

MWN50-GH IP68

MWN50-G IP65*

MWN horizontal rotor axis propeller water meter
(Woltman)DN50



MWN50-GH IP68



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MWN50-GH IP68/MWN50-G IP65* are screw-type, dry-running water meters of the Woltman type, with a horizontal rotor axis parallel to the water supply pipe at the installation site. Thanks to continuous development work, these water meters are characterized by modern design and technological solutions, thus demonstrating high operational durability and resistance to strong magnetic fields. The water meters are designed to work with optical or inductive communication overlays, which enable remote wired or wireless reading of the readings. The water meters are made based on the MID Directive in accordance with the EN14154, ISO4064 and OIML R49 standards, in the measurement range up to R100.

*On request, the MWN50-G IP65 water meter can be made with IP68 protection level

Application

Water meters with threaded connections are intended for use in temperature cold water distribution networks up to 50°C, with low pressure losses for relatively constant and large volume flows. Maximum allowable pressure working pressure is 16 bar. The design of the water meter allows it to be installed in horizontal water supply systems with a counterdirected upwards (H↑) or sideways (H→), and vertically (V), or in intermediate positions H-V. MWN50-GH water meter is used and is mounted on above-ground hydrants using a base. Thanks using a rotating counter, it is possible to easily read the readings directly from the water meter dial in various mounting positions. IP68 water meters are perfect for operation in difficult conditions environmental conditions, being as standard adapted to the installation of universal inductive communication modules with #UTIP (Universal TI Plug) connector. However, IP65 water meters can work with both optical and as well as inductive communication modules.

Regulatory and standards 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 49-1:2006 – Water meters intended for the metering of cold potable water and hot water. Part 1: Metrological and technical requirements
- OIML R 49-2:2004 – Water meters intended for the metering of cold potable water and hot water. Part 2: Test methods
- 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 5
- 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 test certificate – Cold water, no. SK08-M1001-SMU002
- 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 electromagnetic environmental conditions: class E1 and E2, per EN-ISO 4064: 2014 and Directive 2014/32/EC of the European Parliament and of the Council of 26 February 2014

