

**Operating instruction**
**baelz 23-PT, baelz 23-NTC 3.1**
**Outdoor temperature sensor  
baelz 23-PT, baelz 23-NTC 3.1**

**Outdoor temperature sensor baelz 23-PT and baelz 23-NTC 3.1**
**Range of application and mode of action**

The outdoor temperature sensors are used for measurement of air temperature in outdoor areas, in cold stores and greenhouses. The sensors are also used as leading sensors for flow temperature regulations controlled by atmospheric conditions. Inside the sensor enclosure, there is a measuring element of resistance. In case of temperature change, the item changes his electric resistance. The sensors are usable with controllers, which are equipped with suitable sensor inputs, for example baelz 64xx for PT-Sensor, baelz 6164 and 62xx for PT- and NTC Sensor.

**Indications for assembly and installation**

The sensor baelz 23 is installed into a plastic enclosure with removable cover.

The clamps are accessible after removal of cover.

The cable entry can come out of the wall or finery.

During assembly, there is to be paid attention to that the sensors aren't exposed to direct sun contact.

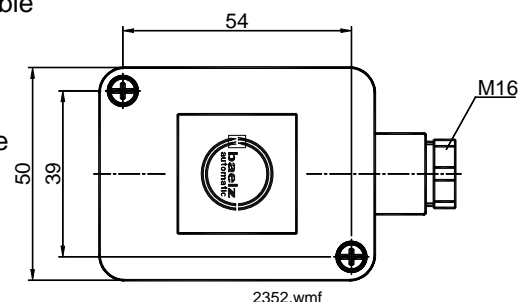
Mounting always on the coldest side of the building (normally the northside).

Sensors should not be exposed to the morning sun.

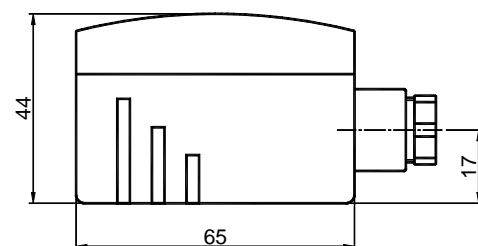
Ground clearance should be at least 1,5m.

The following sites have to be avoid:

In the area of heat sources, above windows, doors, bleeding-offs or walls of fireplace.



2352.wmf



353.wmf

**Connection between temperature and resistance:**

| Temp. In °C  | -40   | -20   | -10   | 0,0   | 10    | 20     | 30     | 40     | 50    | 60     | 70     | 80     | 90    | 100   | 140    |
|--------------|-------|-------|-------|-------|-------|--------|--------|--------|-------|--------|--------|--------|-------|-------|--------|
| PT100 In Ω   | 84,27 | 92,16 | 96,09 | 100,0 | 103,9 | 107,79 | 111,67 | 115,54 | 119,4 | 123,24 | 127,07 | 130,89 | 134,7 | 138,5 | 153,58 |
| NTC 3.1 In Ω | 23781 | 8524  | 5349  | 3450  | 2281  | 1544   | 1069   | 755    |       | 398    |        |        |       |       |        |

**Technical specifications**

|                    |  |
|--------------------|--|
| Temperature limits | PT100 DIN 43760 – Grade B<br>-50...+90°C |
| Measuring element  | PT100 DIN Grade B                        |
| Cable entry        | M16                                      |
| Enclosure          | Polyamide, Enclosure Type IP65           |
| Colour             | white                                    |
| Connection         | through 2pole clamp                      |
| Temperature limits | NTC 3.1<br>-40...+60°C                   |
| Measuring element  | NTC 3.1                                  |
| Cable entry        | M16                                      |
| Enclosure          | Polyamide, Enclosure Type IP65           |
| Colour             | white                                    |
| Connection         | through 2pole clamp                      |

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Der Bälz-Pilot  
regelt  
für:



Mensch,  
Natur und  
Technik in Harmonie