

Pressure Sensors for Mobile Hydraulics

with internal diaphragm
for gauge pressure

Accuracy 1%

Standard output: 4...20 mA; 2-wire
or 1...5 VDC; 3-wire



Description:

The pressure sensors model P3374 are especially designed for the needs in the field of mobile hydraulics. The sensor element is placed in the pressure connection in order to be protected against damage. In case of a damage of the pressure sensor can not loose oil.

Measuring ranges from 60 bar up to 600 bar, graded in accordance with EN, cover the whole range of hydraulic applications. The measuring element guarantees a high long-term stability even in applications with frequent changes in load.

The pressure sensor is designed to withstand shock loads up to 1000g and vibrations up to 50g according to DIN IEC 770.

Even extreme thermal shocks have no influence on the operational safety. Apart from the standard electrical connections a cable outlet IP 69 K is available for applications demanding steam jet protection.

The pressure sensors meet the electromagnetic compatibility (EMC) to EN 50081-1, EN 50081-2 and EN 50082-2.

Features

- Measuring ranges from 60 to 600 bar
- Finely graded selection of ranges to EN
- Corrosion resistant stainless steel design
- Extremely resistant to shock and vibrations
- Protection type IP65 up to IP69K
- High peak pressure resistance

Measuring ranges

Gauge pressure
positive 0...60 bar
to 0...600 bar

Applications

Mobile hydraulics:
Farm trucks,
Cranes,
Caterpillars,
Special vehicles.

Model: P3354

Technical data

Model	P3374	Options
Pressure type	positive gauge pressure	
Output signal	4...20 ma - 2-wire system 1...5 VDC - 3-wire system	other on request
Accuracy ¹⁾	1% of F.S.	
Ranges accord. to EN	0 ... 60 bar to 0 ... 600 bar	
Sensor element	thin film	
Repeatability	≤ ± 0.1 % of F.S.	
Stability per year	≤ ± 0.2 % of F.S. in rated conditions	
Case	stainless steel 1.4571	
Pressure connection	G ¼ A to DIN 3852-E pressure port Ø 3,5 mm; M 14x1.5 DIN 3852-E/F pressure port Ø 3,5 mm; 7/16-20 UNF SAE J 514 pressure port Ø 3,5 mm; ¼ NPT pressure port Ø 3,5 mm	CDS-system ²⁾
Wetted parts	Stainless steel 1.4571 and 1.4542	
Overload limit	2-times ; vacuum resistant	
Electr. connection	round connector M12x1 (4-pins) cable outlet with 1.5 m cable	plug to DIN 43650 C with junction box
Power supply	10...30 VDC	
Power consumption – 4...20 mA – 1...5 V	signal current approx. 5mA	
Load – 4...20 mA – 1...5 V	$R_A[\Omega] \leq (U_B[V]-10V)/0,02A$ > 5 kΩ	
Temperature comp. range Temperature influence – zero point – span	0... 85°C ≤ ± 0.3 % /10 K ≤ ± 0.2 % /10 K	
Response time	< 5 ms (within 10 % to 90 % of F.S.)	
Protection type (EN 60529/IEC 529)	IP 67 for round connector M12x1 IP 69 K (steam jet protection) for cable outlet	IP 65 for DIN 43650 C plug
Emission ²⁾	to EN 50 081-1 and EN 50 081-2	
Interference ³⁾	to EN 50 082-2 respectively DIN 40 839	
Shock	1000g to IEC 770	
Vibrations	50g to IEC 770	
Electric. protection types	Polarity, overvoltage and short circuit protection	
Temperature ranges – Storage – Media – Ambient	-40 ... 85 °C -40 ... 125 °C -30 ... 85 °C	Ambient temp. -40 ... 85 °C
Weight	Approx.. 0,2 kg	

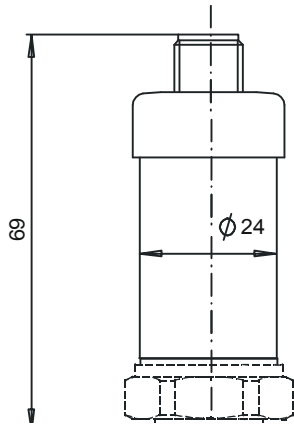
of F.S. = of full scale value

- 1) Terminal point adjustment according to DIN 16 086, incl. linearity and hysteresis
- 2) Minimised pressure port for dampening of pressure peaks
- 3) Declaration of conformity on request

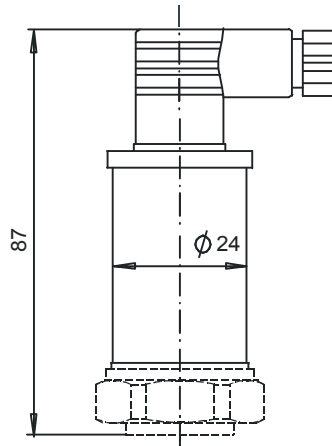
Dimensions (mm)

