DATA SHEET

Industrial pressure transducers for measuring absolute and relative pressure

Description

Technical data

Industrial pressure transducer	
Measuring range	-1...+100 bar
Overrange	See table delivery spectrum over/burst pressure
Residual error Linearity/Hyst.	< ±0.4 % FS
Temperature coefficient	TCO < ±0.015 % FS / K TCG < ±0.010 % FS / K
Application temp. range	-20...+80 °C
Sensor material	Ceramic measuring cell
Housing material	Stainless steel
Seal	Viton
Pressure connection	G¼“ / G½” external thread
Connection	2 m cable
Protection class	IP65
CE conformity	2014/30/EU
EMC emission standard	EN 61000-6-3:2011
EMC immunity	EN 61000-6-1:2007
Version 4...20 mA	
Output signal	4…20 mA, two wires
Min. load	Ra[Ω]=(Uv[V]-10V) / 0.02 A
Version 0...10 V	
Output signal	0...10 V, three wires
Operation voltage	12...36 V DC / 5 mA
Version I²C	
Output signal	I²C-Bus
Operation voltage	3,0...5,3 V DC / 5 mA

Performance features

- Variants from vacuum to 100 bar FS
- For measuring absolute and relative pressure
- Standard output signal 0...10 V, 4...20 mA or I²C
- High-quality industrial version (stainless steel)
- Robust, media-resistant version
- Temperature compensated
- Easy to install
- Water and oil resistant
- Protection class IP65

Areas of application

- Pneumatics
- Hydraulics
- Industrial applications
- Mechanical and plant engineering
- Automation technology

Properties

The stainless steel pressure sensors transmit the measured value as a calibrated and temperature-compensated standard signal 0...10 V, 4...20 mA or I²C. The portfolio of products covers the pressure range from vacuum to 100 bar full scale (FS) with graduated measuring range variants (see table).
Precise calibration at seven measuring points for three different temperatures ensures excellent precision and a very low residual temperature error.
The sensors are ideal for measuring static and dynamic relative or absolute pressure in liquids and gaseous media. Typical areas of application include pneumatics, hydraulics and industrial applications.
The robust sensor housing, compliant with protection class IP65, is made of stainless steel and has a G¼“ or G½” external thread as the process connection. The electrical connection is made through a 2 m cable. The version with current signal is supplied via the current loop.

The version with I²C output is programmed at the factory with the address 0x78. On request, a customer-specific address can be programmed. Please order the article 0800 3000 „Programming the I²C address ex works“.

Of the 15-bit measured value, 12 bits of resolution are to be used. The three least significant bits can be ignored.

Attention

Please avoid extreme mechanical and inappropriate exposure.

The device/product is not suitable for potential explosive areas and medical-technical applications.

For more information, please visit our website: www.bb-sensors.com

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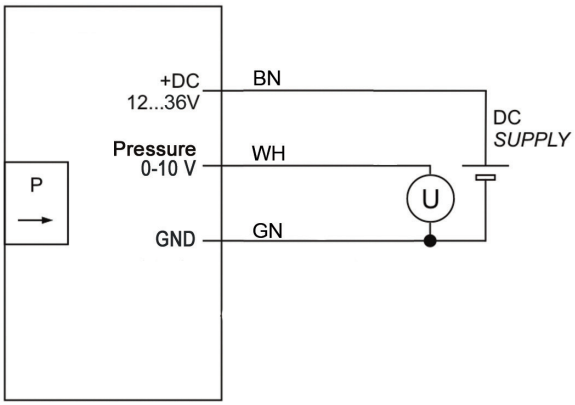
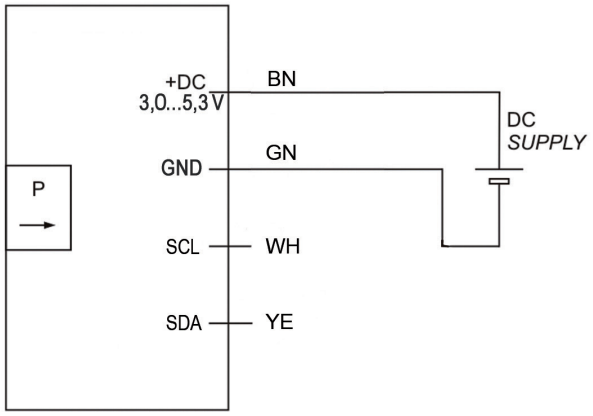
Connection layout

