EDGE POSITION CONTROLLER MANUAL

自 動 對 邊 機 操 作 手 冊

SINGUNO TECHNOLOGY CO., LTD.

目 錄

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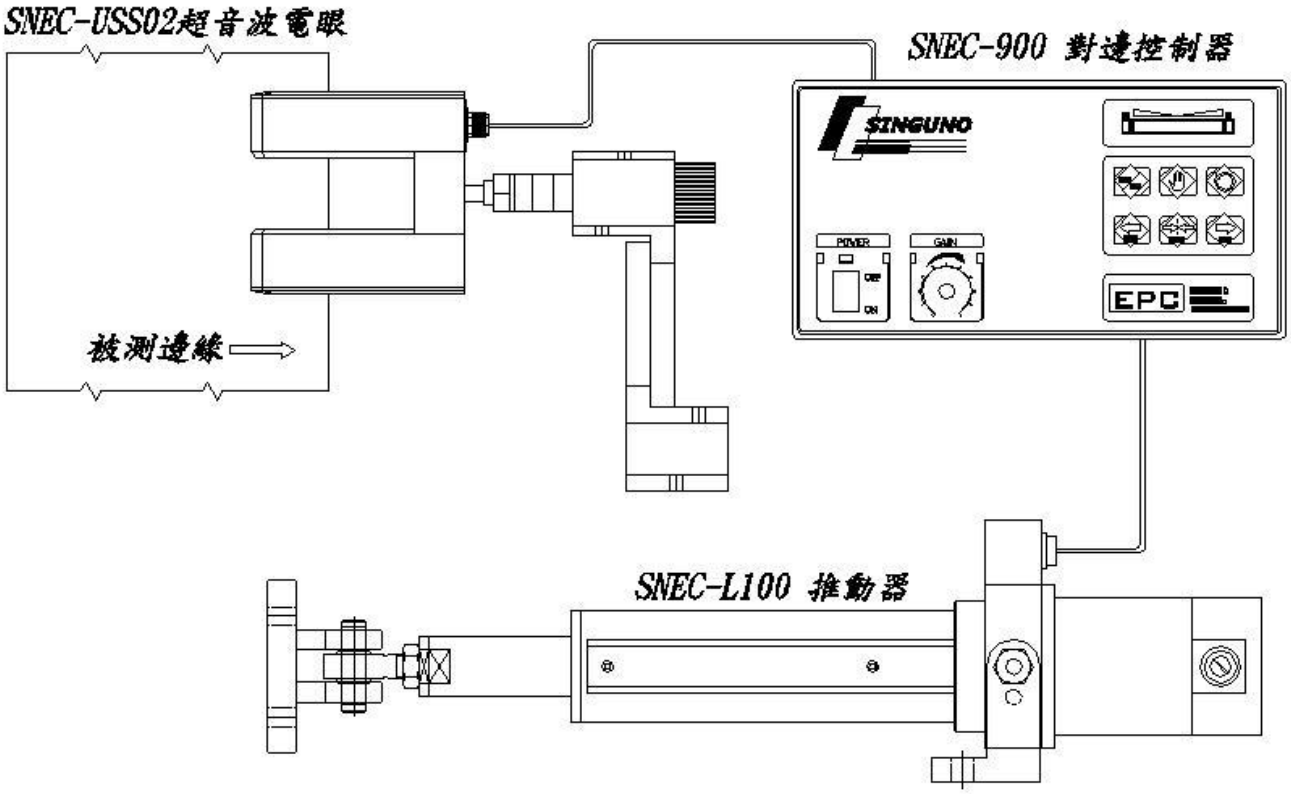
1. 功能介紹

(EPC)超音波對邊機系統



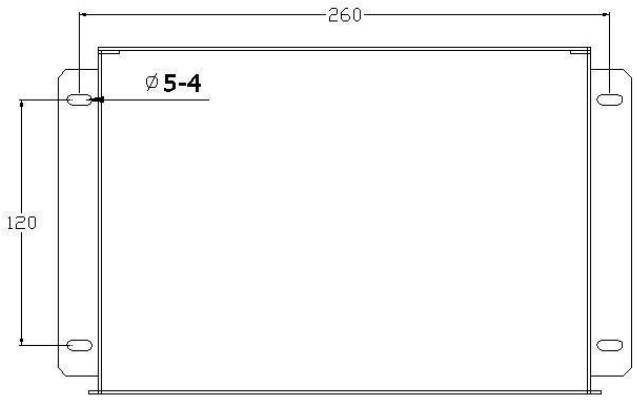
1. 專為材料邊緣追蹤，新開發 SNEC-USS02 電眼，
   適用於：透明/非透明薄膜、紙、金屬薄膜之加工設備。
2. 由於SNEC-USS02 電眼超強功能，可降低加工時材料損耗(追蹤精度為±0.1mm)
3. 可搭 DC 馬達驅動器，從120kg 至150kg 推力之驅動器均有。
4. EPC 系統配備：
   (1). 感測裝置 : SNEC-USS02 超音波電眼。
   (2). 控制裝置 : SNEC-900 控制器。
   (3). 驅動裝置 : L150 , L100 , K150 驅動器。
   (4). 零配件 : [1]. 電眼調整架。
   [2]. 5PIN 感測器連接線。
   [3]. 7PIN 驅動器連接線。
   [4]. 固定座 4 PC。
   [5]. L架 2 PC。
   [6]. M4螺絲 8 PC ,M5螺絲 2 PC。
   [7]. 操作說明書1本。

