Electronic pressure switch（sensor） PS200

KATU 卡图

Technical parameter

- ◇ Supply voltage: 12... 30Vdc
- ◇ No-load current consumption: maximum 30mA,24Vdc power supply
- ◇ Output type: PNP/NPN can be set, normally open/normally closed can be set / Frequency (full scale 100Hz) Optional
- Switch load: <200mA
- Response time: <10ms
- Switching accuracy: ≤±0.5% range
- ◇ Switch setting mode: button increase/decrease
- ◇ Switch point return difference: factory default return difference is 0.5% of the set value of the switch (configurable)
- ◇ Connection protection: reverse phase, overload, paragraph protection
- ◇ Accuracy: ≤±0.5% range
- ◇ Stability (annual drift) : ≤±0.3% range
- ◇ Temperature:
- Medium temperature: -20... 85°C
- Ambient temperature: -20... 80°C
- Storage temperature: -30... 80°C
- ◇ Material:
- Induction diaphragm: stainless steel 316L/ ceramic
- Process connection: stainless steel 304
- Sealing material: Butadiene rubber/fluorine rubber
- Housing: engineering plastic
- ◇ Protection grade: IP67
- ◇ Outlet: M12x1 connector

Principle structure

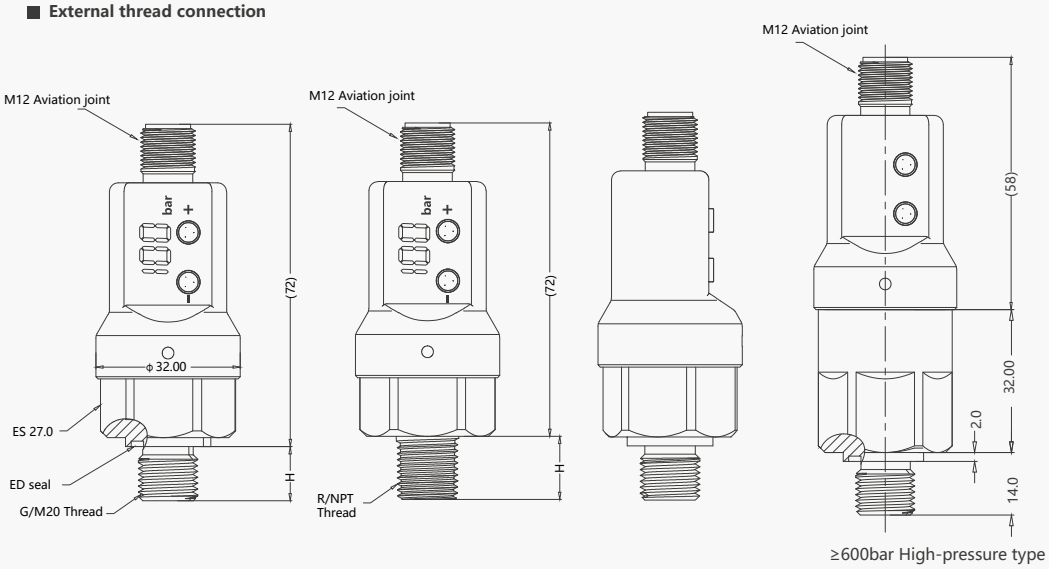
The diffused silicon sensor is used for pressure measurement, and the signal is converted into a standard industrial electrical signal after processing by a post-processing circuit and displayed. Designed with an integrated injection molded housing, this series of products can be used in a variety of industrial applications. Key setting, easy operation, high-light LED can digitally display real-time measurement values. A variety of connection methods can fully meet a variety of specific installation needs.

Parameter table

Pressure range	bar	1	2	5	10	16	25	60	100	160	250	400	600
	psi	15	30	75	145	230	370	900	1500	2300	3600	6000	9000
Maximum overload pressure		×5			×3			×2			×1.5		×1.3
Minimum damage pressure		×6			×4			×3			×2		×1.6

Dimension drawing（mm）

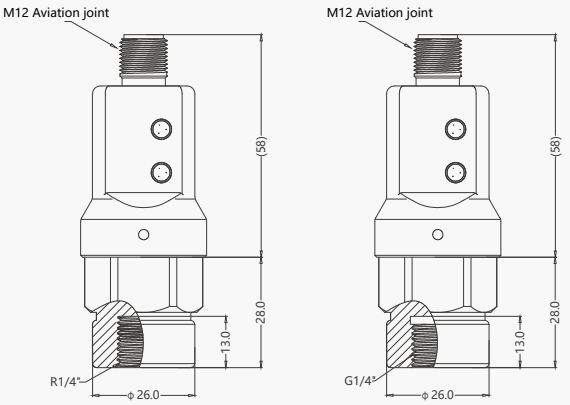
■ **External thread connection**



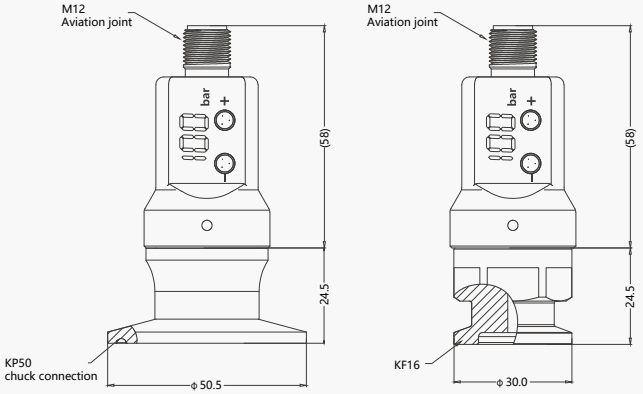
≥600bar High-pressure type

External thread	Thread height(H)	Sealing method
G1/4	12	ED seal
G1/2		
M20×1.5		
R1/4	14	no
R1/2		
N1/4		

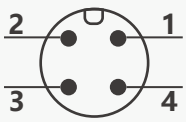
■ Internal thread connection

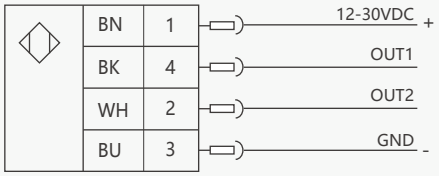


■ Chuck connection



Wiring diagram





switch/frequency					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply（+）	BU	3	power supply（-）
BK	4 (OUT1)	SP1 Switch PNP (Factory default) SP1 Switch NPN Frequency (full scale 100Hz)	WH	2 (OUT2)	/

Analog output: 4-20mA					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply（+）	BU	3	power supply（-）
BK	4 (OUT1)	4-20mA	WH	2 (OUT2)	/

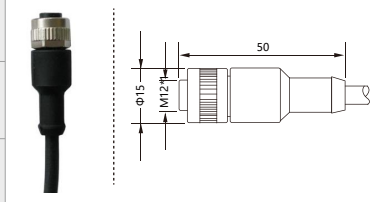
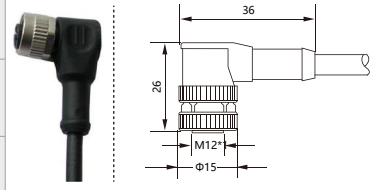
Analog output: 1-5V					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply（+）	BU	3	power supply（-）
BK	4 (OUT1)	1-5V	WH	2 (OUT2)	/

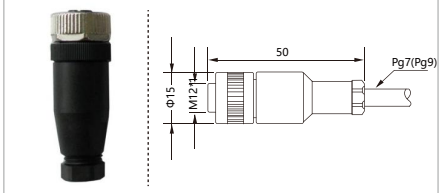
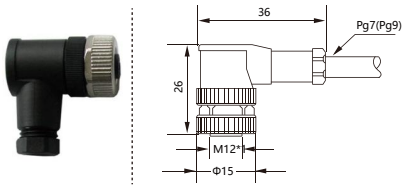
RS485					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply（+）	BU	3	power supply（-）
BK	4 (OUT1)	RS485(B)	WH	2 (OUT2)	RS485(A)

