

SIER ELECTRONICS CO., LTD

SPK08 Electronic Pressure Switch

Features

- 4-digit high-precision segmented display with 180° flip capability
- Flexible mounting with 360° rotation of the main body
- Supports multi-unit switching
- Flexible output configuration (Hysteresis: NO/NC; Window: NO/NC)
- Impact and vibration resistant, with a service life of up to 100 million cycles
- Supports one-touch zero reset



Applications

- Petroleum & Petrochemical
- Industrial Process Monitoring & Control
- Hydraulic & Pneumatic Control Systems
- Industrial Machinery Manufacturing
- Automated Inspection Systems
- Pumping Stations & Water Treatment Systems

Introduction

The SPK08 Intelligent Pressure Switch integrates pressure measurement, display, output, and control into a single compact unit. Constructed with advanced components including a diffused silicon sensor, ARM chip, and solid-state relay, it is a precise, reliable, and stable intelligent instrument.

Specifications

Range	1...0 ~ 0.01...1000bar
Accuracy	±0.5%FS
Pressure type	Gauge/absolute/sealed gauge optional
Long term stability	≤±0.2% FS/year
Display range	-1999~9999
Display Mode	4 bit high precision metre tube
Load Capacity	≤24V, 1.5A
Offset thermal drift	0.03%FS/°C (≤1bar), 0.02%FS/°C (> 1bar)
Span thermal drift	0.03%FS/°C (≤1bar), 0.02%FS/°C (> 1bar)
Operating temp.	-20°C~80°C
Storage temp.	-40°C~80°C
Load Resistor	≤ (U-10) /0.02Ω (2-wire)
Protection Rating	IP65
Electrical Connection	Aviation connector

Output Signals

Current	4~20mA
Voltage	DC 0~5V
	DC 1~5V
PNP/NPN/Relay	

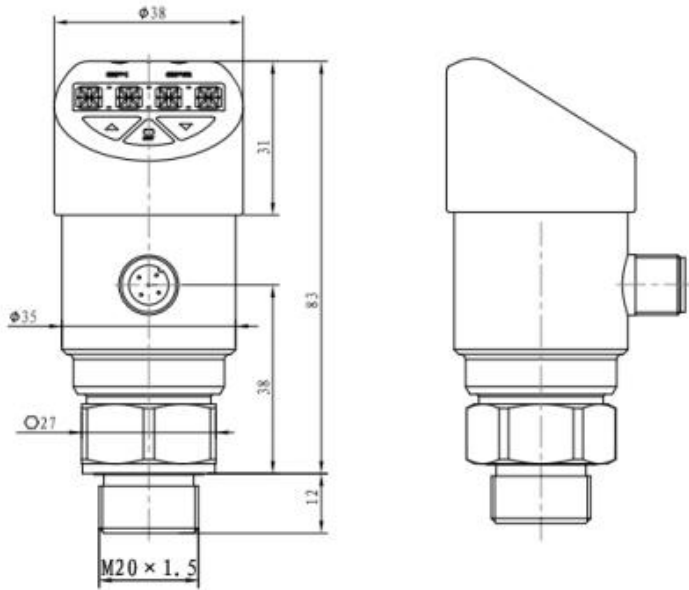
Power Supply

Output signals	Power supply
4~20mA	DC 24V±20%

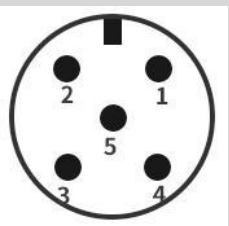
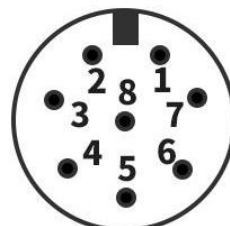
Material

Housing	SS304/SS316L
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Outline Dimension(unit:mm)



Electrical Connection

M12×1 Aviation connector					
	Wiring	Colour		Wiring	
	1	VCC	Brown		5:OUT
	2	SP2	White		6:COM1
	3	GND	Blue		7:COM2
	4	SP1	Black		

Switch Functions

Differential Return Function

If the system pressure fluctuates at zero, the differential will keep the switching state of the output stable.

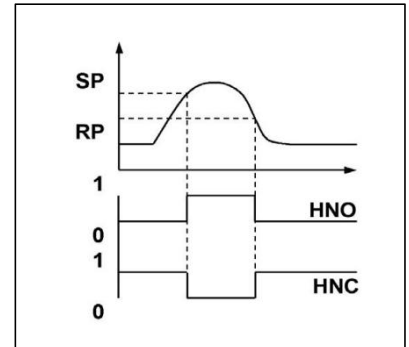
Increasing system pressure will cause the output to switch when the switching action point (SP) is reached.

