G2 misuratori

THE VALUE OF METERING

Made in ITALY

SMART METERS

- Direct-reading smart meters with radio data transmission:

  -water meter with radio module Mod. **DUF-R-WMB** protocol **W-Mbus OMS for Walk-by/Drive-by**
  -water meter with radio module Mod. **DUF-R-W+L** protocol **LoRaWAN for fixed network** + protocol **W-Mbus OMS for Walk-by/Drive-by:** the system **automatically** switches between the fixed-network protocol and the walk-by/drive-by protocol
  - water meter with radio Mod. **DUF-R-CNB-IOT** with **protocol MQTT***
- Single-jet meter, with a 360° rotatable dry dial for turbid and highly calcareous water, featuring magnetic drive, with DN 15-20 **R80H**, UO-D0, T50
- Inductive transmission between the mechanical and electronic components. The radio module can be replaced
- All models are **MID**-approved in accordance with the current Directive
- All models are certified for use with drinking water in accordance with **Ministerial Decree 174 of 6 April 2004**
- Transmitted consumption data, net of any reverse flows
- Multi-layered cryptographic data security
- Available in a LoRaWAN-only version

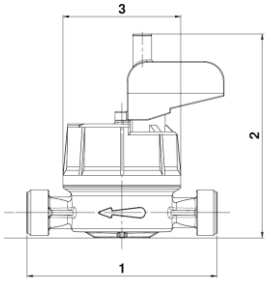
SMART METERS

CE MID

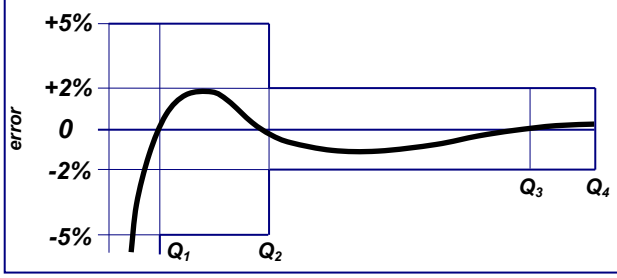
Technical Specifications - DN in mm- inches	*15-1/2*	*20-3/4*
Permanent Flow Rate Q_3 (m^3/h)	***2,5***	***4,0***
Overload capacity Q_4 (m^3/h	*3,125*	*5,0*
Transition flow rate Q_2 with measuring range R80H [MPE ±2%] (l/h)	*50*	*80*
Minimum flow rate Q_1 with measuring range R80H [MPE ±5%] (l/h)	*31,25*	*50*
Starting flow with measurement rangeR80H (l/h)	*6*	*11*
Accuracy class	*2*	*2*
Pressure drop class ΔP (bar)	*0,63*	*0,63*
Maximum permissible operating pressure MAP (bar)	*16*	*16*
Dial display range min/max (m^3)	*0,0001 / 100.000*	*0,0001 / 100.000*
1) Length of the meter excluding fittings (mm)	*110-80 115-170*	*130*
Length of the meter including fittings (mm)	*190-160 195-250*	*228*
2) Maximum height when the lid is open (mm)	*138*	*143*
3) Maximum height when the lid is closed (mm)	*70*	*74*
4) maximum overall diameter (mm)	*72*	*72*
5) Distance between the pipe and the meter mounting surface (mm)	*16*	*19*
Weight including fittings (kg)	*0,660*	*0,840*
Weight excluding fittings (mm)	*0,500*	*0,600*

Available options on request:

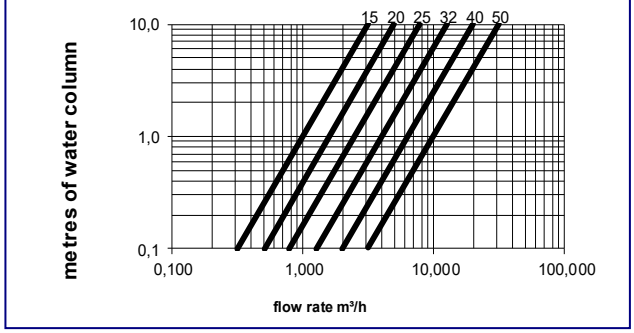
- ❑ **DUIC model for hot water**
- ❑ Resin coating
- ❑ LoRaWAN protocol operating at 915 MHz



Graphical representation of a typical error curve



Head loss diagram



The Company reserves the right to make changes to technical specifications and product illustrations – 04/26

Technical specifications of the radio module

Meter reading	Inductive sensor
Battery life	13 years
Operating environmental conditions	-10 °C … +55 °C
Enable radio transmission	Via an actuator integrated into the instrument body
Storage temperature	-20 °C … +60 °C
Degree of protection	IP68
Certification	EC, European Directive on Electromagnetic Compatibility, LoRaWAN-certified product, and OMS

Technical specifications of the LoRaWAN protocol

	Fixed network
Network type	Frequency: 868 MHz, LoRaWAN certified protocol (915 MHz frequency on request)
Data transmitted	Sensor ID, consumption data, hardware status, battery level, alarms: tampering (removal), reverse flow, low battery, leaks, on-site temperature, on request
Edit configuration data	Possible from remote or via a radio terminal
Flexibility	On request the system automatically switches between the protocols LoRaWAN and W-Mbus OMS
Activation	OTAA-ABP
Transmission interval	1 daily reading and 2 daily history reports
Transmission distance	Up to 14 km in ideal conditions

Technical specifications of the Wireless M-Bus protocol

	Walk-by/Drive-by
Network type	Frequency 868 MHz, W-MBus compliant with OMS
Data transmitted	Sensor ID, consumption data, hardware status, battery level, alarms: tampering (removal), reverse flow, low battery, leaks, on-site temperature, on request
Edit configuration data	Possible via radio terminal
Transmission distance	Up to 500 metres in ideal conditions

Technical specifications for NB-IoT transmission

Transmission	Two-way communication over a fixed network using the NB-IoT cellular standard
Transmission interval	Each 3 days (customisable)
Communication protocol	MQTT
Edit configuration data	Available via remote access and/or local NFC
Data transmitted	Sensor ID, consumption data, hardware status, alarms,
Alarms transmitted	Mechanical tampering (removal), reverse flow, low battery, etc..
Communication interface	NFC for installation, configuration and data recovery

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AQUA European Association of Smart Meter Manufacturers