SIRUBA

電控參數說明書

ELECTRONIC CONTROL PARAMETER MANUAL

C007K / VC008

目　錄

安全事項

- 在使用本產品之前，請先閱讀《 產品說明書 》及所搭配的縫紉機機 械說明書。
- 本產品必須由接受過專業培訓的人員來安裝或操作。
- 請儘量遠離電弧焊接設備 ,以免產生的電磁波干擾本控制器而發生誤動作。
- 請不要在室溫 45°以上或者 0°以下的場所使用。
- 請不要在濕度 30%以下或者 95%以上或者有露水和酸霧的場所使用。
- 安裝控制箱及其他部件時，請先關閉電源並拔掉電源插頭。
- 為防止干擾或漏電事故，請做好接地工程，電源線的接地線必須牢固的方式與大地有效連接。
- 所有維修用的零部件，須由本公司提供或認可，方可使用。
- 在進行任何保養維修動作前，必須關閉電源並拔掉電源插頭。控制箱裡有高壓危險，必須關閉電源五分鐘後方可打開控制箱。
- 本手冊中標有 ⚠ 符號之處為安全注意點，必須注意並嚴格遵守，以免造成不必要的損害。

1 產品安裝

1.1 產品規格

產品型號：ASD58-55；ASU58-55；ASD58-75；ASU58-75；

電源電壓：AC 220±20% V；電源頻率：

50Hz/60Hz； 最大輸出功率：750W。

1.2 介面插頭的連接

將腳踏板及機頭的各連接插頭安插到控制器後面對應的插座上，各插座名稱如圖 1-2 所示。連接好，請檢查插頭是否插牢。

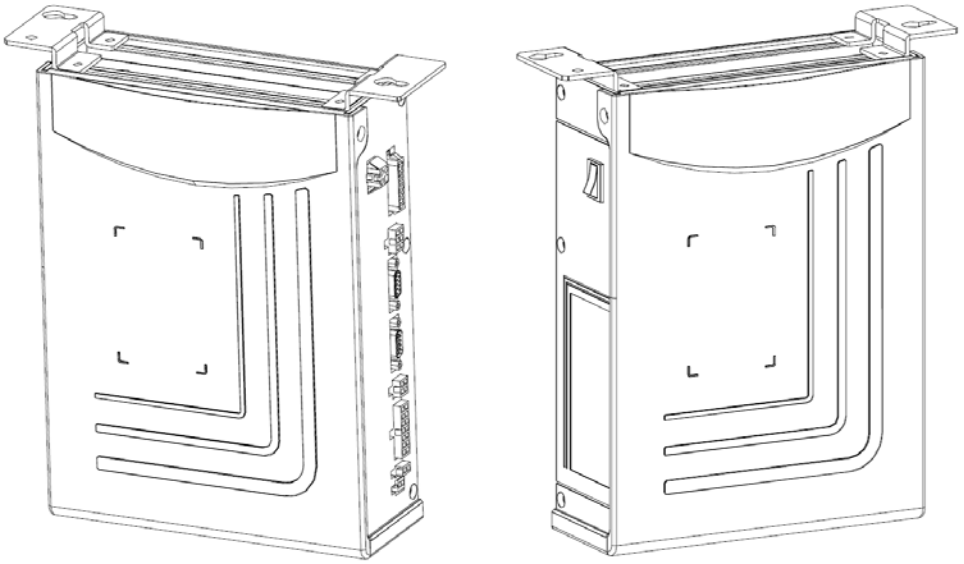


圖 1-1　　AS 系列
控制器圖

① 電機電源插座；② 腳踏板插座；③ 電機編碼器插座；④ 操作面板插座；⑤翻 台開關插座；⑥自動電磁鐵插座；⑦抬壓腳電磁鐵插座；⑧機頭燈插座（ 黑色)；⑨外置 同步器插座

：使用正常的力量插不進去時，請檢查插頭與插座是否匹配，插入方向或針的方向是 否正確 !照明燈介面和抬壓腳電磁鐵介面都是 1*2 的介面，機頭照明燈介面使用黑色介面，請注意區分。

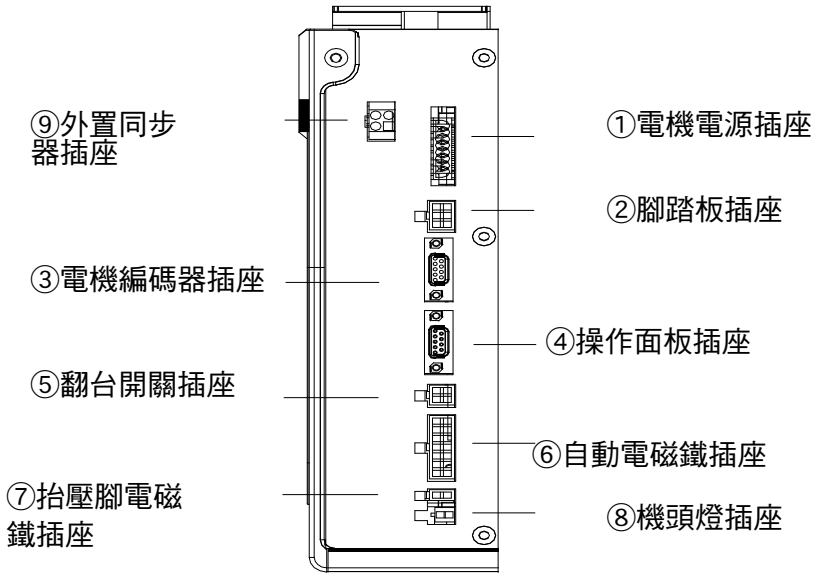


圖 1-2　　AS 系列控制
箱插座背板

1.3 連線與接地

必須要做好系統的接地工程，請合格的電氣工程人員予以施工。產品通電及投入使 用前，必須確保電源插座 AC 輸入端已安全可靠地接地。系統的接地線為黃綠線，該 地線請務必可靠連接至電網安全保護接地上，以保證安全使用，並可防止出現異常 情況。

⚠：所有電源線、信號線、接地線等接線時不要被其它物體壓到或過度扭曲，以確保使 用安全！

1.4 安裝與調整

（Ａ）一體式直驅電機，請參閱各機頭廠家安裝說明書；

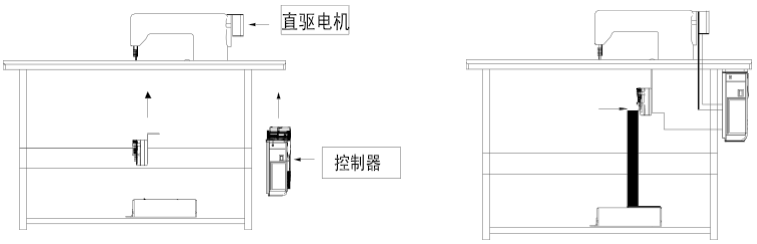


圖 1-3 控制器安裝
示意圖

（Ｂ）外掛式皮帶電機，請注意調整電機與皮帶安裝位置：

（１）電機的皮帶輪與縫紉機皮帶輪必須絕對平行；

（２）電纜線穿過台板下後必須加以固定，防止被皮帶摩擦；

（３）皮帶鬆緊度調整，可將電機腳座上的固定螺栓略微調松後，調整電機與機頭皮帶輪鍵的 適當間距，再鎖緊固定。

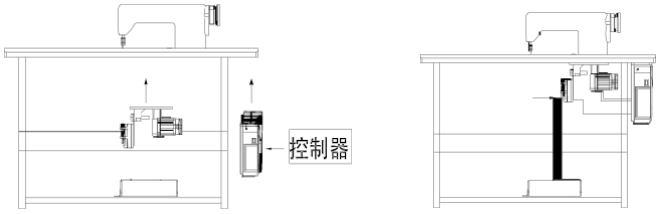


圖 1-4 電機安裝
示意圖

（Ｃ）外掛控制箱的安裝，在台板右側面留出足夠空間，將控制箱鎖緊於台板右下方。

（Ｄ）腳踏板（速控器）的安裝，請保持吊杆成直線，將腳踏板支架鎖緊于台板下方。 並根據需要，適當調整吊杆螺絲，改變腳踏板角度，使踏板前踩與後踩行程適合於 操作習慣。

2　操作面板使用說明

2.1 操作面板的顯示說明

根據不同配置與需求，AS 系列控制器提供多種操作面板供客戶使用。根據系統工作 狀態，操作面板的液晶模組將顯示當前的縫紉模式、各種參數、前/後固縫設置，以及抬 壓腳、停針位、剪線、慢速起縫等液晶字元。各面板所含功能按鍵及液晶顯示功能符號根據型號區別而略有增減，但工作模式與使用方式均大致相同。

（1）H-43 操作面板

外觀

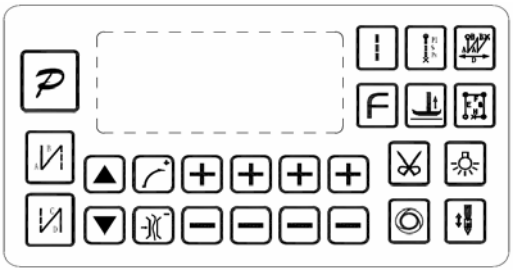


圖 2-1　操作面板 H-43 外觀介面

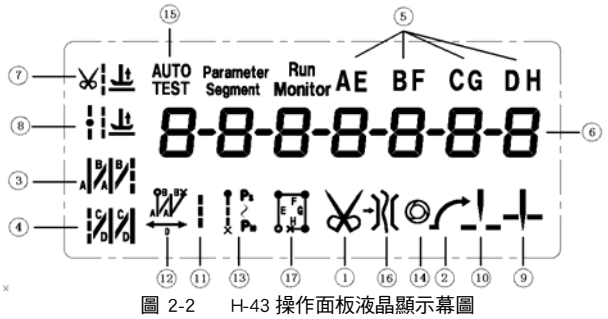


圖 2-2　H-43 操作面板液晶顯示幕圖示

表 2-1　H-43 操作面板液晶功能圖示顯示說明

索引	圖示	描述	索引	圖示	描述
1		自動剪線功能	10		中間停針上停針
2		軟啟動功能	11		自由縫
3		前加固縫	12		W 縫
4		後加固縫	13		多段縫
5	AE BF CG DH	縫紉段數標記	14		多段縫觸發功能
6	8 8 8 8 8 8 8	計數/參數值顯示	15	AUTO TEST	自動測試
7		剪線後抬壓腳	16		夾線功能
8		中間停針抬壓腳	17		四段縫
9		中間停針下停針			

（２）H-70 操作面板外觀

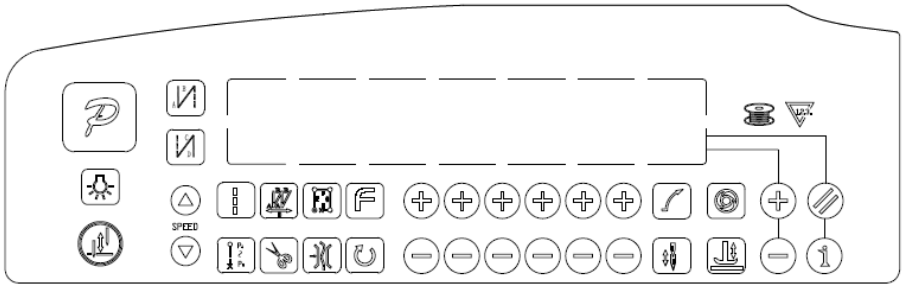


圖 2-3　　操作面板 H-70 外觀介面

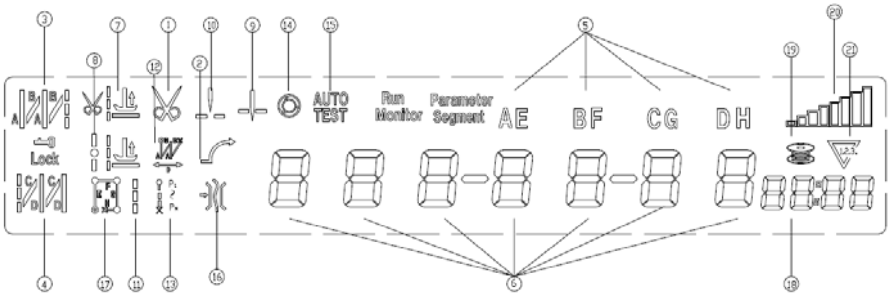


圖 2-4　　H-70 操作面板液晶顯示幕圖示

表 2-2　　H-70 操作面板液晶功能圖示顯示說明

索引	圖示	描述	索引	圖示	描述
1		自動剪線功能	12		W 縫
2		軟啟動功能	13		多段縫
3		前加固縫	14		多段縫觸發功能
4		後加固縫	15	AUTO TEST	自動測試
5	AE BF CG DH	縫紉段數標記	16		夾線功能
6		計數/參數值顯示	17		四段縫
7		剪線後抬壓腳	18		計針標記
8		中間停針抬壓腳	19		計件標記
9		中間停針下停針	20		計數顯示
10		中間停針上停針	21		速度標記
11		自由縫			

2.2 操作面板各按鍵功能說明

序號	外觀	名稱	功能描述
1		確認及返回鍵	按鍵輸入參數確認鍵，並回退到上一級功能表直至操作員縫紉工作狀態。此外，還可與其它按鍵同 時按下實現組合功能，可進入高級參數與功能設置。
2		前加固縫鍵	亦稱為起始倒針功能選擇鍵，每按動一次，系統前固縫工作模式將按照 11B 號參數設置在無前固縫與前單固縫、前雙固縫、前四固縫之間迴圈選擇，對應液晶屏圖示點亮。同時顯示即為前固縫介面，選擇對應的鍵和鍵可增減設置 A、B 段的針數，默認針數範圍 1~F 對應 1~15 針。
3		後加固縫鍵	亦稱為結束倒針功能選擇鍵，每按動一次，系統後固縫工作模式將按照 11B 號參數設置在無後固縫與後單固縫、後雙固縫、後四固縫之間迴圈選擇，，對應液晶屏圖示點亮。同時顯示即為後固縫介面，選擇對應的鍵和鍵可增減設置 C、D 段的針數，默認針數範圍 1~F 對應 1~15 針。
4		自由縫鍵	按下該鍵，系統即進入自由縫工作模式，對應液晶屏圖示 被點亮,踩下踏板即可開始縫紉。
5		W 縫鍵	按下該鍵，系統即進入 W 縫工作模式，對應液晶屏圖示被點亮,同時顯示即為 W 縫介面，選擇對應的鍵和鍵可增減設置 A、B、D 段的針數，針數範圍 1~F 對應 1~15 針。
6		多段縫鍵	亦稱為定長縫，按下該鍵，系統即進入多段縫工作模式，對應液晶屏圖示被點亮,同時顯示 即為多段縫介面，圖中為總段數，可用鍵和鍵增減調整，默認最大 24 段，為當前設置段，為當前段的縫製針數，這些數位均可通過對應的 鍵和鍵增減調整。
7		四段縫鍵	按下該鍵，系統即進入四段縫工作模式，對應液晶屏圖示被點亮,同時顯示 即為四段縫介面，選擇對應的鍵和鍵可增減設置 E、F、G、H 段的針數，默認針數範圍 1~F 對應 1~15 針。
8		軟啟動鍵	按下該鍵，液晶屏圖示 點亮，表明軟啟動有效，再按一下該圖示熄滅，表明關閉軟啟動功能。

