

**Introduction:**

P60 Series are based on microfused technology which employs micromachined silicon piezoresistive strain gages fused with high temperature glass to a stainless steel diaphragm. All the key processes were operated in our 10,000 class cleaning room.

There is a custom ASIC in P60 transducers, Super accuracy is achieved through advanced digital compensation with an aggressive compensated temperature range of -20°C to 85°C.

The wetted material is made of stainless steel, High burst pressure is achieved by its solid structure

Weatherproof and exceeds the latest heavy industrial CE requirements, including surge protection. The circuit is protected from reverse wiring at input and short circuit at output.

**Features:**

- Pressure Range: 0-3.5MPa...100MPa
- Wide range of compensation temp. (-20~85°C)
- Stainless steel welded, without O-ring
- 5X burst pressure
- Reverse polarity protection
- Surge voltage protection
- Input/Output overvoltage protection
- Small size; low cost



**Application:**

- Hydraulic/Pneumatic Control Systems
- Energy and Water Management
- Pumps and Compressors
- Automotive Test Stands
- Agriculture Equipment

**Performance Specifications**

Ambient Temperature: 25° C (unless otherwise specified)

Parameters	Min.	Typical	Max.
<b>Pressure Range</b>	0-3.5MPa...100MPa		
<b>Output</b>	4-20mA; 0.5~4.5V(Ratiometric); 1-5V; 0-5V; 0-10V		
<b>Accuracy (%FS)</b> combined linearity <sup>1</sup> , hysteresis and repeatability.	-0.2	±0.1	0.2
<b>Temp. characters</b>			
Operation Temp. (°C) <sup>2</sup>	-40		125
Compensation Temp. (°C)			
≤35MPa	-20		85
>35MPa	-10		70
<b>Total error band (%FS)<sup>3</sup></b>			
≤35MPa	-1	±0.5	1
>35MPa	-2	±1	2
<b>Long term Stability</b>			
Zero (±%FS annual)		0.2	
Span (±%FS annual)		0.1	
<b>Frequency (Hz)</b>	1k		
<b>Insulation Resistance<sup>4</sup></b>	50MΩ/250V		

<b>Load Resistance RL (Ω)</b>	
<b>Current output</b>	RL < 50X (Vsupply-8)
<b>Voltage output</b>	RL > 20k
<b>Anti-Shock</b>	50g, 11MSEC HALF SINE SHOCK PER MIL-STD-202G, METHOD 213B, CONDITION A.
<b>Anti-Vibration</b>	±20g MIL-STD-810C, PROCEDURE 514.2, FIGURE 514.2-2, CURVE L.
<b>Water proof</b>	
<b>Cable</b>	IP67
<b>Connector</b>	IP65
<b>Over pressure</b>	2 times of rated pressure or 150MPa whichever is less
<b>Burst pressure</b>	5 times of rated pressure or 150MPa whichever is less
<b>Wetted material</b>	Stainless steel 17-4PH and 304
<b>Fasten torque recommended</b>	≤ 7MPa 20N·m; 10-50MPa 40N·m; 70-100MPa 80N·m
<b>Life</b>	> 10 <sup>7</sup> full range pressure

1. BFSL (best fitting straight line)
2. Operation temp. of cable is 105°C maximum / M12 Connector operation temp. range: -25~85°C
3. Total error band: total output error including Zero, Span, non-linearity, temp. error within compensated temperature range.
4. Measured between terminals and case

**CE Compliance:**

EN55032 Emissions Class A&B

IEC61000-4-2 (ESD) : 15KV (air) / 8KV (contact)

IEC61000-4-3 Radiated, Radio-Frequency Electromagnetic Field Immunity (10V/m, 80MHZ~1GHZ)

IEC61000-4-4 Electrical Fast Transient Immunity (1kV)

IEC61000-4-5 Surge Immunity

Input to Output: ±1kV/42Ω; Leads to Case: ±1kV/12Ω;

Output to GND: ±1kV/42Ω (The third item only apply to Voltage Output)

IEC61000-4-6 Immunity to conducted disturbances Induced by Radio Frequency Fields

150kHz~80MHZ, 3V Level for current output; 10V Level for Voltage output

IEC61000-4-9 Pulse Magnetic Field Immunity (100A/m Peak)

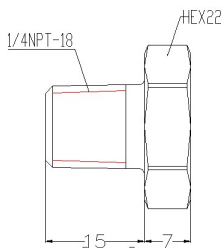
For all CE compliance tests, allowed output deviation within:

±1%FS (for current output); ±1.5%FS (for voltage output)

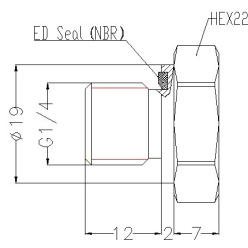
**Dimensions (mm)**

**Pressure port and Hex**

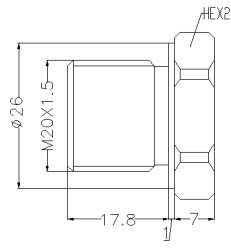
1. 1/4NPT



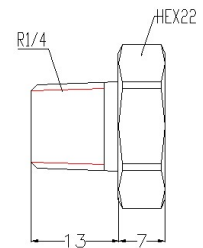
2. G1/4



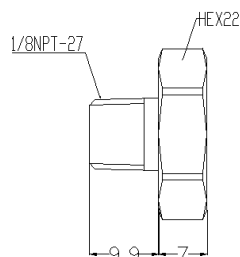
3. M20X1.5



4. R1/4

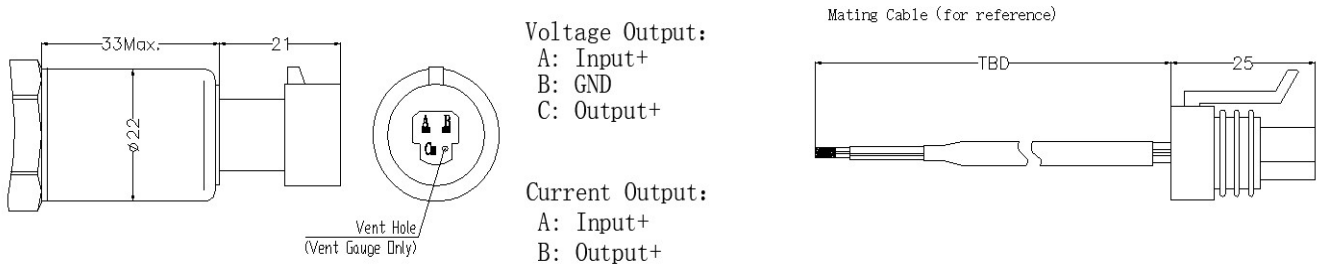


5. 1/8NPT

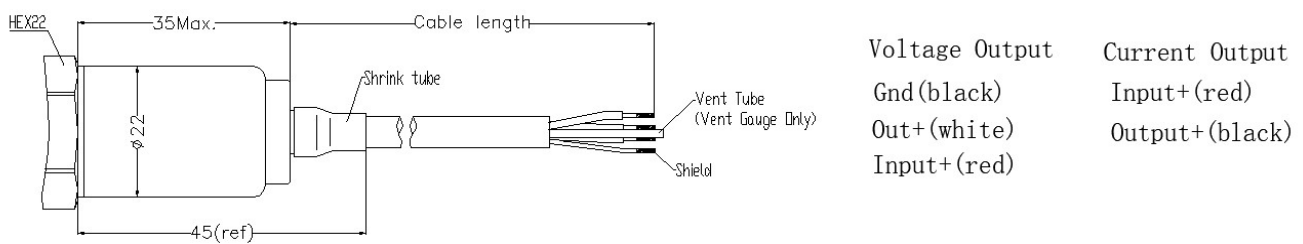


**Case and Cable/Connector**

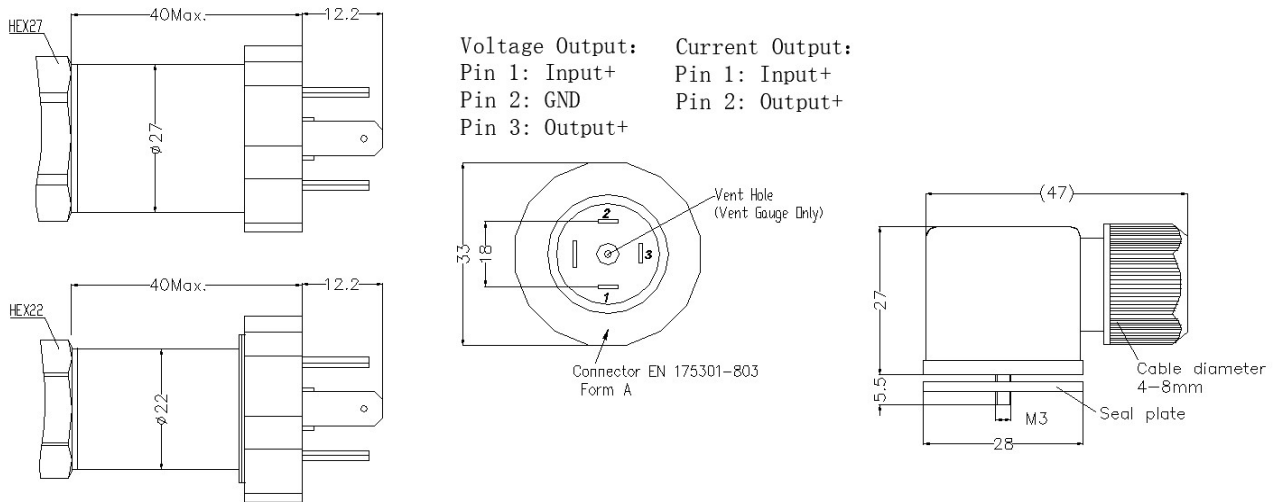
**1. Parkard connector**



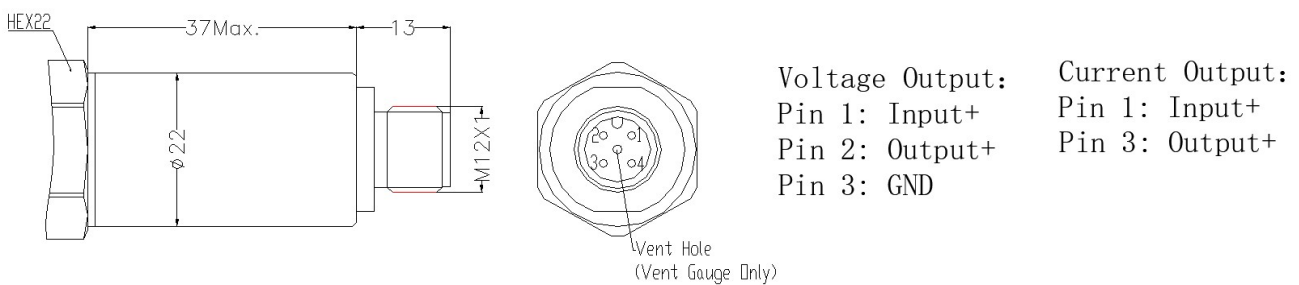
**2. Cable**



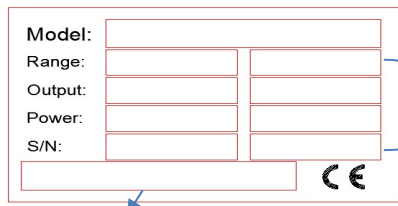
**3. Connector EN 175301-803 (Form A)**



**4. M12X1 connector (4 Pins)**



**Label**

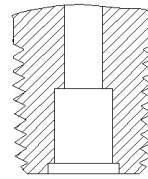


Wiring Infor.

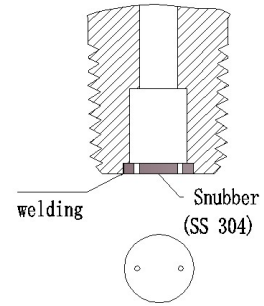