Colour	Voltage output 0...10 V	Current output 4...20 mA	I²C-Bus
BN	Supply: + DC 12...36 V	Supply: + DC 14...24 V	Supply: + DC 3,0...5,3 V
YE	-	-	SDA
GN	Supply: - DC	Pressure: 4...20 mA	Supply: - DC
WH	Pressure: 0...10 V	-	SCL

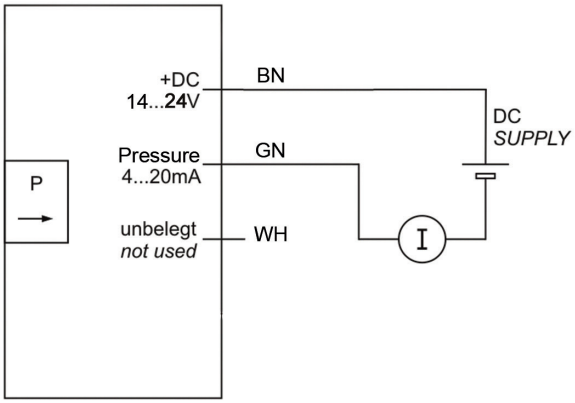
Connection diagramm



Voltage output 0...10 V, DC supply

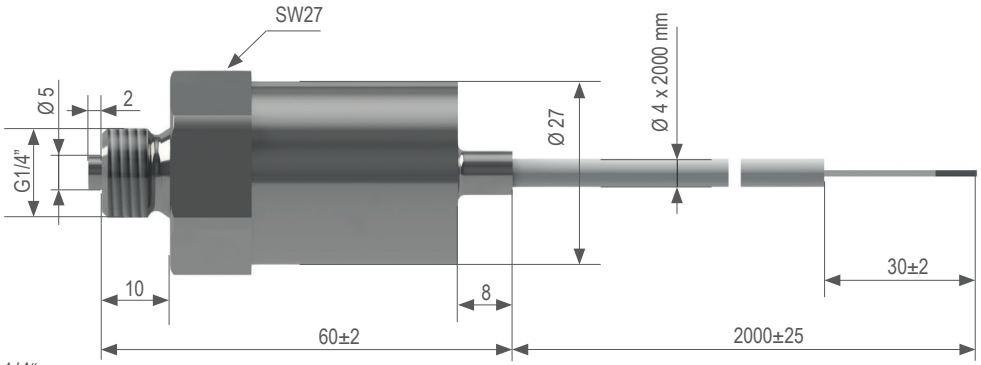


I²C

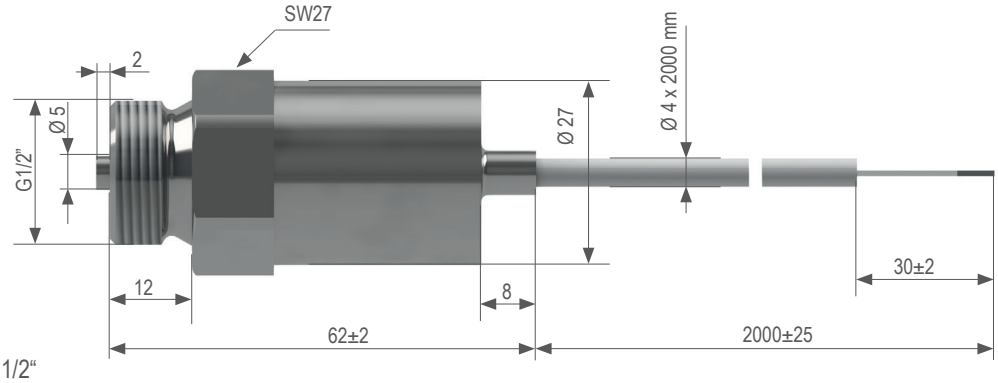


Current output 4...20 mA

Dimensions



G 1/4"



