

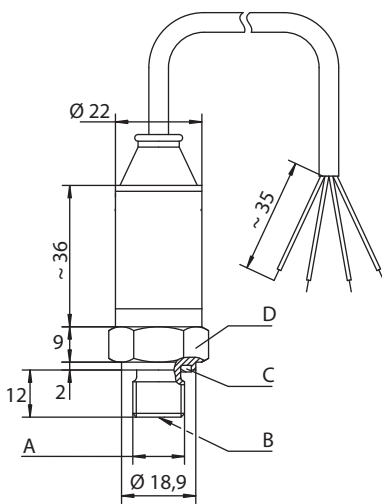


HySense PR 190

Open cable ends, 4 wire



Dimensions



- A ISO 228 – G $\frac{1}{4}$ A
- B Restrictor insert \varnothing 0.6 for measuring ranges > 0 ... 60 bar (0 ... 6.0 MPa)
- C Profile seal acc. to DIN 3869, FKM
- D SW 22

Qualities

Measuring principle	piezo-resistive (poly-cristalline silicon thin film structure on high-grade steel membrane)
Pressure type	relative pressure
Output signal	4 ... 20 mA / 0 ... 10 VDC
Electrical measuring connector	open ends, 4 wires, connection cable 1.5 m
Mechanical connection thread	ISO 228 – G $\frac{1}{4}$ A
Sealing material	profile seal ring acc. to DIN 3869, FKM
Protection type (EN 60529 / IEC 529)	IP 68 K
Casing material	non-corrosive high-grade steel
Membrane material	non-corrosive high-grade steel
Tightening torque	40 Nm (\pm 5 Nm)
Weight	~ 120 g

Wire assignment

Wire color	4 ... 20 mA (two wires)	0 ... 10 V (three wires)
white	free	Signal +
black	– Ub / signal –	– Ub / signal – / GND
green	free	free
red	+ Ub / signal +	+ Ub

Measuring range		Order number	
bar	MPa	4 ... 20 mA	0 ... 10 V
-1 ... 6	-0.1 ... 0.6	3403-32-D6.37	3403-32-D6.39
0 ... 10	0 ... 1.0	3403-26-D6.37	3403-26-D6.39
0 ... 25	0 ... 2.5	3403-40-D6.37	3403-40-D6.39
0 ... 60	0 ... 6,0	3403-21-D6.37	3403-21-D6.39
0 ... 100	0 ... 10	3403-16-D6.37	3403-16-D6.39
0 ... 250	0 ... 25	3403-17-D6.37	3403-17-D6.39
0 ... 400	0 ... 40	3403-15-D6.37	3403-15-D6.39
0 ... 600	0 ... 60	3403-18-D6.37	3403-18-D6.39
0 ... 1.000	0 ... 100	3403-29-D6.37	3403-29-D6.39

Common technical data on page 14. Further output signals on request.
Measuring ranges > 1000 ... 4000 bar (100 ... 400 MPa) on request.

Common technical data

The technical data shown here is valid for the sensors in the HySense® PR 1xx range, mentioned on the previous pages:

- PR 130
- PR 140
- PR 150
- PR 155
- PR 190

Technical data	PR 130 / PR 140 / PR 150 / PR 190	PR 155
Overload range	1.5 x nominal pressure	
Burst pressure	3 x nominal pressure	
Signal type	Two wire analog (4 ... 20 mA), three wire analog (0 ... 10 VDC)	
Supply voltage U_b		
... at 4 ... 20 mA	10 ... 30 VDC	30 V
... at 0 ... 10 VDC	12 ... 32 VDC	–
Current consumption	6.5 mA	50 mA
Overvoltage protection	32 VDC	
Error limit (of final value)	comprises the influences non-linearity, hysteresis, repeatability, zero-point- and span error	
... at +22 °C (room temperature)	± 0.5 %	
... at -15 ... +85 °C	< ± 1.0 %	
... at +85 ... +100 °C	< ± 2.5 %	
... at -40 ... -15 °C	< ± 2.5 %	
Compensation temperature range	-40 ... +100 °C	
Non-linearity	< ± 0.4 % of final value	
Reproducibility	< ± 0.1 % of final value	
Hysteresis	< ± 0.1 % of final value	
Long-term stability	< ± 0.1 % of final value/year	
Response time	< = 1 ms (10 ... 90 %)	
Frequency range	< = 1 kHz	
Isolation resistance	min. 100 MΩ	
Total resistance	$R_g = (U_b - 10 \text{ V}) / 20 \text{ mA}$ (at output signal 4 ... 20 mA)	
Load resistance	$R_L = > 5 \text{ k}\Omega$ (at output signal 0 ... 10 VDC)	
Number of load cycles	> 1 x 10 ⁷	
Medium temperature	-40 ... +125 °C	
Environmental temperature	-40 ... +105 °C (short term +125 °C)	-40 ... +85 °C
Storage temperature	-40 ... +125 °C	
EMV test	EN 50081-2, EN 50082-2	
Vibrational stability	5 mm 10 ... 32 Hz, 20 g 32 ... 500 Hz, DIN EN 60068-2-6	
Shock stability	50 g (11 ms half-sine)	
Mounting orientation	arbitrary	