

## PF20H

Hygienic flow sensor

PF20H-11.010.####.20#.0000.0

### 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



Picture similar



### 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
Step response time	< 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)	IP67 IP68 , 30 min. @ 1 mH2O IP69K , with appropriate cable
Humidity	≤ 100 % RH , condensing
Shock (EN 60068-2-27)	30 g / 11 ms, 6 impulses per axis and direction

#### Ambient conditions

Vibration (sinusoidal) (EN 60068-2-6)	5 g (10 ... 2000 Hz)
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#### 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
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Current rating	100 mA , max.
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Residual current	< 250 µA
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Short circuit protection	Yes
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Interface	IO-Link 1.1
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#### Housing

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

#### Electrical connection

Connector	M12-A, 4-pin
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#### Power supply

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

Hygiene	FDA compliant EHEDG EL Class I
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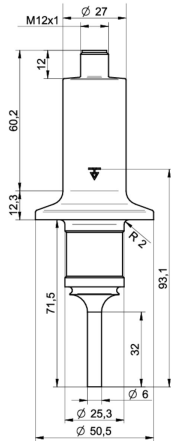
Hygienic flow sensor

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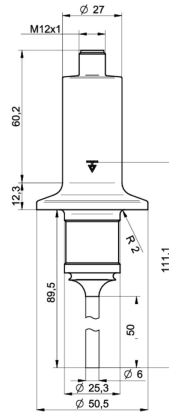
## Operating conditions

Process connection	BCID	Process pressure (bar)
G 1/2 A hygienic	A03	-1 ... 100
G 1/2 A hygienic sealing	B03	-1 ... 10
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

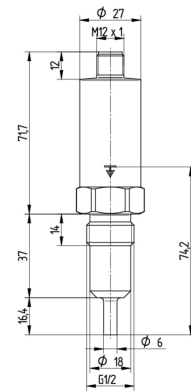
## Dimensional drawings (mm)



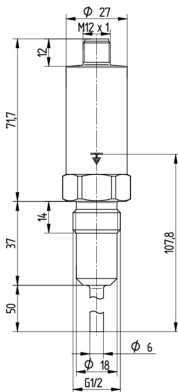
**B01-B013**  
BHC 3A DN 38  
Sensor length 32 mm (BCID: B01)



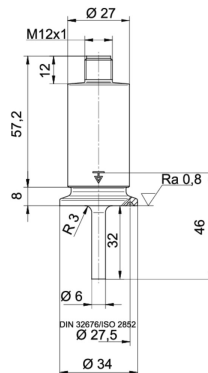
**B01-B015**  
BHC 3A DN 38  
Sensor length 50 mm (BCID: B01)



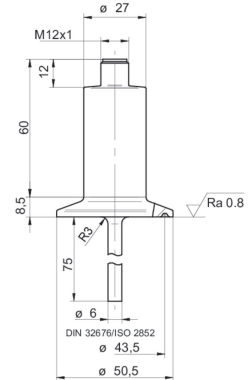
**A03-A031** 1/2 A hygienic Sensor length 16.4 mm (BCID: A03)



**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)



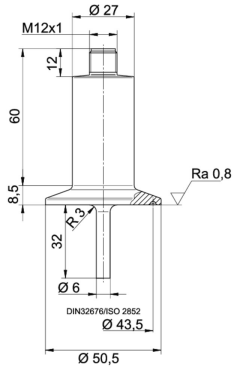
**C04-C042**  
Tri-Clamp Ø 50.5  
Sensor length 75 mm (BCID: C04)

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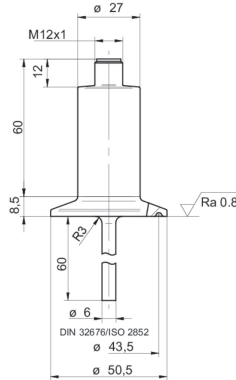
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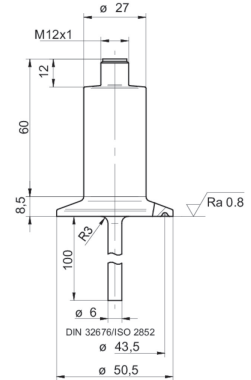
## Dimensional drawings (mm)