2. 各系統配套件介紹

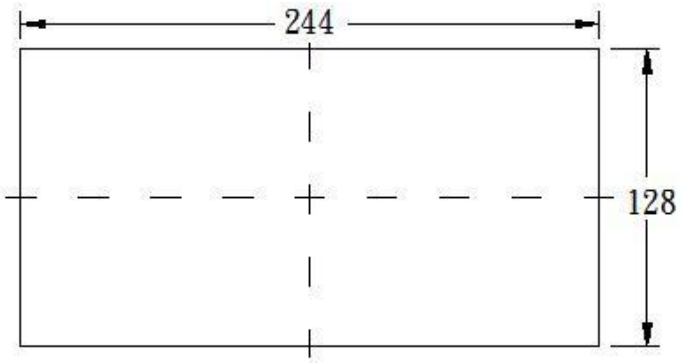
控制器裝置

2.11超音波控制器安裝

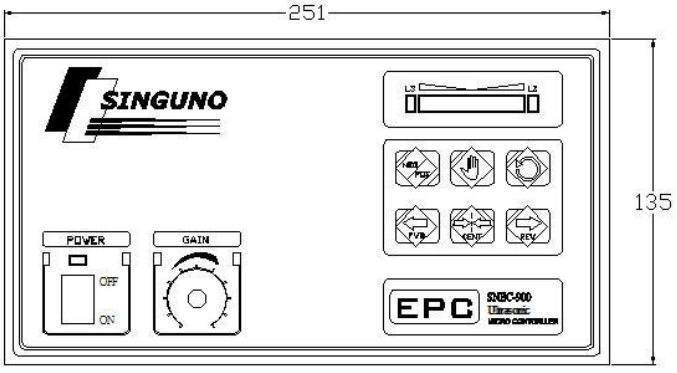
EPC 上視圖



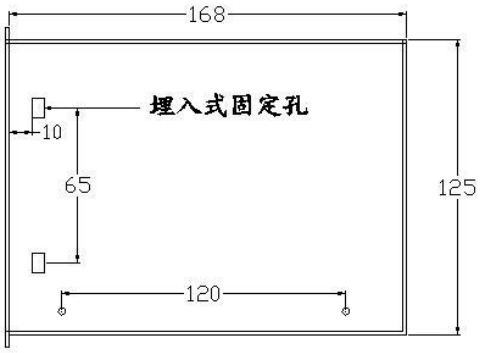
EPC 開孔圖



EPC 面板尺寸

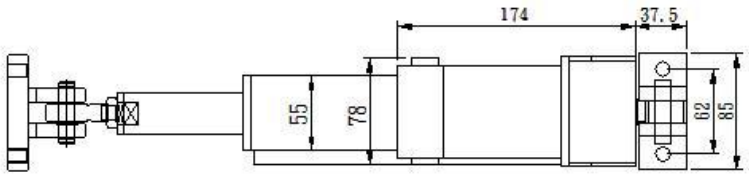


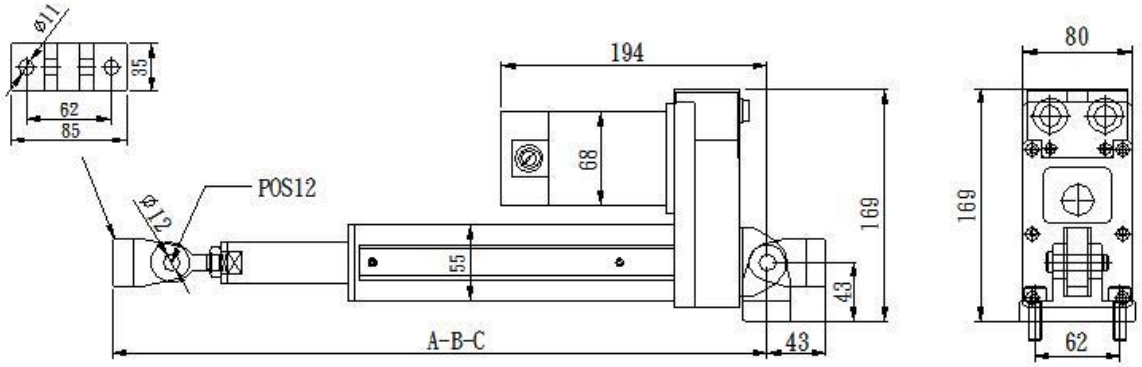
EPC 側視圖



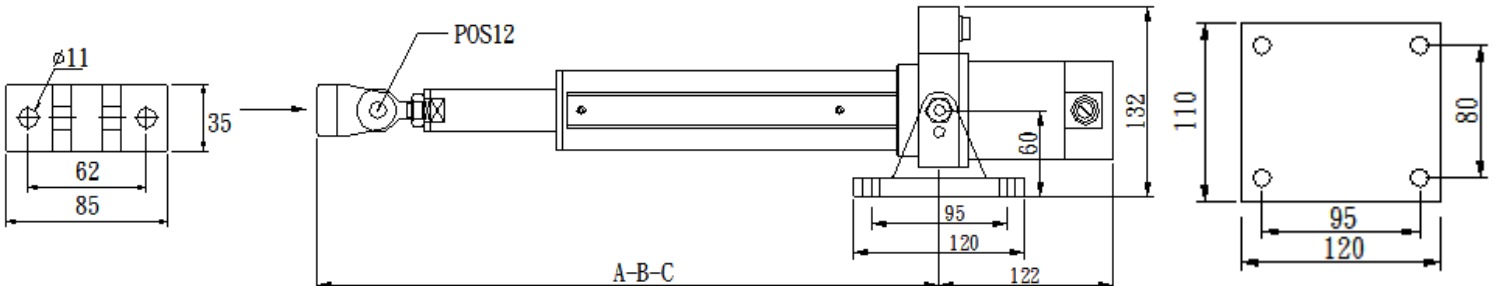
驅動器安裝

2.12 K型 & L型 驅動器安裝

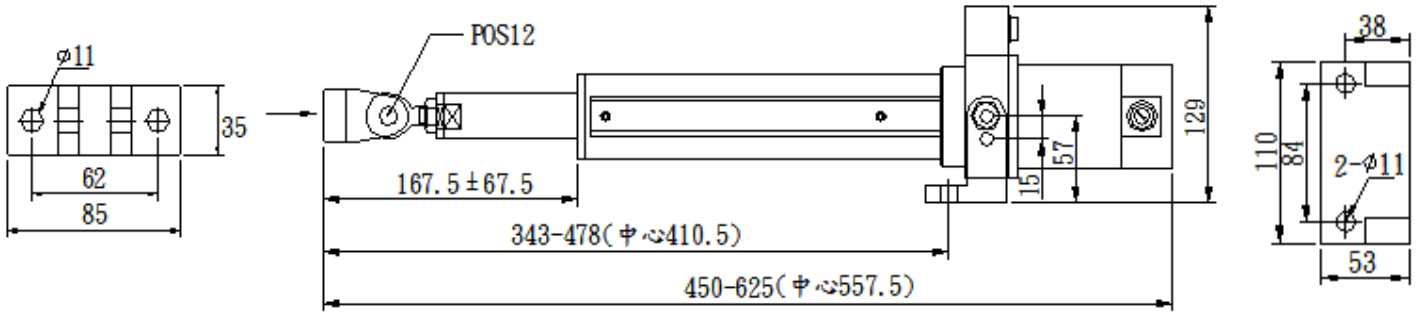




	Type	有效行程(mm)	A(Max)	B(中心)	C(Min)
訂製品	K100	85	446	403.5	361
標準品	K150	135	546	478.5	411

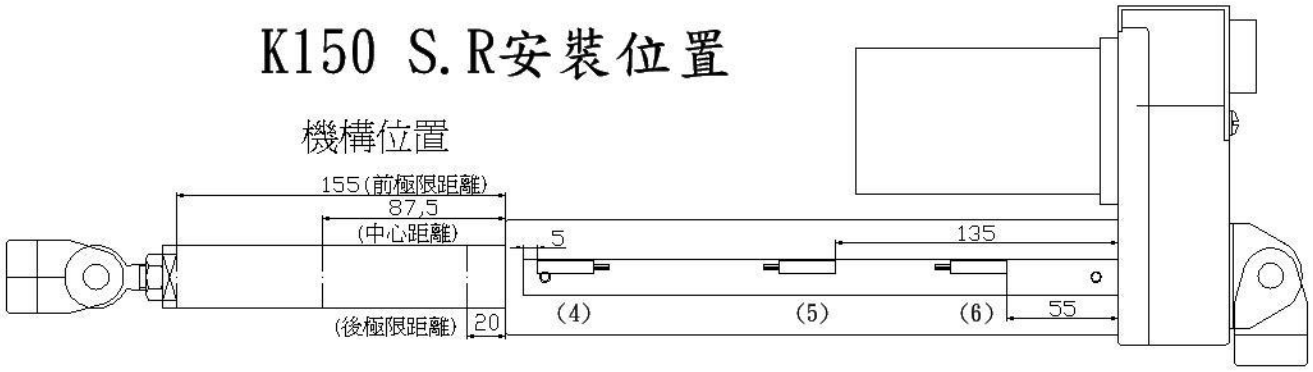


	Type	有效行程(mm)	A(Max)	B(中心)	C(Min)	D(馬達長度)
標準品	L100	85	403	360.5	318	122
標準品	L150	135	503	435.5	368	122

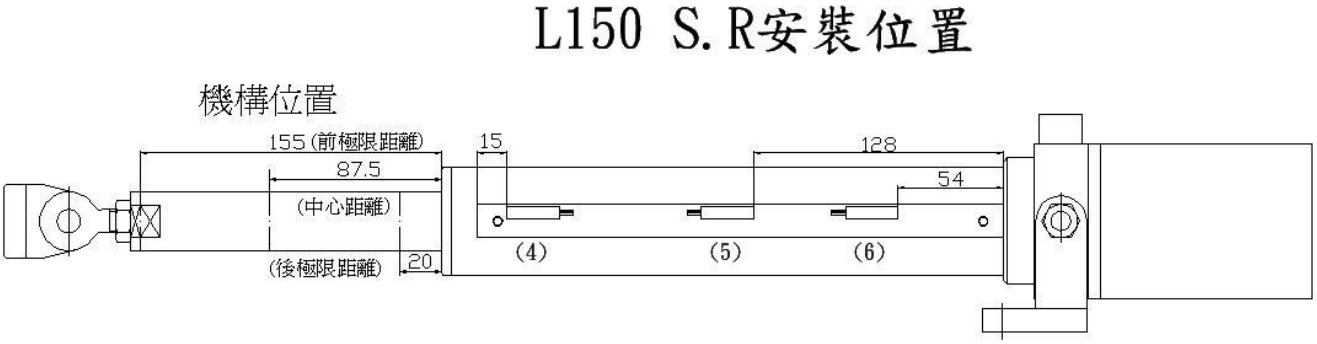


SNEC-L150（推動器）

2.13 驅動器行程調整安裝



[圖一]



[圖二]

K型與L型驅動器調整行程,使用磁簧開關調整距離 。

◆ 調整步驟如下:

[1].將驅動器圓管側邊鋁條的兩個內六角螺絲拆下。

[2].鋁條內安置三個磁簧開關,(4)前極限 (5)中心極限 (6)後極限。

[3].鋁條內安置雙面膠固定,三個磁簧開關。

[4].使用者如需修改行程,將三個磁簧開關位置調整過。

注意事項:

[1].使用者如調整過磁簧開關,必須注意螺桿位置要在磁簧開關範圍內。
如果螺桿位置不在磁簧開關範圍內,必須將驅動器速度調整慢速。
再移動驅動器位置,以必免驅動器齒輪傷到。

