ProGauge®

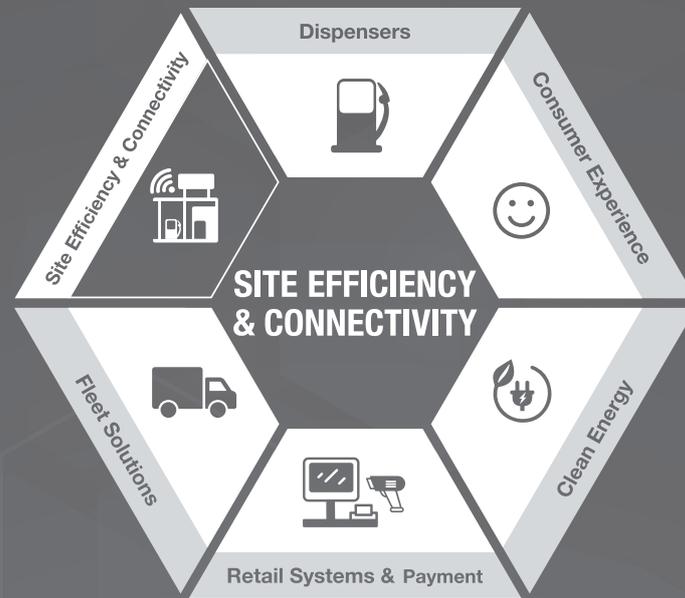# Make Waves. Create Insights.

ProGauge® LR120 Radar

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SITE EFFICIENCY & CONNECTIVITY

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Precise Measurement for Complete Visibility

Introducing the ProGauge® LR120 Radar, Dover Fueling Solutions® (DFS) latest automatic tank gauging (ATG) solution specifically designed for industrial applications. This incredibly accurate radar joins the already well-established ProGauge® portfolio, and seamlessly integrates with the ProGauge MagLink LX® console family to provide operators with complete visibility over stocks — whether in liquid or solid form.

Compact and easy to install, the LR120 Radar has 2mm accuracy and near zero range distance, which yields optimum inventory management capabilities for a wide range of operators — providing unique monitoring and measuring capabilities anywhere, at any time.

The LR120 Radar turns waves into insights. What are you waiting for? Wave hello to the future of measurement. The LR120 Radar is precisely what you're looking for.

Turning Waves Into Insights

The LR120 Radar uses electromagnetic waves in the millimeter-wave microwave band. Its operating principle is based on sending pulses of electromagnetic waves to the product in the tank, then measuring the time it takes for the echo to return.

The LR120 level antenna receives the reflected echo of the object from its surface, and the electronics measure the time elapsed between the emission of the pulse and the reception of the return signal. The distance between the RADAR level and the object is then calculated to measure the exact position of the product level in the tank.

High Precision Accuracy

Delivering precise level measurement to ranges of 30 meters (98.4 ft), the LR120 Radar's long range and narrow beam make it best suited for tanks, wet wells with obstructions, or solid level measurement. It is also approved for open air applications outside of a tank and is hazardous area compliant for safe use in explosive dust or dust environments.

Engineering Excellence

Packaged in a hermetically sealed PVDF enclosure for years of trouble-free and reliable measurement service, the LR120 Radar is compact, easy to install, and its 2mm accuracy and zero near range distance yields optimum inventory management capability for a wide range of operators.

Connected Convenience

The LR120 Radar provides operators with an incredibly accurate solution that seamlessly integrates with the MagLink LX console family, to provide operators with complete visibility. This gives operators even more flexibility and precision when connecting the radar and console to site equipment, and even greater monitoring coverage made visible through a single user interface.

Features and Functions

Technology

- RADAR
- 80 GHz version
- RADAR beam angle: 4°

Enclosure

- Material: PVDF
- Protection rating: IP66

Mechanical Connection

- 4" GAS-M (for ATEX zone "0")
- Flanged starting from DN100 according to EN1092-1 or ANSI (for ATEX zone "0")
- 1" NPT-M / BSPT-M for external mounting on a sleeve (for non-ATEX classified areas)
- Flanged starting from DN80 EN1092-1 or 3" ANSI (for non-ATEX classified areas)
- To insert the antenna into tanks in non-classified areas, a minimum passage of 3" is always required

Antenna Diameter

- DN80; the distance between the tank wall and the RADAR axis must be greater than 200 mm

Antenna Material

- PVDF

Measurement Range

- From 0 mm up to 30,000 mm (30 m)

Output Interface

- RS485 Modbus RTU

Accuracy

- ± 2 mm beyond 250 mm up to the full scale of 30 m
- ± 10 mm between 0 and 250 mm

Measurement Cycle Time

- ≤ 250 ms

Power Supply

- 8...30 V DC

Electrical Output

- Pre-wired cable, 5 m long

Operating Temperature

- -40 … +60 °C

Materials

- Enclosure: PVDF
- Antenna: PVDF
- Process connection flange: AISI316L - AISI304 - Carbon steel - Other materials upon request
- Zone 0 / zone 1 separator: Thermoplastic material
- Bottom closure cap for antenna: PTFE only for ATEX version - starting from DN100

Certifications

Subject to regional availability