

IUW

Ultrasonic bulk water meter for use in drinking water distribution and industrial applications

The IUW ultrasonic bulk water meter is used to record high and fluctuating flows in drinking water distribution and in industry, with a very low pressure loss at the same time.

Two pairs of ultrasonic sensors ensure optimum measurement accuracy.

The IUW is factory-fitted with a 9-digit LCD display and an NFC interface. This enables a subsequent connection of a wM-Bus (OMS) or LoRaWAN®-NDC module. Via the plug and play function of the NDC module, the radio technology set on the meter is automatically adopted by the NDC module.

All variants are approved for any installation and are therefore also suitable for riser and downpipe installation. A head-down mounting is also possible.

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).



B.
One

Performance characteristics in overview

- Any installation position (even "head down")
- Switchable radio technology
- Highest precision and reliability even in case of low flow rates
- Insensitive to deposits and particles
- Battery-operated, electronic LCD register with galvanically isolated NFC interface
- Smart Metering functions (Warnings, alarms)
- Battery life > 15 Years
- Mechanical/electromagnetic environment class M2/E2
- Protection class IP68
- Operating pressure MAP 16

Applications

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

AMR options

- NFC interface (= Near Field Data Capture) for connecting an external NDC module and for device configuration

Technical data

Nominal diameter	DN	mm	50	50	65	65
Permanent Flowrate *	Q_3	m ³ /h	25	40	40	63
Attainable measuring range	Q_3/Q_1	R	500	800	500	800
Standard measuring range ¹	Q_3/Q_1	R	500	500	500	500
Overload Flowrate	Q_4	m ³ /h	31.25	50.00	50.00	78.75
Overload Flowrate max.	Q_{4M}	m ³ /h	55.00	55.00	87.00	87.00
Minimum Flowrate ²	Q_1	m ³ /h	0.05	0.08	0.08	0.13
Transitional Flowrate ²	Q_2	m ³ /h	0.08	0.13	0.13	0.20
Lower measuring limit	-	l/h	25	25	40	40
Display range	min	l	1	1	1	1
	max	m ³	999.999	999.999	999.999	999.999
Medium temperature	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
Storage / Transport Temperature ⁵	-	°C	-10 - +70	-10 - +70	-10 - +70	-10 - +70
Protection class	-	°C	68	68	68	68
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pressure loss class at Q_3	Δp	bar	0.16	0.25	0.16	0.25
Mechanical ambient conditions	-	-	M2	M2	M2	M2
Elektromagnetic ambient class ⁴	-	-	E2	E2	E2	E2
Climatic ambient conditions ³	-	°C	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0

Weight and dimensions

Nominal diameter	DN	mm	50	50	65	65
Overall length	L	mm	200/270/ 300	200/270/ 300	200/300	200/300
Height	H	mm	60	60	73	73
Height	H1	mm	150	150	165	165
Width	B	mm	120x120	120x120	145x145	145x145
Width	B1	mm	135	135	150	150
Flange diameter	D	mm	165	165	185	185
Bolt circle diameter	D1	mm	125	125	145	145
Number of screws	-	pcs.	4	4	4	4
Screw size	-	mm	M16	M16	M16	M16
Bolt diameter	-	mm	19	19	19	19
Weight approx.	-	kg	7.0/8.8/ 9.6	7.0/8.8/ 9.6	8.7/10.8	8.7/10.8

1: Other measuring ranges on request

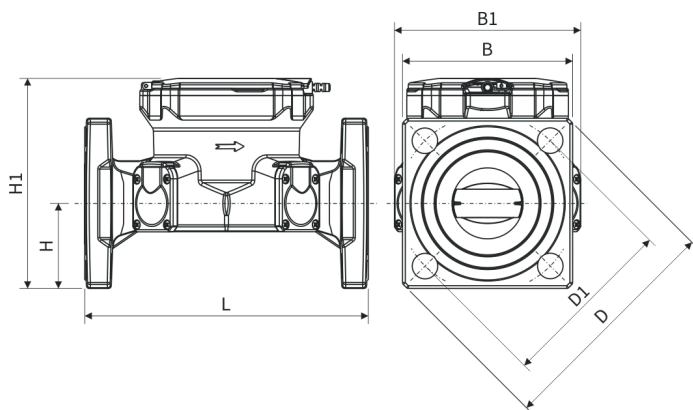
2: The data refer to the standard measuring range

