

MH IP68

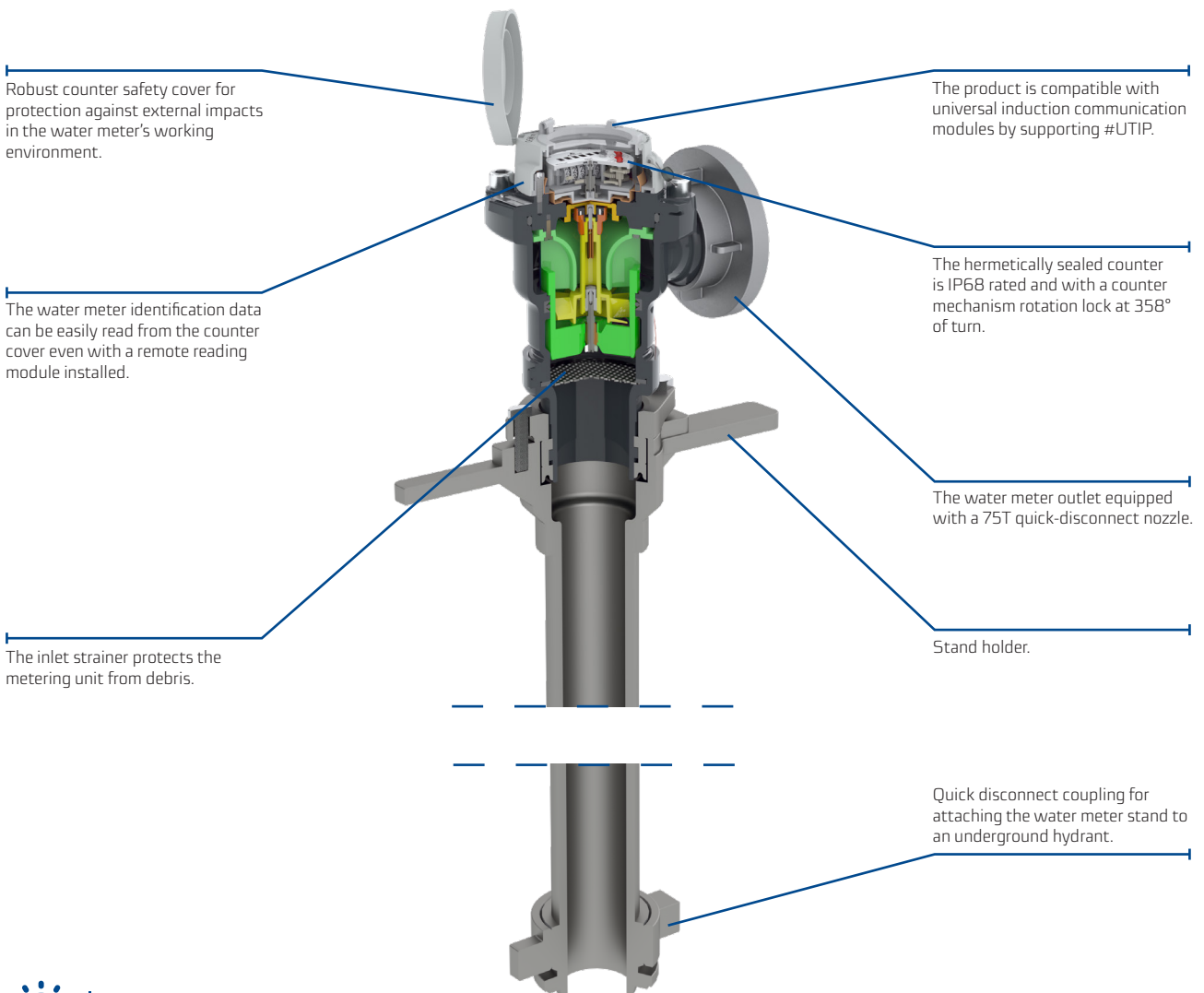
Hydrant water meter
DN50, DN65

MH IP68

MH IP68 is a screw, dry Woltman type water meter with a vertical rotor axis. The meter body, installed on a stand, is adapted for assembly using a standardised connector to an underground hydrant. Given the exposure of the water meter to various atmospheric conditions in the open, the counting mechanism has been placed in a casing made of copper sheet, which is hermetically sealed at the top by rolling in mineral glass seated on a rubber gasket. The device is compatible with clip-on communication modules for automatic wired or wireless meter reading. The water meter is designed and manufactured to the MID (Measuring Instruments Directive) and in compliance with EN14154, OIML R49 and ISO4064.

