

**Varec<sup>®</sup>**



# **ADVANCED TANK GAUGING**

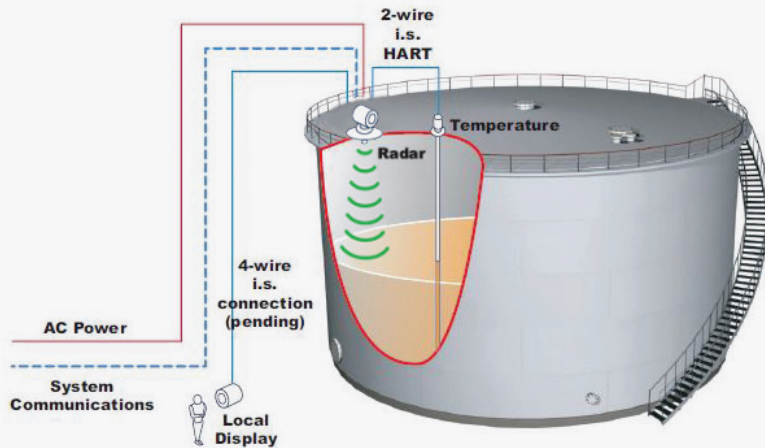
---

High Accuracy Inventory Management  
and Custody Transfer Applications

[www.varec.com](http://www.varec.com)

# RADAR TECHNOLOGY

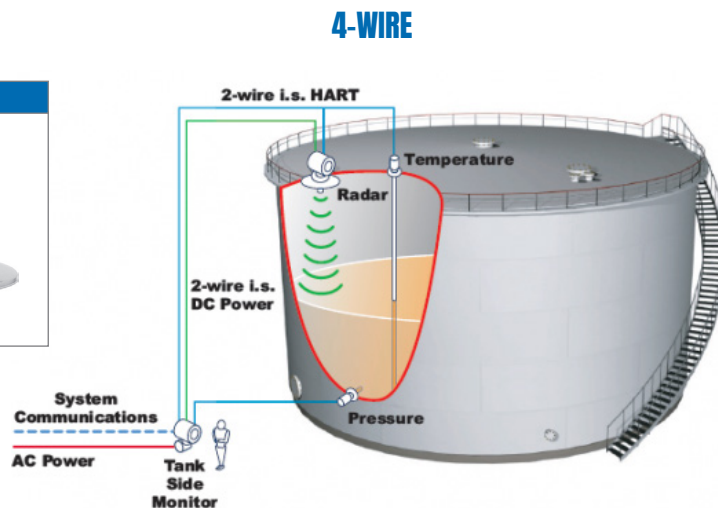
## RADAR GAUGES FMR8X Series



### Key Features (may vary by model):

- Accuracy rate of up to  $\pm 0.5\text{mm}$  (0.02 in)
- Suitable for inventory management and stilling well applications in custody transfer
- Standard range up to 38 m (124 ft)
- Ambient temperature up to  $-40$  to  $+60^\circ\text{C}$  ( $-40$  to  $+140^\circ\text{F}$ )
- Integration of e.g. temperature, water level, pressure, overflow prevention sensor
- Suitable for atmospheric and high pressure applications from 16 to 25 bar (232 to 362 psi)
- V1, MODBUS RS-485, HART protocols
- Wetted parts are completely separated from the electronic circuit
- Intrinsically safe power supply and communication for HART slave devices, e.g. average temperature sensor.
- Direct connection of spot or average temperature sensor
- Tank top mounting as small as 4"/DN100 flange
- National approvals (NMI, PTB) for custody transfer
- Approved for use in explosion hazardous areas to ATEX, FM, CSA, TIIS and IECEx standards

## RADAR GAUGES FMR53X Series



### Key Features (may vary by model):

- Accuracy rate of up to  $\pm 0.5\text{mm}$  (0.02 in)
- Inventory control version available with  $\pm 3\text{ mm}$  (0.11 in) accuracy
- Models come with either horn, planar or parabolic antenna for free space applications
- Ambient temperature up to  $-40^\circ\text{F}$  and  $+185^\circ\text{F}$  ( $-40^\circ\text{C}$  and  $+85^\circ\text{C}$ )
- Standard range up to 38 to 41m (124 to 131 ft)
- Cost-effective and intrinsically safe – 4-wire cable for HART and 24 VDC i.s. power
- Easy on-site operation using built-in display
- National approvals (NMI, PTB) for custody transfer
- Approved for use in explosion hazardous areas to FM, CSA and ATEX standards

## RADAR GAUGES FMR6X Series

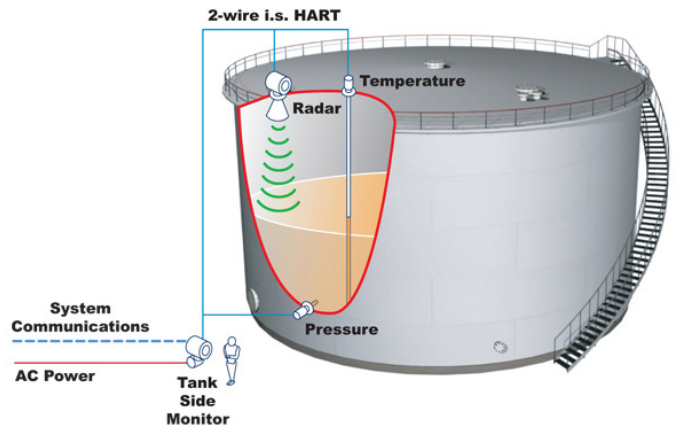


Radar technology is suitable for both non-contact high accuracy inventory management and custody transfer applications and offers an accuracy range of  $\pm 0.5\text{mm}$  (0.02in) to  $\pm 6\text{mm}$  (0.24in) depending on the model. These gauges use non-contact measurement; therefore, measurement is not affected by changing media, temperature changes, gas blankets, or vapors.

