

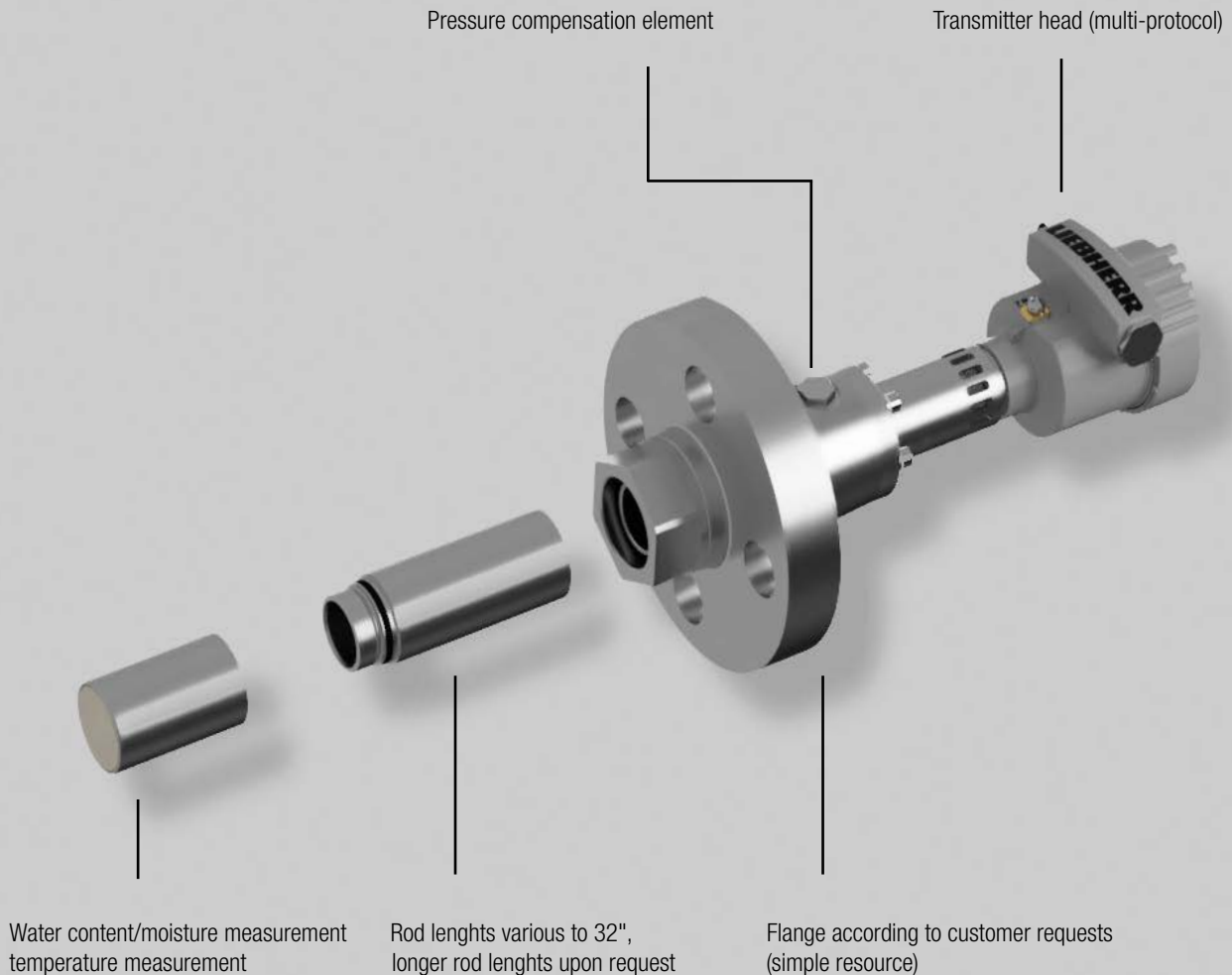
Litronic-WMS

Reliable Water Content Measuring System



LIEBHERR

Water content and temperature



The modular system for monitoring pipelines, tanks and refineries

An autonomous stand-alone-system for the exact determination of water content/moisture and temperature guarantees highest quality and safety during the production, processing and refinement of most of all emulsions, powders and bulks in a running process. The modular system allows customization to required needs and meets your demands in any case. The easy-to-use PC software "WIO" enables a quick and exact calibration of concerning measuring points.



Features:

- Adjustable measuring range
- Switch over to other material curves
- Sensor replacement without recalibration
- Temperature compensation
- Precision voltage regulator
- Multi-protocol transmitter: 4 – 20 mA, HART
- Temperature measurement
- Display (optional)

Applications:

- Platforms
- Loading stations
- Pipelines (pumping stations)
- Refineries (dewatering tanks)
- Oil separators
- Blending Processes
- (Petro-) Chemical industry
- Energy and Safety, Tank and Settling Management
- Many other installation places...

