

accuMAG™ Meters

1-1/2", 2", 3", 4", 6", 8", 10", 12", 14", 16", 18", 20" and 24"

Description

1-1/2", 2", 3", 4", 6", 8", 10", 12", 14", 16", 18", 20" and 24" Sizes

The accuMAG meter operation is based on electromagnetic flow (EMF) technology.



Features

CONFORMANCE TO STANDARDS

The accuMAG meter meets and far exceeds the flow requirements of the most recent revision of AWWA Standard C701 class II. Each meter is performance tested to ensure accuracy compliance. The accuMAG meters meet NSF/ANSI Standard 61, Annex F and G.

PERFORMANCE

The measurement principles of the accuMAG meter assure enhanced accuracy ranges, and an extended service life. The accuMAG meter has no restrictions as to sustained flow rates within its continuous operating range. The measuring tube allows for flows up to its rated maximum capacity without undue wear or accuracy degradation due to no moving parts.

CONSTRUCTION

The accuMAG meter consists of two basic assemblies; the measuring tube and the liner. The measuring tube consists of polyurethane coated steel housing and a nonmagnetic alloy tube with an obstruction-less cross section and a homogenous magnetic field. The liner of the measuring tube is made of Rilsan® and is resistant to corrosion, aging and abrasion.

ELECTRONIC REGISTER

The accuMAG electronic register can be supplied either attached to the meter or a remote design. In the remote design, the register can be installed (between 30 to 75 feet) on the wall or on a post. Additionally, the large character LCD displays AMR, Totalization and a Resettable Test Totalizer. accuMAG register features; AMR resolution units that are fully programmable, Pulse output units are fully programmable, Integral resettable accuracy testing feature compatible with UniPro Testing Assistant Programs, Large, easy-to-read LCD also displays both forward and reverse flow directions. The accuMAG register has extremely low power consumption and with a sampling rate of 1/15 Hz, the water meter can operate for more than ten years before the batteries would need to be replaced.

MEASURING TECHNOLOGY

An electrically conductive fluid flows inside an electrically insulating pipe through a magnetic field. The magnetic field is generated by a current, flowing through a pair of field coils. Inside of the fluid, a voltage is generated. The signal voltage is picked off by

electrodes and is proportional to the mean flow velocity and thus the flow rate. The signal voltage is very small. The register amplifies the signal voltage, filters it and converts it into signals for totalization, recording and output processing. When installed in any orientation.

MAINTENANCE

The accuMAG meter is designed for easy maintenance. With no moving parts, the maintenance consists of inspecting the measuring tube for deposits or abrasions and battery health.

AMR / AMI SYSTEMS:

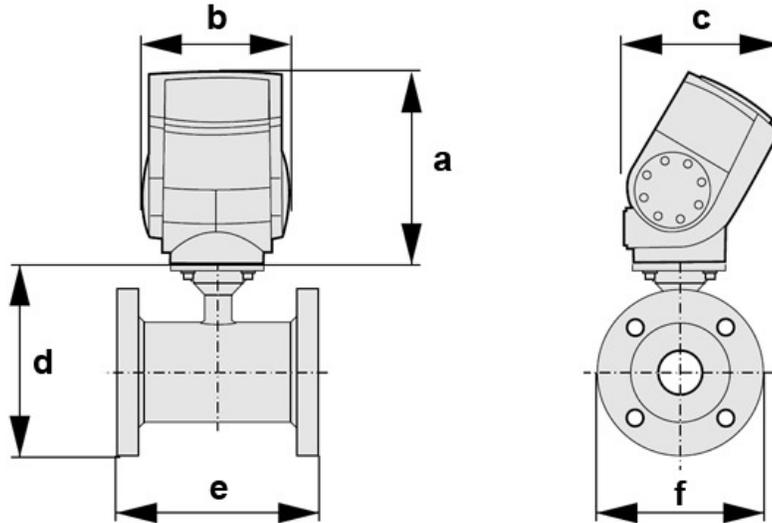
Meters and encoders are compatible with current Sensus AMR/AMI systems.

GUARANTEE

Sensus accuMAG Water Meters are backed by "The Sensus Guarantee." Ask your Sensus representative for details or see Bulletin G-500.

