



扫一扫，进入手机旺铺

ATEX

ATEX II 1G
Ex ia IIC T4/T6 Ga All versions without cooling neck,
DIN connector and with output
signal code A1

ATEX II 1/2G
Ex ia IIC T4/T6 Ga/Gb All versions without cooling neck,
with DIN connector and output
signal code A1

ATEX II 1G
Ex ia IIC T3/T4/T6 Ga All versions with cooling neck,
output signal code A1 and without
DIN connector

ATEX II 1/2G
Ex ia IIC T3/T4/T6 Ga/Gb All versions with cooling neck,
DIN connector and output signal
code A1

ATEX II 1D
Ex ia IIIC T107°C IP6X Da All versions with output signal
code A1

Barrier data $U_i \leq 30 \text{ V}$
 $I_i \leq 100 \text{ mA}$
 $P_i \leq 750 \text{ mW}$

Capacity $C_i \leq 31 \text{ nF}$
 $C_{\text{Cable}} \leq 0.12 \text{ nF/m}$

Inductivity $L_i \leq 3 \text{ }\mu\text{H}$
 $L_{\text{Cable}} \leq 1.1 \text{ }\mu\text{H/m}$

Temperature class T1 ... T3: $-40 < T_{\text{amb}} < 45/70/75/85 \text{ }^\circ\text{C}$
(ambient temperature) T1 ... T4: $-40 < T_{\text{amb}} < 85 \text{ }^\circ\text{C}$
T1 ... T6: $-40 < T_{\text{amb}} < 70 \text{ }^\circ\text{C}$

Temperature class T1 ... T3: $-40 < T_{\text{med}} < 130/150/160/170/200 \text{ }^\circ\text{C}$
(medium temperature) T1 ... T4: $-40 < T_{\text{med}} < 115/130 \text{ }^\circ\text{C}$
T1 ... T6: $-40 < T_{\text{med}} < 75/80 \text{ }^\circ\text{C}$

For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (SEV 11 ATEX 0129).

You find the certificates and manuals under <http://www.baumer.com/>

Surface roughness (in contact with medium)

Process connection

ISO 2852 / TriClamp / DIN 32676 / DIN 11864-3 $R_a \leq 0.4 \text{ }\mu\text{m}$

DN38 Hygienic Connection $R_a \leq 0.8 \text{ }\mu\text{m}$

DN76 Hygienic Connection $R_a \leq 0.8 \text{ }\mu\text{m}$

GEA Tuchenhausen Varivent® ball housing $R_a \leq 0.8 \text{ }\mu\text{m}$

Weld joint $R_a \leq 0.8 \text{ }\mu\text{m}$

Diaphragm $R_a \leq 0.4 \text{ }\mu\text{m}$

Approvals

CE conformity EMC directive 2004/108/CE in accordance with
EN 61000-6-2 & EN 61000-6-3

Hygienic 3-A 74-06
EHEDG, EL Class I

Measuring ranges and overpressure safety

Pressure in bar

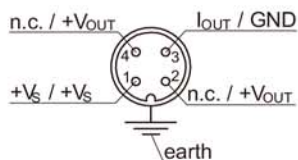
Pressure range	0 ... 0.1	-0.1 ... 0.1	0 ... 1.6	0 ... 6	0 ... 25	0 ... 40
	0 ... 0.16	-0.2 ... 0.2	0 ... 2	0 ... 10	-1 ... 24	-1 ... 39
	0 ... 0.25	0 ... 0.4	0 ... 2.5	-1 ... 9		
		0 ... 0.6	-1 ... 1.5	0 ... 16		
		0 ... 1	0 ... 4	-1 ... 15		
		-1 ... 0	-1 ... 3	0 ... 20		
		-1 ... 0.6	-1 ... 5			
Over pressure	1	3	15	60	70	135
Burst pressure	2	6	30	120	140	270



