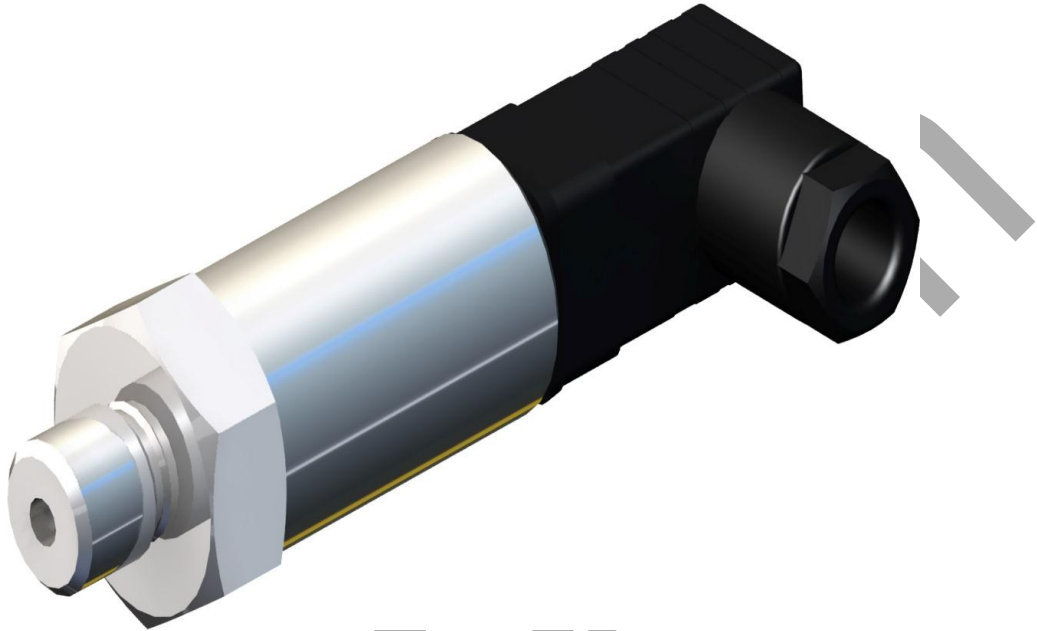


Smartgen[®]

SGPT110 Pressure Transmitter

USER MANUAL



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众智电子 Chinese trademark

Smartgen[®] English trademark

Smartgen — make your generator *smart*

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If the colors of actual products are difference from instruction, please take the material object as the standard.

Version History

| Date | Version | Content |
|------------|---------|------------------|
| 2013-12-18 | 1.0 | Original release |

This manual is suitable for SGPT110 pressure transmitter only.

Clarification of notation used within this publication.

| SIGN | INSTRUCTION |
|--|---|
|  NOTE | Highlights an essential element of a procedure to ensure correctness. |
|  CAUTION! | Indicates a procedure or practice, which, if not strictly observed, could result in damage or destruction of equipment. |
|  WARNING! | Indicates a procedure or practice, which could result in injury to personnel or loss of life if not followed correctly. |

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Contents

| | |
|-------------------------------|----|
| 1 OVERVIEW..... | 5 |
| 2 CHARACTERISTICS | 6 |
| 3 PERFORMANCE PARAMETER | 7 |
| 4 TERMINAL CONNECTION | 8 |
| 5 ELECTRICAL CONNECTION | 9 |
| 6 CASE DEMENSION..... | 10 |
| 7 INSTALLATION | 11 |
| 8 ATTENTION | 12 |

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1 OVERVIEW

SGPT110 piezoresistive pressure transmitter is based on MEAS original advanced highly stable silicon piezoresistance transmitter installed into a 304 stainless steel enclosure. Compatible with various mediums, stable, reliable and highly accurate, SGPT110 can be widely used for gas and liquid pressure measurement.

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2 CHARACTERISTICS


- Measuring range: (0~1)MPa
- Two-wire standard output: 4 mA ~20 mA
- Wide working temperature range: (-40°C~125°C), with temperature compensation and common mode rejection functions.
- Whole stainless steel structure
- O-shape gasket
- Standard screw thread pressure measurement method
- Pluggable connection, small volume, low power consumption.

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3 PERFORMANCE PARAMETER

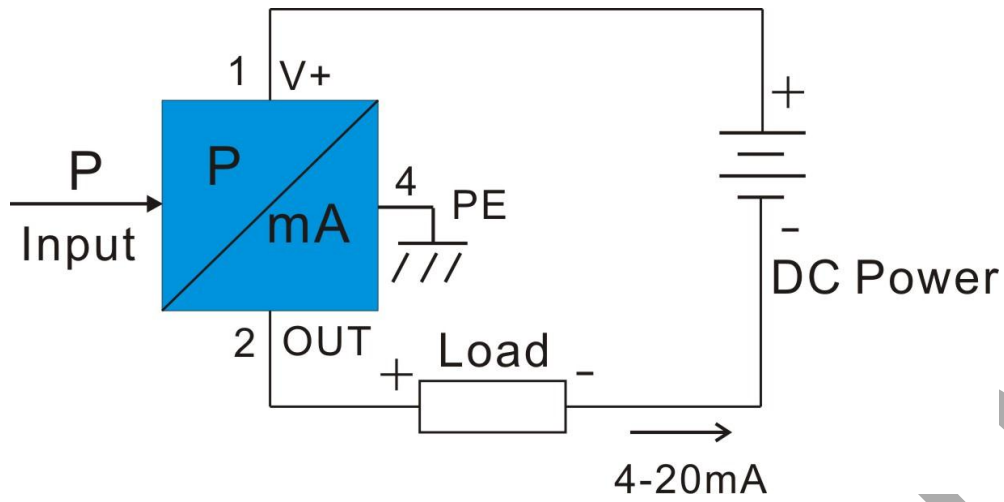
| Item | Content |
|---------------------------------|---|
| Measuring range | (0~1)MPa |
| Overload capacity | 250% Full Scale Pressure |
| Pressure type | Gauge pressure |
| Measuring dielectric | Gas and liquid which compatible with stainless steel 304. |
| Measurement Accuracy Class | Class 0.25 |
| Working temperature | -40°C~125°C |
| Compensation temperature | -20°C ~85°C |
| Power supply range | DC 12V~36V (DC 24V) |
| Signal output | 4 mA ~20 mA |
| Load resistance | $R_L \leq (V_+ - 7.5V)/20mA$ |
| Enclosure protection | Hersman Plug-type(IP65) |
| Safety and explosion prevention | EXIA II CT5 |
| Connector and enclosure | stainless steel 304 |
| O-shape gasket | Fluororubber |
| Transmitter mebrane | Stainless steel 316L. |

