# **SERVO TECHNOLOGY**

Servo technology provides an intelligent system for measuring level, interface level, spot & profile density and water bottom with a high accuracy rate up to ±0.4mm (±0.16in). The NMS8x Proservo gauge is well-suited for custody transfer measurement.

## **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°C (-328 to 392°F)
- Ambient temperature -40 to  $+60^{\circ}$ C (-40 to  $+140^{\circ}$ F)
- Outputs maximum level value to the local display and system software and alerts operators
- Integration of temperature, water level, pressure, and overfill prevention sensor



- MODBUS RS-485, V1, WM550, 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



# ADVANCED **TANK GAUGING**

Explore Varec's range of Radar and Servo Technology Gauges for accurate and costeffective level, density, temperature and water measurement





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# **RADAR TECHNOLOGY**

# **RADAR GAUGES NMR8X Series**





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

- Accuracy rate of up to ±0.5mm (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  $+60^{\circ}$ C (-40 to  $+140^{\circ}$ F)
- · Integration of temperature, water level, pressure, and overfill prevention sensor
- Suitable for atmospheric and high pressure applications from 16 to 25 bar (232 to 362 psi)

- MODBUS RS-485, V1, 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

**4-WIRE** 

- National approvals (NMi, PTB) for custody transfer
- · Approved for use in explosion hazardous areas to ATEX, FM, CSA, TIIS and IECEx standards

### **RADAR GAUGES FMR6X Series**



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 ±1 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

### **RADAR GAUGE FMR532**



#### **Key Features:**

- Accuracy rate of up to 1.0mm (0.4 in)
- Inventory control version available with ±3 mm (0.11 in) accuracy
- · Model comes with planar antenna for stilling well applications
- Ambient temperature up to -40  $^{\circ}$ F and +185  $^{\circ}$ F  $(-40 \degree C and +85 \degree C)$
- Standard range up to 38 m (124 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 FMR5X Series**

#### EMR51

FMR54

100



- Suitable for inventory management applications
- (0.24'')
- 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° to -196° C (-40° to -321°F) and 130° to 450° C ( $266^{\circ}$  to  $842^{\circ}$  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

# **RADAR TECHNOLOGY**

- 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  $+200^{\circ}$  C  $(-40^{\circ} \text{ to } +392^{\circ}\text{F})$
- HART protocols
- Approved for use in explosion hazardous areas to ATEX, FM, CSA, and IEC Ex standards

- 26 GHz band microwaves to measure liquids to an accuracy of ± 2 mm (0.08") to ± 6 mm
- 2-wire technology reduces on tank wiring costs and allows easy implementation into