

真空電控比例閥 E/P REGULAR

系列名稱 MODEL NAME

CVAR.CVTR 2900 series

目錄

目錄	P1
使用安全	P2
操作上的注意事項	P3-4
配線方法	P5
顯示畫面、主選單	P6
按鍵鎖定功能	P7
輸出模式	P8
輸出設定	P9-10
輸出類型	P11
單位	P12
歸零校正	P13
睡眠模式	P14

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操作注意事項



▶ 在操作狀態下，由於停電等電源被切斷時，本產品可暫時保持2次側的輸出。另外，在大氣開放狀態下使用2次側的輸出時，由於空氣會持續溢流，因此請謹慎操作。

▶ 如果本產品在充電狀態下切斷供給壓力，內裝的電磁閥仍持續動作，有時會發生蜂鳴聲。由於上述之情況會對電磁閥的壽命產生很大的影響，所以在切斷供給壓力時，務必切斷本產品的電源。

▶ 母線端成式型接頭配件是4芯線。在不使用監視器輸出(模擬輸出、開關輸出)的情況下，可能導致失誤動作，因此應避免與其他線接觸。

▶ 本公司所有產品在出貨時均按照各自的規格進行調整。胡亂分解、各部的拆卸可能導致故障，因此務必杜絕這種行為。

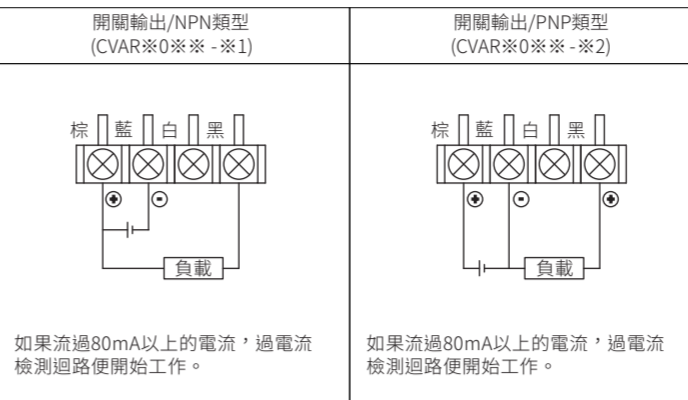
▶ 為了避免因噪聲引起的誤觸，請採取如下措施。
1. 在AC電源線上設置線路濾波器，用以除去電源噪聲。
2. 本產品及本產品配線盡量遠離發動機以及動力線等強磁場環境，並避免噪聲的影響。
3. 感應電荷(電磁閥、繼電器等)必須採取負荷電湧防止措施。
4. 為了避免電源波動的影響，請在切斷電源後插拔連接器。

▶ 由於直角型電線連接器本身不能旋轉，因此絕對不可以轉動它。

配線圖(監視器輸出)

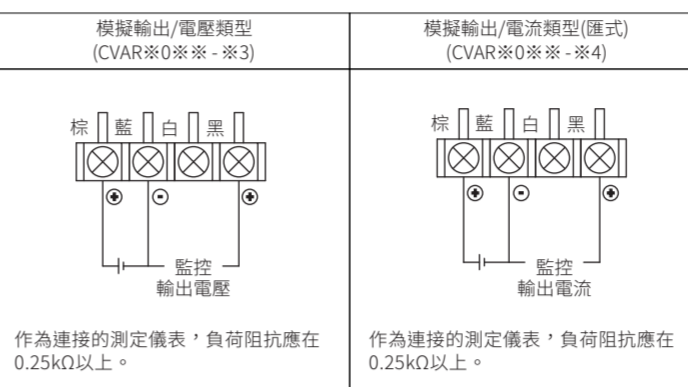


為防止作動錯誤，請避免監控輸出與其他線等接觸。



如果流過80mA以上的電流，過電流檢測迴路便開始工作。

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作為連接的測定儀表，負荷阻抗應在0.25kΩ以上。

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為了能夠安全的使用

這裡所述的注意事項，目的是為了安全並正確地使用本產品，也是為了預防對您及其他人可能造成的危害和損害。為了明確指示危害和損害的大小以及緊迫程度，以下事項分為「注意」、「警告」和「危險」三個級別。因為不論那個級別都是與安全有關的重要內容，因此還必須遵守ISO 4414、JIS B 8837以及其它安全法規。

