



INSTRUCTION MANUAL FOR DÜRKOPP ADLER-271 MACHINE ONLY

HVP-70-4-ED FOR DÜRKOPP ADLER- 271

MINI-MOTOR TYPE



ENGLISH

Please read this manual thoroughly before use to ensure safe and proper use.
Please read the instruction manual for the machine head together with this manual.
Save this manual for future reference.

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Appendix : 7-Segment Display Characters Compare Chart

1. Safety Precaution

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

When install and operate HVP-70 MINI Servo Motor, precaution must be taken as the following.
This product is designed for specified sewing machines and must not be used for other purposes.

1.1 Work Environment:

(1). Power voltage:

Only use Power Voltage indicated on the name plate of the HVP-70 in $\pm 10\%$ ranges.

(2). Electromagnetic pulse interference:

To avoid the abnormal running, please keep the product away from the high electromagnetic machine or electro pulse generator.



(3). Temperature:

- a. Please don't operate in room temperature is above 45°C or under 5°C
- b. Avoid operating in direct sun light or outdoors area.
- c. Avoid operating near the heater.
- d. Avoid operating in the area which humidity is 30% less and 95% more, also keep away dew area.

(4). Atmosphere:

- a. Avoid operating in dusty area, and stay away from corrosive material.
- b. Avoid operating in evaporative or combustible gas area.

1.2 Safety in Installation :

(1). Motor and control box: Follow the instruction in this manual for proper installation.

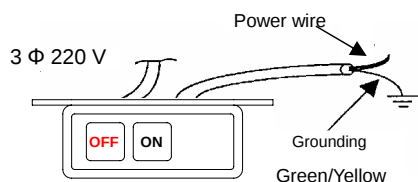
(2). Accessories: Turn off the power and unplug the cord before mounting any accessories.

(3). Power cord:

- a. Avoid power cord being applied by heavy objects or excessive force, or over bend.
- b. Power cord must not set to be near the V-belt and the pulley, keep 3 cm space or above.
- c. Check the outlet's voltage before plugging the cord, make sure it match the voltage shown on the name plate of the HVP-70 in $\pm 10\%$ ranges.

(4). Grounding:

- a. To avoid the static interference and current leakage, all grounding must be done



Ground Wire (Green/Yellow)
must be grounding.

- b. Use the correct connector and extension wire when connecting ground wire to Earth and secure it tightly.

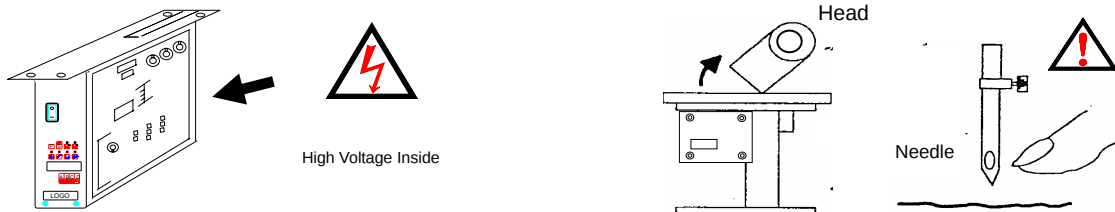
1.3 Safety in Operating :

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

1.4 Safety in Maintenance and Repairs :

Power must be turned off first, when:

- (1). Uninstall the motor or the control box, or plug and unplug any connector.
- (2). Turn off the power and wait 10 minutes before opening box cover.



- (3). Raising the machine arms or changing needle, or threading needle. (Shown as above)
- (4). Repairing or doing any mechanical adjustment.
- (5). Machines rest.

1.5 Regulation in Maintenance and Repairs :

- (1). Maintenance and repairs must be done by trained personnel.
- (2). Don't cover up motor's ventilation, it can cause motor over heated.
- (3). Don't use any objects or force to hit the product.
- (4). All spare parts for repair must be approved or supplied by the manufacturer.

1.6 Danger and Caution Signs :



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



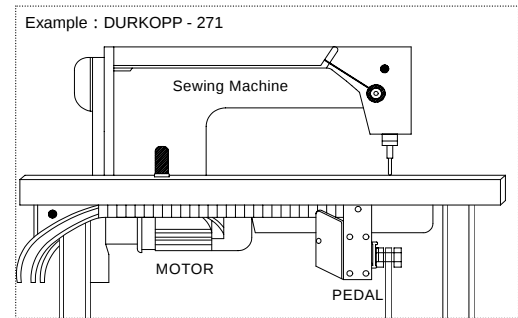
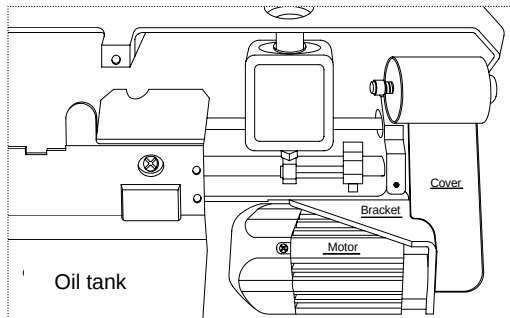
This symbol indicates electrical risks and warnings.

1.7 Warranty Information :

Manufacturer provides a limited warranty in respect of the products covered for a period of 18 months for any defects arising in the normal course.

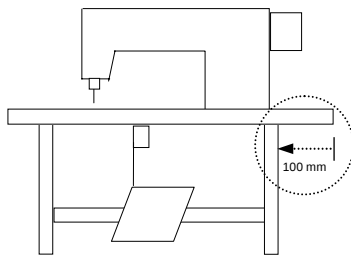
2. Installation and Adjustment:

(1).Motor Installation :

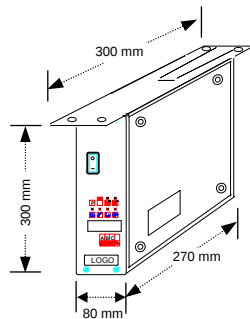


(2).Control Box Installation :

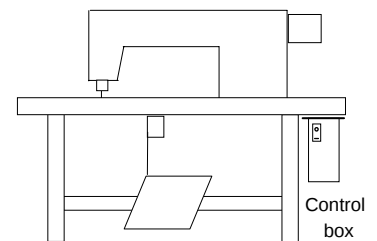
a). Leave 100 mm space at right



b). Mounting control box under the working table

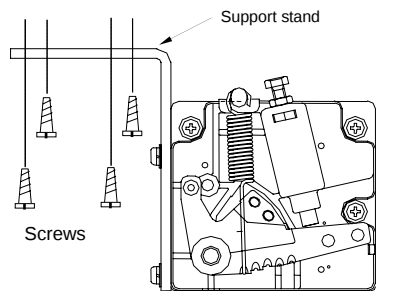


c). Installation layout



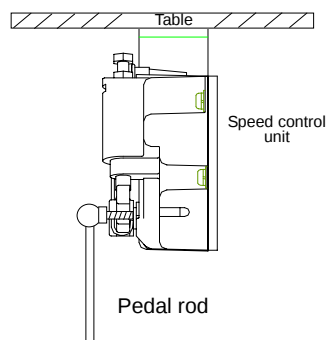
(3).Speed Control Unit Installation :

a). Speed Control Unit

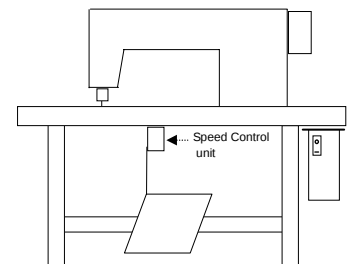


Always use screwdriver to tightly secure screws

b). Keep rod in vertical, secure the unit under the table

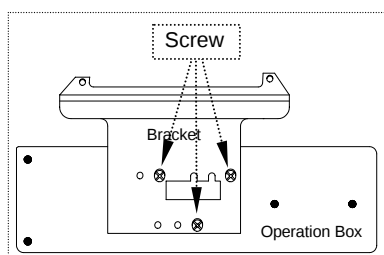


c). Installation layout

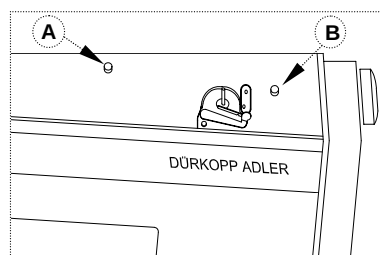


(4).Operation Box Installation :

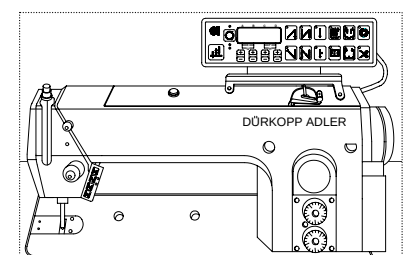
a). Assembling the operation box and Bracket.



b). Unscrew A and B.



c). Mounting the bracket by screws A and B.



(5). Adjust the force required to operate the foot pedal :

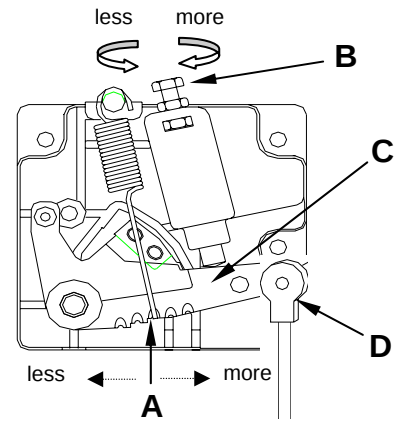
Components of the speed control unit: see figure

A : Spring for toeing forward force adjustment

B : Bolt for heeling backward force adjustment

C : Treadle / Pedal arm.

D : Pitman Rod for Treadle / Pedal

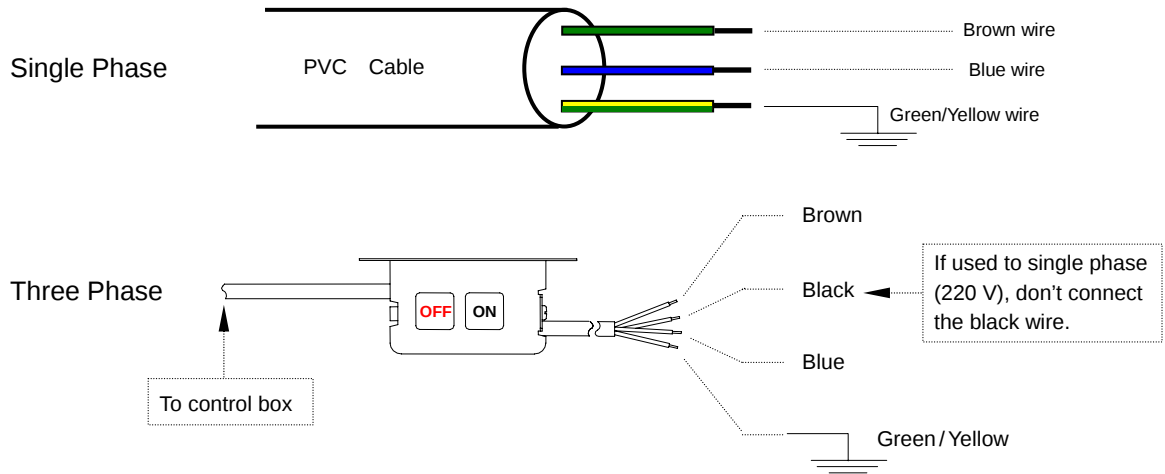


Term of adjustment		Adjustment result
1	Toeing forward force adjustment	Spring A move to right = force increased Spring A move to left = force decreased
2	Heeling backward force adjustment	Bolt B turn ↶ = force decreased Bolt B turn ↷ = force increased
3	Treadle stroke adjustment	Rod D secure at right = stroke is longer , Rod D secure at left = stroke is shorter.

3. Power Connection and Grounding :

(1). Single phase and three phase connection :

Green/yellow wire is the ground wire.



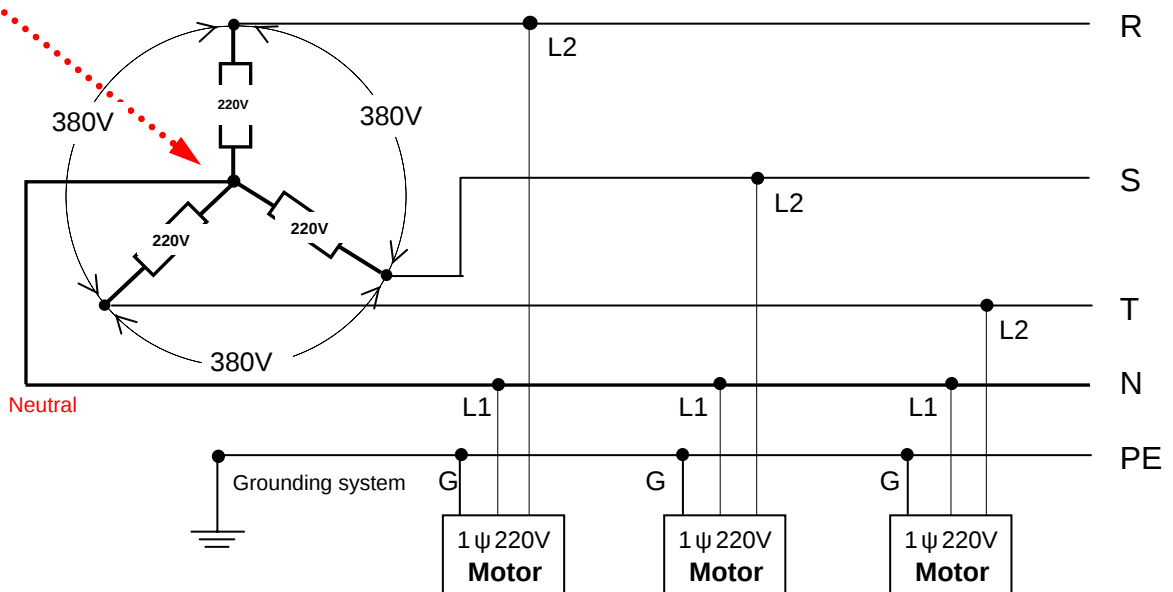
1. When a three phase 220 V servo motor used on single phase 200 ~ 240 V power, only connect brown and blue wires. Use insulating tape to wrap up the black wire for safety.
2. Green / Yellow wire must be grounded well.

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

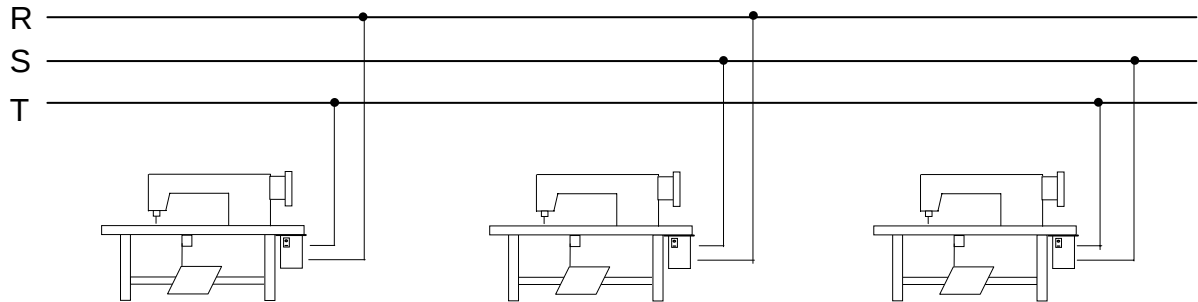


Caution : If the system have no Neutral point, then this servo motor is not suitable for this connection.

Caution: Must have a Neutral point



(3). When using 1 Φ / 220V motors in 3 Φ / 220V power system, please make power connections as below for load balance.



(4). How to change solenoid supply voltage (DC: 24 V or 30 V) :

The JP 4 is for 30 V and JP5 is for 24 V.

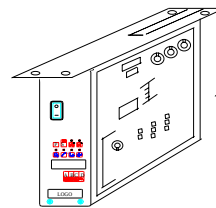


Caution: Before setting make sure the machine head's solenoid specification.

