

MIR-900 Series – Flexible Dual Rod

- Highly Repeatable
- Tefzel® Wave Guide Encapsulation
- Lengths to 12 Feet
- Ideal for Coating/Viscous Liquids

MIR-900 Series sensors handle tank depths to 12 feet, but more important for some will be the ability of this series to deliver dependable sensing in fluids that coat and build up on the sensor wave guide. The flexible dual rod is completely encapsulated with a low-dielectric bridge between the rods that facilitates accurate wave reflection, even when coated with media.

Two standard lengths are available, which may be trimmed to size to fit tanks 12 feet deep or less. A stainless steel weight, fitted at the guide's end, maintains guide rigidity. OEM versions are sized and calibrated at the factory and supplied with fitted Ryton® end weights. With zero deadband at the top, MIR-900 is capable of measuring tank contents right up to the bottom of its mounting.

Specifications

General

Model	MIR-900
Wave Guide Configuration	Flexible, Dual Rod
Technology	Micropower Impulse Radar
Operating Frequency	2.5 GHz

Mechanical

Enclosure Material	304SS
Enclosure Height	4.31" (109.5mm)
Probe Material	Tefzel® over-molded 304SS
Probe Dimensions	0.534" (13.6mm) width x 0.084" (2.13mm) thickness
Other Wetted Materials	Thermal plastic polyurethane, Viton®, 304SS, Silicone, Ryton®
Mountings	1" & 2" NPTs and BSPs
Indication Range	4" to 12" (102mm to 3.66m)

Electrical

Supply Voltage	8-36 VDC
Output	4-20mA (2-wire)
Approvals	UL & CSA Intrinsically Safe (Pending)
Zener Barriers for IS Approval	Gems p/n 112300 (Supply); Gems p/n 114166 (Return)
Termination	0.5" NPT conduit

Environmental

Temperature Range	0°F to 150°F (-17.8°C to +65.6°C)
Maximum Pressure	100 PSI @ 150°F (6.9 bar @ 65.6°C)
Dielectric Range	≥ 3.0
Enclosure Rating	Nema 4X (IP67)
Electromagnetic Compatibility	CE EN 50081-1 Emissions; CE EN 50082-1 Immunity

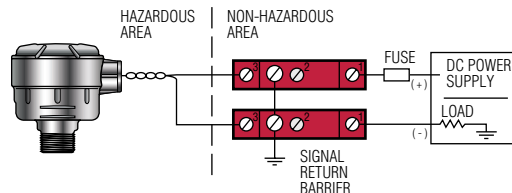
Performance

Resolution	0.01" (0.25mm)
Repeatability	0.01" (0.25mm)
Accuracy	1-2% full scale
Linearity	1-2% full scale
Response Time	2 seconds
Warm-up Time	15 seconds



Field Configurable:
Cut to Length 4" to 144"

Intrinsically Safe – Add intrinsic safety to the MIR Series with a Gems Zener Barrier.



Part Number
112300 Supply ⚡
114166 Return ⚡

The exceptionally compact, almost "wafer-thin"

