

# High Precision Pressure Transducer

For absolute pressure measurement

**Model 8262**

For relative pressure measurement

**Model 8263**

Code:	8262 EN
Delivery:	12 weeks
Warranty:	24 months



- Measuring ranges between 0 ... 10 psi to 0 ... 7500 psi (0 ... 0.7 bar to 0 ... 500 bar)
- Accuracy < 0.05 %
- For dynamic and static measurements
- Very low sensitivity to temperature
- Very high operating temperature range
- Output 0 ... 10 V or 4 ... 20 mA available (optional)
- Protection class IP67

## Application

High-precision pressure transducers of this type are a very attractive and economic solution for making extremely accurate pressure measurements for users from all fields of engineering. Thanks to their excellent long-term stability, reliability and rugged construction, these pressure transducers are suitable for use in both research and production, in mechanical engineering, industrial processes, aerospace engineering and many other applications.

These high-precision pressure transducers can be used for static and dynamic measurements on gaseous and liquid media.

Range of applications:

- ▶ Process monitoring
- ▶ Aerospace engineering
- ▶ Research and science
- ▶ Reference measurements on calibration equipment

## Description

The high precision, extraordinary temperature compensation and high reliability are achieved through extremely precise manufacturing and calibration.

The medium to be measured is conducted via the pressure connector into a sealed chamber where it acts on a diaphragm. This diaphragm is connected to the sensor element, a double bending beam, via a rod.

There are two types of transducers for different measuring modes:

**8262:** Measurement of absolute pressure with respect to enclosed vacuum or, for measurement ranges of 500 psi and up, with respect to a permanently enclosed atmosphere (sealed gauge).

**8263:** Relative pressure sensors for measuring the pressure with respect to the atmosphere (true gauge). In this type, contact is made to the surrounding air pressure by means of a second membrane made of stainless steel. This allows the sensor to be used in harsh industrial environments as well, without the sensor element being attacked.

A special connecting cable is available to let you benefit from the burster TEDS electronic data sheet (memory chip fitted in the plug and containing sensor-specific data).

## Technical Data

Order Code		Measuring Range		Resonance-Frequency [kHz]
Absolute Model 8262	Gauge Model 8263	psi	bar	
-	8263-10	10	0.7	1.6
8262-15	8263-15	15	1.0	2.1
8262-25	8263-25	20	1.7	2.5
8262-50	8263-50	50	3.4	2.9
8262-75	8263-75	75	5.2	3.5
8262-100	8263-100	100	6.9	4.5
8262-150	8263-150	150	10.3	6.0
8262-200	8263-200	200	13.8	7.0
8262-300	8263-300	300	20.7	9.0
8262-500	8263-500	500	34.5	9.5
8262-750	8263-750	750	51.7	12.0
8262-1000	8263-1000	1000	68.9	17.0
8262-1500	8263-1500	1500	103.4	20.0
8262-2000	8263-2000	2000	137.8	35.0
8262-3000	8263-3000	3000	206.7	40.0
8262-5000	8263-5000	5000	344.5	54.0
8262-7500	8263-7500	7500	516.8	60.0

### Electrical values

Bridge resistance: Foil strain gauges; input and output resistance	350 Ω ± 1.5 %
Calibration resistor:	59 kΩ ± 0.1 %
The output voltage caused by a shunt of this value is given in the calibration protocol.	
Excitation voltage:	10 V DC
Nominal sensitivity:	standardized 2.0 mV/V ± 0.2 %

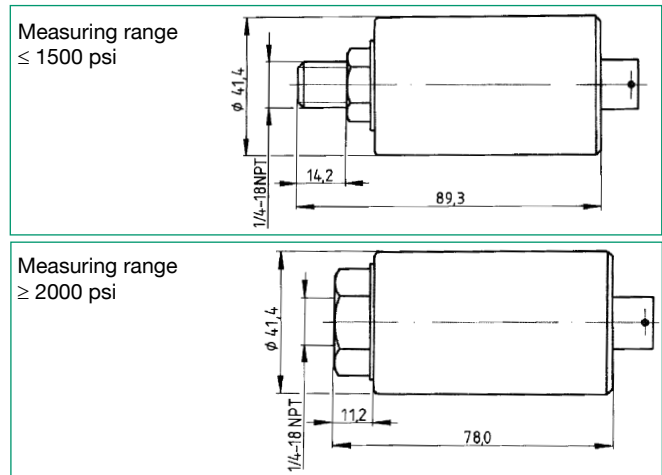
### Environmental conditions

Range of operating temperature:	- 70 °C ... 120 °C
Nominal temperature range:	15 °C ... 70 °C
Influence of temperature on zero:	± 0.0015 % F.S./K
Influence of temperature on sensitivity:	± 0.0015 % F.S./K

