

## RadarRight™ Series 200 Non-Contact Radar Continuous Level Sensor for Liquids



### FEATURES & ADVANTAGES

- ▼ **Non-contact** level measurement solution...nothing to “touch” your process.
- ▼ **Real-time continuous output** provides immediate level measurements.
- ▼ **No moving parts** to wear which leads to long operational life and low maintenance.
- ▼ **Proven microwave “pulse” technology** for dependable measurements.
- ▼ **Easy set-up / configuration** with LCD push button display module (included).
- ▼ **Small beam angle** to concentrate energy for high accuracy and reliability with materials having a wide range of characteristics.
- ▼ **Small antenna sizes (diameters)** for easy mounting.
- ▼ **Minimal “dead band” (“blinking zone”)** for optimum measurement in vessel.
- ▼ **1-1/2” NPT thread, stainless steel process connection** allows for easy installation.
- ▼ **Advanced microprocessor** and unique echo processing technology provide for reliable operation under various process conditions.
- ▼ **Extremely low emission power** with “pulse” technology; is harmless towards the environment and human beings.

### PRINCIPLE OF OPERATION

The **RadarRight™** radar level instrument emits a microwave pulse from its antenna, which travels at the speed of light to the surface of the medium below. The time-of-flight of the pulse and its reflection back to the instrument location is directly related to the empty distance in the vessel and the material level. The output from the electronics is continuously updated as the level of the material surface changes. The **RadarRight** radar level instrument uses the proven 26GHz as the transmitting frequency.

### PRACTICAL APPLICATIONS

- ▼ Excellent when application requires that nothing contacts or interferes with the process.
- ▼ Strong performance for liquids in vessels up to 98.5 ft. (30m) tall.
- ▼ Suitable for various metal or nonmetal vessels.
- ▼ Provides measurements in storage tanks & process tanks under process conditions, such as, applications with low or non-corrosive media, light surface foam or agitation, condensation or vapor, etc.
- ▼ Can be used in a stilling well...ideal for foamy conditions.

### OPTIONS

- ▼ Output Options:
  - ▼ “Smart” RS-485 (Modbus RTU compatible)
  - ▼ Analog 4-20mA (two-wire, loop powered)
- ▼ Selection of antennas (horns):
  - ▼ 3 inch (78mm) diameter SS horn – for vessels up to 49.2 ft. (15m) tall
  - ▼ 4 inch (98mm) diameter SS horn – for vessels up to 98.5 ft. (30m) tall
- ▼ Variety of mounting flanges.
- ▼ HMI2 Local Operator Interface Control Console (For use with “Smart” RS-485 sensor only.)

For more detailed information, please contact a Monitor representative or visit Monitor’s website at <http://www.monitortech.com/radar-level-non-contact-200.shtml>



Scan this with a smartphone QR-Code app for more product details.





## SPECIFICATIONS

More product specifications can be found in #364A Installation Manual.

Application:	Liquids for Vessels up to 98.5 ft. (30m) High (with 4" Dia. Antenna)
Max. Measurement Range:	3" (78mm) Dia. Antenna: 49.2 ft (15m) 4" (98mm) Dia. Antenna: 98.5 ft (30m)
Measurement Accuracy:	±0.12in (±3mm)
Ambient Operating Temp.:	-40~150° F (-40~65° C)
Process Temperature:	-40~266° F (-40~130° C)
Process Pressure:	-14.5 to 150 psi (-1 to 10 bar)
Dead Band:	12" to 16" (305mm to 406mm) - Antenna Dependent
3dB Beam Angle:	3" (78mm) Dia. Antenna: 12° 4" (98mm) Dia. Antenna: 8°
Weight (Approx.)	
with 3" (78mm) Dia. Antenna	6.0 lbs [2.72kg] without flange
with 4" (98mm) Dia. Antenna	6.5 lbs [2.95kg] without flange
Frequency Range:	26GHz
Signal Output:	"Smart" RS-485 / Modbus RTU (2-wire); 4-20mA Analog (2-wire, loop powered)
Power:	24VDC (16~26VDC)
LCD:	Standard
Housing:	Die cast aluminum, ENCLOSURE TYPE 4X, IP66
Housing Finish:	Powder Coating
Process Connection:	1-1/2" NPT Thread
Flange Accessories:	K-Flange; 4" ANSI
Antenna(s):	3" (78mm) Dia. or 4" (98 mm) Dia. [Stainless Steel]
Approvals:	CE Mark; TÜV Rheinland US/C, Ordinary Loc.

