



## Principle and characteristics

The PS482 series digital pressure relay features a high-precision diffused silicon measuring core. It is an all-electronic structure that can accurately measure pressure in real time and has the characteristics of high precision and good long-term stability. The operation is simple, installation is convenient, and the product is flexible to use. The product shell is made of 304 stainless steel material, featuring excellent structural stability and shock resistance. It can measure water pressure, air pressure, oil pressure, and other media that do not corrode stainless steel. It is applicable to various pressure monitoring and protection working conditions such as equipment matching, pressure protection, and constant pressure control.

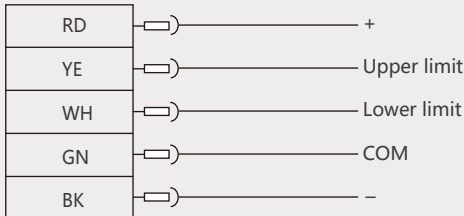
- High-brightness LED real-time pressure display
- Super strong overpressure resistance design to prevent the instrument from being damaged by overpressure
- Conversion of internationally recognized pressure units

## Technical parameters

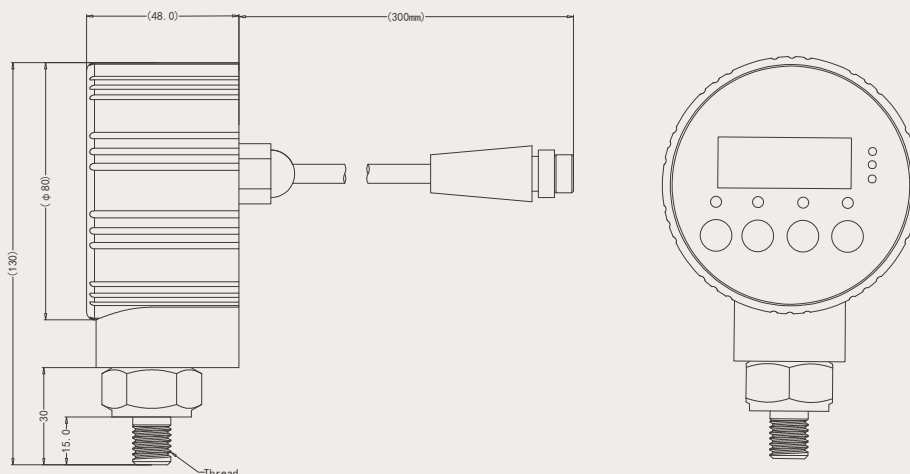
- |  |   |
|--|---|
| ◇ Measuring range: -100 kpa to 0... 0 to 5kPa... 100MPa                                | ◇ Display range: -1999 to 9999  |
| ◇ Accuracy class: 0.5 grade (default), 0.25 grade                                      | ◇ Sampling frequency: 10ms  |
| ◇ Power supply voltage: 24VDC  | ◇ Operating temperature: -20 to 70°C  |
| ◇ Pressure types: Gauge pressure (default),<br>absolute pressure,<br>negative pressure | ◇ Long-term stability: ±0.2%FS/ year  |
| ◇ Display mode: 4-digit LED display  | ◇ Product material:<br>ABS shell,<br>316L stainless steel isolation diaphragm |

## Wiring diagram

### Relay connection method



## Dimension drawing (mm)



## Range code

Standard range	Gauge pressure code	Absolute pressure code	Standard range	Gauge pressure code	Standard range	Range code
0...50mbar	B005	A005	0...60bar	B60	-10...10KPa	F10
0...100mbar	B01	A01	0...100bar	B100	-50...50KPa	F50
0...350mbar	B035	A035	0...160bar	B160	-100...100KPa	F100
0...600mbar	B06	A06	0...250bar	B250	-100...0KPa	F110
0...1bar	B1	A1	0...400bar	B400	-100...500KPa	F150
0...2bar	B2	A2	0...600bar	B600	-100...900KPa	F190
0...6bar	B6	A6	0...1000bar	B1000		
0...10bar	B10	A10				
0...25bar	B25	A25				

