



Process Automation



Process Automation

Level Sensors | Level Switches | Overfill Prevention
Pressure Sensors | Temperature Sensors

Sensors and Systems: www.fafnir.com



Accurate



Flexible



Reliable

PRESSURIX A

Accurately Measure Pressure in All Scenarios: Modular Pressure Sensor

The pressure sensor PRESSURIX A uses a smart modular technology. It is suited for measuring the relative and absolute pressure of gases, vapours and liquids. The broad range of process connections allows the device to be deployed in a variety of applications.

The pressure diaphragm seal with flange connection is applicable for pressure measurement with aggressive, highly viscous, solidifying or crystallizing media. Using capillary lines for temperature isolation, the PRESSURIX AD can be used at process temperatures up to 350 °C.

Why Choose PRESSURIX A?

Main Features and Benefits

- + Modular pressure sensor (2-wire technology, 4 to 20mA, optionally with HART®)
- + Convenient plug-and-play technology
- + Multi-function display
- + Large variety of process connections
- + Measuring range 80 mbar to 400 bar
- + Process temperature up to 350 °C
- + Accuracy $\leq 0.15\%$
- + Turn down 5:1
- + ATEX approval
- + Qualified for SIL 2 applications

Applications

- + Chemical and petrochemical industry
- + Process engineering



PRESSURIX A/AD – Technical Data

Sensor head

| | |
|---------------------|---|
| Protection class | IP66 |
| Material | Stainless steel 1.4301 (304); Makrolon; Viton |
| Head design | Two-chamber system with PTFE pressure compensation filter |
| Cable terminal | M16 x 1.5 cable gland for cable diameter 5 to 10 mm; M12 Connector |
| Ambient temperature | -25 °C to +85 °C |

Sensor

| | |
|----------|---|
| Material | Stainless steel 1.4404 (316L); Hastelloy® C4; others on request |
|----------|---|

Accuracy

| | |
|--------------------------------|--|
| Linearity | ≤0.15 % of span |
| Repeatability | ≤0.05 % of nominal range |
| Long-term drift | 0.1 %/year of nominal range |
| Temperature effect | ±0.15 %/10 K of nominal range (0 °C; to +60 °C); ±0.2 %/10 K of nominal range (<0 °C; > +60 °C) |
| Influence of mounting position | ≥3.5 mbar (if not mounted vertical) |

| | |
|-----------|-----|
| Turn down | 5:1 |
|-----------|-----|

| | |
|---------------|--------|
| Response time | >0.2 s |
|---------------|--------|

| | |
|----------------------|----------------------------------|
| Measuring technology | Piezoresistive measuring element |
|----------------------|----------------------------------|

Electrical connection

| | |
|------------|---|
| Connection | 2-wire |
| Voltage | 12 to 40 V _{DC} ; Ex Version: 12 to 30 V _{DC} |
| Signal | Power output: 4 to 20 mA/HART® |

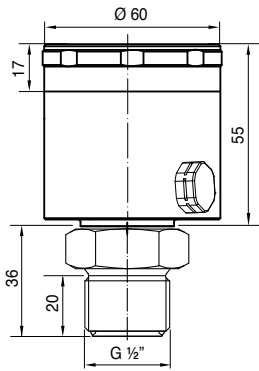
Process conditions

| | |
|-------------|--|
| Temperature | Up to 350 °C |
| Pressure | Up to 400 bar (overload limit up to 600 bar) |

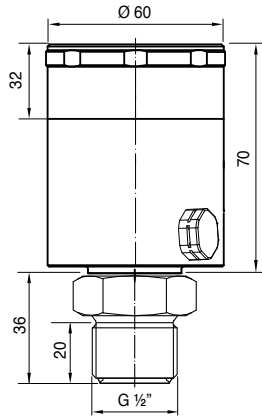
Options

| | |
|--|--|
| | Display |
| | ATEX approval |
| | Qualified for SIL 2 (IEC 61508) |
| | Tank table with 32 points: ideal also as level measurement |





PRESSURIX A ST with a G 1/2" thread.
The housing shown is suitable for either a display or a HART® module.

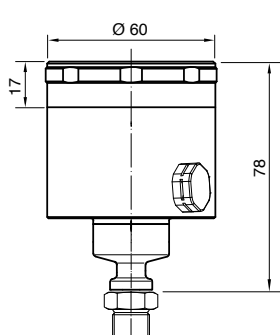


PRESSURIX A ST with a G 1/2" thread.
The housing shown is suitable for both display and HART® module.

