



電子送帶機

COMPUTERIZED METERING DEVICE

使 用 說 明 書
OPERATION MANUAL



MODEL : HCT-S6 SERIES



中 文 版

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I. 安全上的注意事項

使用前請詳細閱讀本技術資料與所搭配的縫製機械說明書，配合正確使用，並須由接受過正確訓練的人員來安裝或操作。

在使用或安裝 HCT-S6 控制箱驅動裝置時，請注意下列事項。
本驅動裝置僅適用於指定範圍的縫紉機械，請勿移做其他用途。

1 作業環境的安全：

(1). 電源電壓：

電源電壓請遵照控制箱銘牌所標示之規格 $\pm 10\%$ 範圍內操作。

(2). 電磁波干擾：

請遠離高週磁波機器或電波發射器等，以免所產生的電磁波干擾本驅動裝置因而發生錯誤動作。

(3). 溫濕度 /：

- a. 請不要在室溫 45°C 以上或 5°C 以下的場所操作。
- b. 請不要在日光直接照射的場所或室外運作。
- c. 請不要在暖氣 (電熱器) 旁運作。
- d. 請不要在相對濕度 30% 以下或 95% 以上或有露水的場所運作。

(4). 空氣：

- a. 請不要在有灰塵或具有腐蝕性物質的場所操作。
- b. 請不要在有揮發性氣體的場所操作。

2 安裝的安全：

(1). 控制箱：請遵照說明書正確裝好。

(2). 附屬品：如要裝配其它選購配件或附屬品時，請先關閉電源並拔掉電源線插頭。

(3). 電源線：

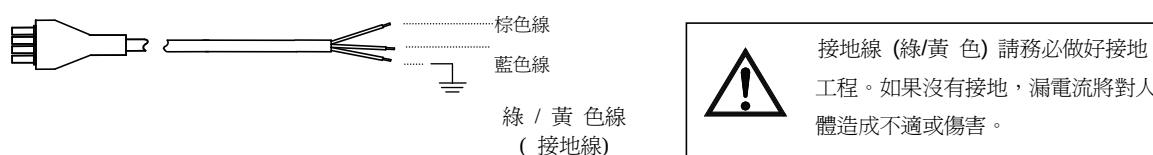
- a. 請注意不要被外物壓住或過度扭曲電源線。
- b. 裝釘電源線時請不要靠近會轉動的皮帶輪及三角皮帶，最少要離開 3 公分以上。
- c. 當連接電源線到電源插座時，應確定此供應電壓必須符合標示在控制箱銘牌上的指定電壓 $\pm 10\%$ 內。

※注意：控制箱電源系統為 **AC 220V** 時，請勿插接到 **AC 380V** 的電源插座上，此時請立即關閉電源開關，重新檢查電源。持續供應 380V 超過五分鐘以上，將會燒毀基板而危及人身安全。



(4).接地：

a. 爲防止雜訊干擾或漏電事故，請做好接地工程。(包括縫紉機、馬達、控制箱、定位器)



b. 電源線的接地線須以適當大小的導線和接頭連接到生產工廠的系統地線，此連接必須被永久固定。

3 操作中的安全：

- (1). 在第一次開電後，請先以低速操作送料機並檢查送料方向是否正確。
- (2). 送料機運轉時，請不要去觸摸送料機構等會作動的部位。
- (3). 所有可作動的部份，必須以所提供的防護裝置加以隔離，防止身體接觸並請勿在裝置內塞入其他物品。

4 保養維修的安全：

在操作以下動作前，請先關閉電源：

- (1). 要拆卸控制箱時，或在控制箱上插或拔任何連接插頭時。
- (2). 控制箱裡面有危險高壓電，所以關閉電源後要等 10 分鐘以上方可打開控制箱蓋。
- (3). 修理或作任何機械上的調整時翻抬車頭時。
- (4). 機器休息不用時。

5 保養維修的規定：

- (1). 修理及保養的作業，要請經過訓練的技術人員執行。
- (2). 請不要以不適當物體，如木槌、鐵槌等敲擊本產品裝置。
- (3). 所有維修用的零件，須由本公司提供或認可，方可使用。

6 危險標示、注意標示：



這個標示符號表示機器安裝時，如有錯誤恐會傷害到人體或機器會受到損壞，所以機器方面有危險性的地方會有此標示。



這個標示符號表示有高壓電，電氣方面有危險性的地方會有此標示。

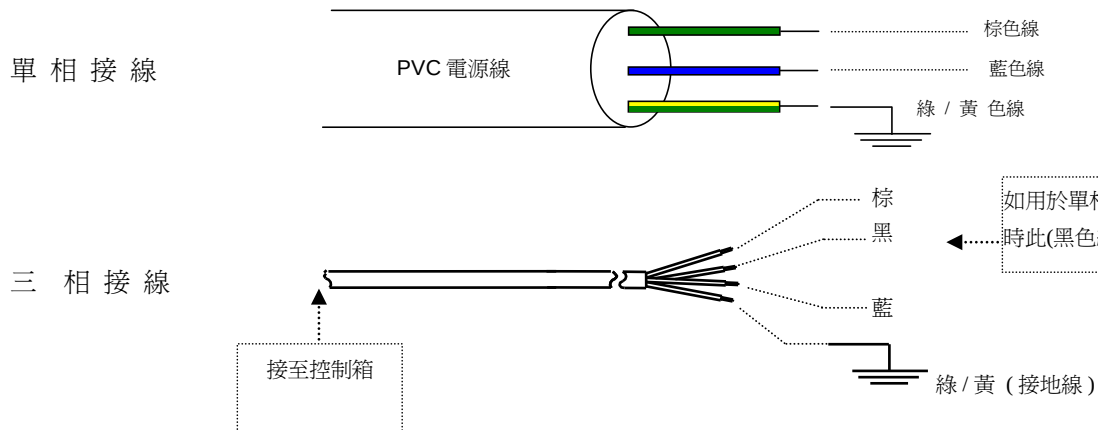
7 保固期限規定：

本裝置保證在正常工作情況且無人爲失誤的操作下，保證出廠 18 個月內，無償的爲客戶維修使能正常操作。

II. 接線與接地

(1).單相與三相電源線的接法：

綠/黃色電線為接地線。

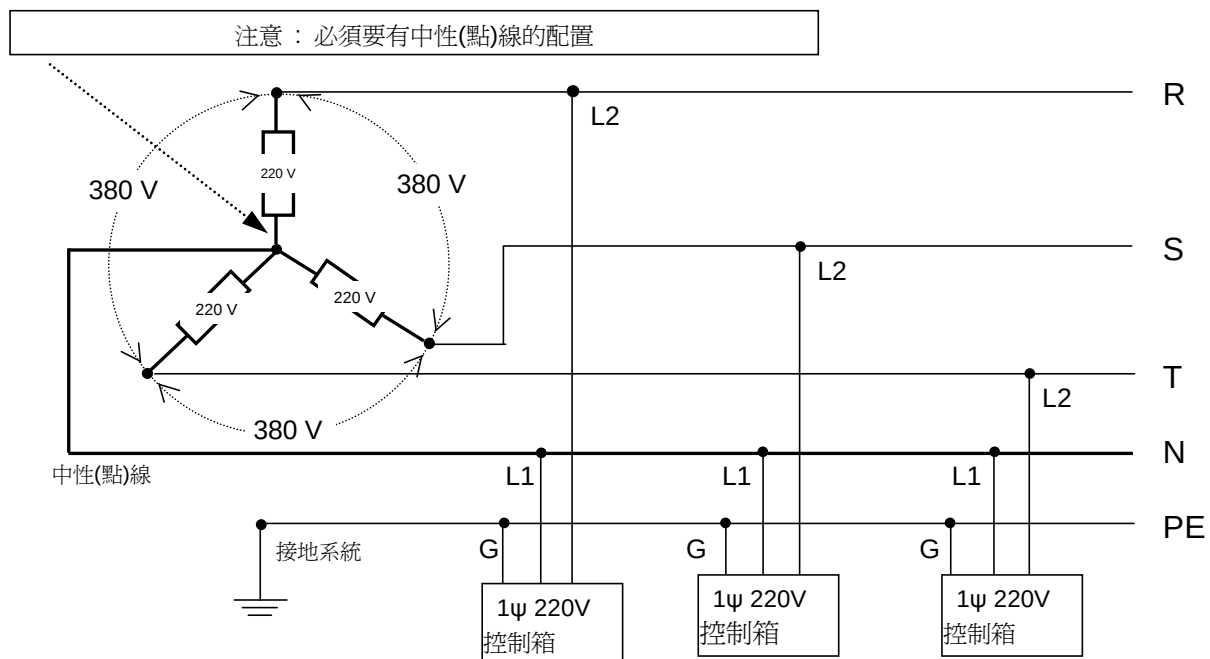


1. 當控制箱如要接於單相 200 ~ 240 V 的電壓使用時，只要接 棕色線 和 藍色線 即可，但黑色線請用絕緣膠帶確實包好，以免產生漏電現象。
2. 綠/黃色電線為接地線，一定要做好系統的接地工程。