Case

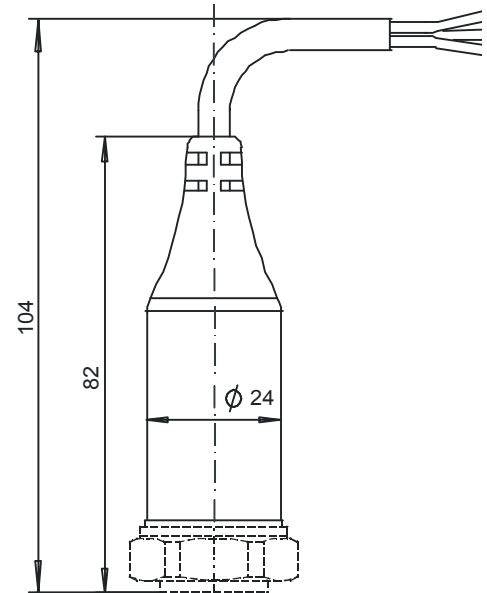
Round connector
M12x1



Plug to DIN 43 650 C

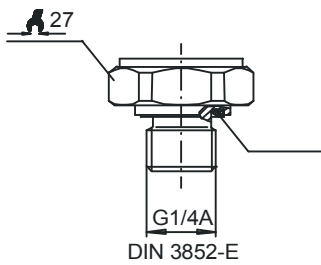


Cable output

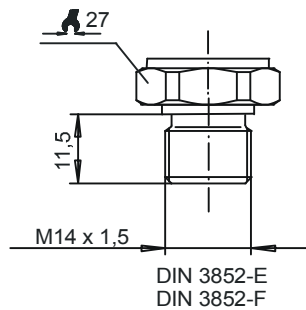


Process connection

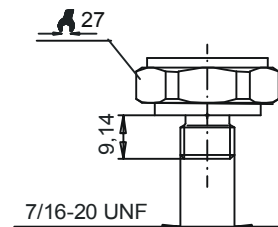
G 1/4



M14x1,5

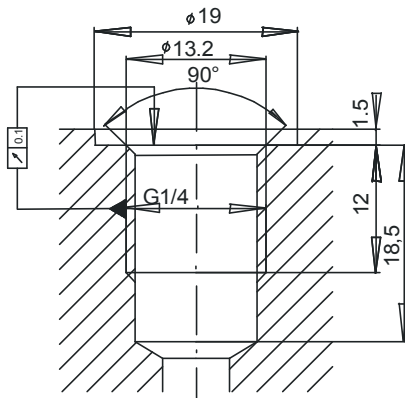


7/16-20 UNF

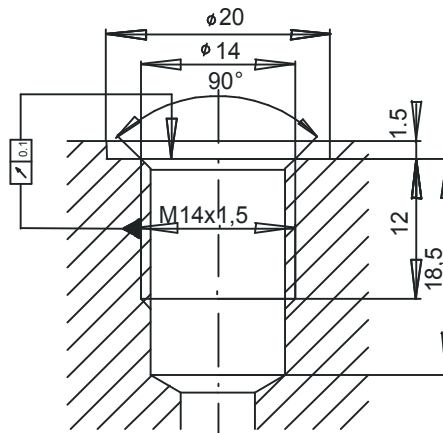


Screw-in-aperture to DIN

G 1/4 DIN 3852-E



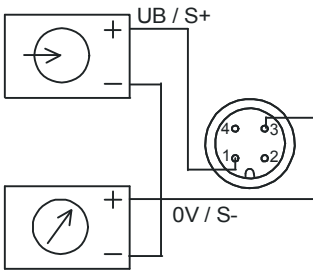
M14x1,5 DIN 3852-E



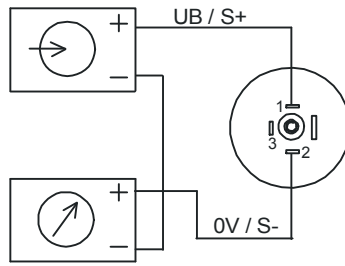
Electrical connection

Two-wire system

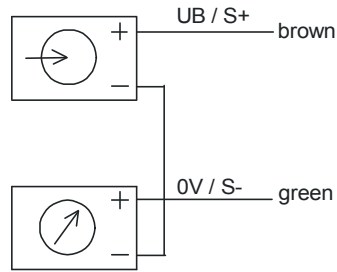
Round connector M12 x 1



Plug to DIN 43 650 C

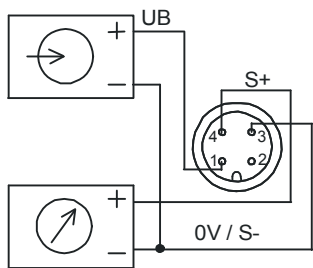


Cable outlet

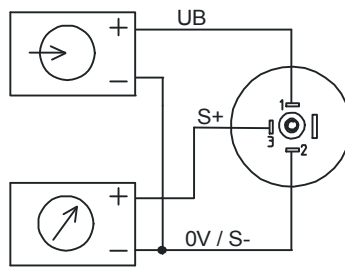


Three-wire system

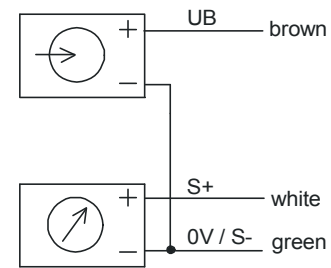
Round connector M12 x 1



Plug to DIN 43 650 C



Cable outlet



Connection table for 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

Subject to technical changes