

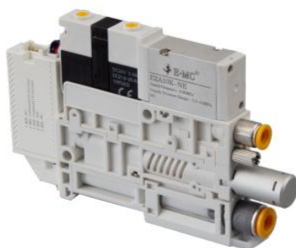
EZA Series Intergrated Vacuum Generator



EZA

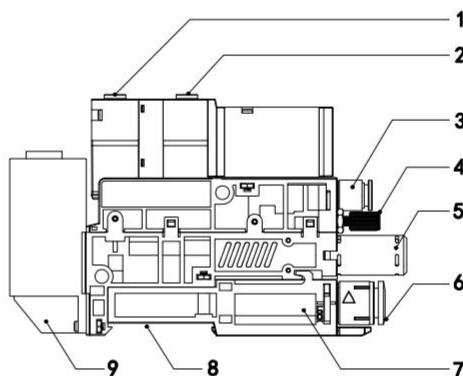
Intergrated Vacuum Generator

Vacuum Flow: 26 NL/min - 74 NL/min



Applications / Features

- Built in low-power solenoid valve has higher stability and longer service life.
- Built in integrated vacuum, air breaking, noise reduction, energy saving, selfholding and other functions.
- Built-in quick-replaceable vacuum filter makes installation and removal faster.
- Silencer exhaust and port exhaust are optional.
- Intergrated lateral hole mounting, 35mm DIN rail mounting and L type bracket mounting are optional.



- 1.Release valve (The green light on when power on.)
- 2.Supply valve¹ (The red light on when power on.)
- 3.Inlet port(ø6)
- 4.Vacuum break flow adjusting needle
5. External silencer
- 6.Vacuum port(ø6/ø8)
- 7.Filter case
- 8.35mm DIN rail mounting slot
- 9.Vacuum pressure switch

How to Order?

Series No.	Nozzle Diameter	Vacuum Gauge Specification	Vacuum Port	Exhaust Type	Mounting Bracket						
EZA: EZA series	07: Ø0.7 10: Ø1.0 12: Ø1.2 15: Ø1.5	Blank: Without N: Type NPN P: Type PNP NE: NPN+Energy Saving PE: PNP+Energy Saving W: External vacuum detection	Blank: ø8 06: ø6	Blank: Silencer(default) D: Exhaust port(Ø8)	Blank: Without(default) B: L-type mounting bracket						
	<table border="1"> <tr> <th>Supply Valve</th> <th>Air Breaking Valve</th> </tr> <tr> <td>K NC</td> <td>NC</td> </tr> <tr> <td>R Self-holding type</td> <td>NC</td> </tr> </table>	Supply Valve	Air Breaking Valve	K NC	NC	R Self-holding type	NC				
Supply Valve	Air Breaking Valve										
K NC	NC										
R Self-holding type	NC										

Note: R-type vacuum meter with energy-saving is not optional. When the R-type is energized for more than 20ms, the vacuum occurs and continues, the vacuum breaker is energized, and the vacuum stops.

Order Example: EZA serie intergrated vacuum, nozzle diameter ϕ 1.0, supply valve NC, air breaking valve NC, vacuum gauge specification type NPN, exhaust type vent, L-type mounting bracket. The ERP code is: EZA10K-N-D-B.

Performance Parameter

Specifications And Models	Rated Supply Pressure(Mpa)	Maximum Vacuum(-Kpa)	Maximum Vacuum Flow(NL/min)	Air Consumption (NL/min)	Noised dB(A)	Air Supply Port(mm)	Vacuum Port(mm)
EZA07-	0.35	85	26	15	62	Ø6	Ø6/Ø8
EZA10-	0.35	85	45	40	74	Ø6	Ø6/Ø8
EZA12-	0.4	85	62	58	78	Ø6	Ø6/Ø8
EZA15-	0.4	91	74	103	82	Ø6	Ø6/Ø8

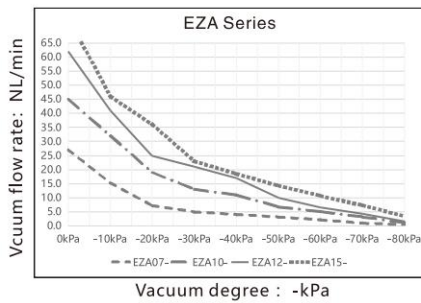
Vacuum Flow Rate of different vacuum flow(-kPa)(NL/min)

Specifications And Models	Supply Pressure(Mpa)	Air Consumption (NL/min)	0kPa	-10kPa	-20kPa	-30kPa	-40kPa	-50kPa	-60kPa	-70kPa	-80kPa	Maximum Vacuum(-Kpa)
EZA07-	0.35	15	26	13.1	7.1	5.5	4.5	3.8	2.7	1.4	0.4	85
EZA10-	0.35	40	45	32	19	13	11	6.8	5.1	3.2	1.2	85
EZA12-	0.4	58	62	41	25	21	17	10	6.6	4.4	1.6	85
EZA15-	0.4	103	74	50	36	23	18.5	14.3	10.7	7.3	3.5	91

