



Pressure transmitter for general applications, 0...25 bar

- Available with hygienic flush-mounted diaphragm
- Housing and wetted parts in corrosion-resistant stainless steel
- Standard signal 4...20 mA for connection to automation systems
- Plug for quick installation and service
- Many pressure ranges available

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with



Type 8611
eCONTROL - Universal
controller ▶



Type 8802
ELEMENT continuous
control valve systems -
overview ▶



Type 8619
multiCELL - multi-chan-
nel/multi-function
transmitter/controller ▶

Type description

This pressure transmitter is designed to cover the majority of industrial applications in the field of pressure measurement technology. High accuracy, compact design, robust construction and flexibility make the transmitter suitable for various measurement tasks. All wetted parts are made of stainless steel and completely welded. Internal seal elements, which restrict the choice of measuring materials, are excluded.

Many other pressure ranges available, 0.125 % accuracy, other output signals, other electrical connections, other process connections, on request.

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1. General technical data

Product properties

Material

Make sure the device materials are compatible with the fluid you are using.

Further information can be found in chapter [“3.1. Bürkert resistApp” on page 6.](#)

Non wetted parts

Housing	- Standard variant <0.4 bar: stainless steel 1.4301 (304) - Standard variant ≥0.4 bar or with flush diaphragm variant: stainless steel 1.4571 (316Ti)
Female cable plug/male fixed plug	PBT/PET GF30

Wetted parts

Process connection	- Standard variant <0.4 bar: stainless steel 1.4571 (316Ti) - Standard variant ≥0.4 bar: - stainless steel 1.4404 (316L) (for ≤ 10 bar (150 PSI)) - stainless steel 1.4534 (13-8 PH) (for > 10 bar (150 PSI))
Measuring element	- Standard flush diaphragm variant: stainless steel 1.4571 (316Ti), FKM seal - Hygienic flush diaphragm variant: stainless steel 1.4404 (316L), EPDM seal - Standard variant <0.4 bar: stainless steel 1.4571 (316Ti) - Standard variant ≥0.4 bar: - stainless steel 1.4404 (316L) (for ≤ 10 bar (150 PSI)) - stainless steel 1.4534 (13-8 PH) (for > 10 bar (150 PSI)) - Standard flush diaphragm variant: stainless steel 1.4571 (316Ti), FKM seal - Hygienic flush diaphragm variant: stainless steel 1.4404 (316L), EPDM seal
Seal	- Standard flush diaphragm variant: FKM - Hygienic flush diaphragm variant: EPDM
Internal transmitting liquid	Synthetic Oil (for standard variants with pressure range < 10 bar (150 PSI) and for all flush diaphragm units)
Compatibility	Any pipe with sensor connection - for standard variant: G ½" A according to DIN 16288 - for flush diaphragm variant: - G 1" B with O-ring (range up to 1.6 bar) - G ½" B with O-ring (range > 1.6 bar) - G 1" B hygienic variant (all ranges)
Dimensions	Detailed information can be found in chapter “4. Dimensions” on page 7.
Measured quantity	Relative pressure
Measuring range	Pressure reference = relative pressure [atmospheric] 0...0.1; 0.16; 0.25; 0.4; 0.6; 1.0; 1.6; 2.5; 4.0; 6.0; 10.0; 16.0 or 25.0 bar 0...10; 15; 25; 60; 100; 150; 250; 400 PSI Detailed information can be found in chapter “7.3. Ordering chart” on page 11.
Product accessory	
Welding socket for pressure transmitter	- Standard flush diaphragm variant: G ½" B or G 1" B - Hygienic flush diaphragm variant: G 1" B (hygienic) Detailed information can be found in chapter “5. Product accessories” on page 10.

