

# VYDAS

## INTERNATIONAL MARKETING

*Specialist Sensors & Instruments for Industry*



### **PRESSURE TRANSMITTERS PX SERIES**

#### APPLICATIONS

Pressure transmitters of the PX Series are suitable for overpressure, underpressure and absolute pressure measurements of liquids, vapours and gases, in the range from 0.10 up to 1000 bar. They are mainly used for industrial measurement and automatic control equipment.

#### FEATURES

- High stability and accuracy
- Small dimensions and weight
- High reliability and durability
- Convenient pressure and electrical terminals
- Wide range of application

#### CONSTRUCTION

The transmitter consist of two main compact units – a measurement head and an electronic measurement set. In the acid- resisting steel housing of the measurement head is a high quality piezoresistance pressure transducer. The housing of electronic measurement set consist of two dust-proof and splash-proof chambers. In one of them is the electronic measurement set; in the second – the overvoltage protection and the terminal strip. The transmitter unit has the switch giving a possibility of 4 changes of the measurement range.

#### PRINCIPLE OF OPERATION

The measured pressure acts through the separating diaphragm and silicon oil to the silicon sensor consists of diffusion resistors connected as a Wheatstone bridge. The output signal of this bridge is proportionally depending from the acting pressure. The electronic circuit converts this voltage signal to the standard current or voltage output signal in the 2 wire or 3 wire connection system.

#### TECHNICAL DATA

Pressure range* (bar)	0,2; 0,5 -0,2; -0,5	1; 5; 10; 20; 50; 100 -1
Allowable overpressure	2,5 (bar)	3 x FS

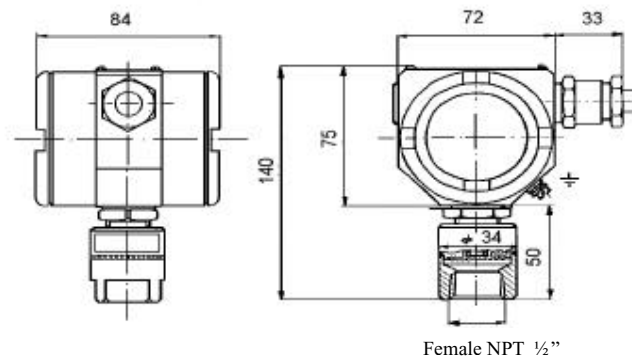
\* Given values from 0.2 ...20 bars are concerning to the absolute pressure also.

The continual development of our products may cause changes to the specification which can not be published in this document

VYDAS INTERNATIONAL MARKETING Swan House Passfield Business Centre Lynchborough Road Passfield Hants GU30 7SB UK  
Telephone: 44 (0)1428 751822 Fax: 44 (0)1428 751833 Email: [info@vydas.co.uk](mailto:info@vydas.co.uk) Website: [www.vydas.co.uk](http://www.vydas.co.uk)

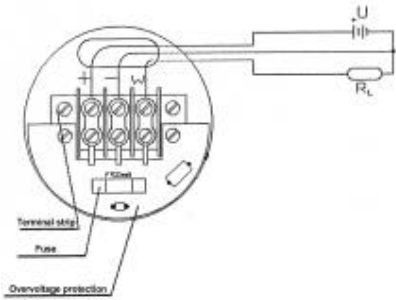
Supply voltage (U)	15...36V DC
Output signal	4...20mA } 2 wires 20...4mA } 0...20mA } 3 wires 20...0mA } 0...10V }
Relocatability of the range beginning	+10% and -10% for the 0..10V output
Changing of the range wide	-10%; optionally - the range changing for 75%, 50% and 25 % for transmitters with the range ±0.4 bar
Load resistance (R)	$R \leq \frac{U - 15V}{20mA} \times 10^3 [\Omega]$ for the 4...20mA output ±2kΩ for the 0...10V output
Base error	≤ 0,5%; optionally ≤ 0,25%
Repeatability	0,05%
Ambient temperature range	- 20...+ 70°C
Medium temperature	- 20...+ 85°C
Compens. temp. range	0... + 70°C (standard) - 20...+ 85°C (option)
Temp. errors in compens. temp. range:	zero error: ≤ 0,25%/10°C typ. ≤ 0,5%/10°C max. range error ≤ 0,25%/10°C
Position change error	negligible
Housing protection	IP65
Pressure terminal	according to the ordering code
Electrical terminal	the terminal strip
Weight	about 1kG
Materials:	
- separating diaphragm	316Lss
- housing of the measurement head	1H18N9T
--housing of the electronic measurement set	Al. Alloy

## DIMENSIONS

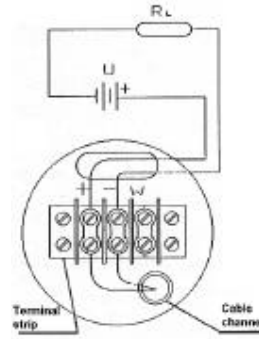


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# ELECTRICAL CONNECTION CIRCUIT DIAGRAM



