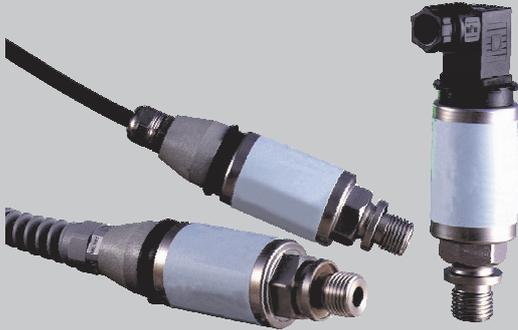




Pressure Transmitter

Compact Design

Series 120/160



Ranges from -1... 0 bar up to 400 bar Gauge

4-x Overload

Various Output Signals

Wide Selection of Pressure Ports

Built-up to approx. 65 mm

GENERAL

The transmitter features stability and toughness demanded by industrial applications.

The possibility to start at vacuum with the measuring range offers additional use not only in the industrial pressure range.

DESCRIPTION

A rugged measuring diaphragm with CVD thin-film-sensor features high overload capacity.

The wide choice of electrical outputs as well as both electrical connections (version 120 resp. 160) and pressure ports as e.g. G 1/2-in, G 1/4-in, NPT 1/4-in; UNF means the unit is suitable for most applications.

The welded stainless steel construction ensures long service life.

TECHNICAL DATA

INPUT

Measuring span

from -1 ...0; 0...1 bar
Up to 0...400 bar gauge

Overload limit

Minimum 4-x nominal pressure
(Return to Zero without remaining offset)

Burst pressure

35 x nominal pressure up to 4 bar
20 x nominal pressure up to 40 bar
5 x nominal pressure up to 400 bar

Fatigue Life

> 100 millionen FS cycles

Zero Tolerance

1 % of span

Tolerance of Span

1 % of span

Process Media

Gases, Vapours and Liquids

Pressure Port

See order codes

Wetted parts

Stainless steel 17-4 PH (X5CrNi-CuNb16-4)

OUTPUT

Output Signal

See order codes

Characteristic

Linear

Comformity

± 0,5 % of span (Best-fit-setting)

Load

Two-wire technology

$$R_L = \frac{U_{Supply} - 7[V]}{0,02[A]} [Ohm]$$

Three-wire technology $\geq 2 \text{ k}\Omega$

Long Term Drift

0,2 %/ year [of span] (non-cumulative)

POWER SUPPLY

DC - Voltage

Version	Output signal	Supply Voltage
Voltage	all	$U_s = U_{out} + 1,5 [V]$ (up to max 35 V ²⁾)
Current	4...20 mA	7 ...35 V ²⁾

Consumption

Version	Voltage	Current
Required	8 mA	20 mA

Effect of Supply

0,1 % / 10 V of span

AMBIENT CONDITIONS

Operating Temperature ¹⁾

-40...+125 °C

Permissible Process Temperature

-40...+125 °C

Compensated Temperature Range

-20 ...+80 °C

Temperature Effect

$\geq 0,2 \%$ / 10 K (within compensated range)

Vibrations

35 g_{pp} sinusoidal, 5 to 2000 Hz

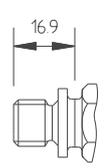
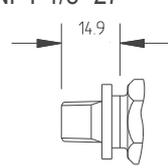
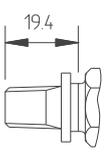
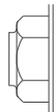
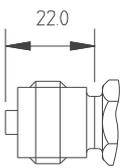
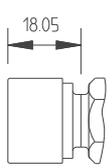
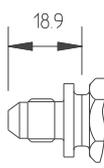
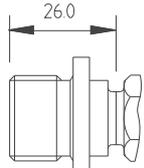
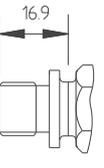
Electromagnetic Compatibility

