SiRUBA

電控參數說明書

ELECTRONIC CONTROL PARAMETER MANUAL

DT828L for 45/75

⚠安全指示

1.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

（１）電源電壓與工作頻率：請遵照馬達與控制箱銘牌所標之規格。

（2） 電磁波干擾：請遠離高頻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方式錯誤動作

（3） 接地：為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）

拆除馬達或控制箱時，勿帶電拔插；控制箱裡面有危險高電壓，所以關閉電源等 1 分鐘以上放可打開控制箱蓋

為保證人身安全，請在維修機械或進行穿針作業時關閉電源

這個標示符合表示機器安裝時，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誌。

這個識別字合表示高壓電等，電氣方面有危險性的地方會有此標誌。

2 操作盒按鍵說明

+ mm −	針距大小調節鍵	+ SPM −	電機運行速度調節鍵
恢复出厂设置 Reset	恢復出廠設置調整鍵	+ ∧ −	轉角角度調節鍵
+ −	加減鍵	P	功能鍵
S	確認鍵	ABAB	前固縫按鍵
	軟啟動按鍵		自由縫按鍵
E	一段定針縫按鍵		自動抬壓腳選擇按鍵

	自動觸發按鍵		後固縫按鍵
	停針位元選擇按鍵		W 固縫模式按鍵
	調試功能按鍵		剪線設定按鍵
	電子夾線器設定按鍵		花樣編輯按鍵
	固縫花樣按鍵		段式縫花樣自編模式按鍵
	漂亮縫初設置按鍵		手動抬壓腳按鍵
	補針按鍵		

3．監控模式

正常情況下，按“P”鍵，將參數調整到 42，按“S”確認，進入到監控模式。按下方相對應的加減鍵顯示相關的監控參數。按“P”鍵返回到縫紉模式。

顯示序號	項目名稱	預設值	顯示序號	項目名稱	預設值	顯示序號	項目名稱	預設值	顯示序號	項目名稱	預設值
N01	電控版本號	15	N04	腳踏板 AD 值	345	N07	母線電壓 AD 值	630	N10	剪刀位置感應	0
N02	操作盒版本號	3805	N05	上定位角度	84	N08	錯誤代碼記錄	154	N12	膝靠感應 AD 值	500
N03	車縫速度	0	N06	下定位角度	1408	N09	執行時間	7	N13	壓腳感應 AD 值	0

4． 模式設置

調試模式：正常進入縫紉模式後長安“M”鍵 3 秒，進入到調試模式，若從該模式退回到正常模式，需安“P”鍵退出進入正常模式

显示序号	项目名称	默认值	显示序号	项目名称	默认值	显示序号	项目名称	默认值
72	上停针位校正	84	92	编码器起始角度		128	剪刀动作测试	

正常進入縫紉模式後長安“M”鍵 3 秒，液晶屏顯示“92”，安 S 鍵進入電機角度測試介面，按“  ”鍵，電機會轉動幾下，之後液晶屏顯示角度數位，代表電機光柵片的安裝角度為顯示數位，按 S 鍵保存。若要從該模式退回到正常模式，按“P”鍵退出進入正常模式。

正常進入縫紉模式後長安“M”鍵 3 秒，液晶屏顯示“92”，按下方加鍵切換到“72”按 S 鍵進入機械零位元調整介面，轉動手輪，顯示幕的數值會隨手輪位置變化而變化，按“S”鍵保存當前位置數值為上停針位位置。若要從該模式退回到正常模式，按“P”鍵退出進入正常模式。

正常進入縫紉模式後長安“M”鍵 3 秒，液晶屏顯示“92”，按下方加鍵切換到“128”按 S 鍵進入剪線動作測試介面，再按“  ”，剪刀會按照相對應角度動作一次（迴圈）。若要從該模式退回到正常模式，按“P”鍵退出進入正常模式。

密碼模式：長按“P”鍵進入密碼模式，液晶屏顯示 0000，按下方對應的加減鍵修改數值，若密碼正確，按“S”鍵後，可查看高級參數。

保存出廠參數和恢復出廠參數：長按“  ”鍵 5 秒，保存出廠參數完成。長按“  ”鍵 5 秒，輸入正

確的密碼，恢復出廠參數完成。

4.4.花樣縫編輯：

正常進入縫紉機模式後長按“Patt”鍵，液晶屏顯示“n-01 01”，按“+ -”鍵切換 n1-n9 花樣，選定要設置的花樣號後按“S”鍵進入設置，液晶屏顯示“1 1 3.0”，此時可以進行第一段的針數、重複次數和針距值得設置，按下方對應的鍵和“ ”鍵設置各參數值，按 S 鍵保存，P 鍵退出，一段設置完成；按“ ”鍵液晶屏顯示 n01 02，按“S”鍵進入設置，液晶屏顯示“1 1 3.0”，此時可以進行第二段的針數、重複次數和針距值設置，按下方對應的鍵和“ ”鍵設置各參數值，按“S”鍵保存， P 鍵退出，二段設置完成；按“ ”鍵，液晶屏顯示 n01 03，按“S”鍵進入設置，液晶屏顯示“1 1 3.0”，此時若將當前段數的針數設置為零，則縫紉時不進行此段的縫紉；設置完成後按 S 鍵保存，按 P 鍵退出。若從該模式退回到正常模式，按兩次“P”鍵即可。

长按 Patt 键进入，界面显示			按 S 键进入，界面显示		
花样编号	N-01	01	1	1	3.0
含义	花样号	1 号第一段花样	针数	重复次数	针距大小
编辑方式	下方加减键	+ 针 −	下方加减键	下方加减键	+ 针 −

長按Patt 鍵進入，介面顯示			按S 鍵進入，介面顯示		
花樣編號	N-01	02	1	1	3.0
含義	花樣號	1 號第二段花樣	針數	重複次數	針距大小
編輯方式	下方加減鍵	+ 针 −	下方加減鍵	下方加減鍵	+ 针 −

4.5．花樣縫紉方法：正常進入縫紉模式後按“Patt”鍵，液晶屏顯示“n0”，按下方的加減鍵切換 n1-n9花樣，選定要縫紉的花樣號後按“S”鍵確認，此時按選定的花樣進行縫紉；退出花樣縫時，將參數調整到“n0”，按“S”鍵確認，P 鍵退出進入自由縫模式。

5．參數表

※按“ ”鍵3秒，，密碼Key 2017後，按"S"鍵，即恢復原廠設定。

参数项	中文说明	范围	初始值	内容值名称说明与备注
P01	最高转速（rpm）	100-2700	2500	
P02	加速曲线调整（%）	10-100	100	控速器爬升斜率设定 斜率值愈大，速度愈陡； 斜率值愈小，速度愈慢。
P03	停针位选择	UP/DN	DN	UP：上停针；DN：下停针
P04	起始回缝速度（rpm）	100-2000	1500	
P05	终止回缝速度（rpm）	100-2000	1500	
P06	连续回缝速度（rpm）	100-2000	1500	
P07	慢速起缝速度（rpm）	200-1500	1500	
P08	慢速起缝针数（针）	0-15	2	
P09	自动定针缝速度（rpm）	200-3000	2200	定针缝自动触发功能打开的速度设定。
P10	停针位后自动执行终止回缝功能	ON/OFF	ON	ON：在执行完最后一段定针缝后，将自动执行终止回缝动作。即在任何缝制模式下，终止回缝前不能作补针功能。 OFF：在执行完最后一段定针缝后，将无法自动执行终止回缝功能，必须重新再作前或全后踏动作时始可。

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P11	回縫線跡整體補償	-20～20	0	同時增加或減小 P18、P19、P25、P26、P32、P33 項的參數值。
P12	起始回縫運動模式選擇	0-1	1	0：受踏板控制，可任意停止與啟動。 1：輕觸踏板，自動執行回縫動作。
P13	起始回縫結束模式選擇	CON/STP	CON	CON：起始回縫段完成後，自動連續下一段功能。 STP：起始回縫段針數完成後自動停止。
P14	慢速起縫功能設置	ON/OFF	OFF	
P15	補針方式	0-4	5	0：半針；1：一針； 2：連續補半針； 3：連續補一針； 4: 連續補針, 快速停車 5：倒縫功能 6：密縫功能
P16	手動倒縫限速	0-3200	0	數值小於 100 時功能關閉。
P17	計數器模式選擇	0-1	1	0：P41 項計數器不自動計數 1：P41 項計數器每切線一次自動計數
P17-N06	自動計件功能	0-50	1	0：關閉 1-50：剪線計件次數設置。
P17-N12	開機顯示計數器介面選擇	0-1	0	0：關閉；1：開啟
P17-N13	自動計件模式選擇	0-1	0	0：增計件模式，1：減計件模式
P17-N16	螢幕清晰度	0-10	4	設定螢幕的清晰度
P18	起始回縫線跡補償 1	0-200	190	起始回縫 A 段針跡補償，0～200 動作逐步滯後；數值越大，A 短最後一針越長，B 段第一針越短。
P19	起始回縫線跡補償 2	0-200	190	起始回縫 B 段針跡補償，0～200 動作逐步滯後；數值越大，B 段最後一針越長。
P21	踏板加速位置	30-1000	520	
P22	踏板回中位置	30-1000	420	
P23	踏板抬壓腳位置	30-1000	270	
P24	踏板切線位置	30-500	130	
P25	終止回縫補償 3	0-200	190	終止回縫 C 段針跡補償，0～200 動作逐步滯後；數值越大，C 段第一針越短
P26	終止回縫補償 4	0-200	190	終止回縫 D 段針跡補償，0～200 動作逐步滯後；數值越大，C 段最後一針越長，D 段第一針越短。
P27	自由縫花樣樣式編輯			
P28	連續回縫運動模式選擇	0-1	1	0：人工，受踏板控制，可任意停止與啟動 1：自動，輕觸踏板，自動執行回縫動作
P29	切線停車力度	1-45	20	
P30	膝靠抬壓腳時松線開始動作的壓腳高度	0-300	80	
P31	膝靠抬壓腳時松線功能開關	0-1	1	0：關閉； 1：松線
P32	連續回縫補償 5	0-200	190	連續回縫 A（C）段針跡補償，0～200 動作逐步滯後；數值越大，A（C）段最後一針越長；B（D）段第一針越短
P33	連續回縫補償 6	0-200	190	連續回縫 B（D）段針跡補償，0～200 動作逐步滯後；數值越大，B（D）段最後一針越長，C 段第一針越短
P34	定針縫運動模式選擇	A/M	A	A：輕觸腳踏板，即自動執行定針縫動作； M：受腳踏板控制，可任意停止與啟動；