3 wire



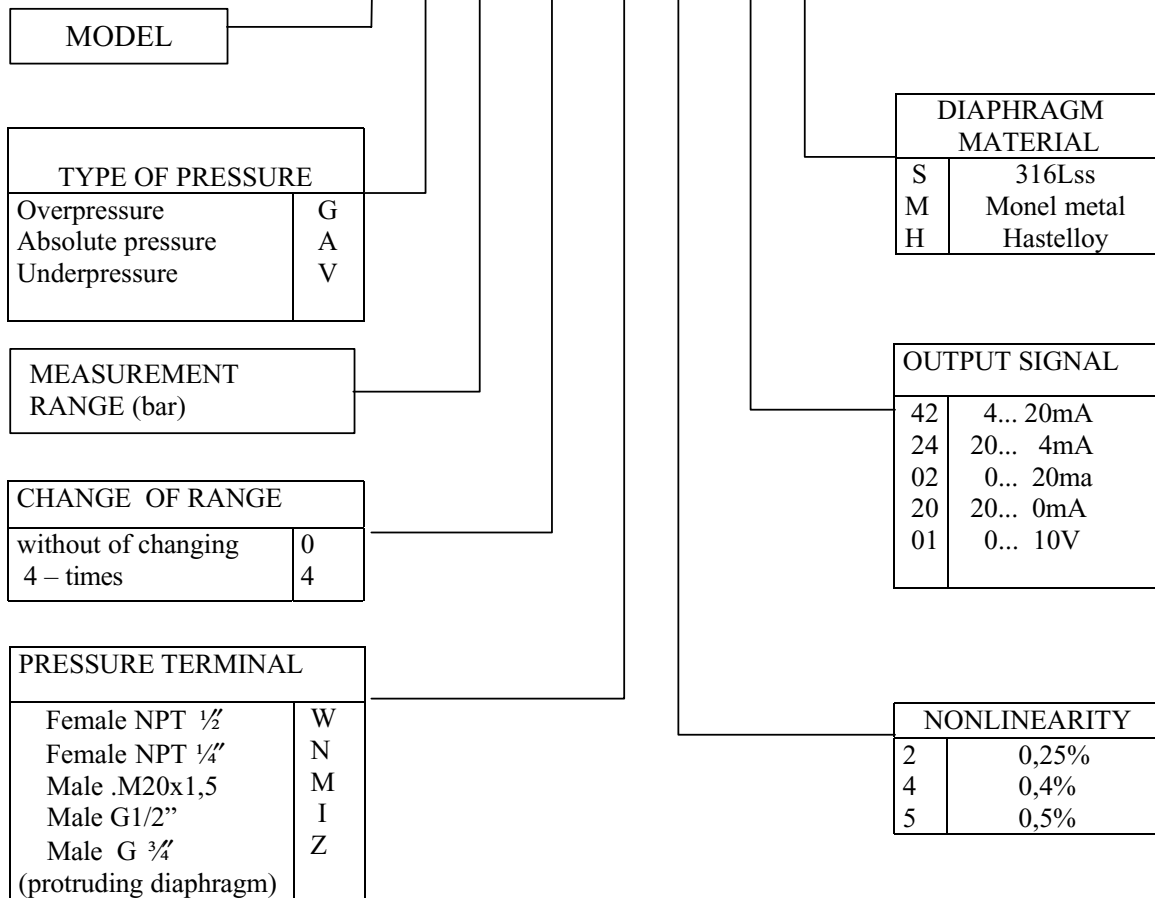
2 wire

## ORDERING INFORMATION

Specify the model according to the ordering code:

Pressure transmitter

PX X - X - X - X - X - X - X - X



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### Ordering example:

PX G - 5 - 0 - M - 2 - 42 - S medium: the water,temp.70... 85°C, ambient temp. 0...50°C

PX – Pressure transmitter

G – Overpressure measurement

5 – Measure range 0...5 of bar

0 – Without range changing

M – Pressure terminal with the metric thread M20x1.5 (manometric)

2 – Nonlinearity 0,25%

42 – 4...20 mA output signal

S – Diaphragm material 316Lss.

### NOTES:

1. As a special order it is possible to specify the construction of non standard transmitters.
2. When ordering please specify additionally: the type and temperature of the medium and the ambient temperature, as indicated in the order example.
3. The pressure terminal with the protruding diaphragm marking „Z” can be used in the range of the pressure from 0,5 up to 100 bar.



**VYDAS**

VYDAS INTERNATIONAL MARKETING  
Swan House PBC Lynchborough Rd  
Passfield Hampshire GU30 7SB UK

**Tel: 44 (0)1428 751822**

**Fax: 44 (0)1428 751833**

**Email: [info@vydas.co.uk](mailto:info@vydas.co.uk)**

**Web: [www.vydas.co.uk](http://www.vydas.co.uk)**

**PELIRON** ® Ltd