Selection list

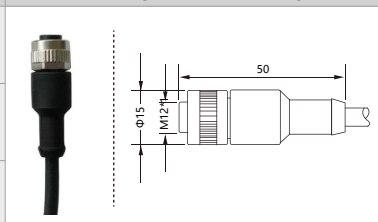
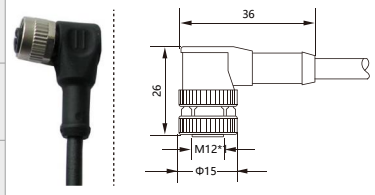
PS200-	B	100	G14M	-	Elaborate
PS200-					PS200 electronic pressure sensor
	B				Gauge pressure
	F				Negative pressure
		0001			Measurement range: -10... 10KPa or 0... 10KPa
		0006			Measurement range: -60... 60KPa or 0... 60KPa
		001			Measurement range: -1... 1bar or 0... 1bar
		002			Measurement range: -1... 2bar or 0... 2bar
		005			Measurement range: -1... 5bar or 0... 5bar
		010			Measurement range: 0... 10bar
		025			Measurement range: 0... 25bar
		060			Measurement range: 0... 60bar
		100			Measurement range: 0... 100bar
		160			Measurement range: 0... 160bar
		250			Measurement range: 0... 250bar
		400			Measurement range: 0... 400bar
		600			Measurement range: 0... 600bar
		1000			Measurement range: 0... 1000bar
			G14M		Process connection: G1/4 external thread
			G12M		Process connection: G1/2 external thread
			N14M		Process connection: NPT1/4 external thread
			R14M		Process connection: R1/4 external thread
			R12M		Process connection: R1/2 external thread
			M20M		Process connection: M20*1.5 external thread
			G14K		Process connection: G1/4 Internal thread
			R14K		Process connection: R1/4 Internal thread
			KP50		Process connection: 1.5-inch (outer diameter 50.5mm) chuck metal flat film type (standard pressure resistance 1.6MPa)
			KF16		Process connection: KF16 vacuum chuck type
				-	Output signal: Switch/frequency
				A	Output signal: Analog 4-20mA
				V	Output signal: Analog 1-5V
				RS	Output signal: RS485

Factory standard:ZL03-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL03-PU02G
M12*1-4Pin (5m cable)			ZL03-PU05G
M12*1-4Pin (10m cable)			ZL03-PU010G
		PVC	ZL03-PC02G
			ZL03-PC05G
			ZL03-PC010G
M12*1-4Pin (2m cable)		PUR	ZL03-PU02W
M12*1-4Pin (5m cable)			ZL03-PU05W
M12*1-4Pin (10m cable)			ZL03-PU010W
		PVC	ZL03-PC02W
			ZL03-PC05W
			ZL03-PC010W

M12* 1-4pin self-connector/size drawing（mm）	model
	GL04 (4Pin joint)
	WL04 (4Pin joint)

Factory standard:ZL04-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL04-PU02G
M12*1-4Pin (5m cable)			ZL04-PU05G
M12*1-4Pin (10m cable)			ZL04-PU010G
		PVC	ZL04-PC02G
			ZL04-PC05G
			ZL04-PC010G
M12*1-4Pin (2m cable)		PUR	ZL04-PU02W
M12*1-4Pin (5m cable)			ZL04-PU05W
M12*1-4Pin (10m cable)			ZL04-PU010W
		PVC	ZL04-PC02W
			ZL04-PC05W
			ZL04-PC010W

Ceramic electronic pressure switch (sensor) PS201

KATU 卡图

Technical parameter

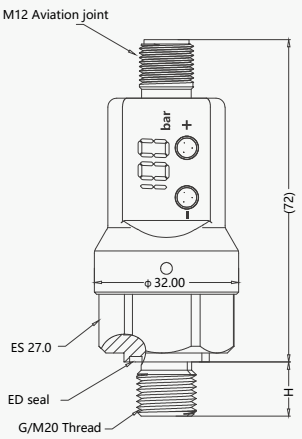
- ◇ Supply voltage: 12... 30Vdc
- ◇ No-load current consumption: maximum 30mA,24Vdc power supply
- ◇ Output type: PNP/NPN can be set, normally open/normally closed can be set / Frequency (full scale 100Hz) Optional
- Switch load: <200mA
- Response time: <10ms
- Switching accuracy: ≤±0.5% range
- ◇ Switch setting mode: button increase/decrease
- ◇ Switch point return difference: factory default return difference is 0.5% of the set value of the switch (configurable)
- ◇ Connection protection: reverse phase, overload, paragraph protection
- ◇ Accuracy: ≤±1% range
- ◇ Stability (annual drift) : ≤±0.3% range
- ◇ Temperature:
- Medium temperature: -20... 85°C
- Ambient temperature: -20... 80°C
- Storage temperature: -30... 80°C
- ◇ Material: Sensing diaphragm: ceramic
  Process connection: stainless steel 304
  Sealing material: fluorine rubber
  Housing: engineering plastic
- ◇ Protection grade: IP67
- ◇ Outlet: M12x1 connector

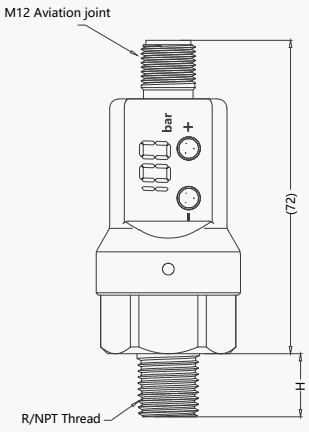
Principle structure

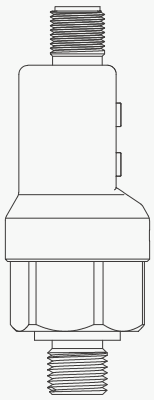
The ceramic piezoresistive sensor is used for pressure measurement, and the signal is converted into a standard industrial electrical signal after processing by a post-processing circuit and displayed. Designed with an integrated injection molded housing, this series of products can be used in a variety of industrial applications. Key setting, easy operation, high-light LED can digitally display real-time measurement values. A variety of connection methods can fully meet a variety of specific installation needs.

Dimension drawing (mm)

■ **External thread connection**

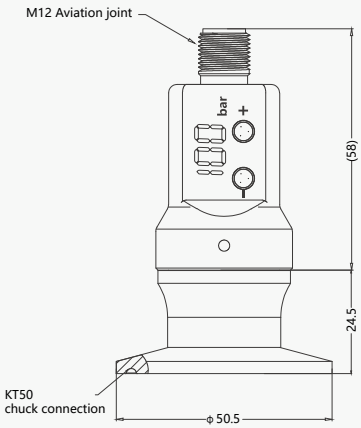




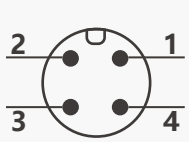


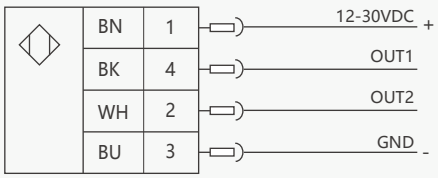
External thread	Thread height(H)	Sealing method
G1/4	12	ED seal
G1/2		
M20×1.5		
R1/4	14	no
R1/2		
N1/4		

■ **Chuck connection**



Wiring diagram





switch/frequency					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	SP1 Switch PNP (Factory default) SP1 Switch NPN Frequency (full scale 100Hz)	WH	2 (OUT2)	/