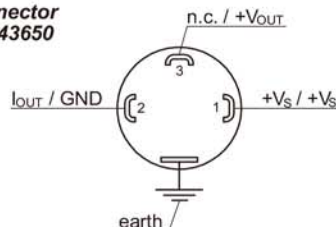
Electrical connections

Signal at 4...20 mA / Signal at 0...10V

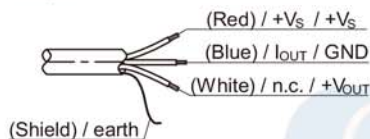
M12 4-pins



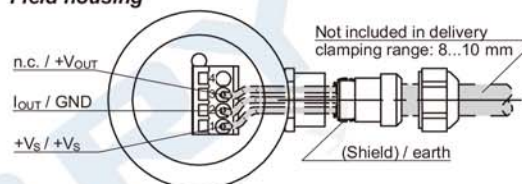
Connector DIN 43650



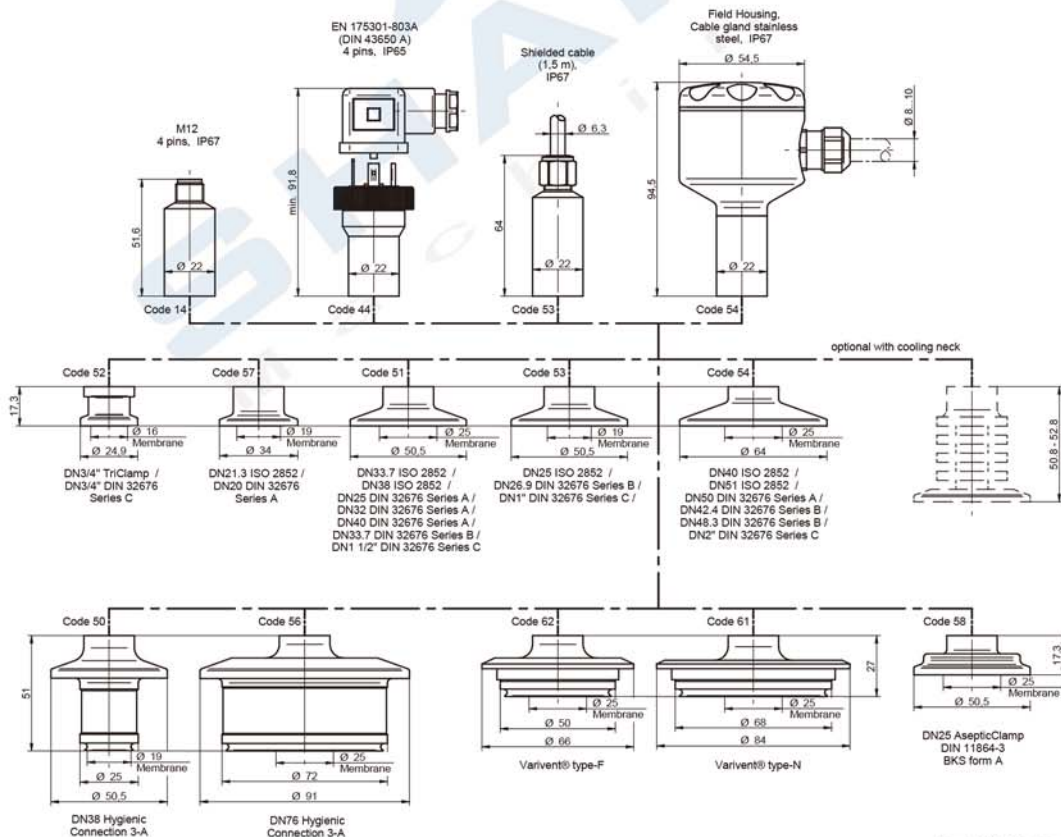
Cable output



Field housing



Dimensions (mm)



Ordering details PBMH hygienic

[illegible]



Main benefits

- Fully autoclavable pressure sensor for common sterilization processes
- High temperature resistance for SIP and CIP processes
- Surface roughness of process connection ≤ 0.8 Ra for highest hygienic requirements
- Fully welded and compact design for washdowns without residuals
- Excellent active temperature compensation for increased process stability
- Available with optional electro-polished process connection for improved degree of purity
- External programming of zero point and span with FlexPro-grammer 9701

Applications

- Health care
- Biotechnology

Technical specifications

Measuring principle	Piezoresistive silicon chip
Measuring ranges	-1 ... 0 bar up to 0 ... 40 bar
Type of pressure	Relative / Absolute
Accuracy (20 °C)	$\leq \pm 0.25\%$ FS (includes linearity, hysteresis, repeatability, error of span and zero point according limit point adjustment)
Turn down	5:1
Performance after Turn down	[Turn-Down] * [Accuracy] FS
Zero thermal drift	$\leq \pm 0.03\%$ FS/10 K
Span thermal drift	$\leq \pm 0.03\%$ FS/10 K
Long term stability	$\leq \pm 0.1\%$ FS / Year
Response time (10 ... 90%)	≤ 5 ms
Process connections	See page 3

Autoclavability

Sterilisation conditions	Complete sensor with attached protective cover
Process duration	≤ 30 min
Sterilisation temperature	≤ 140 °C
Ambient pressure during sterilisation process	≤ 3500 mbar

Environment

Temperature	
Storage	-10 ... +85 °C
Compensated range	-10 ... +85 °C
Medium (without cooling neck)	-10 ... +125 °C
Medium (with cooling neck)	-10 ... +200 °C
Ambient	-10 ... +85 °C
SIP/CIP compatibility	Medium temperature up to 150 °C (< 60 minutes) without cooling neck Medium temperature up to 200 °C (permanent) with cooling neck
Protection rating	IP67 (EN 60529)
Vibration IEC60068-2-6	1.5 mm p-p (10 – 57 Hz), 10 g (58 Hz – 2 KHz) 10 cycles within 2.5 h per axis
Shock IEC60068-2-27	50 g/11 ms 100 g/6 ms 10 x Imp. per Axis and direction
Bump IEC60068-2-27	100 g/2 ms 4000 x Imp. per Axis and direction
Random IEC60068-2-64	0.1 g ² /Hz (20 Hz – 1 KHz) 30 min per axis (>10 g RMS)