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Register Mounted to Meter

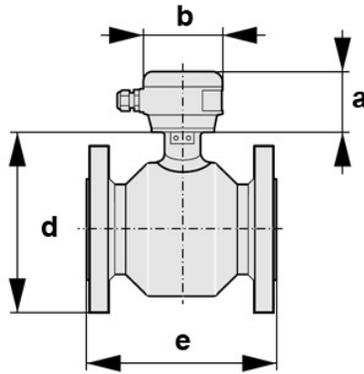


DIMENSIONS AND NET WEIGHTS

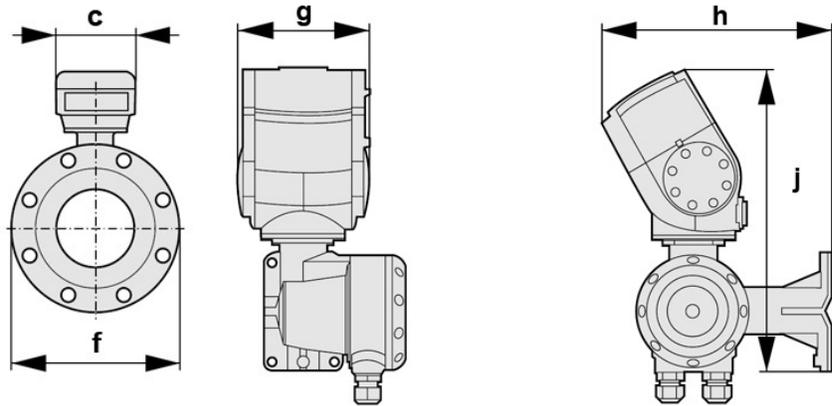
| Meter and Pipe Size | Normal Operating Range | | Connections | A | B | C | D | E | F | Net Weight |
|---------------------|-------------------------------------|--------------------------------------|-------------|---------------|---------------|---------------|-----------------|-----------------|----------------|---------------------|
| 1-1/2" DN 40mm | .7 gpm .16 m ³ /hr | 180 gpm 40.9 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 6" 152mm | 5.91" 150mm | 4.92" 125mm | 21 lbs. 9.5 kg. |
| 2" DN 50mm | 1.2 gpm .27 m ³ /hr | 320 gpm 72.7 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 7.05" 180mm | 7.87" 200mm | 5.98" 152mm | 34 lbs. 15.4 kg. |
| 3" DN 80mm | 2.8 gpm .63 m ³ /hr | 720 gpm 163 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 8.03" 204mm | 7.87" 200mm | 7.5" 190mm | 42 lbs. 17 kg. |
| 4" DN 100mm | 5 gpm 1.13 m ³ /hr | 1250 gpm 284 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 9.49" 240mm | 9.84" 250mm | 9" 228mm | 56 lbs. 17 kg. |
| 6" DN 150mm | 11 gpm 2.5 m ³ /hr | 2850 gpm 647 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 11.69" 297mm | 11.81" 300mm | 11" 280mm | 80 lbs. 29 kg. |
| 8" DN 200mm | 19.5 gpm 4.4 m ³ /hr | 5100 gpm 1158 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 14.25" 362mm | 13.78" 350mm | 13.5" 343mm | 100 lbs. 36 kg. |
| 10" DN 250mm | 31 gpm 7.0 m ³ /hr | 8000 gpm 1816 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 16.3" 414mm | 15.75" 400mm | 16" 406mm | 148 lbs. 50 kg. |
| 12" DN 300mm | 44.5 gpm 10.1 m ³ /hr | 11500 gpm 2610 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 18.78" 477mm | 19.69" 500mm | 19" 482mm | 212 lbs. 60 kg. |
| 14" DN 350mm | 182 gpm 41.3 m ³ /hr | 15700 gpm 3564 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 20.67" 525mm | 27.56" 700mm | 21" 533mm | 289 lbs. 80 kg. |
| 16" DN 400mm | 237 gpm 53.8 m ³ /hr | 20500 gpm 4654 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 22.95" 583mm | 31.5" 800mm | 23.5" 597mm | 369 lbs. 103 kg. |
| 18" DN 450mm | 300 gpm 68.1 m ³ /hr | 26000 gpm 5902 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 24.72" 628mm | 31.5" 800mm | 25" 635mm | 415 lbs. 113 kg. |
| 20" DN 500mm | 370 gpm 84 m ³ /hr | 32100 gpm 7287 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 26.67" 677mm | 31.5" 800mm | 27.5" 698mm | 497 lbs. 132 kg. |
| 24" DN 600mm | 385 gpm 87.4 m ³ /hr | 33400 gpm 7582 m ³ /hr | Flanged | 6.7" 170mm | 4.8" 122mm | 5.5" 140mm | 31.38" 797mm | 31.5" 800mm | 32" 813mm | 680 lbs. 167 kg. |