- Contact normally open (HNO): activated
- Contact normally closed (HNC): not activated

If the system pressure drops again, the output will not switch until the reset switching point (RP) has been reached, but only when it falls below the reset switching point (RP).

Only when it falls below the reset switching point (RP) will the output switch.

- Contact normally open (HNO): not activated
- Contact normally closed (HNC): active



Window Function

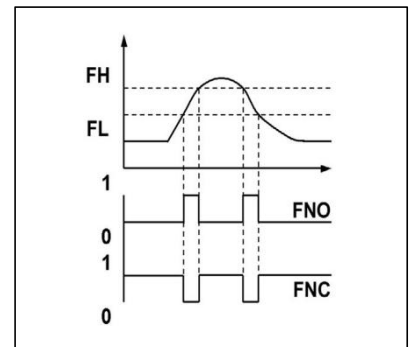
The window function allows you to control the defined range. The system pressure is between window

High (FH) and Window Low (FL), the output switch will open.

- Contact normally open (FNO): activated
- Contact normally closed (FNC): not activated

When the system pressure is outside the window high (FH) and window low (FL) ranges, the output switch will not open.

- Contact normally open (FNO): not activated
- Contact normally closed (FNC): activated

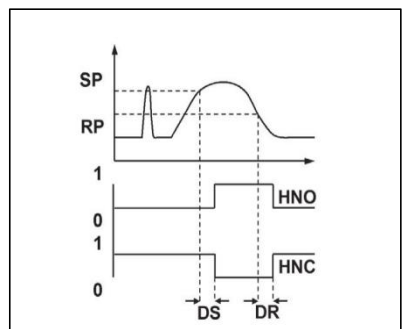


Delay time (≤ 30 s)

In this way, unwanted transient pressure peaks or high frequency signals are filtered out.

When the pressure reaches the switching condition, the switching output does not change state immediately, but must wait until the delay time has elapsed.

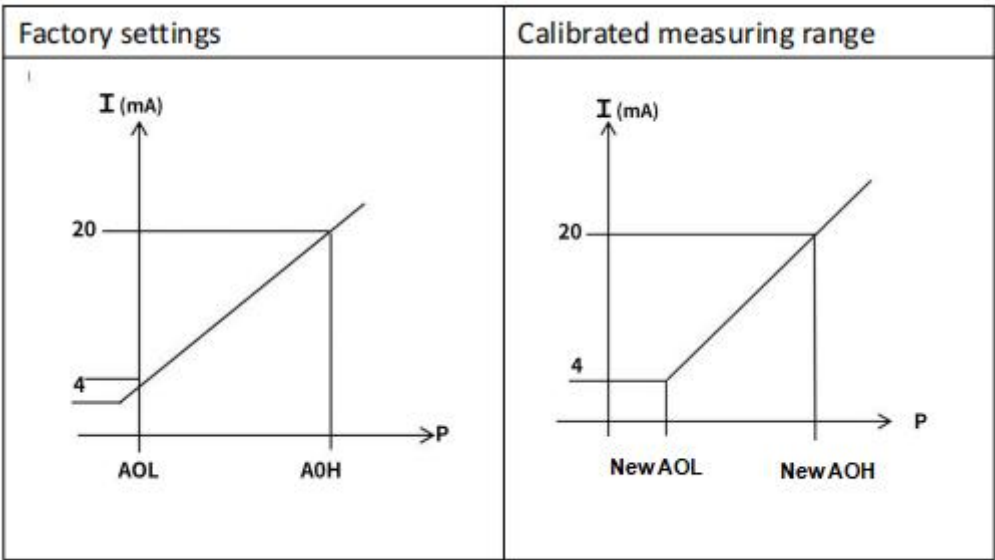
Pressure changes during the delay time do not change the state of the switching outputs.



Range scaling

The analogue output range can be scaled for special applications. (For example, current products)
AOL is the starting point of the analogue output signal (measured value is corresponding to 4mA).
AOH is the final point of the analogue output signal (measured value is corresponding to 20mA).