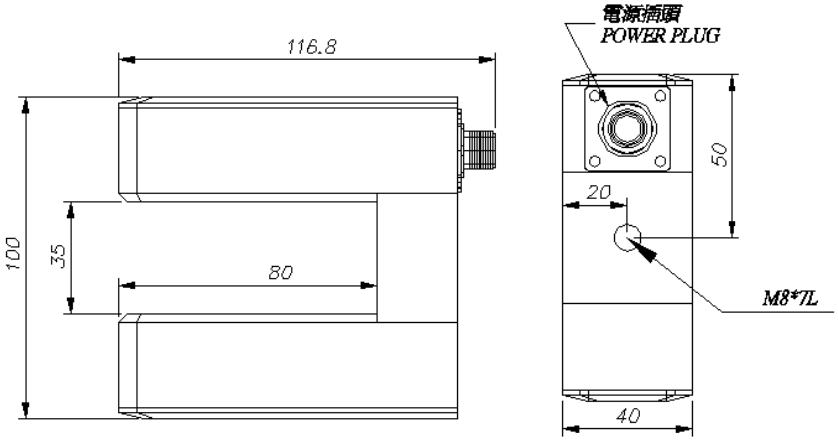
超音波電眼安裝

2.14 電眼 SNEC-USS02 安裝

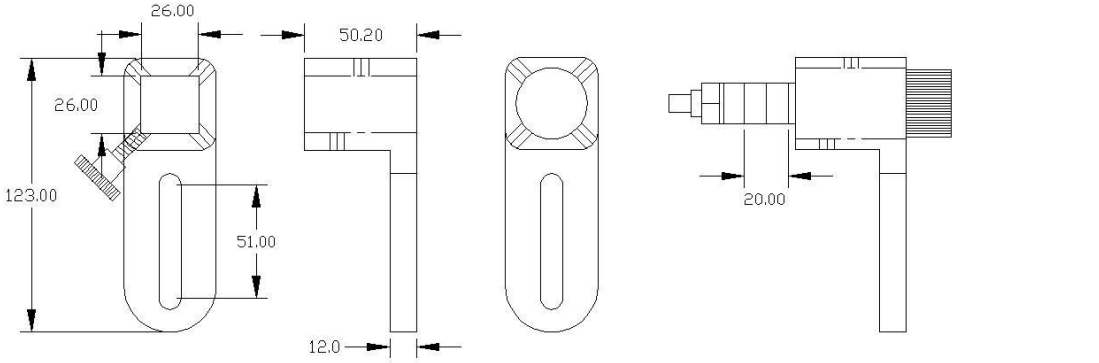
SNEC-USS02超音波電眼

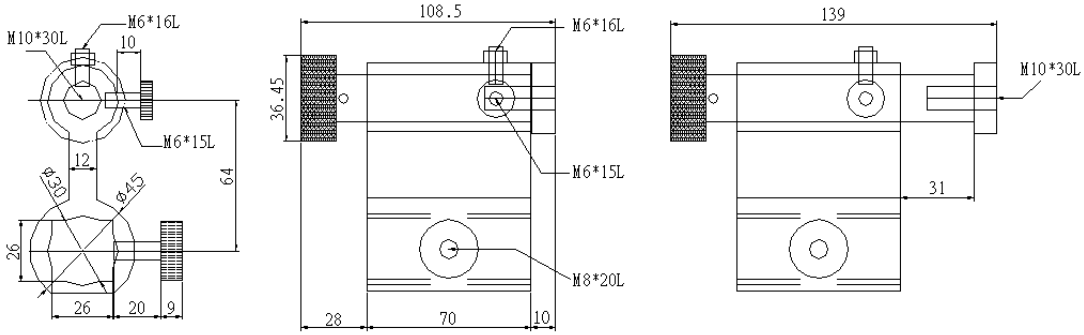
新型微調座

微調座



SNEC-USS02 超音波電眼安裝尺寸

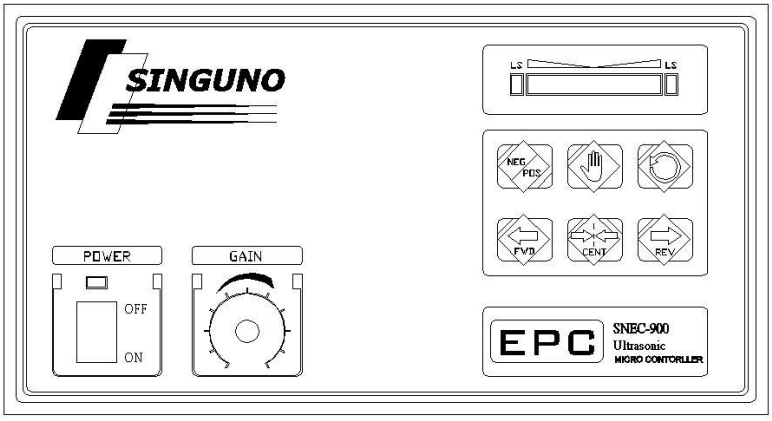




3.各系統配套件功能鍵/指示燈說明

控制器功能

3.11 超音波控制面板



功能按鍵說明:


自動模式


手動模式

手動右移

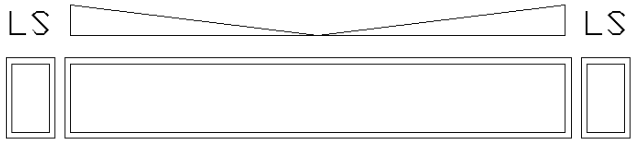
手動左移

手動中心

自動方向切換

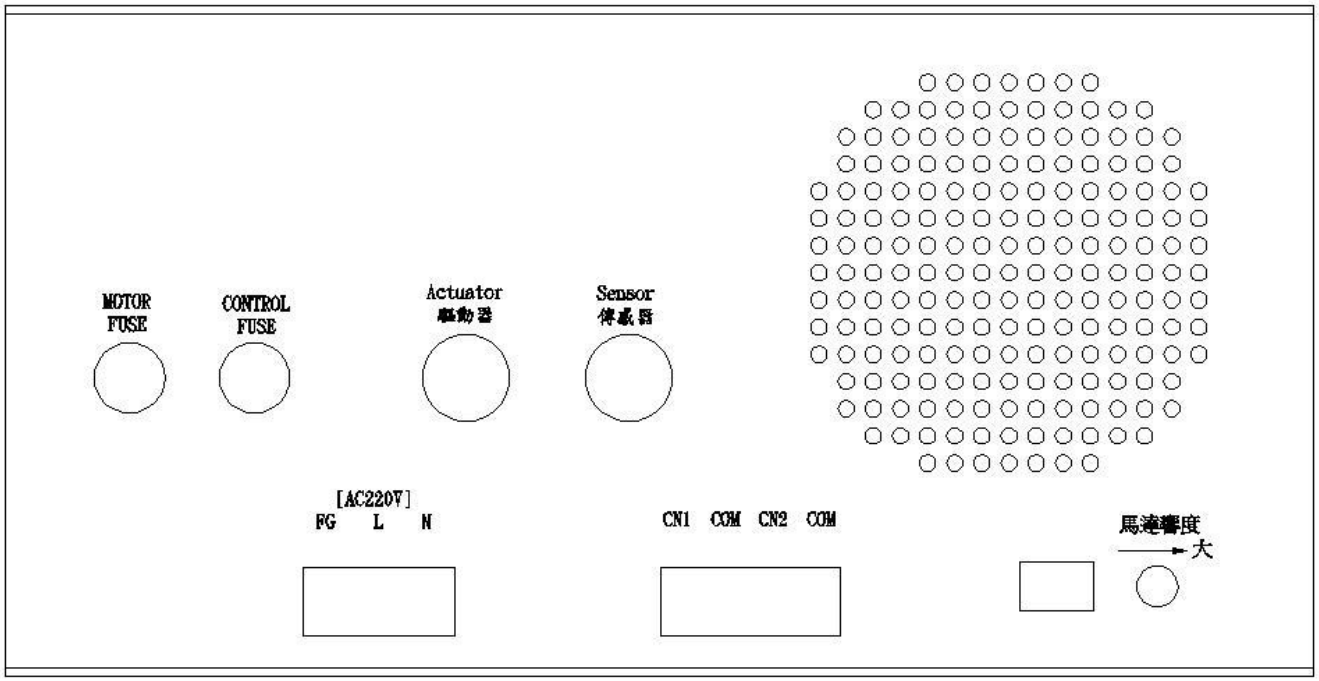
[1]. POWER開關 : 控制器電源開關。

[2]. GAIN 旋鈕 : 調整超音波電眼抓取材料變化顯示低時,將感度加大。



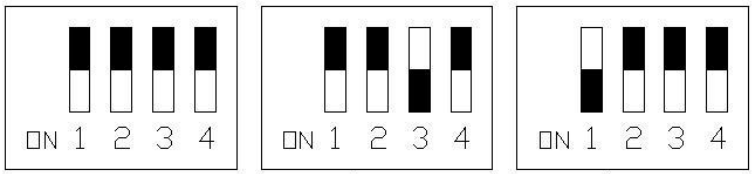
[3]. 控制器顯示燈號 ,左右兩側安裝極限開關 。

3.12 超音波控制器後面板



功能按鍵說明:

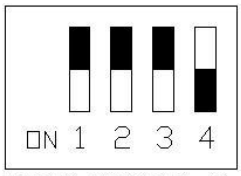
[1].MOTOR FUSE : 驅動器電源保險絲 250V/3A。
[2].CONTROL FUSE : 控制器電源保險絲 250V/3A。
[3].驅動器連接頭 : 7PIN連接頭 , 連接至驅動器上。
[4].超音波連接頭 : 5PIN連接頭 , 連接至超音波電眼上。
[5].3PIN歐式端子台 : 連接電源信號 , 輸入電源 110V~220V。
[6].4PIN歐式端子台 : 可做外部信號控制。
[7].4段指撥開關模式選擇如下 :
[8].CN1-COM :外部(自動/手動)切換.
[9].CN2-COM :外部斷料停機. [10]. 馬達響度 : 調整馬達速度 .



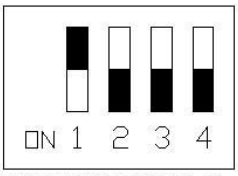
開機自動模式

開機中心模式

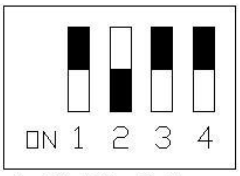
手動方向變更



開機手動模式



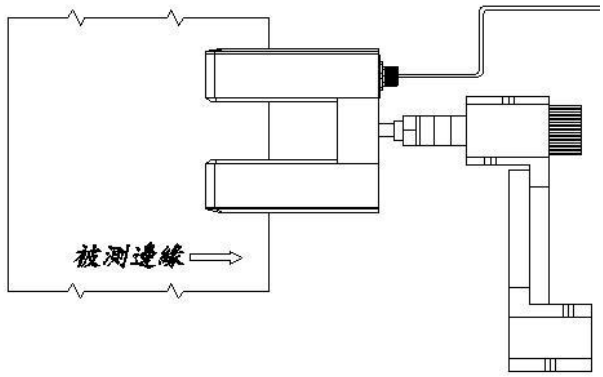
開機記憶模式



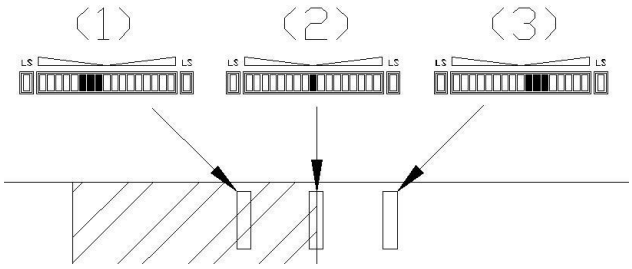
自動模式中
手動功能有效

4. EPC系統操作說明

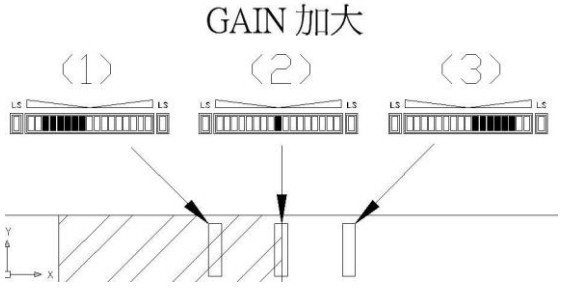
4.11 超音波電眼



[圖三]



[圖四]



