

WSD

Woltman meter with impeller axis arranged vertically to the flow direction

The WSD bulk water meter is used to record high and greatly varying flows in drinking water distribution and industrial applications.

The meter is equipped with a 6-roller dry dial register (IP68) and a modulator disc. This enables electronic, reaction-free scanning and is the basis for remote reading of the meter data via radio with LoRaWAN® or wM-Bus. A combined M-Bus / pulse module is also possible.

A mechanical pulser can also be connected in parallel.



Performance characteristics at a glance

- Woltman vertical type
- For horizontal installation
- All materials, which are used in the drinking water section, comply with the required standards, guidelines and the current German drinking water approval (other country-specific drinking water approvals on request)
- Replaceable MID-compliant metrological unit
- Highest precision and reliability even in case of low flow rates
- Flood-proof (IP68) hermetically sealed glass/copper register
- Low starting flow and high overload security
- Wide measuring range, low pressure loss
- Hydraulic bearing relieve
- Long-term measuring stability
- No straight inlet or outlet needed (U0/D0) according to OIML R49 and DIN EN ISO 4064
- Prepared for remote reading
- Register rotatable 355 °
- Operating pressure MAP 16
- Approved in accordance with MID and OIML

Applications

- For the consumption measurement of cold and clean drinking water or service water up to 50 °C
- For measuring high flow rate

AMR options

- Can be retrofitted with a mechanical pulser
- Can be combined with stationary GSM system
- Retrofittable with EDC module (Electronic Data Capture):
 - EDC- LPWAN radio module (868 MHz) for LoRaWAN®
 - EDC- wireless M-Bus radio module (868 MHz)
 - EDC-combined M-Bus and pulse module

Technical data										
Nominal diameter	DN	mm	50	50	65	80	80	100	150	200
Permanent Flowrate	Q ₃	m ³ /h	25	40	40	63	63	100	250	400
Attainable measuring range	Q ₃ /Q ₁	R	200H	200H	200H	200H	200H	200H	200H	200H
Standard measuring range ¹	Q ₃ /Q ₁	R	160H	160H	160H	160H	160H	160H	160H	160H
Overload Flowrate	Q ₄	m ³ /h	31,25	50	50	78,75	78,75	125	312,5	500
Minimum flowrate ²	Q ₁	m ³ /h	0,156	0,25	0,25	0,394	0,394	0,625	1,563	2,5
Transitional Flowrate ²	Q ₂	m ³ /h	0,25	0,4	0,4	0,63	0,63	1,0	2,5	4,0
Start-up flow rate	-	l/h	50	50	65	100	100	110	250	450
Display range	min.	l	0,5	0,5	0,5	0,5	0,5	0,5	0,5	0,5
	max.	m ³	999.999	999.999	999.999	999.999	999.999	999.999	999.999 ^{x10}	999.999 ^{x10}
Temperature range	-	°C	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50	0,1 - 50
Operating pressure	MAP	bar	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 16	0,3 - 10	0,3 - 16	0,3 - 16	0,3 - 16
Pulse value Reed	-	l/pulse	100	100	100	100	100	100	1000	1000
Pulse value modulator disc	-	l/pulse	10	10	10	10	10	10	100	100
Pressure loss class at Q ₃	Δp	bar	0,25	0,63	0,63	0,63	0,63	0,63	0,63	0,63
Mechanical environmental condition	-	-	M2	M2	M2	M2	M2	M2	M2	M2
Climatic ambient conditions ⁴	-	°C	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

Dimensions and weights:										
Nominal diameter	DN	mm	50	50	65	80	80	100	150	200
Overall length ¹	L	mm	200/270/300	200/270/300	300	225/300/350	300	250/350/360	500	500
Height	H1	mm	143	143	143	190	190	195	270	351
Height	H2	mm	85	85	95	102	102	114	146	174
Total height approx. ³	H1+H2	mm	228	228	238	292	292	309	416	525
Installation height of the measuring unit	H3	mm	270	270	270	370	370	382	557	743
Flange diameter	D	mm	165	165	185	200	200	220	285	340
Bolt circle diameter	D1	mm	125	125	145	160	160	180	240	295
Number of bolts	-	pcs.	4	4	4	8	4	8	8	12
Screw size	-	mm	M16	M16	M16	M16	M16	M16	M20	M20
Bolt diameter	-	mm	19	19	19	19	19	19	23	23
Weight approx.	-	kg	11/13/13	11/13/13	18	19/21/22	21	20/24/24	58	94

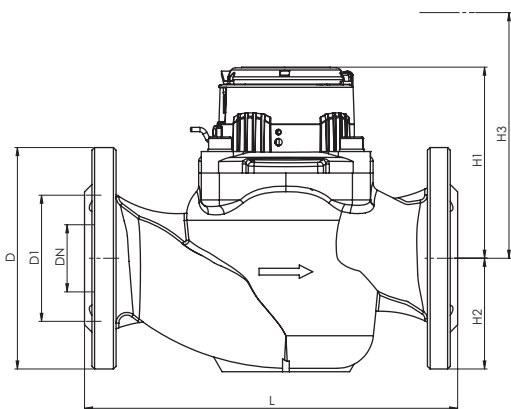
¹ Other measuring ranges and overall lengths on request

