

FMR540 Radar Tank Gauge

Smart radar tank gauge for continuous and non-contact level measurement with an accuracy better than ± 1 mm

Varec[®]



Highlights

- 4-wire technology: HART and 24 V DC intrinsically safe power supply.
- Non-contact measurement: Tank top is almost independent from product properties.
- Horn antenna: DN100 (4").
- Parabolic antenna: DN200 (8") or DN250 (10").
- Integrate into existing tank gauging systems using the 4590 Tank Side Monitor
- Easy onsite operation using built-in display.
- Easy commissioning and diagnostics using Windows[®] based software.
- HART, PROFIBUS PA or FOUNDATION Fieldbus protocols.
- Integrated air purge prevents antenna clogging.
- Alignment device provides optimum alignment of antenna/radar beam to the liquid surface
- High temperatures: Suitable for process temperatures up to -40 to +200°C (-40 to +392°F).
- High pressure: Suitable from Vacuum to +16bar (+232psi).
- Approved for use in hazardous locations.
- SIL 2 approved for overspill protection applications.

FMR540 Radar Tank Gauge (RTG)

The FMR540 RTG is used for custody transfer and inventory control applications with NMI- and PTB-approvals and meets the requirements according to OIML R85 and API 3.1B. The parabolic antenna is particularly suited for free space applications up to 40m.

Product Options

Approvals & Certifications

- ATEX, IEXCEX, WHG, Overfill prevention SIL

Antenna

- Horn or parabolic - Various sizes and material types

Process Connections

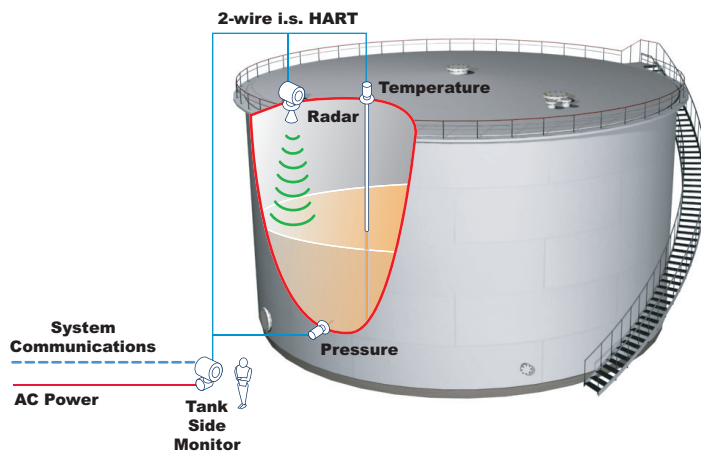
- ANSI, DN, JIS, JPI and UNiflange
- Gas-tight feed through

Output Options

- HART

Gland Entry

- Metric, NPT, G



Example tank gauging system using the 4590 Tank Side Monitor and 4532/4539 Average Temperature Converter

Technical Specifications

Note! This product conforms to all applicable industry standards and approvals, such as climate class, electromagnetic (EMC), vibration and radio frequency (RF). See product installation manual.

Note! These specifications apply to the FMR540 RTG under reference operating conditions with no major interference reflections inside the signal beam.

Maximum Measured Error & Range	Better than ± 1 mm Horn antenna: 30 m (98 ft) NMI and PTB 15 m (49 ft) Parabolic antenna: 40 m (131 ft) NMI = 25 m (82 ft), PTB = 30 m (98 ft)
Power Consumption	Maximum 400 mW at 16 V Maximum 600 mW at 24 V Maximum 750 mW at 30 V Non-Ex: max. 900 mW at 36 V
Current Consumption	HART: maximum 25 mA
Weight	6 kg (13.23 lbs) plus flange weight
Enclosure	IP65/68, NEMA 4X/6P (IP20, NEMA 1 with open housing and removed liquid crystal display) Housing F23: 316L, corrosion-resistant steel Housing F12/T12: aluminum, seawater repellent, chromate, powder coated
Antenna	IP65/68, NEMA 4X/6P
Conduit Entries	Cable gland: M20x1,5 (for EEx d: cable entry) Cable entry: G ½ or ½ NPT
Ambient Temperature	-40°F to 176°F (-40°C to 80°C)
Operating Frequency	K-band 26 GHz, Up to 8 RTGs can be installed in the same tank

Note! Please complete an Application Data Sheet for this equipment to facilitate proper selection of options for your unique application. Contact your Varec Sales Representative for more information.

Dimensions

Note! Aluminum housing shown with example antenna (not all possible configurations shown).