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P35	抬壓腳時松線功能設定	0-2	1	0：關閉； 1：抬壓腳時松線出力功能開啟，中途停車時松線出力功能關閉； 2：抬壓腳時松線出力功能和中途停車時松線出力功能開啟
P36	松線功能設定	0-1	1	0：關閉； 1：松線；
P37	撥線/夾線功能設定	0-11	1	0：功能關閉 1：撥線/挺線功能開啟 2～11：夾線功能開啟，數值越大動作力度越大
P38	自動切線功能設置	ON/OFF	ON	
P39	中途停車自動抬壓腳設定	UP/DN	DN	UP：開啟 DN：關閉
P40	切線自動抬壓腳設定	UP/DN	DN	UP：開 啟 DN： 關閉
P41	切線計數器顯示	0-9999	0	車縫完成件數顯示；長按減號鍵可計數清零；
P42-N01	電控版本號			
P42-N02	選針盒版本號		2101	
P42-N03	轉速			
P42-N04	腳踏板 AD 值			
P42-N05	機械角度（上定位）			
P42-N06	機械角度（下定位）			
P42-N07	母線電壓 AD 值			
P42-N11	狀態資訊			
P42-N15	步進版本號			
P42-N16	針數計數器顯示（每縫 10 針，數值變化 1）			
P42-N17	維護運行針數（萬針）*10			
P43	馬達轉動方向設定	CCW/CW	CCW	CW：順時針方向 CCW：逆時針方向
P44	中途停車時剎車力度	1-45	16	
P45	花樣自由縫運動模式選擇	0-1	0	0：受腳踏板控制，可任意停止與啟動； 1：輕觸腳踏板，即自動執行一個花樣的縫紉動作；
P46	切線後，反轉提針功能選擇	ON/OFF	OFF	
P47	切線後，反轉提針角度的調整（度）	10-300	40	
P48	最低速度（定位速度）（rpm）	100-500	210	
P49	切線速度（rpm）	100-250	200	調整切線週期時的主軸電機速度
P50	抬壓腳全額出力的工作時間(ms)	10-990	200	
P51	壓腳出力的週期信號(%)	1-50	38	壓腳動作時，以週期性省電輸出，避免電磁鐵發燙
P52	延遲馬達啟動，保護壓腳下放時間（ms）	10-990	120	踩下時延遲啟動時間，以配合自動抬壓腳放下的確認
P53	半後踏抬壓腳功能取消	0-2	1	0：關閉； 1：反踏和半反踏都有抬壓腳； 2：半反踏無抬壓腳，反踏有抬壓腳；

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P54	切線動作時間（ms）	10-990	200	
P55	撥 / 掃線動作時間	10-990	50	
P56	開電後自動找上定位	0-1	0	0：始終不找上定位 1：始終找上定位；
P57	松線保護時間（s）	1-60	60	保持時間後強制關閉，防止電磁鐵長時間吸合而發燙
P58	上定位調整	0-359	273	上定位調整，數值減少時會提前停針，數值增加時會延遲停針
P59	下定位調整	0-359	23	下定位調整，數值減少時會提前停針，數值增加時會延遲停針
P60	測試速度（rpm）	100-3000	2200	
P61	A 項測試	OFF/ON	OFF	持續運行測試模式
P62	B 項測試	OFF/ON	OFF	全功能啟停測試模式
P63	C 項測試	OFF/ON	OFF	無定位、無功能啟停測試模式
P64	測試執行時間	1-250	30	
P65	測試停止時間	1-250	10	
P66	機頭保護開關檢測	0-2	1	0：不檢測； 1：檢測零信號； 2：檢測正信號
P67	切線保護開關檢測	ON/OFF	OFF	OFF：不檢測；ON：檢測
P68	最高限速	100-3000	2700	
P69	花樣自由縫速度	100-1800	1500	
P70	機型選擇	1-60	28	
P71	補針針距	0-【P123】	3.0	
P72	上定位快捷調整	0-359		調整上停針位元，顯示的數值會隨手輪位置變化而變化，短按 S 鍵可保存當前位置（數值）為上停針位。
P73	下定位快捷調整	0-359		調整下停針位元，顯示的數值會隨手輪位置變化而變化，短按 S 鍵可保存當前位置（數值）為下停針位。
P74	正縫針距補償	-100-100	-012	以 0 補償，往大調為正補償，正縫針距變大，往小調為負補償，正縫針距變小
P75	倒縫針距補償	-100-100	-002	以 0 補償，往大調為負補償，倒縫針距變大，往小調為負補償，倒縫針距變小
P76	倒縫步進電機的剎車力度	0-5	0	
P77	自由縫連終止回縫時倒縫回應時機	20-350	160	
P78	夾線器起夾角度	5-359	180	
P79	夾線器結束角度	5-359	230	
P80	進刀角度	0-359	53	第一次進度角度（下定位為 0°計算）
P81	第一次退刀角度	1-359	170	
P82	第二次退刀角度	0-359	220	第一次退刀角度（下定位為 0°計算）
P83	切線後停車力度	10-100	20	
P84	切線全額出力時間（ms）	10-990	60	
P85	切線出力的週期信號	1-10	7	
P86	上下定位距離	100-345	110	上下定位距離角度（每 4 個數值為 1 度）
P87	撥/掃線回程延遲時間	10-990	50	確保撥線/無鳥巢鉤線機構回到原位
P88	中途停車剎車距離	10-100	30	
P89	交流過壓值設定	500-1023	880	
P90	慢速起縫第一針速度	200-1500	400	

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P91	慢速起縫第二針速度	200-1500	1000	
P92	電機電角度校正			讀取編碼器起始角度，出廠已設置，請勿隨意更改（參數值不可手動更改，隨意更改會導致控制箱、電機出現異常或損壞）
P93	半反踏功能延遲時間（ms）	10-900	100	
P95	壓腳第一段出力動作的周期信號（%）	10-100	100	
P96	主軸電機堵轉電流峰值（A）	0-20	10	
P97	主軸電機堵轉保護時間（s）	0-10	5	
P98	松線保護時間（s）	1-10	2	
P99	起始密縫針距	0-【P123】	0.5	
P100	起始密縫方向	0-1	0	0：逆時針方向 1：順時針方向
P101	松線開始角度	1-359	160	松線開始角度（下定位為 0°計算）
P102	松線結束角度	1-359	250	松線結束角度（下定位為 0°計算，需大於 P101 項參數值）
P103	大夾線器啟夾電流	1-80	30	
P105	自由縫花樣樣式選擇	n0-n9	n0	n0：關閉； n1～n9：自由縫花樣樣式；
P106	主軸電機平時電流（A）	0-20	16	
P107	起始密縫速度	100-3000	1000	
P108	起始密縫針數	0-12	02	
P109	撥/掃線前延遲時間（ms）	5-990	5	找到上定位後進入撥/掃線動作前的間隔時間
P110	切線回程時間（ms）	60-990	100	確保切線機構回到原位
P111	無鳥巢模式開關	0-1	0	0：關閉； 1：開啟；
P112	無鳥巢鉤線前延時	0-990	60	
P113	無鳥巢鉤線動作時間	0-990	70	
P114	無鳥巢鉤線返程時間	0-990	30	
P115	無鳥巢鉤線占空比	1-100	70	
P116	無鳥巢吸氣時間	0-5000	500	
P117	無鳥巢挺線占空比	0-100	50	
P118	花樣縫模式手動倒縫按鍵的功能選擇	0-1	0	0：一直按住按鍵可以實現倒著縫紉花樣。 1：點擊按鍵則清除當前正進行的花樣針數並重新開始，用於轉角縫紉時避免突出一針；
P119	電磁鐵過流保護檢測開關	0-1	0	0：不檢測 1：檢測；
P121	剪線後抬壓腳動作提前角度	0-50	0	
P122	膝靠啟動 AD 值	0-1023	600	
P123	最大針距限制	0-7.0	5.0	
P125	中途抬壓腳高度補償	0-320	80	以 80 為 0 補償，往大調為正補償，壓腳高度升高，往小調為負補償，壓腳高度降低