序號	外觀	名稱	功能描述
9		夾線鍵	按下該鍵，液晶屏圖示  點亮，表明夾線功能有效，再按一下圖示熄滅，表明關閉夾線功能。
10		停針位鍵	用於縫紉中途停車時系統的上/下停針位置選擇，按下該鍵，  點亮，表明為上停針，再按下該鍵，  點亮，表明為下停針。但縫紉完成剪線之後，系統將停車在上針位。 注：H-43 面板無此按鍵，通過複合鍵  實現此功能。
11		補針鍵	在自由縫中途停車或多段縫段間停車時，按下該鍵可實現補針功能。點動按鍵為補半針，按下時間稍長為補一針，保持按下則連續補針。
12		自動剪線鍵	按下該鍵，液晶屏圖示 點亮，表明自動剪線功能有效，再按一下該圖示熄滅，表明關閉剪線功 能。
13		抬壓腳鍵	每按動一次，系統抬壓腳模式將在不自動抬壓腳、剪線後自動抬壓腳  、縫紉中停車自動抬壓腳  、剪線後和停車時都自動抬壓腳四種模式之間迴圈選擇，對應液晶屏圖示同時點亮。
14		多段縫觸發鍵	在多段縫模式下，按下該鍵，液晶屏圖示  點亮，表明選擇觸發模式有效，此時點動腳踏板一次即可完成當前段的設定針數縫製；再按一下該圖示熄滅，表明多段縫下觸發功能關閉。
15		機頭燈鍵	H-43 與 H-70 面板支援外接機頭燈調光功能，依次按下該鍵，可獲得關閉和從暗到明四級調光效果。
16		自訂功能鍵	自訂擴展功能按鍵，並根據情況可擴展為與其它按鍵同時按下實現組合功能。
17		速度增減鍵	可快速調整系統的最高轉速。在多段縫模式下，亦為總段數的調整按鍵。此外，在參數設置時，可作為對應參數號的調整按鍵。
18		參數增減鍵	調整對應數值的增加鍵與減小鍵。
19		切換鍵	快捷切換操作，目前保留，暫未使用（H-43 面板無此按鍵）。
20		計數切換鍵	計針數模式與計件數模式的計數切換鍵（H-43 面板無此按鍵）。
21		計數清零鍵	計針模式與計件模式下當前計數清零按鍵（H-43 面板無此按鍵）。

3　系統參數設置說明

3.1 技術員參數表

1、　[P]鍵和[⏻]鍵同時按下可修改技術員參數表；

2、　液晶顯示P d-0000，要求鍵入技術員密碼，初始密碼為 0000，按對應的[⊕]鍵和[⊖]鍵可更改密碼數值；

3、　按下[P]鍵，如密碼正確，即進入技術員參數設置模式，顯示100-0000，

4、　按下對應的[▲][▼]鍵和[-)(]或[⊕]鍵和[⊖]鍵可選擇參數編號並更改相應的參數值；

5、　最後按下[P]鍵，即退出參數設置模式，回到縫紉工作模式。

參數編號	參數範圍	典型值	參數描述	備註
100	100~800	200	起縫速度	速度
101	200~5000	3500	自由縫最高速（全域最高限速）	
102	200~5000	3000	定長縫最高速	
103	200~5000	3000	手動倒縫最高限速	
104	100~800	200	補針速度	
105	100~500	250	剪線速度	
106	0／1	0	慢速啟動模式 0：僅剪線後有慢速啟動；1：剪線後、中間停止都有慢速啟動	
107	1~9	2	慢速起縫針數	
108	100~800	200	慢速起縫速度	
109	1~20	20	加速靈敏度（對於直驅機頭可設置為較大的值；對於皮帶傳動不要設置太大，否則振動、雜訊較大。此參數不影響電機出力）	
10A	1~20	20	減速靈敏度（對於直驅機頭可設置為較大的值；對於皮帶傳動不要設置太大，否則振動、雜訊較大。此參數不影響電機出力）	
10B	200~1200	800	中速數值（RPM）輪帶比速度	
10C	25~200	50	低速數值（RPM）	

110	200~2200	1800	前固縫速度	加固縫參數
111	200~2200	1800	後固縫速度	
112	200~2200	1800	連續回縫速度（W 縫）	
113	1~70	24	前固(及 W)縫針跡補償 1（吸合補償，數值增大表示加快吸合）	
114	1~70	20	前固(及 W)縫針跡補償 2（釋放補償，數值增大表示釋放加快）	
115	1~70	24	後固縫針跡補償 1（吸合補償，數值增大表示加快吸合）	
116	1~70	20	後固縫針跡補償 2（釋放補償，數值增大表示釋放加快）	
117	1~70	24	保留	
118	1~70	20	保留	
119	1～999	60	自動回縫段落停止時間 CT 設定（ms）	
11A	10~359	170	針跡補償參考角度（倒縫電磁鐵最佳吸合角度）	
11B	0-4	0	前後加固模式類型。(CD 與 AB 類似) 0：B->AB->ABAB->無。 1：B->無。 2：B->AB->無。 3：AB->無。 4：AB->ABAB->無。	
11C	0000-9999	0	分別對應 A/B/C/D 針數的十位，同時與前後固縫介面下所設 A/B/C/D 個位數位共同組成兩位元數針數，每段針數範圍 1~99 針。	
11D	0000-9999	0	分別對應 E/F/G/H 針數的十位，同時與四段縫介面下所設 E/F/G/H 個位元數位共同組成兩位元數針數，每段針數範圍 1~99 針。	
120	0／1／2／3	0	前加固工作模式。 0：輕觸踏板，即自動執行起始回縫。 1：受踏板控制，可任意停止。 2：針停上定位後，受 119 號參數[CT]時間控制動作 3：針停下定位後，受 119 號參數[CT]時間控制動作	加固縫模式
121	0／1／2	0	前固縫結束後操作模式選擇： 0：前固縫後，繼續縫紉 1：前固縫後，自動停止 2：前固縫後，自動剪線	
122	0／1	0	定長縫結束後操作模式選擇： 0：後固縫； 1：停車待命（可補針）	

123	0／1／2／3	0	後加固工作模式。 0：輕促踏板，即自動執行結束回縫。 1：無效 2：針停上定位後，受 119 號參數[CT]時間控制動作 3：針停下定位後，受 119 號參數[CT]時間控制動作	加固縫模式
124	0／1／2／3	0	W 加固工作模式。 0：輕促踏板，即自動執行起始回縫。 1：受踏板控制，可任意停止。 2：針停上定位後，受 119 號參數[CT]時間控制動作 3：針停下定位後，受 119 號參數[CT]時間控制動作	
125	0～99	0	後固縫最後一個 C 段增加的針數	
126	0～99	0	前固縫之前插入的針數（第一 A 段增加的針數）	
127	0～99	0	後固縫之後插入的針數（最後一個 D 段增加針數）	
128	0～3	0	中間定長回縫次數	
129	0～99	4	中間固縫的針數	
12A	0～99	0	W 縫首段縮減或增加針數；範圍 0-99，默認 0	
12B	0～99	0	W 縫末段縮減或增加針數；範圍 0-99，默認 0	
12C	0/1	0	W 縫首段增補或縮減模式：0 縮減，1 增補。默認 0	
12D	0/1	0	W 縫末段增補或縮減模式：0 縮減，1 增補。默認 0	
12E	0/1	0	定針縫段間計數開閉：0 計針數，1 不計針數；範圍 0-1，默認 0（轉手輪計針數）	
130	0／1／2／3	2	腳踏板曲線模式： 0：自動線性斜率（根據最高速自動計算） 1：兩段斜率 2：冪次曲線 3：S 型曲線	踏板參數
131	200~4000	3000	兩段斜率：中段速度 RPM（兩段斜率的轉振點速度）	
132	0~1024	800	兩段斜率：中段踏板模擬量（需在 138 到 139 參數之間）	
133	1／2	1	冪次曲線：1：平方曲線；2：開方曲線；	
134	0~1024	90	踏板剪線位置	

135	0~1024	300	踏板抬壓腳位置	具體設置方法見圖4-1所示。	
136	0~1024	460	踏板回中位置		
137	0~1024	480	踏板前踩運行位置		
138	0~1024	580	踏板低速運行位置（上限）		
139	0~1024	962	踏板模擬量最大值		
13A	0~800	100	踏板抬壓腳確認時間		
13B	0／1	0	踏板回中立刻剪線選擇：0 關；1 開		
13C	0／1	1	抬壓腳位置抬壓腳功能選擇：0 不抬；1 抬		
13D	0／1	1	剪線位置抬壓腳功能選擇：0 不抬；1 抬		
13E	1~800	0	剪線後抬壓腳延遲時間（撥線）		
13F	0／1／2／3／4	0	全後踏操作模式選擇:(保留) 0：全後踏有切線及抬壓腳 1：全後踏只有提針功能 2：全後踏無抬壓腳功能 3：全後踏抬壓腳及提針 4：全後踏抬壓腳並走慢速		
140	0／1	1	上電自動找上針位：0 不找；1 找		習慣設定
141	0／1	1	自動加固功能選擇：（無自動加固功能的機頭，最好禁止） 0：禁止固縫；1：允許固縫		
142	0／1	0	手按回縫時功能模式選擇 0：Juki 模式。在縫紉中途或中途停止時均有動作。 1：Brother 模式。僅在縫紉中途有動作。		
143	0／1／2／3	0	特殊運行模式： 0：操作工選擇（正常） 1：簡易縫模式 2：測電機初始角（不再需要取下皮帶） 3：計算傳動比模式（需要有停針感測器，且不能取下皮帶）		
144	0~31	0	電機低速加力功能開關：0 正常功能；1~31：低速加力過厚能力檔位		
145	0／1	1	保留		
146	1~800	100	按鈕補半針命令時間		
147	1~800	150	按鈕補一針命令時間		

148	0／1／2	0	按鈕補針模式:0:按下時間控制；1：補半針；2：補一針	
149		0	壓腳下放速度減緩：緩放延遲係數，越大下放越慢	
14A	0~10	0	踏板加速速度曲線濾波係數	
14B	0~99	0	F 鍵功能選擇。F 鍵功能選擇。0：無；1：厚料對針眼功能	
150	1～100	1	計針數功能比例值設定	計數模式
151	1～9999	1	計針數上限設定值	
152	0～4	0	計針數模式選擇： 0：不計數 1：依針數遞增計數，計數滿後自動重新計數 2：依針數遞減計數，計數滿後自動重新計數 3：依針數遞增計數，計數滿後，馬達自動停止，須由重定按鈕設定或面板上的P鍵來啟動重新計數。 4：依針數遞減計數，計數滿後，馬達自動停止，須由重定按鈕設定或面板上的P鍵來啟動重新計數。 5：依針數遞增計數，計數滿後，發出報警，剪線後馬達鎖住 6：依針數遞減計數，計數滿後，發出報警，剪線後馬達鎖住	
153	1～100	1	計件數功能比例值設定	
154	1～9999	1	計件數上限設定值	
155	0～4	0	計件數模式選擇： 0：不計數 1：計件數遞增計數，計數滿後自動重新計數 2：計件數遞減計數，計數滿後自動重新計數 3：計件數遞增計數，計數滿後，馬達自動停止，須由重定按鈕設定或面板上的P鍵來啟動重新計數。 4：計件數遞減計數，計數滿後，馬達自動停止，須由重定按鈕設定或面板上的P鍵來啟動重新計數。	
156	0～9999	0	對應1/2/3/4號電磁鐵斬波占空比時間選擇（0以ms為單位，1以0.1ms為單位）	
157	0～9999	0	對應5/6/7/8號電磁鐵斬波占空比時間選擇（0以ms為單位，1以0.1ms為單位）	
158	0～1	0	計數可調開關（計針數和計件數）（0可調，1不可調）	

160		0	執行時間復位	
161	0／1／2		參數傳輸 0：無動作 1：下傳參數 2：上傳參數	操作類（不保存）
162	1, 2		恢復出廠參數	
163	1, 2		保存當前參數為用戶自訂機修參數（可恢復）	
164			密碼	
165			恢復控制器出廠參數，並覆蓋機頭廠家出廠參數或用戶自訂機修參數。原有參數不可恢復。	

注：16X 參數操作保存時，必須長時間按住  大約 3-5 秒即可保存。

3.2 系統員參數表

1、 P鍵和設定鍵同時按下可修改系統員參數表；

2、 液晶顯示P d-0000, 要求鍵入系統密碼，初始密碼為 0000，按對應的⊕鍵和⊖鍵可更改密碼數值；

3、 按下P鍵，如密碼正確，即進入系統員參數設置模式，顯示200-0000;

4、 按下對應的▲鍵和▼鍵 或⊕鍵和⊖鍵可選擇參數編號並更改相應的參數值；

5、 最後按下P鍵，即退出參數設置模式，回到正常縫紉模式。

參數編號	參數範圍	典型值	參數描述	備註
200	0／1／2	0	剪線電機運行模式選擇： 0：平車式 1：繃縫式 A（普通繃縫剪線：停到上針位後剪線） 2：包縫式:手動剪線	剪線模式
201	0～359	0	剪線結束時機械角度	
202	0／1／2／3／4／5／6	1	剪線時序選擇： 0： 203 號參數所設定角度[TS]處進行切線，直至上停針後延時 206 參數所設定時間[T2]為止。 1：203號參數所設定角度[TS]處進行切線， 直至204號參數所設定 角度[TE]為止。 2: 203 號參數所設定角度[TS]處進行切線，延時 206 參數所設定時間[T2]為止。 3 :下針位元信號後延遲 205 號參數所設定時間[T1]進行切線, 延時 206 參數所設定時間[T2]設定時間為止。 4 :找到上針位元信號後延遲 205號參數所設定時間[T1]進行切線,延時 206參數所設定時間[T2]設定時間為止，大部分應用於繃縫機。 5：找到下針位元信號後即開始進行切線動作至上停針止。然後延遲 205 號參數所設定時間[T1]後再作 206 參數所設定的切線時間[T2]。（大 部分用於一般平車機型，而T1與T2設定值大部分均設為 0 ） 6 :203號參數所設定角度[TS]處進行切線東芝至上停針止。然後延遲 205號參數所設定時間[T1]後再作206參數所設定的切線時間[T2]。	

203	5-359	10	剪線開始角度 TS（相對於下針位角度）	
204	10-359	120	剪線結束角度 TE（相對於下針位角度，需大於 TS）	
205	1-999	10	剪線開始延時 T1（ms）	
206	1-999	120	剪線結束延時 T2（ms）	
207	1～999	30	保留	
208	1～9999	90	保留	
209	1～999	120	保留	
20A	10-60	20	剪線加力係數(電機加力)	
20B	0～999	0	剪線短線頭功能選擇 （0：關閉；非 0：1 針後延遲關閉時間）	
210	0／1／2／3／4／5／6	0	松線電磁鐵時序選擇： 0：211 號參數所設定角度[LS]後進行松線動作,直至上針位再延遲 214 號參數所設定時間[L2]為止。 1：211 號參數所設定角度[LS]後進行松線動作,直至 212 號參數所設 定角度[LE]為止。 2：211 號參數所設定角度[LS]後進行松線動作,延遲 214 號參數所設 定時間[L2]為止。 3:下針位元信號後延遲[L1]設定時間進行松線動作, 延遲 214 號參數所 設定時間[L2]為止。 4:上針位元信號後延遲[L1]設定時間進行松線動作, 延遲 214 號參數所 設定時間[L2]為止。 5:下針位元信號後即開始進行松線動作至上停針止。然後延遲 213 號參 數設定時間[L1]後再作 214 號參數所設定松線時間[L2]。 6: 211 號參數所設定角度[LS]後進行松線動作,至上停針止。然後延遲 213 號參數設定時間[L1]後再作 214 號參數所設定松線時間[L2]。	松線、掃線、夾線模式
211	5-359	25	松線電磁鐵啟動角度 LS（相對於下針位角度）	
212	10-359	350	松線電磁鐵結束角度 LE（相對於下針位角度，需大於 LS）	
213	1-999	1	松線電磁鐵啟動延遲時間 L1（ms）	
214	1～999	10	松線電磁鐵上針位後延遲時間 L2（ms）	
215	0／1	1	掃線功能選擇 0：關閉；1：打開	

216	1～999	10	撥線／掃線延遲時間 ms	
217	1～9999	70	撥線／掃線持續時間 ms	
218	1～999	50	撥線／掃線復原時間 ms	
219	0／1	0	夾線功能選擇 0：關閉；1：打開	
21A	10-359	120	夾線開始角度	
21B	11-359	318	夾線結束角度	
21C	0～9999	0	吹風開始延時 ms	
21D	1～9999	50	吹風持續時間 ms	
21E	11-359	160	夾線時壓腳抬起後的下放角度	
220	200～360	360	剪線後停止位置（可實現剪線回拉功能）	停止模式
221	0～240	0	縫紉前反轉角度（提高過厚料能力）	
222	0／1	0	停針後 D 軸電流鎖定選擇	
223	1～3000	300	停針後 D 軸電流鎖定時間（ms）	
224	0/1/2/3	0	緊急停車模式： 0：關閉緊急停車功能 1：緊急停於任何位置 2：緊急停於上針位 3：緊急停於下針位	
225	0～999	0	緊急停車前繼續縫紉的針數（根據速度與針數設定不同，實際可能大於此數量）	
226	0/1	0	緊急停車後再啟動： 0：不可再啟動，需重新上電； 1：信號撤銷後可再次開始縫紉	
227	200～360	360	中間停上針位位置調整	
228	0/1/2	0	針冷卻功能出力設定(0：運行時動作，1：高於 22A 號參數所設定速度時動作，2：剪線結束後動作 229 號參數所設定時間)	
229	1 - 2550	2500	針冷卻延遲時間(ms)	
22A	200 - 6000	200	針冷卻啟動速度(rpm)	
22B	1 - 20	2	AS-61 系列雙針機自動轉角針數	

