

## 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

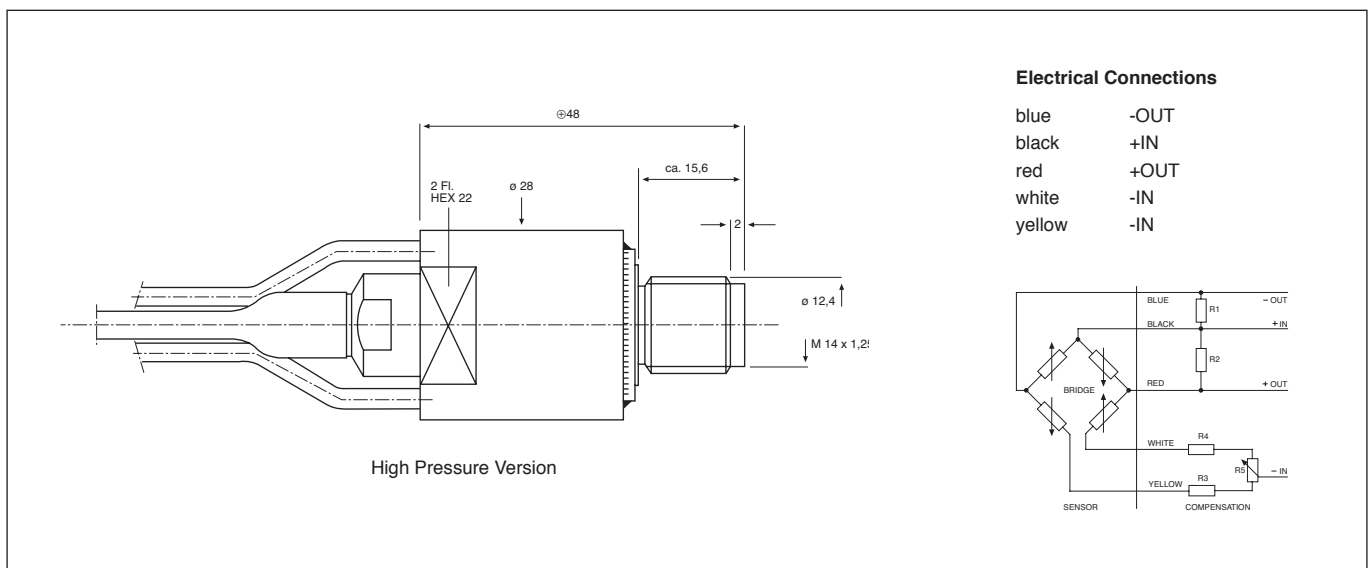
Cooling Water Flow Rate ≈ 0,2 l / Min.

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)



Subject to alterations

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