

IZAR RC IOT LRW WMB

RADIO MODULE

DIEHL
Metering



APPLICATION

The IZAR RC IoT LRW WMB radio module integrates LoRaWAN® technology for fixed network and wireless M-Bus for mobile reading. IZAR RC IoT can be easily clipped onto all modular Diehl Metering meters in the inductive range (Ha+Ti or Ti) equipped with a grey or red ring. IZAR RC IoT has a built-in inductive sensor that makes it insensitive to magnetic fraud. Furthermore, it can be used with a pulse-emitting meter when combined with our IZAR BE PULSE interface. IZAR RC IoT is integrated into IZAR LoRaWAN® solution with software and accessories.

FEATURES

- ▶ Compact radio module for mechanical water meter
- ▶ Designed for LoRaWAN® fixed network
- ▶ Wireless M-Bus fallback for mobile reading in parallel with the fixed network
- ▶ Ecodesigned
- ▶ Available in 868 MHz
- ▶ Main functions : Current index, Hourly consumptions, Minimum and maximum flow rate values, Backflow volume, Midnight Index
- ▶ Main alarms : Overflow, Fraud, Backflow, Blocked meter, Persistent flow, Oversized meter, Undersized meter, Low Battery
- ▶ NFC as local Interface
- ▶ Index granularity (monthly, daily, hourly, quarterly)
- ▶ Data logger
- ▶ Insensitive to magnetic fraud
- ▶ Battery lifetime up to 15 years

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► IP 68

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OPERATING PRINCIPLE

IZAR RC IoT LRW wMB includes an electronic circuit that collects the data coming from a Diehl Metering modular water meter. It transmits in real time the index and other operating information in fixed network and mobile reading.

► Fixed network:

IZAR RC IoT LRW wMB operates in LoRaWAN® fixed network. The radio module complies with the LoRaWAN® Specification 1.0.4 in Class A, it supports Adaptive Data Rate (ADR), Over The Air (OTA) activation as well as dynamic NB-Trans and SpreadFactor mechanisms. The radio module data are sent via a proprietary protocol over LoRaWAN® with meter data redundancy. A profile allows the radio module to send the current index and alarms according to the TR06 OMS Over LoRaWAN®.

► Mobile reading:

IZAR RC IoT LRW wMB sends wireless M-Bus OMS Gen4 frames for mobile reading. The radio module data are sent via OMS Gen 4 over wM-Bus C-Mode. The radio module can be configured locally via C2 mode. Logged indexes can be retrieved on-demand.

TECHNICAL DATA

IZAR RC IoT LRW WMB	
Communication Protocol for Fixed Network	OMS over LoRaWAN® (TR06) for Index and Alarms. Proprietary protocol for extended data over LoRaWAN®
Sending interval in Fixed Network	Last 16 hourly consumptions sent every 8 hours - Last nightline consumption sent every 12 hours - Alarm frame sent on event with 3 repetitions
Communication Protocol for Mobile Reading	OMS Gen 4 wireless M-Bus C-Mode
Sending interval in Mobile Reading	Current index and alarms sent every 60s (walk-by), accelerated to 15s allowing passive drive-by and drive-by. Index log on-demand.
Frequency	863 ... 870 MHz
Encryption	Individual keys for NFC, wM-Bus and LoRaWAN®
Transmission power	Up to 16mW (12 dBm) EIRP
Radio range	Up to 500 m (Mobile Reading) and several km (Fixed Network) depending on network coverage
Standards	RoHS 2011/65/EU RED 2014/53/EU EN 13757-3/-4
Certification	LoRaWAN® 1.0.4
Power supply	2 Lithium batteries 3 V
Battery lifetime	Up to 15 years*

*Standard conditions of use and temperature. Theoretical life, with no guarantee.

AMBIENT CONDITIONS

IZAR RC IoT LRW WMB	
Ambiant operating temperature	°C -10 ... +55
Storage temperature	°C -20 ... +65
Ambient humidity	% 0 ... 100
Degree of protection	IP 68

CONFIGURATION

IZAR RC IoT LRW WMB	
Local interface	NFC and wireless M-Bus
Software	IZAR@Mobile for local reading and configuration. IZAR PLUS PORTAL for remote reading and configuration.

COMPATIBILITY

IZAR RC IoT LRW WMB	
Meters	Diehl Metering Ha+Ti or Ti inductive modular range. Pulse weight DN15 to DN40 (1 liter) Pulse weight DN50 to DN125 (10 liters) Pulse weight DN150 to DN300 (100 liters)

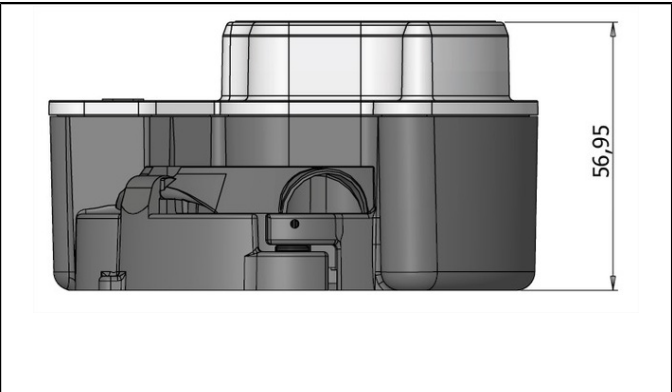
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ACCESSORIES

- IZAR BE PULSE (interface for external radio module)
- IZAR PULSE i + IZAR BE PULSE KIT (pulse emitter + interface for external radio module)

DIMENSIONS



IZAR RC IoT LRW WMB		
Diameter	mm	106.1
Total Height	mm	56.95
Height over meter	mm	52.65
Total mass	g	161
EEE mass (2012/19/UE)	g	60.9
Battery & accumulator mass (2006/66/CE)	g	45.8
ILithium mass	g	1.6