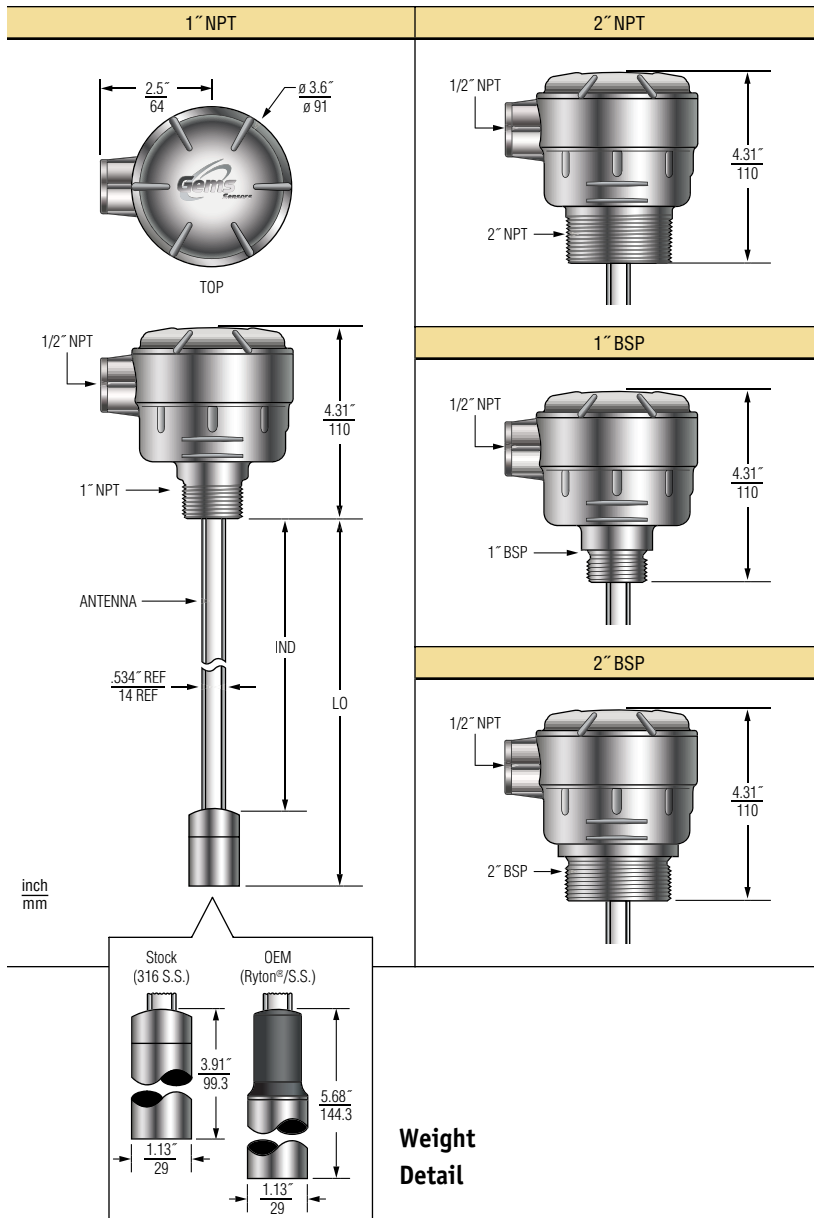


design of GEMS 65800 Series zener barriers saves space and simplifies installation. They limit D.C. voltage and current to the hazardous area and provide a path for fault current. Encapsulated construction is impervious to dust and moisture.

MIR-900 Series — Flexible Dual Rod, continued

Dimensions

Except for mounting sizes, all types share equivalent dimensions.



Weight Detail

MIR-900: Cut & Calibrate

Gems Sensors stocks standard sensors that you cut to length and calibrate. And to simplify the calibration, we've included a display and two pushbuttons.



1. Order sensors from stock – ships same day
2. Cut the rods to suit your tank
3. Install the weight to straighten and seal the antenna
4. Simple three step calibration; no need to fill and drain your tank
5. Install the sensor

And you're ready to go!

Why use the MIR-900 Series

1. **Use in deeper tanks**
MIR-900 measures fluids to 12 feet. (Use MIR-800 up to 6 feet)
2. **Roll Out Installation for Tight Spaces**
Tanks will often find their tops very close to ceilings. Flexible rods make installation a snap where tight headroom would render a long length sensor impractical. Use MIR-900 wherever space above the tank is at a premium.
3. **Zero Deadband**
Sense liquids right up to the bottom of the sensor head. With MIR-900 sensors there is no dead band at the high level point.
4. **Over-molded Rods for Coating, Crystallization, and product build-up**
Inks, paints, honey, syrups, and other coating fluids will not stop the MIR-900 from maintaining accurate level sensing.
5. **Roll Up for Easy Transport & Handling**
Moving a 12-foot long sensor has never been this easy. For shipping or just storing at the plant, the MIR-900 can't be beat. Save space and reduce shipping costs.

Radar for OEMs

- Food & Beverage
- Medical Equipment
- HVAC/R
- Pharmaceuticals
- Measure Contents of Any Vessel from 4 inches to 12 feet
- Fuel Cells
- Printing
- Specialty Chemicals
- Semicon Manufacturing

Gems has designed and priced Detector® sensors for practical and affordable application by Original Equipment Manufacturers. Specify either MIR-800 or MIR-900 and we will deliver your sensors sized and calibrated – ready to drop in and connect with minimal labor. We welcome your inquiries. Please contact a Gems specialist today to discover how radar can make **your** product smarter and better.

How to Order

Select by mounting size and wave guide length suitable for tank depth.

Mounting Size	Wave Guide Length (See 'Cut & Calibrate', left)	Configurable Length of Indication	Part Number
1" NPT	84"	4" to 84"	202530 ⚡
	144"	4" to 144"	202532 ⚡
2" NPT	84"	4" to 84"	202531 ⚡
	144"	4" to 144"	202533 ⚡
BSP Sizes	Contact a Gems Specialist — 800.378.1600		

⚡ = Stock item