### Key Features (may vary by model):

- Free space radar system, operating based upon the frequency modulated continuous wave method
- High accuracy inventory management up to  $\pm 1\text{ mm}$  (0.04 in)
- 2-wire technology, reduces on tank wiring costs and allows easy implementation into existing systems
- Easy on-site operation using built-in display
- Suitable for pressures from -14.5 psi (-1 bar) up to 232 PSI (16 bar)
- Standard range up to 30 to 70m (98 to 230 ft)
- Suitable for process temperatures between  $-40^{\circ}$  to  $+200^{\circ}\text{C}$  ( $-40^{\circ}$  to  $+392^{\circ}\text{F}$ )
- HART protocols
- Approved for use in explosion hazardous areas to ATEX, FM, CSA, and IEC Ex standards

### 2-WIRE



## RADAR GAUGES FMR5X Series



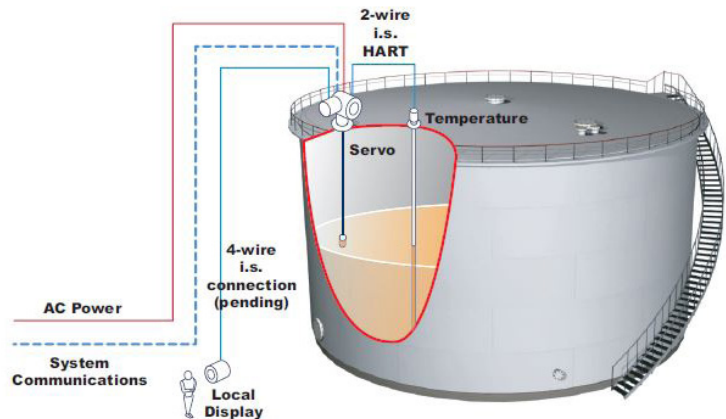
### Key Features (may vary by model):

- Suitable for inventory management applications
- 26 GHz band microwaves to measure liquids to an accuracy of  $\pm 2\text{ mm}$  (0.08") to  $\pm 6\text{ mm}$  (0.24")
- 2-wire technology reduces on tank wiring costs and allows easy implementation into existing systems
- Easy on-site operation using built-in touch control display without opening enclosure
- For applications in aggressive liquids, offers extraordinary advantages with its completely PTFE-filled and flush-mounted 2" and 3" (50 mm and 80 mm) horn antenna
- Standard range of 20 to 40m (66 to 131 ft)
- Suitable for process temperatures between  $-40^{\circ}$  to  $-196^{\circ}\text{C}$  ( $-40^{\circ}$  to  $-321^{\circ}\text{F}$ ) and  $130^{\circ}$  to  $450^{\circ}\text{C}$  ( $266^{\circ}$  to  $842^{\circ}\text{F}$ ) with high-temperature antenna.
- Suitable for pressures from -14.5 psi (-1 bar) up to 2320 PSI (160 bar)
- HART, PROFIBUS PA or FOUNDATION Fieldbus protocol
- Approved for use in explosion hazardous areas to ATEX, FM, CSA, TIIS, and IEC Ex standards
- SIL 2 approved for overspill protection system applications or SIL 3 for standalone applications

# SERVO TECHNOLOGY

Servo technology provides an intelligent system for measuring level, interface level, density and water bottom with an accuracy rate up to  $\pm 0.016\text{in}$  ( $\pm 0.4\text{mm}$ ).

## PROSERVO GAUGES NMS8X Series



### Key Features (may vary by model):

- Suitable for atmospheric and high pressure applications for level measurement and custody transfer
- Pressure applications from 6 to 25 bar (87 to 362 psi)
- Operating temperature  $-200$  to  $+200^{\circ}\text{C}$  ( $-328$  to  $392^{\circ}\text{F}$ )
- Ambient temperature  $-40$  to  $+60^{\circ}\text{C}$  ( $-40$  to  $+140^{\circ}\text{F}$ )
- Outputs maximum level value to the local display and system software and alerts operators
- V1, MODBUS RS-485, and HART protocols
- Wetted parts are completely separated from the electronic circuit
- FM, ATEX and IEC Ex, and NEPSI approval for use in hazardous areas
- NMI, OIML and PTB approved for custody transfer applications
- SIL2 certified for overfill prevention

# Varec<sup>®</sup>

5834 Peachtree Corners East, Peachtree Corners (Atlanta), GA 30092 USA  
Tel: +1 (770) 447-9202 | Toll Free: +1 (866) 698-2732 | Fax: +1 (770) 662-8939

[www.varec.com](http://www.varec.com)

© 2018 Varec, Inc., a Leidos company. All Rights Reserved. This document is for information purposes only.  
Varec, Inc. makes no warranties, express or implied, in this summary.  
The names of actual companies and products mentioned herein may be the trademarks of their respective owners.

PR0158GVAE4318