aquaradio® MultiCom

External multi-protocol radio module system

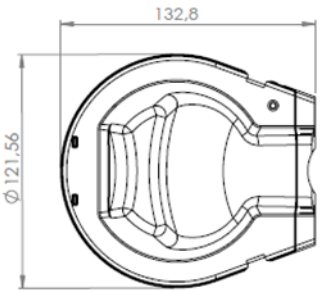
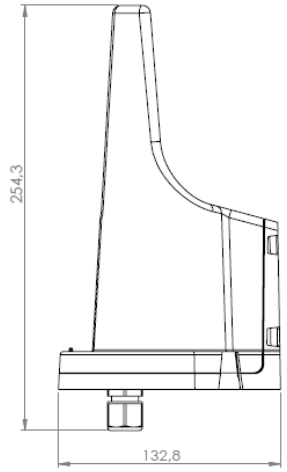
Technical data sheet

FEATURES

- Multi-protocol communication and selectable: wM-Bus 868MHz, LoRaWAN®
- Configurable input interface: Pulses or wired M-Bus
- Robust housing with IP68
- Battery Powered, lifetime up to 16 years
- Replaceable battery
- Easy data reading, 6 configuration by BLE/NFC with ParamApp® Android application

BENEFITS

- Perfectly suitable for Automatic reading, Smart metering, Smart building and Internet of Things “IoT” applications
- Dedicated for water, thermal energy and any kind of meters
- Universal multi-protocol external module
- Suitable for harsh environments
- Retro-fit installation to extend radio system
- Make all your existing meters smart
- System integration component for easy solution

Specifications	
Dimensions	  H x L x l : 254 x 133 x 122 mm
Weight	580g with one battery
Operation temperature	-20°C to 55°C
Storage temperature	-20°C to 70°C
Waterproof class	IP 68
Humidity	Max. 95%
Terminal	Signal connection: max 1.5 mm2 (AWG15) Screw terminals
Mounting	On a wall, on a mast (diameter 40mm min) and on our RUBIN SONIC with optional accessory
Cable inlets	2...7mm cable diameters
Input mode	Input mode configurable Pulses Inputs (2,3 or 4 wires) or wired M-Bus interface
Radio transmission protocols	WM-Bus 868MHz (OMS 4.0) or LoRAWAN® 868EU Fully configurable on site
Power Supply	
Battery	1 or 2x 3.6 VDC replaceable Li-SoCl2 battery – 19Ah One battery included
Typical Life Time	Up to 16 Years (depending on environment and settings conditions)
Pulse input interface	
Configuration Mode	Fully configurable 2 wires (Pulses + GND) 3 wires (Pulses + GND + DIR) or 4 wires (Pulse + GND + DIR + Tamper)
Pulses Weight	Fully configurable: Water/Gaz meters : 0,1l – 1l – 10l – 100l – 1m3 – 10m3 – 100m3 – 1000m3 Thermal Energy meters : 1Wh – 10Wh – 100Wh – 1kWh – 10kWh – 100kWh – 1000kWh
Min. pulse duration (closed contact)	2ms
Min. pause between pulses (open contact)	20ms
Max. pulse frequency	50Hz
Max. pulse frequency with 50% duty cycle	25Hz
Contact voltage	3.6V
Contact current	9µA
Pull-up resistance	400kΩ
Readout interval	Permanent

M-Bus Input interface	
M-Bus interface	M-Bus interface According to EN 13757-2/-3
Addresses	Primary address: 0 Standard secondary address: 99999999
Baudrate	300, 2'400, 9'600 Baud
Readout interval	Data is read up to 15min (default)
Communication wM-Bus	
wM-Bus interface	According to EN 13757-4 / OMS V4.x.x (OMS 3.0 compliant)
Frequency band	868.95 MHz (T1 unidirectional Mode)
Addresses	OMS address including serial number of the device (8 digits)
Transmission interval	16 seconds by default (configurable for drive-by or walk-by)
Readout interval	Permanent
Emitted Power	25 mW / (14 dBm)
Radio Range	Up to 2 km (depending on the environment conditions)
Encryption mode	Mode 5 (AES 128 bits)
Telegram content by default	Main volume Reverse volume Date/time Historic value (default monthly) Historic date Events/alarms Remaining battery lifetime
Communication LoRa Wireless	
LoRaWAN® interface	According to LoRaWAN®
Frequency band	868 MHz
Addresses	LoRa address (16 digits)
Connection mode	Over-The-Air Activation OTAA Activation by Personalization ABP
Transmission interval	Default Twice a day (6.00 and 18.00 UTC) Configurable up to 15min interval Value below possible with impact on battery life-time
Readout interval	Permanent
Emitted Power	25 mW (14 dBm)
Radio Range	Up to 15 km (depending on the environment conditions)
Telegram content by default	Current meter reading Returned water volume Meter number Date/Time Status info Battery life
Programming interface	NFC & BLE (Bluetooth Low Energy) NFC 13,56 MHz – BLE 2,4 GHz
Smart Phone Commissioning	
Operating system	Android >6.0; available on Google Play Store
Application	ParamApp®
Features	Commissioning and readout via NFC and Bluetooth interface for better usability Datalogger exportation for Analysis and Diagnostics