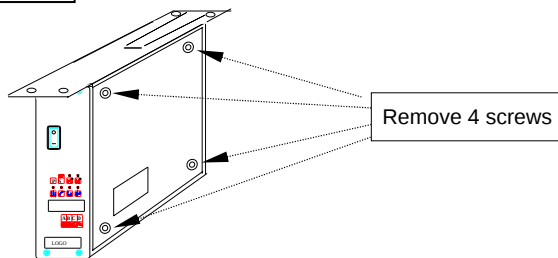


Caution:

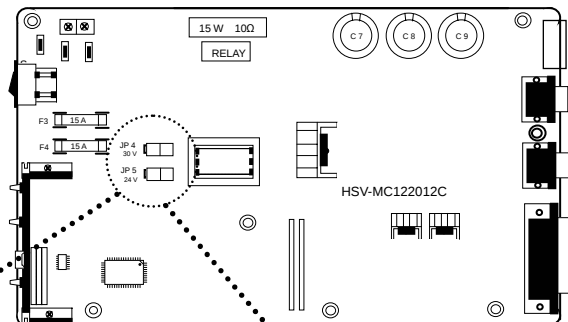
Turn off the power & wait for 10 min.
before opening the cover,



Step 1

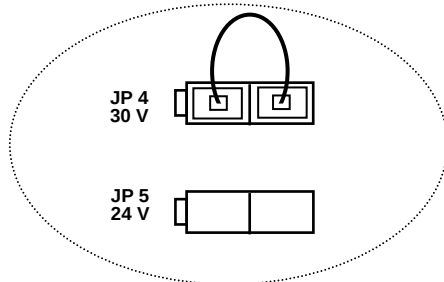


Main board layout:

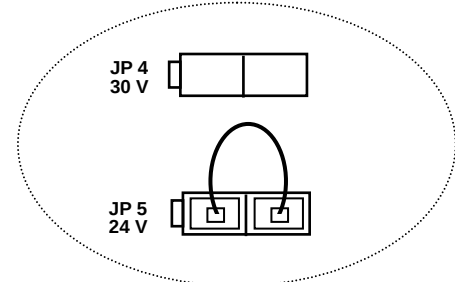


Step 2

30 V jumper setting



24 V jumper setting

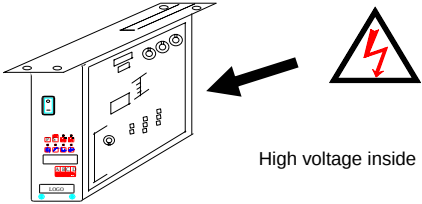


Factory setting

(5). How to supply an additional power source from the control box :

 **Caution 1 :** Turn off the power & wait for 10 min. before opening the cover,

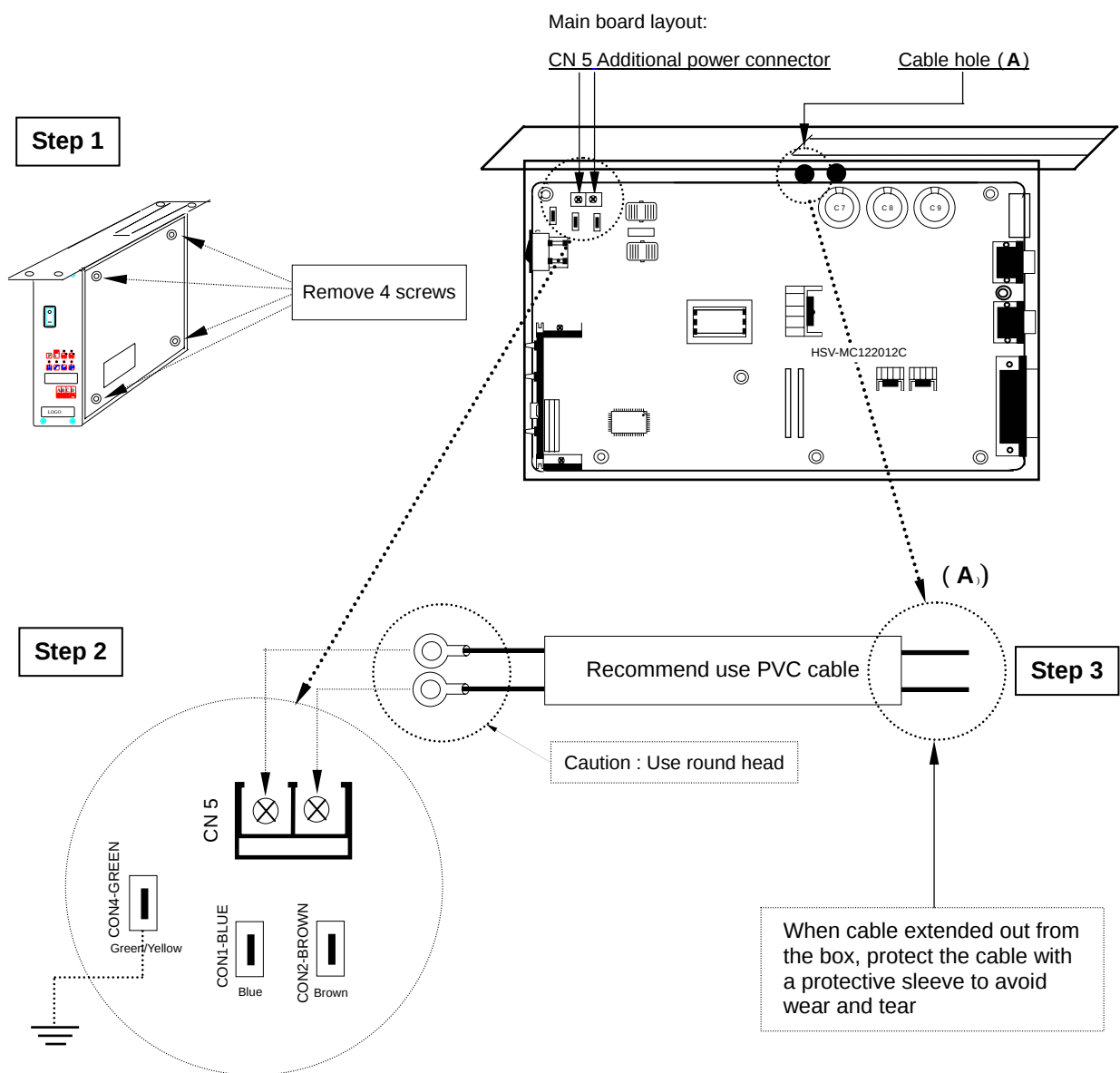
 **Caution 2 :** When turning off the control box's power switch, it will not turn off the additional, Please add switch for the power.



High voltage inside



Caution : Unplug the power cord before doing any one of the following steps.



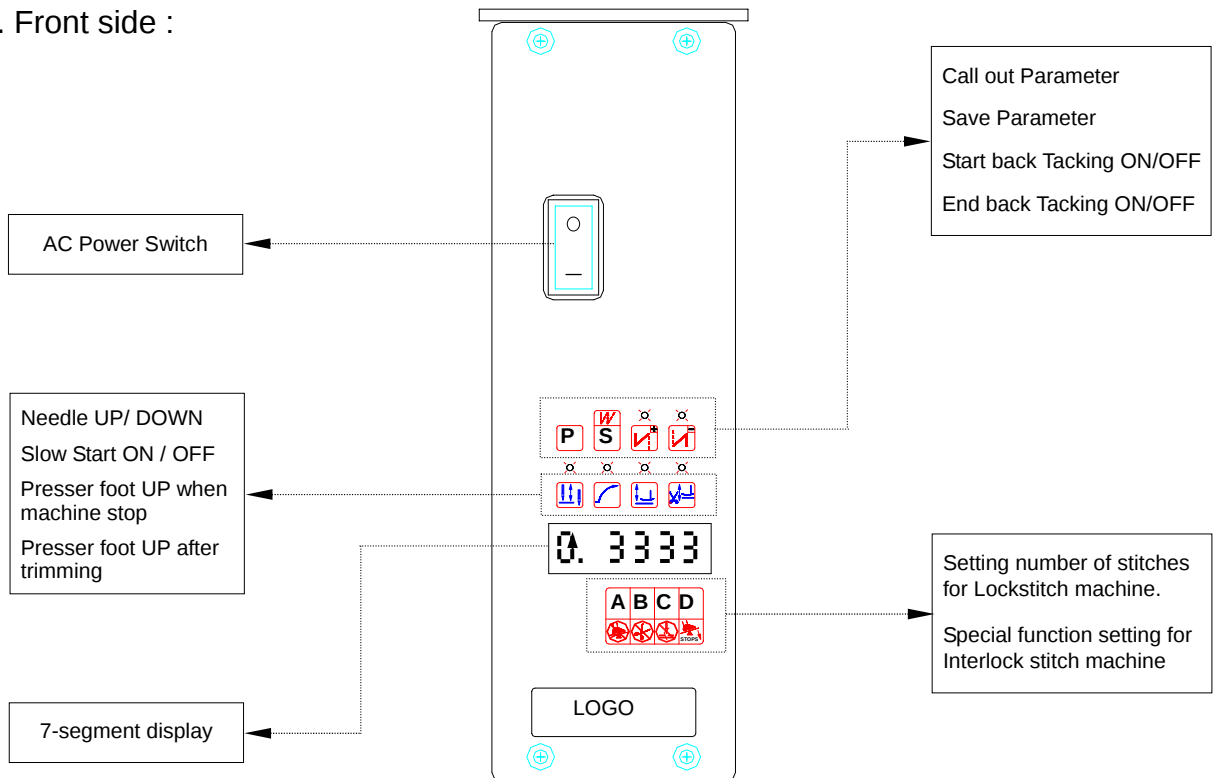


Caution : 1. Secure the round terminals tightly on CN5 to avoid electric noise and spark, which caused by the bad connection.

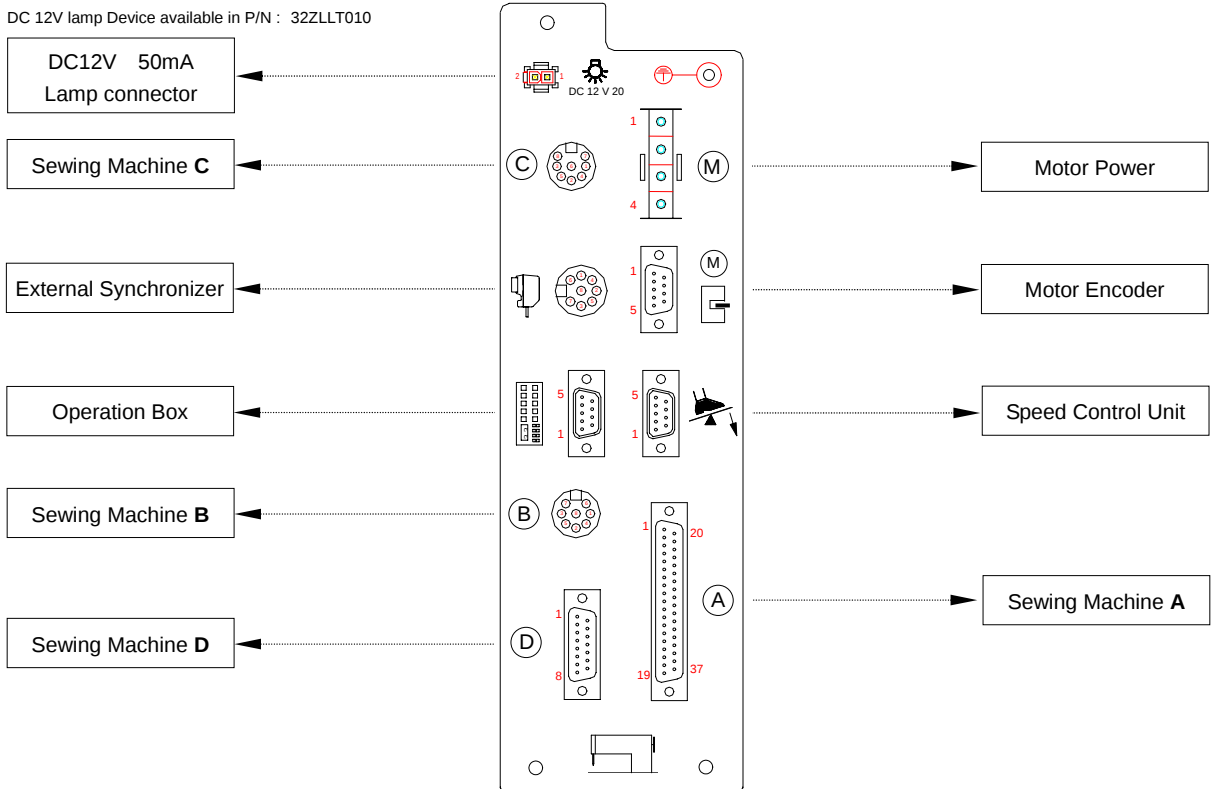
2. Have the cable passed through and secured at the hole (A) .

4. Diagrams Of Control Box :

(1). Front side :



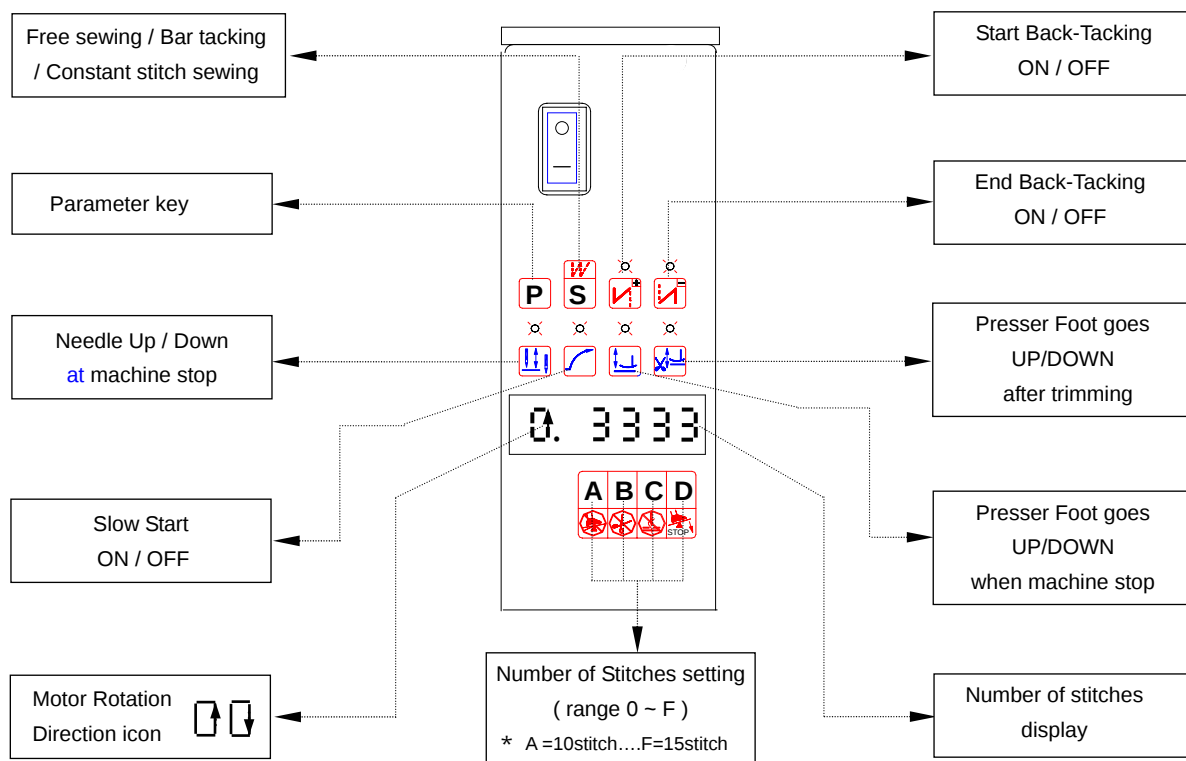
(2). Rear side : Connector Panel (Model : HVP-70-4-ED)



5. Key functions on panel board and 7-segment display :

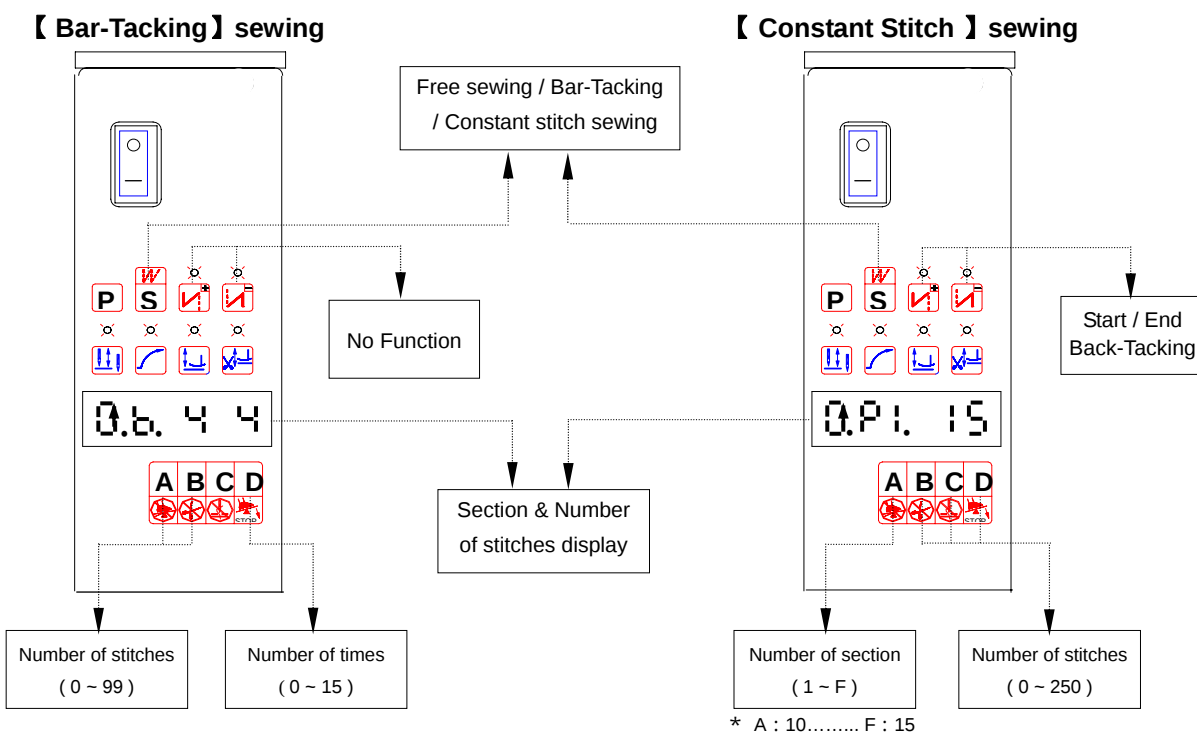
Note : How to enter various parameter mode ? See the page 12.