G 1/2"

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Delivery spectrum

Pressure kind	Output	Process connection	Measuring range	Over pressure	Burst pressure	Article number
relativ	0...10 V	G1/4“	-1-1 bar	3,2 bar	5 bar	0550 1192-001
relativ	0...10 V	G1/4“	0-1 bar	3,2 bar	5 bar	0550 1192-002
relativ	0...10 V	G1/4“	0-1,6 bar	3,2 bar	5 bar	0550 1192-003
relativ	0...10 V	G1/4“	0-2,5 bar	10 bar	12 bar	0550 1192-004
relativ	0...10 V	G1/4“	0-4 bar	10 bar	12 bar	0550 1192-005
relativ	0...10 V	G1/4“	0-6 bar	12 bar	18 bar	0550 1192-006
relativ	0...10 V	G1/4“	0-10 bar	20 bar	30 bar	0550 1192-007
relativ	0...10 V	G1/4“	0-16 bar	32 bar	48 bar	0550 1192-008
relativ	0...10 V	G1/4“	0-25 bar	50 bar	75 bar	0550 1192-009
relativ	0...10 V	G1/4“	0-40 bar	80 bar	120 bar	0550 1192-010
relativ	0...10 V	G1/4“	0-60 bar	120 bar	180 bar	0550 1192-011
relativ	0...10 V	G1/4“	0-100 bar	200 bar	300 bar	0550 1192-012
relativ	0...10 V	G1/2“	-1-1 bar	3,2 bar	5 bar	0550 1182-001
relativ	0...10 V	G1/2“	0-1 bar	3,2 bar	5 bar	0550 1182-002
relativ	0...10 V	G1/2“	0-1,6 bar	3,2 bar	5 bar	0550 1182-003
relativ	0...10 V	G1/2“	0-2,5 bar	10 bar	12 bar	0550 1182-004
relativ	0...10 V	G1/2“	0-4 bar	10 bar	12 bar	0550 1182-005
relativ	0...10 V	G1/2“	0-6 bar	12 bar	18 bar	0550 1182-006
relativ	0...10 V	G1/2“	0-10 bar	20 bar	30 bar	0550 1182-007
relativ	0...10 V	G1/2“	0-16 bar	32 bar	48 bar	0550 1182-008
relativ	0...10 V	G1/2“	0-25 bar	50 bar	75 bar	0550 1182-009
relativ	0...10 V	G1/2“	0-40 bar	80 bar	120 bar	0550 1182-010
relativ	0...10 V	G1/2“	0-60 bar	120 bar	180 bar	0550 1182-011
relativ	0...10 V	G1/2“	0-100 bar	200 bar	300 bar	0550 1182-012
relativ	4...20 mA	G1/4“	-1-1 bar	3,2 bar	5 bar	0550 1292-001
relativ	4...20 mA	G1/4“	0-1 bar	3,2 bar	5 bar	0550 1292-002
relativ	4...20 mA	G1/4“	0-1,6 bar	3,2 bar	5 bar	0550 1292-003
relativ	4...20 mA	G1/4“	0-2,5 bar	10 bar	12 bar	0550 1292-004
relativ	4...20 mA	G1/4“	0-4 bar	10 bar	12 bar	0550 1292-005
relativ	4...20 mA	G1/4“	0-6 bar	12 bar	18 bar	0550 1292-006
relativ	4...20 mA	G1/4“	0-10 bar	20 bar	30 bar	0550 1292-007
relativ	4...20 mA	G1/4“	0-16 bar	32 bar	48 bar	0550 1292-008
relativ	4...20 mA	G1/4“	0-25 bar	50 bar	75 bar	0550 1292-009
relativ	4...20 mA	G1/4“	0-40 bar	80 bar	120 bar	0550 1292-010
relativ	4...20 mA	G1/4“	0-60 bar	120 bar	180 bar	0550 1292-011
relativ	4...20 mA	G1/4“	0-100 bar	200 bar	300 bar	0550 1292-012

