

HYDRUS 2.0 USA

ULTRASONIC METER

DIEHL
Metering



APPLICATION

The HYDRUS 2 ultrasonic smart water meter sets the standard for highly accurate water consumption measuring and enables digitalized smart meter reading for all residential, commercial and industrial applications.

- ▶ Extreme low-flow accuracy with innovative ultrasonic technology and long term measuring stability
- ▶ Measurement accuracy is maintained over a wide range of flow rates
- ▶ Lead-free brass body, UV resistant housing with IP 68 rating
- ▶ Battery lifetime of up to 20 years and maintenance-free operation over the entire installation period

GENERAL FEATURES

- Lead-free copper alloy "CUPHIN®"
- Diehl Extended Encoder protocol that includes, temperature, alarms and error messages, etc.
- Mountable in any installation position
- Designed for indoor or meter pit installation (IP 68)
- 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

Hydrus 2.0 USA	
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	3.6 VDC lithium battery
Battery lifetime	Up to 20 years
Interfaces	Optical, industry standard Encoder protocol, ASCII output for compatibility with all AMR/AMI systems, Diehl Extendend 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

HYDRUS 2.0 USA	
Display indication	LCD, 9-digit, additional symbols/display counter/unit
Units	Flow and volume (GPM, gal, Ft 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; Temperture Alarm; No Usage

APPROVAL

HYDRUS 2.0 USA	
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

HYDRUS 2.0 USA	
Measuring pipe	Lead-free copper alloy "CUPHIN®"
Register housing	Engineered Polymer
Transducers	Composite
Reflectors	Stainless steel

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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	7½	7½	7½	9.0
Operating flow range		GPM	0.08 - 22	0.1 - 22	0.1 - 32	0.1 - 32
Low flow range		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"
Lay length	L	Inch	10¾	13	17
Operating flow range		GPM	0.1 - 55	0.16 - 100	0.8 - 170
Low flow range		GPM	0.055 - 0.1	0.1 - 0.16	0.55 - 08
Operating range accuracy		%	±1.5	±1.5	±1.5
Low flow range accuracy		%	±5	±5	±5
Pressure loss			1.5 psi at 25 GPM	3.5 psi at 70 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	7½	7½	7½	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 to center of pipe	H1	Inch	1.3	1.3	1.3	1.3
Nominal thread size			¾" - 14 NPSM	1" - 11½ NPSM	1" - 11½ NPSM	1" - 11½ NPSM
Net weight		Ib	2.8	2.8	2.8	3.1

Size			1"	1 1/2"	2"
Lay length	L	Inch	10¾	13	17
Register length	L1	Inch	3.5	3.5	3.5
Register width	W	Inch	3.7	3.7	3.7
Overall height	H	Inch	4.2	5.3	5.8
Height to center of pipe	H1	Inch	1.4	2	2.5
Nominal thread size			1¼" - 11½ NPSM	flanges	flanges
Net weight		Ib	3.5	14.1	19.2

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www.diehl.com/metering