22C	0/1	2	AS-61 系列中分壓腳工作模式：0：不與壓腳、倒縫、交替量關聯；1：與壓腳、倒縫、交替量關聯。	
22D	0～359	0	定角度補針的目標角度(對針眼角度)	
22E	0/1	0	AS-61 系列雙針機自動轉角節能模式開關 0：關閉；1：開啟	
230	0／1	0	壓腳提升的控制模式 0：按鈕點動切換；；1：按鈕始終按下才有效；	模式選擇
231	0／1	0	自動測試模式選擇：（前面兩位元數模式設置） 0：定針數；1：定時間（×100ms）	
232	0～1000	300	安全開關報警確認時間 ms（不區分直驅翻台開關和繃縫剪刀保護開關，統一處理方式）	
233	0～1000	50	安全開關恢復確認時間 ms	
234	0／1	0	電機轉向： 1：反轉；0：正轉	
235	0／1 /2	0	壓腳交互量速度控制功能： 0：關閉；1：類比信號；2：開關信號	
236	0～1023	0	交互量下限	
237	0～1023	710	交互量上限	
238	200～800	200	交互量速度控制下限	
239	200～2500	400	交互量速度控制上限	
23A	0/1/2/3	0	單布邊檢測器工作模式： 0：不使用布邊檢測器 1：布邊檢測器工作於人工啟動模式 2：布邊檢測器工作於自動啟動模式 3：布邊檢測器工作於雙切線人工控速模式	
23B	10～3000	50	自動模式啟動確認時間 ms	
23C	0～999	3	啟動後不回應的針數	
23D	0～999	3	雙切線第一次切線的針數	
23E	0～999	3	信號無效後繼續縫紉的針數（根據速度與針數設定不同，實際可能大於此數量）	

23F	0／1	0	自動倒縫時的密縫模式 0：自動倒縫時保持當前密縫狀態;1：自動倒縫時強制關閉密縫;	
240	0～9999	1000	電機/機頭傳動比：X0.001 （如果自動計算過傳動比，控制器內的該參數可能與 HMI 上的不同）	機頭相關參數
241	-	-	保留	
242	0～359	0	上停針位調整角度（相對於上針位感測器的位置偏移）	
243	0～359	175	下針位機械角度	
244	0~800	200	放壓腳延遲時間（ms）	
245	0～359	9	厚料加力開始角度	
246	0～359	57	厚料加力結束角度	
247	0～2000	0	加油提醒時間（小時。0：關閉此功能）	
248	0～4000	0	加油報警、禁止執行時間（小時。0：關閉此功能）	
249	200～2500	1000	機頭交互量 B2 速度	
24A	200～2500	1500	機頭交互量 B3 速度	
24B	0～1023	800	類比信號輸入 1 開關閾值	
24C	0～1023	800	類比信號輸入 2 開關閾值	
250	詳見下行	1	1 號輸入功能定義	輸入功能定義
251		1	1 號輸入有效電平 0/1	
252		0	2 號輸入功能定義	
253		0	2 號輸入有效電平 0/1	
254		0	3 號輸入功能定義	
255		0	3 號輸入有效電平 0/1	
256		0	4 號輸入功能定義	
257		0	4 號輸入有效電平 0/1	
258		0	5 號輸入功能定義	
259		0	5 號輸入有效電平 0/1	
25A		0	6 號輸入功能定義	
25B		0	6 號輸入有效電平 0/1	

250-25B	0：禁止；1：手動倒縫；2：安全開關；3：緊急停針；4：布邊檢測；5：剪線開關輸入；6：壓腳開關輸入；7：補針；8：前後加固逆轉；9：壓腳交互量抬起；10：密縫；11:計數器復位；13：壓腳交替量輸入 1；14：壓腳交替量輸入 2；15：提針鎖定；16：拼縫壓腳控制輸入；17：雙針機左轉輸入；18：雙針機右轉輸入；19：副張力控制輸入			
260	詳見下行	1	1 號電磁鐵輸出功能定義	輸出功能定義
261		3	2 號電磁鐵輸出功能定義	
262		4	3 號電磁鐵輸出功能定義	
263		5	4 號電磁鐵輸出功能定義	
264		2	5 號電磁鐵輸出功能定義	
265		6	6 號電磁鐵輸出功能定義	
266		7	7 號電磁鐵輸出功能定義	
267		8	8 號電磁鐵輸出功能定義	
260-267	0：輸出禁止 1：剪線；2：撥線；3：倒縫；4：抬壓腳；5：松線；6：夾線；7：吸風；8：吹風；9：針冷卻；10：壓腳交互量抬起；11：密縫；12：加固逆轉懸掛狀態；13：交互量抬起狀態；14：密縫狀態；16:底線計數滿狀態；17：剪線短頭輸出；18：拼縫壓腳輸出；19：雙針左轉針杆吸合；20：雙針右轉針杆吸合；21：雙針左轉狀態；22：雙針右轉狀態；23：副張力控制輸出吸合；24：副張力控制狀態			
270	1～500	50	1 號電磁鐵全出力時間 ms	電磁鐵組 1
271	1～100	1	1 號電磁鐵斬波每週期開通時間 ms(保留)	
272	1～100	1	1 號電磁鐵斬波每週期關閉時間 ms(保留)	
273	0～600	0	1 號電磁鐵保護時間 100ms	
274	1～500	70	2 號電磁鐵全出力時間 ms	
275	1～100	1	2 號電磁鐵斬波每週期開通時間 ms(保留)	
276	1～100	1	2 號電磁鐵斬波每週期關閉時間 ms(保留)	
277	0～600	0	2 號電磁鐵保護時間 100ms	
278	1～500	150	3 號電磁鐵全出力時間 ms	
279	1～100	1	3 號電磁鐵斬波每週期開通時間 ms(保留)	
27A	1～100	1	3 號電磁鐵斬波每週期關閉時間 ms(保留)	
27B	0～600	0	3 號電磁鐵保護時間 100ms	
27C	1～500	100	4 號電磁鐵全出力時間 ms	
27D	1～100	1	4 號電磁鐵斬波每週期開通時間 ms(保留)	

27E	1～100	1	4 號電磁鐵斬波每週期關閉時間 ms(保留)	
27F	0～600	0	4 號電磁鐵保護時間 100ms	
280	1～500	40	5 號電磁鐵全出力時間 ms	電磁鐵組 2
281	1～100	0	5 號電磁鐵斬波每週期開通時間 ms(保留)	
282	1～100	0	5 號電磁鐵斬波每週期關閉時間 ms(保留)	
283	0～600	0	5 號電磁鐵保護時間 100ms	
284	1～500	100	6 號電磁鐵全出力時間 ms	
285	1～100	0	6 號電磁鐵斬波每週期開通時間 ms(保留)	
286	1～100	0	6 號電磁鐵斬波每週期關閉時間 ms(保留)	
287	0～600	0	6 號電磁鐵保護時間 100ms	
288	1～500	100	7 號電磁鐵全出力時間 ms	
289	1～100	0	7 號電磁鐵斬波每週期開通時間 ms(保留)	
28A	1～100	0	7 號電磁鐵斬波每週期關閉時間 ms(保留)	
28B	0～600	0	7 號電磁鐵保護時間 100ms	
28C	1～500	100	8 號電磁鐵全出力時間 ms	
28D	1～100	0	8 號電磁鐵斬波每週期開通時間 ms(保留)	
28E	1～100	0	8 號電磁鐵斬波每週期關閉時間 ms(保留)	
28F	0～600	0	8 號電磁鐵保護時間 100ms	
290	詳見下行	7	1 號模擬輸入功能定義	機頭輸入功能定義
291		1	1 號模擬輸入有效電平 0/1	
292		0	2 號模擬輸入功能定義	
293		1	2 號模擬輸入有效電平 0/1	
294		10	11 號輸入功能定義	
295		1	11 號輸入有效電平 0/1	
296		8	12 號輸入功能定義	
297		1	12 號輸入有效電平 0/1	
298		9	13 號輸入功能定義	
299		1	13 號輸入有效電平 0/1	
29A		1	14 號輸入功能定義	
29B		1	14 號輸入有效電平 0/1	

29C		0	15 號輸入功能定義	
29D		1	15 號輸入有效電平 0/1	
29E		0	16 號輸入功能定義	
29F		1	16 號輸入有效電平 0/1	
290-29F	0：禁止；1：手動倒縫；2：安全開關；3：緊急停針；4：布邊檢測；5：踏板剪線輸入；6：踏板壓腳輸入；7：補針；8：前後加固逆轉；9：壓腳交互量抬起；10：密縫；11:計數器復位；13：壓腳交替量輸入 1；14：壓腳交替量輸入 2；15：提針鎖定；16：拼縫壓腳控制輸入；17：雙針機左轉輸入；18：雙針機右轉輸入			
2A0	詳見下行	0	9 號機頭輸出功能	機頭輸出功能定義
2A1		0	10 號機頭輸出功能	
2A2		0	11 號機頭輸出功能	
2A3		0	12 號機頭輸出功能	
2A4		0	13 號機頭輸出功能	
2A5		0	14 號機頭輸出功能	
2A6		0	15 號機頭輸出功能	
2A7		0	16 號機頭輸出功能	
2A0-2A7	0：輸出禁止 1：剪線；2：撥線；3：倒縫；4：抬壓腳；5：松線；6：夾線；7：吸風；8：吹風；9：針冷卻；10：壓腳交互量抬起；11：密縫；12：加固逆轉懸掛狀態；13：交互量抬起狀態；14：密縫狀態；16:底線計數滿狀態；17：剪線短頭輸出；18：拼縫壓腳輸出；19：雙針左轉針杆吸合；20：雙針右轉針杆吸合；21：雙針左轉狀態；22：雙針右轉狀態；			

3.3 監控參數表

1、 P 鍵和 ✂ 鍵同時按下可進入監控模式，液晶顯示 Monitor 024-0000；

2、 按對應的 ▲ ▼ 鍵和 ↗ 鍵或 ⊕ 鍵和 ⊖ 鍵可選擇參數編號，即可即時監視對應參數 變化；

3、 最後按下 P 鍵，即退回到正常縫紉模式。

參數編號	參數描述	參數編號	參數描述
010	針數計數	025	踏板電壓採樣值
011	計件數	026	機頭傳動比實際值
012	機頭真實速度	027	電機累計執行時間（Hour）
013	霍爾狀態	028	機頭交互量電壓採樣值
020	母線電壓	029	DSP 軟體版本號
021	機頭速度	02A	模擬輸入 1 採樣值
022	相電流	02B	模擬輸入 2 採樣值
023	初始角度	02C	錯誤計數器
024	機械角度	02D	QP 超狀態
		030-037	歷史故障代碼

3.4 安全報警

報警代碼	代碼含義	解決措施
ALA-1	加油提醒	按 P 鍵可暫時取消報警。請及時加油
ALA-2	計針數報警	表示計針數已達所設上限，按 P 鍵可取消報警並重新計數
ALA-3	計件數報警	表示計件數已達所設上限，按 P 鍵可取消報警並重新計數
ALA-4	緊急停車	再按下緊急停車按鈕，可消除緊急停車狀態
ALA-5	提針鎖定	再按下提針鎖定按鈕，可消除提針鎖定狀態
PoWoFF	斷電提醒	請等候 30 秒再重新打開電源開關
Arn UP	翻台開關報警	擺正機頭，確保翻台開關復原

3.5 故障代碼表

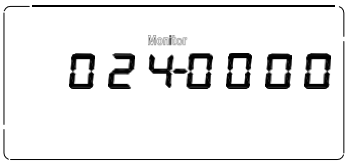
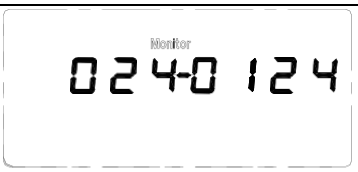
若系統出現報錯或報警，請首先檢查如下項：

1、先確認機器的連接線是否連接完好；2、確認電控和機頭是否匹配；3、確認恢復出廠是否準確。

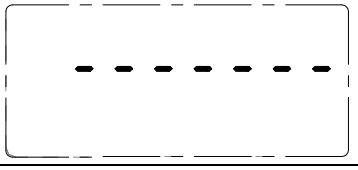
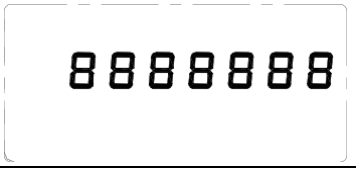
故障代碼	代碼含義	解決措施
Err-01	硬體過流	關閉系統電源，30 秒後重新接通電源，控制器若仍不能正常工作，請更換控制器並通知廠方。
Err-02	軟體過流	
Err-03	系統欠壓	斷開控制器電源，檢查輸入電源電壓是否偏低(低於 176V)。若電源電壓偏低，請在電壓恢復正常後重新開機控制器。若電壓恢復正常後，啟動控制器仍不能正常工作，請更換控制器並通知廠方。
Err-04	停機時過壓	斷開控制器電源，檢查輸入電源電壓是否偏高（高於 264V）。若電源電壓偏高，請在電壓恢復正常後重新開機控制器。若電壓恢復正常後，啟動控制器仍不能正常工作，請更換控制器並通知廠方。
Err-05	運行時過壓	
Err-06	電磁鐵回路故障	關閉系統電源，檢查電磁鐵連線是否正確，是否有鬆動、破損等現象。若有則及時更換。確認無誤後重啟系統，若仍不能工作，請更換控制器並通知廠方。
Err-07	電流檢測回路故障	關閉系統電源，30 秒後重新接通電源觀察是否能正常工作。重試幾次，若該故障頻繁出現，請更換控制器並通知廠方。
Err-08	電機堵轉	斷開控制器電源，檢查電機電源輸入插頭是否脫落、鬆動、破損，是否有異物纏繞在機頭上。排除後重啟系統仍不能正常工作，請更換控制器並通知廠方。
Err-09	制動回路故障	關閉系統電源，檢查電源板上白色的制動電阻接頭是否鬆動或脫落，將其插緊後重啟系統。若仍不能正常工作，請更換控制器並通知廠方。
Err-10	HMI 通訊故障	檢查控制台與控制器的連線是否脫落、鬆動、斷裂，將其恢復正常後重啟系統。若仍不能正常工作，請更換控制器並通知廠方。
Err-11	機頭停針信號故障	檢查機頭同步信號裝置與控制器的連線是否鬆動，將其恢復正常後重啟系統。若仍不能正常工作，請更換控制器並通知廠方。
Err-12	電機初始角度檢測故障	請斷電後再嘗試 2-3 次，若仍報故障，請更換控制器並通知廠方。
Err-13	電機 HALL 故障	關閉系統電源，檢查電機感測器接頭是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換控制器並通知廠方。
Err-14	DSP 讀寫 EEPROM 故障	關閉系統電源，30 秒後重啟系統，若仍不能正常工作，請更換控制器並通知廠方。
Err-15	電機超速保護	
Err-16	電機反轉	
Err-17	HMI 讀寫 EEPROM 故障	
Err-18	電機超載	
Err-19	少油報警	給針杆部分加油，並將 P22 參數設置為 4000，將上次加油後工作時間復位；也可以按 P 鍵關閉報警,繼續使用。

4 特殊功能操作說明

4.1 上停針位調整

1		控制系統在恢復出廠後，可根據需要重新設置上針位元！ 第一步：先按住 P 鍵，再按 ✂ 鍵，即進入監控模式，默認為 024 號監控參數，液晶屏顯示當前角度，如為 0°表明此位置為系統當前預設的上停針位置。
2		第二步：轉動手輪，讓挑線杆到上停針位置或希望調整到的合適位置，此時液晶屏顯示調整後的上停針位，如 124°
3		第三步：先按住 P 鍵，再按 I 鍵，使機械偏轉角度歸零，上停針位設置完成。最後按 P 鍵退出。