(2).當電源系統配置為三相四線式 380V 時，欲使用單相 220 V 供應本電機的接線方式：



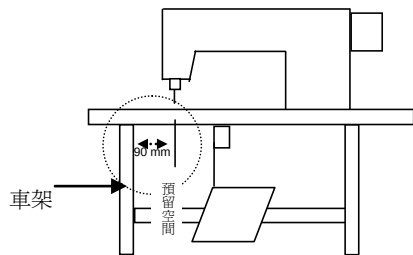
注意：如果此配置系統沒有【中性(點)線】時，則控制箱不適合在此場所使用。



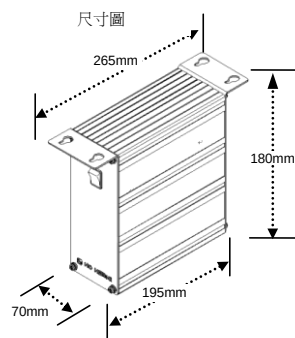
(3).當控制箱欲使用在三相 220V 的電壓時，須注意配置使用上的負載平衡。

III. 控制箱安裝

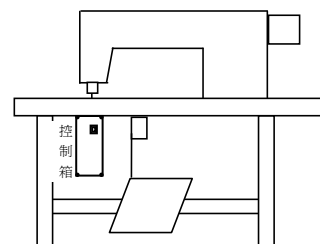
a). 車板左側車架面須預留 90 mm 以上空間



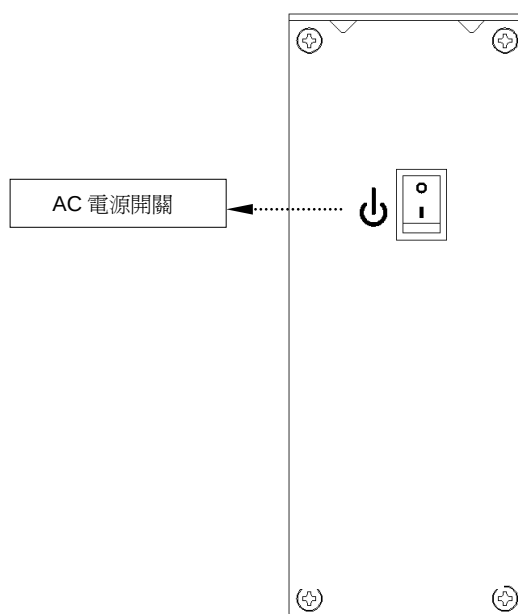
b). 將 HCT-S6 控制箱鎖裝於車板下方



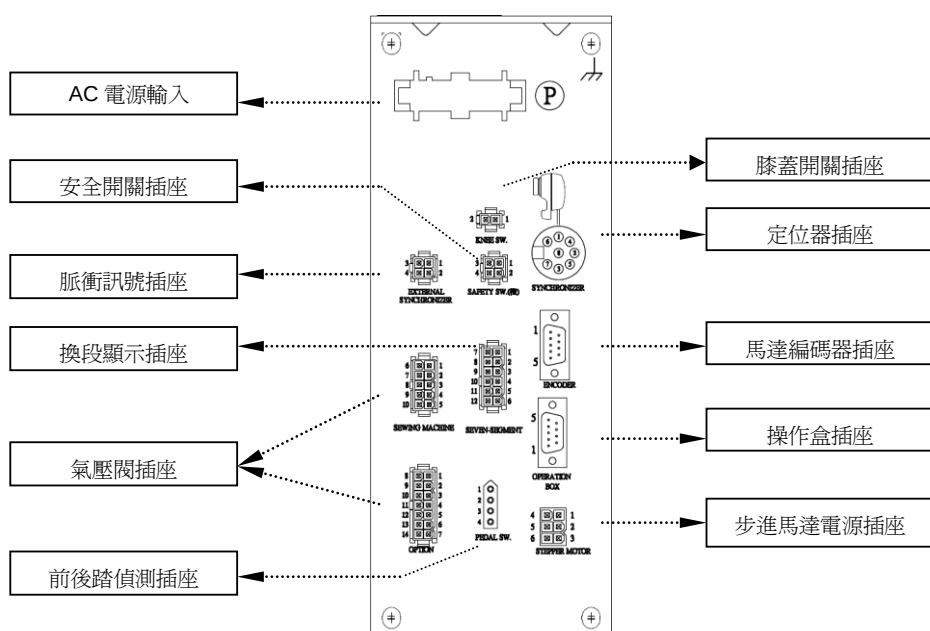
c). 安裝後示意圖



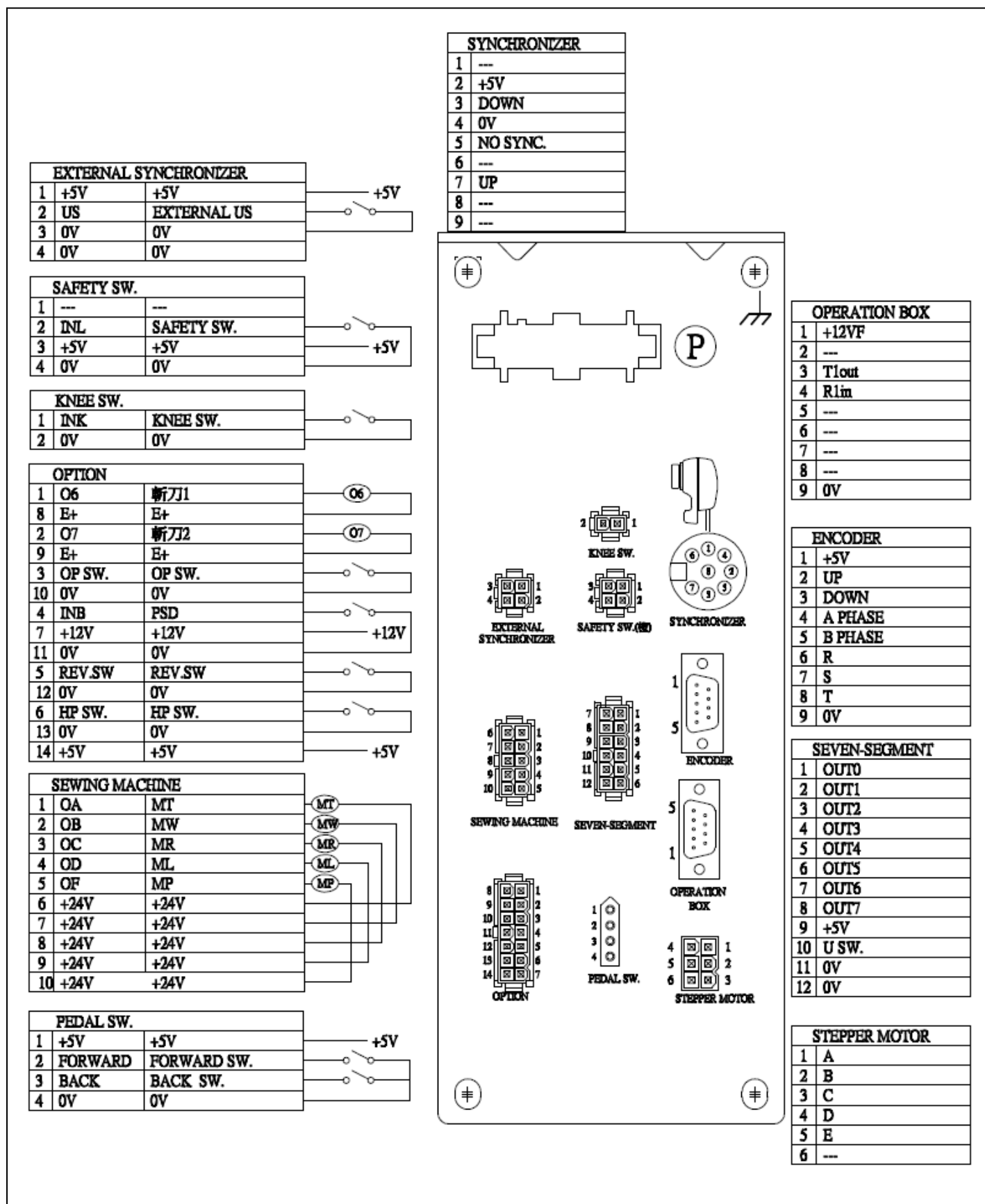
控制箱正面：



控制箱背面 端子座面板：

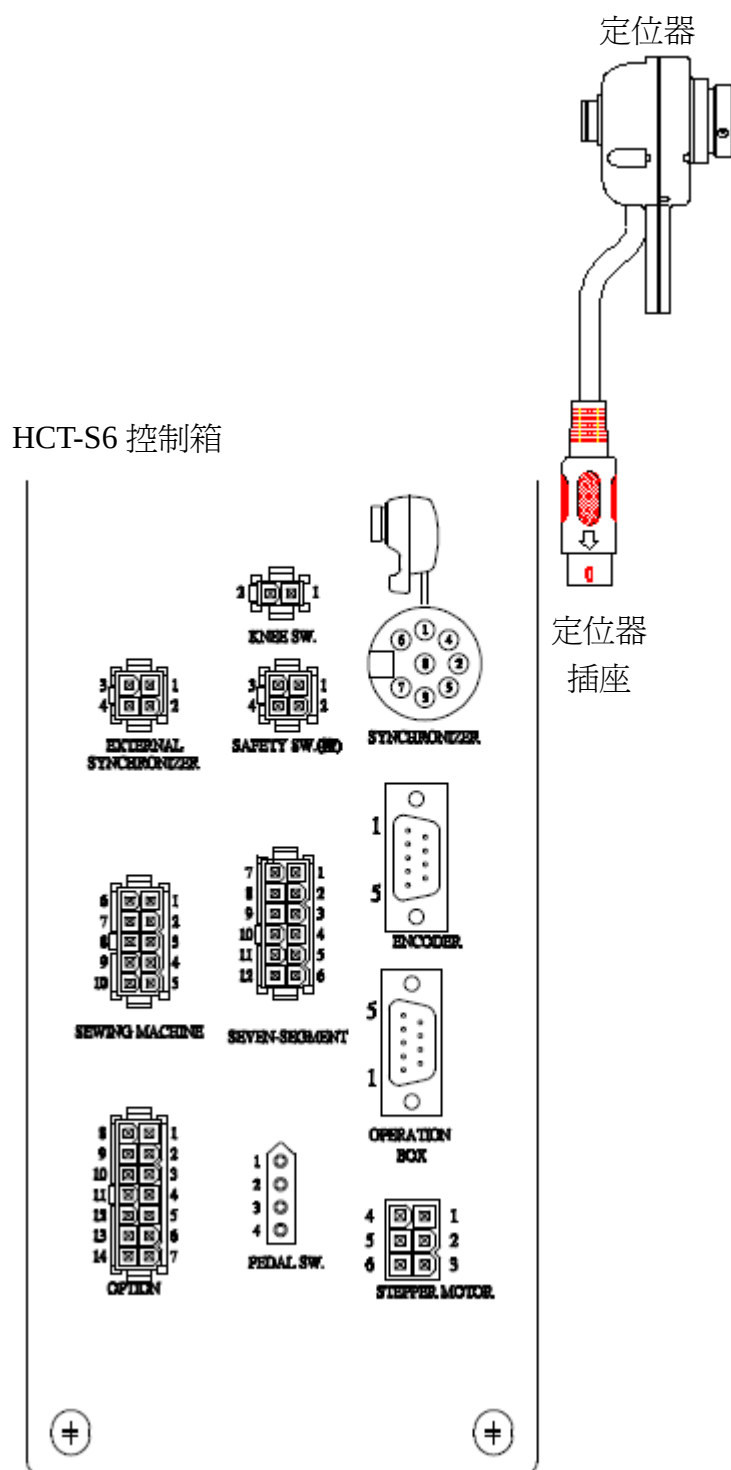


端子座 Pin 功能配置圖：

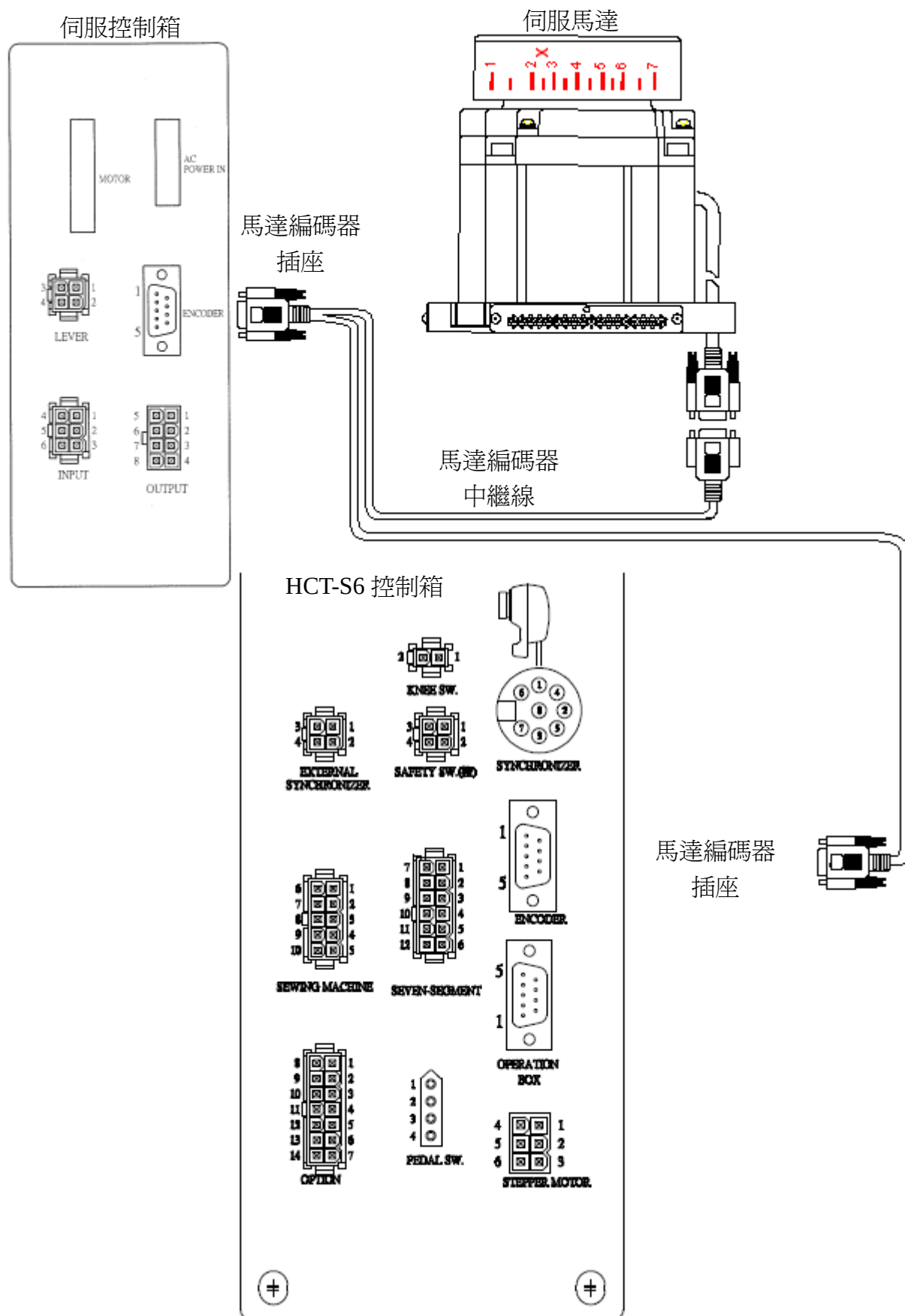


搭配說明示意圖：

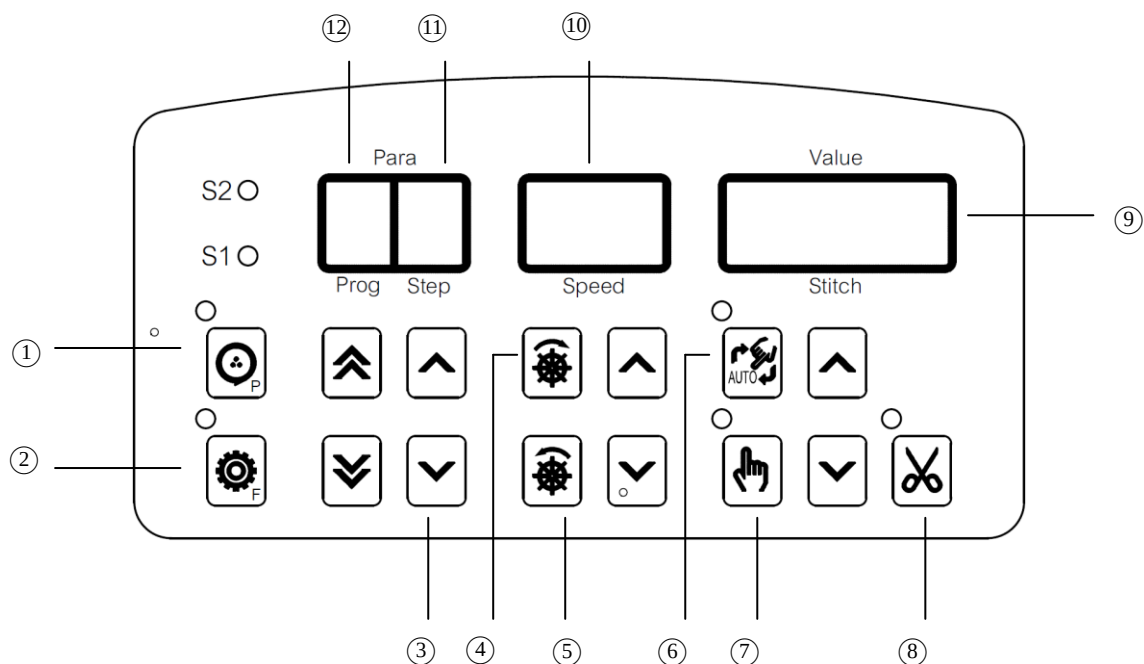
1. 一般安裝



2. 直驅式伺服電機



IV. 縫製畫面功能說明



- ①  進入到編輯畫面鍵

說明：按此鍵，會切換到編輯畫面，進入後則可依實際需求進行相關設定

- ②  進入到參數設定畫面鍵

說明：按此鍵，會切換到參數設定畫面，進入後則可依實際需求進行相關設定

- ③  工程段數切換按鍵

說明：切換工程段數用，工程段數最多可設定 17 段

- ④  送料鍵

說明：按此鍵不放開，正轉送料用步進馬達運轉，按鍵離開後步進馬達停止運轉。

- ⑤  退料鍵

說明：按此鍵不放開，反轉送料用步進馬達運轉，按鍵離開後步進馬達停止運轉。

- ⑥  顯示該工程段數為自動車縫模式或手動車縫模式 /

說明：

 LED ON 為自動，LED OFF 為手動

自動:設定針數累計到達時依序進入下一工程段數

“MAN”(手動):用手動開關進入下一工程段數

- ⑦  針數/換段修正切換鍵

說明：切換每一 Step 之設定針數/換段修正值。

 LED ON 顯示目前車縫針數，LED OFF 顯示設定針數/換段修正值
換段修正：補償換段時鬆緊帶產生緩衝段的誤差
當 Stitch 欄顯示“XXX.”時，XXX 值為換段修正值，範圍為 0~99

- ⑧  切線顯示

說明： LED ON 此段結束時有切線動作，LED OFF 此段結束時無切線動作

- ⑨  針數/換段修正值顯示器

說明：顯示每一 Step 之換段修正值/設定針數。

