

HYDRUS

Ultrasonic Meter

EWT



APPLICATION

Static ultrasonic water meter for accurate measuring and recording for all applications of water supply.

FEATURES

- ▶ Real data communication, open metering telegram
- ▶ Long-term stability under difficult conditions
- ▶ Unlimited system capability
- ▶ Leak detection
- ▶ Higher performance than class D requirements
- ▶ No calming sections required
- ▶ No measurement of air
- ▶ Insensitive against sedimentation
- ▶ Mounting in any installation position, battery lifetime up to 16 years
- ▶ Suitable for outdoor installation
- ▶ Displaying of error and alarm codes
- ▶ No over-run performance

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GENERAL

		HYDRUS	
Medium temperature range	°C	1 ... 50	
Temperature safety	°C	1 ... 90	
Ambient operating temperature	°C	1 ... 70	
Ambient storage temperature	°C	-20 ... +70	
Nominal pressure	PN	bar	16
Power supply			One or two 3.6 VDC lithium batteries (second battery not possible at M-Bus)
Battery lifetime			Up to 12 years (one battery), up to 16 years (two batteries)
Interfaces			Optical, radio 434 or 868 MHz, M-Bus, L-Bus, pulse
Data storage			For events and for consumption values
Protection class			IP 68

TECHNICAL DATA DISPLAY

		HYDRUS	
Display indication			LCD, 8-digit
Units DN 15 - DN 32			Flow and volume (m ³ + 3 digits after the comma)
Units DN 40 + DN 50			Flow (m ³ + 3 digits after the comma); Volume (m ³ + 2 digits after the comma)
Values displayed (depending on configuration)			Volume- flow - mediums temperature - display test - current error and alarm status - date - primary and secondary address - radio signal ON/OFF - battery lifetime - accounting day - error hour counter - pulse values

INTERFACES

		HYDRUS	
Optical			For configuration of display and radio telegram, to switch to the various displays
Radio			434 or 868 MHz, real data telegram (configurable), Open Metering Standard
M-Bus			2400 Baud (adjustable to 300 Baud), configurable telegram, cable length 1.5 m
Pulse (Open collector)			Two configurable pulse outputs, cable length 1.5 m

HYDRUS_{DN 15 - 20}

Ultrasonic Meter

TECHNICAL DATA*

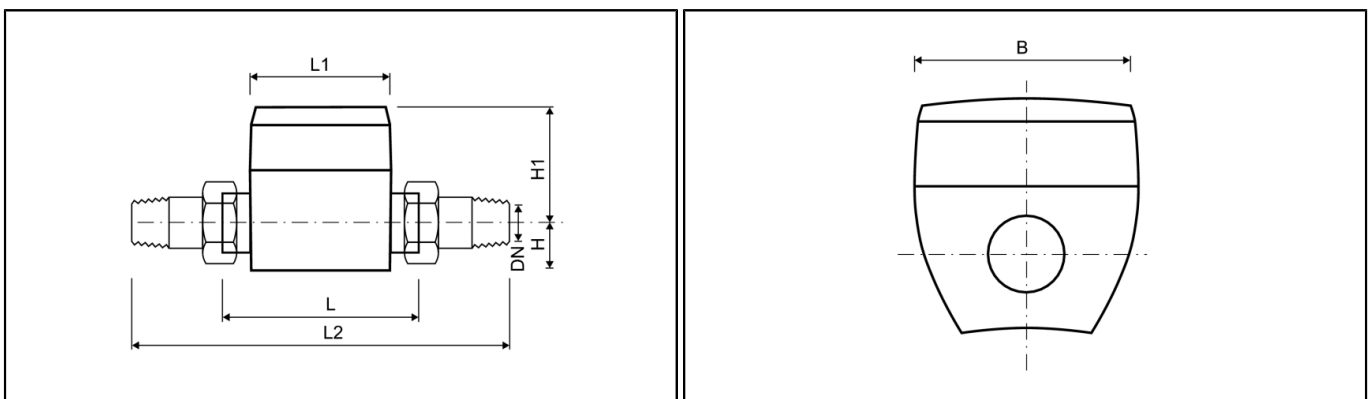
Nominal flow rate	Q ₃	m ³ /h	2.5	2.5	2.5	2.5	4	4
Nominal diameter	DN	mm	15	15	20	20	20	20
Overall length	L	mm	110	165	130	190	130	190
Overload flow rate	Q ₄	m ³ /h	3.125	3.125	3.125	3.125	5	5
Transition flow rate	Q ₂	l/h	16	16	16	16	25.6	25.6
Minimum flow rate	Q ₁	l/h	10	10	10	10	16	16
Starting flow rate		l/h	2.5	2.5	2.5	2.5	3.0	3.0
Pressure loss at Q ₃		bar	0.33	0.33	0.25	0.25	0.3	0.3

* at dynamic range R 250

APPROVAL

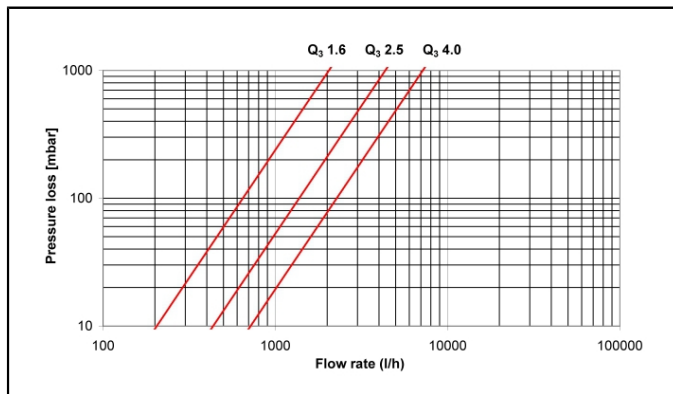
DN 15 - 20	
Approval	MID LNE 14586, OIML R49, EN 14154, TVO, KTW
Dynamic range (Q ₃ /Q ₁) - Q ₃ 2.5 - 4 m ³ /h	R 160 / 250 / 400

DIMENSIONS

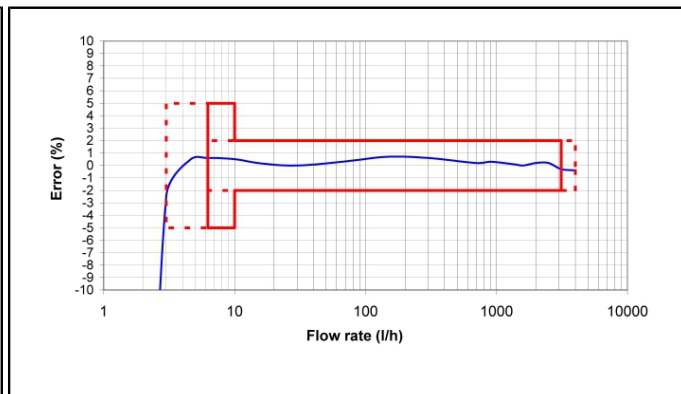


Nominal flow rate	Q ₃	m ³ /h	2.5	2.5	2.5	2.5	4	4
Nominal diameter	DN	mm	15	15	20	20	20	20
Overall length	L	mm	110	165	130	190	130	190
Counter length	L1	mm	88	88	88	88	88	88
Counter width	B	mm	94	94	94	94	94	94
Overall length with coupling	L2	mm	186	240	225	290	225	290
Connection thread on meter		Inch	G ³ / ₄ B	G ³ / ₄ B	G1B	G1B	G1B	G1B
Connection thread of coupling		Inch	R ¹ / ₂	R ¹ / ₂	R ³ / ₄	R ³ / ₄	R ³ / ₄	R ³ / ₄
Height	H	mm	32	32	34	34	34	34
Height	H1	mm	67	67	65	65	65	65
Weight without coupling (approx.)		kg	0.8	1	0.9	1.1	0.9	1.1
Weight with coupling (approx.)		kg	1	1.4	1.3	1.5	1.3	1.5

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph

HYDRUS^{DN 25 - 50}

Ultrasonic Meter

TECHNICAL DATA*

Nominal flow rate	Q ₃	m ³ /h	6.3	10	10	10	16	16	25
Nominal diameter	DN	mm	25	25	32	40	40	50	50
Overall length	L	mm	260	260	260	200	300	270	270 / 300
Overload flow rate	Q ₄	m ³ /h	7.87	12.5	12.5	20	20	31.25	31.25
Transition flow rate	Q ₂	l/h	50.4	80	64	64	128	102.4	200
Minimum flow rate	Q ₁	l/h	31.5	50	40	40	80	64	125
Starting flow rate		l/h	12	12	12	12	20	20	25
Pressure loss at Q ₃		bar	0.13	0.35	0.35	0.1	0.24	0.09	0.23