4.2 一鍵恢復機頭廠家參數值

1		如果希望恢復機頭廠家的出廠參數，可按照如下步驟： 第一步：先按住 P 鍵，再按 ✂ 鍵，即進入監控模式，默認為 024 號監控參數。
2		第二步：長按 F 鍵 3 秒鐘以上，開始一鍵恢復機頭廠家參數，液晶屏顯示橫杠，表明正在恢復參數，此時控制器切勿斷電或拔出操作面板插頭。
3		待數碼管顯示全 8，表明機頭廠家參數恢復完成。

4.3 腳踏板靈敏度調整

腳踏板動作由初始位置①（136 號參數）開始，緩慢向前踩至②（137 號參數）開始低速縫紉，繼續前踩至③（138 號參數）開始加速，再深踩至④（139 號參數）達到最高速度。②③段之間維持起縫速度，③④段之間為無級調速過程；

1、當腳踏板由初始位置①（136 號參數）開始，緩慢後踩至⑤（135 號參數）時抬 壓腳自動抬起；

2、當腳踏板由初始位置①（136 號參數）開始，緩慢後踩至⑥（134 號參數）時自 動完成剪線動作。

3、各參數數值設置需保證

（134 號參數）<（135 號參數）<（136 號參數）<（137 號參數）<（138 號參數）<（139 號參數）

4、可通過監控模式下 025 號參數即時監測不同位置下的踏板採樣數值作為各參數的參考值。調整對應參數，抬壓腳和前踩或後踩的動作位置也隨之改變。如前踩很大距離機器還沒有運轉，可適當減小 137 參數（不能小於回中位置參數 136），即可提高前踩的靈敏度；若機器過於靈敏，輕觸踏板機器就開始運行，可適當加大 137 參數；若不容易補針，稍微前踩，速度就迅速提高造成前沖多針，可適當增大 138 參數或減小 137 參數（即增大腳踏板低速範圍），也可以適當降低初始起縫速度（100）。

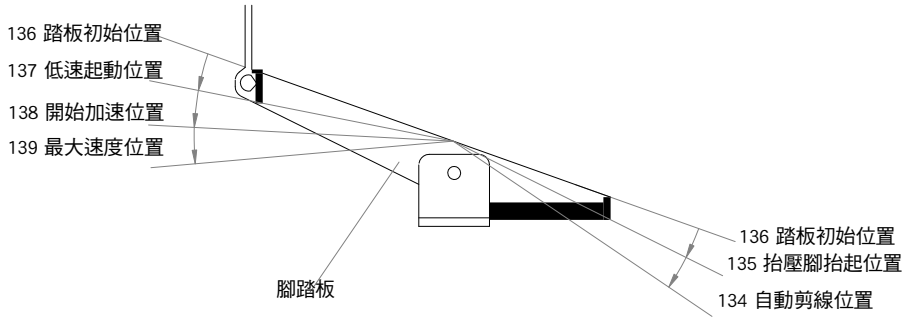


圖 4-1　踏板動作各位置參數示意圖

4.4 電磁鐵性能調整

按典型配置，設參數 260 為 1，表明 1 號電磁鐵被設置為剪線電磁鐵，則 1 號電磁鐵 設置參數 270~273 號即為剪線電磁鐵設置參數。設參數 261 為 3，表明 2 號電磁鐵被設置 為倒縫電磁鐵，則 2 號電磁鐵設置參數 274~277 號即為倒縫電磁鐵設置參數。設參數 262 為 4，表明 3 號電磁鐵被設置為抬壓腳電磁鐵，則 3 號電磁鐵設置參數 278~27B 號即為抬

壓腳電磁鐵設置參數。

z 電磁鐵速度調整 若電磁鐵吸合緩慢，力度不夠。可增加電磁鐵全出力時間，例如增大參數 270，即增

加剪線電磁鐵全出力時間，從而提高剪線吸合速度、增大剪線力度。若電磁鐵聲音過大，可適當減小電磁鐵全出力時間。

z 電磁鐵容易發熱

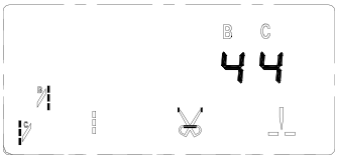
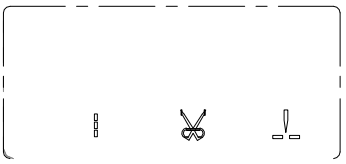
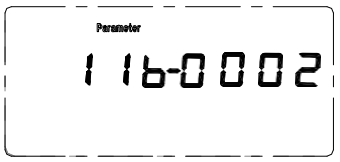
可減小占空比，適當將斬波開通時間參數（如 271 號）降低或者將關閉時間參數（如 272 號）增加（注：如果開通時間占比調整過小，可能會導致電磁鐵吸合狀態下力度不夠甚至提前釋放）。

z 電磁鐵吸合無力，吸合狀態的力度如何調整（怎樣增大吸合時候狀態的力度

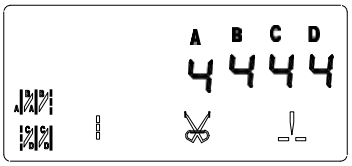
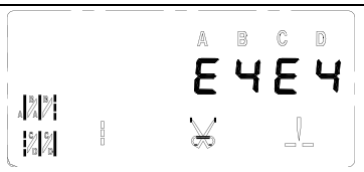
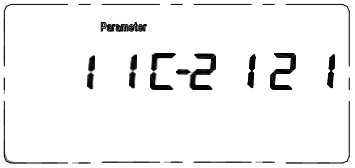
可增大占空比，適當將斬波開通時間參數（如 275 號）增加，或將關閉時間參數（如 276 號）減小（注：如果開通時間占比調整過大，易使電磁鐵發熱）

4.5 前後固縫模式設置

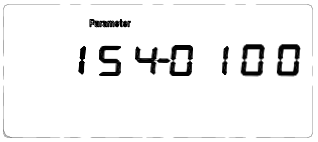
針對固縫模式，通過前固縫按鍵和後固縫按鍵，系統預設支援①單固縫、②雙固縫、③四固縫與④無固縫四種模式間切換。

①	前單固縫、後單固縫模式 	②	前雙固縫、後雙固縫模式 
③	前四固縫、後四固縫模式 	④	無前、後固縫 
		可通過調整 11B 號參數，修改固縫切換模式。若設置為 1，則只在單固縫與關閉固縫間切換；若設置為 2，則在單固縫、雙固縫和關閉固縫間切換；若設置為 3，則在雙固縫與關閉固縫間切換；若設置為 4，則在雙固縫、四固縫和關閉固縫間切換。前固縫和後固縫模式均由 11B 號參數指定。	

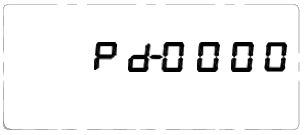
4.6 前後固縫與四段縫超長針數設置

1		在設置前後固縫的 A/B/C/D 段與四段縫的 E/F/G/H 段時，可選擇對應的⊕鍵和⊖鍵增減設置各段數值，系統通常預設設置範圍為 1~F 對應 1~15 針。
2		但若需要設置更多的針數，可通過修改 11C 號參數和 11D 號參數來指定欲設置針數的十位，再加上 A/B/C/D 和 E/F/G/H 段設置的個位數字，共同組成總針數。例如，在設置前後固縫針數時，默認 11C 號參數為 0000
3		若 A 段、C 段設置為 E，B 段、D 段設置為 4，則 A 段、C 段實際 針數為 14 針，B 段、D 段實際針數為 4 針。
4		若任意一段的針數需設置超過 15 針，則需調整 11C 號參數。如 將 11C 號參數調整為 2121，
5		同時相應 A/B/C/D 段分別設置為 1/6/1/6，則 A 段、C 段實際針數為 21 針，B 段、D 段實際針數為 16 針。這樣，所述各段針數 實際可調範圍可擴展為 1~99 針。
6		四段縫的 E/F/G/H 各段的設置與前後固縫類似，但十位調整參數為 11D 號參數。 注：調出 11C 號參數的快速鍵為同時按下F加▲鍵；11D 號參數的快速鍵為同時按下F加▼鍵。

4.7 H-43 操作面板計件數功能

1		第一步，先按住P鍵，再按鍵，液晶屏會提示輸入技術員參數密碼，再按下P鍵進入技術員模式；
2		第二步,調整到 154 號參數,輸入將所需的計件數，例如設定的報警件數為 100 件；
3		第三步，再調到 155 號參數，選擇所需計件數模式，通常可設置為 3，即計件數滿後按復位鍵取消報警重新計數,然後按P鍵保存退出。
4		第四步，打開計件數監控功能，先按住P鍵，再按鍵進入監控模式。
5		第五步，將參數號調到 011，即計件數監視功能，這樣每剪完一次線，計件數就增加 1。
6		第六步，當所計件數達到所設上限值（154 號參數）時，例如 100 件時，
7		操作面板顯示 ALA-3，提示計件數報警，表明計件數已達到 154 號參數所設報警件數，
8		第七步，此時可按P鍵取消報警，並重新開始計數，計件報警件數仍然由 154 號參數確定。

4.8 H-43 操作面板計針數功能

1		第一步，先按住P鍵，再按鍵，液晶屏會提示輸入技術員參數密碼，再按下P鍵進入技術員模式；
2		第二步,調整到 151 號參數,輸入將所需的計針數，例如設定的報警針數為 3000 針；
3		第三步，再調到 152 號參數，選擇所需計針數模式，通常可設置為 3，即計針數滿後按復位鍵取消報警重新計數，然後按P鍵保存退出。
4		第四步，打開計針數監控功能，先按住P鍵，再按鍵進入監控模式。
5		第五步，將參數號調到 010，即計針數監視功能，這樣每轉一圈完成一針，計針數就增加 1。
6		第六步，當所計針數達到所設上限值（151 號參數）時，例如達到 3000 針時，
7		操作面板顯示 ALA-2，提示計針數報警，表明計針數已達到 151 號參數所設報警針數，
8		第七步，此時可按P鍵取消報警，並重新開始計數，計針報警件數仍然由 152 號參數確定。

4.9 H-70 操作面板計針數/計件數功能

H-70 操作面板包含專門的計針數/計件數顯示模組。

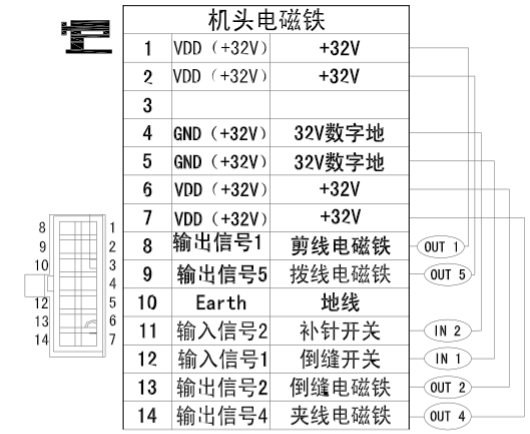
H-70 操作面板系統參數的設置方式與 H-43 面板一致。

1		第一步，先按住P鍵，再按  鍵，液晶屏會提示輸入技術員參數密碼，再按下P鍵進入技術員模式；
2		第二步，選擇所需計針數模式，通常可設置為 3，即計針數滿後按復位鍵取消報警重新計數；
3		第三步，再選擇所需計件數模式，調到 155 號參數，亦可設置為 3，即計針數滿後按復位鍵取消報警重新計數；然後按P鍵保存退出。
4		若開啟了計針數功能或計件數功能，操作面板將對應顯示計針數標識或計件數標識。當計針數功能與計件數功能均開啟時，預設顯示計針數值，
5		此時按計數切換鍵  可在顯示計針數與計件數功能間切換。
6		系統通常預設開啟計數設定值快捷修改的功能。可調整 158 號參數，修改為 1 則關閉此功能，默認為 0 開啟此功能。
7		此時，顯示計針數時，按計數按鍵區域內  鍵，可對計針數設定值加減；

8		顯示計件數時，按計數按鍵區域內  鍵，可對計件數當前值加減；
9		按計數復位鍵  可對當前顯示的計數值清零。

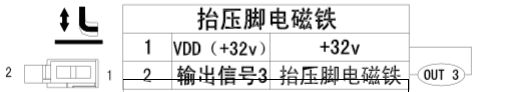
5　介面定義配置圖

平縫系列介面配置表



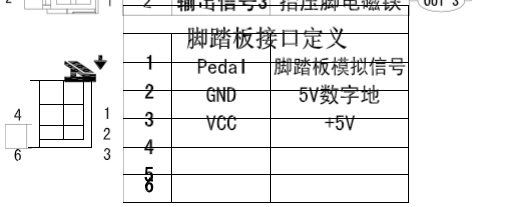
机头电磁铁		
1	VDD（+32V）	+32V
2	VDD（+32V）	+32V
3		
4	GND（+32V）	32V数字地
5	GND（+32V）	32V数字地
6	VDD（+32V）	+32V
7	VDD（+32V）	+32V
8	输出信号1	剪线电磁铁
9	输出信号5	拨线电磁铁
10	Earth	地线
11	输入信号2	补针开关
12	输入信号1	倒缝开关
13	输出信号2	倒缝电磁铁
14	输出信号4	夹线电磁铁

OUT 1　OUT 5　IN 2　IN 1　OUT 2　OUT 4



抬压脚电磁铁		
1	VDD（+32v）	+32v
2	输出信号3	抬压脚电磁铁

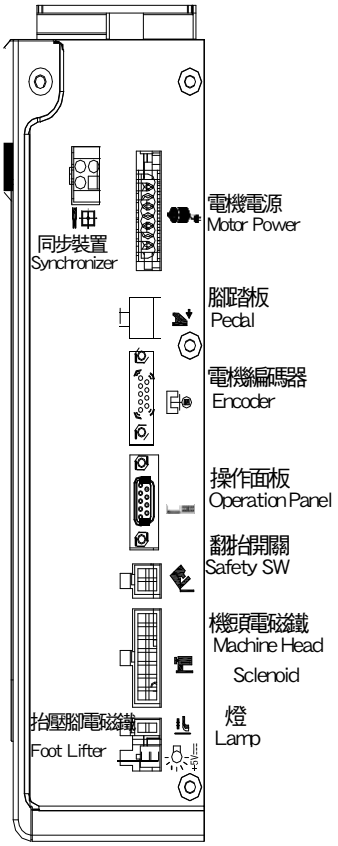
OUT 3

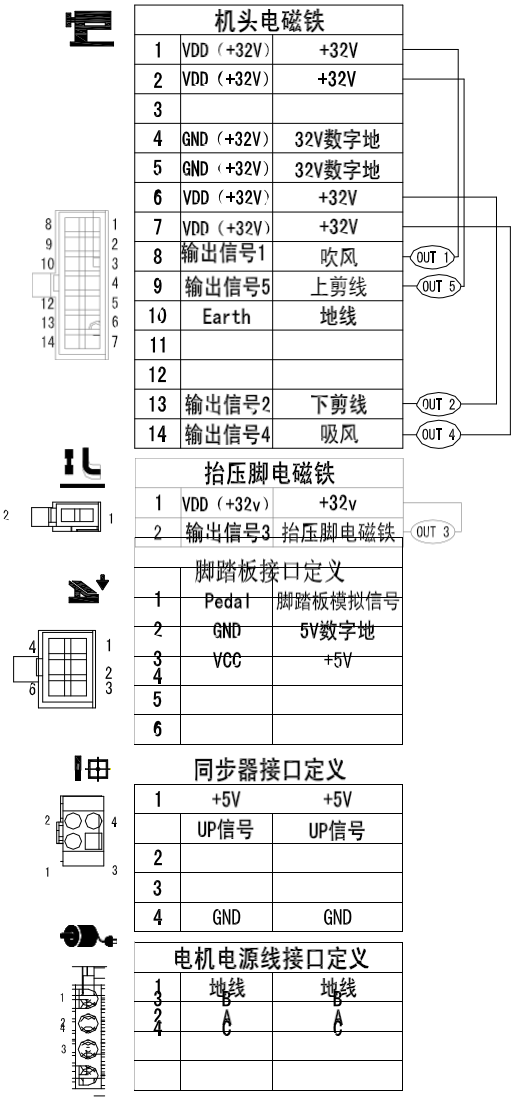


脚踏板接口定义		
1	Pedal	脚踏板模拟信号
2	GND	5V数字地
3	VCC	+5V
4		
5		
6		

同步器接口定义		
1	+5V	+5V
2	UP信号	UP信号
3		
4	GND	GND

电机电源线接口定义		
1	地线	地线
2	A	A
3	B	B
4	C	C





机头电磁铁		
1	VDD（+32V）	+32V
2	VDD（+32V）	+32V
3		
4	GND（+32V）	32V数字地
5	GND（+32V）	32V数字地
6	VDD（+32V）	+32V
7	VDD（+32V）	+32V
8	输出信号1	吹风
9	输出信号5	上剪线
10	Earth	地线
11		
12		
13	输出信号2	下剪线
14	输出信号4	吸风

抬压脚电磁铁		
1	VDD（+32v）	+32v
2	输出信号3	抬压脚电磁铁

脚踏板接口定义		
1	Pedal	脚踏板模拟信号
2	GND	5V数字地
3	VCC	+5V
4		
5		
6		

同步器接口定义		
1	+5V	+5V
	UP信号	UP信号
2		
3		
4	GND	GND

电机电源线接口定义		
1	地线	地线
3	B	B
2	A	A
4	C	C

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Contents

Safety Instruction

- Please read this manual carefully, also with related manual for the machinery before use the controller.
- For installing and operating the controller properly and safely, qualified personnel are required.
- Please try to stay away from arc welding equipment, in order to avoid electromagnetic interference and malfunction of the controller.
- Keep in room bellow 45° and above 0°
- Do not humidity below 30% or above 95% or dew and mist of places.
- Install the control box and other components, turn off the power and unplug the power cord.
- To prevent interference or leakage accidents, please do the ground work, the power cord ground wire must be securely connected to an effective way to earth.
- All parts for the repair provided by the Company or approved before use.
- Performing any maintenance action, you must turn off the power and unplug the power cord. There are dangerous high voltage control box, you must turn the power off after one minute before opening the control box.
- This manual marked with the symbol of the Department of Safety Precautions must be aware of and strictly adhered to, so as not to cause unnecessary damage.

