

# SITRANS F flowmeters

## SITRANS F M

### Transmitter Transmag 2 with sensor 911/E

#### Overview



#### Benefits

- Fully-welded steel fitting
- Metering tube liners available made of hard/soft rubber, PTFE or Novolak
- Various flange connections available to EN 1092-1, ANSI B16.5
- Input amplifier with integral data component (smartPLUG) for all calibration values and customized settings if required.

#### Technical specifications

##### 911/E sensor

##### Mode of operation and design

Measuring principle

Pulsed alternating field

##### Process connection

Nominal diameters

DN 15 ... 600 (1/2" ... 24")

Metering tube connections

EN 1092-1, ANSI B16.5, others on request

##### Rated operating conditions

###### Installation conditions

- Minimum process temperature -20 °C (-4 °F)
- With hard rubber liner Max. 90 °C (194 °F)  
Option: 100 °C (212 °F)
- With PTFE liner • 150 °C (300 °F) at 25 bar (363 psi)
- With Novolak liner • 100 °C (194 °F) at 40 bar (580 psi)  
130 °C (266 °F) at 40 bar (580 psi)

###### Ambient temperature limits

- Remote versions • -20 ... +65 °C (-4 ... +149 °F)
- Compact versions from DN 65 (2½") • -20 ... +40 °C (-4 ... +104 °F) with a process temperature > 130 °C (> 266 °F)
- -20 ... +65 °C (-4 ... +149 °F) with a process temperature ≤ 60 °C (≤ 140 °F)
- -20 ... +40 °C (-4 ... +104 °F) with a process temperature 60 ... 130 °C (140 ... 266 °F), depends on used sensor and its liner

###### Degree of protection

IP65 / NEMA 4, IP67 / NEMA 4X

Optional IP68 / NEMA 6

###### Medium conditions

Minimum conductivity

> 1 µS/cm, on request 0.1 µS/cm depending on medium

Maximum flow velocity

12 m/s (39.4 ft/s)

Full scale value of flow velocity

- Alternating field

0.15 ... 12 m/s (0.49 ... 39.4 ft/s)

Transmitter Transmag 2 with sensor 911/E

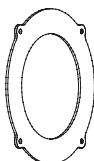
**Sensor cables between sensor and transmitter**

The signal voltage proportional to the flow and present at the electrodes of the EMF is only a few  $\mu$ V to mV. Superimposed on this are electrochemical interferences resulting from the contact between the electrodes and liquid, and which can be up to several Volt. Also frequently superimposed are line frequency interferences, interferences resulting from vibrations on the pipelines or signal cables, as well as strong magnetic fields in the vicinity. Sufficient shielding must therefore be provided, as well as fixed routing of the signal cables (electrode and magnet current cable) in the case of remote versions. This also applies to devices with integral preamplifier (smartPLUG). The cable length between the sensor and transmitter must not exceed 50 m (164 ft).

Attention must also be paid to the cable routing. Signal cables must be routed free of vibration, and protected against strong magnetic and stray fields. In case of doubt, the sensor cables must be routed in earthed steel conduit.

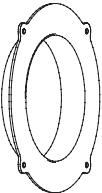
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**Protection washers for liners**



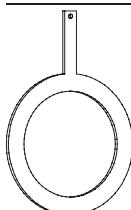
|                     |  |
|---------------------|--|
| Function            | Protection of liner during transport.  |
| Contact with medium | Yes, but the protection washers can be removed prior to installation of the sensor in the pipeline if they are not resistant to the measured medium.   |
| Material            | Stainless steel mat. No. 1.4571/316Ti, optionally Hastelloy C4 mat. No. 2.4610   |
| Material thickness  | The overall length of the sensor is increased by <ul style="list-style-type: none"> <li>• 6 mm for DN 15 to DN 150 (0.24" for 1/2" to 6") or</li> <li>• 10 mm for DN 200 to DN 600 (0.4" for 8" to 24")</li> </ul> |
| Standard            | Yes, can be used for PTFE liners up to PN 10 (MWP 145 psi) and for soft rubber; cannot be used for other liners.   |
| Order No.           | <b>7ME592x-....</b>  |

**Protection rings for liners**



|                     |  |
|---------------------|--|
| Function            | To protect the edges of liners from abrasion (e.g. gravel, sand etc.). Used mainly with PTFE or soft rubber liners. Deformation of liners possible at high temperatures from 100 to 180 °C (212 to 356 °F) and pressures up to 16 bar (232 psi) are avoided. |
| Contact with medium | Yes, please always check resistance to measured medium.  |
| Material            | Stainless steel mat. No. 1.4571/316Ti, optionally Hastelloy C4 mat. No. 2.4610   |
| Material thickness  | The overall length of the sensor is increased by <ul style="list-style-type: none"> <li>• 6 mm for DN 15 to DN 150 (0.24" for 1/2" to 6") or</li> <li>• 10 mm for DN 200 to DN 600 (0.4" for 8" to 24")</li> </ul>   |
| Standard            | No, optional for PTFE and soft rubber liners. They are required for PTFE liners of PN 16 (MWP 232 psi) or more instead of protection washers, and must be ordered separately.  |
| Order No.           | <b>7ME591x-....</b>  |

**Earthing washers**



|                     |   |
|---------------------|---|
| Function            | Electrical reference and earthing of the medium. Required if the pipelines are not electrically conducting or are lined (plastic pipelines, concrete pipelines etc.). All earthing rings must be connected to the earthing screw present on the sensor. |
| Contact with medium | Yes, please always check resistance to measured medium.   |
| Material            | Stainless steel mat. No. 1.4571/316Ti, or Hastelloy C4 mat. No. 2.4610  |
| Material thickness  | The overall length of the sensor is increased by 2 mm (0.08") per earthing ring.  |
| Standard            | No, only optional. Required between the medium and sensor for equipotential bonding between non-conducting pipelines or lined pipelines.  |
| Order No.           | <b>7ME590x-....</b>   |

# SITRANS F flowmeters

## SITRANS F M

### Transmitter Transmag 2 with sensor 911/E

#### Notes on pressure equipment directive

The devices are designed for liquids of danger group "Gases of fluid group 1". The categories differ according to the version, and are listed in the table below.