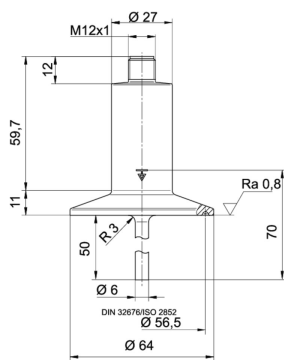
**C04-C043**  
Tri-Clamp Ø 50.5  
Sensor length 32 mm (BCID: C04)



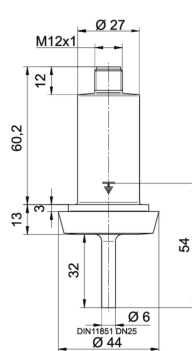
**C04-C046**  
Tri-Clamp Ø 50.5  
Sensor length 60 mm (BCID: C04)



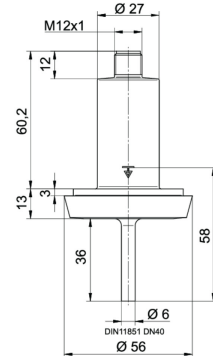
**C04-C047**  
Tri-Clamp Ø 50.5  
Sensor length 100 mm (BCID: C04)



**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)



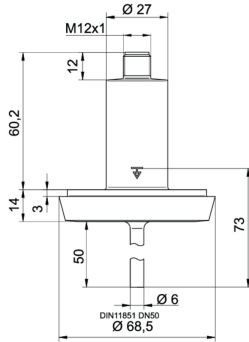
**D03-D034**  
DIN 11851 (dairy pipe connection)  
DN 40  
Sensor length 36 mm (BCID: D03)

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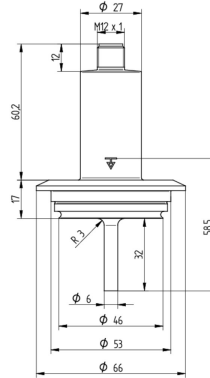
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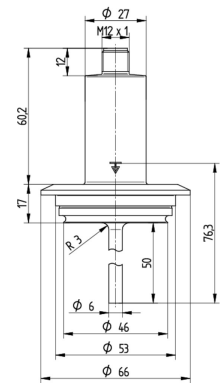
## Dimensional drawings (mm)



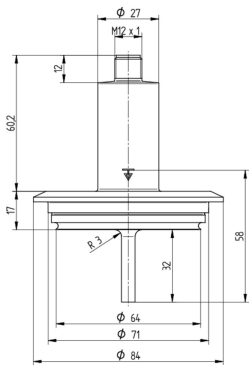
**D04-D045**  
DIN 11851 (dairy pipe connection)  
DN 50  
Sensor length 50 mm (BCID: D04)



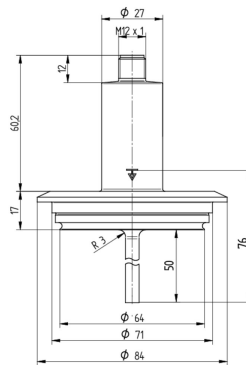
**V01-V013**  
Varivent® DN 25; 1" (Type F)  
Ø 50  
Sensor length 32 mm (BCID: V01)



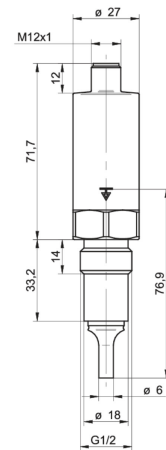
**V01-V015**  
Varivent® DN 25; 1" (Type F)  
Ø 50  
Sensor length 50 mm (BCID: V01)



**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)



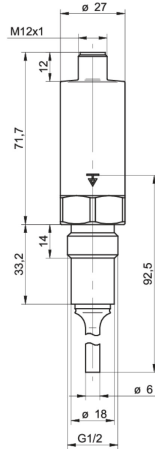
**B03-B031**  
G 1/2 A hygienic sealing  
Sensor length 16.4 mm (BCID: B03)

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## Dimensional drawings (mm)



