



WATER MEASUREMENT



## MP-01, MP130-01

**PROPELLER WATER METER  
WITH VERTICAL ROTOR AXIS DN40÷DN100**



MP-01 is a dry Woltmant propeller water meter with the vertical rotor axis which is perpendicular to water supply lines. The water meter features modern design and technological solutions which makes it durable and perfect for operation with pulse transmitters and remote reading systems.



### INTENDED USE

The water meter is intended for industrial consumption metering of cold water of up to 30°C, water of up to 50°C or hot water of up to 130°C and the maximum operating pressure of 16 bar with relatively constant and large volume flows. The water meter design enables installation in horizontal (H) water supply systems with the counter upwards.



## MP TYPE WATER METER



WITH RADIO INTERFACE



WITH NK AND NO  
PULSE TRANSMITTER



W/O PULSE TRANSMITTER

### ADVANTAGES

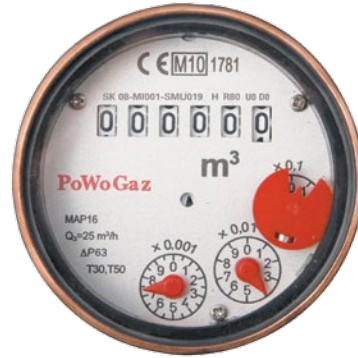
- Economy:
  - easy installation in water supply systems
  - modular design which significantly eases servicing
  - immunity to external magnetic fields acc. to EN 14154-3
  - low start threshold
- Comfort of use:
  - supports remote radio reading
  - reading with NK and NO transmitters
  - ease of reading due to:
    - free alignment of the counter from 0 to 360° (rotational installation in the shield with cover)
    - hermetically sealed counter, resistant to fogging
- Reliability:
  - tested and robust design
  - high operating durability due to modern high abrasion resistant materials (on bearings and journals)
  - interchangeable and unified metering insert for various body sizes
  - excellent corrosion and mechanical resistance of paint coats (epoxy powder coats)

### SPECIAL CHARACTERISTICS

- the water meter in standard version supports AMR remote reading
- alarm signalling – the water meter with the radio interface can issue alarms e.g. about removal or breaking of the interface, interface operating disturbances, backflow, leaks, etc.
- two-point rotor bearing system
- external adjustment system
- wide metering range
- supports electronic testing of water meter metrological parameters
- magnetic clutch
- the NKOP version is adapted for NK and NO transmitters without re-verification



drum and dial counter adapted for radio interface, supports NK and NO transmitters  
the counter features an optical data transmission component and it is built in a hermetic plastic shield



Optional: IP68 rated counter (for cold water only), supports the NK transmitter, enclosed in a hermetically sealed copper shield with mineral glass.