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P126	電子膝靠最高壓腳高度	0-【P172】	220	
P127	膝靠功能選擇	0-2	1	0：關閉； 1：主軸電機停止時有效； 2：主軸電機運行和停止時都有效；
P128	切線功能測試			在參數設定介面，短按切線鍵，轉動手輪，切線將按照設定的角度進行動作。
P129	倒縫步進電機零點校正	-500-500	0	
P130	切線步進電機零點校正	-200-200	-012	
P131	正常針距	0-【P123】	3.5	
P132	加密針距	0-【P123】	2.0	
P134	第二次切線距離（後動作）	0-200	15	
P135	電子膝靠最低壓腳高度	0-【P172】	45	
P136	最高壓腳高度	0-【P172】	176	
P137	第一次切線距離（先動作）	0-200	106	
P138	壓腳釋放緩衝占空比(%)	0-100	20	
P139	壓腳釋放緩衝延遲時間(ms)	0-200	10	
P140	第二次退刀速度	20-1000	300	
P141	第一次退刀速度	20-1000	200	切線過程第一段速度
P142	第一次進刀速度	20-1000	450	切線過程第二段速度
P143	密縫模式	0-3	0	0：關閉； 1：起始密縫開啟； 2：終止密縫開啟； 3：起縫密縫、終止密縫開啟；
P144	高速正縫針距整體補償	-100-100	0	
P145	高速倒縫針距整體補償	-100-100	0	
P146	壓腳速度	20-400	250	
P147	壓腳電機運轉方向	0-1	0	
P148	主軸電機運行時，電子膝靠最高壓腳高度	0-【P172】	100	
P149	倒縫步進電機的保持電流	0-12	6	
P150	壓腳步進電機的保持電流	0-25	15	
P151	倒縫步進電機的最大電流	0-12	12	
P152	壓腳步進電機的最大電流	0-65	50	
P153	漂亮縫針距	0-【P123】	0.5	
P154	漂亮縫速度	100-3000	1000	
P155	手動補針按鍵功能切換	0-1	0	0：補針功能； 1：密縫功能
P159	終止密縫方向	0-1	0	0：正縫； 1：倒縫
P160	終止密縫針數	0-12	2	
P161	存維護針數高 16 位	0	0	
P162	存維護針數低 16 位	0	0	

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P163	存底線針數高 16 位	0	0	
P164	存底線針數低 16 位	0	0	
P165	針數計數器模式選擇	0-4	0	0：不計數； 1. 遞增迴圈計數； 2. 遞減迴圈計數； 3. 遞增計數，計數滿後報警，需由清除鍵來啟動重新計數； 4. 遞減計數，計數滿後報警，需由清除鍵來啟動重新計數
P166	針數計數器上限值（針）	0-9999	500	
P167	維護針數上限值（萬針）*10	0-9999	0	
P169	logo 燈的亮度設置	0-3	0	
P170	手動按鍵 N 的補針針距	0-【P123】	3.0	
P171	手動按鍵 L 的補針針距	0-【P123】	0.8	
P172	最高壓腳高度限制	0-300	220	
P173	手動按鍵 R 的補針針距	0-【P123】	1.6	
P174	手動按鍵 N 的功能選擇	0-6	6	0：功能關閉 1：補半針 2：補一針 3：連續補半針 4：連續補一針 5：在車縫中或中途停止時具有倒縫動作 6：密縫功能
P175	手動按鍵 L 的功能選擇	0-6	0	0：功能關閉 1：補半針 2：補一針 3：連續補半針 4：連續補一針 5：在車縫中或中途停止時具有倒縫動作 6：密縫功能
P176	手動按鍵 R 的功能選擇	0-6	0	0：功能關閉 1：補半針 2：補一針 3：連續補半針 4：連續補一針 5：在車縫中或中途停止時具有倒縫動作 6：密縫功能
P177	正向 1mm 針距基準值	0-2000	58	
P178	反向 1mm 針距基準值	0-2000	47	
P179	正向 2mm 針距基準值	0-2000	100	
P180	反向 2mm 針距基準值	0-2000	85	
P181	正向 3mm 針距基準值	0-2000	145	

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P182	反向 3mm 針距基準值	0-2000	128	
P183	正向 4mm 針距基準值	0-2000	185	
P184	反向 4mm 針距基準值	0-2000	160	
P185	正向 5mm 針距基準值	0-2000	222	
P186	反向 5mm 針距基準值	0-2000	190	
P187	正向 6mm 針距基準值	0-2000	262	
P188	反向 6mm 針距基準值	0-2000	228	
P189	正向 7mm 針距基準值	0-2000	300	
P190	反向 7mm 針距基準值	0-2000	252	
P201	起縫抬壓腳開關	0-1	0	0：關閉； 1：開啟
P202	起縫抬壓腳開始角度	0-359	1	
P203	起縫抬壓腳結束角度	0-359	80	
P204	起縫抬壓腳力度	0-100	60	
P205	起縫第 1 針速度（rpm）	0-9999	0	
P206	起縫第 2 針速度（rpm）	0-9999	0	
P207	起縫第 3 針速度（rpm）	0-9999	0	
P211	松線第一段出力動作的周期信號（%）	1-100	35	
P212	松線第一段出力動作時間	0-100	20	
P213	針間距離	13-254	64	
P214	自由縫轉角角度	30-140	90	
P215	定針縫轉角模式	0-3	0	0：多段縫 1：左轉 2：右轉 3：機械轉角
P216	轉角針數模式	0-1	0	0：針距平分 1：大小針距
P217	轉角自動模式	0-2	1	0：受踏板控制 1：自動轉角 2：機械轉角
P218	轉角落針時間	0-999	109	
P219	左右機針分離電磁鐵占空比	1-100	38	
P220	左右分離電磁鐵保護時間	0-90	15	
P234	花樣縫停針功能	0-1	0	0：關閉 1：停針需走完當前花樣
P235	（0mm～【P245】）花樣縫線跡補償	0-200	188	
P236	（【P245】～7mm）花樣縫線跡補償	0-200	180	
P237	（【P245】～7mm）起始回縫線跡補償 1	0-200	180	起始回縫 A 段針跡補償，0～200 動作逐步滯後；數值越大，A 短最後一針越長，B 段第一針越短。

參數項	中文說明	範圍	初始值	內容值名稱說明與備註
P238	（【P245】～7mm）起始回縫線跡補償 2	0-200	180	起始回縫 B 段針跡補償，0～200 動作逐步滯後；數值越大，B 段最後一針越長。
P239	（【P245】～7mm）終止回縫線跡補償 3	0-200	180	終止回縫 C 段針跡補償，0～200 動作逐步滯後；數值越大，C 段第一針越短。
P240	（【P245】～7mm）終止回縫線跡補償 4	0-200	180	終止回縫 D 段針跡補償，0～200 動作逐步滯後；數值越大，C 段最後一針越長，D 段第一針越短。
P241	（【P245】～7mm）連續回縫線跡補償 5	0-200	180	連續回縫 A（C）段針跡補償，0～200 動作逐步滯後；數值越大，A（C）段最後一針越長；B（D）段第一針越短
P242	（【P245】～7mm）連續回縫線跡補償 6	0-200	180	連續回縫 B（D）段針跡補償，0～200 動作逐步滯後；數值越大，B（D）段最後一針越長，C 段第一針越短
P243	（【P245】～7mm）終止回縫第一針針距補償	0-200	0	
P244	【P245】～7mm）回縫線跡整體補償	-20～20	0	同時增加或減小 P237、P238、P239、P240、P241、P242 項的參數值
P245	大針距設置	0-7.0	5.5	
P246	（【P245】～7mm）起始回縫、終止回縫、連續回縫 限速	200-1600	1200	
P247	回縫轉角針距補償 1	-100-100	0	回縫時，正縫轉倒縫的補償
P248	回縫轉角針距補償 2	-100-100	0	回縫時，倒縫轉正縫的補償
P249	倒縫步進電機速度	50-1000	600	
P254	7mm 高速正縫針距整體補償	-100-100	0	參數值為 0 時，所有針距的高速正縫針距整體補償都由 P144 項控制
P255	7mm 高速倒縫針距整體補償	-100-100	0	參數值為 0 時，所有針距的高速倒縫針距整體補償都由 P145 項控制

注：參數初始值僅供參考，實際參數值以實物為准。

6 錯誤代碼表

錯誤碼	內容	對策
E01	1. 電源 ON 時，主電壓檢測過高 2. 供應電源電壓過高時	關閉系統電源，檢測供應電源電壓是否正確。（或是否超過使用規定的額定電壓）。 若正確，請更換控制箱並通知售後服務。
E02	1. 電源 ON 時，主電壓檢測過低 2. 供應電源電壓過低時	關閉系統電源，檢測供應電源電壓是否正確。（或是否低於使用規定的額定電壓）。 若正確，請更換控制箱並通知售後服務。
E03	操作面板與 CPU 傳輸通信異常	關閉系統電源，檢查控制台的連線是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換控制箱並通知售後服務。

