

## Overview



The complete flowmeter system SITRANS FC430 can be ordered for standard, hygienic or NAMUR service. All versions can be ordered for CT service, according to OIML R 117 (Liquids other than water) and NTEP.

SIL specified compact variants can be validated and configured for SIL 2 or SIL 3 operation. SIL 3 operation requires two flowmeters in series and monitored by a SIL-rated control system. Series mounting must not introduce cross-talk between the sensors. Refer to installation guidelines.

The flowmeter is based on the latest developments within digital signal processing technology – engineered for high measuring performance:

- Fast response to rapid changes in flow
- Fast dosing applications
- High immunity against process noise
- High turndown ratio of flowrates
- Suitable for liquid and gas service
- Easy to install, commission and maintain

FC430 is available as standard with 4 to 20 mA analog output with HART 7.2. Additional functions can be freely configured for analog, pulse, frequency, relay or status output or binary input.

The transmitter comes with a user-configurable graphical display and SensorFlash, a micro SD card for configuration backup, firmware update and data storage.

The SITRANS FC430 flowmeter system consists of a SITRANS FCS400 sensor and a SITRANS FCT030 transmitter.

## Benefits

- It is compact and light, fitting neatly into dense piping arrangements
- Easy maintenance because modules can be exchanged rapidly
- Effective separation of measurement from plant vibration
- Highly secure operation in safety critical applications
- Non-volatile memory of all setup and operation data
- Reliable measurements due to high signal to noise ratio
- Secure, digital transfer of measurement data from the sensor
- Short overall length; easy drop-in replacement into most existing installations
- Functional Safety (SIL X). Device suitable for use in accordance with IEC 61508 and IEC 61511.






























## Technical specifications







|  |   |
|--|---|
| <b>Sizes</b>                                       | DN 15 (½"), DN 25 (1"),<br>DN 50 (2"), DN 80 (3")   |
| <b>Accuracy</b>                                    | ± 0.10 %  |
| <b>Repeatability</b>                               | ± 0.05 %  |
| <b>Flow range</b><br>(water @ 1 bar pressure loss) | DN 15: 3 700 kg/h (8 157 lb/h)<br>DN 25: 11 500 kg/h (25 353 lb/h)<br>DN 50: 52 000 kg/h (114 640 lb/h)<br>DN 80: 136 000 kg/h (300 000 lb/h)   |
| <b>Architecture</b>                                | Compact or remote configuration   |
| <b>Display</b>                                     | Full graphical display, 240 x 160 pixels<br>with selection of twelve languages<br>including Chinese and Russian   |
| <b>Power supply</b>                                | 20 ... 27 V DC ± 10%;<br>100 ... 240 V AC ± 10 %,<br>47 ... 63 Hz ± 10%   |
| <b>Weight</b>                                      | 4.6 ... 50 kg   |
| <b>Material</b>                                    | <ul style="list-style-type: none"> <li>• Sensor</li> <li>- Wetted parts</li> <li>- Enclosure</li> <li>• Transmitter</li> </ul>  |
|  | 316L stainless steel or Hastelloy C22<br>304 stainless steel<br>Aluminum with corrosion-resistant<br>coating  |
| <b>Enclosure rating</b>                            | IP67  |
| <b>Pressure ratings</b>                            | <ul style="list-style-type: none"> <li>• Measuring tubes</li> <li>- 316L</li> <li>- Hastelloy C22</li> <li>• Sensor enclosure</li> <li>• Sensor enclosure burst pressure</li> </ul>   |
|  | 100 bar (1450 psi)<br>160 bar (2321 psi)<br>20 bar (DN15, DN 25)<br>17 bar (DN 50, DN 80)<br>>160 bar (all sizes)   |
| <b>Temperature ratings</b>                         | <ul style="list-style-type: none"> <li>• Process medium</li> <li>• Ambient</li> <li>• Display</li> </ul>  |
|  | -50 ... +200 °C (-58 ... +392 °F)<br>-40 ... +60 °C (-40 ... +140 °F)<br>-20 ... +60 °C (-4 ... +140 °F)  |
| <b>Process connections</b>                         | <ul style="list-style-type: none"> <li>• Flanges</li> <li>• Pipe threads</li> <li>• Hygienic threads</li> <li>• Hygienic clamps</li> </ul>  |
|  | EN 1092-1 B1, EN 1092-1 D,<br>ANSI/ASME B16.5, JIS B 2220,<br>DIN 11864-2<br>ASME B1.20 (NPT), ISO228-1 G<br>(BSPP), VCO Quick-connect<br>DIN 11851, DIN 11864-1A,<br>ISO 2853, SMS 1145<br>DIN 11864-3A, DIN 32676, ISO 2852 |
| <b>Approvals</b>                                   | <ul style="list-style-type: none"> <li>• Hazardous area</li> <li>• Pressure equipment</li> <li>• Hygienic</li> <li>• Custody transfer</li> <li>• Operational safety<br/>(compact system only)</li> </ul>                      |
|  | ATEX, IECEx, EAC Ex, FM, NEPSI,<br>CSA, INMETRO<br>PED, CRN<br>3A, EHEDG<br>OIML R 117, NTEP<br>SIL 2 Single<br>SIL 3 Redundant system  |
| <b>NAMUR</b>                                       | NAMUR-compliant (e.g. NE 21,<br>NE 41, NE 107 and NE 132)   |
| <b>I/O</b>   | Up to 4 channels combining analog,<br>relay or digital outputs and<br>binary input  |
| <b>Communication</b>                               | HART 7.2  |
| <b>EMC performance</b>                             | <ul style="list-style-type: none"> <li>Emission</li> <li>Immunity</li> </ul>  |
|  | EN 55011/CISPR-11 (Class A)<br>EN/IEC 61236-1 (Industry)  |
| <b>Mechanical load</b>                             | 18 to 400 Hz random<br>The flow meter will mechanically tolerate<br>3.17 g RMS in all directions.<br>Flow accuracy cannot be guaranteed<br>under all conditions.  |



