Datasheet
VHF Moisture Sensor

PCE-MWM 200

EN

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Application

Probe moisture meter PCE-MWM 200 includes a sand moisture measurement sensor consisting of a central pin-probe and four-screen pins placed around the central one. Probes and sensor housing are made of stainless steel AISI 321. The probe moisture meter PCE-MWM 200 is designed for installation in tanks with liquid materials such as fuel oil, slurry from cement production, coal-water fuel (CWF), etc. The moisture measurement sensor housing and its probes are made of AISI 321 stainless steel. Pin diameter – 12 mm, gap between the central and shield pins – 25 mm. A large gap between the pins makes the moisture measurement sensor resistant to clogging.

Product features

The top of the sensor is made as a coupling with 1" female pipe thread, which allows mounting the sensor on a pipe of 33 mm diameter. The cable connecting the sensor and the electronic unit is laid through this airtight-connected pipe. Such sensor mounting allows adjusting the depth of its immersion in the tank and monitoring moisture at different levels. Mounting of the pipe to the moisture measurement sensor is sealed with silicone sealant. The use of stainless steel and special dielectric spacers provides corrosion resistance and allows using the moisture analyzer in pipes with liquids of 145°C temperature. The range of measured environment temperature can be extended up to 800 °C due to ceramics and high-temperature alloys application. In the instruments case the accuracy of environment permittivity measurement remains virtually the same as that of the sensors for temperatures up to 145°C. Measurable materials: oil, gasoline, diesel oil emulsion, liquids, sand, broken / crushed stone.

Technical specification

Readings range of the mass fraction of water, W	0 ... 100 %

Moisture measurement range	0.1 ... 100 % (mass fraction of water)
Limits of permissible absolute error of the measurements results of the mass fraction of water	ΔW=0,02+0,025W (where W is the measurements result)
Temperature display range	-50 ... +150 °C
Temperature measurement range	-5 ... +80 °C
Limits of permissible absolute error of the temperature measurements	±1 °C
Output interface - Digital / - Current	RS 485 Modbus RTU / 4-20 mA
Voltage supply - Rated / - Allowable	24 V / 18-36 V
Consumption current, not more than	200 mA
Overall dimension of the sensors	335 x 80 x 80 mm
Sensor mass, not more	8 kg
Range of working temperatures (sensor operation) -Common industrial execution -With the widened temperature range	 -20 ... +120 °C -20 ... +145 °C
Range of working temperatures of the electric sensor unit operations	-20 ... +80 °C
Overall dimension of the electric unit	255 x 170 x 60 mm

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Technical drawing

PCE-MWM 200

You can get this technical drawing on demand.

Ordering code PCE-MWM 200-XX

Explosion proof (optional)
-EX Electronics in explosion proof housing Ex d II B T5

Ordering example

PCE-MWM 200-EX

- VHF moisture sensor PCE-MWM 200
- Explosion proof Ex d II B T5