■ 表示的說明

標示	表示意義
	表示錯誤操作時可能導致人員死亡或者嚴重傷
	表示錯誤操作時可能導致人身傷害和財物損失

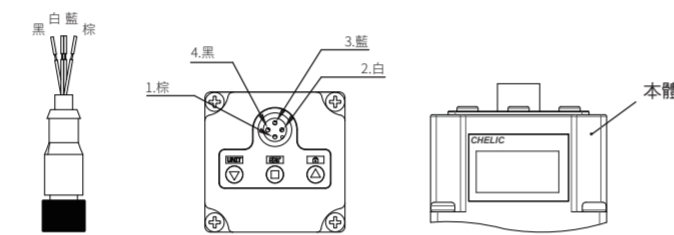
警告

- 產品**
- 本電控比例閥是否適用，應由氣壓系統設計者或者規格測定人員判斷。本產品是否適用於客戶系統，應該由氣壓系統設計者或者規格測定人員根據需要進行分析及測試後決定。該系統性能及其安全性方面由系統適合性判定者負責。希望日常關注最新的產品目錄和資料探討所有相關的事項，並充分考慮機器發生故障的可能性，以建構理想的系統。
 - 本產品應由具有充分專業知識和經驗的人操作。錯誤操作壓縮空氣是非常危險的，因此安裝、操作以及保養採用了空壓機器的機械、裝置應由具有充分專業知識和經驗的人員進行。
 - 在確認安全之前，絕對不能進行裝置的操作及拆卸。
 - 實施機械、裝置的檢查及整備之前，務必確認已經採取被驅動物體下落防止措施和失控防止措施等。
 - 在拆卸裝置時，首先應當確認是否採取上述安全措施，並切斷電源等，在確保系統安全的同時，參照和理解所使用機器的產品個別注意事項之後進行操作。
 - 應確保能夠應付重新啟動機械和裝置時可能發生的各種意外動作或失誤動作。另外，應定期檢查，確保正常運作。
 - 在以下條件及環境下使用時，尤其應當考量安全對策，同時希望事先與本公司協商。
 - 在明確規定外的條件、環境以及室外使用時。
 - 用於核能、鐵道、航空、車輛、醫療器材、與飲料食品接觸的機台、娛樂機台、緊急斷電系統、沖壓用離合器制動迴路等用途時。
 - 用於可能對人體及財產產生較大的影響、特別要求安全性的用途時。

配線方法



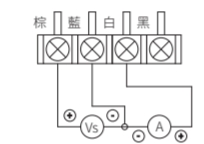
- 如果配線錯誤，可能導致破損，請謹慎操作。
- 請使用足夠容量和波動小的DC電源。
- 切斷電源後方可插拔連接器。
- 由於直角型電線連接器本身不可旋轉，因此絕對不可轉動它。



配線圖(電源及輸入信號)

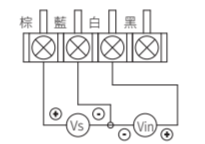
端子 No.	1	2	3	4
導線色	棕	白	藍	黑
配線	電源	信號	COM	監控

▼ 電流型配線



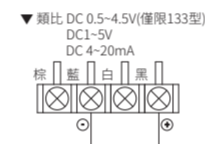
Vs: 供給電源 DC 24V±10%
A: 輸入信號 DC 4-20mA

▼ 電壓型配線



Vs: 供給電源 DC 24V±10%
Vin: 輸入信號 DC 0-5V DC 0-10V

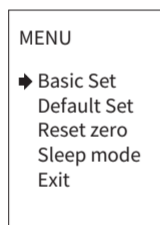
● 監控輸出配線圖



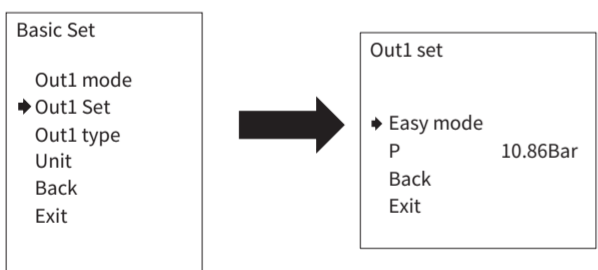
● 繼比 DC 0.5-4.5V(僅限133型)
DC1-5V
DC 4-20mA

輸出模式 *註 1

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入Basic Set的設定功能。



- 進入“Basic Set”頁面之後，選擇“Out1 set”進入功能選單，可選擇需要的輸出模式。

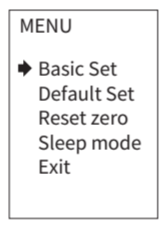


- 選單內“Back”為倒退一頁選單。
- 選單內“Exit”為直接退出選單，正常狀態下回到壓力顯示畫面。

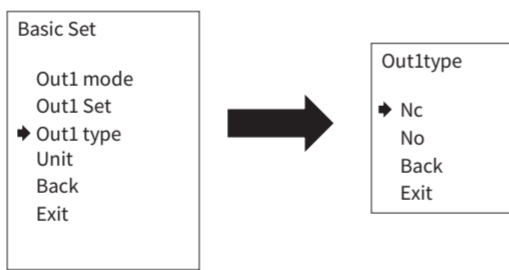
*註1：需具有開關輸出功能的CVAR才可設定輸出模式。

輸出類型 *註 1

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入Basic Set的設定功能。



- 進入“Basic Set”頁面之後，選擇“Out1 type”進入功能選單，可選擇需要的輸出模式。

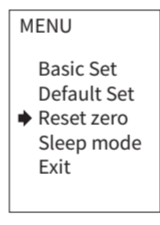


- 選單內“Back”為倒退一頁選單。
- 選單內“Exit”為直接退出選單，正常狀態下回到壓力顯示畫面。

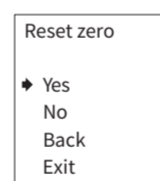
*註1：需具有開關輸出功能的CVAR才可設定輸出模式。

歸零校正

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入“Reset zero”的設定功能。



- 進入“Reset zero”頁面之後，進行功能確定或是退出功能選單。



- * Yes 為執行選單功能
- * No 為不執行選單功能，並直接退出選單
- * Back 為倒退一頁選單
- * Exit 為直接退出選單，正常狀態下回到壓力顯示畫面。

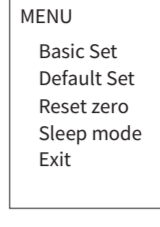
鎖定功能



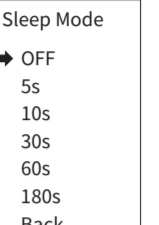
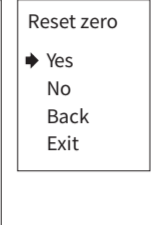
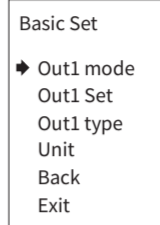
開啟電源後進入上鎖狀態並不能操作。

設定方法

- 正常狀態下，按壓“▲”可以上鎖電控比例閥。
- 在“上鎖”的狀態下，長壓“▲”3秒，可以解鎖。
- 正常狀態下，按“SET”即可進入“選單”。
 - 進入“選單”後，可使用“▲”、“▼”按鍵上下移動“◆”(箭頭指標)，然後再按“SET”選擇要進入的設定功能。
 - “MENU”主選單一