- ⑩  送料速度(送布量)表示

說明：顯示每針的送料速度，送料速度範圍為 0~180

- ⑪  縫製段數表示

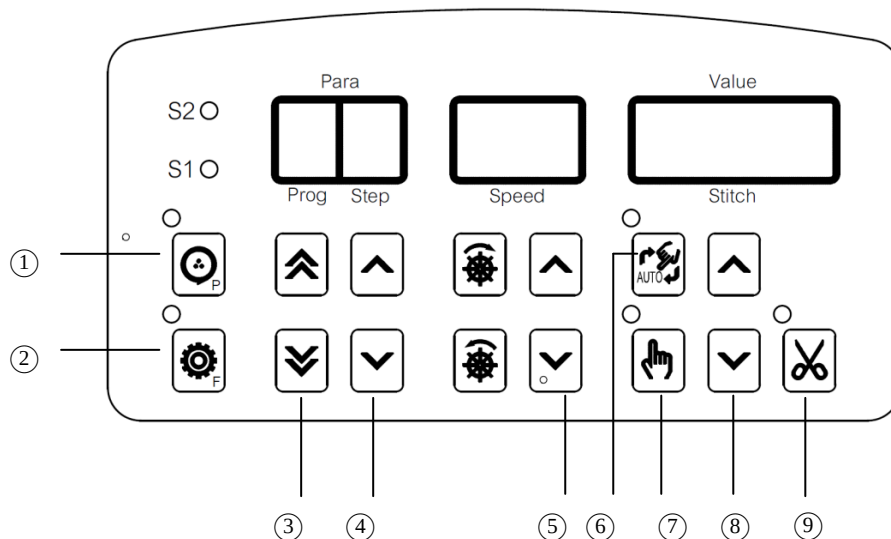
說明：每個工程模式各有 17 個工程段數可供設定

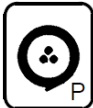
- ⑫  縫製資料區表示

說明：顯示目前選用的工程模式,最多可儲存 26 組(A~Z)不同工程內容的資料

V. 編輯畫面功能說明

◎縫製畫面下按  鍵 LED 亮進入編輯畫面



①  返回鍵
說明：返回縫製畫面

②  設定工程結束

說明：可設定兩種工程結束的模式,如下:

End: 工程結束時自動切線

Cont: 工程結束時不切線,並自動返回 Step01.

③  工程模式切換按鍵

說明：工程模式存放區共 26 組(A ~ Z)，依實際需求選擇適當之存放區

④  工程段數切換按鍵

說明：切換工程段數用，工程段數最多可設定 17 段

⑤



設定送料速度

說明：

每針送料長度的設定，以下是送料量的對照表。

速度	送料長度(mm)	速度	送料長度(mm)
0	0.00	100	2.44
10	0.24	110	2.69
20	0.49	120	2.93
30	0.73	130	3.17
40	0.98	140	3.42
50	1.22	150	3.66
60	1.46	160	3.91
70	1.71	170	4.15
80	1.95	180	4.39
90	2.20		

⑥



設定該工程段數為自動車縫模式或手動車縫模式 /

說明：

○



LED ON 為自動，LED OFF 為手動

自動:設定針數累計到達時依序進入下一工程段數

“MAN”(手動):用手動開關進入下一工程段數

⑦



針數/換段修正切換/載入針數鍵

說明：切換每一 Step 之設定針數/換段修正值/載入針數。

○



LED ON 載入針數，LED OFF 設定針數/換段修正值

⑧



設定車縫針數/換段修正值/載入針數

說明：依需求設定針數/換段修正值/載入針數



當 LED ON :

在試縫完成後可將針數作為該工程的針數設定(注意!原針數會被覆蓋掉):



當 LED OFF :

Stitch 欄顯示“XXX ”時，XXX 值為設定的每段針數。

Stitch 欄顯示“XXX .”時，XXX 值為設定的換段修正值，以下是修正量的對照表。

ME 專用

Par63	設定值	修正範圍
0	00~99	0 ~ 36mm
1	00~99	0 ~ 48mm
2	00~99	0 ~ 60mm
3	00~99	0 ~ 72mm
4	00~99	0 ~ 84mm
5	00~99	0 ~ 96mm
6	00~99	0 ~ 108mm
7	00~99	0 ~ 120mm
8	00~99	0 ~ 132mm
9	00~99	0 ~144 mm

