

VersaFlow Mag 100 Electromagnetic Flow Sensor Technical Datasheet

34-VF-03-08
September 2009

Specification

The Economical Solution

The VersaFlow Mag 100 flow sensor is an economical solution for a wide range of applications. VersaFlow Mag 100 can be used in applications (including various aqueous solutions), where other measurement techniques e.g. turbines, venturi, etc. were previously used.

VersaFlow is suitable for even the most demanding applications and is recognized as an industry standard.

Highlights

- Basic and fully functional wafer design flow sensor
- Quick and easy to install and operate
- Available in sizes 3/8" - 6"
- Excellent price-performance ratio
- Excellent chemical resistance
- Maintenance free

Industries

- Water
- Wastewater
- Heating, Ventilation & Air Conditioning (HVAC)
- Agriculture
- Machinery

Applications

- Water circulation, distribution and treatment e.g. in swimming pools and recreation facilities
- Sprinkler irrigation systems
- Fertilizer distribution
- Fire fighting systems
- Water circuits of buildings and offices



Figure 1 – VersaFlow Electromagnetic Flow Sensor

VersaFlow Electromagnetic Flow Converters

VersaFlow converters are compatible with all sensors
TWM 9000



Wall Mount



Integral Mount



Field Mount



TWM 1000

All meters consist of a sensor and converter, which may be mounted integral to the sensor, or remotely mounted with a field mount kit, wall mount housing or 19" rack mount module. See Specification 34-VF-03-02 or 34-VF-03-24 for converter details

34-VF-03-08
 Page 2
 Technical Data

| ASME [inch] | 3/8" | 1/2" | 1" | 1 1/2" | 2" | 3" | 4" | 6" |
|-------------|------|------|----|--------|----|----|-----|-----|
| DN [mm] | 10 | 15 | 25 | 40 | 50 | 80 | 100 | 150 |

Process flange standard

| | | | | | | | | |
|------------------------|---|--|--|--|--|--|--|--|
| EN 1092-1 -PN40 | | | | | | | | |
| EN 1092-1 -PN 16 | | | | | | | | |
| ASME B16.5- 150 lbs RF | | | | | | | | |
| ASME B16.5-300 lbs RF | | | | | | | | |
| JIS20 K | | | | | | | | |
| JIS10 K | | | | | | | | |
| | Pressure limits in separate table. | | | | | | | |
| | Note: DN 10 (3/8") requires DN 15 (1/2") process flanges. | | | | | | | |

Liner

| | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|
| PFA | | | | | | | | |
|-----|--|--|--|--|--|--|--|--|

Electrodes

| | | | | | | | | |
|--------------|--|--|--|--|--|--|--|--|
| Hastelloy C4 | | | | | | | | |
|--------------|--|--|--|--|--|--|--|--|

Grounding rings

| | | | | | | | | |
|---|--|--|--|--|--|--|--|--|
| Integrated st. st. 1.4571 (AISI 316 Ti) | | | | | | | | |
| Separate st st. 1.4571 (AISI 316 Ti) | | | | | | | | |

Stud bolts and nuts

| | | | | | | | | |
|--------------------------|----------------------|--|--|--|--|--|--|--|
| Rubber centering sleeves | | | | | | | | |
| Steel | | | | | | | | |
| Stainless steel | | | | | | | | |
| | Gaskets not included | | | | | | | |

Materials used

| | | | | | | | | |
|---|-----------------------------|--|--|--|--|--|--|--|
| Measuring tube, austenitic stainless steel | | | | | | | | |
| Housing GTW-S 38 (polyurethane coated) | | | | | | | | |
| Housing sheet steel (polyurethane coated] | | | | | | | | |
| Connection box, die-cast aluminum (polyurethane coated] | | | | | | | | |
| | Other materials on request. | | | | | | | |

