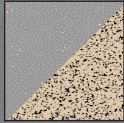




Expertise, Quality, Integrity... to **EMPOWER** you!

# RadarRight™ Series 480

## Non-Contact Radar Continuous Level Sensor for Powders & Bulk Solids



For Powders  
& Bulk Solids

80GHz



### FEATURES & ADVANTAGES

- ▼ **NON-CONTACT** level measurement solution...nothing to “touch” your process.
- ▼ **REAL-TIME CONTINUOUS OUTPUT** provides immediate level measurements.
- ▼ **INCLUDES LCD DISPLAY MODULE** for easy set-up / configuration.
- ▼ **4° BEAM ANGLE** to concentrate energy for **HIGH ACCURACY** and reliability with materials having a wide range of characteristics.
- ▼ **MINIMAL “DEAD BAND” (“BLANKING ZONE”)** for optimum measurement in vessel.
- ▼ **GIMBAL (SWIVEL) STYLE PROCESS CONNECTION** enables aiming antenna for added measurement accuracy and avoiding internal obstacles, flow streams, etc.
- ▼ **AIR PURGE** to optimize sensor performance in dusty 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.

### PRACTICAL APPLICATIONS

- ▼ Excellent when application requires that nothing contacts or interferes with the process.
- ▼ Strong performance with powders and bulk solids in vessels up to 200ft (60m) tall.
- ▼ Reliable measurements in dusty conditions.
- ▼ Suitable for various metal or nonmetal vessels.

### OPTIONS

- ▼ **Output Options:**
  - ▼ “Smart” RS-485 (Modbus RTU compatible)
  - ▼ Analog 4-20mA (two-wire, loop powered)
- ▼ Variety of mounting flanges.
- ▼ HMI<sup>2</sup> Local Operator Interface Control Console and SiloTrack™ Cloud (For use with “Smart” RS-485 sensor only.)



## SPECIFICATIONS

APPLICATION	BULK SOLIDS / POWDERS
MEASUREMENT RANGE	200 FT (60M)
MEASUREMENT ACCURACY	+/- 0.20IN (5.0MM)
AMBIENT OPERATING TEMPERATURE	-40F TO 266F (-40C TO 130C)
PROCESS TEMPERATURE	-40F TO 392F (-40C TO 200C)
PROCESS PRESSURE	-14.5 TO 43PSI (-0.1 TO 0.3MPA)
FREQUENCY	80 GHZ
BEAM ANGLE (3DB)	4 DEGREES
SIGNAL OUTPUT	RS-485 MODBUS OR 4-20MA
POWER	4-WIRE: 9-27 VDC; MAX 1.5W
	2-WIRE: 12-30 VDC; MAX 22.5MA
4-20MA LOOP IMPEDENCE	533OHMS AT 24VDC
DISPLAY/PROG LCD	INCLUDED
HOUSING	POWDER COATED ALUMINUM ALLOY
ANTENNA MATERIAL	316L AND PTFE
PROCESS CONNECTION	VARIOUS FLANGES
PROTECTION LEVEL	IP67/TYPE4X
APPROVALS/CONFORMITY	CSA ORDINARY LOCATIONS, CE
DEAD BAND	2.62FT (0.8M)

## ORDERING INFORMATION

RadarRight™ Non-Contact Radar Level Measurement - Series 480		
Select	Application Series	
5	Series 480 (for Powders & Bulk Solids) <sup>1</sup>	
Select	Output	
1	"Smart" RS-485 (Modbus) <sup>2</sup>	
2	Analog 4-20mA (two-wire loop powered)	
Select	Antenna Type	
1	Standard PTFE Lens	
Select	Environment/Approvals	
1	Ordinary Location - CSA cus	
Select	Process Connection	
2	Gimbal/Swivel (suitable flange required)	
Select	Display/Programming	
1	Removable Display, no BT	
25 - 8	5 x 1 - 1 2 1	Order Number

### MOUNTING FLANGES AND ACCESSORIES:

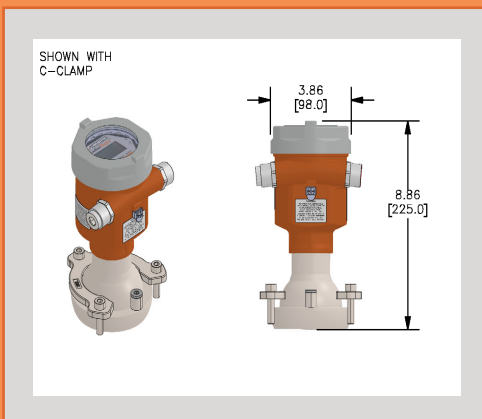
PART #	DESCRIPTION
25-3111	K-FLANGE (ALUMINUM)
25-3113	4" ANSI FLANGE (316L SS)
25-0071	FITTING ADAPTER, G 1/8" TO 1/8" NPT
R0514-22001 <sup>3</sup>	BELDEN 9322, CABLE INSTRUMENTATION, 2-LEAD, SHIELDED <sup>4</sup>
R0514-18001 <sup>3</sup>	CABLE, INSTRUMENTATION, 4-LEAD, SHIELDED, 18 AWG <sup>4</sup>
17-8021	POWER SUPPLY, UNIVERSAL AC TO 24VDC <sup>4</sup>

### NOTE:

- 1 Consult Monitor Technologies factory for all applications prior to pricing and issuing quotation.
- 2 Optional HMI<sup>2</sup> Operator Interface and SiloTrack™ Cloud - for use with "Smart" RS-485 version only.
- 3 Cable is not for plenum installations. Consult local electrical codes and verify compliance before installing.
- 4 Cable or power supply are not included. Must be ordered separately.

## MECHANICALS

DIMENSIONS ARE SHOWN IN INCHES WITH MILLIMETER EQUIVALENT IN BRACKETS



INFORMATION ON THIS SHEET IS SUBJECT TO CHANGE WITHOUT NOTICE

### Silo Installation Example



### Display Module



HMI<sup>2</sup>



### SiloTrack™ CLOUD