# Flow Measurement








## SITRANS F C

### Flowmeter SITRANS FC430

| Selection and Ordering data   | Article No.   | Ord. code |
|---|---|-----------|
| <b>SITRANS FC430 Digital coriolis flowmeter</b>                                      | 7ME 4 6 1 3 -   |           |
| <b>with SITRANS FCS400 Standard flow sensor with hygienic and flange/pipe thread connections and compact or remote mounting with FCT030 transmitter</b>               |   |           |
|  Click on the Article No. for the online configuration in the PIA Life Cycle Portal. |   |           |
| <b>Sensor size, connection size</b>   |   |           |
| DN 15, DN 10 (1/2", 3/8")   | 3 F   |           |
| DN 15, DN 15 (1/2", 1/2")   |  3 G   |           |
| DN 15, DN 20 (1/2", 3/4")   |  3 H   |           |
| DN 15, DN 25 (1/2", 1")   |  3 J   |           |
| DN 25, DN 15 (1", 1/2")   | 3 K   |           |
| DN 25, DN 25 (1", 1")   |  3 L   |           |
| DN 25, DN 40 (1", 1 1/2")   |  3 N   |           |
| DN 50, DN 40 (2", 1 1/2")   |  4 B   |           |
| DN 50, DN 50 (2", 2")   |  4 C   |           |
| DN 80, DN 65 (3", 2 1/2")   |  4 J   |           |
| DN 80, DN 80 (3", 3")   |  4 K   |           |
| DN 80, DN 100 (3", 4")  | 4 L   |           |
| <b>Process connection</b>   |   |           |
| EN 1092-1 B1, PN 16   | A 0   |           |
| EN 1092-1 B1, PN 40   |  A 1   |           |
| EN 1092-1 B1, PN 63   | A 2   |           |
| EN 1092-1 B1, PN 100  |  A 3  |           |
| EN 1092-1 B1, PN 160  | B 1   |           |
| EN 1092-1 D NUT, PN 40  | A 5   |           |
| EN 1092-1 D NUT, PN 63  | A 6   |           |
| EN 1092-1 D NUT, PN 100   | A 7   |           |
| EN 1092-1 D NUT, PN 160   | A 8   |           |
| ANSI B16.5-2009, class 150  |  D 1 |           |
| ANSI B16.5-2009, class 300  | D 2   |           |
| ANSI B16.5-2009, class 600  |  D 3 |           |
| ANSI B16.5-2009, class 900  | D 4   |           |
| ISO228-1 G pipe thread  |  E 1 |           |
| ASME B1.20.1 NPT pipe thread  |  E 3 |           |
| DIN 11851 hygienic screwed  |  F 1 |           |
| DIN 32676 hygienic Tri-Clamp  |  G 1 |           |
| DIN 11864-1A aseptic screwed  |  H 1 |           |
| DIN 11864-2A aseptic flanged  |  H 2 |           |
| DIN 11864-3A clamped  | H 3   |           |
| ISO 2852 hygienic clamped   |  J 1 |           |
| ISO 2853 hygienic screwed   |  J 5 |           |
| SMS 1145 hygienic screwed   | K 1   |           |
| 12-VCO-4 quick connect  | K 5   |           |
| JIS B2200:2004/10K  | L 2   |           |
| JIS B2220:2004/20K  | L 4   |           |
| JIS B2220:2004/40K  | L 6   |           |
| JIS B2220:2004/63K  | L 7   |           |
| <b>Wetted parts material</b>  |   |           |
| AISI 316L/W1.4435/W1.4404 (100 barg max.)   |  1   |           |
| Hastelloy C22 (only for 7ME461)   | 3   |           |
| <b>Calibration/Accuracy class</b>   |   |           |
| 0.1 % flow, 5 kg/m <sup>3</sup> density   |  1   |           |
| 0.1 % flow, 0.5 kg/m <sup>3</sup> density   |  4   |           |
| Standard fraction calibration   | 8   |           |
| <b>Transmitter/DSL material &amp; mounting style</b>  |   |           |
| Compact, IP67, aluminum   |  D   |           |
| Remote, IP67, aluminum, M12   |  G   |           |
| Remote, IP67, aluminum, T/Box   |  K   |           |