## Selection Table

PS482-	B	G14M	-	Detailed description
PS482-				PS482 Digital pressure relay
	-			See the range table
		N14M		Process connection: NPT1/4 external thread
		N12M		Process connection: NPT1/2 external thread
		G14M		Process connection: G1/4 external thread
		G12M		Process connection: G 1/2 external thread
		M20M		Process connection: M 20*1.5 external thread
		M22M		Process connection: M 22*1.5 flat model external thread
		R14M		Process connection: R (PT) 1/4 external thread
		R12M		Process connection: R (PT) 1/2 external thread
		R14K		Process connection: R1/4 internal thread
		G14K		Process connection: G 1/4 internal thread
		H50		Flat film type: 1.5-inch chuck (outer diameter 50.5mm) (suitable for $\leq 1.6$ MPa)
			-	Measurement accuracy: 0.5% (factory default)
			02	Measurement accuracy: 0.25%



## Principle and characteristics

The PS482A Ceramic Pressure Relay features a high-precision diffused silicon measuring core. It is an all-electronic structure that can accurately measure pressure in real time and has the characteristics of high precision and good long-term stability. The operation is simple, installation is convenient, and the product is flexible to use. The product shell is made of 304 stainless steel material, featuring excellent structural stability and shock resistance. It can measure water pressure, air pressure, oil pressure, and other media that do not corrode stainless steel. It is applicable to various pressure monitoring and protection working conditions such as equipment matching, pressure protection, and constant pressure control.

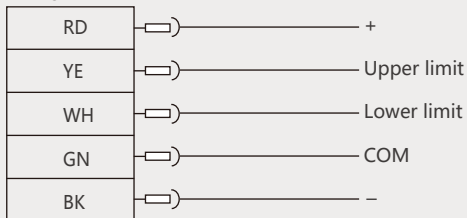
- High-brightness LED real-time pressure display
- Super strong overpressure resistance design to prevent the instrument from being damaged by overpressure
- Conversion of internationally recognized pressure units

## Technical parameters

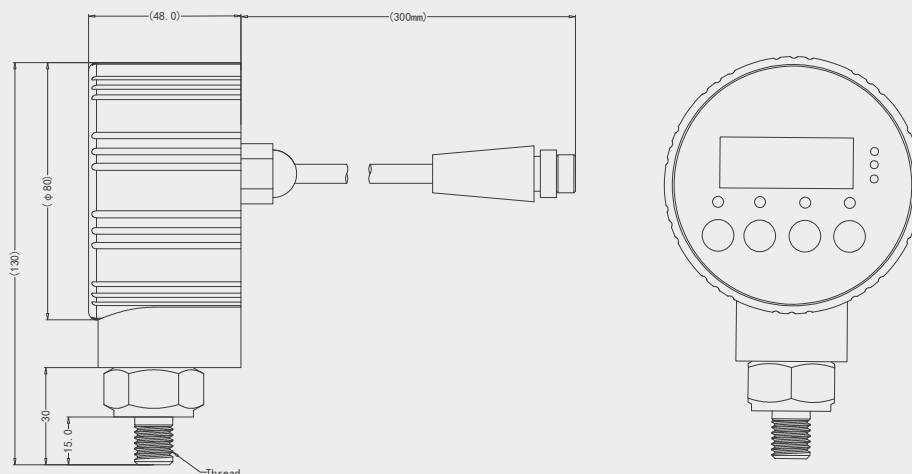
- |  |                                      |
|--|--------------------------------------|
| ◇ Measuring range: -100 kpa to 0... 0 to 5kPa... 100MPa                                | ◇ Display range: -1999 to 9999       |
| ◇ Accuracy class: 0.5 grade  | ◇ Sampling frequency: 10ms           |
| ◇ Power supply voltage: 24VDC  | ◇ Operating temperature: -20 to 70°C |
| ◇ Pressure types: Gauge pressure (default),<br>absolute pressure,<br>negative pressure | ◇ Long-term stability: ±0.2%FS/ year |
| ◇ Display mode: 4-digit LED display  | ◇ Product material: ABS shell,       |

