

## VersaFlow Mag 1000 Electromagnetic Flow Sensor Technical Datasheet

34-VF-03-16  
September 2009

### Specification

#### Solution for the water and wastewater industry

The VERSAFLOW electromagnetic flow sensor is the optimum solution for water and wastewater applications. Its long-term reliability and durability make it the standard flow sensor for the water market.

#### Highlights

- Drinking water approvals including KTW, WRc, KIWA, ACS
- Time proven design
- Maintenance free
- In situ verification with HONEYWELL MagCheck
- Compliance with OIML R-49 and ISO 4064
- Permanently submersible, buried underground (option)

#### Industries

- Water
- Wastewater
- Pulp & paper
- Minerals & Mining
- Iron, Steel & Metals
- Power Plant

#### Applications

- Water distribution networks
- Irrigation
- Municipal watering
- Water purification
- Cooling stations
- District heating



Figure 1 – VersaFlow Electromagnetic Flow Sensor

#### Electromagnetic product range

##### VersaFlow converters: TWM 9000



##### TWM1000





| Nominal diameter | MM10 |        |        |    |        |    |     |     |     |     | MM11 |     |     |     |     |     |     |     | MM12 |     |      |      |      |      |      |      |
|------------------|------|--------|--------|----|--------|----|-----|-----|-----|-----|------|-----|-----|-----|-----|-----|-----|-----|------|-----|------|------|------|------|------|------|
| ASME [inch]      | 1"   | 1 1/4" | 1 1/2" | 2" | 2 1/2" | 3" | 4"  | 5"  | 6"  | 8"  | 10"  | 12" | 14" | 16" | 18" | 20" | 24" | 28" | 32"  | 36" | 40"  | 48"  | 56"  | 64"  | 72"  | 80"  |
| DN [mm]          | 25   | 32     | 40     | 50 | 65     | 80 | 100 | 125 | 150 | 200 | 250  | 300 | 350 | 400 | 450 | 500 | 600 | 700 | 800  | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |

Materials

|  |                            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|--|----------------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Measuring tube – austenitic stainless steel            | [Standard]                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Housing (polyurethane coated) sheet steel              | [Standard]                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Housing stainless steel                                | [Optional]                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Die-cast aluminum connection box (polyurethane coated) | [Standard]                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| Stainless steel connection box                         | [Optional]                 |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|  | Other materials on request |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Protection category

|                            |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|----------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| IP 66/67 eq. NEMA 4/4X / 6 | [Standard] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IP 68 field eq. NEMA 6P    | [Optional] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| IP 68 factory eq. NEMA6P   | [Optional] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Approvals

|                     |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Non-Ex              | [Standard]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| EEx zone 1          | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| FM - class I div. 2 | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| CSA – class I div.2 | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| NEPSI zone 1        | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| SAA - Aus Ex zone 2 | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TIIS - zone 2       | [Optional]   |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|                     | Please note the approvals are for flow sensors only. |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Versions

|                           |            |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|---------------------------|------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| TWM 1000 Compact/Separate | [Optional] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| TWM 9000 Compact/Separate | [Standard] |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |

Conductivity

|                   |               |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|---------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|
| Min. conductivity | min. 20 µS/cm |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------|---------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|

standard
  optional
  on request

## Temperature range

| Temperature range | Process [°C] |      | Ambient [°C] |      |
|-------------------|--------------|------|--------------|------|
|                   | min.         | max. | min.         | max. |

### Hardrubber

|   |    |    |     |    |
|---|----|----|-----|----|
| Remote Converter (TWM 1000 or TWM 9000) | -5 | 80 | -40 | 65 |
| Compact with TWM 1000 or TWM 9000       | -5 | 80 | -40 | 65 |

### Polypropylene

|   |   |    |     |    |
|---|---|----|-----|----|
| Remote Converter (TWM 1000 or TWM 9000) | -5  | 90 | -40 | 65 |
| Compact with TWM 1000 or TWM 9000       | -5  | 90 | -40 | 65 |
|   | * Polypropylene available for DN 25 - 150 |    |     |    |

| Temperature range | Process [°F] |      | Ambient [°F] |      |
|-------------------|--------------|------|--------------|------|
|                   | min.         | max. | min.         | max. |

### Hardrubber

|   |    |     |     |     |
|---|----|-----|-----|-----|
| Remote Converter (TWM 1000 or TWM 9000) | 23 | 176 | -40 | 149 |
| Compact with TWM 1000 or TWM 9000       | 23 | 176 | -40 | 149 |