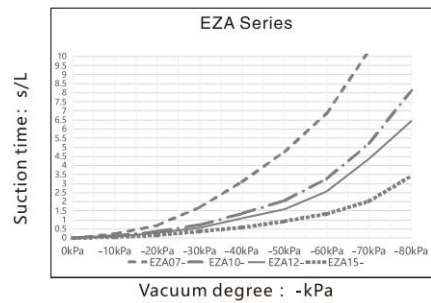
Suction time of different vacuum(-kpa)(s/L)

Specifications And Models	Supply Pressure(Mpa)	Air Consumption (NL/min)	0kPa	-10kPa	-20kPa	-30kPa	-40kPa	-50kPa	-60kPa	-70kPa	-80kPa	Maximum Vacuum(-Kpa)
EZA07-	0.35	15	0	0.25	0.70	1.63	2.68	4.61	7.23	11.85	18.77	85
EZA10-	0.35	40	0	0.12	0.36	0.72	1.34	2.06	3.26	5.21	8.12	85
EZA12-	0.4	58	0	0.07	0.3	0.58	1.1	1.59	2.55	4.36	6.45	85
EZA15-	0.4	103	0	0.05	0.16	0.37	0.58	0.92	1.33	2.03	3.42	91

EZA-Vacuum flow rate in different vacuum degree(NL/min)



EZA-Suction time of different vacuum(-kPa)(s/L)



Main Dimension

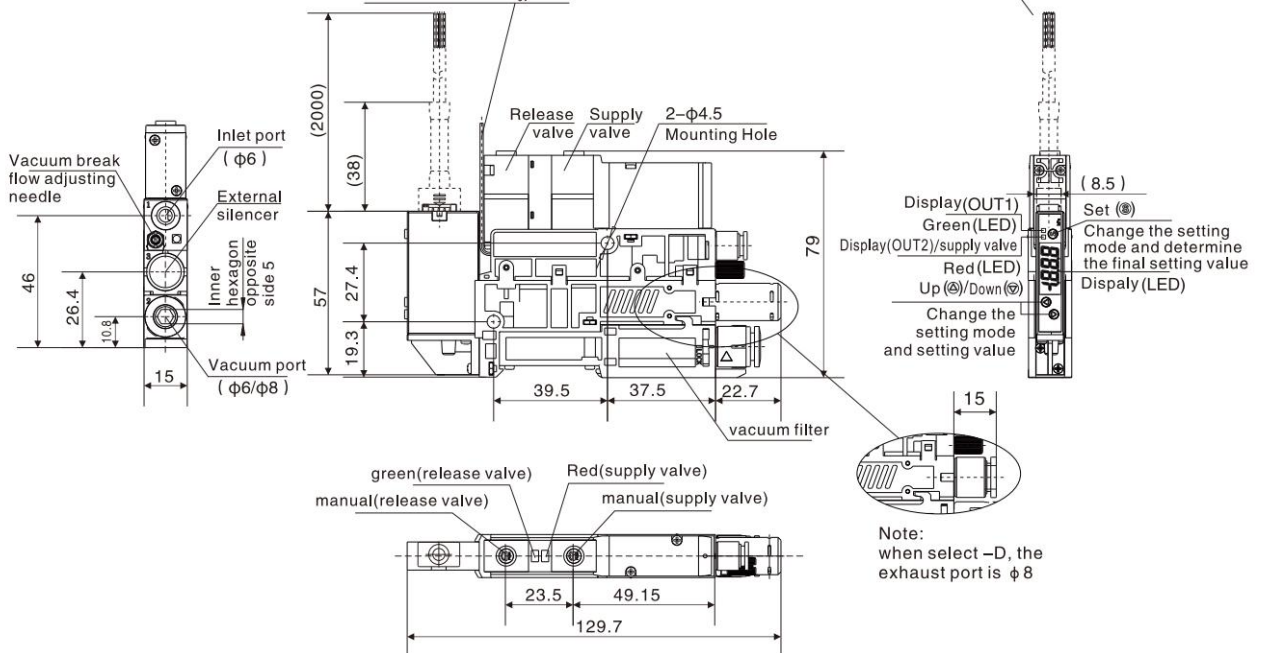
EZA□-N/P/NE/PE

EZA□-NE/PE Energy Conservation		EZA□-N/P No Energy Conservation	
Brown	DC(24V)	brown	DC(24V)
Blue	DC(0V)	blue	DC(0V)
Orange	Purge signal: DC (0V)	orange	Analog output
White	Vacuum signal (0V)	white	OUT2
Black	OUT1	black	OUT1

Valve control(1 meter)

