

PRESSURE

Pressure Transducer FDA 602 L



- ▶ Compact pressure sensors for industrial applications in liquid and gaseous substances.
- ▶ Piezo-resistive, flexibly suspended silicone measuring cell in an oil-filled, all-welded special steel enclosure.
- ▶ The stable mechanical construction provides a reliable protection for the measuring cell against the test substance and immunizes it against pressure peaks and vibrations.
- ▶ Available with three calibrations.
Relative pressure: pressure related to the environmental pressure.
Absolute pressure: pressure related to vacuum (0 bar)
Overpressure: pressure related to atm. pressure at manufacturing (approx. 1 bar).

Accessories:

Teflon sealing tape, -200 to +260 °C, width 10 mm, thickness 0.1 mm, roll of 12 meters Order no. ZB9000TB

Quick-release coupling, nominal width 5, up to 35 bar
Connection internal thread G1/4", brass Order no. ZB9602N5

Quick-release coupling, nominal width 7.2, up to 35 bar
Connection internal thread G1/4", brass Order no. ZB9602N7



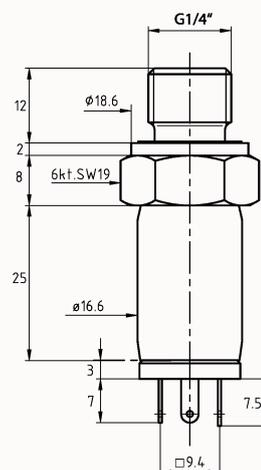
Quick-release coupling

nominal width 5
internal thread G1/4"

nominal width 7,2
internal thread G1/4"

Technical Data:

Overload	Two times final value
Output signal	0.2 to 2.2 V
Accuracy class (linearity + hysteresis + reproducibility)	±0.5 % of final value
Total error range	
0 to +50 °C	±1.0 % of final value
-10 to +80 °C	±1.5 % of final value
(linearity + hysteresis + reproducibility + temperature coefficients + zero-point + range tolerance)	
Response time (0 to 99 %)	<5 ms
Nominal conditions	22°C ±2 K, 10 to 90 % RH, non-condensing
Power supply	6.5 to 15 VDC, consumption <4 mA via ALMEMO® connector
Operating temperature	-40 to +100 °C
Pressure terminal	male thread G1/4" membrane not flush with front
Material in contact with medium	Stainless steel DIN 1.4404/1.1135 External seal, Viton
Weight	approx. 50 g
Protective class	IP 65



Types:

including ALMEMO® cable 1.5m long

Measuring ranges relative pressure:

up to 2.5 bar

Order no. FDA602L3R

up to 10 bar

Order no. FDA602L5R

Measuring ranges absolute pressure:

up to 5 bar

Order no. FDA602L4A

up to 10 bar

Order no. FDA602L5A

Measuring ranges excess pressure:

up to 25 bar

Order no. FDA602L2U

up to 50 bar

Order no. FDA602L3U

up to 100 bar

Order no. FDA602L4U

Pressure transducer for measuring the temperature of refrigerants see page 11.08.

PRESSURE

Temperature-Compensated Pressure Sensors FD 8214



- ▶ Compact pressure sensors for liquid and gaseous substances.
- ▶ Piezo-resistive measuring cell with temperature compensation.
- ▶ Pressure membrane and enclosure made from special steel.
- ▶ Available with three calibrations.
 - Relative pressure:
Pressure related to the environmental pressure.
 - Absolute pressure:
Pressure related to vacuum (0bar).
 - Overpressure:
Pressure related to atm. pressure at manufacturing (approx. 1bar).

As the pressure is transmitted to the pressure membrane through a small hole in the thread part, the liquids should not be prone to crystallise and gases should not be heavily contaminated with dust.

Option:

Linearity 0.1% (for ranges >0.1 bar to >600 bar)	Order no. OR8214G1
Linearity 0.25%	Order no. OR8214G
Substance temperature -25 to +100°C	Order no. OR8214T1
Substance temperature -25 to +150°C (version with cooling fins)	Order no. OR8214T2
Process connection, small flange (for FD8214xA absolute pressure)	
KF16	Order no. OR8214KF16
KF25	Order no. OR8214KF25
Food compliant version with vegetable oil ASEOL Food	Order no. OR8214ML
Throttle against excess pressure	Order no. OR8214DS
Output 0 to 10V	Order no. OR8214V
Output 0 to 20mA	Order no. OR8214A
Output 4 to 20mA	Order no. OR8214R4

Types:

FD 8214:
Standard version with G $\frac{1}{4}$ " internal thread
Other threads available on request

FD 8214 M:
Membrane (welded with end of thread) flush with front,
external thread G $\frac{1}{2}$ ", can be sterilised (important for food and
pharmaceutical industry)
Other threads available on request

G $\frac{1}{4}$ " internal thread G $\frac{1}{2}$ " external thread

Measuring ranges relative pressure:

0 to 100 mbar	FD821401R	FD8214M01R
0 to 160 mbar	FD821402R	FD8214M02R
0 to 250 mbar	FD821403R	FD8214M03R
0 to 400 mbar	FD821404R	FD8214M04R
0 to 600 mbar	FD821405R	FD8214M05R
0 to 800 mbar	FD821406R	FD8214M06R
0 to 1 bar	FD821407R	FD8214M07R
0 to 1.6 bar	FD821408R	FD8214M08R
0 to 2.5 bar	FD821409R	FD8214M09R
0 to 4 bar	FD821410R	FD8214M10R
0 to 6 bar	FD821411R	FD8214M11R
0 to 10 bar	FD821412R	FD8214M12R

