

EOS420 LEVEL SENSOR GENERAL DESCRIPTION



The EOS420 series delivers high-performance, wireless IoT level measurement based on external 4–20 mA sensors, such as hydrostatic level probes. It enables reliable measurements of liquids—even under demanding conditions—and is ideal for continuous level monitoring in tanks, containers, and shafts.

The robust M12 connector allows for the simple and secure integration of a wide variety of industrial 4–20 mA sensors.

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

In addition to level measurement, the EOS420 series offers integrated GPS-based location tracking. 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 environments. For maximum flexibility, the device features an injection-molded SMA connector as well as an M12 connector for connecting external sensors.

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

Features

- Wireless IoT level monitoring via external 4-20 mA sensors
- Compatible with hydrostatic level probes and industrial 4-20 mA sensors
- Continuous liquid level monitoring in tanks, containers, and shafts
- Activity tracking and shock detection via integrated accelerometer
- M12 connector for secure external sensor integration
- 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
- Integrated accelerometer for shock detection and activity tracking
- Flat design or 1.5-inch thread version available

Application Examples

- Continuous level monitoring in tanks, containers, and shafts using external 4-20 mA sensors
- Liquid level measurement with hydrostatic probes in industrial and municipal applications
- Monitoring of underground infrastructure such as shafts, chambers, retention basins, and underground tanks
- Water and wastewater level monitoring in utilities, treatment plants, and remote field installations
- Smart tank monitoring for industrial liquids, process media, chemicals, and additives
- Retrofit of existing 4-20 mA level probes into wireless IoT infrastructures

- Remote monitoring of distributed storage tanks and decentralized industrial sites
- Refill, stock-level, and inventory monitoring for liquid media
- Outdoor and harsh-environment monitoring where wired communication is not available
- Mobile tank and container monitoring with GNSS-based localization

VERSIONS

Item Code	Battery	Model	Available	Configuration
S-EOS-LOEU-420-F	3xAA	Flat	✓	BLE
S-EOS-MIOTY-420-F	3xAA	Flat	✓	BLE
S-EOS-NBM1-420-F	3xAA	Flat	✓	BLE
S-EOS-LOEU-420-F-SMA	3xAA	Flat	✓	BLE
S-EOS-MIOTY-420-F-SMA	3xAA	Flat	✓	BLE
S-EOS-NBM1-420-F-SMA	3xAA	Flat	✓	BLE
S-EOS-LOEU-420-F-SMA-M12	3xAA	Flat	✗	BLE
S-EOS-MIOTY-420-F-SMA-M12	3xAA	Flat	✗	BLE
S-EOS-NBM1-420-F-SMA-M12	3xAA	Flat	✗	BLE
S-EOS-LOEU-420-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-MIOTY-420-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-NBM1-420-T	3xAA	1.5-inch thread	✓	BLE
S-EOS-LOEU-420-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-MIOTY-420-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-NBM1-420-T-SMA	3xAA	1.5-inch thread	✓	BLE
S-EOS-LOEU-420-T-SMA-M12	3xAA	1.5-inch thread	✗	BLE
S-EOS-MIOTY-420-T-SMA-M12	3xAA	1.5-inch thread	✗	BLE
S-EOS-NBM1-420-T-SMA-M12	3xAA	1.5-inch thread	✗	BLE

X: Upon request

Item Code	Battery	Model	Available	Configuration
S-EOS2C-LOEU-420-F	2xC	Flat	X	BLE
S-EOS2C-MIOTY-420-F	2xC	Flat	X	BLE
S-EOS2C-NBM1-420-F	2xC	Flat	X	BLE
S-EOS2C-LOEU-420-F-SMA	2xC	Flat	X	BLE
S-EOS2C-MIOTY-420-F-SMA	2xC	Flat	X	BLE
S-EOS2C-NBM1-420-F-SMA	2xC	Flat	X	BLE
S-EOS2C-LOEU-420-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-MIOTY-420-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-NBM1-420-F-SMA-M12	2xC	Flat	X	BLE
S-EOS2C-LOEU-420-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-420-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-420-T	2xC	1.5-inch thread	X	BLE
S-EOS2C-LOEU-420-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-420-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-420-T-SMA	2xC	1.5-inch thread	X	BLE
S-EOS2C-LOEU-420-T-SMA-M12	2xC	1.5-inch thread	X	BLE
S-EOS2C-MIOTY-420-T-SMA-M12	2xC	1.5-inch thread	X	BLE
S-EOS2C-NBM1-420-T-SMA-M12	2xC	1.5-inch thread	X	BLE

X: Upon request