black	COM
red	supply valve control
blue	release valve control

Note: not available for energy-save

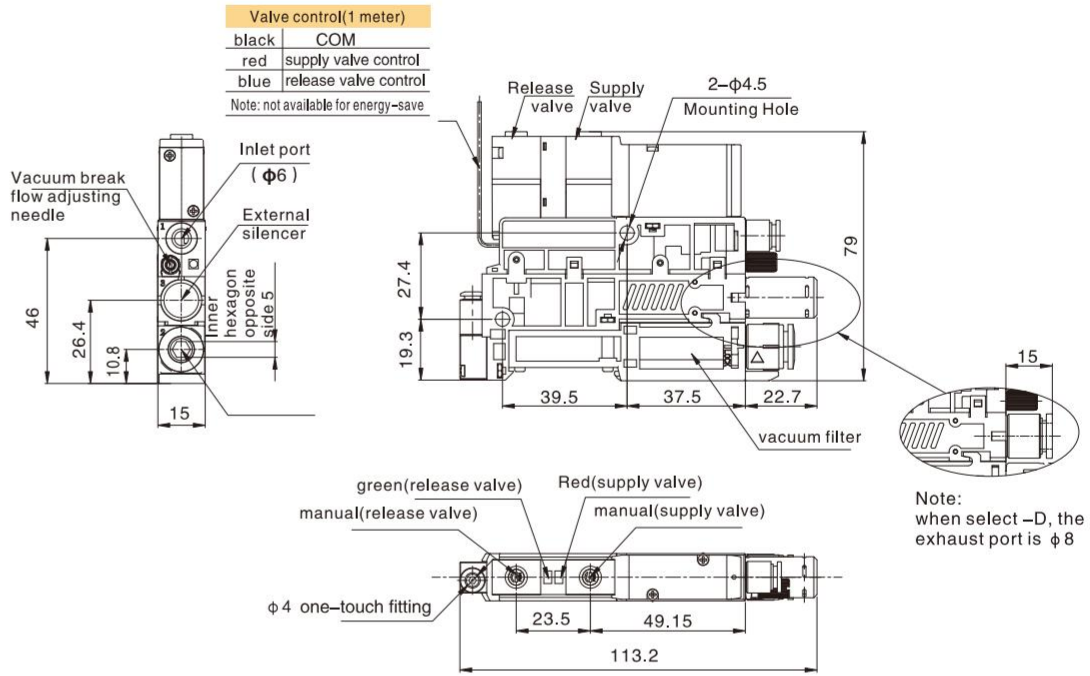


EZA Series Intergrated Vacuum Generator

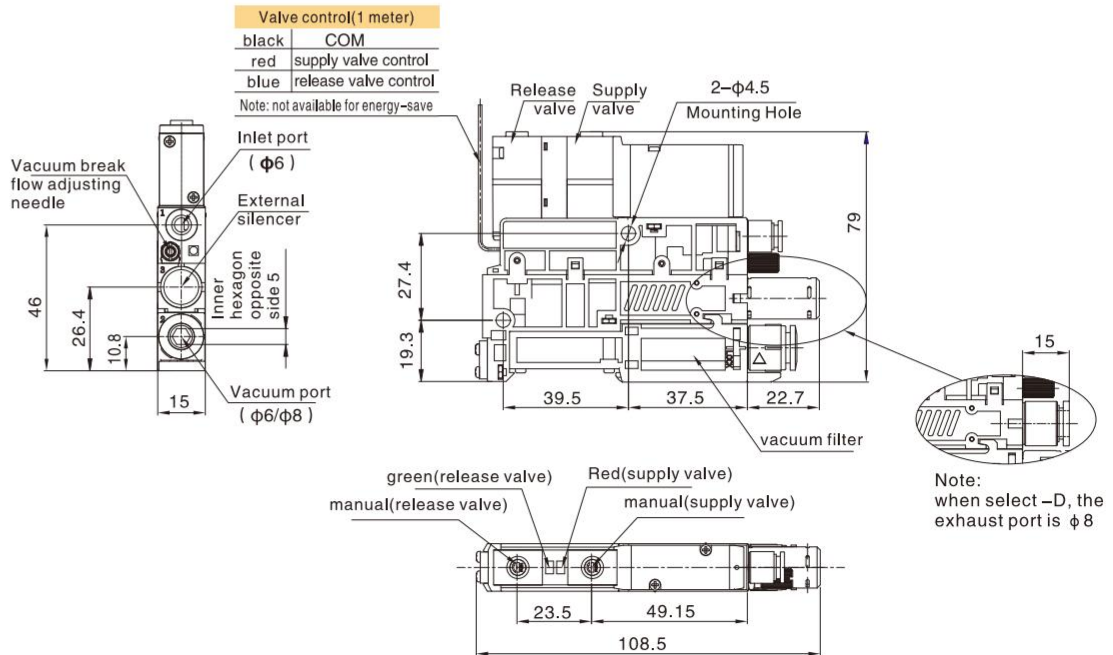


Main Dimension

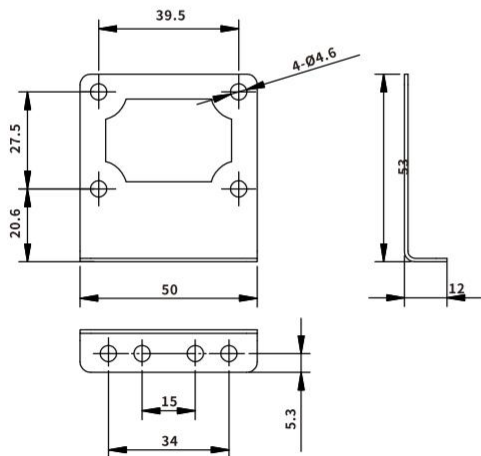
EZA□-W External Vacuum Detection



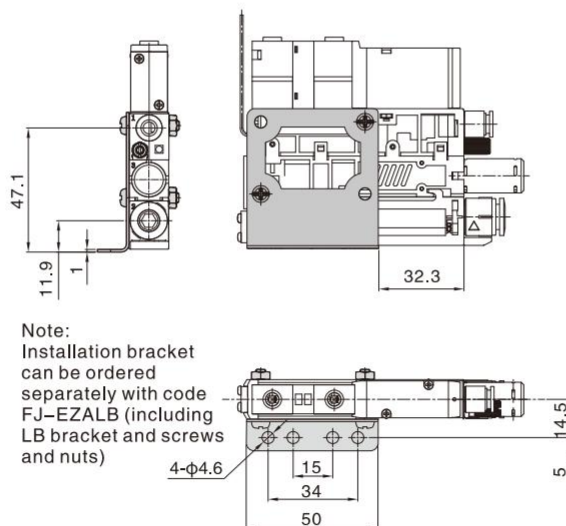
EZA□ without vacuum pressure gauge



L-type Mounting Bracket

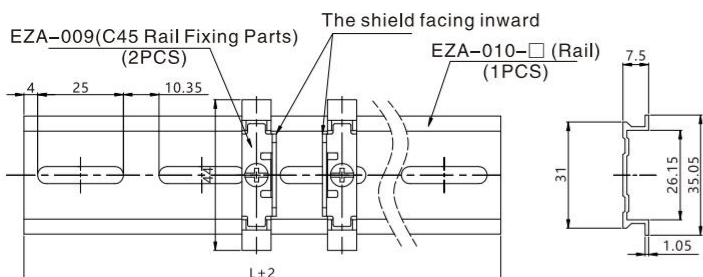


Outline drawing of EZA/EZP-LB installation bracket



Note:
Installation bracket
can be ordered
separately with code
FJ-EZALB (including
LB bracket and screws
and nuts)

Rail Installation Dimensions and Model



Model	Rail Length (L)	Applicable Links
FJ-EZA-D3	103.5	2~4 Links
FJ-EZA-D4	139	5~6 Links
FJ-EZA-D5	174.5	7~8 Links
FJ-EZA-D6	210	9~11 Links
FJ-EZA-D7	245	12~13 Links
FJ-EZA-D8	280.5	14~16 Links
FJ-EZA-D9	316	17~18 Links
FJ-EZA-D10	351	19~20 Links

EZA Series Intergrated Vacuum Generator



Operation Manual(energy-saving Type) V2.0

Notes

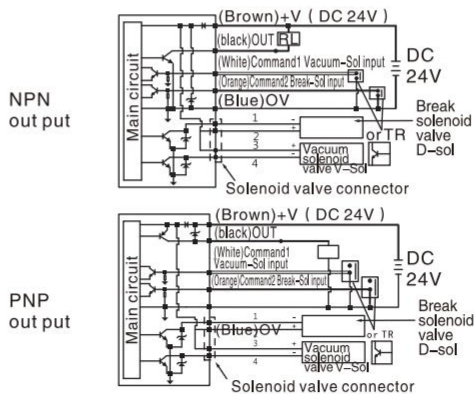
- Do not use corrosive and inflammable gas or any liquid.
- Use it within the specified operating pressure. Otherwise it can cause damage to the pressure switch or inability to measure correctly.
- Do not drop, hit or apply shock to the Pressure switch. Otherwise damage to the internal parts can result, causing malfunction.
- Turn off the power before connecting the wires. Because it can cause damage due to the wrong wiring or short circuit.
- Do not use in an environment with splattering liquid of oil or solvent.
- This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
- Separate power lines from high voltage lines, avoiding wiring in the same conduit with these lines.

A. Specifications

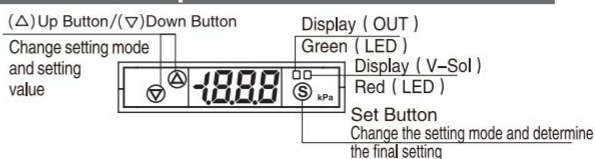