## Wiring diagram

### Relay connection method



## Dimension drawing (mm)



## Range code

Standard range	Gauge pressure code	Absolute pressure code	Standard range	Gauge pressure code
0...50mbar	B005	A005	0...60bar	B60
0...100mbar	B01	A01	0...100bar	B100
0...350mbar	B035	A035	0...160bat	B160
0...600mbar	B06	A06	0...200bar	B200
0...1bar	B1	A1		
0...2bar	B2	A2		
0...6bar	B6	A6		
0...10bar	B10	A10		
0...25bar	B25	A25		

## Selection Table

PS482A -	B	G 14 M	Detailed description
PS482A -			PS482A Ceramic Pressure Relay
	-		See the range table
		N14M	Process connection: NPT1/4 external thread
		N12M	Process connection: NPT1/2 external thread
		G14M	Process connection: G1/4 external thread
		G12M	Process connection: G1/2 external thread
		M20M	Process connection: M 20*1.5 external thread
		M22M	Process connection: M 22*1.5 flat model external thread
		R14M	Process connection: R (PT) 1/4 external thread
		R12M	Process connection: R (PT) 1/2 external thread
		R14K	Process connection: R1/4 internal thread
		G14K	Process connection: G1/4 internal thread
		H50	Flat film type: 1.5-inch chuck (outer diameter 50.5mm) (suitable for $\leq 1.6$ MPa)



## Principle and characteristics

The PS482B Strain Gauge Pressure Relay features a high-precision diffused silicon measuring core. It is an all-electronic structure that can accurately measure pressure in real time and has the characteristics of high precision and good long-term stability. The operation is simple, installation is convenient, and the product is flexible to use. The product shell is made of 304 stainless steel material, featuring excellent structural stability and shock resistance. It can measure water pressure, air pressure, oil pressure, and other media that do not corrode stainless steel. It is applicable to various pressure monitoring and protection working conditions such as equipment matching, pressure protection, and constant pressure control.

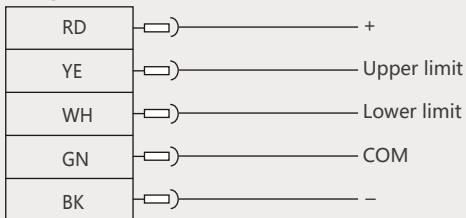
- High-brightness LED real-time pressure display
- Super strong overpressure resistance design to prevent the instrument from being damaged by overpressure
- Conversion of internationally recognized pressure units

## Technical parameters

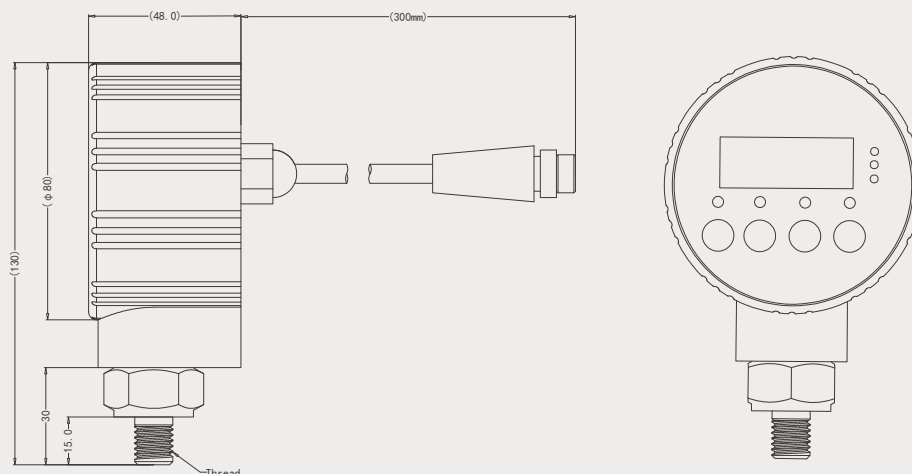
- |  |                                      |
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| ◇ Measuring range: -100 kpa to 0... 0 to 5kPa... 100MPa                                | ◇ Display range: -1999 to 9999       |
| ◇ Accuracy class: 0.5 grade  | ◇ Sampling frequency: 10ms           |
| ◇ Power supply voltage: 24VDC  | ◇ Operating temperature: -20 to 70°C |
| ◇ Pressure types: Gauge pressure (default),<br>absolute pressure,<br>negative pressure | ◇ Long-term stability: ±0.2%FS/ year |
| ◇ Display mode: 4-digit LED display  | ◇ Product material: ABS shell,       |

