# DATA SHEET

## Industrial pressure transmitter for measuring absolute and relative pressure

Description

### 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

### Technical data

| Industrial pressure transducer | |
|---|---|
| Measuring range | -1...+100 bar |
| Overload | See table delivery spectrum over/burst pressure |
| Residual error Linearity/Hyst. | < ±0.4 % FS |
| Temperature coefficient | TCO < ±0.015 % FS / K<br>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 | 4-pole industrial plug, male, DIN 43650 |
| Protection class | IP65 |
| CE-conformity | 2014/30/EU |
| EMC emission standard | EN 61000-6-3:2011 |
| EMV 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 |

### Features

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 media connection. The electrical connection is an industrial plug ac-cording to DIN 43650. 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“.

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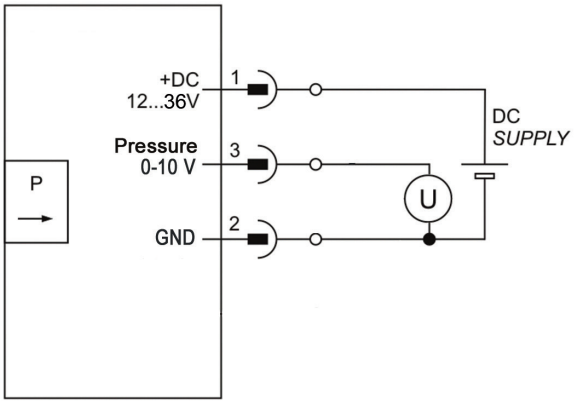
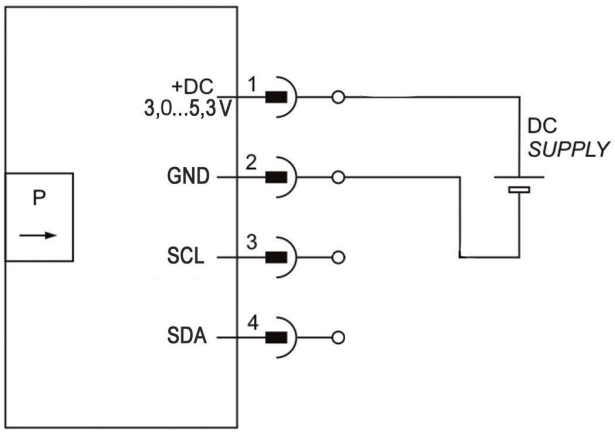
### Connection layout

| Pin | Voltage output 0...10 V | Current output 4...20 mA | I²C-Bus |
|---|---|---|---|
| 1 | Supply: + DC 12...36 V | Supply: + DC 14...24 V | Supply: + DC 3,0...5,3 V |
| 2 | Supply: - DC | Pressure: 4...20 mA | Supply: - DC |
| 3 | Pressure: 0...10 V | - | SCL |
| 4 | - | - | SDA |

