm	21715	
AKF10.135.07 TRA 3	4-20mA	135mm	21722	
AKF10.192.07 TRA 3	4-20mA	192mm	21739	
AKF10.240.07 TRA 3	4-20mA	240mm	21746	
AKF10.320.07 TRA 3	4-20mA	320mm	21753	
AKF10.392.07 TRA 3	4-20mA	392mm	21760	
AKF10.465.07 TRA 3	4-20mA	465mm	21777	
AKF10.062.07 TRV 3	0-10V	62mm	22064	
AKF10.135.07 TRV 3	0-10V	135mm	22071	
AKF10.192.07 TRV 3	0-10V	192mm	22088	
AKF10.240.07 TRV 3	0-10V	240mm	22095	
AKF10.320.07 TRV 3	0-10V	320mm	22101	
AKF10.392.07 TRV 3	0-10V	392mm	22118	
AKF10.465.07 TRV 3	0-10V	465mm	22125	

TRA 4 / TRV 4		0°C...+160°C		
AKF10		PG1		
Type	Out	Pocket L	Art. No.	
AKF10.062.07 TRA 4	4-20mA	62mm	21784	
AKF10.135.07 TRA 4	4-20mA	135mm	21791	
AKF10.192.07 TRA 4	4-20mA	192mm	21807	
AKF10.240.07 TRA 4	4-20mA	240mm	21814	
AKF10.320.07 TRA 4	4-20mA	320mm	103299	
AKF10.392.07 TRA 4	4-20mA	392mm	21838	
AKF10.465.07 TRA 4	4-20mA	465mm	21845	
AKF10.062.07 TRV 4	0-10V	62mm	22132	
AKF10.135.07 TRV 4	0-10V	135mm	22149	
AKF10.192.07 TRV 4	0-10V	192mm	22156	
AKF10.240.07 TRV 4	0-10V	240mm	22163	
AKF10.320.07 TRV 4	0-10V	320mm	22170	
AKF10.392.07 TRV 4	0-10V	392mm	22187	
AKF10.465.07 TRV 4	0-10V	465mm	22194	

# » AKF10 – Duct Temperature Sensor Ø7mm active / LON

TRA 5 / TRV 5		0°C...+250°C	
AKF10		PG1	
Type	Out	Pocket L	Art. No.
AKF10.062.07 TRA 5	4-20mA	62mm	21852
AKF10.135.07 TRA 5	4-20mA	135mm	21869
AKF10.192.07 TRA 5	4-20mA	192mm	21876
AKF10.240.07 TRA 5	4-20mA	240mm	21883
AKF10.320.07 TRA 5	4-20mA	320mm	21890
AKF10.392.07 TRA 5	4-20mA	392mm	21906
AKF10.465.07 TRA 5	4-20mA	465mm	21913
AKF10.062.07 TRV 5	0-10V	62mm	22200
AKF10.135.07 TRV 5	0-10V	135mm	22217
AKF10.192.07 TRV 5	0-10V	192mm	22224
AKF10.240.07 TRV 5	0-10V	240mm	22231
AKF10.320.07 TRV 5	0-10V	320mm	22248
AKF10.392.07 TRV 5	0-10V	392mm	22255
AKF10.465.07 TRV 5	0-10V	465mm	22262

LON			
AKF10		PG1	
Type	Out	Pocket L	Art. No.
AKF10.062.07 LON	FTX	62mm	79419
AKF10.135.07 LON	FTX	135mm	95006
AKF10.192.07 LON	FTX	192mm	95013
AKF10.240.07 LON	FTX	240mm	95020
AKF10.320.07 LON	FTX	320mm	95037
AKF10.392.07 LON	FTX	392mm	95044
AKF10.465.07 LON	FTX	465mm	95051

## OPTIONS

AKF10 TRA / TRV / LON	PG1
Description	
LCD	

## ACCESSORIES

AKF10		PG1	
Description	Art. No.		
<b>Immersion pockets nickel-plated</b>			
Type	Length	for mounting length	
THMS50	50mm	62mm 1793	
THMS120	120mm	135mm 1809	
THMS185	185mm	192mm 1823	
THMS225	225mm	240mm 1816	
THMS300	300mm	320mm 1830	
THMS375	375mm	392mm 1847	
THMS450	450mm	465mm 102179	
<b>Immersion pockets stainless steel</b>			
THVA50	50mm	62mm 1885	
THVA120	120mm	135mm 1854	
THVA185	185mm	192mm 1915	
THVA225	225mm	240mm 1861	
THVA300	300mm	320mm 1892	
THVA375	375mm	392mm 1908	
THVA450	450mm	465mm 1878	

## Mounting flanges

MF7 (brass)	102360
MF7 flexible (incl. seal inserts for D=4mm / 6mm)	399098



THMS



MF7 MS



MF7 flexible

Ordering example 1: AKF10.392.07 PT100 260°C 4L  
 AKF10=type / 392=mounting length 392mm  
 07=diameter of pocket 7mm PT100=sensor PT100  
 260°C=temperature up to 260°C / 4L=4-wire connection

Ordering example 2: AKF10.465.07 TRA 5  
 AKF10=type / 465=mounting length 465mm  
 07=diameter of pocket 7mm  
 TRA 5=transducer 4-20mA, 0°C...+250°C

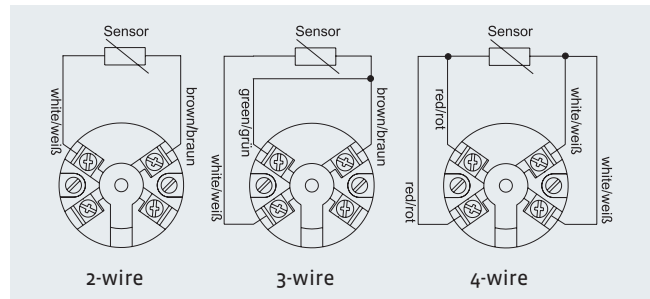
# Duct Temperature Sensor Ø4mm passive – KFK01 «

## Application

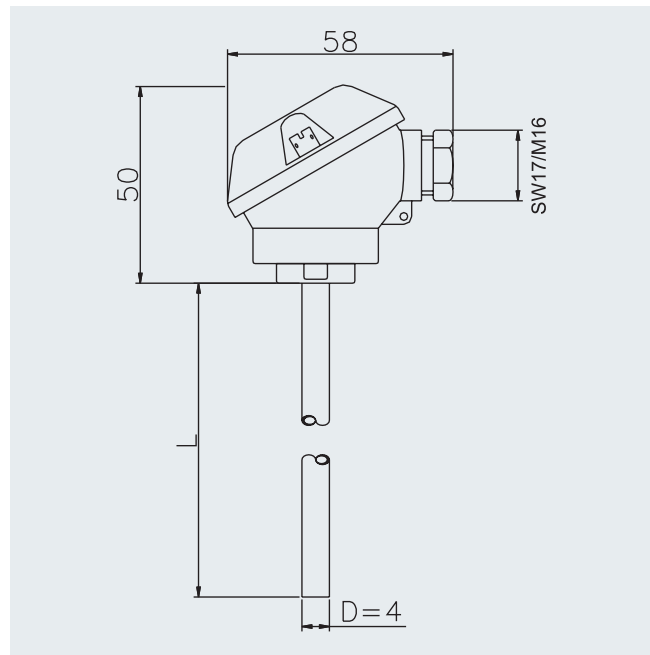
For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems.

TECHNICAL DATA	
Mounting lengths	40mm, 90mm, 140mm, 190mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form J, Material alu diecasting
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=4mm
Protection	IP65, SI-Protection
Notice	Other sensors on request

## Connection



## Dimensional Drawing (mm)



Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

## » KFK01 – Duct Temperature Sensor Ø4mm passive

<b>PT100</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 PT100	40mm	31868	
KFK01.090.04 PT100	90mm	32605	
KFK01.140.04 PT100	140mm	32612	
KFK01.190.04 PT100	190mm	32629	

<b>PT100 1/3 DIN</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 PT100 1/3 DIN	40mm	32636	
KFK01.090.04 PT100 1/3 DIN	90mm	32643	
KFK01.140.04 PT100 1/3 DIN	140mm	32650	
KFK01.190.04 PT100 1/3 DIN	190mm	32667	

<b>PT1000</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 PT1000	40mm	32674	
KFK01.090.04 PT1000	90mm	32681	
KFK01.140.04 PT1000	140mm	32698	
KFK01.190.04 PT1000	190mm	32704	

<b>PT1000 1/3 DIN</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 PT1000 1/3 DIN	40mm	32711	
KFK01.090.04 PT1000 1/3 DIN	90mm	32728	
KFK01.140.04 PT1000 1/3 DIN	140mm	32735	
KFK01.190.04 PT1000 1/3 DIN	190mm	32742	

<b>Ni1000</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 Ni1000	40mm	32759	
KFK01.090.04 Ni1000	90mm	32766	
KFK01.140.04 Ni1000	140mm	32773	
KFK01.190.04 Ni1000	190mm	32780	

<b>Ni1000TK5000</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 Ni1000TK5000	40mm	32797	
KFK01.090.04 Ni1000TK5000	90mm	32803	
KFK01.140.04 Ni1000TK5000	140mm	32810	
KFK01.190.04 Ni1000TK5000	190mm	32827	

<b>FeT</b>			160°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 FeT	40mm	348959	
KFK01.090.04 FeT	90mm	348973	
KFK01.140.04 FeT	140mm	250641	
KFK01.190.04 FeT	190mm	349000	

<b>NTC1,8k</b>			150°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 NTC1,8k	40mm	348966	
KFK01.090.04 NTC1,8k	90mm	348980	
KFK01.140.04 NTC1,8k	140mm	348997	
KFK01.190.04 NTC1,8k	190mm	349017	

<b>NTC5k</b>			150°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 NTC5k	40mm	32834	
KFK01.090.04 NTC5k	90mm	32841	
KFK01.140.04 NTC5k	140mm	32858	
KFK01.190.04 NTC5k	190mm	32865	

<b>NTC10k</b>			150°C
<b>KFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
KFK01.040.04 NTC10k	40mm	32872	
KFK01.090.04 NTC10k	90mm	32889	
KFK01.140.04 NTC10k	140mm	32896	
KFK01.190.04 NTC10k	190mm	32902	

# Duct Temperature Sensor Ø4mm passive – KFK01 «

NTC10k Precon			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.040.04 NTC10k Precon	40mm	32995	
KFK01.090.04 NTC10k Precon	90mm	34005	
KFK01.140.04 NTC10k Precon	140mm	34012	
KFK01.190.04 NTC10k Precon	190mm	34029	

NTC20k			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.040.04 NTC20k	40mm	32919	
KFK01.090.04 NTC20k	90mm	32926	
KFK01.140.04 NTC20k	140mm	32933	
KFK01.190.04 NTC20k	190mm	32940	

## OPTIONS

KFK01 160°C

PG1

### Description

Temperature up to 260°C

3-wire connection

4-wire connection

## ACCESSORIES

KFK01

PG1

### Description

Art. No.

Mounting flange MF4 (brass)

102438

Mounting flange MF7 flexible (incl. seal inserts for D=4mm / 6mm)

399098



MF4



MF7 flexible

Ordering example: KFK01.140.04 Ni1000 260°C 3L

KFK01=type / 140=mounting length 140mm / 04=diameter of pocket 4mm

Ni1000=sensor Ni1000 / 260°C=temperature up to 260°C

3L=3-wire connection

# » KFK01 – Duct Temperature Sensor Ø7mm passive

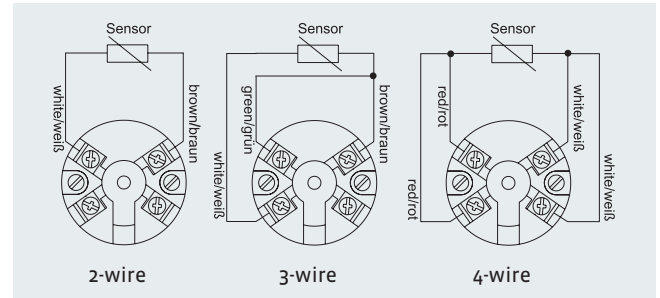
## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems. In combination with an immersion pocket also suitable for temperature measuring in liquid mediums (e.g. pipeline systems).

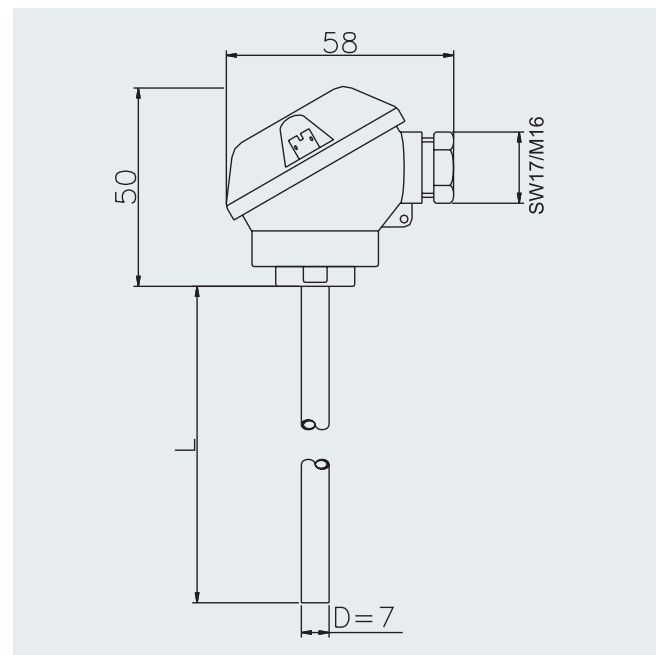
TECHNICAL DATA	
Mounting lengths	62mm, 135mm, 192mm, 240mm, 320m, 392mm, 465mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,59mm <sup>2</sup>
Connection head	Form J, Material alu diecasting
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=7mm
Protection	IP65, SI-Protection
Notice	Other sensors on request



## Connection



## Dimensional Drawing (mm)



Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# Duct Temperature Sensor Ø7mm passive – KFK01 «

PT100			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 PT100	62mm	30472	
KFK01.135.07 PT100	135mm	27274	
KFK01.192.07 PT100	192mm	27281	
KFK01.240.07 PT100	240mm	27298	
KFK01.320.07 PT100	320mm	27304	
KFK01.392.07 PT100	392mm	27311	
KFK01.465.07 PT100	465mm	27328	

PT100 1/3 DIN			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 PT100 1/3 DIN	62mm	27335	
KFK01.135.07 PT100 1/3 DIN	135mm	27342	
KFK01.192.07 PT100 1/3 DIN	192mm	27359	
KFK01.240.07 PT100 1/3 DIN	240mm	27366	
KFK01.320.07 PT100 1/3 DIN	320mm	27373	
KFK01.392.07 PT100 1/3 DIN	392mm	27380	
KFK01.465.07 PT100 1/3 DIN	465mm	27397	

PT1000			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 PT1000	62mm	27403	
KFK01.135.07 PT1000	135mm	27410	
KFK01.192.07 PT1000	192mm	27427	
KFK01.240.07 PT1000	240mm	27434	
KFK01.320.07 PT1000	320mm	27441	
KFK01.392.07 PT1000	392mm	27458	
KFK01.465.07 PT1000	465mm	27465	

PT1000 1/3 DIN			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 PT1000 1/3 DIN	62mm	27472	
KFK01.135.07 PT1000 1/3 DIN	135mm	27489	
KFK01.192.07 PT1000 1/3 DIN	192mm	27496	
KFK01.240.07 PT1000 1/3 DIN	240mm	27502	
KFK01.320.07 PT1000 1/3 DIN	320mm	27519	
KFK01.392.07 PT1000 1/3 DIN	392mm	27526	
KFK01.465.07 PT1000 1/3 DIN	465mm	27533	

Ni1000			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 Ni1000	62mm	27540	
KFK01.135.07 Ni1000	135mm	27557	
KFK01.192.07 Ni1000	192mm	27564	
KFK01.240.07 Ni1000	240mm	27571	
KFK01.320.07 Ni1000	320mm	27588	
KFK01.392.07 Ni1000	392mm	27595	
KFK01.465.07 Ni1000	465mm	27601	

Ni1000TK5000			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 Ni1000TK5000	62mm	27618	
KFK01.135.07 Ni1000TK5000	135mm	27625	
KFK01.192.07 Ni1000TK5000	192mm	27632	
KFK01.240.07 Ni1000TK5000	240mm	27649	
KFK01.320.07 Ni1000TK5000	320mm	27656	
KFK01.392.07 Ni1000TK5000	392mm	27663	
KFK01.465.07 Ni1000TK5000	465mm	27908	

FeT			160°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 FeT	62mm	145480	
KFK01.135.07 FeT	135mm	142502	
KFK01.192.07 FeT	192mm	188333	
KFK01.240.07 FeT	240mm	200103	
KFK01.320.07 FeT	320mm	171533	
KFK01.392.07 FeT	392mm	349109	
KFK01.465.07 FeT	465mm	196857	

NTC1,8k			150°C
KFK01		PG1	
Type	Pocket L	Art. No.	
KFK01.062.07 NTC1,8k	62mm	243537	
KFK01.135.07 NTC1,8k	135mm	247672	
KFK01.192.07 NTC1,8k	192mm	314466	
KFK01.240.07 NTC1,8k	240mm	349093	
KFK01.320.07 NTC1,8k	320mm	250757	
KFK01.392.07 NTC1,8k	392mm	349116	
KFK01.465.07 NTC1,8k	465mm	349123	



## » KFK01 – Duct Temperature Sensor Ø7mm passive

NTC5k			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.062.07 NTC5k	62mm	27915	
KFK01.135.07 NTC5k	135mm	27922	
KFK01.192.07 NTC5k	192mm	27939	
KFK01.240.07 NTC5k	240mm	27946	
KFK01.320.07 NTC5k	320mm	27953	
KFK01.392.07 NTC5k	392mm	27960	
KFK01.465.07 NTC5k	465mm	27977	

NTC10k			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.062.07 NTC10k	62mm	27984	
KFK01.135.07 NTC10k	135mm	27991	
KFK01.192.07 NTC10k	192mm	28004	
KFK01.240.07 NTC10k	240mm	28011	
KFK01.320.07 NTC10k	320mm	28028	
KFK01.392.07 NTC10k	392mm	28035	
KFK01.465.07 NTC10k	465mm	28042	

NTC10k Precon			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.062.07 NTC10k Precon	62mm	28196	
KFK01.135.07 NTC10k Precon	135mm	28202	
KFK01.192.07 NTC10k Precon	192mm	28219	
KFK01.240.07 NTC10k Precon	240mm	28226	
KFK01.320.07 NTC10k Precon	320mm	28233	
KFK01.392.07 NTC10k Precon	392mm	28240	
KFK01.465.07 NTC10k Precon	465mm	28257	

NTC20k			150°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.062.07 NTC20k	62mm	28059	
KFK01.135.07 NTC20k	135mm	28066	
KFK01.192.07 NTC20k	192mm	28073	
KFK01.240.07 NTC20k	240mm	28080	
KFK01.320.07 NTC20k	320mm	28097	
KFK01.392.07 NTC20k	392mm	28103	
KFK01.465.07 NTC20k	465mm	28110	

LM235Z			120°C
KFK01			PG1
Type	Pocket L	Art. No.	
KFK01.062.07 LM235Z	62mm	28332	
KFK01.135.07 LM235Z	135mm	28349	
KFK01.192.07 LM235Z	192mm	28356	
KFK01.240.07 LM235Z	240mm	28363	
KFK01.320.07 LM235Z	320mm	28370	
KFK01.392.07 LM235Z	392mm	28387	
KFK01.465.07 LM235Z	465mm	28394	

### OPTIONS

#### KFK01 160°C

PG1

#### Description

Temperature up to 260°C

3-wire connection

4-wire connection

## ACCESSORIES

KFK01 PG1

Description Art. No.

