

Overview

- SIP- capable without restrictions up to 150 °C / 24h
- Broad portfolio of process connections
- Flow and temperature measurement in a single sensor
- Compact and robust
- Available with IO-Link interface



Technical data

Performance characteristics

| | |
|-------------------------------|---|
| Down time at temperature step | < 10 s |
| Max. measuring error | ± 2 % FSR , flow measurement ± 8 cm/s , flow measurement ± 1 °C , temperature measurement @ flow > 0 cm/s |
| Measuring range, flow | 10 ... 400 cm/s |
| Measuring range, temperature | -25 ... 150 °C |
| Response time, T90 | < 5 s |

Process conditions

| | |
|---------------------|---|
| Process temperature | -25 ... 125 °C , flow measurement -25 ... 150 °C , temperature measurement @ flow > 0 cm/s |
| Process pressure | Refer to section "Operating conditions" |

Process connection

| | |
|--------------------------------|---|
| Connection variants | Refer to section "Dimensional drawings" |
| Mounting position | Any, top, bottom, side |
| Wetted parts material | AISI 316L (1.4404) |
| Surface roughness wetted parts | Ra ≤ 0.8 µm |

Ambient conditions

| | |
|---------------------------------------|--|
| Operating temperature range | -25 ... 80 °C |
| Storage temperature range | -25 ... 80 °C |
| Degree of protection (EN 60529) | IP 67 IP 68 , 30 min. @ 1 mH2O IP 69K , with appropriate cable |
| Humidity | ≤ 100 % RH , condensing |
| Shock (EN 60068-2-27) | 30 g / 11 ms, 6 impulses per axis and direction |
| Vibration (sinusoidal) (EN 60068-2-6) | 5 g (10 ... 2000 Hz) |

Output signal

| | |
|--------------------------|---|
| Current output | 4 ... 20 mA |
| Voltage output | 0 ... 10 V |
| Output type | Digital (push-pull) NPN PNP |
| Switching logic | Active high Active low Normally closed (NC) Normally open (NO) |
| Voltage drop | < 2 V, switching output |
| Current rating | 100 mA , max. |
| Residual current | < 250 µA |
| Short circuit protection | Yes |
| Interface | IO-Link 1.1 |

Housing

| | |
|--------------|---|
| Style | Compact transmitter |
| Overall size | Refer to section "Dimensional drawings" |
| Material | Stainless steel |

Electrical connection

| | |
|-----------|--------------|
| Connector | M12-A, 4-pin |
|-----------|--------------|

Power supply

| | |
|-----------------------------|--|
| Voltage supply range | 12 ... 32 V DC , with 2 x 4 ... 20 mA 18 ... 30 V DC , with IO-Link |
| Power-up time | 10 s , max. |
| Reverse polarity protection | Yes |

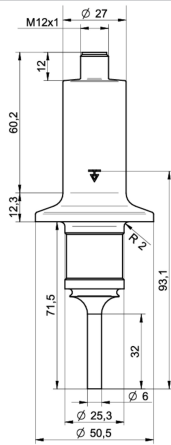
Compliance and approvals

| | |
|---------------------------|---|
| Hygiene | (EC) No 1935/2004 (EC) No 2023/2006 FDA compliant |
| EAC (Eurasian Conformity) | EAC (TR CU 020/2011) |

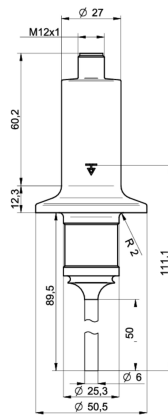
Operating conditions

| Process connection | BCID | Process pressure (bar) |
|---|------|------------------------|
| G 1/2 A hygienic | A03 | -1 ... 100 |
| BHC 3A DN 38 | B01 | -1 ... 68 |
| Tri-Clamp Ø 34.0 | C02 | -1 ... 68 |
| Tri-Clamp Ø 50.5 | C04 | -1 ... 68 |
| Tri-Clamp Ø 64.0 | C05 | -1 ... 68 |
| DIN 11851 (dairy pipe connection), DN 25 | D01 | -1 ... 40 |
| DIN 11851 (dairy pipe connection), DN 40 | D03 | -1 ... 40 |
| DIN 11851 (dairy pipe connection), DN 50 | D04 | -1 ... 25 |
| Varivent® DN 25; 1" (Type F), Ø 50 | V01 | -1 ... 16 |
| Varivent® DN 32 ... 125; 1 1/2" ... 6" (Type N), Ø 68 | V02 | -1 ... 16 |

