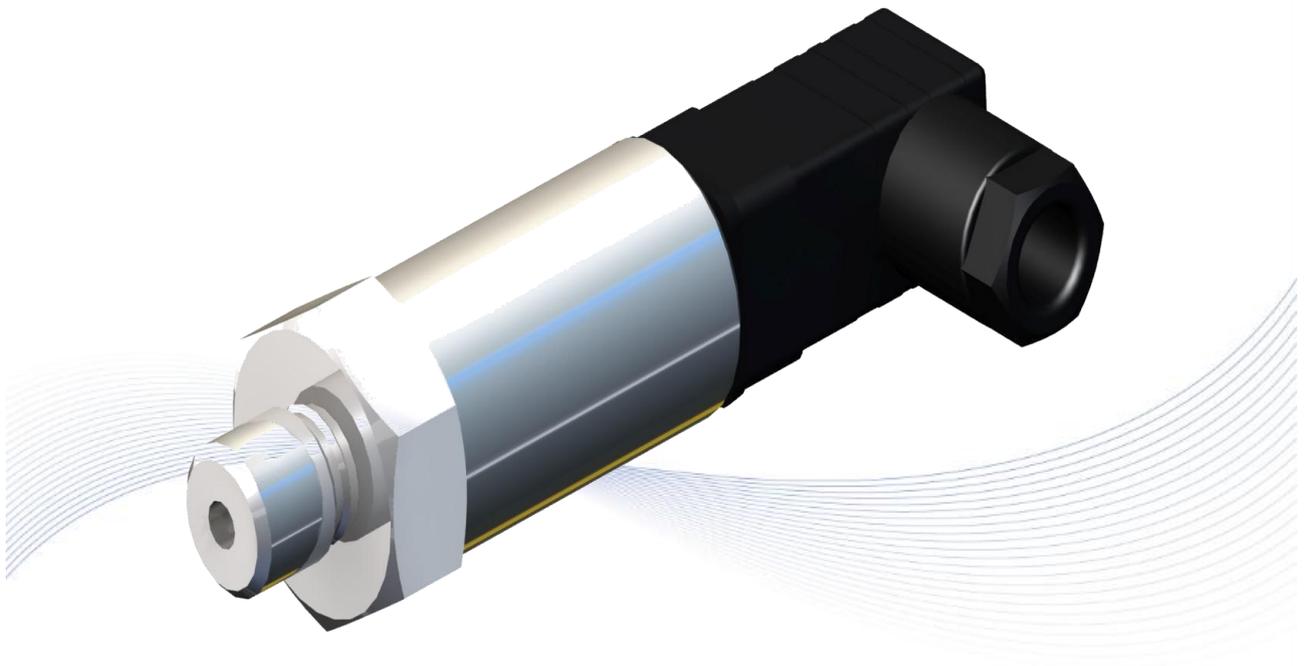


# SmartGen

MAKING CONTROL SMARTER

## SGPT110 PRESSURE TRANSMITTER USER MANUAL



郑州众智科技股份有限公司  
SMARTGEN(ZHENGZHOU)TECHNOLOGY CO.,LTD.

## SmartGen Registered trademark

No. 28 Xuemei Street, Zhengzhou, Henan, China

Tel: +86-371-67988888/67981888/67992951

+86-371-67981000(overseas)

Fax: +86-371-67992952

Web: [www.smartgen.com.cn/](http://www.smartgen.com.cn/)

[www.smartgen.cn/](http://www.smartgen.cn/)

Email: [sales@smartgen.cn](mailto:sales@smartgen.cn)

All rights reserved. No part of this publication may be reproduced in any material form (including photocopying or storing in any medium by electronic means or other) without the written permission of the copyright holder.

SmartGen reserves the right to change the contents of this document without prior notice.

**Table 1 Software Version**

Date	Version	Content
2013-12-18	1.0	Original release.
2023-12-11	1.1	1. Change comprehensive accuracy from class 0.25 to class 1.0. 2. Update company logo and address information.

This manual is suitable for SGPT110 pressure transmitter only.

**Table 2 Sign Instruction**

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.

SmartGen

## CONTENT

1	OVERVIEW.....	5
2	PERFORMANCE AND CHARACTERISTICS.....	5
3	SPECIFICATION .....	5
4	TERMINAL CONNECTION .....	6
5	ELECTRICAL CONNECTION .....	6
6	OVERALL DIMENSION.....	6
7	INSTALLATION STRUCTURE .....	7
8	ATTENTION.....	7

SmartGen

## 1 OVERVIEW

SGPT110 piezoresistive pressure transmitter is based on MEAS original advanced highly stable silicon piezoresistance transmitter, which is installed into a 304 stainless steel enclosure. With premium performance of compatibility, stability, reliability and accuracy, it can be widely used for gas and liquid (compatible with stainless steel 304) pressure measurement.