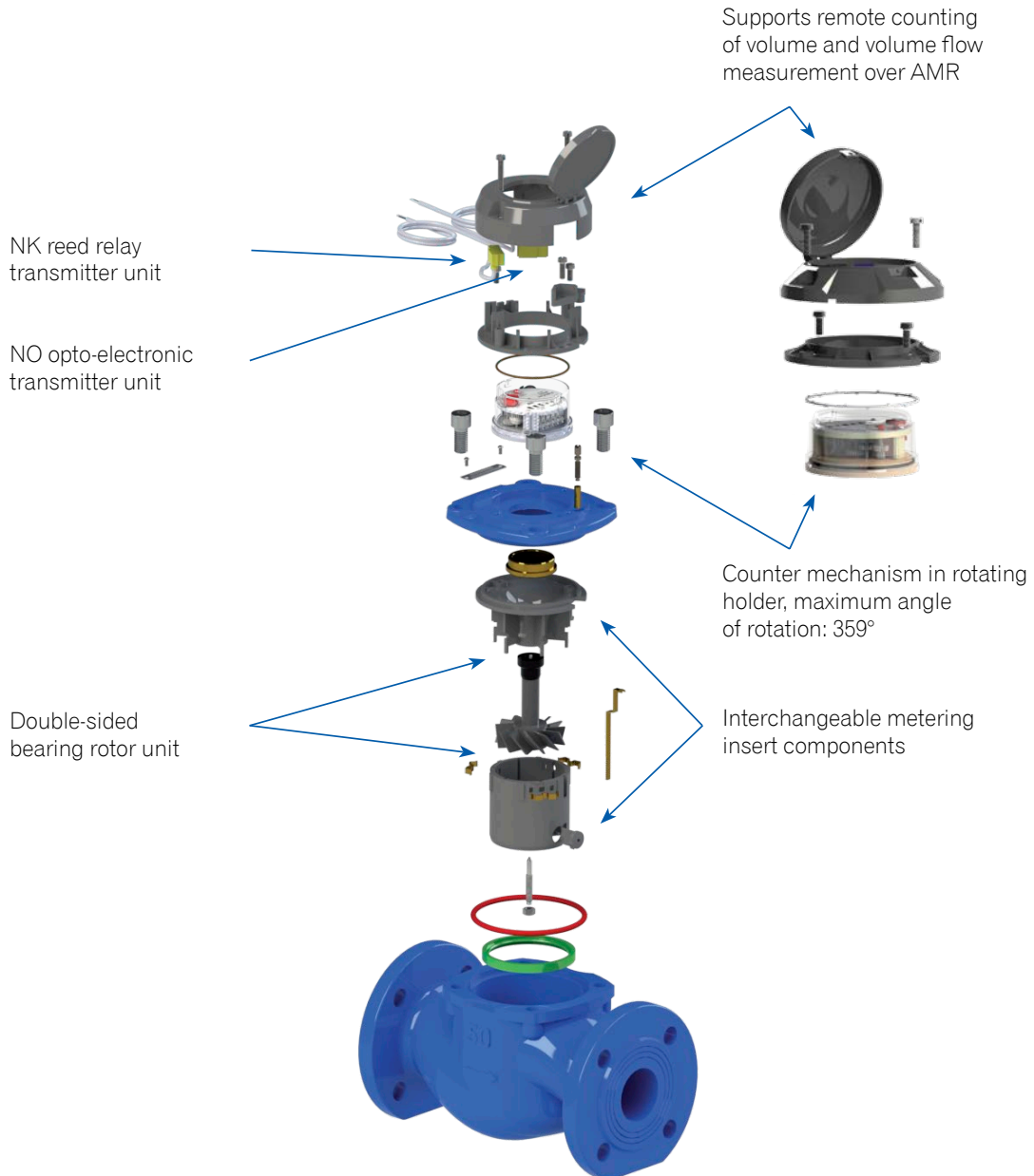
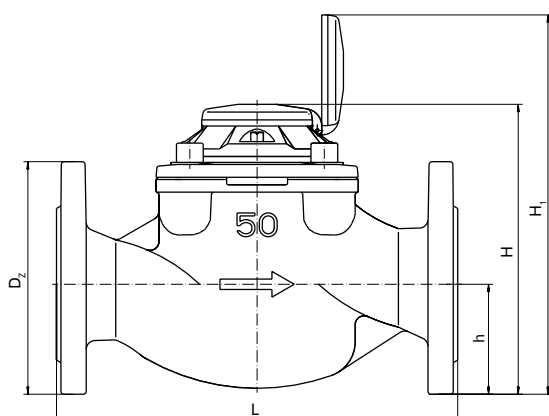


Tabela 1. TECHNICAL DATA

Parametr			MP-01, MP-01-XX				
Nominal diameter	DN	mm	40	50	65	80	100
Temperature class (operating temperature range)	T30 (0,1 ÷ 30°C), T50 (0,1 ÷ 50°C)		MP-01 (w/o transmitter) or MP-01 (w/transmitters) in -NK, NKP, NO, NKO, NKOP versions**				
	T130 (0,1 ÷ 130°C)		MP130-01 (w/o transmitter) or MP130-01 (w/transmitters) in -NK, NKP versions**				
Continuous volume flow	$Q_3$	m <sup>3</sup> /h	25	25	40	63	100
Volume overflow	$Q_4$	m <sup>3</sup> /h	31,25	31,25	50	78,75	125
Transition volume flow	$Q_2$	m <sup>3</sup> /h	0,5	0,5	0,8	1,26	2
Minimum volume flow	$Q_1$	m <sup>3</sup> /h	0,31	0,31	0,5	0,8	1,25
Starting threshold	–	m <sup>3</sup> /h	0,05	0,05	0,07	0,07	0,1
Metering range R	$Q_3/Q_1$	–	80				
Ratio	$Q_2/Q_1$	–	1,6				
Resistance class for flow profile	–	–	U0, D0				
Reading range	–	m <sup>3</sup>	10 <sup>6</sup>				
Reading accuracy	–	m <sup>3</sup>	0,0005				
Upper limit pressure	$P_{max}$	–	MAP16=(16bar)				
operating pressure range	–	bar	from 0,3 to 16				
Maximum pressure loss	$\Delta P$	kPa	$\Delta P_{63} = (0,63bar)$				
Operating position	–	–	H				
Permissible limit error range	$\epsilon$	%	±5% ( $Q_1 \leq Q < Q_2$ ) ±2 ( $Q_2 \leq Q \leq Q_3$ ) for $0,1 \leq T \leq 30^\circ C$ ±3 ( $Q_2 \leq Q \leq Q_3$ ) for $T > 30^\circ C$				
Pulse value NK reed relay transmitter	–	dm <sup>3</sup> / imp.	2,5; 5; 10; 25; 50; 100; 250; 500; 1000				
Pulse value NO opto-electronic transmitter***	–	dm <sup>3</sup> / imp.	1				
Dimensions	L	mm	200*; 270; 300*	200*; 270; 300*	300	300; 350*	350*; 360
	h	mm	70	73	87	95	105
	H	mm	183	200	250	255	335
	H <sub>1</sub>	mm	283	300	350	375	455
	D <sub>z</sub>	mm	150	165	185	200	220
Weight	w/o transmitter	kg	11,6	12,7	19	21	30
	with NK   NO transmitter		12	13,1	19,4	21,4	30,4