The minimum temperature is defined at -10 °C (14 °F) for the flange materials C22.8 (1.0460) and ST52-5 (1.0570).

The minimum temperature is defined at -20 °C (-4 °F) for the flange material 1.4571/316Ti.

**Classification according to pressure equipment directive (PED 97/23/EC)**

| Nominal diameter<br>DN | Nominal pressure<br>PN<br>(inches) | Permissible media          | Category                                      |             |
|------------------------|------------------------------------|----------------------------|---|-------------|
|                        | (MWP psi)                          |                            |   |             |
| 15 ... 25              | (1/2" ... 1")                      | 10 ... 40<br>(145 ... 580) | Gases fluid group 1 and liquids fluid group 1 | Article 3.3 |
| 32 ... 100             | (1 1/4" ... 4")                    | 10<br>(145)                | Gases fluid group 1 and liquids fluid group 1 | I           |
| 32 ... 50              | (1 1/4" ... 2")                    | 16<br>(232)                | Gases fluid group 1 and liquids fluid group 1 | I           |
| 32 ... 40              | (1 1/4" ... 1 1/2")                | 25<br>(363)                | Gases fluid group 1 and liquids fluid group 1 | I           |
| 100 ... 350            | (4" ... 12")                       | 10<br>(145)                | Gases fluid group 1 and liquids fluid group 1 | II          |
| 65 ... 200             | (2 1/2" ... 8")                    | 16<br>(232)                | Gases fluid group 1 and liquids fluid group 1 | II          |
| 50 ... 125             | (2" ... 5")                        | 25<br>(363)                | Gases fluid group 1 and liquids fluid group 1 | II          |
| 32 ... 80              | (1 1/4" ... 3")                    | 40<br>(580)                | Gases fluid group 1 and liquids fluid group 1 | II          |
| 350 ... 600            | (14" ... 24")                      | 10<br>(145)                | Gases fluid group 1 and liquids fluid group 1 | III         |
| 250 ... 600            | (10" ... 24")                      | 16<br>(232)                | Gases fluid group 1 and liquids fluid group 1 | III         |
| 150 ... 600            | (6" ... 24")                       | 25<br>(363)                | Gases fluid group 1 and liquids fluid group 1 | III         |
| 100 ... 600            | (4" ... 24")                       | 40<br>(580)                | Gases fluid group 1 and liquids fluid group 1 | III         |

Transmitter Transmag 2 with sensor 911/E

| Selection and Ordering data   | Order No.  | Order code |
|---|------------|------------|
| <b>SITRANS F M 911/E flow sensor</b>  |            |            |
| Rubber liner  | 7 ME 5 1   | 0          |
| <b>Nominal pressure</b>   |            |            |
| PN 10 (MWP 145 psi)   | 1          |            |
| PN 16 (MWP 232 psi)   | 2          |            |
| PN 25 (MWP 363 psi)   | 3          |            |
| PN 40 (MWP 580 psi)   | 4          |            |
| <b>Design</b>   |            |            |
| Compact, alternating field from DN 65 (2½")   | 1          |            |
| Remote, alternating field   | 3          |            |
| <b>Liner</b>  |            |            |
| Hard rubber   | 1          |            |
| • VHE/H3b max. 90 °C (194 °F)   | 2          |            |
| • VHE/G31 up to 100 °C (212 °F)   | 3          |            |
| • VHE/181 (potable water - KTW)   | 4          |            |
| Soft rubber VWE/R61   | 5          |            |
| Neoprene BWE/DN 63  | 6          |            |
| Soft rubber VWE/1645 (potable water - KTW)  |            |            |
| <b>Nominal diameter</b>   |            |            |
| DN 15 (½")  | A          |            |
| DN 20 (¾")  | B          |            |
| DN 25 (1")  | C          |            |
| DN 32 (1¼")   | D          |            |
| DN 40 (1½")   | E          |            |
| DN 50 (2")  | F          |            |
| DN 65 (2½")   | G          |            |
| DN 80 (3")  | H          |            |
| DN 100 (4")   | J          |            |
| DN 125 (5")   | K          |            |
| DN 150 (6")   | L          |            |
| DN 200 (8")   | M          |            |
| DN 250 (10")  | N          |            |
| DN 300 (12")  | P          |            |
| DN 350 (14")  | Q          |            |
| DN 400 (16")  | R          |            |
| DN 500 (20")  | S          |            |
| DN 600 (24")  | T          |            |
| Other nominal diameters: specify in plain text  | Z          | J 1 Y      |
| <b>Connection flange</b>  |            |            |
| DIN 2501/EN 1092-1, mat. No. 1.0460/1.0570 (mild steel)   | A          |            |
| DIN 2501/EN 1092-1, mat. No. 1.4571/316Ti   | B          |            |
| ANSI B 16.5 RF, mat. No. 1.0432/1.0570 (mild steel), to 10 bar (145 psi)                                      | C          |            |
| ANSI 300 RF, steel, to 20 bar (290 psi)   | D          |            |
| JIS 10 K, mat. No. 1.0570   | E          |            |
| Other connection form   | Z          | K 1 Y      |
| <b>Electrode material</b>   |            |            |
| Mat. No. 1.4571/316Ti   | 1          |            |
| Hastelloy C4 (mat. No. 2.4610)  | 2          |            |
| Titanium  | 3          |            |
| Tantalum  | 4          |            |
| Monel   | 5          |            |
| Platinum head with shaft, mat. No. 1.4571/316Ti   | 7          |            |
| Other materials: specify in plain text  | 9          | L 1 Y      |
| Selection and Ordering data   | Order No.  | Order code |
| <b>SITRANS F M 911/E flow sensor</b>  |            |            |
| Rubber liner  | 7 ME 5 1   | 0          |
| <b>Sealing material</b>   |            |            |
| Viton   | 1          |            |
| EPDM  | 2          |            |
| Kalrez  | 3          |            |
| <b>Protection washers, protection rings</b>   |            |            |
| Without   | 0          |            |
| With protection washers (only for soft rubber and Neoprene; order as accessory)                               | 1          |            |
| With protection rings (only for soft rubber and Neoprene; order as accessory)                                 | 2          |            |
| <b>Cable gland</b>  |            |            |
| ½" NPT  | B          |            |
| M16 x 1.5   | C          |            |
| <b>Degree of protection</b>   |            |            |
| IP67/NEMA4X   | B          |            |
| IP68/NEMA6, cable length 5 m (16.4 ft)  | C          |            |
| IP68/NEMA6, cable length 10 m (32.8 ft)   | D          |            |
| IP68/NEMA6, other cable lengths (order as accessory 7ME5930...)   | E          |            |
| Selection and Ordering data   | Order Code |            |
| <b>Additional information</b>   |            |            |
| Please add “-Z” to Order No. and specify Order code(s) and plain text.  |            |            |
| One earthing (grounding) electrode made of mat. No. 1.4571/316Ti up to DN 300 (12")                           | A01        |            |
| Two earthing (grounding) electrodes made of mat. No. 1.4571/316Ti above DN 350 (14")                          | A02        |            |
| One earthing (grounding) electrode made of Hastelloy C4/2.4610 up to DN 300 (12")                             | A03        |            |
| Two earthing (grounding) electrodes made of Hastelloy C4/2.4610 above DN 350 (14")                            | A04        |            |
| Replaceable electrodes above DN 100 (4")  | A05        |            |
| Replaceable electrodes above DN 100 (4"), replaceable under pressure  | A06        |            |
| With 3-point calibration certificate up to DN 600 (24") or $Q_{max} > 2000 \text{ m}^3/\text{h}$ (8805 USgpm) | B06        |            |
| With 6-point calibration certificate up to DN 600 (24") or $Q_{max} > 2000 \text{ m}^3/\text{h}$ (8805 USgpm) | B07        |            |
| Rating plate inscription in English   | B11        |            |
| Acceptance test B to DIN 50049, Section 3.1 and EN 10204  | C12        |            |
| Factory certificate to EN 10204-2.2   | C14        |            |
| Silicone-free materials   | Y04        |            |
| Measuring-point number (max. 16 char.), specify in plain text. Y15:....                                       | Y15        |            |
| Measuring-point description (max. 27 char.), specify in plain text. Y16:....                                  | Y16        |            |
| Stainless steel tag plate   | Y17        |            |
| Special design, specify quotation No./date in plain text  | Y99        |            |

