

Datasheet

Smart Pressure Transmitter SP100

Introduction

SP100 is a cost efficient in-line pressure transmitter. Good for gas/oil, robust design, easy to use make it suitable for a wide range of applications such as power plant, chemical processing, steel mill, mining and more.



Characteristics

Compact and robust design

Accuracy up to 0.075%

Gauge / absolute pressure

high stability and reliability

Easy to use

High accuracy, high repeatability

Applications

Semiconductor

Hydraulic and lubrication system

Oil field

Power plant

Pressure control system

Specifications

| | |
|-----------------------|--|
| Measuring range | See measuring range code below for details |
| Signal output | 4...20mA with HART (2-wire) |
| Accuracy | 0.2% (optional 0.1%, 0.075%) |
| Temperature effect | 0.5% |
| Stability | 0.1% |
| Mounting effect | Zero drift less than 0.3Kpa (can be removed by zero calibration) |
| Vibration effect | < 0.1% |
| Power supply | 24VDC |
| Initialization time | 2s |
| Refresh time | 0.25s |
| Operating temperature | -35...80°C / -31...176°F |
| Medium temperature | Standard: -20...85°C / -4...185°F |
| | High temperature: -20...200°C / -4...392°F |
| Storage temperature | -40...125°C / -40...257°F |
| Humidity | 5...98% |
| Housing material | Aluminum |
| Electrical connection | M20 x 1.5 |
| Process connection | G1/2, M20 x 1.5 male thread |
| Protection class | IP65 |

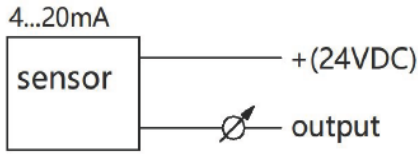
Measuring range code

| Gauge pressure | |
|----------------|--------------------------------|
| Code | Measuring range |
| NB0.2 | -200...200 mbar / -2.9...5 psi |
| NB0.35 | -350...350 mbar / -5...5 psi |
| NB0.7 | -700...700 mbar / -10...10 psi |
| NB1 | -1...1 bar / -14.5...14.5 psi |
| GB0.2 | 0...200 mbar / 0...2.9 psi |
| GB0.35 | 0...350 mbar / 0...5 psi |
| GB0.7 | 0...700 mbar / 0...10 psi |
| GB1 | 0...1 bar / 0...14.5 psi |
| GB2 | 0...2 bar / 0...29 psi |
| GB3.5 | 0...3.5 bar / 0...50 psi |
| GB7 | 0...7 bar / 0...100 psi |
| GB10 | 0...10 bar / 0...145 psi |
| GB20 | 0...20 bar / 0...290 psi |
| GB35 | 0...35 bar / 0...500 psi |
| GB70 | 0...70 bar / 0...1000 psi |
| GB100 | 0...100 bar / 0...1450 psi |
| GB200 | 0...200 bar / 0...2900 psi |
| GB350 | 0...350 bar / 0...5000 psi |
| GB700 | 0...700 bar / 0...10000 psi |

| Absolute pressure | |
|-------------------|-----------------------------|
| Code | Measuring range |
| AB0.2 | 0...200 mbar / 0...2.9 psi |
| AB0.35 | 0...350 mbar / 0...5 psi |
| AB0.7 | 0...700 mbar / 0...10 psi |
| AB1 | 0...1 bar / 0...14.5 psi |
| AB2 | 0...2 bar / 0...29 psi |
| AB3.5 | 0...3.5 bar / 0...50 psi |
| AB7 | 0...7 bar / 0...100 psi |
| AB10 | 0...10 bar / 0...145 psi |
| AB20 | 0...20 bar / 0...290 psi |
| AB35 | 0...35 bar / 0...500 psi |
| AB70 | 0...70 bar / 0...1000 psi |
| AB100 | 0...100 bar / 0...1450 psi |
| AB200 | 0...200 bar / 0...2900 psi |
| AB350 | 0...350 bar / 0...5000 psi |
| AB700 | 0...700 bar / 0...10000 psi |

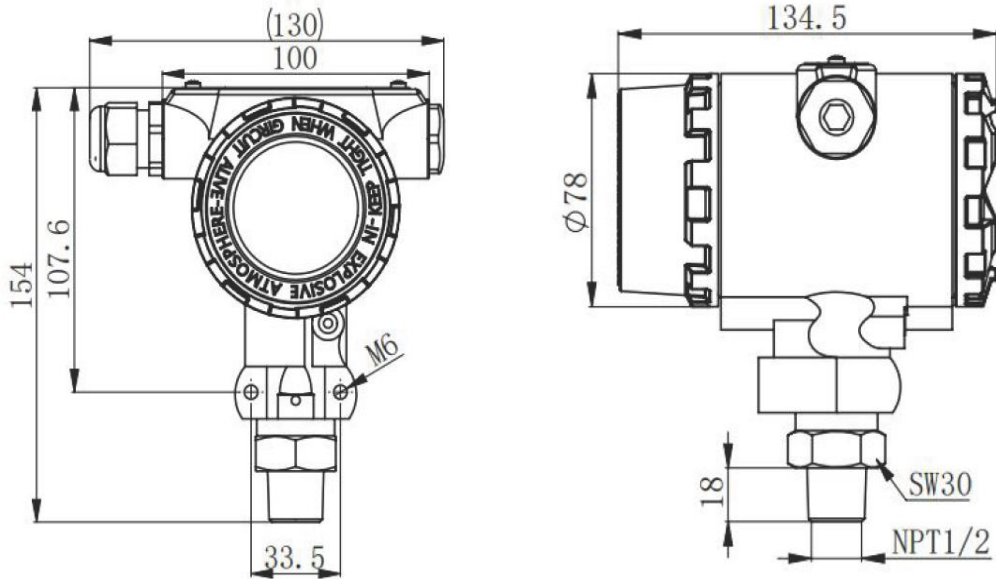
Customization on request for measuring range not listed above:
 GB20 for gauge pressure 0...20 bar / 0...290 psi;
 NB1 for negative pressure -1...1 bar / -14.5...14.5 psi;
 AB20 for absolute pressure 0...20 bar / 0...290 psi.

Wiring



| Pin | Cable | 4...20mA output |
|-----|-------|-----------------|
| 1 | + | Power |
| 2 | - | 4...20mA output |
| 3 | / | / |

Dimensions in mm



Process connection: NPT1/2

Order Code

Example: SP100-GB1BG12SP

1. Model

SP10- Smart pressure transmitter

2. Measuring range

- GB1 Gauge pressure 0...1bar / 0...14.5 psi
- AB1 Absolute pressure 0...1bar / 0...14.5 psi
- NB1 Negative -1...1bar / 14.5...14.5 psi

3. Accuracy

- A 0.075%
- B 0.1%
- C 0.2%

4. Process connection

- N14 Thread NPT1/4
- N12 Thread NPT1/2
- G14 Thread G1/4
- G12 Thread G1/2
- M20 Thread M20 x 1.5

5. High temperature

- S Standard (-20...80°C / -4...176°F)
- H High temperature (-20...200°C / -4...392°F)

6. Exproof

- P Non-exproof
- Ex Exproof