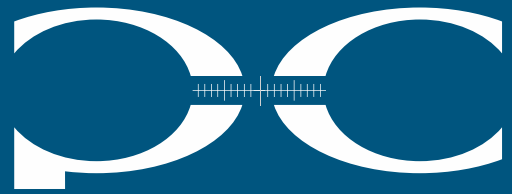


Level Transmitter Sensor

Model PC-PSK2



POSITION CONTROL
MEASUREMENT ENGINEERING



Product Data

PC-PSK2 is made from high-quality silicon piezoresistive sensor. The piezoresistive sensor is packaged in stainless steel housing. The PC-PSK2 is precision engineered to fit most level measurement. The water-proof cable connects with housing sealed, with vented tube putting in, the transmitter could be used in the water or liquid in a long time. Integrated construction and standard output signal could provide easy operation and good automatic control.

Features

- Measuring ranges from 1mH²O to 200mH²O
- Accuracy: $\pm 0.25\%$ FSO or $\pm 0.5\%$ FSO
- Calibrated and temperature compensated
- Stainless steel construction
- Piezoresistive pressure sensor design
- Variety of Pressure & Electrical connections
- Output 4...20mA, 0...10V, 0...5V and others

Standard Pressure Ranges

Nominal pressure range		
0...1mH ² O		
0...2mH ² O		
0...5mH ² O		
0...10mH ² O		
0...15mH ² O		
0...20mH ² O		
0...50mH ² O		
0...80mH ² O		
0...100mH ² O		
0...150mH ² O		
0...200mH ² O		

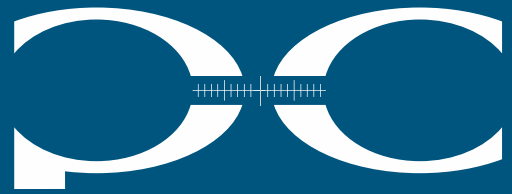
Other pressure ranges available. Please consult the factory.

Applications

- Level measurement
- Hydraulic monitoring in rivers and sea
- Liquid level measurement
- Water treatment
- Water diversion project

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Performance Specifications

Parameter	Value	Units	Notes		
General					
Pressure Range	0-1,...,200	mH ² O			
Overpressure	1.5xFS	mH ² O			
Environmental					
Operating Temperature Range	-20 to +70	°C	-4°F to 158°F		
Compensated Temperature Range	0 to +70	°C	32° F to 158°F		
Storage Temperature Range	-40 to +125	°C	-40°F to 257°F		
Vibration	10	g	20 to 2000Hz		
Shock	100	g	10ms		
Cycles	10x10 ⁶	cycles			
Electrical @ 25°C(77°F)					
Output Signal	4...20mA	0...5Vdc	1...5Vdc	0...10Vdc	0.5...4.5Vdc(ratiometric)
Power Supply(Vs)	12...36Vdc	12...36Vdc	12...36Vdc	15...36Vdc	5Vdc
Load Resistance	<(Vs-12)/0.02A (For current output), >10 kΩ (For voltage output)				
Insulation Resistance	100MΩ@50Vdc				
Physical Specifications					
Media Compatibility	All media compatible with 316L stainless steel				
Housing	304 stainless steel				
Diaphragm	316L stainless steel				
Seal Ring	Viton or NBR				
Oil Filling	Silicone oil				
Protection	IP68				
Net Weight	Approx.225g				
Parameter	Minimum	Typical	Maximum	Units	Notes
Performance					
Accuracy	0.1	0.25	0.5	%FSO	1,2
Temp Coeff - Zero		±0.75	±1.5	%FSO	3
Temp Coeff - Span		±0.75	±1.5	%FSO	3
Long-Term Stability		±0.2	±0.3	%FSO/year	1

Notes

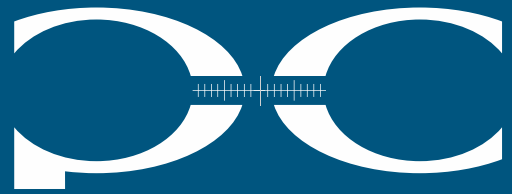
- All values measured at 25°C)
 - Including non-linearity, hysteresis and repeatability.
 - 0°C to 70°C(32°F to 158°F) with reference to 25°C(77°F).
- The listed specifications and dimensions are subject to change without prior notice.

