AccentPDIR

USER MANUAL

ACS Series

Multi-jet Dry Type

Hot Water Meters with Contact Output

ACS-H-075-R •ACS-H-100-R

ACS-H-150-R •ACS-H-200-R

www.accentpdir.com • 2564 Industry Lane • Norristown, PA 19403 • 888-265-5632

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ACS-H-075R-200R

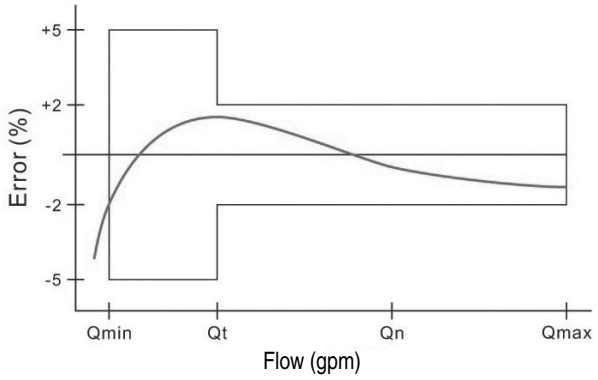
Main Technical Data

Nominal diameter		DN	075 - 3/4	100 - 1”	150 - 1 1/2”	200 - 2”
Maximum flow rate	US gpm	Qmax	22	30.8	88	132
Nominal flow rate	US gpm	Qn	11	15.4	44	66
Transition flow rate	US gpm	Qt	0.88	1.23	3.52	5.3
Minimum flow rate	US gpm	Qmin	0.22	0.31	0.88	1.32
Minimum reading	US gallon		0.01	0.01	0.1	0.1
Minimum graduation	US gallon		0.005	0.005	0.05	0.05

✦ Maximum Permissible Error:

In the lower zone from Qmin inclusive up to but excluding Qt is ±5%.
In the upper zone from Qt inclusive up to and including Qmax is ±2%.

Accuracy Curve



Specifications

Temperature		194°F (90°C) max
Pressure		150 psi operating
Materials	Body	Cast bronze
	Internals	Engineered thermoplastic
	Magnet	Alnico
Accuracy		+/- 1.5% of reading
Sensor		Reed switch
Maximum Current		20 mA
Maximum Voltage		24 Vdc or Vac
Cable Length		12’(4m) std (2000’max run)

General Information

ACS Series meters use the internationally-accepted multi-jet principle. A gear train drives the register totalizer dials. For pulse output, one of the pointers is replaced by a magnet arm, which is detected by a reed switch sensor attached to the outside of the lens. The reed switch provides dry contact closure and does not require power.

Pulse Output

Reed switch sensors respond to a magnet that rotates on the face of the meter under the lens. The sensor turns on and off once each time the magnet passes under it. Sensors are designed for electronic control loads, and should not be used to switch power loads or line voltages. See maximum current and voltage ratings, under specifications.

Inlet Strainer

Clean the strainer yearly, or as required, depending on water condition. Pull out the strainer or back-flush the meter to loosen trapped particulates.

Calibration

New meters are factory tested to meet AWWA C-708 Multi-Jet Meter accuracy specification.

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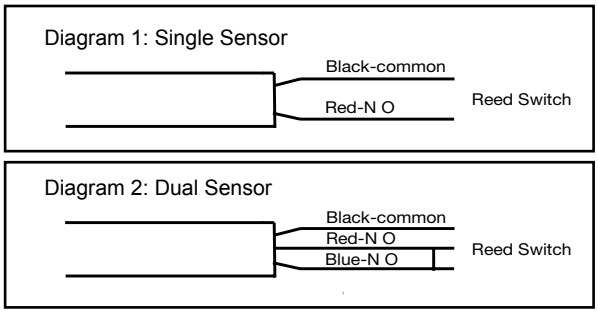
ACS-H- 075R-200R

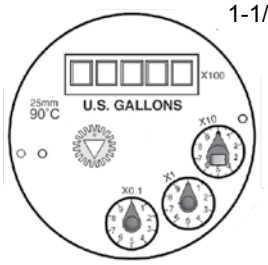
Suggested Meter Installation

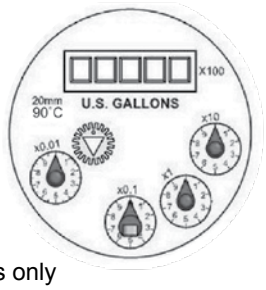
- Thoroughly flush the service line upstream of the meter to remove dirt and debris.
- Set the meter inline. Water meters are recommended to be installed horizontally with the register facing upwards.
- Make sure the water flow follows the arrow cast on the meter body.
- Slowly open any upstream valves to prevent damage to the meter.

