



## Overview

HPM3186 monocrystalline silicon compact differential pressure transmitter adopts monocrystalline silicon high-stability differential pressure chip, with internal overload diaphragm protection design, which can achieve high-precision measurement and high overload load. The product has an embedded signal processing module, which realizes the combination of static pressure and temperature compensation and can achieve high-precision measurement and maintain good long-term stability under a wide range of static pressure and temperature changes. At the same time, the product adopts a fully welded structure, and the pressure interface is a threaded connection. It can be directly installed on the measuring pipeline or connected through a pressure pipe.

The product is small and easy to install. It is widely used in differential pressure, liquid level, flow measurement and control in the fields of process control and equipment monitoring.

## Features

- ◆ Compact differential pressure measurement
- ◆ Single crystal silicon high stability differential pressure chip
- ◆ Overload diaphragm protection design
- ◆ High accuracy
- ◆ Fully welded type
- ◆ Multiple process connections

## Technical Parameters

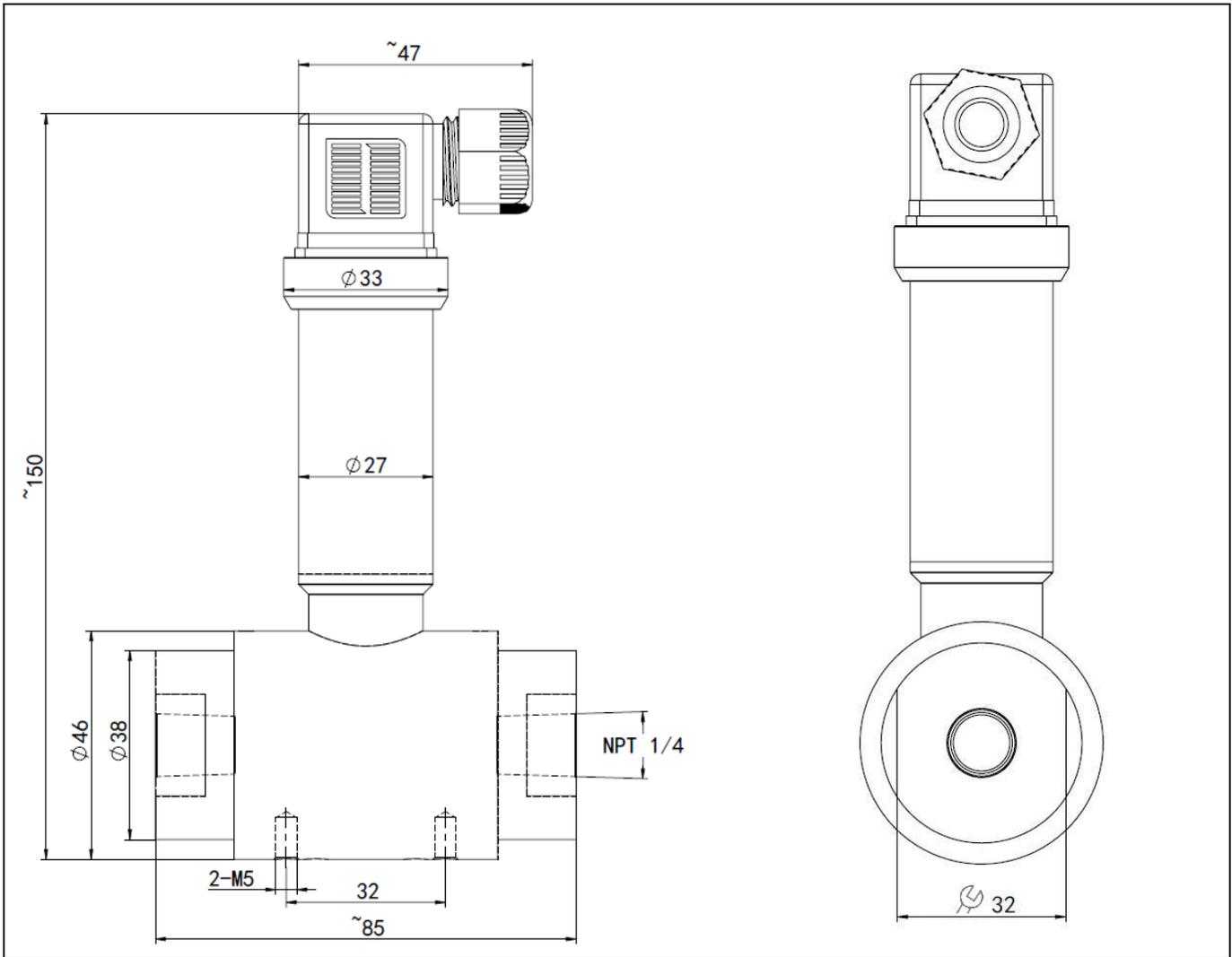
Range, overload and accuracy								
<b>Rated range</b>	1kPa	6kPa	40kPa	100kPa	400kPa	1MPa	3MPa	10MPa
<b>Single-side positive terminal</b>	300kPa	16MPa						
<b>Single-side negative terminal</b>	150kPa	16MPa						
<b>Double-side static pressure</b>	5MPa	25MPa	25MPa	25MPa	25MPa	40MPa	40MPa	40MPa
<b>Accuracy</b>	0.1%	0.075%	0.075%	0.075%	0.075%	0.075%	0.075%	0.075%
<b>Measuring Medium</b>	Various liquids and gases compatible with contact materials							