### Polypropylene

|   |  |     |     |     |
|---|--|-----|-----|-----|
| Remote Converter (TWM 1000 or TWM 9000) | 23   | 194 | -40 | 149 |
| Compact with TWM 1000 or TWM 9000       | 23   | 194 | -40 | 149 |
|   | * Polypropylene available for ASME 1" - 6" |     |     |     |

## Vacuum load

| Liner         | Diameter<br>[mm] | Minimum operating pressure absolute in mbar (abs) at process temperature |      |      |      |
|---------------|------------------|--|------|------|------|
|               |                  | 20°C   | 40°C | 60°C | 80°C |
| Polypropylene | DN 25 - 150      | 250  | 250  | 400  | 400  |
| Hard rubber   | DN 200 - 300     | 250  | 250  | 400  | 400  |
|               | DN 350 - 1000    | 500  | 500  | 600  | 600  |
|               | DN 1200 - 3000   | 600  | 600  | 750  | 750  |

| Liner         | Diameter<br>[inch] | Minimum operating pressure absolute in psia at process temperature |       |       |       |
|---------------|--------------------|--|-------|-------|-------|
|               |                    | 68°F   | 104°F | 140°F | 176°F |
| Polypropylene | 1" - 6"            | 3,6  | 3,6   | 5,8   | 5,8   |
| Hard rubber   | 8" - 12"           | 3,6  | 3,6   | 5,8   | 5,8   |
|               | 14" - 40"          | 7,3  | 7,3   | 8,7   | 8,7   |
|               | 48" -120"          | 8,7  | 8,7   | 10,9  | 10,9  |

## Dimensions and Weights

| Nominal size |       | Dimensions [mm] |     |   |   |     |     |     | Approx. weight |
|--------------|-------|-----------------|-----|---|---|-----|-----|-----|----------------|
| DN           | PN    | L               |     | H | W | T   |     |     | [kg]           |
| [mm]         | [bar] | DIN             | ISO |   |   | box | 010 | 300 |                |

### DN25...150

|     |    |     |     |     |     |     |     |     |    |
|-----|----|-----|-----|-----|-----|-----|-----|-----|----|
| 25  | 40 | 150 | 200 | 140 | 115 | 218 | 245 | 297 | 5  |
| 32  | 40 | 150 | 200 | 157 | 140 | 235 | 262 | 314 | 6  |
| 40  | 40 | 150 | 200 | 166 | 150 | 244 | 271 | 323 | 7  |
| 50  | 40 | 200 | 200 | 186 | 165 | 264 | 291 | 343 | 11 |
| 65  | 16 | 200 | 200 | 200 | 185 | 278 | 305 | 357 | 9  |
| 80  | 40 | 200 | 200 | 209 | 200 | 287 | 314 | 366 | 14 |
| 100 | 16 | 250 | 250 | 237 | 220 | 315 | 342 | 394 | 15 |
| 125 | 16 | 250 | 250 | 266 | 250 | 344 | 371 | 423 | 19 |
| 150 | 16 | 300 | 300 | 300 | 285 | 378 | 405 | 457 | 27 |

### DN200...600

|     |    |     |     |     |     |     |     |     |     |
|-----|----|-----|-----|-----|-----|-----|-----|-----|-----|
| 200 | 10 | 350 | 350 | 361 | 340 | 439 | 466 | 518 | 34  |
| 250 | 10 | 400 | 450 | 408 | 395 | 486 | 513 | 565 | 48  |
| 300 | 10 | 500 | 500 | 458 | 445 | 536 | 563 | 615 | 58  |
| 350 | 10 | 500 | 550 | 510 | 505 | 588 | 615 | 667 | 78  |
| 400 | 10 | 600 | 600 | 568 | 565 | 646 | 673 | 725 | 101 |
| 450 | 10 | 600 | -   | 618 | 615 | 696 | 723 | 775 | 111 |
| 500 | 10 | 600 | -   | 671 | 670 | 749 | 776 | 828 | 130 |
| 600 | 10 | 600 | -   | 781 | 780 | 859 | 886 | 938 | 165 |