## Wiring diagram

### Relay connection method



## Dimension drawing (mm)



## Range code

Pressure range	bar	100	160	250	400	600	1000	1500	2000
	psi	1500	2300	3600	6000	9000	14500	21800	29000
Max overload pressure		×2		×1.5		×1.3	×1.2		
Min damage pressure		×3		×2		×1.6	×1.5		

## Selection Table

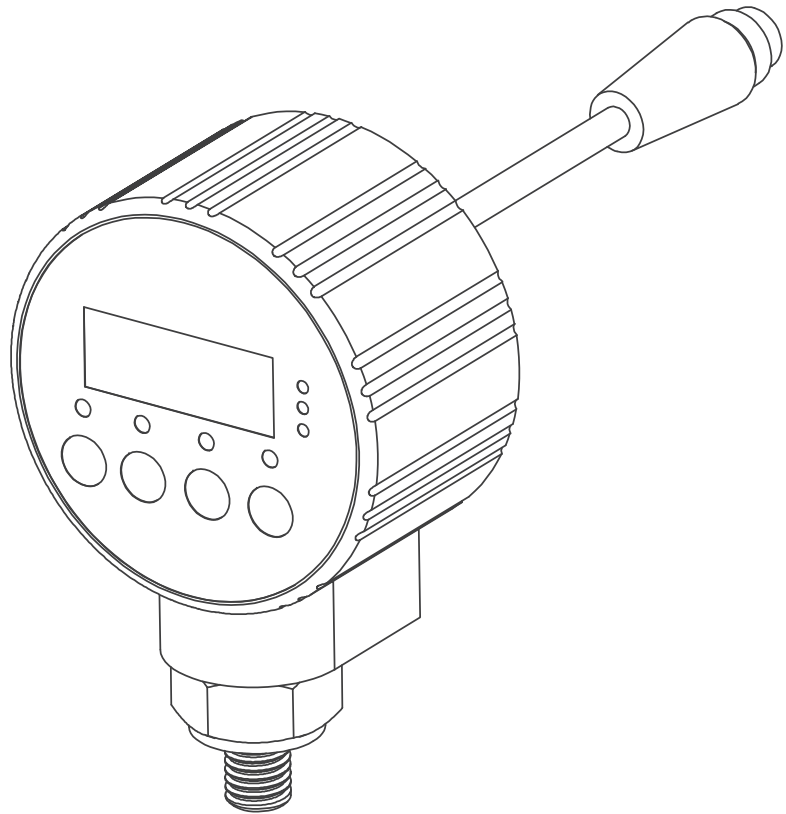
PS482B-	B100	G14M	Detailed description
PS482B-			PS482B Strain Gauge Pressure Relay
	B100		Measurement range: 0...100bar
	B160		Measurement range: 0...160bar
	B250		Measurement range: 0...250bar
	B400		Measurement range: 0...400bar
	B600		Measurement range: 0...600bar
	B1000		Measurement range: 0...1000bar
	B1500		Measurement range: 0...1500bar
	B2000		Measurement range: 0...2000bar
		N14M	Process connection: NPT1/4 external thread
		N12M	Process connection: NPT1/2 external thread
		G14M	Process connection: G1/4 external thread
		G12M	Process connection: G1/2 external thread
		M20M	Process connection: M20*1.5 external thread
		M22M	Process connection: M22*1.5 flat model external thread
		R14M	Process connection: R (PT) 1/4 external thread
		R12M	Process connection: R (PT) 1/2 external thread
		R14K	Process connection: R1/4 internal thread
		G14K	Process connection: G1/4 internal thread
		H50	Flat film type: 1.5-inch chuck (outer diameter 50.5mm) (suitable for ≤ 1.6MPa)

—— Sensor and controller ——

■ Flow ■ pressure ■ temperature ■ level ■ position

**KATU** 卡图

**Operation instruction**  
**Digital pressure relay**  
**PS482 series**



## Purpose of product application

The 500 Series sensor (switch) has two switch outputs and one analog output.



