

HYDRUS 2.0

ULTRASONIC METER

DIEHL
Metering



APPLICATION

Highly accurate, lead-free brass ultrasonic smart water meter for all residential, commercial and industrial installations

FEATURES

- ▶ Extreme low-flow accuracy and long term measurement stability
- ▶ Integrated leak detection
- ▶ Mountable in any installation position
- ▶ Lead-free copper alloy "CUPHIN®" body
- ▶ UV resistant housing with IP 68 rating
- ▶ Over 40 days of hourly data storage
- ▶ Diehl Extended Encoder protocol that includes, temperature, alarms and error messages, etc.
- ▶ Meets or exceeds C715 AWWA/ANSI Standards
- ▶ Complies with NSF/ANSI Standards 61, Annex F/G as well as FCC part 15 B

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GENERAL TECHNICAL DATA

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Potable water temperature range	°F 34 ... 122
Ambient operating temperature	°F 34 ... 158
Ambient storage temperature	°F -4 ... +140(> 90° F max. for one hour)
Maximum pressure	psi 300
Power supply	Two 3.6 VDC lithium batteries
Battery lifetime	Up to 20 years
Interfaces	Optical, industry standard Encoder protocol, ASCII output for compatibility with all AMR/AMI systems, Diehl Extended protocol is available
Data storage	Alarms and consumption values (42 days memory configurable value hourly / daily)
Protection class	IP 68
Operating performance	In the temperature range of 45 to 85° F, meter consumption measurement is accurate to ±1.5% over the normal flow range (reference: approved Diehl Metering test bench, ISO9001 certified)

TECHNICAL DATA DISPLAY

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Display indication	LCD, 9-digit, additional symbols/display counter/unit
Units	Flow and volume (gpm, gal, ft ³ , m ³)
Values displayed (depending on configurations)	Volume - high resolution volume - flow - reverse flow - medium temperature - display test - current /continuous / historic error and alarm status - leak - metrology log access - display counter - units - accounting day, date and volume - software checksum
Alarms	Leak Alarm; Low Power; Tampering Alarm; Reverse Flow; Over Flow; Temperature Alarm; No Usage

APPROVAL

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NSF	Complies with NSF/ANSI Standard 61, Annex F/G
AWWA	Meets or exceeds applicable sections of the AWWA/ANSI C715 Standards
FCC	Complies with FCC part 15 B

MATERIAL

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Measuring pipe	Lead-free copper alloy "CUPHIN®"
Register housing	Engineered Polymer
Transducers	Composite
Reflectors	Stainless steel

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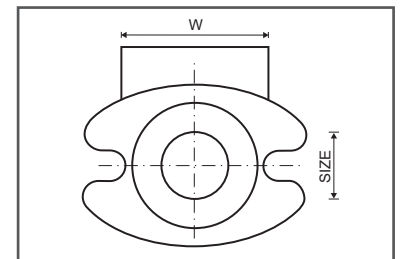
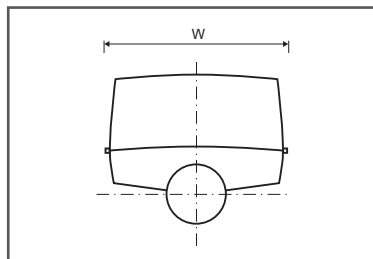
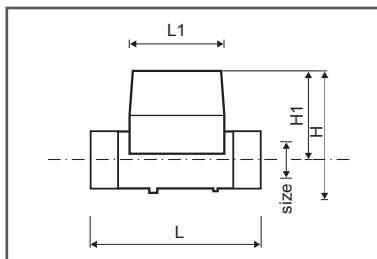
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TECHNICAL DATA

Size			5/8" x 1/2"	5/8" x 3/4"	3/4" S	3/4"
Lay length	L	Inch	7 1/2	7 1/2	7 1/2	9.0
Safe Maximum Operating Capacity (SMOC)		gpm	0.08 - 22	0.1 - 22	0.1 - 32	0.1 - 32
Minimum test flow rate		gpm	0.025 - 0.08	0.04 - 0.1	0.04 - 0.1	0.04 - 0.1
Operating range accuracy		%	±1.5	±1.5	±1.5	±1.5
Low flow range accuracy		%	±5	±5	±5	±5
Pressure loss			4.3 psi at 15 gpm	2.0 psi at 15 gpm	2.0 psi at 15 gpm	2.0 psi at 15 gpm
Operating performance	In the temperature range of 45 to 85 °F, meter consumption measurement is accurate to +/- 1.5% over the normal operating flow range (reference: Approved Diehl Metering test bench, ISO 9001 certified)					

Size			1"	1 1/2"	2"	2"
Lay length	L	Inch	10 3/4	13	10	17
Normal test flow limits up to SMOC		gpm	0.1 - 55	0.16 - 100	0.8 - 170	0.8 - 170
Minimum test flow rate		gpm	0.055 - 0.1	0.1 - 0.16	0.55 - 0.8	0.55 - 0.8
Operating range accuracy		%	±1.5	±1.5	±1.5	±1.5
Low flow range accuracy		%	±5	±5	±5	±5
Pressure loss			1.5 psi at 25 gpm	3.5 psi at 70 gpm	3.6 psi at 110 gpm	3.6 psi at 110 gpm
Operating performance	In the temperature range of 45 to 85 °F, meter consumption measurement is accurate to +/- 1.5% over the normal operating flow range (reference: Approved Diehl Metering test bench, ISO 9001 certified)					

DIMENSIONS



Size			5/8" x 1/2"	5/8" x 3/4"	3/4" S	3/4"
Lay length	L	Inch	7 1/2	7 1/2	7 1/2	9.0
Register length	L1	Inch	3.5	3.5	3.5	3.5
Register width	W	Inch	3.7	3.7	3.7	3.7
Overall height	H	Inch	4.0	4.0	4.0	4.0
Height from center of pipe to top	H1	Inch	2.7	2.7	2.7	2.7
Nominal thread size			3/4" - 14 NPSM	1" - 11 1/2 NPSM	1" - 11 1/2 NPSM	1" - 11 1/2 NPSM
Net weight		lbs.	2.8	2.8	2.8	3.1

Size			1"	1 1/2"	2"	2"
Lay length	L	Inch	10 3/4	13	10	17
Register length	L1	Inch	3.5	3.5	3.5	3.5
Register width	W	Inch	3.7	3.7	3.7	3.7
Overall height	H	Inch	4.2	5.3	5.8	5.8
Height from center of pipe to top	H1	Inch	2.8	3.3	3.3	3.3
Nominal thread size			1 1/4" - 11 1/2 NPSM	flanges	flanges	flanges
Net weight		lbs.	3.5	14.1	16.1	19.2

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<https://www.diehl.com/metering/us/en/>

