SERIES TH10, TH20, TH60

TH10 Series
(Wall mount type temperature/humidity sensor)

* Easy Installation (compact & light weight)
* High Accuracy Temperature and Humidity Measurement Possible
* Linearized Humidity Signal (0-5V DC or 4-20mA DC)
* Temperature Output Signal: Pt100Ω 3-wire system resistance output

Specification

* Supply Voltage: 12~24V DC (+/-5%)
  24V DC power supply to be used for 4~20mA DC humidity output signal
* Operation Ambient Temperature Range: 0~50 ºC
* Operation Ambient Humidity Range: 90% RH max. (No dew condensation)
* Stock Temperature Range: -10~60 ºC
* Stock Humidity Range: 90% RH max. (No dew condensation)
* Power Consumption: Max. 12mA at humidity voltage output
  Max. 22mA at humidity current output
* Insulation Resistance: 500V DC 100M ohms min. between terminals and case
* Dielectric Strength: 1 min. at 1.5kV AC between terminals and case
* External Dimensions: W82 x H82 x D27 mm
* Mounting Method: Wall mount
* Weight: Approx. 60g
* Humidity Sensing Range: 20~90%RH (at 25 ºC)
* Humidity Sensing Accuracy: +/-3%RH (at 25 ºC, 40~80%RH)
* Humidity Sensing Element: Macromolecule humidity sensor
* Humidity Output Signal Voltage output type: 0~5V DC (0~100% RH), Output resistance: 5kΩ max.
  Current output type: 4~20mA DC (0~100% RH), Load resistance: 600Ω max. at 24V DC supply voltage
  Max. load resistance (Ω) = (supply voltage (V) - 12(V))/0.02A
* Sensing Repeatability Characteristics: Within 5 min.
  Wind velocity 1.2cm/s air current, at 25ºC, 90% repeatability
* Temperature Sensing Range: 0~50 ºC
* Humidity Output Signal: R.T.D., 3-wire system resistance output
* Temperature Sensing Element: Pt100, Class B, Amperage: 2mA max.
* Accessory: Lock screw x 4 pcs. (M3 x 20)
* Installation Site: Environmental Conditions
  Must be used indoors.
  Max. elevation: 2000m
  Ambient Temperature: -10~50 ºC
  Ambient Humidity: Max. 90%RH
  (No dew condensation)

* Places exposed to flammable or corrosive gases, oil mist, or excessive dust that could cause insulation to deteriorate.
* Places subject to vibration or impact
* Places near strong electric circuit or places subject to inductive influence
* Placed exposed to water dripping or direct sunlight
Humidity Sensing Range and Accuracy

Ordering Information

<table>
<thead>
<tr>
<th>Item</th>
<th>Code</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>TH10-</td>
<td>Indoor Type Temperature/Humidity Sensor (Sensing element self-contained type)</td>
</tr>
<tr>
<td>Humidity Output</td>
<td>0</td>
<td>None</td>
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<tr>
<td></td>
<td>5</td>
<td>0<del>5V DC/0</del>100% RH Output Resistance: 5kΩ max.</td>
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<tr>
<td></td>
<td>6</td>
<td>4<del>20mA DC/0</del>100% RH Load Resistance: 600Ω max. (at 24V DC supply)</td>
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<tr>
<td>Temperature Output</td>
<td>0</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Pt100 3 wire system, Output Resistance: Class B, 2mA</td>
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<tr>
<td>Remarks</td>
<td>0</td>
<td>Without</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>With (Please consult before ordering.)</td>
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</tbody>
</table>

External Dimensions & Mounting

Unit: mm
Terminal Arrangement & Wiring Example

TH10-580  Humidity: Voltage output
          Temperature: Resistance output

Temperature Controller
Pt100

TH10

O

OUT

G

Humidity Controller

0~5V DC

DC Power Supply Box

12~24V DC
(Example: CP2UE)

TH10-680  Humidity: Current output
          Temperature: Resistance output

Temperature Controller
Pt100

TH10

Vn

IN / OUT

VP

Humidity Controller

4~20mA DC

DC Power Supply Box

24V DC
(Example: CP2UE)

Temperature and Humidity Control Specialists

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