DATA SHEET

Type 8325

bürkert
FLUID CONTROL SYSTEMS







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-channel and 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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Table of contents

1. General Technical Data 3

2. Approvals 5

2.1. Pressure Equipment Directive....5
Device used on a pipe....5
Device used on a vessel....5

3. Dimensions 5

3.1. Standard version <0.4 bar with process connection G ½" B....5
3.2. Standard version ≥0.4 bar with process connection G ½" B....6
3.3. Standard version ≥0.4 bar with process connection NPT ½" B....6
3.4. Standard flush diaphragm version with process connection G ½" B....7
3.5. Standard flush diaphragm version with process connection G 1" B....7
3.6. Hygienic flush diaphragm version with process connection G 1" B....8

4. Product accessories 8

5. Networking and combination with other Bürkert products 9

6. Ordering information 9

6.1. Bürkert eShop – Easy ordering and quick delivery....9
6.2. Bürkert product filter....9
6.3. Ordering chart....10
6.4. Ordering chart accessories....11
Accessories for pressure transmitter with flush diaphragm....11

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

1. General Technical Data

Product properties	
Material	
Non wetted parts	
Housing of the standard version < 0.4 bar	Stainless steel 1.4301 (304)
Housing of the standard version ≥ 0.4 bar or with flush diaphragm version	Stainless steel 1.4571 (316Ti)
Wetted parts	
Standard version < 0.4 bar	Stainless steel 1.4571 (316Ti)
Standard version ≥ 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 version	Stainless steel 1.4571 (316Ti), FKM seal
Hygienic flush diaphragm version	Stainless steel 1.4404 (316L), EPDM seal
Dimensions	Detailed information can be found in chapter "3. Dimensions" on page 5.
Internal transmitting liquid	Synthetic Oil (for Standard version with pressure range < 10 bar (150 PSI) and for all flush diaphragm units)
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
Compensated T° range	0…+80 °C (+32…+176 °F)
Product accessories	
Welding socket for pressure transmitter	• Standard flush diaphragm version: G ½" B or G 1" B • Hygienic flush diaphragm version: G 1" B (hygienic) Detailed information can be found in chapter "4. Product accessories" on page 8.
Performance data	
Temperature coefficient (Tc)	In compensated T° range
Average Tc of zero	
Standard version < 0.4 bar	≤ ± 0.4 % of measuring span / 10K
Standard version ≥ 0.4 bar	≤ ± 0.2 % of measuring span / 10K
Flush diaphragm version (standard + hygienic)	≤ ± 0.2 % of measuring span / 10K (measuring range > 0.25 bar); < ± 0.4 % of measuring span / 10K (measuring range ≤ 0.25 bar)
Average Tc of Span	
Standard version < 0.4 bar	≤ ± 0.2 % of measuring span / 10K
Standard version ≥ 0.4 bar	≤ ± 0.2 % of measuring span / 10K
Flush diaphragm version (standard + hygienic)	≤ ± 0.2 % of measuring span / 10K
Adjustability: Zero / span	± 5 %
Response time	
Standard version < 0.4 bar	≤ 1 ms
Standard version ≥ 0.4 bar	≤ 3 ms
Flush diaphragm version (standard + hygienic)	≤ 2 ms
Measurement deviation	≤ 0.5 % of measuring span (2-point calibration)[1.)] ≤ 0.25 % of measuring span (Best Fit Straight Line, BFSL)[1.)]
Hysteresis	≤ 0.1 % of measuring span
Repeatability	≤ 0.1 % of measuring span
1-year stability	
Standard version < 0.4 bar	≤ ± 0.2 % of measuring span (at reference conditions)
Standard version ≥ 0.4 bar	• ≤ ± 0.1 % of measuring span • ≤ ± 0.2 % of measuring span (with special measuring ranges and measuring ranges < 1 bar (15 psi))
Flush diaphragm version (standard + hygienic)	≤ ± 0.2 % of measuring span (at reference conditions)

