G2 misuratori
THE VALUE OF METERING

SMART METERS

QDFU Smart Meter

DN 15-20
R250H-160V
DN 25-32-40
R200H-100V

Mod. QDFU-R-CLW
LoRaWAN
LoRa

Mod. QDFU-R-WMB
M-Bus wireless
OMS

Mod. QDFU-R-W+L
LoRaWAN
M-Bus wireless
OMS
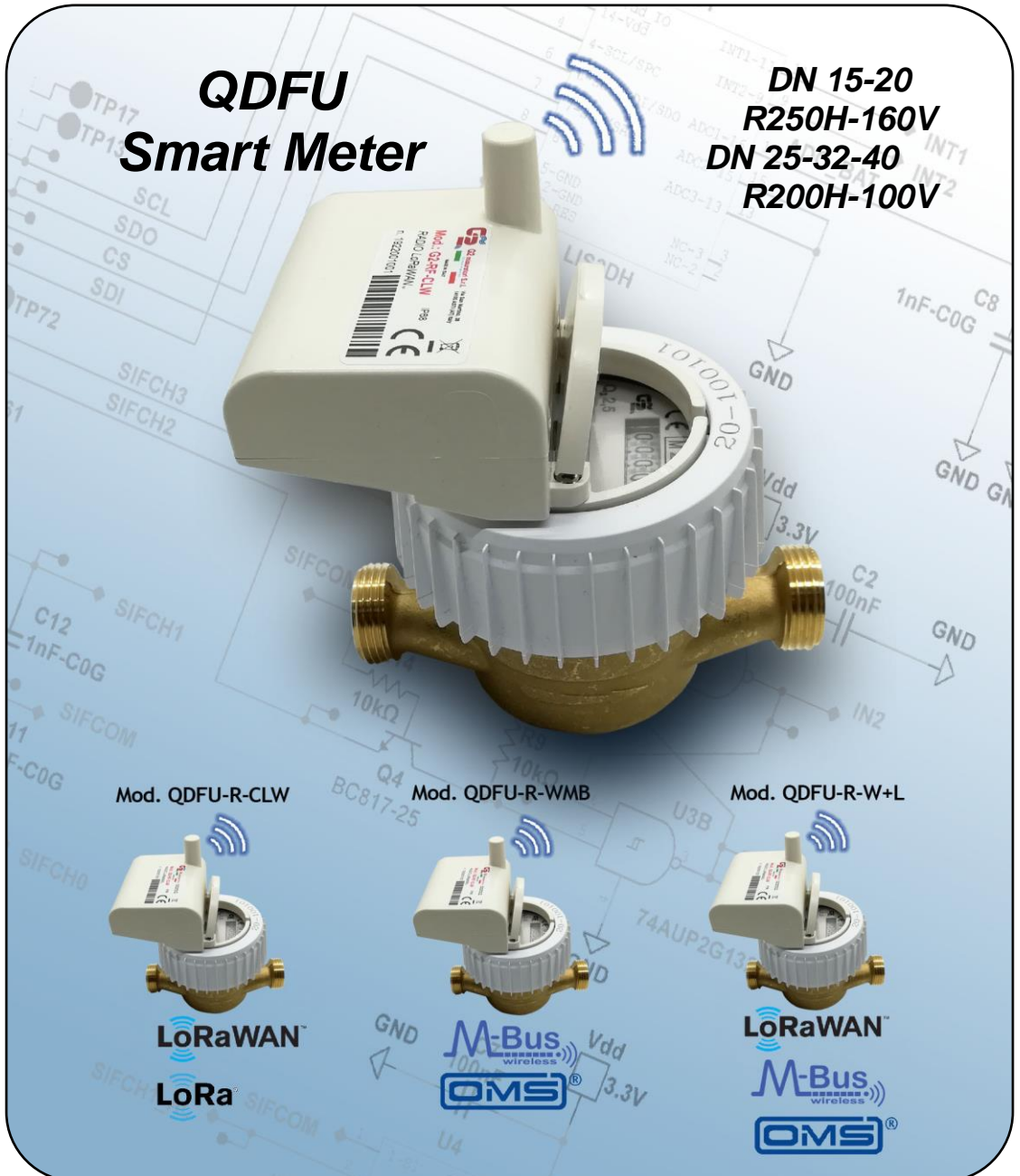
- Direct reading smart meter with data transmission via radio frequency 868 Mhz, with the protocols listed below.
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- -Counter with radio module Mod. QDFU-R-CLW LoRaWAN protocol for fixed network and LoRa for Walk-by/Drive-by
- -Counter with radio module Mod. QDFU-R-WMB W-Mbus OMS protocol for Walk-by/Drive-by
- -Counter with radio module Mod. QDFU-R-W+L LoRaWAN protocol for fixed network and LoRa for Walk-by/Drive-by + W-Mbus OMS protocol for Walk-by/Drive-by: the system automatically switches between fixed network and Walk-by/Drive-by protocols
- Single jet meter, protected rollers with fully protected dry dial, with mechanical transmission, with DN 15-20 R 250H - 160V, DN25-32-40 R200HR100V, UO-D0, T50
- Inductive transmission between mechanical and electronic parts. Radio module can be replaced
- All models are MID-approved according to the applicable directive
- All models are certified for use with drinking water according to D.M. 174 of 6/4/2004
- Transmitted consumption data, net compensated for any reverse flows
- Multi-level cryptographic data security
- Transmitted data: sensor ID, consumption data, hardware status, alarms, battery level, leaks
- Data security via multi-level encryption
- Modification of configuration data possible from fixed network remotely and/or via radio terminal
- Resin-coated IP 68 module for outdoor use - CE certified