4 TERMINAL CONNECTION

|  | Port | Description |
|---|------|------------------------------|
| | 1 | Positive source: V+ |
| | 2 | 4mA~20mA output: OUT |
| | 3 | Not connected |
| | 4 | Shell ground (Shield ground) |

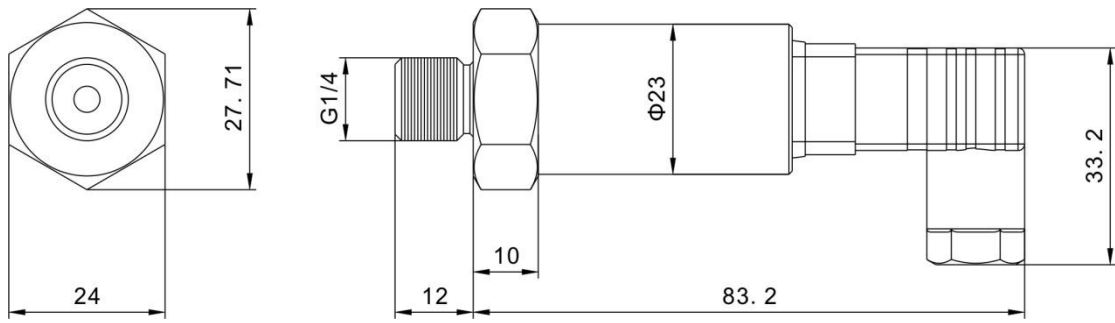
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5 ELECTRICAL CONNECTION



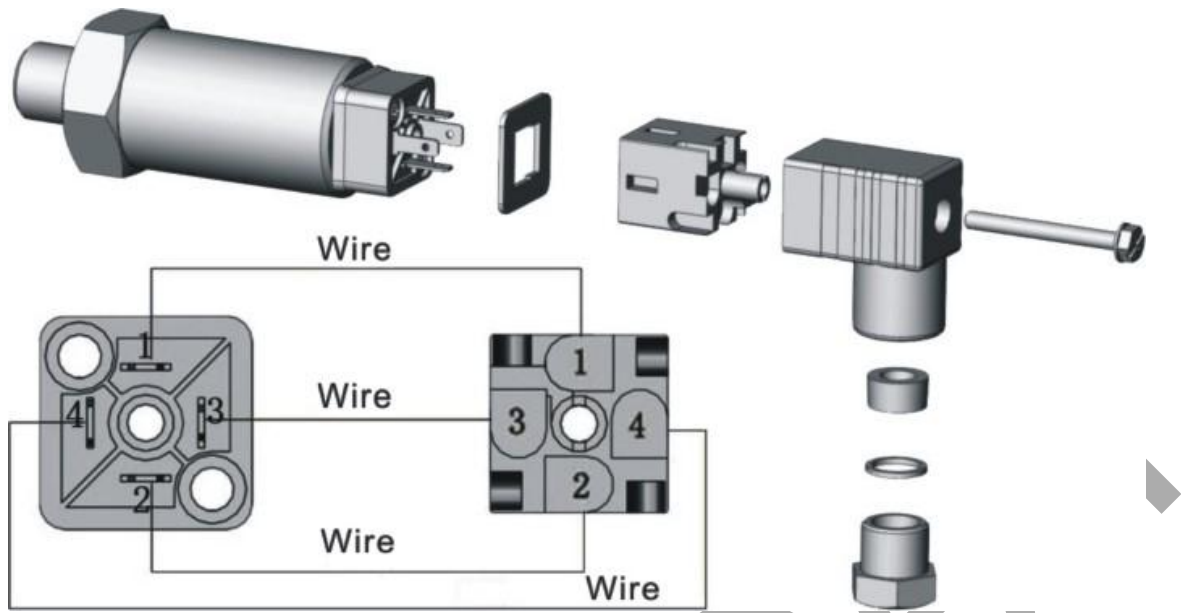
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6 CASE DIMENSION



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7 INSTALLATION



8 ATTENTION

- During installation ensure that measuring range and wiring is correct.
- The enclosure of the pressure transmitter should usually be connected to the ground; signal cable and power cable must not be crossed over; strong electromagnetic interference in the vicinity of the sensor must be avoided.
- Transmitter in use must be regularly calibrated according to the industry standards.
- Do not expose the transmitter to overpressure for a long time.
- Do not throw foreign bodies into the pressure opening, it can influence measurement results.
- Avoid transmitter contact with over-corrosive or overheated medium.
- During liquid pressure measurement, transmitter must not be installed to the place exposed to liquid impact (water hammer phenomenon) in order to avoid damage.
- During liquid pressure measurement, pressure tapplings must be opened from the side of pipeline in order to avoid sediment slag accumulation.