

## Non-Contact Radar with Superior Performance in Solids

The BinMaster NCR-80 is a non-contact radar level sensor designed specifically for superior performance in powders and bulk solids. Its advanced technology uses an 80 GHz frequency focused in a narrow 4° beam angle. This ensures reliable performance at measuring ranges up to 393 feet and accuracy within 0.2 inches. The NCR-80 is ideal for continuous level measurement in tall and narrow vessels where there is excessive noise or dust.

### Reliable level measurement. 80 GHz of power.

There are three versions of the NCR-80 including a metal-jacketed lens antenna, a plastic horn antenna, and a 1-1/2" NPT threaded model. There are countless configurations of the NCR-80 offering a diverse selection of approvals, mounting options, specialized seals, output options, and housings. BinMaster offers a wide variety mounting plates for 0°, 10°, 30° and 45° angled roofs as well as swiveling flanges and mounting straps that allow for aiming. The NCR-80 can be used with either the BinView® web application or BinInventory® LAN-based software as well as an assortment of digital panel meters and bar graph displays.

Swiveling Stainless Steel Flange



### NCR-80 for Bulk Solids

- Powerful 80 GHz non-contact radar
- Measuring distance up to 393 feet
- 4° beam angle for precise targeting
- Reliable accuracy within 0.2 inches
- High temperatures up to 392°F
- Hazardous location approvals
- BinDisc option simplifies setup and configuration



1-1/2" NPT  
Threaded



Lightweight Plastic  
Antenna with  
Mounting Strap



## Narrow 4° Beam Angle

The narrow 4° beam angle allows for precise aiming to avoid the flow stream, internal structure, or sidewall buildup. Narrow focusing also simplifies setup, as the signal will reflect only from the measured material being targeted. The NCR-80 is resistant to interference, while its advanced filters ensure rapid signal processing and a fast update rate. Its advanced firmware constantly tracks echoes and automatically eliminates false echoes for reliable performance.

## Sealed System is Maintenance Free

The antenna lens is encased in a sealed antenna system. This makes it resistant to dust buildup and virtually maintenance free. The NCR-80 has a flush face that does not protrude into the vessel which prevents potential damage to the sensor. The plastic lens is made of durable, PEEK plastic for ruggedness and long lasting performance. It is chemical resistant for tough applications and has FDA approval, making it suitable for food and pharmaceutical use.

The NCR-80 comes standard with an air purge connection, which is only necessary for extreme conditions with high dust that will cause dust buildup on the lens. It is designed for low air consumption to save on compressed air costs, ensuring fast and efficient cleaning for high dust applications.

*80 GHz focuses a narrow 4° beam that measures only material; a 10° beam from 26 GHz may detect internal structure, corrugation, or buildup.*

## Fast and Simple Setup with BinDisc

An optional BinDisc interface enables push-button sensor setup and configuration. The BinDisc is integrated into the sensor housing and is installed and visible under the housing cover for easy viewing. BinDisc simplifies setup and provides continuous, at-a-glance, operational status of the sensor. This handy interface aids in on-site system diagnosis. Data can also be sent to a PLC in a control system.



# NCR-80 Excels in Solids

## Grain Feed and Pet Food

- 4° beam angle is ideal for tall, narrow bins or bins with internal structure
- Segmented cement grain bins with multiple compartments
- Bins where the sensor must be mounted near the bin wall
- Targeted locations on grain piles or flat storage warehouses
- On large conveyors for distance measurement to detect overloading
- Rendering operations, measuring feather or bone meals

## Cement Silos

- Clinker silos with excessive noise and high temperatures
- Tall or narrow finished cement silos with excessive dust
- Adaptable to powders or bulk solids of raw and finished materials
- Over moving belts and conveyors to prevent overloading
- Inside rock crushers to monitor filling and emptying

## Plastic Pellets, Powders, or Flakes

- For narrow silos where precise level is desired
- In low dielectric materials or materials with limited reflectivity

## Sand and Aggregates

- For tall narrow silos with excessive dust or noise
- Mounted over piles or pits for level detection

## Wood Chips or Pellets

- Detecting level of materials with varying dielectrics and moisture levels
- Performs in high steam environments

## Power Plants

- Monitoring level in coal feeders to ensure continuous supply
- Mounted over piles or bunkers

## Food Processing

- Flour, sugar, and salt silos
- Dusty ingredients and malted grains



# NCR-80 Specifications



	Plastic Antenna	Stainless Steel Flange	1-1/2" NPT Threaded
<b>Frequency</b>	79 GHz	79 GHz	79 GHz
<b>Antenna Type</b>	3.15" (80 mm) plastic horn antenna	metal jacketed lens antenna	integrated horn antenna
<b>Measuring Range</b>	393 feet (120 m)	393 feet (120 m)	80 feet (24 m)
<b>Accuracy</b>	± 0.2 in. (5mm)	± 0.2 in. (5mm)	± 0.2 in. (5mm)
<b>Power Requirements</b>	Regular Voltage Version: 90 to 253, V AC, 50/60 Hz, Low Voltage Version: 9.6 to 48 V DC, 20 to 42 V AC, 50/60 Hz	Regular Voltage Version: 90 to 253, V AC, 50/60 Hz, Low Voltage Version: 9.6 to 48, V DC, 20 to 42 V AC, 50/60 Hz	Regular Voltage Version: 90 to 253, V AC, 50/60 Hz, Low Voltage, Version: 9.6 to 48 V DC, 20 to 42 V AC, 50/60 Hz
<b>Process Temperature</b>	-40°F to 176°F (-40° to 80°C)	-40°F to 392°F (-40° to 200°C)	-40°F to 392°F (-40° to 200°C)
<b>Process Pressure</b>	-14.5 to +29 PSI, -1 to +2 bar (-100 to +200 kPa)	-14.5 to +43 PSI, -1 to +3 bar (-100 to +300 kPa)	-1 to +20 bar (-100 to +2000 kPa)
<b>Mounting</b>	3", 4", or 8" swiveling flange with 8° adjustable aiming or mounting strap	4", 6", or 8" swiveling flange with 10° adjustable aiming	1-1/2" NPT process connection
<b>Housing Material</b>	Plastic	Aluminum	Aluminum
<b>Enclosure Rating</b>	IP66/IP68 (0.2 bar), IP66/IP67, IP66/IP68 (1 bar)	IP66/IP68 (0.2 bar), IP66/IP67, IP66/IP68 (1 bar)	IP66/IP68 (0.2 bar), IP66/IP67, IP66/IP68 (1 bar)
<b>Approvals</b>	CSA / FM Class I, II, III, Div 1, Groups A, B, C, D, E, F, G Other Approvals Available	CSA / FM Class I, II, III, Div 1, Groups A, B, C, D, E, F, G, Other Approvals Available	CSA / FM Class I, II, III, Div 1, Groups A, B, C, D, E, F, G Other Approvals Available
<b>Output</b>	Two-wire 4 - 20 mA/HART®, Four-wire 4 - 20 mA, Modbus RTU	Two-wire 4 - 20 mA/HART®, Four-wire 4 - 20 mA, Modbus RTU	Two-wire 4 - 20 mA/HART®, Four-wire 4 - 20 mA, Modbus RTU

NCR80-1018-PCG