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| Selection and Ordering data  | Order No.    | Order code |
|--|--------------|------------|
| <b>SITRANS F M 911/E flow sensor</b>                                     |              |            |
| Novolak liner  | 7 ME 5 2 - 0 | 0          |
| <b>Nominal pressure</b>  |              |            |
| PN 10 (MWP 145 psi)  | 1            |            |
| PN 16 (MWP 232 psi)  | 2            |            |
| PN 25 (MWP 363 psi)  | 3            |            |
| PN 40 (MWP 580 psi)  | 4            |            |
| <b>Design</b>  |              |            |
| Compact, alternating field from DN 65 (2½")                              | 1            |            |
| Remote, alternating field  | 3            |            |
| <b>Nominal diameter</b>  |              |            |
| DN 50 (2")   | F            |            |
| DN 65 (2½")  | G            |            |
| DN 80 (3")   | H            |            |
| DN 100 (4")  | J            |            |
| DN 125 (5")  | K            |            |
| DN 150 (6")  | L            |            |
| DN 200 (8")  | M            |            |
| DN 250 (10")   | N            |            |
| DN 300 (12")   | P            |            |
| DN 350 (14")   | Q            |            |
| DN 400 (16")   | R            |            |
| DN 500 (20")   | S            |            |
| DN 600 (24")   | T            |            |
| Other nominal diameters: specify in plain text                           | Z            | J 1 Y      |
| <b>Connection flange</b>   |              |            |
| DIN 2501/EN 1092-1, mat. No. 1.0460/1.0570 (mild steel)                  | A            |            |
| DIN 2501/EN 1092-1, mat. No. 1.4571/316Ti                                | B            |            |
| ANSI B 16.5 RF, mat. No. 1.0432/1.0570 (mild steel), to 10 bar (145 psi) | C            |            |
| ANSI 300 RF, steel, to 20 bar (290 psi)                                  | D            |            |
| JIS 10 K, mat. No. 1.0570  | E            |            |
| Other connection form  | Z            | K 1 Y      |
| <b>Electrode material</b>  |              |            |
| Mat. No. 1.4571/316Ti  | 1            |            |
| Hastelloy C4 (mat. No. 2.4610)   | 2            |            |
| Titanium   | 3            |            |
| Tantalum   | 4            |            |
| Platinum head with shaft, mat. No. 1.4571/316Ti                          | 7            |            |
| Other materials: specify in plain text                                   | 9            | L 1 Y      |
| <b>Sealing material</b>  |              |            |
| Viton  | 1            |            |
| EPDM   | 2            |            |
| Kalrez   | 3            |            |
| <b>Protection washers, protection rings</b>                              |              |            |
| Without  | 0            |            |
| With protection rings (order as accessory)                               | 2            |            |
| <b>Cable gland</b>   |              |            |
| ½" NPT   | B            |            |
| M16 x 1.5  | C            |            |

| Selection and Ordering data                                     | Order No.    | Order code |
|---|--------------|------------|
| <b>SITRANS F M 911/E flow sensor</b>                            |              |            |
| Novolak liner   | 7 ME 5 2 - 0 | 0          |
| <b>Degree of protection</b>                                     |              |            |
| IP67/NEMA4X   |              | B          |
| IP68/NEMA6, cable length 5 m (16.4 ft)                          |              | C          |
| IP68/NEMA6, cable length 10 m (32.8 ft)                         |              | D          |
| IP68/NEMA6, other cable lengths (order as accessory 7ME5930...) |              | E          |

| Selection and Ordering data   | Order Code |
|---|------------|
| <b>Additional information</b>   |            |
| Please add “-Z” to Order No. and specify Order code(s) and plain text.  |            |
| One earthing (grounding) electrode made of mat. No. 1.4571/316Ti up to DN 300 (12")                               | A01        |
| Two earthing (grounding) electrodes made of mat. No. 1.4571/316Ti above DN 350 (14")                              | A02        |
| One earthing (grounding) electrode made of Hastelloy C4/2.4610 up to DN 300 (12")                                 | A03        |
| Two earthing (grounding) electrodes made of Hastelloy C4/2.4610 above DN 350 (14")                                | A04        |
| Replaceable electrodes above DN 100 (4"), replaceable under pressure  | A06        |
| With 3-point calibration certificate up to DN 600 (24") or Q <sub>max</sub> > 2000 m <sup>3</sup> /h (8805 USgpm) | B06        |
| With 6-point calibration certificate up to DN 600 (24") or Q <sub>max</sub> > 2000 m <sup>3</sup> /h (8805 USgpm) | B07        |
| Rating plate inscription in English   | B11        |
| Acceptance test B to DIN 50049, Section 3.1 and EN 10204  | C12        |
| Factory certificate to EN 10204-2.2   | C14        |
| Silicone-free materials   | Y04        |
| Measuring-point number (max. 16 char.), specify in plain text. Y15:....   | Y15        |
| Measuring-point description (max. 27 char.), specify in plain text. Y16:....                                      | Y16        |
| Stainless steel tag plate   | Y17        |
| Special design, specify quotation No./date in plain text  | Y99        |

Transmitter Transmag 2 with sensor 911/E

| Selection and Ordering data  | Order No. | Order code  | Selection and Ordering data   | Order No.  | Order code  |
|--|-----------|-------------|---|------------|-------------|
| <b>SITRANS F M 911/E flow sensor</b>                                     | 7 ME 5 3  | - 0 0 - 0 0 | <b>SITRANS F M 911/E flow sensor</b>  | 7 ME 5 3   | - 0 0 - 0 0 |
| <b>PTFE liner</b>  | 1         | 2           | <b>PTFE liner</b>   | 1          | 2           |
| <b>Nominal pressure</b>  | 3         | 4           | <b>Protection washers, protection rings</b>   | 3          | 4           |
| PN 10 (MWP 145 psi)  | 1         | 2           | With protection washers (included as standard with PTFE, mat. No. 1.4571/316Ti)                                   | 1          | 2           |
| PN 16 (MWP 232 psi)  | 2         | 3           | With protection rings required for PN 16 (MWP 232 psi) and above, order as accessory)                             | 2          | 3           |
| PN 25 (MWP 363 psi)  | 3         | 4           | With protection washers of other material (order as accessory)  | 3          | 4           |
| PN 40 (MWP 580 psi)  |           |             |   |            |             |
| <b>Design</b>  | 1         | 3           | <b>Cable gland</b>  | B          | C           |
| Compact, alternating field from DN 65 (2½")                              |           |             | 1/2" NPT  | B          | C           |
| Remote, alternating field  |           |             | M16 x 1.5   | D          | E           |
| <b>Nominal diameter</b>  | C         | D           | <b>Degree of protection</b>   |            |             |
| DN 25 (1")   | C         | D           | IP67/NEMA4X   |            |             |
| DN 32 (1¼")  | E         | F           | IP68/NEMA6, cable length 5 m (16.4 ft)  |            |             |
| DN 40 (1½")  | E         | F           | IP68/NEMA6, cable length 10 m (32.8 ft)   |            |             |
| DN 50 (2")   | G         | H           | IP68/NEMA6, other cable lengths (order as accessory 7ME5930...)   |            |             |
| DN 65 (2½")  | G         | H           |   |            |             |
| DN 80 (3")   | H         | I           |   |            |             |
| DN 100 (4")  | J         | K           |   |            |             |
| DN 125 (5")  | J         | L           |   |            |             |
| DN 150 (6")  | K         | M           |   |            |             |
| DN 200 (8")  | L         | N           |   |            |             |
| DN 250 (10")   | M         | P           |   |            |             |
| DN 300 (12")   | N         | Q           |   |            |             |
| DN 350 (14")   | P         | R           |   |            |             |
| DN 400 (16")   | Q         | S           |   |            |             |
| DN 500 (20")   | R         | T           |   |            |             |
| DN 600 (24")   | S         | Z           |   |            |             |
| Other nominal diameters: specify in plain text                           | Z         |             | <b>Selection and Ordering data</b>  | Order Code |             |
| <b>Connection flange</b>   | J         | Y           | <b>Additional information</b>   |            |             |
| DIN 2501/EN 1092-1, mat. No. 1.0460/1.0570 (mild steel)                  | A         |             | Please add "-Z" to Order No. and specify Order code(s) and plain text.  |            |             |
| DIN 2501/EN 1092-1, mat. No. 1.4571/316Ti                                | B         |             | One earthing (grounding) electrode made of mat. No. 1.4571/316Ti up to DN 300 (12")                               | A01        |             |
| ANSI B 16.5 RF, mat. No. 1.0432/1.0570 (mild steel), to 10 bar (145 psi) | C         |             | Two earthing (grounding) electrodes made of mat. No. 1.4571/316Ti above DN 350 (14")                              | A02        |             |
| ANSI 300 RF, steel, to 20 bar (290 psi)                                  | D         |             | One earthing (grounding) electrode made of Hastelloy C4/2.4610 up to DN 300 (12")                                 | A03        |             |
| JIS 10 K, mat. No. 1.0570  | E         |             | Two earthing (grounding) electrodes made of Hastelloy C4/2.4610 above DN 350 (14")                                | A04        |             |
| Other connection form  | Z         |             | Replaceable electrodes above DN 100 (4"), replaceable under pressure  | A06        |             |
| <b>Electrode material</b>  | K         | Y           | With 3-point calibration certificate up to DN 600 (24") or Q <sub>max</sub> > 2000 m <sup>3</sup> /h (8805 USgpm) | B06        |             |
| Mat. No. 1.4571/316Ti  | 1         |             | With 6-point calibration certificate up to DN 600 (24") or Q <sub>max</sub> > 2000 m <sup>3</sup> /h (8805 USgpm) | B07        |             |
| Hastelloy C4 (mat. No. 2.4610)   | 2         |             | Rating plate inscription in English   | B11        |             |
| Titanium   | 3         |             | Acceptance test B to DIN 50049, Section 3.1 and EN 10204  | C12        |             |
| Tantalum   | 4         |             | Factory certificate to EN 10204-2.2   | C14        |             |
| Platinum head with shaft, mat. No. 1.4571/316Ti                          | 7         |             | Silicone-free materials   | Y04        |             |
| Other materials: specify in plain text                                   | 9         |             | Measuring-point number (max. 16 char.), specify in plain text. Y15:....   | Y15        |             |
|  |           |             | Measuring-point description (max. 27 char.), specify in plain text. Y16:....                                      | Y16        |             |
|  |           |             | Stainless steel tag plate   | Y17        |             |
|  |           |             | Special design, specify quotation No./date in plain text  | Y99        |             |