### Immersion pock. brass nickel-plated

Type	Length	for mounting length	
THMS50	50mm	62mm	1793
THMS120	120mm	135mm	1809
THMS185	185mm	192mm	1823
THMS225	225mm	240mm	1816
THMS300	300mm	320mm	1830
THMS375	375mm	392mm	1847
THMS450	450mm	465mm	102179

### Immersion pockets stainless steel

THVA50	50mm	62mm	1885
THVA120	120mm	135mm	1854
THVA185	185mm	192mm	1915
THVA225	225mm	240mm	1861
THVA300	300mm	320mm	1892
THVA375	375mm	392mm	1908
THVA450	450mm	465mm	1878

### Mounting flanges

MF7 (brass)	102360
MF7 flexible (incl. seal inserts for D=4mm / 6mm)	399098



THMS



MF7 MS



MF7 flexible

Ordering example: KFK01.392.07 PT1000 260°C 4L

KFK01=type / 392=mounting length 392mm / 07=diameter of pocket 7mm

PT1000=sensor PT1000 / 260°C=temperature up to 260°C

4L=4-wire connection

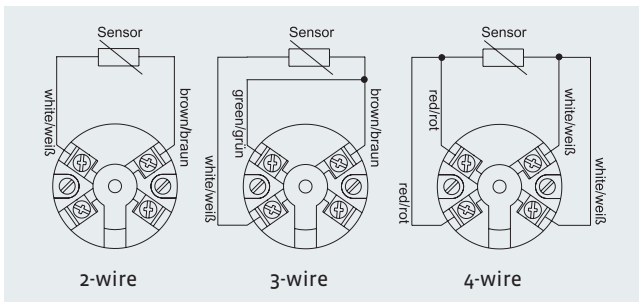
# » KFK03 – Duct Temperature Sensor passive / active

## Application

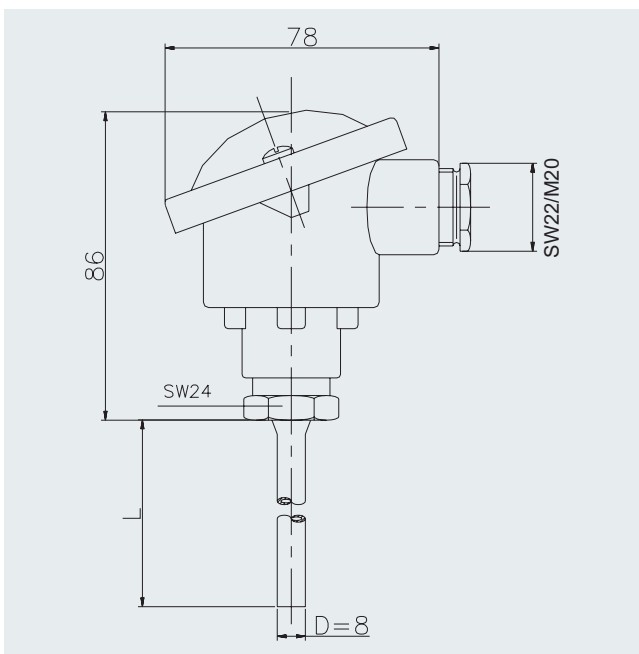
For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems.

TECHNICAL DATA- PASSIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (Standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP66, SI-Protection
Notice	Other sensors on request

## Connection passive



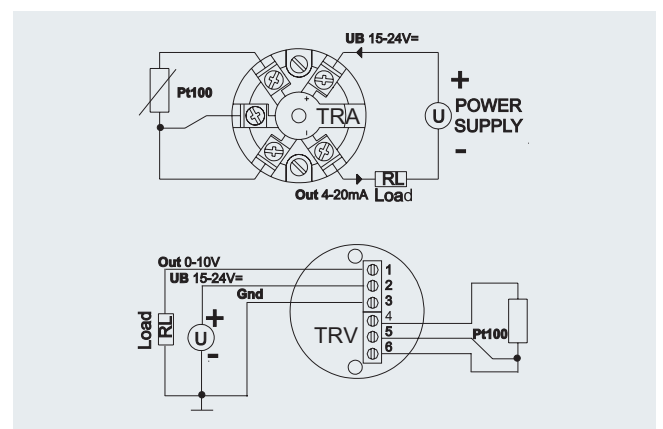
## Dimensional Drawing passive / active (mm)



TECHNICAL DATA - ACTIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C
Accuracy	TRA: ±0,2°C / ±0,1% of measuring range TRV: ±0,1% of measuring range
Ambient temperature	-25°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	15-24V=
Power consumption	TRA: max. 20mA/24V= TRV: max. 40mA/24V=
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP66, SI-Protection



## Connection active



Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# Duct Temperature Sensor passive – KFK03 «

PT100			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 PT100	100mm	37877	
KFK03.150.08 PT100	150mm	37884	
KFK03.200.08 PT100	200mm	37891	
KFK03.250.08 PT100	250mm	37907	

PT100 1/3 DIN			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 PT100 1/3 DIN	100mm	37914	
KFK03.150.08 PT100 1/3 DIN	150mm	37921	
KFK03.200.08 PT100 1/3 DIN	200mm	37938	
KFK03.250.08 PT100 1/3 DIN	250mm	37945	

PT1000			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 PT1000	100mm	37952	
KFK03.150.08 PT1000	150mm	37969	
KFK03.200.08 PT1000	200mm	37976	
KFK03.250.08 PT1000	250mm	37983	

PT1000 1/3 DIN			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 PT1000 1/3 DIN	100mm	37990	
KFK03.150.08 PT1000 1/3 DIN	150mm	39765	
KFK03.200.08 PT1000 1/3 DIN	200mm	39772	
KFK03.250.08 PT1000 1/3 DIN	250mm	39789	

Ni1000			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 Ni1000	100mm	39796	
KFK03.150.08 Ni1000	150mm	39802	
KFK03.200.08 Ni1000	200mm	39819	
KFK03.250.08 Ni1000	250mm	39826	

Ni1000TK5000			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 Ni1000TK5000	100mm	39833	
KFK03.150.08 Ni1000TK5000	150mm	39840	
KFK03.200.08 Ni1000TK5000	200mm	39857	
KFK03.250.08 Ni1000TK5000	250mm	39864	

FeT			160°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 FeT	100mm	39871	
KFK03.150.08 FeT	150mm	39888	
KFK03.200.08 FeT	200mm	39895	
KFK03.250.08 FeT	250mm	39901	

NTC1,8k			150°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 NTC1,8k	100mm	325912	
KFK03.150.08 NTC1,8k	150mm	349031	
KFK03.200.08 NTC1,8k	200mm	298803	
KFK03.250.08 NTC1,8k	250mm	314329	

NTC5k			150°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 NTC5k	100mm	349130	
KFK03.150.08 NTC5k	150mm	349147	
KFK03.200.08 NTC5k	200mm	349154	
KFK03.250.08 NTC5k	250mm	349161	

NTC10k			150°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 NTC10k	100mm	39918	
KFK03.150.08 NTC10k	150mm	39925	
KFK03.200.08 NTC10k	200mm	39932	
KFK03.250.08 NTC10k	250mm	39949	

NTC10k Precon			150°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 NTC10k Precon	100mm	39994	
KFK03.150.08 NTC10k Precon	150mm	40006	
KFK03.200.08 NTC10k Precon	200mm	40013	
KFK03.250.08 NTC10k Precon	250mm	40020	

NTC20k			150°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 NTC20k	100mm	39956	
KFK03.150.08 NTC20k	150mm	39963	
KFK03.200.08 NTC20k	200mm	39970	
KFK03.250.08 NTC20k	250mm	39987	

## » KFK03 – Duct Temperature Sensor passive / active

LM235Z			120°C
KFK03			PG1
Type	Pocket L	Art. No.	
KFK03.100.08 LM235Z	100mm	40037	
KFK03.150.08 LM235Z	150mm	40044	
KFK03.200.08 LM235Z	200mm	40051	
KFK03.250.08 LM235Z	250mm	40068	

TRA 1 / TRV 1				-50°C...+50°C
KFK03				PG1
Type	Out	Pocket L	Art. No.	
KFK03.100.08 TRA 1	4-20mA	100mm	152464	
KFK03.150.08 TRA 1	4-20mA	150mm	165334	
KFK03.200.08 TRA 1	4-20mA	200mm	232166	
KFK03.250.08 TRA 1	4-20mA	250mm	204668	
KFK03.100.08 TRV 1	0-10V	100mm	350983	
KFK03.150.08 TRV 1	0-10V	150mm	351010	
KFK03.200.08 TRV 1	0-10V	200mm	277860	
KFK03.250.08 TRV 1	0-10V	250mm	286879	

TRA 3 / TRV 3				0°C...+50°C
KFK03				PG1
Type	Out	Pocket L	Art. No.	
KFK03.100.08 TRA 3	4-20mA	100mm	338585	
KFK03.150.08 TRA 3	4-20mA	150mm	170239	
KFK03.200.08 TRA 3	4-20mA	200mm	161909	
KFK03.250.08 TRA 3	4-20mA	250mm	134804	
KFK03.100.08 TRV 3	0-10V	100mm	272315	
KFK03.150.08 TRV 3	0-10V	150mm	351027	
KFK03.200.08 TRV 3	0-10V	200mm	284905	
KFK03.250.08 TRV 3	0-10V	250mm	285094	

TRA 5 / TRV 5				0°C...+250°C
KFK03				PG1
Type	Out	Pocket L	Art. No.	
KFK03.100.08 TRA 5	4-20mA	100mm	239080	
KFK03.150.08 TRA 5	4-20mA	150mm	320948	
KFK03.200.08 TRA 5	4-20mA	200mm	240116	
KFK03.250.08 TRA 5	4-20mA	250mm	281577	
KFK03.100.08 TRV 5	0-10V	100mm	350990	
KFK03.150.08 TRV 5	0-10V	150mm	309127	
KFK03.200.08 TRV 5	0-10V	200mm	351119	
KFK03.250.08 TRV 5	0-10V	250mm	276214	

OPTIONS	
KFK03 160°C	
PG1	
Description	
Temperature up to 260°C	
3-wire connection	
4-wire connection	

TRA 2 / TRV 2				-10°C...+120°C
KFK03				PG1
Type	Out	Pocket L	Art. No.	
KFK03.100.08 TRA 2	4-20mA	100mm	242639	
KFK03.150.08 TRA 2	4-20mA	150mm	351034	
KFK03.200.08 TRA 2	4-20mA	200mm	351041	
KFK03.250.08 TRA 2	4-20mA	250mm	351133	
KFK03.100.08 TRV 2	0-10V	100mm	332453	
KFK03.150.08 TRV 2	0-10V	150mm	326711	
KFK03.200.08 TRV 2	0-10V	200mm	351096	
KFK03.250.08 TRV 2	0-10V	250mm	347242	

TRA 4 / TRV 4				0°C...+160°C
KFK03				PG1
Type	Out	Pocket L	Art. No.	
KFK03.100.08 TRA 4	4-20mA	100mm	315920	
KFK03.150.08 TRA 4	4-20mA	150mm	338981	
KFK03.200.08 TRA 4	4-20mA	200mm	337380	
KFK03.250.08 TRA 4	4-20mA	250mm	303057	
KFK03.100.08 TRV 4	0-10V	100mm	351003	
KFK03.150.08 TRV 4	0-10V	150mm	261418	
KFK03.200.08 TRV 4	0-10V	200mm	351102	
KFK03.250.08 TRV 4	0-10V	250mm	347969	

ACCESSORY	
KFK03	
PG1	
Description	Art. No.
Mounting flange MF8 (VA)	103305



Ordering example 1: KFK03.200.08 PT100 260°C 4L  
 KFK03=type / 200=mounting length 200mm  
 08=diameter of pocket 8mm / PT100=sensor PT100  
 260°C=temperature up to 260°C / 4L=4-wire connection

Ordering example 2: KFK03.250.08 TRA 5  
 KFK03=type / 250=mounting length 250mm  
 08=diameter of pocket 8mm  
 TRA 5=transducer 4-20mA, 0°C...+250°C

# Duct High Temperature Sensor passive / active – RGo3 «

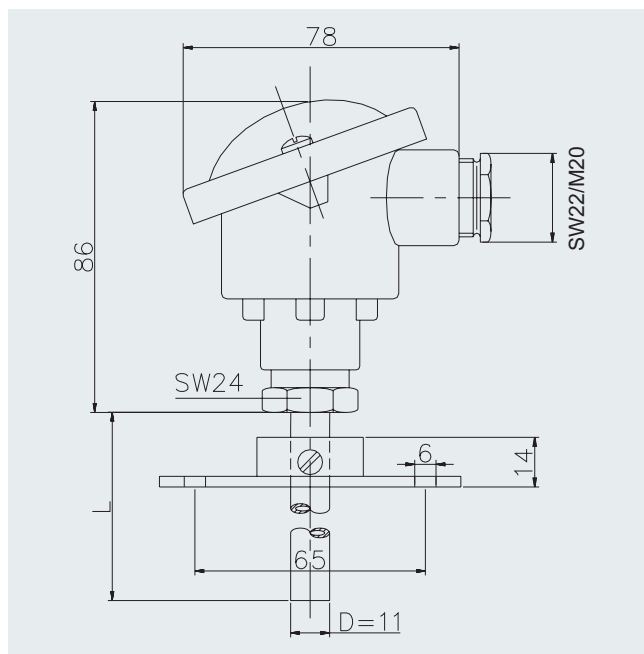
## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/ exhaust air ducts). Designed for locking on control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	250mm, 500mm
Measuring range	max. +600°C
Ambient temperature	-25°C...+90°C (connection head)
Connection	PT100: 3-wire
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=11mm
Protection	IP66
Notice	Incl. mounting flange Other sensors on request

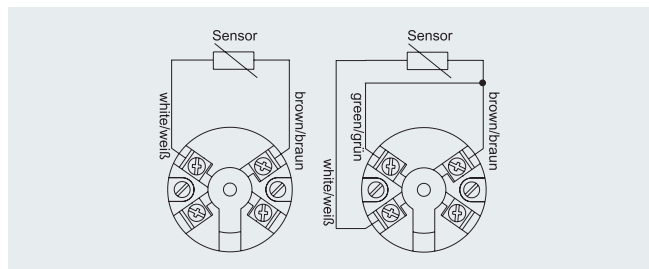


## Dimensional Drawing passive / active (mm)

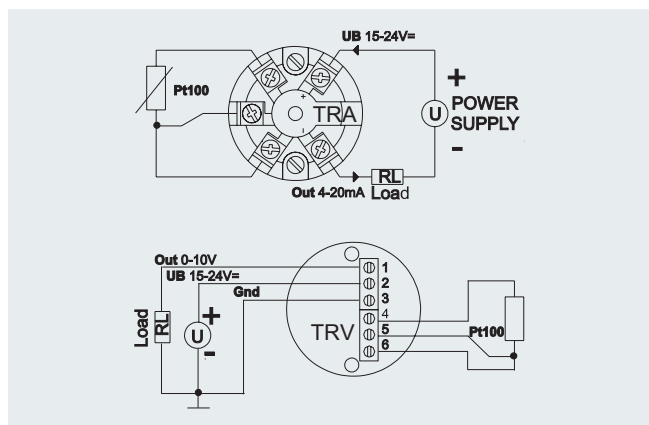


TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	250mm, 500mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 5/TRV 5: 0°C...+250°C TRA 6/TRV 6: 0°C...+400°C TRA 7/TRV 7: 0°C...+600°C
Accuracy	TRA: ±0,2°C / ±0,1% of measuring range TRV: ±0,1% of measuring range
Ambient temperature	-25°C...+70°C (connection head)
T max. sensor top	+600°C
Power supply	15-24V=
Power consumption	TRA: max. 20mA/24V= TRV: max. 40mA/24V=
Terminal clamp	Screwing terminal max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=11mm
Protection	IP66
Notice	Incl. mounting flange

## Connection passive



## Connection active



## » RG03 – Duct High Temperature Sensor passive / active

PT100			600°C
RG03			PG1
Type	Pocket L	Art. No.	
RG03.250.011 PT100 3-wire	250mm	64361	
RG03.500.011 PT100 3-wire	500mm	64378	

TRA 6 / TRV 6				0...+400°C
RG03				PG1
Type	Out	Pocket L	Art. No.	
RG03.250.11 TRA 6	4-20mA	250mm	177405	
RG03.500.11 TRA 6	4-20mA	500mm	143936	
RG03.250.11 TRV 6	0-10V	250mm	261982	
RG03.500.11 TRV 6	0-10V	500mm	240789	

TRA 7 / TRV 7				0...+600°C
RG03				PG1
Typ	Out	Pocket L	Art. No.	
RG03.250.11 TRA 7	4-20mA	250mm	64422	
RG03.500.11 TRA 7	4-20mA	500mm	78283	
RG03.250.11 TRV 7	0-10V	250mm	64408	
RG03.500.11 TRV 7	0-10V	500mm	242127	

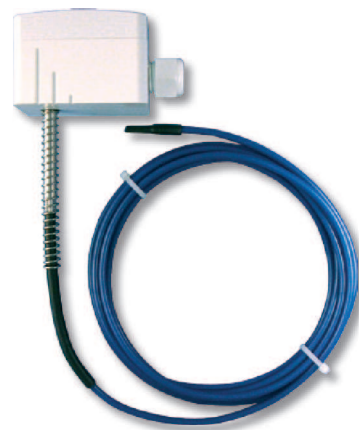
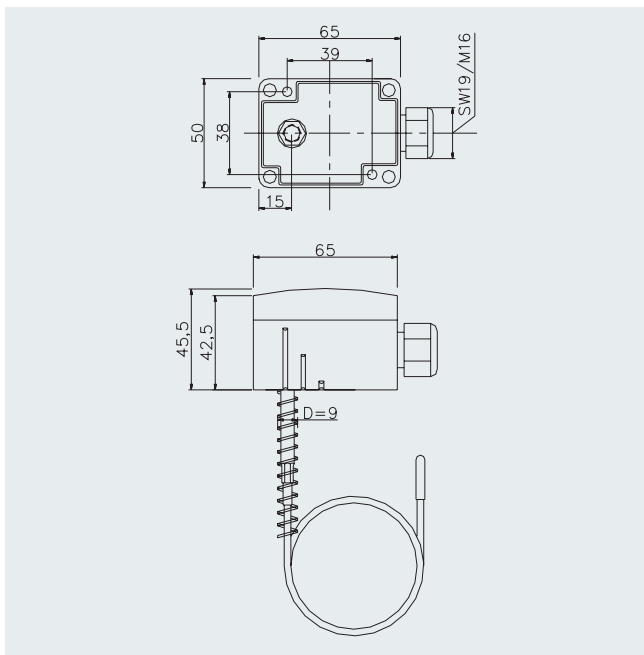
## Application

For detection of average temperature with temperature laminations in ducts (averaging).

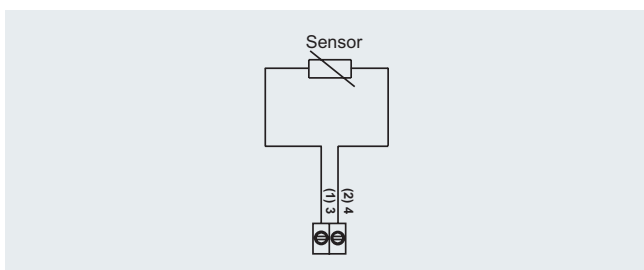
TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	Sensor Ni1000 / PT1000: 3.000mm, 6.000mm  Sensor Ni1000TK5000: 2.500mm, 5.000mm
Measuring range	-50°C...+80°C
Accuracy	±3% of measuring range
Ambient temperature	-35°C...+90°C (connection head)
Tmax. sensor top	+80°C
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor rod	PE
Protection	IP65
Notice	Incl. mounting angle set

TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	3.000mm, 6.000mm
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 3/TRV 3: 0°C...+50°C
Accuracy	±3% of measuring range
Ambient temperature	-35°C...+70°C (connection head)
Tmax. sensor top	+80°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor rod	PE
Protection	IP65
Notice	Delivery incl. mounting angle set

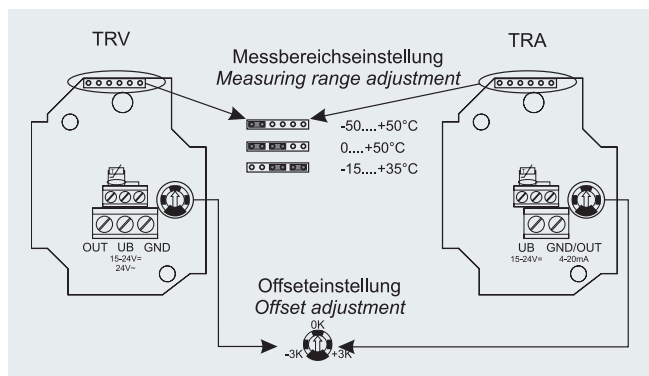
## Dimensional Drawing passive / active (mm)



## Connection passive



## Connection active





## » MWF – Average Temperature Sensor passive / active

Ni1000			
MWF			PG1
Type	Rod L	Art. No.	
MWF3000 Ni1000	3000mm	136198	
MWF6000 Ni1000	6000mm	136204	

Ni1000TK5000			
MWF			PG1
Type	Rod L	Art. No.	
MWF2500 Ni1000TK5000	2500mm	282697	
MWF5000 Ni1000TK5000	5000mm	282680	

PT1000			
MWF			PG1
Type	Rod L	Art. No.	
MWF3000 PT1000	3000mm	398053	
MWF6000 PT1000	6000mm	398060	

TRA 1 / TRV 1				-50°C...+50°C	
MWF					PG1
Type	Out	Rod L	Art. No.		
MWF3000 TRA 1	4-20mA	3000mm	80286		
MWF6000 TRA 1	4-20mA	6000mm	80446		
MWF3000 TRV 1	0-10V	3000mm	79372		
MWF6000 TRV 1	0-10V	6000mm	80323		

TRA 3 / TRV 3				0°C...+50°C	
MWF					PG1
Type	Out	Rod L	Art. No.		
MWF3000 TRA 3	4-20mA	3000mm	80316		
MWF6000 TRA 3	4-20mA	6000mm	80477		
MWF3000 TRV 3	0-10V	3000mm	79457		
MWF6000 TRV 3	0-10V	6000mm	80330		

### ACCESSORY

MWF		PG1
Description	Art. No.	
Mounting flange MF7 (brass)	102360	
Mounting flange MF7 flexible (incl. seal inserts for D=4mm / 6mm)	399098	



MF7 MS



MF7 flexible

# Screwing-In Temperature Sensor passive – SFK01 «

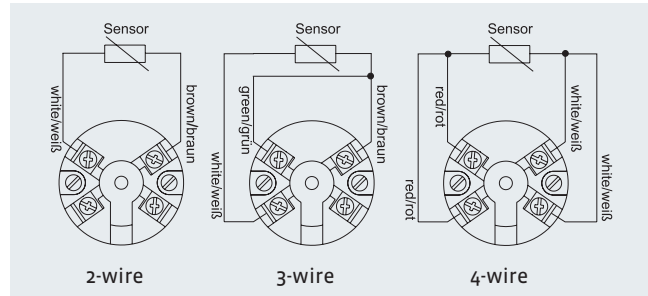
## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). Designed for locking on control and display systems.