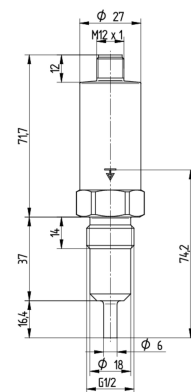
Dimensional drawings



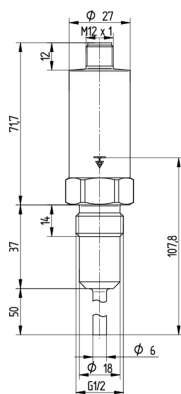
B01-B013
BHC 3A DN 38
Sensor length 32 mm (BCID: B01)



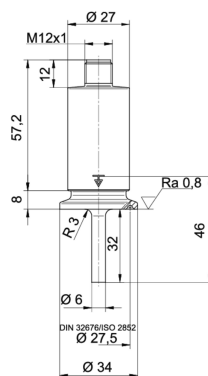
B01-B015
BHC 3A DN 38
Sensor length 50 mm (BCID: B01)



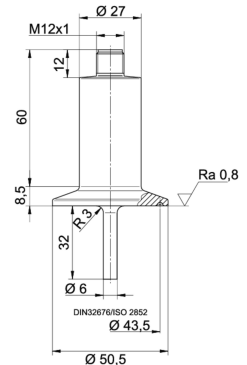
A03-A031
G 1/2 A hygienic
Sensor length 16.4 mm (BCID: A03)



A03-A035
G 1/2 A hygienic
Sensor length 50 mm (BCID: A03)

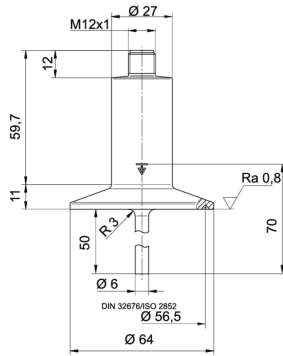


C02-C023
Tri-Clamp Ø 34.0
Sensor length 32 mm (BCID: C02)

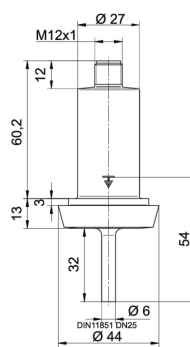


C04-C043
Tri-Clamp Ø 50.5
Sensor length 32 mm (BCID: C04)

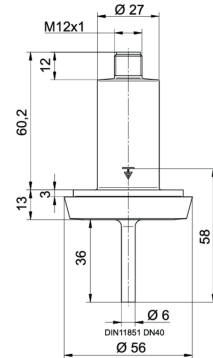
Dimensional drawings



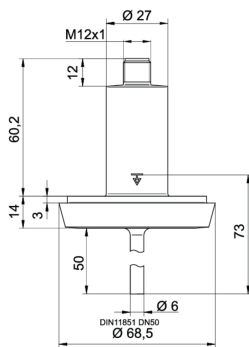
C05-C055
Tri-Clamp Ø 64.0
Sensor length 50 mm (BCID: C05)



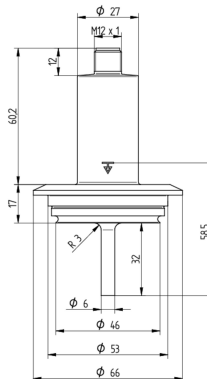
D01-D013
DIN 11851 (dairy pipe connection)
DN 25
Sensor length 32 mm (BCID: D01)



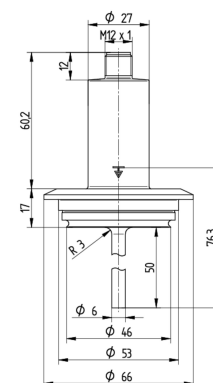
D03-D034
DIN 11851 (dairy pipe connection)
DN 40
Sensor length 36 mm (BCID: D03)