SMART METERS

Technical data meter mechanical part
**DN in mm - inches**

	15 - 1/2"	20 - 3/4"	25 - 1"	32 - 1.1/4"	40 - 1.1/2"	
Permanent flow rate Q3 (m³/h)	**2,5**	**4,0**	**6,3**	**10**	**16**	
Overload flow rate Q4 (m³/h)	3,125	5,0	7,875	12,5	20	
Transitional flow Q2 with measuring range R200H [MPE ±2%] (l/h)	20	32	50,40	80	128	
Minimum flow rate Q1 with measuring range R200H [MPE ±5%] (l/h)	12,50	20	31,50	50	80	
Sensitivity with R200H measuring range (l/h)	3.5	5	8	8	15	
Accuracy class			2			
Environmental class			C (-25°C + 55…+70°C)			
Pressure loss class ΔP (bar)			0,63			
Maximum permissible operating pressure MAP (bar)			16			
1) Length of meter without fittings (mm)	110-115	130	160	160	200	
Length of meter including fittings (mm)	190-195	228	260	280	340	
2) Maximum overall height (mm)	130	130	150	150	165	
3) Maximum overall diameter (mm)	80	80	100	100	110	
4) Distance between pipe and meter support surface (mm)	24	24	34	34	42	
Weight with connection kit (kg)	0,850	1,10	1,75	2,0	3,46	
Weight without connection kit (kg)	0,690	0,86	1,28	1,33	2,42	

Radio module specifications

Counter detection	Inductive sensor
Battery life	10 years
Environmental operating conditions	-10 °C ... +55 °C
Radio transmission activation	Via actuator on instrument body
Storage temperature	-20 °C ... +60 °C
Degree of protection	IP68
Certification	CE, European Electromagnetic Compatibility Directive

Head loss diagram

15 20 25 32 40 50

metri di colonna d'acqua

portata m³/h

Typical accuracy curve

error

+5%
+2%
0
-2%
-5%

S

Q₁ Q₂ Q₃ Q₄

LoRaWAN and Lora protocol specifications

	Fixed network	Walk-by/Drive-by
Network type	Freq. 868 Mhz prot. LoRaWAN Freq. 868 Mhz prot. LoRa with proprietary protocol	Freq. 868 Mhz prot. LoRaWAN Freq. 868 Mhz prot. LoRa with proprietary protocol
Transmitted data	Sensor ID, consumption data, hardware status, battery level, alarms: mechanical fraud (removal), reverse flow, low battery, leaks,temperature on site on request	
Change configuration data	Possible from remote landline or via radio terminal Possible via radio terminal	Possible from remote landline or via radio terminal Possible via radio terminal
Flexibility	Automatically switches between the 2 settings according to programming	
Activation	OTAA-ABP /	OTAA-ABP /
Transmission interval	1 single reading daily and	1 single reading daily and
Transmission distance	2 daily history transmissions Configurable by day and time of week	2 daily history transmissions Configurable by day and time of week
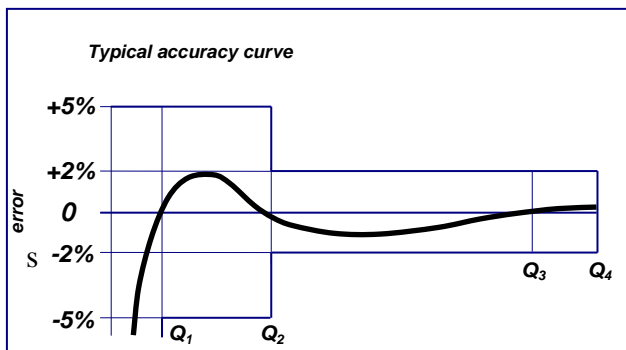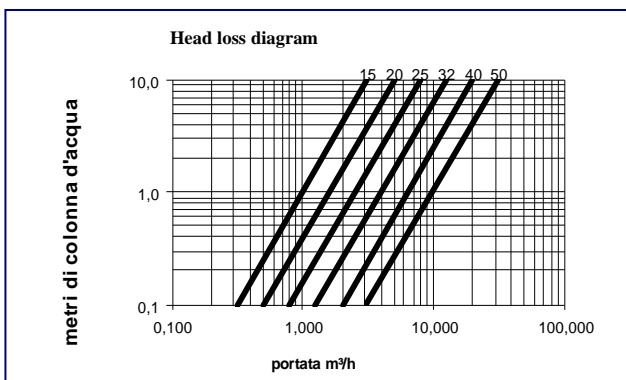
Technical characteristics of Wireless M-Bus protocol

	Walk-by/Drive-by
Network type	Freq. 868 Mhz W-MBus OMS compliant
Transmitted data	Sensor ID, consumption data, hardware status, battery level, alarms: mechanical fraud (removal), reverse flow, low battery, leakage,temperatura on site on request
Change configuration data	Possible via radio terminal
Transmission distance	Up to 500mt in optimal conditions
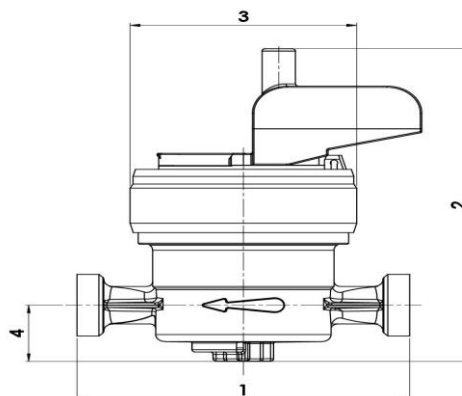
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