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Delivery spectrum

Pressure kind	Output	Process connection	Measuring range	Over pressure	Burst pressure	Article number
relativ	4...20 mA	G1/2“	-1-1 bar	3,2 bar	5 bar	0550 1282-001
relativ	4...20 mA	G1/2“	0-1 bar	3,2 bar	5 bar	0550 1282-002
relativ	4...20 mA	G1/2“	0-1,6 bar	3,2 bar	5 bar	0550 1282-003
relativ	4...20 mA	G1/2“	0-2,5 bar	10 bar	12 bar	0550 1282-004
relativ	4...20 mA	G1/2“	0-4 bar	10 bar	12 bar	0550 1282-005
relativ	4...20 mA	G1/2“	0-6 bar	12 bar	18 bar	0550 1282-006
relativ	4...20 mA	G1/2“	0-10 bar	20 bar	30 bar	0550 1282-007
relativ	4...20 mA	G1/2“	0-16 bar	32 bar	48 bar	0550 1282-008
relativ	4...20 mA	G1/2“	0-25 bar	50 bar	75 bar	0550 1282-009
relativ	4...20 mA	G1/2“	0-40 bar	80 bar	120 bar	0550 1282-010
relativ	4...20 mA	G1/2“	0-60 bar	120 bar	180 bar	0550 1282-011
relativ	4...20 mA	G1/2“	0-100 bar	200 bar	300 bar	0550 1282-012
relativ	I²C	G1/4“	-1-1 bar	3,2 bar	5 bar	0550 1392-001
relativ	I²C	G1/4“	0-1 bar	3,2 bar	5 bar	0550 1392-002
relativ	I²C	G1/4“	0-1,6 bar	3,2 bar	5 bar	0550 1392-003
relativ	I²C	G1/4“	0-2,5 bar	10 bar	12 bar	0550 1392-004
relativ	I²C	G1/4“	0-4 bar	10 bar	12 bar	0550 1392-005
relativ	I²C	G1/4“	0-6 bar	12 bar	18 bar	0550 1392-006
relativ	I²C	G1/4“	0-10 bar	20 bar	30 bar	0550 1392-007
relativ	I²C	G1/4“	0-16 bar	32 bar	48 bar	0550 1392-008
relativ	I²C	G1/4“	0-25 bar	50 bar	75 bar	0550 1392-009
relativ	I²C	G1/4“	0-40 bar	80 bar	120 bar	0550 1392-010
relativ	I²C	G1/4“	0-60 bar	120 bar	180 bar	0550 1392-011
relativ	I²C	G1/4“	0-100 bar	200 bar	300 bar	0550 1392-012
relativ	I²C	G1/2“	-1-1 bar	3,2 bar	5 bar	0550 1382-001
relativ	I²C	G1/2“	0-1 bar	3,2 bar	5 bar	0550 1382-002
relativ	I²C	G1/2“	0-1,6 bar	3,2 bar	5 bar	0550 1382-003
relativ	I²C	G1/2“	0-2,5 bar	10 bar	12 bar	0550 1382-004
relativ	I²C	G1/2“	0-4 bar	10 bar	12 bar	0550 1382-005
relativ	I²C	G1/2“	0-6 bar	12 bar	18 bar	0550 1382-006
relativ	I²C	G1/2“	0-10 bar	20 bar	30 bar	0550 1382-007
relativ	I²C	G1/2“	0-16 bar	32 bar	48 bar	0550 1382-008
relativ	I²C	G1/2“	0-25 bar	50 bar	75 bar	0550 1382-009
relativ	I²C	G1/2“	0-40 bar	80 bar	120 bar	0550 1382-010
relativ	I²C	G1/2“	0-60 bar	120 bar	180 bar	0550 1382-011
relativ	I²C	G1/2“	0-100 bar	200 bar	300 bar	0550 1382-012