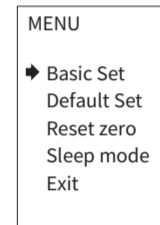


- 從主選單按壓“SET”可進入選定的子選單，進入“子選單”後可使用“▲”、“▼”按鍵上下移動“◆”(箭頭指標)，然後再按“SET”選擇要進入的設定功能。

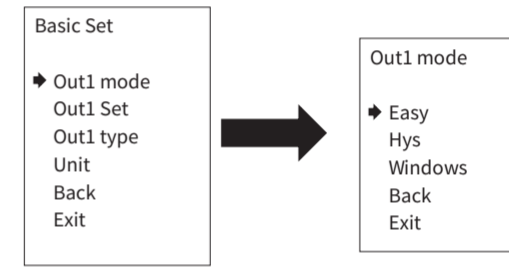


輸出模式 *註 1

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入Basic Set的設定功能。



- 進入“Basic Set”頁面之後，選擇“Out1 mode”進入功能選單，可選擇需要的輸出模式。



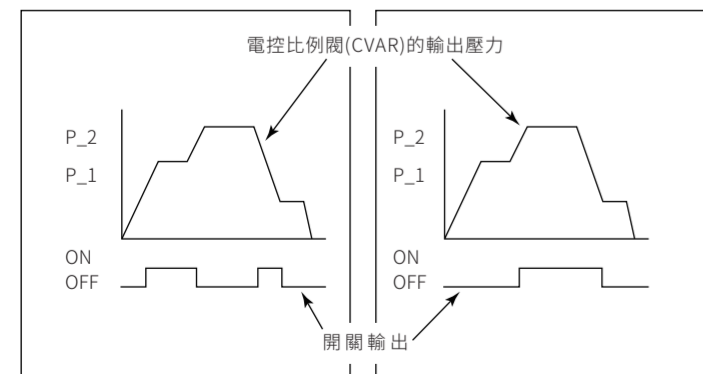
- 選單內“Back”為倒退一頁選單。
- 選單內“Exit”為直接退出選單，正常狀態下回到壓力顯示畫面。

*註1：需具有開關輸出功能的CVAR才可設定輸出模式。

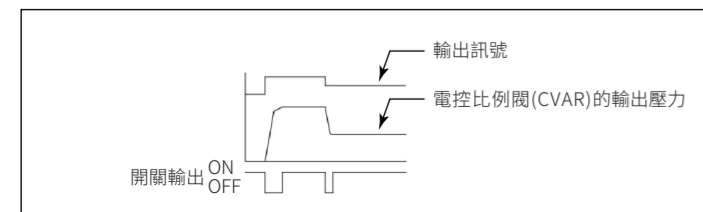
通過設定 P_1和P_2，可實現下列動作。

* 本功能僅限於監視器輸出、開關輸出型(CVAR※0※※-※2, CVAR※0※※-※3)。

■ P_1 < P_2: 窗口比較模式

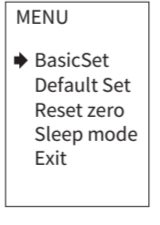


■ P_1 = P_2 = 0 的場合: 自我診斷模式 (在到達設定壓力時，轉為ON。)

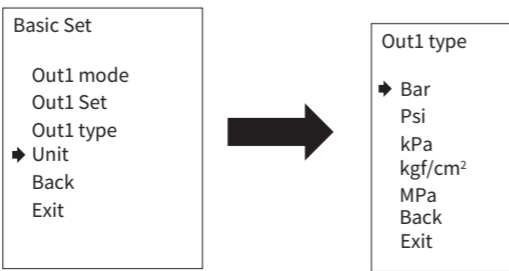


單位

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入Basic Set的設定功能。



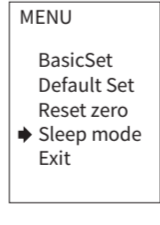
- 進入“Basic Set”頁面之後，選擇“Unit”進入功能選單，可選擇需要的輸出模式。



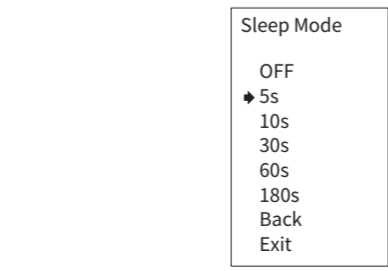
- 選單內“Back”為倒退一頁選單。
- 選單內“Exit”為直接退出選單，正常狀態下回到壓力顯示畫面。

睡眠模式

- 在“Unlock”的狀態下，按壓“SET”進入“選單”。
- 進入“選單”後，可使用“▲”和“▼”按鍵上下移動“◆”(箭頭指標)，然後按壓“SET”選擇進入“Sleep mode”的設定功能。