Protection category

| | | | | | | | | |
|----------------------------|--|--|--|--|--|--|--|--|
| IP 66/67 eq. NEMA 4/4X / 6 | | | | | | | | |
| IP 68 eq. NEMA 6 | | | | | | | | |

Approvals

| | | | | | | | | |
|--------|-------------------------------|--|--|--|--|--|--|--|
| Non-Ex | | | | | | | | |
| | Approval for flow sensor only | | | | | | | |

Versions

| | | | | | | | | |
|---------------------------------------|--|--|--|--|--|--|--|--|
| Compact + TWM 1000 C or TWM 9000C | | | | | | | | |
| Separate +TWM 1000W or TWM9000F, R, W | | | | | | | | |

■ standard ■ optional □ on request

| | | | | | | | | |
|-------------|------|------|----|--------|----|----|-----|-----|
| ASME [inch] | 3/8" | 1/2" | 1" | 1 1/2" | 2" | 3" | 4" | 6" |
| DN [mm] | 10 | 15 | 25 | 40 | 50 | 80 | 100 | 150 |

Vacuum load

| | |
|-------------|-----------------------|
| Vacuum load | 0 mbar/0 psi absolute |
|-------------|-----------------------|

Electrical Conductivity

| | |
|-----------|--------------------|
| Non-water | min. 5 μ S/cm |
| Water | min. 20 μ S/cm |

standard optional on request

| Process flange standard | Operating pressure | |
|-------------------------|--------------------|--------------------|
| | min. - max. [bar] | min. - max. [psig] |
| ASME B16.5 - 150 lbs RF | 0-16 | 0-232 |
| ASME B16.5 - 300 lbs RF | 0-16 | 0-232 |
| EN 1092-1 – PN 16 | 0-16 | 0-232 |
| EN 1092-1 – PN 40 | 0-16 | 0-232 |
| JIS 10 K | 0-10 | 0-145 |
| JIS20K | 0-16 | 0-232 |

| Temperature | Process | | Ambient | |
|---------------------------------------|-----------|-----------|-----------|-----------|
| | min. [°C] | max. [°C] | min. [°C] | max. [°C] |
| Remote Converter TWM 1000 or TWM 9000 | -25 | 120 | -25 | 60 |
| Compact with TWM 1000 or TWM 9000 | -25 | 120 | -25 | 50 |

| Temperature | Process | | Ambient | |
|---------------------------------------|-----------|-----------|-----------|-----------|
| | min. [°F] | max. [°F] | min. [°F] | max. [°F] |
| Remote Converter TWM 1000 or TWM 9000 | -13 | 248 | -13 | 140 |
| Compact with TWM 1000 or TWM 9000 | -13 | 248 | -13 | 122 |

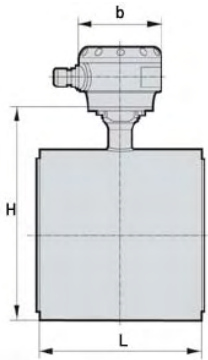
Dimensions

| Nominal size | Dimensions [mm] | | | | | | Approx. weight |
|--------------|-----------------|-----|-----|------------------|------------------|------------------|----------------|
| DN | L | H | W | T _{box} | T ₀₁₀ | T ₃₀₀ | [kg]* |
| 10 | 68 | 137 | 47 | 214 | 242 | 292 | 1,7 |
| 15 | 68 | 137 | 47 | 214 | 242 | 292 | 1,7 |
| 25 | 54 | 147 | 66 | 224 | 252 | 302 | 1,7 |
| 40 | 78 | 162 | 82 | 239 | 267 | 317 | 2,6 |
| 50 | 100 | 151 | 101 | 228 | 256 | 306 | 4,2 |
| 80 | 150 | 180 | 130 | 257 | 285 | 335 | 5,7 |
| 100 | 200 | 207 | 156 | 284 | 312 | 362 | 10,5 |
| 150 | 200 | 271 | 219 | 348 | 376 | 426 | 15 |

