SIEMENS

## Datasheet for

The Coriolis flowmeter with superior performance under demanding conditions. This meter delivers unsurpassed performance for demanding and critical applications with superior aeration handling and advanced diagnostic functionality. The Coriolis meter with the most robust and durable design for precise measurement in high pressure applications.

**Ordering data:** **7ME44643FJ112CB3**

**L60+B01+A11+F11+E06**

### General

| | |
|---|---|
| Manufacturer | Siemens |
| Supplier | Siemens |
| Product designation | Mass flow meter |
| Brand name | SITRANS FC640 |
| Type designation | The Coriolis flowmeter with superior performance under demanding conditions. This meter delivers unsurpassed performance for demanding and critical applications with superior aeration handling and advanced diagnostic functionality. The Coriolis meter with the most robust and durable design for precise measurement in high pressure applications. |
| Net weight | 26.2 kg |
| Slogan | Leading accuracy. Fastest update rate. SITRANS F C - One platform. Infinite solutions. |

### Input

| | |
|---|---|
| Measurand | Density, Mass flow, Volume flow |

#### Measuring range

| | |
|---|---|
| Mass flow (minimum) | 830 kg/h |

### Output

#### Current output

| | |
|---|---|
| Signal range | 4 ... 20 mA |
| Load (maximum) | 600 Ohm |

#### Digital output

##### *Pulse output*

| | |
|---|---|
| Short-circuit monitoring, at active output | Short-circuit is fused internally |
| Nominal value of the output voltage, at active output | 24 V |
| Output voltage, at passive output (maximum) | 30 V |
| Pulse duration, at passive output | 20 ms...100 ms |
| Current carrying capacity, at passive output | 200 mA |

##### *Frequency output*

| | |
|---|---|
| Pulse-pause-ratio | 1 % |
| Signal frequency | 0 kHz...12.5 kHz |

### Accuracy

| | |
|---|---|
| Measurement accuracy (of the mass flow) | 0.1 % |
| Density measuring accuracy | 1 kg/m3 |
| Zero point error (maximum) | 0.5 kg/h |

### Operating conditions

| | |
|---|---|
| Medium temperature (maximum) | 150 °C |

#### Process medium

| | |
|---|---|
| Gas-share (volume-referred) (maximum) | 50 % |
| Density | 0 kg/m3...5 kg/m3 |
| Dynamically viscosity | 0.02 mPa.s...10,000 mPa.s |

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### Pressure

| | |
|---|---|
| Operating pressure, relative (maximum) | 16 bar |

### Environmental conditions

| | |
|---|---|
| Ambient temperature during storage (maximum) | 60 °C |

### Degree of protection

| | |
|---|---|
| IP rating of the transmitter | IP66, IP67 |

## Structural Design

### Mechanical design

| | |
|---|---|
| Design of the device | separated version, transmitter separated |
| Nominal size of measuring pipe | DN 25 |

#### *Process connection*

| | |
|---|---|
| Design | clamp |
| Standard | JIS B 2220 |
| Nominal size | DN 40 |

#### *Material*

#### *Process connection*

| | |
|---|---|
| Material | stainless steel |
| Material number according to DIN EN 10027-2 | 1.4404 |
| Material number according to AISI | 316L |

#### *Enclosure*

| | |
|---|---|
| Material of the sensor | Stainless steel |
| Material number of the sensor according to DIN EN 10027-2 | 1.4301 |
| Material number of the sensor according to AISI | 304 |
| Material of the transmitter | aluminum |

#### *Sensor*

| | |
|---|---|
| Material of the measuring tube | stainless steel |
| Material number of measuring tube according to DIN EN 10027-2 | 1.4404 |
| Material number of measuring tube according to AISI | 316L |

#### *Dimensions*

| | |
|---|---|
| Installation length | 500 mm |

### Electrical connections

| | |
|---|---|
| Design of the cable entry | 1/2" NPT |
| Length of the connection cable | 20 m |

### Display and operating controls

| | |
|---|---|
| Display | with display |

## Power supply

### Electrical

| | |
|---|---|
| Nominal voltage, DC | 24 V |
| Supply voltage, DC | 20.5 V...28 V |
| Nominal voltage, AC | 115 V, 230 V |
| Supply voltage, AC | 80 V...264 V |

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| | |
|---|---|
| Nominal frequency | 50 Hz, 60 Hz |
| Supply voltage frequency | 47 Hz...63 Hz |

### Communication

| | |
|---|---|
| Protocol | HART |
| Protocol version | Version 7 |

### Certificates and approvals

### Reliability (MTBF)

| | |
|---|---|
| MTBF | 222 a |
| Note | <= 40 C |
| Standard for MTBF | JIS Z 8115 |
| Determination procedure | Number of registered failures |
| Ex-marking (IECEx & ATEX) | II 2D Ex ib IIIC T150 °C Db (Sensor) |
| Ex-marking (IECEx & ATEX) | II 2D Ex tb [ia Da] IIIC T75 °C Db (Transmitter) |
| Ex-marking (IECEx & ATEX) | II 2G Ex db [ia Ga] IIC T6 Gb or II 2G Ex db eb [ia Ga] IIC T6 Gb (Transmitter) |