### DN700...2000

|      |    |      |   |      |      |      |      |      |      |
|------|----|------|---|------|------|------|------|------|------|
| 700  | 10 | 700  | - | 898  | 895  | 976  | 1003 | 1055 | 248  |
| 800  | 10 | 800  | - | 1012 | 1015 | 1090 | 1117 | 1169 | 331  |
| 900  | 10 | 900  | - | 1114 | 1115 | 1192 | 1219 | 1271 | 430  |
| 1000 | 10 | 1000 | - | 1225 | 1230 | 1303 | 1330 | 1382 | 507  |
| 1200 | 6  | 1200 | - | 1417 | 1405 | 1495 | -    | 1574 | 555  |
| 1400 | 6  | 1400 | - | 1619 | 1630 | 1697 | -    | 1776 | 765  |
| 1600 | 6  | 1600 | - | 1819 | 1830 | 1897 | -    | 1976 | 1035 |
| 1800 | 6  | 1800 | - | 2027 | 2045 | 2105 | -    | 2184 | 1470 |
| 2000 | 6  | 2000 | - | 2259 | 2265 | 2337 | -    | 2416 | 1860 |

| Nominal size |       | Dimensions 150 lbs [inch] |   |   |     |     |     | Approx. weight |
|--------------|-------|---------------------------|---|---|-----|-----|-----|----------------|
| DN           | PN    | L                         | H | W | T   |     |     | [lbs]          |
| [mm]         | [bar] |                           |   |   | box | 010 | 300 |                |

**DN1"...6"**

|        |     |       |       |      |       |       |       |    |
|--------|-----|-------|-------|------|-------|-------|-------|----|
| 1"     | 284 | 5,91  | 5,39  | 4,25 | 8,46  | 9,53  | 11,57 | 18 |
| 1 1/2" | 284 | 5,91  | 6,1   | 5    | 9,17  | 10,24 | 12,28 | 22 |
| 2"     | 284 | 7,87  | 7,05  | 5,98 | 10,12 | 11,18 | 13,23 | 29 |
| 3"     | 284 | 7,87  | 8,03  | 7,5  | 11,1  | 12,17 | 14,21 | 37 |
| 4"     | 284 | 9,84  | 9,49  | 9    | 12,56 | 13,62 | 15,67 | 51 |
| 5"     | 284 | 9,84  | 10,55 | 10   | 13,62 | 14,69 | 16,73 | 60 |
| 6"     | 284 | 11,81 | 11,69 | 11   | 14,76 | 15,83 | 17,87 | 75 |

**DN8"...24"**

|     |     |       |       |      |       |       |       |     |
|-----|-----|-------|-------|------|-------|-------|-------|-----|
| 8"  | 284 | 13,78 | 14,25 | 13,5 | 17,32 | 18,39 | 20,43 | 95  |
| 10" | 284 | 15,75 | 16,3  | 16   | 19,37 | 20,43 | 22,48 | 143 |
| 12" | 284 | 19,69 | 18,78 | 19   | 21,85 | 22,91 | 24,96 | 207 |
| 14" | 284 | 27,56 | 20,67 | 21   | 23,74 | 24,8  | 26,85 | 284 |
| 16" | 284 | 31,5  | 22,95 | 23,5 | 26,02 | 27,09 | 29,13 | 364 |
| 18" | 284 | 31,5  | 24,72 | 25   | 27,8  | 28,86 | 30,91 | 410 |
| 20" | 284 | 31,5  | 26,97 | 27,5 | 30,04 | 31,1  | 33,15 | 492 |
| 24" | 284 | 31,5  | 31,38 | 32   | 34,45 | 35,51 | 37,56 | 675 |

Pressures are applicable at 20 °C (68 °F)

For higher temperatures, the pressure and temperature ratings are as per ASME B16.5 (up to 24") or ASME B16.47 (>24")

| Nominal size |       | Dimensions 150 lbs [mm] |   |   |     |     |     | Approx. weight |
|--------------|-------|-------------------------|---|---|-----|-----|-----|----------------|
| ASME         | PN    | L                       | H | W | T   |     |     | [kg]           |
| [inch]       | [psi] |                         |   |   | box | 010 | 300 |                |

**DN1" ...6"**

|        |     |     |     |       |     |     |     |    |
|--------|-----|-----|-----|-------|-----|-----|-----|----|
| 1"     | 284 | 150 | 137 | 108   | 215 | 242 | 294 | 8  |
| 1 1/2" | 284 | 150 | 155 | 127   | 233 | 260 | 312 | 10 |
| 2"     | 284 | 200 | 179 | 152   | 257 | 284 | 336 | 13 |
| 3"     | 284 | 200 | 204 | 190,5 | 282 | 309 | 361 | 17 |
| 4"     | 284 | 250 | 241 | 228,6 | 319 | 346 | 398 | 23 |
| 5"     | 284 | 250 | 268 | 254   | 346 | 373 | 425 | 27 |
| 6"     | 284 | 300 | 297 | 279,4 | 375 | 402 | 454 | 34 |