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

Electrical data	
Operating voltage [Vs]	Filtered and regulated connection to main supply: permanent (through external SELV (Safety Extra Low Voltage) and LPS (Limited Power Source) power supply)
Standard version < 0.4 bar	10…30 V DC
Standard version ≥ 0.4 bar	8…36 V DC
Flush diaphragm version (standard + hygienic)	10…30 V DC
Reversed polarity of DC	Yes
Overvoltage protection	Yes
Short circuit protection	Yes
Power Source (not supplied)	Limited power source according to UL/EN 60950-1 standards or limited energy circuit according to UL/EN 61010-1 §9.4
Output signal	Standard 4…20 mA, 2 wires
Load in Ω	
Standard version < 0.4 bar	≤ (Vs [V] - 10 [V]) / 0.02 [A]
Standard version ≥ 0.4 bar	≤ (Vs [V] - 7.5 [V]) / 0.023 [A]
Flush diaphragm version (standard + hygienic)	≤ (Vs [V] - 10 [V]) / 0.02 [A]
Media data	
Fluid temperature	
Standard version	-30…+100 °C (-22…+212 °F)
Standard flush diaphragm version	-30…+100 °C (-22…+212 °F)
Hygienic flush diaphragm version	-20…+150 °C (-4…+302 °F)
Process/Port connection & communication	
Process connection	
Standard version	• G ½" B (according to EN837) • NPT ½" B (according to ANSI/ASME B1.20.1)
Flush diaphragm version	• 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 version (all ranges)
Electrical connection	4 pin cable plug according to EN 175301-803 form A
Approvals and certificates	
Standards	
Protection class according to IEC/EN 60529	IP65 with device wired and with cable plug mounted and tightened
Directives	
CE directives	The applied standards, which verify conformity with the EU Directives, can be found on the EU Type Examination Certificate and/or the EU Declaration of conformity (if applicable)
Pressure equipment directives	Complying with Article 4, Paragraph 1 of 2014/68/EU directive Detailed information on the pressure equipment directive can be found in chapter "2.1. Pressure Equipment Directive" on page 5.
Environment and installation	
Ambient temperature	
Operation	
Standard version < 0.4 bar	-20…+80 °C (-4…+176 °F)
Standard version ≥ 0.4 bar	-30…+100 °C (-4…+212 °F)
Flush diaphragm version (standard + hygienic)	-20…+80 °C (-4…+176 °F)
Storage	
Standard version < 0.4 bar	-40…+100 °C (-40…+212 °F)
Standard version ≥ 0.4 bar	-40…+70 °C (-40…+158 °F)
Flush diaphragm version (standard + hygienic)	-40…+100 °C (-4…+212 °F)

1.) calibrated in vertical mounting position with pressure connection bottom

2. Approvals

2.1. Pressure Equipment Directive

The device conforms to Article 4, Paragraph 1 of the Pressure Equipment Directive 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, DN = nominal diameter of the pipe

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.c.i	DN ≤ 25
Fluid group 2, Article 4, Paragraph 1.c.i	DN ≤ 32 or PS*DN ≤ 1000
Fluid group 1, Article 4, Paragraph 1.c.ii	DN ≤ 25 or PS*DN ≤ 2000
Fluid group 2, Article 4, Paragraph 1.c.ii	DN ≤ 200 or PS ≤ 10 or PS*DN ≤ 5000

Device used on a vessel

Note:

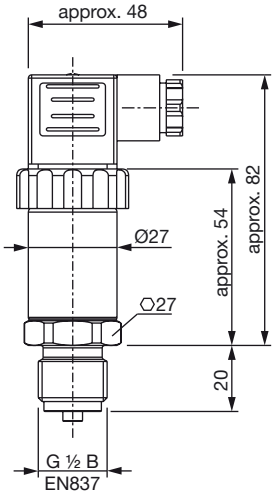
- The data in the table is independent of the chemical compatibility of the material and the fluid.
- PS = maximum admissible pressure, V = vessel volume

Type of fluid	Conditions
Fluid group 1, Article 4, Paragraph 1.a.i	V > 1 L and PS*V ≤ 25 bar.L or PS ≤ 200 bar
Fluid group 2, Article 4, Paragraph 1.a.i	V > 1 L and PS*V ≤ 50 bar.L or PS ≤ 1000 bar
Fluid group 1, Article 4, Paragraph 1.a.ii	V > 1 L and PS*V ≤ 200 bar.L or PS ≤ 500 bar
Fluid group 2, Article 4, Paragraph 1.a.ii	PS > 10 bar and PS*V ≤ 10000 bar.L or PS ≤ 1000 bar