1. Installation Introduction

1.1Product specifications

Product Type: ASD58-55 ; ASU58-55 ; ASD58-75 ; ASU58-75 ; AHE58-55; Supply

Voltage: AC 220 ± 20% V;

Power frequency: 50Hz/60Hz;

Maximum output power: 550W;

1.2 Interface connection

The foot pedal and the head of each connecting plug into the socket on the corresponding controller behind, each socket name as shown in Figure 1-2.Attached, please check whether the plug is inserted.

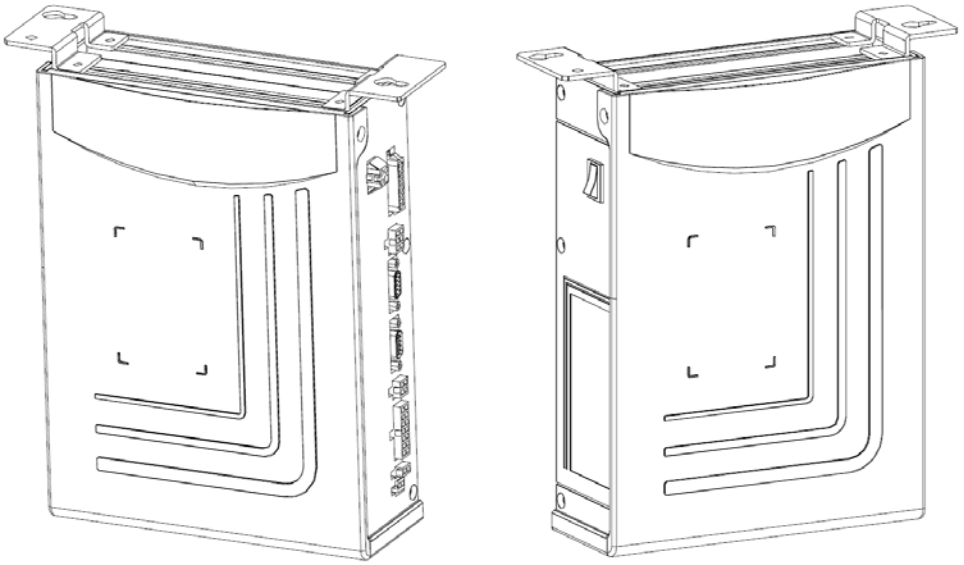


Fig.1-1 AS series Control Box

①:the motor power supply socket; ②: the pedal socket; ③:the motor encoder socket; ④the operation panel switch socket socket;⑤ the turn table;⑥:the automatic electromagnet socket; ⑦:the presser foot lifting electromagnet socket; ⑧:the head lamp socket (black); ⑨:the external synchronizer socket.

⚠: The use of the normal force are not inserted into the plug and socket, please check whether the matching, direction or needle insertion direction is correct! Lighting interface and presser foot lifting electromagnet interface is a 1*2 interface, head lamp interface using black interface, please pay attention to the distinction between.

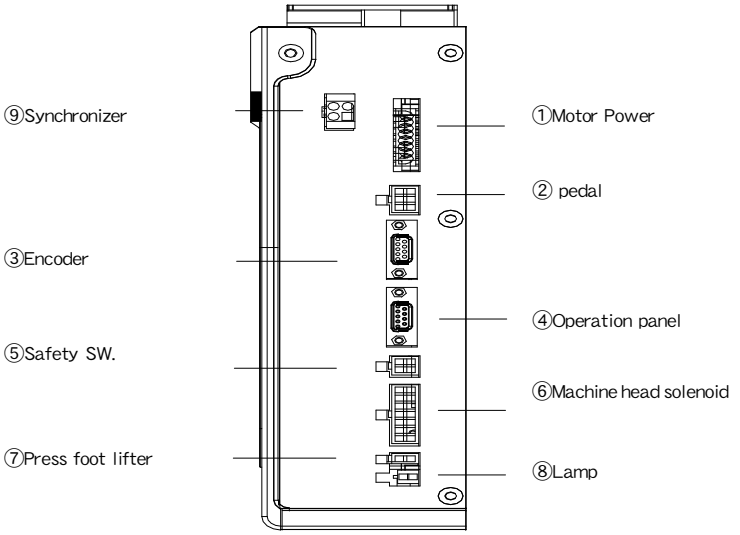


Fig.1-2 AS series control box outlet backplane

„ 1.3 Power Connection and Grounding basic parameters

Please electrical engineer must do construction to the system grounding engineering. Electricity and put into use, must ensure that the power supply socket AC input has been safe and reliable grounding. System ground is yellow-green line, the line must be connected to the power grid safe reliable grounding protection, to ensure the safe use, and can prevent the abnormal situation.

⚠：All the power line, signal line, ground wire connection not by other objects or excessive pressure to distort, in order to ensure the safe use!

„ 1.4 Installation and adjustment

(A) The integrated direct drive motor, please refer to the various machine head manufacturers installation instructions;

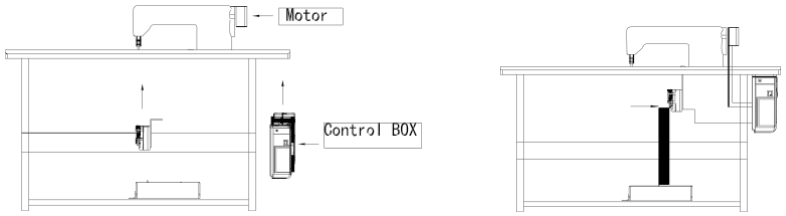


Fig.1-3 Direct drive installation diagram controller

(B) Plug-in type belt motor, please pay attention to adjust the motor with the belt installation position:

(1) The belt pulley and the sewing machine belt wheel motor must be absolutely parallel;

(2)The cable through the platen must be fixed, to prevent the belt friction;

(3) The belt tightness adjustment, the motor base fixing bolts slightly loose, adjustment of the motor and the head pulley key proper spacing, then lock tight fix.

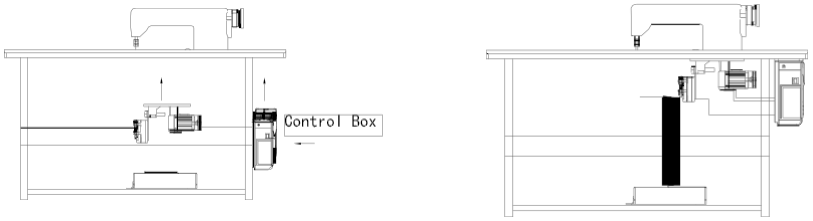


Fig.1-4 Motor installation diagram controller

(C) The external control box is installed; please note the table right side leaving enough space. The control box is locked in the lower right

(D) The pedal (speed controller) is installed; please keep the boom into a straight line, the foot board support locking in the table below. And according to need, adjust the screw, change the angle of the foot pedal, the pedal feet step on and after stroke is suitable for the operation habit.

2 Operation Panel Instruction

2.1 Operation panel display instruction

According to the different configuration and demand, AS series controller provides many kinds of operation panel for customers to use. According to the operating condition of the system, the LCD module operation panel will display the sewing patterns, various parameters, front / back fixed seam to set the current, and the presser foot, needle position, line cutting, slow up the joint character LCD. Each panel contains the function keys and liquid crystal display function symbols according to the type of distinction and slight increase or decrease, but the work mode and use are roughly the same.

1) H-43 Operation panel appearance

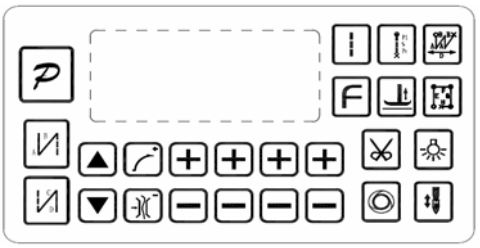


Fig.2-1 H-43 appearance

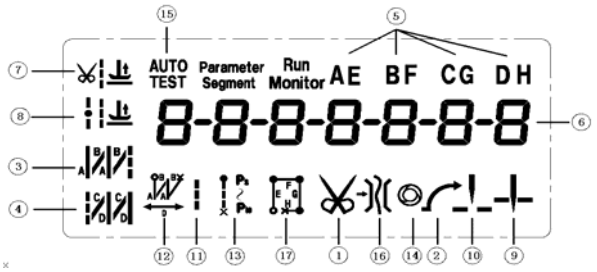


Fig.2-2 H-43 LCD screen icon

Table 2-1 LCD Icon Display Description

Index	Icon	Description	Index	Icon	Description
1		Automatic trimming	10		Intermediate stops up stop position
2		Soft-start function	11		Free sewing
3		start back tacking	12		W seam
4		End back tacking	13		Multi-seam
5	AE BF CG DH	Sewing segments index	14		Trigger function
6	8 8 8 8 8 8	Numeric character display (pin number / parameter)	15	AUTO TEST	Automatic test
7		Foot lifter after trimming	16		Clamp function
8		Middle stop foot lifter	17		Four –
9		Intermediate stops down stop position			

2) H-70 **Operation panel appearance**

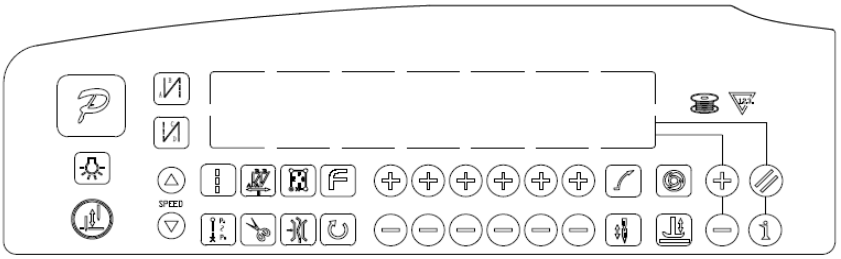


Fig.2-3 H-70 appearance

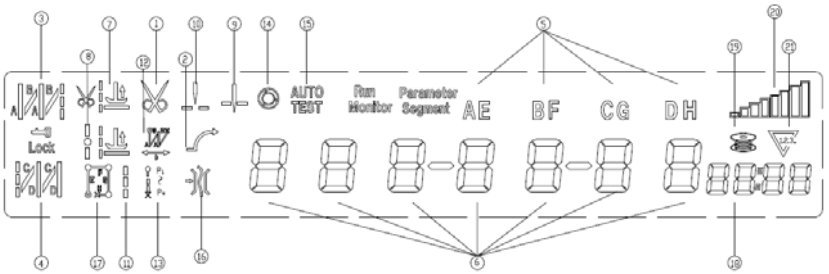
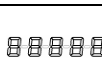


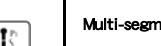
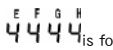
Fig.2-4 H-70 LCD screen icon

Table 2-2 LCD Icon Display Description

Index	Icon	Description	Index	Icon	Description
1		Automatic trimming	12		W sewing
2		Soft-start function	13		Multi-segment sewing
3		start back tacking	14		Multi-seam trigger function
4		End back tacking	15		Automatic test
5		Sewing segments index	16		Clamp function
6		Numeric character display (pin number / parameter)	17		Four – segment sewing
7		Foot lifter after trimming	18		Count needle number
8		Middle stop foot lifter	19		Count piece number
9		Intermediate stops down stop position	20		Count display
10		Intermediate stops up stop position	21		Speed mark
11		needle and piece number of base line			

2.2 The operation panel keys of description

No	Appearance	Name	Description
1		**Function key**	The key is parameters confirm key, and back to the previous menu until the operator sewing mode state. In addition, work with other key to set a higher level of the parameter.
2		**Start back tacking key**	It is called start back tacking function selection keys, every effective press the key once, system will be in accordance with the 11B parameter set none and single start back tacking ,double start back tacking , four start back tacking , LCD icon is lit at the same time. Show is start back tacking interface, Select the corresponding ⊕ key and the ⊖ key can set needle(C、D) default range 1~F corresponds to the 1~15 pin.

No	Appearance	Name	Description
3		End back tacking key	It is called end back tacking function selection keys, every effective press the key once, system will be in accordance with the 11B parameter set none and single end back tacking  , double end back tacking , four end back tacking  , LCD icon is lit at the same time. Show is end back tacking interface, Select the corresponding ⊕ key and the ⊖ key can set needle(C、D) default range 1~F corresponds to the 1~15 pin.
4		Free sewing mode key	Press this key, the system into free sewing mode. LCD icon is lit, step on the pedal to start sewing.
5		W sewing mode key	Press this key, system into w sewing mode, LCD icon  is lit, shown  is w sewing interface, Select the corresponding ⊕ key and the ⊖ key can set needle(A、B、D) default range 1~F corresponds to the 1~15 pin.
6		Multi-segment sewing mode key	It is called constant sewing, you press the key, the system enters to the multi segment sewing mode, LCD icon  is lit, shown  is multi – segment sewing interface, is total segment, use ⊕ key and the ⊖ key to adjusting, the default maximum 24 segments,  as the current setting section, as the sewing needle number of the current section, they are used ⊕ key and the ⊖ key to adjusting.
7		Four-segment sewing mode key	Press this key, system into the four segment sewing mode, LCD icon  is lit, shown  is four-segment sewing interface, Select the corresponding ⊕ key and the ⊖ key can set needle(E, F, G, H) default range 1~F corresponds to the 1~15 pin.

No	Appearance	Name	Description
8		**Soft start key**	Press this key, LCD icon  is lit, show soft start function effectively, then press the icon is off, indicates close soft start function.
9		**Clamp string key**	Press this key, LCD icon  is lit, show clamp function effectively, then press the icon is off, indicates close clamp function.
10		**Stop position key**	When sewing midway stop, system upper / lower needle stop position by pressing the key,  is lit, that is up needle stop position, then press the key,  is lit, show down needle stop. the sewing complete trimming, the system will stop up needle position. Note: the H-43 panel without the key, the key  combination to achieve the function.
11		**Stitch compensation key**	In the free sewing midway stop or multi segment sewing section stop, press the key can realize stitch compensate function. One shot the button to fill half needle, press a long time to fill a needle, keep the continuous stitch compensate.
12		**Trimming key**	Press this key, LCD icon  is lit, indicate that the automatic trimming function effectively, then press the icon is off, indicates close trimming function.
13		**Press foot lifting key**	Each press once, system presser foot model will not automatically presser foot, trimming back automatic presser foot  , sewing to automatic presser foot  , sewing end and stop press foot lifting four modes, corresponding LCD icon is lit up at the same time

No	Appearance	Name	Description
14		One-Shot-Sewing key	In the multi segment sewing mode, press the key, LCD icon is lit  , suggesting that trigger mode effectively, the pedal can be accomplished once the current period of setting needle sewing; then click the icon out, show that multi segment joint triggered off.
15		Lamp	H-43 and H-70 panel support machine headlight dimming function, in order to press the key, can get close and from dark to bright four stage light modulation effect.
16		Custom functions key	Custom extension function keys, and according to the situation can work with other key combination function
17		Speed increase and decrease key	The highest speed of system can be fast adjustment. In the multi segment sewing mode, also as the total segments of the adjust button. In addition, the parameter setting, can be used as keys corresponding to the adjustment parameter
18		Parametric increase and decrease key	Adjust the parameter values increase and decrease
19		Switch key	Fast switching operation, the retention, not being used (H-43 panel without this key).
20		Counting switch key	Counting switch meter needle number model and the piece number model (H-43 panel without this key).
21		Count zero clearing key	Count needle mode and piece mode current count the clear button (H-43 panel without this key).

