

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

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

Process conditions

Process pressure	Refer to section "Operating conditions"
Process temperature	-25 ... 125 °C , flow measurement -25 ... 150 °C , temperature measurement

Process connection

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

Ambient conditions

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)
Degree of protection (EN 60529)	IP 67 IP 68 , 30 min. @ 1 mH2O IP 69K , with appropriate cable
Humidity	≤ 100 % RH , condensing
Operating temperature range	-25 ... 80 °C
Storage temperature range	-25 ... 80 °C

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

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

Electrical connection

Connector	M12-A, 4-pin
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Power supply

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

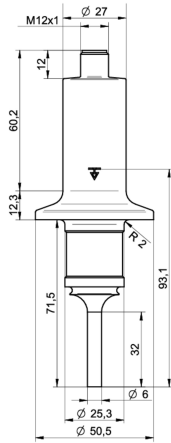
Compliance and approvals

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

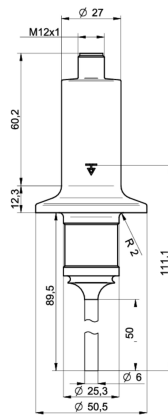
Operating conditions

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

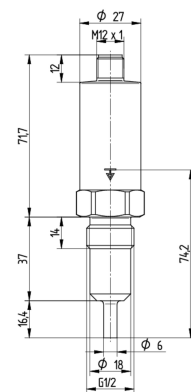
Dimensional drawings



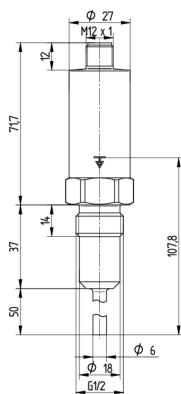
B01-B013
BHC 3A DN 38
Sensor length 32 mm (BCID: B01)



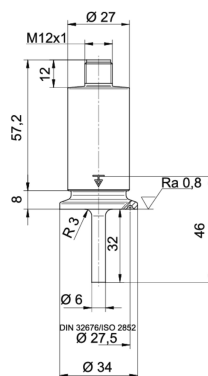
B01-B015
BHC 3A DN 38
Sensor length 50 mm (BCID: B01)



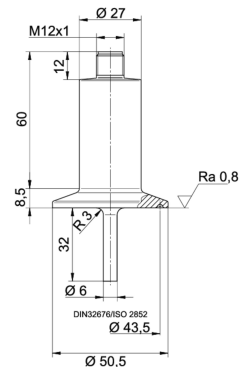
A03-A031
G 1/2 A hygienic
Sensor length 16.4 mm (BCID: A03)



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

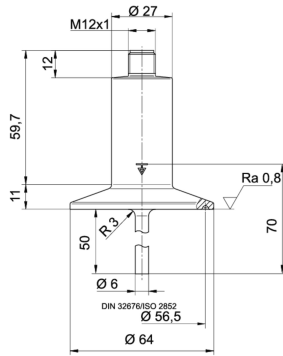


C02-C023
Tri-Clamp Ø 34.0
Sensor length 32 mm (BCID: C02)

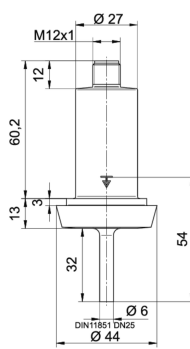


C04-C043
Tri-Clamp Ø 50.5
Sensor length 32 mm (BCID: C04)

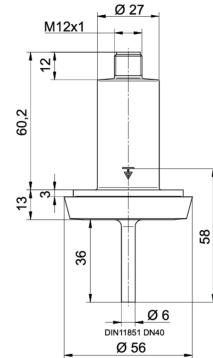
Dimensional drawings



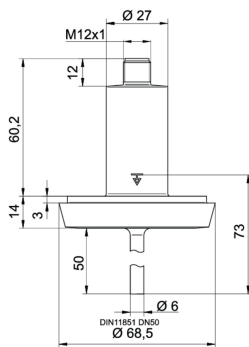
C05-C055
Tri-Clamp Ø 64.0
Sensor length 50 mm (BCID: C05)



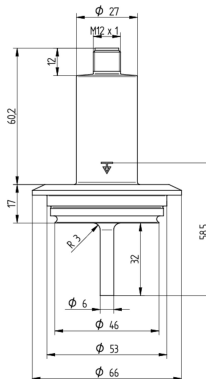
D01-D013
DIN 11851 (dairy pipe connection)
DN 25
Sensor length 32 mm (BCID: D01)



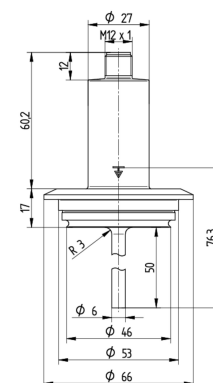
D03-D034
DIN 11851 (dairy pipe connection)
DN 40
Sensor length 36 mm (BCID: D03)



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

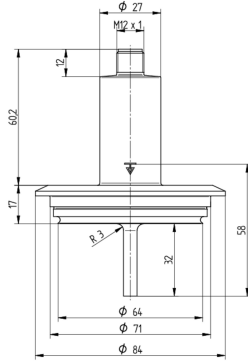


V01-V013
Varivent® DN 25; 1" (Type F)
Ø 50
Sensor length 32 mm (BCID: V01)

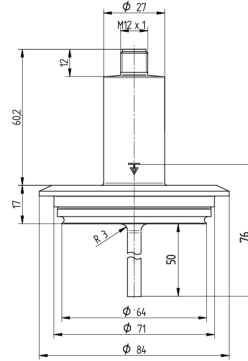


V01-V015
Varivent® DN 25; 1" (Type F)
Ø 50
Sensor length 50 mm (BCID: V01)

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

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

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

Product	PF20H - 1 1 . 010 . #### . 2 0 . # . 0 00 0 . #
Version	PF20H
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 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
Industrial approvals Standard																				00

PF20H

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Ordering key - Configuration possibilities see website

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

Special approvals

Standard 0

Configuration

Factory settings 0

Customer-specific 1