Analog output: 4-20mA					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	4-20mA	WH	2 (OUT2)	/

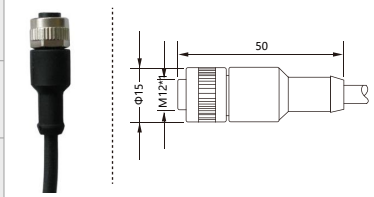
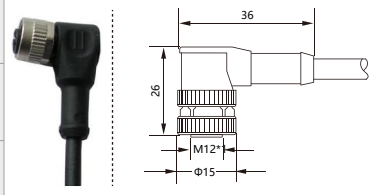
Analog output: 1-5V					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	1-5V	WH	2 (OUT2)	/

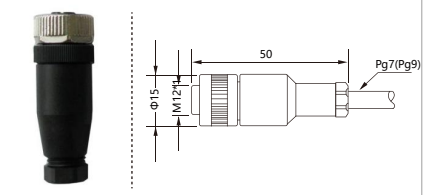
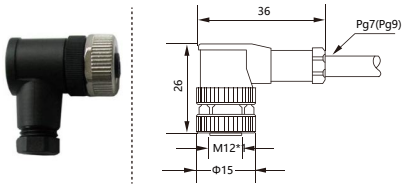
RS485					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	RS485(B)	WH	2 (OUT2)	RS485(A)

Selection list

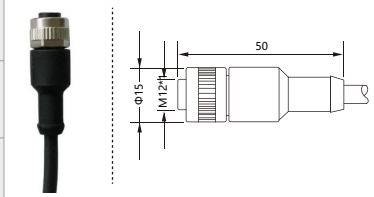
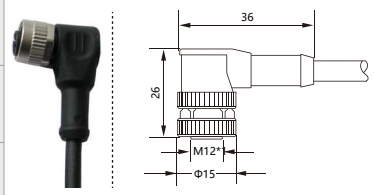
PS201-	B002	G14M	-	expatiate
PS201-				PS201 Ceramic electronic pressure switch (sensor)
	B002			Measuring range: 0... 2bar
	B010			Measuring range: 0... 10bar
	B050			Measuring range: 0... 50bar
	B100			Measuring range: 0... 100bar
	B200			Measuring range: 0... 200bar
		G14M		Process connection: G1/4 external thread
		G12M		Process connection: G1/2 external thread
		N14M		Process connection: NPT1/4 external thread
		R14M		Process connection: R1/4 external thread
		R12M		Process connection: R1/2 external thread
		M20M		Process connection: M20*1.5 external thread
		KT50		Process connection: 1.5-inch (outer diameter 50.5mm) chuck ceramic flat film type(Standard pressure resistance 1.6MPa)
			-	Output signal: switch/frequency
			A	Output signal: analog 4-20mA
			V	Output signal: analog 1-5V
			RS	Output signal: RS485

Factory standard:ZL03-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable) M12*1-4Pin (5m cable) M12*1-4Pin (10m cable)		PUR	ZL03-PU02G ZL03-PU05G ZL03-PU010G
		PVC	ZL03-PC02G ZL03-PC05G ZL03-PC010G
M12*1-4Pin (2m cable) M12*1-4Pin (5m cable) M12*1-4Pin (10m cable)		PUR	ZL03-PU02W ZL03-PU05W ZL03-PU010W
		PVC	ZL03-PC02W ZL03-PC05W ZL03-PC010W

M12* 1-4pin self-connector/size drawing（mm）	model
	GL04 (4Pin joint)
	WL04 (4Pin joint)

Factory standard:ZL04-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable) M12*1-4Pin (5m cable) M12*1-4Pin (10m cable)		PUR	ZL04-PU02G ZL04-PU05G ZL04-PU010G
		PVC	ZL04-PC02G ZL04-PC05G ZL04-PC010G
M12*1-4Pin (2m cable) M12*1-4Pin (5m cable) M12*1-4Pin (10m cable)		PUR	ZL04-PU02W ZL04-PU05W ZL04-PU010W
		PVC	ZL04-PC02W ZL04-PC05W ZL04-PC010W

Strain gauge electronic pressure switch (sensor) PS203

KATU 卡图

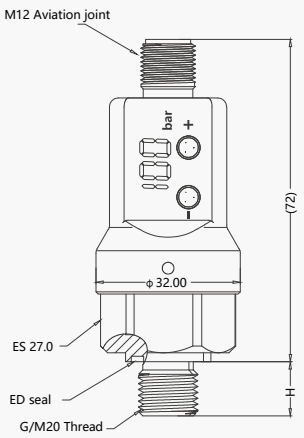
Technical parameter

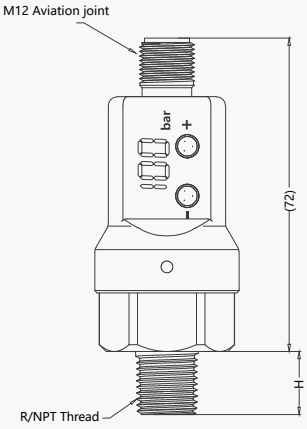
- ◇ Supply voltage: 12... 30Vdc
- ◇ No-load current consumption: maximum 30mA,24Vdc power supply
- ◇ Output type: PNP/NPN can be set, normally open/normally closed can be set
- / Frequency (full scale 100Hz) Optional
- Switch load: <200mA
- Response time: <10ms
- Switching accuracy: ≤±0.5% range
- ◇ Switch setting mode: button increase/decrease
- ◇ Switch point return difference: factory default return difference is 0.5% of the set value of the switch (configurable)
- ◇ Connection protection: reverse phase, overload, paragraph protection
- ◇ Accuracy: ≤±0.5% range
- ◇ Stability (annual drift) : ≤±0.3% range
- ◇ Temperature:
- Medium temperature: -20... 85°C
- Ambient temperature: -20... 80°C
- Storage temperature: -30... 80°C
- ◇ Material:
- Induction diaphragm: stainless steel 316L/ ceramic
- Process connection: stainless steel 304
- Sealing material: Butadiene rubber/fluorine rubber
- Housing: engineering plastic
- ◇ Protection grade: IP67
- ◇ Outlet: M12x1 connector

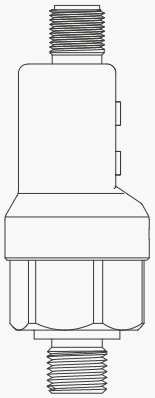
Principle structure

The strain gauge pressure core measurement principle is adopted. The signal is processed by the post-processing circuit and converted into a standard industrial electrical signal for output and display. The one-piece injection molded shell design enables this series of products to be used in various industrial Settings. Key setting, simple operation, high-brightness LED can digitally display real-time measurement values. Multiple connection methods can fully meet various specific installation requirements.