3 System parameter setting

3.1 Technician mode

1、Press P key and key can modify the technician parameter table.

2、The LCD will display P d-0 0 0 0.Type the password for the technician, the initial password is 0 0 0 0，press the corresponding + key and the − key can change the password value;

3、Press P key，If the password is correct, enter into the technician parameter setting mode,shown 100-0000,

4、Press the corresponding ▲ key and ▼ key or + key and − key, select the parameter and change the corresponding parameter.

5、Press P key, exit parameter setting mode, return to sewing mode.

NO.	Range	Default	Description	Comment
100	100~800	200	Start sewing speed	Speed
101	200~5000	3500	Maximum sewing speed	
102	200~5000	3000	Maximum constant sewing speed	
103	200~5000	3000	Maximum manual back tacking speed	
104	100~800	200	Stitch compensation speed	
105	100~500	250	Trimming speed	
106	0／1	0	Soft start mode setup: 0：Soft start only after trimming 1：Soft start after both trimming and stop	
107	1~9	2	Soft start stitch number	
108	100~800	200	Soft start speed	

109	1~20	20	System accelerate sensitivity （ Direct drive transmission can be set up to a large value ； belt transmission don't set large value or too much noise and vibration. This parameter do not affect the electrical ）	
10A	1~20	20	System decelerate sensitivity （ Direct drive transmission can be set up to a large value ； belt transmission don't set large value or too much noise and vibration. This parameter do not affect the electrical ）	
10B	200~1200	800	Medium speed value(RPM)	
10C	25~200	50	Low speed value(RPM)	
110	200~2200	1800	Start back tacking speed	Back tacking Para.
111	200~2200	1800	End back tacking speed	
112	200~2200	1800	W-type sewing speed	
113	1~70	24	Start back tacking, No.1 stitch compensation profile	
114	1~70	20	Start back tacking, No.2 stitch compensation profile	
115	1~70	24	End back tacking, No.1 stitch compensation profile	
116	1~70	20	End back tacking, No.2 stitch compensation profile	
117	1~70	24	Retain	
118	1~70	20	Retain	
119	1～999	60	Auto back tacking section stop time CT(ms)	
11A	10~359	170	Stitch compensation reference angle(optimum actuation angle of backstitch electromagnet)	
11B	0-4	0	Start and end back tacking type (CD and AB) 0：B->AB->ABAB->none 1：B->none 2：B->AB->none 3：AB->none 4：AB->ABAB->none	

11C	0000-9999	0	Corresponding to A/B/C/D pins of ten bit, start and end back tacking interface under the A/B/C/D digits together constitute the two digit pin number, each section of pin number 1~99 needle.	
11D	0000-9999	0	Corresponding to E/F/G/H pins of ten bit, start and end back tacking interface under the E/F/G/H digits together constitute the two digit pin number, each section of pin number 1~99 needle.	
120	0／1／2／3	0	Start back tacking mode 0: touch the pedal, automatic execution start back tacking. 1: the pedal can be arbitrarily stopped to control. 2: the needle stop up position, 119 parameter [CT] time control action 3: the needle stop down position, 119 parameter [CT] time control	Back tacking Mode
121	0／1／2	0	Start back tacking after operation mode selection: 0: start back tacking after continue sewing 1: start back tacking after automatic stop 2: start back tacking after automatic trimming	
122	0／1	0	constant sewing after operation mode selection: 0：end back tacking;　1：standby (fill needle)	
123	0／1／2／3	0	End back tacking mode: 0：touch the pedal, automatic execution start back tacking 1: none 2: the needle stop up position, 119 parameter [CT] time control action 3: the needle stop down position, 119 parameter [CT] time control action	
124	0／1／2／3	0	W back tacking mode: 0: start back tacking after continue sewing 1: start back tacking after automatic stop 2: start back tacking after automatic trimming	
125	0～99	0	End back tacking last C segment increase needle number	

126	0～99	0	Before start back tacking insertion of needle number (the first A segment increase needle number)	
127	0～99	0	After end back tacking insertion of needle number (the first D segment increase needle number)	
128	0～3	0	Intermediate constant back sewing number	
129	0～99	4	Intermediate constant sewing number	
12A	0～99	0	the first section of W sewing reduction or increase needle number; the range of 0-99, the default value is 0	
12B	0～99	0	the terminal section of W sewing reduction or increase needle number; the range of 0-99, the default value is 0	
12C	0/1	0	The first section of W sewing addition or reduction mode: 0 reductions,1 supplement. The default is 0	
12D	0/1	0	The terminal section of W sewing addition or reduction mode: 0 reductions, 1 supplement. The default is 0	
12E	0/1	0	constant sewing intersegment count on or off: 0 gauge needles, 1 without needles; the range of 0-1, the default 0 (hand wheel gauge needle number)	
130	0／1／2／3	2	Pedal speed-control profile mode: 0：Auto linear ramp (auto calculation according to max. speed) 1：Two segment liner Curve. 2：Power law curve 3：S-type curve	Pedal Para.
131	200~4000	3000	Sub-Para. Of two-stage speed control: mid-turning-point speed RPM (two-stage ramp turning point speed)	
132	0~1024	800	Sub-para. Of two-stage speed control ramp: Pedal analog value of mid-turning-point (in 138 to 139 parameters)	
133	1／2	1	Sub-para. Of power speed control curve: 1: Square 2：Radiation	

134	0~1024	90	Trimming pedal-position	Figure 4-1shows the specific setting method.	
135	0~1024	300	Foot lifting pedal-position		
136	0~1024	460	Pedal back to Mid position		
137	0~1024	480	Pedal start running position		
138	0~1024	580	Pedal low speed running position		
139	0~1024	962	Pedal max. Analog value		
13A	0~800	100	Pedal foot lifting confirming time		
13B	0／1	0	After pedal back to Mid position then trimming selection start: 0：off 1：on		
13C	0／1	1	Foot lifting position, foot lifting function selection: 0: without 1:with		
13D	0／1	1	Trimming position, foot lifting function selection: 0: without 1:with		
13E	1~800	0	Trimming after, foot lifting delay time (clamp)		
13F	0／1／2／3／4	0	The back pedal operation mode selection: (Reserved) 0: after a tangent and presser foot 1 : after only needle lifting function 2 : after all no presser foot function 3: after stepping presser foot and needle 4: after stepping presser foot lift and go slow		
140	0／1	1	Run to up needle position after Power on： 0: no action 1: action		Customize Set up
141	0／1	1	Automatically reinforcing functions chose ： （ the machine head is not automatically reinforcing functions, the best way is prohibit ） 0：prohibit 1：allow		

142	0／1	0	Function mode selection when manually push back tacking 0 :Juki mode. During sewing or stop sewing both have this action. 1：Brother mode. Only acts during sewing.	
143	0／1／2／3	0	Special operation mode: 0: Operator selection 1: Simply sewing mode 2: Motor initial angle measurement (not necessary to remove the belt) 3: Ratio mode calculation (synchronize encoder is necessary and belt can not be removed)	
144	0~31	0	Motor torque increase function in low speed on & off: 0: Normal functions 1-31: low speed torque increase level	
145	0／1	1	Retain	
146	1~800	100	Instruction execution time of half stitch compensation	
147	1~800	150	Instruction execution time of one stitch compensation	
148	0／1／2	0	Fill needle mode: 0: the time control； 1：fill half needle； 2：fill a needle	
149		0	The presser foot lowering speed slowed down: slow release delay coefficient, bigger down more slowly	
14A	0~10	0	Pedal acceleration curve filtering coefficient	
14B	0~99	0	F key function selection: 0：none； 1：Thick materical on the needle eye of function	
150	1～100	1	Stitch counting proportion set up	
151	1～9999	1	Stitch counting value set up	

152	0～4	0	Stitch counting mode selection: 0: no counting 1: Counting up according to stitch number, after reaching set value then restart. 2: Counting down according to stitch number, after reaching set value then restart. 3: according to the number of needle increment count, count full, motor automatically stop, shall be determined by the P key to reset button set or panel to start counting again. 4: according to the number of needle count down, count full, motor automatically stop, shall be determined by the P key to reset button set or panel to start counting again. 5: according to the number of needle increment count, count full, alarm, shear line motor lock	Count Mode
153	1～100	1	Cunting piece proportion set up	
154	1～9999	1	Counting piece value set up	
155	0～4	0	Trimming counting mode selection: 0: no counting 1: Counting up according to stitch number, after reaching set value then restart. 2: Counting down according to stitch number, after reaching set value then restart. 3: the piece number increment count, count full, motor automatically stop, shall be determined by the P key to reset button set or panel to start counting again.	

			4: the piece number count down, count full, motor automatically stop, shall be determined by the P key to reset button set or panel to start counting again.	
156	0～9999	0	Corresponding to 1/2/3/4, an electromagnet chopper duty time selection (0 in MS, 1 in 0.1ms)	
157	0～9999	0	Corresponding to 5/6/7/8, an electromagnet chopper duty time selection (0 in MS, 1 in 0.1ms)	
158	0～1	0	Counting adjustable switch (gauge needle number and piece number (0) adjustable, 1 non adjustable)	
160		0	Running time reset	Operation (never save)
161	0／1／2		Para. transmission method: 0: no action; 1: Para. Download (from operation panel to controller); 2: Para. Upload (from controller to operation panel).	
162	1, 2		Recover to default para.	
163	1, 2		Save current para. As User custom para.(recoverable)	
164	-		Password	
165	-		Recovery controller factory parameters, and covering the head factory parameter or user defined mechanical parameters. The original parameters can not be restored.	

Note: Such “16x "parameter to operate is saved, you need press  key, about 3-5 seconds, it is saved.

3.2 Administrator mode

1、Press P key and ◎ key can modify the administrator parameter table.

2、The LCD will display Pd-0000.Type the password for the administrator, the initial password is 0000, press the corresponding ⊕ key and the ⊖ key can change the password value;

3、Press P key ,If the password is correct, enter into the administrator parameter setting mode,shown 200-0000,

4、Press the corresponding ▲ key and ▼ key or ⊕ key and ⊖ key, select the parameter and change the corresponding parameter.

5、Press P key, exit parameter setting mode, return to sewing mode.

NO.	Range	Default	Description	Comment
200	0／1／2	0	Trimming motor operation mode selection: 0： flat sewing machine 1：interlock machines（ ordinary flat seaming shearing line: stop to the needle position after the trimming ） 2：The over-lock type: manual trimming	Trimming Mode
201	0～359	0	Mech. Angle when trimming finished	
202	0／1／2／3／4／5／6	1	Trimming time sequence selection: 0: The parameter 203 set angle[TS] start trimming, until the parameter 206 upper needle stop position is reached, then time delay to [T2] set value. 1: The parameter 203 set angles [TS] start trimming, until the parameter 204 set [TE] angle. 2: The parameter 203 set angle [TS] start trimming, time delay to the parameter 206 set [T2] value.	

			3: After lower needle stop position is reached, time delay to the parameter 205 set value [T1] then start trimming, time delay to the parameter 206 set value [T2]. 4: After upper needle stop position is reached, time delay to the parameter 205 set value[T1] then start trimming, time delay to the parameter 206 set value [T2], most applications are for interlock machines. 5: find the needle position signal started first stop pin stop tangent action. Tangent time delay [T2] and 205parameters of the set time [T1] after the 206 parameter set.(most generally used for car models, while T1 and T2 setting value most are set to 0) 6:203 parameters that are set at [TS] of the tangent ,Toshiba first stop pin stop. Tangent time delay [T2] and205 parameters of the set time [T1] after	
203	5-359	10	Trimming start angle TS (relate to down needle stop position angle)	
204	10-359	120	Trimming finish angle TE (relate to down needle stop position angle, the value should be bigger than TS)	
205	1-999	10	Trimming start time delay T1 (ms)	
206	1-999	120	Trimming finish time delay T2 (ms)	
207	1～999	30	(Reserved)	
208	1～9999	90	(Reserved)	
209	1～999	120	(Reserved)	
20A	10-60	20	trimming force coefficient (motor force)	
20B	0～999	0	trimming short head feature selection (0: off; non turn off delay time of 0: 1 after the needle)	

210	0／1／2／3／4／5／6	0	Thread slack electromagnet sequential selection: 0:211 parameter set point of [LS] after loose line, untilthe needle position to delay 214 parameter set time [L2]. 1:211 parameter set point of [LS] after loose line, until the 212 parameter set angle [LE]. 2:211 parameter set point of [LS] after loose line, 214parameters set by the [L2] until the time delay. 3: bit signal delay [L1] set the time to loose line, 214parameters set by the [L2] until the time delay. 4: needle position signal delay [L1] set the time to looseline, 214 parameters set by the [L2] until the time delay. Under 5: bit signal started loose line first stop pin stop.Then the delay parameter 213 set time [L1] after the 214parameter set loose line time [L2]. 6: 211 parameter set point of [LS] after loose line, first stop pin stop. Then the delay parameter 213 set time [L1] after the 214	Thread slack/ Thread sweeping/ String nipping Mode
211	5-359	25	Thread slack electromagnet start angle LS (relate to down needle stop position angle)	
212	10-359	350	Thread slack electromagnet finish angle LE (relate to down needle stop position, the value should bigger than LS)	
213	1-999	1	Thread slack electromagnet start time delay T1 (ms)	
214	1～999	10	Thread slack electromagnet time delay T2(ms)after upper needle stop position is reached	
215	0／1	1	String sweeping function selection 0: off 1:on	
216	1～999	10	Thread wiping/Thread sweeping time delay ms	

217	1～9999	70	Thread wiping/Thread sweeping time delay ms	
218	1～999	50	Thread wiping/Thread sweeping recover time ms	
219	0／1	0	Thread nipping function selection 0: off 1: on	
21A	10-359	120	Thread nipping initial angle	
21B	11-359	318	Thread nipping finish angle	
21C	0～9999	0	Air blow start time delay ms	
21D	1～9999	50	Air blow duration time ms	
21E	11-359	160	Lower angle after foot lifting when thread nipping	
220	200～360	360	Stop position after trimming(can implement pull back function after trimming)	Stop Mode
221	0～240	0	Reverse angle before sewing start(enhance the ability over thick material)	
222	0／1	0	D axis current lock selection after stop	
223	1～3000	300	D axis current lock duration after stop (ms)	
224	0/1/2/3	0	Emergency Stop Mode: 0: Turn off the emergency stop function 1: Emergency stop at any position 2: Emergency stop at upper needle stop position 3: Emergency stop at lower needle stop position	
225	0～999	0	Continue stitch No. before emergency stop (according to different set speed and stitch No., the actual value might be bigger)	
226	0/1	0	Restart after emergency stop: 0: Can not be restart, it’ s necessary to restart the power. 1: When the alarm is canceled, can be restarted.	
227	200～360	360	Upper needle position adjustment when machine stop mid position	

228	0/1/2	0	Needle cooling output power set up (0: 1: running action, higher than the 22A parameter setspeed when the action, 2: cut the line after the end of 229,the movement parameter setting time)	
229	1 - 2550	2500	Needle cooling time delay	
22A	200 - 6000	200	Needle cooling start speed	
22B	1 - 20	2	AS-61 series double needle machine,automatic corner pin number	
22C	0/1	2	Pressure foot work mode of the AS-61 series: 0: not with thepresser foot, tacking, alternating quantity association; 1: andfoot pressure, sewing, alternating quantity association。	
22D	0～359	0	Target angle angle (angle of complement needle needle)	
22E	0/1	0	AS-61 series double needle machine automatic angleenergy-saving mode switch 0:off；1:on	
230	0／1	0	Foot lifting control mode 0: Push button jog switch: 1: Valid when button is pushed;	Mode selection
231	0／1	0	Auto test mode selection: 0: With certain stitch number 1: With certain time	
232	0～1000	300	Safety alarm confirming time ms (for flat sewing machine safety tilting switch and overlock sewing machine safety knife protection switch are same, use the same solution)	
233	0～1000	50	Safety switch recover confirm time ms	
234	0／1	0	Motor resolving direction: 1: C.C.W 0: C.W.	