Item	Compound Pressure
Rated pressure range※	-105.0~105.0kPa
Set pressure range※	-100.0~100.0kPa
Proof pressure	500kPa
Applicable fluid	Air, non-corrosive gas and non-flammable gas
Minimum setting scale for pressure unit	kPa: 0.1 kgf/cm ² : 0.001 bar: 0.001 psi: 0.01 inHg: 0.1 mmHg: 1
Power supply voltage	24 VDC ± 10%, ripple max. 10%
Current consumption	≤40mA(without load)
Output type	1switching value(NPN/PNP adjustable)
Switch Maximum load current	125mA
Maximum applied voltage	24V DC
Internal voltage drop/Residual voltage	≤1.5V
Input control	NPN type : low-level input (SPST or electronic contact), level voltage: less than 0.4V DC, more than 10ms transmission time PNP type : high-level input (SPST or electronic contact), potential voltage: 20~24V DC, 10ms more than transmission time
Cartridge valve control switch	200mA@24V DC max
Repeatability	± 0.2%F.S. ± 1 digit
Response time	≤2.5ms (chattering-proof function:2.5ms,20ms,100ms 500ms,1000ms and 1999ms selectable)
Action display light	OUT:Green V-Sol control input:red(vacuum signal)
Protech class	Ip40
Working temperature	Operation: 0 to 50 °C, Storage: -10 to 60 °C (No condensation)
Operating humidity range	Operation, Storage: 35 to 85%RH (No condensation)
Withstand voltage	1000 VAC in 1 minute(between case and lead wire)
Insulation resistance	50 MΩ or more (at 500 VDC,between case and lead wire)
Vibration resistance	Total amplitude 1.5mm, 10Hz~150Hz~10Hz scan for 1 minute, 2 hours each directions of X, Y and Z
Impact resistance	Maximun 980m/s(100G) 3 times each in directions of X, Y and Z
Temperature characteristic	± 2%F.S. of detected pressure(25 °C) at temp.(Range of 0~50°C)
Inlet type	90° inlet Port & No Port
Wire specification	Oil-resistance cable(PVC)(0.15m ²)
Weigh	Approx. 58g(with 2 meters lead wire)