3: Condensation possible

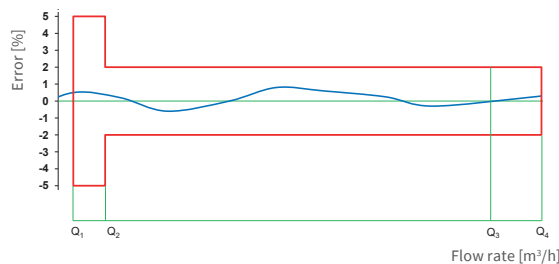
4: During electromagnetic interference, data transmission between the NFC interface and the NDC module may be disrupted, resulting in a loss of radio transmission. However, this does not affect the counting progress on the measuring device itself.

5: >35°C for up to 4 weeks

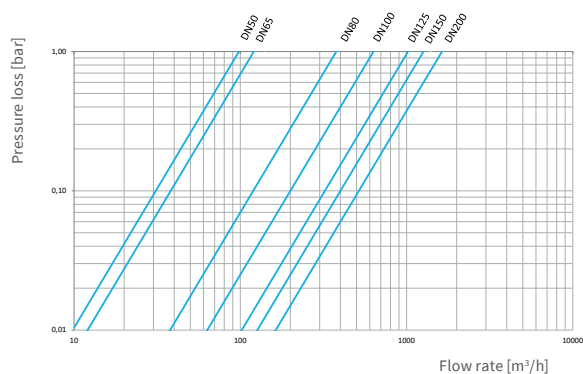
*Attention: Not all versions are available in all markets



Dimensions



Typical error curve



Pressure loss curve

Technical data

Nominal diameter	DN	mm	80	80	100	100
Permanent Flowrate *	Q_3	m ³ /h	63	100	100	160
Attainable measuring range	Q_3/Q_1	R	500	800	500	800
Standard measuring range ¹	Q_3/Q_1	R	500	500	500	500
Overload Flowrate	Q_4	m ³ /h	78.75	125.00	125.00	200.00
Overload Flowrate max.	Q_{4M}	m ³ /h	138.00	138.00	220.00	220.00
Minimum Flowrate ²	Q_1	m ³ /h	0.13	0.20	0.20	0.32
Transitional Flowrate ²	Q_2	m ³ /h	0.20	0.32	0.32	0.51
Lower measuring limit	-	l/h	63	63	100	100
Display range	min	l	1	1	1	1
	max	m ³	999.999	999.999	999.999	999.999
Medium temperature	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
Storage / Transport Temperature ⁵	-	°C	-10 - +70	-10 - +70	-10 - +70	-10 - +70
Protection class	-	°C	68	68	68	68
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pressure loss class at Q_3	Δp	bar	0.10	0.10	0.10	0.10
Mechanical ambient conditions	-	-	M2	M2	M2	M2
Elektromagnetic ambient class ⁴	-	-	E2	E2	E2	E2
Climatic ambient conditions ³	-	°C	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0

Weight and dimensions

Nominal diameter	DN	mm	80	80	100	100
Overall length	L	mm	200/225/ 300/350	200/225/ 300/350	250/350/360	250/350/360
Height	H	mm	94	94	104	104
Height	H1	mm	203	203	221	221
Width	B	mm	= D	= D	= D	= D
Width	B1	mm	< D	< D	< D	< D
Flange diameter	D	mm	200	200	220	220
Bolt circle diameter	D1	mm	160	160	180	180
Number of screws	-	pcs.	8	8	8	8
Screw size	-	mm	M16	M16	M16	M16
Bolt diameter	-	mm	19	19	19	19
Weight approx.	-	kg	11.2/11.6/ 12.6/13.9	11.2/11.6/ 12.6/13.9	13.7/16.2/16.3	13.7/16.2/16.3

