

# P30-2

## Pressure Transmitter Datasheet



**\*High Quality\*  
3 Years Warranty**

### At a Glance

- Premium Pressure Transmitter for gauge and pressure measurement with 3 years warranty
- High repeatability and long-term stability
- High overload resistance
- Measuring ranges up to 40 bar (600psi)
- Customer specific measuring ranges available
- Flush mounted or manometer connection
- Housing and connection made from 316L

## Overview

### Application

P30-2 transducers have been designed for precise measurement of gauge pressure in simple industrial applications. The measurement ranges available start from -200 ...200 mbar or 0...400 mbar to the highest measurement ranges of -1 ... 40 bar or 0...40 bar. Custom ranges are also available for volume applications. P30-2 transducers are made from AISI 316L stainless steel for improved robustness and have a permissible overload is four times the nominal span.

Typical applications: Hydraulic systems, compressed air, plant construction, pumps, filling and weighing machines, level measuring, packaging machines

### Function

The P30-2 pressure transmitter is available with a process connection with an internal diaphragm or in a flush-mount design. The process pressure deflects the metal process isolating diaphragm of the sensor and the fill fluid transfers the pressure to a Wheatstone bridge (semiconductor technology). As pressure varies, the related bridge output voltage changes and is measured by the connected device. The transducer can be supplied with a 0...10V (3-wire) or 4...20mA (2-wire) output.

## Technical Data

<b>Measuring Range</b>	0 ... 40bar
<b>Long Term Drift</b>	0.2% Full scale (FS)/year (non-cumulative)
<b>Accuracy</b>	0.5% FS (including linearity, repeatability, zero point and span, hysteresis)
<b>Thermal Error</b>	1.0% FS (<1bar measuring range) 0.8% FS (≥1bar measuring range)
<b>Process Temperature</b>	-25 ... +85°C (-13 ... 185°F)
<b>Ambient Temperature</b>	-40 ... +70°C (-40 ... +158°F)
<b>Storage Temperature</b>	-40 ... +85°C (-40 ... +185°F)
<b>Ambient Humidity</b>	4 ... 95% HR (non-condensing)
<b>Response Time</b>	6ms (dead time)
<b>Setting time</b>	10ms (t63)
<b>Lifetime</b>	>100M cycles

## Mechanical Configuration

<b>Pressure Port</b>	See under "Process Connections"
<b>Wetted Parts</b>	Membrane: 1.4435 /X2CrNiMo 18-14-3), AISI 316L Fitting: 1.44044 (X2CrNiMo 17-12-2), AISI 316L
<b>Non-wetted parts</b>	Housing 316L; pressure venting element PBT/PC; lower part connector PPSU; design element PMT/PC; Valve connector PA (sealing NBR; screw V2A)
<b>Process media</b>	Gases, vapors, liquids and dust
<b>Mounting Position</b>	Any position
<b>Electrical Connection</b>	Plug connection
<b>Mis-wire protection</b>	Yes, incl. overvoltage protection
<b>Protection</b>	IP65, NEMA Type 4X
<b>Vibration</b>	Warranted for 5 ... 200H: 0.05g <sup>2</sup> /Hz (IEC 60068-2-64:2008)
<b>Approvals</b>	CE, conforms to European Pressure Directive, RoHS compliant, CSA C/US
<b>Weight</b>	Approx. 250g

## Output Signals

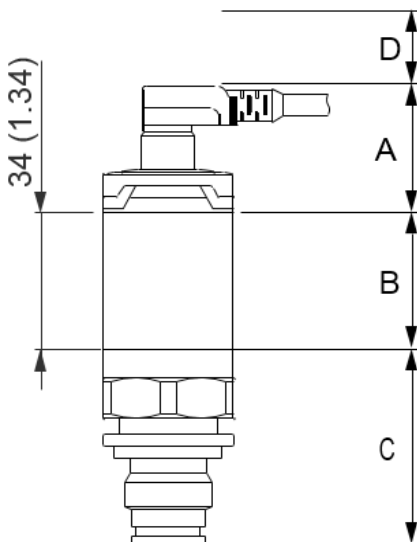
<b>Voltage Output</b>	0 ... 10V
<b>Output Signal</b>	3-wire, linear characteristic curve
<b>Max Burden</b>	Load ≥ 5kΩ
<b>Current Output</b>	4 ... 20 mA
<b>Output Signal</b>	2-wire, linear characteristic curve
<b>Signal Range</b>	3.8 ... 20.5 mA
<b>Error Signal</b>	> 21mA according to NAMUR NE43
<b>Max. Burden</b>	Depending of supply voltage: $R = (\text{Supply voltage} - 6.5V)/22\text{mA}$
<b>Supply Voltage</b>	12 ... 30 V DC; 10 ... 30V DC (4 ... 20 mA version)
<b>Current Consumption</b>	≤ 12mA; ≤ 26mA (4 ... 20mA version)
<b>Fuse Protection</b>	Micro fuse 500mA (slow)

