



NB IoT – Cat-M1 IP68 Rated Corrosion Resistant Low Power Radar Distance and Level Sensor

- Compatible with most standard communication Protocols (UDP, LwM2M, MQTT, NIDD, etc.)
- Wide range of industrial applications
- High accuracy and repeatability
- Designed to meet outdoor and underground applications
- Long-term durable performance in harsh environment
- Ultra-low power
- Suitable for liquid and solid media



TECHNICAL SPECIFICATION

Sensor

• Range:	8	30	m
• Accuracy (combined linearity, hysteresis, repeatability)	±5	±2	mm
• Resolution:	Sub mm	Sub mm	
• Sensor Minimum Distance:	0 ~ 20	0 ~ 20	cm
• Process Pressure:	-1 to 3	-1 to 3	bar
• Frequency:	80	80	GHz
• Beam angle:	8	4	°
• Compensated Temperature:	-20 ~ +60	-20 ... +80	°C

Power

• Power Supply:	Built-in Replaceable Lithium Battery, External Power (option)		
• Rated Voltage	3.6		V
• Battery Lifetime:	50,000+ readings and 10,000+ transmission (With UDP protocol/ More than 10 years for most applications)		

Physical Specification

• Materials:	Enclosure: POM, Sensor Head: PVDF, PA6 and Fiberglass		
• Weight:	~700		g
• Protection Rate:	IP68, UV protected		

Communication

• SIM Card Type	4FF Nano-SIM, from any Network Provider		
• Firmware Update:	Over The Air, Locally via Wireless Connectivity		
• Sampling Period:	Configurable via downlink (default 4 hours)		
• Power Consumption:	Power Saving: < 5uA, Transmission: < 220mA		

• Communication Standards	Cat-NB1 (NB-IoT) Cat-M1 (option of back support by GPRS)
• Communication Bands	B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B26/B28 and B39
• Data Rates:	Cat-M1: 375Kbps (DL)/375Kbps (UL) NB-IoT: 32Kbps (DL)/70Kbps (UL)
• TX Power:	23dBm
• Min Receiver Sensitivity:	Cat-M1: -107dBm NB-IoT: -113dBm
• Antenna:	Internal (Default)/ External (optional) (customised options available)
• Optional Features:	<ul style="list-style-type: none"> • Attach without PDN (Packet Data Network) • Support for IPV6 • SMS communication • Mobility support (Cat-M1 only)

NETWORK CONNECTION AND VISUALISATION

Network Integration

Pre-configured or configurable to all main narrow band networks (3, A1, AT&T, China Mobile, DU, Etisalat, KPN, M1 Singapore, Optus, Orange, Proximus, Spark, Sprint, Swisscom, Telefonica, Telstra, T-Mobile, Verizon, Vodafone, 1NCE, Emnify and any other network)

Visualisation and Data Management

Ellenex white label microservice platform and Integratable to all main IIoT platforms directly or through the API(AWS, Azure, PTC ThingWorx, Bosch IoT, Cisco Jasper & Kinetic, Sierra Numerex, MathWorks ThingSpeak, GE Digital Predix, LandisGyr, Siemens MindSphere, Cumulocity, myDevices, Ubidots, TagoIO, AllThingsTalk Maker, HPE IoT and any other major IoT platform).

Ellenex Platform Main Features

- Encrypted ultra-low power communication protocol
- Advanced device inventory
- Integration APIs for enterprise systems
- Multi-tenant role-based access control
- Data export and import
- White-label platform for enterprise runs on private account
- Variable alarm setting for high and low thresholds and multi-channel alerting
- Sampling and transmission interval configuration
- Transmission condition configuration
- Other configurations and customisation available on request



Encrypted & ultra-low power



Integratable



Dynamic alerting



Multi-tenant


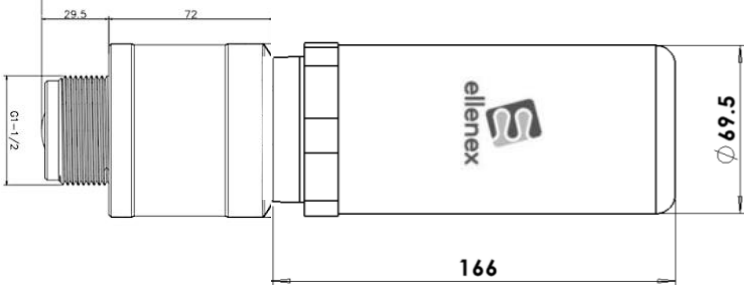


Scalable



Composable & API first

MODEL GUIDE

Model	Options:
<p>C Model:</p> 	 <p>Cylindrical compact, POM enclosure</p>

INDUSTRIES



Water & Environment



Agriculture & Farming



Oil & Gas



Marine & Oceanography



Mining & Construction



Smart Building & HVAC

APPLICATIONS

- Flood alarming
- Corrosive Liquid Storage
- Manhole and underground water way
- Wastewater Tank

ORDERING CODE

DRC3-N					
Communication Type					
B: NB-IoT			C: Cat-M1		
Measurement Range					
8 meters			30m		
Device Activation					
X: No switch <small>(always on)</small>			Others on request		
Antenna					
I: Internal			E: on request		
Options (On request)					
DRC3-N	B	8m	X	I	

Sample Product Code:

- **DRC3-N-B-8m-X-I**

NB-IoT radar distance sensor, range of 8m, with cylindrical housing (compact and IP68 rated), always on and with internal antenna.