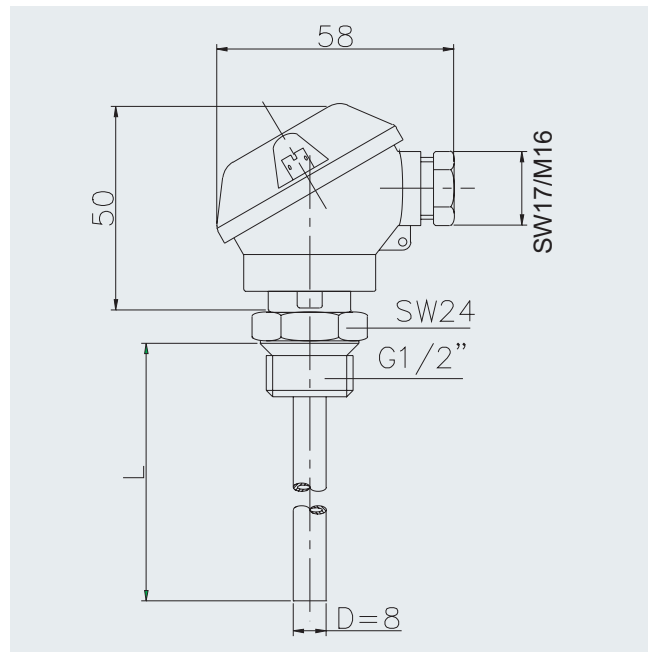
### TECHNICAL DATA

Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form J, Material aluminium diecasting
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP65, SI-Protection
Notice	Other sensors on request

## Connection



## Dimensional Drawing (mm)



Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

## » SFK01 – Screwing-In Temperature Sensor passive

<b>PT100</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 PT100	50mm	37662	
SFK01.100.08 PT100	100mm	27717	
SFK01.150.08 PT100	150mm	27724	
SFK01.200.08 PT100	200mm	27731	
SFK01.250.08 PT100	250mm	27748	
SFK01.450.08 PT100	450mm	27755	

<b>PT1000</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 PT1000	50mm	27823	
SFK01.100.08 PT1000	100mm	27830	
SFK01.150.08 PT1000	150mm	27847	
SFK01.200.08 PT1000	200mm	27854	
SFK01.250.08 PT1000	250mm	27861	
SFK01.450.08 PT1000	450mm	27878	

<b>Ni1000</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 Ni1000	50mm	36788	
SFK01.100.08 Ni1000	100mm	36795	
SFK01.150.08 Ni1000	150mm	36801	
SFK01.200.08 Ni1000	200mm	36818	
SFK01.250.08 Ni1000	250mm	36825	
SFK01.450.08 Ni1000	450mm	45292	

<b>FeT</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 FeT	50mm	45360	
SFK01.100.08 FeT	100mm	45377	
SFK01.150.08 FeT	150mm	45384	
SFK01.200.08 FeT	200mm	45391	
SFK01.250.08 FeT	250mm	45407	
SFK01.450.08 FeT	450mm	45414	

<b>PT100 1/3 DIN</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 PT100 1/3 DIN	50mm	27762	
SFK01.100.08 PT100 1/3 DIN	100mm	27779	
SFK01.150.08 PT100 1/3 DIN	150mm	27786	
SFK01.200.08 PT100 1/3 DIN	200mm	27793	
SFK01.250.08 PT100 1/3 DIN	250mm	27809	
SFK01.450.08 PT100 1/3 DIN	450mm	27816	

<b>PT1000 1/3 DIN</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 PT1000 1/3 DIN	50mm	27885	
SFK01.100.08 PT1000 1/3 DIN	100mm	27892	
SFK01.150.08 PT1000 1/3 DIN	150mm	36740	
SFK01.200.08 PT1000 1/3 DIN	200mm	36757	
SFK01.250.08 PT1000 1/3 DIN	250mm	36764	
SFK01.450.08 PT1000 1/3 DIN	450mm	36771	

<b>Ni1000TK5000</b>			160°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 Ni1000TK5000	50mm	45308	
SFK01.100.08 Ni1000TK5000	100mm	45315	
SFK01.150.08 Ni1000TK5000	150mm	45322	
SFK01.200.08 Ni1000TK5000	200mm	45339	
SFK01.250.08 Ni1000TK5000	250mm	45346	
SFK01.450.08 Ni1000TK5000	450mm	45353	

<b>NTC1,8k</b>			150°C
<b>SFK01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK01.050.08 NTC1,8k	50mm	351140	
SFK01.100.08 NTC1,8k	100mm	270311	
SFK01.150.08 NTC1,8k	150mm	270304	
SFK01.200.08 NTC1,8k	200mm	263566	
SFK01.250.08 NTC1,8k	250mm	249362	
SFK01.450.08 NTC1,8k	450mm	293655	

# Screwing-In Temperature Sensor passive – SFK01 «

NTC5k			150°C
SFK01			PG1
Type	Pocket L	Art. No.	
SFK01.050.08 NTC5k	50mm	351157	
SFK01.100.08 NTC5k	100mm	258685	
SFK01.150.08 NTC5k	150mm	249867	
SFK01.200.08 NTC5k	200mm	351164	
SFK01.250.08 NTC5k	250mm	351171	
SFK01.450.08 NTC5k	450mm	168601	

NTC10k			150°C
SFK01			PG1
Type	Pocket L	Art. No.	
SFK01.050.08 NTC10k	50mm	45421	
SFK01.100.08 NTC10k	100mm	45438	
SFK01.150.08 NTC10k	150mm	45445	
SFK01.200.08 NTC10k	200mm	45452	
SFK01.250.08 NTC10k	250mm	45469	
SFK01.450.08 NTC10k	450mm	45476	

NTC10k Precon			150°C
SFK01			PG1
Type	Pocket L	Art. No.	
SFK01.050.08 NTC10k Precon	50mm	45544	
SFK01.100.08 NTC10k Precon	100mm	45551	
SFK01.150.08 NTC10k Precon	150mm	45568	
SFK01.200.08 NTC10k Precon	200mm	45575	
SFK01.250.08 NTC10k Precon	250mm	45582	
SFK01.450.08 NTC10k Precon	450mm	45599	

NTC20k			150°C
SFK01			PG1
Type	Pocket L	Art. No.	
SFK01.050.08 NTC20k	50mm	45483	
SFK01.100.08 NTC20k	100mm	45490	
SFK01.150.08 NTC20k	150mm	45506	
SFK01.200.08 NTC20k	200mm	45513	
SFK01.250.08 NTC20k	250mm	45520	
SFK01.450.08 NTC20k	450mm	45537	

LM235Z			120°C
SFK01			PG1
Type	Pocket L	Art. No.	
SFK01.050.08 LM235Z	50mm	45605	
SFK01.100.08 LM235Z	100mm	45612	
SFK01.150.08 LM235Z	150mm	45629	
SFK01.200.08 LM235Z	200mm	45636	
SFK01.250.08 LM235Z	250mm	45643	
SFK01.450.08 LM235Z	450mm	45650	

OPTIONS		PG1
SFK01 160°C		PG1
Description		
Temperature up to 260°C		
3-wire connection		
4-wire connection		

ACCESSORIES			
SFK01			
Bonded pockets stainless steel			Art. No.
Type	Length	for mounting length	
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example: SFK01.100.08 PT100 1/3 DIN 260°C 4L  
 SFK01=type / 100=mounting length 100mm  
 08=diameter of pocket 8mm / PT100 1/3 DIN=sensor PT100 1/3 DIN /  
 260°C=temperature up to 260°C / 4L=4-wire connection

## » SFK02 – Screw-In Temperature Sensor passive / active / LON

### Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). Designed for locking on control and display systems.



TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Ambient temperature	-35°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP65, SI-Protection
Notice	Other sensors on request

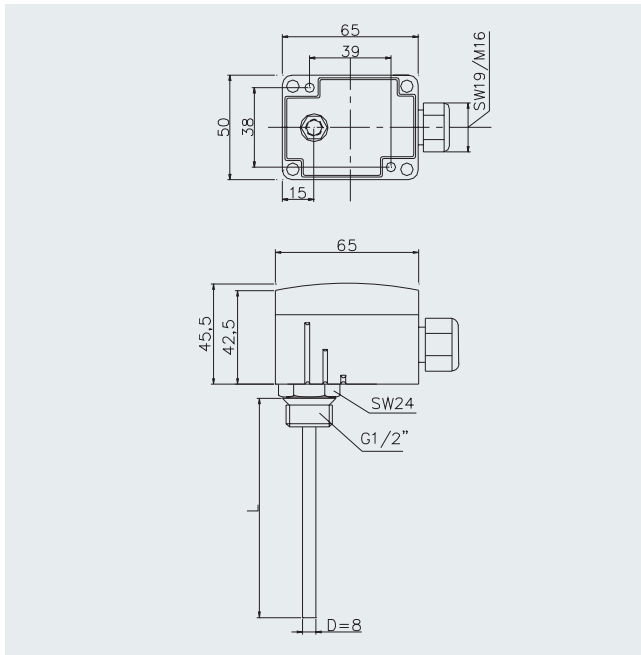
TECHNICAL DATA – ACTIVE OUTPUT / LON	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Ambient temperature	-35°C...+70°C (connection head)
T max. sensor pocket	160°C (standard), 260°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA LON: typ. 0,5W/1,7VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white(similar to RAL9010), with quick release fastener screws
Cable entry	M16 M20 single and double (LON / LCD)
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP65, SI-Protection



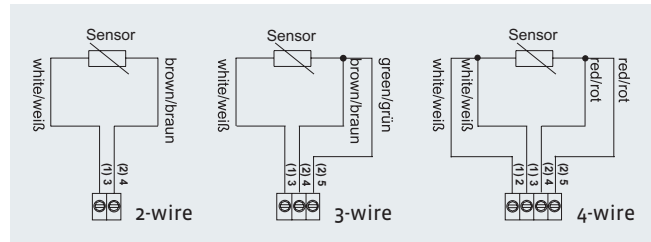
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# Screw-In Temperature Sensor passive/ active / LON – SFK02 «

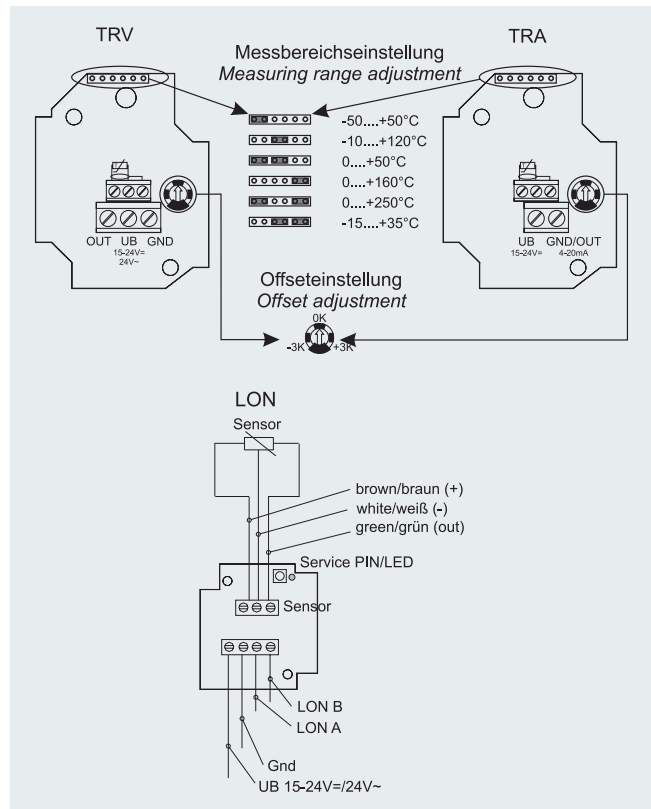
## Dimensional Drawing passive / active(mm)



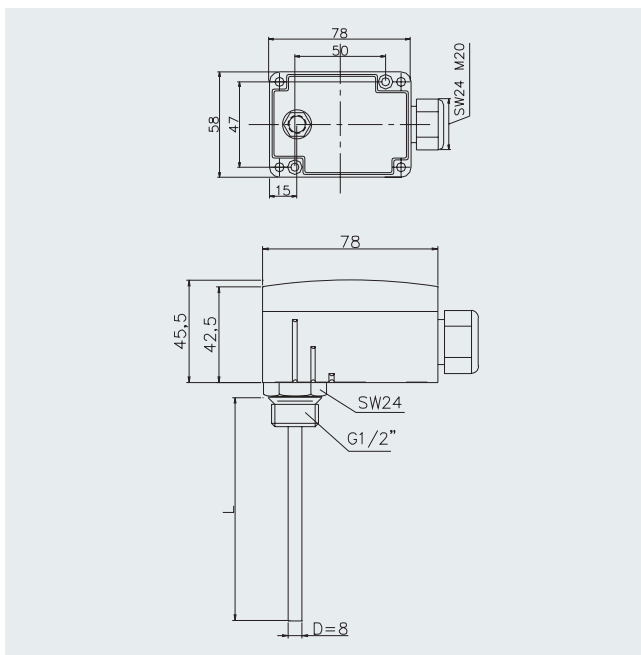
## Connection passive



## Connection active / LON



## Dimensional Drawing LON / LCD (mm)



## » SFK02 – Screw-In Temperature Sensor passive

<b>PT100</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 PT100	50mm	37617	
SFK02.100.08 PT100	100mm	49801	
SFK02.150.08 PT100	150mm	49818	
SFK02.200.08 PT100	200mm	49825	
SFK02.250.08 PT100	250mm	49832	
SFK02.450.08 PT100	450mm	49849	

<b>PT100 1/3 DIN</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 PT100 1/3 DIN	50mm	49856	
SFK02.100.08 PT100 1/3 DIN	100mm	49863	
SFK02.150.08 PT100 1/3 DIN	150mm	49870	
SFK02.200.08 PT100 1/3 DIN	200mm	49887	
SFK02.250.08 PT100 1/3 DIN	250mm	49894	
SFK02.450.08 PT100 1/3 DIN	450mm	49900	

<b>PT1000</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 PT1000	50mm	49917	
SFK02.100.08 PT1000	100mm	49924	
SFK02.150.08 PT1000	150mm	49931	
SFK02.200.08 PT1000	200mm	49948	
SFK02.250.08 PT1000	250mm	49955	
SFK02.450.08 PT1000	450mm	49962	

<b>PT1000 1/3 DIN</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 PT1000 1/3 DIN	50mm	49979	
SFK02.100.08 PT1000 1/3 DIN	100mm	49986	
SFK02.150.08 PT1000 1/3 DIN	150mm	49993	
SFK02.200.08 PT1000 1/3 DIN	200mm	50005	
SFK02.250.08 PT1000 1/3 DIN	250mm	50012	
SFK02.450.08 PT1000 1/3 DIN	450mm	50029	

<b>Ni1000</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 Ni1000	50mm	50036	
SFK02.100.08 Ni1000	100mm	50043	
SFK02.150.08 Ni1000	150mm	50050	
SFK02.200.08 Ni1000	200mm	50067	
SFK02.250.08 Ni1000	250mm	50074	
SFK02.450.08 Ni1000	450mm	50081	

<b>Ni1000TK5000</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 Ni1000TK5000	50mm	50098	
SFK02.100.08 Ni1000TK5000	100mm	50104	
SFK02.150.08 Ni1000TK5000	150mm	50111	
SFK02.200.08 Ni1000TK5000	200mm	50128	
SFK02.250.08 Ni1000TK5000	250mm	50135	
SFK02.450.08 Ni1000TK5000	450mm	50142	

<b>FeT</b>			160°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 FeT	50mm	50159	
SFK02.100.08 FeT	100mm	50166	
SFK02.150.08 FeT	150mm	50173	
SFK02.200.08 FeT	200mm	50180	
SFK02.250.08 FeT	250mm	50197	
SFK02.450.08 FeT	450mm	50203	

<b>NTC1,8k</b>			150°C
<b>SFK02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFK02.050.08 NTC1,8k	50mm	351324	
SFK02.100.08 NTC1,8k	100mm	258135	
SFK02.150.08 NTC1,8k	150mm	240628	
SFK02.200.08 NTC1,8k	200mm	293013	
SFK02.250.08 NTC1,8k	250mm	183864	
SFK02.450.08 NTC1,8k	450mm	351614	

# Screw-In Temperature Sensor passive/ active – SFK02 «

NTC5k			150°C
SFK02			PG1
Type	Pocket L	Art. No.	
SFK02.050.08 NTC5k	50mm	351331	
SFK02.100.08 NTC5k	100mm	351348	
SFK02.150.08 NTC5k	150mm	351355	
SFK02.200.08 NTC5k	200mm	351577	
SFK02.250.08 NTC5k	250mm	351584	
SFK02.450.08 NTC5k	450mm	351591	

NTC10k			150°C
SFK02			PG1
Type	Pocket L	Art. No.	
SFK02.050.08 NTC10k	50mm	50210	
SFK02.100.08 NTC10k	100mm	50227	
SFK02.150.08 NTC10k	150mm	50234	
SFK02.200.08 NTC10k	200mm	50241	
SFK02.250.08 NTC10k	250mm	50258	
SFK02.450.08 NTC10k	450mm	50265	

NTC10k Precon			150°C
SFK02			PG1
Type	Pocket L	Art. No.	
SFK02.050.08 NTC10k Precon	50mm	50333	
SFK02.100.08 NTC10k Precon	100mm	50340	
SFK02.150.08 NTC10k Precon	150mm	50357	
SFK02.200.08 NTC10k Precon	200mm	50364	
SFK02.250.08 NTC10k Precon	250mm	50371	
SFK02.450.08 NTC10k Precon	450mm	50388	

NTC20k			150°C
SFK02			PG1
Type	Pocket L	Art. No.	
SFK02.050.08 NTC20k	50mm	50272	
SFK02.100.08 NTC20k	100mm	50289	
SFK02.150.08 NTC20k	150mm	50296	
SFK02.200.08 NTC20k	200mm	50302	
SFK02.250.08 NTC20k	250mm	50319	
SFK02.450.08 NTC20k	450mm	50326	

LM235Z			120°C
SFK02			PG1
Type	Pocket L	Art. No.	
SFK02.050.08 LM235Z	50mm	50395	
SFK02.100.08 LM235Z	100mm	50401	
SFK02.150.08 LM235Z	150mm	50418	
SFK02.200.08 LM235Z	200mm	50425	
SFK02.250.08 LM235Z	250mm	50432	
SFK02.450.08 LM235Z	450mm	50449	

OPTIONS		PG1
SFK02 160°C		PG1
Description		
Temperature up to 260°C		
3-wire connection		
4-wire connection		