1: Other measuring ranges on request

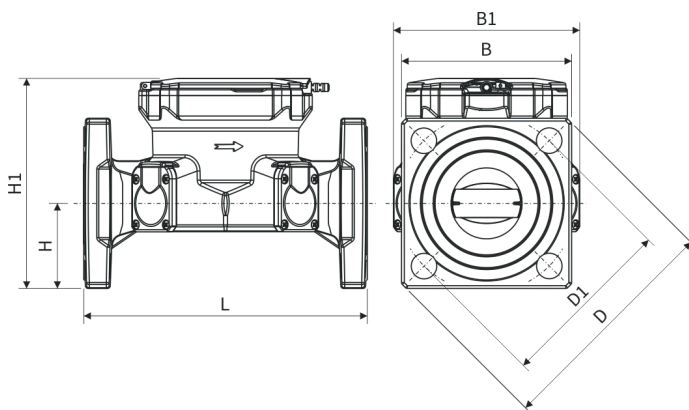
2: The data refer to the standard measuring range

3: Condensation possible

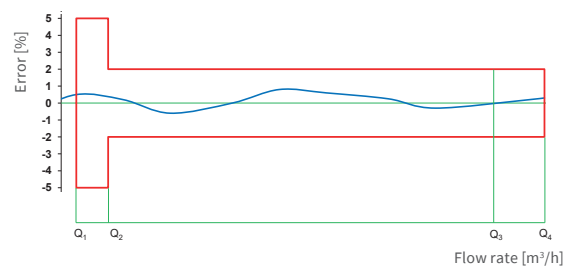
4: During electromagnetic interference, data transmission between the NFC interface and the NDC module may be disrupted, resulting in a loss of radio transmission. However, this does not affect the counting progress on the measuring device itself.

5: >35°C for up to 4 weeks

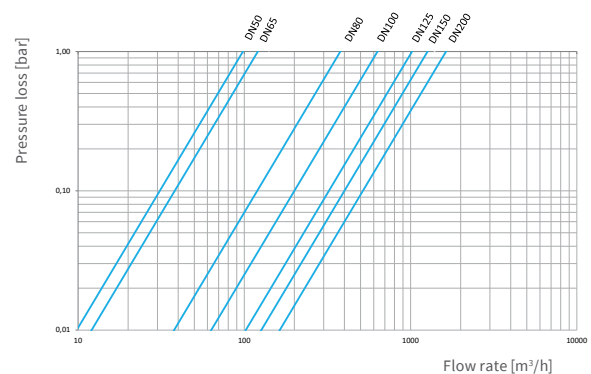
*Attention: Not all versions are available in all markets



Dimensions



Typical error curve



Pressure loss curve

Technical data

Nominal diameter	DN	mm	125	125	150	150
Permanent Flowrate +	Q_3	m ³ /h	160	250	250	400
Attainable measuring range	Q_3/Q_1	R	500	800	500	800
Standard measuring range ¹	Q_3/Q_1	R	500	500	500	500
Overload Flowrate	Q_4	m ³ /h	200.00	312.50	312.50	500.00
Overload Flowrate max.	Q_{4M}	m ³ /h	344.00	344.00	550.00	550.00
Minimum Flowrate ²	Q_1	m ³ /h	0.32	0.50	0.50	0.80
Transitional Flowrate ²	Q_2	m ³ /h	0.51	0.80	0.80	1.28
Lower measuring limit	-	l/h	100	250	250	250
Display range	min	l	1	1	10	10
	max	m ³	999.999	999.999	9.999.999	9.999.999
Medium temperature	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
Storage / Transport Temperature ⁵	-	°C	-10 - +70	-10 - +70	-10 - +70	-10 - +70
Protection class	-	°C	68	68	68	68
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pressure loss class at Q_3	Δp	bar	0.10	0.10	0.10	0.10
Mechanical ambient conditions	-	-	M2	M2	M2	M2
Elektromagnetic ambient class ⁴	-	-	E2	E2	E2	E2
Climatic ambient conditions ³	-	°C	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0