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Remote Register Version



Remote Register for Wall or Post Mount



DIMENSIONS AND NET WEIGHTS

| Meter and Pipe Size | Normal Operating Range | | Connections | A | B | C | D | E | F | G | H | J | Net Weight |
|---------------------|------------------------|-------------------------|-------------|--------------|---------------|---------------|-----------------|-----------------|----------------|---------------|----------------|----------------|---------------------|
| 1-1/2" DN 40mm | .7 gpm .16 m³/hr | 180 gpm 40.9 m³/hr | Flanged | 3.1" 79mm | 5.5" 140mm | 4.2" 107mm | 6" 152mm | 5.91" 150mm | 4.92" 125mm | 4.8" 122mm | 13.2" 335mm | 12.2" 310mm | 21 lbs. 9.5 kg. |
| 2" DN 50mm | 1.2 gpm .27 m³/hr | 320 gpm 72.7 m³/hr | Flanged | 3.1" 79mm | 5.5" 140mm | 4.2" 107mm | 7.05" 180mm | 7.87" 200mm | 5.98" 152mm | 4.8" 122mm | 13.2" 335mm | 12.2" 310mm | 34 lbs. 15.4 kg. |
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SPECIFICATIONS

| | | | | | | | | | | | | | | | | | |
|--|---|--------------------------------|---------------------------|------------------------|--------------------------|-----------------|-------|---------------|--|------------------------------|-----------------|-----------------------------|-----------------|--------------------------|---------------------------------------|--|---------------------------------------|
| SERVICE | Measurement of potable and reclaim water. Operating temperature range of 23 °F (-5 °C) to 158 °F (70 °C) | | | | | | | | | | | | | | | | |
| OPERATING RANGE (100% ± 1.5%) | 1-1/2" - 0.7 - 180 GPM (.16 - 40.9 m ³ /hr) 2" - 1.2 - 320 GPM (.27 - 72.7 m ³ /hr) 3" - 2.8 - 720 GPM (.63 - 163 m ³ /hr) 4" - 5 - 1,250 GPM (1.13 - 284 m ³ /hr) 6" - 11 - 2,850 GPM (2.5 - 647 m ³ /hr) 8" - 19.5 - 5,100 GPM (4.4 - 1,158 m ³ /hr) 10" - 31 - 8,000 GPM (7.0 - 1,816 m ³ /hr) 12" - 44.5 - 11,500 GPM (10.1 - 2,610 m ³ /hr) 14" - 182 - 15,700 GPM (41.3 - 3,564 m ³ /hr) 16" - 237 - 20,500 GPM (53.8 - 4,654 m ³ /hr) 18" - 300 - 26,000 GPM (68.1 - 5,902 m ³ /hr) 20" - 370 - 32,100 GPM (84.0 - 7,287 m ³ /hr) 24" - 385 - 33,400 GPM (87.4 - 7,582 m ³ /hr) | | | | | | | | | | | | | | | | |
| LOW FLOW (> 95%) | 1-1/2" - .3 GPM (.07 m ³ /hr) 2" - .4 GPM (.09 m ³ /hr) 3" - .7 GPM (.16 m ³ /hr) 4" - 1.3 GPM (.29 m ³ /hr) 6" - 3 GPM (.68 m ³ /hr) 8" - 5.5 GPM (1.25 m ³ /hr) 10" - 8.4 GPM (1.91 m ³ /hr) 12" - 12 GPM (2.72 m ³ /hr) 14" - 49 GPM (11.1 m ³ /hr) 16" - 64.5 GPM (14.6 m ³ /hr) 18" - 82 GPM (18.6 m ³ /hr) 20" - 101 GPM (22.9 m ³ /hr) 24" - 105 GPM (23.8 m ³ /hr) | | | | | | | | | | | | | | | | |