You can find accessories for SITRANS F M 911/E in the Online Catalog on the Internet at [www.siemens.com/fi01](http://www.siemens.com/fi01).

# SITRANS F flowmeters

## SITRANS F M

### Transmitter Transmag 2 with sensor 911/E

| Selection and Ordering data                               | Order No. | Order code |
|---|-----------|------------|
| <b>SITRANS F M</b><br>electromagnetic flowmeter           |           |            |
| <b>Protection washers for flow sensor 911E (per pair)</b> | 7ME5922 - |            |
| <b>Liner</b>  |           |            |
| Hard rubber/soft rubber                                   | 1         |            |
| PTFE  | 0         |            |
| <b>Nominal diameter</b>                                   |           |            |
| <i>Material 1.4571/316 Ti</i>                             |           |            |
| DN 15 (1/2")  | AA        |            |
| DN 20 (3/4")  | BA        |            |
| DN 25 (1")  | CA        |            |
| DN 32 (1 1/4")  | DA        |            |
| DN 40 (1 1/2")  | EA        |            |
| DN 50 (2")  | FA        |            |
| DN 65 (2 1/2")  | GA        |            |
| DN 80 (3")  | HA        |            |
| DN 100 (4")   | JA        |            |
| DN 125 (5")   | KA        |            |
| DN 150 (6")   | LA        |            |
| DN 200 (8")   | MA        |            |
| DN 250 (10")  | NA        |            |
| DN 300 (12")  | PA        |            |
| Other nominal diameters:<br>specify in plain text         | Z A       | J 1 Y      |
| <i>Material Hastelloy C4/2.4610</i>                       |           |            |
| DN 15 (1/2")  | AB        |            |
| DN 20 (3/4")  | BB        |            |
| DN 25 (1")  | CB        |            |
| DN 32 (1 1/4")  | DB        |            |
| DN 40 (1 1/2")  | EB        |            |
| DN 50 (2")  | FB        |            |
| DN 65 (2 1/2")  | GB        |            |
| DN 80 (3")  | HB        |            |
| DN 100 (4")   | JB        |            |
| DN 125 (5")   | KB        |            |
| DN 150 (6")   | LB        |            |
| DN 200 (8")   | MB        |            |
| DN 250 (10")  | NB        |            |
| DN 300 (12")  | PB        |            |
| Other nominal diameters:<br>specify in plain text         | Z B       | J 1 Y      |
| <b>Flange design</b>                                      |           |            |
| Flange to DIN   | 1         |            |
| Flange to ANSI  | 2         |            |
| Flange to JIS   | 3         |            |

| Selection and Ordering data                                | Order No. | Order code |
|--|-----------|------------|
| <b>SITRANS F M</b><br>electromagnetic flowmeter            |           |            |
| <b>Protection rings for flow sensor 911E (per pair)</b>    | 7ME5912 - |            |
| <b>Liner</b>   |           |            |
| Hard rubber/soft rubber                                    | 1         |            |
| Novolak  | 7         |            |
| PTFE   | 0         |            |
| <b>Nominal diameter</b>                                    |           |            |
| <i>for PTFE material 1.4571/316 Ti</i>                     |           |            |
| DN 15 (1/2")   | AA        |            |
| DN 20 (3/4")   | BA        |            |
| DN 25 (1")   | CA        |            |
| DN 32 (1 1/4")   | DA        |            |
| DN 40 (1 1/2")   | EA        |            |
| DN 50 (2")   | FA        |            |
| DN 65 (2 1/2")   | GA        |            |
| DN 80 (3")   | HA        |            |
| DN 100 (4")  | JA        |            |
| DN 125 (5")  | KA        |            |
| DN 150 (6")  | LA        |            |
| DN 200 (8")  | MA        |            |
| DN 250 (10")   | NA        |            |
| DN 300 (12")   | PA        |            |
| Other nominal diameters:<br>specify in plain text          | Z A       | J 1 Y      |
| <i>for Hard/Soft rubber, Novolak material 1.471/316 Ti</i> |           |            |
| DN 15 (1/2")   | AB        |            |
| DN 20 (3/4")   | BB        |            |
| DN 25 (1")   | CB        |            |
| DN 32 (1 1/4")   | DB        |            |
| DN 40 (1 1/2")   | EB        |            |
| DN 50 (2")   | FB        |            |
| DN 65 (2 1/2")   | GB        |            |
| DN 80 (3")   | HB        |            |
| DN 100 (4")  | JB        |            |
| DN 125 (5")  | KB        |            |
| DN 150 (6")  | LB        |            |
| DN 200 (8")  | MB        |            |
| DN 250 (10")   | NB        |            |
| DN 300 (12")   | PB        |            |
| Other nominal diameters:<br>specify in plain text          | Z B       | J 1 Y      |
| <b>Flange design</b>                                       |           |            |
| Flange to DIN  | 1         |            |
| Flange to ANSI   | 2         |            |
| Flange to JIS  | 3         |            |