Application

The hydrant water meter is designed for local distribution and measurement of cold water consumption with a temperature of up to 50°C and a maximum allowable working pressure of 16 bar. The water meter can be used by water supply companies, construction and agricultural companies, as well as by individual users. The structure of the water meter stand allows for quick connection to an underground water network hydrant with a diameter of 80mm. The stand can be made in two material variants: aluminium for water intake for domestic purposes and acid-resistant steel for water intake for food purposes. The water meter outlet is equipped with a quick-disconnect nozzle of size 75T. The water meter performs excellently in challenging environmental conditions, and the rotating counter enables easy reading of the water meter readings in the appropriate working positions. The standard water meter version is designed for use with universal induction communication modules which feature #UTIP (Universal TI Plug).



Advantages

Convenient use:

- The compact construction of the water meter along with the associated stand facilitates transport
- The structure of the water meter stand allows for quick connection to an underground water network hydrant with a diameter of 80mm
- The MH-08 water meter is adapted to work with universal inductive clip-on modules from #UTIP
- Alarm output capability: the meter with a universal induction communication module is capable of remote indication of any removal of or damage to the module, disruption of operation, reverse flows, leakages, and more
- Ease of reading due to the counter's ability to rotate freely within 358°
- Fog-resistant hermetic counter: counter mechanism enclosed in a glass-copper casing with an IP68 protection rating

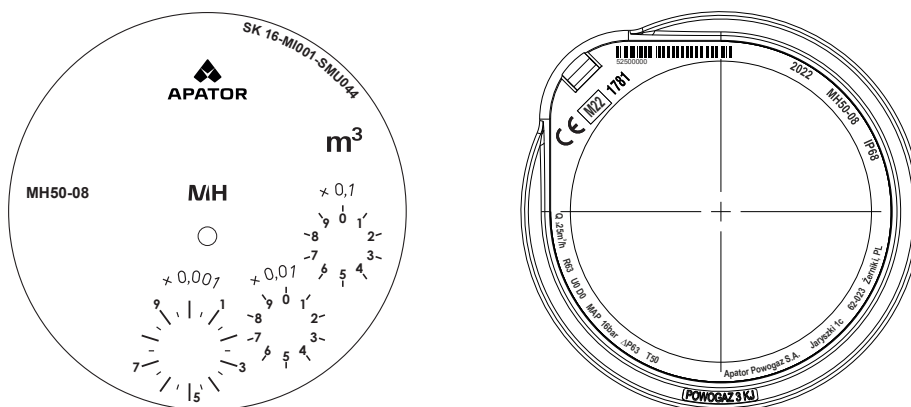
Reliability:

- Tested and robust design
- Durably protected by design from strong magnetic field interference per EN-14154
- Long operating life thanks to advanced wear-resistant materials of bearings and pivots
- The counter mechanism is protected against mechanical damage
- Permanently mounted strainer at the inlet to the water meter's measuring chamber

Key features

- The water meter is adapted to work in harsh environmental conditions, independently or with an installed communication module for remote readings in the AMR system
- Magnetic coupling
- Counter protected by a lid
- Protection against:
 - strong magnetic field interference per EN 14154
 - mechanical tampering (with a robust, tamper-proof counter and cover design)
- Potable water approved materials

Design of the cover and dial of the MH-08 hydrant water meter with an IP68 protection rating



Regulatory and standard compliance

- Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of measuring instruments
- Polish Act of 13/04/2016 on market surveillance and compliance assessment systems
- OIML R 49-1:2013 – Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements
- OIML R 49-2:2013 – Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
- OIML R 49-3:2013 – Water meters intended for the metering of cold potable water and hot water. Part 3: Test report format
- EN 14154-1:2005+A2:2011 – Water meters. Part 1: General requirements
- EN 14154-2:2005+A2:2011 – Water meters. Part 2: Installation and conditions of use
- EN 14154-3:2005+A2:2011 – Water meters. Part 3: Test methods and equipment
- EN ISO 4064-1:2017 – Water meters for cold potable water and hot water. Part 1: Metrological and technical requirements
- EN ISO 4064-2:2017 – Water meters for cold potable water and hot water. Part 2: Test methods
- EN ISO 4064-5:2017 – Water meters for cold potable water and hot water. Part 5: Installation requirements
- EU type examination certificate no. – SK 16-MI001-SMU044
- Classification of environmental climate and mechanical conditions: Class B (ref. EN-ISO 4064-1:2014 (E))
- Classification of mechanical environmental conditions: Class M1, as per Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014
- Classification of environmental electromagnetic conditions: Class E1, E2 (ref. EN-- ISO 4046: 2014 and with Directive 2014/32/EU of the European Parliament and of the Council of February 26, 2014).