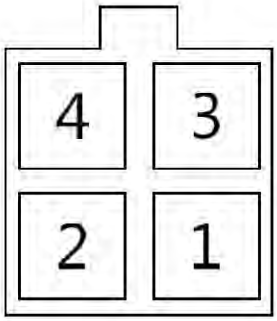
E05	控速器接觸異常	關閉系統電源，檢查控速器接頭是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換控速器並通知售後服務。
E07	1. 馬達插頭配線接觸不良導致不轉 2. 車頭機構鎖死或馬達皮帶異物捲入卡死 3. 加工物過厚，馬達扭矩不足無法貫穿 4. 模組驅動出力異常	轉動機頭手輪觀察是否卡住。如卡住則先排除機械故障。如轉動正常，檢查電機編碼器接頭和電機電源線接頭是否鬆動。如有鬆動請修正。 如接觸良好，檢查供應電源電壓是否異常或轉速設置過高。如有請調整。 若仍不能正常工作，請更換控制箱並通知售後服務。
E10	電磁鐵過流保護	關閉系統電源，檢查電磁鐵（電磁閥）是否損壞或短路。
E09 E11	定位信號異常	關閉系統電源，檢查電機編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換電機並通知售後服務。
E13	電力模組過熱保護	關閉系統電源，檢查電磁鐵連接或電磁鐵是否損壞
E14	編碼器信號異常	關閉系統電源，檢查電機編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換電機並通知售後服務。
E15	電力模組不正常過流保護	關閉系統電源，再重新開啟。若仍不能正常工作，請更換控制箱並通知售後服務。
E16	切線步進電機異常	關閉系統電源，檢查切線機構是否回到正確位置；檢查切線的設置是否錯誤。
E17	機頭保護開關沒到正確位置	關閉系統電源，檢查機頭是否掀開，控制箱內滾珠開關是否移位或損壞。
E20	電機啟動失敗（電角度錯誤）	關閉系統電源，檢查電機編碼器介面和電機電源介面是否鬆動或脫落，將其恢復正常後重啟系統。若仍不能正常工作，請更換控制箱並通知售後服務。
E28	維護保養警高	請進行維護保養。（報警時，按 S 鍵進行清除並重新計數。）
E80	主CPU 與步進驅動CPU 通信異常	請更換控制箱並通知售後服務。
E82	倒縫步進電機過流	1、關閉系統電源，觀察倒縫步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查倒縫步進電機介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或倒縫步進電機並通知售後服務。
E84	倒縫步進電機編碼器 定位信號異常	1、關閉系統電源，觀察倒縫步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查倒縫步進電機編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、檢查光柵安裝是否正確（光柵螺絲有沒有固緊，光柵是不是在編碼器頭居中位置）； 3、檢查光柵碼盤是不是有油，如果有，請清理乾淨，復原後重啟系統； 4、若仍不能正常工作，請更換控制箱或倒縫步進電機並通知售後服務。

E85	倒縫步進電機編碼器信號異常	1、關閉系統電源，檢查倒縫步進電機編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、檢查光柵安裝是否正確（光柵螺絲有沒有固緊，光柵是不是在編碼器頭居中位置）； 3、檢查光柵碼盤是不是有油，如果有，請清理乾淨，復原後重啟系統； 4、若仍不能正常工作，請更換控制箱或倒縫步進電機並通知售後服務。
E86	倒縫步進電機啟動失敗	1、關閉系統電源，檢查倒縫步進電機電源線介面、編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、檢查光柵安裝是否正確（光柵螺絲有沒有固緊，光柵是不是在編碼器頭居中位置）； 3、檢查光柵碼盤是不是有油，如果有，請清理乾淨，復原後重啟系統； 4、若仍不能正常工作，請更換控制箱或倒縫步進電機並通知售後服務。
E87	倒縫步進電機堵轉	1、 關閉系統電源，觀察倒縫步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查倒縫步進電機電源線介面、編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、 若扔不能正常工作，請更換控制箱或倒縫步進電機並通知售後服務
E92	剪線(壓腳)步進電機過流	1、關閉系統電源，觀察剪線(壓腳)步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查剪線(壓腳)步進電機介面是否松動或脫落，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或剪線(壓腳)步進電機並通知售後服務。
E94	剪線(壓腳)步進電機 編碼器定位信號異常	1、關閉系統電源，觀察剪線(壓腳)步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查剪線(壓腳)步進電機編碼器介面是否鬆動或脫落，編碼器碼盤是否有油，如果有請清理乾淨，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或剪線(壓腳)步進電機並通知售後服務。
E95	剪線(壓腳)步進電機編碼器信號異常	1、關閉系統電源，檢查剪線(壓腳)步進電機編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或剪線(壓腳)步進電機並通知售後服務。

E96	剪線(壓腳)步進電機啟動失敗	1、關閉系統電源，檢查剪線(壓腳)步進電機電源線介面、編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或剪線(壓腳)步進 電機並通知售後服務。
E97	剪線(壓腳)步進電機堵轉	1、關閉系統電源，觀察剪線(壓腳)步進電機是否卡住。如卡住則先排除機頭機械故障。如正常，檢查剪線(壓腳)步進電機電源線介面、編碼器介面是否鬆動或脫落，將其恢復正常後重啟系統。 2、若仍不能正常工作，請更換控制箱或剪線(壓腳)步進 電機並通知售後服務。

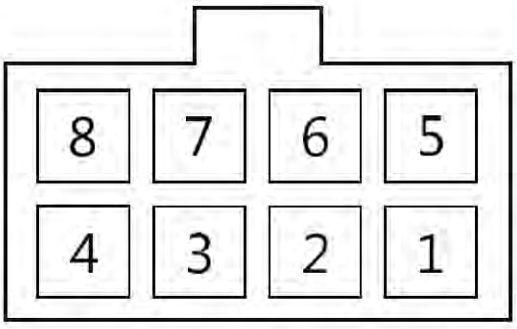
7.各埠接線示意圖

7-1.4P 埠示意圖



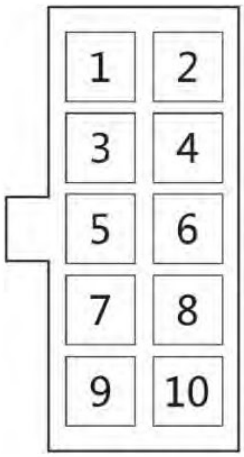
1.壓腳高度感應：1、3（DGND）、4（S5V）

7-2.8P 埠示意圖



1、5：右分離電磁鐵
2、6：左分離電磁鐵
3、7：掃線電磁鐵
4、8：松線電磁鐵

7-3.10P 埠示意圖



1. 地线（按钮蓝色线）　2. 预留输入口（+5V）

3. 预留输入口　4. 预留输入口

5. 按键L（按钮黄色线）　6. 按键R（按钮红色线）

7. 机头灯+（红色线）　8. 倒缝按键(按钮棕色线)

9. 机头灯-（黑色线）　10. 密缝按键（按钮黑色线）

Safety instruction

1. Safety precautions

Please read this technical document and the sewing machine manual carefully before use, and use it correctly

(1) Power supply voltage and operating frequency: Please follow the specifications on the nameplate of the motor and control box.

(2) Electromagnetic wave interference: please stay away from high-frequency wave machines or radio transmitters, so as not to interfere with the electromagnetic wave generated by the driving device and cause wrong operation

(3) Grounding: In order to prevent noise interference or leakage accidents, please do a good job of grounding engineering (including sewing machine, motor, control box, positioner)

When removing the motor or control box, do not plug and insert with power on;There is dangerous high voltage in the control box, so turn off the power for more than 1 minutes to open the cover of the control box

To ensure personal safety, please turn off the power when maintaining the machinery or threading the needle

If the mark is consistent, it means that human body may be hurt or the machine may be damaged if there is any mistake during the installation of the machine

Therefore, there will be this mark where the machine is dangerous.

This sign is in line with high voltage, electrical dangerous places will have this sign.

2 Operate the box key instructions

+ 止 −	Needle spacing size adjustment key	+ SPM −	Motor speed adjustment key
恢复出厂设置 Reset	Restore factory setting adjustment key	+ ∧ −	Corner Angle adjustment key
+ −	Add and subtract keys	P	Function keys
S	Confirm keys		Front secure button

	Soft start key		Free seam keys
	A length of fixed stitch stitch key		Automatic lift press foot selector key
	Automatic trigger key		Reclining keys
	Stop stitch position select key		W Solid stitch mode key
	Debug function key		Wire clipping setting keys
	Electronic wire clipper setting key		Pattern editing keys
	Solid stitch pattern keys		Section stitch pattern self - made mode button
	Pretty Sewing set keys		Manual lift press foot keys
	Refill pin key		

3 Monitor mode

Normally, press "P" to adjust the parameters to 42, press "S" to confirm, and enter the monitoring mode.Press the corresponding add or subtract key below to display the relevant monitoring parameters.Press the "P" key to return to sewing mode.

