



Main characteristics (20 °C)

Measuring range	-1.0 ... 400.0 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
Standard process temperature	Silicon oil -40 ... 125 °C (<150 °C <60 min) White oil -10 ... 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 ... 400 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
- Programmable by touch screen
- Easy and full programmable with FlexProgrammer 9701

Applications

- Oil and Gas
- Chemical
- Energy
- 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	$R_0 = (U_{supply} - 10 V) / 20 mA$
Insulation resistance	>100 MΩ at 500 V
Sensor failure	Configurable, 3,6...4 or 20...23 mA
Electrical connections	M12 connector or M16 cable gland in stainless steel or plastic

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

Display specifications

Type	Graphically LCD
Front glass	Polycarbonate
Display modes	8 modes, programmable, e.g. value, bar graph, analogue, tank illustration
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, D21.09.

Material

Process connection	SS 1.4404, AISI 316L (Hastelloy-C)
Housing	SS 1.4301, AISI 304
Diaphragm	SS 1.4435, AISI 316L (Hastelloy-C)
Sealing	NBR, EPDM or FKM (Viton®)

Approvals

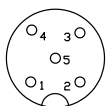
Apply to	EMC directive 2004/108/CE in accordance with EN61000-6-2, EN 61000-6-3 Pressure directive 97/23/CE
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Measuring ranges and over pressure safety

	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	-1.0...400.0
Over pressure	1	3	15	60	70	135	690
Burst pressure	2	6	30	120	140	270	1350

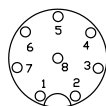
Electrical connections

M12, 5-wire

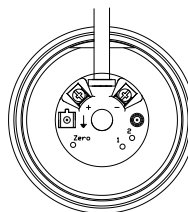


- 1 + supply, 4...20 mA
- 2 Common for relays
- 3 - supply, 4...20 mA
- 4 Relay 1
- 5 Relay 2

M12, 8-wire



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



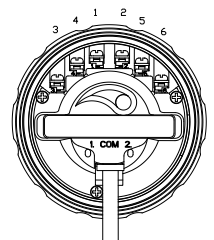
Cable gland

Transmitter

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

Display

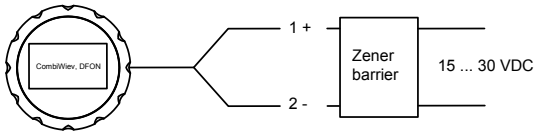
- 1 N.C.
- 2 N.C.
- 3 Relay 1
- 4 Relay 1
- 5 Relay 2
- 6 Relay 2
- Com 1 Red clip (FlexProgrammer)
- Com 2 Black clip (FlexProgrammer)



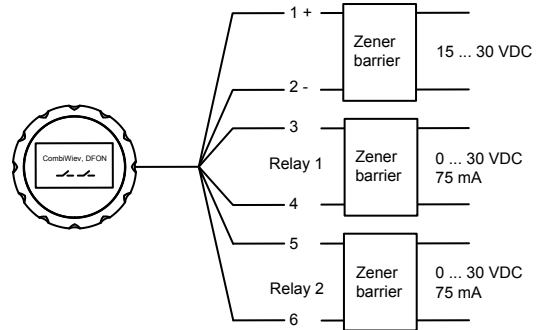
Disposal of product and packing.
According to national laws or by returning to Baumer.