| MAXIMUM CONTINUOUS OPERATION | 1-1/2" - 180 GPM (40.9 m ³ /hr) 2" - 320 GPM (72.7 m ³ /hr) 3" - 720 GPM (163 m ³ /hr) 4" - 1,250 GPM (284 m ³ /hr) 6" - 2,850 GPM (647 m ³ /hr) 8" - 5,100 GPM (1,158 m ³ /hr) 10" - 8,000 GPM (1,816 m ³ /hr) 12" - 11,500 GPM (2,610 m ³ /hr) 14" - 15,700 GPM (3,564 m ³ /hr) 16" - 20,500 GPM (4,654 m ³ /hr) 18" - 26,000 GPM (5,902 m ³ /hr) 20" - 32,100 GPM (7,287 m ³ /hr) 24" - 33,400 GPM (7,582 m ³ /hr) | | | | | | | | | | | | | | | | |
| MAXIMUM INTERMITTENT OPERATION | 1-1/2" - 225 GPM (51.1 m ³ /hr) 2" - 400 GPM (90.8 m ³ /hr) 3" - 900 GPM (204 m ³ /hr) 4" - 1,560 GPM (355 m ³ /hr) 6" - 3,560 GPM (809 m ³ /hr) 8" - 6,375 GPM (1,447 m ³ /hr) 10" - 10,000 GPM (2,270 m ³ /hr) 12" - 14,375 GPM (3,263 m ³ /hr) 14" - 19,625 GPM (4,455 m ³ /hr) 16" - 25,625 GPM (5,817 m ³ /hr) 18" - 32,500 GPM (7,378 m ³ /hr) 20" - 40,125 GPM (9,108 m ³ /hr) 24" - 41,750 GPM (9,477 m ³ /hr) | | | | | | | | | | | | | | | | |
| MAXIMUM OPERATING PRESSURE | 175 PSI (12.1 bar) | | | | | | | | | | | | | | | | |
| FLANGE CONNECTIONS | U.S. ANSI B16.1 / AWWA Class 150 | | | | | | | | | | | | | | | | |
| REGISTER | Fully electronic register with programmable registration (Gal. /Cu.Ft. / Cu. Mtr. / Imp.Gal / Acre Ft.) Programmable AMR/AMI reading and pulse outputs 8-15 year field replaceable battery life (based on configuration) | | | | | | | | | | | | | | | | |
| NSF APPROVED MATERIALS | <table border="0"> <tbody> <tr> <td>Measuring Tube Housing:</td> <td>Polyurethane Coated Steel</td> </tr> <tr> <td>Measuring Tube:</td> <td>Non-magnetic Alloy Steel</td> </tr> <tr> <td>Flanges:</td> <td>Steel</td> </tr> <tr> <td>Liner:</td> <td>Rilsan (1 1/2" - 12") Hard Rubber (14"-24")</td> </tr> <tr> <td>Measuring Electrodes:</td> <td>Stainless Steel</td> </tr> <tr> <td>Grounding Electrode:</td> <td>Stainless Steel</td> </tr> <tr> <td>Register Housing:</td> <td>Polyurethane coated Die-cast Aluminum</td> </tr> <tr> <td>Register Connection Box: (for remote version only)</td> <td>Polyurethane coated Die-cast Aluminum</td> </tr> </tbody> </table> | Measuring Tube Housing: | Polyurethane Coated Steel | Measuring Tube: | Non-magnetic Alloy Steel | Flanges: | Steel | Liner: | Rilsan (1 1/2" - 12") Hard Rubber (14"-24") | Measuring Electrodes: | Stainless Steel | Grounding Electrode: | Stainless Steel | Register Housing: | Polyurethane coated Die-cast Aluminum | Register Connection Box: (for remote version only) | Polyurethane coated Die-cast Aluminum |
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