Minimum range of AOL and AOH = 25% of the measurement range



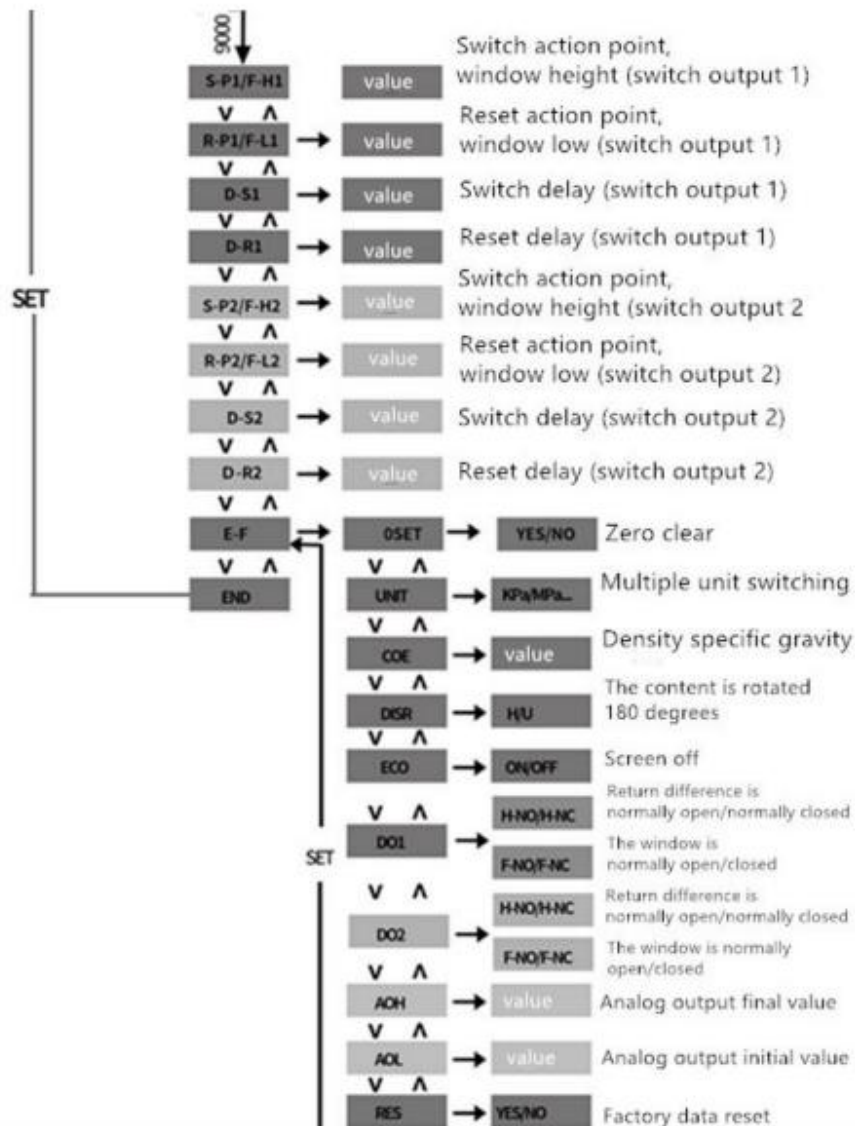
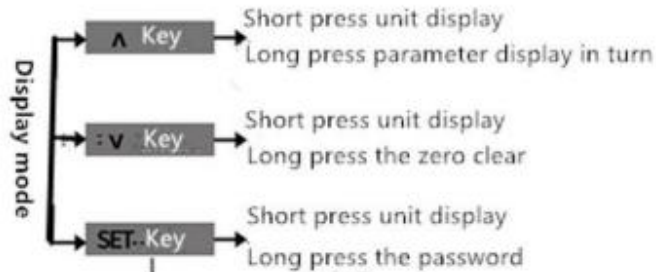
Zero Setting

Check the zero position displayed on the digital display during adjusting. If the zero point deviation is displayed after installation, you can use 0SET in programming mode or press and hold down the "v" button to clear the zero position.

Note: Make sure the system pressure is released before setting the zero position.

Menu guide

Key introduction



Order Information

SPK08	Electronic pressure switch				
	Range	1...0 ~ 0.01...1000bar			
	[0~X]bar	X: the actual measured pressure			
		Code	Switch Type		
		P	PNP		
		N	NPN		
		G	Relay		
			Code	Electrical connection	
			B3	Aviation connector	
				Code	Others
				C1	M20*1.5 male thread
				C2	G1/4 male thread
SPK08	[0~10bar]	P	B3	C1	the whole spec

Notes

- To minimize the effects of electromagnetic interference (EMI), please observe the following precautions:
- Keep wiring connections as short as possible
- Use shielded cables
- Avoid running wires in close proximity to interference sources (e.g., user devices or electrical/electronic equipment)
- When installing with flexible conduit, ground the housing separately

Contact

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