(1). Function keys in the 【Normal Mode】 :

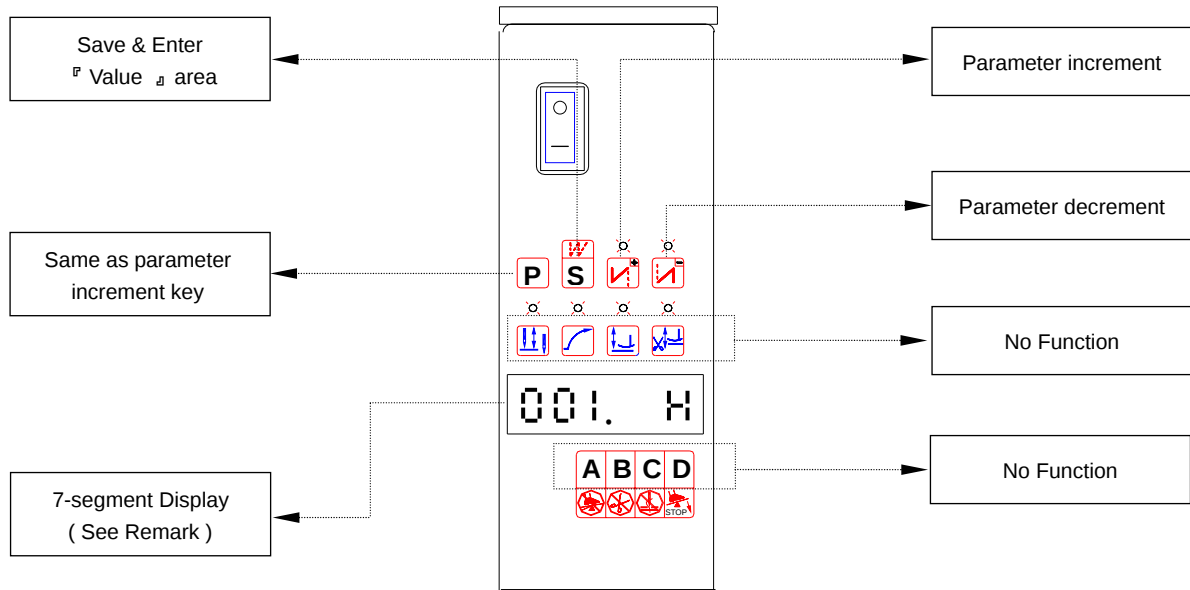


(2). Function keys in 【Bar Tacking】 and 【Constant Stitch Sewing】 mode :

Under 【Normal Mode】 , press the key **S** to switch back and forth in 「free sewing」 , 「Bar-tacking」 and 「constant stitch sewing」 functions.



(3). Function keys in 【Parameter Mode A、 B、 C、 D、 E】 :

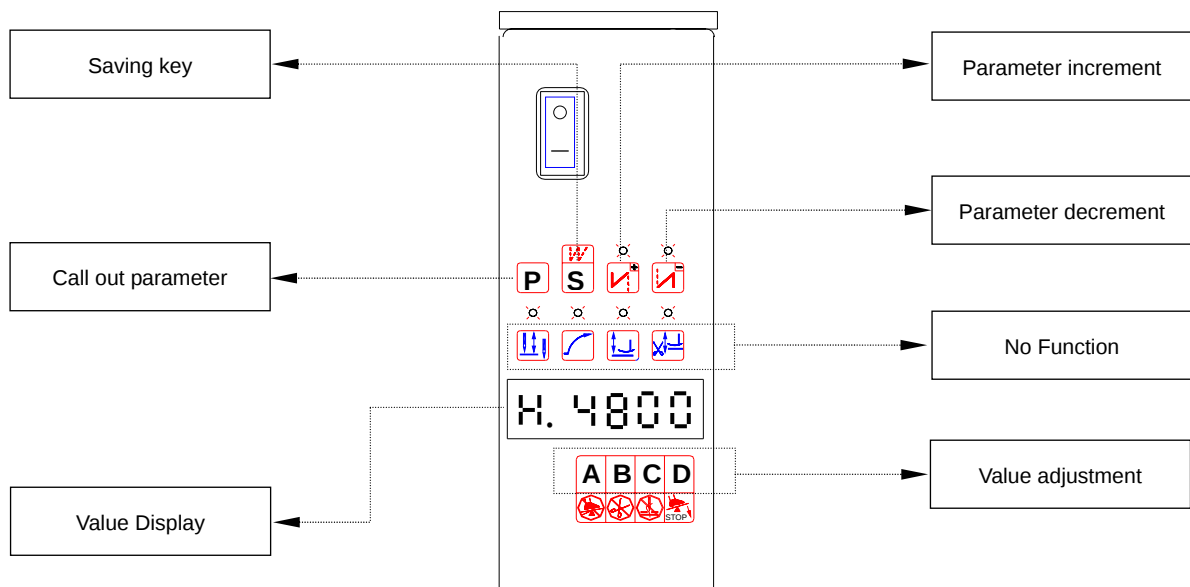


Remark :

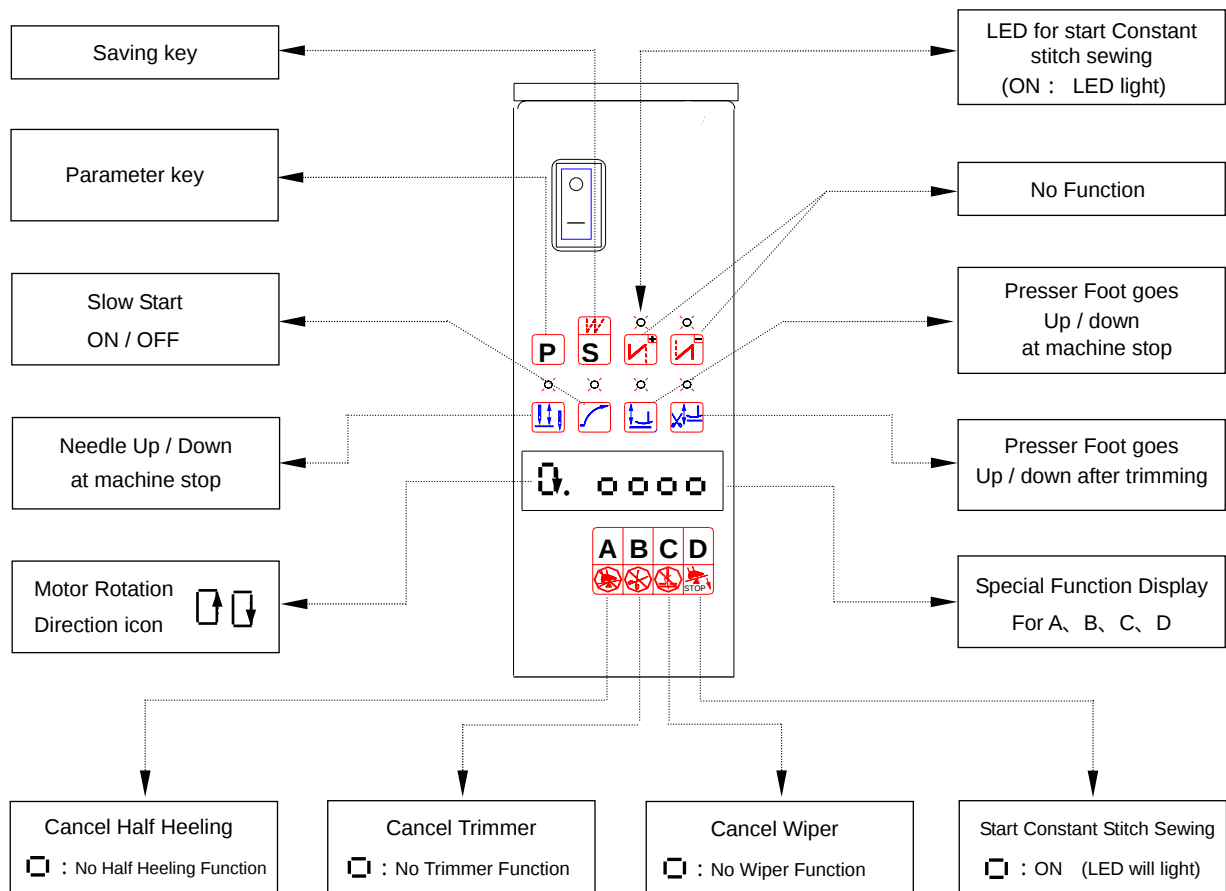
7-Segment
Display

- In 【Mode A 】 First parameter showing is 【001. H】 . All available parameter start from 1 ~ 46.
- In 【Mode B 】 First parameter showing is 【047. MAC】 . All available parameter start from 1 ~ 122.
- In 【Mode C 】 First parameter showing is 【123. FAS】 . All available parameter start from 1 ~ 249.
- In 【Mode D 】 First parameter showing is 【176. VDN】 . All available parameter start from 1 ~ 249.
- In 【Mode E 】 First parameter showing is 【208. VER】 . All available parameter start from 1 ~ 249.

(4). Function keys in 【Parameter Value】 area :



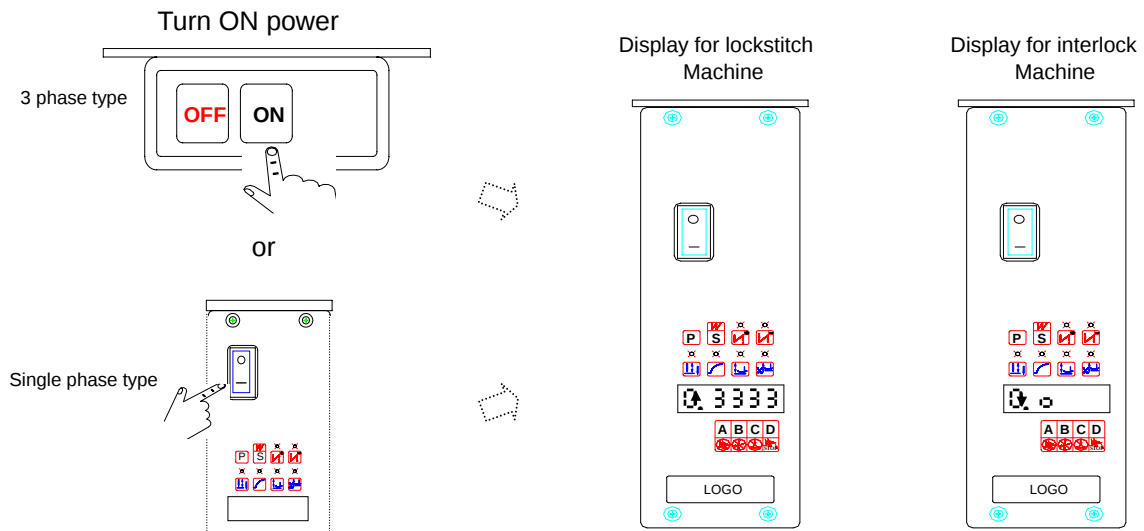
(5). Special function keys in the 【Normal Mode】 ,when parameter 【134.KLK】 = ON



6. How to enter parameter mode :

(1). How to enter 【Normal Mode】 level :

Just turn ON the power to enter 【Normal Mode】



(2). How to enter 【Parameter Mode】 level :

Parameter Mode		Operation	First display	Range for Parameter
Level 1	Parameter Mode A	At 【Normal Mode】 press P key °	001. H	Parameter #1 ~ 46
Level 2	Parameter Mode B	P + POWER ON	047.nAC	Parameter #1 ~ 122
Level 3	Parameter Mode C	S + POWER ON	123.FAS	Parameter #1 ~ 249
Level 4	Parameter Mode D	 + POWER ON	176.udn	Parameter #1 ~ 249
Level 5	Parameter Mode E	 + POWER ON	208.uEr	Parameter #1 ~ 249
RESET		A B + POWER ON	-E5Er	Return to factory setting
Remark		※ Level 4 & 5 only for (ED) software Version D1.7 (included) above °		

(3). How to set the Parameter Value :

Note 1 : Confirm the parameter code you want to adjust. (See the parameter table for detail)

Note 2 : Follow below steps to adjust parameter value.

Step 1 : Enter one of the 【 Parameter Mode **A** to **E** 】 .

Step 2 : Press  or  key to select the target parameter number.

Step 3 : Press  key to enter the parameter value.

Step 4 : Press     key to adjust the value.

Step 5 : Press  key to save the value and return to 【Normal Mode】 automatically.

Caution :



1. Must operate in the 【Normal mode】 , an operating area of sewing can start motor.
2. 【Parameter mode】 , an setting area of parameter, disable from running motor.

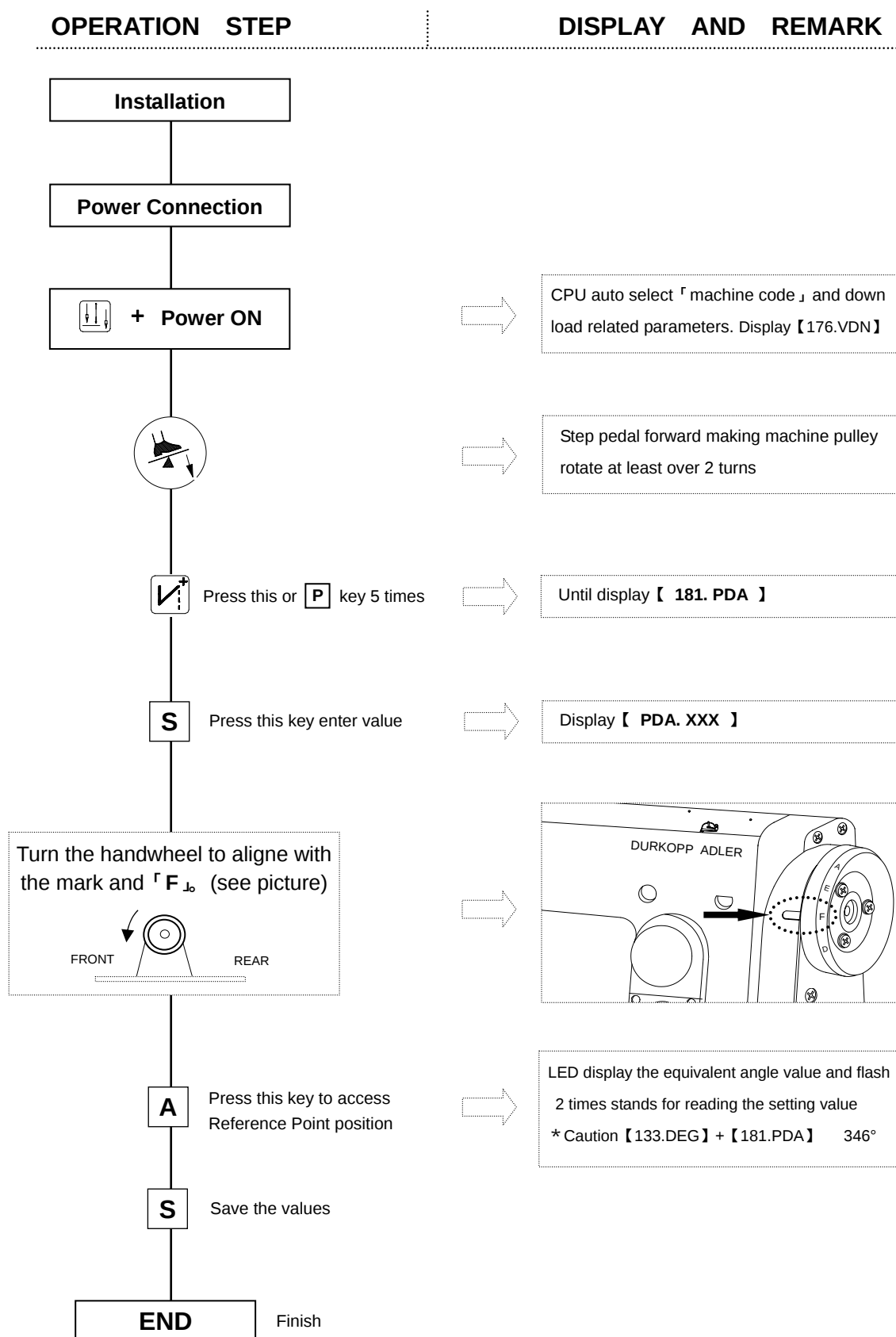
(4). Value setting for key in the 【Parameter Value】 :

KEY TERMS SCALE				
IN TERMS OF SPEED	1000 spm	100 spm	10 spm	1 spm
IN TERMS OF ANGLE	-----	100 °	10 °	1 °
IN TERMS OF TRIMMING	1000 ms	100 ms	10 ms	10 ms
IN TERMS OF FUNCTION			FUNCTION SWAP	FUNCTION SWAP
※ 1. Other than the function selection, each press of the key will start change the value from 0 to 9 ° 2. When 【 134. KLK 】 set 『 ON 』 , it acts as special function 『 ON / OFF 』 key. See the chapter 5.5 (Page.11) for detail °				

Note : After value change, press key  to save the value, otherwise they will lose after turning power off.