| Selection and Ordering data   | Article No.   | Ord. code |
|---|---|-----------|
| <b>SITRANS FC430 Digital coriolis flowmeter</b>   | 7ME 4 6 1 3 -   |           |
| <b>with SITRANS FCS400 Standard flow sensor with hygienic and flange/pipe thread connections and compact or remote mounting with FCT030 transmitter</b> |   |           |
| <b>Ex approval</b>  |   |           |
| Non-Ex  |  | A         |
| ATEX  |  | C         |
| IECEX   |  | F         |
| FM  |  | H         |
| CSA   |   | M         |
| NEPSI   |   | N         |
| INMETRO   |   | P         |
| KCs   |   | Q         |
| EAC   |   | U         |
| <b>Local User Interface</b>   |   |           |
| Blind   |  | 1         |
| Graphical, 240 x 160 pxl  |  | 3         |

 We can offer shorter delivery times for configurations designated with the Quick Ship Symbol . For details see page 9/5 in the appendix.

| Selection and Ordering data                               | Order code  |
|---|---|
| <b>Further designs</b>                                    |   |
| Please add "-Z" to Article No. and specify Order code(s). |   |
| <b>Cable glands</b>                                       |   |
| Metric, no glands   |  A01 |
| Metric, plastic   |  A02 |
| Metric, brass/Ni plated                                   | A05   |
| Metric, stainless steel                                   | A06   |
| NPT, no glands  | A11   |
| NPT, Plastic  | A12   |
| NPT, brass/Ni plated                                      | A15   |
| NPT, stainless steel                                      | A16   |
| <b>Software functions and CT approvals</b>                |   |
| Standard  |  B11 |
| CT standard   | B31   |
| CT with NTEP  | B52   |
| <b>I/O configuration Ch1</b>                              |   |
| Ca 4 ... 20 mA HART active SIL certified                  |  E04 |
| Cp 4 ... 20 mA HART passive SIL certified                 |  E05 |
| Ca 4 ... 20 mA HART active                                |  E06 |
| Cp 4 ... 20 mA HART passive                               |  E07 |
| <b>Options for Ex</b>                                     |   |
| ATEX + IECEx + EAC Ex                                     | Q0B   |
| Only compact versions can be used in SIL applications.    |   |

## Selection and Ordering data

Order code

## I/O configuration Ch2, Ch3 and Ch4

|                           |       |
|---------------------------|-------|
| None                      | ◆ F00 |
| aSignal, None, None       | F40   |
| aSignal, aSignal, None    | F41   |
| aSignal, aSignal, aSignal | F42   |
| aSignal, aSignal, Ia      | F43   |
| aSignal, aSignal, R       | F44   |
| aSignal, Ia, None         | F45   |
| aSignal, Ia, Ia           | F46   |
| aSignal, Ia, R            | F47   |
| aSignal, R, None          | F50   |
| aSignal, R, R             | F51   |
| pSignal, None, None       | F60   |
| pSignal, pSignal, None    | F61   |
| pSignal, pSignal, pSignal | F62   |
| pSignal, pSignal, Ip      | F63   |
| pSignal, pSignal, R       | F64   |
| pSignal, Ip, None         | F65   |
| pSignal, Ip, Ip           | F66   |
| pSignal, Ip, R            | F67   |
| pSignal, R, None          | F70   |
| pSignal, R, R             | F71   |
| aSignal, aSignal, pSignal | F80   |
| aSignal, aSignal, Ip      | F81   |
| aSignal, pSignal, None    | F82   |
| aSignal, pSignal, pSignal | F83   |
| aSignal, pSignal, Ia      | F84   |
| aSignal, pSignal, Ip      | F85   |
| aSignal, pSignal, R       | F86   |
| aSignal, Ia, Ip           | F87   |
| aSignal, Ip, None         | F90   |
| aSignal, Ip, Ip           | F91   |
| aSignal, Ip, R            | F92   |
| pSignal, pSignal, Ia      | F93   |
| pSignal, Ia, None         | F94   |
| pSignal, Ia, Ia           | F95   |
| pSignal, Ia, Ip           | F96   |
| pSignal, Ia, R            | F97   |

## Notes on I/O configurations:

**a or p suffix:** The I/O module is selected at ordering with either active or passive function.

**Signal:** The output can be selected for Current (0 or 4 to 20 mA), frequency or pulse function in the menu.

**I:** Discrete status input to the flowmeter. Functions are selected in the menu including 'Freeze output', 'Reset totalizer'.