| Selection and Ordering data  | Order Code |
|--|------------|
| <b>Additional information</b>  |            |
| Please add “-Z” to Order No. and specify Order code(s) and plain text. |            |
| Special design, specify quotation No./date in plain text               | Y99        |

| Selection and Ordering data  | Order code |
|--|------------|
| <b>Additional information</b>  |            |
| Please add “-Z” to Order No. and specify Order code(s) and plain text. |            |
| Tag plate of stainless steel   |            |
| • Y30 - tag number (max. 16 digits, specify in plain text)             | Y17        |
| • Special design, specify quotation No./date in plain text             | Y99        |

Transmitter Transmag 2 with sensor 911/E

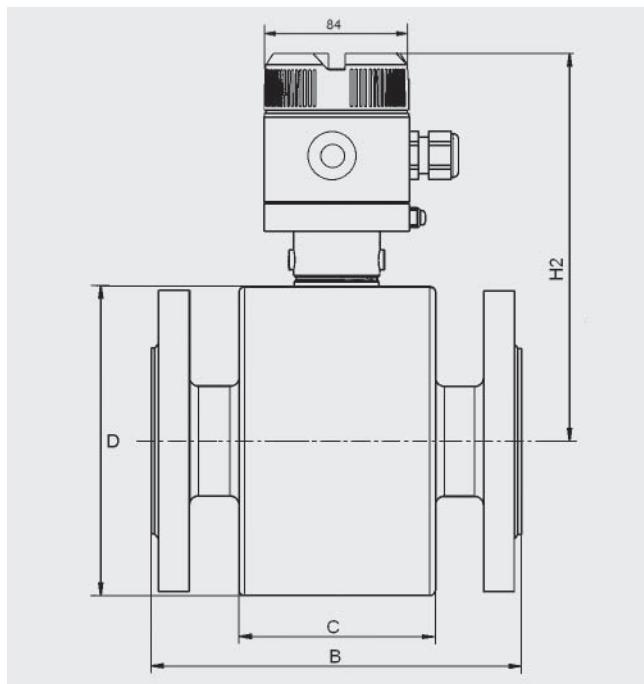
| Selection and Ordering data                              | Order No. | Order code | Selection and Ordering data  | Order No.     | Order code |
|--|-----------|------------|--|---------------|------------|
| <b>SITRANS F M</b><br>electromagnetic flowmeter          | 7ME5902 - |            | <b>SITRANS F M</b><br>electromagnetic flowmeter                        | 7ME5902 -     |            |
| <b>Earthing rings for flow sensor 911E</b><br>(per unit) |           |            | <b>Earthing rings for flow sensor 911E</b><br>(per unit)               |               |            |
| <b>Liner</b>   |           |            | <b>Further design</b>  |               |            |
| Hard rubber/soft rubber                                  | 1         |            | Please add "-Z" to Order No. and specify Order code(s).                |               |            |
| Novolak  | 7         |            | Special design, specify quotation No./date in plain text               | Y99           |            |
| PTFE   | 0         |            |  |               |            |
| <b>Nominal diameter</b>                                  |           |            | <b>Selection and Ordering data</b>                                     | Order code    |            |
| <i>Material 1.4571/316 Ti</i>                            |           |            | <b>Additional information</b>  |               |            |
| DN 15 (1/2")   | AA        |            | Please add "-Z" to Order No. and specify Order code(s) and plain text. |               |            |
| DN 20 (3/4")   | BA        |            | Special design, specify quotation No./date in plain text               | Y99           |            |
| DN 25 (1")   | CA        |            |  |               |            |
| DN 32 (1 1/4")   | DA        |            |  |               |            |
| DN 40 (1 1/2")   | EA        |            |  |               |            |
| DN 50 (2")   | FA        |            |  |               |            |
| DN 65 (2 1/2")   | GA        |            |  |               |            |
| DN 80 (3")   | HA        |            |  |               |            |
| DN 100 (4")  | JA        |            |  |               |            |
| DN 125 (5")  | KA        |            |  |               |            |
| DN 150 (6")  | LA        |            |  |               |            |
| DN 200 (8")  | MA        |            |  |               |            |
| DN 250 (10")   | NA        |            |  |               |            |
| DN 300 (12")   | PA        |            |  |               |            |
| DN 350 (14")   | QA        |            |  |               |            |
| DN 400 (16")   | RA        |            |  |               |            |
| DN 500 (20")   | SA        |            |  |               |            |
| DN 600 (24")   | TA        |            |  |               |            |
| DN 700 (28")   | UA        |            |  |               |            |
| DN 800 (32")   | VA        |            |  |               |            |
| DN 900 (36")   | WA        |            |  |               |            |
| DN 1000 (40")  | XA        |            |  |               |            |
| Other nominal diameters:<br>specify in plain text        | Z A       | J 1 Y      | <b>Selection and Ordering data</b>                                     | Order No.     | Order code |
| <i>Material Hastelloy C4/2.4610</i>                      |           |            | <b>SITRANS F M Transmag 2 and<br/>sensor 911/E</b>                     | 7ME5930 -     |            |
| DN 15 (1/2")   | AB        |            | <b>Cable for remote versions</b>                                       | 7 ME 5930 -   |            |
| DN 20 (3/4")   | BB        |            |  | A 0 0 - 0 A 0 |            |
| DN 25 (1")   | CB        |            |  | 0 A           |            |
| DN 32 (1 1/4")   | DB        |            |  |               |            |
| DN 40 (1 1/2")   | EB        |            |  |               |            |
| DN 50 (2")   | FB        |            |  |               |            |
| DN 65 (2 1/2")   | GB        |            |  |               |            |
| DN 80 (3")   | HB        |            |  |               |            |
| DN 100 (4")  | JB        |            |  |               |            |
| DN 125 (5")  | KB        |            |  |               |            |
| DN 150 (6")  | LB        |            |  |               |            |
| DN 200 (8")  | MB        |            |  |               |            |
| DN 250 (10")   | NB        |            |  |               |            |
| DN 300 (12")   | PB        |            |  |               |            |
| DN 350 (14")   | QB        |            |  |               |            |
| DN 400 (16")   | RB        |            |  |               |            |
| DN 500 (20")   | SB        |            |  |               |            |
| DN 600 (24")   | TB        |            |  |               |            |
| Other nominal diameters:<br>specify in plain text        | Z B       | J 1 Y      | <b>Later 3-point calibration certificate for<br/>SITRANS F M</b>       |               |            |
| <b>Flange design</b>                                     |           |            |  |               |            |
| Flange to DIN  | 1         |            |  |               |            |
| Flange to ANSI   | 2         |            |  |               |            |
| Flange to JIS  | 3         |            |  |               |            |

