

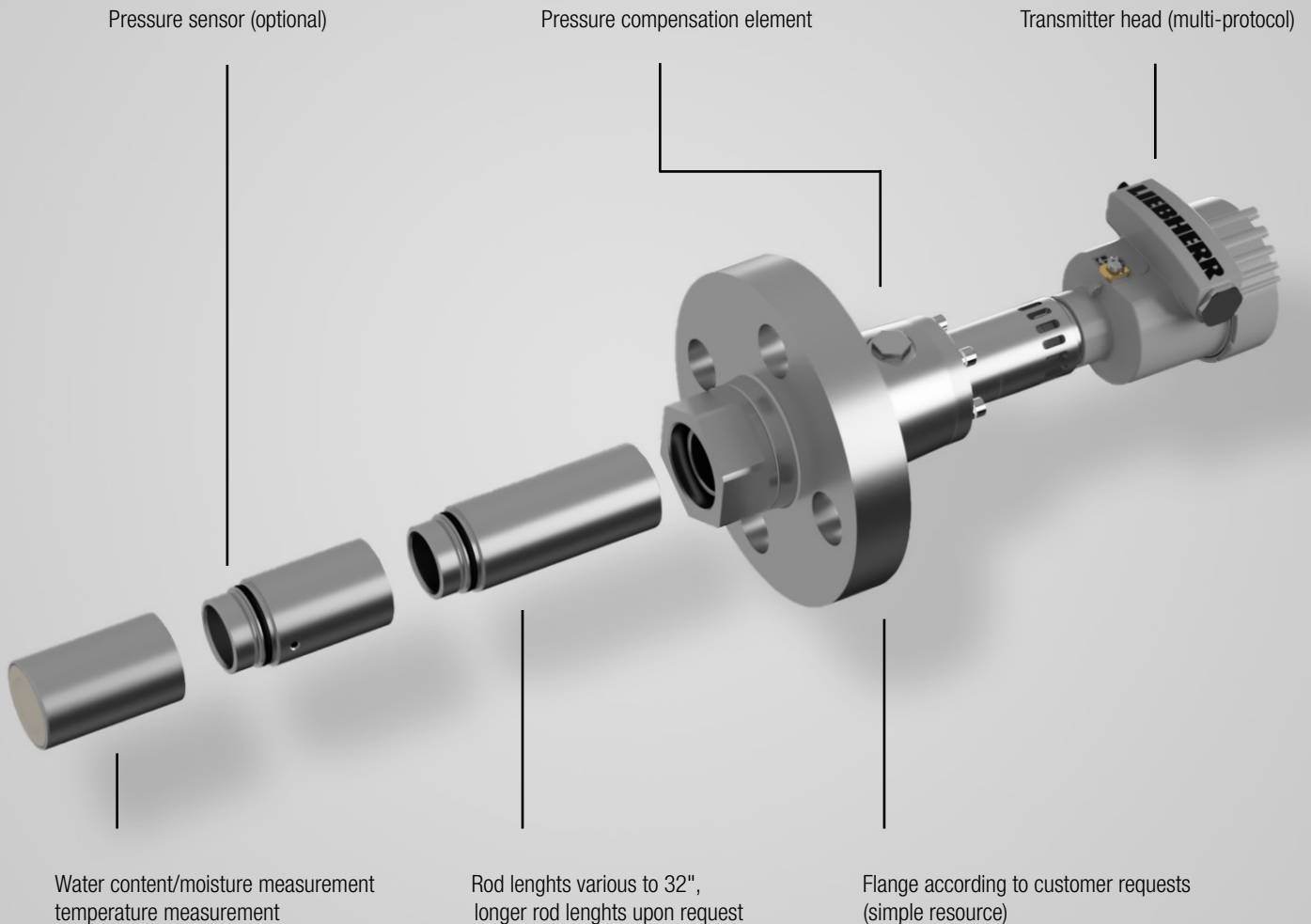
Litronic-WMS

# Reliable Water Content Measuring System



**LIEBHERR**

## Water content, pressure and temperature



### The modular system for monitoring pipelines, tanks and refineries

An autonomous stand-alone-system for the exact determination of water content/moisture, pressure and temperature in a running process. The modular system allows customization to required needs. Highest quality and safety are guaranteed by the system during production, processing and refinement of most of all emulsions, powder and bulks. The Litronic-WMS will meet 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, Modbus RTU
- Temperature measurement
- Display (optional)
- Pressure measurement (optional)

