Humidity sensor

Assembly and connection

To prevent water ingress, wall mounting with downward cable output is specified. The sensor has to be connected to data link (DL-bus) and sensor mass. The polarity of the data link is interchangeable. For distances up to 30 m, a cable cross section of 2 x 0.75 mm² is adequate.
The sensor takes its power supply from the DL-bus (data link) and returns the corresponding measurement when requested by the controller (ESR31 and UVR63 (from version 1.0), ESR21, UVR61-3 and UVR63H from version 5.0, UVR1611 from version A3.00 and serial number 13286, plus X2 devices).

The request is made up of the address of the sensor (adapter PCB) and index of a measurement recorded there.

The address is specified on the adapter by breaking the conductors which are labelled 1, 2 and 4. These are located on the left at the lower edge board, close to the screw terminal. If none of the conductors are cut, the adapter is assigned address 1 (factory setting). Provided no other sensors are connected to the DL-bus, no change of address is required.

The new address is derived from address 1 (= factory setting) plus the sum of all the disconnected values.

**Example:** required address 6 = 1 (factory setting) + 1 + 4
= conductors 1 and 4 must be cut.

The index of the respective measurements is fixed:

<table>
<thead>
<tr>
<th>Index</th>
<th>Measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Relative humidity [0.1%]</td>
</tr>
<tr>
<td>2</td>
<td>Temperature [0.1°C]</td>
</tr>
<tr>
<td>3</td>
<td>Dewpoint [0.1°C]</td>
</tr>
<tr>
<td>4</td>
<td>Absolute humidity [1°C ≡ 1g/m³]</td>
</tr>
</tbody>
</table>

ESR21, ESR31, UVR61-3, UVR63, UVR63H: The desired measured values are imported as "External sensors" (setting in the menu "EXT DL"), where address and index are specified.

**Example:** Here the sensor value of Address 1, with Index 3 was allocated to the external sensor E3, i.e. the dewpoint of the sensor.

X2 devices: The measured values are parameterised in the menu "DL bus".
**UVR1611**: The measurements are parameterised as analogue network inputs:

- **network node**: address of the sensor
- **analog network output**: index of the measurement
- **source**: DL

**TAPPS2 Programming UVR1611**:

1. O14 Data link
2. NWI Analogue 1 DL/1/1
3. Source: DL
4. Sensor address
5. Index of the measured value

A still unused network input variable must be selected for each new value.

**Technical data**

- **Dimension (WxHxD)**: 40 x 54 x 23 mm
- **Permissible ambient temperature**: -10°C to +50°C
Accuracy relative humidity:

- Measurement range rel. humidity: 0 to 100%
- Dewpoint measurement range: -10 to 50°C
- Dewpoint measurement accuracy: ±2.5K (20 - 80%RH)
- Bus load (DL-Bus): 8%

We reserve the right to make any technical changes

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