



Data Sheet

Microwave Moisture Sensor

PCE-MWM 240

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Areas of application

This microwave moisture sensor measures the content of moisture in various materials in mining, the petrochemical industry or agriculture as well as in the production of building materials.

The granules can be even greater than 5 cm in diameter and that is why such materials as sand, gravel, crushed stone, sawdust, grains, flour, seeds, wood and rubber chips, ore, etc. are all included in the list of possible materials that can be measured by means of the moisture meter.

The PCE-MWM 240-A is used for moisture measurement of bulk materials (crushed stone, silicate mass, clay, sand, sawdust, etc.) in bunkers, silos, batchers, on conveyer belts and in mixers used in the silicate brick production, as well as screw conveyors.

The PCE-MWM 240-B measures the moisture in bulk materials like sand, crushed stone, silicone mass, clay, etc. in bunkers, silos and batchers.

1 System description

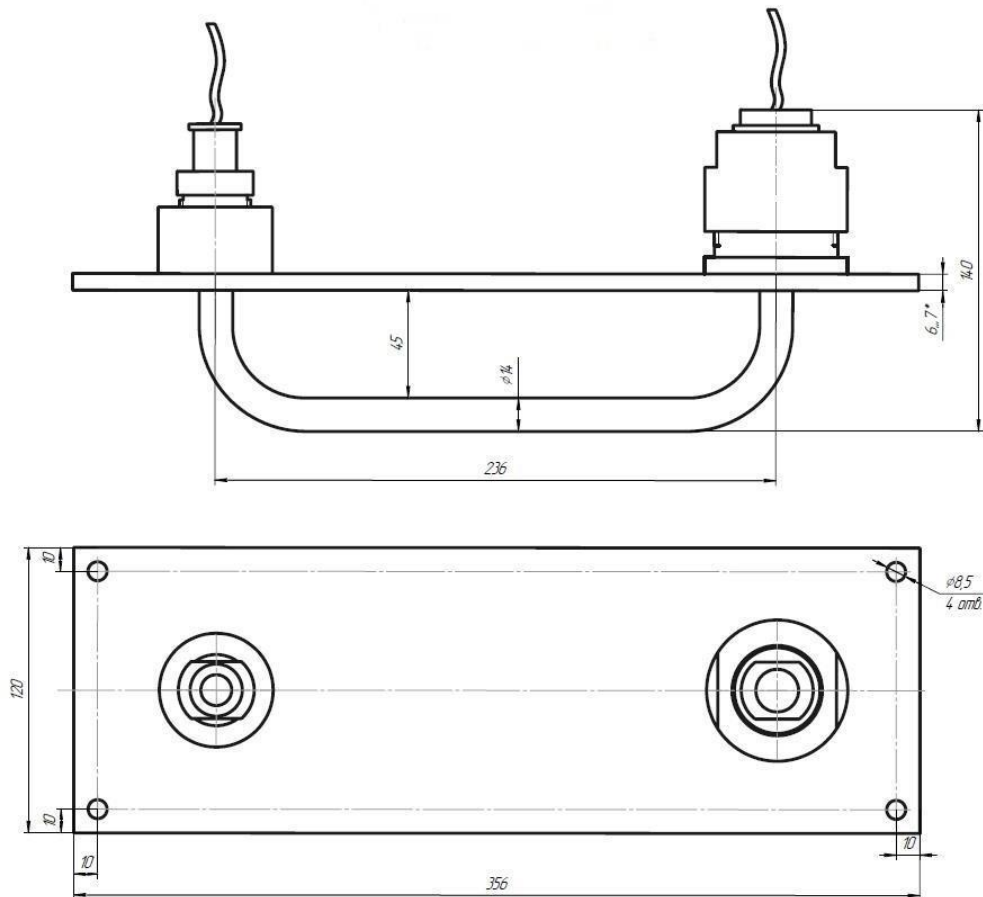
- based on the VHF band waves
- very accurate results by averaging them over whole volume of materials even with non-uniform materials
- electronic unit + sensor
- sensor resistant to mechanical stress from abrasive materials and leak-proof
- stainless steel probe can be used in temperatures of up to 200 °C
- PCE-MWM 240-A U-shape bracket
- PCE-MWM 240-B straight rod shape
- probes can be different in size and vary from 20 cm to 1.5 m

2 Technical specifications of the PCE-MWM 240

Measurement range	0 ... 100 %
Max. admissible absolute error	$\Delta = 0,02 + 0,025 \cdot W$ (siehe untenstehende Notiz 1)
Operating temperature range	-20 ... +145 °C
Operating mode	kontinuierlicher Dauerbetrieb
Sampling rate	1 s
Power supply	24 VDC
Power consumption	200 mA
Heat-up time before use	30 min
Outputs	- RS 485 Modbus RTU - 4-20 mA (RS485: max. Kabellänge 1000 m; 4-20 mA: max. Kabellänge 100 m)
Dimensions Rod sensor Bracket sensor	L 500 ... 1500 mm, Ø 15 ... 30 mm L 250 mm, Ø 14 mm
Dimensions (evaluation electronics)	255 x 170 x 60 mm
Protection type (sensor)	IP65
Protection type (evaluation electronics)	IP54
Weight Rod sensor Bracket sensor Electronic unit	2 ... x kg (depending on length) 3 kg 2 kg
Further information on accuracy	
Moisture W [%]	Deviation ΔW [%]
0 ... 6	0.3
6 ... 8	0.4
8 ... 10	0.5
10 ... 20	1.0
20 ... 50	2.5
50 ... 100	5.0

3 Technical drawings

PCE-MWM 240-A



PCE-MWM 240-B

On request

4 In-use pictures



5 Order code PCE-MWM 240-X(-XXXX)-XX**Edition**

- A Bracket sensor
- B Rod sensor

Sensor length (model B only)

- XXXX Length in mm (max. 1500 mm)

Explosion protection (optional)

- EX Evaluation electronics in protected case Ex d II B T5

Example:

PCE-MWM 240-B-0950-EX

- *Microwave moisture sensor PCE-MWM 240*
- *Rod sensor edition*
- *Length 950 mm*
- *Explosion protection Ex d II B T5*