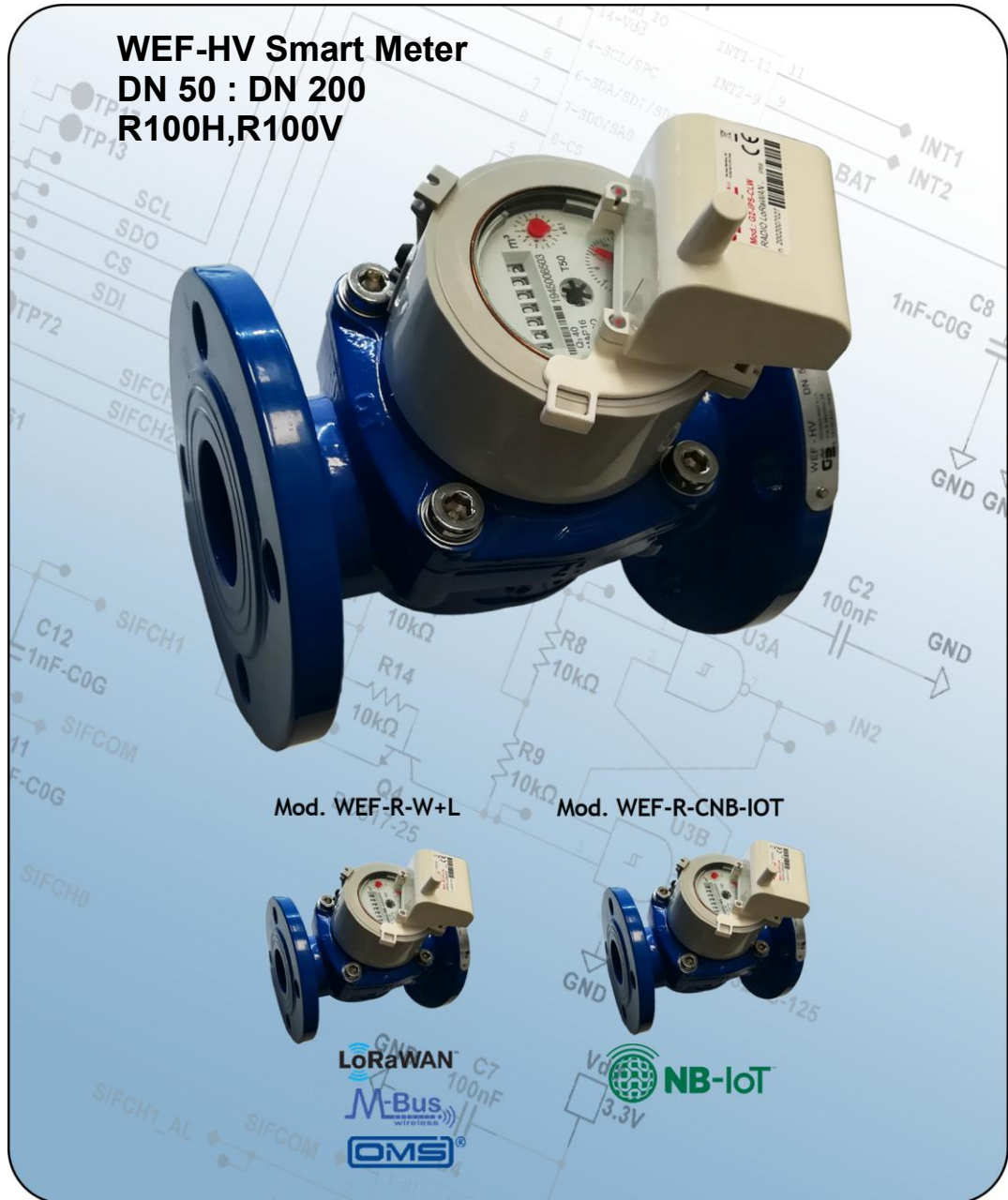




SMART METERS



- Direct-reading smart meters with radio data transmission.
 - Meter with radio module (Model WEF-R-W+L) featuring the **LoRaWAN** protocol for **fixed networks** and the **W-Mbus OMS** protocol for **walk-by/drive-by**: the system **automatically** switches between the fixed-network protocol and the walk-by/drive-by protocol
 - Meter with Mod **WEF-R-CNB-IOT** radio module and **MQTT protocol** *
- water meter, sizes DN 50 to DN 200, temperature class T50, measuring range R100HV. Internal measuring mechanism can be inspected without the need to remove the meter from the system with a DRY dial for turbid and highly calcareous water.
- 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 (Module B+D), in compliance with standards **EN 14154, OIML R49** and **ISO 4064**
- Requirements for straight sections of piping: U0/D0
- May be installed in any position (for non-horizontal installations, the flow must be upwards).
- Transmitted consumption data, net of any reverse flows
- Multi-layered cryptographic data security
- Available in a LoRaWAN-only or W-Mbus OMS-only version

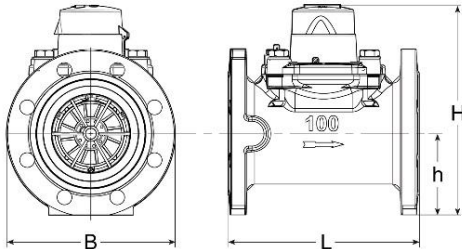
SMART METERS



Technical specifications – DN in mm	50	65	80	100	125	150	200
Permanent flow rate Q_3 (m ³ /h)	40	63	100	160	160	250	400
Overload capacity Q_4 (m ³ /h)	50	78,75	125	200	200	312,5	500
Transition flow rate Q_2 R80 [MPE ±2%] (m ³ /h)	0,8	1,26	2	3,2	3,2	5	8
Minimum flow rate Q_1 R80 [MPE ±5%] (m ³ /h)	0,5	0,7875	1,25	2	2	3,125	5