TRA 1 / TRV 1			-50°C...+50°C
SFK02			PG1
Type	Out	Pocket L	Art. No.
SFK02.050.08 TRA 1	4-20mA	50mm	104623
SFK02.100.08 TRA 1	4-20mA	100mm	104630
SFK02.150.08 TRA 1	4-20mA	150mm	104647
SFK02.200.08 TRA 1	4-20mA	200mm	104654
SFK02.250.08 TRA 1	4-20mA	250mm	104661
SFK02.450.08 TRA 1	4-20mA	450mm	104678
SFK02.050.08 TRV 1	0-10V	50mm	104920
SFK02.100.08 TRV 1	0-10V	100mm	104937
SFK02.150.08 TRV 1	0-10V	150mm	104944
SFK02.200.08 TRV 1	0-10V	200mm	104951
SFK02.250.08 TRV 1	0-10V	250mm	104968
SFK02.450.08 TRV 1	0-10V	450mm	104975

TRA 2 / TRV 2			-10°C...+120°C
SFK02			PG1
Type	Out	Pocket L	Art. No.
SFK02.050.08 TRA 2	4-20mA	50mm	104685
SFK02.100.08 TRA 2	4-20mA	100mm	104692
SFK02.150.08 TRA 2	4-20mA	150mm	104708
SFK02.200.08 TRA 2	4-20mA	200mm	104715
SFK02.250.08 TRA 2	4-20mA	250mm	104722
SFK02.450.08 TRA 2	4-20mA	450mm	104739
SFK02.050.08 TRV 2	0-10V	50mm	104982
SFK02.100.08 TRV 2	0-10V	100mm	104999
SFK02.150.08 TRV 2	0-10V	150mm	107501
SFK02.200.08 TRV 2	0-10V	200mm	107518
SFK02.250.08 TRV 2	0-10V	250mm	107525
SFK02.450.08 TRV 2	0-10V	450mm	107532



## » SFK02 – Screw-In Temperature Sensor active / LON

TRA 3 / TRV 3				0°C...+50°C
SFK02				PG1
Type	Out	Pocket L	Art. No.	
SFK02.050.08 TRA 3	4-20mA	50mm	104746	
SFK02.100.08 TRA 3	4-20mA	100mm	104753	
SFK02.150.08 TRA 3	4-20mA	150mm	104760	
SFK02.200.08 TRA 3	4-20mA	200mm	104777	
SFK02.250.08 TRA 3	4-20mA	250mm	104784	
SFK02.450.08 TRA 3	4-20mA	450mm	104791	
SFK02.050.08 TRV 3	0-10V	50mm	107549	
SFK02.100.08 TRV 3	0-10V	100mm	107556	
SFK02.150.08 TRV 3	0-10V	150mm	107563	
SFK02.200.08 TRV 3	0-10V	200mm	107570	
SFK02.250.08 TRV 3	0-10V	250mm	107587	
SFK02.450.08 TRV 3	0-10V	450mm	107594	

TRA 5 / TRV 5				0°C...+250°C
SFK02				PG1
Type	Out	Pocket L	Art. No.	
SFK02.050.08 TRA 5	4-20mA	50mm	104869	
SFK02.100.08 TRA 5	4-20mA	100mm	104876	
SFK02.150.08 TRA 5	4-20mA	150mm	104883	
SFK02.200.08 TRA 5	4-20mA	200mm	104890	
SFK02.250.08 TRA 5	4-20mA	250mm	104906	
SFK02.450.08 TRA 5	4-20mA	450mm	104913	
SFK02.050.08 TRV 5	0-10V	50mm	107662	
SFK02.100.08 TRV 5	0-10V	100mm	107679	
SFK02.150.08 TRV 5	0-10V	150mm	107686	
SFK02.200.08 TRV 5	0-10V	200mm	107693	
SFK02.250.08 TRV 5	0-10V	250mm	107709	
SFK02.450.08 TRV 5	0-10V	450mm	107716	

TRA 4 / TRV 4				0°C...+160°C
SFK02				PG1
Type	Out	Pocket L	Art. No.	
SFK02.050.08 TRA 4	4-20mA	50mm	104807	
SFK02.100.08 TRA 4	4-20mA	100mm	104814	
SFK02.150.08 TRA 4	4-20mA	150mm	104821	
SFK02.200.08 TRA 4	4-20mA	200mm	104838	
SFK02.250.08 TRA 4	4-20mA	250mm	104845	
SFK02.450.08 TRA 4	4-20mA	450mm	104852	
SFK02.050.08 TRV 4	0-10V	50mm	107600	
SFK02.100.08 TRV 4	0-10V	100mm	107617	
SFK02.150.08 TRV 4	0-10V	150mm	107624	
SFK02.200.08 TRV 4	0-10V	200mm	107631	
SFK02.250.08 TRV 4	0-10V	250mm	107648	
SFK02.450.08 TRV 4	0-10V	450mm	107655	

### OPTIONS

SFK02 TRA / TRV	PG1
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#### Description

LCD

### LON

SFK02	PG1
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Type	Out	Pocket L	Art. No.	
SFK02.050.08 LON	FTX	50mm	95181	
SFK02.100.08 LON	FTX	100mm	95198	
SFK02.150.08 LON	FTX	150mm	95204	
SFK02.200.08 LON	FTX	200mm	95211	
SFK02.250.08 LON	FTX	250mm	95228	
SFK02.450.08 LON	FTX	450mm	95235	

### ACCESSORIES

SFK02	PG1
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Bonded Pocket Stainless Steel	Art. No.
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Type	Length	For mounting length	Art. No.
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example 1: SFK02.250.08 PT1000 260°C 3L  
 SFK02=type / 250=mounting length 250mm  
 08=diameter of pocket 8mm / PT1000=sensor PT1000  
 260°C=temperature up to 260°C / 3L=3-wire connection

Ordering example 2: SFK02.100.08 TRA 1  
 SFK02=type / 100=mounting length 100mm  
 08=diameter of pocket 8mm  
 TRA 1=transducer 4-20mA, -50°C...+50°C

## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). Designed for locking on control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP66, SI-Protection
Notice	Other sensors on request

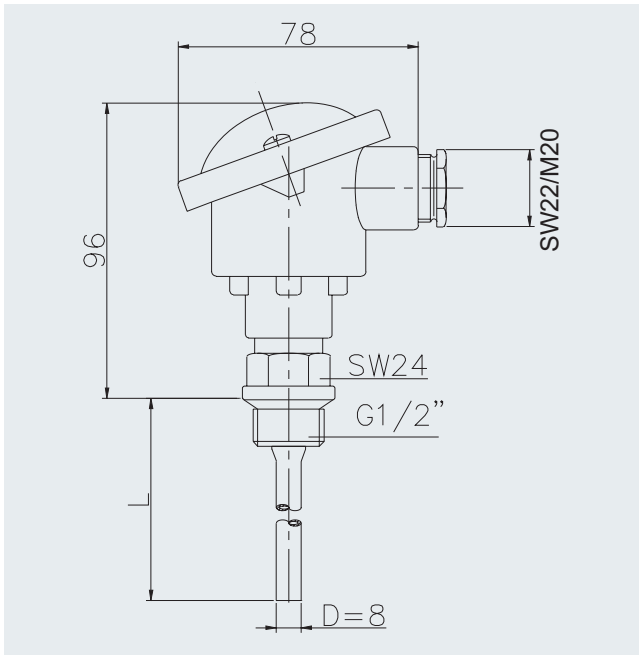
TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 2/TRV 2: -10°C...+120°C TRA 3/TRV 3: 0°C...+50°C TRA 4/TRV 4: 0...+160°C TRA 5/TRV 5: 0...+250°C
Accuracy	TRA: ±0,2°C / ±0,1% of measuring range TRV: ±0,1% of measuring range
Ambient temperature	-25°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	15-24V=
Power consumption	TRA: max. 20mA/24V= TRV: max. 40mA/24V=
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Protection	IP66, SI-Protection



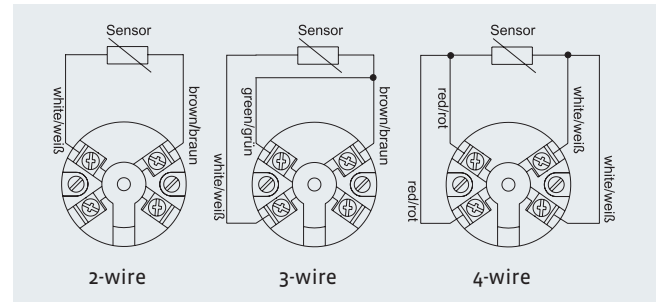
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# » SFK03 – Screw-In Temperature Sensor passive / active

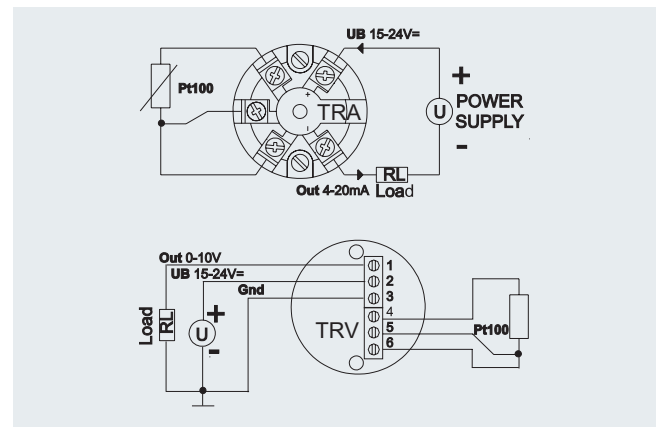
Dimensional Drawing passive / active (mm)



Connection passive



Connection active



<b>PT100</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 PT100	100mm	64309	
SFK03.150.08 PT100	150mm	71079	
SFK03.200.08 PT100	200mm	71086	
SFK03.250.08 PT100	250mm	71093	

<b>PT100 1/3 DIN</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 PT100 1/3 DIN	100mm	71109	
SFK03.150.08 PT100 1/3 DIN	150mm	71116	
SFK03.200.08 PT100 1/3 DIN	200mm	71123	
SFK03.250.08 PT100 1/3 DIN	250mm	71130	

<b>PT1000</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 PT1000	100mm	71147	
SFK03.150.08 PT1000	150mm	71154	
SFK03.200.08 PT1000	200mm	71161	
SFK03.250.08 PT1000	250mm	71178	

<b>PT1000 1/3 DIN</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 PT1000 1/3 DIN	100mm	71185	
SFK03.150.08 PT1000 1/3 DIN	150mm	71192	
SFK03.200.08 PT1000 1/3 DIN	200mm	71208	
SFK03.250.08 PT1000 1/3 DIN	250mm	71215	

<b>Ni1000</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 Ni1000	100mm	71222	
SFK03.150.08 Ni1000	150mm	71239	
SFK03.200.08 Ni1000	200mm	71246	
SFK03.250.08 Ni1000	250mm	71253	

<b>Ni1000TK5000</b>			160°C
<b>SFK03</b>			<b>PG1</b>
<b>Type</b>	<b>Pocket L</b>	<b>Art. No.</b>	
SFK03.100.08 Ni1000TK5000	100mm	71260	
SFK03.150.08 Ni1000TK5000	150mm	71277	
SFK03.200.08 Ni1000TK5000	200mm	71284	
SFK03.250.08 Ni1000TK5000	250mm	71291	

# Screw-In Temperature Sensor passive / active – SFK03 «

FeT			160°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 FeT	100mm	71307	
SFK03.150.08 FeT	150mm	71314	
SFK03.200.08 FeT	200mm	71321	
SFK03.250.08 FeT	250mm	71338	

NTC1,8k			150°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 NTC1,8k	100mm	351652	
SFK03.150.08 NTC1,8k	150mm	351676	
SFK03.200.08 NTC1,8k	200mm	351683	
SFK03.250.08 NTC1,8k	250mm	351706	

NTC5k			150°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 NTC5k	100mm	351713	
SFK03.150.08 NTC5k	150mm	351720	
SFK03.200.08 NTC5k	200mm	351751	
SFK03.250.08 NTC5k	250mm	351775	

NTC10k			150°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 NTC10k	100mm	71345	
SFK03.150.08 NTC10k	150mm	71352	
SFK03.200.08 NTC10k	200mm	71369	
SFK03.250.08 NTC10k	250mm	71376	

NTC10k Precon			150°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 NTC10k Precon	100mm	71420	
SFK03.150.08 NTC10k Precon	150mm	71437	
SFK03.200.08 NTC10k Precon	200mm	71444	
SFK03.250.08 NTC10k Precon	250mm	71451	

NTC20k			150°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 NTC20k	100mm	71383	
SFK03.150.08 NTC20k	150mm	71390	
SFK03.200.08 NTC20k	200mm	71406	
SFK03.250.08 NTC20k	250mm	71413	

LM235Z			120°C
SFK03			PG1
Type	Pocket L	Art. No.	
SFK03.100.08 LM235Z	100mm	71468	
SFK03.150.08 LM235Z	150mm	71475	
SFK03.200.08 LM235Z	200mm	71482	
SFK03.250.08 LM235Z	250mm	71499	

OPTIONS			
SFK03 160°C			PG1
Description			
Temperature up to 260°C			
3-wire connection			
4-wire connection			

TRA 1 / TRV 1			-50°C...+50°C	
SFK03			PG1	
Type	Out	Pocket L	Art. No.	
SFK03.100.08 TRA 1	4-20mA	100mm	194440	
SFK03.150.08 TRA 1	4-20mA	150mm	200899	
SFK03.200.08 TRA 1	4-20mA	200mm	352055	
SFK03.250.08 TRA 1	4-20mA	250mm	254908	
SFK03.100.08 TRV 1	0-10V	100mm	318853	
SFK03.150.08 TRV 1	0-10V	150mm	352024	
SFK03.200.08 TRV 1	0-10V	200mm	352062	
SFK03.250.08 TRV 1	0-10V	250mm	352109	

TRA 2 / TRV 2			-10°C...+120°C	
SFK03			PG1	
Type	Out	Pocket L	Art. No.	
SFK03.100.08 TRA 2	4-20mA	100mm	189316	
SFK03.150.08 TRA 2	4-20mA	150mm	344166	
SFK03.200.08 TRA 2	4-20mA	200mm	315746	
SFK03.250.08 TRA 2	4-20mA	250mm	352086	
SFK03.100.08 TRV 2	0-10V	100mm	335744	
SFK03.150.08 TRV 2	0-10V	150mm	352031	
SFK03.200.08 TRV 2	0-10V	200mm	246958	
SFK03.250.08 TRV 2	0-10V	250mm	352253	

## » SFK03 – Screw-In Temperature Sensor active

TRA 3 / TRV 3		0°C...+50°C	
SFK03		PG1	
Type	Out	Pocket L	Art. No.
SFK03.100.08 TRA 3	4-20mA	100mm	132220
SFK03.150.08 TRA 3	4-20mA	150mm	165044
SFK03.200.08 TRA 3	4-20mA	200mm	165280
SFK03.250.08 TRA 3	4-20mA	250mm	303835
SFK03.100.08 TRV 3	0-10V	100mm	281775
SFK03.150.08 TRV 3	0-10V	150mm	352048
SFK03.200.08 TRV 3	0-10V	200mm	352079
SFK03.250.08 TRV 3	0-10V	250mm	352260

TRA 4 / TRV 4		0°C...+160°C	
SFK03		PG1	
Type	Out	Pocket L	Art. No.
SFK03.100.08 TRA 4	4-20mA	100mm	293051
SFK03.150.08 TRA 4	4-20mA	150mm	295024
SFK03.200.08 TRA 4	4-20mA	200mm	239226
SFK03.250.08 TRA 4	4-20mA	250mm	352093
SFK03.100.08 TRV 4	0-10V	100mm	298414
SFK03.150.08 TRV 4	0-10V	150mm	292115
SFK03.200.08 TRV 4	0-10V	200mm	324403
SFK03.250.08 TRV 4	0-10V	250mm	352277

TRA 5 / TRV 5		0°C...+250°C	
SFK03		PG1	
Type	Out	Pocket L	Art. No.
SFK03.100.08 TRA 5	4-20mA	100mm	131674
SFK03.150.08 TRA 5	4-20mA	150mm	146821
SFK03.200.08 TRA 5	4-20mA	200mm	152884
SFK03.250.08 TRA 5	4-20mA	250mm	157421
SFK03.100.08 TRV 5	0-10V	100mm	243933
SFK03.150.08 TRV 5	0-10V	150mm	295314
SFK03.200.08 TRV 5	0-10V	200mm	297509
SFK03.250.08 TRV 5	0-10V	250mm	306607

### ACCESSORIES

SFK03			PG1
Bonded pockets stainless steel			Art. No.
Type	Length	for mounting length	
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example 1: SFK03.200.08 LM235Z 260°C 3L  
 SFK03=type / 200=mounting length 200mm  
 08=diameter of pocket 8mm / LM235Z=sensor LM235Z  
 260°C=temperature up to 260°C / 3L=3-wire connection

Ordering example 2: SFK03.450.08 TRV 4  
 SFK03=type / 450=mounting length 450mm  
 08=diameter of pocket 8mm  
 TRV 4=transducer 0-10V, 0°C...+160°C

## Application

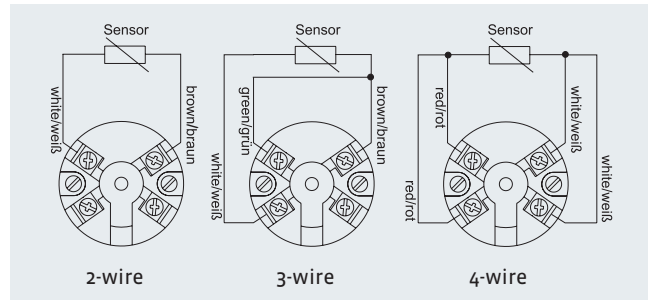
For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). Designed for locking on control and display systems.

### TECHNICAL DATA

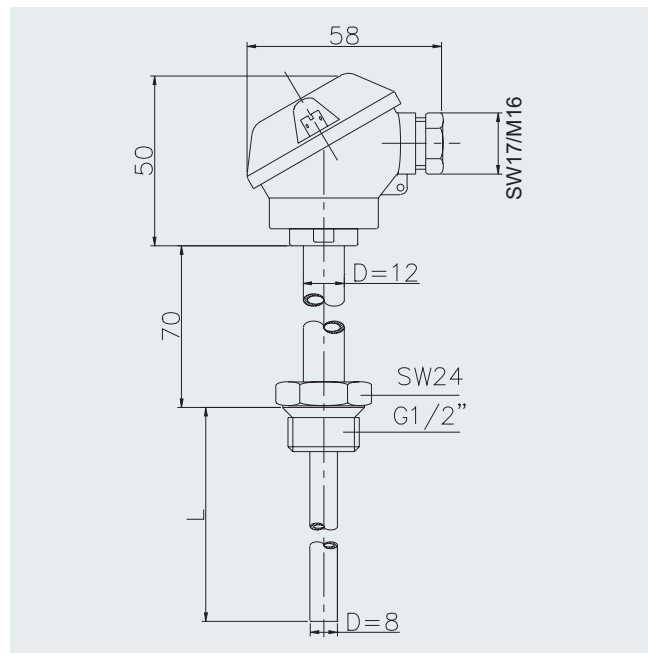
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form J, Material aluminium
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Neck tube	Stainless steel 1.4305, Ø=12mm, L=70mm
Protection	IP65, mit SI-Protection
Notice	Other sensors on request



## Connection passive



## Dimensional Drawing (mm)



Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

## » SFKH01 – Screw-In Temperature Sensor passive

<b>PT100</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 PT100	50mm	54652	
SFKH01.100.08 PT100	100mm	55567	
SFKH01.150.08 PT100	150mm	55574	
SFKH01.200.08 PT100	200mm	55581	
SFKH01.250.08 PT100	250mm	55598	
SFKH01.450.08 PT100	450mm	55604	

<b>PT100 1/3 DIN</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 PT100 1/3 DIN	50mm	55611	
SFKH01.100.08 PT100 1/3 DIN	100mm	55628	
SFKH01.150.08 PT100 1/3 DIN	150mm	55635	
SFKH01.200.08 PT100 1/3 DIN	200mm	55642	
SFKH01.250.08 PT100 1/3 DIN	250mm	55659	
SFKH01.450.08 PT100 1/3 DIN	450mm	55666	

<b>PT1000</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 PT1000	50mm	55673	
SFKH01.100.08 PT1000	100mm	55680	
SFKH01.150.08 PT1000	150mm	55697	
SFKH01.200.08 PT1000	200mm	55703	
SFKH01.250.08 PT1000	250mm	55710	
SFKH01.450.08 PT1000	450mm	55727	

<b>PT1000 1/3 DIN</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 PT1000 1/3 DIN	50mm	55734	
SFKH01.100.08 PT1000 1/3 DIN	100mm	55741	
SFKH01.150.08 PT1000 1/3 DIN	150mm	55758	
SFKH01.200.08 PT1000 1/3 DIN	200mm	55765	
SFKH01.250.08 PT1000 1/3 DIN	250mm	55772	
SFKH01.450.08 PT1000 1/3 DIN	450mm	55789	

