COMECO
CONTROL & MEASUREMENT

Bulk-material Moisture Probe RHP

♦ **Low cost**
♦ **Voltage output signal**
♦ **Built-in temperature sensor available**
♦ **May be used with H5850 handheld meter or separately**
♦ **Compact and convenient for handheld measurement**
♦ **Fast connection**
♦ **IP65 protection**
♦ **Optional preparation of material samples**

RHP is designed to convert moisture content of bulk materials into standard voltage signal. The probe is especially suitable for fast measurements in combination with COMECO's handheld moisture meter model H5850, but may be used with other moisture measurement devices that feature a programmable or scalable input. Employing the variation of material dielectric constant caused by moisture variation, RHP converts the capacitance of the system formed by the material and the measurement cell into electrical signal proportional to material moisture. Furthermore, a temperature sensor may be built in for simultaneous material temperature measurement. Through its flexible cable with miniature connector, this moisture probe can be connected to a H5850 meter to form a lightweight and convenient multifunctional device for handheld moisture measurement of bulk materials such as grain, powder, wheat, granules, sand-like materials, etc.

Technical specifications

Input

Moisture content	0.0...300.0 %
Humidity	capacitive sensor, 0...75 %RH
Temperature (option)	Pt100 or Pt1000 (w=1.385) [1], -10...50 °C
- accuracy	class 'B'

Output

Output voltage	min. 0...max. 100 mV DC
Linearity proportional to	measured value

Accuracy

Measurement error	2.5% from span
Non-linearity	within measurement error
Temperature drift	0.1% from span for 1 °C

[1] H5850 requires Pt1000!

Power supply

Supply voltage	DC from the handheld meter
Admissible variations	20 mVp-p at 50 Hz

Operating conditions

Ambient temperature	-10...50 °C
Ambient humidity	0...85 %RH, non-condensing

Design and materials

Case material	stainless steel
Wiring	1...5 m PVC or silicone cable w/ 4-pin M8 connector type 'C3'
Dimensions	70x80x60 mm (w/o cable)
Weight	200 g (w/o cable)
Protection class	IP65

Ordering code   RHP - G8 - #1#2

Code	Feature or option	Code values
G8	Cable length 'k' [m] and type	**1PV…5PV** - PVC, **1SL…5SL** - silicone
#1	Built-in temperature sensor [1]	**X** - none, **D** - Pt100, **G** - Pt1000
#2	Material samples for calibration	**X** - none (samples supplied by customer), **S** - samples included

IMPORTANT NOTE:

The exact type of controlled bulk material has to be specified in the order!