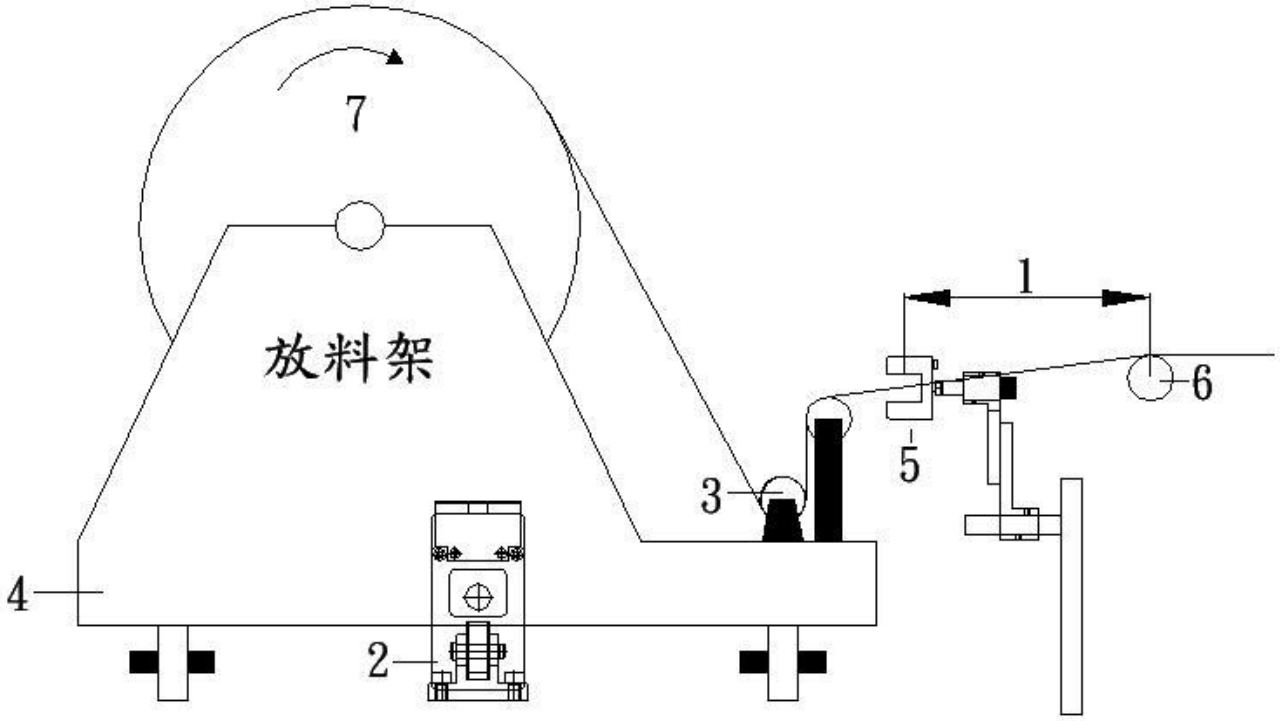
[圖五]

[1].將控制器切換手動模式,將材料放至超音波電眼內。
[2].調整材料遮罩到材料(1)顯示燈號。
[3].未遮罩到材料(3)顯示燈號。
[4].當超音波電眼抓到線邊,中心(2)顯示燈號。
[5].可調整GAIN旋鈕加大,將解析放大容易抓取。

注意 : 超音波電眼使用注意不可傷到表面 , 以免造成嚴重故障。

5.試車說明

5.11 EPC 安裝相關位置(放料座使用)



運用說明:

[1].導正區
[2].驅動器
[3].放料架上之引導羅拉
[4].放料架台車
[5].超音波電眼
[6].設備引導羅拉.(固定輪)
[7].放料軸心

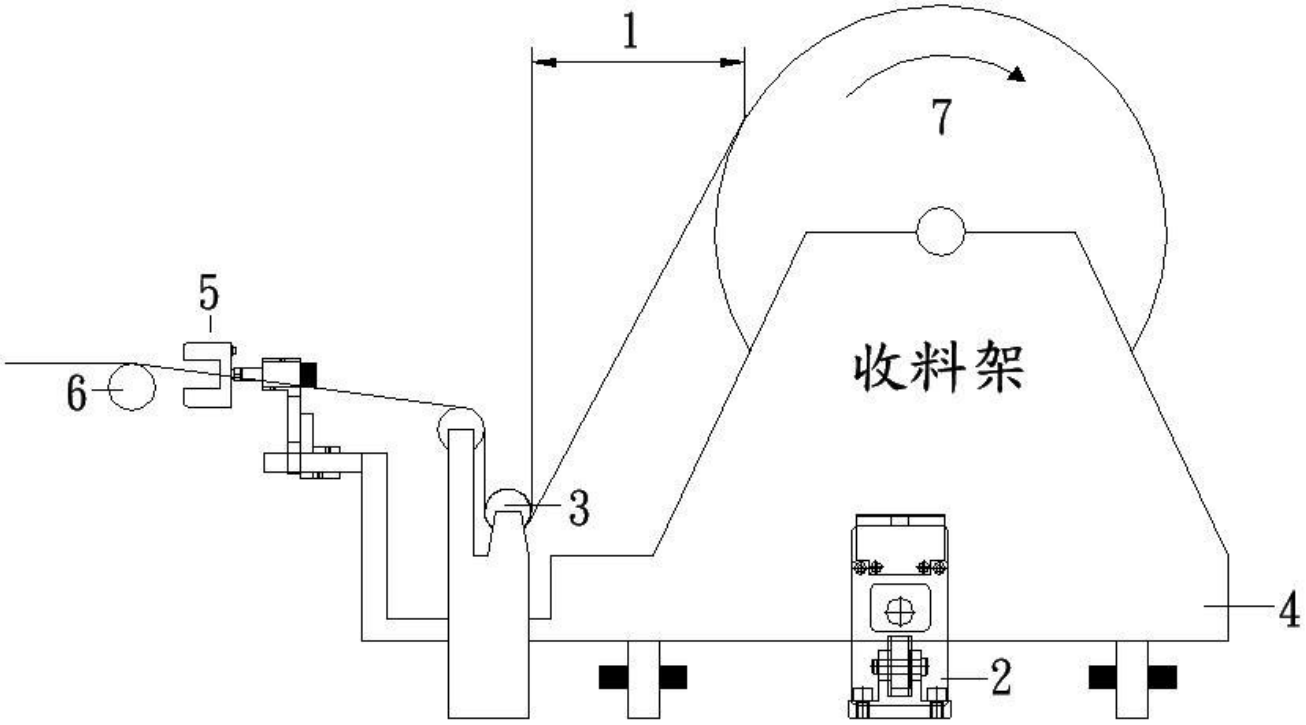
1.導正區(1)

放料:導正區距離為放料架上之引導羅拉(3)至設備引導羅拉(6)之距離.
導正區距離為材料寬度的0.25到0.5倍.如果是較硬質的材料則距離須加大.

2.電眼(5)

放料:電眼須固定在機台上.

5.12 EPC 安裝相關位置(收料座使用)



運用說明:

[1].導正區
[2].驅動器
[3].收料架上之引導羅拉
[4].收料架台車
[5].超音波電眼
[6].設備引導羅拉.(固定輪)
[7].收料軸心

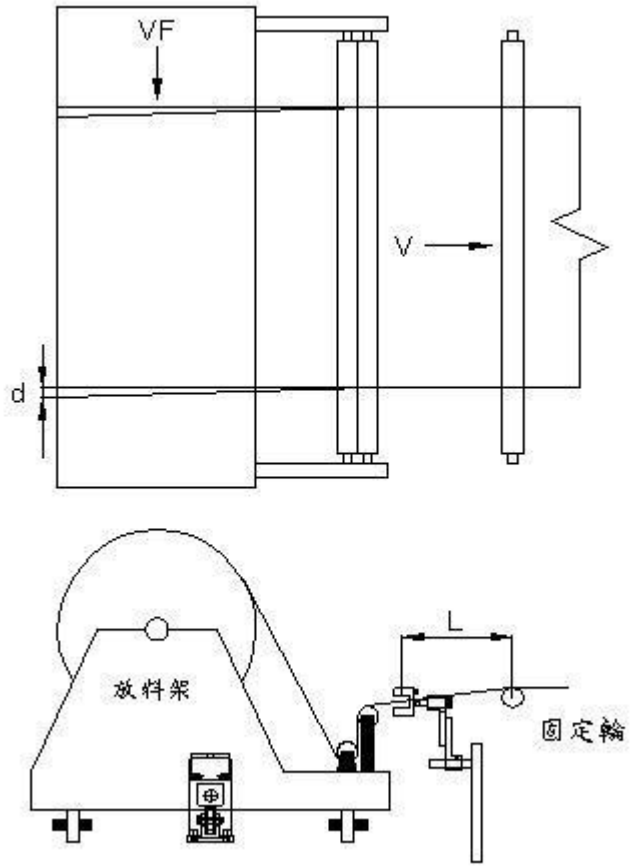
1.導正區(1)

收料:導正區距離為設備引導羅拉(6)至材料捲軸(7)之距離.
導正區距離為材料寬度的0.25到0.5倍.如果是較硬質的材料則距離須加大

2.電眼(5)

收料:電眼須固定在收料架平台上.使用超音波電眼則越靠近設備引導羅拉(6)越佳.

5.13 EPC 感測安裝位置與速度關係



[VF] 自動對邊裝置修正速度(mm/sec)
[V] 機械線速度(m/min)
[d] 每米長度可能之蛇行量(mm)
[L] 超音波電眼與固定輪距離(m)
[T] 容許修正時間(SEC)
[Q] 所需之修正量(mm)

T = (L/V) * 60
Q = d * L
L = V * (1/60) * (d/VF)

5.14 EPC 驅動器推力

SNEC-K TYPE

推動器 速度（ mm/Sec ）	25 mm/Sec
馬達推力 + 減數比	1:11
滾珠螺桿 最大推力 可承載（ Kg ）	600 Kg
驅動器垂直推力（ Kg ）	150 Kg
驅動器承載推力（ Kg ）	1500 Kg
驅動器行程（ mm ）	150 mm

SNEC-L TYPE

推動器 速度（ mm/Sec ）	25 mm/Sec
馬達推力 + 減數比	1: 6
滾珠螺桿 最大推力 可承載（ Kg ）	600 Kg
驅動器垂直推力（ Kg ）	120 Kg
驅動器承載推力（ Kg ）	1200 Kg
驅動器行程（ mm ）	100 mm , 150 mm

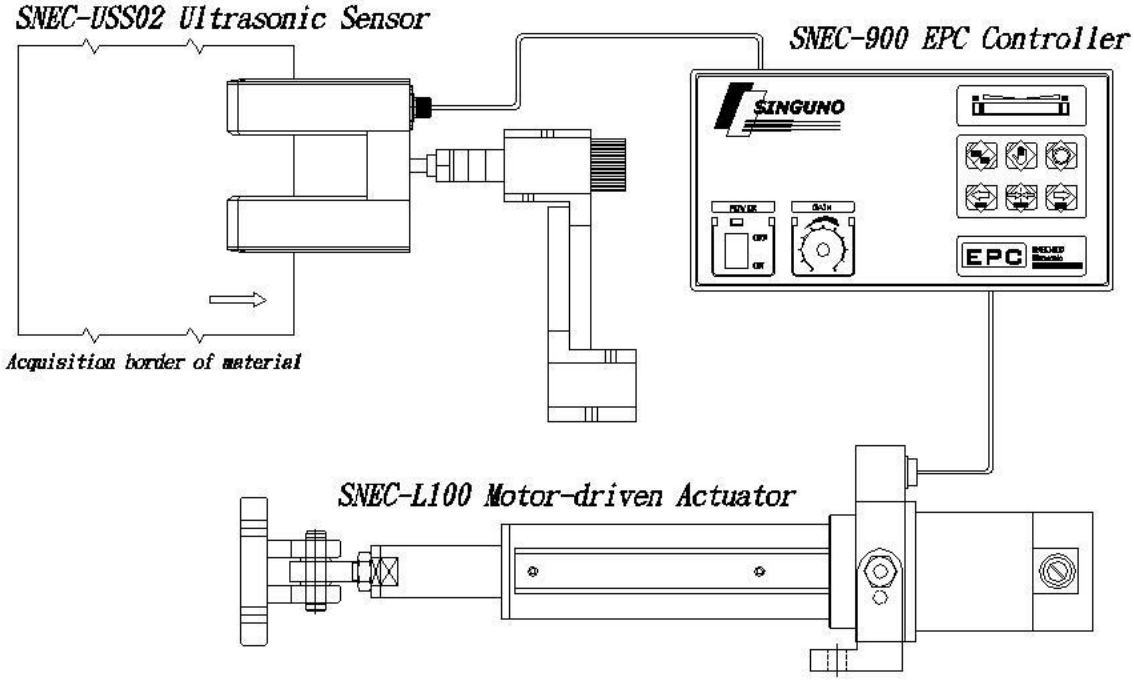
5.15 EPC 常見問題疑難排解

1.當控制器電源開啟後 , 電源燈未亮 ?
Ans : 請檢查控制器電源接線部份是否有脫落或接錯情況 .請檢查保險絲部份是否有燒毀 , 如燒毀請更換 250V / 3A 規格。
2.驅動器動作與超音波電眼動作相反 ?
Ans : 請將控制器面板上自動方向切換鍵按下。
3.驅動器無法動作 ?
Ans : (1).請將控制器切換手動鍵測試是否有動作。(2).請檢查驅動器的連接線是否有脫落或未接的情況 。(3).請檢測驅動器上的碳刷是否還有。

如客戶在使用上有碰到無法解決問題 ,
請與經銷代理商聯絡,我們會盡快的為您服務 。

1. Function introduction

(EPC) Ultrasonic EPC Specification



1. Aberration and Acquisition border of material
   Specialty and Develop SNEC-USS02 EPC Sensor.
   Application: Film of limpidity and Opacity , Paper ,
   Work over machine of metal film .
2. Cause Ultrasonic SNEC-USS02 have mightiness function , have abate waste material at work over of machine. (acquisition accuracy is ±0.1mm)
3. Conform DC Motor-Driven Actuator, we have Driven Actuator Impulsion with 120kg~150kg 。
4. EPC System Fitment:
   (1). Induce apparatus : SNEC-USS02 EPC Sensor 。
   (2). Controller apparatus: SNEC-900 Controller 。
   (3). Motor-Driven Actuator apparatus: L150 , K150 Driven Actuator 。
   (4). Accessory: [1]. Ultrasonic adjustment brace 。
   [2]. 5PIN Sensor connection cord 。
   [3]. 7PIN Motor-Driven Actuator connection cord 。
   [4]. fixation brace 4 PC 。
   [5]. L style brace 2 PC 。
   [6]. M4 bolt 8 PC , M5 bolt 2 PC 。
   [7]. EPC Instruction one tome 。

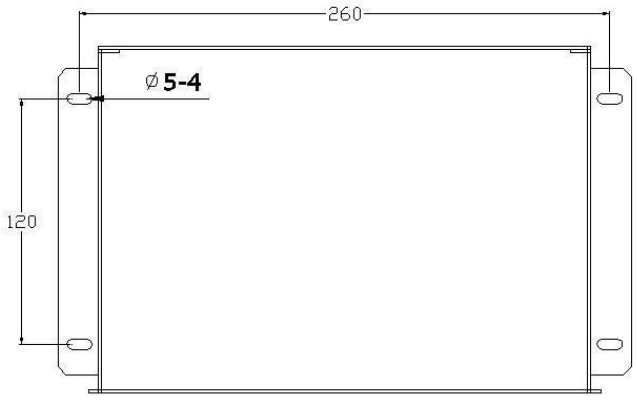
2. Various systems assembly introduction

