Differential pressure transmitter

0 to 25 bar



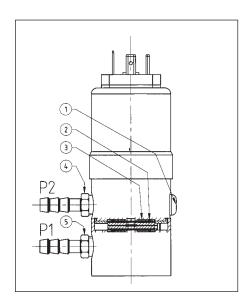




Technical overview

The differential pressure transmitter of type series 692 with proven, unique ceramic technology, features calibrated and amplified sensor signals which are available as standardised voltage or current outputs.

Various application-specific pressure and electrical connections and housing materials suitable for different media can be provided.



Legend to cross-section drawing

- 1 Fixing screw (do not loosen)
- 2 Seals
- 3 Ceramic element
- 4 P2 lower pressure, higher vacuum
- 5 P1 higher pressure, lower vacuum

The distinct advantages

- Very low temperature sensitivity
- High resistance to extreme temperatures
- No mechanical ageing
- No mechanical creepage
- Modular system and choice of materials to suit individual applications

Pressure ranges

Relative pressure, see order code selection table

Overload

see order code selection table

System pressure

(P1 and P2 simultaneously) 25 bar to pressure range 6 bar 50 bar on pressure range 10/16/25 bar

Rupture pressure

1.5 x system pressure

Accuracy (linear signals)

Total of linearity, hysteresis and repeatability

- < +/- 0.5 % fs at 2 x nominal pressure
- < +/- 0.8 % fs at 3 x nominal pressure
- < +/- 1.3 % fs at 5 x nominal pressure

Zero point residual voltage

- < 50 mV at 2 x nominal pressure
- < 75 mV at 3 x nominal pressure
- < 125 mV at 5 x nominal pressure

Materials in contact with the medium

Ceramic/Stainless steel 1.4305, PVDF

Sealing material:

option FPM, EPDM, NBR, MVQ acc. to order code selection table

Temperature influences (linear signals)

Medium and ambient temperature

-15 °C to +80 °C

TC zero point see order code selection table TC sensitivity (% fs/K)

- < +/- 0.015 at 2 x nominal pressure
- < +/- 0.022 at 3 x nominal pressure
- < +/- 0.037 at 5 x nominal pressure

Load cycle

< 50 Hz

Dynamic response

Suitable for static and dynamic measurements. Response time: < 5 ms

Weight

approx. 430 grams

Installation arrangement

Unrestricted

Signal Power supply 0 – 5 V 11 – 33 VDC

24 VAC +/- 15% 3-wire cable

0 – 10 V 18 – 33 VDC

24 VAC +/- 15% 3-wire cable

4 – 20 mA 11 – 33 VDC 2-wire cable

Short circuit-proof and protected against polarity reversal. Each connection against other with max. +/- supply voltage

Load

0 - 5 V > 10 k Ohm 0 - 10 V > 10 k Ohm

4-20 mA $\leq \frac{\text{supply voltage} - 11 \text{ V}}{0.02 \text{ A}} [Ohm]$

Current consumption

At maximum signal output:

0 - 5 V < 5 mA 0 - 10 V < 5 mA 4 - 20 mA < 25 mA

Electrical connections / Protection standard

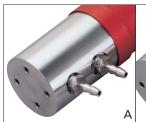
Cable 1.5 meters, IP 65, with cable gland (threaded)

Rount plug connector DIN 41524, 3-pole, IP 65 Connector DIN EN 175301-803-A, IP 65

Calibration

Adjustable versions

(zero point/slope approx. +/- 10%)









Versions

- A Pressure Tube Tip for pipe ∅ 4 mm
- B Screw fitting for pipe Ø 6 mm
- C Screw fitting for pipe Ø 8 mm
- D Screw fitting PVDF for pipe