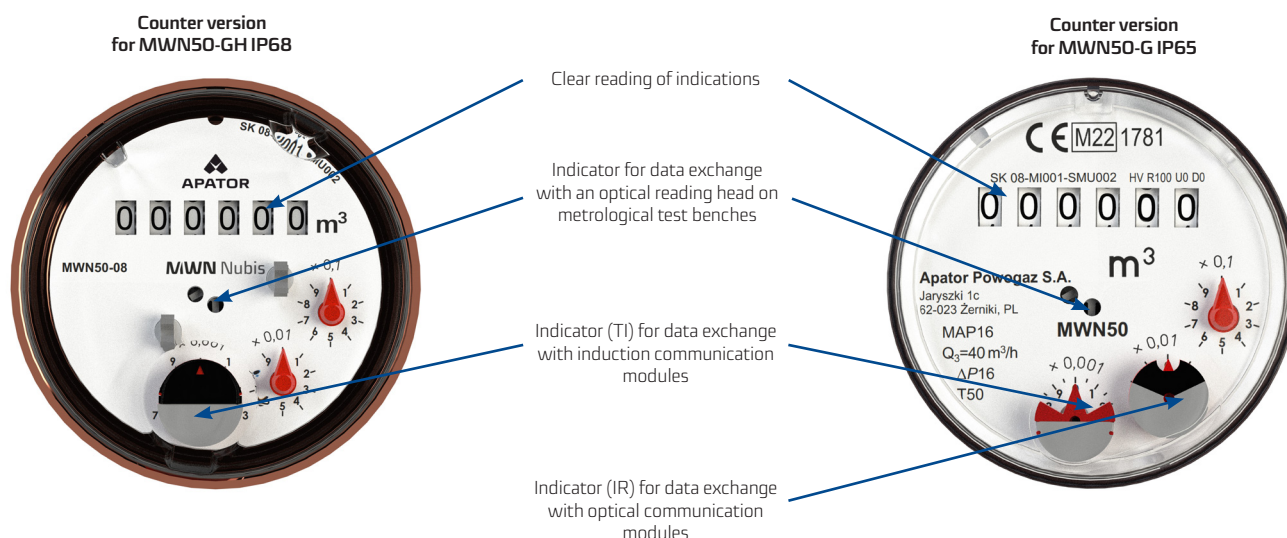


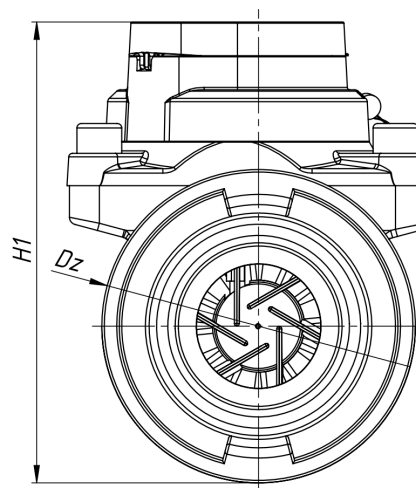
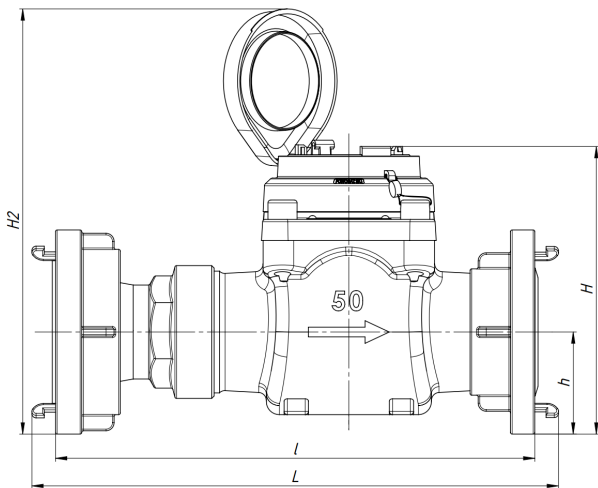
Table 1. Specifications

Parameter			MWN50-GH-08 (IP68); MWN50-G (IP65)* MWN-G-NK**
Nominal diameter	DN	mm	50
Temperature class (operating temperature range)	-		T30, T50
Permanent flow rate	Q_3	m^3/h	40
Overload flow rate	Q_4	m^3/h	50
Transitional flow rate	Q_2	m^3/h	0,64
Minimum flow rate	Q_1	m^3/h	0,4
Starting flow	-	m^3/h	0,15
Measurement range, R	Q_3/Q_1	-	100
Coefficient	Q_2/Q_1	-	1,6
Connection ends	-	-	G – threaded
Maximum pressure loss	-	-	U0, D0
Flow profile sensitivity class	-	m^3	10^6
Indicating range	-	m^3	0,0005
Resolution of reading	P_{max}	-	MAP16 = (16 bar)
Maximum allowable pressure	-	bar	from 0,3 to 16
Operating pressure range	ΔP	kPa	16
Operating orientation	-	-	H, V
Maximum permissible error range: ($Q_2 \leq Q \leq Q_4$)	ϵ	%	± 2 for $0.1^\circ C \leq T \leq 30^\circ C$ cold water ± 3 T > 30°C water
Maximum permissible error range: ($Q_1 \leq Q < Q_2$)	ϵ	%	± 5
Reed relay pulse transmitter NK (IP65 only)	-	$dm^3/imp.$	100 (standard pulsing) 10 (available on request)