Performance data

Compensated ambient temperature range (T_{amb}) 0...+80 °C (+32...+176 °F)

Temperature coefficient (Tc)

Average Tc of zero

In compensated T° range

- Standard variant <0.4 bar: $\leq \pm 0.4\%$ of measuring span/10K
- Standard variant ≥ 0.4 bar: $\leq \pm 0.2\%$ of measuring span/10K
- Flush diaphragm variant (standard + hygienic):
 - $\leq \pm 0.2\%$ of measuring span/10K (measuring range >0.25 bar)
 - $< \pm 0.4\%$ of measuring span/10K (measuring range ≤ 0.25 bar)

Average Tc of measuring span

- Standard variant <0.4 bar: $\leq \pm 0.2\%$ of measuring span/10K
- Standard variant ≥ 0.4 bar: $\leq \pm 0.2\%$ of measuring span/10K
- Flush diaphragm variant (standard + hygienic): $\leq \pm 0.2\%$ of measuring span/10K

Adjustability: Zero / span

$\pm 5\%$

Measurement deviation

- $\leq 0.5\%$ of measuring span (2-point calibration)¹⁾
- $\leq 0.25\%$ of measuring span (Best Fit Straight Line, BFSL)¹⁾

Hysteresis

$\leq 0.1\%$ of measuring span

Repeatability

$\leq 0.1\%$ of measuring span

Response time

- Standard variant <0.4 bar: ≤ 1 ms
- Standard variant ≥ 0.4 bar: ≤ 3 ms
- Flush diaphragm variant (standard + hygienic): ≤ 2 ms

Stability

Over 1 year

- Standard variant <0.4 bar: $\leq \pm 0.2\%$ of measuring span (at reference conditions)
- Standard variant ≥ 0.4 bar:
 - $\leq \pm 0.1\%$ of measuring span
 - $\leq \pm 0.2\%$ of measuring span (with special measuring ranges and measuring ranges <1 bar (15 psi))
- Flush diaphragm variant (standard + hygienic): $\leq \pm 0.2\%$ of measuring span (at reference conditions)

Electrical data

Operating voltage [U]

- Standard variant <0.4 bar: 10...30 V DC
- Standard variant ≥ 0.4 bar: 8...36 V DC
- Flush diaphragm variant (standard + hygienic): 10...30 V DC
- Filtered and regulated
- Connection to main supply: permanent (through external SELV (Safety Extra Low Voltage) and LPS (Limited Power Source) power supply)

Power source (not supplied)

Limited power source according to UL/EN 62368-1 standards or limited energy circuit according to UL/EN 61010-1 paragraph 9.4

DC reverse polarity protection

Yes

Overvoltage protection

Yes

Short circuit protection

Yes

Load

- Standard variant <0.4 bar: $\leq (U [V] - 10 [V]) / 0.02 [A]$ (in Ω)
- Standard variant ≥ 0.4 bar: $\leq (U [V] - 7.5 [V]) / 0.023 [A]$ (in Ω)
- Flush diaphragm variant (standard + hygienic): $\leq (U [V] - 10 [V]) / 0.02 [A]$ (in Ω)

Output

Standard 4...20 mA, 2 wires

Medium data

Fluid temperature

- Standard variant: -30...+100 °C (-22...+212 °F)
- Standard flush diaphragm variant: -30...+100 °C (-22...+212 °F)
- Hygienic flush diaphragm variant: -20...+150 °C (-4...+302 °F)

Process/Pipe connection & communication

Process connection	• Standard variant – G ½" B (according to EN837) – NPT ½" B (according to ANSI/ASME B1.20.1) • Flush diaphragm variant – G 1" B standard with O-ring (range up to 1.6 bar) – G ½" B standard with O-ring (range up to > 1.6 bar) – G 1" B hygienic variant (all ranges)
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Electrical connection	4-pin cable plug according to EN 175301-803 form A
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Approvals and conformities

Directives

CE directive	Further information on the CE Directive can be found in chapter "2.2. Standards" on page 6.
Pressure equipment directive	Complying with article 4, paragraph 1 of 2014/68/EU directive Further information on the pressure equipment directive can be found in chapter "2.3. Pressure Equipment Directive (PED)" on page 6.