Electrical specification

Output signal /	4 ... 20 mA / 8 ... 30 VDC
Power supply	0...10 V / 13 ... 30 VDC
Load impedance	
Current output	$R_{\Omega} = (U_{\text{supply}} - 8 \text{ V}) / 20 \text{ mA}$
Voltage output	> 5 K Ω
Insulation resistance	>100 M Ω at 500 VDC
Electrical connections	See page 3

Material

Process connection	SS 1.4435 AISI 316L
Housing	SS 1.4404 AISI 316L
Diaphragm	SS 1.4435 AISI 316L
Sealing	EPDM gaskets are conform to 3-A, Sanitary Standard 18-03 Class I

Surface roughness (in contact with medium)

Process connection	Ra ≤ 0.4 μm
Weld joint	Ra ≤ 0.8 μm
Diaphragm	Ra ≤ 0.4 μm

Approvals

CE conformity	EMC directive 2004/108/CE in accordance with EN 61000-6-2 & EN 61000-6-3
Hygienic	3-A 74-06 EHEDG, EL Class I

Measuring ranges and overpressure safety

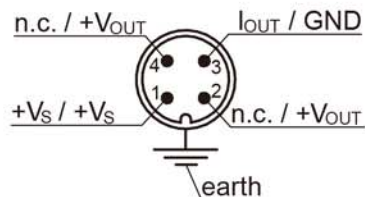
Pressure range	Pressure in bar				
	0 ... 0.4	0 ... 1.6	0 ... 6	0 ... 25	0 ... 40
	0 ... 0.6	0 ... 2	0 ... 10	-1 ... 24	-1 ... 39
	0 ... 1	0 ... 2.5	-1 ... 9		
	-1 ... 0	-1 ... 1.5	0 ... 16		
	-1 ... 0.6	0 ... 4	-1 ... 15		
		-1 ... 3	0 ... 20		
		-1 ... 5			
Over pressure	3	15	60	70	135
Burst pressure	6	30	120	140	270