PZH National Institute of Hygiene and WRAS certificates (all materials used in MH water meters have Hygiene Certificates for use with potable water).

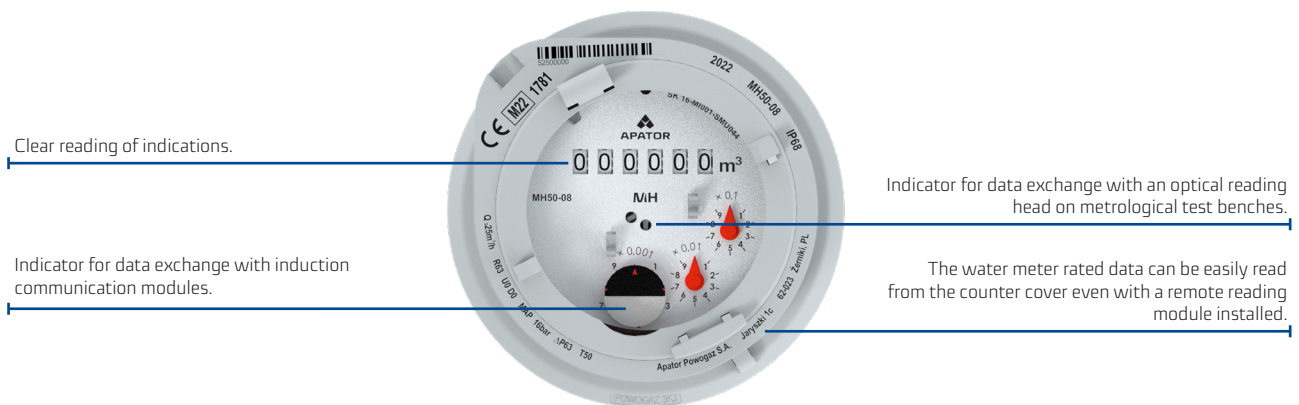
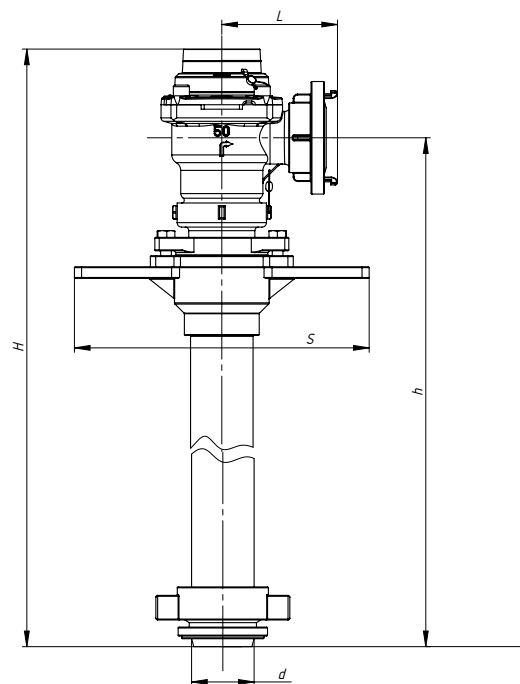