⑨

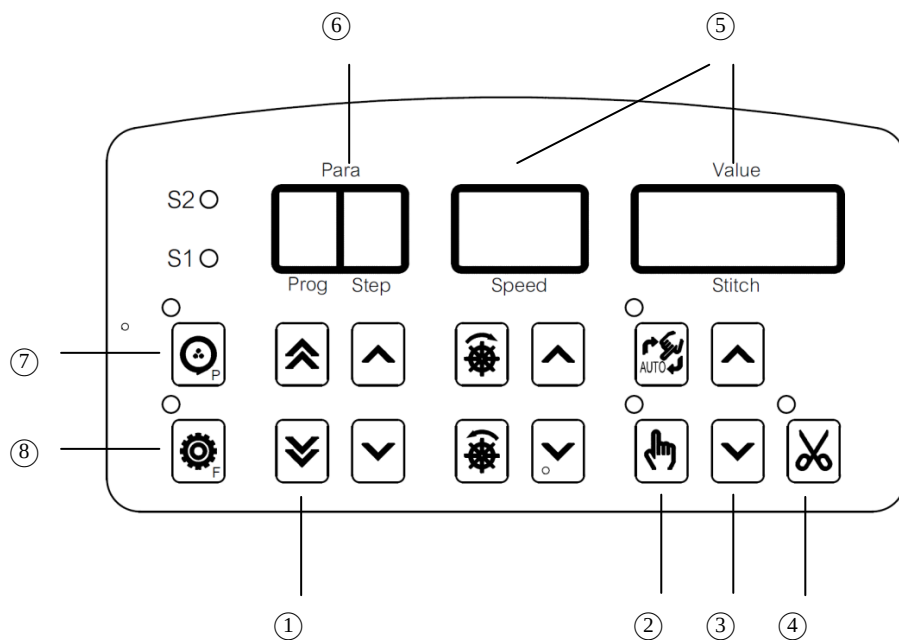


設定切線模式

說明：按下此鍵後，此鍵的 LED ON，表示此工程段縫製結束後會自動做切線動作。

VI. 參數設定畫面功能說明

◎縫製畫面下按  鍵 LED 亮進入參數設定畫面



- ①  參數資料 "上 / 下 " 按鍵

說明：每按一次， "上 / 下"移動一筆參數

- ②  參數資料值顯示鍵 /

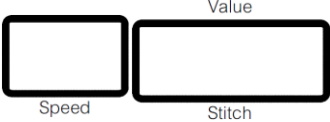
說明：按住可顯示該參數資料值

- ③  設定參數值

說明：設定參數值用

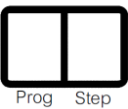
- ④  參數名稱顯示鍵 /

說明：按下後  LED ON、 LED OFF，顯示該參數名稱

- ⑤  參數名稱內容表示 /

說明：  LED ON 或按住  時，顯示該參數的內容

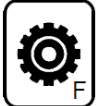
 LED ON 時，顯示該參數的名稱

- ⑥  參數碼表示 /

說明：參數共有 64 個

- ⑦  返回鍵

說明：返回縫製畫面

- ⑧  參數內容顯示鍵 /

說明：按下後  LED ON、 LED OFF，顯示該參數內容

參數內容 1/4

參數 編號 NO.	參數名稱 name of parameter	參數值 value	範圍 range	參數說明 description	註明
01	tape	10	0~99	送帶長度 meter of feeding, 00=35mm, increases 1=1mm,99=134mm	保留
02	sp	50	0~99	送帶速度設定 feeding speed , 00=50mm,increase =1.9mm,99=238.1mm	保留
03	in_tr	0	0~99	送料後回拉長度設定 00=0mm,每增加 1=0.35mm,99=34mm meter of pull back after fed, 00=0mm, increase 1=0.35mm,99=34mm	保留
04	cut_t	15	0~99	切刀時間設定 00=0.1 秒,每增加 1=0.005 秒,99=0.6 秒 cutter timing , 00=0.1s, increase 1=0.005s,99=0.6s	
05	cut_s	15	0~99	切刀後繼續車縫的針數 stitch after cut off	保留
06	foot	0	1/ 0	縫製完畢後壓腳自動提升或不自動提升的 選擇 on - 1 / off - 0 to select presser foot lift automatically or not	保留
07	v_off	10	0~99	始縫時停止吸線頭的針數 sewing stitch after thread suction stop	保留
*09	cut2m	0	0/1/2/3	0: 自動偵測切帶功能無效 auto detecte cut elastic tape invalid 1:只切布料前端的鬆緊帶 cut off the elastic band in front of the fabric 2:只切布料後端的鬆緊帶 cut off the elastic band in end of the fabric 3:布料前端和後端的鬆緊帶都要切 cut off the elastic band in front & end of fabric	
10	cut2s	10	0~99	電眼偵測到布時,再車縫多少針數後切斷鬆 緊帶;調整布料前端鬆緊帶長度用 sensor detected fabric, cut off the elastic band after how many stitches: adjust the length of elastic band at start	
11	cut2e	10	0~99	電眼偵測到沒布時,再車縫多少針數後切斷 鬆緊帶;調整布料後端鬆緊帶長度用 sensor detected fabric, cut off the elastic band after how many stitches: adjust the length of elastic band at end	

參數內容 2/4

參數 編號 NO.	參數名稱 name of parameter	參數值 value	範圍 range	參數說明 description	註明
12	rev	0			
13	rev	0			
14	rev	0			
15	rev	0			
16	rev	0			
17	sf_sw	3	0/1/2/3	安全開關型態: mode of safety switch 0:常開式 normally open 1:常閉式 normally close 2:常閉式,但安全開關打開時可當一般拷克車使用 permanently close, it run as overlock when the safety switch be open 3:禁用安全開關 disable safety switch	保留
18	rest	0	1/0	參數切換到 run 時可回復出廠設定值 (需重新開機) no - 0 / run - 0 return to factory preset value when parameter switch to run (need power on again)	
21	rev	0			
22	rev	0			
23	rev	0			
25	rev	0			
26	rev	0			
27	rev	0			
28	rev	0			
29	rev	0			
30	knee	2	0/1/2/3/4	膝蓋開關功能切換: function of knee switch 0: 無效 invalid 1: 控制 MC 切刀 control MC cutter 2: 控制 ME 切刀 control ME cutter 3: 切換工程段數 change program segment 4: 抬壓腳 presser foot lift	
31	ext	3	0/1/2/3/4	外部開關功能切換: external key function 0: 無效 invalid 1: 控制 MC 切刀 control MC cutter 2: 控制 ME 切刀 control ME cutter 3: 切換工程段數 change program segment 4: 抬壓腳 presser foot lift	

參數內容 3/4

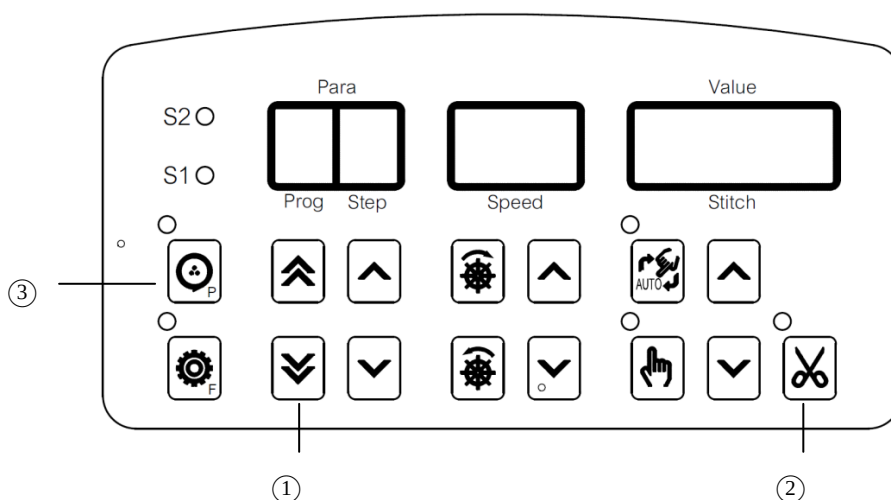
參數 編號 NO.	參數名稱 name of parameter	參數值 value	範圍 range	參數說明 description	註明
32	cut2	1	0/1/2	ME 切刀用氣壓缸型態: air cylinder for ME 0:雙動型 double solenoids 1:單動型 one solenoid 2:雙動型雙切動作 double cut effected	
33	rev	0			
34	psd	2	0/2/3	車頭型態: code of sewing machine 0: MC 拷克車用 / for MC overlock 2: ME 用,啓縫時不偵測布 for ME, sew without fabric been detected 3: ME 用,啓縫時不偵測布;使用'A'自動模式 前必須先安裝光檢知器 for ME, sew without fabric been detected; Sensor must be installed before using the Auto Mode('A')	
35	psd_t	0	0 / 1	切換不同型態感測器:Sensor selection 0:感測器型號 a / type a 1:感測器型號 b / type b	
36	rev	0			
37	rev	0			
38	rev	0			
39	rev	0			
40	rev	0			
41	smdir	0	0 / 1	切換送料馬達正反轉(cw – 0 / ccw – 1) clockwise/ counter clockwise for feeding motor	
42	smcw	3	0~3	馬達送料速度 / feeding speed	
43	smccw	3	0~3	馬達退料速度 / the speed of the return	
44	zig	0	-100%~100%	回縫時，步進馬達逆送量的比例 The scale of stepping motor moving back while process back tacking	
45	s_con	0	0 ~ 9999	縫製計數器 / sewing counter	
46	tm1	1	0 ~ 99	自動運轉動作時間設定 Time setting for auto run test effeted	

參數內容 4/4

參數編號	參數名稱	參數值	範圍	參數說明	註明
47	tm2	0	0 ~ 99	自動運轉停止時間設定 Time setting for auto run test stopped	
48	tot	1	0 ~ 99	自動運轉全程時間設定 Time setting for entire auto run test	
49	a	60	0 ~ 99	自動運轉速度設定 Speed setting for auto run test effeted	
50	loop	5	0 ~ 99	自動運轉圈數設定 Loop setting for auto run test	
52	rev	0			
53	rev	0			
54	Pre_s	80	0~127	補償速度	
57	me_pr	1	0 / 1	偵測到布料時，啟動切刀開關誤動作保護功能 start tape cutter malfunction protection while detected the fabric (on - 1 / off – 0)	
58	pl_du	40%	5% ~ 60%	壓腳電磁鐵電流調整 adjust the current of presser foot solenoid	
59	me_se	2	0 / 1 / 2	ME cutter 安全開關型態: mode of ME cutter safety switch: 0:常開式 normally open 1:常閉式 normally close 2:禁用安全開關 disable safety switch	
60	air_t	800	100~3000	每針氣壓閥的持續動作時間(ms) solenoid valve the continuous operation time every stitch.(ms)	保留
61	me_bl	800	0~3000	ME 切帶後，輔助送料吹氣裝置持續吹氣時間(ms) ME cutter starts, feed blowing device keep blowing at how many times.(ms)	
62	mesbl	5	0~255	ME 切帶後，輔助送料吹氣裝置吹氣的針數 ME cutter starts, feed blowing device stops blowing at how many stitches.	
63	pre	1	0~9	補償值	
64	save	0	0 / 1	將目前的參數值設定為出廠設定值 / the current value of parameters is set to factory settings. (no - 0 / run – 1)	

VII. 測試畫面功能說明

◎在縫製畫面下依序按  →  →  →  →  後將會進入測試畫面：



- ①   測試參數資料 "上 / 下 " 按鍵 /

說明：選擇要測試的項目

- ②  測試鍵

說明：按此鍵，執行所選擇的測試項目

- ③  返回鍵

說明：返回縫製畫面

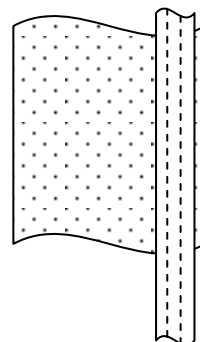
測試參數內容

參數名稱	參數說明
Foot	押腳功能測試
Cut1	剪線功能測試鍵
Tension	鬆線功能測試
Vacuu	後吸功能測試鍵
Blow	前吸功能測試鍵
Buzzer	鳴器測試鍵
Cut2	剪線功能測試鍵
Stm	步進馬達功能測試鍵
Aotorun	步進馬達自動運轉測試 - 長時間
Aototur	步進馬達自動運轉測試 - 圈數運轉

VIII. 操作說明

- 範例 1. a.車縫兩個開口的內衣,設定 1 個工程段數,使用手動模式,送料速度 85
 b.布料前端和布料後端自動切帶.
 c.布料前端保留較短的鬆緊帶,啓縫 10 針後切帶; 布料後端保留較長的鬆緊帶,布料縫製結束後 25 針切線

Step	Speed	Stitch	參數 09	參數 10	參數 11	參數 34
01	85	MAN	3	10	25	2



步驟 1. 在縫製畫面按下  進入到編輯畫面

步驟 2. 將 Step 1 的 Speed 欄設定為 85, 按  鍵 LED OFF, Step 1 的 Stitch 欄設定為”MAN”

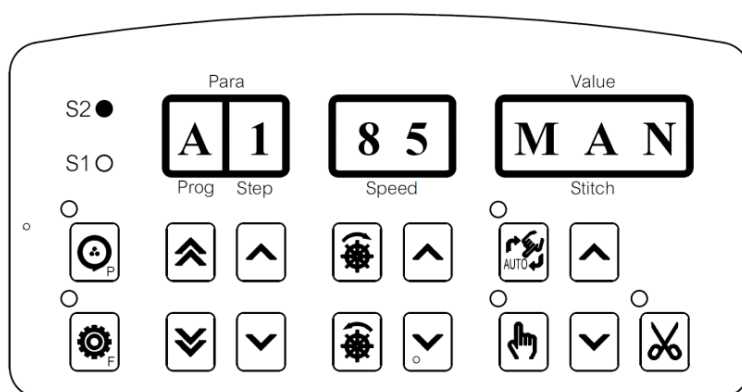
步驟 3. 確認 Step 2 的 Speed 欄設定為空白 Stitch 欄為”end”,若 Step 2 的 Stitch 欄不是”end”,則跳至

Step 2,再按  鍵設定 Stitch 欄為”end”

步驟 4. 按返回鍵  回縫製畫面, 再按  鍵進入參數設定畫面

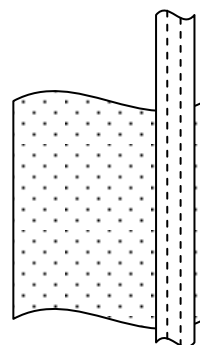
步驟 5. 設定參數 09=3; 參數 10=10; 參數 11=25;

步驟 6. 按返回鍵  回縫製畫面即可, 畫面如下圖所示



- 範例 2. a.車縫兩個開口的內衣,設定 1 個工程段數,使用手動模式,送料速度 50
 b.布料前端自動切帶,布料後端手動切帶.
 c.布料前端啓縫 5 針後切帶; 布料後端由操作員手動切帶

Step	Speed	Stitch	參數 09	參數 10	參數 11	參數 34
01	50	-	1	5	(無效)	2



步驟 1. 在縫製畫面按下  進入到編輯畫面

步驟 2. 將 Step 1 的 Speed 欄設定為 50, 按  鍵 LED OFF, Step 1 的 Stitch 欄設定為”MAN”