**DN8" ...24"**

|     |     |     |     |       |     |     |     |     |
|-----|-----|-----|-----|-------|-----|-----|-----|-----|
| 8"  | 284 | 350 | 362 | 342,9 | 440 | 467 | 519 | 43  |
| 10" | 284 | 400 | 414 | 406,4 | 492 | 519 | 571 | 65  |
| 12" | 284 | 500 | 477 | 482,6 | 555 | 582 | 634 | 94  |
| 14" | 284 | 700 | 525 | 533,4 | 603 | 630 | 682 | 129 |
| 16" | 284 | 800 | 583 | 596,9 | 661 | 688 | 740 | 165 |
| 18" | 284 | 800 | 628 | 635   | 706 | 733 | 785 | 186 |
| 20" | 284 | 800 | 685 | 698,5 | 763 | 790 | 842 | 223 |
| 24" | 284 | 800 | 797 | 812,8 | 875 | 902 | 954 | 306 |

Pressures are applicable at 20 °C (68 °F)

For higher temperatures, the pressure and temperature ratings are as per ASME B16.5 (up to 24") or ASME B16.47 (>24")



| Nominal size |       | Dimensions 300 lbs [inch] |   |   |     |     |     | Approx. weight |
|--------------|-------|---------------------------|---|---|-----|-----|-----|----------------|
| ASME         | PN    | L                         | H | W | T   |     |     | [lbs]          |
| [inch]       | [psi] |                           |   |   | box | 010 | 300 |                |

**DN1"...6"**

|        |     |       |       |      |       |       |       |    |
|--------|-----|-------|-------|------|-------|-------|-------|----|
| 1"     | 741 | 5,91  | 5,71  | 4,87 | 8,78  | 9,84  | 11,89 | 18 |
| 1 1/2" | 741 | 7,87  | 6,65  | 6,13 | 9,72  | 10,79 | 12,83 | 20 |
| 2"     | 741 | 9,84  | 7,32  | 6,5  | 10,39 | 11,46 | 13,5  | 29 |
| 3"     | 741 | 9,84  | 8,43  | 8,25 | 11,5  | 12,56 | 14,61 | 37 |
| 4"     | 741 | 11,81 | 10    | 10   | 13,07 | 14,13 | 16,18 | 51 |
| 6"     | 741 | 12,6  | 12,44 | 12,5 | 15,51 | 16,57 | 18,62 | 79 |

**DN8"...24"**

|     |     |       |       |      |       |       |       |      |
|-----|-----|-------|-------|------|-------|-------|-------|------|
| 8"  | 741 | 15,75 | 15,04 | 15   | 18,11 | 19,17 | 21,22 | 157  |
| 10" | 741 | 19,69 | 17,05 | 17,5 | 20,12 | 21,18 | 23,23 | 247  |
| 12" | 741 | 23,62 | 20    | 20,5 | 23,07 | 24,13 | 26,18 | 375  |
| 14" | 741 | 27,56 | 21,65 | 23   | 24,72 | 25,79 | 27,83 | 474  |
| 16" | 741 | 31,5  | 23,98 | 25,5 | 27,05 | 28,11 | 30,16 | 639  |
| 20" | 741 | 31,5  | 28,46 | 30,5 | 31,54 | 32,6  | 34,65 | 937  |
| 24" | 741 | 31,5  | 33,39 | 36   | 36,46 | 37,52 | 39,57 | 1345 |

Pressures are applicable at 20 °C (68 °F)

For higher temperatures, the pressure and temperature ratings are as per ASME B16.5 (up to 24") or ASME B16.47 (>24")

| Nominal size |       | Dimensions 300 lbs [mm] |   |   |     |     |     | Approx. weight |
|--------------|-------|-------------------------|---|---|-----|-----|-----|----------------|
| ASME         | PN    | L                       | H | W | T   |     |     | [kg]           |
| [inch]       | [psi] |                         |   |   | box | 010 | 300 |                |

**DN1" ...6"**

|        |     |     |     |       |     |     |     |    |
|--------|-----|-----|-----|-------|-----|-----|-----|----|
| 1"     | 741 | 150 | 145 | 123,8 | 223 | 250 | 302 | 8  |
| 1 1/2" | 741 | 200 | 169 | 155,6 | 247 | 274 | 326 | 9  |
| 2"     | 741 | 250 | 186 | 165,1 | 264 | 291 | 343 | 13 |
| 3"     | 741 | 250 | 214 | 209,6 | 292 | 319 | 371 | 17 |
| 4"     | 741 | 300 | 254 | 254   | 332 | 359 | 411 | 23 |
| 6"     | 741 | 320 | 316 | 317,5 | 394 | 421 | 473 | 36 |