Starting flow (m ³ /h)	0,15	0,15	0,25	0,30	0,5	0,8	2
Measuring range R *	80H	80H	80H	80H	80H	80H	80H
Maximum permissible operating pressure (MAP) (bar)	16	16	16	16	16	16	16
Maximum reading (m ³)	10 ⁶	10 ⁶	10 ⁶	10 ⁶ / 10 ⁷	10 ⁶	10 ⁶ / 10 ⁷	10 ⁸
Minimum reading increment (l)	0,5	0,5	0,5	5	0,5	5	50
Inductance rating *	K10	K10	K10	K10	K10	K100	K1000
L) Length (mm)	200	200	225	250	250	300	350
H) Height (mm)	239	254	259	275	297	344	377
B) Maximum overall diameter (mm)	165	185	200	220	250	285	340
h) Distance between the pipe and the support surface of the meter (mm)	70	85	90	106	120	140	172
Weight (kg)	13	15,5	16	19,5	22,5	40	41,5

The following options are available on request:

- * Other K models
- * Other R models (horizontal and vertical)
- Resin coated ,
- LoRaWAN protocol operating at 915 MHz



Technical specifications of the radio

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
Protection grade	IP68
Certification	EC, European Directive on Electromagnetic Compatibility, LoRaWAN, 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

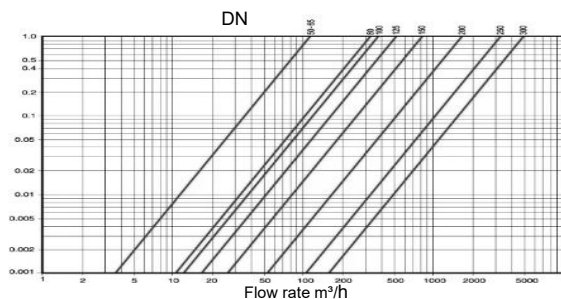
Technical specifications of the OMS Wireless M-Bus

	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

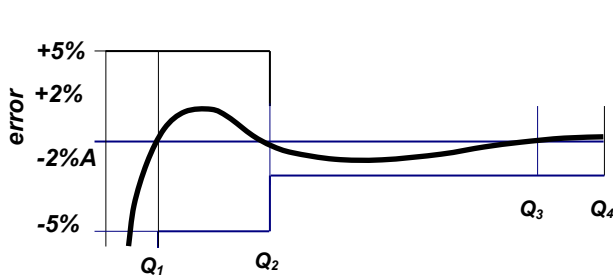
Technical specifications for NB-IoT transmission

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
Data-logger	via NFC, with data recovery with mobile App

Head loss diagram



Typical error curve



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



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