# SITRANS F flowmeters

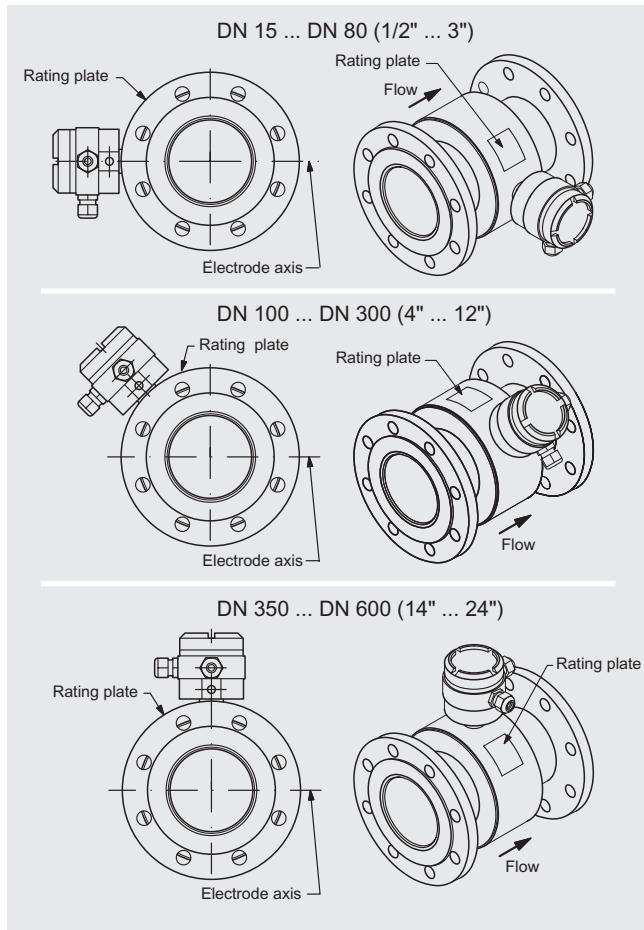
## SITRANS F M

### Transmitter Transmag 2 with sensor 911/E

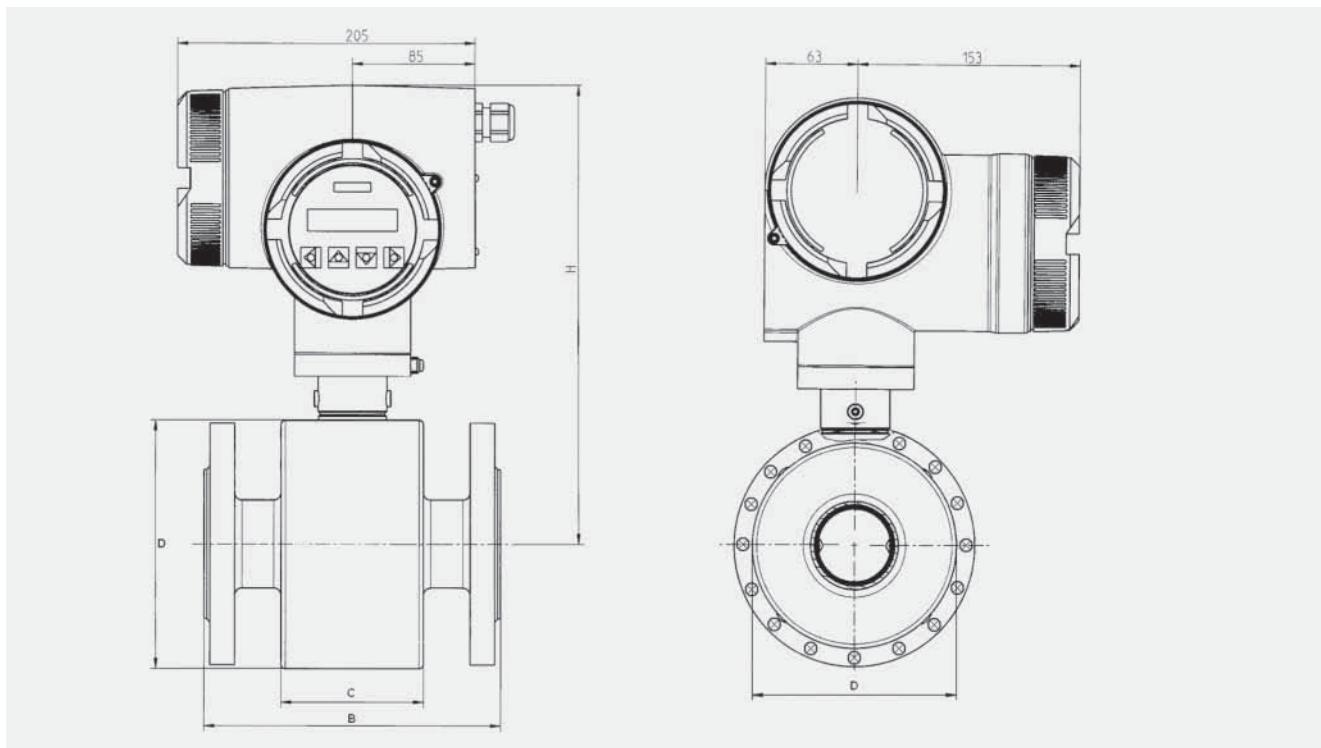
#### Dimensional drawings



SITRANS F M flow sensor 911/E, remote version, dimensions in mm (inches)



