

HSDP-W Series

Liquid Differential Pressure Transmitters

Honeywell HSDP-W Series Liquid Differential Pressure Transmitters are mainly used for the measurement of liquid pressure. The sensitive element of the liquid differential pressure transmitters is a solid piezoresistive sensitive chip, and the part in contact with the measured liquid is the corrugated diaphragm on both sides of the transmitters, and the space between the sensitive chip and the corrugated diaphragm is filled with silicone oil. The measured differential pressure acts on the corrugated diaphragm and is transmitted to the sensitive chip through silicone oil. Using the piezoresistive effect of semiconductor silicon materials, the conversion of differential pressure and electrical signals is realized. Since the output signal of the Wheatstone bridge on the sensitive chip has a good linear relationship with the differential pressure, accurate measurement of the measured differential pressure can be realized.

Features

- Using temperature compensation and high temperature screening to achieve stable and reliable performance.
- Fully sealed structure by laser welding.
- Various control signal outputs (0-10V, 4-20mA, Modbus RTU)
- 1-meter extension cable for easy wiring




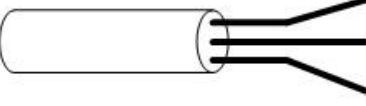
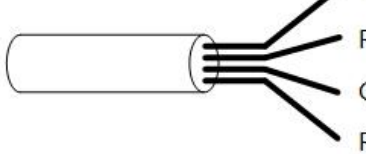
Basic Parameters

SKU Group	HSDP-WxxxxA HSDP-WxxxxV	HSDP-WxxxxM	HSDP-WxxxxAL
Output Signal /Protocol	HSDP-WxxxxA:4-20mA HSDP-WxxxxV:0-10V	Modbus RTU	4-20mA
Sensor Type	Piezoresistive Differential Pressure Sensor		
Operation mode	Only Positive sensing is allowed (positive sensing means high pressure side pressure is greater than low pressure side pressure) Negative sensing is not allowed (Negative sensing means high pressure side pressure lower than low pressure side pressure)		
Accuracy	Full Scale(FS) > 200 kPa: $\pm 0.25\%FS$ Full Scale(FS) \leq 200 kPa: $\pm 0.5\%FS$ (This accuracy is met within the compensation temperature)		
Stability	$\pm 0.2\%F.S / \text{Year}$ (Full Scale > 200 kPa) $\pm 0.5\%F.S / \text{Year}$ (Full Scale \leq 200 kPa)		
Compensation Temperature Range	-10°C to 60 °C	-10°C to 70 °C	-10°C to 60 °C
Reaction Time	50ms	200ms	50ms
Overload Pressure	Positive sensing: $\leq 2 \times FS$ Negative sensing is not allowed		
Rupture Pressure	Positive sensing: $\leq 3 \times FS$ Negative sensing: < 200kPa		
Single side Max Static Pressure	$\leq 20MPa$		
Static Pressure Impact	$\pm 0.05\% F.S / 100kPa$		
Applicable Medium	Cold & Hot water or glycol solution with a maximum concentration of 50%, incombustible gas		
Medium Temp.	-20°C to 70°C	-20°C to 70°C	-20°C to 80°C
Operation Temp.	-20°C to 70°C	-20°C to 70°C	-20°C to 80°C
Storage Temp.	-20°C to 85°C	-20°C to 85°C	-20°C to 85°C
Power Supply	12V to 28V DC(4-20mA) 15V to 28V DC(0-10VDC)	3.6V to 28VDC	16V to 28V DC
Connection number for RS485 RTU devices	A maximum of 64 devices can be connected to a single network segment		
Connection	Female thread G1/4		
Protection standard	IP68 (EN 60529)	IP68 (EN 60529)	IP65 (EN 60529)
Wiring	Lead Wire:1m ($\Phi 7.4mm$ cable)	Lead Wire:1m ($\Phi 7.4mm$ cable)	Hersman Joint With 1 meter cable ($\Phi 6mm$ cable)
Certification	CE (EN 61000-6-2: 2005, EN 61000-6-4: 2007+A1: 2011) RoHS		
Materials	Housing : SS304 Sensing diaphragm : 316L Cable : PEC O-ring sealing : FPM	Housing : SS304 Sensing diaphragm : 316L Cable : PUR O-ring sealing : FPM LED housing : ABS	

Order Information and Technical Specification

SKU	Full Scale	Output Signal /Protocol	Display Option
HSDP-W0035A	0 to 35kPa	4-20mA	NO
HSDP-W0070A	0 to 70kPa	4-20mA	NO
HSDP-W0100A	0 to 100kPa	4-20mA	NO
HSDP-W0200A	0 to 200kPa	4-20mA	NO
HSDP-W0350A	0 to 350kPa	4-20mA	NO
HSDP-W0700A	0 to 700kPa	4-20mA	NO
HSDP-W1000A	0 to 1000kPa	4-20mA	NO
HSDP-W2000A	0 to 2000kPa	4-20mA	NO
HSDP-W3500A	0 to 3500kPa	4-20mA	NO
HSDP-W0035V	0 to 35kPa	0-10V	NO
HSDP-W0070V	0 to 70kPa	0-10V	NO
HSDP-W0100V	0 to 100kPa	0-10V	NO
HSDP-W0200V	0 to 200kPa	0-10V	NO
HSDP-W0350V	0 to 350kPa	0-10V	NO
HSDP-W0700V	0 to 700kPa	0-10V	NO
HSDP-W1000V	0 to 1000kPa	0-10V	NO
HSDP-W2000V	0 to 2000kPa	0-10V	NO
HSDP-W3500V	0 to 3500kPa	0-10V	NO
HSDP-W0035AL	0 to 35kPa	4-20mA	YES
HSDP-W0070AL	0 to 70kPa	4-20mA	YES
HSDP-W0100AL	0 to 100kPa	4-20mA	YES
HSDP-W0200AL	0 to 200kPa	4-20mA	YES
HSDP-W0350AL	0 to 350kPa	4-20mA	YES
HSDP-W0700AL	0 to 700kPa	4-20mA	YES
HSDP-W1000AL	0 to 1000kPa	4-20mA	YES
HSDP-W2000AL	0 to 2000kPa	4-20mA	YES
HSDP-W3500AL	0 to 3500kPa	4-20mA	YES
HSDP-W0035M	0 to 35kPa	Modbus	NO
HSDP-W0070M	0 to 70kPa	Modbus	NO
HSDP-W0100M	0 to 100kPa	Modbus	NO
HSDP-W0200M	0 to 200kPa	Modbus	NO
HSDP-W0350M	0 to 350kPa	Modbus	NO
HSDP-W0700M	0 to 700kPa	Modbus	NO
HSDP-W1000M	0 to 1000kPa	Modbus	NO
HSDP-W2000M	0 to 2000kPa	Modbus	NO
HSDP-W3500M	0 to 3500kPa	Modbus	NO

Wiring

Output Signal/Protocol	Wiring diagrams
4-20mA	 <p>V+ Red 0V/Out Black</p>
0-10V	 <p>V+ Red Out White GND Black</p>
Modbus RTU	 <p>V+ Red RS485B White GND Black RS485A Yellow & Green</p>

Dimension (mm)

