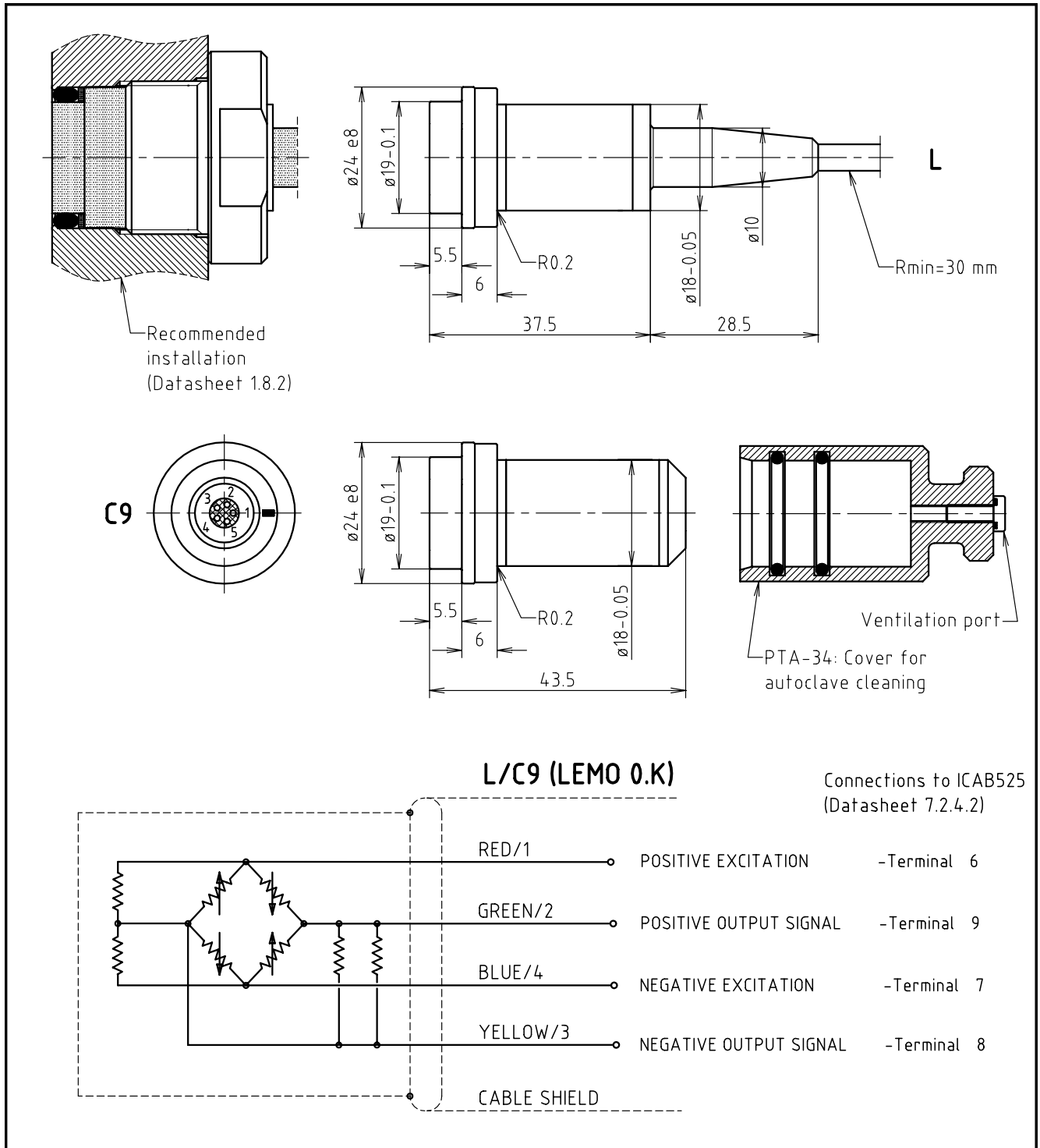


# PRESSURE TRANSDUCER PTA



## DESCRIPTION

The sensing element of the pressure transducer is a diaphragm machined out of titanium grade 5. On the inside of the diaphragm is mounted a strain-gauge, which converts the pressure generated deformation to a change in resistance. Titanium grade 5 is characterized by excellent corrosion data, very high 0.1% proof stress (85 kp/mm<sup>2</sup>), very little hysteresis and excellent long-term stability. Available with teflon cable or LEMO connection. The connector version allows the sensor to be autoclave cleaned provided the connector is protected by a cover.

## SPECIFICATIONS

|  |   |
|--|---|
| <b>Standard ranges</b>                         | 10 or 20 bar gauge.<br>50, 100, 200, 500 or 1000 bar sealed reference.  |
| <b>Pressure limit</b>                          | 400 % without damage.   |
| <b>Excitation voltage</b>                      | 5 V nom. max. 10 V.   |
| <b>Input resistance</b>                        | 1000 $\Omega$ $\pm$ 0.5 %.  |
| <b>Output resistance</b>                       | 800-1000 $\Omega$ .   |
| <b>Output signal</b>                           | 10 bar - 1000 bar: 2 mV/V $\pm$ 2 %.  |
| <b>Zero balance</b>                            | < $\pm$ 2 % of FSO.   |
| <b>Non-linearity incl. hysteresis</b>          | < $\pm$ 0.5 %, typical $\pm$ 0.2 %.   |
| <b>Resonant frequency of diaphragm</b>         | Bar: 10 20 50 100 200 500 1000<br>kHz: 28 36 54 77 108 160 229  |
| <b>Temperature range</b>                       | -55 °C to +150 °C.  |
| <b>Temperature coefficient of zeropoint</b>    | < 0.02 %/°C of FSO for 10 to 1000 bar.  |
| <b>Temperature coefficient of sensitivity</b>  | < 0.02 %/°C.  |
| <b>Vibration</b>                               | Response less 0.05 % of FSO/g at 30 g peak<br>10-2000 Hz, limited by 12 mm double amplitude.<br>2 axis for 6 hours. IEC 68-2-6 Test Fc. |
| <b>Mechanical shock</b>                        | 1000 g, 1 ms, 6 shocks will not affect calibration.<br>IEC 68-2-27, Test Ea.  |
| <b>Material in contact with pressure media</b> | Titanium grade 5.   |
| <b>Surface roughness (front)</b>               | < 0.4 $\mu$ m.  |
| <b>Weight</b>                                  | 40 g.   |
| <b>Cable</b>                                   | Teflon cable, $\varnothing$ 4.5 mm, 4 x 0.38 mm <sup>2</sup> with shield<br>(standard 2 metres).  |
| <b>Connector</b>                               | LEMO, model EGG, series 0K,<br>5-pole female connector.<br>Mating part: LEMO, model FGG, series 0K,<br>5-pole plug                      |
| <b>Protection class</b>                        | IP67 or better  |

## INSTALLATION

The pressure transducer can be mounted in a HFJ adaptor (please see datasheet 1.8.2).

## ORDERING INFORMATION

PTA x xx

L/x: Cable version with x meter cable length (standard 2 m).

C9: LEMO connector

Pressure range in bar.

PTA-34 Cover for cleaning