

# KTFxx

## CABLE-TYPE BULB TEMPERATURE SENSORS

### PRODUCT DATA



### GENERAL

The KTFxx cable-type bulb temperature sensors can be used as

- immersion sensors
- duct air sensors

The sensors can be employed for hot and cold water installations in systems using Pt1000, NTC 10k, NTC 20k, or Ni1000 temperature sensing elements.

**NOTE:** Immersion well not included. For information on immersion well options, see VF Immersion Temperature Sensors – Product Data (Product Literature No.: EN0B-0724GE51).

### FEATURES

- Pt1000, NTC 10k, NTC 20k, or Ni1000 temperature sensing element
- Stainless steel probes, IP65 rating
- High accuracy

### Models

OS no.	sensor type	description	temperature range
KTF00-65-2M	Pt1000	2-meter cable	-30...+105 °C (-22...+221 °F)
KTF01-65-2M	Ni1000	2-meter cable	
KTF10-65-2M	NTC 10k	2-meter cable	
KTF20-65-2M	NTC 20k	2-meter cable	
KTF20-65-2M-B	NTC 20k	pack of 50 KTF20-65-2M	
KTF20-65-5M-B	NTC 20k	5-meter cable, pack of 50	
KTF00-65-2M-300	Pt1000	2-meter cable	-20...+260 °C (-4...+500 °F)
KTF01-65-2M-300	Ni1000	2-meter cable	-20...+250 °C (-4...+482 °F)

### Accessory

The new KTFxx sensors no longer come with a spring, which is not required with new, smaller-diameter WS and WM immersion wells.

When securing new sensors into old-style VFxx immersion wells, order the accessory VF-SPRING.

### SPECIFICATION

#### Nominal value

Pt1000	1000 Ω at 0 °C (32 °F)
NTC 10k	10 kΩ at 25 °C (77 °F)
NTC 20k	20 kΩ at 25 °C (77 °F)
Ni1000	1000 Ω at 0 °C (32 °F)

#### Accuracy

Pt1000 (IEC751 Class B)	±0.3 °C at 0 °C (32 °F)
NTC 10k	±0.2 °C at 25 °C (77 °F)
NTC 20k	±0.2 °C at 25 °C (77 °F)
Ni1000	±0.4 °C at 0 °C (32 °F)

#### Sensitivity

Pt1000	≈ 3.85 Ω / K
NTC 10k	-440 Ω / K at 25 °C (non-linear)
NTC 20k	≈ -934.5 Ω / K at 25 °C (non-linear)
Ni1000	≈ 6.18 Ω / K

**Time constant**

Immersion well application < 30 sec  
 Air duct application < 1 min at air velocity of 3 m/s

**Sensor sleeve material** stainless steel (1.4571)

**Cable sheath material** PVC (excepting the KTF00-65-2M-300 and KTF01-65-2M-300, which have PTFE)

**Electrical connection** 2-m or 5-m cable, 2x0.22 mm<sup>2</sup>

**Ambient Limits (wiring box)**

Storage temperature -30...+70 °C (-22...+158 °F)  
 Humidity 5...95% rh, non-condensing

**Safety** IP65 as per EN 60529

**Dimensions** see Fig. 1 on page 2

**DIMENSIONS**

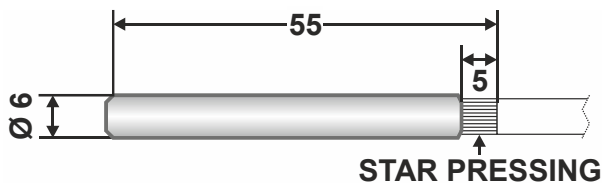


Fig. 1. Dimensions of the cable-type bulb sensor in mm

**WIRING**

wiring run	max. length
sensor to controller	200 m (660 ft)

Offset due to wire resistance per 10 m of distance from sensor to controller, when using the KTF00-65-2M (Pt1000):

type of wire	temperature offset Pt1000
0.5 mm <sup>2</sup> (AWG20)	0.18 °C (0.324 °F)
1.0 mm <sup>2</sup> (AWG17)	0.09 °C (0.162 °F)
1.5 mm <sup>2</sup> (AWG15)	0.06 °C (0.108 °F)

**INSTALLATION**

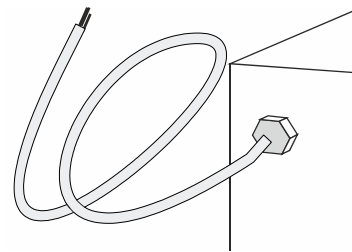


Fig. 2. Mounting into the immersion well

**NOTE:** Use shielded wiring in areas with high EMI. Keep 15 cm (5.9") minimum distance between sensor lines and 230 Vac power lines.



Manufactured for and on behalf of the Environmental & Energy Solutions Division of Honeywell Technologies Sàrl, Rolle, Z.A. La Pièce 16, Switzerland by its Authorized Representative:

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