**R:** Relay output for discrete status reporting. Function is selected in the menu, including 'Error', 'High flow warning'.

The MLFB structure for FC430 systems must be filled to **this level**, including "-Z" options A., B., E. and F.

## Selection and Ordering data

Order code

## Add-on options and accessories

Please add "-Z" to Article No. and specify Order code(s).

## Certificates

|                                     |       |
|-------------------------------------|-------|
| Pressure test certificate CRN       | C01   |
| Pressure test certificate PED       | C02   |
| Material certificate EN 10204-3.1   | C05   |
| Welding inspection report           | C07   |
| Factory certificate to EN 10204 2.1 | ◆ C10 |
| Factory certificate to EN 10204 2.2 | C11   |
| Cleaning for oil and grease         | C50   |

## Cable

|  |     |
|--|-----|
| None   | L50 |
| 5 m (16.4 ft), standard with M12 plugs fitted  | L51 |
| 5 m (16.4 ft), standard                        | L52 |
| 10 m (32.8 ft) standard with M12 plugs fitted  | L55 |
| 10 m (32.8 ft), standard                       | L56 |
| 25 m (82 ft), standard with M12 plugs fitted   | L59 |
| 25 m (82 ft), standard                         | L60 |
| 50 m (164 ft), standard with M12 plugs fitted  | L63 |
| 50 m (164 ft), standard                        | L64 |
| 75 m (246 ft), standard with M12 plugs fitted  | L67 |
| 75 m (246 ft), standard                        | L68 |
| 150 m (492 ft), standard with M12 plugs fitted | L71 |
| 150 m (492 ft), standard                       | L72 |

## Region-specific approvals and certificates

|                   |     |
|-------------------|-----|
| South Korea (KCC) | W28 |
|-------------------|-----|

## Additional data

Please add "-Z" to Article No. and specify Order code(s) and plain text.

## Tag name

|                                 |     |
|---------------------------------|-----|
| Tag name plate, stainless steel | Y17 |
|---------------------------------|-----|

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

## Operating instructions for SITRANS FC430

| Description | Article No. |
|-------------|-------------|
| • English   | A5E03361511 |
| • German    | A5E03651143 |

This device is shipped with a Quick Start guide and a CD containing further SITRANS F C literature.

All literature is available to download for free, in a range of languages, at [www.siemens.com/processinstrumentation/documentation](http://www.siemens.com/processinstrumentation/documentation)

