1 Purpose

The capsule weight sensor is designed for inline monitoring of filled capsules. The microwave technology based system offers high accuracy, speed and repeatability.

2 Measurement principle

The sensor uses a microwave cavity resonator. The flat shaped resonator can be mounted at an electrically non-conductive transporting tube of 12 mm outer dimension with circular or quadratic footprint. The capsules are dynamically characterized while moving through the resonator.

3 Setup

FT-Sensor 87154Q01 with circular transporting tube for 8 mm capsules.

Figure 1: Demonstrator of FT-Sensor

4 Dimensions of FT-Sensor

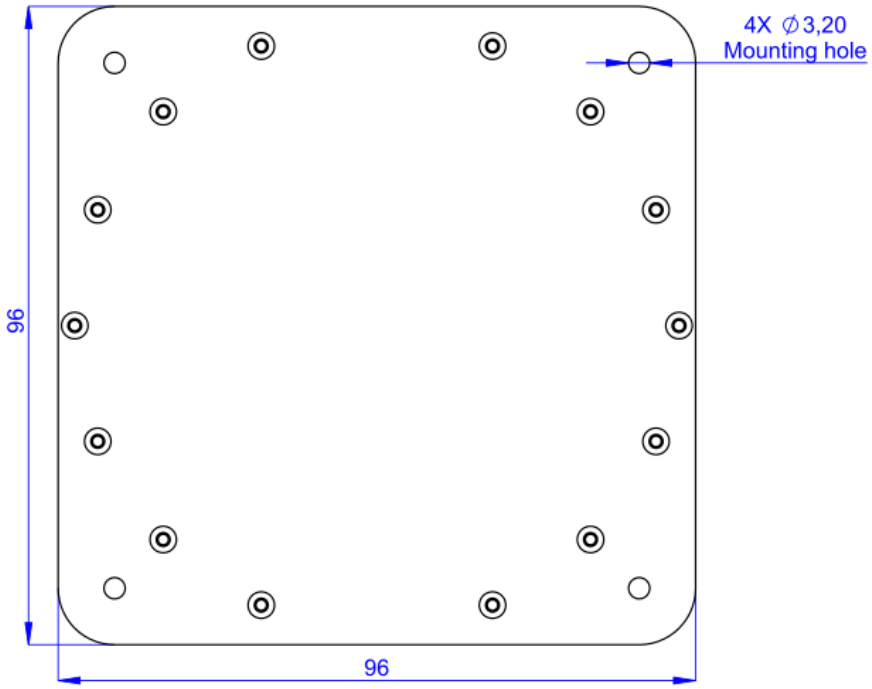

Figure 2: Top view drawing. Unit in mm.

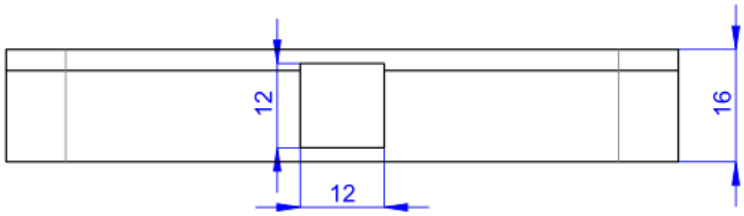

Figure 3: Side view drawing. Unit in mm.

5 Technical data

Description		
	Microwave sensor for measuring capsule weight	
Measurement Principle		
	Resonance method	
	Frequency range 2.5 GHz	
	Measurement through transporting tube	
Measurement Specifications		
	Capsule Weight	50 … 700 mg
	Accuracy	1 %
	Measurement time	200 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	0.5 kg

6 Ordering information

Model-Nr	Description	Connector
87154.MV4.62B	Resonator Body	SMA
87154.MV4.52B	Resonator Cover	
87161.120.00C	Evaluation Electronics	Power Supply LAN

7 Company address

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