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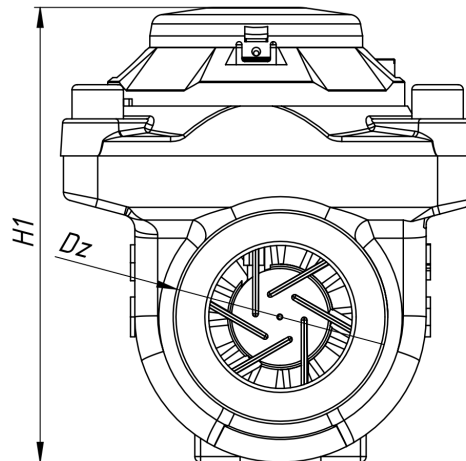
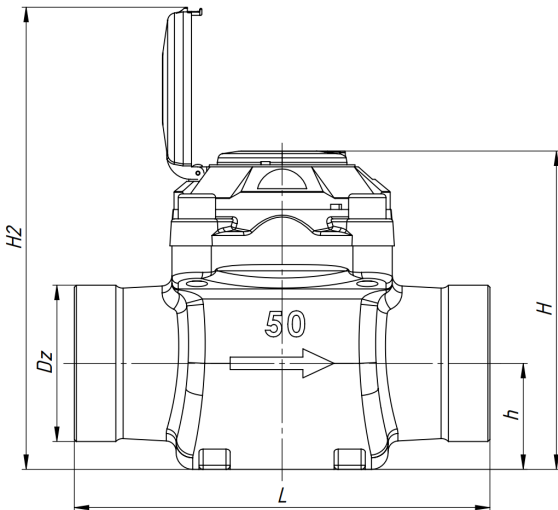
** Version XX-NKP water meter adapted to the NK reed switch transmitter with IP65 protection rating

Dimensions of the MWN-GH water meter in IP68 version



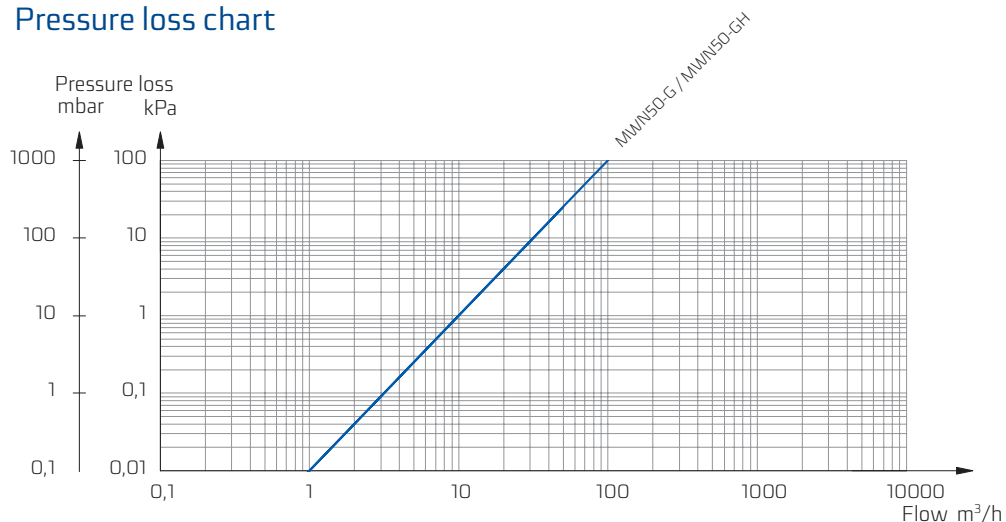
DN		
H	mm	177
H1	mm	185
H2	mm	262
h	mm	63
l	mm	300
L	mm	320
Dz	mm	126