<b>Output Signal</b>	4~20mA <sub>DC</sub> +HART / V <sub>s</sub> =12~30VDC
<b>Temperature compensation range</b>	-10~70°C
<b>Temperature Coefficient of Zero</b>	±0.2%FS (Within temperature compensation range, 1kPa) ±0.1%FS (Within temperature compensation range, other ranges)
<b>Temperature Coefficient of Full Scale</b>	±0.2%FS (Within temperature compensation range, 1kPa) ±0.1%FS (Within temperature compensation range, other ranges)
<b>Measuring Medium Temperature</b>	-40~120°C
<b>Ambient Temperature</b>	-40~80°C
<b>Storage Temperature</b>	-40~80°C
<b>Protection Grade</b>	IP65
<b>Short circuit protection</b>	With
<b>Reverse polarity protection</b>	No damage, the circuit does not work
<b>Process Connection</b>	NPT1/4 female thread (default), G1/4 male thread, M20×1.5 male thread, other customized
<b>Insulation resistance</b>	>200MΩ, 500VDC
<b>Dielectric strength</b>	<2mA 500VAC (Apply 500VAC 50Hz test voltage, no breakdown or arcing for 1 minute)

## Structure Material

Ordering code	Part	Note
S4	Housing	stainless steel 304
S6		stainless steel 316L
S4	Process connection	stainless steel 304
S6		stainless steel 316L
S6	Sensor	stainless steel 316L diaphragm
HC		Ha C diaphragm
TA		Tantalum diaphragm

**Structure Drawings (unit: mm)**



Note:

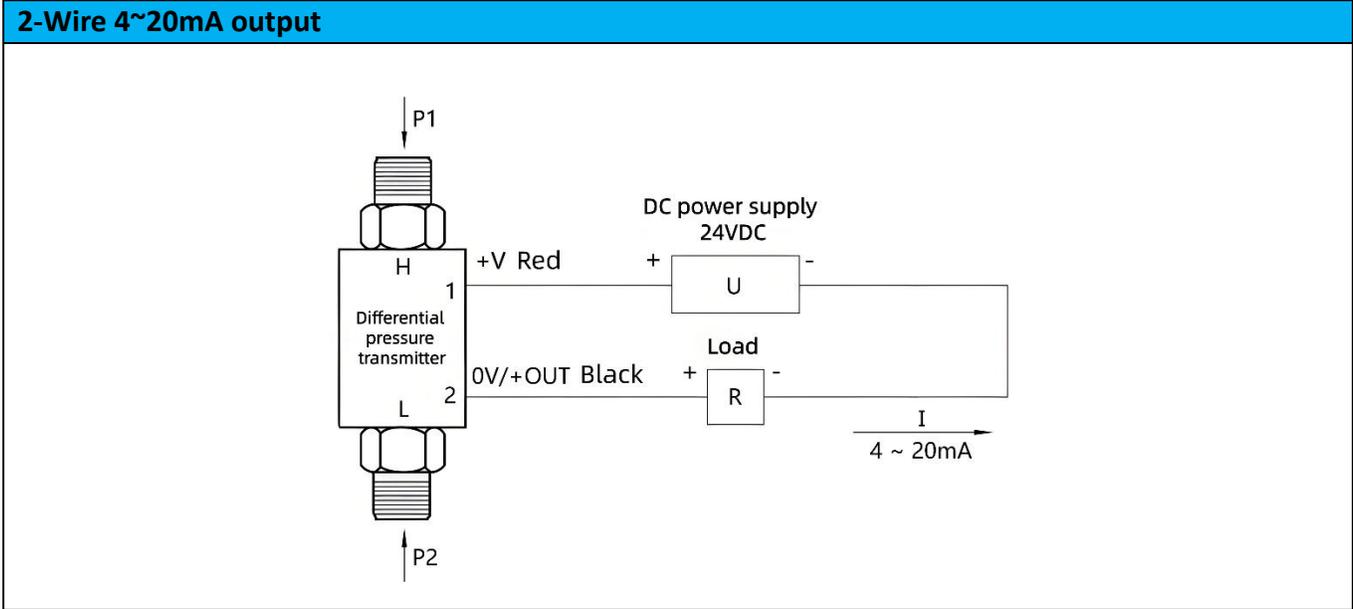
1. The dimensions listed in the figure may change with the update of the process
2. For other shapes, please consult the sales engineer

**Electrical Connection**

DIN43650 (Order code: C1)	Cable outlet (Ordering code: C2)

2-wire 4 ~ 20mA current output		
Signal definition	Power supply+(+V)	Power supply-(0V/+OUT)
DIN43650	1	2
Cable outlet	Red	Black

### Electrical wiring diagram



### Ordering Guide

Model No.	Type										
HPM3186	Monocrystalline silicon compact type Differential pressure transmitter										
		Range	Measuring Range								
		(0 ~ X)kPa	X is upper limit								
				Code	Output						
				B1	(4 ~ 20)mA						
				B8	HART						
				Code	Process Connection						
				P1	M20×1.5 male						
				P3	G1/4 male						
				PT3	NPT1/4 female						
				Code	Electrical Connection						
				C1	DIN43650						
				C2	Cable outlet						
				Code	Housing Materials						
				S4	304						
				S6	316L						
				Code	Process Connection Materials						
				S4	304						
				S6	316L						
				Code	Sensor Diaphragm Materials						
				S6	316L						
				HC	Ha C						
				TA	Tantalum						
				Code	Others						
				QF	Factory inspection report						
					Other customized requirements						
eg:HPM3186	(0 ~ 20)kPa	B1 B8	P3	C1	S4	S6	S6				

## Certification Information

Factory certification	
Certification organization	CQM
Quality management system	ISO 9001:2015
Certification scope	Research, development and manufacture of pressure transmitter and temperature transmitter
Certificate No.	00223Q21711R1S

CE	
Certification organization	ECM
Certification scope	Pressure Transmitter (Differential Pressure Transmitter)
Standard	EN IEC 61000-3-2:2019+A1:2021
	EN IEC 61000-3-3:2013+A1:2019+A2:2021
	EN IEC 61000-6-4:2019, EN IEC 61000-6-2:2019
Certificate No.	6G241223.NHEWC83