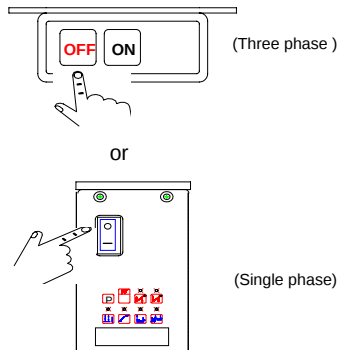
7.How to adjust Needle position :

For DURKOPP ADLER - 271 Needle position adjustment illustration

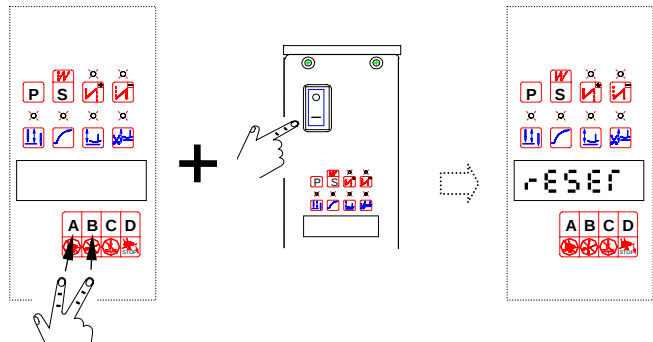


8. How to use 【Recovery】 to go back at factory default :

a. Turn OFF power.



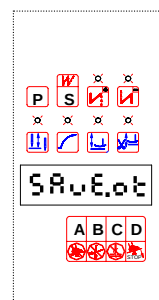
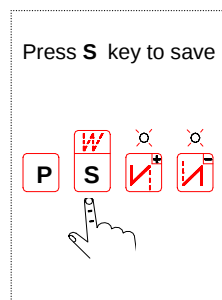
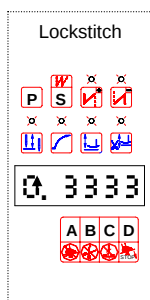
b. Press and hold **A** **B** keys, then turn ON the power.
LED will display 【 RESE T】 and blink twice.



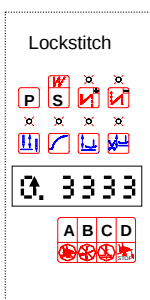
c. After blinking, the recovery starts and then goes back to 【 Normal mode 】



d. Must press **S** Key to save the function.
LED will display 【SAVE. OK】 and blink twice .



e. goes back to 【 Normal mode 】



Remark :

1. Above operation only suitable for the software version D2..3 and above
(see Parameter 【208. VER】 for software version)
2. If the software version is before the version D2.3, then at step d. LED will not display 【SAVE. OK】 and will not blink twice. But need press the **S** key three times to return to the 【Normal Mode】 (see Note).

Note : Operation instructions for the software before version D2.3

After saving need to press the **S** key 3 times to return to the 【 Normal mode 】 area.

Press 1st time, LED will show 【 **b. 4 4** 】 Bar-tacking.

Press 2nd time, LED will show 【 **P 1. 15** 】 Constant stitch

Press 3rd time, will return to the 【Normal mode 】 area.

9. Basic troubleshooting :

(1). Error Code and Measurement :

Error Code	Cause of The Problem	Status and Measurement
ER0. 1	1. Power module detected error. 2. Abnormal over current or voltage occurred. 3. Resistor for the LV is damaged or F2 fuse open.	Motor will be shut down. Please check the power module. Please check the main board over current circuitry. Please check the resistor (220Ω 30W) for the limited voltage or F2 fuse.
ER0. 2	E ² PROM (IC7) r/w malfunction.	Motor will be shut down. Replace the IC7 memory unit.
ER0. 4	1. When power on, current sensor detected high voltage. 2. Connect the wrong voltage, too high. 3. Parameter 【130. OVD】 setting is wrong, too low.	Motor will be shut down. Please check the AC power. (Too high.) Please check the parameter 【130.OVD】 setting value of the main board. (Use factory default setting) Note : 1. Don't adjust this parameter unless is really necessary. Wrong setting may cause problem. 2. If set wrong and 【ER0. 4】 shown. The only solution is to reset. * When reset, please check the machine code that need to match the machine head currently used.
ER0. 5	1. When power on, current sensor detected low voltage. 2. Connect the wrong voltage, too low. 3. Parameter 【131. LVD】 setting is wrong, too low.	Motor will be shut down. Please check the AC power. (Too low.) Please check the parameter 【131. LVD】 setting value of the main board. (Use factory default setting)
ER0. 7	1. Bad connection at the motor connector. 2. Synchronizer (sensor) signal error. 3. Synchronizer is single position type, and parameter set wrong type. 4. Machine locked or object stuck in the motor pulley. 5. Sewing material is too thick. 6. Circuitry of power module is faulty.	Motor will be shut down. Please check the motor or motor connectors' connection. Please check the Synchronizer (sensor) and its signal. Please check the parameter 【177. SIN】 setting. (set 「OFF」 for 2 position type synchronizer.) Please check machine head to see if objects stuck in the motor pulley, or rotate not smoothly. Please check the circuitry of power module.
ER0. 8	Operation box linked to CPU interface had communication error.	Motor will be shut down. Please check the Operation Box and its connection.

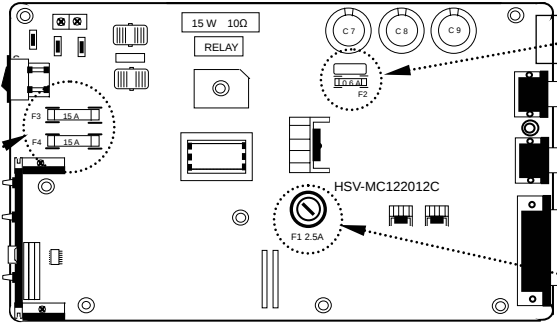
Error Code	Cause of The Problem	Status and Measurement
ER0. 9	1. Machine solenoid shorted. 2. Main board's power transistor is faulty.	Motor still can run, but all output signals and Operation box's pattern sewing function will be invalid Please check machine's solenoids, if any resistance value is 2 Ω less. Please check all the power transistors, which related to machines' solenoids.
ER0. 11	1. If parameter 【121.ANU】 is set ON, but Auto Needle Up is malfunction when the power turned on.	Motor still can run, but it automatic starts the clutch mode. All Constant-stitch sewing pattern and trimmer wiper function will be invalid. Check Synchronizer's up position's signal. Check main board's Synchronizer circuitry.
ER0. 14	Using PSU signal without sewing material when 【106. PSN】 = OFF	Motor stops. Please check 「PSU」 sensor circuitry and its signal.
ER0. 15	Using PSD signal without sewing material when 【106. PSN】 = OFF	Motor stops. Please check 「PSD」 sensor circuitry and its signal.
ER0. 51	1. Motor overloads for more than 20 seconds during one sewing. 2. Motor's coil is defective. 3. Machine head is too crude to rotate smoothly.	Motor stops. Please check to see if machine head is too heavy to sew. Please check to see if the sewing material is too thick to sew. Please check motor's coils to see if defective. Please check machine head to see if too crude to rotate smoothly.
	Motor rotation icon in display is halting & not moving: 1. Safety switch is either faulty or bad connection. 2. Parameter 【075. SFM】 setting not match the machine head model.	Motor stops. Please check the safety switch. Please check parameter 【075. SFM】 setting, make sure it match machine head's safety switch

Digital Alphabet	English Alphabet	Cause of The Problem	Status and Measurement
P080FF	POWER OFF	1. AC power shut down or bad connection. 2. Main board OI 1 detect circuitry faultiness.	Motor stops Please check AC power and connection. Please check the main board OI circuitry.
ENSTOP	EM STOP	1. An emergency stop signal activated when Parameter 【149. IND】 = ES.	Motor stops emergently Please check condition of 「IND」 signal. Only restarting power can normally run (it).

(2). Instruction of Fuse Replacement :

Fuse Type and Location : When fuse fused, find out the cause and fix it before replace the new one.

Main Board Top View



F3 / F4 Fuse is 15 A / 250V
(For AC Power Protection)

F2 Fuse is 0.6 A / 250V
(For Brake Protection)

F1 Fuse is 2.5 A 250 V
(For DC 12 V Protection)



Caution : Turn off the power and wait 10 minutes before opening box cover

(3). Others :

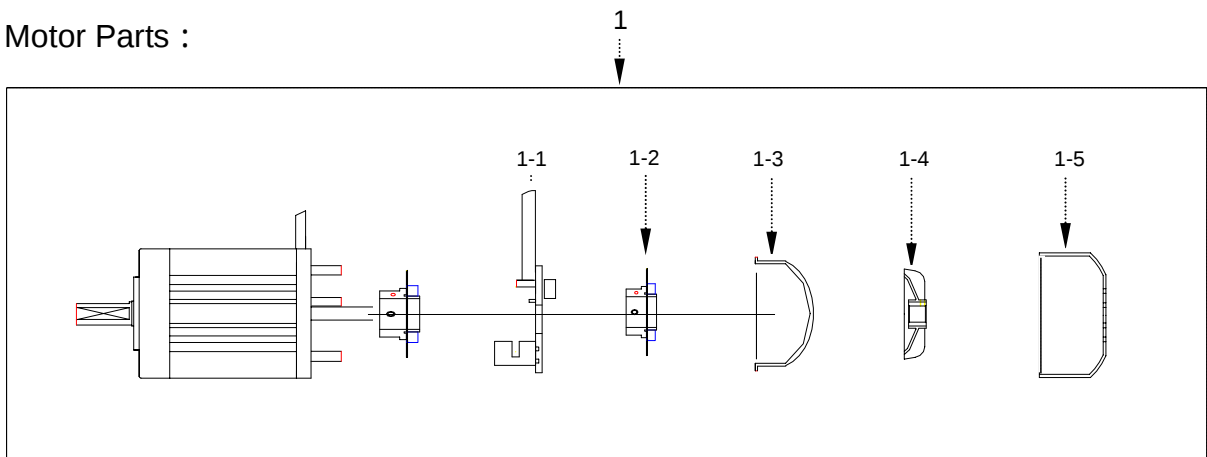


Caution : Turn off the power and wait 10 minutes before opening box cover

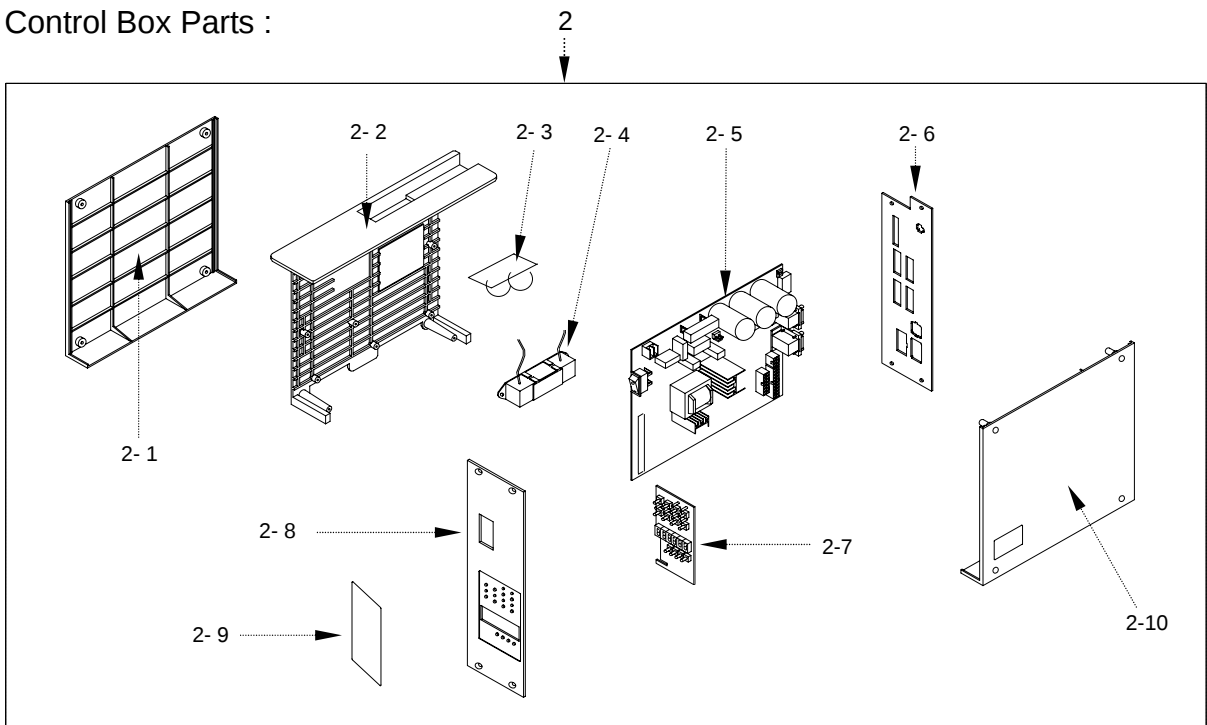
1. During the machine's operation, if the synchronizer (sensor) felt out or the belt snapped. The motor will rotate few stitches then stop, and 【ER0. 7】 will be shown in the display. Turn off the power and troubleshooting first then restart the power.
2. If other technical issues occur, beside the fuse replacement, don't try to change any parts in the control box. Please ask supplier or trained technician for technical support.

(4). PARTS LIST : HVP-70-4-ED for DÜRKOPP ADLER -271 only

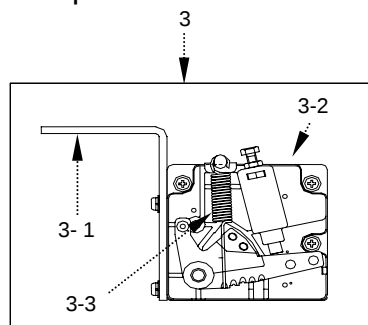
Motor Parts :



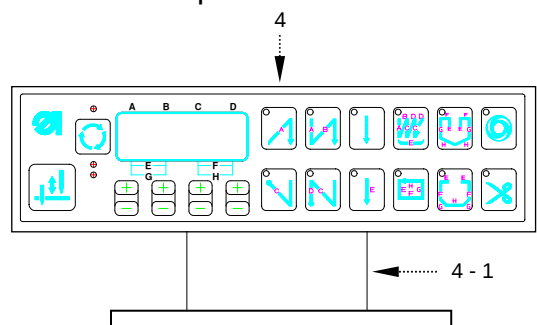
Control Box Parts :



Speed Control Unit :



Operation Box :

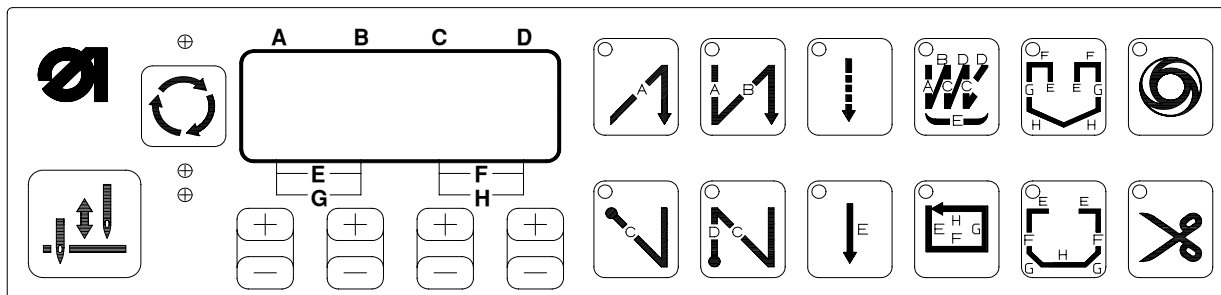


Main Parts List of HVP-70-4-ED :

ITEM		PART CODE	PART NAME	SPEC.
1	1	2VP3432209AX7	Motor Ass. (CE)	Ke : 28 500W (VP-50AB104-CE)
	1-1	2VPPBE010070	Motor Encoder	(including cable)
	1-2	2VPMP01004	Index base assembly	INDEX Open 5°
	1-3	315SMV070	Encoder Protection Cover	For 69 mm set
	1-4	315FA1070	Fan	12
	1-5	315ECV040	Cover	For 69 mm set
2	2	2VP70400ED205	HVP-70 Control Box	1 200-240 V (15A)
	2-1	315MPB270	Left Cover	(No Screws included)
		331SP1130	Left Cover Round Screw	M4 * 8
	2-2	2VPPMPB205	Aluminum Case	
	2-3	2VPPCB240	Power Board of EMI	For CE
	2-4	2VP70304201	Cement Resistor	220Ω / 30 W
	2-5	2VP70302004	Main P.C. Board	For HVP-70-4-ED (1 15 A)
	2-6	2VP70408ED001	Rear Panel	HVP- 4- ED
	2-7	2VPPCB181	LED P.C. Board	7 mm tack sw
	2-8	315MPB290	Operating Front Panel	For 1
	2-9	341V50103	Function Keys Sticker	For HVP-70
	2- 10	315MPB280	Right Cover	Right side
		331SP1860	Right Cover Round Screw	M4 * 0.7 * 25
3	3	2VP70306002	Speed control Unit	2 positioning type including bracket
	3- 1	313MPC060	Speed Control Unit Bracket	
	3- 2	2VPPCB201	Speed Control Unit Board	(include cables)
	3- 3	33BMPC070	Coil Spring-tensile	
4	4	2VPOPBC30007	Operation Box (Durkopp only)	For Dürkopp machine only
		2VPOPBC30001	Operation Box (C-300)	length : 1.0 M
	4 - 1	2VPOPBT0J	Operation Box Bracket	For DÜRKOPP ADLER -271 machine
OTHER	F1	32PFSR220	Micro Fuse	2.5 A / 250V (MBF 2.50)
	F2	32PFSR200	Cannula Fuse	0.6 A / 250V
	F3	32PFSR150	Cannula Fuse	15A / 250V
	F4	32PFSR150	Cannula Fuse	15 A / 250V