# Flow Measurement

## SITRANS F C

### Flowmeter SITRANS FC430

| Selection and Ordering data  | Article No.   | Ord. code |
|--|---------------|-----------|
| <b>SITRANS FC430 Digital coriolis flowmeter</b> ↗  | 7ME 4 6 2 3 - |           |
| <b>with SITRANS FCS400 Flow sensor</b>   |               |           |
| <b>Hygienic version with Ra &lt; 0.8 µm, 3A approved, and compact or remote mounting with FCT030 transmitter</b> |               |           |
| ↗ Click on the Article No. for the online configuration in the PIA Life Cycle Portal.                            |               |           |
| <b>Sensor size, connection size</b>  |               |           |
| DN 15, DN 10 (½", 3/8")  | 3 F           |           |
| DN 15, DN 15 (½", ½")  | 3 G           |           |
| DN 15, DN 20 (½", ¾")  | 3 H           |           |
| DN 15, DN 25 (½", 1")  | 3 J           |           |
| DN 25, DN 25 (1", 1")  | 3 L           |           |
| DN 25, DN 32 (1", 1¼")   | 3 M           |           |
| DN 25, DN 40 (1", 1½")   | 3 N           |           |
| DN 50, DN 40 (2", 1½")   | 4 B           |           |
| DN 50, DN 50 (2", 2")  | 4 C           |           |
| DN 80, DN 65 (3", 2½")   | 4 J           |           |
| DN 80, DN 80 (3", 3")  | 4 K           |           |
| <b>Process connection</b>  |               |           |
| DIN 11851 0.8 µm hygienic screwed  | F 1           |           |
| DIN 32676 0.8 µm hygienic Tri-Clamp  | G 1           |           |
| DIN 11864-1 0.8 µm hygienic screwed  | H 1           |           |
| DIN 11864-2A BF-A 0.8 µm hygienic screwed (metric)   | H 2           |           |
| DIN 11864-3A BF-A 0.8 µm hygienic clamped  | H 3           |           |
| DIN 11864-2B BF-A 0.8 µm hygienic flanged (NPS)  | H 4           |           |
| ISO 2852 0.8 µm hygienic clamped   | J 1           |           |
| ISO 2853 0.8 µm hygienic screwed   | J 5           |           |
| <b>Wetted parts material</b>   |               |           |
| AISI 316L/1.4435 (40 bar max.)   | 1             |           |
| <b>Calibration/Accuracy class</b>  |               |           |
| 0.1 % flow, 5 kg/m³ density  | 1             |           |
| 0.1 % flow, 0.5 kg/m³ density  | 4             |           |
| Standard fraction calibration  | 8             |           |
| <b>Transmitter/DSL material and mounting style</b>   |               |           |
| Compact, IP67, aluminum  | D             |           |
| Remote, IP67, aluminum, M12  | G             |           |
| Remote, IP67, aluminum, T/Box  | K             |           |
| <b>Ex approval</b>   |               |           |
| Non-Ex   | A             |           |
| ATEX II 2GD  | C             |           |
| IECEX GDb  | F             |           |
| FM, Class 1, Div 1   | H             |           |
| CSA, Class 1, Zone 1   | M             |           |
| NEPSI  | N             |           |
| INMETRO  | P             |           |
| KCs  | Q             |           |
| EAC  | U             |           |
| <b>Local User Interface</b>  |               |           |
| Blind  | 1             |           |
| Graphical, 240 x 160 pxl   | 3             |           |

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

| Selection and Ordering data                               | Order code |
|---|------------|
| <b>Further designs</b>                                    |            |
| Please add "-Z" to Article No. and specify Order code(s). |            |
| <b>Cable glands</b>                                       |            |
| Metric, no glands   | ◆ A01      |
| Metric, plastic   | ◆ A02      |
| Metric, brass/Ni plated                                   | ◆ A05      |
| Metric, stainless steel                                   | ◆ A06      |
| NPT, no glands  | ◆ A11      |
| NPT, plastic  | ◆ A12      |
| NPT, brass/Ni plated                                      | ◆ A15      |
| NPT, stainless steel                                      | ◆ A16      |
| <b>Software functions and CT approvals</b>                |            |
| Standard  | ◆ B11      |
| CT standard   | ◆ B31      |
| CT with NTEP  | ◆ B52      |
| <b>I/O configuration Ch1</b>                              |            |
| Ca 4 ... 20 mA HART active SIL certified                  | ◆ E04      |
| Cp 4 ... 20 mA HART passive SIL certified                 | ◆ E05      |
| Ca 4 ... 20 mA HART active                                | ◆ E06      |
| Cp 4 ... 20 mA HART passive                               | ◆ E07      |
| <b>Options for Ex</b>                                     |            |
| ATEX + IECEX + EAC Ex                                     | ◆ Q0B      |

Only compact versions can be used in SIL applications.

## Selection and Ordering data

Order code

## I/O configuration Ch2, Ch3 and Ch4

|                           |       |
|---------------------------|-------|
| None                      | ◆ F00 |
| aSignal, None, None       | F40   |
| aSignal, aSignal, None    | F41   |
| aSignal, aSignal, aSignal | F42   |
| aSignal, aSignal, Ia      | F43   |
| aSignal, aSignal, R       | F44   |
| aSignal, Ia, None         | F45   |
| aSignal, Ia, Ia           | F46   |
| aSignal, Ia, R            | F47   |
| aSignal, R, None          | F50   |
| aSignal, R, R             | F51   |
| pSignal, None, None       | F60   |
| pSignal, pSignal, None    | F61   |
| pSignal, pSignal, pSignal | F62   |
| pSignal, pSignal, Ip      | F63   |
| pSignal, pSignal, R       | F64   |
| pSignal, Ip, None         | F65   |
| pSignal, Ip, Ip           | F66   |
| pSignal, Ip, R            | F67   |
| pSignal, R, None          | F70   |
| pSignal, R, R             | F71   |
| aSignal, aSignal, pSignal | F80   |
| aSignal, aSignal, Ip      | F81   |
| aSignal, pSignal, None    | F82   |
| aSignal, pSignal, pSignal | F83   |
| aSignal, pSignal, Ia      | F84   |
| aSignal, pSignal, Ip      | F85   |
| aSignal, pSignal, R       | F86   |
| aSignal, Ia, Ip           | F87   |
| aSignal, Ip, None         | F90   |
| aSignal, Ip, Ip           | F91   |
| aSignal, Ip, R            | F92   |
| pSignal, pSignal, Ia      | F93   |
| pSignal, Ia, None         | F94   |
| pSignal, Ia, Ia           | F95   |
| pSignal, Ia, Ip           | F96   |
| pSignal, Ia, R            | F97   |

