

# DATA SHEET



## Relative pressure sensors (stainless steel) with thread - 0391 0004

### Description



### Characteristic features

- Pressure range from 0 to 600 bar
- Measurement of relative pressure
- Integrated 1/4" connection thread
- Integrated pressure connection
- Thick-film stainless steel technology
- Vacuum-proof, high burst pressure
- Zero point / Temperature Compensated
- Robust, media-resistant design
- Water and oil resistant
- Easy to install, with connecting cable

### Areas of application

- Hydraulics
- Refrigeration technology
- Braking systems

### Technical data

Type of measurement	Pressure measuring cell in thick-film technology
Measuring range	0...600 bar, (see product range)
Output voltage range	1,5 ... 3,5 mV / V
Linearity / hysteresis / reproducibility	< ±0,4 ... 1,5% FS
Accuracy	< ±0,4% FS typ.
Nominal temperature range	-40 ... 105 °C
Operating temperature range	-40 ... 105°C
Storage temperature range	-40 ... 105°C
Temperature error/ gain	
No signal-TK-0(0 ... 85 °C)	< ±0,03% FS / K
Output span-TK-S (0...85°C)	< ±0,05% FS / K max.
Bridge resistance	10 kΩ ± 20 %
admissible low-pressure (bar)	vacuum-proof
Supply voltage	≤ 30 VDC
Insulation resistance	> 100 MΩ
Dimensions	Ø 18 ±0,1 x 24 (+ 2,5 mm Cable)
Connection	ribbon cable, RM 1,27 x 40 mm Length

### Product information

The pressure sensors of the series 0391 0004 are cells with thick-film on stainless steel for measuring static and dynamic relative pressure in liquids or gases.

In opposition to the series 0391 0004 the sensors have an integrated pressure connector: the 1/4" connection thread.

The sensor is „all of a piece“ without thick places so no maintenance of the swimming installation has to be done and no leaks occur. The thick-film-on-steel technology in combination with the monolithic sensor technology allows the measurement range by a factor of 5 to pass before the membrane bursts. The measured medium is only touched by the stainless steel material (1.4404), resulting in excellent resistance towards aggressive and corrosive media. Therefore, the sensors are particularly suitable for applications in the field of hydraulics, refrigeration technology and for other demanding industrial applications. The delivery range covers 5 graded measuring variants in a pressure range from 0 to 600 bar. The sensor itself is designed as a Wheatstone full bridge, and provides a heavy dependent differential voltage. The sensor is zero-point and temperature compensated, and can also be reduced so that it will work in most applications.

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### Range of products

Measuring range	Burst pressure	Order no
10 bar	50 bar	0391 0004-02
25 bar	125 bar	0391 0004-05
40 bar	200 bar	0391 0004-07
60 bar	300 bar	0391 0004-09
100 bar	500 bar	0391 0004-01
160 bar	650 bar	0391 0004-03
250 bar	750 bar	0391 0004-04
400 bar	1200 bar	0391 0004-06
600 bar	1800 bar	0391 0004-08

### Options

The standard model is delivered with a 4-lead ribbon cable, RM 1,27 mm. The standard temperature range is  $-40$  to  $105$  °C. For special applications different temperature ranges up to  $+150$  °C and special calibration are available on request.

### Pin assignment