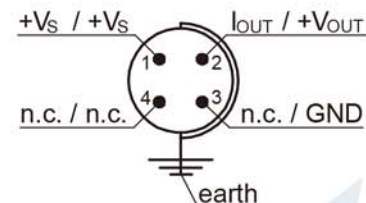
Electrical connections

Signal at 4...20 mA / Signal at 0...10V

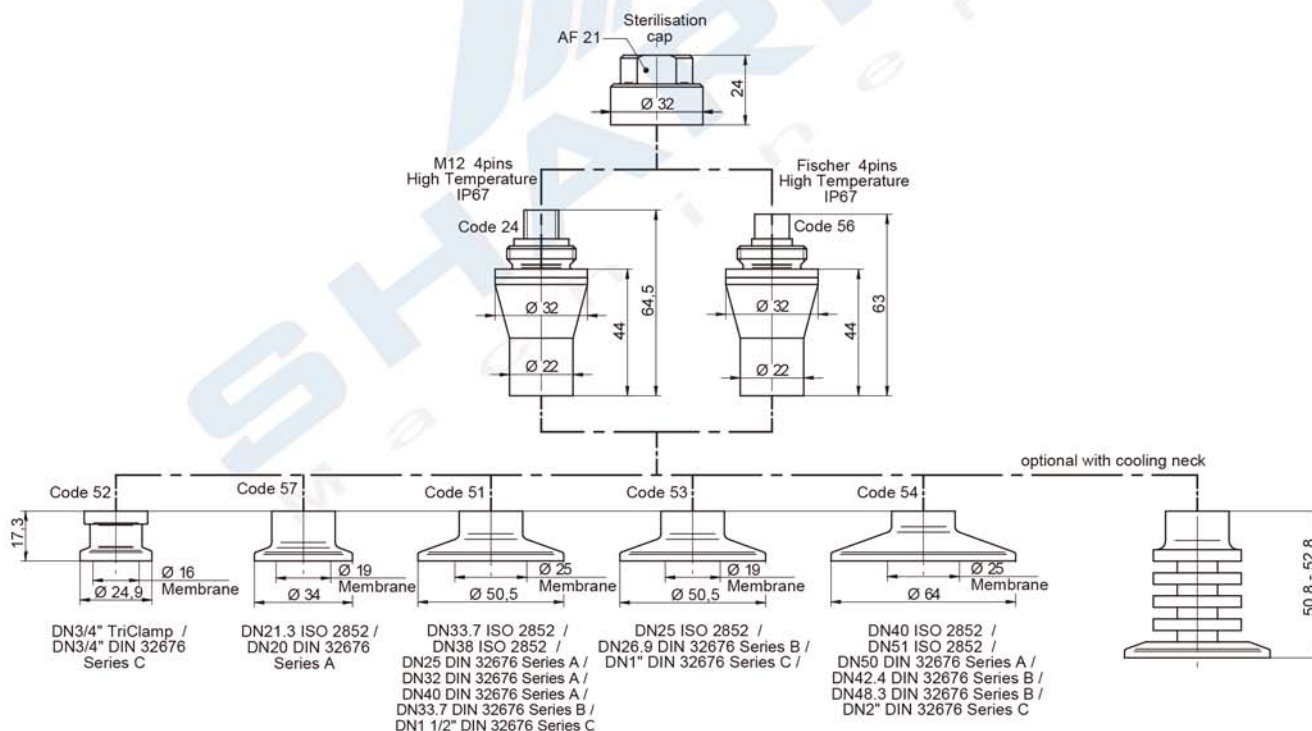
M12, 4-pins



Fischer plug 4-pins



Dimensions (mm)



Ordering details PBMH autoclavable

[illegible]



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	$R_Q = (U_{supply} - 10 \text{ V}) / 20 \text{ mA}$
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

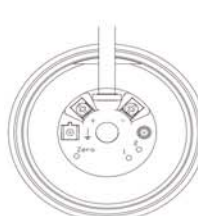


- 1 + supply, 4...20 mA
- 2 Common for relays
- 3 - supply, 4...20 mA
- 4 Relay 2
- 5 Relay 1

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.



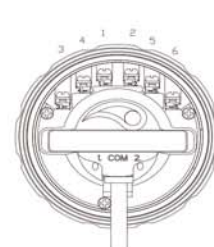
Cable gland

Transmitter

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

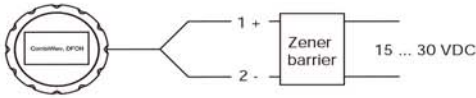
Display

- 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)

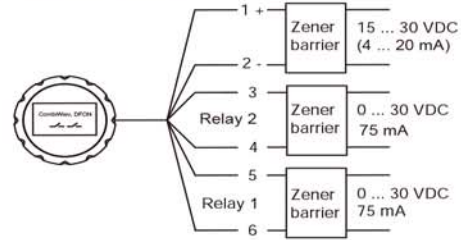


ATEX Ia Gas/Dust

PFMx without relay output

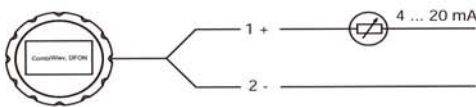


PFMx with relay output

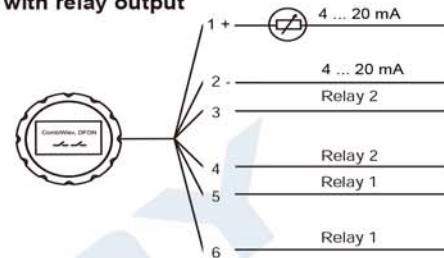


ATEX nA Gas

PFMx without relay output

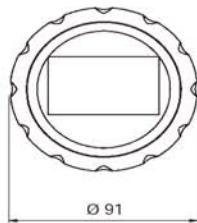


PFMx with relay output

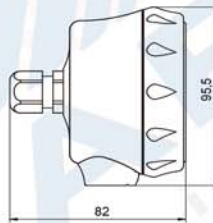


Dimensions (mm)

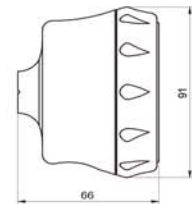
Front view



Bottom connection

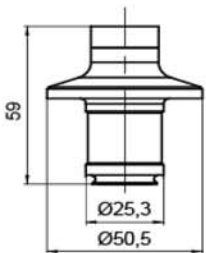


Rear connection

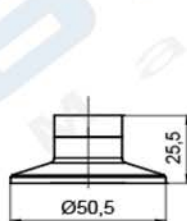


Process connections dimensions (mm)

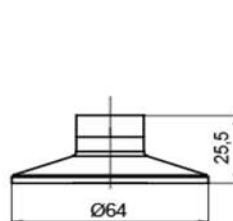
3-A DN 38
Code 50



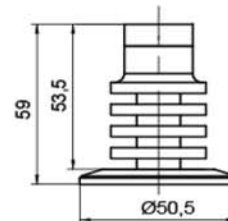
ISO 2852 DN 38
Code 51



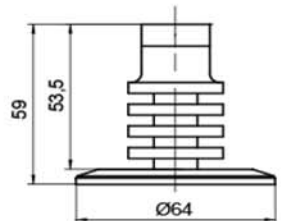
ISO 2852 DN 51
Code 54



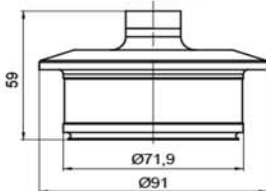
Cooling neck, high temperature
Code 81



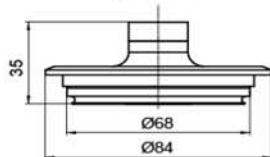
Code 84



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

Model

CombiPress™

PFMH

Housing

Stainless steel 1.4301 (AISI 304) Bottom connection

5

Stainless steel 1.4301 (AISI 304) Rear connection

6

Accuracy

±0.25%

4

±0.10% (not range 0.345 bar)

