

# Instructions for Installation

## Room temp. sensor TBLZ-1-24-2, for wall installation, IP20/ Outdoor temp. sensor TBLZ-1-24-3, for outdoor inst., IP54 GOLD/COMPACT

### 1. General

The temperature sensor is intended for wall mounting and is equipped with a screw terminal connection for a cable. Temperature sensor TBLZ-1-24-2 is designed for measuring the room temperature and temperature sensor TBLZ-1-24-3 is designed for measuring the outdoor temperature. The function selector switch is used for setting whether the temperature sensor shall measure the room temperature or the outdoor air temperature.

An adaptor for conversion from a 4 wire cable to a 3 metre long modular cable is supplied with the sensor.

### 2. Application

#### 2.1 GOLD RX/PX/CX/SD Version E/F, GOLD LP, COMPACT

##### Room temperature sensor

The room temperature sensor is designed for supplementing the extract air temperature sensor inside the air handling unit.

The room temperature sensor is used when the temperature in a room shall be given priority.

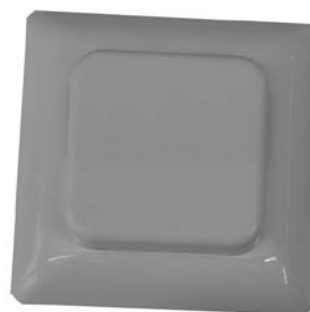
It can also be used if there are temperature losses in the extract air duct up to the air handling unit's point of measurement.

##### Outdoor temperature sensor

The outdoor temperature sensor is designed for supplementing the outdoor air temperature sensor inside the air handling unit.

The outdoor air sensor is used when measurement of the outdoor temperature is required while the air handling unit is idle or the outdoor air duct is closed off.

Temperature sensor, TBLZ-1-24-2



Adaptor



Modular cable



Temperature sensor, TBLZ-1-24-3



## 3. Installation

### 3.1 Temperature sensor

#### 3.1.1 Function of the room temperature sensor

The temperature sensor needs to be positioned at a representative measurement point about 1.5 metres above the floor. Avoid sources of interference such as radiators, direct solar radiation and the like.

Remove the cover on the temperature sensor by pressing the locking tabs on the sides of the cover with a small screwdriver, to disengage them.

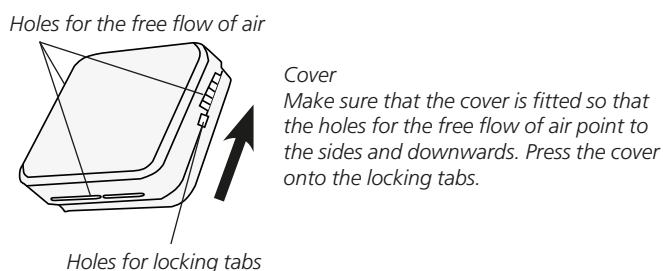
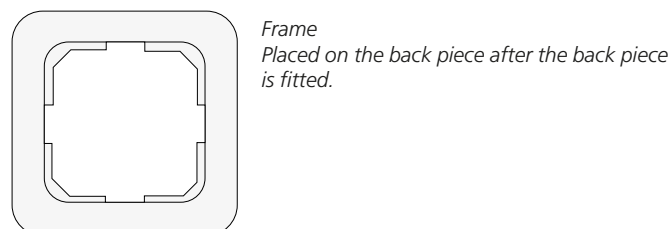
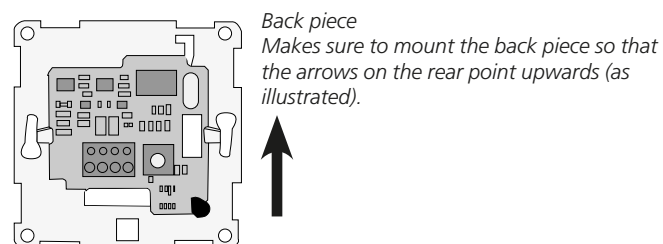
Remove the frame.

Mount the temperature sensor back piece on an interior wall using two screws. Makes sure to mount the back piece so that the arrows on the rear of the back piece point upwards.

Place the frame on the back piece.

Fit the cover. Make sure that the ventilation holes in the cover for the free flow of air point to the sides and downwards and push the cover on the locking tabs.

See below.



