

SIEMENS

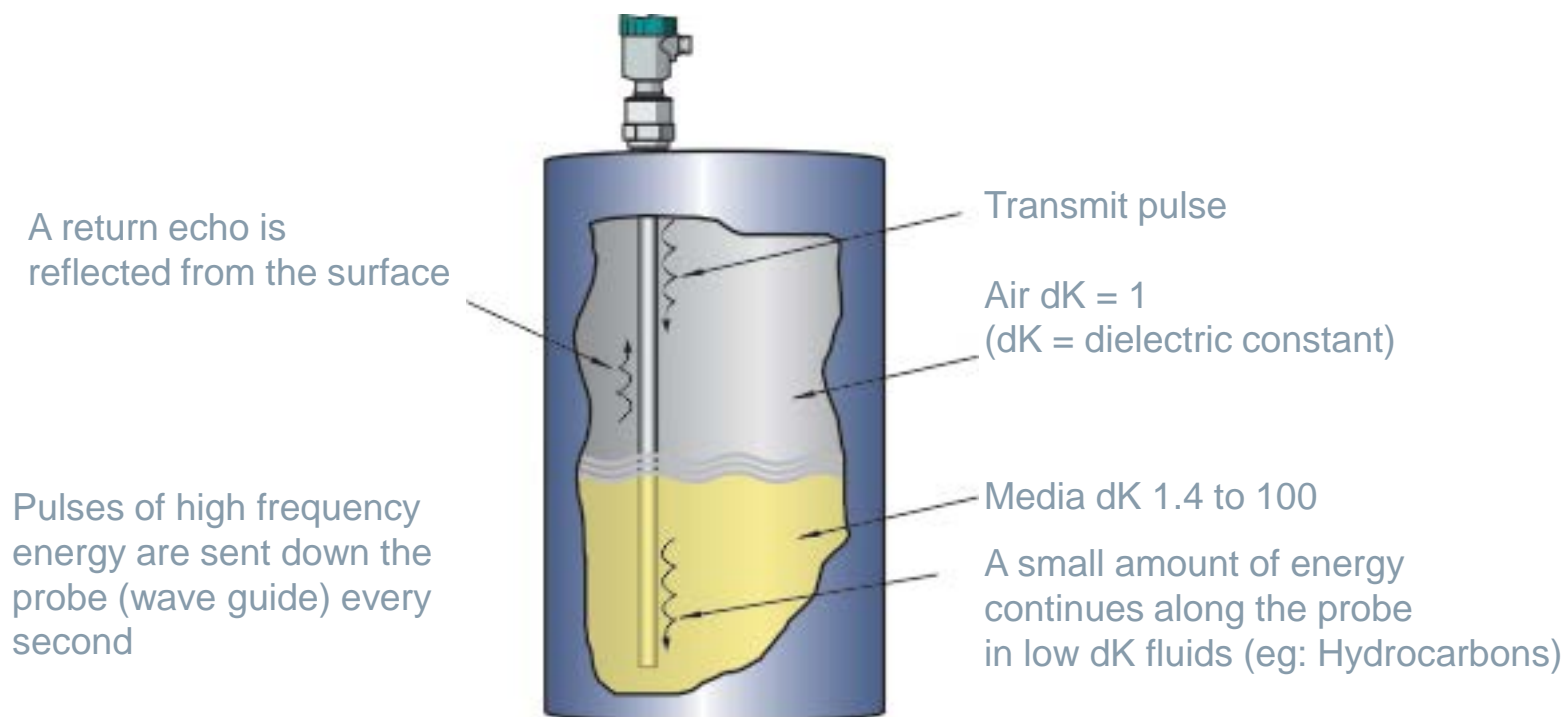


Guided wave radar

SITRANS LG

Time of Flight – With a difference

Guided Wave Radar (GWR) uses the principle of Time Domain Reflectometry (TDR), where pulses of high frequency energy are sent down a wave guide (probe or cable) and precision timing circuitry measures the reflection of the signal off the surface of the process.