Environment and installation

Ambient temperature	• Operation: – Standard variant < 0.4 bar: -20...+80 °C (-4...+176 °F) – Standard variant ≥ 0.4 bar: -30...+100 °C (-4...+212 °F) – Flush diaphragm variant (standard + hygienic): -20...+80 °C (-4...+176 °F) • Storage: – Standard variant < 0.4 bar: -40...+100 °C (-40...+212 °F) – Standard variant ≥ 0.4 bar: -40...+70 °C (-40...+158 °F) – Flush diaphragm variant (standard + hygienic): -40...+100 °C (-4...+212 °F)
Application range	Indoors and outdoors Protect the device against electromagnetic interference, ultraviolet rays and, when installed outdoors, against the effects of climatic conditions.
Degree of protection according to IEC/EN 60529	IP65 with device wired and with cable plug mounted and tightened

1.) Calibrated in vertical mounting position with pressure connection at bottom

2. Approvals and conformities

2.1. Conformity

In accordance with the Declaration of Conformity, the product is compliant with the EU Directives.

2.2. Standards

The applied standards which are used to demonstrate compliance with the EU Directives are listed in the EU-Type Examination Certificate and/or the EU Declaration of Conformity.

2.3. Pressure Equipment Directive (PED)

The device conforms to article 4, paragraph 1 of the Pressure Equipment Directive (PED) 2014/68/EU under the following conditions:

Device used on a pipe

Note:

- The data in the table is independent of the chemical compatibility of the material and the fluid.
- PS = maximum admissible pressure (in bar), DN = nominal diameter of the pipe

Type of fluid	Conditions
Fluid group 1, article 4, paragraph 1.c.i	$DN \leq 25$
Fluid group 2, article 4, paragraph 1.c.i	$DN \leq 32$ or $PS \cdot DN \leq 1000$
Fluid group 1, article 4, paragraph 1.c.ii	$DN \leq 25$ or $PS \cdot DN \leq 2000$
Fluid group 2, article 4, paragraph 1.c.ii	$DN \leq 200$ or $PS \leq 10$ or $PS \cdot DN \leq 5000$

Device used on a vessel

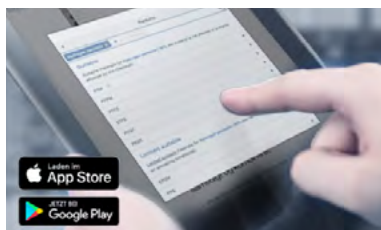
Note:

- The data in the table is independent of the chemical compatibility of the material and the fluid.
- PS = maximum admissible pressure (in bar), V = vessel volume

Type of fluid	Conditions
Fluid group 1, article 4, paragraph 1.a.i	$V > 1 \text{ L}$ and $PS \cdot V \leq 25 \text{ bar} \cdot \text{L}$ or $PS \leq 200 \text{ bar}$
Fluid group 2, article 4, paragraph 1.a.i	$V > 1 \text{ L}$ and $PS \cdot V \leq 50 \text{ bar} \cdot \text{L}$ or $PS \leq 1000 \text{ bar}$
Fluid group 1, article 4, paragraph 1.a.ii	$V > 1 \text{ L}$ and $PS \cdot V \leq 200 \text{ bar} \cdot \text{L}$ or $PS \leq 500 \text{ bar}$
Fluid group 2, article 4, paragraph 1.a.ii	$PS > 10 \text{ bar}$ and $PS \cdot V \leq 10000 \text{ bar} \cdot \text{L}$ or $PS \leq 1000 \text{ bar}$

3. Materials

3.1. Bürkert resistApp



Bürkert resistApp – Chemical resistance chart

You want to ensure the reliability and durability of the materials in your individual application case? Verify your combination of media and materials on our website or in our resistApp.

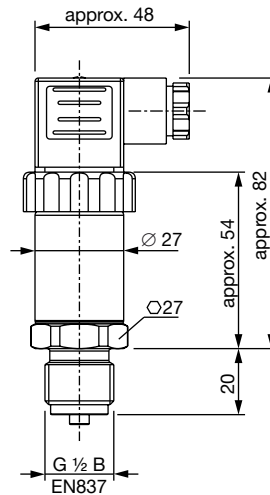
[Start chemical resistance check](#)

4. Dimensions

4.1. Standard variant <0.4 bar with process connection G 1/2" B

Note:

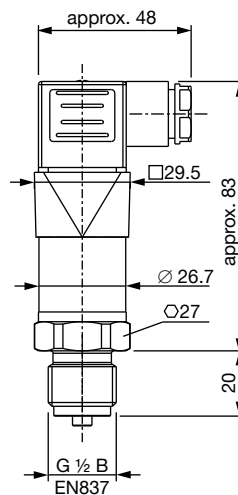
Dimensions in mm, unless otherwise stated