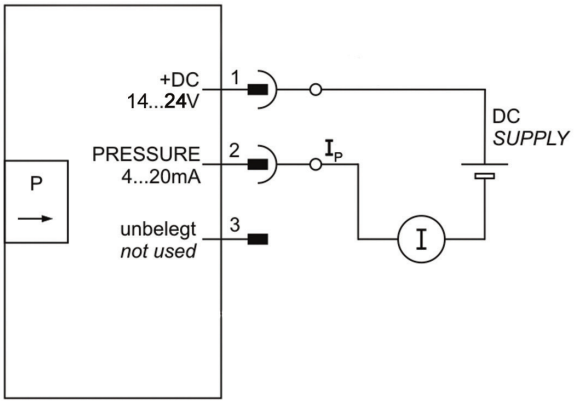

### Connection diagramm




Voltage output 0...10 V, DC supply

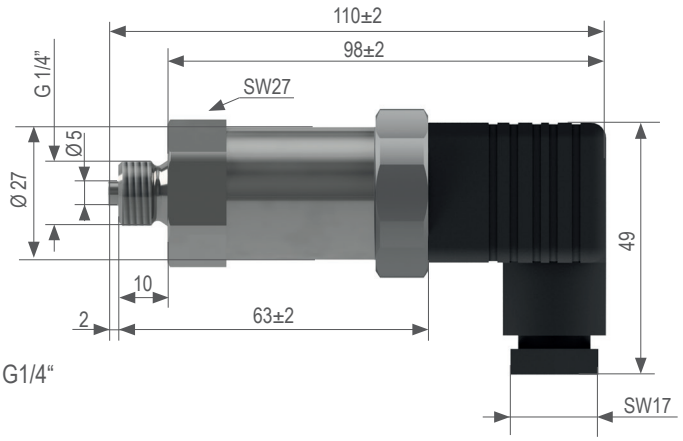



I²C

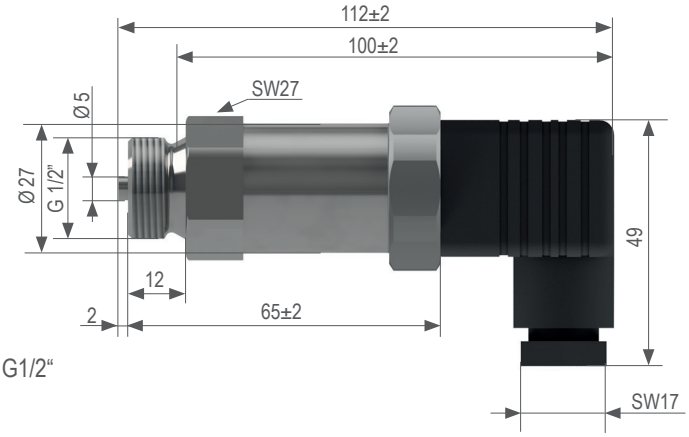



Current output 4...20 mA

### Dimensions




G1/4“




G1/2“

### 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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## Industrial pressure transmitter for measuring absolute and relative pressure

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 1191-001 |
| relativ | 0...10 V | G1/4“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1191-002 |
| relativ | 0...10 V | G1/4“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1191-003 |
| relativ | 0...10 V | G1/4“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1191-004 |
| relativ | 0...10 V | G1/4“ | 0-4 bar | 10 bar | 12 bar | 0550 1191-005 |
| relativ | 0...10 V | G1/4“ | 0-6 bar | 12 bar | 18 bar | 0550 1191-006 |
| relativ | 0...10 V | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 1191-007 |
| relativ | 0...10 V | G1/4“ | 0-16 bar | 32 bar | 48 bar | 0550 1191-008 |
| relativ | 0...10 V | G1/4“ | 0-25 bar | 50 bar | 75 bar | 0550 1191-009 |
| relativ | 0...10 V | G1/4“ | 0-40 bar | 80 bar | 120 bar | 0550 1191-010 |
| relativ | 0...10 V | G1/4“ | 0-60 bar | 120 bar | 180 bar | 0550 1191-011 |
| relativ | 0...10 V | G1/4“ | 0-100 bar | 200 bar | 300 bar | 0550 1191-012 |
| relativ | 0...10 V | G1/2“ | -1-1 bar | 3,2 bar | 5 bar | 0550 1181-001 |
| relativ | 0...10 V | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1181-002 |
| relativ | 0...10 V | G1/2“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1181-003 |
| relativ | 0...10 V | G1/2“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1181-004 |
| relativ | 0...10 V | G1/2“ | 0-4 bar | 10 bar | 12 bar | 0550 1181-005 |
| relativ | 0...10 V | G1/2“ | 0-6 bar | 12 bar | 18 bar | 0550 1181-006 |
| relativ | 0...10 V | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 1181-007 |
| relativ | 0...10 V | G1/2“ | 0-16 bar | 32 bar | 48 bar | 0550 1181-008 |
| relativ | 0...10 V | G1/2“ | 0-25 bar | 50 bar | 75 bar | 0550 1181-009 |
| relativ | 0...10 V | G1/2“ | 0-40 bar | 80 bar | 120 bar | 0550 1181-010 |
| relativ | 0...10 V | G1/2“ | 0-60 bar | 120 bar | 180 bar | 0550 1181-011 |
| relativ | 0...10 V | G1/2“ | 0-100 bar | 200 bar | 300 bar | 0550 1181-012 |
| relativ | 4...20 mA | G1/4“ | -1-1 bar | 3,2 bar | 5 bar | 0550 1291-001 |
| relativ | 4...20 mA | G1/4“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1291-002 |
| relativ | 4...20 mA | G1/4“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1291-003 |
| relativ | 4...20 mA | G1/4“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1291-004 |
| relativ | 4...20 mA | G1/4“ | 0-4 bar | 10 bar | 12 bar | 0550 1291-005 |
| relativ | 4...20 mA | G1/4“ | 0-6 bar | 12 bar | 18 bar | 0550 1291-006 |
| relativ | 4...20 mA | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 1291-007 |
| relativ | 4...20 mA | G1/4“ | 0-16 bar | 32 bar | 48 bar | 0550 1291-008 |
| relativ | 4...20 mA | G1/4“ | 0-25 bar | 50 bar | 75 bar | 0550 1291-009 |
| relativ | 4...20 mA | G1/4“ | 0-40 bar | 80 bar | 120 bar | 0550 1291-010 |
| relativ | 4...20 mA | G1/4“ | 0-60 bar | 120 bar | 180 bar | 0550 1291-011 |
| relativ | 4...20 mA | G1/4“ | 0-100 bar | 200 bar | 300 bar | 0550 1291-012 |