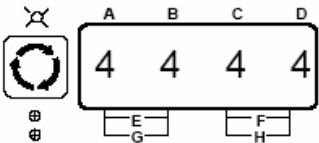
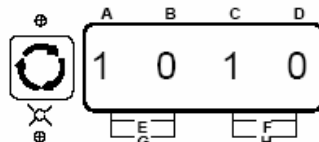
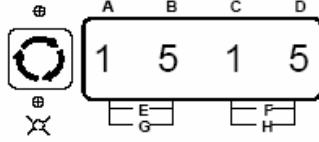
10. Operation Box :

(1). Operation Box Diagram :



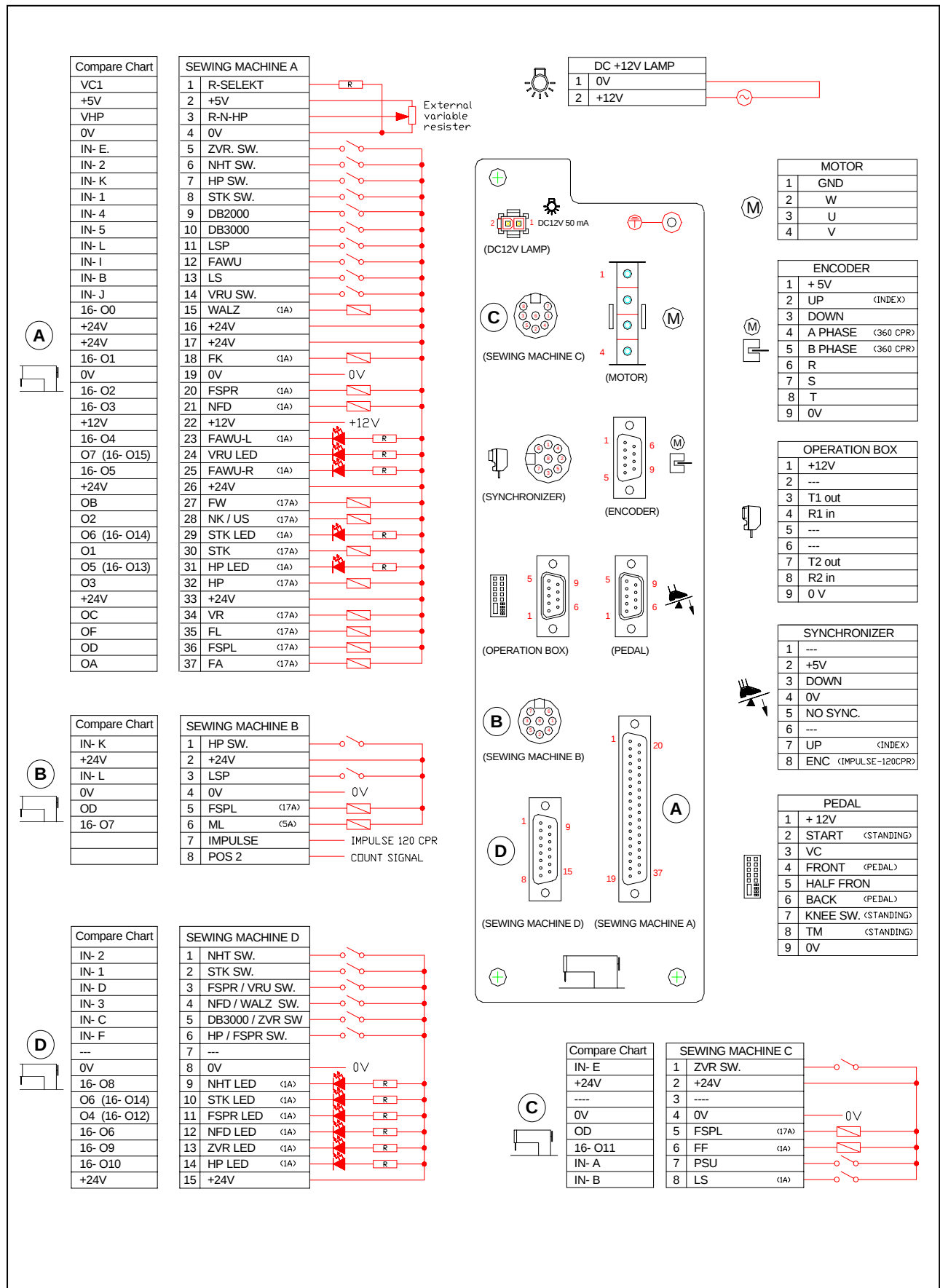
(2). Key Functions :

FUNCTION	KEY	OPERATION OF SEWING MACHINE
Start Tacking Selection		Single start back tacking
		Double start back tacking
End Back Tacking Selection		Single end back tacking
		Double end back tacking
Free Sewing		1). As the treadle is toed down, machine will start sewing. Once the treadle returned to neutral, machine will stop immediately. 2). As the treadle heeled back, the trimming cycle will be finished automatically.
Bar Tack Sewing		Once the treadle is toed down, all the seams of Bar Tacking, A, B, C, D sections will be completed with E times, and the trimming cycle will be finished automatically Note : When the bar tack sewing start, it will not stop until the trimming cycle finished, except for the treadle heeled back to cancel the action.
Constant-Stitch Sewing	 or  or  or 	1). As the treadle is toed down, Constant-stitch Sewing E, F, G or H performed section by section. 2). Once the treadle returns to neutral intermediately in any one section, the machine will stop immediately. When the treadle toed down again the balanced stitches of E, F, G or H goes on. 3). If the parameter 【010. ACD】 is set ON, the machine will not stop and automatically start trimming cycle and end back tacking at the end of the last section E or H.

Stitch Setting Selection		A、 B、 C、 D -- stitch setting range in 0 ~ F (Note) E、 F、 G、 H -- stitch setting range in 0 ~ 99  ----A=B=C=D=4 stitches  ---- E = F = 10 stitches  ---- G = H = 15 stitches Press  key to select : Top A、 B、 C、 D Middle E、 F Bottom G、 H
Needle Up / Forward Stitch Correction		1).In Free sewing: One touch of this key act as stitch correction. (half stitch forward) 2).In constant-stitch sewing : (In Bar-tack sewing, it only act as needle up) a. If sewing stops intermediately in one section, one touch of this key will raise the needle to up position. b. If sewing stops at the end of section, one touch of this key will correct one stitch forward.
One-Shot-Sewing Selection		1). In Free sewing and Bar-tack sewing : One touch of this key make beep sound but have no function, also LED does not light up,. 2). In Constant-stitch sewing : a. One shot to the pedal, automatic performed number of stitches of E、 F、 G、 H sections. b. Toe down the pedal again and again to finish rest the sections until it finish pattern.
Trimming Cycle Selection		Enable or disable the trimming cycle.

Note : Stitches setting of A B C D sections correspond to the alphabet.
A=10、 B=11、 C=12、 D=13、 E=14、 F=15 stitches

11.HVP - 70 - 4 - ED PANEL :



Compare Chart

IN- E
+24V

0V
OD
16- O11
IN- A
IN- B

SEWING MACHINE C

1	ZVR SW.
2	+24V
3	---
4	0V
5	FSPL (17A)
6	FF (1A)
7	PSU
8	LS (1A)

DC12V 50 mA

(DC12V LAMP)

(SEWING MACHINE C)

(MOTOR)

(SYNCHRONIZER)

(OPERATION BOX)

(PEDAL)

(SEWING MACHINE B)

(SEWING MACHINE D)

(SEWING MACHINE A)

NAME	DIRECTIONS
ZVR	Intermediate backtack
NHT	Needle up / down
HP	High lift limitation
STK	Switch stitch length
DB2000	Speed limitation 2000 rpm
DB3000	Speed limitation 3000 rpm
LSP	Machine run blockage
FK	Thread clamp
LS	Light barrier
VRU	Backtack suppression / recall
WALZ	Roller feed
FA	Thread trimmer
FSPL	Thread tension release
FL	Sewing foot lift

NAME	DIRECTIONS
R-SELEKT	Resistor for machine select
R-N-HP	Set point potentiometer for speed limitation depending on high lift
NFD	Sewing foot pressure
FSPR	Reduction of thread tension
FAWU-L	Thread monitor at the bottom left
FAWU-R	Thread monitor at the bottom right
NK / US	Needle cooling / option
ML	Motor running
FW	Thread wiper
VR	Backtacking
POS2	Position 2
FF	Flip-flop