**Applications:**

- Water cut meter
- Pipeline, tanks BS&W (basic sediment and water) measurement
- Desalter crude feed measurement
- Automatic well testing
- LACT units
- Separation control

**Material list:**

- Oil, crude oil, diesel, bio diesel, quenching oil
- Lubrication oil, coolant
- Colour, paint, solvent, ethanol
- Wax, resin
- Other emulsions and suspensions

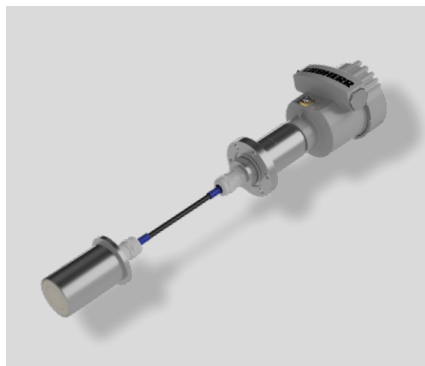
**WMS Rod Sensor P45-GD**

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



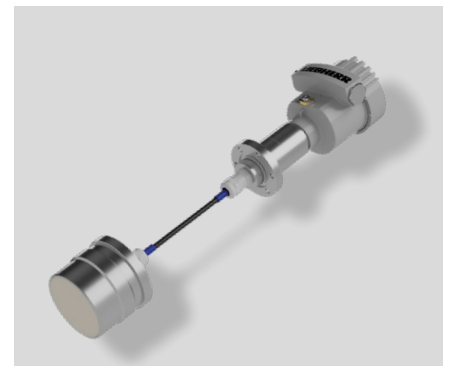
**WMS Planar Sensor P45-GD**

- 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



**WMS Planar Sensor P78-GD**

- Planar sensor D = 78 mm
- For powder, bulks and emulsions
- Application in systems up to 80 bar
- Wearing protection: Zirconium Oxide Ceramics



## 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:	24 V, 150 mA DC
Temperature measurement:	-10 °C – 80 °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
Operation temperature:	5 °C – 80 °C
Material transmitter head:	Aluminium
Material sensor:	1.4571, optional Hastelloy C-276 2.4819
Material retractable fitting:	1.4571
Pressure measurement (optional):	Relative up to 40 bar
Measured value display:	LCD-Display VEGADIS 82

### Certificates:

ATEX:

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

DIN EN IEC 60079-0:2018, 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

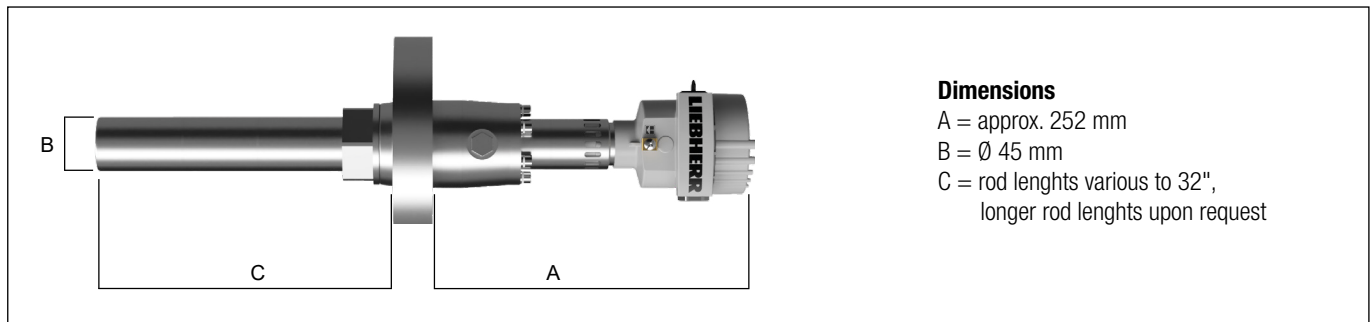
IEC 60079-0:2017 Edition: 7.0, IEC 60079-1:2014-06 Edition: 7.0, IEC 60079-11:2006 Edition: 5, IEC 60079-26:2014-10 Edition: 3.0, IEC 60079-31:2013 Edition: 2

### 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 32",  
longer rod lengths upon request

### Retractable fitting (Option)

For pipeline diameters from 6" to 32" and for tank installations is an optional retractable fitting available. This equipment allows to retract the sensor under process conditions up to 6 bar.