Measuring ranges absolute pressure:

Option: Process connection, small flange (see under Options)

0 to 1 bar	FD821407A	FD8214M07A
0 to 1.6 bar	FD821408A	FD8214M08A
0 to 2.5 bar	FD821409A	FD8214M09A
0 to 4 bar	FD821410A	FD8214M10A
0 to 6 bar	FD821411A	FD8214M11A
0 to 10 bar	FD821412A	FD8214M12A

Measuring ranges overpressure:

0 to 10 bar	FD821412U	FD8214M12U
0 to 16 bar	FD821413U	FD8214M13U
0 to 25 bar	FD821414U	FD8214M14U
0 to 40 bar	FD821415U	FD8214M15U
0 to 60 bar	FD821416U	FD8214M16U
0 to 100 bar	FD821417U	FD8214M17U
0 to 160 bar	FD821418U	FD8214M18U
0 to 250 bar	FD821419U	FD8214M19U
0 to 400 bar	FD821420U	FD8214M20U
0 to 600 bar	FD821421U	FD8214M21U
0 to 1000 bar	FD821422U	FD8214M22U

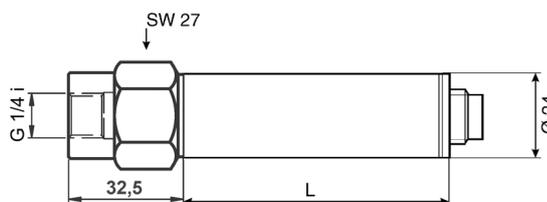
other measuring ranges on request

Accessories:

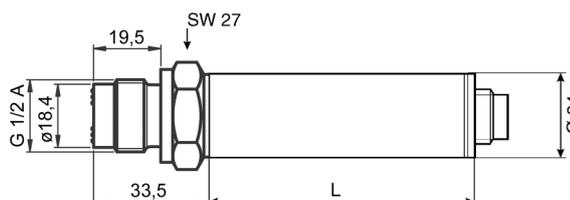
Coupler socket with 2m cable and ALMEMO® connector	Order no. ZA8214AK
Coupler socket 6-pin Straight version	Order no. ZB9030RB
Coupler socket 6-pin Angled version	Order no. ZB9030RBW

Technical Data:

Measuring cell:	piezo-resistive
Overload	Ranges 600 bar, i.e. 1.5 times the final value (minimum 3 bar, maximum 850 bar) Ranges >600 bar, 1500 bar
Output signal, power supply :	Standard 0 to 2 volts, feed 6.5 to 13 volts (from ALMEMO® device), current <4 mA Option : 0 to 10 volts, feed 15 to 30 volts, load >10 kilohms, current <4 mA Option : 0 to 20 mA, feed 9 to 33 volts, (>18 volts at load 500 ohms), current <25 mA Option : 4 to 20 mA, 2 conductors, feed 9 to 33 volts, (>18 volts at load 500 ohms), current <25 mA
Response time:	<1.5 ms / 10 to 90 % nominal pressure
Linearity:	Standard ± 0.5 % of final value Option : ± 0.25 % of final value for all ranges Option : ± 0.1 % of final value for ranges >0.1 bar and up to 600 bar
Media temperature:	0 to +80°C, temperature comp.: 0 to +70°C option: -25 to +100°C, temperature comp.: -25 to +85°C -25 to +150°C, temperature comp.: -25 to +85°C
Temperature drift:	Zero-point $<\pm 0.04$ % of final value / °C for ranges >0.5 bar Range $<\pm 0.02$ % of final value / °C for all ranges
Nominal temperature:	22°C ± 2 K, 10 to 90% rH non-condensing
Material:	housing, pressure connector, membrane: special steel 1.4435
Operat. environment/Sealing:	IP 67
Dimensions:	see drawing
Connecting threads:	Type 8214: internal thread G1/4", wrench SW 27 Option for absolute pressure: small flange KF16 or KF21 Type 8214 M: external thread G1/2", wrench SW 27 Other threads are available on request
Electrical connection	Flush-mounting connector, binder coupling 723, 5-pin
Weight:	approx. 180 g



Type **FD 8214** standard version with internal thread G1/4"
L = 45 mm (L = 72 mm with option of medium temperature up to 150 °C with cooling ribs)



Type **FD 8214M**, membrane flush with front (welded with end of thread), internal thread G1/2" can be easily sterilized
L = 45mm
(L = 72 mm with option of medium temperature up to 150 °C with cooling ribs)

Accessories:

Longer cable, please specify length (L) Order no. ZB9060K(L)

Teflon sealing tape, -200 to +260 °C, width 10 mm, thickness 0.1 mm, roll of 12 meters Order no. ZB9000TB

Quick-release coupling, nominal width 5, up to 35 bar
Connection G1/4" external thread, brass Order no. ZB8214N5

Quick-release coupling, nominal width 7.2, up to 35 bar
Connection 1/4" external thread, brass Order no. ZB8214N7



Quick-release coupling

nominal width 5
external thread G1/4"

nominal width 7,2
external thread G1/4"