Manufacture Infor.

**Snubber**

W/O Snubber



With Snubber (Code: S)



**Ordering Information**

Model	Exitation	Output
P61	5V	0.5-4.5V (Ratiometric)
P62	8-30V	0-5V
P63	8-30V	4-20mA
P64	8-30V	1-5V
P65	15-30V	0-10V

Code	Pressure Range	Vent Gauge	Sealed Gauge
3.5M	0-3.5MPa	*	
7M	0-7MPa	*	
10M	0-10MPa		*
20M	0-20MPa		*
35M	0-35MPa		*
50M	0-50MPa		*
70M	0-70MPa		*
100M	0-100MPa		*
XX	Others		

Code	Pressure Port
1	1/4NPT
2	1/4BSP
3	M20X1.5
4	R1/4 (old ZG1/4)
5	1/8NPT
X	Others

Code	Electric outlet
1	Connector Packard
2(*m)	Cable (lengh: *meter)
3	Connector EN 175301-803 (Form A)
4	Connector M12X1 ( 4 Core Male)
X	Others

Code	Snubber
S	With Snubber

**Example:**

P63	10M	1	2 (1m)	S		
4-20mA	0-10MPa	1/4NPT	Cable 1 meter	With Snubber		Model : P63-10M-12 (1m)-S