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Delivery spectrum

Pressure kind	Output	Process connection	Measuring range	Over pressure	Burst pressure	Article number
absolut	0...10 V	G1/4“	0-1 bar	3,2 bar	5 bar	0550 2192-001
absolut	0...10 V	G1/4“	0-2 bar	10 bar	12 bar	0550 2192-002
absolut	0...10 V	G1/4“	0-5 bar	12 bar	18 bar	0550 2192-003
absolut	0...10 V	G1/4“	0-10 bar	20 bar	30 bar	0550 2192-004
absolut	0...10 V	G1/4“	0-20 bar	50 bar	75 bar	0550 2192-005
absolut	0...10 V	G1/4“	0-50 bar	120 bar	180 bar	0550 2192-006
absolut	0...10 V	G1/2“	0-1 bar	3,2 bar	5 bar	0550 2182-001
absolut	0...10 V	G1/2“	0-2 bar	10 bar	12 bar	0550 2182-002
absolut	0...10 V	G1/2“	0-5 bar	12 bar	18 bar	0550 2182-003
absolut	0...10 V	G1/2“	0-10 bar	20 bar	30 bar	0550 2182-004
absolut	0...10 V	G1/2“	0-20 bar	50 bar	75 bar	0550 2182-005
absolut	0...10 V	G1/2“	0-50 bar	120 bar	180 bar	0550 2182-006
absolut	4...20 mA	G1/4“	0-1 bar	3,2 bar	5 bar	0550 2292-001
absolut	4...20 mA	G1/4“	0-2 bar	10 bar	12 bar	0550 2292-002
absolut	4...20 mA	G1/4“	0-5 bar	12 bar	18 bar	0550 2292-003
absolut	4...20 mA	G1/4“	0-10 bar	20 bar	30 bar	0550 2292-004
absolut	4...20 mA	G1/4“	0-20 bar	50 bar	75 bar	0550 2292-005
absolut	4...20 mA	G1/4“	0-50 bar	120 bar	180 bar	0550 2292-006
absolut	4...20 mA	G1/2“	0-1 bar	3,2 bar	5 bar	0550 2282-001
absolut	4...20 mA	G1/2“	0-2 bar	10 bar	12 bar	0550 2282-002
absolut	4...20 mA	G1/2“	0-5 bar	12 bar	18 bar	0550 2282-003
absolut	4...20 mA	G1/2“	0-10 bar	20 bar	30 bar	0550 2282-004
absolut	4...20 mA	G1/2“	0-20 bar	50 bar	75 bar	0550 2282-005
absolut	4...20 mA	G1/2“	0-50 bar	120 bar	180 bar	0550 2282-006
absolut	I²C	G1/4“	0-1 bar	3,2 bar	5 bar	0550 2392-001
absolut	I²C	G1/4“	0-2 bar	10 bar	12 bar	0550 2392-002
absolut	I²C	G1/4“	0-5 bar	12 bar	18 bar	0550 2392-003
absolut	I²C	G1/4“	0-10 bar	20 bar	30 bar	0550 2392-004
absolut	I²C	G1/4“	0-20 bar	50 bar	75 bar	0550 2392-005
absolut	I²C	G1/4“	0-50 bar	120 bar	180 bar	0550 2392-006
absolut	I²C	G1/2“	0-1 bar	3,2 bar	5 bar	0550 2382-001
absolut	I²C	G1/2“	0-2 bar	10 bar	12 bar	0550 2382-002
absolut	I²C	G1/2“	0-5 bar	12 bar	18 bar	0550 2382-003
absolut	I²C	G1/2“	0-10 bar	20 bar	30 bar	0550 2382-004
absolut	I²C	G1/2“	0-20 bar	50 bar	75 bar	0550 2382-005
absolut	I²C	G1/2“	0-50 bar	120 bar	180 bar	0550 2382-006

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