Material list:

- Oil, crude, mud, fuel, bitumen
- Pyrolysis oil, wax, resin
- Colours, paint, ethanol, solvents
- Fertilizer, detergent, biomass
- Sawdust, pellets, coke
- Ceramicslurry, propellant
- Chemical powder and granulates

WMS Rod Sensor P45-GD

- For pipelines and tanks
- For emulsions
- Up to 100 bar
- Rod lengths various to 32", further rod lengths upon request
- measurement field in front, optional lateral
- Wearing protection: PEEK



WMS Planar Sensor P45-GD

- Planar sensor D = 45 mm
- For emulsions, powder and bulks (e.g.: dust)
- From 2" pipe diameter
- Application in systems up to 100 bar
- Wearing protection: PEEK
- Weld-on socket



WMS Planar Sensor P78-GD

- Planar sensor D = 78 mm
- For powder, bulks and emulsions
- Application in systems up to 16 bar
- Wearing protection: Zirconium Oxide Ceramics
- Weld-on socket or flange



Technical Data

Litronic-WMS	Data
Field frequency:	22 MHz
Physical principle:	Capacity determination with high-frequency leakage field
Measuring range (free adjustable):	0 – 100 %
Achievable measurement accuracy:	+/- 0,05 % based on correct material curve
Resolution:	0,02 %
Resolution with smoothing:	0,005 %
Cycle of update:	65 ms
Power supply:	$U_n = 24$ V DC (max. 30 V SELV/PELV), $I = 150$ mA
Medium temperature:	-5 °C* – 80 °C
Ambient temperature sensor head:	5 °C – 80 °C
Ambient temperature transmitter head:	5 °C – 70 °C
Analogue output:	4 – 20 mA, active
Fault indication:	3,6 mA / 22 mA
Remote parametrization:	HART®-MODEM
Max. cable length:	1.000 m
Protection class:	IP 65
Material transmitter head:	Aluminium
Material sensor:	1.4571, optional Hastelloy C-276 2.4819
Material retractable fitting:	1.4571
Measured value display:	LCD-Display

* under special conditions

Certificates:


ATEX/UKEX:

EU-type examination certificate number: EPS 21 ATEX 1 140 X

UK-Type Examination Certificate: EPS 22 UKEX 1 159 X

DIN EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2015, EN 60079-31:2014

Gas EX-protection:

 II 1/2 G Ex db/ia IIC T4 Ga/Gb

Dust EX-protection:

 II 1/2 D Ex tb/ia IIIC T135°C Da/Db

IECEX:

Certificate number: IECEx EPS 21.0047X

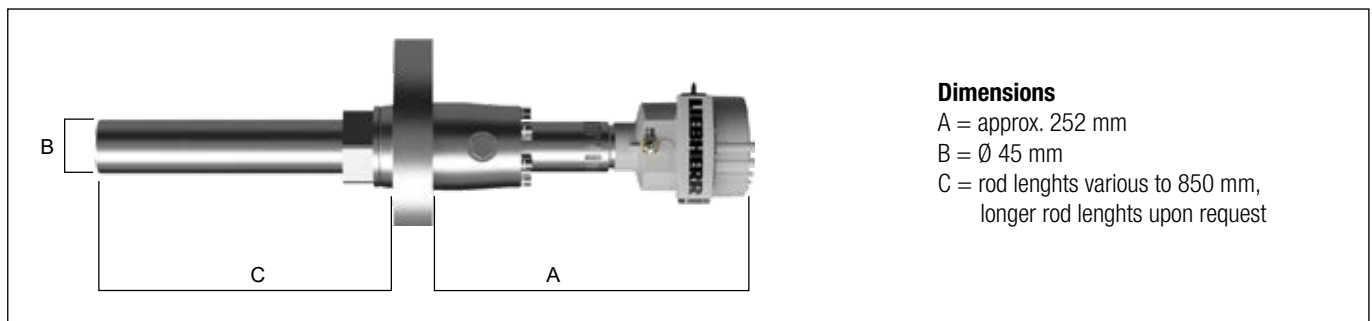
IEC 60079-0:2017 Edition: 7.0, IEC 60079-1:2014-06 Edition: 7.0, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2014-10 Edition: 3.0, IEC 60079-31:2013 Edition: 2

Gas EX-protection:

Ex db/ia IIC T4 Ga/Gb

Dust EX-protection:

Ex tb/ia IIIC T135°C Da/Db



Dimensions

A = approx. 252 mm

B = Ø 45 mm

C = rod lengths various to 850 mm,
longer rod lengths upon request

Retractable fitting (Option)

For pipeline diameters from 6" and for tank installations is an optional retractable fitting available. This equipment allows to retract the sensor under process conditions up to 6 bar.