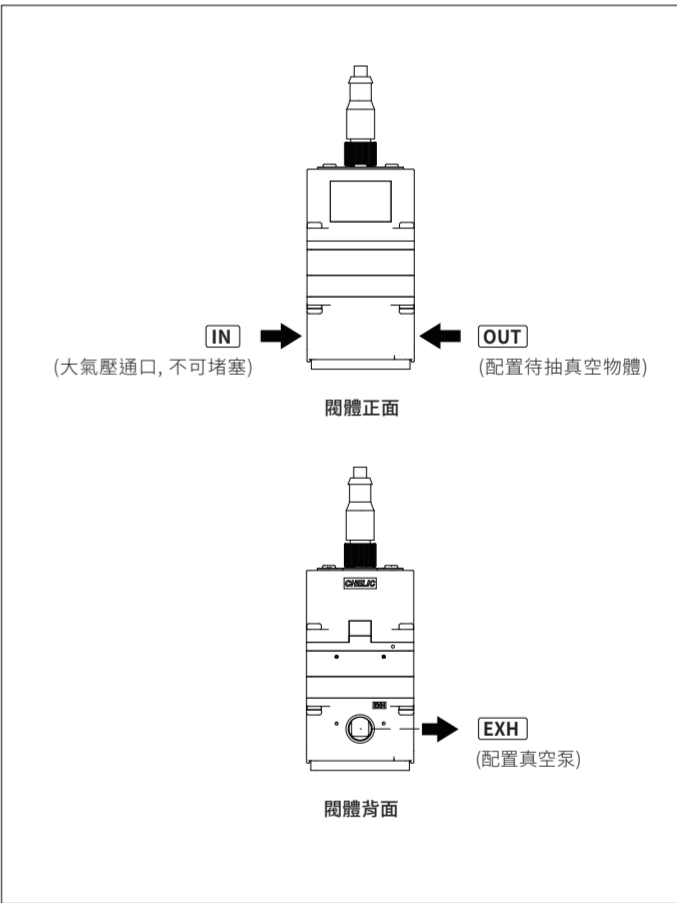


- 進入“Sleep mode”頁面後，可選擇睡眠啟動時間。



- 選單內“Back”為倒退一頁選單。
- 選單內“Exit”為直接退出選單，正常狀態下回到壓力顯示畫面。

配管方式



OPERATION MENU

E/P REGULAR

MODEL NAME

CVAR.CVTR 2900 series

CATALOGUE

CATALOG	P1
SAFETY NOTICE	P2
CAUTION FOR OPERATION	P3-4
WIRING SYSTEM	P5
DISPLAY FRAME、MENU	P6
KEY LOCK FUNCTION	P7
OUTPUT MODE	P8
OUTPUT SETTING	P9-10
OUTPUT TYPE	P11
UNIT	P12
RESET ZERO	P13
SLEEP MODE	P14

CHELIC Corporation

URL <http://www.chelic.com>

CAUTION FOR OPERATION

CAUTION

- ▶ This product can temporarily keep twice output when the power is cut off in operating state. Besides, when using twice output in open air condition, the air will keep overflow, must operate carefully.
- ▶ If the supply pressure is cut off in a charge state, the inside solenoid valve will keep working, sometimes will beeps. As above situation will seriously affect the life of solenoid valve, please cut off the power before you cut off the pressure.
- ▶ The bus bar end connector is four-core wire. If you don't use the monitor output (analog output, switch output), will cause error operation, please avoid connecting with other wire.
- ▶ All of our products have been adjusted according to their specification before leaving factory. Please don't make any modification or disassemble to the structure, function of the product.
- ▶ In order to avoid the error caused by noise, please take the following measures:
 1. Set the line filter on AC power line to remove the power noise.
 2. Keep the product away from the engine and power line to avoid noise affects.
 3. Induced charge (like Solenoid Valve, relay), must prevent them from negative charge.
 4. In order to avoid the effects of power fluctuation, please cut off the power before plug the connector.
- ▶ The angle wire connector can not be rotate, please don't rotate it.

Wiring (Monitor Output)

CAUTION

Don't use monitor output will cause wrong action, so please avoid connecting with other wires.

<p>Switch output/NPN type (CVAR※0※※-※1)</p> <p>If an electrical current over 80mA passed through, the current detection circuit will start work.</p>	<p>Switch output/PNP type (CVAR※0※※-※2)</p> <p>If an electrical current over 80mA passed through, the current detection circuit start to work.</p>
<p>Analog output/voltage type (CVAR※0※※-※3)</p> <p>The load impedance of the measuring instrument must be over 0.25kΩ.</p>	<p>Analog output/current type (CVAR※0※※-※4)</p> <p>The load impedance of the measuring instrument must be over 0.25kΩ.</p>

LOCK FUNTION

CAUTION

Can not operate when enter into lock mode.