D04-D045
DIN 11851 (dairy pipe connection)
DN 50
Sensor length 50 mm (BCID: D04)

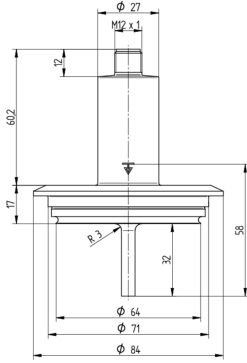


V01-V013
Varivent® DN 25; 1" (Type F)
Ø 50
Sensor length 32 mm (BCID: V01)

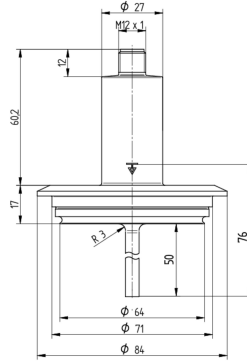


V01-V015
Varivent® DN 25; 1" (Type F)
Ø 50
Sensor length 50 mm (BCID: V01)

Dimensional drawings



V02-V023
Varivent® DN 32 ... 125; 1 1/2" ... 6" (Type N)
Ø 68
Sensor length 32 mm (BCID: V02)



V02-V025
Varivent® DN 32 ... 125; 1 1/2" ... 6" (Type N)
Ø 68
Sensor length 50 mm (BCID: V02)

PF20H

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Electrical connection

Process connection

| Output signal | Equivalent circuit | Electrical connection | Function | Pin assignment |
|--|--------------------|-----------------------|---|---------------------------------|
| Multi-parameter output 4 ... 20 mA, 3-wire (flow) 4 ... 20 mA, 3-wire (temperature) | | | +Vs Iout (flow) Iout (temperature) GND (0 V) Frame ground | 1 2 4 3 Plug thread |
| Programmable output Factory setting with IO-Link IO-Link 4 ... 20 mA, 3-wire | | | +Vs SW1 (IO-Link) Iout GND (0 V) Frame ground | 1 4 2 3 Plug thread |
| Programmable output Configuration programmable by customer IO-Link 0 ... 10 V (3-wire) | | | +Vs SW1 (IO-Link) Uout GND (0 V) Frame ground | 1 4 2 3 Plug thread |
| Programmable output Configuration programmable by customer IO-Link PNP | | | +Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground | 1 4 2 3 Plug thread |
| Programmable output Configuration programmable by customer IO-Link NPN | | | +Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground | 1 4 2 3 Plug thread |
| Programmable output Configuration programmable by customer IO-Link Digital (push-pull) | | | +Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground | 1 4 2 3 Plug thread |

Ordering information

Ordering key - Configuration possibilities see website

| | PF20H | - | 1 | 1 | . | 010 | . | #### | . | 2 | 0 | . | # | . | 0 | 00 | 0 | . | # | |
|---|-------|---|---|---|---|-----|---|------|---|---|---|---|---|---|---|----|---|---|---|---|
| Product | PF20H | | | | | | | | | | | | | | | | | | | |
| Version | | | | | | | | | | | | | | | | | | | | |
| Standard | | | | | | | | | | | | | | | | | | | | 1 |
| Housing | | | | | | | | | | | | | | | | | | | | |
| Stainless steel, AISI 316L (1.4404) | | | | | | | | | | | | | | | | | | | | 1 |
| Electrical connection | | | | | | | | | | | | | | | | | | | | |
| M12-A, 4-pin, stainless steel | | | | | | 010 | | | | | | | | | | | | | | |
| Process connection | | | | | | | | | | | | | | | | | | | | |
| G 1/2 A hygienic (A03), Sensor length: 16.4 mm | | | | | | | | A031 | | | | | | | | | | | | |
| G 1/2 A hygienic (A03), Sensor length: 50 mm | | | | | | | | A035 | | | | | | | | | | | | |