Dimension drawing (mm)

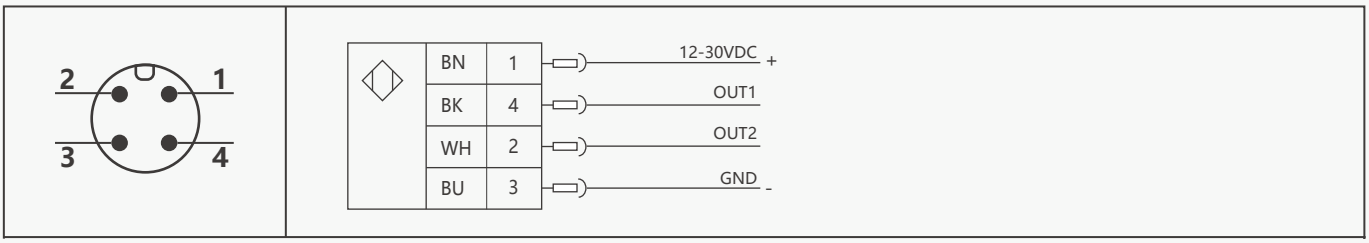






External thread	Thread height(H)	Sealing method
G1/4	12	ED seal
G1/2		
M20×1.5		
R1/4	14	no
R1/2		
N1/4		

Wiring diagram



switch/frequency					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	SP1 Switch PNP (Factory default) SP1 Switch NPN Frequency (full scale 100Hz)	WH	2 (OUT2)	/

Analog output: 4-20mA					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	4-20mA	WH	2 (OUT2)	/

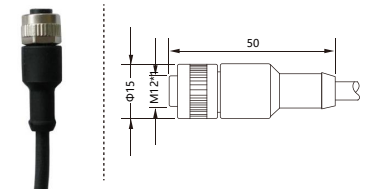
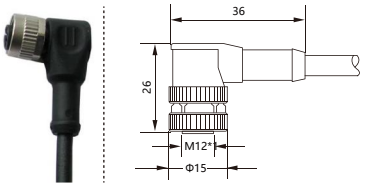
Analog output: 1-5V					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	1-5V	WH	2 (OUT2)	/

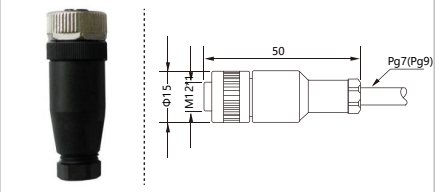
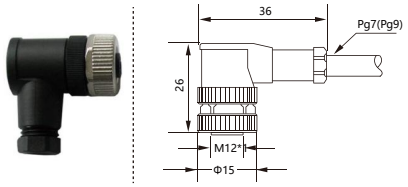
RS485					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	RS485(B)	WH	2 (OUT2)	RS485(A)

Selection list

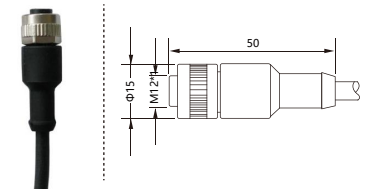
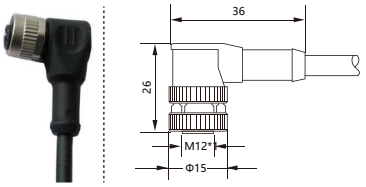
PS203-	100	G14M	-	Elaborate
PS203-				PS203 Strain gauge electronic pressure switch (sensor)
	100			Measurement range: 0... 100bar
	160			Measurement range: 0... 160bar
	250			Measurement range: 0... 250bar
	400			Measurement range: 0... 400bar
	600			Measurement range: 0... 600bar
		G14M		Process connection: G1/4 external thread
		G12M		Process connection: G1/2 external thread
		N14M		Process connection: NPT1/4 external thread
		R14M		Process connection: R1/4 external thread
		R12M		Process connection: R1/2 external thread
		M20M		Process connection: M20*1.5 external thread
			-	Output signal: Switch/frequency
			A	Output signal: Analog 4-20mA
			V	Output signal: Analog 1-5V
			RS	Output signal: RS485

Factory standard:ZL03-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL03-PU02G
M12*1-4Pin (5m cable)			ZL03-PU05G
M12*1-4Pin (10m cable)			ZL03-PU010G
M12*1-4Pin (2m cable)		PVC	ZL03-PC02G
M12*1-4Pin (5m cable)			ZL03-PC05G
M12*1-4Pin (10m cable)			ZL03-PC010G
M12*1-4Pin (2m cable)		PUR	ZL03-PU02W
M12*1-4Pin (5m cable)			ZL03-PU05W
M12*1-4Pin (10m cable)			ZL03-PU010W
		PVC	ZL03-PC02W
			ZL03-PC05W
			ZL03-PC010W

M12* 1-4pin self-connector/size drawing（mm）	model
	GL04 (4Pin joint)
	WL04 (4Pin joint)

Factory standard:ZL04-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL04-PU02G
M12*1-4Pin (5m cable)			ZL04-PU05G
M12*1-4Pin (10m cable)			ZL04-PU010G
M12*1-4Pin (2m cable)		PVC	ZL04-PC02G
M12*1-4Pin (5m cable)			ZL04-PC05G
M12*1-4Pin (10m cable)			ZL04-PC010G
M12*1-4Pin (2m cable)		PUR	ZL04-PU02W
M12*1-4Pin (5m cable)			ZL04-PU05W
M12*1-4Pin (10m cable)			ZL04-PU010W
		PVC	ZL04-PC02W
			ZL04-PC05W
			ZL04-PC010W

Flat membrane type electronic pressure switch (sensor) PS205

KATU 卡图

Principle structure

The diffused silicon sensor is used for pressure measurement, and the signal is converted into a standard industrial electrical signal after processing by a post-processing circuit and displayed. Designed with an integrated injection molded housing, this series of products can be used in a variety of industrial applications. Key setting, easy operation, high-light LED can digitally display real-time measurement values. A variety of connection methods can fully meet a variety of specific installation needs.

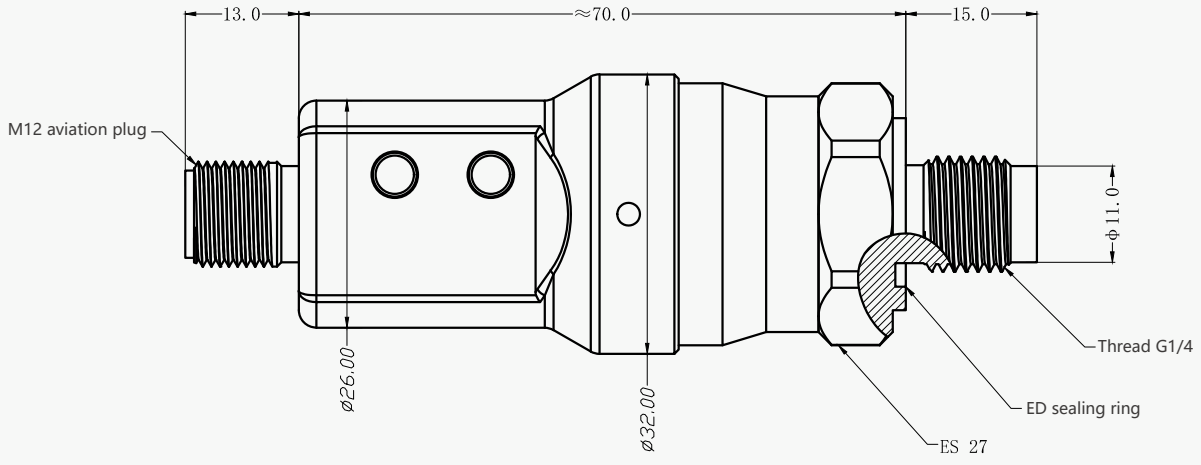
Technical parameter

- ◇ Supply voltage: 12... 30Vdc
- ◇ No-load current consumption: maximum 30mA,24Vdc power supply
- ◇ Output type: PNP/NPN can be set, normally open/normally closed can be set / Frequency (full scale 100Hz) Optional
- Switch load: <200mA
- Response time: <10ms
- Switching accuracy: ≤±0.5% range
- ◇ Switch setting mode: button increase/decrease
- ◇ Switch point return difference: factory default return difference is 0.5% of the set value of the switch (configurable)
- ◇ Connection protection: reverse phase, overload, paragraph protection
- ◇ Accuracy: ≤±0.5% range
- ◇ Stability (annual drift) : ≤±0.3% range
- ◇ Temperature:
- Medium temperature: -20... 85°C
- Ambient temperature: -20... 80°C
- Storage temperature: -30... 80°C
- ◇ Material:
- Induction diaphragm: stainless steel 316L/ ceramic
- Process connection: stainless steel 304
- Sealing material: Butadiene rubber/fluorine rubber
- Housing: engineering plastic
- ◇ Protection grade: IP67
- ◇ Outlet: M12x1 connector

