

WNK81MA Diffused Silicon Pressure Transmitter

WNK81MA pressure transmitter is a high stable pressure transmitter by using specific ASIC signal conditioning chip and high performance SS316L diaphragm diffused silicon pressure sensor. The internal specific ASIC integrated circuit transforms millivolt signal to standard voltage, current or frequency signal. It can easily connect with PC interface card, controlling instruments, smart gauges or PLC. It is compact designed, light and stainless steel sealing structure, which enable it capability of working in corrosive environment.



Application

WNK81MA is solution for below applications:

- Pressure measurement of gas, vapor or liquid in various areas;
- Liquid level, volume or mass measurement;
- Integrated in a variety of user-defined solutions;
- Smart water and gas management system, smart fire controlling, automotive electronics controlling, air compressor, HVAC, pump, valve and etc;

Features

- Specific high performance ASIC conditioning circuit;
- Diffused silicon pressure sensor;
- Stainless steel, aluminium and copper housing;
- 0.5...4.5V, 4...20mA, 1...5V and 0...10V analog output or I²C and SPI digital output;
- Fast respond, no hysteresis ;
- Various process thread or other customization port acceptable;
- Accurate, stable and reliable

Specifications

Performance

Input	
Pressure type	Gauge pressure, sealing pressure, absolute pressure
Measuring range	-0.1~60MPa
Output	
Analog	0.5...4.5V, 4...20mA, 1...5V, 0...10V
Analog	I ² C, SPI
Accuracy	
0.2%	Linearity, hysteresis, repetitiveness: <0.2% sensor full range
0.5%	Linearity, hysteresis, repetitiveness: <0.5% sensor full range
Overload	
2.5X pressure sensor full scale	
Housing Info.	
Housing Material	SS 304, Cu, Al
Wetting Material	SS316L
Ingress Protection	IP67

Power Supply

Supply voltage	5V \24VDCregulated power supply,
Supply voltage effect	5V supply voltage effect: min.3V/max.5.5V ● For 0.5...4.5V output sensor, voltage has no effect for linearity and temperature compensation, voltage is proportional to LRV and FRV. ● For I²C and SPI digital output sensor, voltage has no effect for linearity, LRV, URV and compensation temperature. 24V supply power effect: min.9V/max30V ● For 4...20mA current output sensor, voltage has no effect for linearity, LRV, URV and compensation temperature.

Operating condition: Temperature

Environment	-40 to 85°C
Storage	-45 to 85°C

Electrical connection

Packard		M12*4P			Cable Outlet		Mini DIN43650		GX12-3	
C1		C2			C3		C4		C5	
Current (2 wire)	Voltage (3 wire)	Current (2 wire)	Voltage (3 wire)	I2C (4 wire)	Current (2 wire)	Voltage (3 wire)	Current (2 wire)	Voltage (3 wire)	Current (2 wire)	Voltage (3 wire)
Pin1: Supply V+ Pin2: Output Pin3: N/A	Pin1: Supply V+ Pin2: Common Pin3: Output	Pin1: Supply V+ Pin2: Output Pin3: N/A Pin4: N/A	Pin1: Supply V+ Pin2: Output Pin3: Common Pin4: N/A	Pin1: Supply V+ Pin2: SCL Pin3: Common Pin4: SDA	Red: Supply V+ Green: Output	Red: Supply V+ Green: Common Yellow: Output	Pin1: Supply V+ Pin2: Output Pin3: N/A	Pin1: Supply V+ Pin2: Common Pin3: Output	Pin1: Supply V+ Pin2: Output Pin3: N/A	Pin1: Supply V+ Pin2: Common Pin3: Output

Process connection

Thread	G1/4	1/4-18NPT	1/8-27NPT
Units in mm Hexagon is 25mm			
Code	P1	P2	P3

Thread	M14×1.5	M12×1.5	1/4-19PT	7/16-20UNF(female)
Units in mm Hexagon is 25mm				
Code	P4	P5	P6	P7

Ordering Info

Model	Product description		
WVK81MA	Pressure Transmitter		
CODE	Pressure Type		
A	Absolute Pressure		
G	Gauge pressure		
S	Sealing pressure		
CODE	Accuracy		
2	0.2%FS - Not available		
5	0.5%FS		
CODE	Sensor range		
A	0.1bar	E	10 bar
B	0.5 bar	F	50 bar
C	1 bar	G	100 bar
D	5bar	H	600 bar
Other ranges are in developing			
CODE	Output		
1	0.5...4.5V DC		
2	4...20mA		
3	I ² C		
4	SPI		
5	0...10V DC		
6	1...5V DC		
X	Customization		
CODE	Electrical connector		
C1	Packard		
C2	M12		
C3	Cable outlet (pls put down cable length, such as 01 for 1 meters)		
C4	Mini DIN43650		
C5	GX12-3		
CX	Customization		
CODE	Process connector		
P1	G1/4	P5	M12×1.5
P2	1/4-18NPT	P6	1/4-19PT
P3	1/8-27NPT	P7	7/16-20UF(female)
P4	M14×1.5	PX	Customization
Pls contact WVK for other process connectors			
Typical ordering code: WVK81MA GC2 C1 P1 WVK81MA GC2 C310 P1_____ C3 direct cable outlet length is 1 meter.			