4.2. Standard variant ≥ 0.4 bar with process connection G 1/2" B

Note:

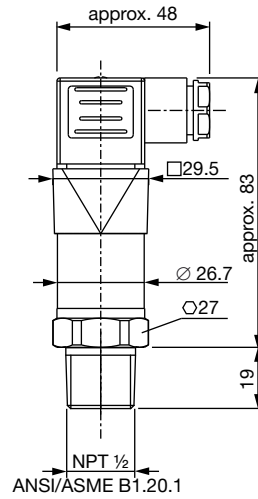
Dimensions in mm, unless otherwise stated



4.3. Standard variant ≥ 0.4 bar with process connection NPT $\frac{1}{2}$ " B

Note:

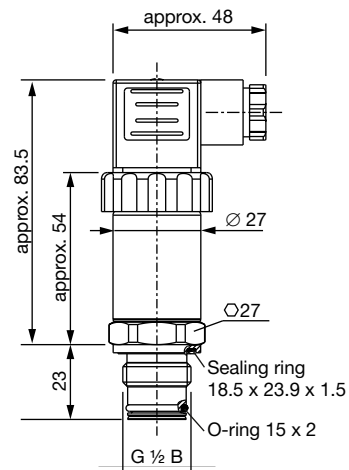
Dimensions in mm, unless otherwise stated



4.4. Standard flush diaphragm variant with process connection G $\frac{1}{2}$ " B

Note:

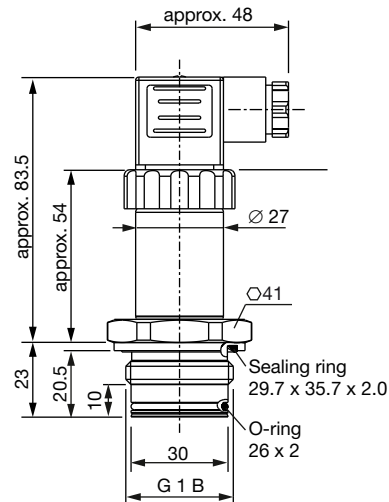
Dimensions in mm, unless otherwise stated



4.5. Standard flush diaphragm variant with process connection G 1" B

Note:

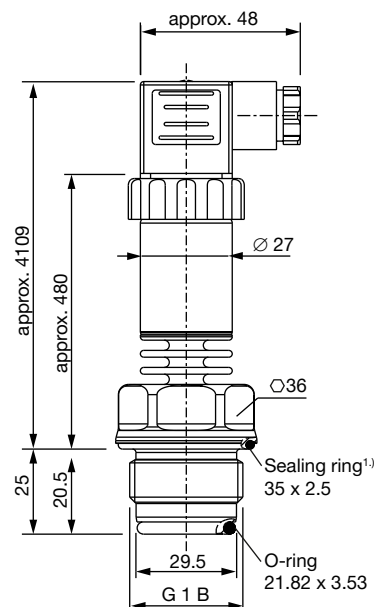
Dimensions in mm, unless otherwise stated



4.6. Hygienic flush diaphragm variant with process connection G 1" B

Note:

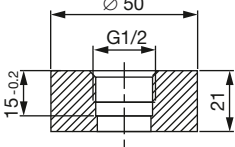
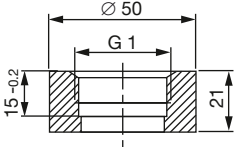
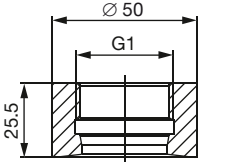
Dimensions in mm, unless otherwise stated



1.) Sealing ring 29.7 x 35.7 x 2.0 (before year 2019)

