

# HRL-C-G3

## RADIO MODULE

**DIEHL**  
Metering



### APPLICATION

The HRLc G3 radio module integrates LoRaWAN® technology for remote reading solutions and a mobile reading vendor-specific radio protocol. HRLc G3 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. HRLc G3 has a built-in inductive sensor that makes it insensitive to magnetic fraud. Thanks to complementary transmission protocols, this smart device is compatible with walk-by reading solutions. Furthermore, it can be used with any pulse-emitting meter when combined with our IZAR BE PULSE interface.

### FEATURES

- ▶ Compact radio transmitter for mechanical water meter
- ▶ Designed for LoRaWAN® fixed networks (operated or private)
- ▶ Available in 868 MHz
- ▶ Main Functions: Midnight index, Hourly consumption, Return flow volume, Minimum and maximum flow values
- ▶ Main Alarms: Fraud, Battery, Blocked meter, Temperature, Backflow, Overflow, Leak
- ▶ Insensitive to magnetic fraud
- ▶ Battery lifetime up to 15 years
- ▶ IP 68

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### OPERATING PRINCIPLE

HRLc G3 includes an electronic circuit that collects the data coming from a Diehl Metering water meter and transmits all the meter information every 12 hours in LoRaWAN® fixed network mode or on demand in mobile reading mode according to a defined listening time slot.

LoRaWAN® fixed network:

Data are collected through the operated network to which the customer has subscribed or through a private network specifically deployed by the customer. Depending on the needs of each customer, it is possible to access the data either via the IZAR@NET 2 software or directly via the network operator interface (usually REST or MQTT API interfaces).

Walk-by reading:

The information available in the HRLc G3 is collected in bidirectional mode using a portable terminal equipped with a battery-powered radio receiver. The data is then uploaded directly to the centralized computer system.

### TECHNICAL DATA

HRL-c-G3	
Fixed Network Radio Protocol	LoRaWAN® Class A
Walk-by Radio Protocol	Vendor specific
Frequency	863 ... 868 MHz
Encryption	Individual key - AES-128/CTR
Transmission power	25 mW (14 dBm)
Transmission mode	Bi-directional
Radio range	Up to 500 m (walk-by) and several km (LoRaWAN®) depending on network coverage
Standards	EN 300220   RED 2014/53/EU   RoHS 2011/65/EU   EN 60950   EN 62311:2008   EN 62479:2010   EN 301489   EN 50581:2012
Certification	LoRa Alliance®, Inc - According specification v1.0.1
Power supply	Lithium battery 3.6 V - Li/SOCI2
Battery lifetime	Up to 15 years*

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

### AMBIENT CONDITIONS

HRL-c-G3	
Ambient operating temperature	°C -10 ... +55
Storage temperature	°C -20 ... +65
Ambient humidity	% 0 ... 100
Degree of protection	IP 68

### CONFIGURATION

HRL-c-G3	
Local interface	Bi-directional radio
Functions	Midnight index   Hourly consumption   Backflow volume   Minimum and maximum flow values
Alarms management	Fraud   Low battery   Meter stopped   Temperature   Backflow   Overflow   Leak

### COMPATIBILITY

HRL-c-G3	
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)

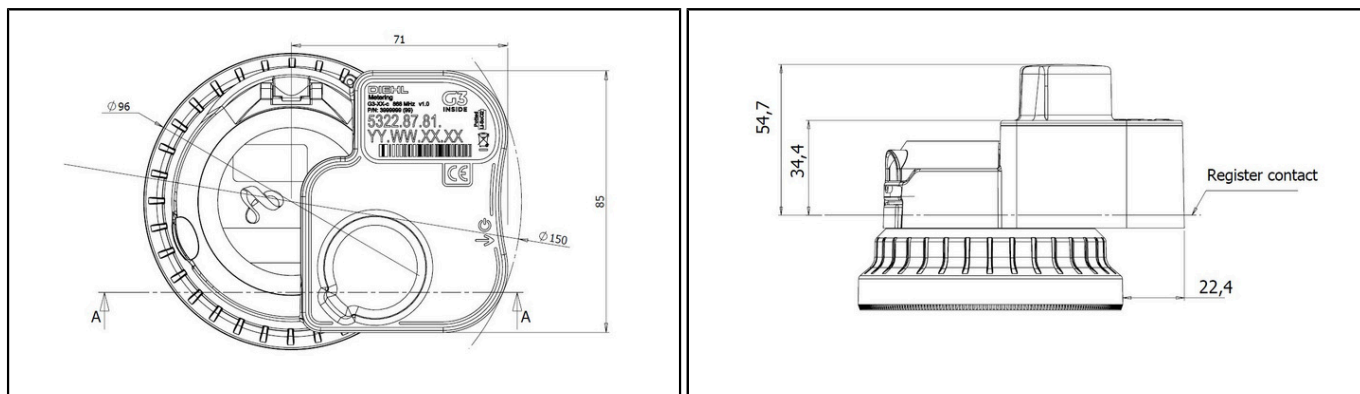
### ACCESSORIES

- IZAR BE PULSE (interface for external radio module)
- IZAR PULSE i + IZAR BE PULSE KIT (pulse emitter + interface for external radio module)
- G3 LORA CONFIGURATION KIT (including Bluetooth® receiver, magnet, smartphone & configuration app.)

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### DIMENSIONS



HRL-c-G3		
Length	mm	110
Height	mm	59
Width	mm	85
Total mass	g	214.2
EEE mass (2012/19/UE)	g	188.2
Battery & accumulator mass (2006/66/CE)	g	26
Lithium mass	g	0.9