① Under normal state, press the "▲" can lock the direction control valve.
 ② Press the "▲" by three seconds, can unlock the direction control valve.
 ③ Under normal state, press the "SET" and get into the "MENU"
 A. "MENU", please use "▲" and "▼" button to move up and down, then press the "SET" to enter the setting view.
 B. "MENU" —

MENU

- Basic Set
- Default Set
- Reset zero
- Sleep mode
- Exit

C. Press the "SET" to get into the submenu, after get into the submenu, use "▲"、"▼" to move up and down, press the "SET" to enter the setting view.

<p>Basic Set</p> <ul style="list-style-type: none"> Out1 mode Out1 Set Out1 type Unit Back Exit 	<p>Reset zero</p> <ul style="list-style-type: none"> Yes No Back Exit 	<p>Sleep Mode</p> <ul style="list-style-type: none"> OFF 5s 10s 30s 60s 180s Back Exit
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Safety notice

Please read this safety notice carefully, and pay attention to safety item while using this product, to prevent injury to human body and property dangerous. Hence, there are divided into three classes of "DANGER", "WARNING" and "CAUTION" according to the dangerous grade. No matter which class, they all very important content, must comply with ISO 4414, JIS B 88370 and other safety regulations.

MARK INSTRUCTION

MARK	DESCRIPTION
	Condition of operation is situated at "warning" state, may cause casualty if wrong operation.
	Condition of operation is situated at "Caution" state, may cause minor or moderate injury and damage of property if wrong operation.

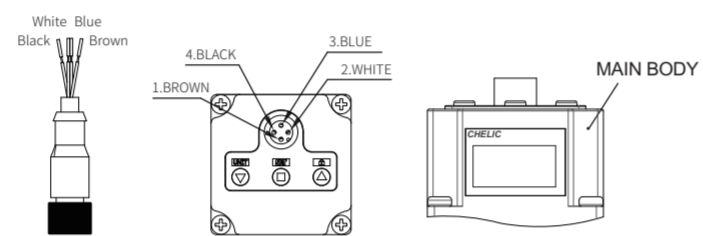
WARNING

- Product**
- ① Let the designer of pneumatic system or rule tester to determine if this direction control valve is suitable or not.
 Let the designer of pneumatic system or rule tester analysis and determine whether this product is suitable or not. The person should also be responsible for the performance of the system and it's security. It's necessary to pay attention to the latest product catalog and menu, consult all related matters and consider the possibility of machine failure to build an ideal system.
- ② The product must be operated by the person who has professional knowledge and practical experience.
 Wrong operation is very dangerous, so the installation, operation and maintenance of the air compressor equipment should be done by the person who has professional knowledge and practical experience.
- ③ The operation and disassembly of the mechanism must be under safety condition.
 A. Before inspect and prepare the mechanism, be sure measures have been taken for prevent the driven objects from falling and lose control.
 B. Make sure to take above mentioned measures and shut off the power switch when disassemble the mechanism, to ensure the safety, please also refer and learn the product notice before start work.
 C. Make sure able to handle any error operation which would happen after re-start of the mechanism. Inspection should be regularly to assure the normal operations.
- ④ Should especially consider the security countermeasure when using under below conditions, but at the same time, we hope you can negotiate with us in advance.
 A. Use in other conditions and outdoor those not stated in the catalogues.
 B. Using in nuclear power, railway, airway, car, medical equipment, food and drink machine, entertainment, emergency power-off system and safety machine.
 C. Using in that will have great impact on human body and property.

WIRING METHOD

CAUTION

- ① Error wiring might cause breakage, please operate carefully.
- ② Please use DC power which has enough capacity and with small fluctuation.
- ③ Please cut off the power before plug the connector.
- ④ The angle wire connector can not be rotate, please don't rotate it.