※ Note: Due to temperature and linear compensation, the upper/lower ranges of the gauge may fluctuate slightly. This is normal.

B. Out Circuit Wiring Diagrams

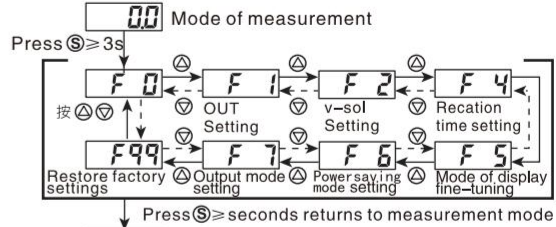


C. Panel Description

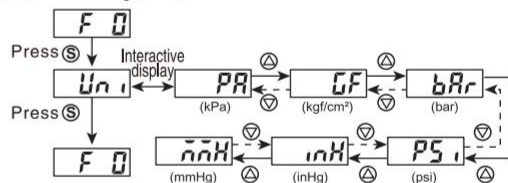


D. Basic Setting Mode

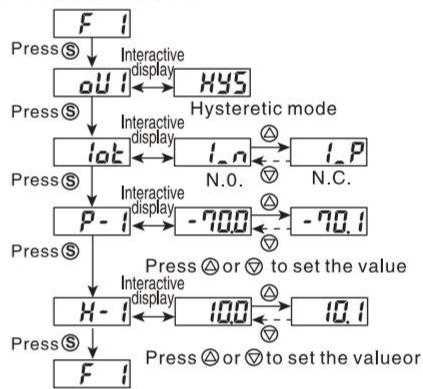
1 Mode of function select



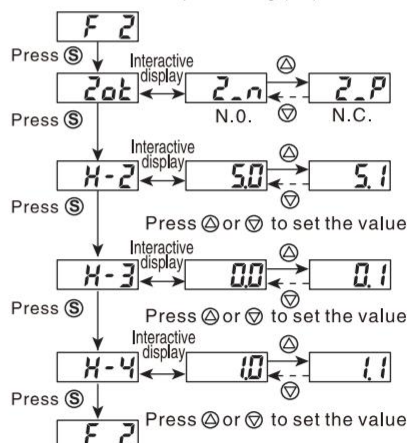
2 Unit setting (F0)



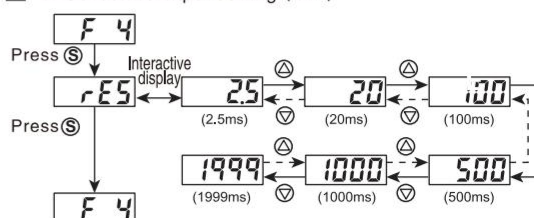
3 OUT setting (F1)



4 V-Sol control input setting (F2)

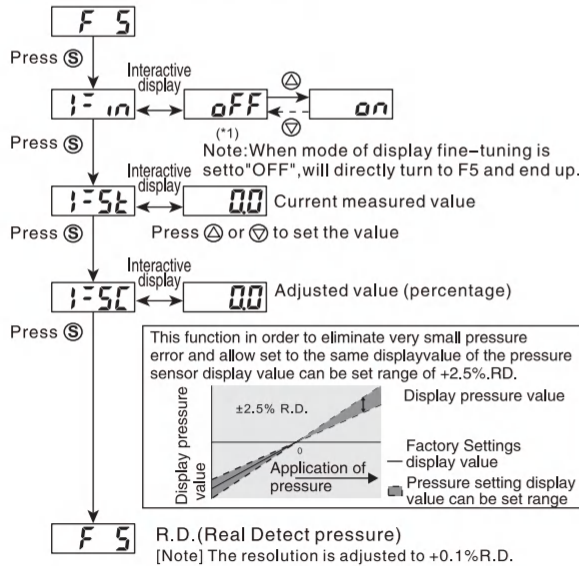


5 V-Sol control input setting (F4)



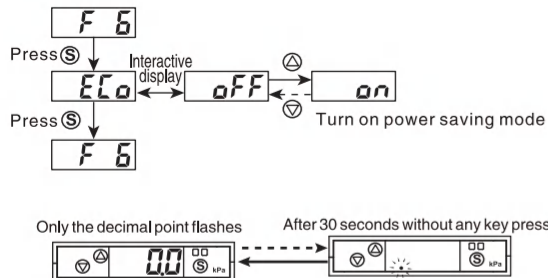
Operation Manual(energy-saving Type) V2.0

6 Mode of display fine-tuning (F5)

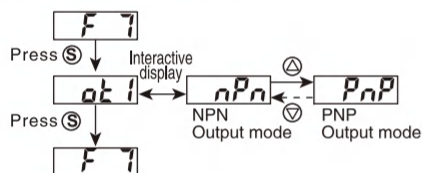


7 Power saving mode (F6)

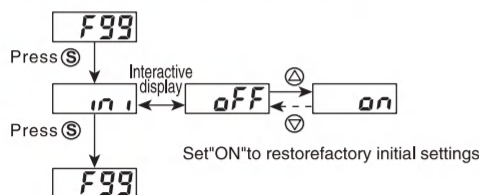
- During Power-Save mode, the main display will turned off if no buttons is pressed after 30 seconds.
- During Power-Save mode, the output LCD may not be synchronize with the output. It is normal and will not affect output operation.
- Press any button to turn-on main display temporarily.



8 Output mode setting (F7)

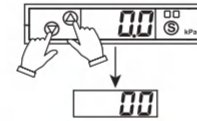


9 Restore factory initial settings (F9)



E. Zeroing Setting

With the mode of measurement, press **△** and **▽** at the same time, more than 3seconds until the screen appears "00".



F. Mode of Output Action

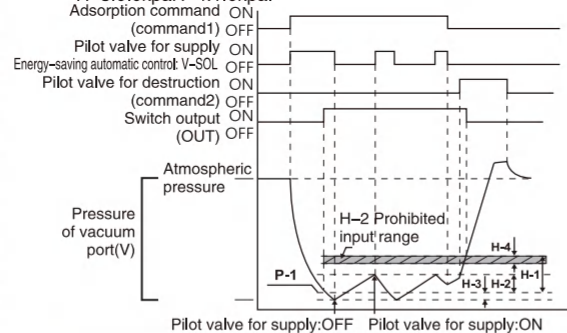
The pre-set power saving control actions and setting values on the switch are indicated as following. If the action shown below is not abnormal, it can continue to be used in this condition.

OUT action

Switch will be ON when the pressure exceeds the set value (P-1). Switch will be OFF when the pressure from set value (P-1) to the hysteresis value or above. Factory initial settings (P-1): -70.0kpa (H-1): 10.0kpa.

V-sol action

According to the adsorptive command signal, supply pilot valve: V-sol open, vacuum is generated, and begin to absorb. Supply pilot valve OFF when vacuum level reaches the set value (P-1-H-3: signal of supply pilot valve OFF point). When vacuum level decreases and reaches the ON point of adsorption switch (P-1-H-3: signal of supply pilot valve OFF point), supply pilot valve will open again keep vacuum level. Then supply pilot valve will repeat ON, OFF. The forbidden set area of H-2 could be set by H-4: the forbidden input range of supply pilot valve signal. (set to H-1 ≥ H-2 + H-4). Factory initial setting is P-1: -70.0kpa, H-1: 10.0kpa, H-2: 5.0kpa, H-3: 0.0kpa, H-4: 1.0kpa.



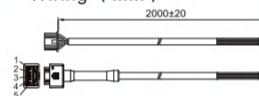
G. Pressure unit Conversion Table

From	To	kPa	kgf/cm ²	mmHg	psi	bar	inHg
1 kPa	1	0.010197	7.500616	0.145038	0.010000	0.2953	
1 kgf/cm ²	98.0665	1	735.559	14.2233	0.980665	28.95979	
1 mmHg	0.13332	0.0013595	1	0.019336	0.0013332	0.039370	
1 psi	6.895	0.07031	51.7157	1	0.06895	2.036074	
1 bar	100.0000	1.01972	750.062	14.5038	1	29.52988	
1 inHg	3.386388	0.034530	25.40000	0.491141	0.033863	1	

H. Dimension

unit (mm)

Wiring (MM)



PN0	Color of lead wire
1	DC(+)(Brown)
2	Command 2 D-Sol input (Orange)
3	Command 1 V-Sol input (White)
4	OUT (Black)
5	DC-(Blue)

I. Error Indication function

Error	Error displayed	Error Condition	Troubleshooting
Residual pressure error	Err	The zero clear range more than 2% F.S	Change input pressure to ambient pressure and perform zero reset again.
Pressurizing error	HHH	Reset applied pressure to a level within the set pressure range.	Reset applied pressure to a level within the set pressure range.
	LLL	Pressure exceeding the lower limit of the set pressure range is applied.	
System error	Er4	Displayed if an internal system error has occurred. Displayed if an internal system error has occurred.	Turn the power off and on again. If the failure cannot be solved, contact EMC.

Note(*)1 When OUT2 is set to "OFF", skip to the end of F2

EZA Series Intergrated Vacuum Generator



Operating instructions (non energy-saving) V2.0

Notes

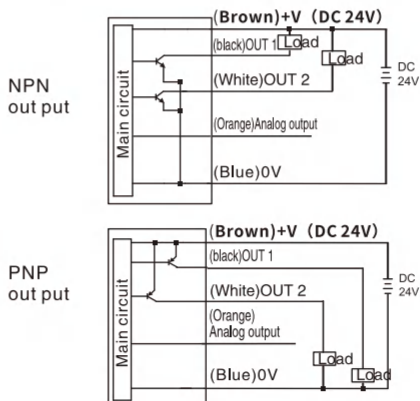
- Do not use corrosive and inflammable gas or any liquid.
- Use it within the specified operating pressure. Otherwise it can cause damage to the pressure switch or inability to measure correctly.
- Do not drop, hit or apply shock to the Pressure switch. Otherwise damage to the internal parts can result, causing malfunction.
- Turn off the power before connecting the wires. Because it can cause damage due to the wrong wiring or short circuit.
- Do not use in an environment with spattering liquid of oil or solvent.
- This product is not explosion-proof rated. Do not use in atmosphere containing flammable or explosive gases.
- Separate power lines from high voltage lines, avoiding wiring in the same conduit with these lines.

A. Specifications

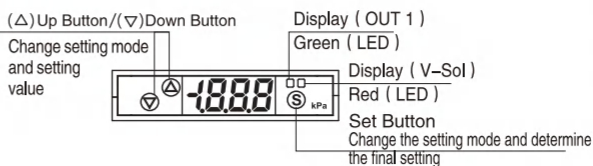
Item	Compound Pressure
Rated pressure range**	-105.0~105.0kPa
Set pressure range**	-100.0~100.0kPa
Proof pressure	500kPa
Applicable fluid	Air, non-corrosive gas and non-flammable gas
Minimum setting scale for pressure unit	kPa: 0.1 kgf/cm ² : 0.001bar: 0.001 psi: 0.01 inHg: 0.1 mmHg: 1
Power supply voltage	24 VDC ± 10%, ripple max. 10%
Current consumption	≤40mA(without load)
Output type	2 switching value(NPN/PNP adjustable)+1Analog (Voltage) output
Switch Maximum load current	125mA
Maximum applied voltage	24V DC
Internal voltage drop(Residual voltage)	≤ 1.5V
Repeatability	± 0.2%F.S. ± 1 digit
Response time	≤2.5ms (Malfunction prevention function: 2.5ms,20ms, 100ms, 500ms, 1000ms, 1999ms optional)
Action display light	OUT1: Green OUT2: Red
Protech class	Ip40
Working temperature	Operation: 0 to 50 °C, Storage: -10 to 60 °C (No condensation)
Operating humidity range	Operation, Storage: 35 to 85%RH (No condensation)
Withstand voltage	1000 VAC in 1 minute(between case and lead wire)
Insulation resistance	50 MΩ or more (at 500 VDC,between case and lead wire)
Vibration resistance	Total amplitude 1.5mm,10Hz~150Hz~10Hz scan for 1 minute, 2 hours each directions of X,Y and Z
Impact resistance	Maximum 980m/s(100G) 3 times each in directions of X,Y and Z
Temperature characteristics	± 2%F.S. of detected pressure(25 °C) at temp.(Range of 0~50°C)
Inlet type	90° inlet Port & No Port
Wire specification	Oil-resistance cable(PVC)(0.15mm ²)
Weigh	Approx. 58g(with 2 meters lead wire)

**Note1: Due to temperature and linear compensation, the upper/lower ranges of the gauge may fluctuate slightly. This is normal.
 **Note2:Factory default -50kPa.

