HPM3136 Monocrystalline silicon

Compact Differential Pressure Transmitter

Nanjing Hangjia Electronic Technology Co., Ltd.

Overview

HPM3136 monocrystalline silicon compact differential pressure transmitter adopts monocrystalline silicon high-stability differential pressure chip, which can achieve high-precision measurement and high overload. 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, which can be directly installed on the measuring pipeline or connected through a pressure pipe. The product is compact and easy to install, and is widely used in differential pressure, liquid level, flow measurement and control in the fields of process control and equipment monitoring.

Features

- Compact structure for differential pressure measurement
- Single crystal silicon high stability differential pressure chip
- High accuracy
- High overload
- Fully welded type
- Multiple process connections

Technical Parameters

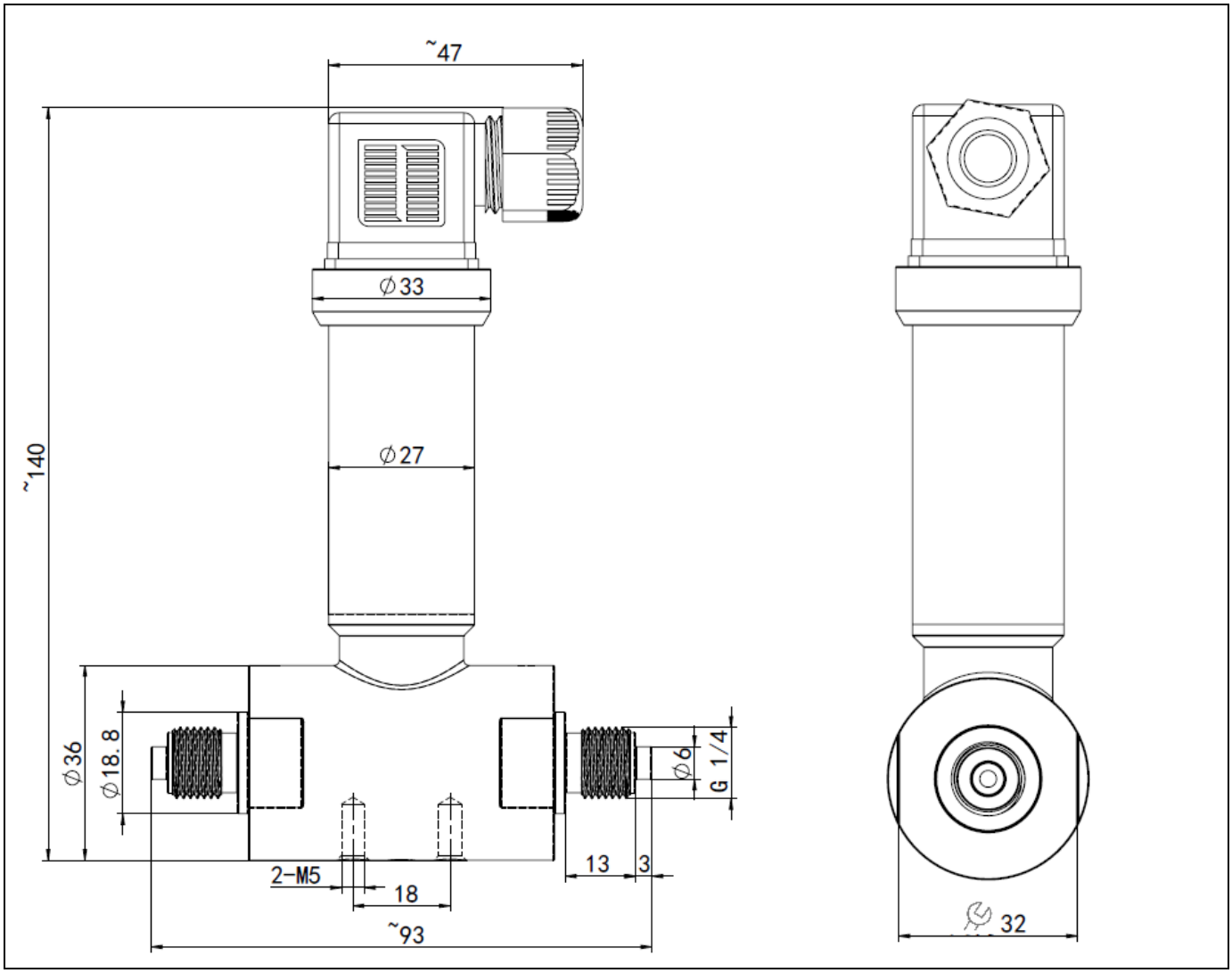
Range, overload and accuracy									
Rated range	1kPa (non-oil-filled)	6kPa (non-oil-filled)	1kPa	6kPa	40kPa	100kPa	400kPa	1MPa	3MPa
Single-side positive terminal	200kPa	200kPa	200kPa	200kPa	500kPa	1MPa	4MPa	6MPa	12MPa
Single-side negative terminal	150kPa	150kPa	150kPa	150kPa	500kPa	1MPa	4MPa	6MPa	12MPa
Double-side static pressure	1MPa	1MPa	1MPa	1MPa	5MPa	5MPa	10MPa	16MPa	25MPa
Accuracy	0.2%	0.1%	0.5%	0.5%	0.1%	0.1%	0.1%	0.1%	0.1%
Note: Oil-filled sensor by default and has an isolation diaphragm, unless otherwise specified									
Measuring Medium	Various liquids and gases compatible with contact materials								
Output Signal	4~20mA$_{DC}$+HART								

