

# DATA SHEET

(Technical subjects to change  
Date 01/2008)

## Tube-/Immersion temperature sensor KNTF

### Application

This device is perfect for the detection of temperatures in liquid or gaseous media. Connection to common heating and regulating systems is possible with different measuring elements<sup>1</sup>.

### Product overview

KNTF	Sensor	Passive, ranges upon request <sup>1</sup>
Ø 6mm		Measuring transducer MUA active, 4...20mA
		Measuring transducer MUV active, 0...10 V

### Specifications

#### In general:

Installation length:	KNTF Ø = 6mm 50mm/100mm/150mm/200mm/300mm/400mm
Material sensor sleeve:	Stainless steel 1.4571
Connection head material:	PA6/GK30
Connection head colour:	White
Protection class:	IP65 according to EN60529
Weight (Without immersion sleeve/flange):	50 mm Length: 102g 100mm Length: 106g 150mm Length: 110g 200mm Length: 114g 300mm Length: 122g 400mm Length: 132g
Cable entry point:	M16x1,5
Measuring temperature	
Sensor tip:	-50°C...+180°C
Casing:	-35°C...+100°C

#### Measuring elements<sup>1</sup>:

Following measuring elements are available:

- PT100
- PT100 1/3DIN
- PT1000
- PT1000 1/3DIN
- Ni1000
- Ni1000TK5000
- FeT
- NTC 5k, 10k, 20k
- NTC 1,8 kOhm
- Precon
- KTY81-210
- LM235Z



Image: Tube temperature sensor with flange

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Measuring ranges:	Depends on measuring element
Accuracy:	Depends on measuring element
Measurement current:	<1mA
Connection:	Max. 1,5mm <sup>2</sup> via terminal screws 2-Wire/3-Wire/4-Wire

### Measuring transducer MUA<sup>2</sup>

Power supply:	DC 15...30 V
Current sensor:	≤ 0,5mA
Lowest measuring point:	25K
Highest measuring point:	1050K
Measuring ranges:	Freely programmable
Output:	4...20mA
Electrical connection:	≤ 1,75mm <sup>2</sup> via terminal screws

### Measuring transducer MUV<sup>3</sup>

Power supply:	DC 15...30 V
Current sensor:	≤ 0,5mA
Lowest measuring point:	25K
Highest measuring point:	1050K
Measuring ranges:	freely programmable
Output:	0...10 V
Electrical connection:	≤ 1,75mm <sup>2</sup> via terminal screws

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## Installation information

Tube temperature sensor:  
Please use the enclosed mounting flange/screws to mount this device on top of an air ventilation duct.

Immersion temperature sensor:  
To install this device you'll need to use a screw neck/ T-piece G½" inside the tubing.

### NOTICE:



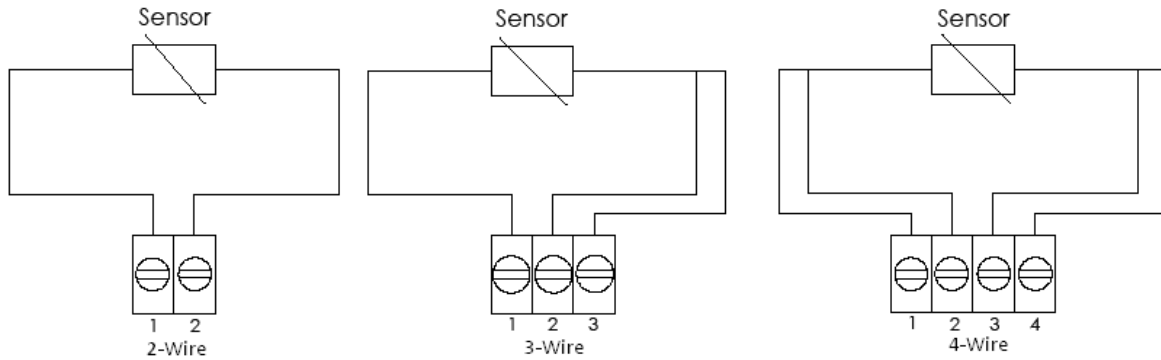
These instruments must be installed by authorised specialists only! Devices shall only be used for their intended purpose. The customer has to ensure adherence to the building and safety regulations and has to avoid all dangers of any kind.

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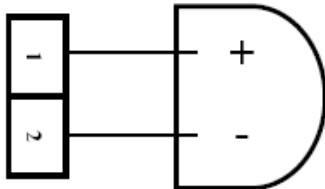
### Connection diagram (passive temperature sensors)



### Connection of LM235Z

The LM235Z is a semiconductor IC. Please pay attention to polarity while connecting! The polarity is marked at the casing. The LM235Z has a maximum allowable measurement current of 400µA...5mA with 10mV/°K.

Please pay attention to polarity: clamp 1 = (+), clamp 2 = (-)



### Optional accessories

Measuring transducer:	MUA output (active, 4...20 mA) <sup>2</sup> MUV output (active, 0...10V) <sup>3</sup>
Mounting flange for ventilatory applications:	MF with Ø 6 mm
Immersion sleeve for heater applications:	Ms installation length 50/100/150/200/300/400 mm Permitted up to 16bar
Immersion sleeve stainless steel:	VA installation length 50/100/150/200/300/400 mm Permitted up to 16bar

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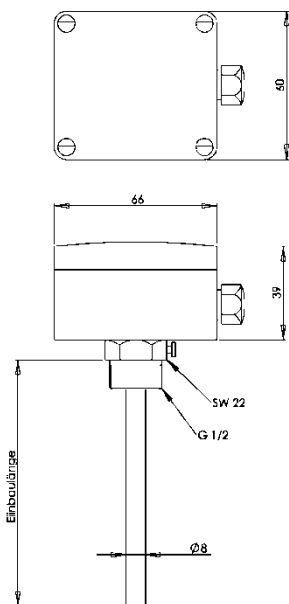
### Standards

EMV: EN60730-1 (2000) Interference resistance  
EN60730-1 (2000) Emitted interference  
CE-Conformance: 89/336/EWG Electromagnetic compatibility

### Dimensional drawing:

(Dimensions in mm)

#### Immersion Sensor



#### Tube Sensor