## Notes on I/O configurations:

**a or p suffix:** The I/O module is selected at ordering with either active or passive function.

**Signal:** The output can be selected for Current (0 or 4 to 20 mA), frequency or pulse function in the menu.

**I:** Discrete status input to the flowmeter. Functions are selected in the menu including 'Freeze output', 'Reset totalizer'.

**R:** Relay output for discrete status reporting. Function is selected in the menu, including 'Error', 'High flow warning'.

The MLFB structure for FC430 systems must be filled to **this level**, including "-Z" options A., B., E. and F.

## Selection and Ordering data

Order code

## Add-on options and accessories

Please add "-Z" to Article No. and specify Order code(s).

## Certificates

|                                     |       |
|-------------------------------------|-------|
| Pressure test certificate CRN       | C01   |
| Pressure test certificate PED       | C02   |
| Material certificate EN 10204-3.1   | C05   |
| Welding inspection report           | C07   |
| Factory certificate to EN 10204 2.1 | ◆ C10 |
| Factory certificate to EN 10204 2.2 | C11   |
| Cleaning for oil and grease         | C50   |

## Cable

|  |     |
|--|-----|
| None   | L50 |
| 5 m (16.4 ft), standard with M12 plugs fitted  | L51 |
| 5 m (16.4 ft), standard                        | L52 |
| 10 m (32.8 ft) standard with M12 plugs fitted  | L55 |
| 10 m (32.8 ft), standard                       | L56 |
| 25 m (82 ft), standard with M12 plugs fitted   | L59 |
| 25 m (82 ft), standard                         | L60 |
| 50 m (164 ft), standard with M12 plugs fitted  | L63 |
| 50 m (164 ft), standard                        | L64 |
| 75 m (246 ft), standard with M12 plugs fitted  | L67 |
| 75 m (246 ft), standard                        | L68 |
| 150 m (492 ft), standard with M12 plugs fitted | L71 |
| 150 m (492 ft), standard                       | L72 |

## Region-specific approvals and certificates

|                   |     |
|-------------------|-----|
| South Korea (KCC) | W28 |
|-------------------|-----|

## Additional data

Please add "-Z" to Article No. and specify Order code(s) and plain text.

## Tag name

|                                 |     |
|---------------------------------|-----|
| Tag name plate, stainless steel | Y17 |
|---------------------------------|-----|

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

## Operating instructions for SITRANS FC430

| Description | Article No. |
|-------------|-------------|
| • English   | A5E03361511 |
| • German    | A5E03651143 |

This device is shipped with a Quick Start guide and a CD containing further SITRANS F C literature.

All literature is available to download for free, in a range of languages, at [www.siemens.com/processinstrumentation/documentation](http://www.siemens.com/processinstrumentation/documentation)

# Flow Measurement


## SITRANS F C

### Flowmeter SITRANS FC430

#### Selection and Ordering data

SITRANS FC430 Digital coriolis flowmeter  Article No. 7ME 4 7 1 3 - Ord. code

with SITRANS FCS400 NAMUR compliant flow sensor with flange/pipe thread connections and compact or remote mounting with FCT030 transmitter

 Click on the Article No. for the online configuration in the PIA Life Cycle Portal.

#### Sensor size, Connection size

|                         |   |     |
|-------------------------|---|-----|
| DN 15, DN 6 (½", ¼")    | ◆ | 3 E |
| DN 15, DN 10 (½", 3/8") | ◆ | 3 F |
| DN 15, DN 15 (½", ½")   | ◆ | 3 G |
| DN 15, DN 20 (½", ¾")   | ◆ | 3 H |
| DN 15, DN 25 (½", 1")   | ◆ | 3 J |
| DN 25, DN 25 (1", 1")   | ◆ | 3 L |
| DN 25, DN 32 (1", 1¼")  | ◆ | 3 M |
| DN 25, DN 40 (1", 1½")  | ◆ | 3 N |
| DN 50, DN 40 (2", 1½")  | ◆ | 4 B |
| DN 50, DN 50 (2", 2")   | ◆ | 4 C |
| DN 80, DN 65 (3", 2½")  | ◆ | 4 J |
| DN 80, DN 80 (3", 3")   | ◆ | 4 K |
| DN 80, DN 100 (3", 4")  | ◆ | 4 L |

