

Electro-magnetic flowmeters are commonly preferred in flow measure of conductive liquids. Electro-magnetic flowmeters returns volumetric values as L/sec. , L/min. , L/h. , m<sup>3</sup>/sec., m<sup>3</sup>/min., m<sup>3</sup>/h. Electromagnetic method is based on Faraday's Law of Induction. Due to following aspects, electromagnetic flowmeters are advantages: Not-including moving part, wet part's material are optional for different liquids, no pressure loss, showing excellent performance. Electromagnetic flowmeters outputs current flow and total flow thus; with the help of electrical signals returns data of flow to the system.



**Applications :**

Treatment Plants, Chemical, Petrochemical Industry, Food Sector, Textile Industry, Paper Production Sector, Power Plants, Water Distribution Networks Agricultural irrigation sector.

**Technical Specifications :**

|                        |   |
|------------------------|---|
| Fluid                  | Liquids   |
| Flow Range             | 0,0045 m <sup>3</sup> to 113094 m <sup>3</sup>  |
| Pipe Diameter          | DN 10 ... DN 2400 mm  |
| Speed Measure Interval | 0.1 m/sec to 10 m/sec   |
| Body Material          | Aluminum Alloy,<br>Opt. 304 Stainless Steel , 316 Stainless Steel   |
| Sensor Material        | 316 Stainless Steel<br>Opt. Hastelloy C, Hastelloy B, Titanium, Tantalum  |
| Wet Part Material      | PTFE or Rubber  |
| Temperature Interval   | (-) 20 °C / (+)150 °C PTFE ;<br>(-) 20 °C / (+) 60 °C Rubber  |
| Sensitivity            | 0.2 % High Sensitivity  |
| Humidity Interval      | 5 – 95 % RH   |
| Minimum Conductivity   | 20 μS   |
| Connection             | Flange Connection   |
| Supply                 | 85...265 VAC or 24 VDC  |
| Protection Class       | IP 67 Opt. IP 68  |
| Output                 | Pulse, Analog, RS 485, Relay  |
| Sample Interval        | 0.2 secs to 100 secs Daily  |
| Record                 | Weekly, Monthly, Annually Total   |
| Display                | Compact IP 67<br>Opt. External Wall Mounting IP 68<br>Current and total Flow Display 3 x 16 mm<br>Alphanumeric Character , Background Lighting<br>LCD Display |
| Alarm                  | Empty Pipe , Sensor Status  |

**EFM E/M FLOWMETER**

EFM ...

**Advantages :**

- Economical
- Easy Setup
- Encrypted menu

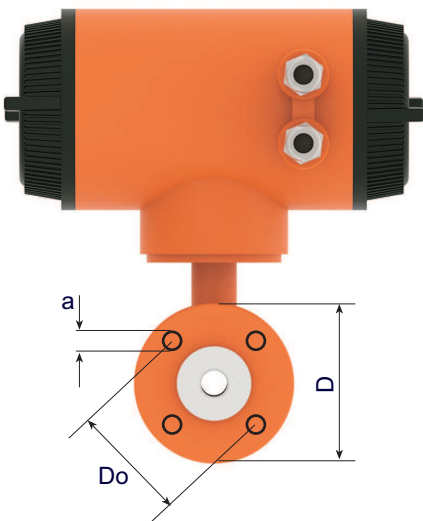
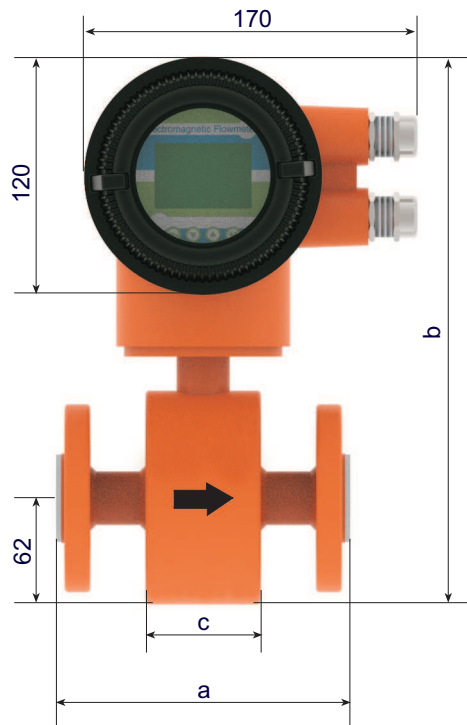