3. Dimensions

3.1. Standard version <0.4 bar with process connection G ½" B

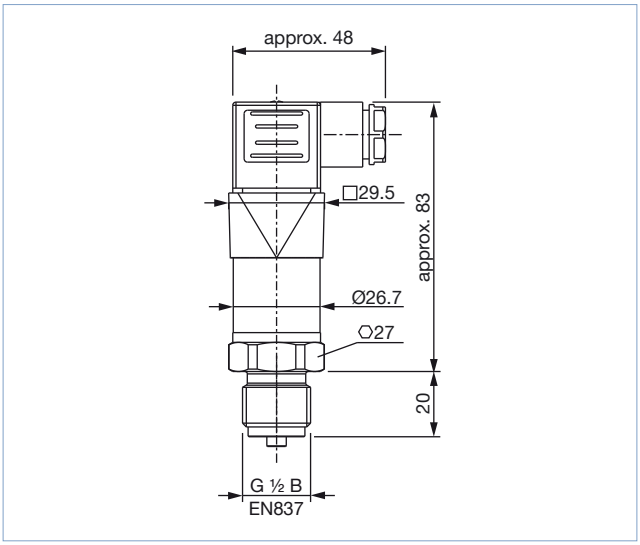
Note:
Dimensions in mm



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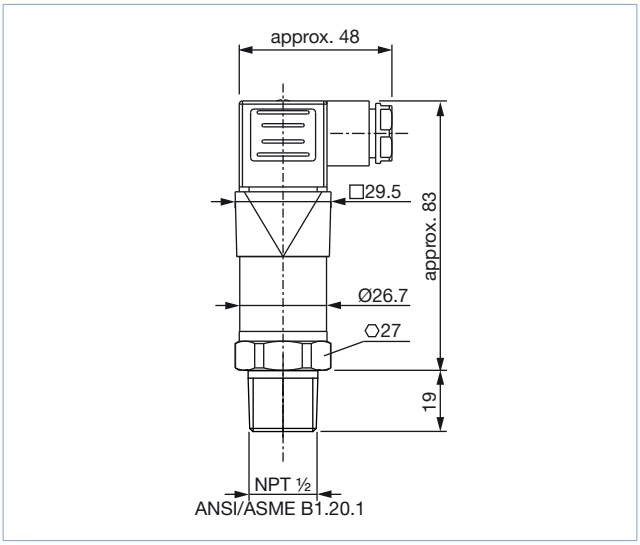
3.2. Standard version ≥0.4 bar with process connection G ½" B

Note:
Dimensions in mm



3.3. Standard version ≥0.4 bar with process connection NPT ½" B

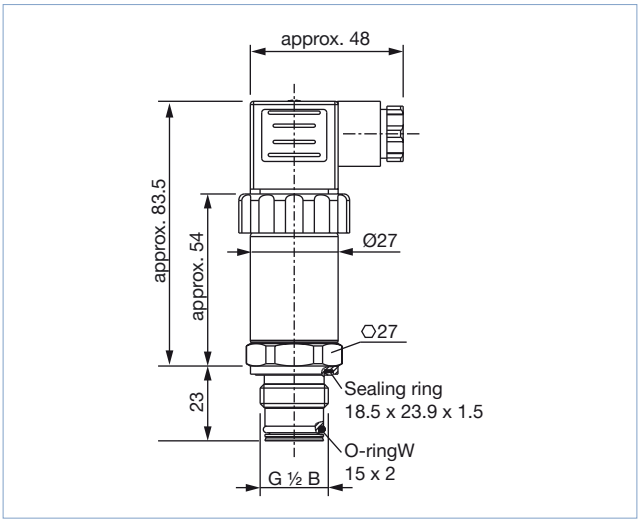
Note:
Dimensions in mm



DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

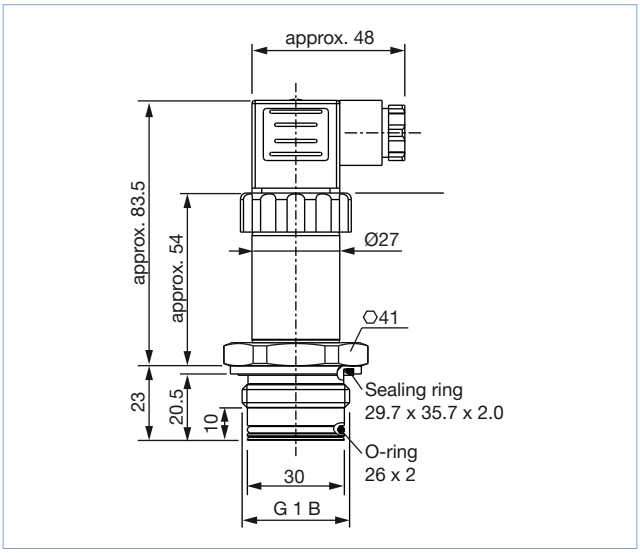
3.4. Standard flush diaphragm version with process connection G ½" B