235	0／1 /2	0	Foot lifting signal speed control function: 0: off 1: analog signal 2: digital signal	
236	0～1023	0	Signal min.	
237	0～1023	710	Signal max.	
238	200～800	200	Signal speed control min.	
239	200～2500	400	Signal speed control max.	
23A	0/1/2/3	0	Single side detector operation mode: 0: no use of detector 1: detector on when manual start mode 2: detector on when auto start mode 3: detector on when double trimming manual speed control mode	
23B	10～3000	50	Auto start mode confirming time ms	
23C	0～999	3	Stitch No. without response after start	
23D	0～999	3	A double tangent first tangent needles	
23E	0～999	3	Continue stitch No. after signal invalid (according to different speed and stitch No., the actual value might be bigger)	
23F	0／1	0	Air-tight joint mode of auto back tacking 0: Hold current air-tight joint condition when auto back tacking; 1: Forced close air-tight joint when auto back tacking;	
240	0～9999	1000	Motor/machine ratio:0.001 (If ratio has been calculated automatically, the para. In the controller might be different with HMI)	Machine Para.
241	-	-	Retain	
242	0～359	0	Adjustment angle of upper needle stop position (relate to angle difference of upper needle stop position encoder)	
243	0～359	175	Mech. Angle of lower needle stop position	

244	0~800	200	Foot lifting release time delay (ms)	
245	0～359	9	Torque increase initial angle of over thick material	
246	0～359	57	Torque increase finish angle of over thick material	
247	0～2000	0	Oil refill time alarm (hour. 0: function deactivated)	
248	0～4000	0	Oil alarm, stop operation time (hour. 0: function deactivated)	
249	200～2500	1000	Machine signal B2 speed	
24A	200～2500	1500	Machine signal B3 speed	
24B	0～1023	800	No.1 Analog signal input threshold value	
24C	0～1023	800	No.2 Analog signal input threshold value	
250	As follows	1	No.1 input definition	Input function definition
251		1	No.1 active input level 0/1	
252		0	No.2 input definition	
253		0	No.2 active input level 0/1	
254		0	No.3 input definition	
255		0	No.3 active input level 0/1	
256		0	No.4 input definition	
257		0	No.4 active input level 0/1	
258		0	No.5 input definition	
259		0	No.5 active input level 0/1	
25A		0	No.6 input definition	
25B		0	No.6 active input level 0/1	
250 - 25B	0:Disable 1:Manual back tacking 2:Safety switch 3:Emergency stop 4:Material side detection 5:Pedal trimming input 6:Pedal foot lifting input 7:Stitch compensation 8:Front-end/rear-end back tacking reverse 9:Presser foot alternation lifting 10:Air-tight joint 11:Counter reset 12:OP input 13:Presser foot alternation input 1 14:Presser foot alternation input 2 15:Needle lifting lock 16:Edge joint presser foot control input 17：Double needle machine left input；18：Double needle machine right input；19：Deputy tension control input			

260	As follows	1	No. 1 electromagnet output definition	Output Definition
261		3	No. 2 electromagnet output definition	
262		4	No. 3 electromagnet output definition	
263		5	No. 4 electromagnet output definition	
264		2	No. 5 electromagnet output definition	
265		6	No. 6 electromagnet output definition	
266		7	No. 7 electromagnet output definition	
267		8	No. 8 electromagnet output definition	
260 - 267	0:Output disable 1:Trimming 2:Thread wiping 3:Back stitch 4:Foot lifting 5:Thread slack 6:Thread nipping 7:Air sucking 8:Air blowing 9:Needle cooling 10: Presser foot alternation lifting 11: Air-tight joint 12:Back tacking reverse hanging mode 13:Alternation lifting mode 14:Air-tight joint mode 15:OP output 16:Bottom thread counter full condition 17:Trimming short thread head output 18: Edge joint presser foot control output 19：Double needle turn left needle bar actuation ；20：Double needle turn right needle bar actuation ；21：Double needle turn left state 22 :Double needle turn right state 23 :Deputy tension control output ;24 :Deputy tension control state			
270	1～500	50	No.1 electromagnet fully output time ms	No.1 Electromagnet
271	1～100	1	No.1 electromagnet chopping on time ms(Reserved)	
272	1～100	1	No.1 electromagnet chopping off time ms(Reserved)	
273	0～600	0	No.1 electromagnet protection time 100ms	
274	1～500	70	No.2 electromagnet fully output time ms	
275	1～100	1	No.2 electromagnet chopping on time ms(Reserved)	
276	1～100	1	No.2 electromagnet chopping off time ms(Reserved)	
277	0～600	0	No.2 electromagnet protection time 100ms	
278	1～500	150	No.3 electromagnet fully output time ms	
279	1～100	1	No.3 electromagnet chopping on time ms(Reserved)	
27A	1～100	1	No.3 electromagnet chopping off time ms(Reserved)	
27B	0～600	0	No.3 electromagnet protection time 100ms	
27C	1～500	100	No.4 electromagnet fully output time ms	

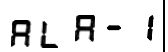
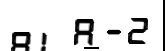
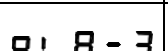
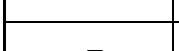
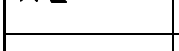
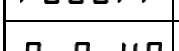
27D	1～100	1	No.4 electromagnet chopping on time ms(Reserved)	
27E	1～100	1	No.4 electromagnet chopping off time ms(Reserved)	
27F	0～600	0	No.4 electromagnet protection time 100ms	
280	1～500	40	No.5 electromagnet fully output time ms	No.2 Electromagnet
281	1～100	0	No.5 electromagnet chopping on time ms(Reserved)	
282	1～100	0	No.5 electromagnet chopping off time ms(Reserved)	
283	0～600	0	No.5 electromagnet protection time 100ms	
284	1～500	100	No.6 electromagnet fully output time ms	
285	1～100	0	No.6 electromagnet chopping on time ms(Reserved)	
286	1～100	0	No.6 electromagnet chopping off time ms(Reserved)	
287	0～600	0	No.6 electromagnet protection time 100ms	
288	1～500	100	No.7 electromagnet fully output time ms	
289	1～100	0	No.7 electromagnet chopping on time ms(Reserved)	
28A	1～100	0	No.7 electromagnet chopping off time ms(Reserved)	
28B	0～600	0	No.7 electromagnet protection time 100ms	
28C	1～500	100	No.8 electromagnet fully output time ms	
28D	1～100	0	No.8 electromagnet chopping on time ms(Reserved)	
28E	1～100	0	No.8 electromagnet chopping off time ms(Reserved)	
28F	0～600	0	No.8 electromagnet protection time 100ms	
290	As follows	7	No.1 input definition	Machine Input d Machine efinition
291		1	No.1 active input level 0/1	
292		0	No.2 input definition	
293		1	No.2 active input level 0/1	
294		10	No.11 input definition	
295		1	No.11 active input level 0/1	
296		8	No.12 input definition	
297		1	No.12active input level 0/1	
298		9	No.13 input definition	

299		1	No.13 active input level 0/1	
29A		1	No.14input definition	
29B		1	No.14 active input level 0/1	
29C		0	No.15input definition	
29D		1	No.15 active input level 0/1	
29E		0	No.16 input definition	
29F		1	No.16 active input level 0/1	
290 - 29F	0:Disable 1:Manual back tacking 2:Safety switch 3:Emergency stop 4:Material side detection 5:Pedal trimming input 6:Pedal foot lifting input 7:Stitch compensation 8:Front-end/rear-end back tacking reverse 9:Presser foot alternation lifting 10:Air-tight joint 11:Counter reset 12:OP input 13:Presser foot alternation input 1 14:Presser foot alternation input 2 15:Needle lifting lock 16:Edge joint presser foot control input 17：Double needle machine turn left input ；18：Double needle machine turn right input			
2A0	As follows	0	No. 9 electromagnet output definition	Machine Output Definition
2A1		0	No. 10 electromagnet output definition	
2A2		0	No. 11 electromagnet output definition	
2A3		0	No. 12 electromagnet output definition	
2A4		0	No. 13 electromagnet output definition	
2A5		0	No. 14 electromagnet output definition	
2A6		0	No. 15electromagnet output definition	
2A7		0	No. 16 electromagnet output definition	
2A0 - 2A7	0:Output disable 1:Trimming 2:Thread wiping 3:Back stitch 4:Foot lifting 5:Thread slack 6:Thread nipping 7:Air sucking 8:Air blowing 9:Needle cooling 10: Presser foot alternation lifting 11: Air-tight joint 12:Back tacking reverse hanging mode 13:Alternation lifting mode 14:Air-tight joint mode 15:OP output 16:Bottom thread counter full condition 17:Trimming short thread head output 18: Edge joint presser foot control output 19：Double needle turn left needle bar actuation ；20：Double needle turn right needle bar actuation ；21：Double needle turn left state 22：Double needle turn right state			

3.3 Monitoring Mode

1, P key and ✂ key press can enter the monitor mode, LCD shown is _ _ 024 0000 _ _ _ _; 2, press the corresponding ▲▼ key and key or ⊞ key and ⊟ key to select parameter number, can be real-time monitoring ofchanges in the corresponding parameters; 3, finally press the P key, is to return to the normal sewing pattern			
No.	Description	No.	Description
010	Count needle number	025	Pedal voltage sampling value
011	Count piece number	026	Head drive than the actual value
012	Machine head actul speed	027	Motor total running time (Hour)
013	Holzer state	028	The interaction of the voltage sampling value
020	busbar voltage	029	DSP software version number
021	Mashine speed	02A	Analog 1 sampling value
022	Phase currunt	02B	Analog input 2 sampling value
023	Initial angle	02C	Error counter
024	Mech. Angle	02D	QP super state
		030-037	Fault code

3.4 Safety switch warning mode

Alarm code	Code meaning	solution
	Refueling remind	Press the P key can temporarily cancel alarm. Please refueling
	Count needle number alarm	Count needle number has reached the limit, you can press the P key to cancel the alarm and re count
	Piece number alarm	Said piece number has reached the limit, you can press the P key to cancel the alarm and re count
	Emergency stop	Then press the emergency stop button, can eliminate the emergency stop status
	Lift needle locking	Then press the needle lifting locking button, can eliminate the needle lifting locking state
	Power off to remind	Please wait for 30 seconds and then re open the power switch
	Turn the switch alarm	Put the head, ensure the turning switch restoration

3.5 False alarm mode

If the system error or warning, please first check the following items:

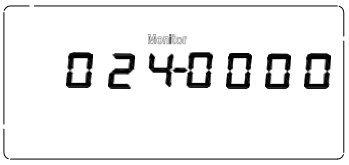
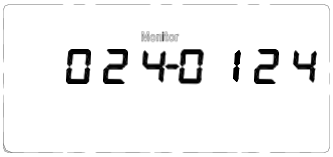
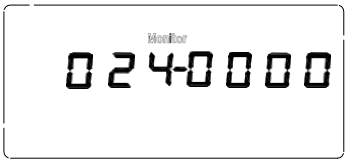
1, to confirm the connection machine is connected properly; 2, confirm the control and head matches; 3, confirm restore factory is accurate.

error code	meaning	solution
Err-01	hardware overflow	Turn off the system power, restart after 30 seconds, if the controller still does not work, please replace it and inform the manufacturer.
Err-02	software overflow	
Err-03	system under-voltage	Disconnect the controller power and check if the input voltage is too low (lower than 176V). If yes, please restart the controller when the normal voltage is resumed. If the controller still does not work when the voltage is at normal level, please replace the controller and inform the manufacturer.
Err-04	over-voltage when the machine is off	Disconnect the controller power and check if the input voltage is too high (higher than 264V). If yes, please restart the controller when the normal voltage is resumed. If the controller still does not work when the voltage is at normal level, please replace the controller and inform the manufacturer.
Err-05	over-voltage in operation	
Err-06	solenoid circuit failure	Turn off the system power, check if the solenoid is connected correctly and if it is loose or damaged. If yes, replace it in time. Restart the system upon making sure everything is in good order. If it still does not work, seek technical support.
Err-07	electrical current checking circuit failure	Turn off the system power, restart after 30 seconds to see if it works well. If not, try several more times. If such failure happens frequently, seek technical support.
Err-08	locked motor roller	Disconnect the controller power, check if the motor input plug is off, loose or damaged, or if there is something twined on the machine head. After checking and correction, if the system still does not work, please replace the controller and inform the manufacturer.
Err-09	brake circuit failure	Turn off the system power, check if the white brake resistance plug on the power board is loose or dropped off, fasten it and restart the system. If it still does not work, please replace the controller and inform the manufacturer.
Err-10	HMI communication failure	Check if the connecting line between control panel and controller is off, loose or broken, restore it and restart the system. If it still does not work, please replace the controller and inform the manufacturer.
Err-11	machine head needle positioning failure	Check if the connection line between machine head synchronizer and controller is loose or not, restore it and restart the system. If it still does not work, please replace the controller and inform the manufacturer.
Err-12	motor original angle checking failure	Please try 2 to 3 more times after power down, if it still does not work, please replace the controller and inform the manufacturer.
Err-13	Motor HALL failure	Turn off the system power, check if the motor sensor plug is loose or dropped off, restore it and restart the system. If it still does not work, please replace the controller and inform the manufacturer.

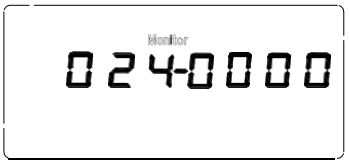
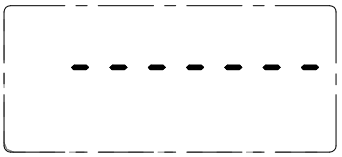
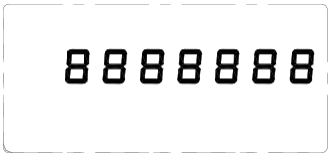
Err-14	DSP Read/Write EEPROM failure	Turn off the system power, restart the system after 30 seconds, if it still does not work, please replace the controller and inform the manufacturer.
Err-15	Motor over-speed protection	
Err-16	Motor reversion	
Err-17	HMI Read/Write EEPROM failure	
Err-18	Motor overload	
Err-19	Lack of oil alarm	Add oil to the needle rod, and set the P22 parameter at 4000, resume the working time after the last oil adding; or you can press button P to close the alarm and continue to use.

4 Special function operating instructions

4.1 Upper stop position adjust

1		The control system in the recovery after the factory, according to the need to re set the needle position! The first step: first press P key, then press key, enter into monitor mode. The default is 024, monitoring parameters, LCD screen displays the current point of view, such as 0 ° shows that this position is the system default on the needle stop position.
2		The second step: turn the hand wheel, let the thread take-up lever to the needle stop position or hope appropriate position adjusting to, the liquid crystal display screen adjustment of needle position, such as 124 °
3		The third step: first press P key, then press key, make the mechanical deflection angle is zero, on needle position set. Finally, according to the key to exit.

4.2 A key recovery machine manufacturers parameter value

1		If you want to restore the factory parameters, according to the following steps: The first step: first press P key, then press ✂ key, enter into monitor mode; The default is 024, monitoring
2		The second step: long press F key for more than 3 seconds, start a key recovery machine factory parameters, LCD screen display bar, that is the restore parameters, the controller is not power or unplug the plug operation panel.
3		The digital tube display is 8 all, the nose factory parameters restore completed.

4.3 Pedal sensitivity adjustment

Pedal movement by the initial position of the (parameter 136) began, slowly forward step to the (parameter 137) began to low-speed sewing, before continuing on to the (parameter 138) began to accelerate, and then on to the deep (parameter 139) reach maximum speed. In the period of maintenance of sewing speed, stepless speed regulation process between the segment;

1、n the pedal from the initial position to the (parameter 136) began to slow, after stepping on to the (parameter 135) when the presser foot lift automatically;
2、hen the pedal from the initial position to the (parameter 136) began to slow, after stepping on to ⑥(parameter 134) automatically complete shear line.