Dimensions of the MWN-G water meter in IP65 version

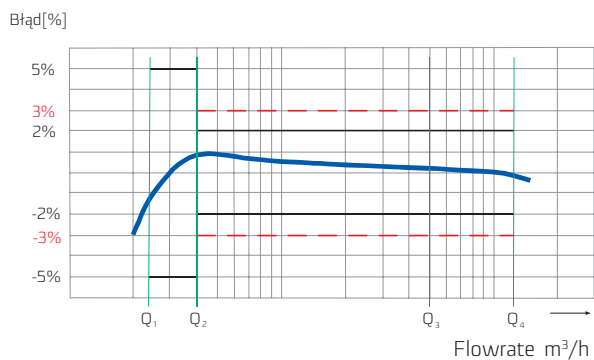


DN		
H	mm	154
H1	mm	160
H2	mm	221,5
h	mm	51
L	mm	200
Dz	mm	75,2

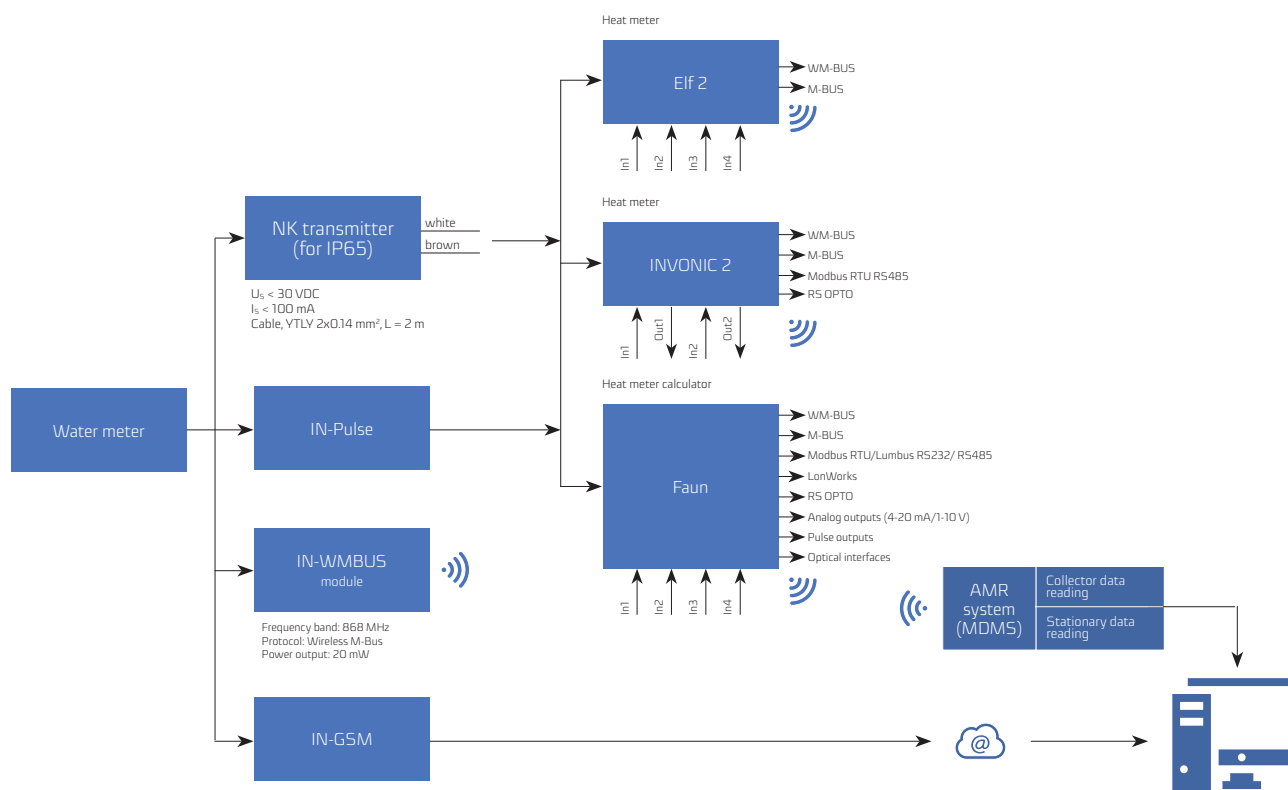
Pressure loss chart



Typical error chart



Remote indication relay & flow rate measurement for IP68/IP65; flow rate measurement



The data presented in the datasheet was correct on the date of publication.
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