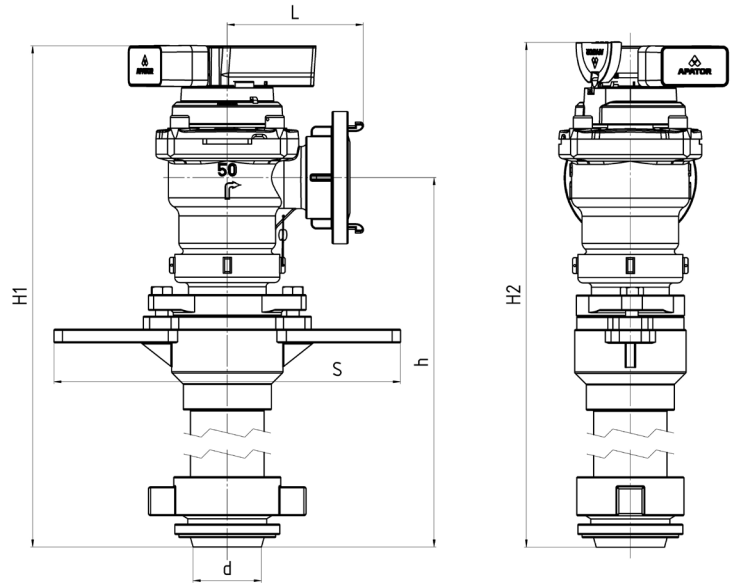
Table 1. Technical data

Parameter	MH-08			
			MH50-08	MH65-08
Nominal diameter	DN	mm	50	65
Permanent flow rate	Q_3	m ³ /h	25	40
Overload flow rate	Q_4	m ³ /h	31.25	50
Transitional flow rate	Q_2	m ³ /h	0.63	1
Minimum flow rate	Q_1	m ³ /h	0.4	0.63
Volumetric flow rate at a pressure loss of 0.1 bar	–	m ³ /h	18	24
Coefficient	Q_2/Q_1	–	1.6	
Measurement range, R	Q_3/Q_1	–	63	
Scale interval	–	m ³	0.0005	
Temperature class (rated operating temperature)	–	–	T30;T50	
Flow profile sensitivity class	–	–	U0, D0	
Indicating range	–	m ³	10 ⁶	
Resolution of reading	–	m ³	0.0005	
Maximum pressure	P_{max}	MPa	1.6	
Maximum pressure loss at Q_3	Δp	kPa	63	
Maximum permissible error range: $Q_2 \leq Q \leq Q_4$	ϵ	%	±2 for $0.1 \leq T \leq 30^\circ\text{C}$ cold water ±3 for $T > 30^\circ\text{C}$ water	
Maximum permissible error range: $Q_1 \leq Q < Q_2$	ϵ	%	±5% for $0.1 \leq T \leq 30^\circ\text{C}$	
Ingress protection rating	-	-	IP68	
Height	H	mm	906	912.5
	h	mm	807	801.3
Length	L	mm	130	130
	S	mm	330	330
Diameter	d	mm	65	65
Weight	-	kg	10	10.3



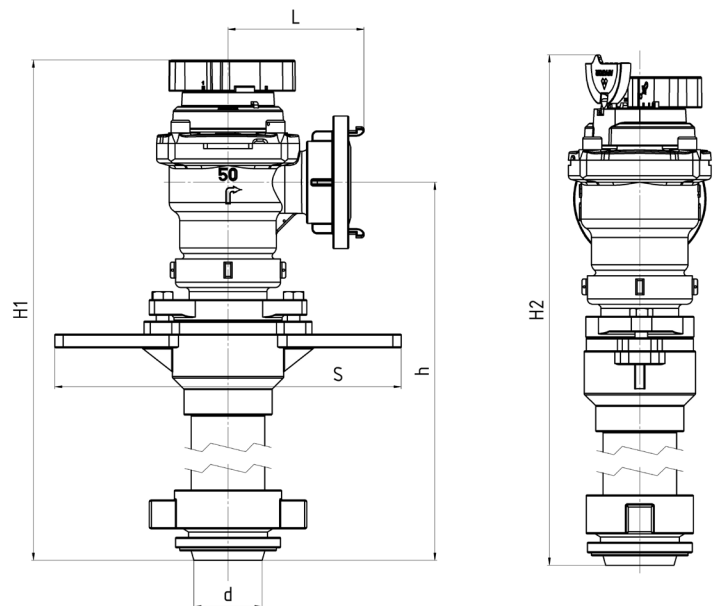
Example of the MH IP68 water meter with compatible data communication modules:

IN-GSM clip-on module #UTIP (Universal TI Plug)