* at dynamic range R 200

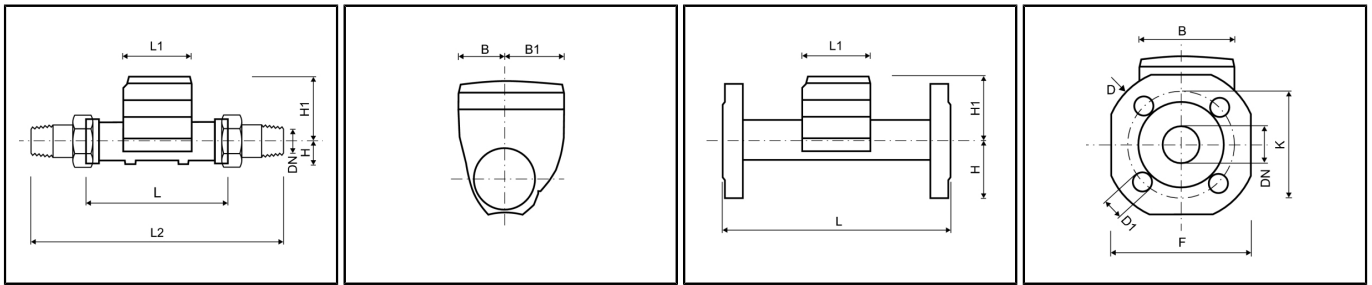
APPROVAL

DN 25 - 50		
Approval		MID LNE 14586, OIML R49, EN 14154, TVO, KTW
Dynamic range (Q ₃ /Q ₁) - Q ₃ 6.3 m ³ /h	R	40 / 80 / 160 / 200
Dynamic range (Q ₃ /Q ₁) - Q ₃ 10 m ³ /h	R	40 / 80 / 160 / 200 / 250
Dynamic range (Q ₃ /Q ₁) - Q ₃ 16 m ³ /h	R	40 / 80 / 160 / 200 / 250 / 400
Dynamic range (Q ₃ /Q ₁) - Q ₃ 25 m ³ /h	R	40 / 80 / 160 / 200 / 250 / 400

HYDRUS^{DN 25 - 50}

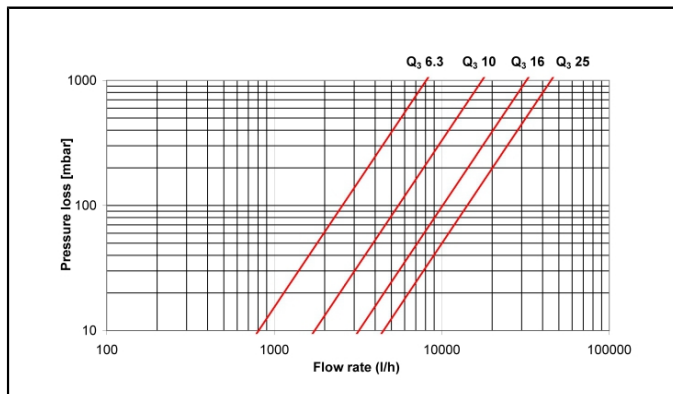
Ultrasonic Meter

DIMENSIONS

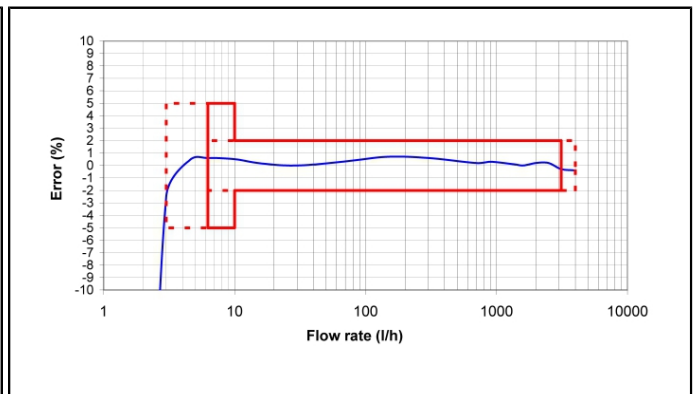


Nominal flow rate	Q ₃	m ³ /h	6.3	10	10	10	16	16	25
Nominal diameter	DN	mm	25	25	32	40	40	50	50
Overall length	L	mm	260	260	260	200	300	270	270 / 300
Counter length	L1	mm	92	92	92	92	92	92	92
Counter width	B	mm	94	94	94	94	94	94	94
DIMENSIONS - THREAD									
Overall length with coupling	L2	mm	380	380	380	340	440	390	-
Connection thread on meter		Inch	G1¼B	G1¼B	G1½B	G2B	G2B	G2½B	-
Connection thread of coupling		Inch	R1	R1	R1¼	R1½	R1½	R2	-
Height	H	mm	26	26	26	31	31	41	-
Height	H1	mm	84	84	84	87	87	90	-
Weight without coupling (approx.)		kg	1.6	1.6	1.8	2.4	3.05	3.9	-
Weight with coupling (approx.)		kg	2.2	2.2	2.4	3.6	4.25	5.5	-
DIMENSIONS - FLANGE									
Flange diameter	D	mm	115	115	140	-	148	163	163
Hole circle diameter	K	mm	85	85	100	-	110	125	125
Number of screwholes		pcs	4	4	4	-	4	4	4
Screwhole diameter	D1	mm	18	14	18	-	18	18	18
Height	H	mm	50	50	62.5	-	69	73.5	73.5
Height	H1	mm	84	84	84	-	87	90	90
Width	F	mm	49.5	49.5	49.5	-	52.5	56	56
Weight with flanges (approx.)		kg	3.45	3.45	4.7	-	6.67	7.23	6.95 / 7.47

PRESSURE LOSS GRAPH / TYPICAL ERROR GRAPH



Pressure loss graph



Typical error graph