



The F78MP Series air radar sensor provides non-contact, continuous level measurement for bulk materials in bins, tanks and silos. Accurate and reliable in difficult environments, the F78MP Series is an ideal level meter for powder and bulk solid inventory management. The F78MP Series air radar withstands corrosive environments and takes consistent measurements in steam, dust and other turbulent conditions.

## HOW IT WORKS

The F78MP Series air radar measures the level of material in a bin or silo by monitoring the time it takes for an emitted microwave pulse to travel from the level meter to the surface of the material being measured and back to the meter. This time is calculated into distance which is then translated into a level measurement.

## NEW MODELS!

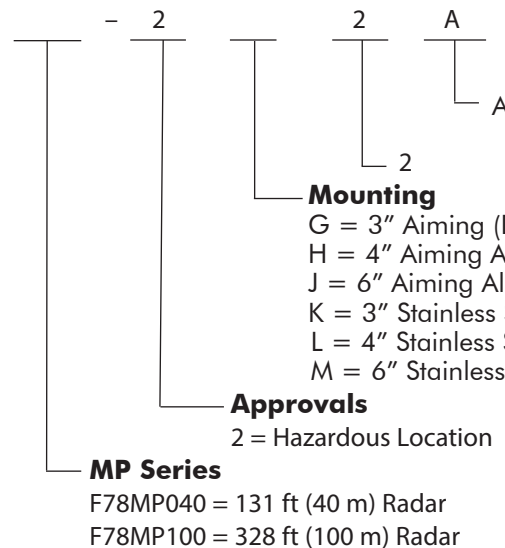
Bindicator radar now transmits at a 78 GHz frequency with a 4 degree beam angle. The higher frequency and narrow beam angle combine to create the most versatile radar unit on the market.

- **SIMPLE INSTALLATION** with a quick set-up procedure and various mounting options
- No moving parts and standard air purge for **MINIMAL MAINTENANCE**
- **ENDLESS APPLICATIONS** working in some of the most challenging environments like plastics and powders

## FEATURES AND BENEFITS

- Quick Start Wizard for easy configuration
- 78 GHz transmitting frequency with a narrow beam angle of 4°
- Standard, directional or aiming flange options to direct unit to optimal location
- 2-Wire 20 to 32 VDC Power Supply
- Measures up to 131 or 328 feet (40 or 100 m)
- Standard air purge connection

## HOW TO ORDER



### NOTES:

1. Standard flanges are not pressure rated; atmospheric pressure only.
2. 3 in. Directional flange is a split flange and has 5 degree rotation; 3 bar pressure rating.
3. 4 and 6 in. Aiming flange has 10 degree rotation; 3 bar pressure rating.

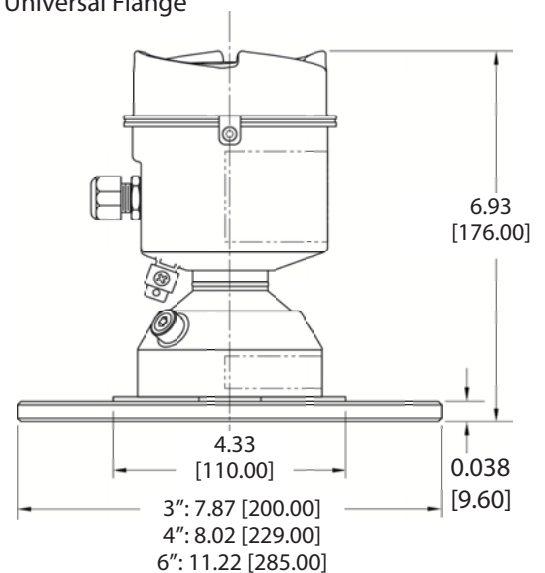
# F78MP Series Radar

## SPECIFICATIONS

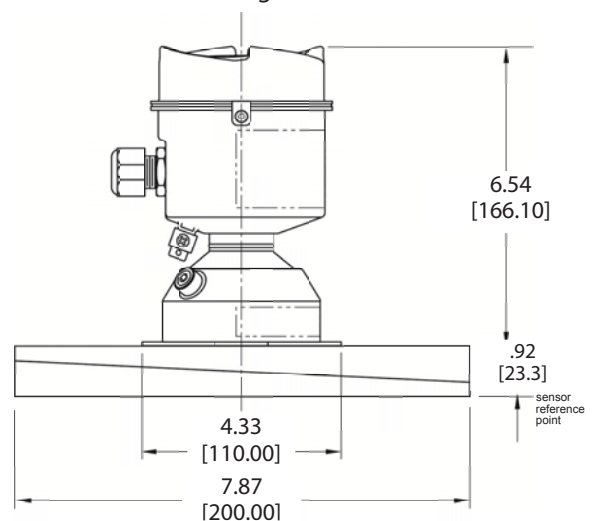
FUNCTIONAL	
Power Supply	Nominal 24 VDC with max 550 Ohm loop resistance; Maximum 30 VDC
Dead Zone	15.7 in. (400 mm) from reference point
Measurable Distance	131 ft (40 m) or 328 ft (100 m)
Transmitting frequency	78 to 79 GHz FMCW
Update Time	Maximum 10 seconds (depends on Settings)
Beam angle	4 degrees
PERFORMANCE	
Accuracy	0.2 in. (5mm) including hysteresis and non-repeatability
Ambient Temperature	-40 to 175 °F (-40 to 80 °C)
Ambient Pressure	12 to 15 psi ( 860 to 1060 mbar)
Process Temperature	-40 to 392 °F (-40 to 200 °C)
Output signal	4 to 20 mA, HART
HART Communication	
Load	230 to 550 Ohm; 230 to 500 Ohm when connecting a coupling module
Maximum Line Length	4,921 ft (1500 m) multi-wire
Humidity	45 to 75% relative humidity
Dielectric Constant	Minimum dk of 1.6 for ranges up to 65.6 ft (20 m) Minimum dk of 2.5 for ranges up to 328 ft (100 m)
PHYSICAL	
Material	Powder coated 316 Stainless Steel
Protection	Type 4X/NEMA 4X; Type 6/NEMA6, IP68
Conduit Entry	1/2" NPT
Mass	6.94 lb (3.15 kg) (with 3" SS flange)
Mounting	3, 4 or 6 in. flat flange or 3 in. Directional flange with 5° rotation or 4 or 6 in. Aiming flange with 10° rotation

## DIMENSIONS

Universal Flange



3 in. Directional Flange



4 and 6 in. Aiming Flange Dimensions available at [www.bindicator.com](http://www.bindicator.com)

## APPROVALS & RATINGS

FM and CSA (US and Canada)

Hazardous: Dust Ignition Proof: Class II, Div1, Groups E, F, G; Class III T4

Hazardous: Non-incendive: Class I, Div 2, Groups A, B, C, D, T4

CE

Electromagnetic Compatibility Directive

Low Voltage Directive



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**venture**  
MEASUREMENT

MPR180316 Rev. B

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