

EOS RADAR LEVEL SENSOR GENERAL DESCRIPTION



The EOS Radar series offers high-performance, wireless IoT level measurement based on precise radar technology. It enables reliable measurements of liquids, bulk solids, and piece goods up to 10 meters—even under demanding conditions.

Thanks to its flat design, the sensor is ideal for use on IBC tanks. The optional integrated 1.5-inch thread ensures quick and easy installation without additional adapters.

In addition to level measurement, the EOS Radar Series offers integrated GPS positioning capabilities. Combined with high-performance antenna technology, this enables exceptionally stable and long-range wireless communication.

The rugged housing is IP69K-rated, making it ideally suited for harsh industrial and outdoor applications. For maximum flexibility, the sensor features an injection-molded SMA connector and, optionally, an M12 connector.

With support for mioty®, NB-IoT, LoRaWAN®, and LTE-CAT-M1, as well as flexibly configurable measurement and transmission intervals, the EOS Radar Series is the ideal solution for smart tank monitoring, industrial applications, and digital inventory management.

FEATURES

- Radar-based level measurement for liquids, bulk solids, and piece goods
- Measurement range up to 10 m; absolute accuracy: 10 mm; resolution: 1 mm
- Activity tracking and shock detection via integrated accelerometer
- Available with mioty®, LoRaWAN®, NB-IoT, and LTE-CAT-M1
- Localization options depending on communication version:
 - mioty®: GNSS with GPS, Galileo, GLONASS, BeiDou
 - LoRaWAN®: GNSS scan with GPS and BeiDou, Wi-Fi SSID scan
 - Cellular: GNSS with GPS, Galileo, GLONASS, BeiDou, and Cell Locate
- IP69K-rated enclosure for harsh industrial environments
- Operating temperature: –20 °C to +80 °C
- Replaceable batteries:
- EOS version: 3 × AA LiSOCl₂ cells
- EOS2C version: 2 × C LiMnO₂ cells
- Provisioning and configuration via BLE
- SMA versions available for external antenna connection
- Optional M12 connector versions available on request

APPLICATION EXAMPLES

- Level monitoring of IBC tanks, storage tanks, and mobile liquid containers
- Inventory monitoring for industrial liquids, chemicals, additives, and process media
- Fill-level monitoring of bulk solids in silos, containers, and storage units
- Monitoring of underground infrastructure such as shafts, technical chambers, underground tanks, and retention basins
- Remote level measurement in outdoor or hard-to-access installations without wired infrastructure
- Tank and container monitoring in logistics, supply chain, and distributed storage applications
- Refill management and stock-level control for decentralized industrial sites
- Harsh-environment monitoring in industrial areas exposed to moisture, dust, cleaning processes, or outdoor conditions
- Mobile tank and container applications where level data can be combined with GPS positioning

- Smart city and utility applications requiring autonomous, wireless level measurement in field infrastructure



VERSIONS

Item Code	Battery	Model	Available	Configuration
S-EOS-LOEU-R-F	3xAA	Flat	✓	BLE
S-EOS-MIOTY-R-F	3xAA	Flat	✓	BLE
S-EOS-NBM1-R-F	3xAA	Flat	✓	BLE
S-EOS-LOEU-R-F-SMA	3xAA	Flat	✓	BLE
S-EOS-MIOTY-R-F-SMA	3xAA	Flat	✓	BLE
S-EOS-NBM1-R-F-SMA	3xAA	Flat	✓	BLE
S-EOS-LOEU-R-F-SMA-M12	3xAA	Flat	X	BLE
S-EOS-MIOTY-R-F-SMA-M12	3xAA	Flat	X	BLE
S-EOS-NBM1-R-F-SMA-M12	3xAA	Flat	X	BLE
S-EOS-LOEU-R-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-MIOTY-R-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-NBM1-R-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-LOEU-R-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-MIOTY-R-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-NBM1-R-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-LOEU-R-T-SMA-M12	3xAA	1.5-inch thread	X	BLE
S-EOS-MIOTY-R-T-SMA-M12	3xAA	1.5-inch thread	X	BLE
S-EOS-NBM1-R-T-SMA-M12	3xAA	1.5-inch thread	X	BLE

X: Upon request

Item Code	Battery	Model	Available	Configuration
S-EOS2C-LOEU-R-F	2xC	Flat	X	BLE
S-EOS2C-MIOTY-R-F	2xC	Flat	X	BLE
S-EOS2C-NBM1-R-F	2xC	Flat	X	BLE
S-EOS2C-LOEU-R-F-SMA	2xC	Flat	X	BLE
S-EOS2C-MIOTY-R-F-SMA	2xC	Flat	X	BLE
S-EOS2C-NBM1-R-F-SMA	2xC	Flat	X	BLE
S-EOS2C-LOEU-R-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-MIOTY-R-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-NBM1-R-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-LOEU-R-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-R-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-R-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-LOEU-R-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-R-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-R-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-LOEU-R-T-SMA-M12	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-R-T-SMA-M12	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-R-T-SMA-M12	2xC	1.5-inch thread	X	BLE

X: Upon request