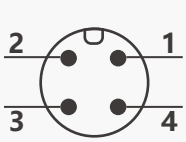
Parameter table

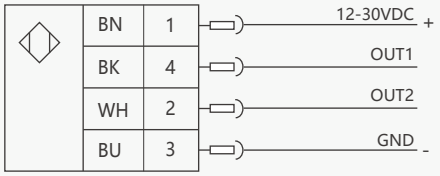
Pressure range	bar	1	2	5	10	16	25	60	100
	psi	15	30	75	145	230	370	900	1500
Max overload pressure		×5			×3			×2	
Min damage pressure		×6			×4			×3	

Dimension drawing (mm)



Wiring diagram





switch/frequency					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	SP1 Switch PNP (Factory default) SP1 Switch NPN Frequency (full scale 100Hz)	WH	2 (OUT2)	/

Analog output: 4-20mA					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	4-20mA	WH	2 (OUT2)	/

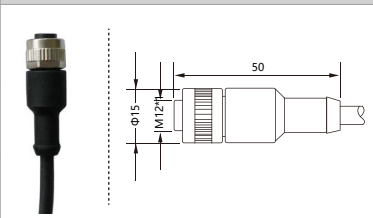
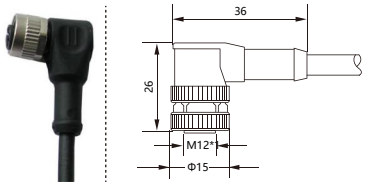
Analog output: 1-5V					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	1-5V	WH	2 (OUT2)	/

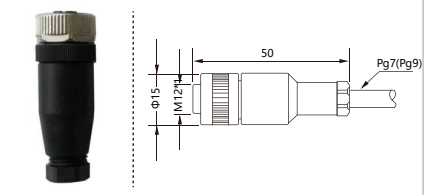
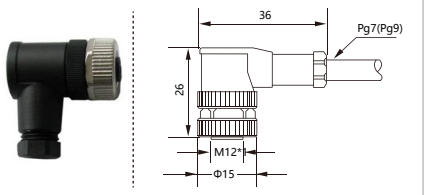
RS485					
color	**stitch**	**Instructions**	**color**	**stitch**	**Instructions**
BN	1	power supply (+)	BU	3	power supply (-)
BK	4 (OUT1)	RS485(B)	WH	2 (OUT2)	RS485(A)

Selection list

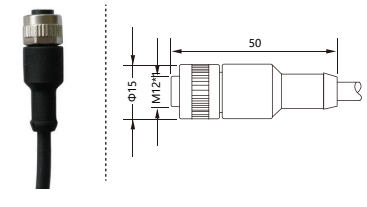
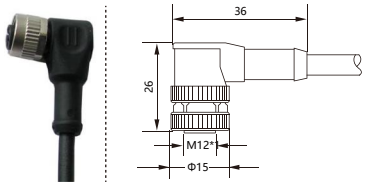
PS205-	100	G14M	-	Detailed description
PS205-				PS205 Flat membrane type electronic pressure switch (sensor)
	001			Measurement range: 0... 1bar
	002			Measurement range: 0... 2bar
	005			Measurement range: 0... 5bar
	010			Measurement range: 0... 10bar
	025			Measurement range: 0... 25bar
	060			Measurement range: 0... 60bar
	100			Measurement range: 0... 100bar
		G14M		Process connection: G1/4 external thread
			-	Output signal: Switch/frequency
			A	Output signal: Analog 4-20mA
			V	Output signal: Analog quantity 1-5V
			RS	Output signal: RS485

Factory standard:ZL03-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL03-PU02G
M12*1-4Pin (5m cable)			ZL03-PU05G
M12*1-4Pin (10m cable)			ZL03-PU010G
		PVC	ZL03-PC02G
			ZL03-PC05G
			ZL03-PC010G
M12*1-4Pin (2m cable)		PUR	ZL03-PU02W
M12*1-4Pin (5m cable)			ZL03-PU05W
M12*1-4Pin (10m cable)			ZL03-PU010W
		PVC	ZL03-PC02W
			ZL03-PC05W
			ZL03-PC010W

M12* 1-4pin self-connector/size drawing（mm）	model
	GL04 (4Pin joint)
	WL04 (4Pin joint)

Factory standard:ZL04-PC02G

name	Outline drawing/dimension drawing（mm）	material	model
M12*1-4Pin (2m cable)		PUR	ZL04-PU02G
M12*1-4Pin (5m cable)			ZL04-PU05G
M12*1-4Pin (10m cable)			ZL04-PU010G
		PVC	ZL04-PC02G
			ZL04-PC05G
			ZL04-PC010G
M12*1-4Pin (2m cable)		PUR	ZL04-PU02W
M12*1-4Pin (5m cable)			ZL04-PU05W
M12*1-4Pin (10m cable)			ZL04-PU010W
		PVC	ZL04-PC02W
			ZL04-PC05W
			ZL04-PC010W

Sensor and controller

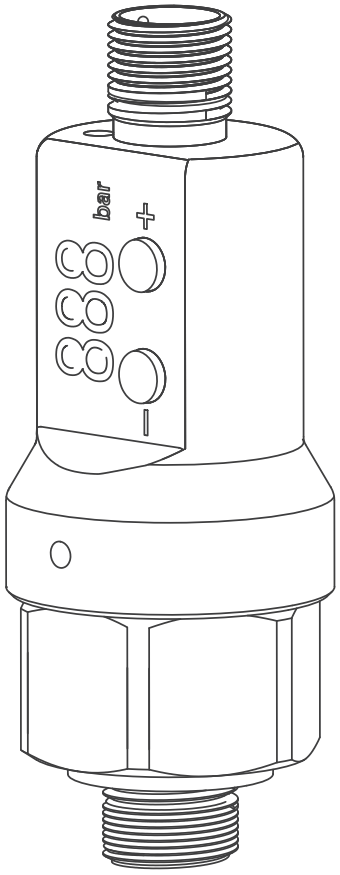
■ Flow ■ pressure ■ temperature ■ level ■ position

KATU 卡图

Operation instruction

Digital display pressure switch

200 series



Purpose of product application

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

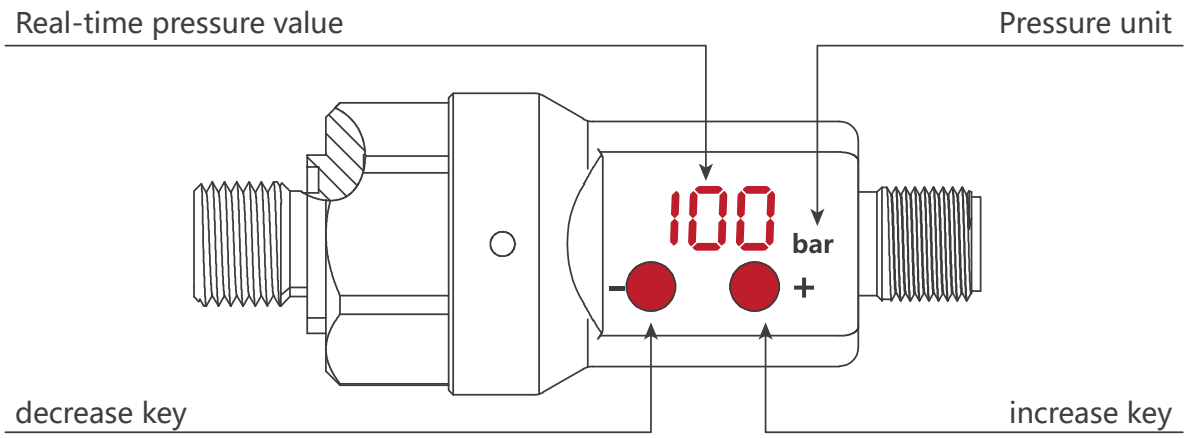
Information that is important to the user.

Deal with

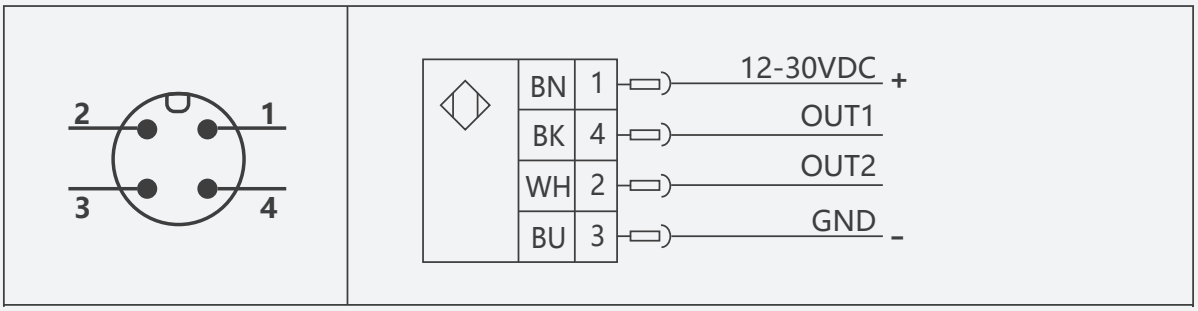
Sensors (switches) must be handled correctly in accordance with national or local regulations for electrical/electronic equipment.

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

Panel description



Electrical connection



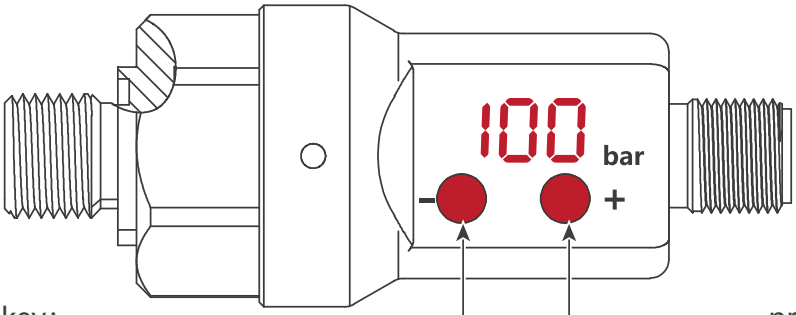
Switch/frequency		
colour	**stitch**	**Instructions**
BN	1	power supply (+)
BU	3	power supply (-)
BK	4 (OUT1)	SP1 switch PNP (factory default) SP1 switch NPN Frequency (full scale 100Hz)

Analog output: 4-20mA		
colour	**stitch**	**Instructions**
BN	1	power supply（+）
BU	3	power supply（-）
BK	4 (OUT1)	4-20mA

Analog output: 1-5V		
colour	**stitch**	**Instructions**
BN	1	power supply（+）
BU	3	power supply（-）
BK	4 (OUT1)	1-5V

RS485 communication		
colour	**stitch**	**Instructions**
BN	1	power supply（+）
BU	3	power supply（-）
BK	4 (OUT1)	RS485（B）
WH	2 (OUT2)	RS485（A）

■ Switch action point convenient operation mode



press the left key:
The switch action value decreases

press the right key:
The switch action value is increased

After setting, the display interface stops blinking.
The switch action value is successfully modified.

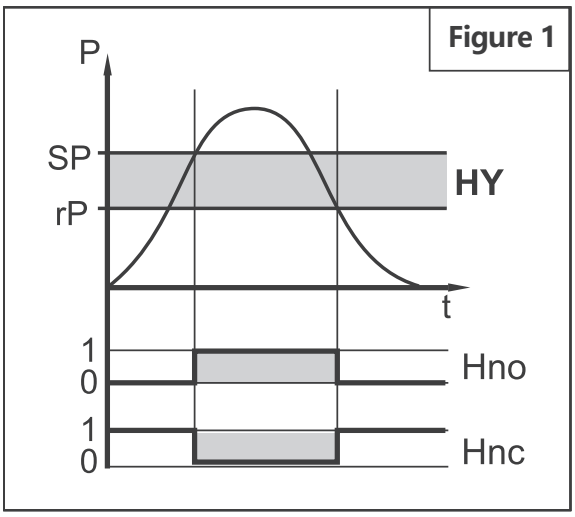
LED display status description: When the LED display blinks, the switch setting value is displayed. When the display is not blinking, the current measurement value is displayed.

■ *Switching function*

If the switch is higher or lower than the set switching limit (SP, rP), its switching state is changed.
The following switch functions can be selected:

- Hysteresis function normally open: = [Hno] (→ Figure 1)
- Hysteresis function normally closed: = [Hnc] (→ Figure 1)

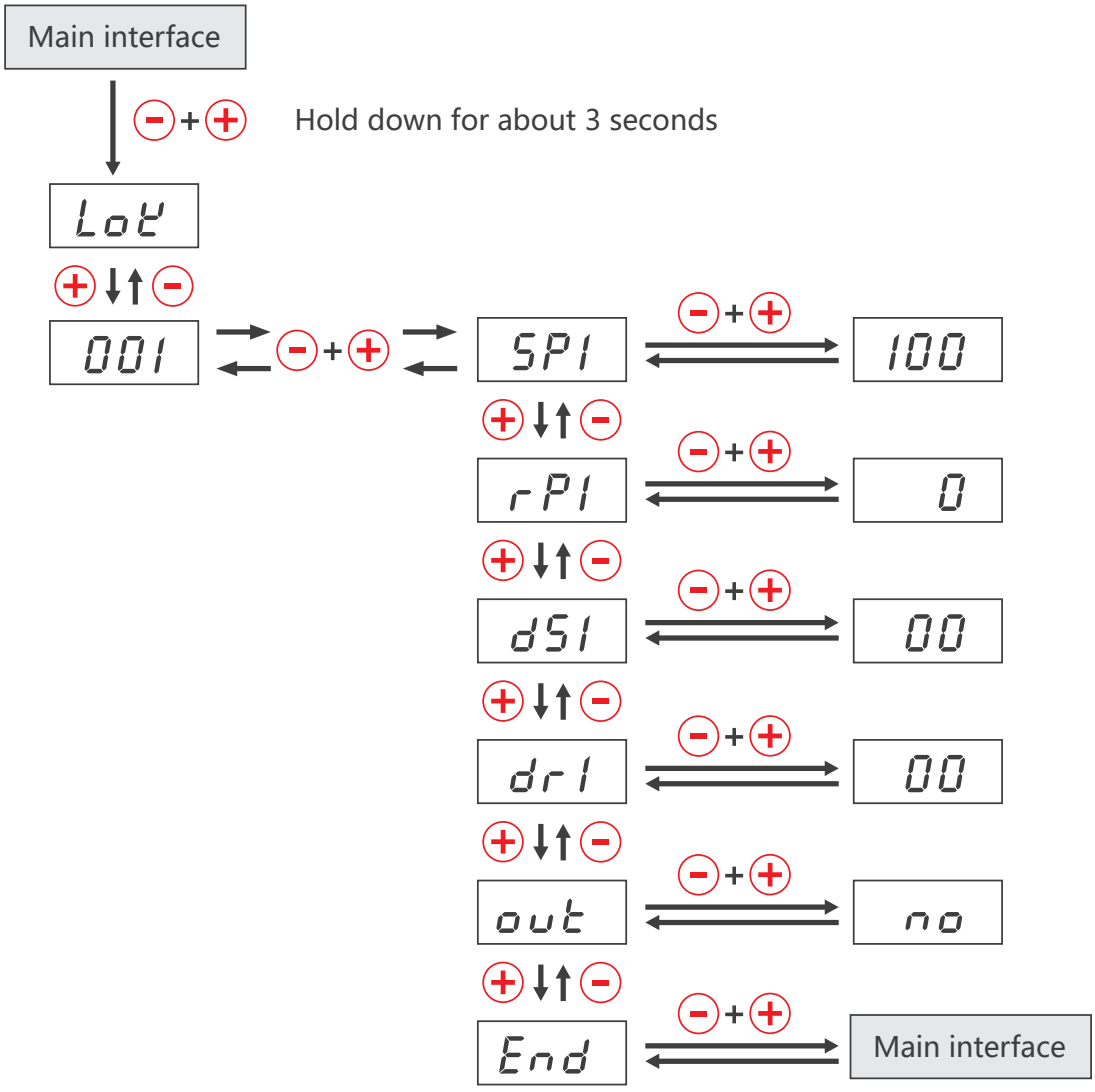
First set the switch point: (SP), Then set the reset point: (rP)。
If SP changes again, the hysteresis will change with it.



P = System pressure; HY = lag;

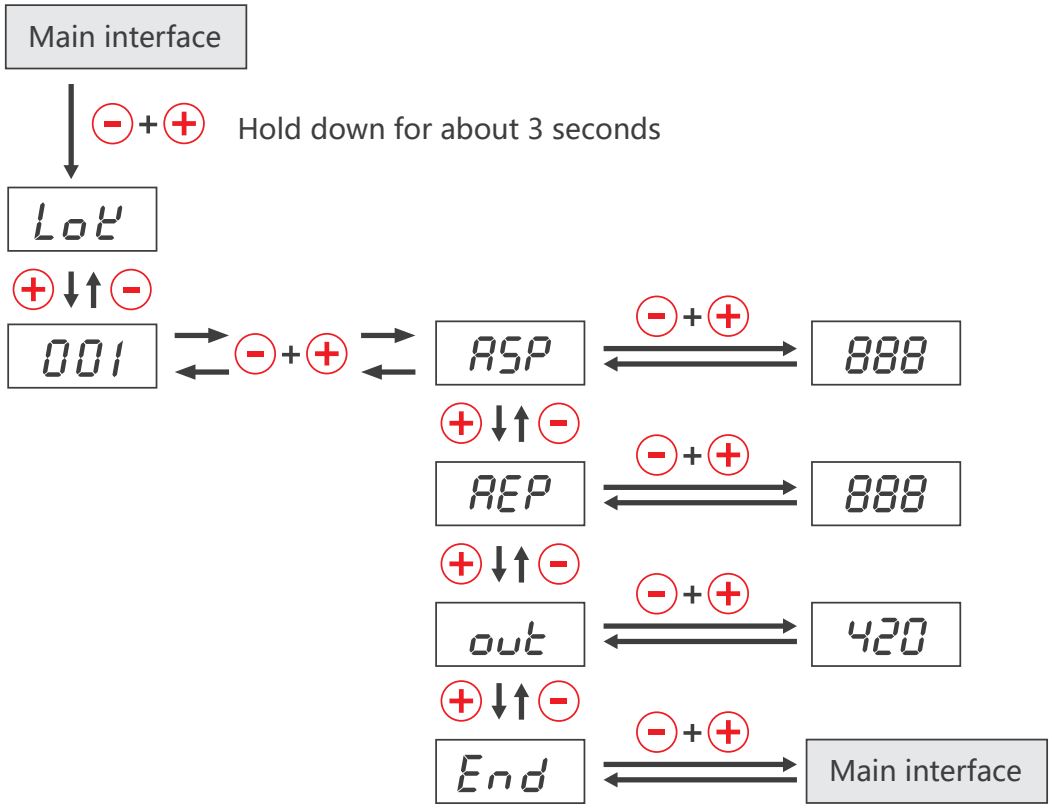
001 menu	
sp1	Switch alarm value (factory default value is 0.2% of the range)
rp1	Switch reset value (factory default is SP1-0.5%)
ds1	OUT1 turn-on delay (factory default is 0s)
dr1	OUT1 shutdown delay (factory default is 0s)
out	Switch output signal: Normally open (no)/Normally closed (nc)
end	Confirm to save and exit

■ 001 Menu debugging (non-professional personnel do not operate)



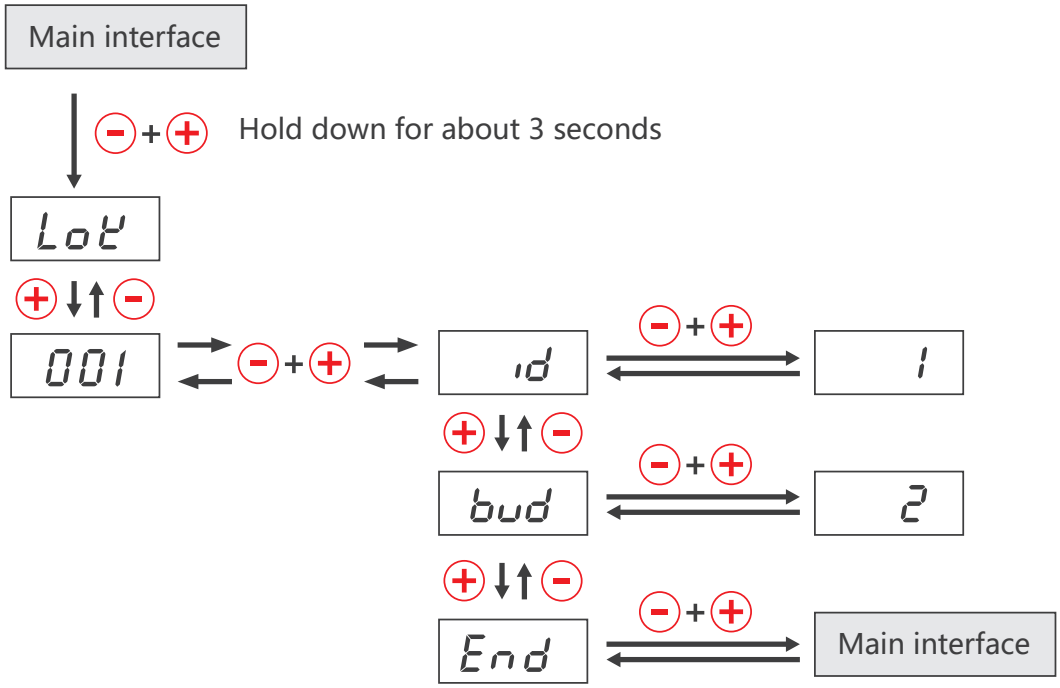
001 Menu	
ASP	Lower limit of analog range
AEP	Upper limit of analog range
OUT	Analog output signal (factory default 420) 420: 4-20mA 020: 0-20mA 204: 20-4mA 200: 20-0mA
end	Confirm to save and exit

■ 001 Menu debugging - Analog (non-professional personnel do not operate)