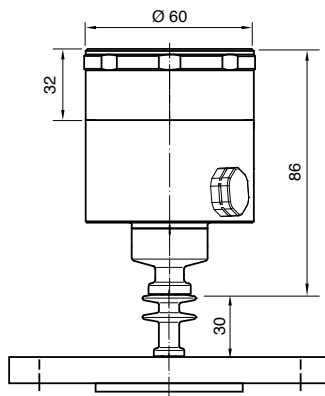
PRESSURIX A

Ideal for most standard applications

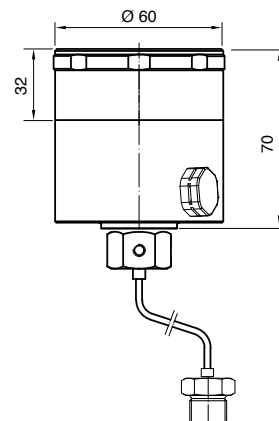
| | |
|---------------------------|--|
| Process connection | G 1/2" B (inline diaphragm) |
| Process conditions | |
| Temperature | Standard temperature (ST): -20 °C to +90 °C |
| Pressure | G 1/2" A (DIN 3852) flush-mounted diaphragm (up to 100 bar); G 1/2" B with O-ring flush-mounted diaphragm (up to 40 bar) -0.4 to 0.4 bar up to -1 to 100 bar (relative); Overload limit (1 bar to 200 bar) 0 to 4 bar up to 0 to 16 bar (absolute); Overload limit (10 bar to 60 bar) |



PRESSURIX AD NT with a G 1/2" thread for temperatures up to 125 °C. The housing is suitable for either a display or a HART® module.



PRESSURIX AD NT with flange and temperature isolator for temperatures up to 160 °C. The housing is suitable for either a display or a HART® module.



PRESSURIX AD HHT with G 1/2" thread and capillary for offset installation for temperatures up to 350 °C. The housing is suitable for either a display or a HART® module.

PRESSURIX AD with Diaphragm Seal

Gives you full flexibility in process connection and installation situations

Process connection

All common process connections

Process conditions

Temperature

Normal temperature (NT): -20 °C to +125 °C;
 Normal temperature plus (NT+): -20 °C to +160 °C;
 High temperature (HT): -20 °C to +200 °C;
 Highest temperature (HHT): -20 °C to +350 °C

Pressure

0 to 1 bar up to 0 to 400 bar (relative);
 -1 to 0 bar up to -1 to 15 bar (relative);
 0 to 1 bar up to 0 to 25 bar (absolute)

System filling

NT: Silicone oil FS standard;
 NT+ and HT: Silicone oil FS, high temp;
 HHT: Highest temperature oil;
 Other oils on request

PRESSURIX S

Pressure Sensor for Use in Tough Environments

The PRESSURIX S version of our pressure sensor is suitable for applications where a simple 4 to 20mA interface is enough. Thanks to its many different process fittings, it is especially suited when measuring pressure in aggressive, highly viscous, solidifying or crystallizing media. With various electrical connections from a right-angle plug to an M12 plug and fixed cable, to an IP67 protection class field housing, the sensor offers a solution for many types of electrical cabling.

Using capillaries as temperature isolators, the PRESSURIX S pressure sensor can also be used at process temperatures up to 350 °C.

Why Choose PRESSURIX S?

Main Features and Benefits

- + Output signal: 4 to 20 mA
- + Compact stainless steel housing
- + High variety on process connections
- + Measuring ranges from 0 to 160 mbar to 0 to 400 bar
- + Process temperature up to 350 °C
- + Accuracy $\leq 0.2\%$
- + Approved for SIL 2 applications

Precise and Adaptable

- + The use of temperature decouplers means that the PRESSURIX S pressure transmitter can be used for process temperatures up to 350 °C and are highly adaptable to varying environment conditions.
- + It is extremely versatile and can be adapted to various environmental conditions.