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code		Parameters Function	Range	Preset For					Description
					100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
USER P O W E R .. O N	1	H	Maximum sewing speed	50 - 9999 spm	4800	900	1700	3500	6600	Maximum speed adjustments
	2	PSL	Speed curve adjustments	1 - 100%	85	45	55	85	85	The larger the value the faster to up speed
	3	CNR	Counter ratio selection	1 - 100	1	1	1	1	1	Setting the multiple to the value of [042. CUD] Connection : [042. CUD] , [159. O4] , [097. TK3]
	4	N	Start back-tacking speed	50 - 8000 spm	1700	400	800	1200	1700	Start back-tacking speed adjustments
	5	V	End back-tacking speed	50 - 8000 spm	1700	400	800	1200	1700	End back-tacking speed adjustments
	6	B	Bar-Tacking Speed	50 - 8000 spm	1700	400	800	1200	1700	Bar-Tacking Speed adjustments
	7	S	Soft start speed	50 - 2000 spm	800	250	400	400	800	Soft start speed adjustments
	8	SLS	Stitch numbers for soft start	0 - 99 stitches	2	2	2	2	2	Soft start stitches setting
	9	A	Automatic constant-stitch sewing speed	50 - 8000 spm	4800	900	1700	3500	6600	Valid only at the auto pattern sewing or one shot signal (SH) active
	10	ACD	Automatic sewing End back-tacking	ON/OFF	ON	ON	ON	ON	ON	Only at the last seam of pattern sewing ON : Valid. OFF : Invalid.
	11	RVM	Back-tacking mode selection	J/B	J	J	J	J	J	J = JUK mode , B = BROTHER mode. J : Active when motor stop or running. B : Active only when motor running.
	12	SMS	Mode selection for Start back-tacking	A/M/SU/SD	A	A	A	A	A	Start back-tacking mode selection A : One shot sewing M : Pedal control and motor can stop at middle way. SU : One shot sewing but motor stops at needle up by [027. CT] timer at end of each seam. SD : One shot sewing but motor stops at needle down by [027. CT] timer at end of each seam.
	13	TYS	Mode selection at the end of Start back-tacking	CON/STP/TRM	CON	CON	CON	CON	CON	At the end of Start back-tacking mode selection. CON : At the end of Start back-tacking ,machine continues sewing if pedal pressed or START signal on (standing operation) STP : At the end of Start Back-Tacking, machine stops and must re-start by pedal command. TRM : Making the trimming cycle once the Start Back-Tacking finished. (Mini Bar tacking)
	14	SBT	Start back-tacking selection	ON/OFF	ON	ON	ON	ON	ON	Valid only when the operation panel disconnected. ON : Perform OFF : Not perform
	15	SBA	Setting stitches A of Start back-tacking	0 - 15 stitches	3	3	3	3	3	Start back-tacking stitches setting , [014. SBT] = ON valid
	16	SBB	Setting stitches B of Start back-tacking		3	3	3	3	3	
	17	SBN	Setting turns of Start back-tacking	0 - 4 times	2	2	2	2	2	Setting the seam times of Start back-tacking , [014. SBT] = ON valid
	18	BT1	Stitch balance for Start back-tacking 1	0 - F	3	4	4	4	3	BT1=0 : Invalid,1-8 : Increase stitches of reverse seam; 9-F : Increase stitches of forward seam BT2=0 : Invalid,1-8 : Increase stitches of forward seam; 9-F : Increase stitches of reverse seam
	19	BT2	Stitch balance for Start back-tacking 2		7	3	3	3	7	
	20	SME	Mode selection for End back-tacking	A/SU/SD	A	A	A	A	A	End back-taking mode selection. A : One shot sewing. SU : One shot sewing but machine stops up position by [027. CT] timer at the end of each seam. SD : One shot sewing but machine stops down position by [027. CT] timer at the end of each seam.
	21	EBT	End back-tacking selection	ON/OFF	ON	ON	ON	ON	ON	Valid only when the operation panel disconnected. ON : Perform OFF : Not perform
	22	EBC	Setting stitches C of End back-tacking	0 - 15 stitches	3	3	3	3	3	End back-tacking stitches setting , [021. EBT] = ON valid
	23	EBD	Setting stitches D of End back-tacking		3	3	3	3	3	
	24	EBN	Setting turns of End back-tacking	0 - 4 times	2	2	2	2	2	Setting the seam times of End back-tacking , [021. EBT] = ON valid
	25	BT3	Stitch balance for End back-tacking 3	0 - F	7	2	2	2	7	BT3=0 : Invalid,1-8 : Increase stitches of reverse seam; 9-F : Increase stitches of forward seam BT4=0 : Invalid,1-8 : Increase stitches of forward seam; 9-F : Increase stitches of reverse seam
	26	BT4	Stitch balance for End back-tacking 4		1	1	1	1	1	
	27	CT	Setting time interruption at each section End of Back-Tacking.	0 - 990 ms	50	270	150	100	50	[012. SMS] , [020. SME] , [031. SMB] = SU,SD setting valid. Conner stop timer, valid only at [012. SMS] , [020. SME] , [031. SMB] setting SU/SD.
	28	SB5	15 stitches plus on Start/End back-tacking	ON/OFF	OFF	OFF	OFF	OFF	OFF	Additional 15 stitches are added to the Start and End back-tacking stitches function selection. ON : valid. OFF : Invalid.
	29	SB9	0-99 stitches plus on Start/End back-	0 - 99 stitches	0	0	0	0	0	Additional setting stitches are added to the Start and End back-tacking stitches.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code		Parameters Function	Range	Preset For					Description
					100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
USER P O W E R .. O N	30	BCC	Added 1 stitch to the C segment of End back-tacking	ON/OFF	ON	OFF	OFF	OFF	ON	Added 1 stitch to the C segment of End back-tacking function selection. ON : valid OFF : Invalid
	31	SMB	Mode selection for Bar-tacking	A/M/SU/SD	A	A	A	A	A	Bar-tacking mode selection. A : One shot sewing. M : Pedal control and motor can stop at middle way. SU : One shot sewing but motor stops at needle up by [027. CT] timer at end of each seam. SD : One shot sewing but motor stops at needle down by [027. CT] timer at end of each seam.
	32	BAR	Bar-tacking selection	ON/OFF	OFF	OFF	OFF	OFF	OFF	Valid only when the operation panel disconnected. ON : Perform OFF : Not perform.
	33	BRC	Setting stitches of Bar-tacking	0 - 99 stitches	4	4	4	4	4	One setting for all seams , [032. BAR] = ON valid.
	34	BRN	Setting turns of Bar-tacking	0 - 15 times	4	4	4	4	4	Setting the seam times of Bar-tacking , [032. BAR] = ON valid.
	35	BT5	Stitch balance for Bar-tacking 5	0 - F	3	4	4	4	3	BT5=0 : Invalid, 1-8 : Increase stitches of reverse seam; 9-F : Increase stitches of forward seam
	36	BT6	Stitch balance for Bar-tacking 6		7	3	3	3	7	BT6=0 : Invalid, 1-8 : Increase stitches of forward seam; 9-F : Increase stitches of reverse seam
	37	SMP	Mode selection for Constant-stitch sewing	A/M	M	M	M	M	M	Constant-stitch sewing mode selection. A : One shot sewing. M : Pedal control and motor can stop at middle way. Valid only when the operation panel disconnected.
	38	PM	Constant-stitch sewing selection	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Perform. OFF : Not perform.
	39	PS	Setting stitches for section 1~4 of Setting stitches for section 5~F of	0 - 250 stitches	15 0	15 0	15 0	15 0	15 0	Stitches setting of seam P1-P4. [038. PM] = ON valid. Stitches setting of seam P5-PF. [038. PM] = ON valid.
	40	WON	Wiper / thread clamp function selection	ON/OFF	ON	ON	ON	ON	ON	Wiper / thread clamp function selection. ON : Enable. OFF : Disable.
	41	TM	Trimmer function selection	ON/OFF	ON	ON	ON	ON	ON	Trimmer function selection. ON : Enable. OFF : Disable.
	42	CUD	Count mode selection (For Bobbin Thread or Sewing Piece)	NOP/U/D/US/DS/UT/DT/UTS/DTS	NOP	NOP	NOP	NOP	NOP	Counter function mode selection. NOP : The counter is invalid. U : Count up by stitches. When count over , counter will be auto- reset. D : Count down by stitches. When count over , counter will be auto- reset. US : Count up by stitches. When count over, motor stops and the counter must be reset by the external switch S4 [152.INI] =CRS or the A key on the front panel.. DS : Count down by stitches. When count over, motor stops and the counter must be reset by the external switch S4 [152.INI] =CRS or the A key on the front panel.. UT : Count up by trimming. When count over , counter will be auto- reset. DT : Count down by trimming. When count over , counter will be auto- reset. UTS : Count up by trimming. When count over, motor stops and the counter must be reset by the external switch S4 [152. INI] =CRS or the A key on the front panel.. DTS : Count down by trimming. When count over, motor stops and the counter must be reset by the external switch S4 [152. INI] =CRS or the A key on the front panel..
	43	UD	Setting Count amount	1 - 9999	99	99	99	99	99	Count setting . (Note : The real number = the value of [003. CNR] X [043. UD] , when [042. CUD] =U,D,US,UD valid only.)
	44	PN	Display counter	0-9999	0	0	0	0	0	Display the current count of [043. UD]
	45	SP	Sewing speed display	0 - 8000 spm	0	0	0	0	0	Showing the current sewing speed.
	46	DIR	Direction of motor rotation	CW/CCW	CW	CW	CW	CW	CW	Motor rotation direction adjustments. (Viewed from the motor shaft side) Connection : [119. DD] CCW : counterclockwise. CW : clockwise.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code		Parameters Function	Range	Preset For					Description
					100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
TECH.	47	MAC	Machine Code	0-92	73	85	86	83	92	Machine code switchover
POWER .. ON	48	N12	Positioning Mode selection. (ON=UP ONLY, OFF=UP/DOWN)	ON/OFF	OFF	OFF	OFF	OFF	OFF	Positioning Mode selection. ON : One position UP only. OFF : Two positions Up / DOWN.
	49	SPD	Machine's pulley dimension.	1 - 250 mm	75	75	75	75	75	Setting machine pulley size when [051. PL] = ON valid
	50	MPD	Motor's pulley dimension.	1 - 250 mm	75	75	75	75	75	Setting motor pulley size when [051. PL] = ON valid
	51	PL	Motor pulley ratio mode adjustment	ON/OFF	OFF	OFF	OFF	OFF	OFF	Selecting the mode of setting pulley ratio. ON : Manually setting the pulley sizes by [049. SPD] , [050. MPD] . OFF : Automatically setting the pulley sizes by the CPU.
	52	BT	Braking time of motor	150 - 500 ms	200	200	200	200	200	Braking time of motor Note : Only valid when [054. BK] set at ON.
	53	POL	Soft start at the first cycle of power ON	ON/OFF	ON	ON	ON	ON	ON	Soft start at the first cycle of power ON function selection. ON : Enable and speed is set by [007. S] . OFF : Disable.
	54	BK	Motor brake at normal stop	ON/OFF	OFF	OFF	OFF	OFF	OFF	Motor stops with brake function. ON : Enable. OFF : Disable.
	55	SRM	Motor returned at start running selection	ON/OFF	OFF	OFF	OFF	OFF	OFF	Valid only when needle stops at up position. ON : Enable. When the needle stops at up position, the first stitching will be done with a reverse angle which is set by the [056.SRA] . OFF : Disable. Exception : If [147. INA] = BCR, an external switch may be used as a selection of ON / OFF to this
	56	SRA	Setting the angles of [055. SRM]	1 - 360 degrees	60	60	60	60	60	Valid only when [055. SRM] = ON.
	57	TRU	Motor stops with a reverse angle after trimming	ON/OFF	OFF	OFF	OFF	ON	OFF	ON : Enable. OFF : Disable.
	58	TR8	Setting the angles of [057. TRU]	1 - 360 degrees	14	28	20	63	14	Valid only [057. TRU] = ON
	59	M	Medium speed	low - 8000 spm	800	800	800	800	800	Medium speed adjustment
	60	L	Low speed	50 - 500 spm	180	100	150	150	180	Low speed adjustments
	61	T	Thread trimming speed	50 - 500 spm	180	100	150	150	180	Thread trimming speed adjustments
	62	HPM	Mode for foot lifting stroke change at special compound feed machine.	ALT/MON	MON	MON	ALT	ALT	MON	For machines have HP function only. [ALT] mode : Presser for lifting stroke changed by each time of the HP switch pushed on. [MON] mode : Presser foot lifting stroke must be remained by the HP switch kept on.
	63	FTP	Type selection for foot lifting solenoid	M/A	M	M	M	M	M	M : Magnetic type. A : Air type. Note : When set at A type, [064. FO] and [065. FC] setting will be invalid. It will be full on.
	64	FO	Full-On time setting for foot lifting solenoid	0 - 990 ms	180	350	350	350	180	Only valid when [063. FTP] set at 「 M 」 mode. For solenoid pulling torque adjustment.
	65	FC	Presser foot lifting output chopping duty-cycle	10 - 90 %	40	40	40	40	40	Only valid when [063. FTP] set at 「 M 」 mode. For solenoid's switching power adjustment. Note : Wrongly adjustment will cause the solenoid unable to lift or over-heating.
	66	FD	Running-Delay time setting after foot lift	0 - 990 ms	80	80	120	80	80	If Foot Lifter is installed, set 100 ms min. to ensure the presser foot come down first.
	67	FPM	Protection for foot lifter solenoid.	ON/OFF	ON	ON	ON	ON	ON	Selection of solenoid protection. ON : The foot lifting solenoid activated time will be controlled by [068. FP] . OFF : The foot lifting solenoid will be always active unless heeling back the pedal.
	68	FP	Working time limit setting for Foot Lifter	(0-9990) x 0.01s	3000	3000	3000	3000	3000	Setting the lifting solenoid activated time. Valid only when the [067. FPM] = ON. Use this setting as PF delay time at half heeling the pedal. If Foot Lifter is installed, set 100 ms min.
	69	HD	Sensitivity adjustment for half-heeling pedal	0 - 990	100	100	100	100	100	1.If timing set to short, it will cause PF started once before trimming at full heeling the pedal. 2.If timing set to long, it will cause PF started too slow or laggard at half heeling the pedal.
	70	HHC	Cancel presser foot lifting with half-heeling pedal	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : No foot lifting at half-heeling. (but full-heeling can operate foot lifter) OFF : Operate foot lifting at half-heeling. Note : When [134. KLK] = ON for interlock-stitch machine, this function can be controlled by A key on
	71	FL	Cancel foot lifting at full-heeling pedal	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : No foot lifting at heeling pedal. OFF : Has foot lifting at heeling pedal.
	72	FHC	Cancel trimming at Full-Heeling pedal	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : No function at heeling pedal. (foot lifter and need up function are also invalid) OFF : Trimmer is functioned at heeling pedal.
	73	NTC	Thread trimming activate at neutral pedal	ON/OFF	OFF	OFF	OFF	OFF	OFF	When the pedal is returned to neutral position, trimming works automatically. ON : Enable. Only valid when [072. FHC] = OFF OFF : Disable.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
TECH.									
POWER ON	74	FRV	Converter for Foot Lifter signal output	ON/OFF	OFF	OFF	OFF	OFF	Foot Lifter output signal converted. ON : The foot lifter goes up during sewing. OFF : Function invalid.
	75	SFM	Safety switch protection mode	NC/NO	NO	NO	NO	NO	Trimming device protection for cover stitch machine. NC : Normal close. When signal at open , motor immediately stops and rotation symbol will stop. NO : Normal open. When signal at close , motor immediately stops and rotation symbol will stop.
	76	TCL	Thread trimmer cancel	ON/OFF	OFF	OFF	OFF	OFF	With TCL trigger signal input, the next trimming will be cancelled as full heeling the pedal. ON : Valid. OFF : Invalid.
	77	ILC	Cancel of interlock timing after full heeling pedal	ON/OFF	OFF	OFF	OFF	OFF	Canceling the interlock timer for quick restarting. For machine without trimmer device only. ON : Valid. OFF : Invalid.
	78	TRM	Motor running mode at trimming sequence	LK/RK/KA/KB/KC	KB	LK	LK	KB	Motor running mode at trimming sequence selection. LK : For general Lock-Stitch machines .Trimming from needle down to up. RK : For Chain stitch machine easy pull out cycle. Needle stops with a reverse angle set by [116. DRU] . KA : For general Cover stitch machines with under trimmer only. KB : For special Cover stitch machines with upper trimmer . KC : Valid only when [079. LTM] =TK and [081. TS] > 0, otherwise function same as LK mode.
	79	LTM	Mode selection for trimming sequence. For TM output signal.	T1/T2/T3/T4/TK/TS/T7	TS	TS	TS	T2	Reference the timing chart of HVP-70. T1 : At down position delayed [081. TS] angles on, at up position delayed [083. T2] time off. T2 : At down position delayed [081. TS] angles on, extended [084. TE] angles off. T3 : At down position delayed [081. TS] angles on, extended [083. T2] time off. T4 : At down position delayed [082. T1] time on, extended [083. T2] time off. TK : At up position delayed [082. T1] time on, extended [083. T2] time off. TS : At down position always on, at up position delayed [082. T1] time on, extended [083. T2] time. T7 : At down position delayed [081. TS] angles on, at up position off, and delayed [082. T1] time on,
	80	LLM	Mode selection for tension-release sequence. For ML output signal	L1/L2/L3/L4/LK/LS/L7	LS	LS	L1	L1	Reference the timing chart of HVP-70. L1 : At down position delayed [085. LS] angles on, at up position delayed [087. L2] time off. L2 : At down position delayed [085. LS] angles on, extended [088. LE] angles off. L3 : At down position delayed [085. LS] angles on, extended [087. L2] time off. L4 : At down position delayed [086. L1] time on, extended [087. L2] time off. LK : At up position delayed [086. L1] time on, extended [087. L2] time off. LS : At down position always on, at up position delayed [086. L1] time on, extended [087. L2] time off. L7 : At down position delayed [085. LS] angles on, at up position off, and delayed [086. L1] time on,
	81	TS	Delayed angles prior to trimmer engaged	0 - 360 degrees	0	0	0	105	Valid for [079. LTM] = T1/T2/T3/T7 .
	82	T1	Delayed timing prior to trimmer engaged	0 - 990 ms	0	0	0	0	Valid for [079. LTM] = T4/TK/TS/T7.
	83	T2	Trimming time	0 - 990 ms	0	0	0	0	Valid for [079. LTM] = T1/T3/T4/TK/TS/T7.
	84	TE	Setting angles of trimming	0 - 360 degrees	0	0	0	161	Valid for [079. LTM] = T2 .
	85	LS	Delayed angles prior to tension release	0 - 360 degrees	0	0	147	231	Valid for [080. LLM] = L1/L2/L3/L7 .
	86	L1	Delayed timing prior to tension release	0 - 990 ms	0	0	0	0	Valid for [080. LLM] = L4/LK/LS/L7.
	87	L2	Extended timing of tension release beyond	0 - 1500 ms	50	50	50	50	Valid for [080. LLM] = L1/L3/L4/LK/LS/L7.
	88	LE	Setting angles of tension release	0 - 360 degrees	0	0	0	0	Valid for [080. LLM] = L2 valid.
	89	D1	Delayed timing prior to trimmer engaged at	0 - 990 ms	0	30	30	0	Only valid when [078. TRM] set at 「 KB 」 mode.
	90	D2	Setting timing of trimming at down-stop	0 - 2500 ms	0	90	90	0	Signal output from the wiper MW.
	91	D3	Timing recall of trimming at down-stop	0 - 990 ms	0	120	120	0	See the KB timing chart.
	92	W1	Delayed timing prior to wiper engaged	0 - 980 ms	0	0	0	0	Time setting between needle up to wiper active.
	93	W2	Setting timing of wiping	0 - 9990 ms	100	100	100	100	Wiper active timer setting.
	94	WF	Delayed timing prior to foot lifter engaged	0 - 990 ms	50	50	30	30	50 Timer setting between wiper active to presses foot active.
	95	CSF	Condense-Stitch function selection	ON/OFF	OFF	OFF	OFF	OFF	Condense-Stitch function by [027. CT] timer for needle up & motor stop. ON : Enable. Note : [021. EBT] =ON, [022. EBC] =8, [023. EBD] =3 and [024. EBN] =2 and [027. CT] =100 must be adjusted. OFF : Disable.
	96	RFC	Backtacking output chopping duty-cycle	10 - 100 %	40	40	40	40	40 Only valid when [063. FTP] set at 「 M 」 mode. For solenoid's switching power adjustment. Note : Wrongly adjustment will cause the solenoid unable to lift or over-heating.
	97	TK3	Tape cutter on timer	0 - 2500 ms 0 - 250 stitches	10	10	10	10	10 Tape cutter on timer setting x10 = 100 ms. When [042.CUD] = US,DS the value is bobbin counter alarm preaction value.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code		Parameters Function	Range	Preset For					Description
					100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
TECH.										Mesh counter mode selection. C : By stitch counter, T : By timer.
+ P O W E R .. O N	98	MST	Mesh counter by timer or by stitch count	C/T	C	C	C	C	C	Edge sensor function selection.. ON : Enable. OFF : Disable.
	99	SEN	Edge sensor function selection	ON/OFF	OFF	OFF	OFF	OFF	OFF	Only valid when [099. SEN] set at ON. To avoid photo interference. Unit controlled by [098. MST]
	100	SRS	Edge sensor signal check 1	0 - 99 stitches	1	1	1	1	1	Only valid when [099. SEN] set at ON. To avoid photo interference. Unit controlled by [098. MST]
	101	CMS	Edge sensor signal check 2	0 - 99 stitches	3	3	3	3	3	Setting Stitches to stop., when edge signal detected. Only valid when [099. SEN] set at ON
	102	SE	Setting stitches from edge sensing to stop	1 - 999 stitches	6	6	6	6	6	When edge signal detected out. Motor will do the trimming cycle automatically. ON : After the stitches of [102. SE] finished, trimming works. OFF : After the stitches of [102. SE] finished, trimming doesn't work.
	103	SET	Trimming mode at sensory stop	ON/OFF	OFF	OFF	OFF	OFF	OFF	When [PSU] signal detected, running the stitches then stop at UP position. The speed of setting is set by [009. A1]
	104	PSU	Stitches for emergency up-stop	1 - 99 stitches	6	6	6	6	6	When [PSD] signal detected, running the stitches then stop at DOWN position. The speed of setting is set by [009. A1]
	105	PSD	Stitches for emergency down-stop	1 - 99 stitches	6	6	6	6	6	When the pedal on and the edge signal detected, the motor can start running. ON : Enable. OFF : Disable.
	106	PSN	Re-start function at emergency stop	ON/OFF	ON	ON	ON	ON	ON	When motor running, manually push the Touch Back switch , reverse solenoid engaged on at needle ON : Valid. OFF : Invalid.
	107	S7U	Manual Back-Tacking engaged at needle-up position	ON/OFF	OFF	OFF	OFF	OFF	OFF	When motor running, manually push the Touch Back switch , reverse solenoid engaged on at needle ON : Valid. OFF : Invalid.
	108	S7D	Manual Back-Tacking engaged at needle-down position	ON/OFF	ON	ON	ON	ON	ON	During sewing, reverse output will be OFF at needle UP or DOWN position . ON : At needle UP position. OFF : At needle DOWN position.
	109	ROF	Mode for de-engaging Back-Tacking	ON/OFF	OFF	OFF	OFF	OFF	OFF	The trimming and reverse solenoid activated on the same time. ON : Valid. OFF : Invalid.
	110	TB	Mode for Back-Tacking at trimming cycle	ON/OFF	OFF	OFF	OFF	OFF	OFF	Correction Mode of Touch-Back Switch mode selection. Note : [010. ACD] = OFF and [011. RVM] = B 1 : Doing correction with one touch the Touch-Back switch . 2 : Doing correction with double touch the Touch-Back switch .
	111	COR	Correction Mode of Touch-Back Switch	1/2	2	2	2	2	2	W : Regular wiper function (active 1 time when full heeling back after sewing) O : Wiper works at each full heeling back (unlimited) A : Wiper works only the pedal is kept full heeling back . Wiper turn off when the pedal return to neutral. Note : Wiper on time controlled by the [093. W2] .
	112	WMD	Wiper function related to full-heeling pedal	W/O/A	W	W	W	W	W	Adjust the needle down stop position.
	113	DEG	Needle DOWN position stop angle	5 - 180 degrees	12	12	12	12	12	Adjust the needle up stop position.
	114	UEG	Needle UP position stop angle	5 - 180 degrees	12	12	12	12	12	Power on display condition selection. ON : When power switch turned on, the panel displays previous condition. (Keep previous condition). OFF : When power switch turned on, the panel displays normal mode.
	115	PMD	Power on display condition	ON/OFF	OFF	OFF	OFF	OFF	OFF	Valid only when [078. TRM] = 'RK' mode Motor reverses from needle down, and stops at the needle upper dead point.
	116	DRU	Reverse angles through Needle down and up	1 - 360 degrees	180	180	180	180	180	Error code history display , total 10 events can be memorized.
	117	ER	Error code display	10 SET/FIFO	-	-	-	-	-	ON : Without the synchronizer , motor is running as a clutch motor and stops at random position. OFF : With synchronizer .
	118	NOS	Converting to a clutch motor selection	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Direct drive. OFF : Belt drive.
	119	DD	Direct drive or belt drive	ON/OFF	OFF	OFF	OFF	OFF	OFF	FU : Regular operation -- full heeling for trimming and foot lifting. NU : Full heeling for up needle. NO : No foot lifting function. NUF : Full heeling for foot lifting and up needle. EFF : Full heeling for foot lifting and running at low speed.
	120	FHM	Mode selection for full-heeling after power on or trimming	FU/NU/NO/NUF/ EFF	FU	FU	FU	FU	FU	ON : Automatic needle UP at power on. OFF : Function invalid.
	121	ANU	Needle goes up as power turned ON	ON/OFF	OFF	OFF	OFF	OFF	OFF	The motor's maximum speed setting.
	122	HL	Upper limit of maximum speed	50 - 9999 spm	5000	1000	2000	4000	7000	