Wiring (Power And Input Signal)

Terminal No.	1	2	3	4
Wire Color	Brown	White	Blue	Black
Wiring	power	signal	COM	Monitoring

▼ Current Type

▼ Voltage Type

▼ Monitor Output Circuit

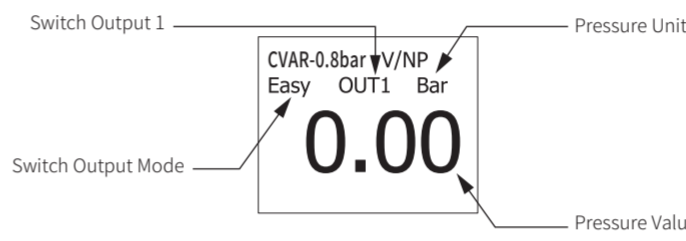
▼ Analog output DC 0.5~4.5V (L33 type only)
 DC 1~5V
 DC 4~20mA

Vs: Power DC 24V±10%
 A: Input signal DC 4~20mA

Vs: Power DC 24V±10%
 Vin: Input signal DC 0~5V
 DC 0~10V

Monitor output

DISPLAY



MAIN MENU

- ① Under normal state, press the "SET" and get into the "MENU".
- ② After get into the "MENU", please use "▲" and "▼" button to move up and down, then press the "SET" to enter the setting view.

MENU

- Basic Set
- DefaultSet
- Reset zero
- Sleep mode
- Exit

- ③ Press the "EXIT" to leave the menu, normally will return to the pressure display frame.

OUTPUT MODE* NOTE 1

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Basic Set function.

MENU

- Basic Set
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Basic Set" frame, select "Out1 mode" to get into function menu, you can choose output mode you need.

<p>Basic Set</p> <ul style="list-style-type: none"> Out1 mode Out1 Set Out1 type Unit Back Exit 	<p>Out1 mode</p> <ul style="list-style-type: none"> Easy Hys Windows Back Exit
---	---

- ④ Select "Back" to get back to the previous page.
- ⑤ Select "Exit" to leave the menu, normally will return to the pressure display frame.

*Note 1: Only CVAR with switch output function, can set the output mode.

OUTPUT SET *NOTE 1

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Basic Set function.

MENU

- Basic Set
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Basic Set" frame, select "Out1 set" to get into function menu, you can choose output mode you need.

<p>Basic Set</p> <ul style="list-style-type: none"> Out1 mode Out1 Set Out1 type Unit Back Exit 	<p>Out1 set</p> <ul style="list-style-type: none"> Easy mode P 10.86Bar Back Exit
---	---

- ④ Select "Back" to get back to the previous page.
- ⑤ Select "Exit" to leave the menu, normally will return to the pressure display frame.

*Note 1: Only CVAR with switch output function, can set the output mode.

OUTPUT MODE* NOTE 1

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Basic Set function.

MENU

- Basic Set
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Basic Set" frame, select "Out1 type" to get into function menu, you can choose output mode you need.

<p>Basic Set</p> <ul style="list-style-type: none"> Out1 mode Out1 Set Out1 type Unit Back Exit 	<p>Out1type</p> <ul style="list-style-type: none"> Nc No Back Exit
---	--

- ④ Select "Back" to get back to the previous page.
- ⑤ Select "Exit" to leave the menu, normally will return to the pressure display frame.

*Note 1: Only CVAR with switch output function, can set the output mode.

RESET ZERO

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Reset Zero function.

