



### 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

### 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

### 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	$R_L = (U_{supply} - 10 V) / 20 mA$
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	 
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	
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

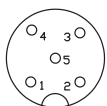
Apply to	EMC directive 2004/108/CE in accordance with EN61000-6-2, EN 61000-6-3 Pressure directive 97/23/CE
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### Measuring ranges and over pressure safety

Pressure range	Pressure in bar						
	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

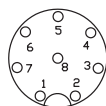
### Electrical connections

#### M12, 5-wire

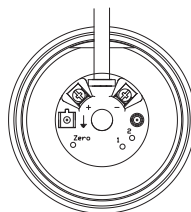


- 1 + supply, 4...20 mA
- 2 Common for relays
- 3 - supply, 4...20 mA
- 4 Relay 1
- 5 Relay 2

#### 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.



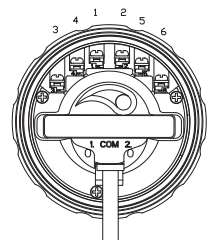
#### Cable gland

##### Transmitter

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

##### Display

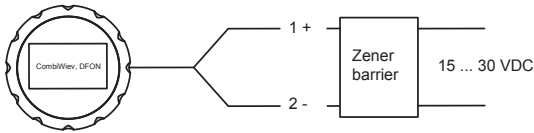
- 1 N.C.
- 2 N.C.
- 3 Relay 1
- 4 Relay 1
- 5 Relay 2
- 6 Relay 2
- Com 1 Red clip (FlexProgrammer)
- Com 2 Black clip (FlexProgrammer)



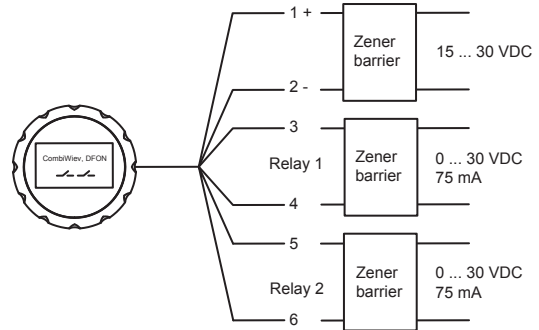
Disposal of product and packing.  
According to national laws or by returning to Baumer.

## ATEX ia Gas/Dust

### PFMx without relay output

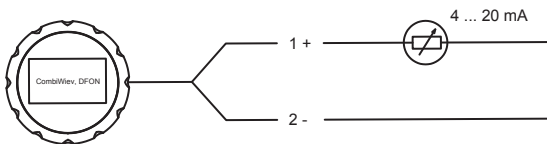


### PFMx with relay output

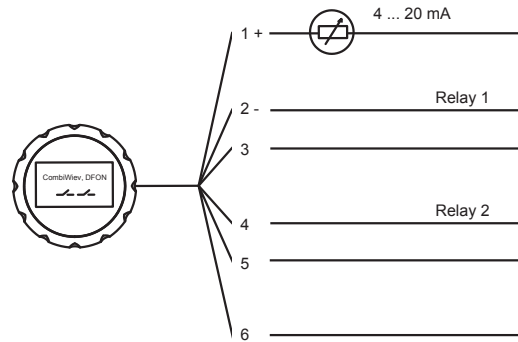


## ATEX nA Gas

### PFMx without relay output

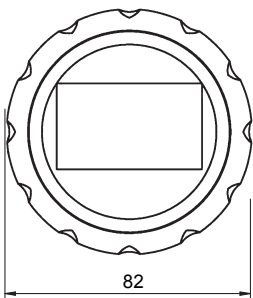


### PFMx with relay output

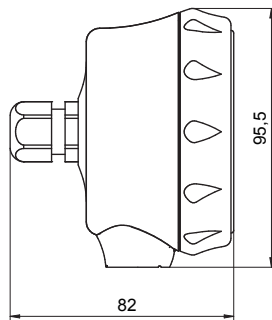


## Dimensions (mm)

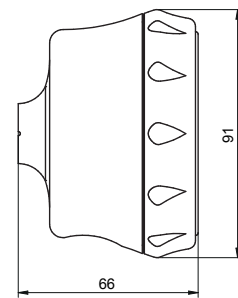
Front view



Bottom connection

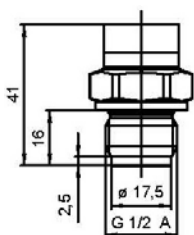


Rear connection

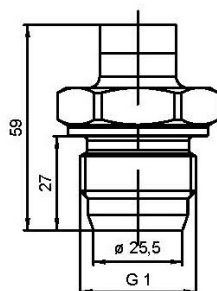


## Process connections dimensions (mm)

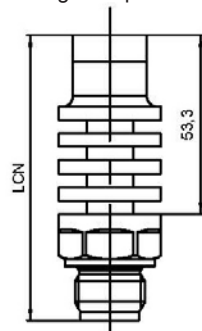
G1/2A DIN 3852  
Code 41



G1A conical  
Code 44



Cooling neck  
high temperature



Standard  
Code 41 →  
Code 44 →

High temp.  
Code 71  
Code 74

LCN :  
77 mm  
9 mm

## Ordering details

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<b>Model</b>																				
CombiPress™																				
<b>Housing</b>																				
Stainless steel 1.4301 / AISI304 Bottom connection																				
Stainless steel 1.4301 / AISI304 Rear connection																				
<b>Accuracy</b>																				
±0.25%																				
±0.10% (not range 0.345 mbar)																				
<b>Pressure range and unit</b>																				
Min. 0.0 / Max 0.345 bar (vacuum and absolute are not available)																				
Min. -1.0 / Max 1.0 bar (0...1 bar abs)																				
Min. -1.0 / Max 5.0 bar (0...5 bar abs)																				
Min. -1.0 / Max 20.0 bar (0...20 bar abs)																				
Min. -1.0 / Max 34.0 bar (0...34 bar abs)																				
Min. -1.0 / Max 68.0 bar (0...68 bar abs)																				
Min. -1.0 / Max 400.0 bar (0...400 bar abs) (Only available for process connection G1/2"A code 41)																				
<b>Kind of pressure</b>																				
Relative																				
Absolute																				
<b>Output signal</b>																				
4...20 mA																				
4...20 mA + HART®																				
<b>Output Connection</b>																				
M12, 5 pins																				
M12, 8 pins																				
Cable gland, M16																				
Cable gland, M20																				
<b>Material of el. connection</b>																				
Plastic																				
AISI 304																				
<b>Process connection</b>																				
G 1/2" A flush DIN3852																				
G 1" flush Cone																				
G 1/2" A flush DIN3852 with cooling neck																				
G 1" flush cone with cooling neck																				
<b>Wetted parts material</b>																				
Stainless steel 1.4404 / AISI 316L																				
Hastelloy C																				
<b>Seal</b>																				
None (for G 1" flush cone)																				
NBR Standard																				
EPDM																				
FKM (Viton®)																				
<b>Oil filling</b>																				
Silicon oil -40...200 °C																				
FDA approved white oil -10...200 °C Standard																				
<b>Display</b>																				
Without display																				
With display No relays activated																				
With display With activated relays																				
<b>ATEX</b>																				
Without																				
Ex nA II T5 (Gas)																				
Ex ia IIC T5 Ga / Ex ia IIIC T100°C Da (Gas or Dust)																				
<b>Approvals</b>																				
Without																				
<b>Configuration</b>																				
No configuration (configured according to pressure cell)																				
Configuration of Range																				
Configuration of Range + Display																				

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