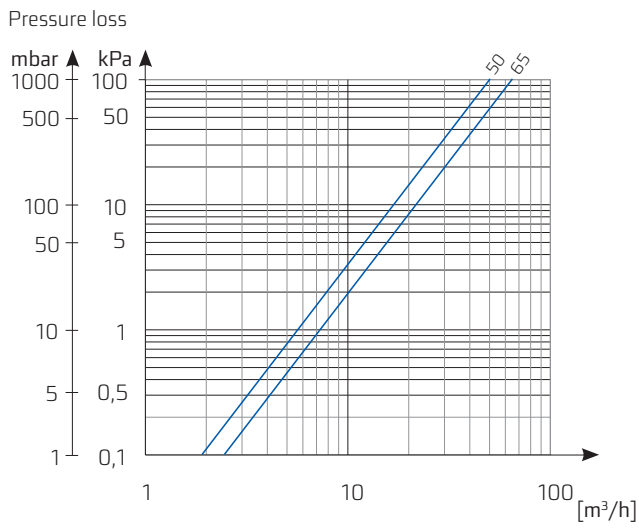
DN		50	65
H1	mm	1006	1013.26
H2	mm	1010	1017.26

IN-WMBUS clip-on module #UTIP (Universal TI Plug)

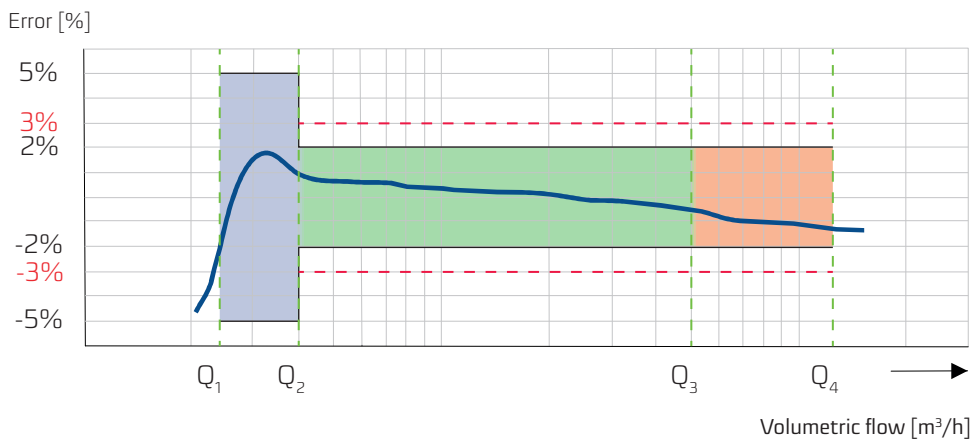


DN		50	65
H1	mm	966.7	1003.96
H2	mm	987.7	1024.96

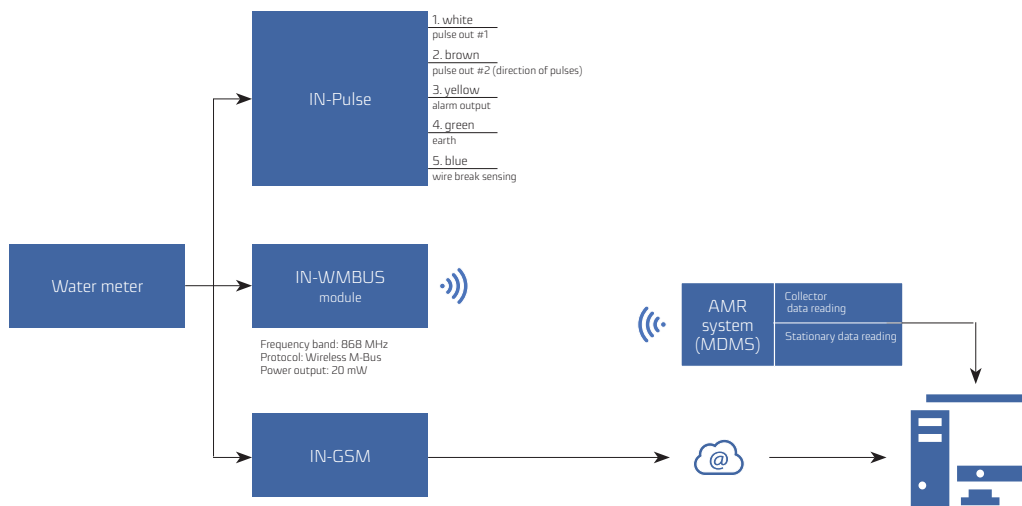
Pressure loss chart



Typical error chart



Remote indication relay & flow rate measurement



The data presented in the datasheet was correct on the date of publication.
The manufacturer has the right to modify and improve the products without notice.
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