## Measuring Ranges

(All data in bar)

Standard Measuring Range	Customized, maximum Measuring Range	Smallest Measuring Span	Overload Limit	Burst Pressure
0 ... 0.4	-0.4 ... +0.4	0.4	1	1.6
0 ... 0.6	-0.6 ... +0.6		6.7	10
0 ... 1.0	-1.0 ... +1.0		2.7	4
0 ... 1.6	-1.0 ... +1.6		6.7	10
0 ... 2.5	-1.0 ... +2.5	0.8	10.7	16
0 ... 4	-1.0 ... +4.0			
0 ... 6	-1.0 ... +6.0	2.4	16	24
0 ... 10	-1.0 ... +10	2	25	40
0 ... 16	-1.0 ... +16	5		64
0 ... 25	-1.0 ... +25			100
0 ... 40	-1.0 ... +40	8	100	160

## Process Connections/Pressure Ports



### A: Electrical Connection

M12: 45mm (1.77")

Valve connector: 52mm (2.05")

### B: Basic Housing

34mm (1.34")

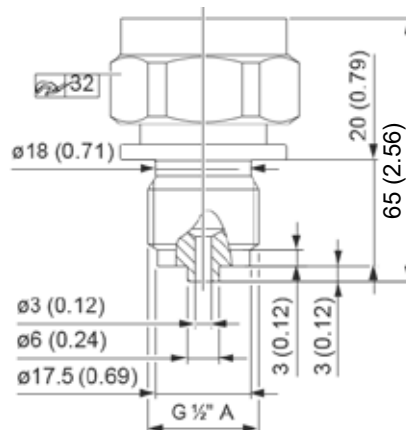
Ø 31.5 mm (1,24")

### C: Process Connections

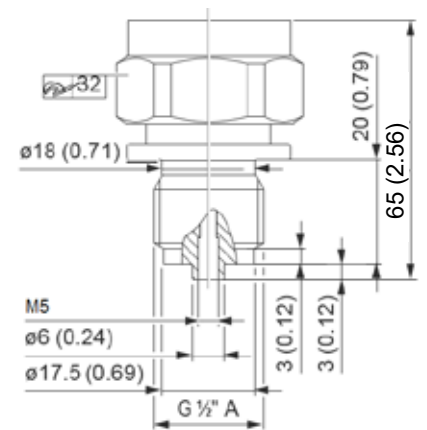
See sketches

### D: Mounting Space

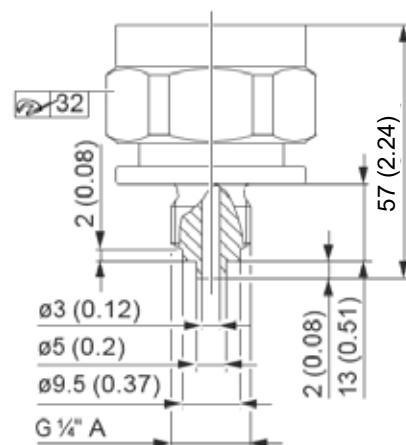
Sufficient space to mount plugs needs to be provided.



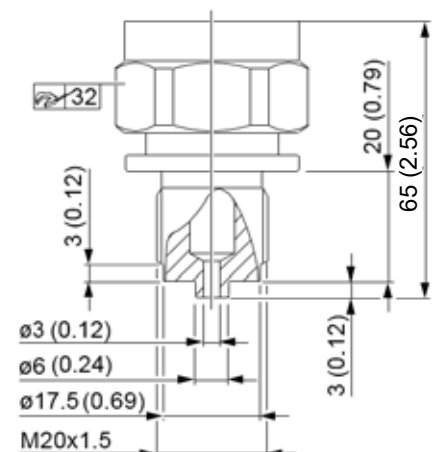
G 1/2" A, EN 837, ISO 228



G 1/2" A with M5 inner thread (optional with mechanical damping)