Show serial number	Item name	Default value	Display ordinal number	Item name	Default value	Display ordinal number	Item name	Default value	Display ordinal number	Item name	Default value
N01	Electronic control version number	15	N04	Foot pedal AD value	345	N07	Bus voltage AD value	630	N10	Scissor position sensing	0
N02	Operation box version number	3805	N05	Up positioning Angle	84	N08	Error code log	154	N12	Knee sensing AD value	500
N03	Stitch speed	0	N06	Lower positioning Angle	1403	N09	Run time	7	N13	Press foot sensing AD value	0

4 Mode Settings

Debugging mode: After entering sewing mode normally, the changan "M" key will enter debugging mode for 3 seconds. If you return to normal mode from this mode, you need to install "P" key to exit and enter normal mode

Display serial number	Item name	Default value	Display ordinal number	Item name	Default value	Display ordinal number	Item name	Default value
72	Upper stop pin position correction	84	92	Encoder starting Angle		128	Scissors Action Test	

After entering sewing mode normally, the changan "M" key will be displayed for 3 seconds, the LCD screen will display "92", and the Ann S key will enter the Angle test interface of the motor, press" "Key, the motor will rotate for several times, and then the LCD screen will display the
Angle number, which represents the installation Angle of the motor grating as the display number. Press S key to save.To return to normal mode from this mode, press "P" key to exit and enter normal mode.

After entering the sewing mode normally, the "M" key will display "92" for 3 seconds. Press the lower plus key to switch to "72" and press the S key to enter the mechanical zero adjustment interface. Turn the handwheel, and the value of the display will change with the change of the position of the wheel.To return to normal mode from this mode, press the "P" key to exit and enter normal mode.

After entering the sewing mode normally, "M" key will be displayed for 3 seconds, and "92" will be displayed on the LCD screen. Press the lower plus key to switch to "128". Press S key to enter the test interface of wire cutting action, and then press" ", the scissors will be in accordance with the relative Angle of action once (cycle).To return to normal mode from this mode, press "P" to exit and enter normal mode.

Password mode: Long press "P" key to enter the password mode, the LCD screen will display 0000, press the corresponding add or subtract key below to modify the value, if the password is correct, press "S" key, you can view advanced parameters.

Save and restore factory parameters: long press" "Button for 5 seconds to save factory parameters.Long press" "Key for 5 seconds, enter the correct password, restore factory parameters complete.

Pattern Seam editing:

Normal into the sewing machine mode after long press "Patt" key, LCD screen display "n-01 01", press "+ -" key switch n1-n9 pattern, select to set the pattern number after press "S" key to enter the setting, LCD screen display "1 1 3.0", at this time can be the first section of the needle number, repeat times and needle distance worth setting, Press the corresponding key below and" "Key to set each parameter value, press the S key to save, P key to exit, a set is completed;Press" "Key, the LCD screen will display n01 02, press" S "key to enter the setting, the LCD screen will display" 1 1 3.0 ", at this time, you can set the stitch number, repeat times and stitch distance value of the second section, press the corresponding key below and"

'Key to set each parameter value, press the" S "key to save, P key to exit, the second stage setting is completed;Press" "Key, the LCD screen displays n01 03, press" S "key to enter the setting, the LCD screen displays" 1 1 3.0 ", at this time, if the needle number of the current segment number is set to zero, the sewing of this segment will not be carried out;After setting, press the S key to save and P key to exit.To return to normal mode from this mode, press the "P" key twice.

Long press Patt key to enter, interface display			Press S key to enter and the interface will display		
Pattern number	N-01	01	1	1	3.0
Meaning	Pattern number	No. 1 First section pattern	Stitch count	Repetitions	Stitch spacing size + 步 −
Editing method	Add or subtract key below		Bottom plus or minus key	Bottom plus or minus key	

Long press Patt key to enter, interface display			Press S key to enter and the interface will display		
Pattern number	N-01	02	1	1	3.0
Meaning	Pattern number	No. 1 second section pattern	Stitch count	Repetitions	Stitch spacing size
Editing method	Add or subtract key below	+ 步 −	Bottom plus or minus key	Bottom plus or minus key	+ 步 −

Pattern sewing method: normal into the sewing mode after press the "Patt" key, the LCD screen shows "n0", press the following plus or minus key switch n1-n9 pattern, select the pattern number to sew after press the "S" key to confirm, at this time according to the selected pattern sewing;Exit pattern sewing, adjust the parameters to "n0", press the "S" key to confirm, P key exit into the free sewing mode.

5. Parameter sheet

※Press and hold the " 0 " key for 5 seconds, enter the password 2017 and press the "S" key to restore the factory parameters.

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P01	Maximum rpm (rpm)	100-2700	2500	
P02	Acceleration Curve	10-100.	100	Speed controller climb slope setting

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
	Adjustment (%)			The higher the slope value, the steeper the speed; The smaller the slope value, the slower the speed.
P03	Stop pin position selection	UP/DN	DN	UP: up to stop the needle;DN: down stop needle
P04	Starting backstitch speed (rpm)	100-2000.	1500	
P05	End backseam speed (rpm)	100-2000.	1500	
P06	Continuous backstitching speed (rpm)	100-2000.	1500	
P07	Slow seam starting speed (rpm)	200-1500.	1500	
P08	Number of slow starting stitches (stitches)	0-15	2	
P09	Automatic set stitch speed (rpm)	200-3000.	2200	Fixed stitch stitch automatic trigger function to open the speed setting.
P10	Automatically perform the stop back stitch function after stopping the stitch position	ON/OFF	ON	ON: After performing the last section of the fixed stitch stitch, the stop back stitch action will be performed automatically.That is, in any sewing mode, no stitch filling function can be performed before terminating the back stitch. OFF: After the completion of the last fixed stitch stitch, it will not be able to automatically perform the stop back stitch function, and it must be done again when the front or full back step.
P11	Back stitch overall compensation	-20 ~ 20	0	Increase or decrease the parameter values for items P18, P19, P25, P26, P32, P33 at the same time.
P12	Starting backstitch motion mode selection	0-1	1	0: controlled by pedal, can stop and start arbitrarily. 1: Tap the pedal to automatically perform the backstitch action.
P13	Start back seam end mode selection	CON/STP	CON	CON: Automatically continuous next section function after the initial back seam section is completed. STP: automatically stops when the number of stitches in the initial backstitch section is complete.
P14	Slow stitch up feature Settings	ON/OFF	OFF	
P15	Filling stitch method	0 to 4	5	0: half stitch;1: one stitch; 2: fill half a stitch continuously; 3: continuously fill one stitch; 4: Continuous stitch filling, quick stop 5: backstitch function 6: close seam function
P16	Manual backstitch speed limit	0-3200.	0	Function off when value is less than 100.
P17	Counter mode selection	0-1	1	0: P41 item counter does not count automatically 1: P41 item counter automatically counts every tangent
P17-N06	Automatic piecework function	0 to 50	1	0: Off

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
				1-50: Cut wire piece count setting.
P17-N12	Power-on Display counter interface selection	0-1	0	0: Off;1: on
P17-N13	Automatic piecework mode selection	0-1	0	0: add piece mode, 1: subtract piece mode
P17-N16	Screen sharpness	0 to 10	4	Set the clarity of your screen
P18	Starting back stitch Stitch Compensation 1	0-200.	190	Start back stitch A stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch of short A and the shorter the first stitch of section B.
P19	Starting back stitch Stitch Compensation 2	0-200.	190	Start back stitch B stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment B.
P21	Pedal acceleration position	30-1000.	520	
P22	Pedal back center position	30-1000.	420	
P23	Pedal lift press foot position	30-1000.	270	
P24	Tangent position of pedal	30-500.	130	
P25	Termination backseam Compensation 3	0-200.	190	End stitch compensation in section C of backstitching, 0 ~ 200 action lag step by step;The larger the value, the shorter the first stitch of section C
P26	Terminate backseam compensation 4	0-200.	190	End back stitch D section stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment C and the shorter the first stitch in segment D.
P27	Free stitch pattern style editing			
P28	Continuous backstitch motion mode selection	0-1	1	0: manual, controlled by pedal, can be stopped and started arbitrarily 1: Automatic, touch the pedal, automatically perform the backstitch action
P29	Tangential stopping force	1-45	20	
P30	The press foot height at which the loose line begins the action when the knee rests to lift the press foot	0-300.	80	
P31	Loose wire function switch when lifting press foot by knee	0-1	1	0: Off; 1: Loose wire

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P32	Continuous backstitch compensation 5	0-200.	190	Continuous backstitching A (C) stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment A (C);The shorter the first stitch in paragraph B (D)
P33	Continuous backstitch compensation 6	0-200.	190	Continuous backstitching B (D) stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment B (D) and the shorter the first stitch in segment C
P34	Fixed stitch stitch motion pattern selection	A/M	A	A: Touch the foot pedal, that is, automatically execute the fixed stitch action; M: controlled by the foot pedal, it can stop and start arbitrarily;
P35	Loose line function setting when lifting press foot	0-2	1	0: Off; 1: open the output function of the loose wire when lifting the press foot, close the output function of the loose wire when stopping in the way; 2: the output function of the loose wire when the press foot is lifted and the output function of the loose wire when the middle stop is turned on
P36	Loose wire function Settings	0-1	1	0: Off; 1: loose wire;
P37	Dial-and-clip function Settings	0 to 11	1	0: Function off 1: The cable dialing/threading function is enabled 2 ~ 11: The clamping function is on, the greater the value, the greater the action
P38	Automatic Tangential feature Settings	ON/OFF	ON	
P39	Automatic press-foot lifting setting for mid-stop	UP/DN	DN	UP: On DN: Off
P40	Tangential automatic press lift foot setting	UP/DN	DN	UP: On DN: Off
P41	Tangent counter display	0-9999.	0	The number of finished pieces of sewing is displayed;Long press the minus key to count zeros;
P42-N01	Electronic control version No.			
P42-N02	Select needle box version number		2101	
P42-N03	RPM			
P42-N04	Foot pedal AD value			
P42-N05	Mechanical Angle (upper positioning)			
P42-N06	Mechanical Angle (lower positioning)			
P42-N07	Bus voltage AD value			
P42-N11	Status information			
P42-N14	Step version number		8	