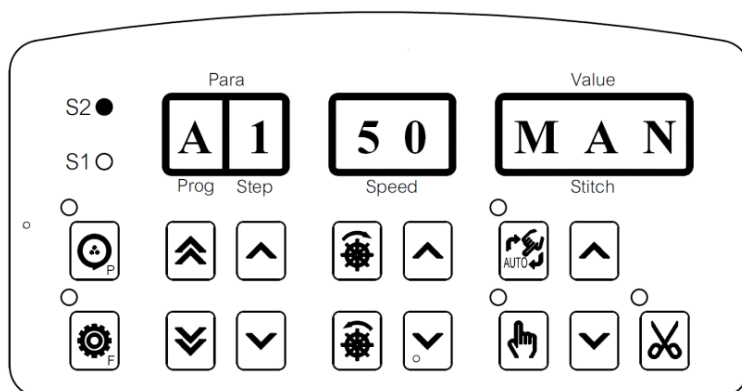
步驟 3. 確認 Step 2 的 Speed 欄設定為空白 Stitch 欄為”end”,若 Step 2 的 Stitch 欄不是”end”,則跳至

Step 2,再按  鍵設定 Stitch 欄為”end”

步驟 4. 按返回鍵  回縫製畫面, 再按  鍵進入參數設定畫面

步驟 5. 設定參數 09=1; 參數 10=5; 忽略參數 11;

步驟 6. 按返回鍵  回縫製畫面即可, 畫面如下圖所示



IX. 提示代碼和錯誤代碼

操作盒用:

提示代碼	訊息	說明
E098	successfully saved	出廠參數值儲存成功
E099	please reboot	已回復出廠參數值,請重啓電源

操作盒用:

錯誤代碼	訊息	說明
E000	SAFETY LOCK-ON	安全開關安裝錯誤,請檢查安全開關或參數 17
E100	No response from front panel	操作盒和控制箱無法互相通信,請檢查操作盒的連接線是否插好或插錯接口。

控制箱用:

錯誤代碼	故障原因	說明
ER0.9	1. 車頭線圈(或氣壓閥)短路時。 2. 驅動車頭氣壓閥之功率電晶體迴路有故障。	車頭出力與操作盒之定針式樣縫製功能將全部關閉對無效。 請檢查氣壓閥之迴路是否短路。 請檢查主基板組之各功率驅動電晶體是否故障。



電子送帶機

COMPUTERIZED METERING DEVICE

使 用 說 明 書
OPERATION MANUAL



MODEL : HCT-S6 SERIES



ENGLISH

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I. Safety Precaution

Please read this manual carefully , also with related manual for the machine head before use. For perfect operation and safety, installing and operating this product by trained personnel is required.

When install and operate MK control box, precaution must be taken as the following.

This product is designed for specify sewing machines and must not be used for other purposes.

1.1 Work Environment :

(1). Power voltage:

Only use Power Voltage indicated on the name plate of the Feeder in $\pm 10\%$ ranges.

(2). Electromagnetic pulse interference:

To avoid the false operate, please keep the product away from the high electromagnetic machinery or electro pulse generator.

(3). Temperature:

a. Please don't operate in room temperature is above 45°C or under 5°C

b. Avoid operating in direct sun light or outdoors area.

c. Avoid operating near the heater.

d. Avoid operating in the area which humidity is 30 % or less and 95% or more, also keep away dew area.

(4). Atmosphere:

a. Avoid operating in dusty area, and stay away from corrosive material.

b. Avoid operating in evaporate or combustible gas area.

1.2 Safety In Installation :

(1). Control box: Follow the instruction in this manual for correct installation.

(2). Accessories: Turn off the power and unplug the cord before mounting any accessories.

(3). Power cord:

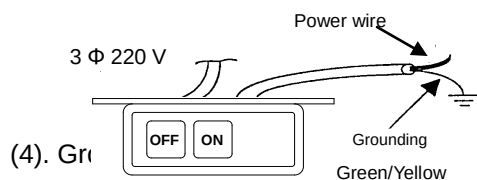
a. Avoid power cord being applied by heavy objects or excessive force, or over bend.

b. Power cord must not set to be near the V-belt and the pulley, keep 3 cm space or above.

c. Check the outlet voltage before plugging the cord, make sure it match the voltage shown on the name plate of the Feeder in $\pm 10\%$ ranges.

※ Attention : If the control box is AC 220V system, please don't connect to the AC 380V power outlet. If that happened, please turn off the power switch immediately and check the power voltage. Continue supply the 380V power over 5 minutes might damage the fuses (F1,F2) and burst the electrolytic capacitors (C3,C4) of the main board and even might endanger the person safety.





Ground Wire (Green/Yellow) must be grounding.
 Properly current leakage cause uncomfortable
 Even hurt the body if not grounding

- a. To avoid the static interference and current leakage, all grounding must be done.
- b. Use the correct connector and extension wire when connecting ground wire to Earth and secure it tightly.

1.3 Safety In Operating :

- (1). When turn on the machine in the first time, use low speed to operate and check the correct rotation direction.
- (2). During machine operation, don't touch any moving parts.
- (3). All moving parts must use the protective device to avoid the body contact and objects insertion.

1.4 Safety in Maintenance and Repairs :

Power must be turned off first, when:

- (1).Uninstall the motor or the control box, or plug and unplug any connector.
- (2).Turn off the power and wait 10 minutes before opening box cover.
- (3).Repairing or doing any mechanical adjustment.
- (4).Machines rest.

1.5 Regulation in Maintenance and Repairs :

- (1).Maintenance and Repairs must be done by specially trained personnel.
- (2).Don't use any objects or force to hit or ram the product.
- (3).All spare parts for repair must be approved or supplied by the manufacturer.

1.6 Danger and Caution Signs :



Risks that may cause personal injury or risk to the machine are marked with this symbol in the instruction manual.



This symbol indicates electrical risks and warnings.

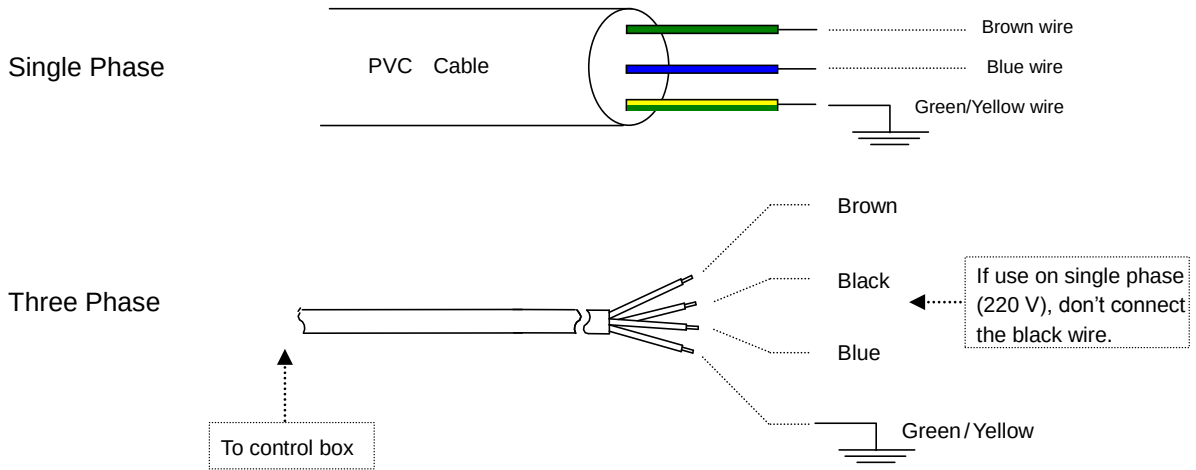
1.7 Warranty Information :

Manufacturer provide a warranty in respect of the products covered for a period of 1 year use or 1 year and 6 months after the shipping date of the products for any defects arising in the normal course of use of the products by customers.

II. Power Connection and Grounding

(1). Single phase and three phase connection:

Green/yellow wire is the ground wire.



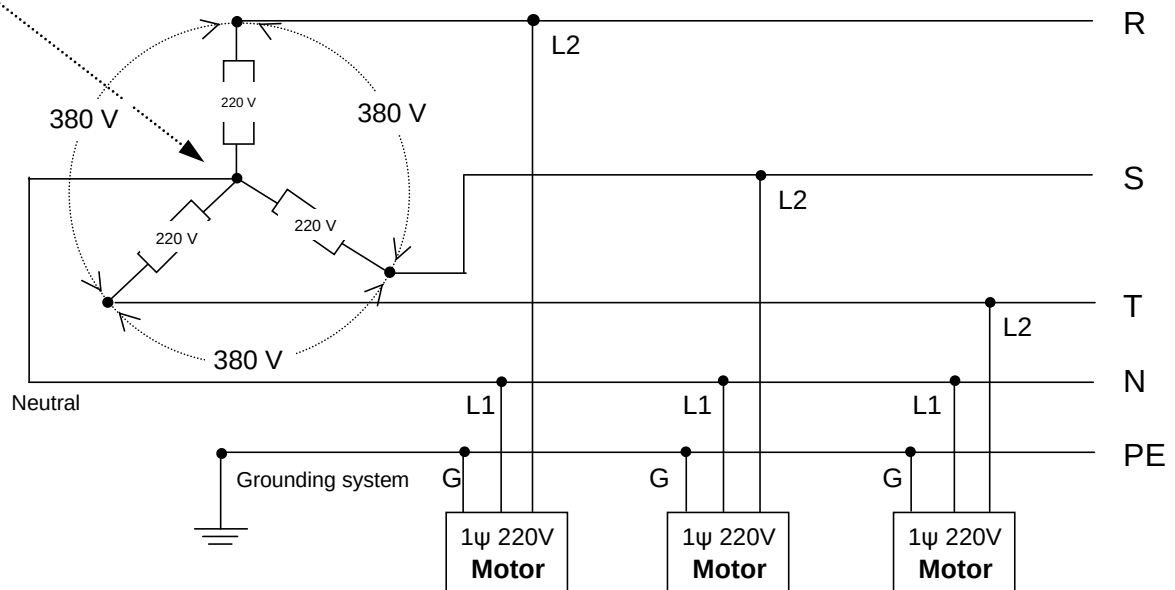
1. When a control box used on single phase 200 ~ 240 V power, only connect brown and blue wires. Use insulating tape to wrap up the black wire, in order to prevent the current leakage.
2. Green / Yellow wire must do the grounding.

(2). How to connect a 1 Φ / 220 V power from a 3 Φ / 380 V power source



Caution : If the power source does not have the neutral point, then this control box is not suitable for this connection.

Caution: Must have a Neutral point

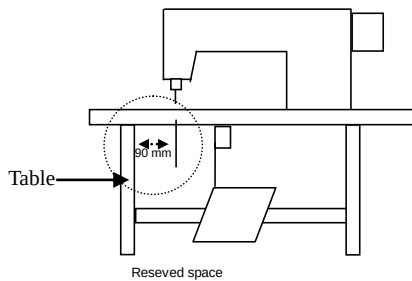


(3). The load balance when use a control box on a 3 Φ / 220 V power source.