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

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

Cable gland, M20

57

Material of el. connection

Plastic (cable gland only)

1

Stainless steel 1.4301 (AISI 304)

3

Process connection

DN38 BHC 3-A Hygienic Connection

BCID: B01

50

DN38 ISO 2852 / TriClamp 1 1/2", 3-A

- C04

51

DN51 ISO 2852 Clamp. 3-A

- C05

54

DN76 BHC 3-A Hygienic Connection (max. range 5 bar)

- B02

56

Varivent® type N (Varivent DN32/125)

- V02

61

DN38 ISO 2852 / TriClamp 1 1/2", 3-A, with cooling neck

- C04

81

DN51 ISO 2852 TriClamp 2", 3-A, with cooling neck

- C05

84

Wetted parts material

Stainless steel 1.4404 (AISI 316L)

2

Seal

Without (to be ordered separately)

0

Oil filling

Standard oil -40...200 °C

1

NSF H1 listed oil (FDA approved) -5...200 °C

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 or 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.

SHARRY Machinery (Shanghai) Co.,Ltd.

Tel: +86-21-64881886

13761943624

Web: www.sharry-sh.com

www.xierui-sh.com





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	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 ... 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	$R_0 = (U_{supply} - 10 \text{ V}) / 20 \text{ mA}$
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 < Tamb < 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	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	NBR, EPDM or FKM (Viton®)

Approvals

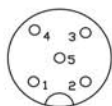
Apply to	EMC directive 2004/108/CE in accordance with EN61000-6-2, EN 61000-6-3 Pressure directive 97/23/CE
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Measuring ranges and over pressure safety

	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

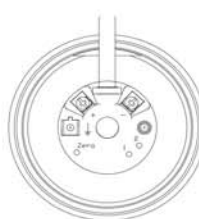


- 1 + supply, 4 ... 20 mA
- 2 Common for relays
- 3 - supply, 4 ... 20 mA
- 4 Relay 2
- 5 Relay 1

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.



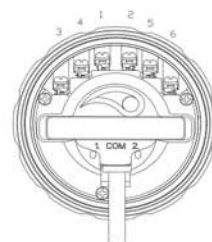
Cable gland

Transmitter

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

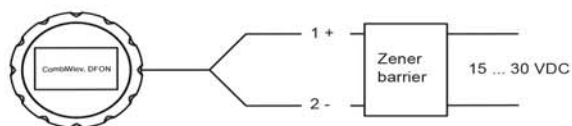
Display

- 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)

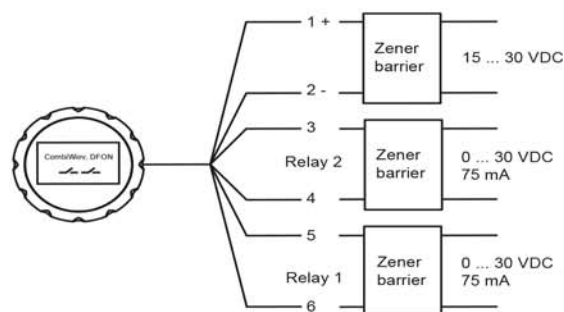


ATEX ia Gas/Dust

PFMx without relay output

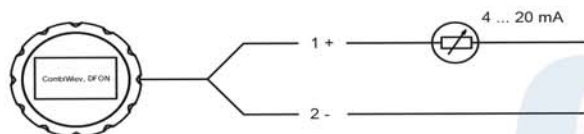


PFMx with relay output

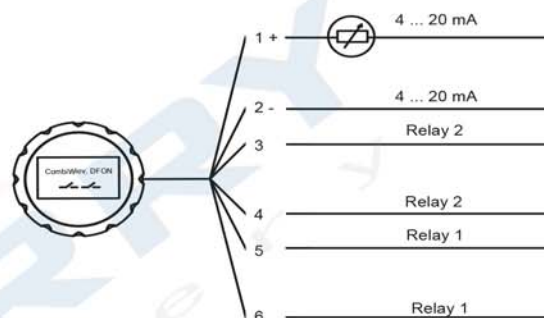


ATEX nA Gas

PFMx without relay output

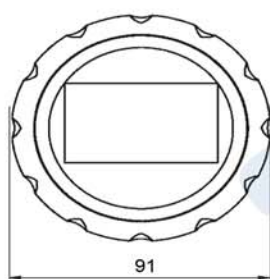


PFMx with relay output

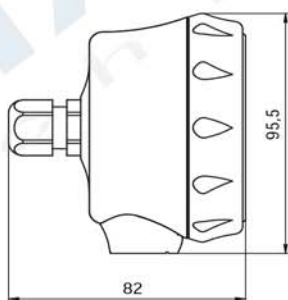


Dimensions (mm)