### Mechanical values

Accuracy: Combined error consisting of non-linearity, hysteresis and variation	< ± 0.05 % F.S.
Kind of measurement:	
model 8262	
measuring range ≤ 300 psi	absolute measurement
measuring range ≥ 500 psi	against sealed atmosphere (sealed gauge)
model 8263	gauge/relative pressure measurement
Dead volume:	2.8 cm <sup>3</sup>
Volume change:	negligibly small
Overload:	50 % over capacity
Burst pressure:	200 % over capacity
Dynamic load:	
recommended	70 % of capacity
possible	100 % of capacity
Design:	
Pressure transducer with hermetically sealed measurement chamber, diaphragm and housing are welded.	
Material: stainless steel 17 - 4 PH	(similar to material 1.4542)
Pressure connection:	
measuring range ≤ 1500 psi	external thread 1/4 - 18 NPT
measuring range ≥ 2000 psi	internal thread 1/4 - 18 NPT
Sealing:	self-sealing, conic thread at sensor's side
Electrical connection:	
6 pin bayonet plug in connector, Souriau 851-07A-10-6P	
Mating connector:	
Souriau 851-06E-C-1-6S or Amphenol 62 GB-16F-10-6S included in scope of delivery	
refer to dimensional drawing	
Dimensions:	
Weight:	approx. 360 g
Protection class acc. EN 60529:	IP67

## Dimensional drawing models 8262 and 8263



Transducers with measuring ranges 10 psi and 15 psi have a diameter of 51 mm. Transducers with internal measurement amplifier are 26 mm longer and approx. 100 g heavier.

## Technical Data with Internal Amplifier

	Voltage output	Current output
	0 ... 10 V	4 ... 20 mA
Excitation voltage	15 ... 28 V	22 ... 32 V
Current consumption	max. 40 mA	max. 65 mA
Connection technology	4 wire	3 wire
Load impedance	-	500 Ω
Measuring rate	3 kHz	2.5 kHz
Range of operating temperature	- 40 °C ... 85 °C	- 20 °C ... 85 °C

## Wiring Code

Pin	without Amplifier	Voltage output	Current output
A	excitation +	excitation +	excitation +
B		signal -	Signal - and excitation -
C	excitation -	excitation -	excitation -
D		signal +	signal +
E	signal -	calibration resistor	calibration resistor
F	signal +	calibration resistor	calibration resistor

## Order Code

Refer to table, mention options with corresponding short terms.

## Accessories

Connecting cable for transducers without amplifier, complete with connector and mating connector (socket), 6 wires, shielded, bending radius > 5 mm, PVC isolation, standard length 3 m

to burster evaluation electronics with 12 pin connector **Model 9911**

with open, color coded and tinned cable ends **Model 9986**

for sensors with integrated amplifier and open, color-coded, tinned cable ends **Model 99545-000D-0160030**

to 7281 with burster TEDS **Model 99229-545D-0160030**

Mating connector (is included in scope of delivery) **Model 9945**

## Test and Calibration Certificate

Included in delivery, et al. with specification of zero output, sensitivity and shunt calibration factor.

## Options

Internal measurement amplifier with voltage output 0 ... 5 V DC...-x1xxxxxx

Internal measurement amplifier with voltage output 0 ... 10 V DC...-x2xxxxxx

Internal measurement amplifier with voltage output 4 ... 20 mA ...-x4xxxxxx

## DAkS Calibration Certificate

According to guideline DKD-R 6-1 with 21 points in 10 % increments, for raising and falling pressure. **Order Code 82DKD-82XX**

## Factory Calibration Certificate (WKS)

Calibration of a pressure transducer separately as well as connected to an indicator. Standard is a certificate with 11 points, starting at zero, running up and down in 20% increments and covering the complete measuring range. Special calibrations on request. Calculation of costs by base price plus additional costs per point.

**Order Code 82WKS-82XX**

