1 Purpose

The moisture sensor is designed for contactless inline monitoring of water content of web-type materials. The microwave technology based system offers high accuracy, speed and repeatability.

2 Measurement principle

The sensor uses a microwave cavity resonator. The cylindrical resonator is split in its center in lateral direction. Web-type materials under test have to be guided through the gap between the two halves without contact to the resonator.

3 Setup

SR-Sensor 87155 with electronics.

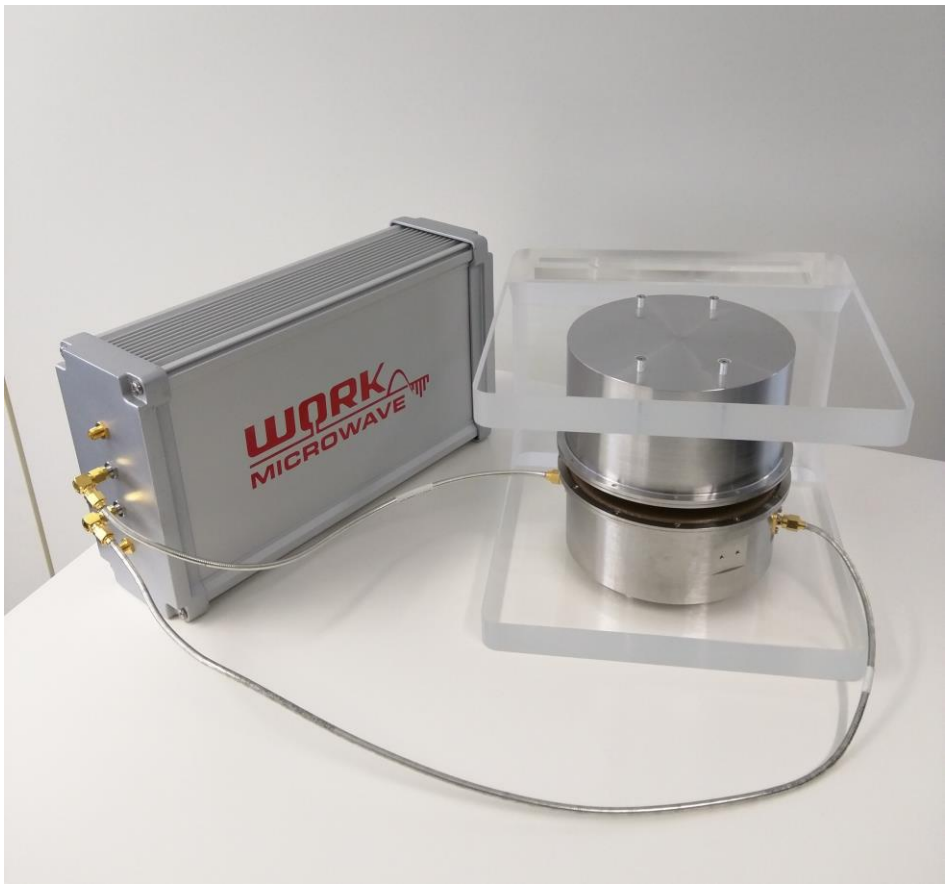

Figure 1: Demonstrator of SR-Sensor

4 Dimensions of SR-Sensor

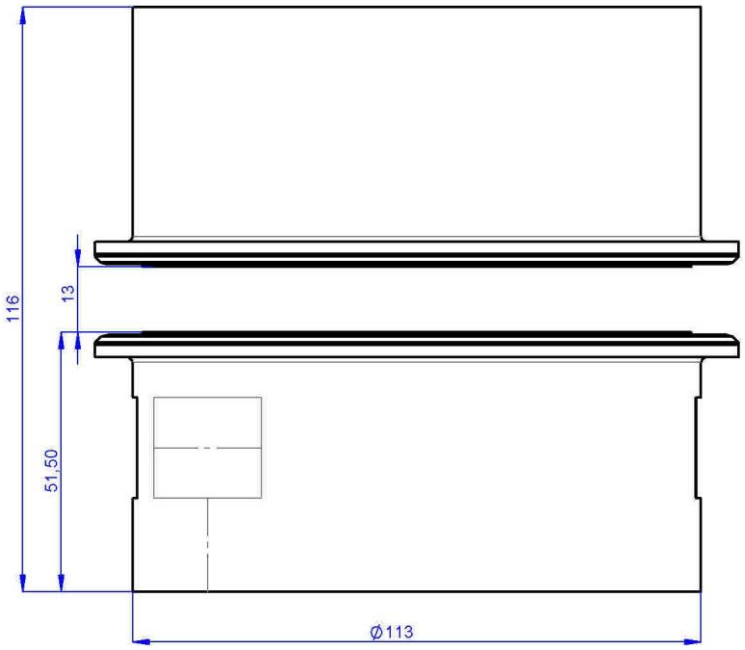

Figure 2: Side view drawing. Unit in mm.

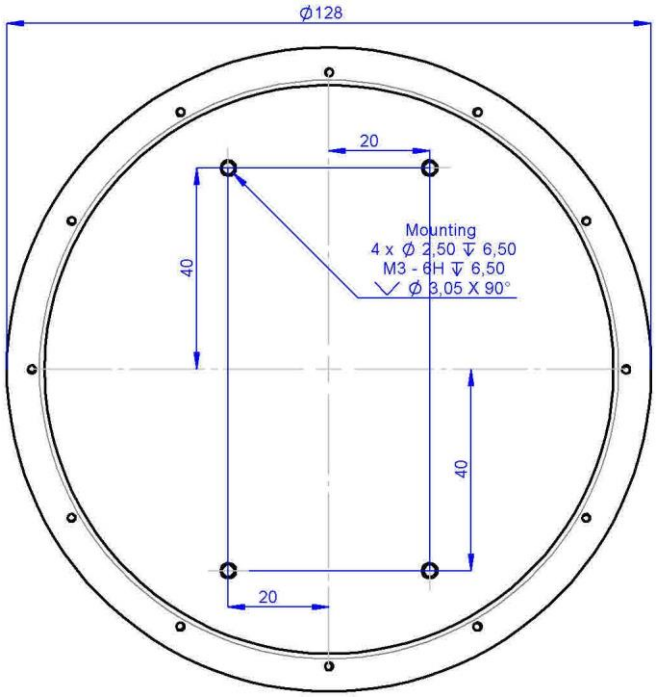

Figure 3: Top- and bottom view drawing. Unit in mm.

5 Technical data

Description		
	Microwave sensor for measuring moisture or water content	
Measurement Principle		
	Resonance method	
	Frequency range 2.2 GHz	
	Split Resonator with 13 mm gap	
Measurement Specifications		
	Moisture	0 … 70 %
	Water Weight	0 … 200 g/m²
	Resolution	0.1 %
	Measurement time	2 ms
Supply Voltage		
	Supply voltage	+20 ... +30V typ: +24V
Current Consumption		
	Operational current	600 mA @ 24V
	Inrush current	<1A
Operating Temperature		
	Sensor	0 … 100°C
	Electronics	0 … 80°C
Weight		
	weight sensor Al	1 kg

6 Ordering information

Model-Nr	Description	Connector
87155.100.51G	Active Resonator Part	SMA
87155.100.53G	Passive Resonator Part	
87155.100.52G	Cover Mounting	
87161.120.00C	Evaluation Electronics	Power Supply LAN

7 Company address

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