#### 3.1.2 To install the outdoor temperature sensor

Position the temperature sensor at a representative point of measurement. Avoid sources of interference such as direct solar radiation and the like.

### 3.2 Adaptor

Remove the cover on the adaptor by pressing in the tab on the side of the cover with a small screwdriver and then twist the cover. Secure the adaptor at an appropriate place by means of two screws or the double-stick pad (supplied).

## 4. Technical Data

### 4.1 Room temperature sensor

|                            |                           |
|----------------------------|---------------------------|
| Dimensions (W x H x D)     | 80x80x16 mm               |
| Degree of protection       | IP 20                     |
| Range of measurement       | -55 °C – +125 °C          |
| Connection terminals, area | 0.1 - 1.0 mm <sup>2</sup> |
| Colour                     | White, RAL 9010           |

### 4.2 Outdoor temperature sensor

|                            |                           |
|----------------------------|---------------------------|
| Dimensions (W x H x D)     | 97x63x34 mm               |
| Degree of protection       | IP 54                     |
| Range of measurement       | -55 °C – +125 °C          |
| Connection terminals, area | 0.1 - 1.0 mm <sup>2</sup> |
| Colour                     | Grey                      |

### 4.3 Adaptor

|                        |             |
|------------------------|-------------|
| Dimensions (W x H x D) | 52x58x22 mm |
| Degree of protection   | IP 20       |
| Colour                 | Beige       |

### 4.4 Modular cable

|            |          |
|------------|----------|
| Cable      | 6-pin    |
| Connection | RJ12     |
| Length     | 3 metres |
| Colour     | Black    |

## 5. Electrical Connections

The electrical connections should be wired by a qualified electrician in accordance with local electrical safety regulations.

### 5.1 Air handling unit

Connect the modular cable to an optional modular connection, marked Internal Bus 1 (GOLD LP/COMPACT) or COM1-3 (GOLD RX/PX/CX/SD Version E/F), on the control unit of the air handling unit. See the wiring diagrams below and on the following page.

### 5.2 Adaptor and temperature sensor

Connect the modular cable from the air handling unit to the modular connection of the adaptor. Connect a 4-wire cable (not supplied by Swegon) between the screw connections on the adaptor and the temperature sensor. For installation in a box, insert the cable through the backside of the temperature sensor. For installation on a wall, insert the cable according to the instructions on the cover and mounting plate of the temperature sensor.

The temperature sensor is digital and depending on the nature of the installation may be sensitive to external interference. The cable to the temperature sensor must not be run parallel near a power cable. If the sensor cable crosses a power cable, it should cross it at a 90° angle.

## GOLD RX/PX/CX/SD, version E/F

### Alt. 1

The function selector switch on respective room temperature sensors connected to an air handling unit, should be preset to position 1-4; on Xzone room temperature sensors to position 5-8 or on outdoor temperature sensors to position A-D. The function selector switches must not be set to the same position as that of another function selector switch. Their mutual order is of no importance.

#### Example:

For a room temperature sensor connected to an air handling unit, the function selector switch should be set to position 1. If two sensors are used, the function selector switches should be set to position 1 and 2 respectively, etc.

Connect the leads according to the following:

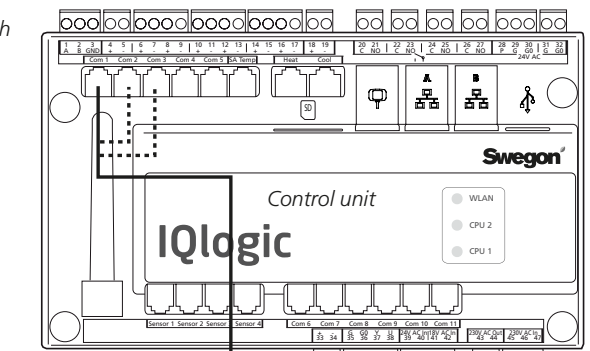
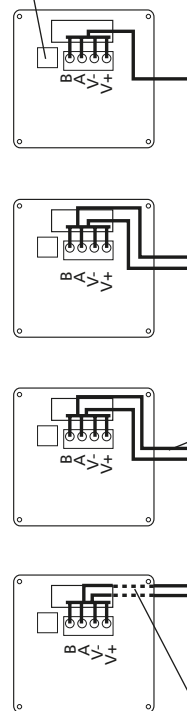
| Adaptor  | Temp. sensor |
|----------|--------------|
| Screw GR | Terminal A   |
| Screw RD | Terminal B   |
| Screw BK | Terminal V-  |
| Screw YL | Terminal V+  |

| Temp. sensor | Temp. sensor |
|--------------|--------------|
| Terminal A   | Terminal A   |
| Terminal B   | Terminal B   |
| Terminal V-  | Terminal V-  |
| Terminal V+  | Terminal V+  |

