

T7415A / KTF20 / DKF20

CABLE-TYPE BULB TEMPERATURE SENSORS

PRODUCT DATA



Fig. 1. The KTF20

GENERAL

The T7415A//KTF2/DKF20 Cable-type Bulb Temperature Sensor can be used as

- immersion sensors
- return air sensors

The sensors can be employed for hot and cold water installations in the following control systems:

- Excel 5000
- MicroniK 200
- MicroniK 100
- Excel Classic
- Excel Plus
- High Performance Excel Plus
- Excel EMC

or other systems using PT1000 or NTC 20k Ω temperature sensing elements.

FEATURES

- PT1000 or NTC 20k Ω temperature sensing element
- Wide sensing range
- High accuracy

Models

| OS no. | Description | Sensing range |
|------------|--|------------------------------|
| T7415A1007 | Cable-type Bulb PT1000 Temperature Sensor | -20...+100 °C (-4...+212 °F) |
| T7415A1015 | Cable-type Bulb PT1000 Temperature Sensor | -20...+300 °C (-4...+572 °F) |
| KTF20 | Cable-type Bulb NTC20k Ω Temperature Sensor | -20...+100 °C (-4...+212 °F) |
| DKF20 | Cable-type Bulb NTC20k Ω Mean value Sensor | -20...+100 °C (-4...+212 °F) |
| KTF20-B | Bulk shipment of 50 KTF20 | see above |

SPECIFICATION

Nominal value

| | |
|-----------------|------------------------|
| PT1000 | 1000 Ω at 0 °C |
| NTC20k Ω | 20 k Ω at 25 °C |

Accuracy

| | |
|-----------------|---|
| PT1000 | IEC751 Class B 0.3 K +0.5% • t (t in °C) |
| NTC20k Ω | 0.3 K +1% • t - 25 °C (t in °C) |

Sensitivity

| | |
|-----------------|---|
| PT1000 | \approx 3.85 Ω / K |
| NTC20k Ω | \approx -934.5 Ω / K at 25 °C (non-linear) |

Response time

| | |
|---------------------|--|
| immersion well app. | $\tau_{0.5} \approx$ 10 s |
| duct application | $\tau_{0.5} \approx$ 2 min at air velocity of 1 m/s (3.3 ft/s) |

Electrical connection

| | |
|--------------|-------------------|
| T7415A/KTF20 | 2 m cable, 2-core |
| DKF20 | 2 m cable, 3-core |

Ambient Limits (wiring box)

| | |
|---------------------|------------------------------|
| Storage temperature | -25...+70 °C (-13...+158 °F) |
| Humidity | 5...95% rh, non-condensing |

Safety

IP54 as per EN60529

Dimensions

see Fig. 2 on page 2

DIMENSIONS

Cable-Type Bulb Sensor

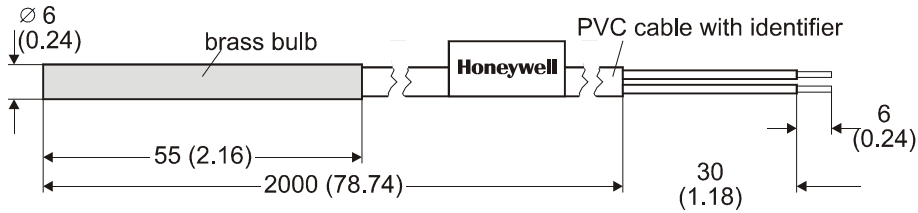


Fig. 2. Dimensions of the cable-type bulb sensor in mm (inches)

INSTALLATION

| Wiring run | Maximum 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 T7415A (PT100):

| Type of wire | Temperature offset PT100 |
|-----------------------------|--------------------------|
| 0.5 mm ² (AWG20) | 0.18 °C (0.324 °F) |
| 1.0 mm ² (AWG17) | 0.09 °C (0.162 °F) |
| 1.5 mm ² (AWG15) | 0.06 °C (0.108 °F) |

INSTALLATION OF KTF20/DKF20

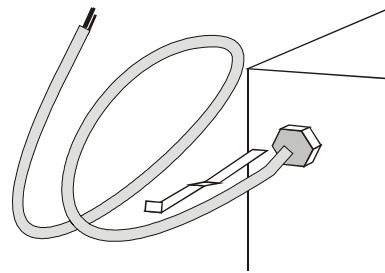


Fig. 3. KTF20 / DKF20 mounting into the immersion well

WIRING OF DKF20

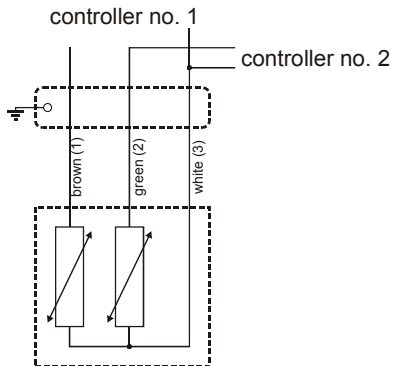


Fig. 4. Sensor branching for two separate controllers with DKF20

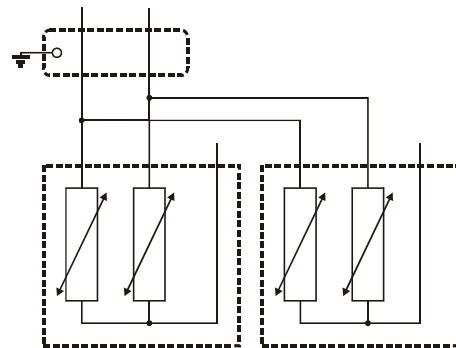


Fig. 5. Averaging with 2 x DKF20

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

Honeywell

Control Products

Honeywell AG
Böblinger Straße 17
D-71101 Schönaich
Phone: (49) 7031 63701
Fax: (49) 7031 637493
<http://europe.hbc.honeywell.com>

Subject to change without notice. Printed in Germany

Manufacturing location certified to

**DIN EN ISO
9001/14001**

EN0B-0362GE51 R0702