#### Process connection

|   |   |     |
|---|---|-----|
| EN 1092-1 B1, PN 16                       |   | A 0 |
| EN 1092-1 B1, PN 40                       | ◆ | A 1 |
| EN 1092-1 B1, PN 63                       |   | A 2 |
| EN 1092-1 B1, PN 100                      | ◆ | A 3 |
| EN 1092-1 B1, PN 160                      |   | B 1 |
| EN 1092-1 D, PN 40                        |   | A 5 |
| EN 1092-1 D, PN 63                        |   | A 6 |
| EN 1092-1 D, PN 100                       |   | A 7 |
| EN 1092-1 D, PN 160                       |   | A 8 |
| ANSI B16.5, RF, class 150                 | ◆ | D 1 |
| ANSI B16.5, RF, class 300                 |   | D 2 |
| ANSI B16.5, RF, class 600                 | ◆ | D 3 |
| ANSI B16.5, RF, class 900                 | ◆ | D 4 |
| ISO228-1 G pipe thread                    | ◆ | E 1 |
| ASME B1.20.1 NPT pipe thread              | ◆ | E 3 |
| DIN 11851 Hygienic screwed                | ◆ | F 1 |
| DIN 32676-C (inch) Hygienic clamped       | ◆ | G 1 |
| DIN 11864-1 Hygienic screwed              | ◆ | H 1 |
| DIN 11864-2A BF-A Hygienic flanged metric |   | H 2 |
| DIN 11864-3A Hygienic clamped             |   | H 3 |
| DIN 11864-2B BF-A Hygienic flanged NPS    |   | H 4 |
| ISO 2852 Hygienic clamped                 |   | J 1 |
| ISO 2853 Hygienic screwed                 |   | J 5 |
| SMS 1145 Hygienic screwed                 | ◆ | K 1 |
| Swagelok Quick Connect                    |   | K 5 |
| JIS B2200/10K                             |   | L 2 |
| JIS B2200/20K                             |   | L 4 |
| JIS B2200/40K                             |   | L 6 |
| JIS B2200/63K                             |   | L 7 |

#### Wetted parts material

|   |   |   |
|---|---|---|
| AISI 316L/W1.4435/W1.4404 (100 barg max.) | ◆ | 1 |
| Hastelloy C22                             |   | 3 |

#### Calibration/Accuracy class

|   |   |   |
|---|---|---|
| 0.1 % flow, 5 kg/m <sup>3</sup> density   | ◆ | 1 |
| 0.1 % flow, 0.5 kg/m <sup>3</sup> density | ◆ | 4 |
| Standard fraction calibration             |   | 8 |

#### Transmitter/DSL material & mounting style

|                               |   |   |
|-------------------------------|---|---|
| Compact, IP67, aluminum       | ◆ | D |
| Remote, IP67, aluminum, M12   | ◆ | G |
| Remote, IP67, aluminum, T/Box | ◆ | K |

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#### Ex approval

|                      |   |   |
|----------------------|---|---|
| Non-Ex               | ◆ | A |
| ATEX II 2GD          | ◆ | C |
| IECEx GDb            | ◆ | F |
| FM, Class 1, Div 1   | ◆ | H |
| CSA, Class 1, Zone 1 |   | M |
| NEPSI                |   | N |
| INMETRO              |   | P |
| KCs                  |   | Q |
| EAC                  |   | U |

#### Local User Interface

|                          |   |   |
|--------------------------|---|---|
| Blind                    | ◆ | 1 |
| Graphical, 240 x 160 pxl | ◆ | 3 |

◆ We can offer shorter delivery times for configurations designated with the Quick Ship Symbol ◆. For details see page 9/5 in the appendix.

#### Selection and Ordering data

Order code

#### Further designs

Please add "-Z" to Article No. and specify Order code(s).

#### Cable glands

|                         |   |     |
|-------------------------|---|-----|
| Metric, no glands       | ◆ | A01 |
| Metric, plastic         | ◆ | A02 |
| Metric, brass/Ni plated |   | A05 |
| Metric, stainless steel | ◆ | A06 |
| NPT, no glands          |   | A11 |
| NPT, plastic            |   | A12 |
| NPT, brass/Ni plated    |   | A15 |
| NPT, stainless steel    |   | A16 |

#### Software functions and CT approvals

|              |   |     |
|--------------|---|-----|
| Standard     | ◆ | B11 |
| CT standard  |   | B31 |
| CT with NTEP |   | B52 |

#### I/O configuration Ch1

|  |   |     |
|--|---|-----|
| Ca 4 ... 20 mA HART active, SIL certified  | ◆ | E04 |
| Cp 4 ... 20 mA HART passive, SIL certified | ◆ | E05 |
| Ca 4 ... 20 mA HART active                 | ◆ | E06 |
| Cp 4 ... 20 mA HART passive                | ◆ | E07 |

#### Options for Ex

|                       |  |     |
|-----------------------|--|-----|
| ATEX + IECEx + EAC Ex |  | Q0B |
|-----------------------|--|-----|

Only compact versions can be used in SIL applications.