Weight and dimensions

Nominal diameter	DN	mm	125	125	150	150
Overall length	L	mm	250	250	300/500	300/500
Height	H	mm	117	117	135	135
Height	H1	mm	247	247	277	277
Width	B	mm	= D	= D	= D	= D
Width	B1	mm	< D	< D	< D	< D
Flange diameter	D	mm	250	250	285	285
Bolt circle diameter	D1	mm	210	210	240	240
Number of screws	-	pcs.	8	8	8	8
Screw size	-	mm	M16	M16	M20	M20
Bolt diameter	-	mm	19	19	23	23
Weight approx.	-	kg	16.4	16.4	24.1/29.4	24.1/29.4

1: Other measuring ranges on request

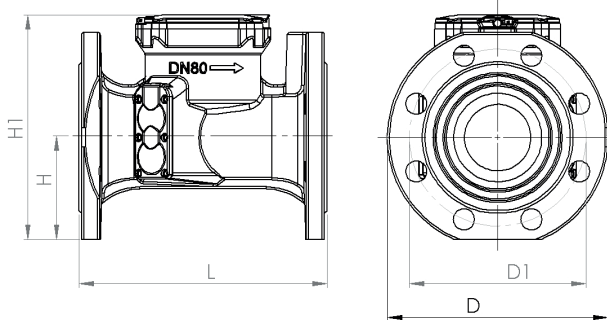
2: The data refer to the standard measuring range

3: Condensation possible

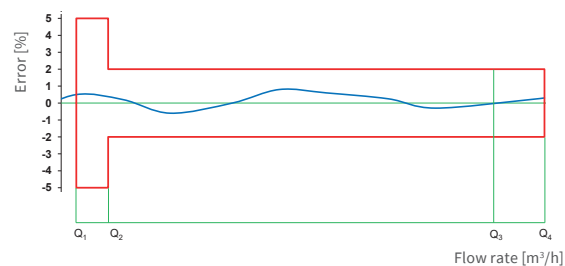
4: During electromagnetic interference, data transmission between the NFC interface and the NDC module may be disrupted, resulting in a loss of radio transmission. However, this does not affect the counting progress on the measuring device itself.

5: >35°C for up to 4 weeks

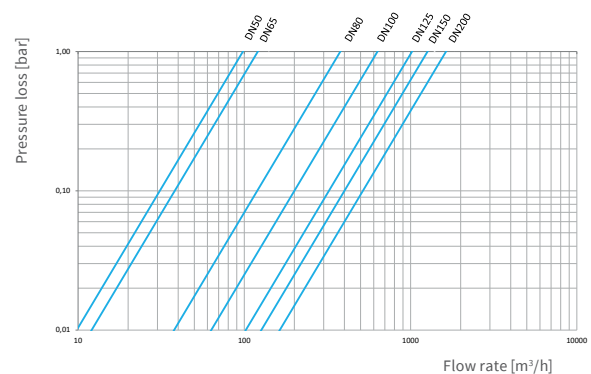
*Attention: Not all versions are available in all markets



Dimensions



Typical error curve



Pressure loss curve

Technical data

Nominal diameter	DN	mm	200	200	250	250	300
Permanent Flowrate *	Q_3	m ³ /h	400	630	630	1000	1000
Attainable measuring range	Q_3/Q_1	R	500	800	500 H	800 H	500 H
Standard measuring range ¹	Q_3/Q_1	R	500	500	500 H	500 H	500 H
Overload Flowrate	Q_4	m ³ /h	500.00	787.50	787.50	1250.00	1250.00
Overload Flowrate max.	Q_{4M}	m ³ /h	865.00	865.00	1375.00	1375.00	1375.00
Minimum Flowrate ²	Q_1	m ³ /h	0.80	1.26	1.26	2.00	2.00
Transitional Flowrate ²	Q_2	m ³ /h	1.28	2.02	2.02	3.20	3.20
Lower measuring limit	-	l/h	400	400	630	630	1000
Display range	min	l	10	10	10	10	10
	max	m ³	9.999.999	9.999.999	9.999.999	9.999.999	9.999.999
Medium temperature	-	°C	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50	0.1 - 50
Storage / Transport Temperature ⁵	-	°C	-10 - +70	-10 - +70	-10 - +70	-10 - +70	-10 - +70
Protection class	-	°C	68	68	68	68	68
Operating pressure	MAP	bar	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16	0.3 - 16
Pressure loss class at Q_3	Δp	bar	0.10	0.25	0.1	0.1	0.1
Mechanical ambient conditions	-	-	M2	M2	M2	M2	M2
Elektromagnetic ambient class ⁴	-	-	E2	E2	E2	E2	E2
Climatic ambient conditions ³	-	°C	5 - 55	5 - 55	5 - 55	5 - 55	5 - 55
Flow profile sensitivity	-	-	U0/D0	U0/D0	U0/D0	U0/D0	U0/D0

