T7414C
STRAP-ON/OUTSIDE TEMPERATURE SENSOR

PRODUCT DATA
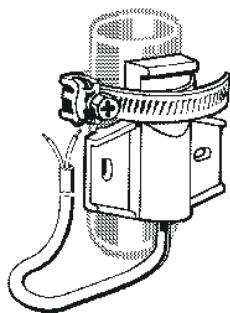
FEATURES

- **Pt1000 / NTC20 temperature sensing element**
- **Small size**
- **Easy mounting**
- **Fully encapsulated housing**

SPECIFICATIONS

Ambient limits
Operating temperature
- Strap-on   -30...+110 °C (-22...+230 °F)
- Outdoor   -30...+70 °C (-22...+158 °F)
Transport / storage temp.   -30...+70 °C (-22...+158 °F)
Humidity   5...95%rh, non-condensing

Safety
Protection standard   IP65 as per EN60529
Flame-retardant housing   V1 as per UL94

Housing   Plastic

Dimensions   See page 2

Weight   60 g

Mounting   Pipe and wall

Cable length   approx. 1 m

Temperature sensor
Sensing element   Pt1000, NTC20kΩ

Sensing range
- Strap-on   -30...+110°C (-22...+230°F)
- Outdoor   -30...+70°C (-22...+158°F)

Response time
- Strap-on Pt1000 $\tau_{0.5} \approx 36$ s
- Strap-on NTC20kΩ $\tau_{0.5} \approx 45$ s
- Outdoor Pt1000 $\tau_{0.5} \approx 240$ s
- Outdoor NTC20kΩ $\tau_{0.5} \approx 300$ s

Sensitivity
- Pt1000 $\approx 3.85\Omega$ / K
- NTC20kΩ   20 kΩ at 25 °C, non-linear

Accuracy
- Pt1000   DIN IEC751 Class B
                              $\Delta T/K = 0.3 + 0.005 \bullet |t|$ (t = °C)
- NTC20kΩ   0,3 K at 25 °C

Resistance
- Pt1000   1000Ω at 0 °C
- NTC20kΩ   20kΩ at 25 °C

T7414C
outdoor-mounted

T7414C
strap-on

GENERAL

The Strap-on Temperature Sensor is used to detect the supply or return water flow temperature on the pipe work.

The Outside Air Temperature Sensor is used in heating, ventilating and air conditioning systems to detect the outside temperature for reset of the main setpoint in weather-dependent control systems.

MODELS

| OS-No.	type / sensing element	mounted using
T7414C1004	strap-on / outdoor / Pt1000	clamp band / screws
T7414C1012	strap-on / outdoor / NTC20	clamp band / screws

CE

DIMENSIONS

Fig. 1. Dimensions (in mm)
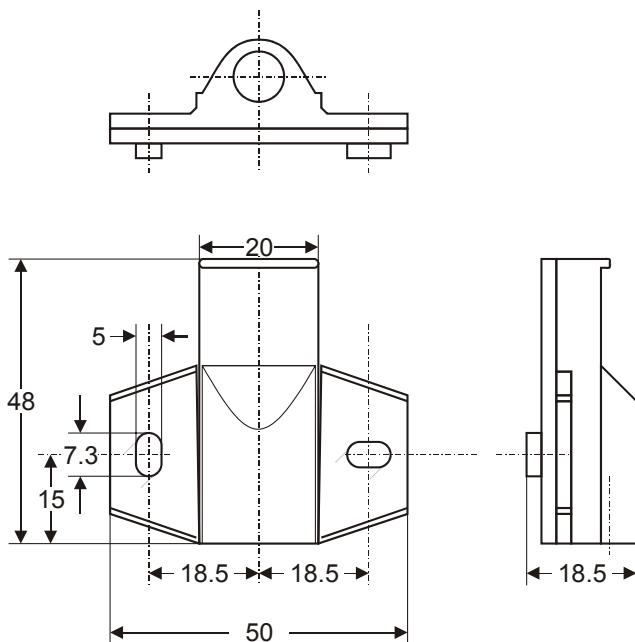
MOUNTING AND INSTALLATION

OUTDOOR

The outdoor air temperature sensor should be mounted on the wall of buildings having windows of the main occupancy rooms or on the coldest side (N-NW side).

It should not be subjected to direct sunshine and be mounted on an open facade so that it can detect all weather conditions.

The mounting height should be 2/3 of the way up wall on up to three-story buildings or between the second or third floor on taller buildings.

Avoid mounting the sensor above windows, doors, air extractors or other heat sources, under a balcony, the eaves, or in a wall niche.

The cable conduit through the wall must be sealed to prevent measurement errors by warm air circulation.

Fasten the sensor with the two supplied screws at the selected place on the wall as shown in Fig. 2.
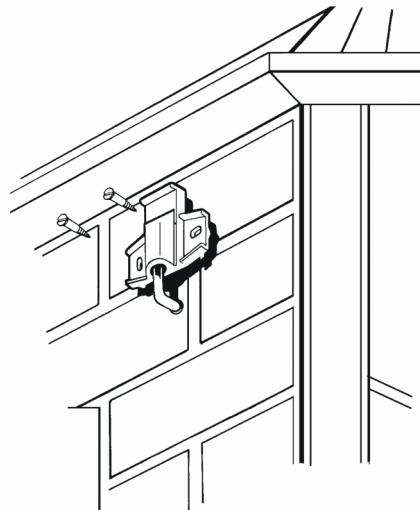
Fig. 2. T7414C outdoor-mounted

STRAP-ON

The strap-on temperature sensor consists of a sensor housing and a clamp band with an adjustable lock for mounting on pipes up to a diameter of 28 mm.

The sensor is equipped with a 1 m-long two-lead connecting cable.

The strap-on sensor must be mounted onto the water pipe with the clamp band at a minimum distance of 1.5 m from the mixing valve. Avoid mounting the sensor near heat sources, as its measurement could then be influenced by warm air circulation. Fasten the sensor as shown in Fig. 3.
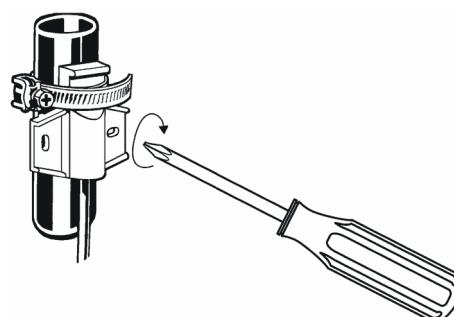

Fig. 3. T7414C strap-on mounted

Honeywell

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