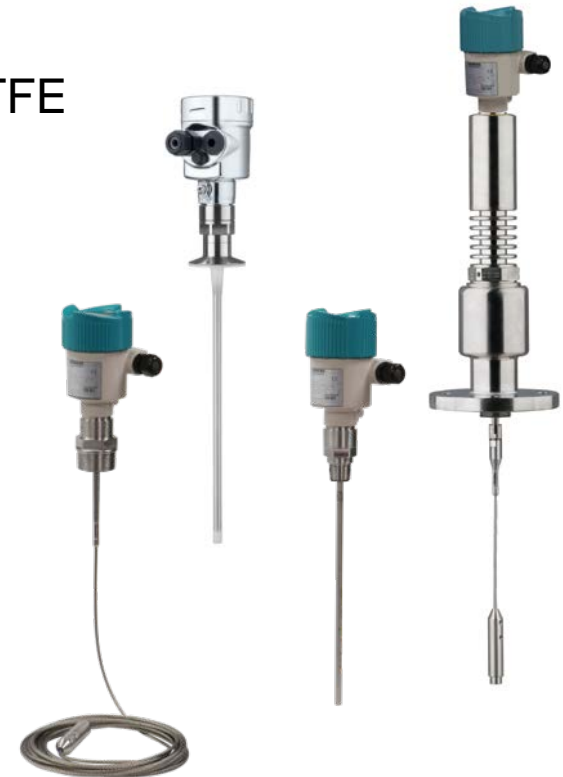
SITRANS LG Product Line

- Models covering a wide range of applications:
 - SITRANS LG240 Hygienic
 - SITRANS LG250 General liquids
 - SITRANS LG260 Solids
 - SITRANS LG270 Aggressive applications
- Ranges to 246 ft
- Dielectric constant: from 1.4
- Accuracy: +/- 2 mm
- Process temperature: -321 ° F to +842 ° F
- Process pressure: -14.5 to 5801psi
- Enclosure options
 - Plastic, aluminum, stainless steel
 - Double and single chamber versions



SITRANS LG product line

- Multiple probe types – Rod/cable/coaxial
 - 316L, C-22, ceramic, PPS-GF40, PFA/TFM-PTFE
 - Exchangeable probes
 - $R_a < 0.8 \mu\text{m}$
- SIL-2
- Ammonia version
- Glass seal
- Centring weights
- FKM, FFKM, EPDM
- Autoclavable version
- Pressure and gas phase compensation with reference distance



SITRANS LG250 Liquids and Interface



Replaces SITRANS LG200

Application: Liquid level and interface

Versions:

- Exchangeable cable
 - Ø 2 mm/Ø 4 mm
 - Max. length: 246 ft
- Exchangeable rod
 - Ø 8 mm/Ø 12 mm
 - Max. length: 20 ft
- Coaxial version
 - Ø 21.3 mm/Ø 42.2 mm
 - Max. length: 20 ft

SITRANS LG250 Liquids and Interface



Process fittings

- Flanges from 1"

Materials

- 316L, C-22, ceramic, PPS-GF40
- FKM, FFKM, EPDM

Dielectric constant: from 1.4

Accuracy: +/- 2 mm

Process temperature: -40 to +392 ° F

Process pressure: -14.5 to 580 psi

Options

- Ammonia version
- Second Line of Defence
- Centring weights

SITRANS LG260 Bulk solids



Application: Bulk solids

Versions:

- Exchangeable cable
 - Ø 4 mm/Ø 6 mm of 316
 - Ø 6mm/Ø 11 mm PA coated
 - Max. length: 197 ft
 - Tensile load: up to 3 tons
- Exchangeable rod
 - Ø 16 mm
 - Max. length: 20 ft

SITRANS LG260 Bulk solids



Process fittings

- Flanges from 1"

Materials

- 316L, C-22, PPS-GF40
- FKM, FFKM, EPDM

Dielectric constant: from 1.4

Accuracy: +/- 2 mm

Process temperature: -40 ... +392 ° F

Process pressure: -1.5 ... 580 psi

Options

- Segmented and bent rods

SITRANS LG240 Food and Pharma



Application liquids

Versions:

- Rod PFA/TFM-PTFE coated
 - Ø 6 mm/10 mm
 - Length up to 13 ft
- Cable PFA/TFM-PTFE coated
 - Ø 2.5 mm/4 mm
 - Length up to 105 ft
 - Gravity weight completely coated
- Rod 1.4435 according to BN2
 - Ø 8 mm/Ra < 0.8 µm
 - Length up to 13 ft

SITRANS LG240 Food and Pharma



Process fittings

- Flanges from 2"
- Hygienic fittings

Materials

- 316L, 316L according to BN2
- TFM-PTFE plated

Dielectric constant: from 1.4

Accuracy: +/- 2 mm

Process temperature: -40 ... +392 ° F

Process pressure: -1.4.5 ... 232 psi

Options

- Autoclavable version

SITRANS LG270 Pressure and Temperature



Delivery “Liquids”