Electrical connections

Cable outlet	4...20mA/HART	1...5VDC	0.5...4.5VDC	MODBUS
+Vcc	2-wire	3-wire	3-wire	4-wire
OUT/RS485A/SDA	Red	Red	Red	Red
GND	Green	Yellow	Yellow	Yellow
RS485B/SCL	NA	Green	Green	Green
				Blue

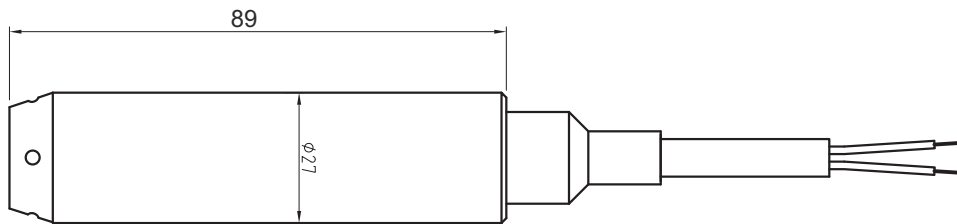
Level Transmitter Sensor

Model PC-PSK2



POSITION CONTROL
MEASUREMENT ENGINEERING

Dimensions (in mm)



Ordering Information

Option1: Model				
PC-PSK2	Level Transmitter			
	Option2: Pressure Ranges			
	0001	1mH ² O	0100	100mH ² O
	0002	2mH ² O	0150	150mH ² O
	0005	5mH ² O	0200	200mH ² O
	0010	10mH ² O	Cxxx	Customized range
	0020	20mH ² O		
	0050	50mH ² O		
	0080	80mH ² O		
	Option3: Cable length			
	[x]m	x=cable length		
		Option4: Output Signal		
		42	4...20mA	
		05	0...5Vdc	
		15	1...5Vdc	
		10	0...10Vdc	
		45	0.5...4.5(ratiometric)	
		50	RS 485 Modbus RTU	
			Option5: Accuracy	
			01	0.15%FSO
			02	0.25%FSO
			05	0.5%FSO
PC-PSK2	0010	15	42	02
<i>Examples of Ordering Code: PC-PSK-001-15-42-02</i>				

Communication format:

I .Read command format (03 function code) example:

A. Send Read command format

Register Address	function code	Register High Address (H)	Register High Address (L)	Register Quantity High Byte (H)	Register Quantity Low Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X03	0X00	0X00	0X00	0X01	0X84	0X0A

B. Return Read data format:

Register Address	function code	Data Bytes	data (H)	data (L)	CRC16 (L)	CRC16 (H)
0X01	0X03	0X02	0X00	0X01	0X79	0X84

II .Write command format (06 function code) example

A. Send write command format

Register Address	function code	Register High Address (H)	Register High Address (L)	Register Quantity High Byte (H)	Register Quantity High Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X06	0X00	0X00	0X00	0X02	0X08	0X0B

B. Return write data format example:

Register Address	function code	Register High Address (H)	Register High Address (L)	Register Quantity High Byte (H)	Register Quantity High Byte (L)	CRC16 (L)	CRC16 (H)
0X01	0X06	0X00	0X00	0X00	0X02	0X08	0X0B

III . Abnormal response return

Register Address	function code	Abnormal code	CRC16 (L)	CRC16 (H)
0X01	0X80+ function code	0x01(illegal function) 0x02(illegal data address) 0x03(illegal data)		

Supported command, meaning of command and data

MODBUS-RTU protocol command list is as follows:

function code	Register High Address	Register Quantity High Byte	Data byte	Data scope	Command meaning
0x03 function code read data					
0x03	0x0000	1	2	1-255	Read slave address
0x03	0x0001	1	2	0-1200 1-2400 2-4800 3-9600 4-19200 5-38400 6-57600 7-115200	Read Baud rate
0x03	0x0003	1	2	0-##### 1-####.# 2-###.## 3-#.###	Decimal point stands for 0-3 digits decimal points
0x03	0x0002	1	2	0- Mpa/°C. 1- Kpa 2- Pa 3- Bar 4- Mbar 5- kg/cm ² 6- psi 7- mh ² o 8- mmh ² o	Pressure unit
0x03	0x0004	1	2	-32768-32767	Measurement output value
0x03	0x0005	1	2	-32768-32767	Zero point of transmitter range
0x03	0x0006	1	2	-32768-32767	Full point of transmitter range
0x03	0x000c	1	2	-32768-32767	Zero point offset value, generally factory sets as 0.
0x06 function codes write data					
0x06	0x0000		2	1-255	Write slave address
0x06	0x0001		2	0-1200 1-2400 2-4800 3-9600 4-19200 5-38400 6-57600 7-115200	Write Baud rate
0x06	0x000c		2	-32768-32767	Zero point offset value* pressure output value= calibration measurement value + Zero point offset value

Save and factory reset					
0x06	0x000F		2	0- save to user area	
0X06	0x0010		2	1- factory reset	