Power Supply	12~30VDC
Temperature compensation range	-10~70℃
Temperature Coefficient of Zero	±0.25%FS(Within temperature compensation range，≤6kPa，non-oil-filled) ±0.5%FS(Within temperature compensation range，≤6kPa) ±0.2%FS(Within temperature compensation range，other ranges)
Temperature Coefficient of Full Scale	±0.25%FS(Within temperature compensation range，≤6kPa，non-oil-filled) ±0.5%FS(Within temperature compensation range，≤6kPa) ±0.2%FS(Within temperature compensation range，other ranges)
Measuring Medium Temperature	-40~120℃
Ambient Temperature	-40~80℃
Storage Temperature	-40~80℃
Protection Grade	IP65
Short circuit protection	With
Reverse polarity protection	No damage, the circuit does not work
Process Connection	G1/4 male thread (default), NPT1/4 female thread, M20×1.5 male thread, other customized
Insulation resistance	>200MΩ，500VDC
Dielectric strength	<2mA @ 500VAC(Apply 500VAC 50Hz test voltage, no breakdown or arcing for 1 minute)

Structure Material

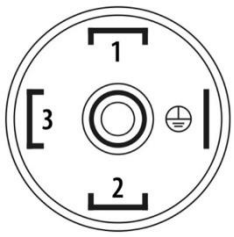
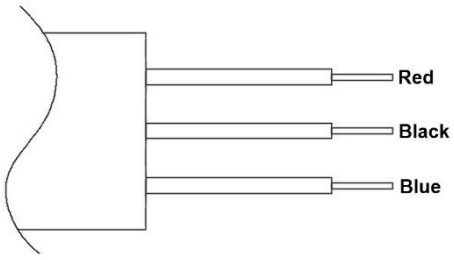
Ordering code	Part	Note
S4	Housing	stainless steel 304
S6		stainless steel 316L
S4	Process connection	stainless steel 304
S6		stainless steel 316L
S6	Sensor	stainless steel 316L diaphragm
HC		Ha C diaphragm
TA		Tantalum diaphragm

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

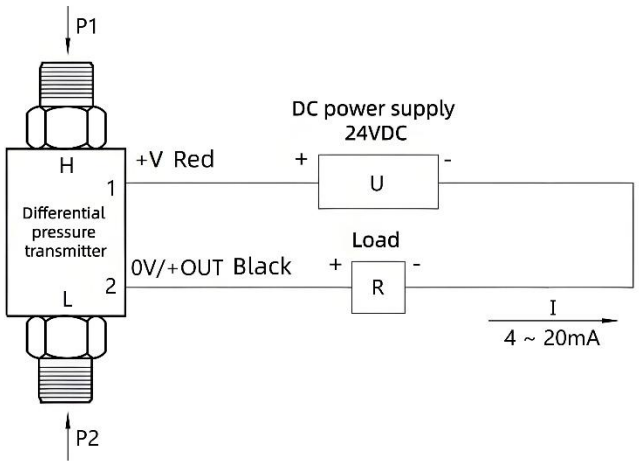
Electrical Connection

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

2-Wire 4~20mA output



Ordering Guide

Model No.	Type								
HPM3136	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					
			P13	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 Diaphgram Materials	
							S6	316L	
							HC	Ha C	
							TA	Tantalum	
								Code	Others
								QF	Factory inspection report
									Other customized requirements
eg:HPM3136	(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