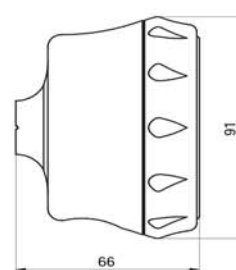
Front view



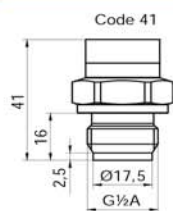
Bottom connection



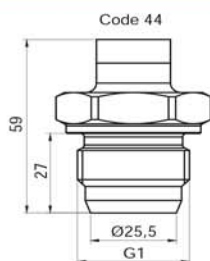
Rear connection



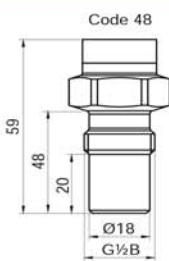
Process connections dimensions (mm)



G 1/2 A
DIN 3852-E



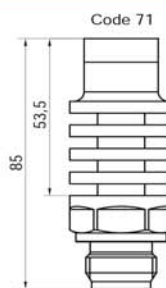
G 1 A
hygienic cone



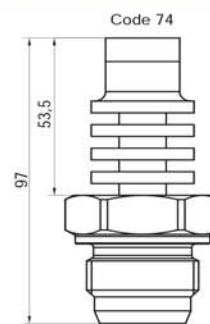
G 1/2 A
hygienic cone



1/2-14 NPT



G 1/2 A
DIN 3852-E



G 1 A
hygienic cone



Ordering details

	-	x	x.	xxx	x.	xx	xx	x.	xx	x	x	x.	x	x	x	x
Model																
CombiPress™																
Housing																
Stainless steel 1.4301 (AISI 304) Bottom connection																
Stainless steel 1.4301 (AISI 304) Rear connection																
Accuracy																
±0.25 %																
±0.10 % (not range 0.345 mbar)																
Pressure range and unit																
Min. 0.0 / max. 0.345 bar (no abs.) (all process connections other than 48, 49)																
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.) (for process connections code 41, 49, 71)																
Kind of pressure																
Relative																
Absolute																
Output signal																
4 ... 20 mA																
4 ... 20 mA + HART®																
Output connection																
M12, 5 pins																
M12, 8 pins																
Cable gland, M16																
Cable gland, M20																
Material of el. connection																
Plastic																
Stainless steel 1.4301 (AISI 304)																
Process connection																
G 1/2 A DIN 3852-E																
G 1 A hygienic (1)																
G 1/2 A hygienic (1)																
1/2-14 NPT																
G 1/2 A DIN 3852-E with cooling neck																
G 1 A hygienic with cooling neck (1)																
Wetted parts material																
Stainless steel 1.4404 (AISI 316L)																
Seal																
None (for connection code 44, 49, 48, 74)																
NBR Standard (for connection code 41, 71)																
EPDM (for connection code 41, 71)																
FKM (Viton®) (for connection code 41, 71)																
Oil filling																
Standard oil -40 ... 200 °C																
NSF H1 listed oil (FDA approved) -5 ... 200 °C																
Display																
Without display																
With display. No relays activated																
With display. With activated relays																
ATEX																
Without																
Ex nA II T5 (Gas)																
Ex ia IIC T5 Ga / Ex ia IIIC T100 °C Da (Gas or Dust)																
Approvals																
Without																
Configuration																
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.
(1) ≤ 60 bar





Main characteristics

Measuring range	-1 ... 0 bar up to 0 ... 600 bar
Long term stability	0.2% FS / Year
Accuracy (20 °C) (linearity, hysteresis and repeatability according Best Fit Straight Line)	$\leq \pm 0.3\%$ FS (BFSL)

Technical specifications

Measuring principle	Thick film on ceramic
Measuring ranges	-1 ... 0 bar up to 0 ... 600 bar
Type of pressure	Relative / Absolute
Accuracy (20 °C) (linearity, hysteresis and repeatability according Best Fit Straight Line)	$\leq \pm 0.3\%$ FS (BFSL) $\leq \pm 0.6\%$ FS (BFSL) for $P \leq 60$ mbar and $P = 600$ bar
Error of zero point	$\leq \pm 1\%$ FS
Error of span	$\leq \pm 1\%$ FS
Zero thermal drift	$\leq \pm 0.25\%$ FS/10 K ($P > 1$ bar) $\leq \pm 0.60\%$ FS/10 K ($P \leq 1$ bar)
Span thermal drift	$\leq \pm 0.15\%$ FS/10 K ($P > 1$ bar) $\leq \pm 0.15\%$ FS/10 K ($P \leq 1$ bar)
Long term stability	0.2% FS / Year
Response time (10 ... 90%)	≤ 3 ms
Process connections	See page 3