² Values refer to standard measuring range

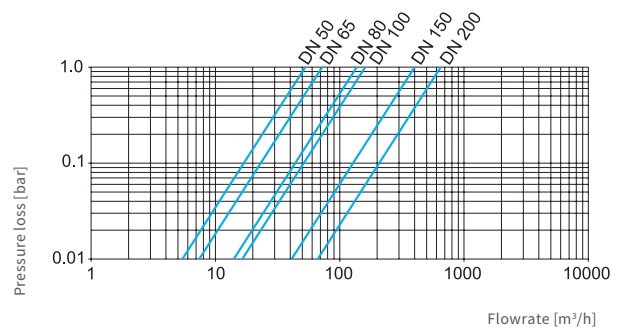
³ Total height WSDE + 20 mm

⁴ Condensation possible

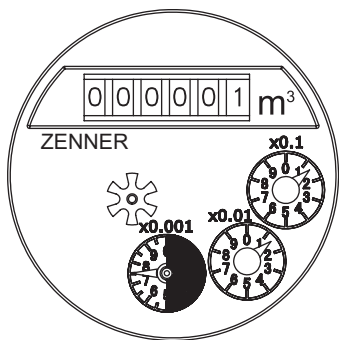
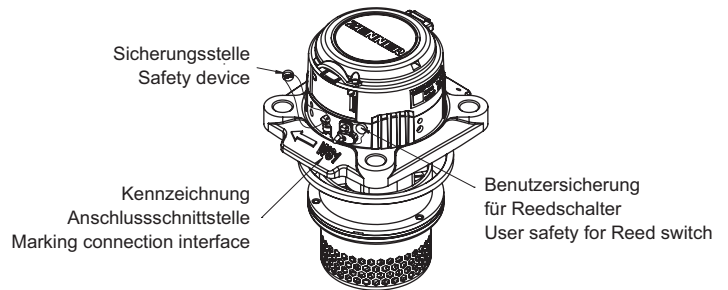
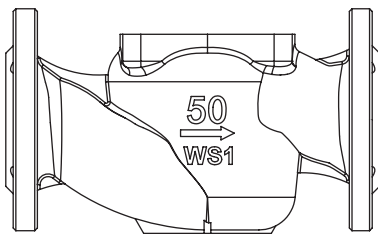
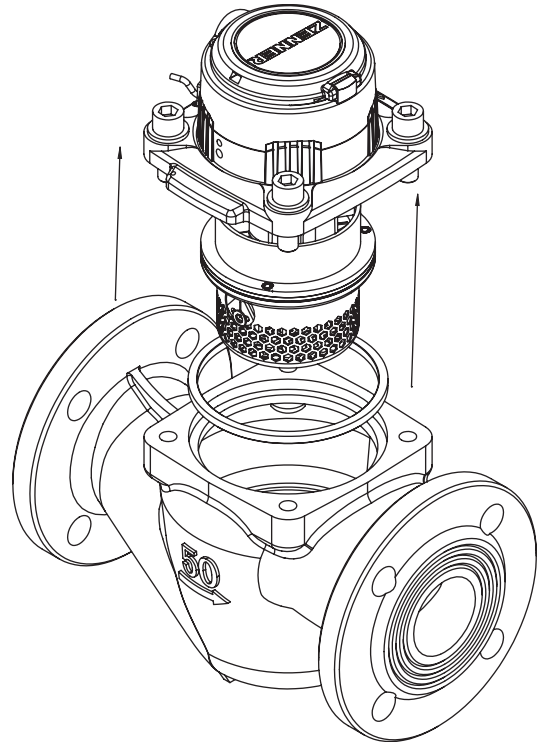
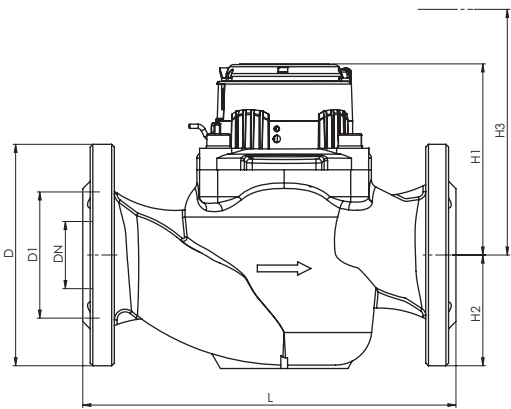
Flange according to ISO 7005-2. Other flanges on request
Attention: not all versions are available in all markets



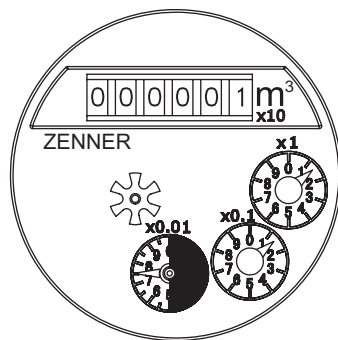
Dimensions



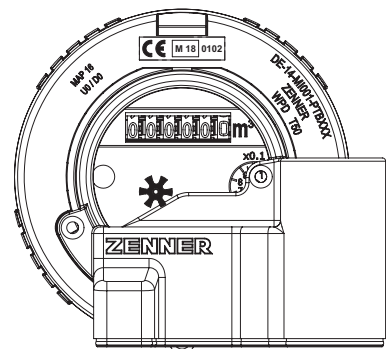
Pressure loss curve



DN 50 - 125
(WSD DN 50 - 200)



DN 150 - 300



ZENNER International GmbH & Co. KG

Heinrich-Barth-Straße 29
D-66115 Saarbrücken
Germany

Tel. +49 681 99 676-30
Fax +49 681 99 676-3100
E-mail info@zenner.com
Internet www.zenner.com