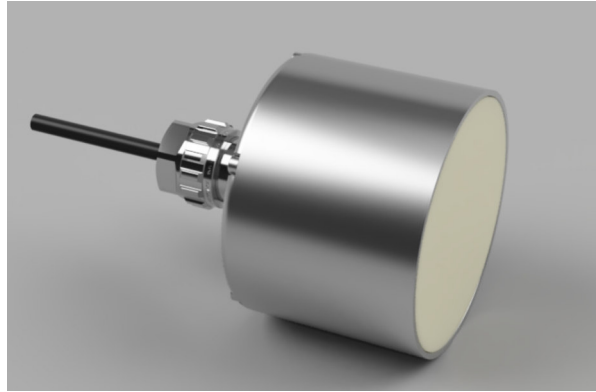
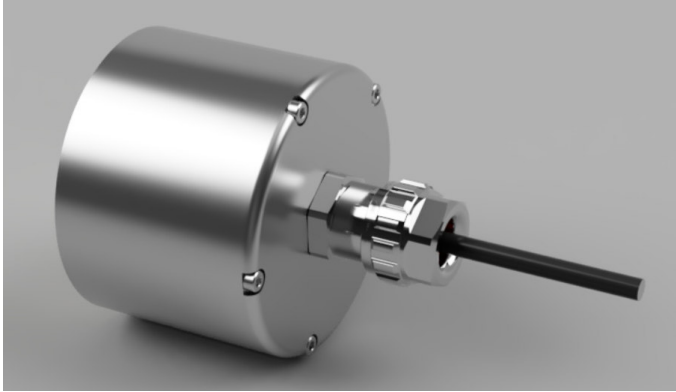


Technical Data


Litronic FMS planar sensor P78-E21



Basic Data

Suitable for use in potentially explosive atmospheres	2D - zone 21
Physical principle:	Capacity determination with high-frequency stray field
Measured frequency:	16 - 22 MHz
Sensor location:	Outside silo via deflector, on conveyor belt with sliding shoe, pipes, worm conveyor, tanks, ...
Measuring range:	0 - 100 % moisture content (measuring window adjustable)
Capacitance resolution:	10 fF
Cycle of up-date:	32,64 ms
Sampling rate for average calculation:	16 - 22 10 ⁶
Max. measuring accuracy of moisture with optimal material specific calibration, mean value with ideal material flow, with Litronic FMS II Interchange and evaluation unit / PC-software:	+/- 0,05 % moisture content
Measuring value transmission method:	digital: RS-485, multi-processor protocol
Max. Number of sensors at the bus:	16
Max. cable length:	1200 m
Power supply:	8..30V, 0.4 VA
Measuring range of temperature:	-10 - 75 °C accuracy: +/- 0,5 °C
Working ambient temperature:	5 - 75 °C
Storing temperature:	-25 - 80 °C
Protection class:	IP68
Connecting cable type / length:	TMPU 6 x AWG24/ 6 m
Material wear protection:	Zircon oxide (ZrO ₂ Al ₂ O ₃)

Technical Data

Material shell / flange:	V4A 1.4404 (Option: 1.4571)
Dimension: Ø / height / height with cable connection:	78 / 53 / 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-identification	 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-identification	Ex tb IIIC T85°C Db

Important Note:

The Liebherr address, the Liebherr Logo, as the manufacturer / distributor must always be read in full, so it is not allowed to paste or cover it.

FEATURES

- capacitive measuring method
- sensor replacement without re-calibration
- sensitivity adjustable in 3 shoulders
- integral microprocessor c/w mean value computing
- material flow identification
- temperature compensation
- limit value check
- digital measured value transfer and recording
- high-strength ceramic wear shield
- stainless steel housing

X Please take care on following special conditions of use!

- For the power supply of the sensor use only a power supply for the relevant device category.
- The cable can only be installed movable if the ambient temperature around is between 5 °C and 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 allowed ambient temperature is between 5 °C and + 75 °C.

Dimensional drawing:

