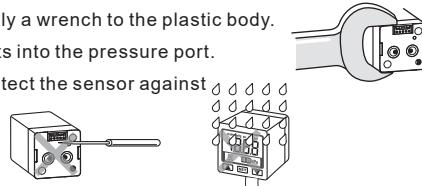


For your safety, please read the following before using.

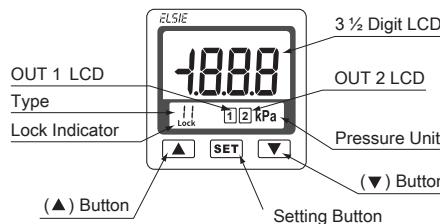
- ① Do not use corrosive or flammable gas or liquid with this product.
- ② Please use within the specifications.
- ③ Please ensure the pressure difference between port A and port B is within the withstand pressure.
- ④ When mounting, please never apply a wrench to the plastic body.
- ⑤ Do not insert metal or sharp objects into the pressure port.

With IP40 compliance, please protect the sensor against dust and water splash.



- ⑥ Please use a separate route for the sensor product wiring and keep separate from any other power or high voltage wiring to avoid noise interruption.
- ⑦ If cable is longer than 100 meters and 0.3mm² cable, please use shielded wire as the output wire.

A. PANEL DESCRIPTION



C. ORDERING INFORMATION

EP 8 1 1 - 0 1 0 - M 5

Pressure Range

01 : -100~1000 Pa
02 : -0.20~2.00 kPa
05 : -0.50~5.00 kPa
11 : -1000~1000 Pa
12 : -2.00~2.00 kPa
15 : -5.00~5.00 kPa

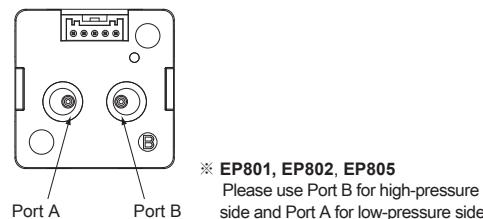
Output Specifications

010 : 2 NPN output + Analog output (1~5V)
011 : 2 NPN output + Analog output (4~20mA)
030 : 2 PNP output + Analog output (1~5V)
031 : 2 PNP output + Analog output (4~20mA)

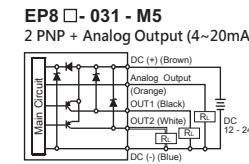
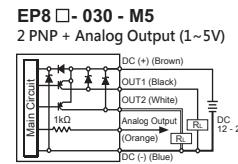
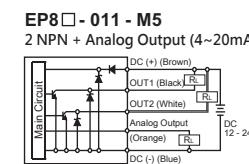
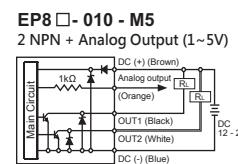
Optional Parts

BT-20 : Mounting bracket
BT-21 : Mounting bracket
PA-C : Panel adapter
PA-D : Panel adapter + Front protective lid

B. CONNECTOR SIDE DESCRIPTION



D. OUTPUT CIRCUIT WIRING DIAGRAMS

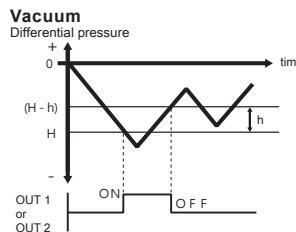
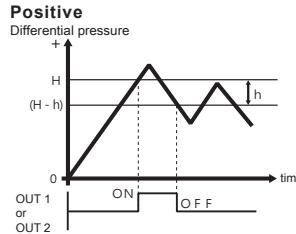