<b>Ni1000</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 Ni1000	50mm	55796	
SFKH01.100.08 Ni1000	100mm	55802	
SFKH01.150.08 Ni1000	150mm	55819	
SFKH01.200.08 Ni1000	200mm	55826	
SFKH01.250.08 Ni1000	250mm	55833	
SFKH01.450.08 Ni1000	450mm	55840	

<b>Ni1000TK5000</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 Ni1000TK5000	50mm	55857	
SFKH01.100.08 Ni1000TK5000	100mm	55864	
SFKH01.150.08 Ni1000TK5000	150mm	55871	
SFKH01.200.08 Ni1000TK5000	200mm	55888	
SFKH01.250.08 Ni1000TK5000	250mm	55895	
SFKH01.450.08 Ni1000TK5000	450mm	55901	

<b>FeT</b>			160°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 FeT	50mm	55918	
SFKH01.100.08 FeT	100mm	55925	
SFKH01.150.08 FeT	150mm	55932	
SFKH01.200.08 FeT	200mm	55949	
SFKH01.250.08 FeT	250mm	55956	
SFKH01.450.08 FeT	450mm	55963	

<b>NTC1,8k</b>			150°C
<b>SFKH01</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH01.050.08 NTC1,8k	50mm	351287	
SFKH01.100.08 NTC1,8k	100mm	258708	
SFKH01.150.08 NTC1,8k	150mm	351317	
SFKH01.200.08 NTC1,8k	200mm	351379	
SFKH01.250.08 NTC1,8k	250mm	351393	
SFKH01.450.08 NTC1,8k	450mm	351416	

# Screw-In Temperature Sensor passive – SFKH01 «

NTC5k			160°C
SFKH01			PG1
Type	Pocket L	Art. No.	
SFKH01.050.08 NTC5k	50mm	351294	
SFKH01.100.08 NTC5k	100mm	351300	
SFKH01.150.08 NTC5k	150mm	351362	
SFKH01.200.08 NTC5k	200mm	351386	
SFKH01.250.08 NTC5k	250mm	351409	
SFKH01.450.08 NTC5k	450mm	351423	

NTC10k			160°C
SFKH01			PG1
Type	Pocket L	Art. No.	
SFKH01.050.08 NTC10k	50mm	55970	
SFKH01.100.08 NTC10k	100mm	55987	
SFKH01.150.08 NTC10k	150mm	55994	
SFKH01.200.08 NTC10k	200mm	56007	
SFKH01.250.08 NTC10k	250mm	56014	
SFKH01.450.08 NTC10k	450mm	56021	

NTC10k Precon			160°C
SFKH01			PG1
Type	Pocket L	Art. No.	
SFKH01.050.08 NTC10k Precon	50mm	56090	
SFKH01.100.08 NTC10k Precon	100mm	56106	
SFKH01.150.08 NTC10k Precon	150mm	56113	
SFKH01.200.08 NTC10k Precon	200mm	56120	
SFKH01.250.08 NTC10k Precon	250mm	56137	
SFKH01.450.08 NTC10k Precon	450mm	56144	

NTC20k			160°C
SFKH01			PG1
Type	Pocket L	Art. No.	
SFKH01.050.08 NTC20k	50mm	56038	
SFKH01.100.08 NTC20k	100mm	56045	
SFKH01.150.08 NTC20k	150mm	56052	
SFKH01.200.08 NTC20k	200mm	56069	
SFKH01.250.08 NTC20k	250mm	56076	
SFKH01.450.08 NTC20k	450mm	56083	

LM235Z			120°C
SFKH01			PG1
Type	Pocket L	Art. No.	
SFKH01.050.08 LM235Z	50mm	56151	
SFKH01.100.08 LM235Z	100mm	56168	
SFKH01.150.08 LM235Z	150mm	56175	
SFKH01.200.08 LM235Z	200mm	56182	
SFKH01.250.08 LM235Z	250mm	56199	
SFKH01.450.08 LM235Z	450mm	56205	

OPTIONS		PG1
SFKH01 160°C		PG1
Description		
Temperature up to 260°C		
3-wire connection		
4-wire connection		

ACCESSORIES			
SFKH01			
Bonded pockets stainless steel			Art. No.
Type	Length	For mounting length	
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example: SFKH01.250.08 NTC5k 260°C 4L  
 SFKH01=type / 250=mounting length 250mm / 08=pocket ø 8mm  
 NTC5k=sensor NTC5k / 260°C=temperature up to 260°C  
 4L=4-wire connection



## » SFKH02 – Screw-In Temperature Sensor passive / active / LON

### Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). With neck tube. Designed for locking on control and display systems.



TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Ambient temperature	-35°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Neck tube	Stainless steel 1.4305, Ø=12mm, L=70mm
Protection	IP65, SI-Protection
Notice	Other sensors on request

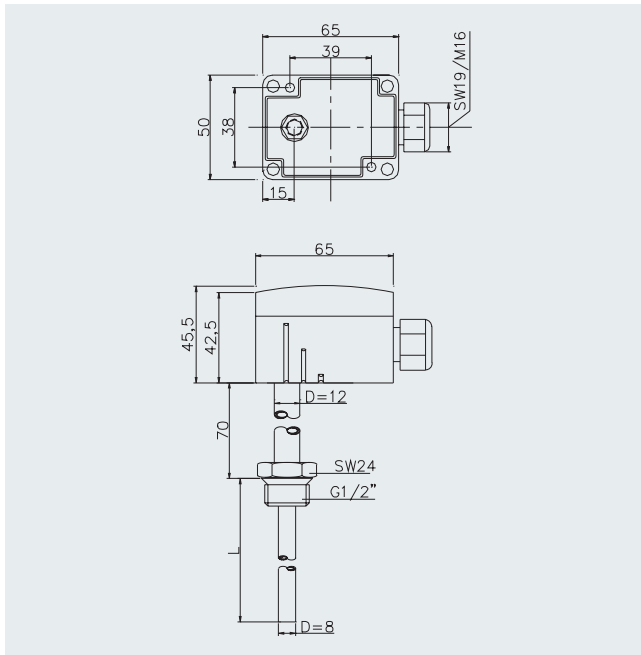
TECHNICAL DATA – ACTIVE OUTPUT/ LON	
Mounting lengths	50mm, 100mm, 150mm, 200mm, 250mm, 450mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+250°C LON: -45°C...+130°C
Accuracy	TRA/TRV: ±1% of measuring range LON: Typ. ±0,5K
Ambient temperature	-35°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%) LON: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA LON: typ. 0,5W/1,7VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Material PA6, colour pure white (similar to RAL9010), with quick release fastener screws
Cable entry	M16 M20 single and double (LON)
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Neck tube	1.4305, Ø=12mm, L=70mm
Protection	IP65, SI-Protection



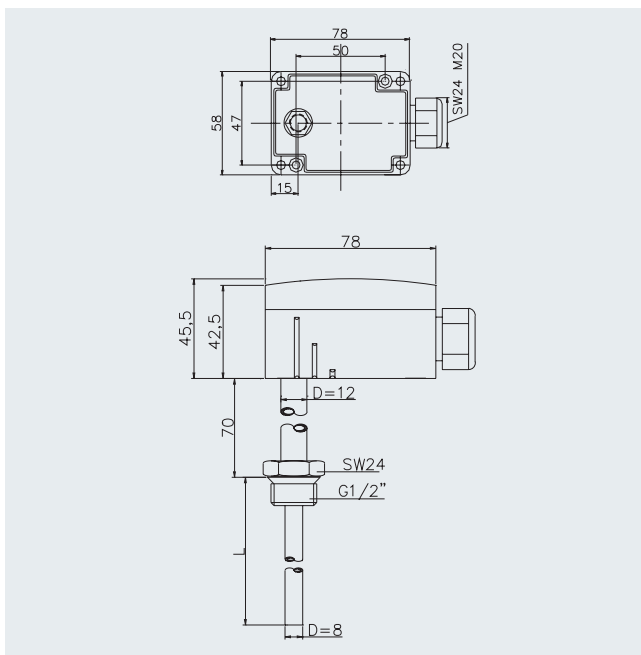
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# Srew-In Temperature Sensor passive / active / LON – SFKH02 «

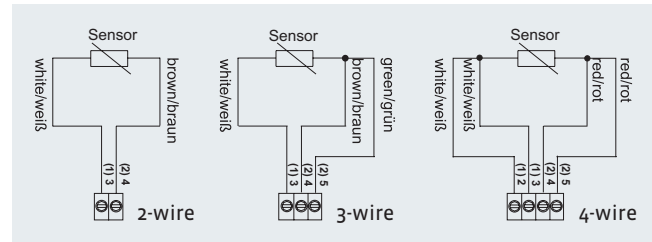
## Dimensional Drawing passive / active (mm)



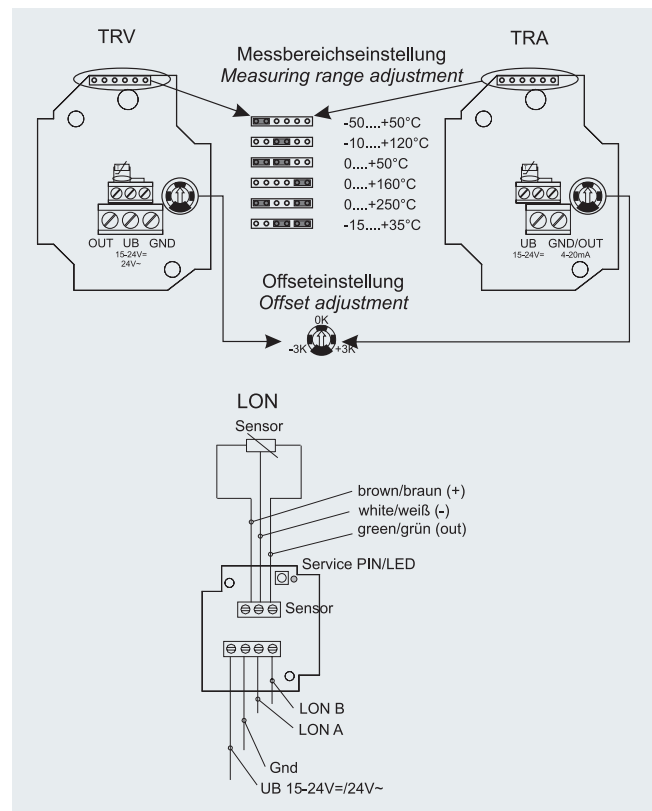
## Dimensional Drawing LON (mm)



## Connection passive



## Connection active / LON



## » SFKH02 – Screw-In Temperature Sensor passive

<b>PT100</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 PT100	50mm	63630	
SFKH02.100.08 PT100	100mm	63647	
SFKH02.150.08 PT100	150mm	63654	
SFKH02.200.08 PT100	200mm	63661	
SFKH02.250.08 PT100	250mm	63678	
SFKH02.450.08 PT100	450mm	63685	

<b>PT100 1/3 DIN</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 PT100 1/3 DIN	50mm	63692	
SFKH02.100.08 PT100 1/3 DIN	100mm	63708	
SFKH02.150.08 PT100 1/3 DIN	150mm	63715	
SFKH02.200.08 PT100 1/3 DIN	200mm	63722	
SFKH02.250.08 PT100 1/3 DIN	250mm	63739	
SFKH02.450.08 PT100 1/3 DIN	450mm	63746	

<b>PT1000</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 PT1000	50mm	63753	
SFKH02.100.08 PT1000	100mm	63760	
SFKH02.150.08 PT1000	150mm	63777	
SFKH02.200.08 PT1000	200mm	63784	
SFKH02.250.08 PT1000	250mm	63791	
SFKH02.450.08 PT1000	450mm	63807	

<b>PT1000 1/3 DIN</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 PT1000 1/3 DIN	50mm	63814	
SFKH02.100.08 PT1000 1/3 DIN	100mm	63821	
SFKH02.150.08 PT1000 1/3 DIN	150mm	63838	
SFKH02.200.08 PT1000 1/3 DIN	200mm	63845	
SFKH02.250.08 PT1000 1/3 DIN	250mm	63852	
SFKH02.450.08 PT1000 1/3 DIN	450mm	63869	

<b>Ni1000</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 Ni1000	50mm	63876	
SFKH02.100.08 Ni1000	100mm	63883	
SFKH02.150.08 Ni1000	150mm	63890	
SFKH02.200.08 Ni1000	200mm	63906	
SFKH02.250.08 Ni1000	250mm	63913	
SFKH02.450.08 Ni1000	450mm	63920	

<b>Ni1000TK5000</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 Ni1000TK5000	50mm	63937	
SFKH02.100.08 Ni1000TK5000	100mm	63944	
SFKH02.150.08 Ni1000TK5000	150mm	63951	
SFKH02.200.08 Ni1000TK5000	200mm	63968	
SFKH02.250.08 Ni1000TK5000	250mm	63975	
SFKH02.450.08 Ni1000TK5000	450mm	63982	

<b>FeT</b>			160°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 FeT	50mm	63999	
SFKH02.100.08 FeT	100mm	64439	
SFKH02.150.08 FeT	150mm	64446	
SFKH02.200.08 FeT	200mm	64453	
SFKH02.250.08 FeT	250mm	64460	
SFKH02.450.08 FeT	450mm	64477	

<b>NTC1,8k</b>			150°C
<b>SFKH02</b>			<b>PG1</b>
Type	Pocket L	Art. No.	
SFKH02.050.08 NTC1,8k	50mm	351454	
SFKH02.100.08 NTC1,8k	100mm	204842	
SFKH02.150.08 NTC1,8k	150mm	290531	
SFKH02.200.08 NTC1,8k	200mm	351508	
SFKH02.250.08 NTC1,8k	250mm	290555	
SFKH02.450.08 NTC1,8k	450mm	351539	

# Screw-In Temperature Sensor passive / active – SFKH02 «

NTC5k			150°C
SFKH02			PG1
Type	Pocket L	Art. No.	
SFKH02.050.08 NTC5k	50mm	351478	
SFKH02.100.08 NTC5k	100mm	351485	
SFKH02.150.08 NTC5k	150mm	351492	
SFKH02.200.08 NTC5k	200mm	351515	
SFKH02.250.08 NTC5k	250mm	351522	
SFKH02.450.08 NTC5k	450mm	351546	

NTC10k Precon			150°C
SFKH02			PG1
Type	Pocket L	Art. No.	
SFKH02.050.08 NTC10k Precon	50mm	64606	
SFKH02.100.08 NTC10k Precon	100mm	64613	
SFKH02.150.08 NTC10k Precon	150mm	64620	
SFKH02.200.08 NTC10k Precon	200mm	64637	
SFKH02.250.08 NTC10k Precon	250mm	64644	
SFKH02.450.08 NTC10k Precon	450mm	64651	

LM235Z			120°C
SFKH02			PG1
Type	Pocket L	Art. No.	
SFKH02.050.08 LM235Z	50mm	64668	
SFKH02.100.08 LM235Z	100mm	64675	
SFKH02.150.08 LM235Z	150mm	64682	
SFKH02.200.08 LM235Z	200mm	64699	
SFKH02.250.08 LM235Z	250mm	64705	
SFKH02.450.08 LM235Z	450mm	64712	

TRA 1 / TRV 1			-50°C...+50°C	
SFKH02			PG1	
Type	Out	Pocket L	Art. No.	
SFKH02.050.08 TRA 1	4-20mA	50mm	108614	
SFKH02.100.08 TRA 1	4-20mA	100mm	108621	
SFKH02.150.08 TRA 1	4-20mA	150mm	108638	
SFKH02.200.08 TRA 1	4-20mA	200mm	108645	
SFKH02.250.08 TRA 1	4-20mA	250mm	109000	
SFKH02.450.08 TRA 1	4-20mA	450mm	109017	
SFKH02.050.08 TRV 1	0-10V	50mm	109277	
SFKH02.100.08 TRV 1	0-10V	100mm	109284	
SFKH02.150.08 TRV 1	0-10V	150mm	109291	
SFKH02.200.08 TRV 1	0-10V	200mm	109307	
SFKH02.250.08 TRV 1	0-10V	250mm	109314	
SFKH02.450.08 TRV 1	0-10V	450mm	109321	

NTC10k			150°C
SFKH02			PG1
Type	Pocket L	Art. No.	
SFKH02.050.08 NTC10k	50mm	64484	
SFKH02.100.08 NTC10k	100mm	64491	
SFKH02.150.08 NTC10k	150mm	64507	
SFKH02.200.08 NTC10k	200mm	64514	
SFKH02.250.08 NTC10k	250mm	64521	
SFKH02.450.08 NTC10k	450mm	64538	

NTC20k			150°C
SFKH02			PG1
Type	Pocket L	Art. No.	
SFKH02.050.08 NTC20k	50mm	64545	
SFKH02.100.08 NTC20k	100mm	64552	
SFKH02.150.08 NTC20k	150mm	64569	
SFKH02.200.08 NTC20k	200mm	64576	
SFKH02.250.08 NTC20k	250mm	64583	
SFKH02.450.08 NTC20k	450mm	64590	

OPTIONS	
SFKH02 160°C	PG1
Description	
Temperature up to 260°C	
3-wire connection	
4-wire connection	

TRA 2 / TRV 2			-10°C...+120°C	
SFKH02			PG1	
Type	Out	Pocket L	Art. No.	
SFKH02.050.08 TRA 2	4-20mA	50mm	109024	
SFKH02.100.08 TRA 2	4-20mA	100mm	109031	
SFKH02.150.08 TRA 2	4-20mA	150mm	109048	
SFKH02.200.08 TRA 2	4-20mA	200mm	109055	
SFKH02.250.08 TRA 2	4-20mA	250mm	109062	
SFKH02.450.08 TRA 2	4-20mA	450mm	109079	
SFKH02.050.08 TRV 2	0-10V	50mm	109338	
SFKH02.100.08 TRV 2	0-10V	100mm	109345	
SFKH02.150.08 TRV 2	0-10V	150mm	109352	
SFKH02.200.08 TRV 2	0-10V	200mm	109369	
SFKH02.250.08 TRV 2	0-10V	250mm	109376	
SFKH02.450.08 TRV 2	0-10V	450mm	109499	

## » SFKH02 – Screw-In Temperature Sensor active / LON

TRA 3 / TRV 3				0°C...+50°C
SFKH02				PG1
Type	Out	Pocket L	Art. No.	
SFKH02.050.08 TRA 3	4-20mA	50mm	109086	
SFKH02.100.08 TRA 3	4-20mA	100mm	109093	
SFKH02.150.08 TRA 3	4-20mA	150mm	109109	
SFKH02.200.08 TRA 3	4-20mA	200mm	109116	
SFKH02.250.08 TRA 3	4-20mA	250mm	109123	
SFKH02.450.08 TRA 3	4-20mA	450mm	109130	
SFKH02.050.08 TRV 3	0-10V	50mm	108799	
SFKH02.100.08 TRV 3	0-10V	100mm	108805	
SFKH02.150.08 TRV 3	0-10V	150mm	108812	
SFKH02.200.08 TRV 3	0-10V	200mm	108829	
SFKH02.250.08 TRV 3	0-10V	250mm	108836	
SFKH02.450.08 TRV 3	0-10V	450mm	108843	

TRA 5 / TRV 5				0°C...+250°C
SFKH02				PG1
Type	Out	Pocket L	Art. No.	
SFKH02.050.08 TRA 5	4-20mA	50mm	109215	
SFKH02.100.08 TRA 5	4-20mA	100mm	109222	
SFKH02.150.08 TRA 5	4-20mA	150mm	109239	
SFKH02.200.08 TRA 5	4-20mA	200mm	109246	
SFKH02.250.08 TRA 5	4-20mA	250mm	109253	
SFKH02.450.08 TRA 5	4-20mA	450mm	108904	
SFKH02.050.08 TRV 5	0-10V	50mm	108911	
SFKH02.100.08 TRV 5	0-10V	100mm	108928	
SFKH02.150.08 TRV 5	0-10V	150mm	108935	
SFKH02.200.08 TRV 5	0-10V	200mm	108942	
SFKH02.250.08 TRV 5	0-10V	250mm	108959	
SFKH02.450.08 TRV 5	0-10V	450mm	108966	

TRA 4 / TRV 4				0°C...+160°C
SFKH02				PG1
Type	Out	Pocket L	Art. No.	
SFKH02.050.08 TRA 4	4-20mA	50mm	109147	
SFKH02.100.08 TRA 4	4-20mA	100mm	109154	
SFKH02.150.08 TRA 4	4-20mA	150mm	109161	
SFKH02.200.08 TRA 4	4-20mA	200mm	109185	
SFKH02.250.08 TRA 4	4-20mA	250mm	109192	
SFKH02.450.08 TRA 4	4-20mA	450mm	109208	
SFKH02.050.08 TRV 4	0-10V	50mm	108850	
SFKH02.100.08 TRV 4	0-10V	100mm	108867	
SFKH02.150.08 TRV 4	0-10V	150mm	108874	
SFKH02.200.08 TRV 4	0-10V	200mm	108881	
SFKH02.250.08 TRV 4	0-10V	250mm	108898	
SFKH02.450.08 TRV 4	0-10V	450mm	109260	