Environment

Temperature	
Storage	-40 ... + 85°C
Compensated range	-10 ... + 55°C
Medium	-25 ... +100°C
Ambient	-25 ... + 70°C
Protection rating	IP65 (EN 60529) up to IP67 depending on electrical connection
Vibration IEC60068-2-6	1.5 mm p-p (10 – 55 Hz), 20 g (55 Hz – 2 KHz)
Shock IEC60068-2-27	25 falls from 1 m on concrete ground

Main features

- Robust stainless steel housing
- Intrinsically safe version (LCIE 02 ATEX 6133X)
- Available with optional Marine approval (Bureau Veritas Marine)

Applications

- Chemical
- Pneumatic
- Energy
- Shipbuilding
- Industrial gas

Electrical specification

Output signal /	4 ... 20 mA / 11 ... 28 VDC
Power supply	0...10 V / 14 ... 28 VDC
Load impedance	
Current output	$R_{\Omega} = (U_{\text{supply}} - 11 \text{ V}) / 20 \text{ mA}$
Voltage output	$> 2.5 \text{ K}\Omega$
Insulation resistance	$> 100 \text{ M}\Omega$ at 500 VDC
Electrical connections	See page 3

Material

Process connection and housing	SS 1.4404 AISI 316L
Diaphragm	Ceramic (96% Al_2O_3)
Sealing	NBR, EPDM, CR, FFKM or FKM (Viton®)
Cable	PVC



ATEX	
I M1	Ex ia I Ma
II 1 G D	Ex ia IIC T6 or T5 Ga
II 1 G D	Ex ia IIC T80°C or T95°C Da IP6X
Barrier data	$U_i \leq 28 \text{ V}$ $I_i \leq 120 \text{ mA}$ $P_i \leq 800 \text{ mW}$
Capacity (current output)	$C_i \leq 30 \text{ nF}$
Capacity (voltage output)	$C_i \leq 60 \text{ nF}$
Ambient temperature T_a	
$T_a = +40^\circ\text{C}$	G: T6 D IP65: Surface temperature = $+80^\circ\text{C}$
$T_a = +70^\circ\text{C}$	G: T5 D IP65: Surface temperature = $+95^\circ\text{C}$ (G = Gas, D = Dust)

For the application in Ex zone you have to respect the conditions mentioned in the ATEX Type Examination Certificate (LCIE 02 ATEX 6133X).

You find the certificates and manuals under <http://www.baumer.com/>

Approvals	
CE conformity	EMC directive 2004/108/CE in accordance with EN 61000-6-2, EN 61000-6-3, EN 61326-1 (Tab.2)
	Pressure directive 97/23/CE

Measuring ranges and overpressure safety

Pressure in mbar				
Pressure range	0 ... 25	0 ... 60	0 ... 100	0 ... 250
	0 ... 40		0 ... 160	0 ... 400 0 ... 600
Over pressure	110	275	500	1000
Burst pressure	200	500	1000	2000

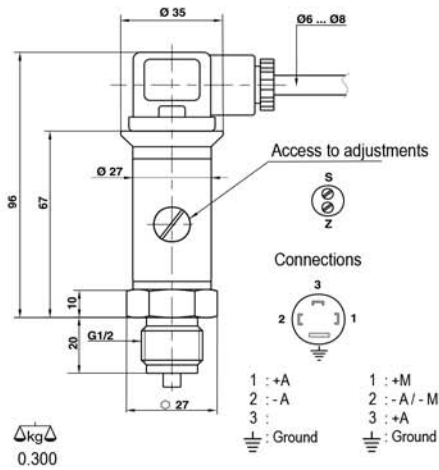
Pressure in bar						
Pressure range	-1 ... 0	-1 ... 1.5	-1 ... 3	-1 ... 5	-1 ... 15	-1 ... 24
	-1 ... 0.6	0 ... 2.5	0 ... 4	0 ... 6	0 ... 16	0 ... 25
	0 ... 1					
	0 ... 1.6					
Over pressure	3	4	8	12	32	50
Burst pressure	6	7	12	18	48	75

Pressure in bar						
Pressure range	0 ... 60	0 ... 100	0 ... 160	0 ... 250	0 ... 400	0 ... 600
Over pressure	120	200	320	500	600	800
Burst pressure	180	300	480	600	800	1000

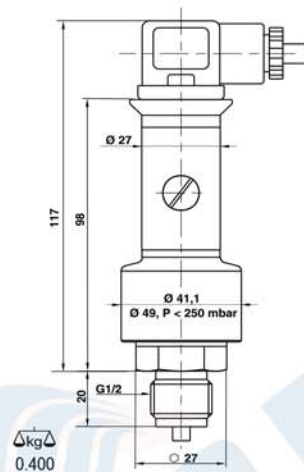


Dimensions (mm)