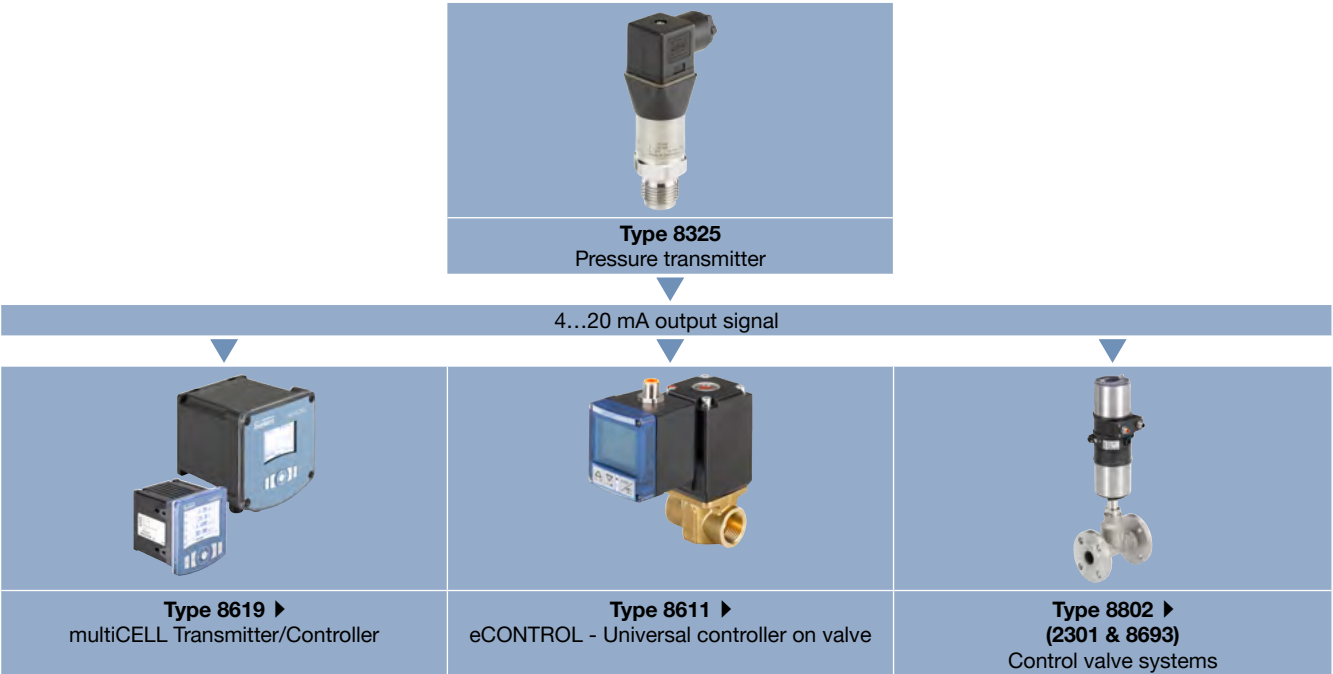
5. Product accessories

Pressure transmitter with flush diaphragm can be installed via a process adapter with welding connection (e.g. for welding to tanks). Measuring instrument and process adapter can be easily fastened or loosened with a wrench.

Accessory	Description
	Adapter with welding connection for pressure transmitter with flush diaphragm: Standard variant with process connection G 1/2" B Material: stainless steel 1.4435 (316L); UNS S31603 Surface roughness of wetted parts Ra <0.4 µm Nominal pressure PN 40
	Adapter with welding connection for pressure transmitter with flush diaphragm: Standard variant with process connection G 1" B Material: stainless steel 1.4435 (316L); UNS S31603 Surface roughness of wetted parts Ra <0.4 µm Nominal pressure PN 40
	Adapter with welding connection for pressure transmitter with flush diaphragm: Hygienic variant with process connection G 1" B Material: stainless steel 1.4435 (316L); UNS S31603 Surface roughness of wetted parts Ra <0.4 µm Nominal pressure PN 40

6. Networking and combination with other Bürkert products

Example:



7. Ordering information

7.1. Bürkert eShop



Bürkert eShop – Easy ordering and quick delivery

You want to find your desired Bürkert product or spare part quickly and order directly? Our online shop is available for you 24/7. Sign up and enjoy all the benefits.

[Order online now](#)

7.2. Bürkert product filter



Bürkert product filter – Get quickly to the right product

You want to select products comfortably based on your technical requirements? Use the Bürkert product filter and find suitable articles for your application quickly and easily.

