

Pressure Sensors for highest pressures

accuracy 0.5 %

standard output: 4...20 mA; 2-wire-system
 oder 0...5 VDC; 3-wire-system
 oder 0...10 VDC; 3-wire-system



Description

Pressure sensors for highest pressures are top of the range pressure transducers.

Due to the flexible construction of both the electrical and the mechanical connections the pressure sensor model 3399 is the perfect choice in the field of highest pressure measurement. Reliability, safety, resistance to corrosion and high mechanical load make them suitable for all highest pressure measuring tasks.

The measuring ranges range from 0...2500 bar to the maximum pressure range of 0...8000 bar. The case and wetted parts comprise stainless steel and are thus resistant to chemically aggressive media. The pressure connection and measuring element are uptightened via a metall cone. Therefore there is no risk of leakage in the welding seams.

A relief bore ensures a defined escape for the media in direction of the pressure connection in case of a damage.

Plugs according to DIN EN 175301-803 form a, 4-pin round connectors M12x1 or cable outlets are used to pick up the electrical output signals.

The pressure sensors for highest pressures meet the electronic magnetic compatibility (EMC) requirements to EN 61326.

Features

- high mechanical load rating
- high peak pressure resistance
- high alternating load resistance
- high long-term stability
- corrosion resistant stainless steel design
- mechanical safety conception
- for dynamic and static measurements

Measuring ranges

Gauge pressure
 positive 0...2500 bar bis 0...8000 bar

Applications

Hydraulic presses,
 compressors for high and highest pressures,
 machine tools,
 test machinery

Model: P3399

Technical data

Model	P3399			Option
Pressure typet	positive gauge pressure			
Output signal	4...20 mA - 2-wire system 0...5 VDC - 3-wire system 0...10 VDC - 3-wire system			0...20 mA 3-wire
Accuracy	0.5 % v.EW. 1)			
Ranges	0 ... 2500 bar 0 ... 4000 bar 0 ... 5000 bar 0 ... 6000 bar 0 ... 7000 bar 0 ... 8000 bar			other ranges on request
Sensor element	thin film			
Repeatability	≤ ± 0.05 % of F.S.			
Stability per year	≤ ± 0.2 % of F.S. in rated conditions			
Case	stainless steel 1.4301			
Pressure connection 3)	Description	Sealing cone- Ø	Mounting torque	Maximum pressure
	9/16"-18UNF F250-C Internal thread	3,2	40 Nm	4500 bar
		2,5	80 Nm	8000 bar
	M16x1,5 Internal thread	3,2	40 Nm	4500 bar
		2,5	80 Nm	8000 bar
	5/8" – 18 UNF Internal thread	3,2	40 Nm	4500 bar
		2,5	80 Nm	8000 bar
	M20 x 1,5 Internal thread	3,2	40 Nm	5000 bar
	2,5	80 Nm	8000 bar	
Wetted parts	stainless steel 1.4542 and 1.4534			
Overload limit	≤ 5000 bar 1.2-fold; > 5000 bar 1.1-fold;			
Electr. connection	plug according to DIN EN 175301-803 form a with junction box; round connector M12x1 (4-pin)			cable outlet with 1.5m cable
Power supply	14...30 VDC, (10...30 VDC for output 4...20 mA)			
Power consumption	output 4...20 mA: signal current output 0...20 mA: signal current + 10 mA voltage output: 25 mA			
Load				
- 4...20 mA	$R_A[\Omega] \leq (U_B[V]-10V)/0.02A$			
- 0...20 mA	$R_A[\Omega] \leq (U_B[V]-14V)/0.02A$			
- 0...5 V	> 5 kΩ			
- 0...10 V	> 10 kΩ			
Temperature comp. range	-20 ... 80°C			
Temperature influence	± 0.2 %/10 K, on zero and span			
Response time	≤ 10 ms (within 10 % to 90 % of F.S.)			
Protection type (to EN 60 529/IEC 529)	IP 65 for plug DIN 43650 IP 67 for round connector M 12 x 1			IP 67 for cable outlet
Emission 2)	accord. EN 61326			
Interference 2)	accord. EN 61326			
Electr. protection types	polarity, overvoltage and short circuit protection			
Temperature ranges				
- storage	-40 85 °C			
- media	-20 80 °C			
- ambient	-20 80 °C			
Weight	approx. 0.3 kg			

of F.S. = of full scale value

1) Terminal point adjustment to DIN 16 086, incl. linearity and hysteresis

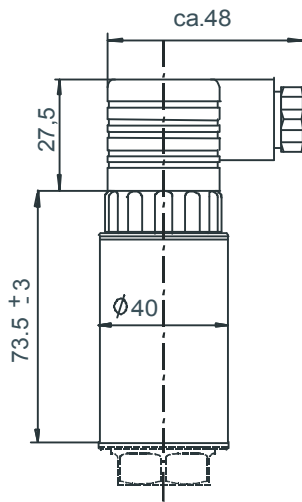
2) Declaration of conformity on request

3) The torque values given above are only examples. The respective values for your mounting position please find in the documentation of your high-pressure equipment supplier.