\*) On demand

\*\*) Version: NK - reed relay transmitter, NKP - water meter adapted for the reed relay transmitter, NO - opto-electronic transmitter, NKO - reed relay and opto-electronic transmitter, NKOP - water meter adapted for both reed relay and opto-electronic transmitters.

\*\*\*) Only for T30 and T50.

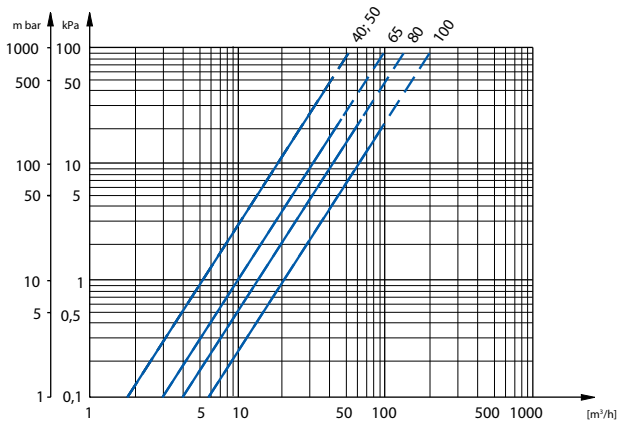
Flange holes acc. to EN 1092-2 (PN10).

## REGULATORY AND STANDARD COMPLIANCE

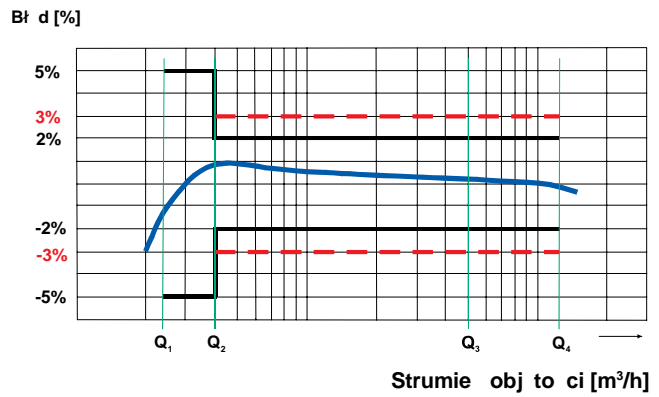
- Directive 2004/22/EC of the European Parliament and of the Council dated March 31 2004 on measuring instruments
- OIML R49:2004 and 2006 – Water meters for metering of cold potable water and hot water
- PN-EN-14154:2011 - Water meters. Part 1 to 3.
- Classification of environmental, climate and mechanical conditions – Class B acc. to PN-EN-14154-3:2005:A1
- Classification of mechanical environmental conditions – Class MI acc. to the Regulation of Ministry of Economy dated 18/12/2006
- Classification of electromagnetic environmental conditions – Class E1 acc. to the Regulation of Ministry of Economy dated 18/12/2006

All materials used in the MP-01 water meter bear appropriate Hygienic Certificates which permit contact with potable water.