[Try out our product filter](#)

7.3. Ordering chart

Standard variant with process connection G ½" B

Pressure range [bar]	Max. pressure [bar]	Operating voltage [V DC]	Output [mA]	Article no.
0...0.10	1	10...30	4...20	569494
0...0.16	1.5	10...30	4...20	569495
0...0.25	2	10...30	4...20	570141
0...0.40	1.2	8...36	4...20	569090
0...0.60	1.8	8...36	4...20	569091
0...1.00	3	8...36	4...20	569092
0...1.60	4.8	8...36	4...20	569093
0...2.50	7.5	8...36	4...20	569094
0...4.00	12	8...36	4...20	569095
0...6.00	18	8...36	4...20	569096
0...10.0	20	8...36	4...20	569097
0...16.0	32	8...36	4...20	569098
0...25.0	50	8...36	4...20	569099

Standard variant with process connection NPT ½" B

Pressure range [PSI]	Max. pressure [PSI]	Operating voltage [V DC]	Output [mA]	Article no.
0...10	30	8...36	4...20	569100
0...15	45	8...36	4...20	569101
0...25	45	8...36	4...20	569102
0...60	180	8...36	4...20	569103
0...100	300	8...36	4...20	569104
0...150	300	8...36	4...20	569176
0...250	500	8...36	4...20	569177
0...400	800	8...36	4...20	569178

Flush diaphragm variant (standard or hygienic) with process connection G ½" B or G 1" B

Pressure range [bar]	Max. pressure [bar]	Operating voltage [V DC]	Output [mA]	Article no.		
				Standard G ½" B	Standard G 1" B	Hygienic G 1" B
0...0.10	1	10...30	4...20	–	569485 	569478 
0...0.16	1.5	10...30	4...20	–	569486 	–
0...0.25	2	10...30	4...20	–	–	–
0...0.40	2	10...30	4...20	–	569487 	569479 
0...0.60	4	10...30	4...20	–	–	569480 
0...1.00	5	10...30	4...20	–	569488 	569481 
0...1.60	10	10...30	4...20	–	–	569482 
0...2.50	10	10...30	4...20	569489 	–	569483 
0...4.00	17	10...30	4...20	–	–	–
0...6.00	35	10...30	4...20	569490 	–	–
0...10.0	35	10...30	4...20	569491 	–	569484 
0...16.0	80	10...30	4...20	569492 	–	–
0...25.0	50	10...30	4...20	569493 	–	–

Further variants on request

 Process connection • EN 837 G ¼" B • DIN 3852-E G ½" A or G ¼" A • ASME NPT ½", NPT ¼", etc. ^{1.)}	 Pressure • Relative pressure: up to 1000 bar or 10000 PSI • Absolute pressure: up to 40 bar or 500 PSI
 Electrical connection M12 connector, EN 175301-803 form C, cable connection, etc. ^{1.)}	 Additional • Output signal 0...10 V DC, 0...5 V DC, etc. ^{1.)} • Measurement deviation at 0.125 % BFSL (Best Fit Straight Line)

1.) For other process, electrical connections or other output signal contact your Bürkert sales office.

7.4. Ordering chart accessories
Weld-on socket
Note:

The following accessories are intended for flush diaphragm variant (standard or hygienic) with process connection G ½" B or G 1" B.

Description	Article no.
Adapter with welding connection for flush diaphragm variant (standard) with process connection G ½"	443295 
Adapter with welding connection for flush diaphragm variant (standard) with process connection G 1"	444137 
Adapter with welding connection for flush diaphragm variant (hygienic) with process connection G 1"	443296 

Seals
Note:

The following accessories are intended for flush diaphragm variant (hygienic) with process connection G 1" B.

Description	Article no.
O-ring made of EPDM, 21.82 x 3.53	562769 
Sealing ring made of EPDM ^{1.)2.)} , 29.7 x 35.7 x 2.0	566539 
Sealing ring made of EPDM ^{2.)3.)} , 35 x 2.5	573044 

1.) For devices delivered before year 2019

2.) For devices delivered in the year 2019, contact your Bürkert sales office or the E&C department in France in Triembach-au-Val 67220, to determine the appropriate seal dimension

3.) For devices delivered after year 2019