## 2 PERFORMANCE AND CHARACTERISTICS

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

## 3 SPECIFICATION

**Table 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
Comprehensive accuracy	Class 1.0
Working temperature	-40°C~+125°C
Compensation temperature	-20°C ~+85°C
Power supply range	DC 12V~36V (DC 24V)
Signal output	4mA ~20mA
Load resistance	$R_L \leq (V_{power} - 7.5V)/20mA$
Enclosure protection	Hersman Plug-type (IP65)
Safety and explosion prevention	EXIA II CT5
Interface and enclosure	Stainless steel 304
O-shape gasket	Fluororubber
Transmitter mebrane	Stainless steel 316L

4 TERMINAL CONNECTION

Table 4 Terminal Description

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

5 ELECTRICAL CONNECTION

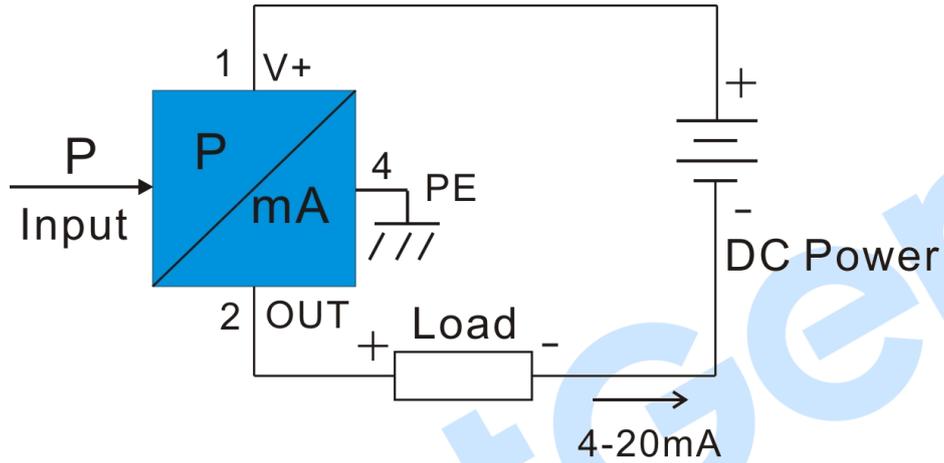


Fig.1 Electrical Connection

6 OVERALL DIMENSION

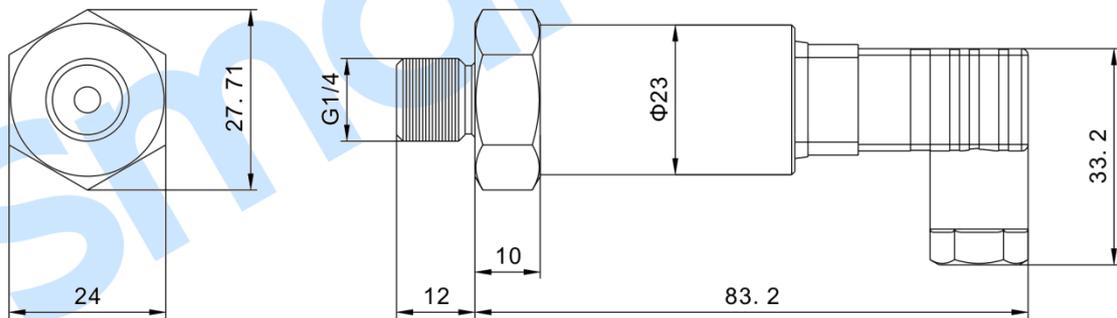
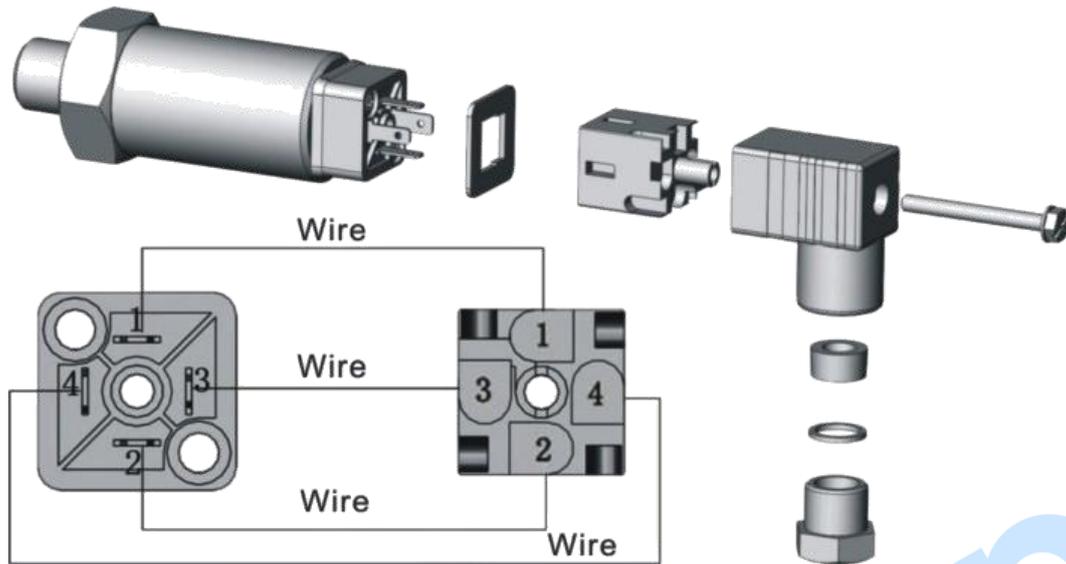


Fig.2 Overall Dimension

## 7 INSTALLATION STRUCTURE



**Fig.3 Installation Structure**

## 8 ATTENTION

- a) During installation ensure that measuring range and wiring is correct.
- b) 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 around the transmitter must be avoided.
- c) Transmitter in use must be regularly calibrated according to the industry standards.
- d) Do not expose the transmitter to overpressure for a long time.
- e) Do not throw foreign bodies into the pressure transmitting hole, which can influence measurement results.
- f) Avoid transmitter contact with over-corrosive or overheated medium.
- g) During liquid pressure measurement, transmitter must not be installed to the place exposed to liquid impact (water hammer phenomenon) in order to avoid damage.
- h) During liquid pressure measurement, pressure tapplings must be opened from the side of pipeline in order to avoid sediment slag accumulation.