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
MAKER  + P O W E R .. ON	123	FASET	Factory default reset						Factory setting reset
	124	PG	Program down load from /save to operation box (C300) / computer	NOP/LOAD/SAVE	NOP	NOP	NOP	NOP	Program mode selection. NOP : No function LOAD : Down load the program from C300 operation panel . (Valid only when [118. NOS] = OFF) SAVE : Save the program to C300 operation panel. (Valid only when [118. NOS] = OFF)
	125	USM	Function for the needle up switch	A/B/C/D/E/F/G	B	B	B	B	Function for the needle up switch. (Connection : [145. IN2] =U or [221. INJ] =U or C300 operation panel needle up switch) A : Stitch changeover + inching B : Stitch changeover only C : Up needle only . D : Up needle and presser foot . E : Inching one stitch only. F : Inching one stitch backward only. (Note : Valid only when [010. ACD] = OFF, [011. RVM] = B) G : Backward running for [133. CHS] setting stitches.
	126	USA	Mode selection for [125. USM]	ON/OFF	OFF	OFF	OFF	OFF	ON : Always enable. OFF : Enable only at intermediate stop .
	127	MAV	Maximum voltage hold	-----	-----	-----	-----	-----	Maximum voltage display
	128	MIV	Minimum voltage hold	-----	-----	-----	-----	-----	Minimum voltage display
	129	PV	Current voltage display	-----	-----	-----	-----	-----	Power voltage display
	130	OVD	Over voltage setting	170V - 315V	305	305	305	305	Over voltage setting
	131	LVD	Low voltage setting	70V - 160V	100	100	100	100	Low voltage setting
	132	UPG	User program saving	0 - 4	0	0	0	0	Save the user's parameter setting into memory blocks for later use. Setting procedure: 1.Press [S] key + POWER ON LCD display [123. FA SET] 2.Press [P] key 9 times LCD display [132. UPG] 3.Press [S] key LCD display [UPG. 0] 4.Press [D] key to select a block number from [UPG. 0] ~ [UPG. 4]. 5. Press [S] key to save the program. Note : To recall the program, go to the memory block in [UPG. 0] ~ [UPG. 4], use [C] key to call it back and then press [S] key to confirm and save.
	133	CHS	Function and stitches setting for Angle-Stitch device (Pegasus W582)	1 - 99 stitches	5	5	5	5	Valid only when [047. MAC] = 「 10 」 (For W582 angle stitch) and [011. RVM] = 「 B 」 . When half heeling the pedal, the needle goes up , pressing down the pedal, this function works. The 「 CHS 」 speed is set by [004. N] . Full heeling back : Same as interlock stitch machine function output.
	134	KLK	SBT/EBT Key Lock selection	ON/OFF	OFF	OFF	OFF	OFF	ON : The keys of A.B.C.D will be locked and defined to specific functions as follow : [A] key : cancel presser foot after half heeling. [B] key : cancel trimmer function at full heeling back. [C] key : cancel wiper function at full heeling back. [D] key : start constant stitch setting OFF : Unlocked.
	135	TOT	Auto-running full time setting	1 - 168 Hrs	1	1	1	1	Auto-running timer amount setting (when [138. UTD] = ON valid.)
	136	TM1	Auto-running on cycle time setting	(1-250) x 0.1S	20	20	20	20	Auto-running on timer setting
	137	TM2	Auto-running off cycle time setting	(1-250) x 0.1S	20	20	20	20	Auto-running off timer setting
	138	UTD	Auto-running test selection	ON/OFF	OFF	OFF	OFF	OFF	ON : Running test function is enable OFF : Running test function is non-enable
	139	CK	Current sensor initial value	-----	-----	-----	-----	-----	Current sensor initial value display
	140	OSE	Outside setting the [102. SE] parameter	ON/OFF	OFF	OFF	OFF	OFF	Setting the parameter [102. SE] from C-300 operation box . ON : Enable OFF : Disable.
	141	BC3	Added 1 stitch to the second C segment of double End Back-Tacking	ON/OFF	OFF	OFF	OFF	OFF	Valid only when the double End Back-Tacking is performed. ON : Enable provided the parameter [030. BCC] = ON . OFF : Disable.
	142	EFK	EFKA pedal unit function	ON/OFF	OFF	OFF	OFF	OFF	See the connection diagram . ON : Enable S0 S1 S2 S3 as input of Actuator EB301/EB302 of EFKA. OFF : Disable.
	143	AT	Automatic standing operation (S0/S1 low-speed SW)	ON/OFF	OFF	OFF	OFF	OFF	Automatic standing operation can be done. ON : Enable OFF : Disable.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
MAKER									
									
+ P O W E R .. O N	144	IN1 Definition IN1=IO1/NOP/S4/CRL/STK/FSR (A/8 or D/2)	IO1/NOP/S4/ CRL/STK/FSR	STK	STK	STK	STK	STK	Define the input function of IN1. IO1 : Control OT1 output of [157.O1] NOP : No function. S4 : Motor is running with [001. H] speed setting. CRL : Should be set when [225. CER] = ON . STK : Input (D/2) of switching stitch length, can activate the LED(D/10 or A/29) and output of solenoid (A/30) . Connected parameters : [227. SLU] , [228. STN] , [229. STL] , must be set [247. SLE]=ON Valid. FSR : Input (D/2) of switching 2nd tension release , can activate the LED(D/11) and output of solenoid (A/20) . Connected parameters : [218. STR] , [230. KFH] .
	145	IN2 Definition IN2=USR/U/NOP (A/6 or D/1)	USR/U/NOP	U	U	U	U	U	Define the input function of IN2. USR : Up the needle by the angle of [058. TR8] when this switch pushed on. U : Needle up function of [125. USM] . NOP : No function.
	146	IN3 Definition IN3=WL/HT/NOP/NFD/WAZ/FSR (D/4)	WL/HT/NOP/NFD / WAZ/FSR	WAZ	WAZ	WAZ	WAZ	WAZ	Define the input function of IN3. WL : Wiper output cancel switch. HT : Pedal half toe signal. NOP : No function. NFD : Input (D/4) of switch for reduction of foot pressure, can activate the LED(D/12) and output of solenoid (A/21) , Connected parameter : [231. MFD] . WAZ : Input (D/4) of switch for roller function , can activate the LED (D/12) and output of solenoid (A/15). Connected parameter : [231. MFD] , [217. FLK] , [232. CTW] , [233. PLC] . FSR : Input (D/4) of switch for 2nd tension release , can activate the LED (D/11) and output of solenoid (A/20) . Connected parameter : [218. STR] , [230. KFH] .
	147	INA Definition INA=BCR/PSU/NOP/SPL (C/7)	BCR/PSU/NOP/ SPL	PSU	PSU	PSU	PSU	PSU	Define the input function of INA. BCR : A switch input signal for selecting ON / OFF of motor start with a reverse angle. Valid only when PSU : A switch input signal for emergency stop at up position. PSD : A switch input signal for emergency stop at down position. SPL : A switch input signal for speed limited by low speed of [060. L] .
	148	INC Definition INC=IO1/IO2/S0/SH/NOP/DB3/ZVR (D/5)	IO1/IO2/S0/SH/ NOP/DB3/ZVR	NOP	NOP	NOP	NOP	NOP	Define the input function of INC. IO1 : Must be selected when [196. BF] = ON . IO2 : Must be selected when [194. A16] =ON or [197. WDA] = ON . S0 : A switch input signal for speed limited by low speed of [060. L] . SH : A switch input signal for speed limited by [009. A] . NOP : No function. DB3 : Input (D/5) of switch for DB3000 speed limitation [191. B3] , can activate the LED (D/13). ZVR : input (D/5) of switch for manual backtack function , can activate the LED (D/13) and output of solenoid (A/34) . Connected parameter : [234. DBA] .
	149	IND Definition IND=TL/ES/NOP/FSR/VRU (D/3)	TL/ES/NOP/FSR/ VRU	FSR	FSR	FSR	FSR	FSR	Define the input function of IND. TL : A switch input signal for trimmer output cancel . ES : A switch input signal for emergency stop . NOP : No function. FSR : Input (D/3) of switching 2nd tension release , can activate the LED(D/11) and output of solenoid (A/20) . Connected parameters : [218. STR] , [230. KFH] . VRU : Input (D/3) of switch for backtack suppression/recall , can activate the LED (D/11)
	150	INE Definition INE=S7/IO1/IO2/CW/IO3 (A/5 or C/1)	S7/IO1/IO2/CW/ IO3	S7	S7	S7	S7	S7	Define the input function of INE. S7 : A switch input signal for reverse sewing. IO1 : Must be selected when [193. AC2] = ON or [194. A16] = ON. IO2 : A switch input signal for reverse one stitch when motor stop and reverse sewing . NOTE :The [010. ACD] =off and [011. RVM] =B must be set. CW : A switch input signal for change motor direction of rotation. IO3 : An input signal for Inching one stitch only when motor stop and reverse sewing . NOTE : The [010.ACD] =off and [011.RVM] =B must be set.
	151	INF Definition INF=HP/F/FSR/NOP (D/6)	HP/F/FSR/NOP	F	F	F	F	F	Define the input function of INF. HP : A switch input signal for high lift of walking foot. F : A switch input signal for knee switch. FSR : Input (D/6) of switching 2nd tension release , can activate the LED(D/14) and output of solenoid (A/20) . Connected parameters : [218. STR] , [230. KFH] . NOP : No function.
	152	INI Definition INI=CRS/FAW (A/12)	CRS/FAW	CRS	CRS	CRS	CRS	CRS	Define the input function of INI. CRS : A switch input signal for counter reset .Note : Valid only when [042. CUD] FAW : A signal for bobbin thread detector.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
MAKER									
POWER ON	153	INK	Definition INK=HP/F/CRR (A/7 or B/1)	HP/F/CRR	HP	HP	HP	HP	Define the input function of INK. HP : A switch input signal for high lift of walking foot. F : A switch input signal for knee switch. CRR : Should be set when [225. CER] = ON .
	154	OA	Definition OA=TM/KS1 (A/37)	TM/KS1	TM	TM	TM	TM	Define the output function of OA. TM : Trimmer output. KS1 : Tape cutter output.
	155	OB	Definition OB=WP/ML/KFA (A/27)	WP/ML/KFA	WP	WP	WP	WP	Define the output function of OB. WP : Wiper output. ML : Tension release output. KFA : Short trimming output.
	156	OD	Definition OD=ML/KS1/KS2/KS3/KS4/NCL (A/36 or B/5 or C/5)	ML/KS1/KS2/KS3/KS4/NCL	ML	ML	ML	ML	Define the output function of OD. ML : Tension release output. KS1 : No function. KS2 : Must be selected when [194. A16] = ON. KS3 : No function. KS4 : Default setting. Must be selected when [196. BF] or [204. BL] = ON, or [205. BAF] = 1, 2 . NCL : Needle cooling output.
	157	O1	Definition O1=OT1/KS1/PUL/CSL/TM (A/30)	OT1/KS1/PUL/CSL/TM	OT1	OT1	OT1	OT1	Define the output function of O1. OT1 : Output by flip-flop control according to each input specifications while inputs IO1 are ON. KS1 : Must be selected when [193. AC2] or [194. A16] or [197. WDA] = ON . PUL : Puller output. CSL : Must be selected when [225. CER] = ON . TM : Trimmer output.
	158	O3	Definition O3=HP/KS1/KS2/CSR (A/32)	HP/KS1/KS2/CSR	HP	HP	HP	HP	Define the output function of O3. HP : Output for high lift for walking foot. KS1 : Must be selected when [205. BAF] = 1, 2 . KS2 : Must be selected when [196. BF] = ON . CSR : Must be selected when [225. CER] = ON .
	159	O4	Definition O4=OT4/BUZ/D11 (D/11)	OT4/BUZ/D11	D11	D11	D11	D11	Define the output function of O4. OT4 : Reserve output. BUZ : Buzzer output is turned On when the [042. CUD] =US,DS,UTS,DTS and the count becomes end. RESET : When the counter reset by pushing the "A" key at panel of controller or by [152. INI] =CRS D11 : If (D/3) is defined for FSPR switch, then (D/11) as FSPR LED output, if (D/3) is defined for VRU switch, then (D/11) as VRU LEI
	160	O5	Definition O5=OT5/HPL (A/31)	OT5/HPL	HPL	HPL	HPL	HPL	Define the output function of O5. OT5 : Must be selected when [197. WDA] = ON or [205. BAF] = 1, 2 . HPL : HP LED output.
	161	O6	Definition O6=STL/OT6 (A/29 or D/10)	STL/OT6	STL	STL	STL	STL	Define the output function of O6. STL : STK LED output. OT6 : Output is turned ON for chain stitch bottom/lamp, when the pedal full heeling back or sewing
	162	O7	Definition O7=BTL/UC (A/24)	BTL/UC	BTL	BTL	BTL	BTL	Define the output function of O7. BTL : BTL LED output. UC : Output is turned ON if at needle up position when the sewing machine is stopped.
	163	BD	SRM return operation stable timer	70 - 990	70	70	70	70	Stable timer for motor return operation.
	164	MXI	Maximum current limiter	5 - 22A	10	19	19	10	Maximum current limiter setting. Note : To avoid damage, adjustment should be done by engineer only.
	165	WKT	Weak braking torque scale	1 - 5	2	2	2	2	Weak braking torque scale setting.
	166	ACT	Acceleration time	60 - 990 ms	140	140	140	140	The time for accelerating machine to high speed from the pedal toed down or when the external run signal (S1) is turned ON.
	167	DCT	Deceleration time	60 - 990 ms	160	160	160	160	The time for the decelerating machine to stop from the pedal returned to neutral or when the external run signal (S1) is turned OFF .
	168	HKP	Motor's holding torque gain adj.	5 - 400	35	20	40	35	To reduce noise, the motor holding torque can be lowered down.
	169	LKP	Low speed gain	5 - 400	50	25	50	50	Low speed gain LKP adjustment.
	170	KP	Gain kp	10 - 150	40	20	40	40	Gain kp adjustments
	171	KI	Gain ki	100 - 3000	1800	1800	1800	1800	Gain ki adjustments
	172	KS	Gain ks	1 - 40	18	18	18	18	Gain ks adjustments
	173	QSK	Quick stop counter	30 - 999	100	100	100	100	Note : Don't adjust.
	174	QSP	Quick stop speed	50 - 500	100	100	100	100	Note : Don't adjust.
	175	HV	Heavy duty	ON/OFF	OFF	OFF	OFF	OFF	Heavy duty function setting ON : Enable. OFF : Disable.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
 MAKER + P O W E R .. O N	176	VDN	Positioning by index (reference) point	OFF/A/B/C	B	B	B	B	Positioning mode selection. OFF : Needle up and down is adjusted by external synchronizer, and needle bar upper dead point is A : Needle up is adjusted by [179. PUA] , and needle down is adjusted by [181. PDA] . B : Needle up is adjusted by [179. PUA] , needle down is adjusted by [181. PDA] and needle bar upper dead point is adjusted by [183. PUB] . C : When pedal control, needle up is adjusted by [179.PUA] , needle down is adjusted by [184. PDB] , [185. PDC] ; if U switch operation in half stitch control; then, can stop the motor at [179. PUA] , [181. PDA] , [184. PDB] , [185. PDC] . this function for handle stitch machine only.
	177	SIN	Single positioning signal synchronizer	ON/OFF	OFF	OFF	OFF	OFF	Defined one signal for two positioning function. Note : Valid only when [176. VDN] =off . ON : Enable. A single positioning signal synchronizer is used. Valid only when [177. SIN] =ON + [176. VDN] = OFF.
	178	NU	Define the UP positioning signal mode H/L	H/L	L	L	L	L	Valid only when [177. SIN] =ON + [176. VDN] = OFF. H : Input logic H active for needle up, and input logic L active for needle down. L : Input logic H active for needle down, and input logic L active for needle up.
	179	PUA	Virtual up A position edge angle	0 - 359 degrees	266	266	315	326	[176. VDN] =MODE "A", "B", "C" valid (from index point).
	180	PUW	Virtual up A position ON angle	10 - 70 degrees	40	40	40	40	[176. VDN] =MODE "A", "B", "C" valid (pulse width).
	181	PDA	Virtual down A position edge angle	0 - 359 degrees	0	0	115	21	[176. VDN] =MODE "A", "B", "C" valid (from index point).
	182	PDW	Virtual down A position ON angle	10 - 70 degrees	40	40	40	40	[176. VDN] =MODE "A", "B", "C" valid (pulse width).
	183	PUB	Virtual up B position edge angle	0 - 359 degrees	266	238	295	266	[176. VDN] =MODE "B", "Off" valid (needle upper dead point).
	184	PDB	Virtual down B position edge angle	0 - 359 degrees	90	90	90	90	[176. VDN] =MODE "C" valid only
	185	PDC	Virtual down C position edge angle	0 - 359 degrees	270	270	270	270	[176. VDN] =MODE "C" valid only
	186	MS	Walking foot lifting maximum speed	400 - 5000 spm	3500	900	1700	3500	Walking foot maximum speed limiter
	187	WS	Walking foot lifting minimum speed	400 - 4800 spm	2000	400	800	2000	The speed of HP solenoid on
	188	MIN	Minimum stroke value of potentiometer for walking foot lifting .	-----	----	----	----	52 (see : No.236)	Min. stroke adjusted by the potentiometer at machine head.
	189	MAX	Maximum stroke value of potentiometer for walking foot lifting .	-----	----	----	----	255 (See : No.236)	Max. stroke adjusted by the potentiometer at machine head.
	190	B2	DB2000 speed limiter	400 - 5000 spm	2000	400	800	2000	B2 speed limiter setting
	191	B3	DB3000 speed limiter	500 - 5000 spm	3000	500	1700	3000	B3 speed limiter setting
	192	PTE	Positioning teaching mode	ON/OFF	ON	ON	ON	ON	Positioning teaching mode selection. ON : Must be selected when [176. VDN] = A,B,C. OFF : Invalid.
	193	SB1	Single Start back-tacking function	ON/OFF	ON	ON	ON	ON	ON : Enable. (Valid only with C300 operation panel , select double start back tacking) OFF : Disable.
	194	EB1	Single End back-tacking function	ON/OFF	ON	ON	ON	ON	ON : Enable. (Valid only with C300 operation panel , select double end back tacking) OFF : Disable.
	195	SLM	Slow start operation mode	T/A	T	T	T	T	The slow start operation mode is selected. This is valid when the panel [SL] key is ON in the normal T : Slow start operation will begin when the power is turned ON or when the first toe down after thread trimming, or the first external run signal (S0,S1) is turned ON. A : Slow start operation will begin when the pedal is toed down or when the external run signal (S0,S1) is turned ON.
	196	BF	BF function	ON/OFF	OFF	OFF	OFF	OFF	BF function selection. ON : Enable. Connected parameter : [148. INC] OFF : Disable.
	197	LFO	Full-on time for Tension release solenoid.	0 - 990 ms	100	100	100	100	For tension solenoid full-on time adjustment.
	198	LFC	Duty cycle of holding power for Tension release solenoid. Related parameter : [155. OB],[156. OD] =ML .	10 - 100%	50	50	50	50	Valid when [155. OB] , [156. OD] = ML , For solenoid switching power adjustment.
	199	FHP	Setting the number of stitches for HP function.	0 - 255 stitches	0	0	0	0	When [239. KLC] =ON. Setting the number of stitches for the walking foot operation. 0 : Function disable. 1 ~ 255 : Stitches setting. Valid only when [062. HPM] =ALT. [239. KLC] =ON.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code		Parameters Function	Range	Preset For					Description	
					100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm		
MAKER										Define the input function of IN4. DB2 : Motor is running by [190. B2] speed. SPV : Speed limited by VHP input. Speed curve controlled by [186. MS] , [187. WS] , [188. MIN] , [189. NOP : No function. S5 : Motor is running by medium speed [059. M] . WL : Wiper output cancel switch.	
 + P O W E R .. O N	200	IN4	Definition IN4=DB2/SPV/NOP/S5/WL (A/9)	DB2/SPV/NOP/S5/WL	DB2	DB2	DB2	DB2	DB2	Define the input function of IN4. DB2 : Motor is running by [190. B2] speed. SPV : Speed limited by VHP input. Speed curve controlled by [186. MS] , [187. WS] , [188. MIN] , [189. NOP : No function. S5 : Motor is running by medium speed [059. M] . WL : Wiper output cancel switch.	
	201	IAV	INA = PSU logical signal invert (C/7)	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	INA input logic signal invert ON : The input logic of each Input signal PSU is reversed. OFF : The input logic of each Input signal PSU is normal.
	202	IBV	INB = PSD logical signal invert (C/8)	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	INB input logic signal invert ON : The input logic of each Input signal PSD is reversed. OFF : The input logic of each Input signal PSD is normal.
	203	ICV	INC logical signal invert (D/5)	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	INC input logic signal invert ON : The input logic of each Input INC signal is reversed. OFF : The input logic of each Input INC signal is normal.
	204	BL	BL CONTROLLER INTERFACE CONTROL	ON/OFF	OFF	OFF	OFF	OFF	OFF	OFF	BL controller interface control function selection. ON : Enable for Pegasus BL controller function . NOTE : Valid only when [156. OD] =KS4. OFF : Disable.
	205	BAF	Mode selection for hemming guide device	OFF,1,2	OFF	OFF	OFF	OFF	OFF	OFF	For the hemming guide device of USA Bottoms Associates Inc. OFF : Normal sewing mode. 1 : For manual mode hemming guide device. 2 : For auto mode hemming guide device.
	206	AO2	Definition AO2=PO1/FSR (A/20)	PO1/FSR	FSR	FSR	FSR	FSR	FSR	FSR	FSR : Input (D/6) of switching 2nd tension release , can activate the LED(D/14) and output of solenoid (A/20) . Connected parameters : [218. STR] , [230. KFH] . PO1 : Needle down pulse width output . (position 1)
207	AO3	Definition AO3=PO2/NFD (A/21)	PO2/NFD	NFD	NFD	NFD	NFD	NFD	NFD	NFD : Input (D/4) of switch for reduction of foot pressure, can activate the LED(D/12) and output of solenoid (A/21) . Connected parameter : [231. MFD] . PO2 : Needle up pulse width output . (position 2)	