## ORDERING INFORMATION

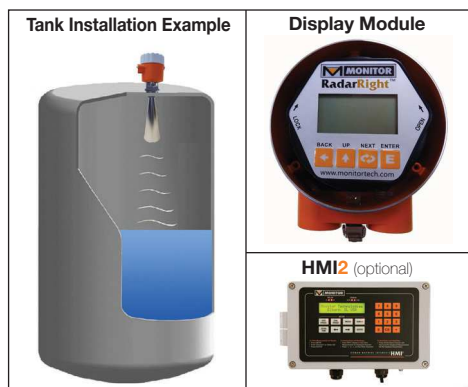
RadarRight™ Non-Contact Radar Level Measurement - Series 200						
Select	Application Series		Select	Output		Order Number
2	Series 200 (for Liquids) 1		1	"Smart" RS-485 (Modbus) 2		
			2	Analog 4-20mA (Two-wire, loop powered)		
				Antenna Type		
			3	Horn, SS, 3" (78mm) Diameter		
			4	Horn, SS, 4" (98mm) Diameter		
				Environment/Approvals		
			1	Ordinary Location - TÜV <sub>usa</sub>		
			3	Hazardous Location - ATEX (Pending)		
				Process Connection		
			1	1-1/2" NPT		

### Optional Flanges and Accessories:

Part #	Description	
16-3070	Flange, "K" Style, flat, Aluminum, 1-1/2 NPT	(suitable for 3" and 4" dia. antennas)
16-3072	Flange, "K" Style, 10 degree, Aluminum 1-1/2 NPT	(suitable for 3" and 4" dia. antennas)
16-3064	Flange, 4" ANSI, Powder Ct'd Steel, 1-1/2 NPT	(suitable for 3" and 4" dia. antennas)
16-3094	Flange, 4" ANSI, 316SS, 1-1/2 NPT	(suitable for 3" and 4" dia. antennas)
1-2400	Spanner Wrench, For Cover Removal / Tighten	
R0514-22001 3	Belden® 9322, Cable, Instrumentation, 2-Lead, Shielded 4	
R0514-18001 3	Cable, Instrumentation, 4-Lead, Shielded, 18 AWG 4	
17-8021	Power Supply, Universal AC to 24VDC 4	

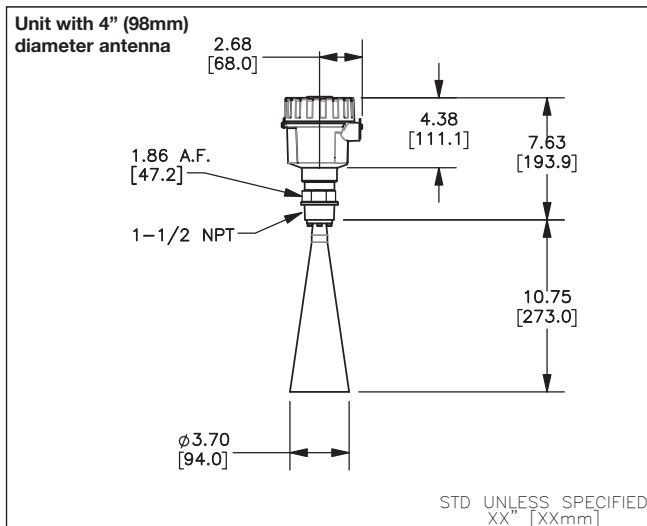
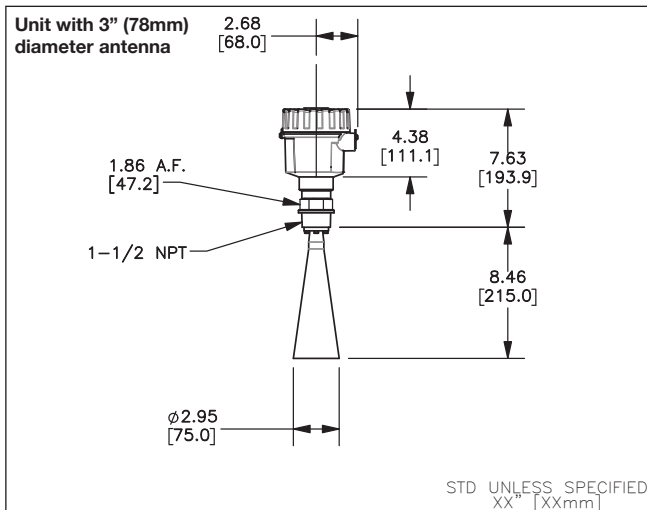
### NOTE:

- Consult Monitor Technologies factory for all applications prior to pricing and issuing quotation.
- Optional HMI2 Operator Interface is for use with "Smart" RS-485 version only.
- Cable is not for plenum installations. Consult local electrical codes and verify compliance before installing.
- Cable or power supply are not included. Must be ordered separately.



## MECHANICALS

DIMENSIONS ARE SHOWN IN INCHES WITH MILLIMETER EQUIVALENT IN BRACKETS UNLESS OTHERWISE STATED



Information on this sheet is subject to change without notice

## MONITOR TECHNOLOGIES, LLC

44W320 Keslinger Road ▼ Elburn, IL 60119 USA  
Tel: 1-630-365-9403 ▼ In US/CAN 1-800-766-6486  
Fax: 1-630-365-5646 ▼ [monitor@monitortech.com](mailto:monitor@monitortech.com)  
[www.monitortech.com](http://www.monitortech.com)  
Blog: [www.monitortech.typepad.com](http://www.monitortech.typepad.com)