Electrode placement



SITRANS F M flow sensor 911/E, compact version, dimensions in mm (inches)

Build-in-length 911/E [in mm and inches]

| Nominal diameter   | DN 15          | DN 20         | DN 25          | DN 32          | DN 40           | DN 50          | DN 65          | DN 80          | DN 100          | DN 125         | DN 150         | DN 200         | DN 250         | DN 300         | DN 350         | DN 400         | DN 500         | DN 600 |  |
|--|----------------|---------------|----------------|----------------|-----------------|----------------|----------------|----------------|-----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|--------|--|
|  | 1/2"           | 3/4"          | 1"             | 1 1/4"         | 1 1/2"          | 2"             | 2 1/2"         | 3"             | 4"              | 5"             | 6"             | 8"             | 10"            | 12"            | 14"            | 16"            | 20"            | 24"    |  |
| <u>Build-In-length B<sup>1)</sup></u>                    |                |               |                |                |                 |                |                |                |                 |                |                |                |                |                |                |                |                |        |  |
| Hard rubber version                                      | 270<br>(10.63) |               | 280<br>(11.02) |                | 330<br>(12.99)  | 340<br>(13.39) |                | 370<br>(14.57) |                 | 410<br>(16.14) | 470<br>(18.50) | 500<br>(19.68) | 550<br>(21.65) | 600<br>(23.62) | 650<br>(25.59) | 780<br>(30.71) |                |        |  |
| Soft rubber / neopren version                            |                |               |                |                |                 |                |                |                |                 |                |                |                |                |                |                |                |                |        |  |
| PTFE-liner without protection washers                    | 270<br>(10.83) |               | 280<br>(11.02) |                | 330<br>(12.99)  | 340<br>(13.39) |                | 370<br>(14.57) |                 | 410<br>(16.14) | 470<br>(18.50) | 500<br>(19.68) | 550<br>(21.65) | 600<br>(23.62) | 650<br>(25.59) | 780<br>(30.71) |                |        |  |
| PTFE-liner with protection washers                       |                |               |                |                |                 |                |                |                |                 |                |                |                |                |                |                |                |                |        |  |
| Novolak-version  | -              |               |                | 275<br>(10.83) | 325<br>(12.79)  | 335<br>(13.19) | 333<br>(13.11) | 362<br>(14.25) |                 | 401<br>(15.79) | 460<br>(18.11) | 489<br>(19.25) | 538<br>(21.18) | 588<br>(23.15) | 638<br>(25.12) | 772<br>(30.39) |                |        |  |
| Dimensions of sensor housing                             |                |               |                |                |                 |                |                |                |                 |                |                |                |                |                |                |                |                |        |  |
| Housing width C  | 170<br>(6.69)  |               |                |                |                 |                |                |                |                 | 240<br>(9.45)  |                |                |                | 306<br>(12.05) | 360<br>(14.17) | 412<br>(16.22) | 552<br>(21.73) |        |  |
| Height H with compact version                            | 281<br>(11.06) |               |                | 285<br>(11.22) | 291<br>(11.46)  | 298<br>(11.73) | 314<br>(12.36) | 326<br>(12.83) | 345<br>(13.58)  | 371<br>(14.61) | 408<br>(16.06) | 441<br>(17.36) | 553<br>(21.77) | 578<br>(22.76) | 633<br>(24.92) | 688<br>(27.09) |                |        |  |
| Height H2 with remote version                            | 175<br>(6.89)  |               |                | 180<br>(7.08)  | 187.5<br>(7.38) | 195<br>(7.68)  | 215<br>(8.46)  | 230<br>(9.06)  | 252.5<br>(9.94) | 285<br>(11.22) | 330<br>(12.99) | 370<br>(14.57) | 347<br>(13.66) | 372<br>(14.65) | 424<br>(16.69) | 477<br>(18.78) |                |        |  |
| Housing diameter D                                       | 135<br>(5.315) |               | 169<br>(6.654) | 184<br>(7.244) | 249<br>(9.803)  |                | 274<br>(10.79) | 298<br>(11.73) | 324<br>(12.76)  | 394<br>(15.51) | 442<br>(17.40) | 492<br>(19.37) | 469<br>(18.46) | 536<br>(21.10) | 631<br>(24.84) | 746<br>(29.37) |                |        |  |
| Weight of PN10 Version in kg (MWP 145 psi version in lb) | 8.0<br>(17.6)  | 8.5<br>(18.7) | 11.0<br>(24.3) | 11.5<br>(25.4) | 25.0<br>(55.1)  | 26<br>(57.3)   |                | 28<br>(61.7)   | 34<br>(75.0)    | 38<br>(83.8)   | 68<br>(149.9)  | 80<br>(176.4)  | 90<br>(198.4)  | 110<br>(242.5) | 150<br>(330.7) | 210<br>(463)   | 370<br>(860)   |        |  |

<sup>1)</sup> Tolerance for Build-In-length: B + 0.0 mm (0.00 inches) / - 4.0 mm (-0.157 inches).

With protection rings or washers for > DN25 + 6.0 mm, > DN200 + 10.0 mm (> 1" + 0.236 inches, > 8" + 0.394 inches)