

Technical Data

Litronic FMS **planar sensor P78**



Features

- capacitive measuring method
- sensor replacement without re-calibration
- sensitivity adjustable in three levels
- integrated microprocessor with mean value calculator
- material flow identification
- temperature compensation
- limit value check
- digital measurement recording and transfer
- highly wear resistant ceramic shield
- stainless steel housing

Liebherr-Mischtechnik GmbH

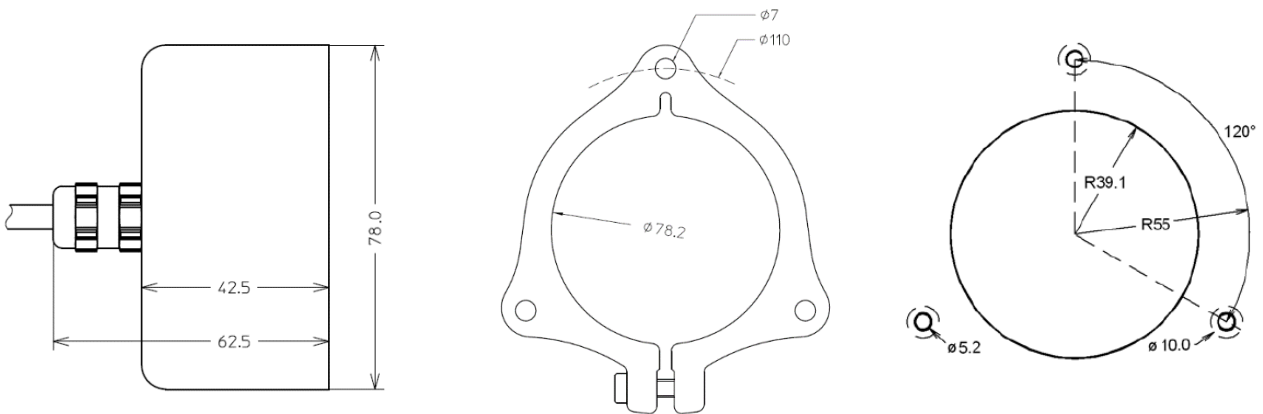
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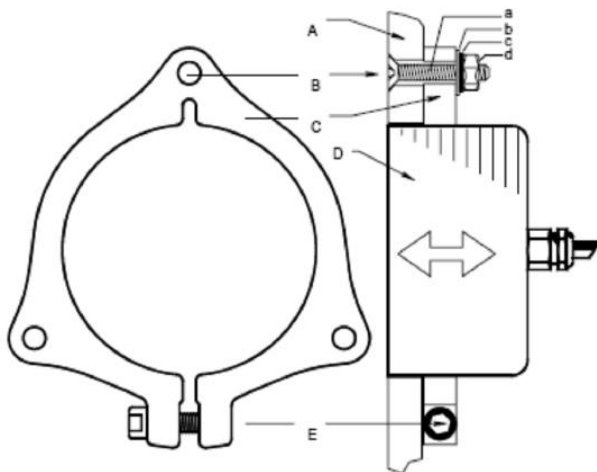
Physical principle	capacity determination with high-frequency stray field
Frequency	20 MHz
Sensor location	outside silo via deflector, on conveyor belt with sliding shoe, pipes, screw conveyors, ...
Measuring range	0 – 100 % moisture content (measuring window adjustable)
Capacity resolution	3 fF
Update cycle	32.64 ms
Sampling rate mean value counter	16 – 25 10 ⁶
Max. measuring accuracy	+/- 0.05 % moisture content ^{1.)}
Measurement value transfer	digital: RS-485, multi-processor protocol
Max. number of sensors on bus	16
Max. bus length	1200 m
Power supply	8...30V, 0.4 VA
Temperature measuring range	-10 – 90 °C
Temperature measurement accuracy	+/- 0.5 °C
Operating ambient temperature	5– 72 °C
Operating temperature electronics	-20 – 80 °C
Storage temperature	-25 – 80 °C
Protection class	IP68
Connecting cable type	UNITRONIC®ROBUST C 7x0.14 shielded
Connecting cable length	6 m
Wear protection	zircon oxide (ZrO ₂ Al ₂ O ₃)
Housing/flange material	V4A (1.4404)
Dimensions: Ø / height / height with cable connection	78 mm / 42.5 mm / 62.5 mm
Weight without cable	approx. 0.500 kg
Weight clamping flange	approx. 0.300 kg

1.) representative according to the batch or the period of continuous operation with the corresponding evaluation unit Litronic FMS II, depending on material, ideal material flow and proper calibration

Dimensional drawing:



Assembly:



- a: Countersunk screw made of non-corrosive material
- b: Washer
- c: Spring washer
- d: Nut
- e: Toothed lock washer made of non-corrosive material
- f: Cable lug made of non-corrosive material
- g: Earth wire 4 mm²

- A: Cladding
- B: Fastening
- C: Wheel flange
- D: Sensor
- E: Tensioning screw