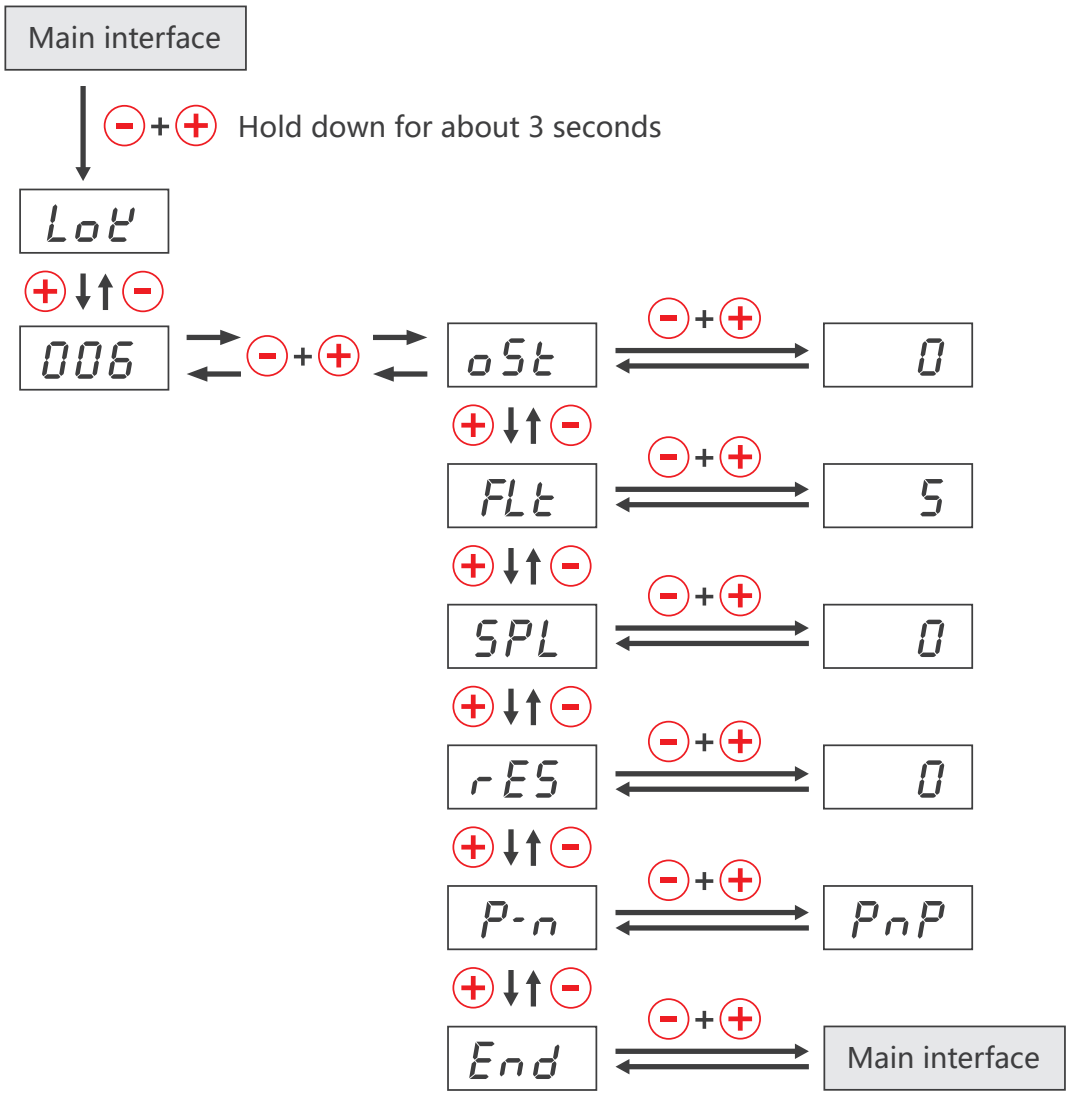
001 Menu	
id	Meter address (Factory default 1)
bud	Baud rate (Factory default 2) 0: 2400 1: 4800 2: 9600 3: 19200 4: 115200
end	Confirm to save and exit

■ 001 Menu debugging -RS485 (non-professional personnel do not operate)



006 menu	
ost	Display value compensation, the default is 0, increase and decrease the value, the actual display value corresponds to the increase or decrease of the corresponding value
flt	The filter coefficient is adjustable from 0 to 100. The default value is 5
spL	Display value The reaction rate increases/decreases
res	factory data reset.
p-n	PNP/NPN switchover
end	Confirm to save and exit

■ 006 Menu debugging (non-professional personnel do not operate)



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!

200 Series pressure -RS485 Communication Protocol (MODBUS-RTU)

1.RTU data format description

1.1 Communication mode

The instrument adopts MODBUS RTU format. The protocol is used for data communication in master-slave query mode.

1.2 data format

The format of each bytein RTU mode is:
The encoding system is: 8-bit binary
Bits per byte: 1 start bit, 8 data bits (least significant bit sent first), 1 stop bit
Five baud rates are available: 2400, 4800, 9600, 19200, 115200

start	address	Function code	date	CRC check	end
≥3.5 character	8 bit	8 bit	n*8 bit	16 bit	≥3.5 character

note:

(1) in RTU mode,an idle interval of at least 3.5 characters separates the packet frames.
(2) The entire messsage frame must be sent in a continuous stream of characters.
(3) The idle interval between two characters should not exceed 1.5 character time.

1.3 address

In the protocol,the address of the instrument is "0-255",and the "0" address is used for broadcasting,and the other addresses are reserved.

2. Command description

2.1 This instrument uses two instructions in the MOBUS protocol:

Command 03	Read a single hold register
Command 06	Write a single hold register

2.2 data format

The data format in the protocol is:floating-point number。Modbus sends the most significant word first。The protocol date encoding sequence is 3412,decoding sequence is 1234。

32 single-precision floating-point number the single format is IEEE754,equivalent to 4 bytes and the sequence is 3-4-1-2。After decoding into the 1-2-3-4 sequence, the 31st, 30th, 29th, ″, and 0 bits from the highest to the lowest are respectively.

The 31 bits are the sign bits(S),where 1 means the number is negative and 0 is positive;30-23 bits,a total of 8 bits is the level code;22-0 digits,a total of 23 digits is mantissa.

The format of command 03 is as follows: (read register command)

note:

MODBUS request

Instrument address	1 BYTE	01-255
Function code	1 BYTE	0x03
Start address	2 BYTE	0-FFFF
Read quantity	2 BYTE	1-12
CRC low-order	1 BYTE	
CRC high-order	1 BYTE	

MODBUS response

Instrument address	1 BYTE	01-255
Function code	1 BYTE	0x03
Byte count	1 BYTE	
Input state	N*2 BYTE	
CRC low-order	1 BYTE	
CRC high-order	1 BYTE	

Command 06 format is as follows (write register command):

Clears the value of total accumulated traffic

MODBUS request

Instrument address	1 BYTE	01-255	
Function code	06	0x06	
Byte count	1 BYTE		

MODBUS response

Instrument address	1 BYTE	01-255	
Function code	06	0x06	
Byte count	1 BYTE		

Description of communication:

Configuration instructions (power off and then power on after changing the address or baud rate)

sequence	Explain	value
Address (id)	Address(default is 1,can be modified)	example: 0001
baud	9600 (revisbility)	2400-115200

Baud=0 r485_baud= 2400
Baud=1 r485_baud=4800
Baud=2 r485_baud=9600
Baud=3 r485_baud=19200
Baud=4 r485_baud=115200

Data item definition (485 scan speed should not be less than 200ms)

sequence	Instructions
40001	Plus or minus (0 is positive, 1 is negative)
40002	Display the pressure value
40003	Number of decimal points in pressure value

Katu Electronic （Kunshan）Co.,Ltd.

telephone：400-150-8815

Website: www.katusensor.com

Factory: Building 27B, Jingdong Intelligent Industrial Park,
No.9 Jinjie Road, Huaqiao Economic Development Zone,
Kunshan City, Suzhou