P + 0.1 mm D + 0.2 mm D + 0.2 mm D + 0.2 mm D + 0.2 mm D + 0.25 mm D + 0.25 mm D + 0.4 mm D + 0.4 mm D + 0.4 mm D + 0.5 mm D + 0.6 mm D + 0.6 mm D + 1 mm D + 2.5 mm D + 4 mm D + 4 mm D + 4 mm D + 4 mm D + 16 mm D + 10 mm D + 110 mm D + 110 mm D + 125 mm A Full scale signal at thes Sealing materials FPI NB	nax. 0.6 bar (nax. 1.2 bar nax. 0.6 bar nax. 1.2 bar nax. 1.2 bar nax. 1.2 bar nax. 1.2 bar nax. 3	22 9.6 bar 9.6 bar 9.6 bar 9.6 bar 9.6 bar 9.6 bar 9.2 bar 9.2 bar 9.3 bar 9.4 bar 9.5 bar 9.6 bar	 TC0 (fs/K) < 0.12 % < 0.06 % < 0.05 % < 0.04 % < 0.05 % < 0.11 % < 0.06 % < 0.12 % < 0.05 % < 0.14 % < 0.04 % < 0.12 % < 0.04 % < 0.04 % < 0.04 % < 0.04 % 			0 0 4 0 4 0 0	0 2 0 3 1 1					
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Outputs and power supply 0 -	- 5 V 11.0	- 33.0 VDC/24 VAC +/- 15%	3-wire cable							0		
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	onnector	DIN EN 175301-803-A	IP 65								1	\neg
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	ithout connections	1/8-27 NPT / PVDF G 1/8	only adjusta									0
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	essure-tube tip	CuZn vni	for tube	Ø 6 mm			<u> </u>					2
	essure-tube tip	PVDF	for tube	Ø 6 mm			<u> </u>					3
	crew fitting	CuZn vni	for pipe	Ø 6 mm								4
		Inox 1.4305	for pipe									5
<u>Sc</u> r	rew fitting	CuZn vni	for pipe	Ø 8 mm								6
	rew fitting	Inox 1.4305	for pipe	Ø 8 mm								7
	rew fitting	PVDF	for pipe	Ø 6 mm								8
	rew fitting	PVDF	for pipe	Ø 8 mm								9
	utside thread	7/16-20 UNF (CuZn vni)										Α
Ad	dapter inside	G 1/8 Inox	for pipe	Ø 6 mm								В
	dapter outside	G 1/8 with union nut (CuZn)	for pipe	Ø 6 mm								С
	ainless steel											
	PVDF all ranges up to 6 bar max., overload and system pressure max. 12 bar											\neg
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		l and grease (only seal FPM, no	ot compound-filled)									
	Stainless steel with pressure tip orifice											\dashv
		nly seal FPM, not compound-fi	lled)									
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Accessories	ee or on and grease (o											

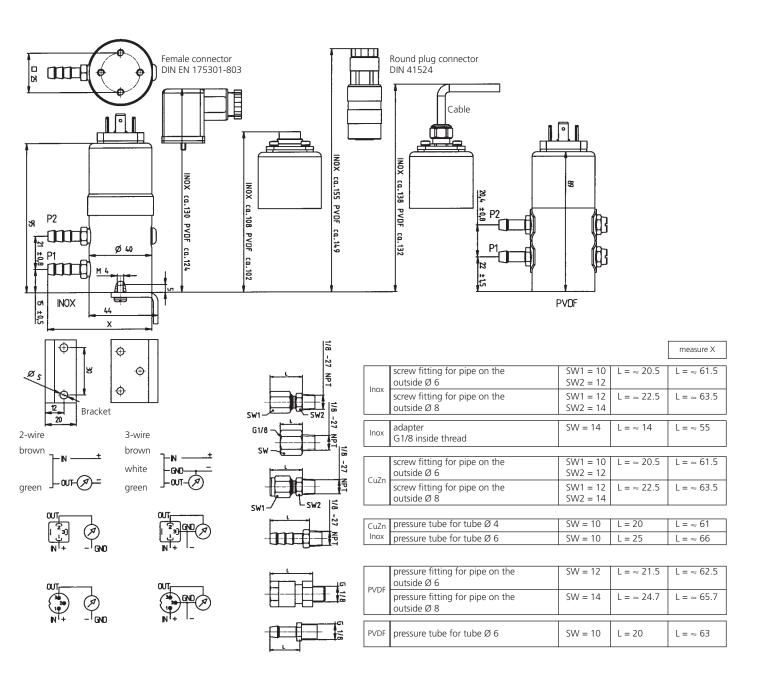
(IP 65 when installed and screwed) (coupling socket)

DIN 41524 (IP 65)

0

Round plug connector Mounting bracket Test certificate

Dimensions in mm Electrical connections



Electromagnetic compatibility: CE conformity (EMC) by application of harmonized standards: Interference stability EN 61000-6-2 and EN 61000-6-3										
Interference stability	Test standard	<u>Effect</u>								
Electrostatic discharge (ESD)	EN 61000-4-2	8 kV air, 4 kV contact	no effect							
High-frequency electromagnetic radiation (HF)	EN 61000-4-3	10 V/m, 80 1000 Mz	no effect							
Conducted HF interference	EN 61000-4-6	10 V, 0.15 80 MHz	no effect							
Fast transients (burst)	EN 61000-4-4	2 kV	no effect							
Surge	EN 61000-4-5	max. tolerable cable length 10 m	no test							
Magnetic fields	EN 61000-4-8	30 A/m, 50 Hz	no effect							
Interference emit	Test standard		<u>Effect</u>							
Conducted interference	EN 55022 (CISPR 22)	0.15 30 MHz	no emission							
Radiation from housing	301000 MHz, 10 m		No emission							

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