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P42-N16	Stitch count counter display (10 stitches per stitch, value change 1)			
P42-N17	Number of maintenance running stitches (tens of thousands) *10			
P43	Motor turning direction set	CCW/CW	CCW	CW: Clockwise CCW: counterclockwise
P44	Braking force during mid-stop	1-45	16	
P45	Pattern Free seam movement pattern selection	0-1	0	0: controlled by the foot pedal, can stop and start arbitrarily; 1: touch the foot pedal, that is, automatically execute a pattern of sewing action;
P46	After tangling, reverse the needle lift function selection	ON/OFF	OFF	
P47	After the tangent, reverse the adjustment (degree) of the lifting needle Angle	10-300.	40	
P48	Minimum speed (positioning speed) (rpm)	100-500.	210	
P49	Tangential speed (rpm)	100-250.	200	Adjust spindle motor speed for tangential period
P50	Working time of full power of presser foot (ms)	10-990.	200	
P51	Periodic signal of pressure foot output (%)	1-50	38	Press foot action, to periodically save power output, avoid electromagnet burning
P52	Delay motor start, protect press underfoot down time (ms)	10-990.	120	Delay the start time when stepping down to match the confirmation of the automatic lift press foot down
P53	Half back step lift press foot function cancelled	0-2	1	0: Off; 1: both reverse step and semi-reverse step have lifting press feet; 2: semi-reverse step without lifting press foot, reverse step has lifting press foot;
P54	Tangential action time (ms)	10-990.	200	
P55	Dial-and-sweep action time	10-990.	50	
P56	Automatically find the location when the power is turned on	0-1	0	0: Never find the location 1: always find the location;
P57	Loose wire protection time (s)	1-60	60	Force it off after holding time to prevent the electromagnet from burning for a long time
P58	Up positioning adjustment	0-359.	273	Adjust the upper position, stop the needle early when the value decreases, delay the stop when the value

				increases
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P59	Lower positioning adjustment	0-359.	23	Adjust the positioning, stop the needle in advance when the value decreases, and delay the stop when the value increases
P60	Test speed (rpm)	100-3000.	2200	
P61	Item A test	OFF/ON	OFF	Run test mode continuously
P62	B test	OFF/ON	OFF	Full feature start-stop test mode
P63	Item C test	OFF/ON	OFF	No-location, no-function start-stop test mode
P64	Test run time	1-250.	30	
P65	Test stop time	1-250.	10	
P66	Nose protection switch detection	0-2	1	0: do not detect; 1: zero signal is detected; 2: detects a positive signal
P67	Tangential protection switch detection	ON/OFF	OFF	OFF: does not detect;ON: detect
P68	Maximum speed limit	100-3000.	2700	
P69	Pattern free seam speed	100-1800.	1500	
P70	Model selection	1-60	28	
P71	P71 Fill stitch spacing	0- [P123]	3.0	
P72	Up positioning quick adjustment	0-359.		Adjust the upper stop pin position, the displayed value will change with the change of the wheel position, short press the S key to save the current position (value) as the upper stop pin position.
P73	Position down for quick adjustment	0-359.		Adjust the lower stop pin position, the displayed value will change with the change of wheel position, short press the S key to save the current position (value) as the lower stop pin position.
P74	Positive stitch length compensation	- 100-100	-012	Compensation with 0, positive compensation towards the major and greater positive stitch spacing, negative compensation towards the minor and smaller positive stitch spacing
P75	Reverse stitch length compensation	- 100-100	-002	Compensate with 0, go to the major for negative compensation, and go to the minor for negative compensation, and go to the minor for negative compensation, and go to the minor for smaller stitches
P76	Brake force for the backward stitched stepper motor	0 to 5	0	

P77	Backseam response timing when the free seam joint terminates the back seam	20-350.	160	
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P78	Angle at which the wire clipper picks up	5-359.	180	
P79	Clipper end Angle	5-359.	230	
P80	Feed Angle	0-359.	53	First progress Angle (lower positioned as 0° calculation)
P81	First return knife Angle	1-359.	170	
P82	Second return knife Angle	0-359.	220	First return knife Angle (lower positioning as 0° calculation)
P83	Stopping force after tangents	10-100.	20	
P84	Tangent full output time (ms)	10-990.	60	
P85	Periodic signal of tangential power	1-10	7	
P86	Up and down positioning distance	100-345.	110	Positioning distance Angle up and down (1 degree for every 4 values)
P87	Dial/sweep line return delay time	10-990.	50	Make sure the strapping/no-bird's nest hook line mechanism is back in place
P88	Mid-stop braking distance	10-100.	30	
P89	Ac overvoltage value set	500-1023.	880	
P90	Slow start first stitch speed	200-1500.	400	
P91	Slow start second stitch speed	200-1500.	1000	
P92	Electromechanical Angle correction			Read the encoder starting Angle, the factory has been set, do not change at will (parameter value cannot be changed manually, random change will lead to the control box, motor abnormal or damage)
P93	Half backstep function delay time (ms)	10-900.	100	
P95	Periodic signal of force action in first section of press foot (%)	10-100.	100	
P96	Peak spindle motor locked-in current (A)	0-20	10	
P97	Spindle motor lockup protection time (s)	0 to 10	5	
P98	Loose wire protection time (s)	1-10	2	
P99	Starting close stitch length	0- [P123]	0.5	

P100	Starting close seam direction	0-1	0	0: counterclockwise 1: clockwise
P101	Loose line starting Angle	1-359.	160	Loose line start Angle (lower positioning as 0° calculation)
P102	Loose wire end Angle	1-359.	250	Loose wire end Angle (lower positioning to 0° calculation, need to be greater than P101 item
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
				parameter value)
P103	Large clip opener current	1-80.	30	
P105	Free stitch pattern style selection	n0-n9	n0	n0: Off; n1 ~ n9: Free seam pattern style;
P106	Normal current of spindle motor (A)	0-20	16	
P107	Starting close seam speed	100-3000	1000	
P108	Number of starting close stitches	0-12	02	
P109	Delay time before dialing/sweeping (ms)	5-990.	5	The interval between finding the up position and entering the dial/sweep action
P110	Tangent return time (ms)	60-990.	100	Make sure the tangential mechanism is back in place
P111	No bird's nest mode switch	0-1	0	0: Off; 1: on;
P112	No bird's nest hook line front delay	0-990.	60	
P113	No bird's nest hook line action time	0-990.	70	
P114	No bird's nest hook line return time	0-990.	30	
P115	No bird's nest hook line duty ratio	1-100.	70	
P116	No nest suction time	0-5000.	500	
P117	No bird's nest wire duty cycle	0-100.	50	
P118	Figure Stitch Mode Manual backstitch key feature selection	0-1	0	0: Hold down the key all the time to achieve the sewing pattern backwards. 1: Click the button to clear the number of stitches currently in progress and start again, so as to avoid highlighting a stitch during corner sewing;
P119	Electromagnet overcurrent protection detection switch	0-1	0	0: does not detect 1: detects;
P121	Lift press foot action ahead of Angle after cutting line	0 to 50	0	
P122	Knee rest to start AD value	0-1023.	600	

P123	Maximum stitch length limit	0-7.0	5.0	

Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P125	Lift press foot height compensation midway	0-320.	80	Compensation with 80 as 0, positive compensation towards the major and higher press foot height, negative compensation towards the minor and lower press foot height
P126	Electronic knee against maximum high pressure foot height	0- [P172]	220	
P127	Kneeback function selection	0-2	1	0: Off: 1: effective when spindle motor stops; 2: effective when the spindle motor is running and stopped;
P128	Tangential function test			In the parameter setting interface, press the tangent key and turn the handwheel. The tangent line will act according to the set Angle.
P129	Zero correction for reverse stitched stepper motor	- 500-500	0	
P130	Tangent stepper motor zero correction	- 200-200	-012	
P131	Normal stitch length	0- [P123]	3.5	
P132	Encrypted needle spacing	0- [P123]	2.0	
P134	Second tangent distance (post action)	0-200.	15	
P135	Electronic knee against lowest low foot height	0- [P172]	45	
P136	Maximum high pressure foot height	0- [P172]	176	
P137	First tangent distance (first action)	0-200.	106	
P138	Press foot release buffer duty ratio (%)	0-100.	20	
P139	Press foot release buffer delay time (ms)	0-200.	10	
P140	Second return knife speed	20-1000.	300	
P141	First return knife speed	20-1000.	200	Tangential process first segment speed
P142	First feed speed	20-1000.	450	Tangential process second segment speed