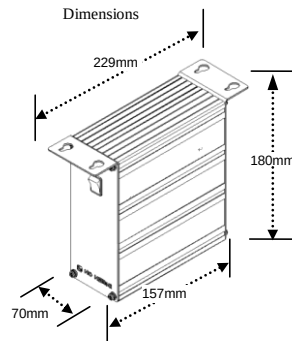
Please consider R.S.T balance when connecting to several sewing machine

III. Control Box Installation

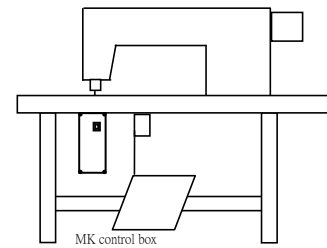
a).Reserved 90mm space (or above) on leftside of table



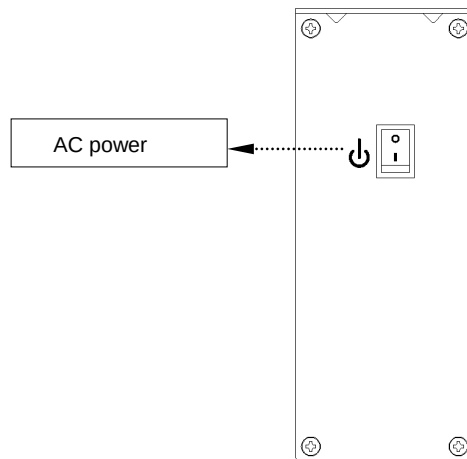
b)Installs HCT-S6 control box under the



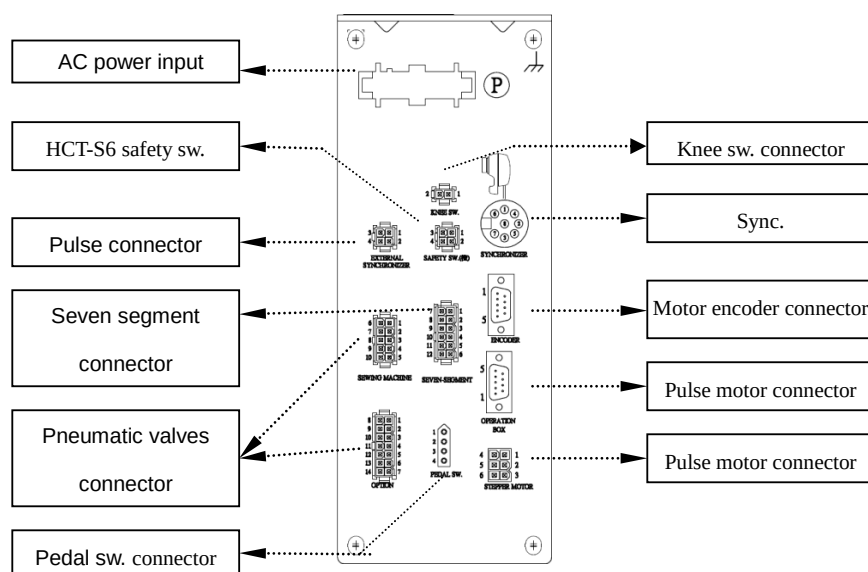
c).Illustration after installation



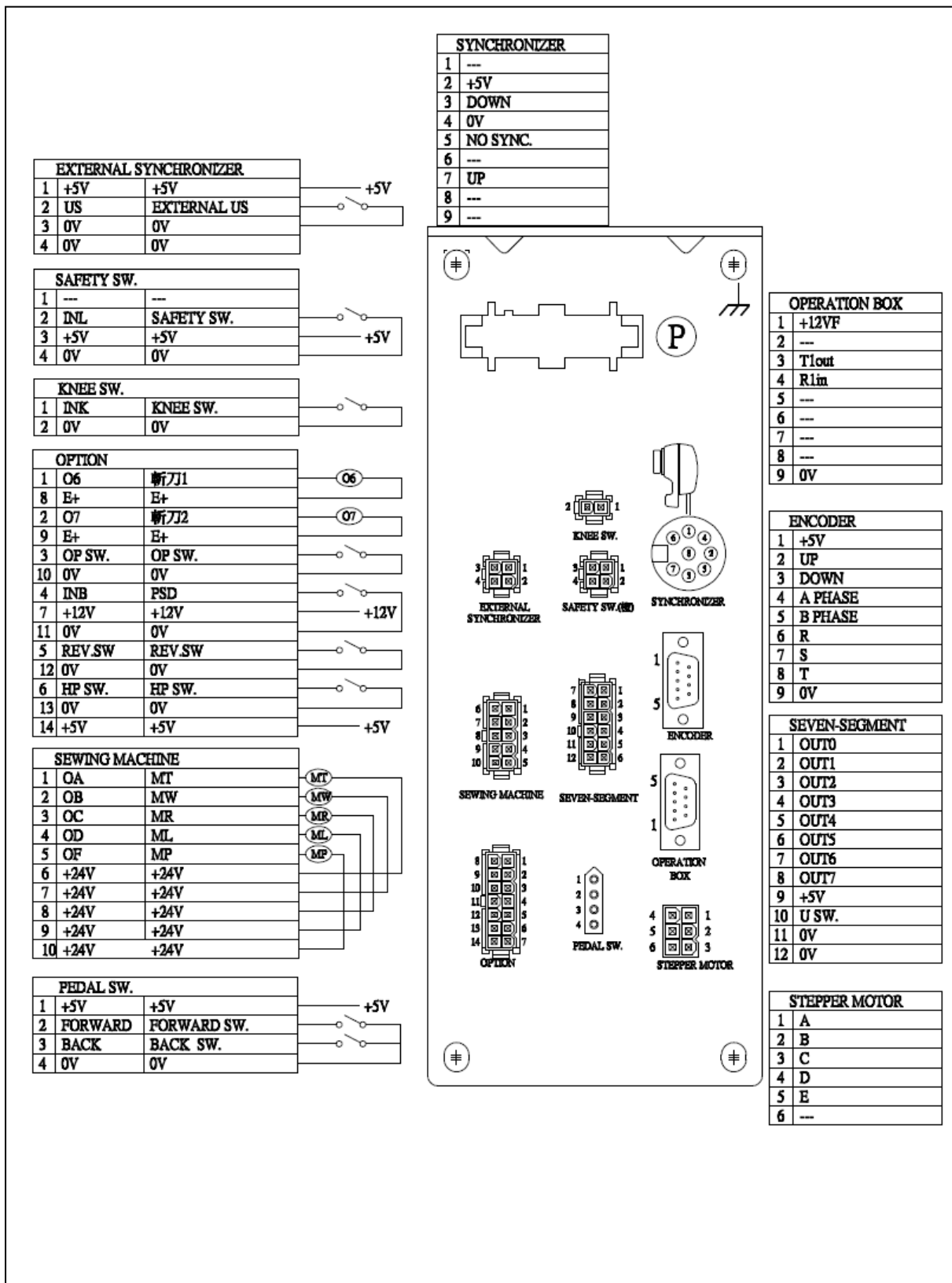
Front side :



Rear side:

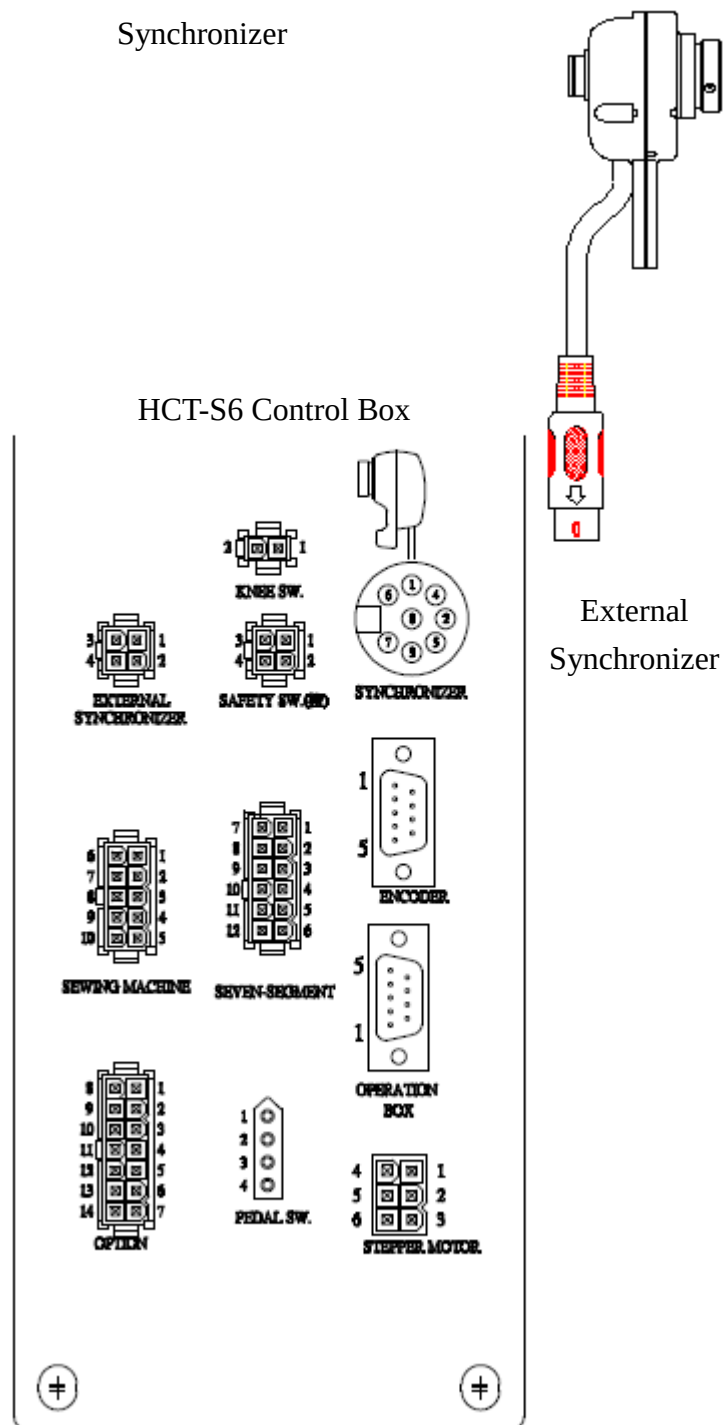


Pin assignment :

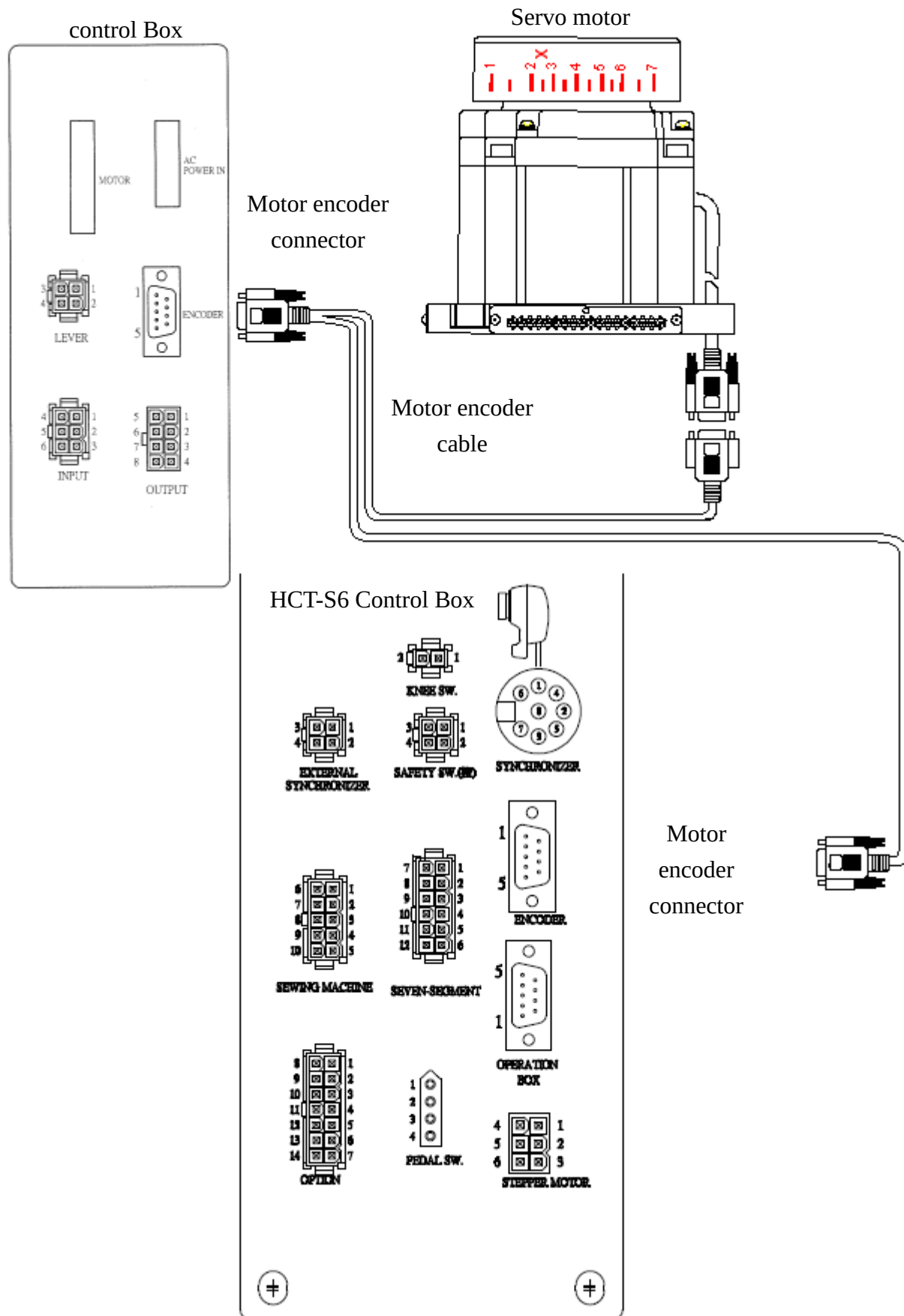


Connection for diagram illustrating :