### **danger**

The sensor (switch) can only be used in the specified application range.

The temperature range must be within the permissible range. Do not exceed the rated pressure and power load value.

Assembly, commissioning and operation must be carried out in accordance with applicable national and local safety instructions.

The switch is designed to be used as a safety device for pressurizing the system in accordance with "Pressure Equipment Directive 97/23 / EC(PED)".

## Standard

The standards applied during development, manufacturing and configuration are listed in the CE Compliance and manufacturer declarations.

## Quality assurance

Our scope of delivery and service is subject to legal warranties and warranty periods.

### **Warranty clause**

We guarantee that the functions and materials of the dual pressure switch meet the statutory requirements under normal operation and maintenance conditions.

### **Security of loss**

Such as:

- Incorrect use,
- Incorrect installation
- Incorrect operation or operation in violation of the provisions of this operation manual.

No liability shall be assumed for any damage resulting therefrom or consequential.

## Safety instruction

Safety instructions are intended to protect users from dangerous situations and /or prevent material damage.

In the operating instructions, the severity of the potential risk can be indicated by the following signal words:



### **danger**

An imminent danger to the user. Failure to comply may result in fatal injury.



### **warning**

An identifiable hazard.

Failure to comply may result in fatal injury and damage to equipment or plant parts.



### **caution**

It means a danger.

Non-compliance may result in minor injury and material damage to the sensor (switch) and/or plant.



### **important**

Information that is important to the user.



### **Deal with**

Sensors (switches) must be handled correctly in accordance with national or local regulations for electrical/electronic equipment.

Sensors (switches) cannot be disposed of with household waste!

## Principle characteristics

PS482 series digital pressure relay High precision diffused silicon measuring core, full electronic structure, accurate real-time pressure measurement, and has high accuracy, good long-term stability. Simple operation, easy installation, flexible product use. The product shell is made of 304 stainless steel material, good structural stability, good shock resistance, and can measure water pressure, air pressure, oil pressure, hydraulic pressure and other non-corrosive media of stainless steel. Suitable for equipment supporting, pressure protection, constant pressure control and other pressure monitoring and protection conditions.

- Highlighted LED real-time pressure display
- Super resistance to overpressure design, prevent the instrument from overpressure damage
- International pressure unit conversion

## Technical parameter

◇ Measuring range: Please refer to the product label for details

◇ Accuracy level: 0.5 (default), 0.25

◇ Power supply voltage: 24VDC/220VAC optional

Pressure type: gauge pressure (default), absolute pressure, negative pressure

◇ Display mode: 4-digit LED display

◇ Display range: -1999 ~ 9999

◇ Sampling frequency: 10ms

◇ Operating temperature: -20 ~ 70°C

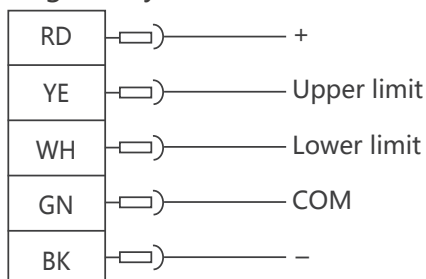
◇ Long-term stability:  $\pm 0.2\%FS/$  year

◇ Material: ABS shell;