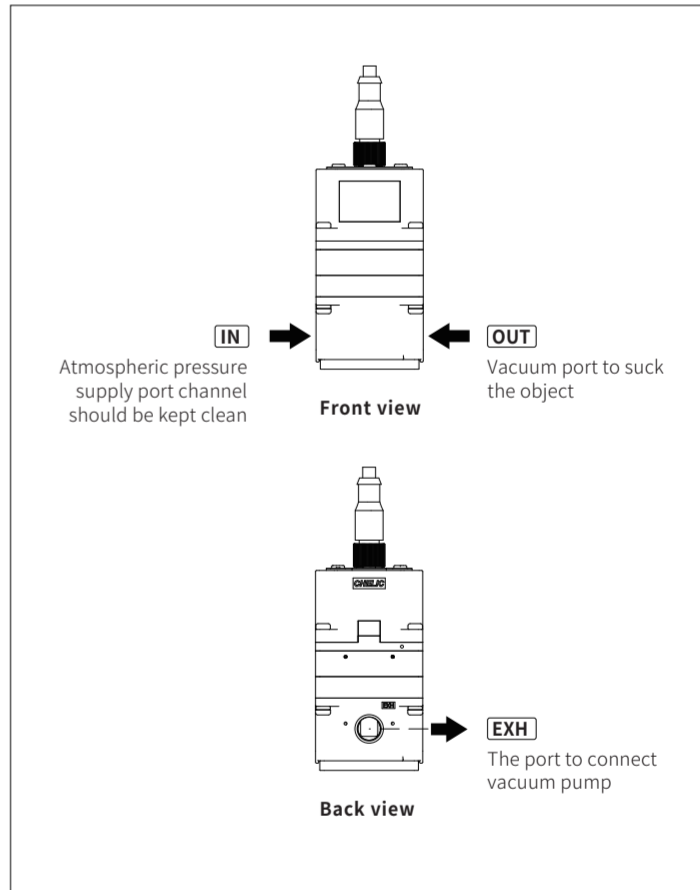
MENU

- Basic Set
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Reset zero" frame, you can choose and confirm the function or exit menu.

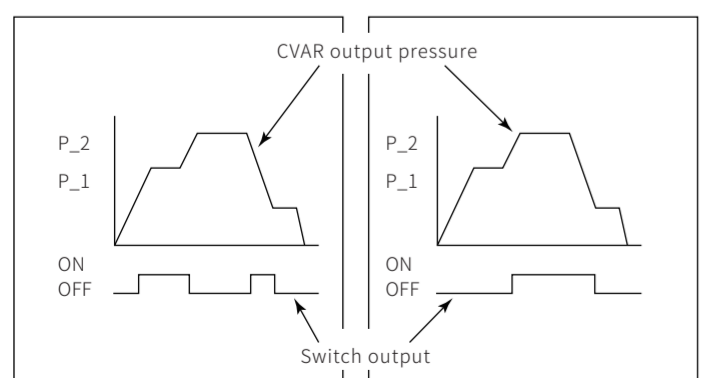
<p>Reset zero</p> <ul style="list-style-type: none"> Yes No Back Exit 	<ul style="list-style-type: none"> * Select "Yes" to perform the function. * Select "No" not perform the function and exit menu. * Select "Back" to get back to the previous page. * Select "Exit" to leave the menu, normally will return to the pressure display frame.
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PIPING INSTRUCTION

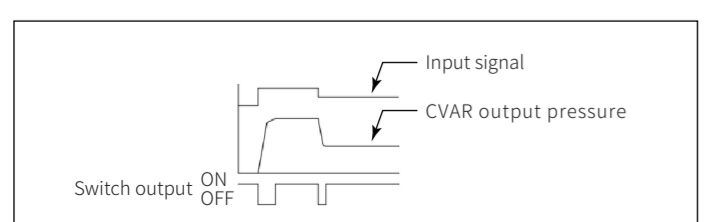


Below function can be achieved by setting P_1 and P_2.
 ※ Only monitor output and switch output have this function.
 (CVAR※0※※-※2, CVAR※0※※-※3) ※

- P_1 < P_2: Window compare mode
- P_1 ≥ P_2: Delayed mode



- P_1=P_2=0: Self-diagnostic mode (When reach the set pressure, turn to ON.)



UNIT

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Basic Set function.

MENU

- BasicSet
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Basic Set" frame, select "Unit" to get into function menu, you can choose output mode you need.

<p>Basic Set</p> <ul style="list-style-type: none"> Out1 mode Out1 Set Out1 type Unit Back Exit 	<p>Out1 type</p> <ul style="list-style-type: none"> Bar Psi kPa kgf/cm² MPa Back Exit
---	---

- ④ Select "Back" to get back to the previous page.
- ⑤ Select "Exit" to leave the menu, normally will return to the pressure display frame.

SLEEP MODE

- ① Under "Unlock" state, press "SET" and get into "MENU".
- ② After get into "MENU", use "▲" and "▼" to move up and down, press "SET" to get into the Sleep mode function.

MENU

- BasicSet
- Default Set
- Reset zero
- Sleep mode
- Exit

- ③ After get into "Sleep mode" frame, can set the startup time of sleep mode.

<p>Sleep Mode</p> <ul style="list-style-type: none"> OFF 5s 10s 30s 60s 180s Back Exit
--

- ④ Select "Back" to get back to the previous page.
- ⑤ Select "Exit" to leave the menu, normally will return to the pressure display frame.