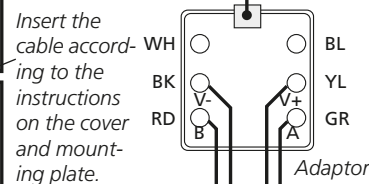
Installation on a wall

Installation in a box

Function selector switch



To be connected to optional modular connection marked COM1-3



Insert the cable through the backside.

Max. permissible length: 100 metres; min. permissible cross-sectional area: 0.5 mm<sup>2</sup>. A twisted pair cable is recommended where 24 V DC is extended in a pair and bus communication (A and B) in a pair.

Temperature sensor

### Alt. 2

The function selector switch on each temperature sensor must be set to position 1-4 and must not share the same position with another function selector switch. Their mutual order is of no importance.

#### Example:

If two sensors are fitted, the function selector switches should be set to position 1 and 2 respectively. If three sensors are fitted, the function selector switches should be set to position 1, 2 and 3 respectively, and so forth.

Connect the leads according to the following:

| Adaptor  | Temp. sensor |
|----------|--------------|
| Screw GR | Terminal A   |
| Screw RD | Terminal B   |
| Screw BK | Terminal V-  |
| Screw YL | Terminal V+  |

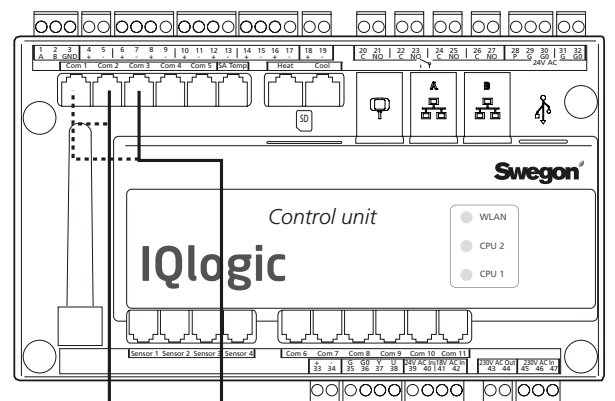
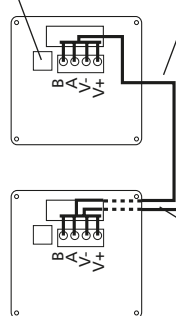
| Temp. sensor | Temp. sensor |
|--------------|--------------|
| Terminal A   | Terminal A   |
| Terminal B   | Terminal B   |
| Terminal V-  | Terminal V-  |
| Terminal V+  | Terminal V+  |

Installation on a wall

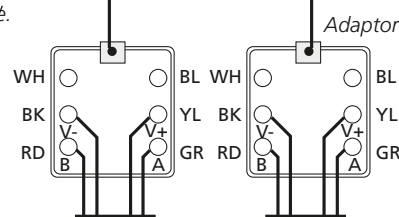
Installation in a box

Function selector switch

Insert the cable according to the instructions on the cover and mounting plate.



To be connected to optional modular connection marked COM1-3



Insert the cable through the backside.

Max. permissible length: 100 metres; min. permissible cross-sectional area: 0.5 mm<sup>2</sup>. A twisted pair cable is recommended where 24 V DC is extended in a pair and bus communication (A and B) in a pair.

Temperature sensor

## GOLD LP/COMPACT

If the temperature sensor is used as a room temperature sensor, set the function selector switch to position 0.

If the temperature sensor is used as an outdoor temperature sensor, set the function selector switch to position A.

Connect the leads according to the following:

### Adaptor

Screw GR  
Screw RD  
Screw BK  
Screw YL

### Temperature sensor

Terminal A  
Terminal B  
Terminal V-  
Terminal V+

Max. permissible length: 100 metres; min. permissible cross-sectional area: 0.5 mm<sup>2</sup>. A twisted pair cable is recommended where 24 V DC is extended in a pair and bus communication (A and B) in a pair.