### OPTIONS

SFKH02 TRA / TRV	PG1
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#### Description

LCD

### LON

SFKH02	PG1
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Type	Out	Pocket L	Art. No.	
SFKH02.050.08 LON	FTT	50mm	95365	
SFKH02.100.08 LON	FTT	100mm	95372	
SFKH02.150.08 LON	FTT	150mm	95389	
SFKH02.200.08 LON	FTT	200mm	95396	
SFKH02.250.08 LON	FTT	250mm	95402	
SFKH02.450.08 LON	FTT	450mm	95419	

### ACCESSORIES

SFKH02	PG1
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#### Bonded pockets stainless steel

Type	Length	For mounting length	Art. No.
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example 1: SFKH02.450.08 NTC1,8k 260°C 3L  
 SFKH02=type / 450=mounting length 450mm / 08=pocket ø 8mm  
 NTC1,8k=sensor NTC1,8k / 260°C=temperature up to 260°C  
 3L=3-wire connection

Ordering example 2: SFKH02.100.08 TRA 2  
 SFKH02=type / 100=mounting length 100mm / 08=pocket ø 8mm  
 TRA 2=transducer 4-20mA, -10°C...+120°C

# Screw-In Temperature Sensor passive / active – SFKH03 «

## Application

For temperature measuring in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. supply/exhaust air ducts). With neck tube. Designed for locking on control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Ambient temperature	-25°C...+90°C (connection head)
T max. sensor top	160°C (standard), 260°C
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Neck tube	Stainless steel 1.4305, Ø=12mm, L=70mm
Protection	IP66, SI-Protection
Notice	Other sensors on request

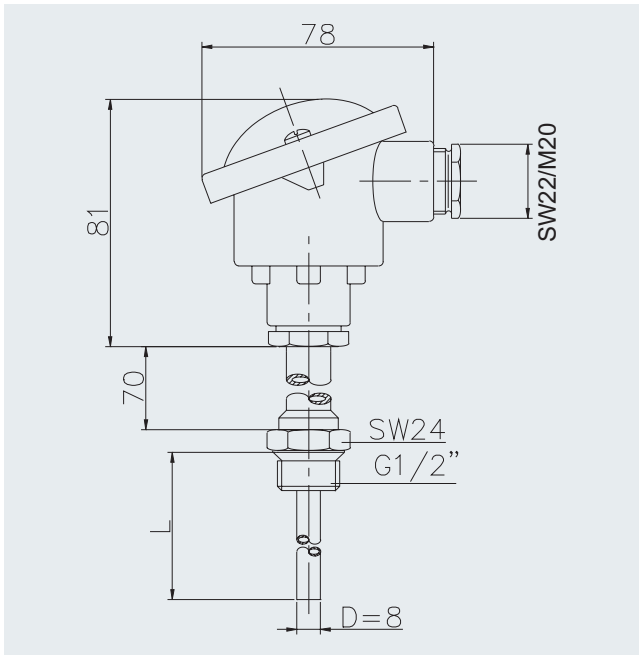
TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	100mm, 150mm, 200mm, 250mm
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1/TRV 1: -50°C...+50°C TRA 2/TRV 2: -10°C...+120°C TRA 3/TRV 3: 0°C...+50°C TRA 4/TRV 4: 0...+160°C TRA 5/TRV 5: 0...+250°C
Accuracy	TRA: ±0,2°C / ±0,1% of measuring range TRV: ±0,1% of measuring range
Ambient temperature	-25°C...+70°C (connection head)
T max. sensor top	160°C (standard), 260°C
Power supply	15-24V=
Power consumption	TRA: max. 20mA/24V= TRV: max. 40mA/24V=
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=8mm
Neck tube	Stainless steel 1.4305, Ø=12mm, L=70mm
Protection	IP66, SI-Protection



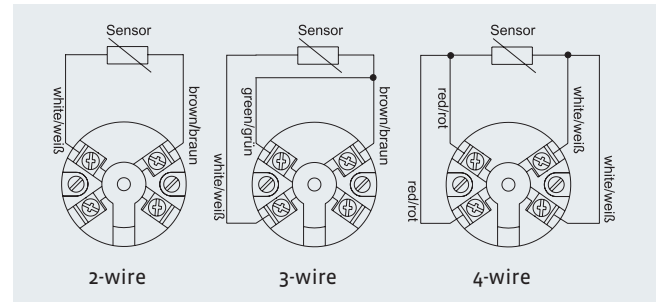
Protection against mechanical overstress  
**SI-Protection**  
 humidity and vibration

# » SFKH03 – Screw-In Temperature Sensor passive / active

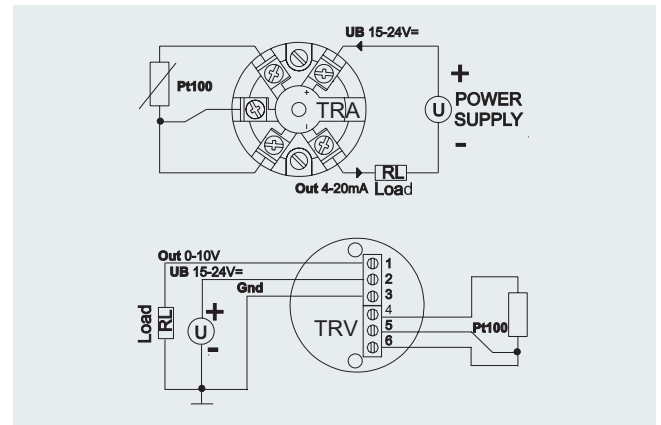
Dimensional Drawing passive / active (mm)



Connection passive



Connection active



PT100		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 PT100	100mm	64323	
SFKH03.150.08 PT100	150mm	75053	
SFKH03.200.08 PT100	200mm	75077	
SFKH03.250.08 PT100	250mm	75084	

PT1000		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 PT1000	100mm	75138	
SFKH03.150.08 PT1000	150mm	75145	
SFKH03.200.08 PT1000	200mm	75152	
SFKH03.250.08 PT1000	250mm	75169	

Ni1000		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 Ni1000	100mm	75213	
SFKH03.150.08 Ni1000	150mm	75220	
SFKH03.200.08 Ni1000	200mm	75237	
SFKH03.250.08 Ni1000	250mm	75244	

PT100 1/3 DIN		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 PT100 1/3 DIN	100mm	75091	
SFKH03.150.08 PT100 1/3 DIN	150mm	75107	
SFKH03.200.08 PT100 1/3 DIN	200mm	75114	
SFKH03.250.08 PT100 1/3 DIN	250mm	75121	

PT1000 1/3 DIN		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 PT1000 1/3 DIN	100mm	75176	
SFKH03.150.08 PT1000 1/3 DIN	150mm	75183	
SFKH03.200.08 PT1000 1/3 DIN	200mm	75190	
SFKH03.250.08 PT1000 1/3 DIN	250mm	75206	

Ni1000TK5000		160°C	
SFKH03		PG1	
Type	Pocket L	Art. No.	
SFKH03.100.08 Ni1000TK5000	100mm	75251	
SFKH03.150.08 Ni1000TK5000	150mm	75268	
SFKH03.200.08 Ni1000TK5000	200mm	75275	
SFKH03.250.08 Ni1000TK5000	250mm	75282	

# Screw-In Temperature Sensor passive / active – SFKH03 «

FeT			160°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 FeT	100mm	75299	
SFKH03.150.08 FeT	150mm	75305	
SFKH03.200.08 FeT	200mm	75312	
SFKH03.250.08 FeT	250mm	75329	

NTC1,8k			150°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 NTC1,8k	100mm	351553	
SFKH03.150.08 NTC1,8k	150mm	351607	
SFKH03.200.08 NTC1,8k	200mm	351638	
SFKH03.250.08 NTC1,8k	250mm	351669	

NTC5k			150°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 NTC5k	100mm	351560	
SFKH03.150.08 NTC5k	150mm	351621	
SFKH03.200.08 NTC5k	200mm	351645	
SFKH03.250.08 NTC5k	250mm	351690	

NTC10k			150°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 NTC10k	100mm	74568	
SFKH03.150.08 NTC10k	150mm	75343	
SFKH03.200.08 NTC10k	200mm	75350	
SFKH03.250.08 NTC10k	250mm	75367	

NTC10k Precon			150°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 NTC10k Precon	100mm	75411	
SFKH03.150.08 NTC10k Precon	150mm	75428	
SFKH03.200.08 NTC10k Precon	200mm	75435	
SFKH03.250.08 NTC10k Precon	250mm	75442	

NTC20k			150°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 NTC20k	100mm	75374	
SFKH03.150.08 NTC20k	150mm	75381	
SFKH03.200.08 NTC20k	200mm	75398	
SFKH03.250.08 NTC20k	250mm	75404	

LM235Z			120°C
SFKH03			PG1
Type	Pocket L	Art. No.	
SFKH03.100.08 LM235Z	100mm	75459	
SFKH03.150.08 LM235Z	150mm	75466	
SFKH03.200.08 LM235Z	200mm	75473	
SFKH03.250.08 LM235Z	250mm	75480	

OPTIONS	
SFKH03 160°C	PG1
Description	
Temperature up to 260°C	
3-wire connection	
4-wire connection	

TRA 1 / TRV 1			-50°C...+50°C
SFKH03			PG1
Type	Out	Pocket L	Art. No.
SFKH03.100.08 TRA 1	4-20mA	100mm	180832
SFKH03.150.08 TRA 1	4-20mA	150mm	256193
SFKH03.200.08 TRA 1	4-20mA	200mm	215350
SFKH03.250.08 TRA 1	4-20mA	250mm	351843
SFKH03.100.08 TRV 1	0-10V	100mm	320986
SFKH03.150.08 TRV 1	0-10V	150mm	351782
SFKH03.200.08 TRV 1	0-10V	200mm	351812
SFKH03.250.08 TRV 1	0-10V	250mm	351904

TRA 2 / TRV 2			-10°C...+120°C
SFKH03			PG1
Type	Out	Pocket L	Art. No.
SFKH03.100.08 TRA 2	4-20mA	100mm	307888
SFKH03.150.08 TRA 2	4-20mA	150mm	227940
SFKH03.200.08 TRA 2	4-20mA	200mm	338011
SFKH03.250.08 TRA 2	4-20mA	250mm	274265
SFKH03.100.08 TRV 2	0-10V	100mm	351737
SFKH03.150.08 TRV 2	0-10V	150mm	351799
SFKH03.200.08 TRV 2	0-10V	200mm	351829
SFKH03.250.08 TRV 2	0-10V	250mm	351911



## » SFKH03 – Screw-In Temperature Sensor active

TRA 3 / TRV 3		0°C...+50°C	
SFKH03		PG1	
Type	Out	Pocket L	Art. No.
SFKH03.100.08 TRA 3	4-20mA	100mm	200622
SFKH03.150.08 TRA 3	4-20mA	150mm	217828
SFKH03.200.08 TRA 3	4-20mA	200mm	200110
SFKH03.250.08 TRA 3	4-20mA	250mm	202909
SFKH03.100.08 TRV 3	0-10V	100mm	351744
SFKH03.150.08 TRV 3	0-10V	150mm	288071
SFKH03.200.08 TRV 3	0-10V	200mm	351836
SFKH03.250.08 TRV 3	0-10V	250mm	351928

TRA 4 / TRV 4		0°C...+160°C	
SFKH03		PG1	
Type	Out	Pocket L	Art. No.
SFKH03.100.08 TRA 4	4-20mA	100mm	284479
SFKH03.150.08 TRA 4	4-20mA	150mm	351768
SFKH03.200.08 TRA 4	4-20mA	200mm	276788
SFKH03.250.08 TRA 4	4-20mA	250mm	336857
SFKH03.100.08 TRV 4	0-10V	100mm	344784
SFKH03.150.08 TRV 4	0-10V	150mm	351805
SFKH03.200.08 TRV 4	0-10V	200mm	258548
SFKH03.250.08 TRV 4	0-10V	250mm	256711

TRA 5 / TRV 5		0°C...+250°C	
SFKH03		PG1	
Type	Out	Pocket L	Art. No.
SFKH03.100.08 TRA 5	4-20mA	100mm	147071
SFKH03.150.08 TRA 5	4-20mA	150mm	291873
SFKH03.200.08 TRA 5	4-20mA	200mm	328425
SFKH03.250.08 TRA 5	4-20mA	250mm	145312
SFKH03.100.08 TRV 5	0-10V	100mm	115001
SFKH03.150.08 TRV 5	0-10V	150mm	261944
SFKH03.200.08 TRV 5	0-10V	200mm	258555
SFKH03.250.08 TRV 5	0-10V	250mm	152716

### ACCESSORIES

SFKH03			PG1
Bonded pockets stainless steel			Art. No.
Type	Length	For mounting length	
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



Ordering example 1: SFKH03.250.08 NTC10k 260°C 3L  
 SFKH03=type / 250=mounting length 250mm / 08=pocket ø 8mm  
 NTC10k=sensor NTC10k / 260°C=temperature up to 260°C  
 3L=3-wire connection

Ordering example 2: SFKH03.450.08 TRV 5  
 SFKH03=type / 450=mounting length 450mm  
 08=pocket ø 8mm / TRV 5=transducer 0-10V, 0°C...+250°C

# Screw-In High-Temperature Sensor passive / active – RGS03 «

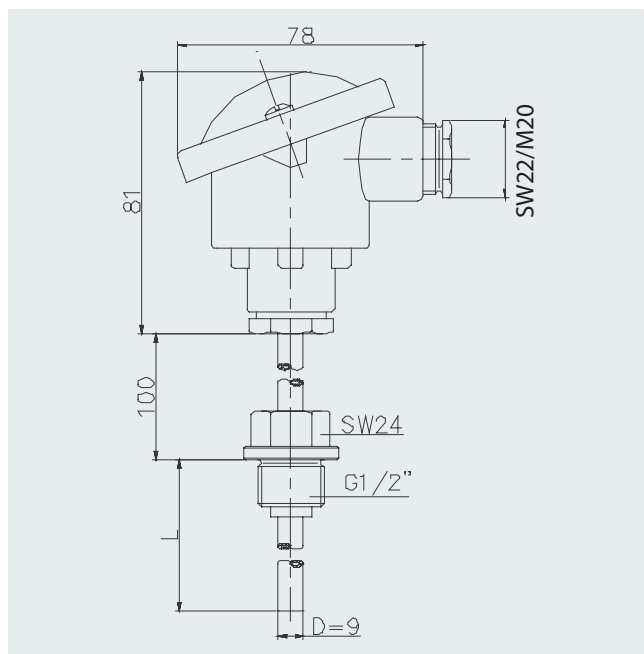
## Application

For special measuring of higher temperatures in gaseous mediums of heating, ventilation and air-conditioning systems (e.g. in supply/exhaust air ducts). With neck tube. Designed for locking on control and display systems.

TECHNICAL DATA – PASSIVE OUTPUT	
Mounting lengths	250mm, 500mm
Measuring range	max. +600°C
Ambient temperature	-25°C...+90°C (connection head)
Connection	PT100: 3-wire
Terminal clamp	Terminal screwing, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=9mm
Neck tube	Stainless steel 1.4305, Ø=9mm, L=100mm
Protection	IP66

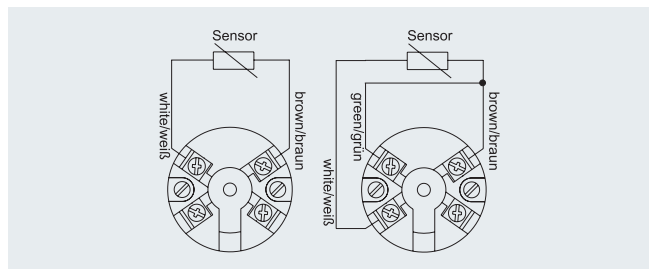


## Dimensional Drawing passive / active (mm)

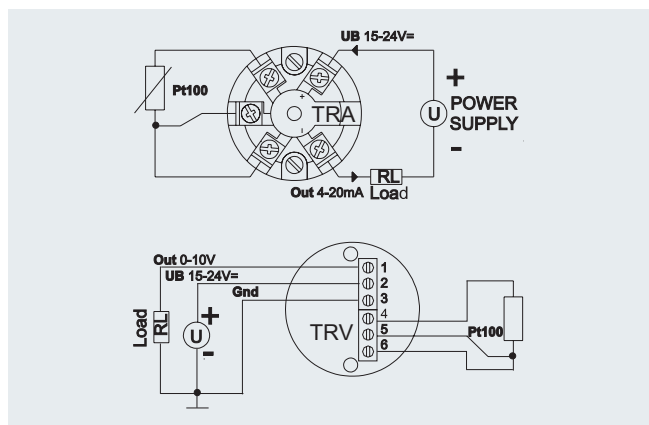


TECHNICAL DATA – ACTIVE OUTPUT	
Mounting lengths	250mm, 500mm
Measuring ranges	TRA: 4-20mA / TRV: 0-10V TRA 5/TRV 5: 0°C...+300°C TRA 6/TRV 6: 0°C...+400°C TRA 7/TRV 7: 0°C...+600°C
Accuracy	TRA: ±0,2°C / ±0,1% of measuring range TRV: ±0,1% of measuring range
Ambient temperature	-25°C...+70°C (connection head)
T max. sensor top	+500°C (short-term +600°C)
Power supply	15-24V=
Power consumption	TRA: max. 20mA/24V= TRV: max. 40mA/24V=
Terminal clamp	Terminal screwing, max. 1,5mm <sup>2</sup>
Connection head	Form B, Material aluminium
Cable entry	M20
Sensor pocket	Stainless steel 1.4571, Ø=9mm
Neck tube	Stainless steel 1.4305, Ø=9mm, L=100mm
Protection	IP66

## Connection passive



## Connection active



## » RGS03 – Screw-In High-Temperature Sensor passive / active

PT100			600°C
RGS03			PG1
Type	Pocket L	Art. No.	
RGS03.250.09 PT100 3-wire	250mm	79297	
RGS03.500.09 PT100 3-wire	500mm	385190	

TRA 6 / TRV 6			0...+400°C
RGS03			PG1
Type	Out	Pocket L	Art. No.
RGS03.250.09 TRA 6	4-20mA	250mm	164115
RGS03.500.09 TRA 6	4-20mA	500mm	155281
RGS03.250.09 TRV 6	0-10V	250mm	223942
RGS03.500.09 TRV 6	0-10V	500mm	351959

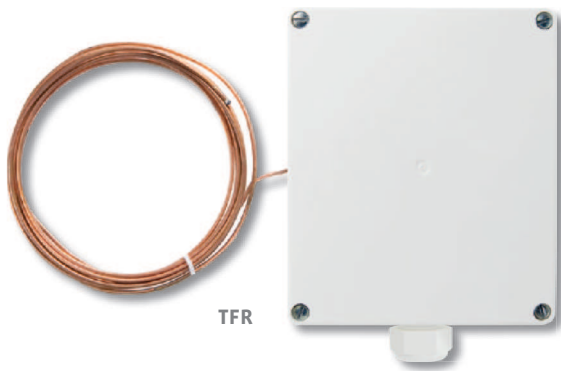
TRA 7 / TRV 7			0...+600°C
RGS03			PG1
Type	Out	Pocket L	Art. No.
RGS03.250.09 TRA 7	4-20mA	250mm	79334
RGS03.500.09 TRA 7	4-20mA	500mm	79341
RGS03.250.09 TRV 7	0-10V	250mm	351935
RGS03.500.09 TRV 7	0-10V	500mm	244824

## Application

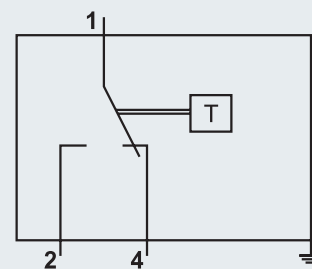
For downstream temperature monitoring of water air heaters in ventilation and air-conditioning systems to prevent frost damages.

