

RTG 3900 L Series Radar Gauges

FEATURES

- State-of-the-art FMCW radar technology with digital reference for enhanced accuracy.
- Non-contact measurement.
- Circular polarization reduces the influence from tank wall echoes.
- Outstanding reliability and high accuracy.
- Emulates other vendors' field buses.
- TÜV approval for overfill protection.
- Integrated in TankRadar Rex tank gauging system.
- Drip-off antennas according to API, ch. 3.1 B, Ed 1.

Saab TankRadar RTG 3900 L Series is a radar level gauge with outstanding reliability, used on storage tanks in refineries and all types of tank terminals. The RTG 3900 L is part of the well proven TankRadar Rex tank gauging system. The gauge has no moving parts and is not in contact with the liquid. All electronics are located in the explosion proof housing, easily accessible from the outside. The RTG 3900 L is easy to install and configure. Its high performance and maintenance free operation make it a highly economical solution.

RTG 3920 L, Horn Antenna Gauge

The RTG 3920 L is designed for easy mounting in small-sized openings on storage tanks with fixed roofs.

It can be used for measurement on most oil products, except for asphalt and similar products giving thick antenna deposits (use RTG 3930 L instead).

RTG 3930 L, Parabolic Antenna Gauge

The RTG 3930 L is designed for mounting on tanks with fixed roofs. The parabolic antenna has the highest gain, making it suitable for all applications from light products to asphalt. The antenna is highly tolerant to viscous products and condensation.

RTG 3950 L, Still-pipe Array Antenna Gauge

RTG 3950 L is designed for mounting on existing still-pipes. Typical applications are crude oil tanks with floating roofs and gasoline tanks with or without inner floating roofs. The gauge uses the Saab invented Low Loss Mode which concentrates the radar signal towards the center of the still-pipe to avoid the influence of rust and deposits on the pipe wall. This improves the accuracy dramatically (100 times better).


RTG 3950 L is available in fixed or inclined version. The inclined version has a hinged hatch, enabling product sampling or verification hand dips in the still-pipe.

RTG 3960 L, LPG/LNG Gauge

RTG 3960 L measures the level in LPG/LNG tanks using a 4-in. still-pipe as a waveguide, ensuring a strong signal even from a boiling surface. Reference devices make it possible to verify measurements without opening the tank.



RTG 3900 L Series gauges, from left to right; 3920 L, 3930 L, 3950 L (inclined and fixed) and 3960 L.

Specification	
Measuring principle	FMCW radar with digital reference and temperature control
Antenna Types	Horn, Parabolic, Still-pipe Array antennas
Instrument Accuracy	± 3 mm (0.12 in.)
Measuring Range	RTG 3920 L: 0.8-20 m (2.6-65 ft) below flange, 0.3-30 m (1-100 ft) with reduced accuracy. RTG 3930 L: 0.8-40 m (2.6-130 ft) below flange RTG 3950 L: 0.8-40 m (2.6-130 ft) from antenna end RTG 3960 L: 0.5-60 m (1.6-200 ft) from antenna end For longer measuring range, please consult your Saab Rosemount representative.
Ambient Temperature	-40 °C to +70 °C (-40 °F to +158 °F)
Process Temperature	RTG 3920 L, RTG 3930 L: max +230 °C (+445 °F) RTG 3950 L: -40 °C to +120 °C (-40 °F to +248 °F) RTG 3960 L: Operating temperature at ball valve, -55 °C to +90 °C (-67 °F to +194 °F). Operating temperature in tank, -170 °C to +90 °C (-274 °F to +194 °F)
Pressure	RTG 3920 L: -0.2 to 2 bar (-2.9 to 29 psig) RTG 3930 L: Clamped, -0.2 to 0.2 bar (-2.9 to 2.9 psig) Welded, -0.2 to 10 bar (-2.9 to 145 psig) RTG 3950 L, fixed version: -0.2 to 2 bar (-2.9 to 29 psig) at 20 °C (70 °F) inclined version: 5-8 in. pipes, -0.2 to 0.5 bar (-2.9 to 7.2 psig) 10 and 12 in. pipes, -0.2 to 0.25 bar (-2.9 to 3.6 psig) RTG 3960 L: Up to 25 bar (365 psig)
Material Exposed to Tank Atmosphere:	Acid proof steel EN 1.4436 (AISI 316/316L), PTFE (Teflon®), FPM (Viton®), PPS, Fluorosilicon and quartz depending on gauge version.
Supply Voltage	100-240 VAC, 50-60 Hz. Optional: 34-70 VAC, 20-28 VDC (max 30 W) or 48-99 VDC
Outputs / Inputs	Outputs: TRL/2 field bus, 1 pc 4-20 mA, Profibus DP, FOUNDATION™ fieldbus, Tiway, 2 pcs relays, other vendors' field buses Inputs: Temperature (Pt 100), 2 pcs 4-20 mA (of which one HART® Master)
Display	On separate DAU, RDU or remotely in control room
Tank Opening / Still-pipe Dimensions	RTG 3920 L: min. 200 mm (8 in.) RTG 3930 L: min. 20-in manway size RTG 3950 L: 5, 6, 10 in. (Sch 10-60). 8 in. (Sch 20-80). 12 in. (Sch 10-40) RTG 3960 L: 4 in. (Sch 10 or 40) or 100 mm inner diameter stainless steel.
Housing	Aluminium, designed for IP 66 & 67
Certificates	ATEX: CE 0575  II 1/2 G EEx d[ia] IIB T6 UL: Class I, Div I, Groups C and D IECEX: Ex d IIB T6

Technical details are subject to change without prior notice. For more technical details see the Rex Technical Description.
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