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm	
MAKER	208 VER	Software Version	-	D2.8	D2.8	D2.8	D2.8	D2.8	software version display only
POWER ON	209 IDX	Define the source of Index (reference) point	UP/DN	UP	DN	UP	DN	UP	Define the source of index point is from needle up signal or needle down signal. UP : The reference index point is from the needle up signal . DN : The reference index point is from the needle down signal.
	210 FK1	Thread Clamp start angle.	0 - 359 degrees	0	0	0	70	0	Thread Clamp output start angle setting.
	211 FK2	Thread Clamp end angle.	0 - 359 degrees	0	0	0	140	0	Thread Clamp output end angle setting.
	212 THP	The timing prior to HP speed	80 - 500 ms	100	100	100	100	100	Setting the timing prior to HP speed.
	213 CHP	Setting the number of stitches for HP function by hp switch (A/7 or B/1)	0 - 255 stitches	0	0	0	0	0	Setting the number of stitches for HP function of walking foot . 0 : Function disable. 1 - 255 : Enable. Valid only when [062. HPM] =ALT.
	214 FNK	Functions of the output "needle cooling"	0,1,2	0	0	0	0	0	Needle cooling output mode selection. 0 : Normal needle cooling function. 1 : Needle cooling operates when sewing speed exceeds the setting value of [216. NK]. 2 : Under edge trimmer.
	215 DK	Setting the needle cooling delay time	0 - 2550 ms	2500	2500	2500	2500	2500	Setting the needle cooling delay time from motor stops
	216 NK	Setting the needle cooling operating point	40 - 6000 spm	40	40	40	40	40	Needle cooling will operate when sewing speed exceeds this setting value. Valid only when [214. FNK] =1.
	217 FLK	Lift roller function	0/1/2/3	0	0	0	0	0	Lift roller output mode selection. 0 : Roller works independently. 1 : Roller works with foot lifter and back tacking. 2 : Roller works with foot lifter. 3 : Roller works with back tacking.
	218 STR	Tension release output function	0/1/2/3	0	0	0	3	0	Tension release output mode selection. 0 : Tension R. output depends on the timing of [080. LLM] only. 1 : Tension R. operates with foot lifting after motor stop. 2 : Tension R. operates with foot lifting after trimming or power on. 3 : Operation and reduction of thread tension output on with foot lifting during motor stop or after thread trimming or power on.
	219 IN5	Definition IN5=DB3/NOP/S5B/F (A/10)	DB3/NOP/S5B/F	DB3	DB3	DB3	DB3	DB3	Define the input function of IN5. DB3 : Motor is running by [191. B3] speed. NOP : No function. S5B : Motor is running by bar tacking [006. B] speed. F : A switch input signal for knee switch.
	220 INB	Definition INB=NOP/PSD/SPB (C/7)	NOP/PSD/SPB	PSD	PSD	PSD	PSD	PSD	Define the input function of INB. NOP : No function. PSD : Emergency stop for down position. SPB : Speed limited by end back-tacking [005. V] speed.
	221 INJ	Definition INJ=NOP/BTL/HP/U/S1 (A/14)	NOP/BTL/HP/U/S1	BTL	BTL	BTL	BTL	BTL	Define the input function of INJ. NOP : No function. BTL : backtack suppression/recall switch for SBT/ EBT only. HP : The switch for high lift for walking foot. U : Needle up switch. (by [125. USM] setting). S1 : Motor is running by VC, if [143. AT] =ON; then running by [009. A] speed.
	222 TOF	Trimmer protection function ON / OFF	ON/OFF	OFF	OFF	OFF	OFF	OFF	Trimmer protection function selection when the machine pulley was moved out of the range of [224. ON] : [223. S2P] function valid. OFF : [223. S2P] function invalid.
	223 S2P	Selecting the trimmer protection mode when [222. TOF] = ON	NO/PS	NO	NO	NO	NO	NO	Operation mode selection. Valid only when [222. TOF] =ON. NO : Operate foot lifting only, without up needle and thread trimming. PS : Operate foot lifting and up needle only, without thread trimming
	224 TOA	Setting the range for thread trimmer protection when [222. TOF] = ON	5 - 40 degrees	10	10	10	10	10	Setting angle for thread trimming signal when shifting the needle stop position before the thread trimming signal.
	225 CER	Corner Function switchover	ON/OFF	OFF	OFF	OFF	OFF	OFF	Corner Function selection. ON : Enable. The related setting includes [144. IN1] [153. INK] [157. O1] [158. O3] [160. O5] [161. O6] Related parameter : [037. SMP] [062. HPM] [097. TK3] [232. CTW] [238. KHP] [199. FHP] [245. NFO] [246. NFC] OFF : Disable.
	226 SO3	SO3=NFD/WL output switchover (A/21)	NFD/WL	NFD	NFD	NFD	NFD	NFD	NFD : The output (A/21) for sewing foot pressure. WL : The output (A/21) for wiper on/off LED.
	227 SLU	Stitch length for backtack	ON/OFF	ON	OFF	OFF	OFF	ON	Connected parameters : [247. SLE]=ON, [144. IN1]=STK, [157. O1]=OT1 ON : Normal stitch length. OFF : Long stitch length.
	228 STN	Stitch length in the next seam (after the thread trimming operation)	2000/1/2	0	0	0	0	0	0 : The selected stitch length remains on. 1 : Switch to long stitches after thread trimming. 2 : Switch to normal stitches after thread trimming.

HVP-70 Sewing Machine Controller Parameters Setting List (for durkopp) E2

software version : D2.8(FOR HVP70-4-ED only)

KEY	Parameters Code	Parameters Function	Range	Preset For					Description	
				100 ohm	220 ohm	680 ohm	1000 ohm	2200 ohm		
MAKE	229	STL	Normal / long stitches with / without speed limitation (pushbutton on D/2)	2000/1/2	0	0	0	0	0	0 : Normal/long stitches without speed limitation. 1 : Normal/long stitches with speed limitation (DB2000). 2 : Normal/long stitches with speed limitation (DB3000).
 + P O W E R .. ON	230	KFH	Coupling the reduction of thread tension with the high lift for working foot and speedomat	0/1/2/3	0	0	0	0	0	0 : Coupling the reduction of thread tension with the high lift for working foot and speedomat OFF. 1 : The reduction of thread tension is switched off and the high lift for working foot is switched on with the pushbutton on socket (A/7). The speedomat has no effect. 2 : When reaching the high lift walking speed by adjusting the speedomat, The reduction of thread tension is switched off . The pushbutton on socket (A/7) has no effect. 3 : When reaching the high lift walking speed by adjusting the speedomat, The reduction of thread tension is switched off . And The pushbutton on socket (A/7) works as with
	231	MFD	Reduction of the sewing foot pressure with speed limitation	0/1/2/3	2	2	2	2	2	0 : Reduction of sewing foot pressure with speed limitation (DB2000) 1 : Reduction of sewing foot pressure with speed limitation (DB3000) 2 : Lift roller and function defined by [217. FLK] parameters. 3 : Reduction of sewing foot pressure inverted
	232	CTW	Stitches prior to the roller is lowered.	0 - 255 stitches	10	10	10	10	10	Stitches setting.
	233	PLC	ON/OFF switch for [232. CTW]	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : [232. CTW] enable. OFF : [232. CTW] disable.
	234	DBA	Manual backtack with speed limitation DB3000	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Speed limited by [191. B3] setting. OFF : Function disable.
	235	FKL	Thread clamp function	0 ~ 11	2	0	0	0	2	0 : Thread clamp off (Note : NFL = sewing foot lifting) 1 : Thread clamp functions with parameters [210. FK1] , [211. FK2] setting angle. (without NFL.) 2 : Without NFL (for light material). 3 : With NFL (for heavy material). 4 : Thread clamp functions with parameters [210. FK1] , [211. FK2] setting angle. (with NFL.) 5 : Preset values : start==211 , end==241 (degrees) (with NFL.) 6 : Preset values : start==192 , end==221 (degrees) (with NFL.) 7 : Preset values : start==172 , end==272 (degrees) (with NFL.) 8 : Preset values : start==70 , end==139 (degrees) (with NFL.) 9 : Preset values : start==49 , end==109 (degrees) (with NFL.) 10 : Preset values : start==49 , end==189 (degrees) (with NFL.) 11 : With NFL (for heavy material).
	236	SEL	Machine code Sub code Select	0/1	0 = 271	0 = 205	0 = 4180i	0 = 367	0 = 171	Default Setting = 0 , Other SubCode See the Sample Setting Page.
	237	FBM	Forward_backward_motion control function.	ON/OFF	OFF	OFF	OFF	OFF	OFF	Forward_backward_motion control function selection. ON : Enable the function of [150. INE] = CW , Reverse run will be enabled while the signal ON. OFF : Disable.
	238	KHP	Setting the number of stitches for HP function.	0 - 255 stitches	0	0	0	0	0	When [239. KLC]=ON. Setting the number of stitches for the walking foot operation. 0 : Function disable. 1 ~ 255 : Stitches setting. Valid only when [062. HPM]=ALT. [239. KLC]=ON.
	239	KLC	To operate HP function by half heeling pedal.	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Enable. OFF : Disable.
	240	FLC	To operate HP function by the knee switch.	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Enable. When [151. INF] = F OFF : Disable.
	241	FAR	Trimming stitch forwards or backwards .	0/1/2/3/4	2	0	1	0	2	0 : Trimming stitch forwards with wiper function. 1 : Trimming stitch backwards with wiper function. 2 : Trimming stitch forwards with thread clamp function. 3 : Trimming stitch backwards with thread clamp function. 4 : Short Trimming function.
	242	SLP	Stitch length selection after power on	ON/OFF	ON	ON	ON	ON	ON	ON : Normal stitch length. OFF : Long stitch length.
	243	HPT	HP function linked with roller control function.	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Roller is lifted when switching on high lift for walking foot. OFF : Roller remains lowered when switching on high lift for walking foot.
	244	KNA	Knee switch control function.	ON/OFF	OFF	OFF	OFF	OFF	OFF	Knee switch control selection. ON : The knee switch can be activated during sewing.(Used for blind stitch machine) OFF : The knee switch can be activated at sewing stop only.
	245	NFO	Full-on time for sewing foot lifting	0 - 990 ms	0	0	0	0	0	Only valid when [063. FTP] set at F M mode. For solenoid pulling torque adjustment.
	246	NFC	Duty cycle of holding power for sewing foot lifting. Related parameter : [235. FKL]	1 - 100%	85	85	85	85	85	Only valid when [235. FKL] set at mode= 3,4,5,6,7,8,9,10, For solenoid's switching power adjustment. Note : 1% -> low holding power / 100% -> high holding power.
	247	SLE	[227.SLU] control function select	ON/OFF	OFF	OFF	OFF	OFF	OFF	ON : Enable. ([227. SLU] function valid) OFF : Disable.
	248	FSO	Full-on time for 2nd tension release output	0 - 990 ms	100	100	100	100	100	For solenoid pulling torque adjustment.
249	FSC	Duty cycle for 2nd tension release output Related parameter : [206. AO2]=FSPR .	1 - 100%	50	50	50	50	50	For 2nd tension release solenoid switching power adjustment.	

7-Segment Display Characters Compare Chart :

Arabic Numerals

Actual Numbers	0	1	2	3	4	5	6	7	8	9
Display Numbers	0	1	2	3	4	5	6	7	8	9

English Alphabet

Actual Alphabet	A	B	C	D	E	F	G	H	I	J
Display Alphabet	A	b	C	d	E	F	G	H	i	J
Actual Alphabet	K	L	M	N	O	P	Q	R	S	T
Display Alphabet	k	L	n	n	o	P	q	r	S	r
Actual Alphabet	U	V	W	X	Y	Z				
Display Alphabet	U	v	B	11	P	≡				