The frost protection thermostat can be used to enable the following frost protection functions:

- Stop fan
- Close outside air dampers
- Open heating coil valve 100%
- Switch-off chiller (condenser) and humidifier
- Triggering by visual and/or audible frost alarm



## Connection



1 - 2 Normalbetrieb / Normal Operation  
1 - 4 Frostgefahr / Frost Danger

### TYPES AVAILABLE

Type	Capillary tube l	Reset
TFR 1,8	1,8m	automatically
TFR 3	3,0m	automatically
TFR 6	6,0m	automatically
TFR 1,8-R	1,8m	manually
TFR 3-R	3,0m	manually
TFR 6-R	6,0m	manually

### TECHNICAL DATA

Set p. adjustment range	-10°C...+15°C (factory setting 5°C)
Differential gap	2 ±1°C
Repeatability	±0,5°C
Sensor operating length	60cm
Switch output	change-over contact, max. 250V AC, max. 10A
Admissbile medium	air
Enclosure	Material PC
Capillary tube	Material copper
Clamp	Screwing terminal, max. 2,5mm <sup>2</sup>
Cable entry	M20
Ambient temperature	adjusted set point + min. 2K...70°C
Protection	IP65
Schutzart	IP65
Notice	Delivery incl. 6 mounting brackets

### FROST PROTECTION THERMOSTAT

TFR / TFR-R	PG1		
Type	Capill. tube	Reset	Art. No.
TFR 1,8	1,8m	automatically	508728
TFR 3	3,0m	automatically	508735
TFR 6	6,0m	automatically	508742
TFR 1,8-R	1,8m	manually	509473
TFR 3-R	3,0m	manually	509480
TFR 6-R	6,0m	manually	509497

Delivery incl. 6 mounting brackets

### ZUBEHÖR

Mounting flange	PG1
Type	Art. No.
Mounting flange MF2/TPO	435642

# » WRF04 – Room Temp. Sensor passive / active / LON / RS485 Modbus

## Application

For temperature measuring in room and office spaces etc.  
Designed for locking on control and display systems.



TYPES AVAILABLE		
Type	Version	Output
WRF04	no sensor	-
	PTC/NTC	passive, resistor
	TRA	active, 4-20mA
	TRV	active, 0-10V
	LON RS485 Modbus	active, FTX active, RS485 Modbus
WRF04LCD	TRA	active, 4-20mA
	TRV	active, 0-10V
	LON	active, FTX
	RS485 Modbus	active, RS485 Modbus



WRF04



WRF04LCD

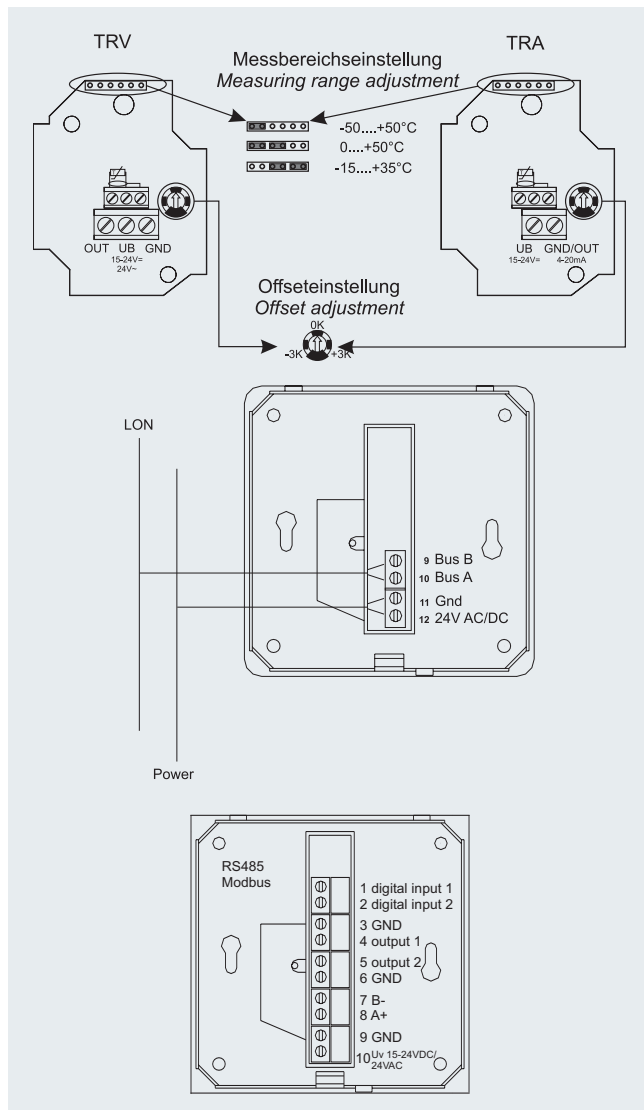
### TECHNICAL DATA – PASSIVE OUTPUT

Ambient temperature	-35°C...+70°C
Enclosure	Material ASA, colour pure white similar to RAL9010, protection IP20, mountable on standard installation box, housing bottom can be pre-mounted and pre-wired separately from housing cover.
Connection	2-wire (standard), 3-wire, 4-wire
Terminal clamp	Screwing clamp, max. 1,5mm <sup>2</sup>
Cable entry	From behind or sidewise top/bottom
Protection	IP30
Notice	Special painting possible (see p. 225) Stainless steel housing possible Other sensors on request

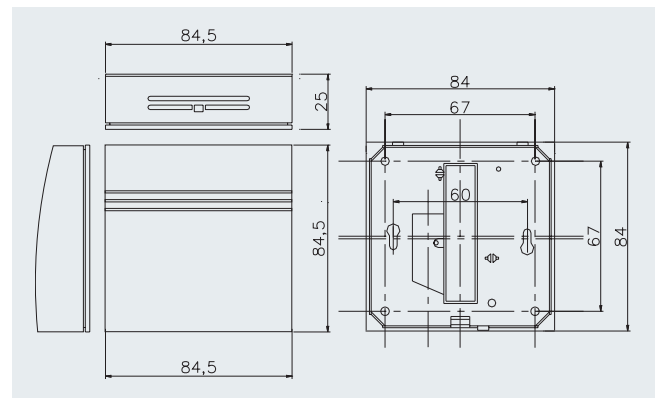
### TECHNICAL DATA – ACTIVE OUTPUT / LON / RS485 MODBUS

Measuring ranges	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 3 / TRV 3: 0°C...+50°C (Measuring range adjustable on the transducer) LON / RS485 Modbus: 0°C...+50°C
Accuracy	±1% of measuring range
Ambient temperature	-35°C...+70°C
Power supply	TRA: 15-24V= (±10%) TRV/ LON/RS485Modbus: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= LCD TRV: typ. 0,6W/1,0VA LON: typ. 0,6W/1,7VA LCD LON: typ. 0,8W/2,0VA RS485: typ. 0,4W/0,6VA LCD RS485: typ. 0,4W/0,6VA
Display	Room temperature
LCD	29mm x 12mm, black/white
Enclosure	Material ASA, colour pure white similar to RAL9010, mountable on standard installation box, housing bottom can be pre-mounted and pre-wired separately from housing cover
Cable entry	From behind or sidewise top/bottom
Terminal clamp	Screwing terminal max. 1,5mm <sup>2</sup>
Protection	IP30
Notice	Special painting possible (see p. 225) Stainless steel enclosure available (only for devices without display)

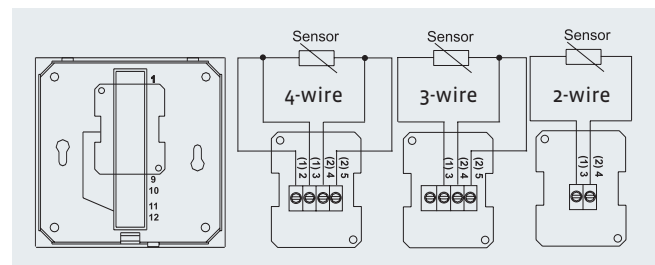
## Connection active / LON / RS485 Modbus



## Dimensional Drawing (mm)



## Connection passive



## » WRF04 – Room Temp. Sensor passive / active / LON / RS485 Modbus

PASSIVE		
WRF04		PG1
Type	Art. No.	
WRF04 enclosure	212892	
WRF04 PT100	193221	
WRF04 PT100 1/3DIN	197731	
WRF04 PT1000	191623	
WRF04 PT1000 1/3 DIN	207980	
WRF04 Ni1000	191616	
WRF04 NTC1,8k	236775	
WRF04 NTC5k	208017	
WRF04 Ni1000TK5000	193214	
WRF04 FeT	218887	
WRF04 NTC10k	207584	
WRF04 NTC10k Precon	197618	
WRF04 NTC20k	193177	
WRF04 LM235Z	193191	

OPTIONS		
WRF04		PG1
Description		
3-wire connection		
4-wire connection		
Stainless steel enclosure		

TRA 1 / TRV 1		-50°C...+50°C	
WRF04		PG1	
Type	Out	Art. No.	
WRF04 TRA 1	4-20mA	210522	
WRF04 TRV 1	0-10V	212274	

TRA 3 / TRV 3		0°C...+50°C	
WRF04		PG1	
Type	Out	Art. No.	
WRF04 TRA 3	4-20mA	198660	
WRF04 TRV 3	0-10V	194389	

LON		
WRF04		PG1
Type	Out	Art. No.
WRF04 LON	FTX	193689

RS485 Modbus Ao2V		
WRF04		PG1
Type	Out	Art. No.
WRF04 RS485 Modbus AO2V	RS485 Modbus	419970

LCD		
TRV 1		-50°C...+50°C
WRF04LCD		PG1
Type	Out	Art. No.
WRF04LCD TRV 1	0-10V	398077

TRV 3		0°C...+50°C
WRF04LCD		PG1
Type	Out	Art. No.
WRF04LCD TRV 3	0-10V	377904

LON		
WRF04LCD		PG1
Type	Out	Art. No.
WRF04LCD LON	FTX	398084

RS485 Modbus		
WRF04LCD		PG1
Type	Out	Art. No.
WRF04LCD RS485 Modbus	RS485 Modbus	398091

## SPECIAL PAINTING

WRF04 / WRF04LCD

PG1

### Description

Set-up costs for tools (one-time)

Minimum order quantity 1-9 pcs.

Minimum order quantity 10-49 pcs.

Minimum order quantity 50-100 pcs.

## ACCESSORIES

WRF04 / WRF04LCD

PG1

### Description

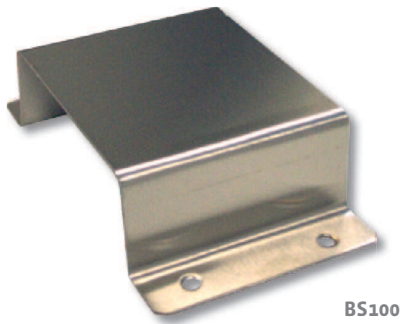
Art. No.

Rawlplugs and screws (2 pcs. each)

102209

Ball stroke protection BS100 (only for WRF04)

103312





## » RDF18 – Ceiling Temperature Sensor passive

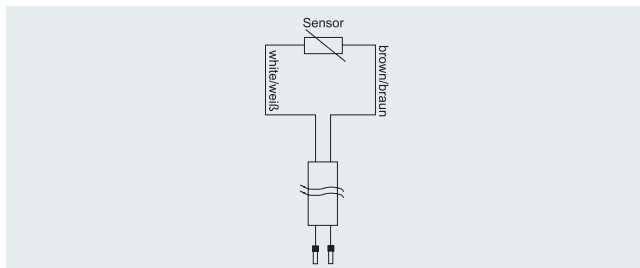
### Application

For temperature measuring in ceilings of room and office spaces etc. Designed for locking on control and display systems.

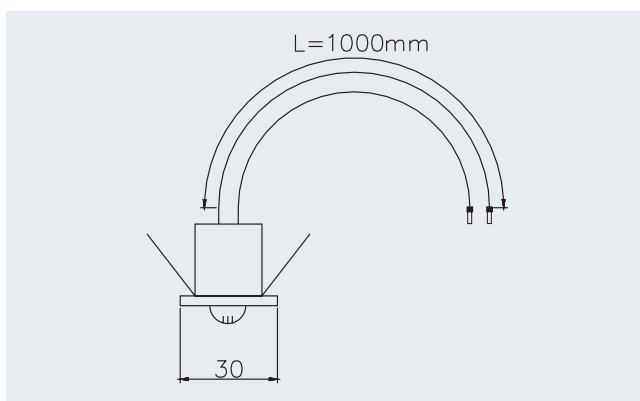
TECHNICAL DATA	
Ambient temperature	-35°C...+70°C
Enclosure	Facet mounting sensor Material ABS, colour signal white, D=35mm
Connection wire	PVC, cross-section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Connection	2-wire
Protection	IP30



### Connection



### Dimensional Drawing (mm)



PASSIVE	
RDF18 – CONNECTION WIRE 1M	PG1
Type	Art. No.
RDF18.100 PT100	271158
RDF18.100 PT100 1/3 DIN	352314
RDF18.100 PT1000	145893
RDF18.100 PT1000 1/3 DIN	200493
RDF18.100 Ni1000	224833
RDF18.100 Ni1000TK5000	269810
RDF18.100 FeT	352321
RDF18.100 NTC1,8k	352338
RDF18.100 NTC5k	352345
RDF18.100 NTC10k	347433
RDF18.100 NTC10k Precon	352352
RDF18.100 NTC20k	271462
RDF18.100 LM235Z	352369

OPTIONS	
RDF18	PG1
Description	
Cable length per additional meter	

Ordering example: **RDF18.200 PT100**  
**RDF18=Type / 200=connection wire 2m / PT100=Sensor PT100**

# Room Pendulum Temperature Sensor passive / active – RPF40 «

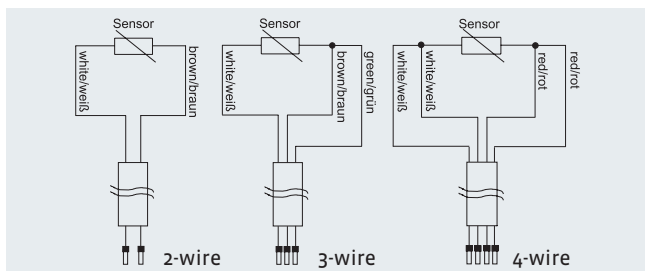
## Application

For sectional temperature measuring in large rooms (e.g. open-plan offices, galleries, production plants etc.). Alternatively with black ball as radiation sensor with long time constant for radiators or similar applications. Designed for locking on control and display systems.

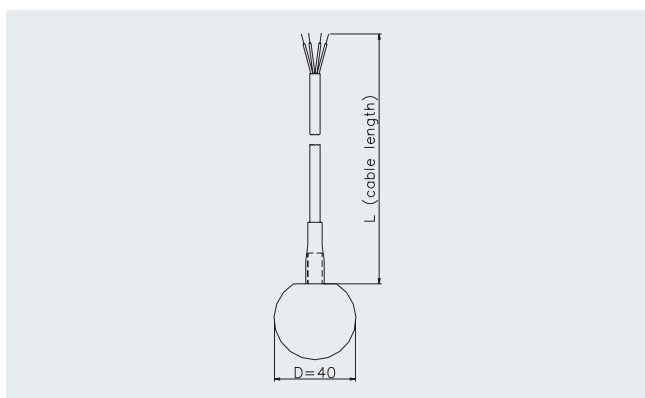
TECHNICAL DATA – PASSIVE OUTPUT	
Ambient temperature	-35°C...+70°C
Sensor head	Material PVC, colour white, D=40mm
Connection wire	PVC, cross-section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Protection	IP65
Notice	Also available with black ball Multi-wire conductor connection on request Other sensors on request



## Connection passive

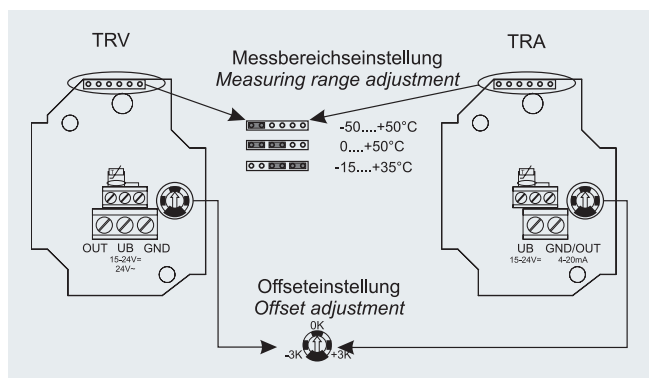


## Dimensional Drawing passive (mm)

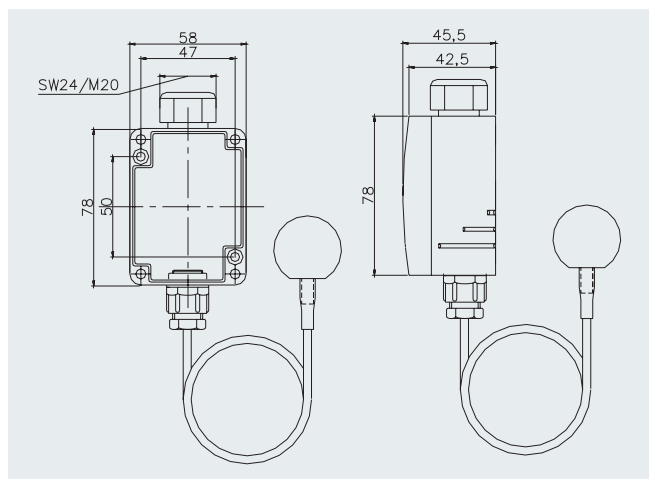


TECHNICAL DATA – ACTIVE OUTPUT	
Measuring range	TRA: 4-20mA / TRV: 0-10V TRA 1 / TRV 1: -50°C...+50°C TRA 3 / TRV 3: 0°C...+50°C
Accuracy	±1% of measuring range
Ambient temperature	-35°C...+70°C
Sensor head	Material PVC, colour white, D=40mm
Enclosure	Material PA6, pure white (similar to RAL9010), with quick release fastener screws
Connection wire	PVC, cross-section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: max. 12mA/24V= typ. 0,42W/0,84VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Protection	IP65
Notice	Also available with black ball

## Connection active



## Dimensional Drawing active (mm)



## » RPF40 – Room Pendulum Temperature Sensor passive / active

### PASSIVE

RPF40 – CONNECTION WIRE 1M		PG1
Type	Art. No.	
RPF40.100.40 PT100	350006	
RPF40.100.40 PT100 1/3 DIN	265621	
RPF40.100.40 PT1000	321068	
RPF40.100.40 PT1000 1/3 DIN	329569	
RPF40.100.40 Ni1000	329279	
RPF40.100.40 Ni1000TK5000	144193	
RPF40.100.40 FeT	359344	
RPF40.100.40 NTC1,8k	334549	
RPF40.100.40 NTC5k	351973	
RPF40.100.40 NTC10k	351980	
RPF40.100.40 NTC10k Precon	164573	
RPF40.100.40 NTC20k	334792	
RPF40.100.40 LM235Z	339476	

### OPTIONS

RPF40		PG1
Description		
Cable length per additional meter		
Connection box AGS54		

### ACTIVE – TRA 1 / TRV 1 -50°C...+50°C

RPF40 – CONNECTION WIRE 1M		PG1
Type	Out	Art. No.
RPF40.100.40 TRA 1	4-20mA	351997
RPF40.100.40 TRV 1	0-10V	352000

### ACTIVE – TRA 3 / TRV 3 0°C...+50°C

RPF40 – CONNECTION WIRE 1M		PG1
Type	Out	Art. No.
RPF40.100.40 TRA 3	4-20mA	132015
RPF40.100.40 TRV 3	0-10V	170178

### OPTIONS

RPF40 TRA / TRV		PG1
Description		
Cable length per additional meter		

Ordering example 1: **RPF40.200.40 Ni1000**  
 RPF40=type / 200=connection wire 2m  
 40=Ø sensor head 40mm / Ni1000=sensor Ni1000

Ordering example 2: **RPF40.100.40 TRV 1**  
 RPF40=type / 100=connection wire 1m  
 40=Ø sensor head 40mm / TRV 1=transducer 0-10V, -50°C...+50°C

# Room Pendulum Temperature Sensor passive / active – RPF100 «

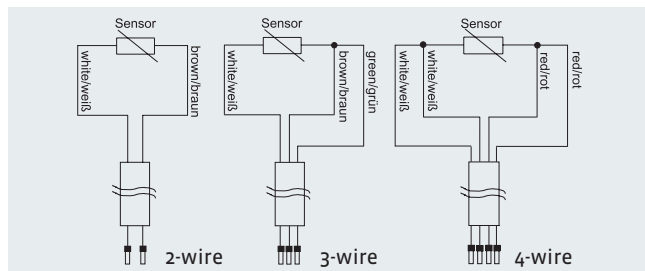
## Application

For sectional temperature measuring in large rooms (e.g. open-plan offices, production plants etc.). Designed for locking on control and display systems.