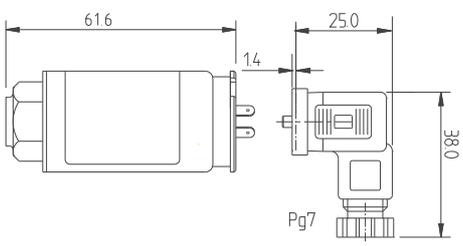
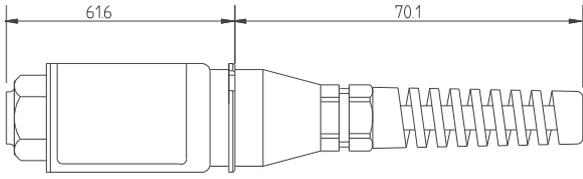
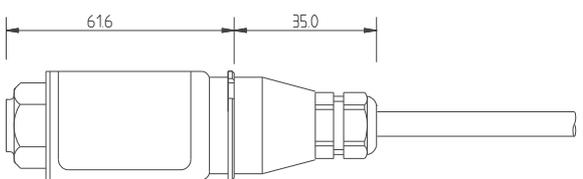
CE approval, UR recommended

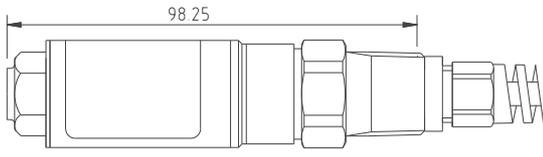
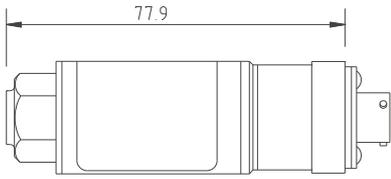
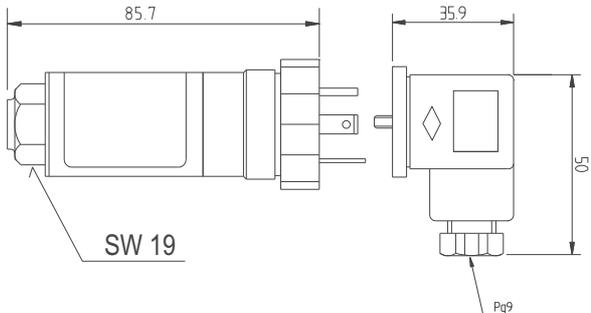
¹⁾ depending from electrical connection

²⁾ $\geq 100 \text{ }^\circ\text{C}$ limited to 24 VDC

DIMENSIONS

Code		Code	
01	G 1/4 A 	08	NPT 1/8 -27 
02	NPT 1/4 -18 	09	G 1/8" female 
03	G 1/2 A 	00	G 1/4 female 
04	7/16 UNF 37° cone 	18	G 1/2 A 
05	G 1/4 with O-Ring 		

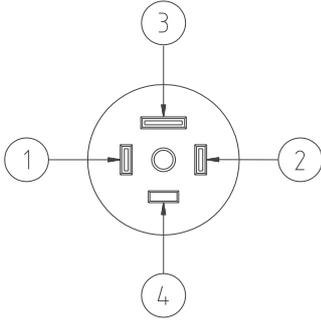
Code	Series 120
A	
F	
D	

	Series 160
3	
C 1	
G	

Series 120

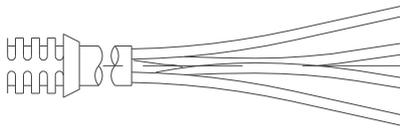
Code

A



Allocation	Current 4...20 mA	Voltage Volt
1	Output plus	Supply plus
2	Output minus	Supply/Output minus
3	Ground	Output plus
⊥	Not allocated	Ground

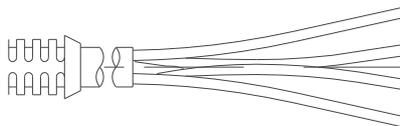
**D
F**



red	Output plus	Supply plus
black	Output minus	Supply/Output minus
white	Not allocated	Output plus
screen	Ground	Ground

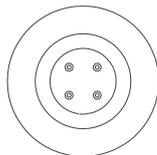
Series 160

3



red	Output plus	Supply plus
black	Output minus	Supply/Output minus
white	Not allocated	Output plus
screen	Ground	Ground

**1
C**



A	Output plus	Supply plus
B	Output minus	Output plus
C	Not allocated	Supply/Output minus
D	Ground	Ground

G

1	Output plus	Supply plus
2	Output minus	Supply/Output minus
3	Not allocated	Output plus
⊥	Ground	Ground

GENERAL

Housing

Stainless steel 316 L (1.4435)

Mode of protection

IP 65 for el. vers. A, B, C, D, G, 1, 2, 3
IP 67 for el. version F
IP 30 for el. version 3 with cable

Electrical Connection

See order codes

Mounting

Position not critical

- Via process coupling according to version. It must be assured that during mounting in liquid filled pipes/containers the displaced volume freely can escape. For process temperatures above + 120 °C the use of a syphon is recommended.