**Flow Values:**

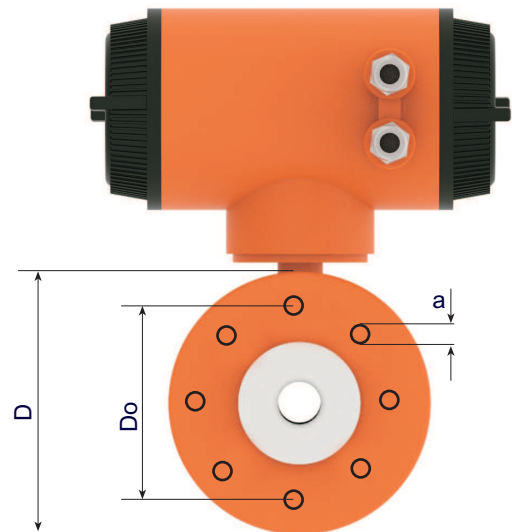
| DN mm | Model    | Min. Measurement m <sup>3</sup> / h | Max. Measurement m <sup>3</sup> / h | Flange Connection | Pressure Class   |
|-------|----------|-------------------------------------|-------------------------------------|-------------------|------------------|
| 10    | EFM 10   | 0,0283                              | 2,8274                              | Ø 10              | 4.0 MPa (40 bar) |
| 15    | EFM 15   | 0,0636                              | 6,3615                              | Ø 15              | 4.0 MPa (40 bar) |
| 20    | EFM 20   | 0,1131                              | 11,3094                             | Ø 20              | 4.0 MPa (40 bar) |
| 25    | EFM 25   | 0,1767                              | 17,6709                             | Ø 25              | 4.0 MPa (40 bar) |
| 32    | EFM 32   | 0,2895                              | 28,9521                             | Ø 32              | 4.0 MPa (40 bar) |
| 40    | EFM 40   | 0,2895                              | 452376                              | Ø 40              | 4.0 MPa (40 bar) |
| 50    | EFM 50   | 0,7068                              | 70,6838                             | Ø 50              | 4.0 MPa (40 bar) |
| 65    | EFM 65   | 1,1946                              | 119,4555                            | Ø 65              | 4.0 MPa (40 bar) |
| 80    | EFM 80   | 1,8095                              | 180,9504                            | Ø 80              | 4.0 MPa (40 bar) |
| 100   | EFM 100  | 2,8274                              | 282,753                             | Ø 100             | 1.6 MPa (16 bar) |
| 125   | EFM 125  | 4,4177                              | 441,7734                            | Ø 125             | 1.6 MPa (16 bar) |
| 150   | EFM 150  | 6,3615                              | 636,1538                            | Ø 150             | 1.6 MPa (16 bar) |
| 200   | EFM 200  | 11,3094                             | 1130,94                             | Ø 200             | 1 MPa (10 bar)   |
| 250   | EFM 250  | 17,6709                             | 1767,0938                           | Ø 250             | 1 MPa (10 bar)   |
| 300   | EFM 300  | 25,4462                             | 2544,615                            | Ø 300             | 1 MPa (10 bar)   |
| 350   | EFM 350  | 34,635                              | 3463,5038                           | Ø 350             | 1 MPa (10 bar)   |
| 400   | EFM 400  | 45.2376                             | 4523,76                             | Ø 400             | 1 MPa (10 bar)   |
| 500   | EFM 500  | 70,6838                             | 7068,375                            | Ø 500             | 1 MPa (10 bar)   |
| 600   | EFM 600  | 101,7846                            | 101784600                           | Ø 600             | 1 MPa (10 bar)   |
| 700   | EFM 700  | 138,5402                            | 13854,015                           | Ø 700             | 1 MPa (10 bar)   |
| 800   | EFM 800  | 180,9504                            | 18095,04                            | Ø 800             | 1 MPa (10 bar)   |
| 900   | EFM 900  | 229,0154                            | 22901,535                           | Ø 900             | 1 MPa (10 bar)   |
| 1000  | EFM 1000 | 282,735                             | 28273,5                             | Ø 1000            | 1 MPa (10 bar)   |
| 1100  | EFM 1100 | 1026.3 281                          | 34210,935                           | Ø 1100            | 0.6 MPa (6 bar)  |
| 1200  | EFM 1200 | 1221,4152                           | 40713,84                            | Ø 1200            | 0.6 MPa (6 bar)  |
| 1400  | EFM 1400 | 1662,4818                           | 55416,06                            | Ø 1400            | 0.6 MPa (6 bar)  |
| 1500  | EFM 1500 | 1908,4613                           | 6361S,3750                          | Ø 1500            | 0.6 MPa (6 bar)  |
| 1600  | EFM 1600 | 2171,4048                           | 72380,16                            | Ø 1600            | 0.6 MPa (6 bar)  |
| 1800  | EFM 1800 | 2748,1842                           | 91606,14                            | Ø 1800            | 0.6 MPa (6 bar)  |
| 2000  | EFM 2000 | 3392,82                             | 113094                              | Ø 2000            | 0.6 MPa (6 bar)  |
| 2200  | EFM 2200 | 4105,3122                           | 136843,74                           | Ø 2200            | 0.6 MPa (6 bar)  |
| 2400  | EFM 2400 | 4885,6608                           | 162855,36                           | Ø 2400            | 0.6 MPa (6 bar)  |

| DN<br>mm | Pressure<br>Class | Device Exterior Diameter |      |      | Flange Connection Dimensions |      |        |
|----------|-------------------|--------------------------|------|------|------------------------------|------|--------|
|          |                   | a                        | b    | c    | D                            | Do   | n x a  |
| 10       | 4.0 MPa (40 bar)  | 150                      | 322  | 82   | 90                           | 60   | 4-Ø14  |
| 15       |                   | 150                      | 322  | 82   | 95                           | 65   | 4-Ø14  |
| 20       |                   | 150                      | 322  | 78   | 105                          | 75   | 4-Ø14  |
| 25       |                   | 150                      | 312  | 78   | 115                          | 85   | 4-Ø14  |
| 32       |                   | 150                      | 327  | 74   | 135                          | 100  | 4-Ø18  |
| 40       |                   | 150                      | 335  | 74   | 145                          | 110  | 4-Ø18  |
| 50       |                   | 200                      | 354  | 86   | 160                          | 125  | 4-Ø18  |
| 65       |                   | 200                      | 366  | 92   | 180                          | 145  | 8-Ø18  |
| 80       |                   | 200                      | 385  | 92   | 19S                          | 160  | 8-Ø18  |
| 100      |                   | 1.6 MPa (16 bar)         | 250  | 406  | 114                          | 215  | 180    |
| 125      | 250               |                          | 436  | 114  | 245                          | 210  | 8-Ø18  |
| 150      | 300               |                          | 465  | 136  | 280                          | 240  | 8-Ø23  |
| 200      | 1.0 MPa (10 bar)  | 350                      | 518  | 156  | 335                          | 295  | 8-Ø23  |
| 250      |                   | 400                      | 570  | 202  | 390                          | 350  | 12-Ø23 |
| 300      |                   | 500                      | 620  | 230  | 440                          | 400  | 12-Ø23 |
| 350      |                   | 500                      | 675  | 278  | 500                          | 460  | 16-Ø23 |
| 400      |                   | 600                      | 733  | 320  | 565                          | 515  | 16-Ø25 |
| 450      |                   | 600                      | 782  | 374  | 615                          | 565  | 20-Ø25 |
| 500      |                   | 600                      | 835  | 388  | 670                          | 620  | 20-Ø25 |
| 600      |                   | 600                      | 940  | 408  | 780                          | 725  | 20-Ø30 |
| 700      |                   | 700                      | 1048 | 520  | 895                          | 840  | 24-Ø30 |
| 800      |                   | 800                      | 1160 | 580  | 1010                         | 950  | 24-Ø34 |
| 900      |                   | 900                      | 1260 | 660  | 1110                         | 1050 | 28-Ø34 |
| 1000     |                   | 1000                     | 1370 | 720  | 1220                         | 1160 | 20-Ø34 |
| 1200     |                   | 0.6 MPa (6 bar)          | 1200 | 1585 | 1130                         | 1405 | 1340   |
| 1400     | 1400              |                          | 1810 | 1260 | 1630                         | 1560 | 36-Ø36 |
| 1600     | 1600              |                          | 2040 | 1450 | 1830                         | 1760 | 40-Ø36 |
| 1800     | 1800              |                          | 2250 | 1640 | 2045                         | 1970 | 44-Ø39 |
| 2000     | 2000              |                          | 2460 | 1820 | 2265                         | 2180 | 48-Ø42 |
| 2200     | 2200              |                          | 2670 | 1990 | 2510                         | 2390 | 52-Ø45 |

Dimensions :



DN 10 ... DN 25



DN 32 ... DN 2200

**Order Form : Please consider sample models when coding.**

**1 MODEL EFM**

Std. ....1 Ex-Proof .....2

**2 LINE SIZE (Diameter)**

DN 10 .....10  
.  
.  
DN 2400 .....2400

**3 ELECTRODE FORM**

4 Electrode.....1 2 Electrode.....2

**4 ELECTRODE TYPE**

316L Stainless Steel.....0 Tantalum.....3  
Platinum.....1 Titanium.....4  
Hastelloy B / C.....2

**5 INSIDE LINING (COATING)**

Rubber.....1 PTFE.....3  
Polyurethane Rubber.....2 FEP.....4

**6 PRESSURE CLASS**

40 bar.....1 6 bar.....3  
16 bar.....2 2,5 bar.....4  
10 bar.....3

**7 WORKING TEMPERATURE**

< 60 °C.....1 < 120 °C.....2

**8 GROUNDING**

Yes.....1

**9 DISPLAY**

On-Body.....1 With Cable.....2

**10 PROTECTION CLASS**

IP 67.....0 IP 68.....1

**11 BODY MATERIAL**

Casting.....0 304 Stainless Steel.....1

**12 FLANGE MATERIAL**

Casting.....0 304 Stainless Steel.....1

**13 SUPPLY VOLTAGE**

220 VAC.....0 24 VDC.....1

**EXAMPLE**

EFM 1200 - 1 - 0 - 3 - 1 - 1 - 1 - 2 - 0 - 0 - 0 - 0

EFM E / M Flowmeter DN 200 , PTFE Coated 40 bar , IP 65 , With Cable , 220 VAC Supply