E. SPECIFICATIONS

MODEL	EP801	EP811	EP802	EP812	EP805	EP815
Rated pressure range	0 ~ 1000 Pa	-1000 ~ 1000 Pa	0.00 ~ 2.00 kPa	-2.00 ~ 2.00 kPa	0.0 ~ 5.00 kPa	-5.00 ~ 5.00 kPa
Setting pressure range	-100 ~ 1000 Pa	-1000 ~ 1000 Pa	-0.20 ~ 2.00 kPa	-2.00 ~ 2.00 kPa	-0.50 ~ 5.00 kPa	-5.00 ~ 5.00 kPa
Withstand pressure		3 kPa		6 kPa		15 kPa
Fluid					Filtered air, Non-corrosive / Non-flammable gas	
Set pressure resolution	Pa kPa	1 —	—	—	0.01	—
Power supply voltage					12 ~ 24V DC ±10%, Ripple (P-P) ≤ 10%	
Current consumption					≤ 40mA (With no load)	
Switch output			NPN: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 30V DC Residual voltage: ≤ 1.5V		PNP: open collector 2 outputs Max. load current: 125mA Max. supply voltage: 24V DC Residual voltage: ≤ 1.5V	
Repeatability (Switch output)					±0.5% F.S. ±1 digit	
Hysteresis	Hysteresis mode Window comparator mode				Adjustable	
Response time					≤ 2.0ms (chattering-proof function: 32ms, 128ms, 1024ms selectable)	
Output short circuit protection					Yes	
7 segment LCD display					One color(White) (Sampling rate: 0.1~3 sec select)	
Indicator accuracy					±2% F.S. ±1 digit (ambient temperature: 25 ±3°C)	
Switch ON Indicator					White Indicator 1 : OUT1 & White Indicator 2 : OUT2	
Analog output (Voltage Output)					Output Voltage: 1 to 5V ±2.5% F.S. (within rated pressure range) Linearity: ±1% F.S. Output impedance: about 1kΩ	
Analog output (Current Output)					Output Current: 4 to 20mA ±2.5% F.S.(within rated pressure range) Linearity: ±1% F.S. Max.Load Impedance: 250Ω at power supply of 12V 600Ω at power supply of 24V Min.Load impedance: 50Ω	
Environment	Enclosure				IP40	
	Ambient temp. Range				Operation: 0 ~ 50°C, storage:-10 ~ 60°C (No condensation or freezing)	
	Ambient humidity range				Operation/Storage: 35 ~ 85% RH (No condensation)	
	Withstand voltage				1000V AC in 1-min (between case and lead wire)	
	Insulation resistance				≥ 50MΩ (at 500V DC,between case and lead wire)	
	Vibration				Total amplitude 1.5mm or 10G, 10Hz-150Hz-10Hz scan for 1 minute, two hours each direction of X, Y and Z	
	Shock				100m/s ² (10G) ,3 times each in direction of X, Y and Z	
	Temperature characteristic				±3% F.S. of detected pressure (25°C) at temp. Range of 0 ~ 50°C	
	Port size				M5 : M5 female thread	
	Lead wire				Ø4 Oil-resistance cable (PVC) - 26 AWG (0.15 mm ²) - 5 cores	
	Weight				Approx. 75g (with 2 meter lead wire)	

G. OPERATION CHART

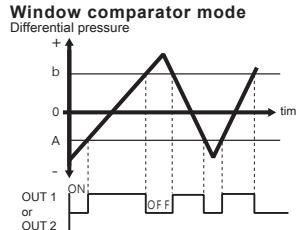
1. Hysteresis mode



Set the sensor ON point "H" and hysteresis "h".
(Notice: Please set "h" value equal or higher than 2 to avoid "Error")