Applications

- + Chemical and petrochemical industry
- + Process control engineering



PRESSURIX S/SD – Technical Data

Sensor head

| | |
|---------------------|---|
| Protection class | IP65/IP67 |
| Material | Stainless steel 1.4301 (304) |
| Cable terminal | M16 x 1.5 cable gland for cable diameter 5 to 10 mm; Right angle Plug (DIN-EN 175301-803-A); Cable Connection; M12 connector |
| Ambient temperature | -20 °C to +85 °C |

Sensor

| | |
|----------|---|
| Material | Stainless steel 1.4404 (316L); Hastelloy® C4; others on request |
|----------|---|

Accuracy

| | |
|------------------------------------|---|
| Linearity | <0.2 % of nominal range; <0.3 % of nominal range for sensors ≥60 bar |
| Temperature effect | Zero point <0.2 %/10 K of nominal range (0 °C to +50 °C) |
| (in compensated temperature range) | Range <0.2 %/10 K of nominal range (0 °C to +50 °C) |

| | |
|---------------|--------|
| Response time | ≤20 ms |
|---------------|--------|

| | |
|-----------------|--|
| Adjusting range | ±5 % f.s. Zero point and range independently |
|-----------------|--|

| | |
|-----------------------|---|
| Measurement principle | Piezoeresistive measuring element or above 160 bar thin film technology |
|-----------------------|---|

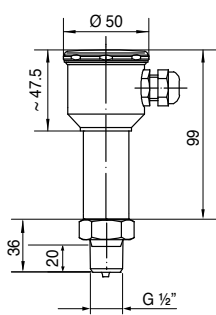
Electrical connection

| | |
|------------|-------------------------|
| Connection | 2-wire |
| Voltage | 8 to 30 V _{DC} |
| Signal | 4 to 20 mA |

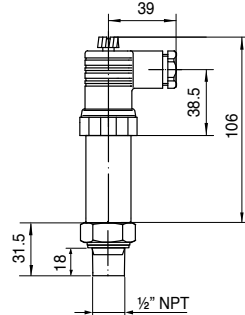
Process conditions

| | |
|-------------|---------------------------------|
| Temperature | Up to 350 °C |
| Pressure | Up to 400 bar |
| | Qualified for SIL 2 (IEC 61508) |

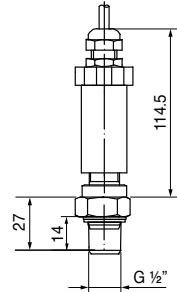




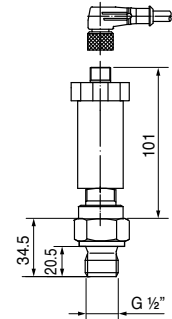
PRESSURIX S ST with G 1/2" thread for temperatures up to 80 °C and with field housing



PRESSURIX S ST with NPT 1/2" thread for temperatures up to 80 °C and with right-angle plug (Form A)



PRESSURIX S NT with G 1/2" thread and temperature decoupler for temperatures up to 140 °C (short term) and with a fixed cable



PRESSURIX S NT with G 1/2" thread and temperature decoupler for temperatures up to 140 °C (short term) and with M12 plug

PRESSURIX S

Ideal for most standard applications

Process connection

G 1/2" B; 1/2" NPT inline diaphragm (up to 400 bar);
G 1/2" A flush-mounted diaphragm with O-Ring (up to 60 bar);
G 1/2" B flush-mounted diaphragm (up to 160 bar)

Process conditions

Temperature

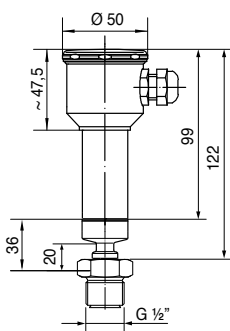
Standard temperature (ST): -10 °C to +80 °C;
High temperature (NT): -10 °C to +140 °C (short term for sterilization process)

Pressure

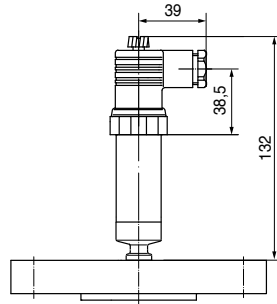
0 to 1 bar to 0 to 400 bar (relative);
-1 to 0 bar to -1 to 15 bar (relative);
0 to 1 bar to 0 to 25 bar (absolute)

System filling

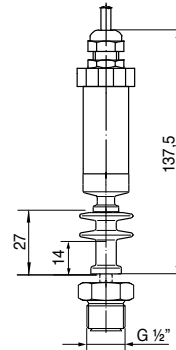
FD1-Oil



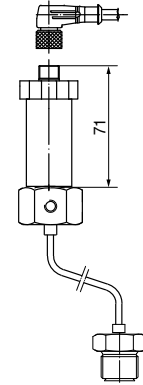
PRESSURIX SD NT with G 1/2" thread for temperatures up to 140 °C with field housing



PRESSURIX SD NT with a flange for temperatures up to 140 °C and with right-angle plug (Form A)



PRESSURIX SD HT with G 1/2" thread and temperature decoupler for temperatures up to 200 °C and with fixed cable