Weight and dimensions

Nominal diameter	DN	mm	200	200	250	250	300
Overall length	L	mm	350	350	450	450	500
Height	H	mm	162	162	193	193	220
Height	H1	mm	324	324	386	386	440
Width	B	mm	= D	= D	= D	= D	= D
Width	B1	mm	< D	< D	< D	< D	< D
Flange diameter	D	mm	340	340	405	405	460
Bolt circle diameter	D1	mm	295	295	355	355	410
Number of screws	-	pcs.	12	12	12	12	12
Screw size	-	mm	M20	M20	M24	M24	M24
Bolt diameter	-	mm	23	23	28	28	28
Weight approx.	-	kg	35.5	35.5	47.8	47.8	67.8

1: Other measuring ranges on request

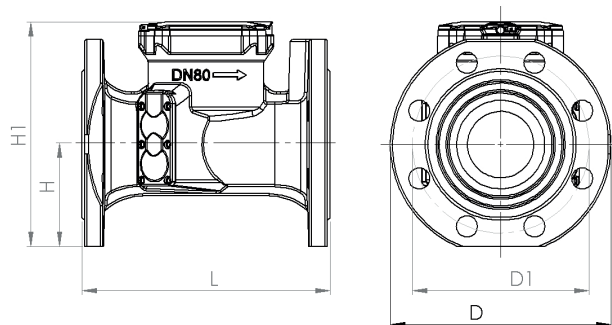
2: The data refer to the standard measuring range

3: Condensation possible

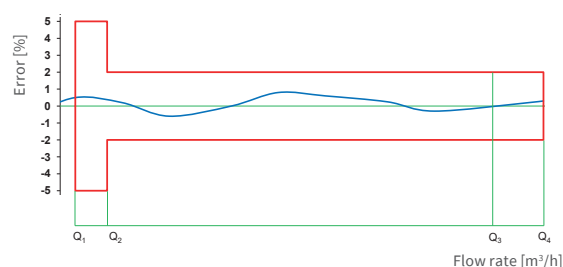
4: During electromagnetic interference, data transmission between the NFC interface and the NDC module may be disrupted, resulting in a loss of radio transmission. However, this does not affect the counting progress on the measuring device itself.

5: >35°C for up to 4 weeks

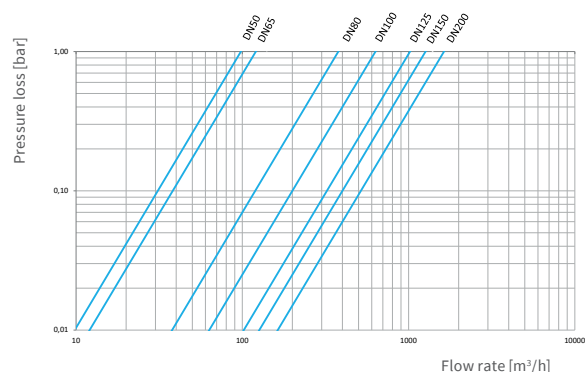
*Attention: Not all versions are available in all markets



Dimensions



Typical error curve



Pressure loss curve

ZENNER International GmbH & Co. KG

Heinrich-Barth-Straße 29 | 66115 Saarbrücken | Germany

Phone +49 681 99 676-30
Fax +49 681 99 676-3100

E-Mail
Internet

info@zenner.com
www.zenner.com