

Endress+Hauser 

People for Process Automation

Micropilot FMR Frequency Modulated Continuous Wave (FMCW) Radar

Overview

The Micropilot FMR10B, FMR20B, and FMR30B are part of Endress+Hauser's refined family of 80 GHz free-space FMCW radar level sensors. Built for both liquid and solid applications, these sensors emphasize simplicity, robustness, and high performance across industries—particularly suited for water & wastewater, mining, minerals & metals, and general utility operations. What sets these models apart is their intuitive commissioning, remote accessibility, and on-demand diagnostics, all delivered through a phone app. The FMCW radar technology proves especially valuable in dusty, harsh environments where traditional ultrasonic sensors may fail due to interference from airborne particles, pressure fluctuations, or turbulent fluids. Whether you're dealing with open basins, silos, or pumping stations, these devices streamline measurement tasks while ensuring reliability in challenging conditions.

Features

Heartbeat Technology with Non-Intrusive Verification

- On-demand verification and diagnostics without process interruption or device removal
- Real-time build-up detection and foam detection capabilities
- Reduces maintenance downtime and documentation workload significantly

Ultra-Fast 3-Minute Commissioning with Guided Wizards

- Guided setup sequences enable complete commissioning in under three minutes
- Step-by-step wizards for configuration, maintenance, and troubleshooting
- Eliminates need for extensive training or specialized expertise

80 GHz Technology with 4° Narrow Beam Angle

- Extremely focused beam (vs. 21° for comparable 10 GHz sensors)
- Superior measurement reliability by avoiding tank internals, pipes, and baffles
- Reduced engineering effort during installation due to fewer obstruction concerns

"It's Me-Function" Device Identification

- Flashing LED/display identification during Bluetooth connection
- Eliminates confusion when working with multiple sensors in close proximity
- Unique feature for multi-sensor installations

Extended-Range Bluetooth with SmartBlue App Integration

- Long-distance Bluetooth connectivity beyond typical short-range limitations (up to 25m [82 ft])
- Comprehensive smartphone/tablet app for remote operation and diagnostics
- Real-time signal curve analysis and parameter adjustment

Color Touch Display (FMR30B)

- Intuitive on-site visual interface for configuration and diagnostics
- Comfortable local access without need for external devices
- Enhanced user experience for field technicians



FMR10B-1009/0















FMR30B-1400/0

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Model	Price	Sensing Range	Process Temperature	Process Pressure	Output	Operating Voltage	Mounting		IP Rating	Electrical Connection	Quick Start Guide Link	Manual Link	Drawing Link		
							Sensor Top	Sensor Bottom							
FMR10B-1009/0	\$750.00	32.8ft/10m	-40 to +60 °C	-14 to 43.5 psi	4–20 mA	12–30 VDC	1" MNPT	1-1/2in male NPT	IP68	1in male NPT with 32.8ft/10m cable	PDF	PDF	PDF		
FMR20B-12X0/0	\$1,102.00	65.6ft/20m		-14.5 to 14.5 psi	4–20 mA HART			UNI slip-on flange			PDF	PDF	PDF		
FMR20B-1A50/0	\$1,363.00	98.4ft/30m						UNI slip-on flange			PDF	PDF	PDF		
FMR30B-11U4/0	\$1,230.00	65.6ft/20m		-14 to 43.5 psi	N/A		1-1/2in male NPT	IP67	Screwless terminals, 1/2in female NPT	PDF	PDF	PDF			
FMR30B-1400/0	\$1,492.00	98.4ft/30m					-14.5 to 14.5 psi			UNI slip-on flange	PDF	PDF	PDF		

Micropilot FMR Frequency Modulated Continuous Wave (FMCW) Radar

Micropilot FMR FMCW Accessories				
Model	Description	Price	Product Image	Drawing Link
<u>52014146</u>	Endress+Hauser lock nut, polycarbonate, 1-1/2in female NPT. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR30B-11U4/0 level sensors.	\$42.00		<u>PDF</u>
<u>71091216</u>	Endress+Hauser flooding protection tube, polybutylene terephthalate (PBT)/ polycarbonate, 1-1/2in female NPT. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR30B-11U4/0 level sensors.	\$99.00		<u>PDF</u>
<u>71162777</u>	Endress+Hauser slip-on flange, polypropylene, 3in. For use with Endress+Hauser FMR20B-1A50/0 and FMR30B-1400/0 level sensors.	\$265.00		<u>PDF</u>
<u>71162778</u>	Endress+Hauser slip-on flange, polypropylene, 4in. For use with Endress+Hauser FMR20B-1A50/0 and FMR30B-1400/0 level sensors.	\$439.00		<u>PDF</u>
<u>71162780</u>	Endress+Hauser slip-on flange, polypropylene, 6in. For use with Endress+Hauser FMR20B-1A50/0 and FMR30B-1400/0 level sensors.	\$376.00		<u>PDF</u>
<u>71429910</u>	Endress+Hauser swivel top mounting bracket, 316 stainless steel. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR20B-1A50/0 level sensors.	\$145.00		<u>PDF</u>
<u>71662268</u>	Endress+Hauser sensor protective cover, polybutylene terephthalate (PBT)/ polycarbonate. For use with Endress+Hauser FMR30B-11U4/0 and FMR30B-1400/0 level sensors.	\$81.00		<u>PDF</u>
<u>71662270</u>	Endress+Hauser flooding protection tube, polybutylene terephthalate (PBT)/ polycarbonate, 3in female NPT. For use with Endress+Hauser FMR20B-1A50/0 and FMR30B-1400/0 level sensors.	\$119.00		<u>PDF</u>
<u>71662413</u>	Endress+Hauser sensor protective cover, polybutylene terephthalate (PBT)/ polycarbonate. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR20B-1A50/0 level sensors.	\$81.00		<u>PDF</u>
<u>71662419</u>	Endress+Hauser bottom mounting bracket, 316 stainless steel. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR30B-11U4/0 level sensors.	\$152.00		<u>PDF</u>
<u>71662421</u>	Endress+Hauser top mounting bracket, 316 stainless steel. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR20B-1A50/0 level sensors.	\$160.00		<u>PDF</u>
<u>71662423</u>	Endress+Hauser long bottom mounting bracket, 316 stainless steel. For use with Endress+Hauser FMR10B-1009/0, FMR20B-12X0/0 and FMR30B-11U4/0 level sensors.	\$177.00		<u>PDF</u>