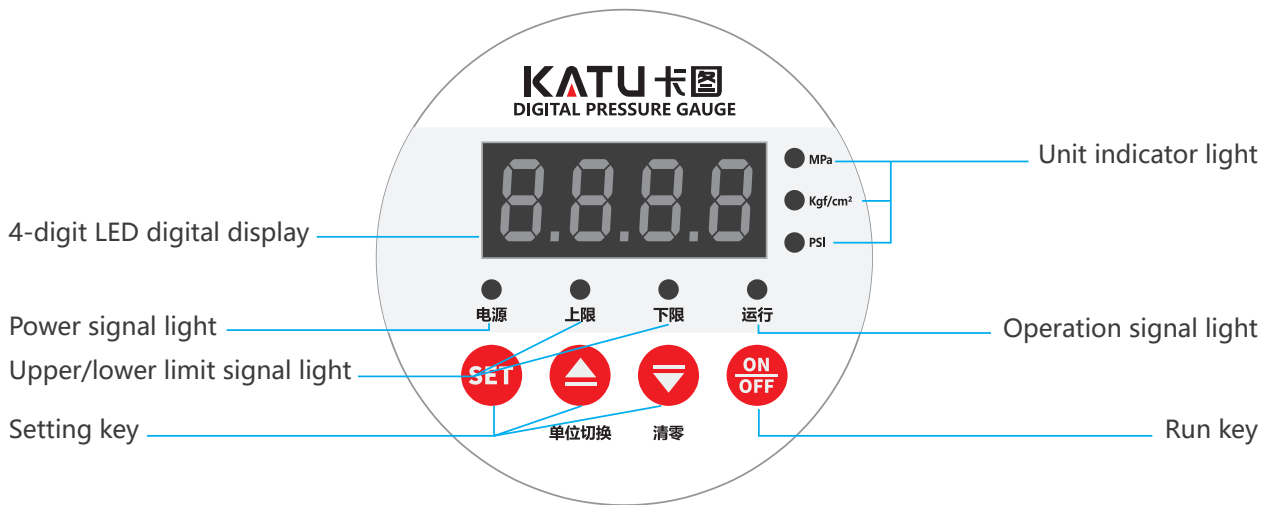
316L stainless steel diaphragm

## Connection mode

Single relay



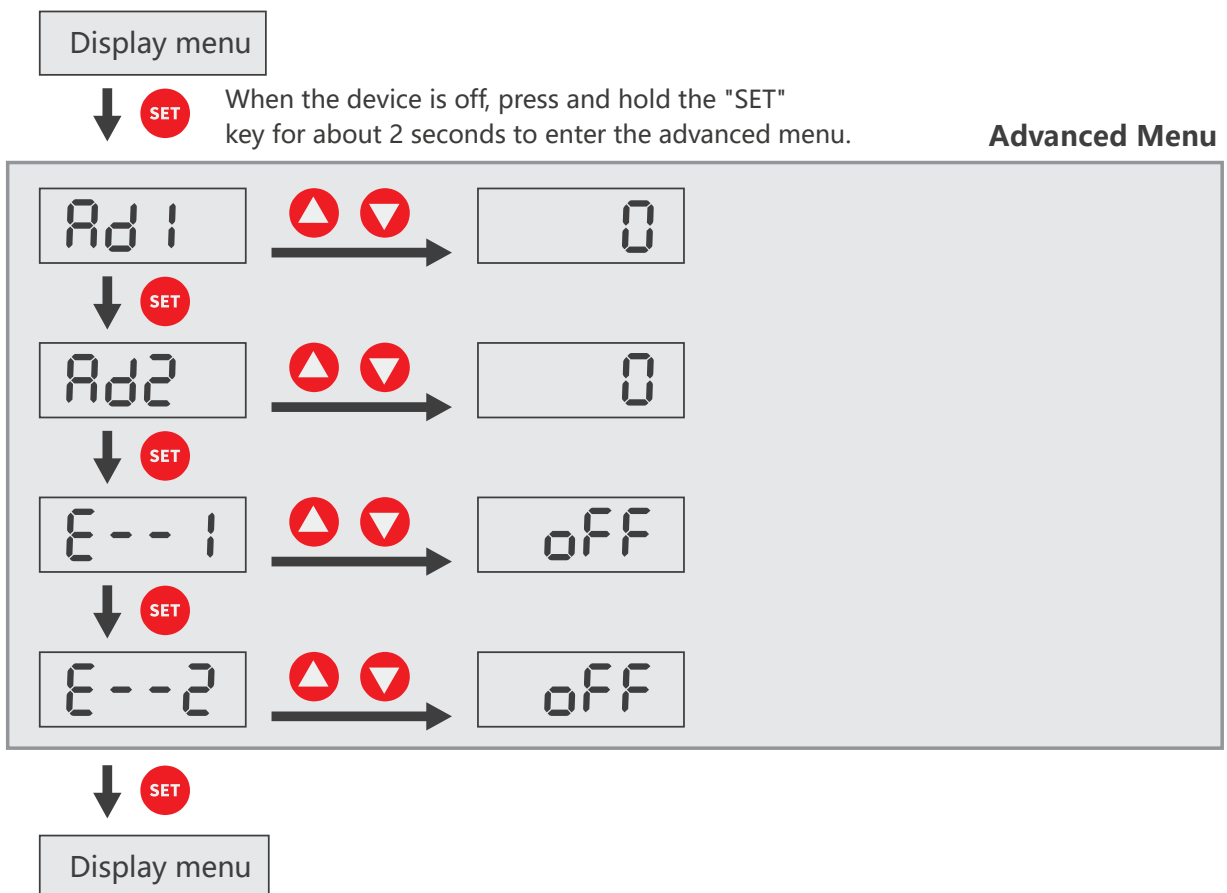
## Panel description



<b>Operation signal light</b>	The "Operation Signal ●" indicates the measurement status. Press "ON/OFF" to turn off● or start the operation ●.
<b>Unit switching</b>	Press the "▲" key briefly to switch units.
<b>Zero stress</b>	When the operation is off, press and hold the "▼" button for about 2 seconds to clear the pressure to zero ( ⚠ operate in a zero-pressure state).
<b>lower limit upper limit</b>	<b>Lower limit setting</b> When the operation is off, briefly press the "SET" key. The screen will flash and the lower limit signal light will come on. The lower limit value can be SET by clicking "▲" or "▼". Once the setting is completed, press the "SET" key briefly. ( ⚠ The lower limit value is set subject to the upper limit value.)
	<b>Upper limit setting</b> When the device is off, briefly press the "SET" key. The screen will flash until the upper limit signal light comes on. The upper limit value can be SET by clicking "▲" or "▼". Once the setting is completed, press the "SET" key briefly.
<b>Advanced Menu</b>	When the device is off, press and hold the "SET" key for about 2 seconds to enter the advanced menu.

## Debugging/Operation (relay)

Advanced Menu	
Ad1	Lower limit hysteresis value (lower limit alarm hysteresis value for low-position release)
	Press the ▲ or ▼ key briefly to modify the lower limit hysteresis value
Ad2	Upper limit hysteresis value (lower limit alarm hysteresis value)
	Press the ▲ or ▼ key briefly to modify the upper limit hysteresis value