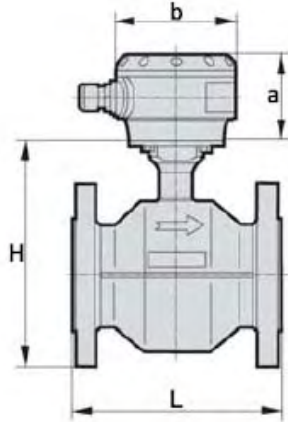
**DN8" ...24"**

|     |     |     |     |       |     |     |      |     |
|-----|-----|-----|-----|-------|-----|-----|------|-----|
| 8"  | 741 | 400 | 382 | 381   | 460 | 487 | 539  | 71  |
| 10" | 741 | 500 | 433 | 444,5 | 511 | 538 | 590  | 112 |
| 12" | 741 | 600 | 508 | 520,7 | 586 | 613 | 665  | 170 |
| 14" | 741 | 700 | 550 | 584,2 | 628 | 655 | 707  | 215 |
| 16" | 741 | 800 | 609 | 647,7 | 687 | 714 | 766  | 290 |
| 20" | 741 | 800 | 723 | 774,7 | 801 | 828 | 880  | 425 |
| 24" | 741 | 800 | 848 | 914,4 | 926 | 953 | 1005 | 610 |

Pressures are applicable at 20 °C (68 °F)

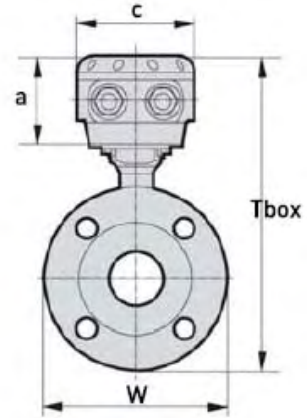
For higher temperatures, the pressure and temperature ratings are as per ASME B16.5 (up to 24") or ASME B16.47 (>24")

Frontview VersaFlow



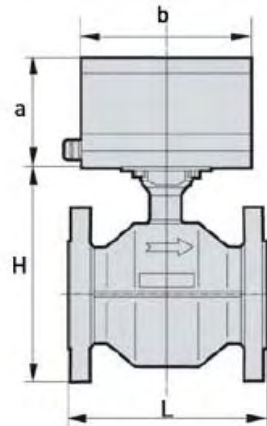
a = 77 mm / 3,1"  
b = 111 mm / 4,4"

Sideview VersaFlow



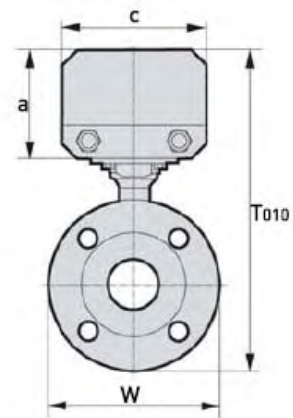
a = 77 mm / 3,1"  
c = 106 mm / 4,2"

Frontview VersaFlow



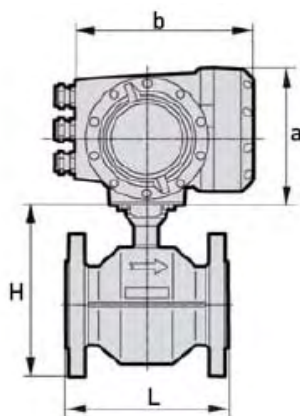
a = 105 mm / 4,2"  
b = 160 mm / 6,3"

Sideview VersaFlow



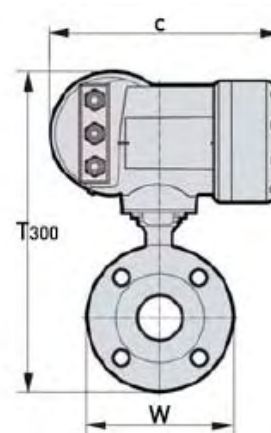
a = 105 mm / 4,2"  
c = 140mm / 5,5"

Frontview VersaFlow



a = 155 mm / 6,1"  
b = 202 mm / 7,8"

Sideview VersaFlow



c = 260 mm / 10,2"

Note: For Sensor with TWM 1000 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 Europe and Africa:

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

### In Asia:

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

### In Canada:

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

### In Eastern Europe:

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

### In the Pacific:

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

### In Latin America:

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

### In the Middle East:

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

### 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.*