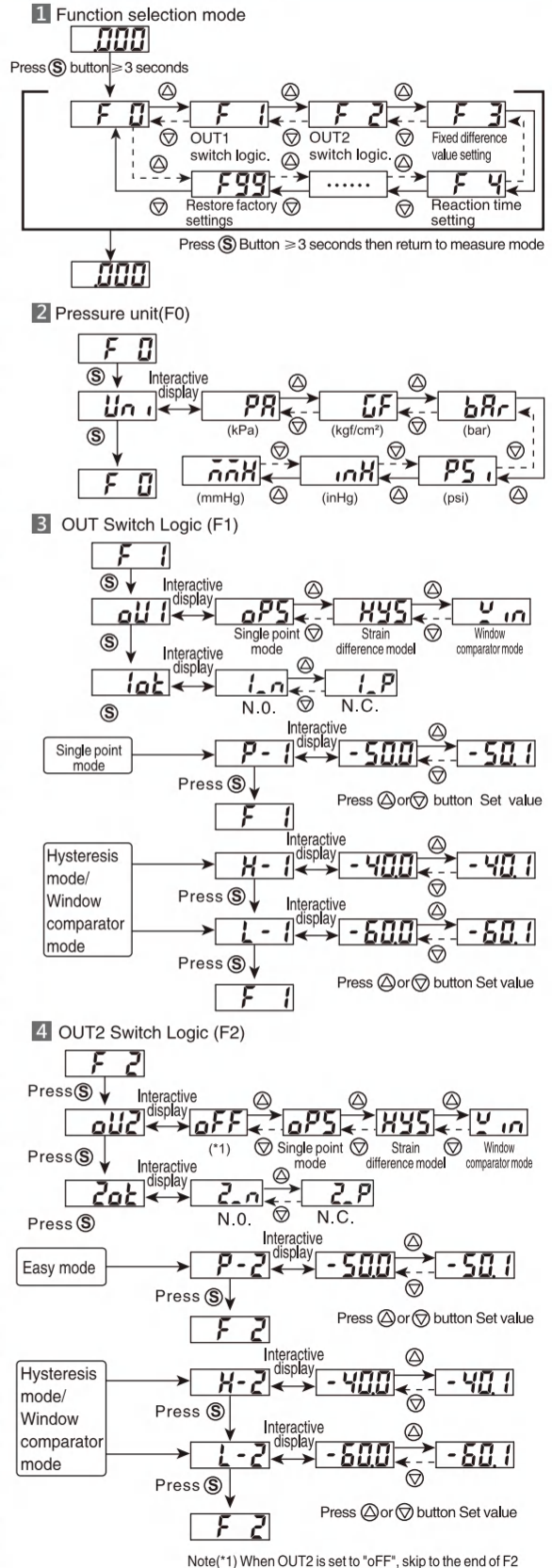
B.Out Circuit Wiring Diagrams



C. Panel Description

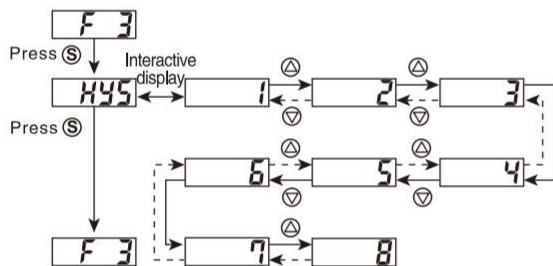


D.Initial Setting Mode

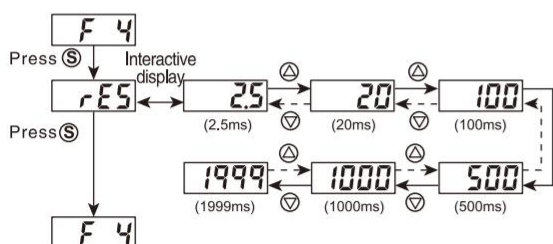


Operating instructions (non energy-saving) V2.0

5 Fixed difference value setting(F3)

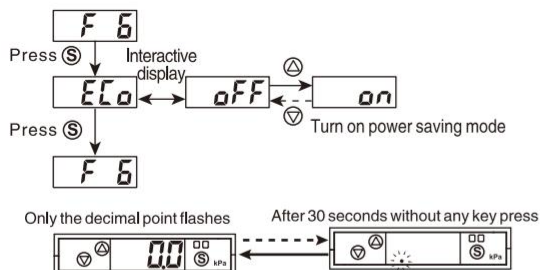


6 Switch reaction time setting(F4)

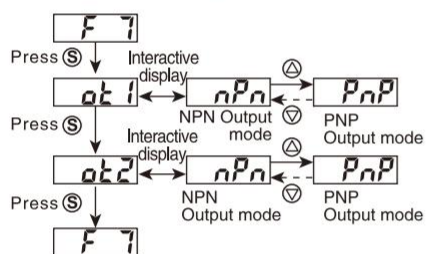


7 Power Save Mode (F6)

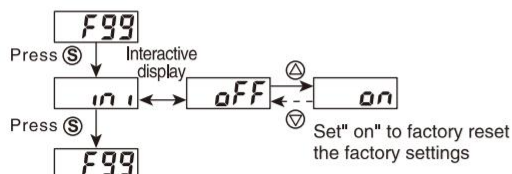
- During Power-Save mode, the main display will turned off if no buttons is pressed after 30 seconds.
- During Power-Save mode, the output LCD may not be synchronize with the output. It is normal and will not affect output operation.
- Press any button to turn-on main display temporarily.



8 Output mode setting(F7)

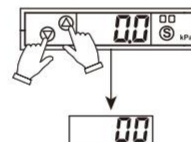


9 Factory reset values(F9)



E. Zeroing Setting

With the mode of measurement, press Δ and ∇ at the same time, more than 3seconds until the screen appears "00"



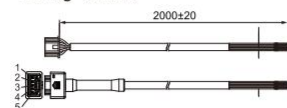
G. Pressure unit translation table

From	To	kPa	kgf/cm ²	mmHg	psi	bar	inHg
1 kPa	1	0,010197	7,500616	0,145038	0,010000	0,2953	
1 kgf/cm ²	98,0665	1	735,559	14,2233	0,980665	28,95979	
1 mmHg	0,13332	0,0013595	1	0,019336	0,0013332	0,039370	
1 psi	6,895	0,07031	51,7157	1	0,06895	2,036074	
1 bar	100,0000	1,01972	750,062	14,5038	1	29,52998	
1 inHg	3,386388	0,034530	25,40000	0,491141	0,033863	1	

H. Dimension

(unit:mm)

Wiring (MM)



Pin No	Color of lead wire
1	DC(+)(Brown)
2	Command 1 D-Sol input (Orange)
3	Command 1 V-Sol input (White)
4	OUT(Black)
5	DC(-)(Blue)

I. Error Indication function

Error	Error displayed	Error Condition	Troubleshooting
Residual pressure error	Err	The zero clear range more than 2% F.S	Change input pressure to ambient pressure and perform zero reset again.
Pressurizing error	HHH	Reset applied pressure to a level within the set pressure range.	Reset applied pressure to a level within the set pressure range.
	LLL	Pressure exceeding the lower limit of the set pressure range is applied.	
System error	Er.4	Displayed if an internal system error has occurred. Displayed if an internal system error has occurred.	Turn the power off and on again. If the failure cannot be solved, contact EMC.

Note(1) When OUT2 is set to "OFF", skip to the end of F2