Connection Diagrams



1-1/2” and 2” meters





3/4” and 1” meters only

Meter Size	Pulse Rate	Drive Gear Position	Connection Diag.#
3/4”	20 P/G	X0.01	2
	10 P/G	X0.01	1
	4 P/G	X0.1	1& magnet wheel
	2 P/G	X0.1	2
	1 P/G	X0.1	1
	5 G/P	X1	2
	10 G/P	X1	1
	50 G/P	X10	2
	100 G/P	X10	1
1”	20 P/G	X0.01	2
	10 P/G	X0.01	1
	4 P/G	X0.1	1& magnet wheel
	2 P/G	X0.1	2
	1 P/G	X0.1	1
	5 G/P	X1	2
	10 G/P	X1	1
	50 G/P	X10	2
	100 G/P	X10	1
1-1/2”	4 P/G	X0.1	1& magnet wheel
	2 P/G	X0.1	2
	1 P/G	X0.1	1
	5 G/P	X1	2
	10 G/P	X1	1
	50 G/P	X10	2
	100 G/P	X10	1
2”	4 P/G	X0.1	1& magnet wheel
	2 P/G	X0.1	2
	1 P/G	X0.1	1
	5 G/P	X1	2
	10 G/P	X1	1
	50 G/P	X10	2
	100 G/P	X10	1

Changing Pulse Rates

The pulse rate is determined by the dial on which the magnet pointer is located. To move the magnet pointer, remove meter top and lens, taking care not to lose the sealing ring. With fingers, lift the magnet pointer off its shaft and remove the plain pointer from the target dial. Reverse their positions and press them firmly into place. Securely seat the sealing ring and then replace the lens, matching the tab on the lens to the notch on the meter so as to align the sensor with the magnetic pointer dial. Thread the meter top on and tighten.

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Warranty

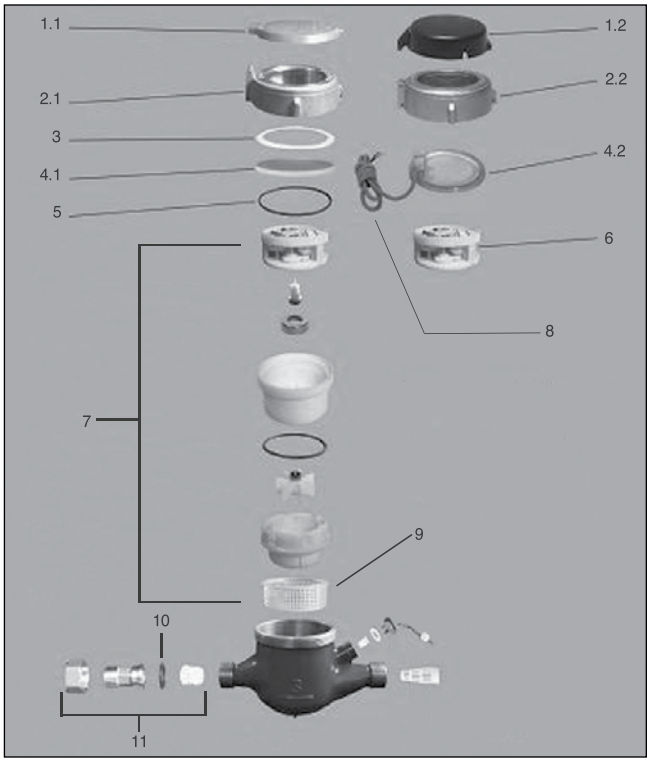
ACS water meters are warranted to perform to AWWA new meter accuracy standards, and to be free from defects in materials and workmanship for a period of 12 months from date of shipment. If a meter does not perform as warranted, AccentPDIR will repair it free of charge subject to the terms of this warranty.

AccentPDIR liability under this performance warranty is expressly limited to the repair or replacement of the meter upon the customer's returning the complete meter prepaid to:

AccentPDIR
Repair Department
2564 Industry Lane
Norristown, PA 19403

This performance guarantee shall not be applicable to meters which have been damaged by aggressive water conditions, foreign matter in media, mis-application, willful misconduct, negligence, vandalism, act of God, improper installation, frost/freeze damage or using the meter outside of it's specific operating parameters (especially temperature and flow ranges).

In no event shall AccentPDIR be liable for incidental or consequential damages of any kind, including but not limited to loss of profits or revenue, loss of use, cost of capital, cost of substitute equipment, facilities or services, downtime costs, delays and claims of customers of the customer or other third parties.



Internal Parts Replacement

All the internal parts of the meter lift out as a unit, after the top has been unscrewed. The lens can then be removed and the internal assembly lifted out. If necessary, turn the meter upside down and tap one end lightly on a countertop to loosen the internals. The assembly can be separated by hand.

		Parts	3/4"	1"	1 1/2"	2"
1		Lid and Hinge Pin Assembly	A4023	A4024	A4025	A4026
2		Lens Gasket Assembly	A4004	A4005	A4006	A4006
3		Internal Assembly (gallons)	A4120	A4121	A4122	A4123
4		Coupling Assembly	A4027	A4029	A4031	A4033
5		Coupling Gasket Assembly	A4028	A4030	A4032	A4034
6		Lens	A4003	A4003	A4003	A4003
8	a	Single Reed Switch Sensor	A0001	A0001	A0001	A0001
	b	Double Reed Switch Sensor	A0002	A0002	A0002	A0002
9	a	Register (gallons)	A4007	A4009	A4011	A4013
	b	Register (cubic meters)	A4008	A4010	A4012	A4014
10		Internal Strainer	A4015	A4017	A4019	A4021
11		Tubular Strainer	A4016	A4018	A4020	A4022