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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 1281-001 |
| relativ | 4...20 mA | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1281-002 |
| relativ | 4...20 mA | G1/2“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1281-003 |
| relativ | 4...20 mA | G1/2“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1281-004 |
| relativ | 4...20 mA | G1/2“ | 0-4 bar | 10 bar | 12 bar | 0550 1281-005 |
| relativ | 4...20 mA | G1/2“ | 0-6 bar | 12 bar | 18 bar | 0550 1281-006 |
| relativ | 4...20 mA | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 1281-007 |
| relativ | 4...20 mA | G1/2“ | 0-16 bar | 32 bar | 48 bar | 0550 1281-008 |
| relativ | 4...20 mA | G1/2“ | 0-25 bar | 50 bar | 75 bar | 0550 1281-009 |
| relativ | 4...20 mA | G1/2“ | 0-40 bar | 80 bar | 120 bar | 0550 1281-010 |
| relativ | 4...20 mA | G1/2“ | 0-60 bar | 120 bar | 180 bar | 0550 1281-011 |
| relativ | 4...20 mA | G1/2“ | 0-100 bar | 200 bar | 300 bar | 0550 1281-012 |
| relativ | I²C | G1/4“ | -1-1 bar | 3,2 bar | 5 bar | 0550 1391-001 |
| relativ | I²C | G1/4“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1391-002 |
| relativ | I²C | G1/4“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1391-003 |
| relativ | I²C | G1/4“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1391-004 |
| relativ | I²C | G1/4“ | 0-4 bar | 10 bar | 12 bar | 0550 1391-005 |
| relativ | I²C | G1/4“ | 0-6 bar | 12 bar | 18 bar | 0550 1391-006 |
| relativ | I²C | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 1391-007 |
| relativ | I²C | G1/4“ | 0-16 bar | 32 bar | 48 bar | 0550 1391-008 |
| relativ | I²C | G1/4“ | 0-25 bar | 50 bar | 75 bar | 0550 1391-009 |
| relativ | I²C | G1/4“ | 0-40 bar | 80 bar | 120 bar | 0550 1391-010 |
| relativ | I²C | G1/4“ | 0-60 bar | 120 bar | 180 bar | 0550 1391-011 |
| relativ | I²C | G1/4“ | 0-100 bar | 200 bar | 300 bar | 0550 1391-012 |
| relativ | I²C | G1/2“ | -1-1 bar | 3,2 bar | 5 bar | 0550 1381-001 |
| relativ | I²C | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 1381-002 |
| relativ | I²C | G1/2“ | 0-1,6 bar | 3,2 bar | 5 bar | 0550 1381-003 |
| relativ | I²C | G1/2“ | 0-2,5 bar | 10 bar | 12 bar | 0550 1381-004 |
| relativ | I²C | G1/2“ | 0-4 bar | 10 bar | 12 bar | 0550 1381-005 |
| relativ | I²C | G1/2“ | 0-6 bar | 12 bar | 18 bar | 0550 1381-006 |
| relativ | I²C | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 1381-007 |
| relativ | I²C | G1/2“ | 0-16 bar | 32 bar | 48 bar | 0550 1381-008 |
| relativ | I²C | G1/2“ | 0-25 bar | 50 bar | 75 bar | 0550 1381-009 |
| relativ | I²C | G1/2“ | 0-40 bar | 80 bar | 120 bar | 0550 1381-010 |
| relativ | I²C | G1/2“ | 0-60 bar | 120 bar | 180 bar | 0550 1381-011 |
| relativ | I²C | G1/2“ | 0-100 bar | 200 bar | 300 bar | 0550 1381-012 |