Gasket

- According to versions with anaerobe sealing material.

Pressure spikes

- Especially within hydraulic systems with fast acting valves (shut down) transient pressure spikes are present. It is recommended that a restrictor respectively a damping device is fitted to protect the transmitter.

Torque

max. 18.5 Nm (SW 19)

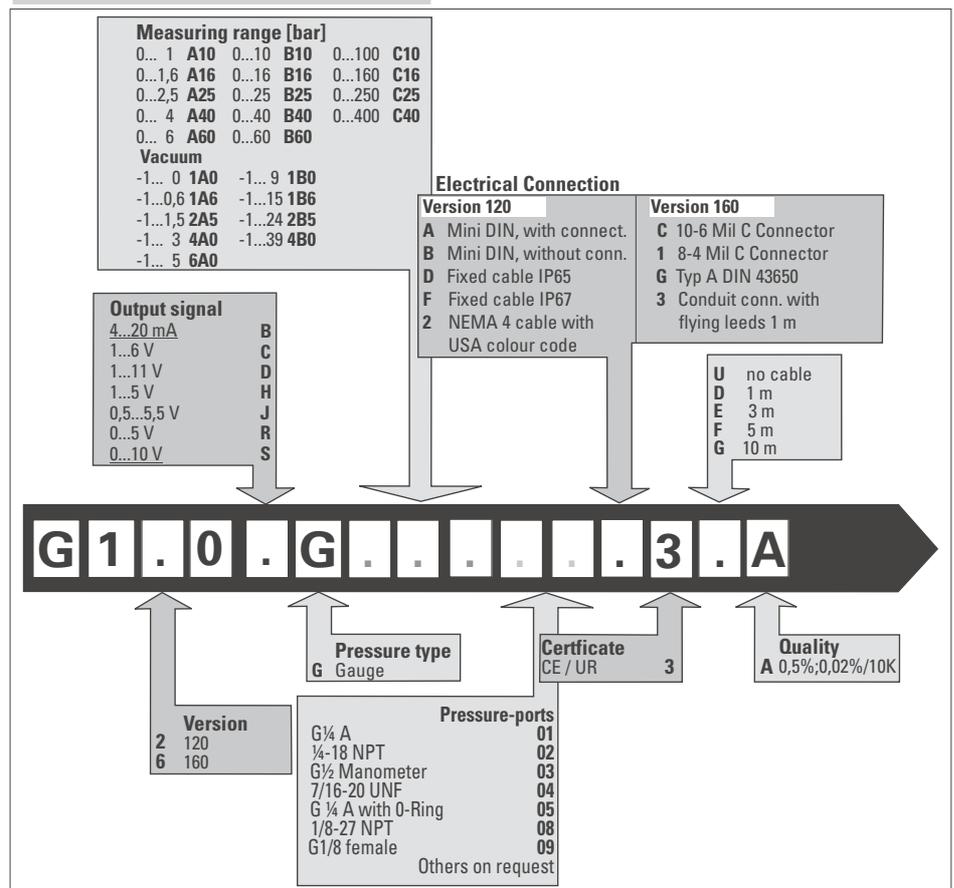
Weight

approximately 100 g
(Without connector, cable appr. 75g/m)

Accessories

Instructions see
www.pma-online.de/en/products

ORDER STRUCTURE



Deutschland

PMA Prozeß- und Maschinen- Automation GmbH
Miramstrasse 87, D-34123 Kassel

Tel./Fax: (0561) 505 - 1307/-1710
E-mail: mailbox@pma-online.de
Internet: <http://www.pma-online.de>

Your local dealer: