

Product Information

CF

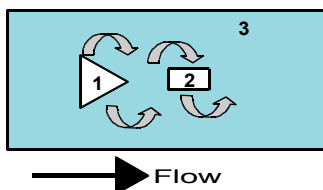
Flow Transmitter CF



- Flow measurement device using the vortex measurement principle
- High precision
- High stability to excessive flow rates
- No moving parts
- Rapid installation and removal thanks to clamp fastening
- Various connections using building block system

Characteristics

A narrow triangular body (1), which goes through the complete cross-section of the measurement pipe, creates vortices in the medium when there is a flow (Kármán vortex street, vortex effect). The frequency of the vortex is proportional to the flow, and is detected using a piezo-sensor (2), which lies behind the triangular body. The complete unit, vortex body, and detector are designed as a plug-in unit (3), and are inserted into the pipe. Here, a lightning fast separation between measurement pipe and the complete measurement unit is possible.



The frequency signal is made available to the output via a push-pull transistor stage, and is resistant to short circuits and reversed polarity protected. The push-pull output can as desired be connected as a PNP or an NPN output.

Technical data

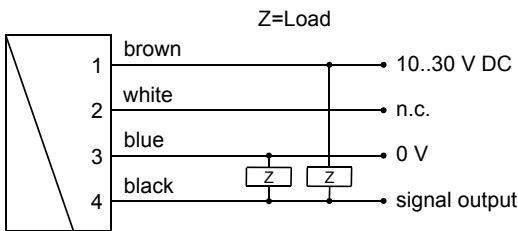
| | | |
|------------------------------------|---|------------------------------------|
| Sensor | vortex principle | |
| Nominal width | DN 8..25 | |
| Process connection | female thread G 1/4..G 1 (others available on request) | |
| Metering ranges | 0.9..150 l/min for details, see table "Ranges" | |
| Measurement accuracy | up to 50 % of full scale value: ±1 % of measured value from 50 % of full scale value: ±2 % of measured value | |
| Pressure resistance | PN 10 bar | |
| Media temperature | 0..60 °C | |
| Ambient temperature | -20..+70 °C | |
| Materials medium-contact | Housing | CW614N plated, 1.4571 or POM GF |
| | Connection | CW614N plated, 1.4571 or POM |
| | Detector | ETFE PA6T6I 40 % GF |
| | Seal | EPDM |
| Supply voltage | 10..30 V DC | |
| Current consumption at rest | approx. 20 mA (without load) | |
| Signal output | transistor output "push-pull" (resistant to short circuits and polarity reversal) I _{out} = 100 mA max. for output frequencies see table "Ranges" | |
| Electrical connection | for round plug connector M12x1, 4-pole | |
| Ingress protection | IP 67 | |
| Weight | see table "Dimensions" | |
| Conformity | CE | |

Ranges

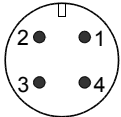
| G | Types | Range l/min H ₂ O | Frequency Hz |
|----------|--------------|--|------------------------|
| G 1/4 | CF-008GM. | 0.9.. 15 l/min | approx. 34..437 |
| G 3/8 | CF-010GM. | 1.8.. 32 l/min | approx. 24..382 |
| G 1/2 | CF-015GM. | 3.5.. 50 l/min | approx. 19..269 |
| G 3/4 | CF-020GM. | 5.0.. 85 l/min | approx. 14..229 |
| G 1 | CF-025GM. | 9.0..150 l/min | approx. 12..202 |

Product Information

Wiring

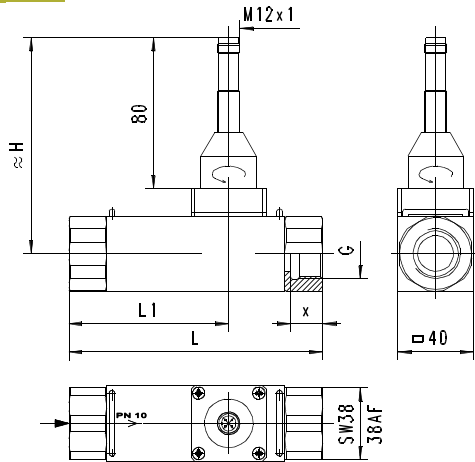


Connection example: PNP NPN



Before the electrical installation, it must be ensured that the supply voltage corresponds with the data sheet. It is recommended to use shielded wiring.

Dimensions



| G | DN | Types | H | L | L1 | X | Weight* kg |
|-------|-------|----------|-----|-----|----|------|---------------|
| G 1/4 | DN 8 | CF-008GM | 113 | 125 | 69 | 12,5 | 1.45 |
| G 3/8 | DN 10 | CF-010GM | 111 | 100 | 50 | | 1.10 |
| G 1/2 | DN 15 | CF-015GM | 113 | | | 14,5 | 1.10 |
| G 3/4 | DN 20 | CF-020GM | 115 | 135 | 85 | 16,5 | 1.50 |
| G 1 | DN 25 | CF-025GM | 117 | 155 | 95 | 18,5 | 1.30 |

*Weight details for metal model. Plastic models available on request

Handling and operation

Installation

The vortex flow meter requires a run-in length of 5..10 x D in order to achieve its specified accuracy. If deposits are to be expected, sensor and electronics should not be installed underneath. It should be ensured that the sensor is installed in the direction of the flow arrow. If the sensor is to be cleaned, the clamps should be released, and the device removed (the pipe should be pressure-free for this). It should be ensured during cleaning that the oscillating vortex body is not exposed to impact (in the moulded part there is a sensitive piezo-ceramic sensor, which can break).

Ordering code

CF- 1. 2. 3. 4. 5. 6. 7. 8.
 E F S

○ = Option

| | |
|---------------------------------|--|
| 1. Nominal width | |
| 008 | DN 8 - G 1/4 |
| 010 | DN 10 - G 3/8 |
| 015 | DN 15 - G 1/2 |
| 020 | DN 20 - G 3/4 |
| 025 | DN 25 - G 1 |
| 2. Process connection | |
| G | female thread |
| 3. Connection material | |
| M | CW614N plated |
| K | ○ 1.4571 |
| P | ○ POM |
| 4. Body material | |
| M | CW614N plated |
| K | 1.4571 |
| P | ○ POM GF |
| 5. Metering range | |
| 015 | 0.9.. 15 l/min |
| 032 | 1.8.. 32 l/min |
| 050 | 3.5.. 50 l/min |
| 085 | 5.0.. 85 l/min |
| 150 | 9.0..150 l/min |
| 6. Sealing material | |
| E | EPDM |
| 7. Signal output | |
| F | frequency output (push-pull) |
| 8. Electrical connection | |
| S | for round plug connector M12x1, 4-pole |

Accessories

- Cable/round plug connector (KB...) see additional information "Accessories"
- Counter EEZ-904
- Converter/counter OMNI-TA