A value of

3、the parameter settings are required to ensure that
(parameter 134) < (parameter 135) < (parameter 136) < (parameter 137) < (parameter 138) < (parameter 139)
4、an be used as the parameter's value through the pedal real-time monitoring of 025 parameters at different positions of the monitoring mode sampling numerical. Adjusting the corresponding parameters, presser foot and step on or after step action position change. As on the great distance machine is not running, may be appropriate
to reduce the 137 parameters (not less than to the location parameters in 136), can improve the sensitivity of feet; if the machine is too sensitive, touch the pedal machines began to work, it may be appropriate to increase the 137 parameters; if it is not easy to fill needle, a little feet, speed quickly improve the cause forward multi needle, may be appropriate to increase or decrease the 138 parameters of 137 parameters (i.e. adding feet pedal speed range), can also be appropriate to reduce
the initial seam speed (100).

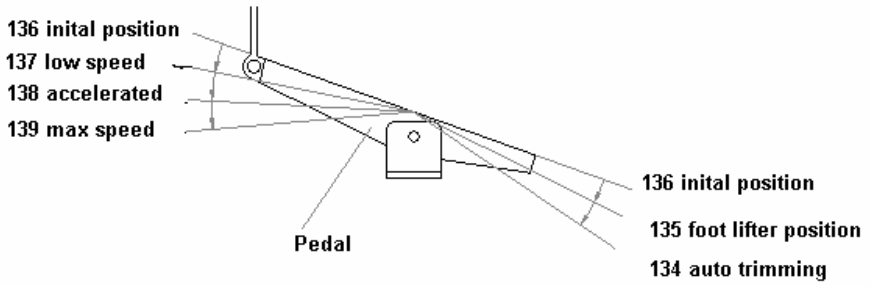


Fig. 4-1 pedal movement of each position parameter

4.4 Electromagnet performance adjustment

According to the typical configuration, parameters of 260 to 1, showed that the No. 1 electromagnets are set to cut the line electromagnet, the No. 1 electromagnet set parameter 270~273 is cutting line electromagnet set parameters. Parameters of 261 to 3, showed that the No. 2 electromagnet is set to reverse stitching electromagnet, the No. 2 electromagnet set parameter 274~277 is reverse stitching electromagnet set parameters. Parameters of 262 to 4, showed that the No. 3 electromagnets are set to the presser foot lifting electromagnet, the electromagnet is No. 3 set parameter 278~27B is the presser foot lifting electromagnet set parameters.

· electromagnetic speed adjustment

If the solenoid pull slow, inadequate. Can increase the electromagnet full output time, such as increase of parameter 270, which increases the shear line electromagnet full output time, so as to improve the shear line pull speed, increased shear line. If the electromagnet voice is too large, may be appropriate to reduce the output time.

· electromagnet easily fever

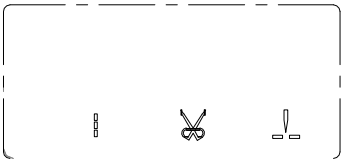
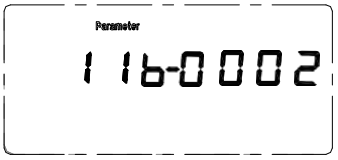
Can reduce the duty ratio, the appropriate chopper opening time parameters (such as 271) or reduce the closing time parameters (such as 272) increased (Note: if the opening time of the solenoid pull state may lead to inadequate or even ahead of the release ratio adjustment is too small,).

· the solenoid pull weakness, how to adjust the operating state dynamics (how to increase the pull strength when state

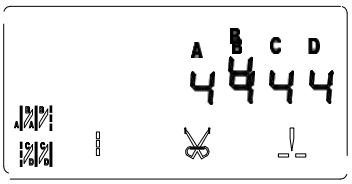
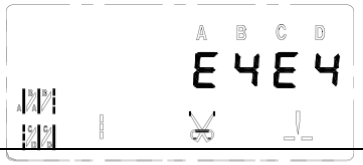
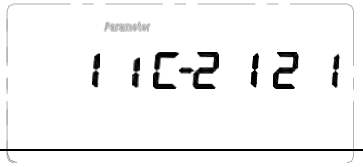
Can increase the duty ratio, the appropriate chopper opening time parameters (such as 275) increased, or the closing time parameters (such as 276) decreases (Note: if the opening time ratio adjustment is too large, easy to make the electromagnet heating)

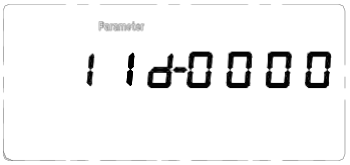
4.5 Start/ end back tacking sewing mode set

According to the fixed seam pattern, through the start back tacking sewing key and end back tacking sewing key, the system default support ①the single back tacking sewing , ②double back tacking sewing ③four back tacking sewing④ none back tacking sewing between the four modes to switch

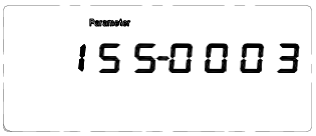
①	single start/end back tacking sewing mode set 	②	double start/end back tacking sewing mode set 
③	four start/end back tacking sewing mode set 	④	None start/end back tacking sewing mode set 
		By adjusting the 11B parameters, modified back tacking sewing mode. If set to 1, only in the single fixed seam and closed seam sealing switch; if set to 2, then in the single fixed seam, double seam sealing and closing fixed seam switch; if set to 3, the double seam sealing and closing fixed seam switch; if set to 4, then in the double fixed seam, four fixed seam and close the gap between switching. Before and after the stitch seam sealing mode is specified by the 11B parameter.	

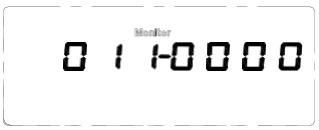
4.6 Start/ end back tacking sewing and Four-segment sewing is set long needle

1		When it is set start/end back tacking sewing of A/B/C/D and four segment sewing E/F/G/H , Select the corresponding key and the key can set the segment value addition and subtraction, the system default range is 1~F corresponds to the 1~15 pin.
2		But if you need to set the number of needles more, can be specified to set the number of needles by modifying 11C parameters and 11D parameters of ten, plus A/B/C/D and E/F/G/H segment is a digit, together constitute the total needle number. For example, in the setting of before and after the solid needle number, the default 11C parameters 0000
3		If A、C segment set is E，B segment、D segment set is 4，A、C segment the actual needle is 14，B、D segment the actual needle is 4.
4		The number of needle if any segment of the need to set more than 15 needles, then adjust the 11C parameters. If the 11C parameter is adjusted to 2121
5		At the same time, the corresponding A/B/C/D segment is set to 1/6/1/6, then A segment, C segment the actual needle number 21 needle, B segment, D segment actual pin number for 16 needle. Thus, the actual number of each needle the adjustable range can be extended to 1~99 needle.

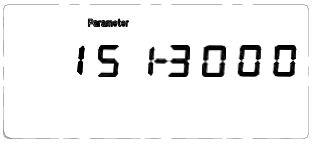
6		Set before and after the four joint E/F/G/H segments fixed seam is similar, but the ten tuning parameters for 11D parameters. Note: the shortcut keys out of 11C parameters for press F and ▲ key; shortcut key 11D parameters for press F and ▼ key.

4.7 H-43 operating panel piece number function

1		The first step, press key, then press key, the LCD screen will be prompted to enter the password technician parameters, then press key to enter the technician mode;
2		The second step, adjusted to 154 parameters, input the piece number, for example the set alarm number for 100;
3		The third step, select the required piece number mode, transferred to the 155 parameters, can be set to 3, including the number of needle after press the reset key to cancel the alarm to count; then press key save and exit.
4		The fourth step, open the count needle number monitoring function, press key, then press key to enter the monitor mode.

5		The fifth step, adjusted the parameter number to 010, including the number of needle monitoring function, so that each turn finished stitch, stitch count is increased by 1.
6		The sixth step, when the needle reached the upper limit (parameter 154), for example, when the needle reached to 100.
7		Operation panel display ALA-3, suggesting that the needle number alarm, show that the needle number has reached 154, the number of needle set alarm.
8		The seventh step, press key to cancel the alarm, and re-start counting, meter needle alarm number still is determined by 154 parameters.

4.8 H-43 operating panel count needle number function

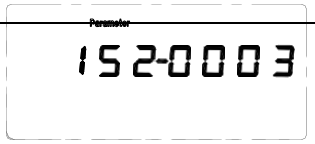
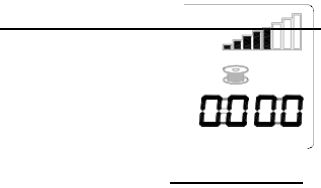
	The first step, press key, then press key, the LCD screen will be prompted to enter the password technician parameters, then press key to enter the technician mode;
	The second step, adjusted to 151 parameters, input the count needle number, for example the set alarm needle number for 3000 pin;

	The third step, select the required count needle number mode, transferred to the 152 parameters, can be set to 3, including the number of needle after press the reset key to cancel the alarm to count; then press key save and exit.
	The fourth step, open the count needle number monitoring function, press key, then press key to enter the monitor mode.
	The fifth step, adjusted the parameter number to 010, including the number of needle monitoring function, so that each turn finished stitch, stitch count is increased by 1.
	The sixth step, when the needle reached the upper limit (parameter 151), for example, when the needle reached to 3000
	Operation panel display ALA-2, suggesting that the needle number alarm, show that the needle number has reached 151, the number of needle set alarm.
	The seventh step, press key to cancel the alarm, and re- start counting, meter needle alarm number still is determined by 152 parameters.

4.9 H-70 operating panel count needle number / piece number function

H-70 operating panel contains special count needle number / piece number display module.

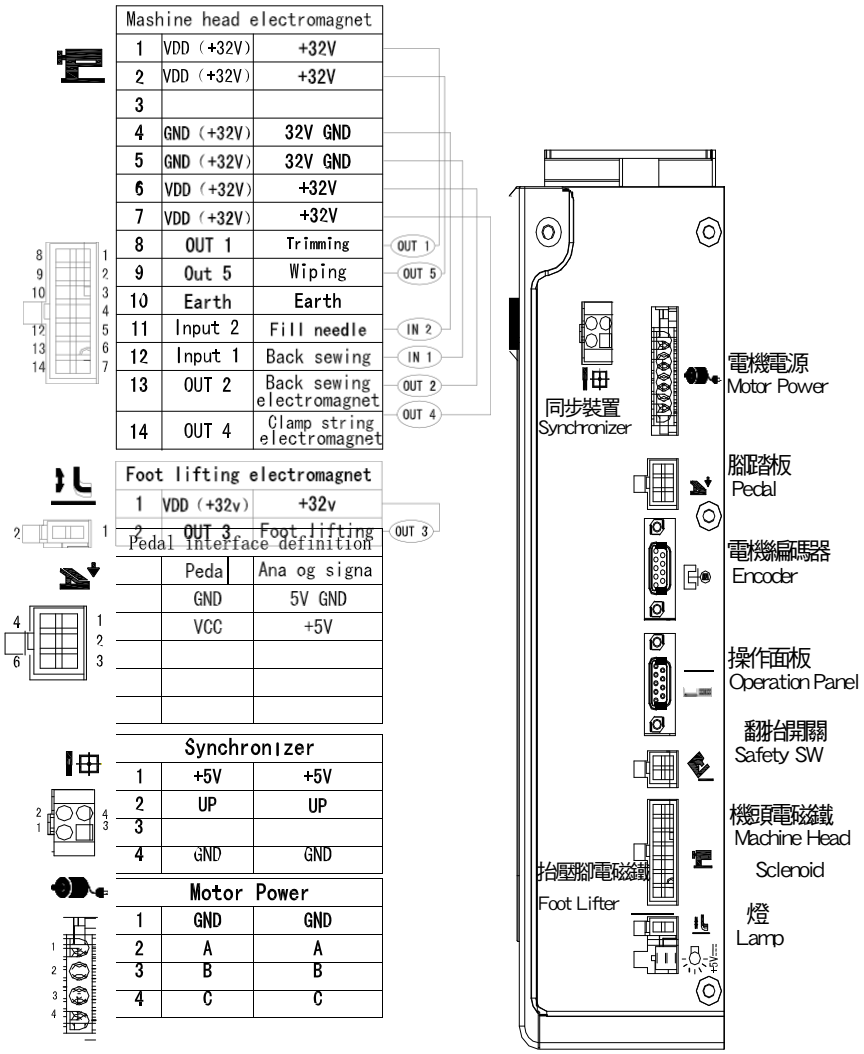
H-70 operating panel system parameter is set the way and the H-43 panel is the same

1		The first step, press P key, then press key, the LCD screen will be prompted to enter the password technician parameters, then press P key to enter the technician mode;
2		The second step, select the desired count needle number mode, usually can be set to 3, including the number of needle after press the reset key to cancel the alarm to count;
3		The third step, select the required piece number mode, transferred to the 155 parameters, can be set to 3, including the number of needle after press the reset key to cancel the alarm to count; then press P key save and exit.
4		If the open count needle number function or piece number function, operation panel will correspond to display count needle number marking or piece number marking. When the count needle number and piece number function are open in the all, the default display count needle number.

5		At this time , press counting key can switch count needle number and piece function in the show .
6		The system default settings count fast modifying function. Adjustable parameter 158, modified to 1 to disable this feature, the default is 0 open this function.
7		At this time, display the count needle number, according to the counting key area, press keys, the count needle number of the set value addition and subtraction.
8		Display piece number, according to the counting key area, press keys, the piece number of the current value addition and subtraction.
9		Press the reset key of count, the count value can be cleared for the currently displayed.

5 The interface define of the configuration

Flat sewing series interface definition table



Mashine head electromagnet		
1	VDD（+32V）	+32V
2	VDD（+32V）	+32V
3		
4	GND（+32V）	32V GND
5	GND（+32V）	32V GND
6	VDD（+32V）	+32V
7	VDD（+32V）	+32V
8	OUT 1	Trimming
9	Out 5	Wiping
10	Earth	Earth
11	Input 2	Fill needle
12	Input 1	Back sewing
13	OUT 2	Back sewing electromagnet
14	OUT 4	Clamp string electromagnet

Foot lifting electromagnet		
1	VDD（+32v）	+32v
2	OUT 3	Foot lifting

Pedal interface definition

	Peda	Ana og signa
	GND	5V GND
	VCC	+5V

Synchronizer		
1	+5V	+5V
2	UP	UP
3		
4	GND	GND

Motor Power		
1	GND	GND
2	A	A
3	B	B
4	C	C

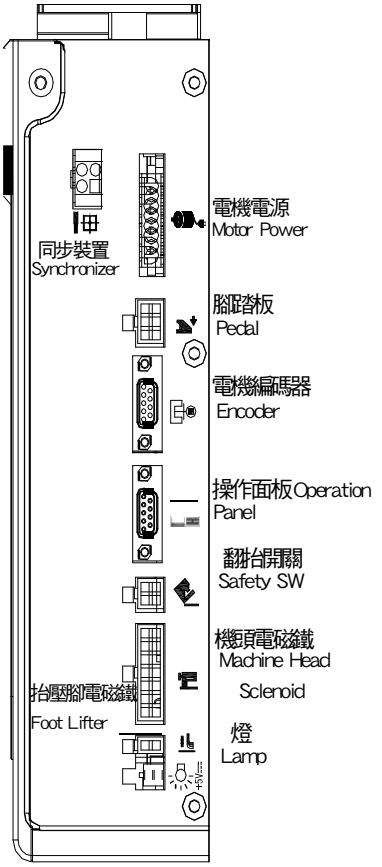
Mashine head electromagnet		
1	VDD (+32V)	+32V
2	VDD (+32V)	+32V
3		
4	GND (+32V)	32V GND
5	GND (+32V)	32V GND
6	VDD (+32V)	+32V
7	VDD (+32V)	+32V
8	OUT 1	Blow
9	OUT 5	Up Trimming
10	Earth	Earth
11		
12		
13	OUT 2	Down Trimming
14	OUT 4	Suction

Foot lifting electromagnet		
1	VDD (+32v)	+32v
2	OUT 3	Foot lifting

Pedal interface definition		
1	Pedal	Analog signal
2	GND	5V GND
3	VCC	+5V
4		
5		
6		

	Synchronizer	
1	+5V	+5V
2	UP	UP Singa
4	GND	GND

Motor Power		
1	GND	GND
2	A	A
3	B	B
4	C	C



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