PRESSURIX SD HHT with G 1/2" thread and a capillary for offset mounting for temperatures up to 350 °C and with M12 connector

PRESSURIX SD with Diaphragm Seal

Gives you full flexibility in process connection and installation situations

| | |
|---------------------------|--|
| Process connection | All common process connections |
| Process conditions | |
| Temperature | Normal temperature (NT): -10 °C to +140 °C; High temperature (HT): -10 °C to +200 °C; Highest temperature (HHT): -10 °C to +350 °C |
| Pressure | 0 to 1 bar to 0 to 400 bar (relative); -1 to 0 bar to -1 to 15 bar (relative); 0 to 1 bar to 0 to 25 bar (absolute) |
| System filling | NT: Silicone oil FS, standard; HT: Silicone oil FS, high temperature; HHT: Ultra high temperature oil; Other oils on request |

PRESSURIX C

The Most Economic Digital Pressure Measurement Solution

The PRESSURIX C is the cost-efficient digital alternative to the PRESSURIX S pressure sensor for full pressure measurement of gases, vapours and liquids.

Why Choose PRESSURIX C?

Main Features and Benefits

- + Measuring ranges 0 to 1 bar up to 0 to 600 bar
- + Accuracy $\leq 0.3\%$
- + Output signal 4 to 20 mA, 2-wire technology
- + Process temperature $-20\text{ }^{\circ}\text{C}$ to $+120\text{ }^{\circ}\text{C}$

Applications

- + OEM application



PRESSURIX C – Technical Data

Sensor head

| | |
|---------------------|------------------------------|
| Protection class | IP65 |
| Material | Stainless steel 1.4301 (304) |
| Cable terminal | M12 connector |
| Ambient temperature | -20 °C to +85 °C |

Sensor

| | |
|----------|---|
| Material | Stainless steel 1.4301 (304)/1.4542 (630) |
|----------|---|

Accuracy

| | |
|--------------------|--|
| Linearity | <0.3 % of nominal range |
| Long-term drift | 0.1 %/year of nominal range |
| Temperature effect | ±0.2 %/10 K of nominal range (0 °C to +50 °C); ±0.3 %/10 K of nominal range (-20 °C to 0 °C; 50 °C to +80 °C) |
| Response time | 30 ms |

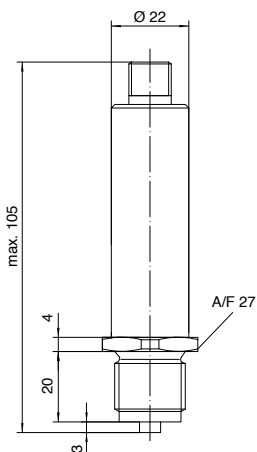
| | |
|-----------------|--|
| Adjusting range | ±5 % f.s. Zero point and range dependent |
|-----------------|--|

Electrical connection

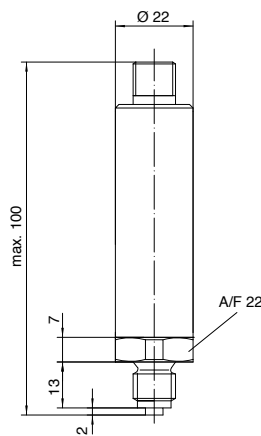
| | |
|------------|-------------------------|
| Connection | 2-wire |
| Voltage | 8 to 30 V _{DC} |
| Signal | 4 to 20 mA |

Process conditions

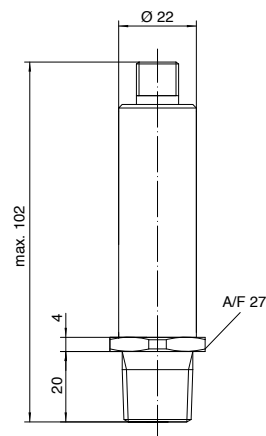
| | |
|-------------|--|
| Temperature | -20 °C to +120 °C |
| Pressure | 0 to 1 to 0 to 600 bar relative; -1 to 0 to -1 to 15 relative |



PRESSURIX C with G 1/2" process connection



PRESSURIX C with G 1/4" process connection



PRESSURIX C with 1/2" NPT process connection





FAFNIR GmbH
Schnackenburgallee 149 c
22525 Hamburg, Germany
Phone: +49/40/39 82 07-0
Fax: +49/40/390 63 39
E-mail: info@fafnir.com
Internet: www.fafnir.com

Sensors & Systems Worldwide: www.fafnir.com