E--1	Intelligent pressure detection (default OFF indicates off) When the pressure exceeds the preset time but has not yet reached the lower limit, the lower limit of the relay opens and displays E--1.
	Press the ▲ or ▼ key briefly to modify
E--2	Intelligent pressure detection (default OFF indicates off) When the pressure exceeds the preset time but is not less than the upper limit, the upper limit of the relay opens and displays E--2.
	Press the ▲ or ▼ key briefly to modify



## Maintenance/cleaning

Sensors (switches) do not require maintenance.



### warning

Periodically check whether the switch is working properly.

If the switch does not work properly, stop the operation immediately.



### caution

Use of improper cleaning agent may damage the switch.

The following cleaning agents can be used to clean polycarbonate: mild soap or detergent Isopropyl alcohol

Immediately after cleaning, rinse with water. Do not leave cleaner on the surface of the product. Do not clean products in high heat or direct sunlight.

The following cleaning agents are known to affect the integrity of polycarbonate components and should not be used: ZEP Fast 505, Pinesol, Formula 409

Halogenated solvents (benzene, gasoline, acetone or carbon tetrachloride)

Strong alkalinity

Methyl ethyl ketone

Abrasive substance

## disassemble



### danger

Only remove the switch in case of power failure (electrical, hydraulic/pneumatic).




Switch disconnection from pressure and power supply must be performed by trained or directed personnel in accordance with the most advanced standards.



### warning

Be aware that the surface of the shell may become very hot if the operating temperature is higher!

## **Katu Electronic (Kunshan) Co.,Ltd.**

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