## Selection and Ordering data

Order code

## I/O configuration Ch2, Ch3 and Ch4

|                           |       |
|---------------------------|-------|
| None                      | ◆ F00 |
| aSignal, None, None       | F40   |
| aSignal, aSignal, None    | F41   |
| aSignal, aSignal, aSignal | F42   |
| aSignal, aSignal, Ia      | F43   |
| aSignal, aSignal, R       | F44   |
| aSignal, Ia, None         | F45   |
| aSignal, Ia, Ia           | F46   |
| aSignal, Ia, R            | F47   |
| aSignal, R, None          | F50   |
| aSignal, R, R             | F51   |
| pSignal, None, None       | F60   |
| pSignal, pSignal, None    | F61   |
| pSignal, pSignal, pSignal | F62   |
| pSignal, pSignal, Ip      | F63   |
| pSignal, pSignal, R       | F64   |
| pSignal, Ip, None         | F65   |
| pSignal, Ip, Ip           | F66   |
| pSignal, Ip, R            | F67   |
| pSignal, R, None          | F70   |
| pSignal, R, R             | F71   |
| aSignal, aSignal, pSignal | F80   |
| aSignal, aSignal, Ip      | F81   |
| aSignal, pSignal, None    | F82   |
| aSignal, pSignal, pSignal | F83   |
| aSignal, pSignal, Ia      | F84   |
| aSignal, pSignal, Ip      | F85   |
| aSignal, pSignal, R       | F86   |
| aSignal, Ia, Ip           | F87   |
| aSignal, Ip, None         | F90   |
| aSignal, Ip, Ip           | F91   |
| aSignal, Ip, R            | F92   |
| pSignal, pSignal, Ia      | F93   |
| pSignal, Ia, None         | F94   |
| pSignal, Ia, Ia           | F95   |
| pSignal, Ia, Ip           | F96   |
| pSignal, Ia, R            | F97   |

## Notes on I/O configurations:

**a or p suffix:** The I/O module is selected at ordering with either active or passive function.

**Signal:** The output can be selected for Current (0 or 4 to 20 mA), frequency or pulse function in the menu.

**I:** Discrete status input to the flowmeter. Functions are selected in the menu including 'Freeze output', 'Reset totalizer'.

**R:** Relay output for discrete status reporting. Function is selected in the menu, including 'Error', 'High flow warning'.

The MLFB structure for FC430 systems must be filled to **this level**, including "-Z" options A..., B..., E... and F...

## Selection and Ordering data

Order code

## Add-on options and accessories

Please add "-Z" to Article No. and specify Order code(s).

## Certificates

|                                     |       |
|-------------------------------------|-------|
| Pressure test certificate CRN       | C01   |
| Pressure test certificate PED       | C02   |
| Material certificate EN 10204-3.1   | C05   |
| Welding inspection report           | C07   |
| Factory certificate to EN 10204 2.1 | ◆ C10 |
| Factory certificate to EN 10204 2.2 | C11   |
| Cleaning for oil and grease         | C50   |

## Cable

|  |     |
|--|-----|
| None   | L50 |
| 5 m (16.4 ft), standard with M12 plugs fitted  | L51 |
| 5 m (16.4 ft), standard                        | L52 |
| 10 m (32.8 ft) standard with M12 plugs fitted  | L55 |
| 10 m (32.8 ft), standard                       | L56 |
| 25 m (82 ft), standard with M12 plugs fitted   | L59 |
| 25 m (82 ft), standard                         | L60 |
| 50 m (164 ft), standard with M12 plugs fitted  | L63 |
| 50 m (164 ft), standard                        | L64 |
| 75 m (246 ft), standard with M12 plugs fitted  | L67 |
| 75 m (246 ft), standard                        | L68 |
| 150 m (492 ft), standard with M12 plugs fitted | L71 |
| 150 m (492 ft), standard                       | L72 |

## Region-specific approvals and certificates

|                   |     |
|-------------------|-----|
| South Korea (KCC) | W28 |
|-------------------|-----|

## Additional data

Please add "-Z" to Article No. and specify Order code(s) and plain text.

## Tag name

|                                 |     |
|---------------------------------|-----|
| Tag name plate, stainless steel | Y17 |
|---------------------------------|-----|

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## Operating instructions for SITRANS FC430

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|-------------|-------------|
| • English   | A5E03361511 |
| • German    | A5E03651143 |

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