Note:
Dimensions in mm



3.5. Standard flush diaphragm version with process connection G 1" B

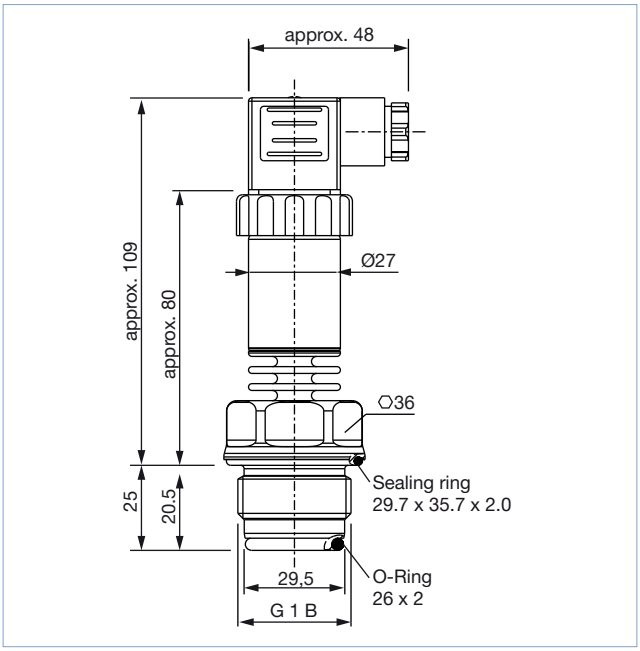
Note:
Dimensions in mm



DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

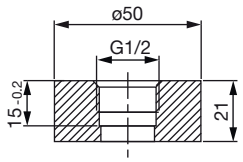
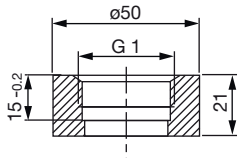
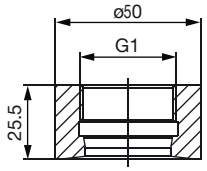
3.6. Hygienic flush diaphragm version with process connection G 1" B

Note:
Dimensions in mm



4. Product accessories

Note:
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
	Welding socket for pressure transmitter with flush diaphragm: Standard version with process connection G ½" B Material: stainless steel 1.4435 (316L); UNS S31603 Surface roughness of wetted parts Ra < 0.4 µm Nominal pressure PN 40
	Welding socket for pressure transmitter with flush diaphragm: Standard version 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
	Welding socket for pressure transmitter with flush diaphragm: Hygienic version 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

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

5. Networking and combination with other Bürkert products

Example:



Type 8325
Pressure transmitter

4…20 mA output signal



Type 8619 ▶
multiCELL Transmitter/ Controller



Type 8611 ▶
eCONTROL - Universal controller on valve



Type 8802 ▶
(2301 & 8693)
Control valve systems

6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast 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

6.2. 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

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

6.3. Ordering chart

Note:
The following values apply exclusively to the standard version with process connection G ½" B

Pressure range [bar]	Pressure max [bar]	Power supply [V DC]	Output signal [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

Note:
The following values apply exclusively to the standard version with process connection NPT ½" B

Pressure range [PSI]	Pressure max [PSI]	Power supply [V DC]	Output signal [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

Note:
The following values apply exclusively to the flush diaphragm version (standard or hygienic).

Pressure range	Pressure max	Power supply	Output signal	Article no.		
[bar]	[bar]	[V DC]	[mA]	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	-	-

DTS 1000356452 EN Version: D Status: RL (released | freigegeben | validé) printed: 09.06.2020

Further versions on request			
	Process connection • EN837 G ¼" B; • DIN 3852-E G ½" A or G ¼" A • ASME NPT ½", NPT ¼"…		**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…		**Additional** • Output signal 0…10 V DC, 0…5 V DC,… • Measurement deviation at 0.125 % BFSL (Best Fit Straight Line)

6.4. Ordering chart accessories

Accessories for pressure transmitter with flush diaphragm

Description	Article no.
Weld-on socket for standard flush diaphragm version with process connection G ½"	443295
Weld-on socket for standard flush diaphragm version with process connection G 1"	444137
Weld-on socket for hygienic flush diaphragm version with process connection G 1"	443296

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www.burkert.com



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