

PCM639 Differential Pressure Transmitter

with Double Sensors

Overview

PCM639 Differential Pressure Transmitter is based on 2 absolute pressure sensors, which can be used where differential pressure is more than 10% of the maximum pressure range. Because of the use of unconventional method of measuring differential pressure with 2 absolute pressure sensors, PCM639 has completely different advantages from traditional differential pressure measuring elements.

PCM639 Differential Pressure Transmitter does not measure differential pressure directly but use 2 absolute pressure sensors to make indirect measurements. While reducing costs, this pressure transmitter also performs well under the circumstance of overpressure on one side. The differential pressure range should not be less than 10% of the maximum pressure range. There are 2 pressure ports on each side, so the product can be easily installed on pressure pipelines. Therefore, the differential pressure value can be accurately measured even in the case of a high ratio of pressure range divided by differential pressure. PCM639 also adopts the microprocessor-based MSP430X, which enables digital error compensation to eliminate all repeatability errors (such as linearity and resistance dependence), and the sensor signal is measured by a 16-bit AID converter, so in the whole pressure range, each standard pressure range can gain 0.1% measurement accuracy.

Notes:

- 1 Do not touch the diaphragm with hard objects, which may cause damage to the diaphragm.
- 2 Please read the Instruction Manual of the product carefully before installation and check the relevant information of the product.
- 3 Strictly follow the wiring method for wiring, otherwise it may cause product damage or other potential faults.
- 4 Misuse of the product may cause danger or personal injury.



Applications

- Hydropower
- Chemical industry
- Urban water supply
- Scientific research
- Accurate measurement of differential pressure of fluid

Notes:

- 1 Do not misuse documentation.
- 2 The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- 3 Complete installation, operation, and maintenance information is provided in the instructions of the product.
- 4 Misuse of the product may cause danger or personal injury.

Electrical performance parameters

Pressure range	0~100MPa
Pressure reference	Absolute pressure
Supply	12~30V, 24V recommended
Output	4~20mA
Operating temp.	-25℃~80℃
Storage temp.	-40℃~100℃
Response time	≤1ms (up to 90%FS)
Insulation resistance	100MΩ/500VDC
Protection	IP65

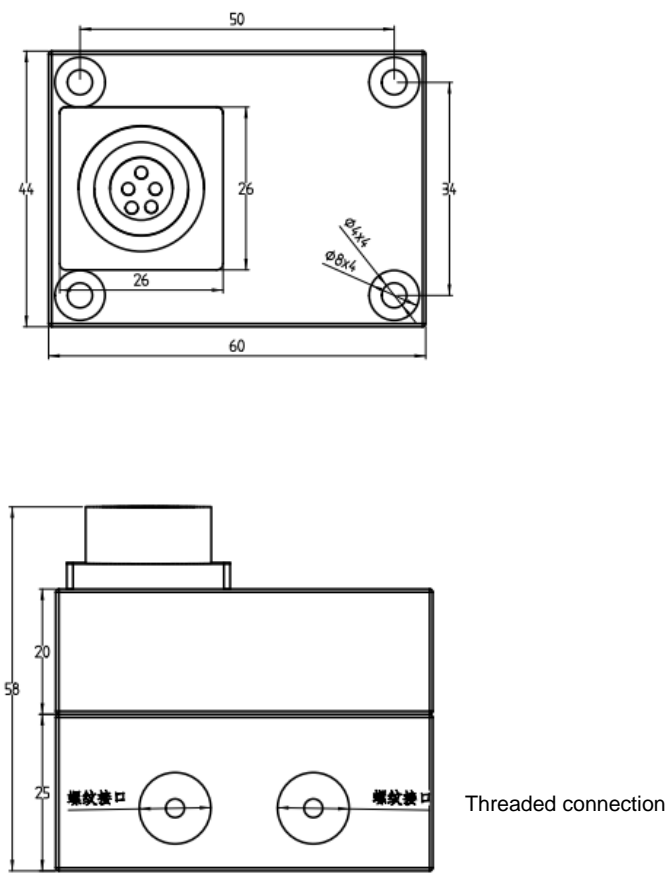
Structural performance parameters

Housing material	304
Medium compatibility	All kinds of liquids and gases compatible with stainless steel

Basic parameters

Measurement error	±0.5%
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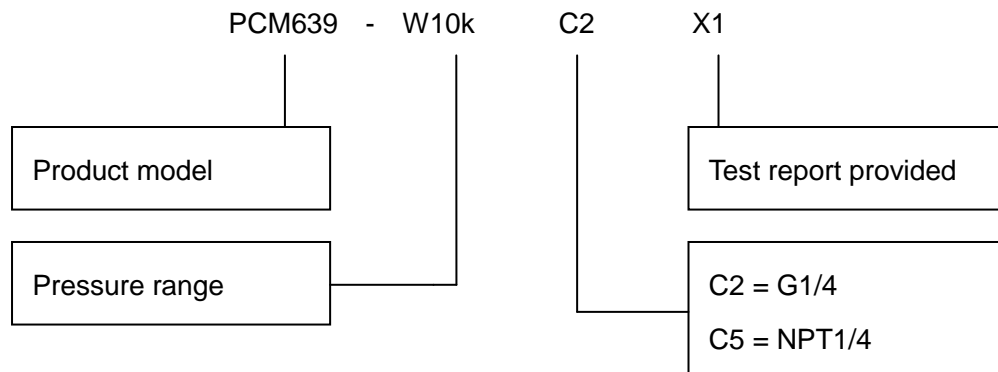
Structure & dimension

<p>Dimension (In mm)</p>	 <p>The technical drawing consists of two views: a top view and a side view. The top view shows a square housing with a central circular port. Dimensions include a total width of 60mm, a total height of 44mm, and a central port diameter of 26mm. There are four mounting holes, each with a diameter of 4mm (labeled as φ4x4). The side view shows the housing's profile with a total height of 58mm, a top flange height of 20mm, and a base height of 25mm. The base features two threaded connection ports, labeled '螺纹接口' (Threaded connection).</p>
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Pressure range selection

Code	W10k	W35k	W100k	W250k	W600k	W1M	W2.5M	W6M	W16M	W40M
Static pressure	20kPa	70kPa	200kPa	500kPa	1.2MPa	2MPa	5MPa	12MPa	32MPa	80MPa
Differential pressure \geq	2kPa	7kPa	20kPa	50kPa	0.12MPa	0.2MPa	0.5MPa	1.2MPa	3.2MPa	8MPa

How to order



Example: PCM639—W10kC2X1

Product model is PCM639, static pressure is 20kPa, differential pressure is greater than 2kPa, threaded connection is G1/4, and test report is provided.

Ordering tips:

- 1 Please pay attention to the compatibility between measuring medium and product contacting part.
- 2 For special requirements on shape and performance parameters of the product, customization is available.

Wotian reserves the right to make any change in this publication without notice. The information provided is believed to be accurate and reliable as of this product sheet.

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