



Main characteristics (20 °C)

Measuring range	-1.0...68.0 bar
Minimum range	50 mbar
Turn down	10:1
Long term stability	<0.1% FS / Year
Accuracy (Linearity, hysteresis and repeatability)	<±0.1% FS / <±0.25% FS
Process temperature range	Standard oil -40 ... 125 °C (<150 °C <60 min) NSF H1 listed oil (FDA approved) -5 ... 125 °C (<150 °C <60 min)
Max. process temperature	200 °C (with cooling neck)

Technical specification

Measuring principle	Piezoresistive silicon sensor
Measuring ranges	-1 ... 0 bar up to 0 ... 68.0 bar
Min. range	0...0,05 bar, programmable
Type of pressure	Relative / Absolute
Turn down	10:1 FS
Accuracy (Linearity, Hysteresis, Repeatability)	0.1% FS@20°C up to 2:1 turn down 0.25% FS@20°C up to 4:1 turn down
Zero thermal drift	≤ ± 0.005% FS/°C
Span thermal drift	≤ ± 0.005% FS/°C
Annual stability, IEC 770 6.3.2	0.1% FS / Year
Response time (10 ... 90%)	≤ 0.3 sec.
Sample time	≤ 0.3 sec.
Start up time	<10 sec.
Process connections	See page 3

Main features

- Flush diaphragm
- Built in graphical display, *CombiView™* DFON optional
- HART®
- ATEX
- 3-A, FDA
- EHEDG (pending)
- Programmable by touch screen
- Easy and full programmable with FlexProgrammer 9701

Applications

- Food and beverage
- Pharmaceutical
- Water treatment
- General process industry

Environment

Temperature	
Storage	-40...+85 °C
Media (without cooling neck)	-40...+125 °C
Short term (SIP)	150 °C for 60 min.
Media (with cooling neck)	-40...+200 °C
Ambient	-40...+85 °C
Protection rating, IEC 529	IP67 / IP69K, depending on electrical connection
Humidity, IEC 68-2-38	98%, condensing
Vibration	DNV high vibration strain, class B 1.6 mm 2...25Hz IEC60068-2-6, test FC 25...100 Hz, 4.0 g

Electrical specification

Output signal	4...20 mA, 20...4 mA, 4...20 mA HART®
Power Supply	10...35 VDC
Load impedance	$R_Q = (U_{supply} - 10 V) / 20 mA$
Insulation resistance	>100 MΩ at 500 V
Sensor failure	Configurable, 3.6...4 or 20...23 mA
Electrical connections	M12 connector in stainless steel M16 or M20 cable gland in plastic or stainless steel

ATEX ia Gas / Dust

Approval	Gas Zone 0/1 Dust Zone 20/21	II 1 G, Ex ia IIC T5 Ga II 1 D, Ex ia IIIC T100°C Da
Voltage drop	U_{Disp}	4.5 or 6.5 VDC
T° class	T1 ... T5	Zone 0 and 20 -20 °C ... 60 °C Zone 1/2 and 21/22 -40°C ... 65 °C
Internal inductivity	L_i	< 10 µH
Internal capacity	C_i	< 15 nF
Barrier data	U_i I_i P_i	< 30 VDC < 0.1 A < 0.75 W

ATEX nA Gas

Approval	Gas Zone 2	II 3 G, Ex nA II T5
Voltage drop	U_{Disp}	4.5 or 6.5 VDC
T° class	T1 ... T5	-30 < T_{amb} < 65 °C
Internal inductivity	L_i	< 10 µH
Internal capacity	C_i	< 15 nF
Max. voltage	U_{max}	< 35 VDC
Max. current	I_{max}	< 0.1 A

Surface roughness

Process connection	
DN38 ISO 2852 / TriClamp	$Ra \leq 0.4 \mu m$
1 1/2" / DIN 32676 Clamp	
DN51 ISO 2852 / DIN 32676	$Ra \leq 0.4 \mu m$
Clamp	
DN38 Hygienic connection	$Ra \leq 0.8 \mu m$
DN76 Hygienic connection	$Ra \leq 0.8 \mu m$
GEA Tuchenhausen Varivent® ball housing	$Ra \leq 0.8 \mu m$
Weld joint	$Ra \leq 0.8 \mu m$
Diaphragm	$Ra \leq 0.4 \mu m$

Display specifications

Type	Graphically LCD
Front glass	Polycarbonate
Display modes	9 modes, programmable, e.g. value, bar graph, analogue, tank illustration, data logging display
Background	White, green, red - programmable
Measuring range	-9999...99999
Digit height	Max. 22 mm
Accuracy	0,1% @ ambient -10...70 °C
Voltage drop	<4...6,5 VDC
Output	2 configurable relay output, 60 Vp, 75 mA
Programming	Touch screen or FlexProgrammer 9701

Further information can be found in separate data sheet for DFON

Material

Process connection	Stainless steel 1.4404 (AISI 316L)
Housing	Stainless steel 1.4301 (AISI 304)
Diaphragm	Stainless steel 1.4435 (AISI 316L)
Sealing	To be ordered separately See table page 3

Approvals

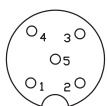
Apply to	EMC directive 2004/108/CE EN61000-6-2, EN 61000-6-3 Pressure directive 97/23/CE Directive: 10/2011 - 1935/2004 - 2023/2006 FDA
Certificates	3-A EHEDG (pending)

Measuring ranges and over pressure safety

	Pressure in bar					
Pressure range	0.0...0.345	-1.0...1.0	-1.0...5.0	-1.0...20.0	-1.0...34.0	-1.0...68.0
Over pressure	1	3	15	60	70	135
Burst pressure	2	6	30	120	140	270

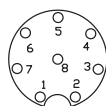
Electrical connections

M12, 5-wire

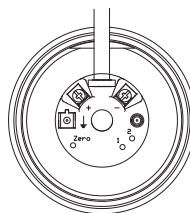


- 1 + supply, 4...20 mA
- 2 Common for relays
- 3 - supply, 4...20 mA
- 4 Relay 2
- 5 Relay 1

M12, 8-wire



- 1 N.C.
- 2 + supply, 4...20 mA
- 3 Relay 2
- 4 Relay 2
- 5 Relay 1
- 6 Relay 1
- 7 - supply, 4...20 mA
- 8 N.C.