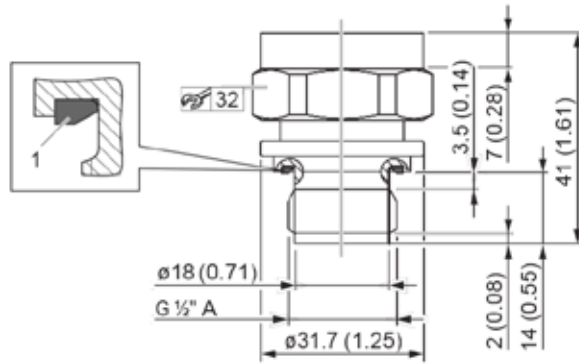


G 1/4" A, EN 837, ISO 228

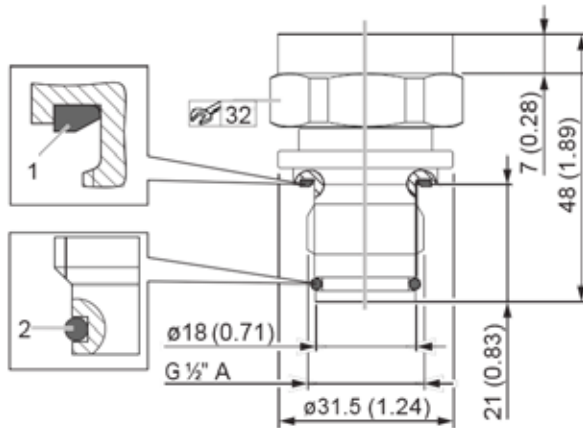


M20x1,5, EN 837

## Process Connections



Flush mount, G 1/2" A, DIN3852, ISO 228

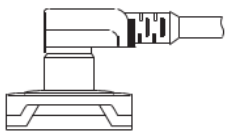


Flush mount, G 1/2" A, DIN3852, ISO 228, with O-ring

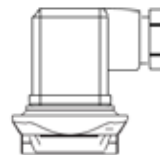
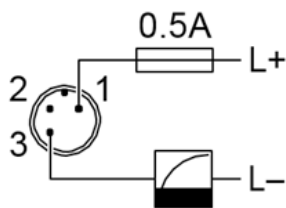
- 1. FKM pre-installed gasket
- 2. FKM pre-installed O-ring

## Electrical Connection

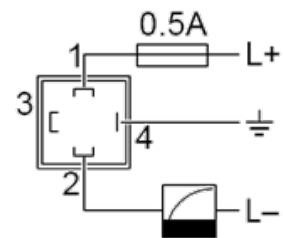
### Current Output



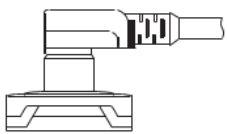
M12 plug



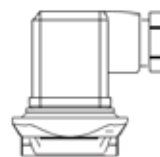
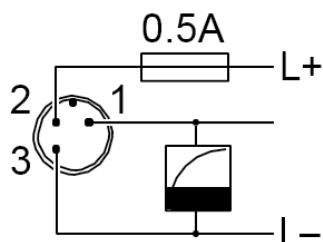
Valve connector



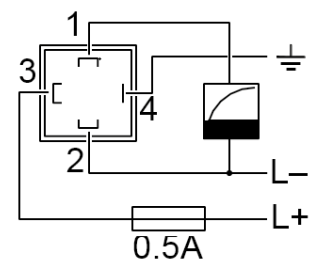
### Voltage Output



M12 plug



Valve connector



## Ausführungen / Bestellungenangaben

**P30 - 2 x x - x 0 x x x - 0 0 x**

### Process connection

#### Internal diaphragm

- 1 - G 1/2" A, EN 837, ISO 228
- 2 - G 1/4" A, EN 837, ISO 228
- 3 - M20 x 1.5, EN 837, DIN 13
- 4 - G 1/2" A, with M5 inner thread
- 5 - G 1/2" A, with mechanical damping

#### Flush mounting

- 7 - G 1/2" A, DIN3852, ISO 228
- 8 - G 1/2" A with O-ring

### Electrical connection

- 1 - M12 Connector
- 2 - Valve connector ISO4400 M16
- 3 - Valve connector ISO4400 NPT1/2

### Output

- 1 - 4...20mA (2-wire)
- 2 - 0...10V (3-wire)

### Output Filter

- 0 - none
- 1 - 100ms
- 2 - 200ms
- 3 - 300ms
- 4 - 400ms
- 5 - 500ms

### Test and Calibration

- 0 - Manufacturing test report
- 1 - Calibration certificate

### Measuring Range

- 03 - 0..400 mbar
- 04 - 0..600 mbar
- 05 - 0..1.0 bar
- 06 - 0..1.6 bar
- 07 - 0..2.5 bar
- 08 - 0..4 bar
- 09 - 0..6 bar
- 10 - 0..10 bar
- 11 - 0..16 bar
- 12 - 0..25 bar
- 13 - 0..40 bar
- 99 - Customized (starting at -1 bar)

On request: Customized version, connection plug M12, free of oil and grease, OEM-packaging

## Contact



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