Temperature/pressure versions

- -321 ... +536° F/-1.4.5 ... 5801 psi

- -321 ... +842 ° F-1 ... 5801 psi

Versions

- Exchangeable cable

- Ø 2 mm/Ø 4 mm

- Length up to 197 ft

- Exchangeable rod

- Ø 16 mm

- Length up to 20 ft

- Coaxial probe Ø 42.2 mm

- Length up to 20 ft

SITRANS LG270 Pressure and Temperature



Process fittings

- Thread 1½"
- Flanges from 2"

Materials

- 316L, C-22
- Ceramic-graphite

Dielectric constant: from 1.6

Accuracy: +/- 3 mm

Options

- Pressure and gas phase compensation with reference distance
- Centering weights

SITRANS LG – Software

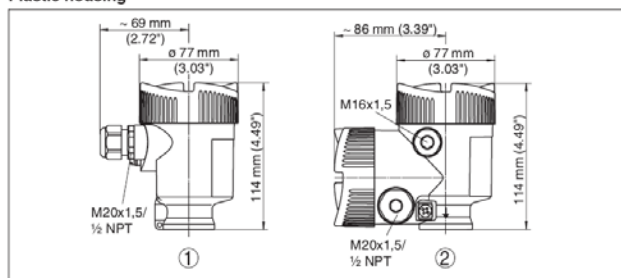
Software and Interface

- EDD support
- DTM support
- HART
- Modbus
- Profibus and FF
- Large menu driven display
- Advanced diagnostics
- Second current output 4 to 20 mA

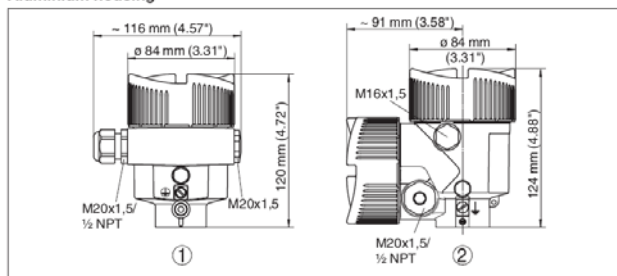


SITRANS LG – Options

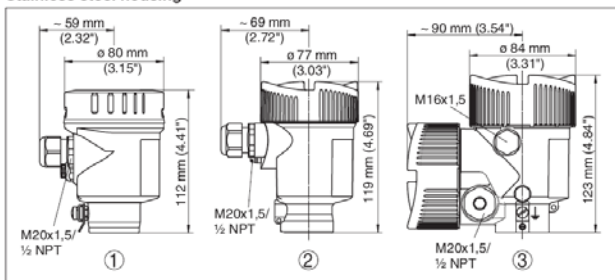
Plastic housing



Aluminium housing



Stainless steel housing



Enclosures

- Plastic
- Aluminium
- Stainless steel electropolished
- Stainless steel casted
- Double and single chamber versions

