**COMECO**
CONTROL & MEASUREMENT

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Wet/Dry-Thermometer Probe RHU

♦ **Highly accurate RH measurement**
♦ **Wide temperature operating range**
♦ **Built-in moistening system**
♦ **IP56 protection**
♦ **Stainless steel wetted parts**
♦ **Optional built-in transmitters**

RHU is designed to measure relative humidity in air and other gases and gas mixtures utilizing the well-known method of "dry" and "wet" thermometers with 2 identical RTD platinum sensors class 'A' mounted in stainless steel sheaths incorporated in a special stainless steel case, which can be installed inside or outside drying or moistening chambers. The method of "wet/dry" temperature difference provides high accuracy in RH measurement. For this accuracy to be ensured, it is absolutely necessary to keep the "wet" sensor always wet and to guarantee the evaporation from its surface. For this purpose, this probe is equipped with a special moistening system. It is also important to assure continuous gas movement along the sensors during the measurement process. Together with a COMECO RH-control instrument (RT180 or RT390), RHU can be widely used in areas, where capacitance RH probes are not applicable: high-temperature chambers, high-accuracy RH measurement, etc.
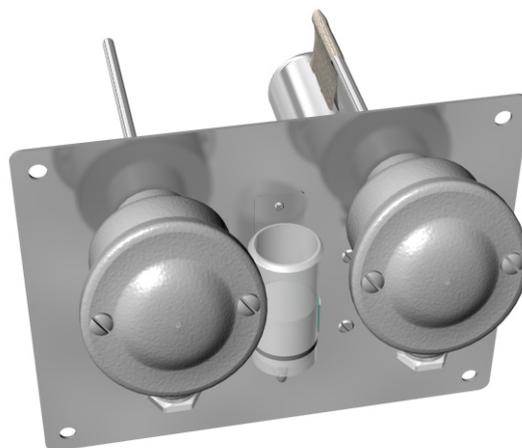
Technical specifications

Input

"Dry" thermometer	Pt100, Pt500, or Pt1000
"Wet" thermometer [1]	Pt100, Pt500, or Pt1000
Thermometer accuracy	class 'A'
Conversion range	0...100 %RH
Medium temperature input:	
- outside mounting	-50...200 °C [2]
- inside mounting	-20...120 °C [2]
Measurement accuracy [2,3]	1 %RH
Response time [2,3]	2 s (when RH changes with 1%)

Output

Signal type	resistance difference
Built-in transmitters (option)	two 2-wire transmitters

Operating conditions

Operating temperature	-20...120 °C
Operating humidity	0...98 %RH

Power supply

Voltage applied to the sensors	max. 20 VDC
Sensor current	max. 2 mA

Design and materials

Case material	stainless steel
Thermometer material	stainless steel
Thermometer heads	aluminum
Wiring	in-head screw terminals
Mounting	wall [4]
"Wet" sensor moistening vessel volume	0.5 l for 1 dm depth
Front dimensions	200x160 mm
Thermometer depth	150, 200, or 250 mm
Total depth	220, 270, or 320 mm
Weight	2...3 kg (depends on the depth)
Protection class	IP56

[1] "Dry" and "wet" RTD sensors must be of a same type!
[2] If there are no problems with water evaporation form the "wet" sensor surface
[3] If there is enough medium movement rate along the sensors
[4] The probe is equipped with wall mounting accessories.

Ordering code   RHU✳ - G6 - #1

Code	Feature or option	Code values
✳	Variant	**S** - with 150 mm thermometers, **M** - with 200 mm thermometers, **L** - with 250 mm thermometers
G6	Sensors	**BD** - Pt100, **BF** - Pt500, **BG** - Pt1000
#1	Built-in transmitters	**X** - none, **TT(RANGE)** - 2 built-in transmitters TRN or TRA [5]

[5] Transmitter type depends on the selected sensor type (G6). Input range must be specified.

COMECO reserves the right of changing specifications without prior notice!