

LEVEL GAUGES WITH MICROWAVE TRANSMITTER

DIESSE has been granted a European patent for the glass level gauge equipped with a microwave transmitter, which allows to get, with 2/4-wire, 4-20mA, Hart-Profibus PA or Foundation fieldbus output signal. Traditional visual readings can also be taken by glasses.

The equipment is suitable for use with most liquids and can be installed in both non-explosive and in potentially explosive atmospheres (ATEX certified).

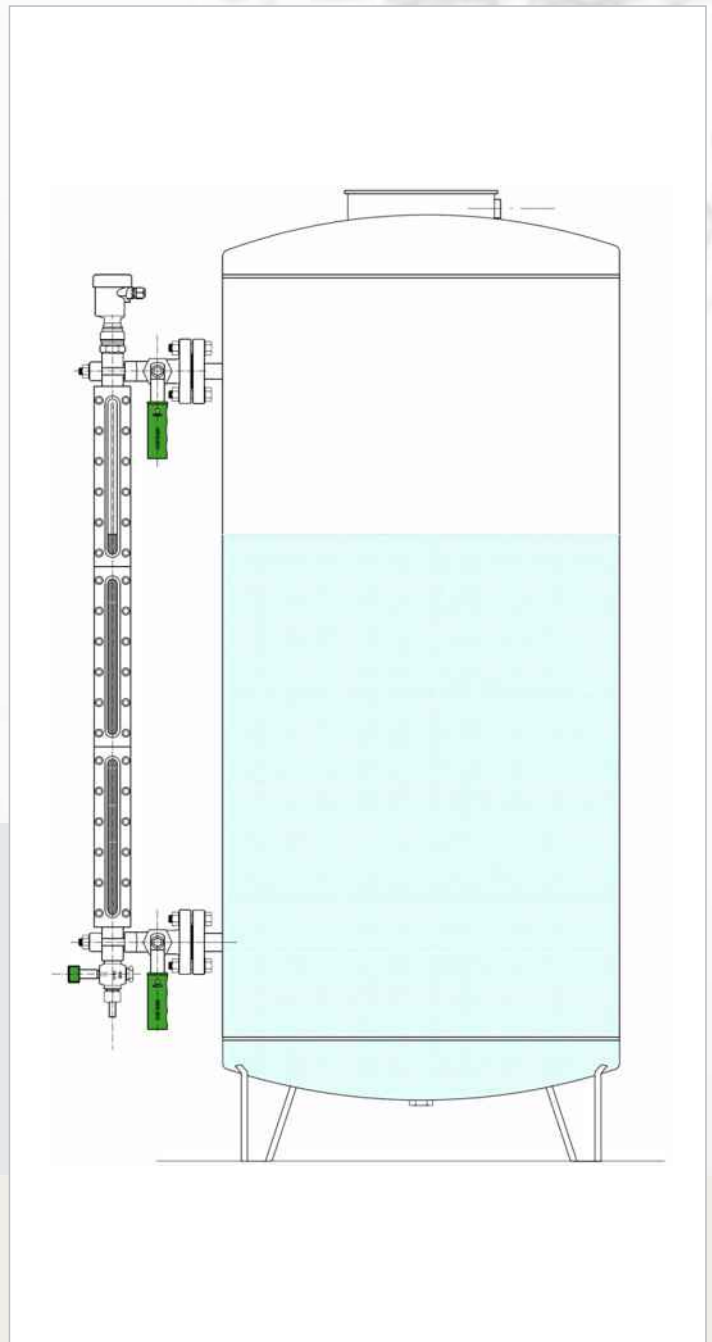
In addition, it can be used as an overflow safety device thanks to the SIL (safety integrity level) of the microwave transmitter.

The standout features of this type of gauge are as follows:

- Remote and in situ indication/transmission of liquid level
- Ability to programme adjustable thresholds (alarm and/or control signals) in proportion to the gauge length
- Automatic analogue/digital control via system accessories (relays, regulators etc.)
- Actual/visible level readings appear in real time with the process management analogue/digital parameters. No risk of discordance
- Two types of parameters on a single process connection: visual mechanical parameters and analogue/digital control parameters
- Pressure and temperature readings can be taken in addition to the usual metric level readings and are shown on one or more displays
- Control and alarm signals can be remotely transmitted

HOW DOES IT WORK?

High frequency microwave pulses are 'guided' along a cable positioned in the centre of the level gauge housing. When the pulses reach the surface of the fluid, they are reflected back up the guide to electronic processors. A microcontroller then processes the reflected microwaves, converting them into legible level or volume data.



TECHNICAL SPECIFICATIONS OF MICROWAVE TRANSMITTER:

MATERIALS:

Cable:
316 stainless steel; diameter: 1 mm

Gasket:
FPM (Viton), EPDM or Kalrez 6375

Process connection:
316L stainless steel, 3/4" BSP (GAS); other materials available on request

COVER/PROTECTION:

Resin, aluminium or 316L stainless steel

ELECTRICAL CONNECTION:

M20 x 1,5 mm or 1/2" NPT

OPERATING CONDITIONS (*):

Pressure: up to 400 bar
Operating temperature: -200 + 400°C
Ambient temperature: -20 + 80°C

OUTPUT SIGNAL:

Standard: 4...20mA, Hart-Profibus PA or Foundation fieldbus

ACCURACY:

+/- 5 mm

ELECTRONIC POWER SUPPLY: (4...20mA/Hart loop powered)

Standard (non Ex): 14-36 VDC
EEx ia version: 10-30 VDC
EEx d version: 20-36 VDC

OPTIONAL ACCESSORIES:

Integrated or remote display and calibration module

INGRESS PROTECTION:

IP 67

EXPLOSION PROTECTION: ATEX II 1G, 1/2G, 2G EEx ia IIC T6
(depending on the model) ATEX II 1/2G, 2G EEx d ia IIC T6

(*) the operating limits of the glass level gauge with microwave transmitter are the same as those listed in relevant sections of the reflex and transparent level gauge pages

Accessories / Certifications:

Please refer to the reflex/transparent glass level gauge sections.