Ordering information
Ordering key - Configuration possibilities see website

| | PF20H | - | 1 | 1 | . | 010 | . | #### | . | 2 | 0 | . | # | . | 0 | 00 | 0 | . | # | |
|---|-------|---|---|---|---|-----|---|------|---|---|---|---|---|---|---|----|---|---|---|--------|
| ISO 2852 (Tri-Clamp), DN 21.3, Ø 34.0 DIN 32676-A (Tri-Clamp), DN 20, Ø 34.0 (C02), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | C023 |
| ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 DIN 32676-A (Tri-Clamp), DN 25; 32; 40, Ø 50.5 DIN 32676-B (Tri-Clamp), DN33.7, Ø 50.5 DIN 32676-C (Tri-Clamp), DN 1 1/2, Ø 50.5 (C04), Sensor length: 75 mm | | | | | | | | | | | | | | | | | | | | C042 |
| ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 DIN 32676-A (Tri-Clamp), DN 25; 32; 40, Ø 50.5 DIN 32676-B (Tri-Clamp), DN33.7, Ø 50.5 DIN 32676-C (Tri-Clamp), DN 1 1/2, Ø 50.5 (C04), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | C043 |
| ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 DIN 32676-A (Tri-Clamp), DN 25; 32; 40, Ø 50.5 DIN 32676-B (Tri-Clamp), DN33.7, Ø 50.5 DIN 32676-C (Tri-Clamp), DN 1 1/2, Ø 50.5 (C04), Sensor length: 60 mm | | | | | | | | | | | | | | | | | | | | C046 |
| ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 DIN 32676-A (Tri-Clamp), DN 25; 32; 40, Ø 50.5 DIN 32676-B (Tri-Clamp), DN33.7, Ø 50.5 DIN 32676-C (Tri-Clamp), DN 1 1/2, Ø 50.5 (C04), Sensor length: 100 mm | | | | | | | | | | | | | | | | | | | | C047 |
| ISO 2852 (Tri-Clamp), DN 40; 51, Ø 64.0 DIN 32676-A (Tri-Clamp), DN 50, Ø 64.0 DIN 32676-B (Tri-Clamp), DN 42.4; 48.3, Ø 64.0 DIN 32676-C (Tri-Clamp), DN 2, Ø 64.0 (C05), Sensor length: 50 mm | | | | | | | | | | | | | | | | | | | | C055 |
| DIN 11851 (dairy pipe connection), DN 25 (D01), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | D013 |
| DIN 11851 (dairy pipe connection), DN 40 (D03), Sensor length: 36 mm | | | | | | | | | | | | | | | | | | | | D034 |
| DIN 11851 (dairy pipe connection), DN 50 (D04), Sensor length: 50 mm | | | | | | | | | | | | | | | | | | | | D045 |
| Varivent® DN 32 ... 125; 1 1/2 ... 6 (Type N), Ø 68 (V02), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | V023 |
| Varivent® DN 32 ... 125; 1 1/2 ... 6 (Type N), Ø 68 (V02), Sensor length: 50 mm | | | | | | | | | | | | | | | | | | | | V025 |
| Varivent® DN 25; 1 (Type F), Ø 50 (V01), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | V013 |
| Varivent® DN 25; 1 (Type F), Ø 50 (V01), Sensor length: 50 mm | | | | | | | | | | | | | | | | | | | | V015 |
| BHC 3A DN 38 (B01), Sensor length: 32 mm | | | | | | | | | | | | | | | | | | | | B013 |
| BHC 3A DN 38 (B01), Sensor length: 50 mm | | | | | | | | | | | | | | | | | | | | B015 |
| Wetted parts material AISI 316L (1.4404) | | | | | | | | | | | | | | | | | | | | 2 |
| Seal None | | | | | | | | | | | | | | | | | | | | 0 |
| Output signal Multi-parameter output, 2 x 4 - 20 mA (3-wire) Programmable output, IO-Link | | | | | | | | | | | | | | | | | | | | 0 1 |
| Explosion protection Without | | | | | | | | | | | | | | | | | | | | 0 |

PF20H

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Ordering information

Ordering key - Configuration possibilities see website

PF20H - 1 1 . 010 . #### . 2 0 . # . 0 00 0 . #

Industrial approvals

Standard

00

Special approvals

Standard

0

Configuration

Factory settings

0

Customer-specific

1