P143	Tight seam pattern	0-3	0	0: Off; 1: start close seam open; 2: end seam opening; 3: start the seam and end the seam;
P144	High speed positive stitch length overall compensation	- 100-100	0	
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P145	High speed reverse stitch length overall compensation	- 100-100	0	
P146	Press foot speed	20-400.	250	
P147	Press foot motor running direction	0-1	0	
P148	When the spindle motor is running, the electronic knee is at the height of the highest pressure foot	0- [P172]	100	
P149	Holding current of the backstitch stepper motor	0-12	6	
P150	Holding current of the press step into the motor	0 to 25	15	
P151	Maximum current of the reverse stitched stepper motor	0-12	12	
P152	Press the maximum current of the foot into the motor	0-65.	50	
P153	Nice stitch length	0- [P123]	0.5	
P154	Pretty Stitch speed	100-3000	1000	
P155	Manual refill needle key function toggle	0-1	0	0: needle refill function; 1: close stitch function
P159	Terminate close seam direction	0-1	0	0: positive seam; 1: reverse stitch
P160	Number of close stitches terminated	0-12	2	
P161	Store maintenance pin count high 16 digits	0	0	
P162	Save maintenance pin count low 16 digits	0	0	
P163	Deposit bottom pin count 16 digits higher	0	0	

P164	Deposit bottom pin count 16 digits lower	0	0	
P165	Pin count counter mode selection	0 to 4	0	0: does not count; 1. Increasing cycle count; 2. Decreasing cycle count; 3. Increasing count, after the count is full alarm, need to be cleared by the key to start the recount;
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
				4. Decreasing count, after the count is full, alarm, need to start the reset by the clear key The number
P166	Needle count counter Upper limit (needle)	0-9999.	500	
P167	Maintenance needle upper limit (10,000 needles) *10	0-9999.	0	
P169	Brightness Settings for logo lights	0-3	0	
P170	Fill stitch spacing for manual key N	0- [P123]	3.0	
P171	Hand key L's fill stitch length	0- [P123]	0.8	
P172	Maximum high pressure foot height limit	0-300.	220	
P173	Manual key R's fill stitch length	0- [P123]	1.6	
P174	Function selection of manual key N	0 to 6	6	0: Feature off 1: Fill half a stitch 2: Fill a stitch 3: Fill half a stitch in succession 4: Fill one stitch in a row 5: Have a backstitch action in the seam or when stopping halfway 6: close seam function
P175	Function selection of manual key L	0 to 6	0	0: Function turned off 1: Fill half a stitch 2: Fill a stitch 3: Fill half a stitch in succession 4: Fill one stitch in a row 5: Have a backstitch action in the seam or when stopping halfway 6: close seam function

P176	Function selection of manual key R	0 to 6	0	0: Function turned off 1: Fill half a stitch 2: Fill a stitch 3: Fill half a stitch in succession 4: Fill one stitch in a row 5: Have a backstitch action in the seam or when stopping halfway 6: close seam function
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P177	Forward 1mm needle distance reference value	0-2000.	58	
P178	Reverse 1mm needle distance reference value	0-2000.	47	
P179	Forward 2mm needle distance reference value	0-2000.	100	
P180	Reverse 2mm needle distance reference value	0-2000.	85	
P181	Forward 3mm needle distance reference value	0-2000.	145	
P182	Reverse 3mm needle distance reference value	0-2000.	128	
P183	Forward 4mm needle distance reference value	0-2000.	185	
P184	Reverse 4mm needle distance reference value	0-2000.	160	
P185	Forward 5mm needle distance reference value	0-2000.	222	
P186	Reverse 5mm needle distance reference value	0-2000.	190	
P187	Forward 6mm needle distance reference value	0-2000.	262	

P188	Reverse 6mm needle distance reference value	0-2000.	228	
P189	Forward 7mm needle distance reference value	0-2000.	300	
P190	Reverse 7mm needle distance reference value	0-2000.	252	
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P201	Slit lift press foot switch	0-1	0	0: Off; 1: on
P202	Seam lift press foot starting Angle	0-359.	1	
P203	Seam lift press foot end Angle	0-359.	80	
P204	Seam lift pressure foot strength	0-100.	60	
P205	Speed of first stitch up (rpm)	0-9999.	0	
P206	Speed of the 2nd stitch up (rpm)	0-9999.	0	
P207	Pick up 3rd stitch speed (rpm)	0-9999.	0	
P211	Periodic signal of force action in first section of loose wire (%)	1-100.	35	
P212	First leg of loose line power action time	0-100.	20	
P213	Distance between needles	13-254.	64	
P214	Free seam corner Angle	30-140.	90	
P215	Set stitch stitch corner pattern	0-3	0	0: multi-section seam 1: Left turn 2: Turn right 3: Mechanical corner
P216	Corner stitch count pattern	0-1	0	0: The stitches are evenly spaced 1: Size stitch spacing
P217	Corner Automatic mode	0-2	1	0: Controlled by pedal 1: Automatic corner 2: Mechanical corner
P218	Turn the corner needle time	0-999.	109	

P219	Left and right machine needle separation electromagnet duty ratio	1-100.	38	
P220	About separation electromagnet protection time	0-90.	15	
P234	Pattern stitch stop stitch function	0-1	0	0: Off 1: Stop stitch to complete the current pattern
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
P235	(0mm ~ [P245]) Pattern stitch compensation	0-200.	188	
P236	(【P245】~7mm)Pattern stitch compensation	0-200.	180	
P237	(【P245】~7mm)Starting back stitch compensation 1	0-200.	180	Start back stitch A stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch of short A and the shorter the first stitch of section B.
P238	(【P245】~7mm)Starting back stitch compensation 2	0-200.	180	Start back stitch B stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment B.
P239	(【P245】~7mm)Endback stitch compensation 3	0-200.	180	Terminate the stitch compensation in section C of backstitching, 0 ~ 200 action lag step by step;The larger the value, the shorter the first stitch of section C.
P240	(【P245】~7mm)Endback stitch compensation 4	0-200.	180	End back stitch D section stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment C and the shorter the first stitch in segment D.
P241	(【P245】~ 7mm) Continuous back stitch compensation 5	0-200.	180	Continuous backstitching A (C) stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment A (C);The shorter the first stitch in paragraph B (D)
P242	(【P245】~ 7mm) Continuous back stitch compensation 6	0-200.	180	Continuous backstitch B (D) stitch compensation, 0 ~ 200 action lag step by step;The larger the value, the longer the last stitch in segment B (D) and the shorter the first stitch in segment C
P243	([P245] ~ 7mm) End back stitch first stitch spacing compensation	0-200.	0	

P244	【P245】~ 7mm) back stitch overall compensation	-20 ~ 20	0	Increase or decrease the parameter values for items P237, P238, P239, P240, P241, P242 at the same time
P245	Large stitch length setting	0-7.0	5.5	
P246	([P245] ~ 7mm) Start back stitching, end back stitching, continuous back stitching speed limit	200-1600	1200	
P247	P247 Back stitch Angle	- 100-100	0	Compensation for turning the front seam into the
Parameter items	Chinese description	Scope	Initial value	Content Value Name Description with remarks
	stitch length compensation 1			back seam when backstitching
P248	Back stitch Angle stitch length compensation 2	- 100-100	0	Compensation for turning the back seam to the front seam when backstitching
P249	Backwards stitched stepper motor speed	50-1000.	600	
P254	7mm High speed positive stitch length overall compensation	- 100-100	0	When the parameter value is 0, the overall compensation of high speed positive stitches for all stitches is controlled by P144
P255	7mm High speed reverse stitch length overall compensation	- 100-100	0	When the parameter value is 0, the overall compensation of high speed reverse stitch length for all stitch lengths is controlled by P145

Note: The initial parameter value is for reference only. The actual parameter value shall prevail in kind.

6 Table of error codes

Error codes	Content	Countermeasures
E01	1. When the power supply is ON, the main voltage is detected too high 2. When the supply voltage is too high	Turn off the system power and test whether the supply voltage is correct.(or if it exceeds the voltage rating specified for use). If correct, please replace the control box and notify after-sales service.
E02	1. When the power supply is ON, the main voltage is detected too low 2. When the supply voltage is too low	Turn off the system power and test if the supply voltage is correct.(or if it is lower than the rated voltage specified for use). If correct, please replace the control box and notify after-sales service.
E03	The transmission communication between the operation panel and the CPU is abnormal	Power off the system, check whether the cable to the control panel is loose or falls off, restore it to normal and restart the system.If it still does not work normally, please replace the control box and notify the after-sales service.