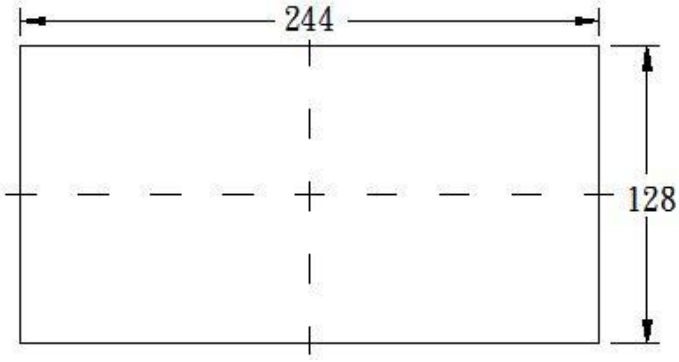
Controller Installation

2.11 EPC Controller Installation and Wiring

EPC Top view

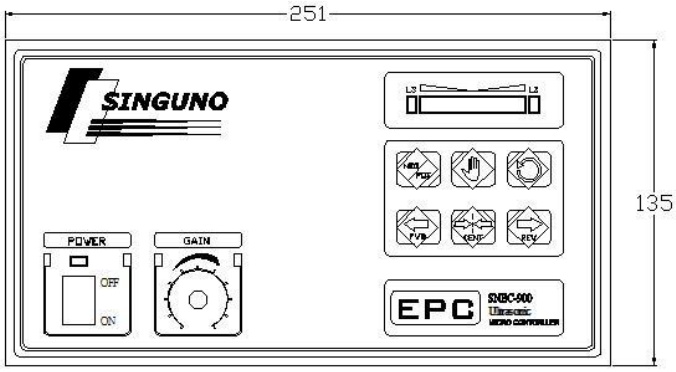
EPC bore figure

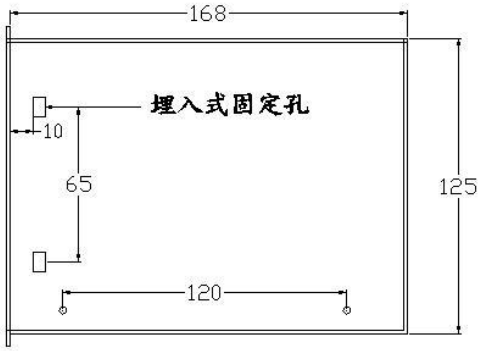




EPC board size

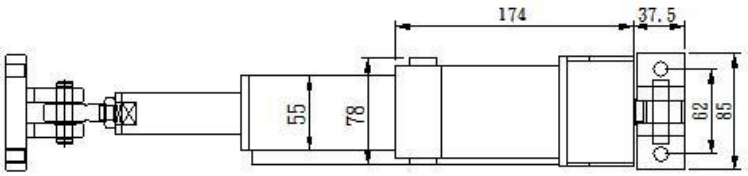
EPC Side view

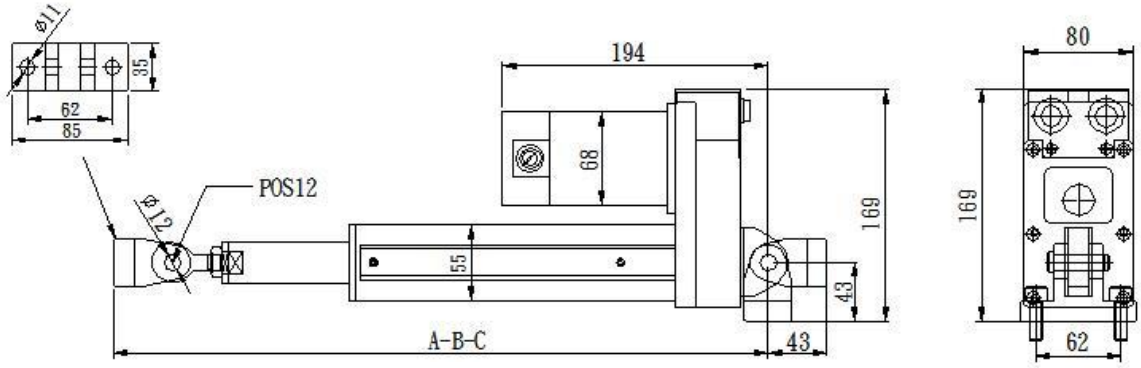




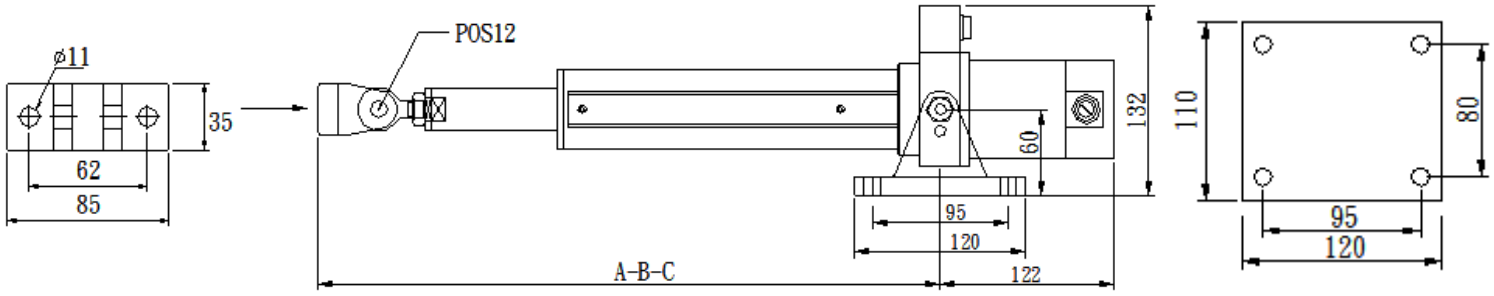
Motor-driven Actuator Installation

2.12 K type & L type Motor-driven Actuator Installation

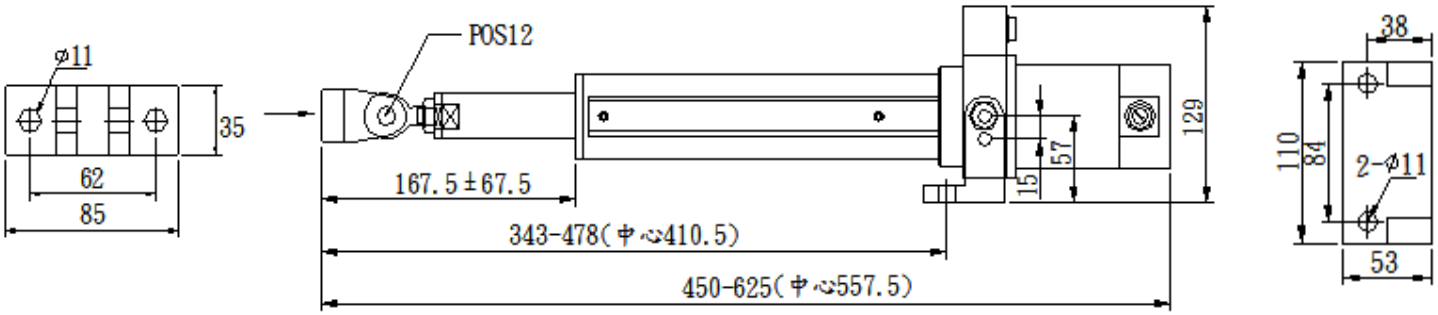




	Type	有效行程(mm)	A(Max)	B(中心)	C(Min)
訂製品	K100	85	446	403.5	361
標準品	K150	135	546	478.5	411

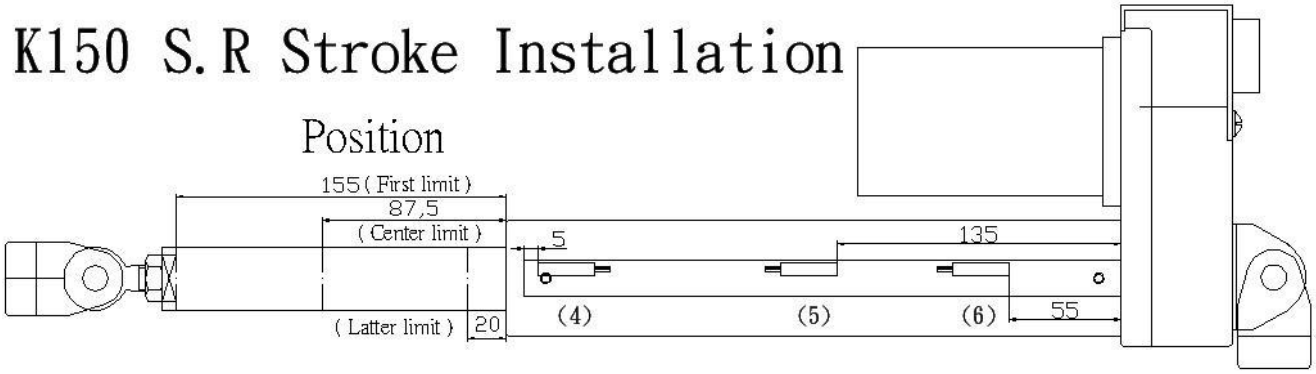


	Type	有效行程(mm)	A(Max)	B(中心)	C(Min)	D(馬達長度)
標準品	L100	85	403	360.5	318	122
標準品	L150	135	503	435.5	368	122

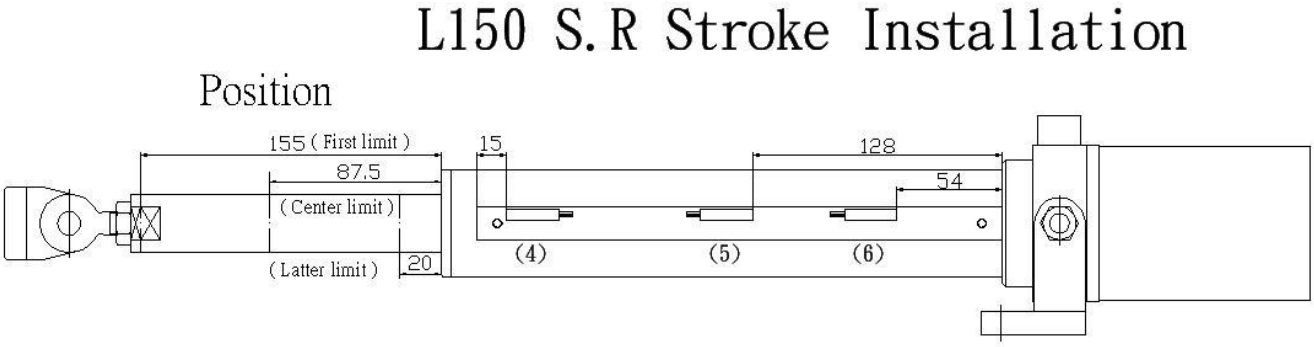


(SNEC-L150 Motor-driven Actuator)

2.13 Motor-driven Actuator stroke Installation



[Figure 一]



[Figure 二]

Motor-driven Actuator stroke adjustment state and distance by magnetism spring stopcock 。

◆ Adjustment step follow :

[1]. Dismantles the driver circular pipe side aluminum strip two in hexagonal screw 。

[2]. In the aluminum strip places three magnetism reed switch。
(4) First limit (5)center limit (6) Latter limit

[3]. In the aluminum strip places the two-sided rubber to be fixed ,Three magnetism reed switch 。

[4]. The user like must revise the traveling schedule ,Three magnetism reed switch proportional type control 。

Attention :

[1]. If you adjustment Magnetism reed switch ,you have attention bolt bar situation keep up it rage。If the bolt bar situation not on it rage, you have must adjustment Driven Actuator made slow speed ,then move Driven Actuator situation ,voidance abrade gear of Driven Actuator 。

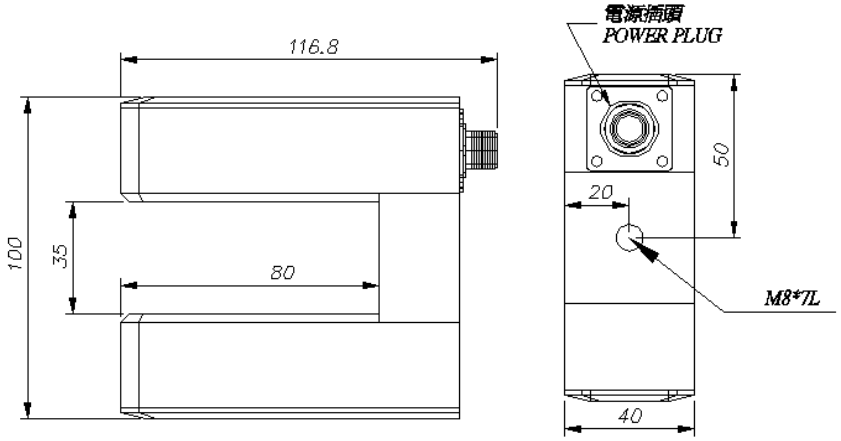
Sensor Installation

2.14 Sensor SNEC-USS02 Installation

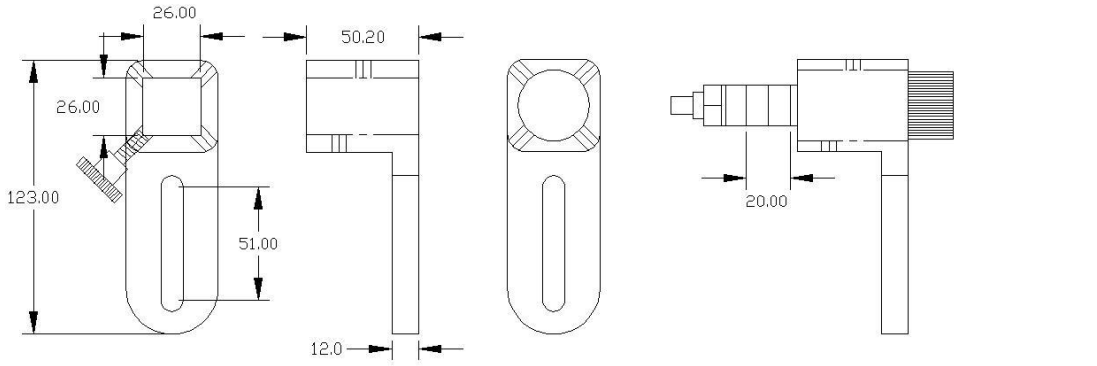
SNEC-USS02 Sensor

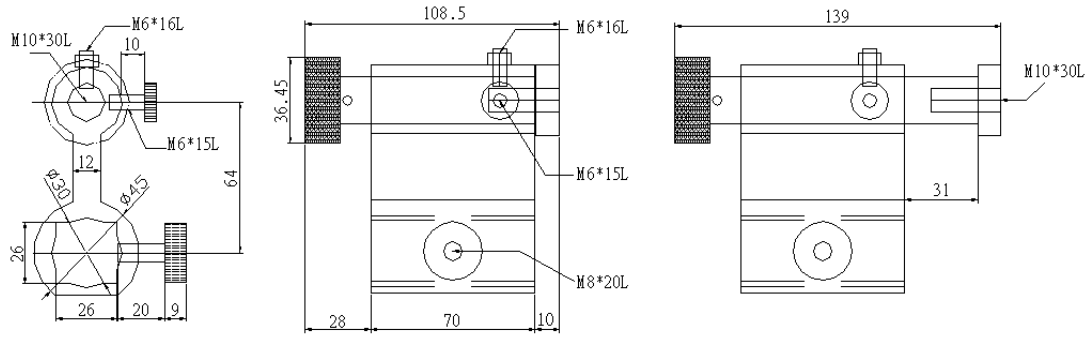
New adjustment brace

Adjustment brace



SNEC-USS02 Installation Size

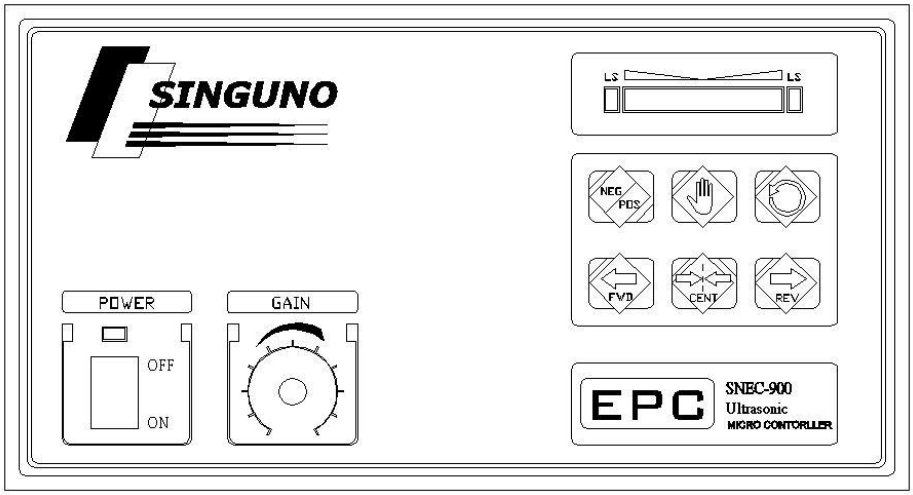




3. Various systems assembly functional key/Indicating lamp explanation

Controller function

3.11 Ultrasonic EPC Controller Panel



function key commentary:


Auto Model


Manual Model

Manual right

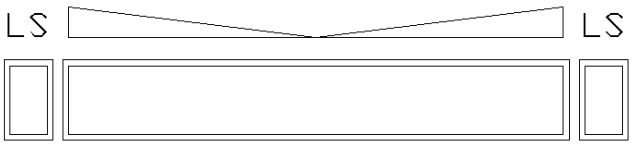
Manual Left

Manual Center

Auto Direction

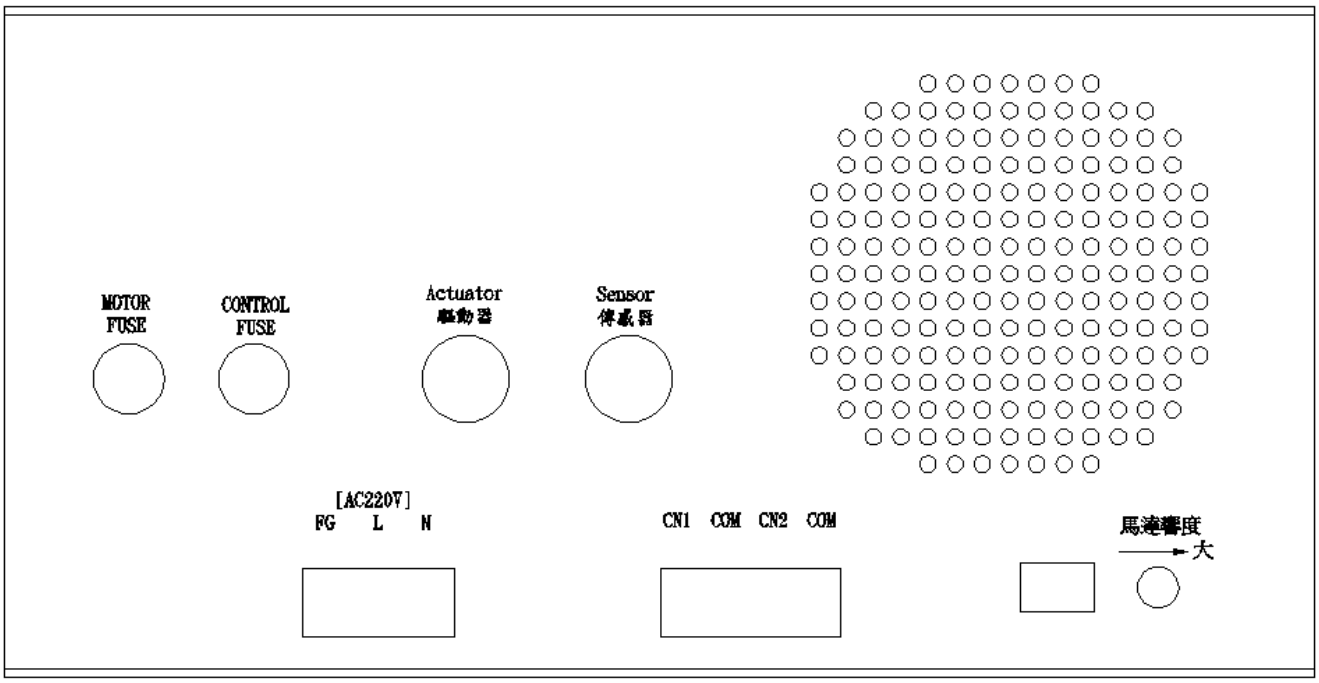
[1]. POWER Switch : Controller power switch 。

[2]. GAIN screw button : When the adjustment EPC Sensor capture material change demonstrates lowly ,Enlarges the sensitivity 。



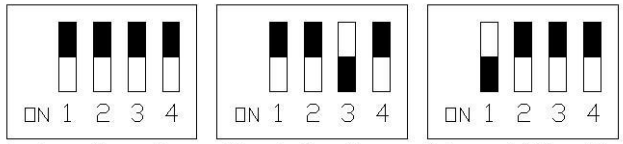
[3]. Controller demonstration lamp signal ,About the both sides install the limit switch 。

3.12 Ultrasonic EPC Controller Rear Panel

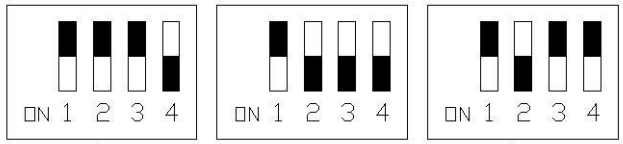


Function key commentary:

[1].MOTOR FUSE : Motor-Driven Actuator power fuse 250V/3A。
[2].CONTROL FUSE : Controller power fuse 250V/3A。
[3].Motor-Driven Actuator Contention : 7PIN Contention , Motor-Driven Actuator 。
[4].Sensor Contention : 5PIN Contention , EPC Sensor。
[5].3 PIN Europeanism terminal : connection power signal importation power 110V~220V。
[6].4 PIN Europeanism terminal : external sign controller。
[7].4 tier finger stopcock model choice follow :
[8].CN1-COM:EXT PLS A/M .
[9].CN2-COM:EXT STOP . [10]. Motor loudness : Adjust the motor speed



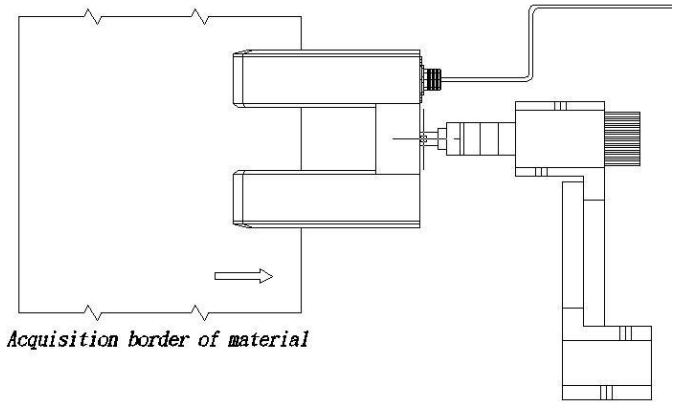
Automatic pattern Central pattern Manual Direction switch



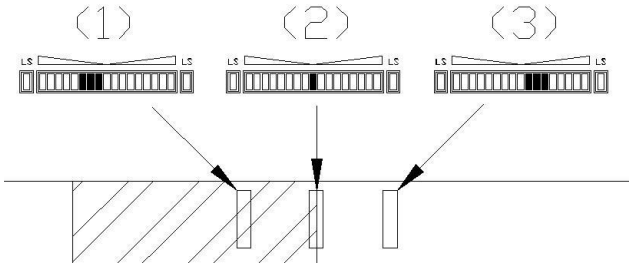
Manual pattern Memory pattern Manual pattern is effective

4. EPC system operation commentary

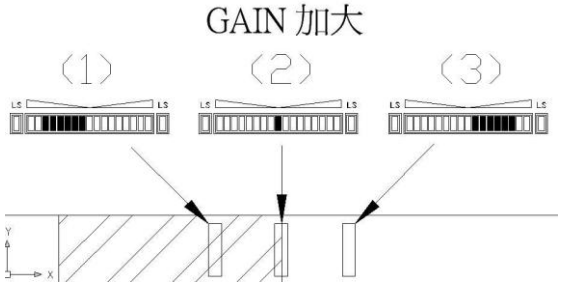
4.11 Ultrasonic EPC Sensor Setting



[Figure 三]



[Figure 四]



[Figure 五]

[1]. Controller cut manual pattern ,Puts the SNEC-USS02 Sensor The position。

[2]. demonstrates the lamp signal the adjustment material shade to the material 。