ATEX ia Gas/Dust

PFMx without relay output

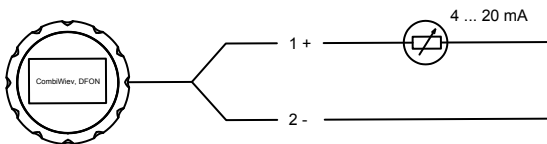


PFMx with relay output

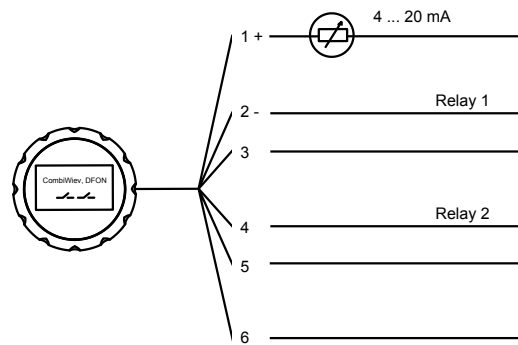


ATEX nA Gas

PFMx without relay output

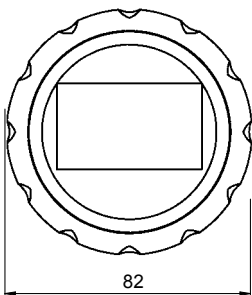


PFMx with relay output

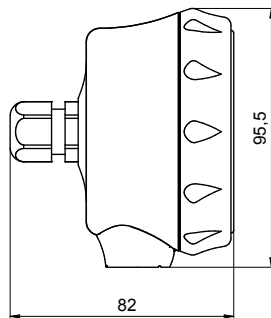


Dimensions (mm)

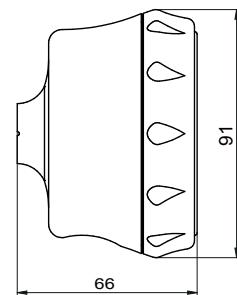
Front view



Bottom connection

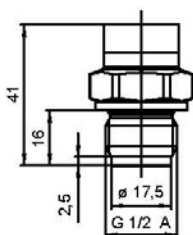


Rear connection

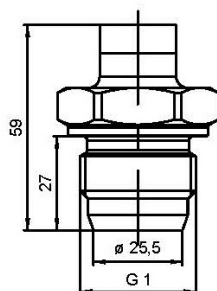


Process connections dimensions (mm)

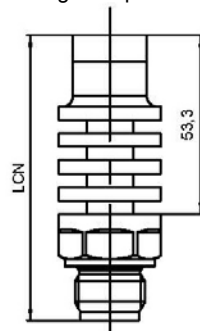
G1/4 DIN 3852
Code 41



G1A conical
Code 44



Cooling neck
high temperature



Standard
Code 41 →
Code 44 →

High temp.
Code 71
Code 748

LCN :
77 mm
9 mm

Ordering details

		-																	
Model																			
CombiPress™		PFMN																	
Housing																			
Stainless steel 1.4301 / AISI304 Bottom connection		5																	
Stainless steel 1.4301 / AISI304 Rear connection		6																	
Accuracy																			
±0.25%		4																	
±0.10% (not range 0.345 mbar)		5																	
Pressure range and unit																			
Min. 0.0 / Max 0.345 bar (vacuum and absolute are not available)		BC1																	
Min. -1.0 / Max 1.0 bar (0...1 bar abs)		BC2																	
Min. -1.0 / Max 5.0 bar (0...5 bar abs)		BC3																	
Min. -1.0 / Max 20.0 bar (0...20 bar abs)		BC4																	
Min. -1.0 / Max 34.0 bar (0...34 bar abs)		BC5																	
Min. -1.0 / Max 68.0 bar (0...68 bar abs)		BC6																	
Min. -1.0 / Max 400.0 bar (0...400 bar abs) (Only available for process connection G1/2"A code 41)		BC7																	
Kind of pressure																			
Relative		R																	
Absolute		A																	
Output signal																			
4...20 mA		A1																	
4...20 mA + HART®		C1																	
Output Connection																			
M12, 5 pins		15																	
M12, 8 pins		18																	
Cable gland, M16		55																	
Material of el. connection																			
Plastic		1																	
AISI 304		3																	
Process connection																			
G 1/2" A flush DIN3852		41																	
G 1" flush. Cone.		44																	
G 1/2" A flush DIN3852 with cooling neck		71																	
G 1" flush cone with cooling neck		74																	
Wetted parts material																			
Stainless steel 1.4404 / AISI 316L		2																	
Hastelloy C		H																	
Seal																			
NBR Standard		1																	
EPDM		2																	
FKM (Viton®)		3																	
Oil filling																			
Silicon oil -40...200 °C		1																	
FDA approved white oil -10...200 °C Standard		2																	
Display																			
Without display		1																	
With display No relays activated		2																	
With display With activated relays		4																	
ATEX																			
Without		0																	
Ex nA II T5 (Gas)		3																	
Ex ia IIC T5 Ga / Ex ia IIIC T100°C Da (Gas or Dust)		5																	
Approvals																			
Without		0																	
Configuration																			
No configuration (configured according to pressure cell)		0																	
Configuration of Range		1																	
Configuration of Range + Display		2																	

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