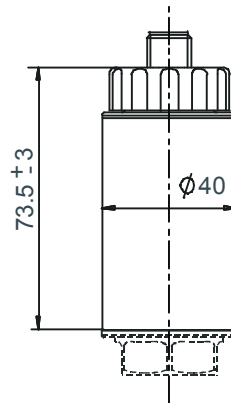
Dimensions (mm)

Case

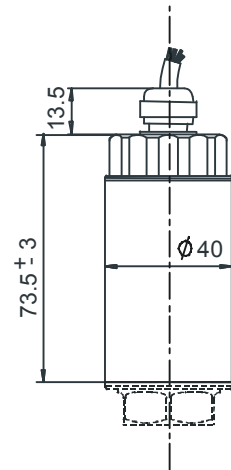
plug DIN 43 650



round plug M12x1

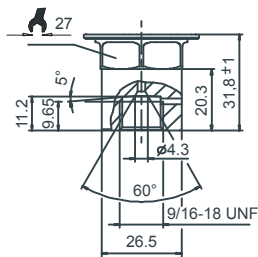


cable outlet

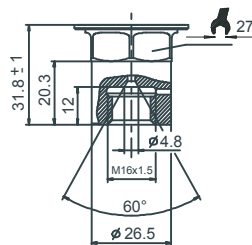


Pressure connections

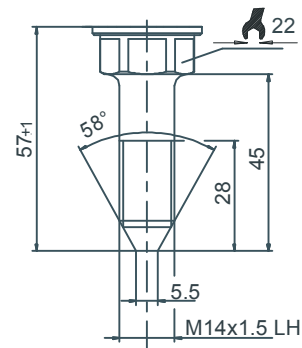
9/16-18 UNF



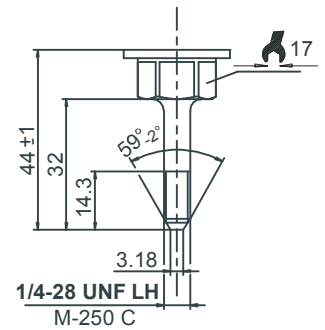
M16x1.5



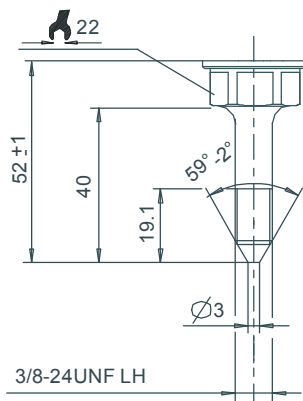
M14x1.5 LH



1/4-28 UNF LH

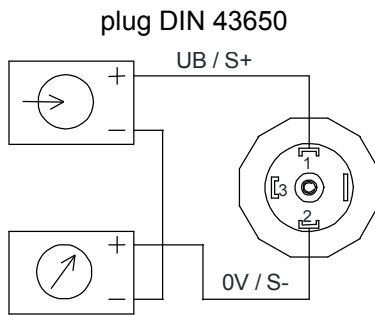


3/8-24UNF LH

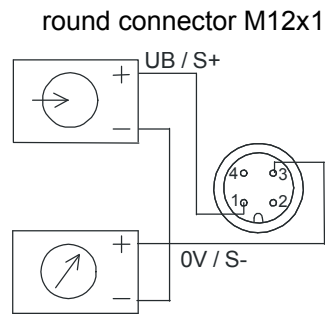


Electrical connection

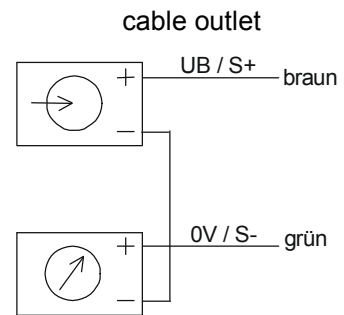
Two-wire-system



E-001

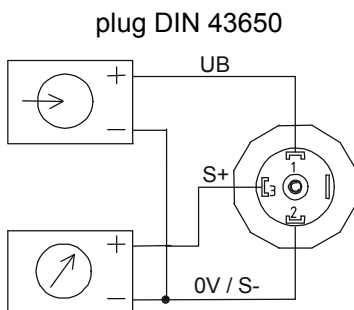


E-033

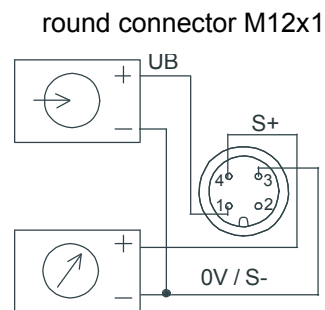


E-015

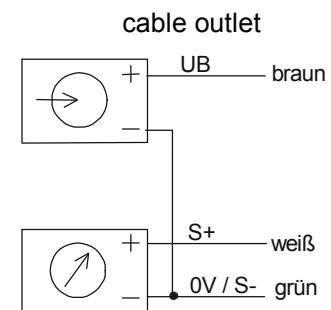
Three-wire-system



E-002



E-034



E-017

Connection table for DIN plug or cable outlet

	4...20 mA (2 - wire)			0...10VDC (3 - wire)		
	Plug M12x1	DIN plug	Cable outlet	Plug M12x1	DIN plug	Cable outlet
Supply: UB+	1	1	brown	1	1	brown
Supply: 0V	3	2	green	3	2	green
Signal: S+		-	-	4	3	white
Signal: S-		-	-	3	2	green

Order details

1. Model
2. Measuring range
3. Output signal
4. Options