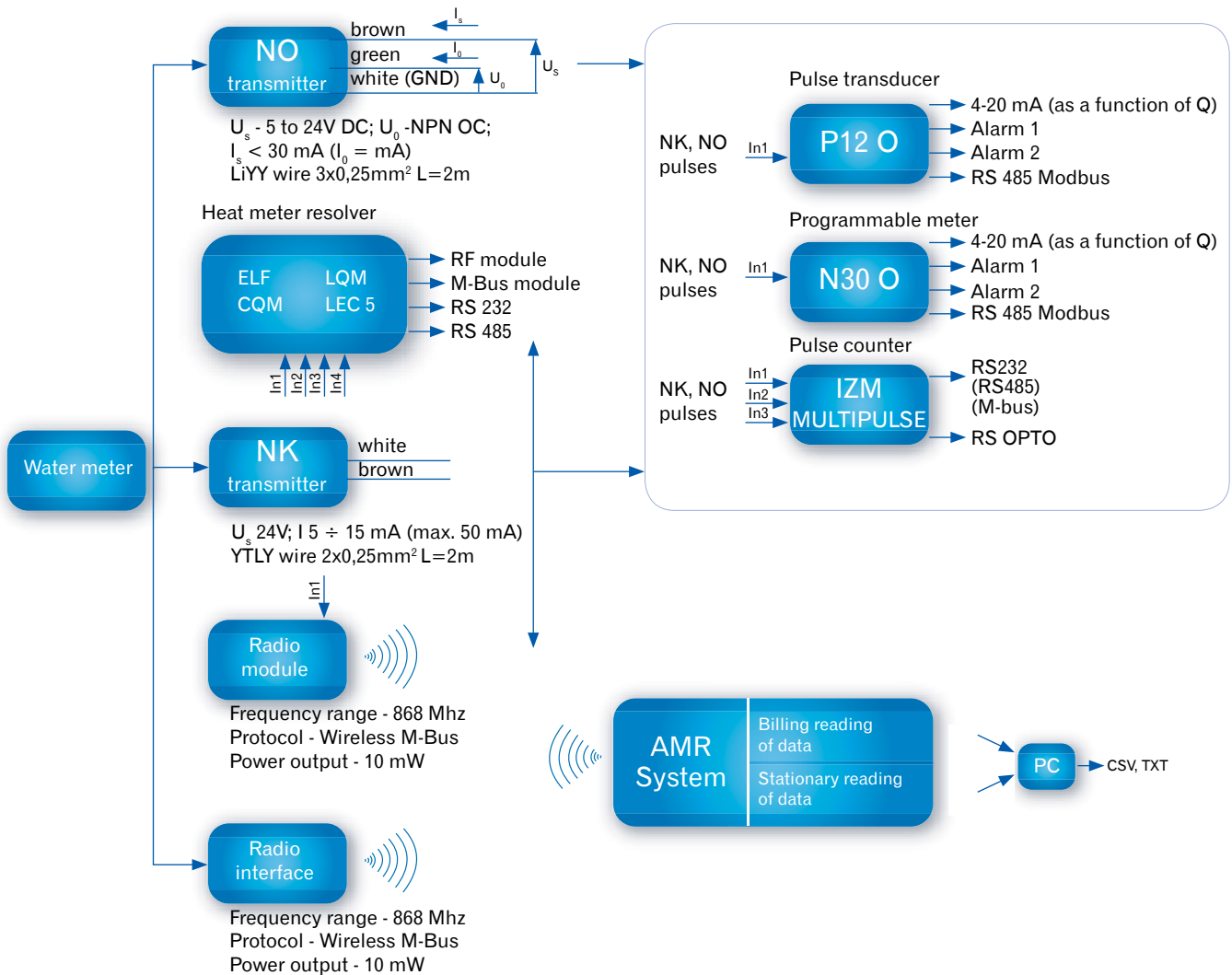
PRESSURE LOSS CHART



TYPICAL ERROR CHART



EXAMPLE CONNECTIONS FOR REMOTE READOUT AND VOLUME FLOW MEASUREMENT TRANSMISSIONS



ORDER EXAMPLE

Cold water meter, e.g. MP50-01-NK (100 dm<sup>3</sup>/pulse) etc.



**Apator Powogaz S.A.**  
Klemensa Janickiego 23/25, 60-542 Poznań, Poland  
e-mail: [handel@powogaz.com.pl](mailto:handel@powogaz.com.pl)  
Secretary office: tel. +48 61 8418 101, fax +48 61 8470 192  
Sales department: tel. +48 61 8418 133, 136, 138, 148  
Export department: tel. +48 61 8418 139



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