**B03-B039**  
G 1/2 A hygienic sealing  
Sensor length 30 mm (BCID: B03)

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## Electrical connection

Output signal	Equivalent circuit	Electrical connection	Function	Pin assignment
<b>Multi-parameter output</b>  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
<b>Programmable output</b> Factory setting with IO-Link			+Vs SW1 (IO-Link) Iout GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> Configuration programmable by customer			+Vs SW1 (IO-Link) Uout GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> Configuration programmable by customer			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> Configuration programmable by customer			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread
<b>Programmable output</b> Configuration programmable by customer			+Vs SW1 (IO-Link) SW2 GND (0 V) Frame ground	1 4 2 3 Plug thread

## Ordering information

Ordering key - Configuration possibilities see website

<b>Product</b>	PF20H	-	1	1	.	010	.	####	.	2	0	.	#	.	00	0	.	0	
<b>Version</b>	Version for Water																		
<b>Housing</b>	Stainless steel, AISI 316L (1.4404)																		
<b>Electrical connection</b>	M12-A, 4-pin, stainless steel					010													

The product features and technical data specified do not express or imply any warranty. Technical modifications subject to change.

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## Ordering information

**Ordering key - Configuration possibilities see website**

	PF20H	-	1	1	.	010	.	####	.	2	0	.	#	.	0	00	0	.	0
<b>Process connection</b>																			
G 1/2 A hygienic (A03), Sensor length: 16.4 mm <sup>(2)</sup>	A031																		
G 1/2 A hygienic (A03), Sensor length: 50 mm <sup>(2)</sup>	A035																		
ISO 2852 (Tri-Clamp), DN 21.3, Ø 34.0 (C02), Sensor length: 32 mm <sup>(2)</sup>	C023																		
ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 (C04), Sensor length: 75 mm <sup>(1)</sup>	C042																		
ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 (C04), Sensor length: 32 mm <sup>(1)</sup>	C043																		
ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 (C04), Sensor length: 60 mm <sup>(1)</sup>	C046																		
ISO 2852 (Tri-Clamp), DN 33.7; 38, Ø 50.5 (C04), Sensor length: 100 mm <sup>(1)</sup>	C047																		
ISO 2852 (Tri-Clamp), DN 40; 51, Ø 64.0 (C05), Sensor length: 50 mm <sup>(1)</sup>	C055																		
DIN 11851 (dairy pipe connection), DN 25 (D01), Sensor length: 32 mm <sup>(1)</sup>	D013																		
DIN 11851 (dairy pipe connection), DN 40 (D03), Sensor length: 36 mm <sup>(1)</sup>	D034																		
DIN 11851 (dairy pipe connection), DN 50 (D04), Sensor length: 50 mm <sup>(1)</sup>	D045																		
Varivent® DN 32 ... 125; 1 1/2 ... 6 (Type N), Ø 68 (V02), Sensor length: 32 mm <sup>(3)</sup>	V023																		
Varivent® DN 32 ... 125; 1 1/2 ... 6 (Type N), Ø 68 (V02), Sensor length: 50 mm <sup>(3)</sup>	V025																		
Varivent® DN 25; 1 (Type F), Ø 50 (V01), Sensor length: 32 mm <sup>(4)</sup>	V013																		
Varivent® DN 25; 1 (Type F), Ø 50 (V01), Sensor length: 50 mm <sup>(4)</sup>	V015																		
BHC 3A DN 38 (B01), Sensor length: 32 mm <sup>(3)</sup>	B013																		
BHC 3A DN 38 (B01), Sensor length: 50 mm <sup>(3)</sup>	B015																		
G 1/2 A hygienic sealing, Sensor length: 16.4 mm <sup>(5)</sup>	B031																		
G 1/2 A hygienic sealing, Sensor length: 30 mm <sup>(5)</sup>	B039																		
<b>Process connection material</b>																			
AISI 316L (1.4404)	2																		
<b>Seal</b>																			
None	0																		
<b>Output signal</b>																			
Multi-parameter output, 2 x 4 - 20 mA (3-wire)	0																		
Programmable output, IO-Link	1																		
<b>Explosion protection</b>																			
Without	0																		
<b>Industrial approvals</b>																			
Standard	00																		
<b>Special approvals</b>																			
Standard	0																		
<b>Configuration</b>																			
Factory settings	0																		

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### Ordering information

#### Ordering key - Configuration possibilities see website

- (1) EHEDG only with special gasket
- (2) EHEDG not included
- (3) EHEDG included
- (4) EHEDG not included, only for tank installation
- (5) EHEDG only with suitable weld-in sleeves or adapters from Baumer