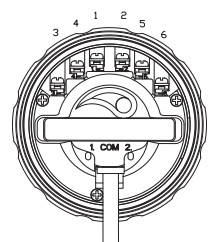
Cable gland

Transmitter

- 24VDC / - 4...20mA
- + 24VDC / + 4...20mA
- Com 1** Red clip (FlexProgrammer)
- Com 2** Black clip (FlexProgrammer)

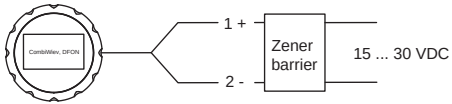
Display

- 1 N.C.
- 2 N.C.
- 3 Relay 2
- 4 Relay 2
- 5 Relay 1
- 6 Relay 1
- Com 1** Red clip (FlexProgrammer)
- Com 2** Black clip (FlexProgrammer)

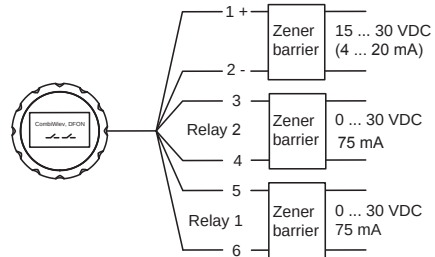


ATEX ia Gas/Dust

PFMx without relay output

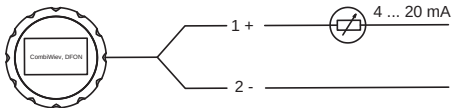


PFMx with relay output

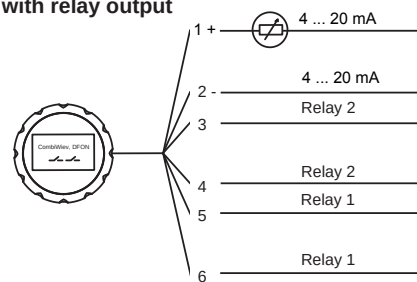


ATEX nA Gas

PFMx without relay output

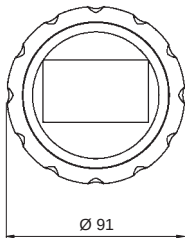


PFMx with relay output

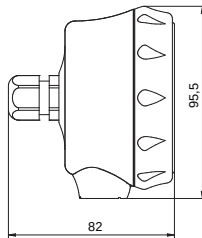


Dimensions (mm)

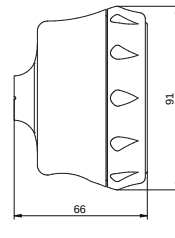
Front view



Bottom connection

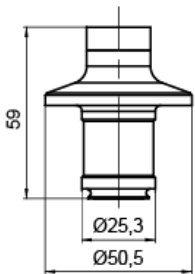


Rear connection

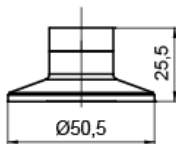


Process connections dimensions (mm)

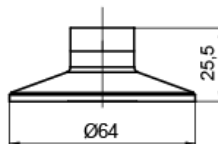
3-A DN 38
Code 50



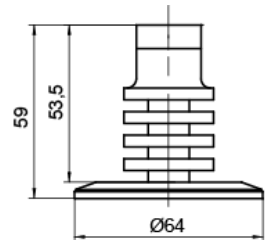
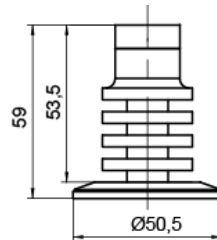
ISO 2852 DN 38
Code 51



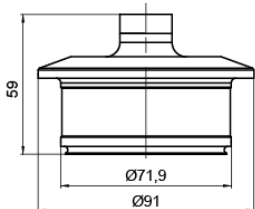
ISO 2852 DN 51
Code 54



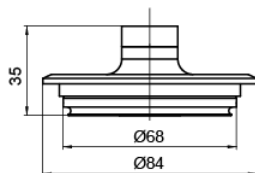
Cooling neck, high temperature
Code 81 Code 84



3-A DN 76
Code 56



Variline® type N
Code 61



Varivent operating pressure:
DN 32 ... DN 50 max. 25 bar
DN 65 ... DN 80 max. 16 bar
DN 80 ... DN 125 max. 10 bar

Accessories – seals

Seal type	Conn.	Material	Approvals	Item Number
O-ring	50	EPDM	3-A FDA	ZPX2-123
-	56	EPDM	3-A FDA	ZPX2-223
-	61	EPDM	3-A FDA	ZPX2-323
Gasket	51 - 81	EPDM	FDA	ZPX3-7232
-	54 - 84	EPDM	FDA	ZPX3-7262

Seal is to be purchased separately.

For other types and materials please see data sheet for accessories.

Ordering details

[illegible]

If the product wanted is not available from above list please inquire.