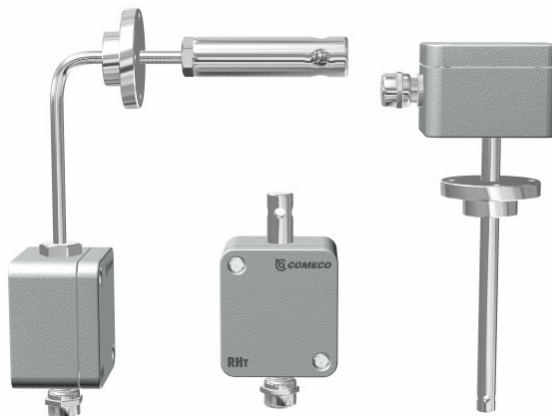


## Two-wire Relative Humidity Transmitters RHT

- ♦ Excellent price-to-performance ratio
- ♦ Temperature compensation system
- ♦ Built-in two-wire temperature transmitter
- ♦ Protection at sensor break
- ♦ High protection class - IP66

The COMECO RHT transmitters measure relative humidity of air and non-aggressive gases and convert it into standard 4...20mA two-wire current signal. These transmitters use thin film or solid state sensors, which capacitance changes proportionally to environmental relative humidity value. All RHT transmitters have a built-in temperature drift compensation system, which guarantees good stability of measurement. An additional platinum temperature sensor or second two-wire transmitter may be built-in for measurement of both medium relative humidity and temperature. RHT transmitters are available in three modifications with different cases, mounting, and temperature ranges. The specific design of the electronic block allows the user to adjust the output on-site. All this, in addition to the high environment protection class, the small size, and the low price, make RHT probes convenient solution for many relative humidity measurement applications.



RH

### Technical specifications

#### Input

|                                         |                            |
|-----------------------------------------|----------------------------|
| <b>RH sensor thin film</b>              | 0 to 100 %RH               |
| <b>RH sensor solid state</b>            | 5 to 95 %RH                |
| <b>Pt100 (w=1.385) (option)</b>         | -20 to +120 °C             |
| <b>Pt500 (w=1.385) (option)</b>         | -20 to +120 °C             |
| <b>Pt1000 (w=1.385) (option)</b>        | -20 to +120 °C             |
| <b>Adjustment of RH - zero (offset)</b> | by trimmer ± 20% from span |
| <b>Adjustment of RH - range</b>         | by trimmer ± 20% from span |
| <b>Adjustment of T - zero (offset)</b>  | by trimmer ± 20% from span |

#### Output

|                                  |                                         |
|----------------------------------|-----------------------------------------|
| <b>RH current output</b>         | two-wire: 4 to 20 mA                    |
| <b>Input range corresponding</b> | 0 to 100 %RH                            |
| <b>T current output (option)</b> | two-wire: 4 to 20 mA                    |
| <b>Input range corresponding</b> | min. -20 to max. +120 °C <sup>(1)</sup> |
| <b>Linearity</b>                 | to measured value                       |
| <b>Output current limit</b>      | max. 23 mA                              |

#### Accuracy

(percents from span)

|                                   |                          |
|-----------------------------------|--------------------------|
| <b>Measurement error for RH</b>   | < 2.5 %                  |
| <b>Measurement error for T</b>    | < 0.5 %                  |
| <b>Non-linearity</b>              | within measurement error |
| <b>Temperature drift (per °C)</b> | RH: 0.1%; T: 0.01%       |

#### Power supply

|                              |                   |
|------------------------------|-------------------|
| <b>Voltage</b>               | 8 to 32 VDC       |
| <b>Admissible variations</b> | 1 Vp-p at 50 Hz   |
| <b>Max. line load</b>        | 700 Ω at 24V/20mA |

#### Operating conditions

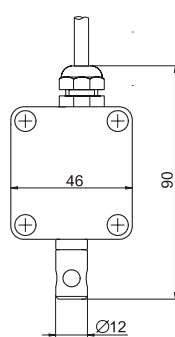
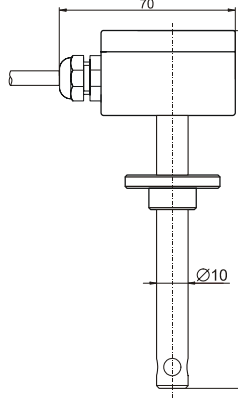
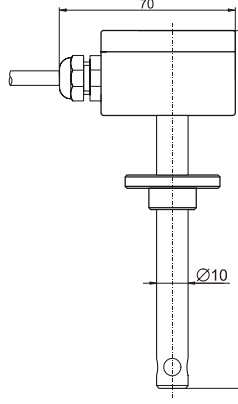
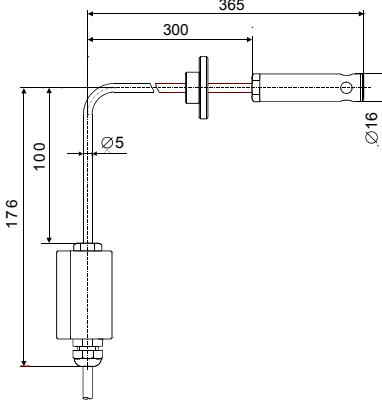
(only for the electronic block)

|                              |                             |
|------------------------------|-----------------------------|
| <b>Operating temperature</b> | from min. -10 to max. 75 °C |
| <b>Operating humidity</b>    | 0 to 98 %RH                 |

#### Design and materials

|                                   |                              |
|-----------------------------------|------------------------------|
| <b>Case material</b>              | stainless Steel and aluminum |
| <b>Wiring</b>                     | hidden screw terminals       |
| <b>Protection (except sensor)</b> | IP66                         |

<sup>(1)</sup> Exact correspondence is specified by client order within the stated limits

| Model                         | A                                                                                   | B1                                                                                  | B2                                                                                  | D                                                                                     |
|-------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| <b>Specification</b>          |  |  |  |  |
| <b>Sensitive element</b>      | thin film                                                                           | thin film                                                                           | thin film or solid state <sup>(2)</sup>                                             | thin film or solid state <sup>(2)</sup>                                               |
| <b>Medium temperature</b>     | -10 to 60 °C                                                                        | -10 to 60 °C                                                                        | -10 to 90 °C <sup>(3)</sup>                                                         | -20 to 120 °C <sup>(3)</sup>                                                          |
| <b>Ambient temperature</b>    | -10 to 60 °C                                                                        | -10 to 60 °C                                                                        | -10 to 60 °C                                                                        | -10 to 60 °C                                                                          |
| <b>Weight (without cable)</b> | 150 g                                                                               | 170 g                                                                               |                                                                                     | 220 g                                                                                 |
| <b>Mounting</b>               | on wall                                                                             | in hole (or free mounting)                                                          |                                                                                     | in hole                                                                               |

<sup>(2)</sup> Contact COMECO for availability!

<sup>(3)</sup> Please check the RH/T working zone in 'SH' data-sheet!

### Ordering code



### RHT★ - #1

| Code | Feature or option  | Code values                                                                                                            |
|------|--------------------|------------------------------------------------------------------------------------------------------------------------|
| ★    | Variant            | A - for wall mounting, B1 - for mounting in a hole, B2 - for increased temperature, D - two-part, for high temperature |
| #1   | Temperature option | X - none, D - Pt100, F - Pt500, G - Pt1000, TT - two-wire transmitter                                                  |