# Flowmeter sensor

## Measuring accuracy

### Reference conditions

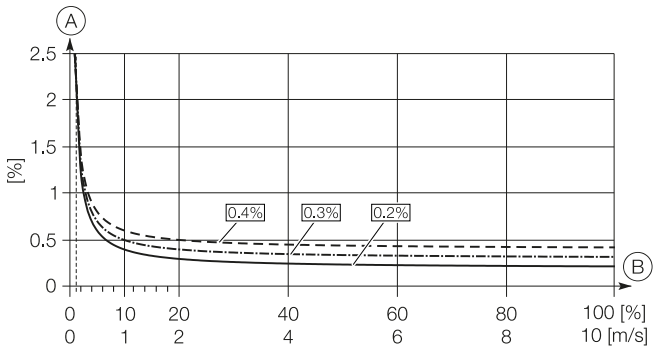
| According to EN 29104 | |
|---|---|
| **Measuring medium temperature** | 20 °C (68 °F) ±2 K |
| **Ambient temperature** | 20 °C (68 °F) ±2 K |
| **Power supply** | Nominal voltage acc. to name plate<br>U = ±1 %, Frequency f = ±1 % |
| **Installation condition** | • Upstream >10 x DN, straight section<br>• Downstream >5 x DN, straight section |
| **Warm-up phase** | 30 min |

### Repeatability, response time

| Repeatability | Response time[1)] |
|---|---|
| ≤ 0.11 % of measured value,<br>$t_{meas}$ = 100 s, v = 0.5 ... 10 m/s | As step function 0 ... 99 %<br>5 τ ≥ 200 ms at 25 Hz excitation frequency<br>5 τ ≥ 400 ms at 12.5 Hz excitation frequency<br>5 τ ≥ 500 ms at 6.25 Hz excitation frequency |

### Measuring error and repeatability

### Measuring error




**Measuring error**

| Pos. | Description |
|---|---|
| Ⓐ | Accuracy ± of measured value in % |
| Ⓑ | Flow velocity v in m/s, Q / $Q_{max}$DN in % |

| Impulse output |
|---|
| **Standard calibration DN 3 .... 2000** |
| DN 3 .... 2000: ±0.4 % of measured value, ±0.02 % $Q_{max}$DN[1)] |
| **Optional calibration** |
| DN 3 .... 600, 800: ±0.3 % of measured value, ±0.02 % $Q_{max}$DN[1)] |
| **Or** |
| DN 10 .... 600, 800: ±0.2 % of measured value, ±0.02 % $Q_{max}$DN[1)] |

| Current output |
|---|
| Same as pulse output plus ±0.1 % of measured value ±0.01 mA |

## Permitted pipe vibration

In accordance with EN 60068-2-6.
Applicable to sensors in remote mount design and sensors in integral mount design.

- Maximum deflection: 0.15 mm (0.006 inch) in the 10 ... 58 Hz range
- Maximum acceleration: 2 g, in the 58 ... 150 Hz range

## IP rating

- IP 65 / IP 67 in accordance with EN 60529
- IP 68 in accordance with EN 60529 (for remote mount design only)

## Signal cables

For remote mount design only.
The maximum signal cable length between flowmeter sensor and transmitter is 200 m (656 ft).
A 5 m (16.4 ft) cable is included in the scope of delivery.
If more than 5 m (16.4 ft) is required, the cable can be ordered separately – see chapter **Accessories**