H: Sensor ON
H-h: Sensor OFF

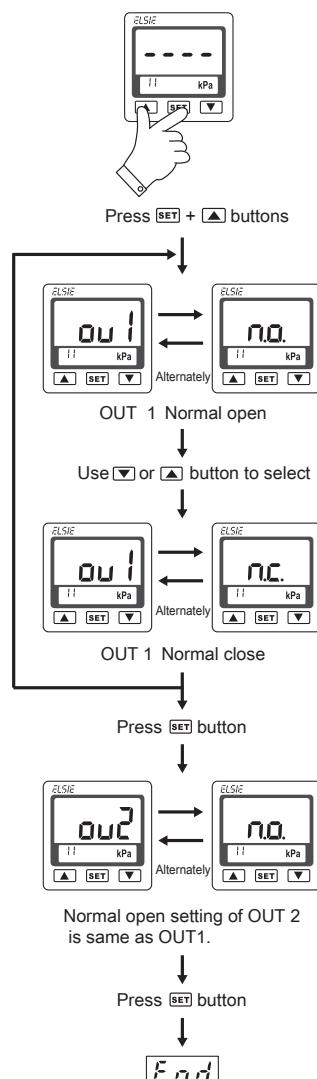
2. Window comparator mode



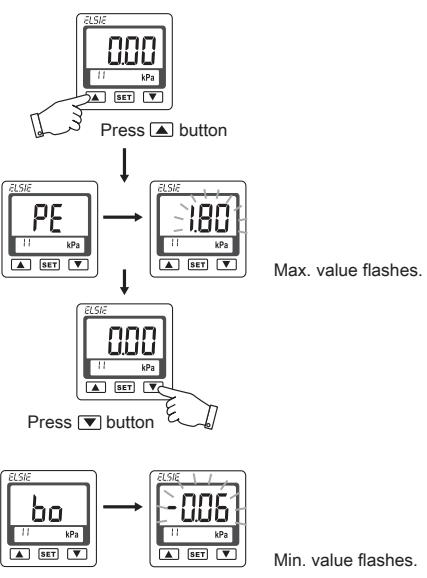
A is lower limit value of window comparator mode.
b is upper limit value of window comparator mode.
(It can not be set A > b.)

H. CHANGE OUTPUT TYPE

Normal open or Normal close mode setting:

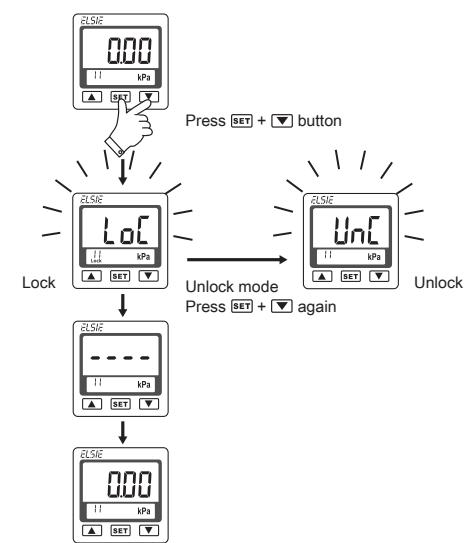


I. THE MAX. & MIN. DISPLAY MODE



* This data shows the max. (min.) pressure detected when power supplied.

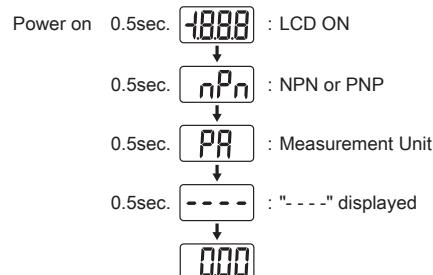
J. KEY LOCK / UNLOCK MODE



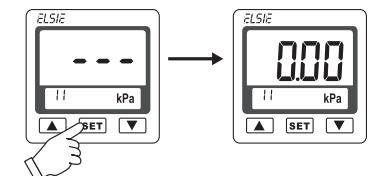
【NOTE:】
Use key lock mode to prevent unauthorized or accidental tampering with the switch setting.

K. INITIAL DISPLAY

First 2 seconds after Power-ON, LCD will display OUTPUT setting.