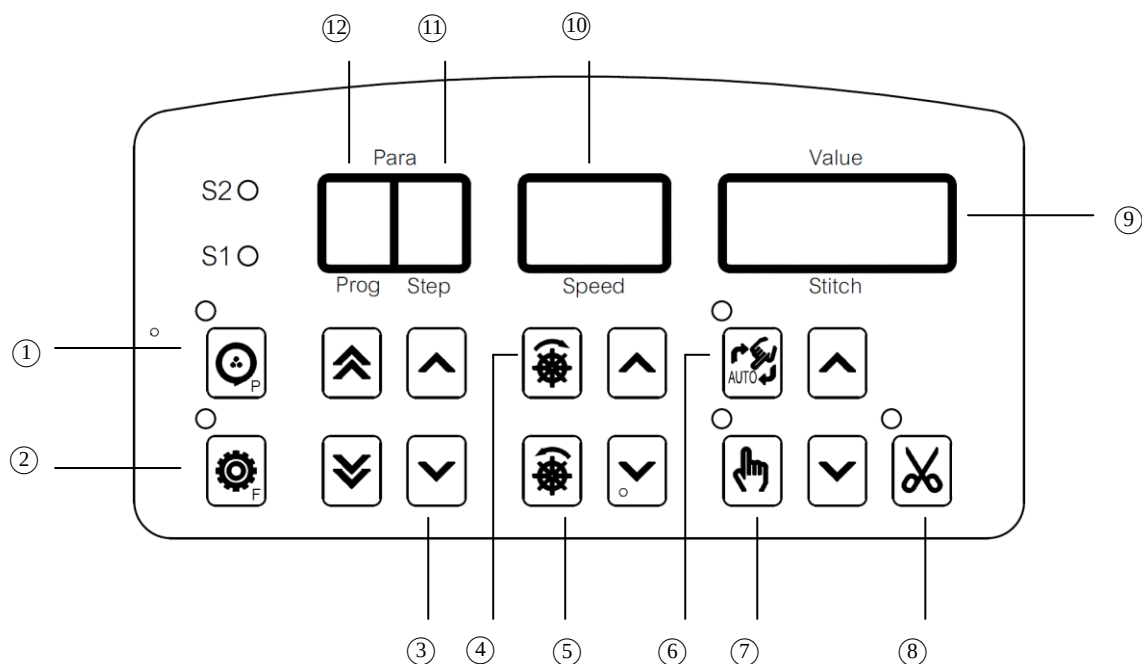
1. General Installation



2. D.D. Servo motor



IV. Function for sewing



- ①  Enter editing

Description: enter editing when press this key, process related setting after entered.

- ②  enter parameter setting

Description: press the key to enter parameter setting, process related setting after entered.

- ③  shift up/downward

Description: moves one step when press shift up/downward key.

- ④  forward

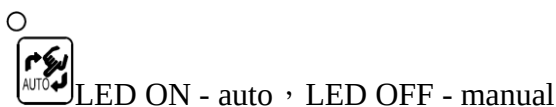
Description: press the key to forward the tape.

- ⑤  reserve

Description: press the key to reverse the tape.

- ⑥  Set auto or manual in programming segment

Description:

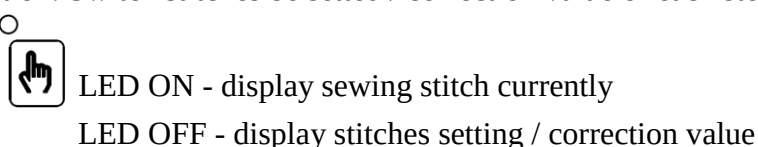


(Auto): enter to next segment automatically while the set stitch achieved.

“MAN” (Manual): enter to next segment manually.

- ⑦  Switch key for stitch /correction value of section changed

Description: Switch stitches be setted / correction value of each step.



Section correction : correct the deviation on buffer tape

The xxx value is correction value of section changed , while stitch column display xxx. , the range is 0 – 99.

- ⑧  Trimming

Description :  LED ON - trimming automatically after finished the programming segment.

- ⑨  Stitch / correction value

Description: display the set stitches / correction value in every programming segment.

- ⑩  Metering of feeding

Description: display the meter of every stitch, the range of meter is 0 ~ 180.

- ⑪  Programming segments

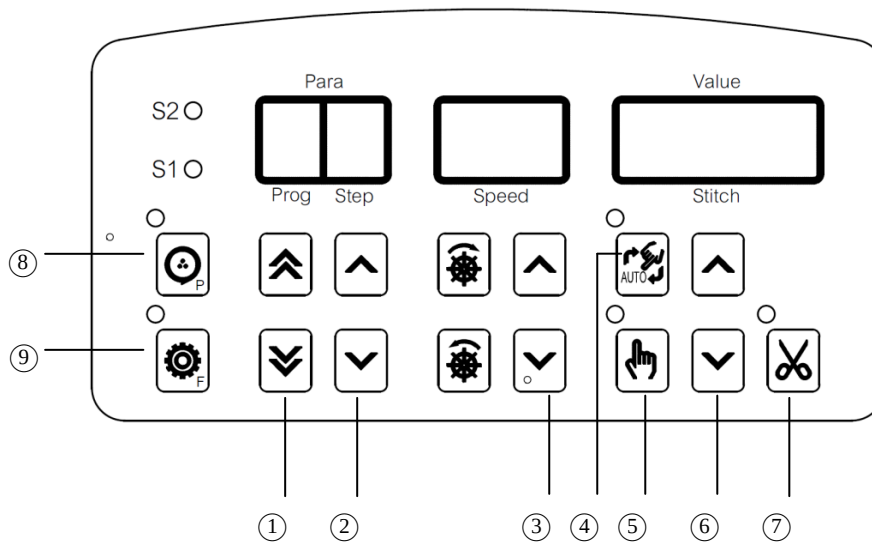
Description: 17 programming segments in each programming mode.

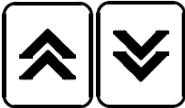
- ⑫  Programming mode

Description: display the model is processing, maximum 26 modes (A~Z).

V. Editing

press  key to enter editing



①  programming mode switch key

Description: total 26 zones(A ~ Z) in programming mode, select the mode you need to store data.

②  programming segment switch key

Description: for switch programming segment, maximum 17 segments.

③  meter feeding setting

Description: set the feeding meter of every stitch, list below is the reference table.

Speed	feeding meter (mm)	Speed	feeding meter (mm)
0	0.00	100	2.44
10	0.24	110	2.69
20	0.49	120	2.93
30	0.73	130	3.17
40	0.98	140	3.42
50	1.22	150	3.66
60	1.46	160	3.91
70	1.71	170	4.15
80	1.95	180	4.39
90	2.20		

④



Set auto or manual in programming segment

Description:

“A”(Auto):enter to next segment automatically while the set stitch achieved.

“M”(Manual):enter to next segment manually.

⑤



Switch key for stitches / correction of section changed / stitches number be loaded

Description: switch stitches be setted / correction value of section changed / stitches number be loaded



LED ON : stitches number be loaded

LED OFF : stitches be setted / correction value of section changed

⑥



setting for stitches number / correction value of section changed / stitches number be loaded

Description: set the stitch / correction value needed, press “+” increment, “-“ decrement .

○



LED ON : the number of stitch after sewing finished can be download to stitch column new stitch setting (warning! The original number of stitch will be over written.)

○



LED OFF :

The xxx value is stitches value of section , while stitch column display xxx

The xxx value is correction value of section changed , while stitch column display xxx., list below is the reference table.

Par63	correction value	Length for Pull back or Forth (mm)
0	00~99	0 ~ 36mm
1	00~99	0 ~ 48mm
2	00~99	0 ~ 60mm
3	00~99	0 ~ 72mm
4	00~99	0 ~ 84mm
5	00~99	0 ~ 96mm
6	00~99	0 ~ 108mm
7	00~99	0 ~ 120mm
8	00~99	0 ~ 132mm
9	00~99	0 ~144 mm

⑦



trimming mode setting

Description: press the key to show scissors mark in mode, it process trimming after sewing finished.

⑧



return

Description: return to sewing mode.

⑨



programming ending setting

Description: two modes been selected:

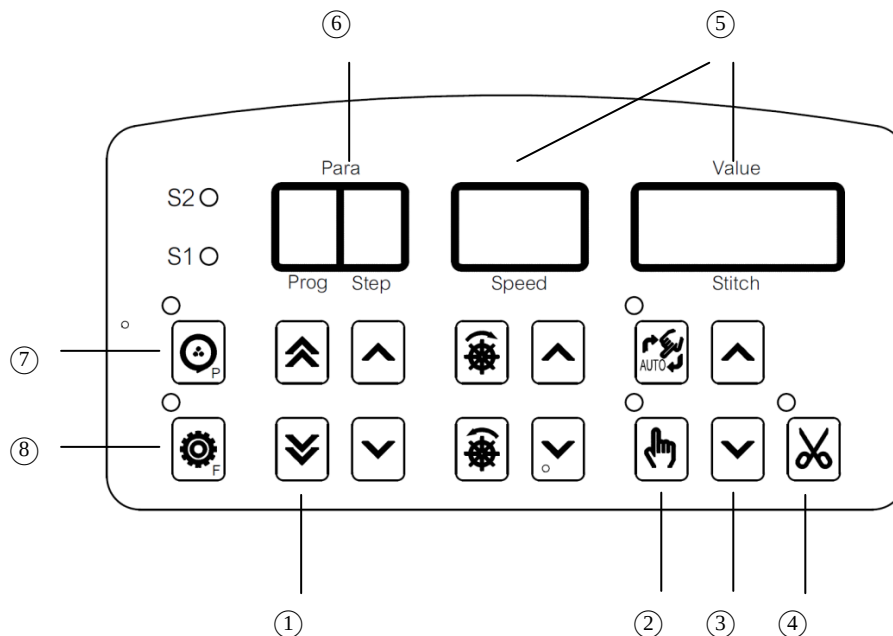
End: trimming after the ending of programming.

End2: no trimming after the ending of programming (ME dedicated).

Cont: no trimming after the ending of programming, and automatically return Step01.

VI. Parameter setting mode

⑦ press  key to enter parameter setting



①   previous/next parameter data

Description: press one time to move one parameter data.

②  parameter value display key

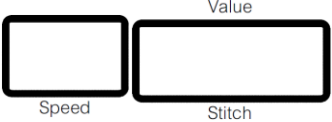
Description: press the key to display parameter value

③   parameter value setting

Description: to set the value of parameter.

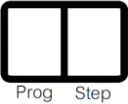
④  name of parameter display key

Description: press  LED ON ,  LED OFF , display name of parameter

- ⑤  parameter value/ name

説明：  LED ON or press  , display parameter value

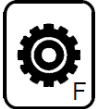
 LED ON , display name of parameter

- ⑥  parameter number

Description: total 64 parameter

- ⑦  return

Description: return to sewing mode.

- ⑧  parameter value display key

Description: press  LED ON 、  LED OFF , display parameter value

content of parameter 1/3

NO.	name of parameter	value	range	description	註明
01	tape	10	0~99	meter of feeding, 00=35mm, increases 1=1mm,99=134mm	retain
02	sp	50	0~99	feeding speed , 00=50mm,increase =1.9mm,99=238.1mm	retain
03	in_tr	0	0~99	meter of pull back after fed, 00=0mm, increase 1=0.35mm,99=34mm	retain
04	cut_t	15	0~99	cutter timing , 00=0.1s, increase 1=0.005s,99=0.6s	
05	cut_s	15	0~99	stitch after cut off	retain
06	foot	0	1/ 0	on - 1 / off - 0 to select presser foot lift automatically or not	retain
07	v_off	10	0~99	sewing stitch after thread suction stop	retain
*09	cut2m	0	0/1/2/3	0: auto detecte cut elastic tape invalid 1: cut off the elastic band in front of the fabric 2: cut off the elastic band in end of the fabric 3: cut off the elastic band in front & end of fabric	
10	cut2s	10	0~99	sensor detected fabric, cut off the elastic band after how many stitches: adjust the length of elastic band at start	
11	cut2e	10	0~99	sensor detected fabric, cut off the elastic band after how many stitches: adjust the length of elastic band at end	
12	rev	0			
13	rev	0			
14	rev	0			
15	rev	0			
16	rev	0			
17	sf_sw	3	0/1/2/3	mode of safety switch 0: normally open 1: normally close 2: permanently close, it run as overlock when the safety switch be open 3: disable safety switch	retain
18	rest	0	1/ 0	no - 0 / run - 0 return to factory preset value when parameter switch to run (need power on again)	

content of parameter 2/3

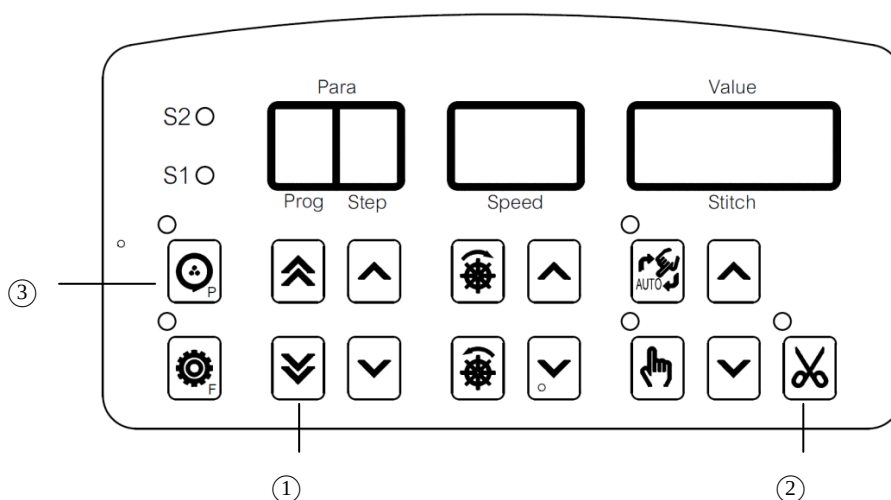
NO.	name of parameter	value	range	description	註明
21	rev	0			
22	rev	0			
23	rev	0			
25	rev	0			
26	rev	0			
27	rev	0			
28	rev	0			
29	rev	0			
30	knee	2	0/1/2/3/4	function of knee switch 0: invalid 1: control MC cutter 2: control ME cutter 3: change program segment 4: presser foot lift	
31	ext	3	0/1/2/3/4	external key function 0: invalid 1: control MC cutter 2: control ME cutter 3: change program segment 4: presser foot lift	
32	cut2	1	0/1/2	air cylinder for ME 0: double solenoids 1: one solenoid 2: double cut effected	
33	rev	0			
34	psd	2	0/2/3	code of sewing machine 0: for MC overlock 2: for ME, sew without fabric been detected 3: for ME, sew without fabric been detected; Sensor must be installed before using the Auto Mode('A')	
35	psd_t	0	0 / 1	Sensor selection 0: type a 1: type b	
36	rev	0			

content of parameter 3/3

NO.	name of parameter	value	range	description	註明
37	rev	0			
38	rev	0			
39	rev	0			
40	rev	0			
41	smdir	0	0 / 1	cw – 0 / ccw – 1 clockwise/ counter clockwise for feeding motor	
42	smcw	3	0~3	feeding speed	
43	smccw	3	0~3	the speed of the return	
44	zig	0	-100%~100%	The scale of stepping motor moving back while process back tacking	
45	s_con	0	0 ~ 9999	sewing counter	
46	tm1	1	0 ~ 99	Time setting for auto run test effeted	
47	tm2	0	0 ~ 99	Time setting for auto run test stopped	
48	tot	1	0 ~ 99	Time setting for entire auto run test	
49	a	60	0 ~ 99	Speed setting for auto run test effeted	
50	loop	5	0 ~ 99	Loop setting for auto run test	
52	rev	0			
53	rev	0			
54	Pre_s	80	0 ~ 127	Speed for correction	
57	me_pr	1	0/ 1	start tape cutter malfunction protection while detected the fabric (on - 1 / off – 0)	
58	pl_du	40%	5% ~ 60%	adjust the current of presser foot solenoid	
59	me_se	2	0 / 1 / 2	mode of ME cutter safety switch: 0: normally open 1: normally close 2:disable safety switch	
60	air_t	800	100~3000	solenoid valve the continuous operation time every stitch.(ms)	retain
61	me_bl	800	0~3000	ME cutter starts, feed blowing device keep blowing at how many times.(ms)	
62	mesbl	5	0~255	ME cutter starts, feed blowing device stops blowing at how many stitches.	
63	pre	1	0 ~ 9	Correction value	
64	save	0	0 / 1	the current value of parameters is set to factory settings. (no - 0 / run – 1)	

VII. Function test mode

③ in sewing mode, press  →  →  →  →  sequentially to enter function test mode:



①   test parameter switch key

Description: select the item to be tested.

②  test key

Description: executing the selected test function

③  return

Description: return to sewing mode

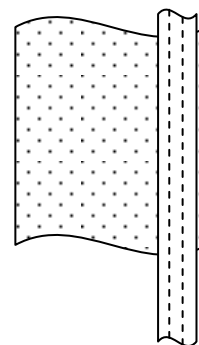
content of parameter

name of parameter	description
Foot	presser foot test
Cut1	cutter test
Tension	tension test
Vacuu	rear suction test
Blow	Front suction test
Buzzer	buzzer test
Cut2	cutter test
Stm	stepping motor test
Aotorun	Stepping motor auto run test – long period
Aototur	Stepping motor auto run test – turn running

VIII. Operation

- example1. a. sewing two opening of underwear , set one program step , manual , feeding speed 85
 b. cutter executes at start and end of fabric
 c. reserve shorter elastic band at start before sewing , sewing 10 stitches executes cutter ;
 reserve longer elastic band at end , executes cutter after 25 stitches

Step	Speed	Stitch	Param09	Param 10	Param 11	Param 34
01	85	MAN	3	10	25	2



Procedure 1. in sewing mode , press  key to enter editing mode

Procedure 2. set 85 at speed column in step 01, press  key LED OFF to set 'MAN' at mode column in step 01

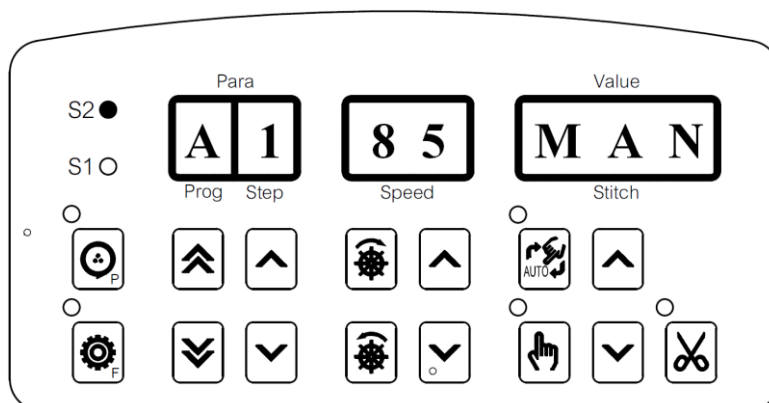
Procedure 3. please check the speed column in step 02 must set at "end" , if not moves to step 02 and

press  key to set speed at "end"

Procedure 4. press  key to return back to sewing mode , press  to enter parameter setting mode

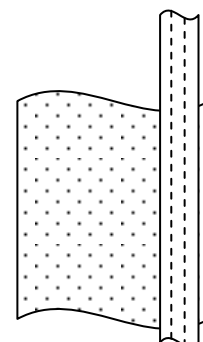
Procedure 5. set parameter 09 = 3 ; parameter 10 = 10; parameter 11 = 25;

Procedure 6. press  key to return back to sewing mode, illustrated as below



- example 2. a. sewing two opening of underwear , set one program step , manual , feeding speed 50
 b. executes cutter automatically at start of fabric , executes cutter manually at end of fabric
 c. executes cutter after 5 stitches at start of fabric , executes cutter by operator at end of fabric

Step	Speed	Stitch	Param 09	Param 10	Param 11	Param 34
01	50	-	1	5	(don't care)	2



Procedure 1. in sewing mode , press  key to enter editing mode

Procedure 2. set 50 at speed column in step 01 , press  key to set "MAN" at mode column in step 01

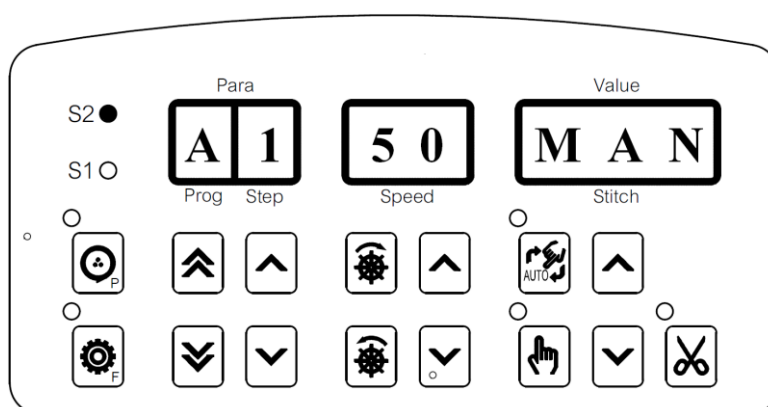
Procedure 3. please check the speed column must set at "end" in step 02 , if not moves to step 02 and

press  key to set "end" at speed column

Procedure 4. press  key to return back to sewing mode , press  key enter parameter setting

Procedure 5. set parameter 09 = 1; parameter 10 =5; parameter 11;

Procedure 6. press  key to return back to sewing mode , illustrated as below



IX. Tip Code list and Error Code list

For operation box:

Tip Code	Message	Comment
E098	successfully saved	factory preset value saved successfully
E099	please reboot	Has returned to factory preset value, please restart the power

For operation box:

Error Code	Message	Comment
E000	SAFETY LOCK-ON	Safety switch installation errors,check the safety switch or parameter 17
E100	No response from front panel	Operation box can not communicate to control box, please check the operation box cable is plugged in or plugged into the wrong connector.

For control box:

Error Code	Cause of the problem	Comment
ER0.9	1. Machine solenoid shorted. 2. Main board's power transistor is faulty.	All output signals and Operation box's pattern sewing function will be invalid. Please check machine's solenoids. Please check al the power transistors which related to solenoid.

七段顯示器字體與實際數值對照表：

7-Segment Display Characters Compare Table

數值字體部份：（Arabic Numerals）

實際數值 Actual	0	1	2	3	4	5	6	7	8	9
七段顯示器 Display	0	1	2	3	4	5	6	7	8	9

英文字體部份：（English Alphabet）

英文數字 （Actual）	A	B	C	D	E	F	G	H	I	J
七段顯示器 （Display）	A	b	C	d	E	F	G	H	i	J
英文數字 （Actual）	K	L	M	N	O	P	Q	R	S	T
七段顯示器 （Display）	k	L	n	n	o	P	q	r	S	r
英文數字 （Actual）	U	V	W	X	Y	Z				
七段顯示器 （Display）	U	v	W		P	≡				

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