



PIEZORESISTIVE PRESSURE TRANSDUCERS

SERIES 13

FOR MEDIA TEMPERATURES UP TO 350 °C

Watercooled pressure transducers are used for accurate static and dynamic measurements in fluids up to 350 °C. The sensor, an integrated silicon cell with four diffused strain gauge resistors, is located in the watercooled section of the oil-filled body. The oil transmits the pressure from the flush steel diaphragm to the sensor, isolating it from the temperature of the media. This allows very accurate pressure measurements over a wide temperature range without influencing the pressure or flow conditions. Originally developed for blow down tests on water-cooled reactors, these transducers find many applications in high temperature chemical reactions and engine tests.

Specifications

Series PA(A)-13 Low Pressure

Pressure Ranges	10	20	50	100	200	400	bar
Overpressure	15	30	75	150	300	500	bar
Signal Output typ.	1000	1000	1000	1000	1000	1000	mV

Series PA(A)-13 High Pressure

Pressure Ranges	400	600	1000				bar
Overpressure	500	700	1100				bar
Signal Output typ.	1000	1000	1000				mV

PA: Sealed Gauge. Zero at atmospheric pressure (at calibration day)

Linearity, incl. Hysteresis	< 0,5 %FS (0,1 / 0,2 %FS at reduced Full Scale)
Repeatability	< 0,1 %FS
Zero	< 20 mV (compensatable externally with R5)
Operating Temperature	20...350 °C media temperature

Temperature Coefficients of Zero
with Change of Media Temperature < 1 mV / 100 °C

Temperature Coefficients of Zero
with Change of Cooling Water Temp. < 0,05 mV / °C

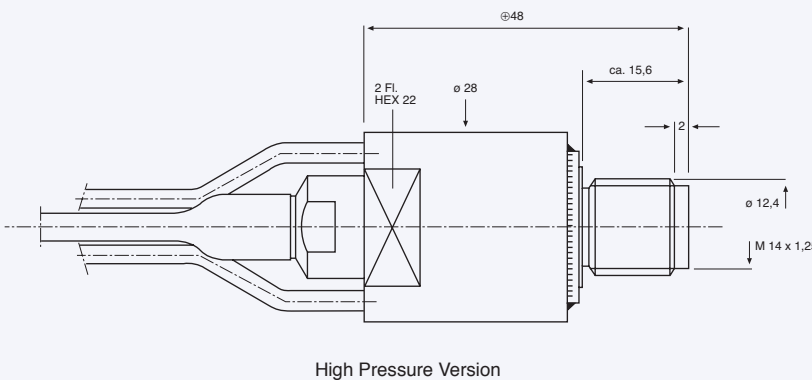
Cooling Water Flow Rate ≈ 0,2 l / Min.

Cooling Water Temperature Rise ≈ 5 °C / 100 °C media temperature

Natural Frequency (Resonance) > 5 kHz

Material Housing Stainless Steel 1.4435 (opt. Hastelloy C-276)

Material Diaphragm Stainless Steel 1.4435 (opt. Hastelloy C-276)



High Pressure Version

Electrical Connections

- blue -OUT
- black +IN
- red +OUT
- white -IN
- yellow -IN