E05	Abnormal contact of the speed controller	Turn off the power to the system, check whether the speed controller connector is loose or falls off, and restart the system after restoring it to normal.If it still does not work properly, please replace the speed controller and notify after-sales service.
E07	1. Motor plug wiring contact is poor resulting in no rotation 2. The front mechanism is locked or the motor belt is stuck with foreign bodies 3. The processing material is too thick, and the motor torque is insufficient to run through 4. Module driving output is abnormal	Turn the nose handwheel to see if it is stuck.If stuck, remove the mechanical fault first. If the rotation is normal, check whether the motor encoder connector and motor power cord connector are loose.Correct if they are loose. If the contact is good, check if the supply voltage is abnormal or the speed is set too high.Adjust if available. If it still does not work properly, please replace the control box and notify after-sales service.
E10	Electromagnet overcurrent protection	Turn off the power to the system and check the electromagnet (solenoid valve) for damage or short circuit.
E09 E11	Locating signal anomalies	Turn off the power to the system, check if the motor encoder interface is loose or falling off, and restart the system after restoring it to normal.If it still does not work properly, please replace the motor and notify after-sales service.
E13	Power module overheating protection	Turn off the power to the system and check for damage to the electromagnet connection or electromagnet
E14	Abnormal encoder signal	Power off the system, check if the motor encoder interface is loose or falling off, and restart the system after restoring it to normal.If it still does not work properly, please replace the motor and notify after-sales service.
E15	Power module abnormal overcurrent protection	Turn off the power to the system and turn it on again.If it still does not work properly, please replace the control box and notify after-sales service.
E16	Tangential stepper motor abnormal	Turn off the power to the system and check that the tangential mechanism is back in the correct position;Check that the tangent mechanism is set incorrectly.
E17	The nose protection switch is not in the correct position	Power off the system and check if the nose is lifted and the ball switch in the control box is shifted or damaged.
E20	Motor startup failure(wrong electrical Angle)	Power off the system, check whether the motor encoder interface and the motor power interface are loose or fall off, and restart the system after restoring them to normal.If it still does not work properly, please replace the control box and notify the after-sales service.
E28	Maintenance maintenance alarm high	Please perform maintenance.(When the alarm is raised, press S to clear and recount.)

E80	The main CPU is communicating incorrectly with the stepper drive CPU	Please replace the control box and notify after-sales service.
E82	Reverse stitch stepper motor overcurrent	1. Turn off the system power and observe whether the backward stitch stepper motor is stuck.If it is stuck, remove the machine first Head mechanical failure.If normal, check that the backstitched stepper motor interface is not loose or falling off that will Restart the system after it returns to normal. 2. If it still cannot work normally, please replace the control box or reverse stitch stepper motor and notify the after-sales service Service.
E84	Backstitch stepper motor encoder locate signal Abnormal	1. Turn off the system power and observe whether the backstitch stepper motor is stuck.If it is stuck, remove the machine first Head mechanical failure.If normal, check that the backstitch stepper motor encoder interface is loose or off Down, restore it to normal after restarting the system. 2. Check whether the grating is installed correctly (whether the grating screws are fixed or not, and whether the grating is in knitting) Middle position of coder head); 3. Check whether there is oil in the grating code disk. If there is, please clean it up and restart the system after restoration System; 4. If it still cannot work normally, please replace the control box or reverse stitch stepper motor and notify the after-sales service Service.

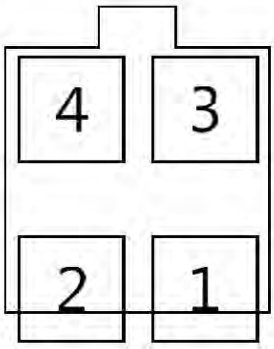
E85	Abnormal signal on the backstitch stepper motor encoder	1. Turn off the power supply of the system and check whether the interface of the backward sewing stepper motor encoder is loose or falls off. Restore it to normal and then restart the system. 2. Check whether the grating is installed correctly (whether the grating screws are fixed or not, and whether the grating is in knitting) Middle position of coder head); 3. Check whether there is oil in the grating code disk. If there is, please clean it up and restart the system after restoration System; 4. If it still cannot work normally, please replace the control box or reverse stitch stepper motor and notify the after-sales service Service.
E86	Reverse stitch stepper motor fails to start	1. Turn off the power supply of the system and check whether the power cord interface and encoder interface of the backward stitched stepper motor are Loose or fall off, restore it to normal and then restart the system. 2. Check whether the grating is installed correctly
		(whether the grating screws are fixed or not, and whether the grating is knitting or not) Middle position of coder head); 3. Check whether there is oil in the grating code disk. If there is, please clean it up and restart the system after restoration System; 4. If it still cannot work normally, please replace the control box or reverse stitch stepper motor and notify the after-sales service Service.

E87	Backstitch stepper motor blocked rotation	1、Turn off the power to the system and observe if the backstitched stepper motor is stuck.If stuck, first remove the mechanical fault of the machine head.If it is normal, check whether the power cord interface and encoder interface of the backward stitched stepper motor are loose or fall off, and restart the system after restoring them to normal. 2、If the machine does not work properly, please replace the control box or the backward stitched stepper motor and notify the after-sales service
E92	Wire cutting (presser pin) stepper motor overcurrent	1. Turn off the power supply of the system and observe whether the cutting wire (press foot) stepper motor is stuck.If stuck, first remove the mechanical fault of the machine head.If normal, check whether the cutting wire (press pin) stepper motor interface is loose Move or fall off, and restart the system after restoring it to normal. 2. If it still cannot work normally, please replace the control box or the cutting wire (press foot) stepper motor and notify the after-sales service.
E94	Cut wire (press pin) stepper motor encoder set Abnormal bit signal	1. Turn off the system power and observe whether the stepper motor is stuck.If stuck, first remove the mechanical fault of the machine head.If it is normal, check whether the wire cutting (press pin) stepper motor encoder interface is loose or off, and whether there is oil in the encoder code plate. If there is, please clean it up and restart the system after restoring it to normal. 2. If it still does not work normally, please replace the control box or the cutting wire (press foot)

		stepper motor and notify the after-sales service.
E95	Cut wire (press pin) stepper motor encoder letter Abnormal number	1. Turn off the system power, check whether the interface of the cutting wire (press pin) stepper motor encoder is loose or falls off, and restart the system after restoring it to normal. 2. If it still does not work normally, please replace the control box or the cutting wire (press pin) stepper motor and notify after-sales service.
E96	Wire cutting (presser pin) stepper motor fails to start	1. Turn off the power supply of the system, check whether the power cord interface and encoder interface of the cutting wire (press pin) stepper motor are loose or fall off, and restart the system after restoring them to normal. 2. If it still cannot work normally, please replace the control box or the cutting wire (press foot) stepper motor and notify the after-sales service.
E97	Wire cutting (presser pin) stepper motor blocking rotation	1. Turn off the power supply of the system and observe whether the cutting wire (press foot) stepper motor is stuck.If stuck, first remove the mechanical fault of the machine head.If it is normal, check whether the power cord interface of the cutting wire (press pin) stepper motor and the encoder interface are loose or fall off, and restart the system after restoring them to normal. 2. If it still does not work normally, please replace the control box or the clipped (press pin) stepper motor and notify the after-sales service.

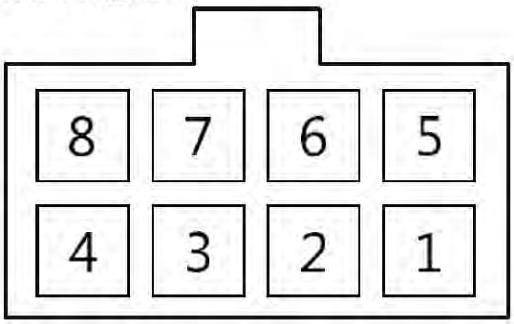
7. Wiring diagram of each port

7-1.4 Schematic diagram of P ports



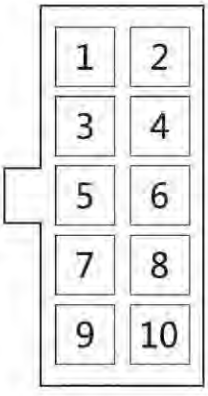
1. Presser pin height induction: 1, 3 (DGND), 4 (S5V)

7-2.8P ports schematic diagram

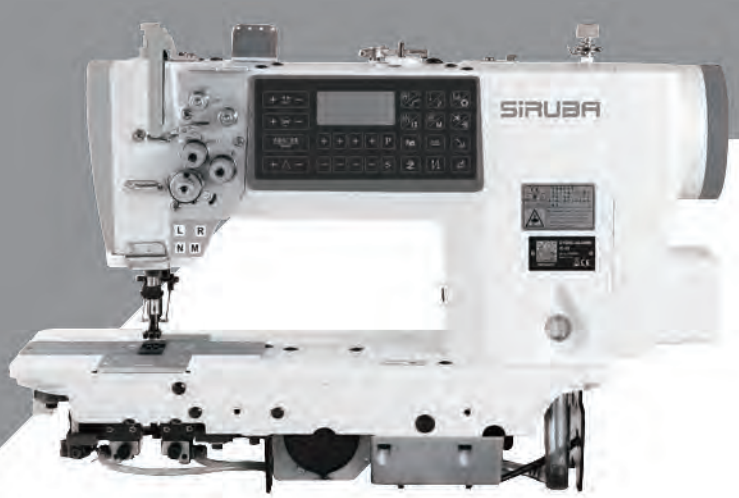


1, 5: Right separation electromagnet
2, 6: Detangle the electromagnet from the left 3,
7: sweep electromagnet
4, 8: loose wire electromagnet

7-3.10 Schematic diagram of P ports



1. Ground wire (button blue wire)
2. Reserved input port (+5V)
3. Reserve input ports
4. Reserve input ports
5. Key L (button yellow line)
6. Key R (button red line)
7. Headlight + (red line)
8. Backstitch button (button brown thread)
9. Headlight - (Black line)
10. Tightly stitched keys (button black thread)



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