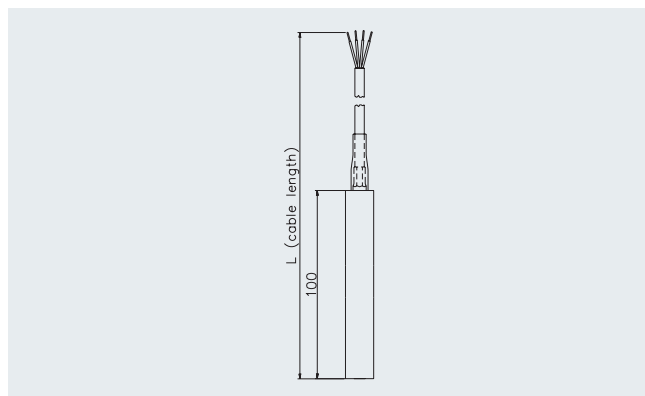
TECHNICAL DATA – PASSIVE OUTPUT	
Ambient temperature	-35°C...+70°C
Sensor pocket	Stainless steel 1.4571, $\varnothing=15\text{mm}$ , L=100mm
Connection wire	PVC, cross-section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Connection	2-wire (standard), 3-wire, 4-wire (optional)
Protection	IP65
Notice	Other sensors on request



## Connection passive

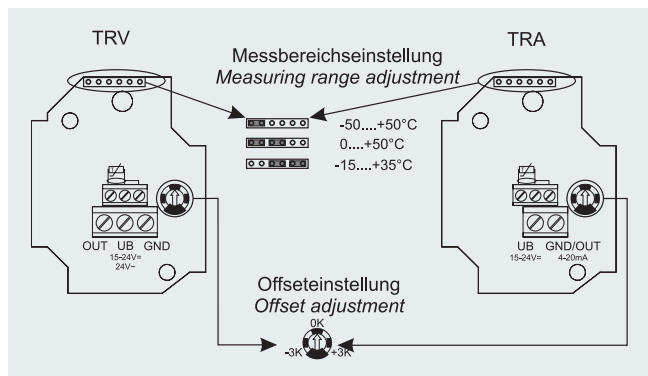


## Dimensional Drawing passive (mm)

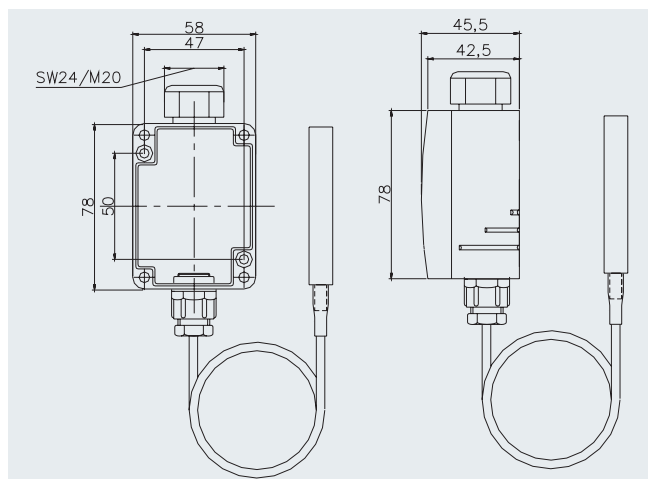


TECHNICAL DATA – ACTIVE OUTPUT	
Measuring range	TRA: 4-20mA / TRV: 0-10V TRA 1 / TRV 1: -50°C...+50°C TRA 3 / TRV 3: 0°C...+50°C
Accuracy	±1% of measuring range
Ambient temperature	-35°C...+70°C
Sensor pocket	Stainless steel 1.4571, $\varnothing=15\text{mm}$ , L=100mm
Enclosure	Material PA6, pure white (similar to RAL9010), with quick release and fastener screws
Connection wire	PVC, cross-section 0,25mm <sup>2</sup> / L=1m, Other standard lengths 2m, 4m, 6m
Power supply	TRA: 15-24V= (±10%) TRV: 15-24V= (±10%) or 24V~ (±10%)
Power consumption	TRA: max. 20mA/24V= TRV: typ. 0,42W/0,84VA
Terminal clamp	Screwing terminal, max. 1,5mm <sup>2</sup>
Protection	IP65

## Connection active



## Dimensional Drawing active (mm)



## » RPF100 – Room Pendulum Temperature Sensor passive / active

### PASSIVE

RPF100 – CONNECTION WIRE 1M		PG1
Type	Art. No.	
RPF100.100.15 PT100	81566	
RPF100.100.15 PT100 1/3 DIN	90780	
RPF100.100.15 PT1000	90827	
RPF100.100.15 PT1000 1/3 DIN	90865	
RPF100.100.15 Ni1000	90902	
RPF100.100.15 Ni1000TK5000	160612	
RPF100.100.15 FeT	90988	
RPF100.100.15 NTC1,8k	278331	
RPF100.100.15 NTC5k	91022	
RPF100.100.15 NTC10k	91060	
RPF100.100.15 NTC10k Precon	91107	
RPF100.100.15 NTC20k	219952	
RPF100.100.15 LM235Z	91145	

### OPTIONS

RPF100		PG1
Description		
Cable length per additional meter		
Connection box AGS54		

### ACTIVE – TRA 1 / TRV 1 -50°C...+50°C

RPF100 – CONNECTION WIRE 1M		PG1
Type	Out	Art. No.
RPF100.100.15 TRA 1	4-20mA	352017
RPF100.100.15 TRV1	0-10V	238601

### ACTIVE – TRA 3 / TRV 3 0°C...+50°C

RPF100 – CONNECTION WIRE 1M		PG1
Type	Out	Art. No.
RPF100.100.15 TRA 3	4-20mA	185769
RPF100.100.15 TRV3	0-10V	120760

### OPTIONS

RPF100 TRA / TRV		PG1
Description		
Cable length per additional meter		

Ordering example 1: **RPF100.100.15 PT1000**  
 RPF100=type / 100=connection wire 1m / 15=pocket ø 15mm  
 PT1000=sensor PT1000

Ordering example 2: **RPF100.200.15 TRA 3**  
 RPF100=type / 200=connection wire 2m / 15=pocket ø 15mm  
 TRA 3=transducer 4-20mA, 0...50°C

## Application

Transmitter for conversion of PT100/PT1000 temperature sensors to 0-10V or 4-20mA.



TYPES AVAILABLE		
Type	Model	Output
MU-S1 PT100	TRA/TRV	active, 4-20mA and 0-10V
MU-S1 PT1000	TRA/TRV	active, 4-20mA and 0-10V
MU-S2 PT100	TRV	active, 0-10V
MU-S2 PT1000	TRV	active, 0-10V

TECHNICAL DATA	
Measuring range	TRA: 4-20mA / TRV: 0-10V  TRA 1 / TRV 1: -50°C...+50°C TRA 2 / TRV 2: -10°C...+120°C TRA 3 / TRV 3: 0°C...+50°C TRA 4 / TRV 4: 0°C...+160°C TRA 5 / TRV 5: 0°C...+300°C
Accuracy	MU-S1: ±0,3% of measuring range MU-S2: ±0,5% of measuring range
Ambient temperature	0°C...+50°C
Enclosure	Polyamide, snap mounting on DIN-rail according to DIN EN 50022
Power supply	24V= or 24V~
Power consumption	MU-S1: typ. 50mA/24V= MU-S2: typ. 40mA/24V=

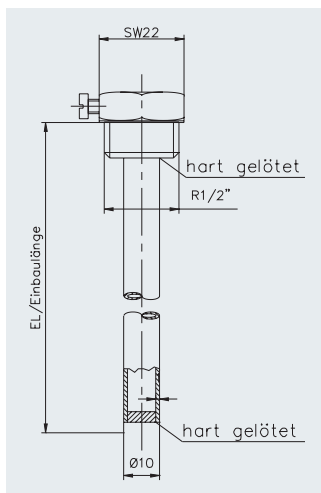
## TRANSMITTERS

### MU-S

Type	Out
MU-S1	4-20mA/0-10V
MU-S2	0-10V

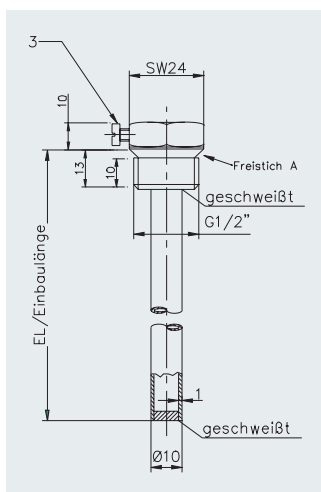
When ordering, please indicate sensor and measuring range

## » Accessory – Immersion Pockets for AKF10 / KFK01 Ø7mm



**Immersion pocket brass nickel-plated (THMS)**  
for duct temperature sensors AKF10 and KFK01  
with pocket diameter 7mm

- > Hard soldered
- > Pressure-proved up to 16 bar
- > Thread G1/2" DIN 2999
- > Width across flat SW22
- > Operating temperature up to +130°C



**Immersion pocket stainless steel (THVA)**  
for duct temperature sensors AKF10 and KFK01  
with pocket diameter 7mm

- > Welded
- > Pressure-proved up to 40 bar
- > Material 1.4571
- > Thread G1/2" DIN ISO 228T1, undercut B, flat sealing
- > Width across flat SW24
- > Operating temperature up to +260°C

### IMMERSION POCKETS

FOR AKF10, KFK01

PG1

Description

Art. No.

#### Immersion pocket brass nickel-plated

Type	Length	For mounting length	
THMS50	50mm	62mm	1793
THMS120	120mm	135mm	1809
THMS185	185mm	192mm	1823
THMS225	225mm	240mm	1816
THMS300	300mm	320mm	1830
THMS375	375mm	392mm	1847
THMS450	450mm	465mm	102179

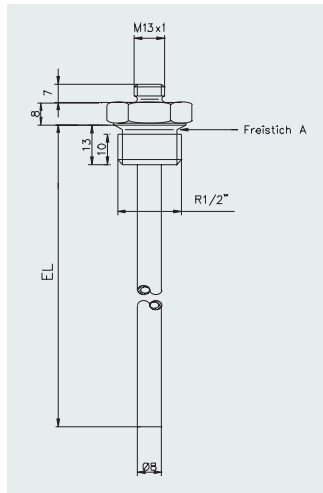
#### Immersion pocket stainless steel

THVA50	50mm	62mm	1885
THVA120	120mm	135mm	1854
THVA185	185mm	192mm	1915
THVA225	225mm	240mm	1861
THVA300	300mm	320mm	1892
THVA375	375mm	392mm	1908
THVA450	450mm	465mm	1878

# Accessory – Immersion Pockets / Welded Pockets «



THMSDS THVADS



**Immersion pocket brass nickel-plated with pressure screw (THMSDS)**  
for cable temperature sensors TF25

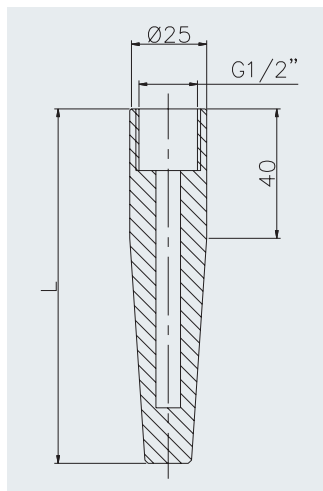
- > Hard soldered
- > Pressure-proved up to 16 bar
- > Thread G1/2" DIN 2999
- > Width across flat SW22
- > Operating temperature +130°C

**Immersion pocket stainless steel with pressure screw (THVADS)**  
for cable temperature sensors TF25

- > Welded
- > Pressure-proved up to 40 bar
- > Material 1.4571
- > Thread G1/2" DIN ISO 228T1, undercut B, flat sealing
- > Width across flat SW24
- > Operating temperature up to +160°C

## IMMERSION POCKETS WITH PRESSURE SCREW

FOR TF25		PG1
Description		Art. No.
<b>Immersion pocket brass nickel-plated with pressure screw</b>		
Type	Mounting length	
THMSDS50	50mm	247368
THMSDS100	100mm	247399
THMSDS200	200mm	247405
<b>Immersion pocket stainless steel with pressure screw</b>		
THVADS50	50mm	247313
THVADS100	100mm	247337
THVADS200	200mm	247344



**Welded Pocket (ESH)**  
for SFK(H)01/SFK(H)02/SFK(H)03

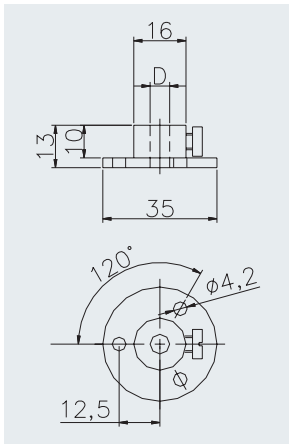
- > Pressure-proved up to 100 bar
- > Material ST52.3
- > Inner thread G1/2"

## WELDED POCKETS

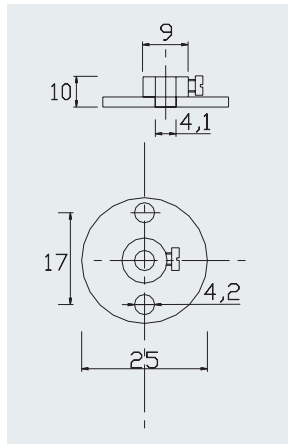
FOR SFK(H)01, SFK(H)02, SFK(H)03		PG1	
Type	Length	For mounting length	Art. No.
ESH110	110mm	100mm	103459
ESH160	160mm	150mm	103466
ESH210	210mm	200mm	103473
ESH260	260mm	250mm	173247



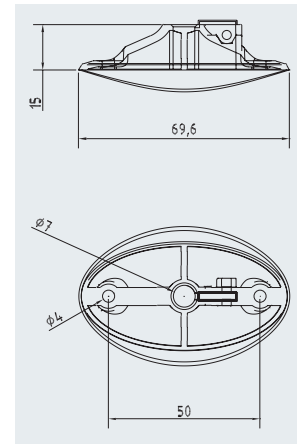
## » Accessory – Mounting Flanges / Clamp Screws



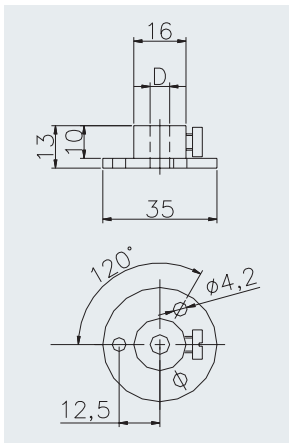
**Mounting Flange MF4**  
for duct temperature sensors AF10 and KFK01  
with pocket diameter 4mm  
 > Material brass, blue galvanized  
 > Operating temperature up to +130°C



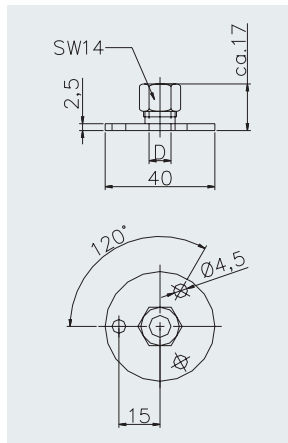
**Mounting Flange MF6**  
for cable temperature sensor TF25  
 > Material brass, blue galvanized  
 > Operating temperature up to +130°C



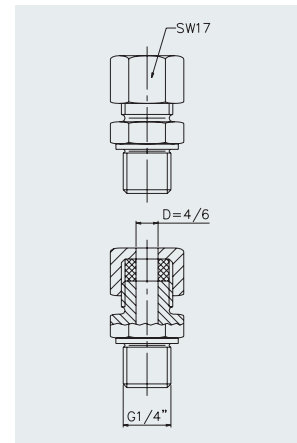
**Mounting Flange MF7 flexible**  
for cable temperature sensors TF14 and TF25,  
duct temperature sensors AKF10 and KFK01,  
average temperature sensor MWF  
 > for pocket diameter 4mm, 6mm and 7mm  
 > delivery incl. seal inserts for d=4mm / 6mm  
 > Operating temperature up to +130°C



**Mounting Flange MF7**  
for duct temperature sensors AKF10 and  
KFK01 with pocket diameter 7mm  
 > Material brass, blue galvanized  
 > Operating temperature up to +130°C



**Mounting Flange with Clamp Screw MF8**  
for duct temperature sensors KFK03  
 > Material stainless steel 1.4541  
 > Clamp screw with teflon ring  
 > Operating temperature up to +200°C



**Clamp Screws**  
**KL4VA / KL6VA**  
for sealing of protective sleeves  
with diameter 4mm / 6mm  
 > Pressure-proved up to 16 bar  
 > Material stainless steel 1.4305  
 > Thread G1/4"  
 > Width across flat SW1 7  
 > VA die ring of VA, operating temperature  
up to 400°C



MF7 flex



MF7



MF8



KL

### MOUNTING FLANGES

FOR AKF10, KFK01, KFK03, TF14, TF25, MWF

PG1

Type	Art. No.
MF4	102438
MF6	3407
MF7	102360
MF7 flexibel	399098
MF8	103305

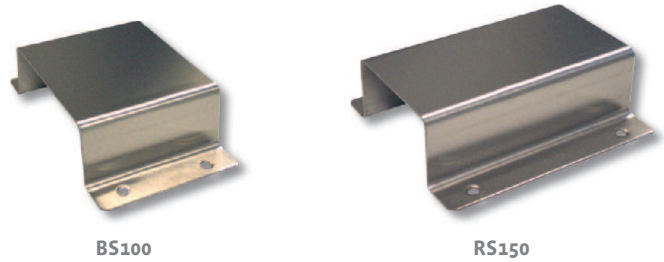
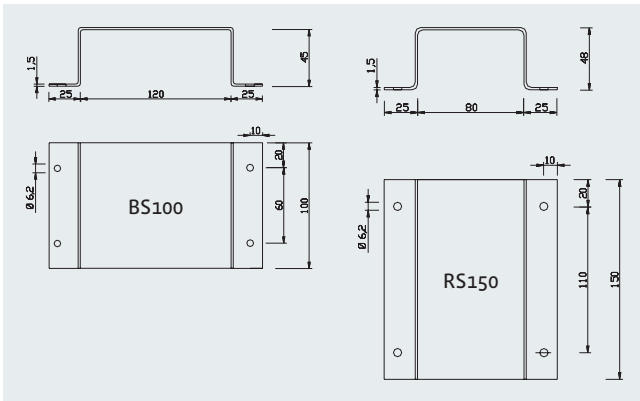
### CLAMPS SCREWS

FOR PROTECTIVE SLEEVES Ø4MM / 6MM

PG1

Type	Art. No.
KL4VA	103206
KL6VA	103213

# Accessory – Protective Coverings / Tightening Strap / Mounting Set «

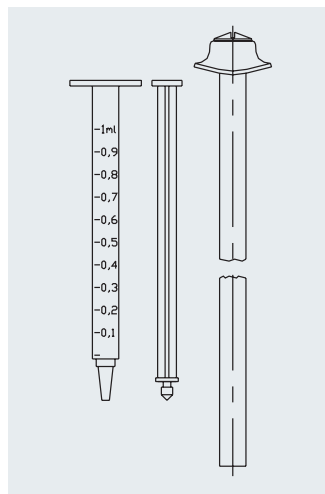


## Ball Stroke Protection BS100 Sun-/Rain Protection RS150

BS100: Protection against mechanical influence  
for wall mounting room temperature sensor WRF04  
RS150: Protection against sun and rain influence  
for outdoor temperature sensors AGS43, AGS54 and AGS54ext

> Material stainless steel 1.4301

BALL STROKE PROTECTION / SUN-/RAIN PROTECTION		PG1
FOR WRF04, AGS43, AGS54, AGS54ext		
Type	Art. No.	
BS100 and rain influence	103312	
RS150	103329	



## Tightening strap with syringe thermal contact fluid SPB2" / SPB900

for pipe contact temperature sensors, VFG54, AF25 and PR25

- > SPB2": Tightening strap for 2"-tube and syringe with thermal contact fluid approx. 0,5cm<sup>3</sup>
- > SPB900: Tightening strap L=900mm and syringe with thermal contact fluid approx. 0,5cm<sup>3</sup>

TIGHTENING STRAP / THERMAL CONTACT FLUID		PG1
FOR AGS54, AF25, PR25		
Type	Art. No.	
SPB2" and thermal contact fluid	102254	
SPB900 and thermal contact fluid	102315	

## Mounting Set D+S

for outdoor temperature sensor AGS43, AGS54 and AGS54ext as well as room temperature sensor WRF04

- > Screws (2 pcs.): SPAX, 3,5x35mm, blue galvanized
- > Rawl plugs (2 pcs.): 6mm



MOUNTING SET		PG1
FOR AGS43, AGS54, AGS54ext, WRF04		
Type	Art. No.	
Rawlplugs and screws (2 pcs. each)	102209	