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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 2191-001 |
| absolut | 0...10 V | G1/4“ | 0-2 bar | 10 bar | 12 bar | 0550 2191-002 |
| absolut | 0...10 V | G1/4“ | 0-5 bar | 12 bar | 18 bar | 0550 2191-003 |
| absolut | 0...10 V | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 2191-004 |
| absolut | 0...10 V | G1/4“ | 0-20 bar | 50 bar | 75 bar | 0550 2191-005 |
| absolut | 0...10 V | G1/4“ | 0-50 bar | 120 bar | 180 bar | 0550 2191-006 |
| absolut | 0...10 V | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 2181-001 |
| absolut | 0...10 V | G1/2“ | 0-2 bar | 10 bar | 12 bar | 0550 2181-002 |
| absolut | 0...10 V | G1/2“ | 0-5 bar | 12 bar | 18 bar | 0550 2181-003 |
| absolut | 0...10 V | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 2181-004 |
| absolut | 0...10 V | G1/2“ | 0-20 bar | 50 bar | 75 bar | 0550 2181-005 |
| absolut | 0...10 V | G1/2“ | 0-50 bar | 120 bar | 180 bar | 0550 2181-006 |
| absolut | 4...20 mA | G1/4“ | 0-1 bar | 3,2 bar | 5 bar | 0550 2291-001 |
| absolut | 4...20 mA | G1/4“ | 0-2 bar | 10 bar | 12 bar | 0550 2291-002 |
| absolut | 4...20 mA | G1/4“ | 0-5 bar | 12 bar | 18 bar | 0550 2291-003 |
| absolut | 4...20 mA | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 2291-004 |
| absolut | 4...20 mA | G1/4“ | 0-20 bar | 50 bar | 75 bar | 0550 2291-005 |
| absolut | 4...20 mA | G1/4“ | 0-50 bar | 120 bar | 180 bar | 0550 2291-006 |
| absolut | 4...20 mA | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 2281-001 |
| absolut | 4...20 mA | G1/2“ | 0-2 bar | 10 bar | 12 bar | 0550 2281-002 |
| absolut | 4...20 mA | G1/2“ | 0-5 bar | 12 bar | 18 bar | 0550 2281-003 |
| absolut | 4...20 mA | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 2281-004 |
| absolut | 4...20 mA | G1/2“ | 0-20 bar | 50 bar | 75 bar | 0550 2281-005 |
| absolut | 4...20 mA | G1/2“ | 0-50 bar | 120 bar | 180 bar | 0550 2281-006 |
| absolut | I²C | G1/4“ | 0-1 bar | 3,2 bar | 5 bar | 0550 2391-001 |
| absolut | I²C | G1/4“ | 0-2 bar | 10 bar | 12 bar | 0550 2391-002 |
| absolut | I²C | G1/4“ | 0-5 bar | 12 bar | 18 bar | 0550 2391-003 |
| absolut | I²C | G1/4“ | 0-10 bar | 20 bar | 30 bar | 0550 2391-004 |
| absolut | I²C | G1/4“ | 0-20 bar | 50 bar | 75 bar | 0550 2391-005 |
| absolut | I²C | G1/4“ | 0-50 bar | 120 bar | 180 bar | 0550 2391-006 |
| absolut | I²C | G1/2“ | 0-1 bar | 3,2 bar | 5 bar | 0550 2381-001 |
| absolut | I²C | G1/2“ | 0-2 bar | 10 bar | 12 bar | 0550 2381-002 |
| absolut | I²C | G1/2“ | 0-5 bar | 12 bar | 18 bar | 0550 2381-003 |
| absolut | I²C | G1/2“ | 0-10 bar | 20 bar | 30 bar | 0550 2381-004 |
| absolut | I²C | G1/2“ | 0-20 bar | 50 bar | 75 bar | 0550 2381-005 |
| absolut | I²C | G1/2“ | 0-50 bar | 120 bar | 180 bar | 0550 2381-006 |



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