Standard version for $P \geq 1$ bar
DIN 43650 plug
IP 65

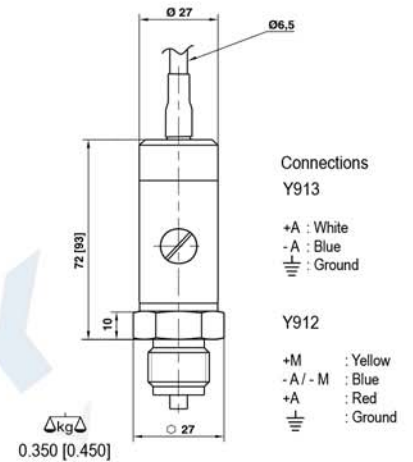


Standard version for $P < 1$ bar
DIN 43650 plug
IP 65

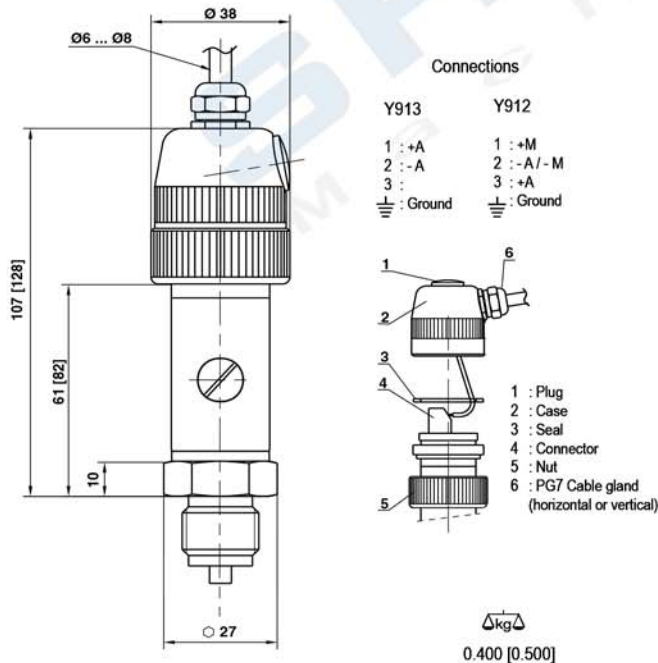


Version also used for -1...0 bar and 0...1 bar ranges with $\pm 50\%$ span adjustment option.

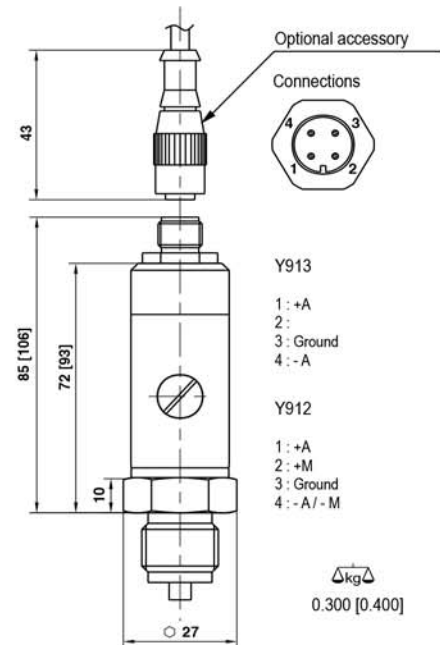
Pig tail (length 1.5 m)
IP 65



Terminal strip outlet + screwed cap
IP 67



M12, 4 contacts plug
IP 65



Ordering details Y91

Y91 - x . x . x . xxx . x / xxxx

Model

Pressure transmitter

Y91

Output signal

0...10 V

2

4...20 mA

3

Process connection

G¼ EN 837

2

G½ EN 837

3

¼ NPT

5

½ NPT

6

M20x150

9

Sealing

NBR

P ≥ 250 mbar

3

CR

1 bar ≤ P < 250 mbar

4

EPDM

5

FFKM (Chemraz® 505)

1 bar ≤ P < 250 mbar

7

FKM (Viton®)

9

Pressure range and unit in bar

0...0.025

Only pressure type relative

N05

0...0.04

Only pressure type relative

N06

0...0.06

Only pressure type relative

N07

0...0.1

Only pressure type relative

N08

0...0.16

Only pressure type relative

N09

0...0.25

Only pressure type relative

N10

0...0.4

Only pressure type relative

N11

0...0.6

Only pressure type relative

N12

0...-1

Only pressure type relative

B59

-1...0.6

Only pressure type relative

B72

-1...1.5

Only pressure type relative

B74

-1...3

Only pressure type relative

B76

-1...5

Only pressure type relative

B77

-1...9

Only pressure type relative

B79

-1...15

Only pressure type relative

B81

-1...24

Only pressure type relative

B82

-1...39

Only pressure type relative

B1L

0...1

B15

0...1.6

B16

0...2.5

B18

0...4

B19

0...6

B20

0...10

B22

0...16

B24

0...25

B26

0...40

B27

0...100

B31

0...160

B33

0...250

B35

0...400

B38

0...600

B39

Kind of pressure

Relative

R

Absolute

A

Output connection

DIN 43650, 4 pins

Shielded cable (1.5 m)

2160

M12, 4 pins

2164

Terminal strip outlet + screwed cap

2166

Terminal strip outlet + cap with M20x150 thread and gland

2167