[3]. has not demonstrated the lamp signal the shade to the material。

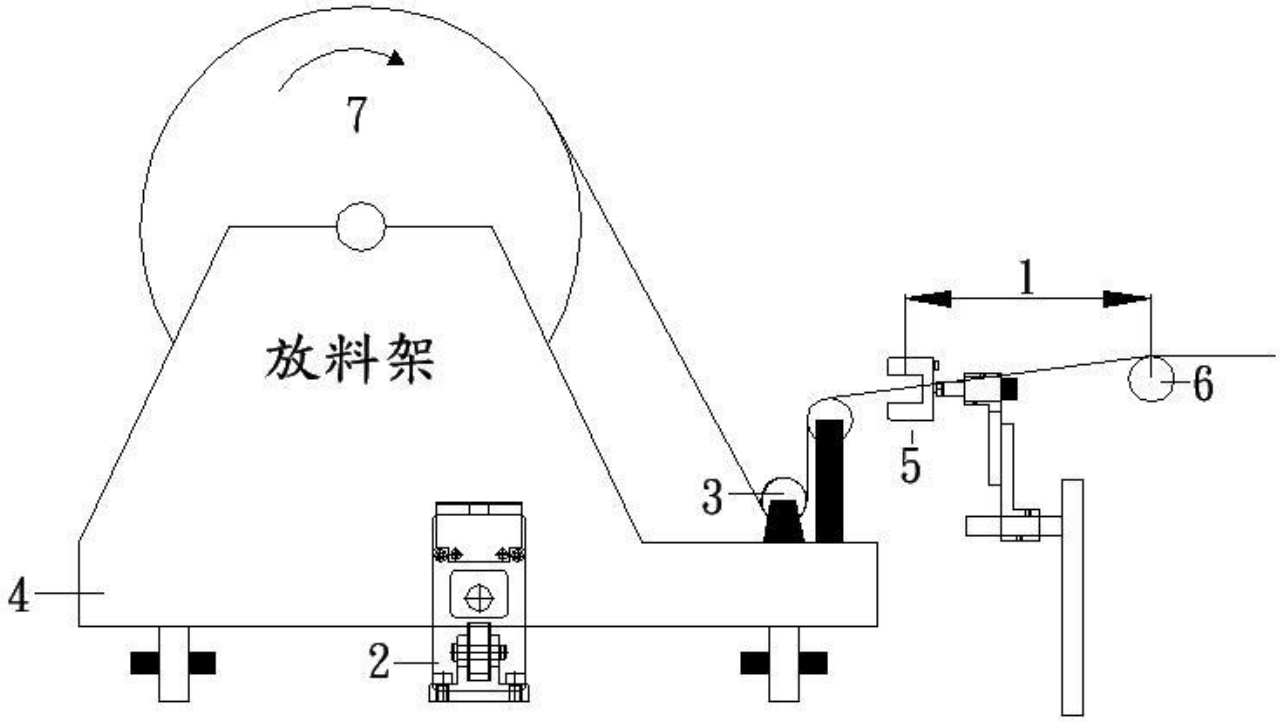
[4]. When EPC Sensor catch border line,center (2) display lamp signal。

[5]. Bumps into the material capture lamp signal demonstration not to be obvious ,May adjust the GAIN knob enlarge ,Will analyze enlarges easily to capture

Attention: EPC Sensor use advert cannot abrade lens , timing carry on condition lens。

5. Testing commentary

5.11 EPC Installation denote model(Use Delivery material plat)



Use commentary:

[1].True area
[2].Motor-Driven Actuator
[3].True Roller Delivery material plat
[4].Delivery material plat
[5].EPC Sensor
[6].Contrivance guiding Roller (Fast pulley)
[7].Delivery material axis

1. True area(1)

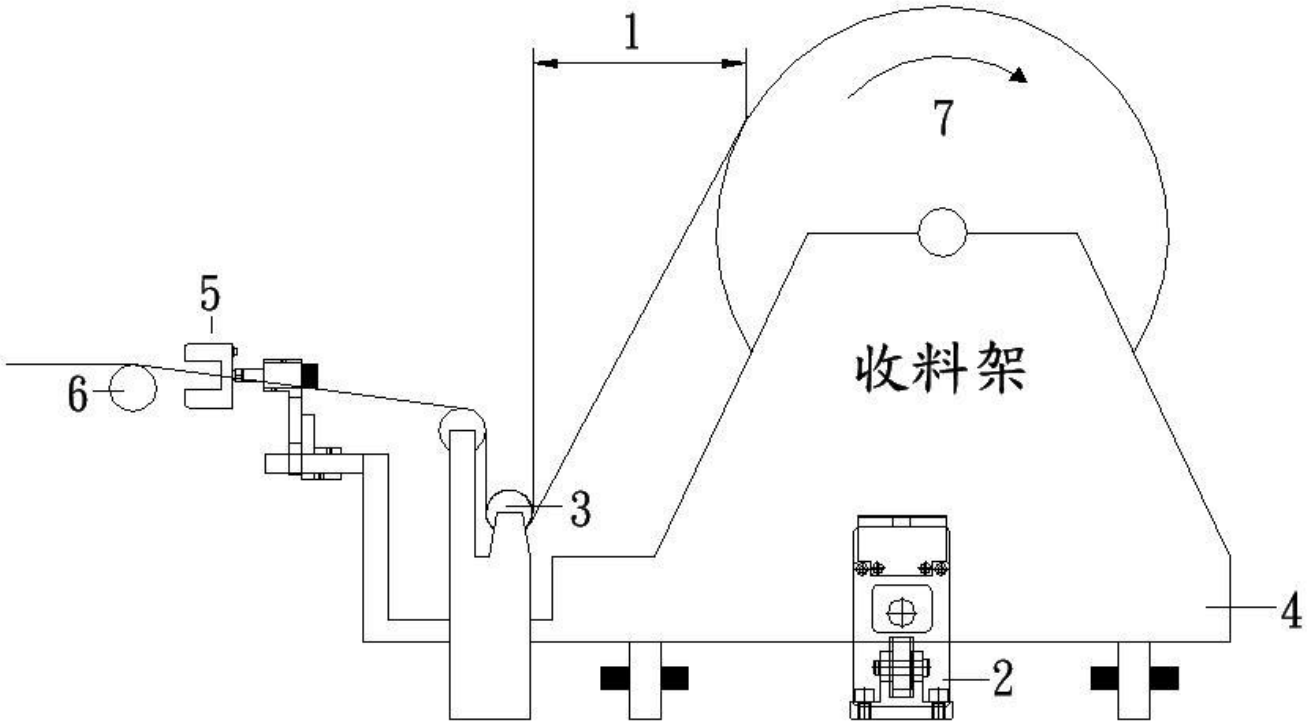
Delivery material: True area distance is true Roller on Delivery material plat [Distance is (3) appliance true Roller (6)]

True area distance is material breadth (0.25~0.25 multiple) If is horniness material so distance must accrete

2. EPC Sensor (5)

Delivery material : It must fixation on machine.

5.12 EPC Installation denote model(Use Receipt material plat)



Use commentary:

[1].True area
[2].Motor-Driven Actuator
[3].True Roller Delivery material plat
[4].Delivery material plat
[5].EPC Sensor
[6].Contrivance guiding Roller (Fast pulley)
[7].Delivery material axis

1. True area (1)

Receipt material : True area distance is true Roller on Receipt material plat [Distance is (3) appliance true Roller (6)] 。

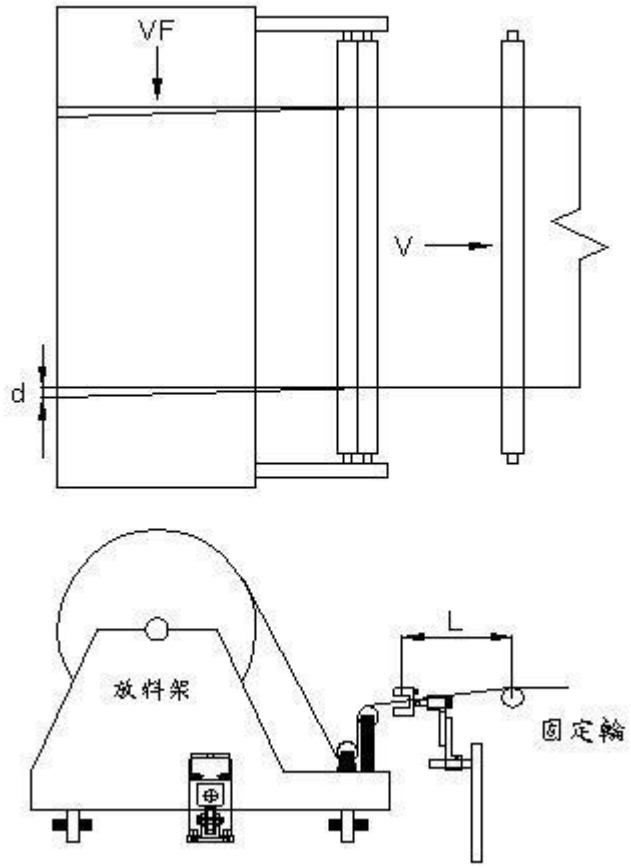
True area distance is Receipt breadth (0.25~0.25 multiple) If is horniness material so distance must accrete。

2. EPC Sensor (5)

Receipt material : It must fixation on machine。

If Use EPC magic eye crowded true Roller (6) of receipt material plat will well。

5.13 EPC Induce Position Installation and Career Connection



[VF] auto aim line apparatus adjust speed(mm/sec)
[V] machine line speed (m/min)
[d] Per meter footage left and right bump mount(mm)
[L] EPC Sensor and fixation gyro distance(m) admit adjusting time (SEC)
[Q] take adjust mount (mm)

T = (L/V) * 60
Q = d * L
L = V * (1/60) * (d/VF)

5.14 EPC Impulsion Of Motor-driven Actuator

SNEC-K TYPE

Motor-driven Actuator Speed (mm/Sec)	25 mm/Sec
The Motor thrust force + reduces the ratio	1:11
The ball bearing screw rod maximum thrust may the load bearing (Kg)	600 Kg
Motor-driven Actuator plumb impulse (Kg)	150 Kg
Motor-driven Actuator run impulse (Kg)	1500 Kg
Motor-driven Actuator Stroke (mm)	150 mm

SNEC-L TYPE

Motor-driven Actuator Speed (mm/Sec)	25 mm/Sec
The Motor thrust force + reduces the ratio	1: 6
The ball bearing screw rod maximum thrust may the load bearing (Kg)	600 Kg
Motor-driven Actuator plumb impulse (Kg)	120 Kg
Motor-driven Actuator run impulse (Kg)	1200 Kg
Motor-driven Actuator Stroke (mm)	100 mm , 150 mm

5.15 EPC Problem and Solve

1.After turn on the controller power ,the power can’ t light up?
Ans : Please check the connect line of the controller it if is shed off or be connected with the wrong place 。
2.The move direction of the Motor-driven Actuator and the detector are contrary ?
Ans : Please short-circuit CN2 and COM which on the terminal substrate behind the controller.。
3. Can’ t operate the Motor-Driven Actuator ?
Ans : (1).Please confirm the cressets on the detector of the controller front-panel and the both sides were work 。
(2).If they are ,means the Motor-Driven Actuator has detected the sensor 。
(3).Please check whether the conjunction lines of the Motor-driven Actuator loose or not connected 。

If consumer has any question can’ t solve when you using it, please get in touch with our commission agent, we will provide service as soon as possible。