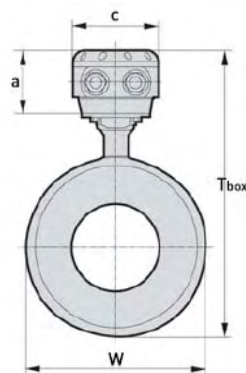
| Nominal size | Dimensions [inches] | | | | | | Approx. weight |
|--------------|---------------------|-------|------|------------------|------------------|------------------|----------------|
| ASME | L | H | W | T _{box} | T ₀₁₀ | T ₃₀₀ | [lbs]* |
| 3/8" | 2,68 | 5,39 | 1,85 | 8,43 | 9,53 | 11,5 | 3,7 |
| 1/2" | 2,68 | 5,39 | 1,85 | 8,43 | 9,53 | 11,5 | 3,7 |
| 1" | 2,13 | 5,79 | 2,6 | 8,82 | 9,92 | 11,89 | 3,7 |
| 1 1/2" | 3,07 | 6,38 | 3,23 | 9,41 | 10,51 | 12,48 | 5,7 |
| 2" | 3,94 | 5,94 | 3,98 | 8,98 | 10,08 | 12,05 | 9,3 |
| 3" | 5,91 | 7,08 | 5,12 | 10,12 | 11,22 | 13,19 | 12,6 |
| 4" | 7,87 | 8,15 | 6,14 | 11,18 | 12,28 | 14,25 | 23,1 |
| 6" | 7,87 | 10,67 | 8,62 | 13,7 | 14,8 | 16,77 | 33,1 |

* Approx. weight of meter body

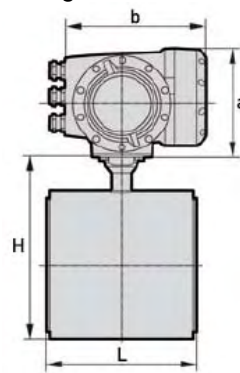
Frontview
Remote Electronics



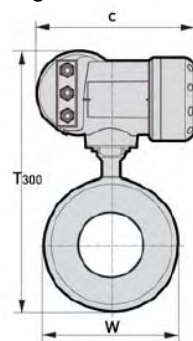
Sideview
Remote Electronics



Frontview
Integral Electronics



Sideview
Integral Electronics



Note: For Sensor with TWM1000 Converter refer to Specification 36-VF-03-24

Ordering Information

Contact your nearest Honeywell sales office, or

In the U.S.:

Honeywell Process Solutions
Honeywell International Inc
2500 West Union Hills Drive
Phoenix, AZ 85027 1-800-343-0228

In Canada:

The Honeywell Centre
155 Gordon Baker Rd.
North York, Ontario M2H 3N7
1-800-461-0013

In Latin America:

Honeywell Inc.
480 Sawgrass Corporate Parkway,
Suite 200 Sunrise, FL 33325
(954) 845-2600

In Europe and Africa:

Honeywell S. A.
Avenue du Bourget 1
1140 Brussels, Belgium

In Eastern Europe:

Honeywell Praha,
s.r.o. Budejovicka 1
140 21 Prague 4,
Czech Republic

In the Middle East:

Honeywell Middle East Ltd.
Khalifa Street,
Sheikh Faisal Building
Abu Dhabi, U. A. E.

In Asia:

Honeywell Asia Pacific Inc.
Honeywell Building,
17 Changi Business Park Central 1
Singapore 486073
Republic of Singapore

In the Pacific:

Honeywell Pty Ltd.
5 Thomas Holt Drive
North Ryde NSW Australia 2113
(61 2) 9353 7000

In Japan:

Honeywell K.K.
14-6 Shibaura 1-chrome
Minato-ku, Tokyo, Japan 105-0023

Or, visit Honeywell on the World Wide Web at: <http://www.honeywell.com/ps>
Specifications are subject to change without notice.