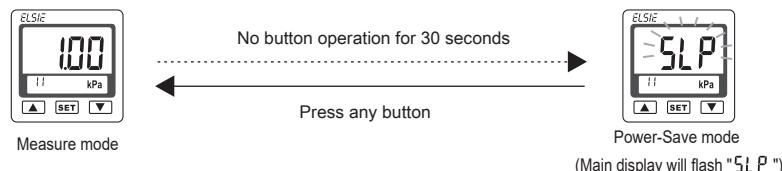
L. ZERO POINT SETTING



Press SET more than 3 sec. until the "0" is shown.
Do not perform zero reset with pressure apply to ports A and B.
The range that can be reset to zero is within $\pm 3\%$ F.S.

M. POWER-SAVE MODE

- During Power-Save mode, the main display will turn off if no buttons are pressed after 30 seconds.
- During Power-Save mode, the output LCD may not synchronize with the output. It is normal and will not affect output operation.
- Press any button to turn-on main display temporarily.

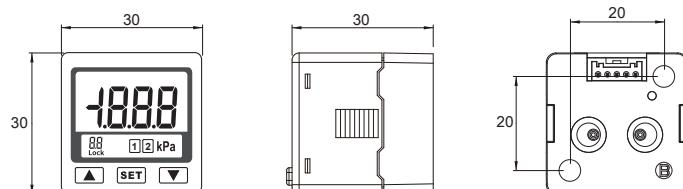


N. ERROR CODE INSTRUCTION

Error code	Error Type	Error Condition	Troubleshooting
EE1	OUT 1 excess load current error	Load current is more than 125mA	Turn power off and check the cause of overload current or lower the current load under 125mA, then restart.
EE2	OUT 2 excess load current error	Load current is more than 125mA	Turn power off and check the cause of overload current or lower the current load under 125mA, then restart.
Err	Zero point setting error	During zero point setting, ambient pressure is over $\pm 3\%$ F.S.	Change input pressure to ambient pressure and perform zero reset again.
Er1	System error	Internal error	Turn power off, and then restart. If error condition remains, please return to factory for inspection.
FFF	Applied pressure error	Supply pressure is exceed the upper limit of pressure setting.	Upper limit of differential pressure.
-FF	Applied pressure error	Supply pressure is exceed the lower limit of pressure setting.	Adjust the pressure within setting pressure range.

O. DIMENSIONS / OPTIONAL PARTS DIMENSIONS

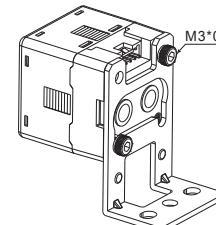
① Pressure sensor



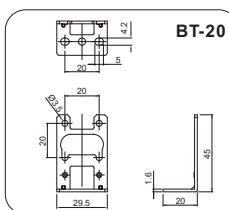
O. DIMENSIONS / OPTIONAL PARTS DIMENSIONS

② Mounting bracket

BT-20



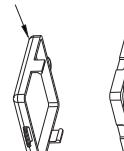
BT-21



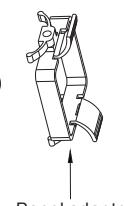
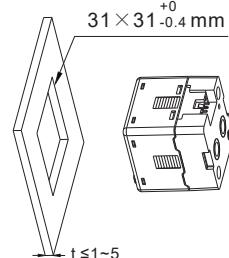
BT-21

③ Panel Mounting

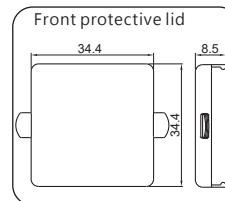
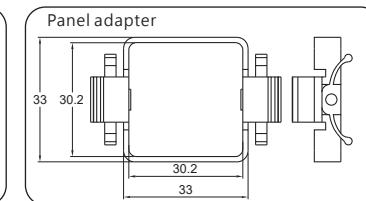
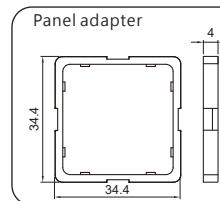
Front protective lid



Panel adapter



Panel adapter



Unit:mm