SITRANS LG – Approvals



Shipping

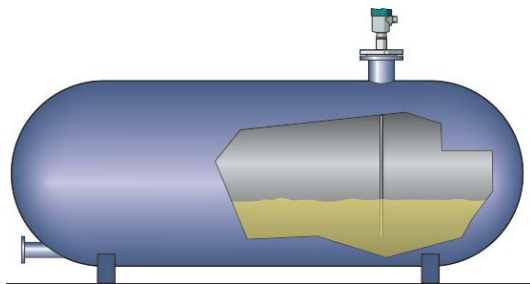
Hygienic

- FDA/3A
- FM
- CSA
- SIL

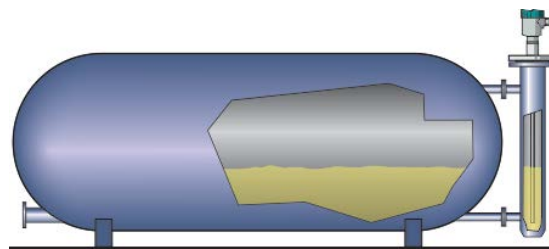
Overfill Protection



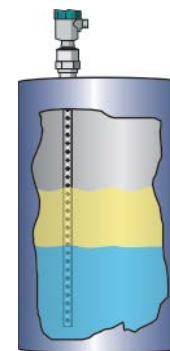
Applications in key industries



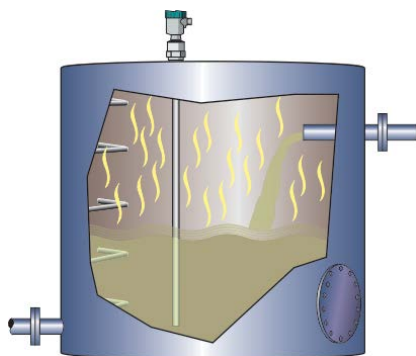
Ideal for horizontal cylinders



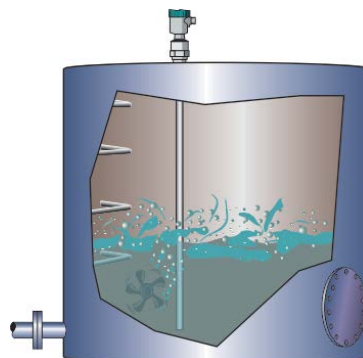
Measurement in side pipes/bypass



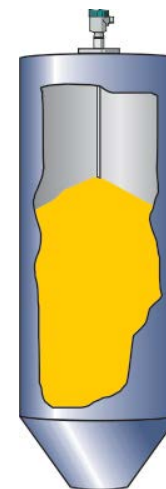
Liquid interface



Applications with steam or ammonia



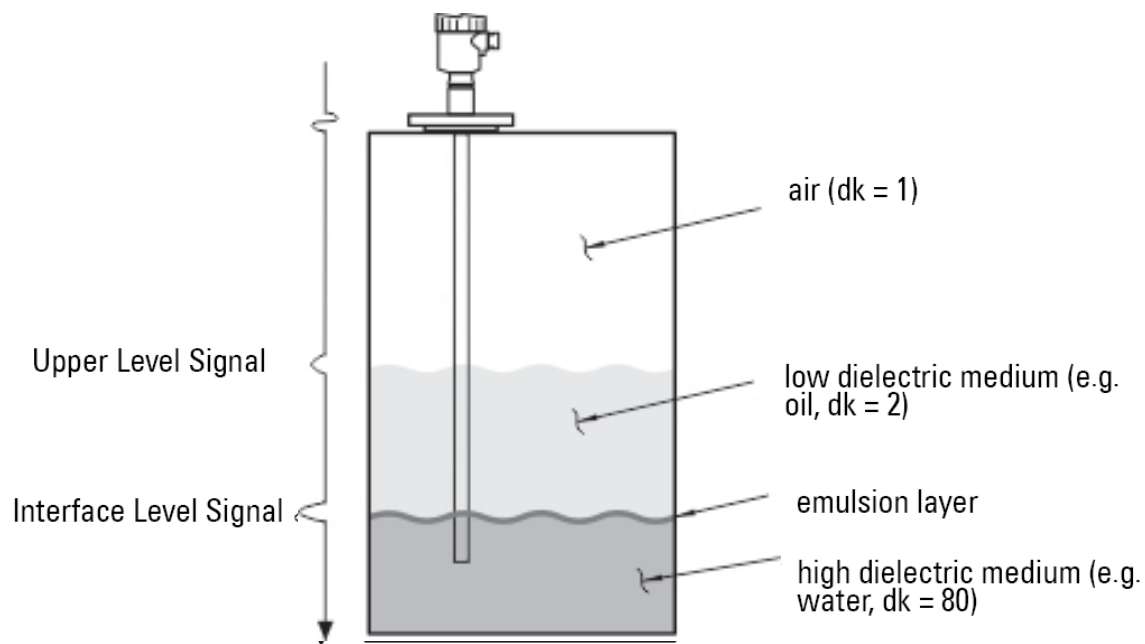
Applications with turbulence



Medium range solids

Key applications – Interface

Interface level application between two liquids



SITRANS LG product line – Conclusion

- Compact, rugged design
- Easy to install and quick to configure
- Probe tracking for reliable measurement
- Models for large range of applications
- Cost-effective chemically resistive versions
- Functional Safety suitable (SIL 2)
- Field replaceable and adjustable probes



HART
COMMUNICATION PROTOCOL

PROFI
BUS

FOUNDATION

SIMATIC
PDM

Group
FDT
Member

FACTORY

AMS
Suite

Radar product portfolio

Liquids – guided wave radar



SITRANS LG250 SITRANS LG240 SITRANS LG270

Liquids – non-contacting



SITRANS LR250 SITRANS Probe LR SITRANS LR200

Solids – guided wave radar



SITRANS LG260

Solids – non-contacting



SITRANS LR560 SITRANS LR460 SITRANS LR260

Siemens Milltronics product portfolio

Level measurement



Ultrasonic

Radar

Guided Wave Radar

Capacitance

Vibration and Rotary

Remote monitoring and Displays



Remote Displays

Weighing



Electronics

Belt scales

Weighfeeders

Impact flowmeters

Load cells

Process protection



Acoustic and Motion sensors

Thank you!



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