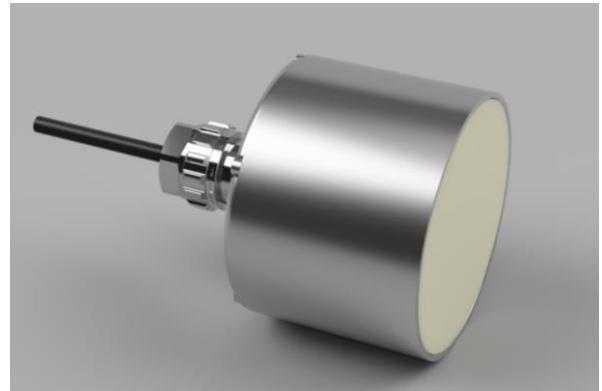
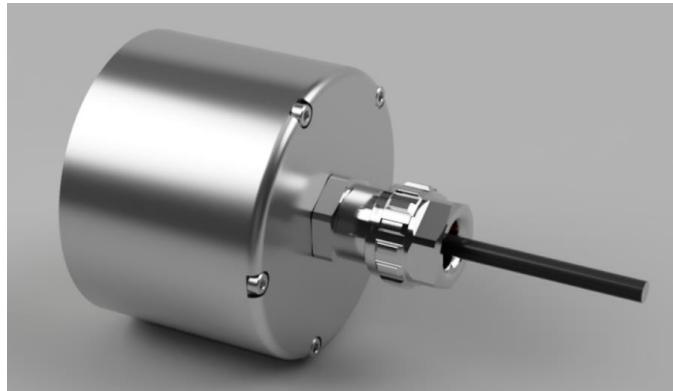


## Technical data

# Litronic FMS planar sensor P78-E21



## 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

**Technical data planar sensor P78-E21**

Suitable for use in potentially explosive atmospheres	2 D – zone 21
Physical principle	capacity determination with high-frequency stray field
Frequency	16 - 22 MHz
Sensor location	outside silo via deflector, on conveyor belt with sliding shoe, pipes, screw conveyors, tanks, ...
Measuring range	0 – 100 % moisture content (measuring window adjustable)
Update cycle	32.64 ms
Max. measuring accuracy	+/- 0.05 % moisture content <sup>1)</sup>
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
Material temperature	+5 – +75 °C
Temperature measuring range	-10 – +75 °C
Temperature measurement accuracy	+/- 0.5 °C
Operating ambient temperature	+5 – +75 °C
Storage temperature	-25 – +80 °C
Protection class	IP68
Connecting cable type / length	TMPU 6 x AWG24/ 6 m
Wear protection	zircon oxide ( $\text{ZrO}_2\text{Al}_2\text{O}_3$ )
Housing / flange material	V4A 1.4404 (option: 1.4571)
Dimensions: Ø / height / height with cable connection	78 mm / 53 mm / 88.6 mm
Weight without cable	0.900 kg
Weight clamping flange	0.300 kg
EU-type examination certificate UK-type examination certificate	EPS 20 ATEX 1 207 X EPS 22 UKEX 1 160 X EN IEC 60079-0:2018, EN 60079-31:2014
Ex-marking	 II 2D Ex tb IIIC T85°C Db
IECEx certificate of conformity	IECEx EPS 20.0077X IEC 60079-0:2017 Edition 7.0, IEC 60079-31:2013 Edition 2

Ex-marking

Ex tb IIIC T85°C Db

- 1.) with optimal material specific calibration, mean value with ideal material flow, with Litronic FMS II evaluation unit / PC-software

## Important Note

The Liebherr address, the Liebherr Logo, as the manufacturer / distributor must always be completely legible, it is not allowed to paste or cover it.

## Observe special operating conditions!

- The power supply of the sensor may only be operated with a power supply unit of the corresponding device category.
- The cable may only be moved if ambient temperature is above 5 °C and below 70 °C.
- The device must be connected either outside of the potentially explosive area or in a housing that corresponds to an ignition protection type in accordance with EN IEC 60079-0.
- The permissible ambient temperature range is 5 °C to 75 °C.

## Dimensional drawing:

