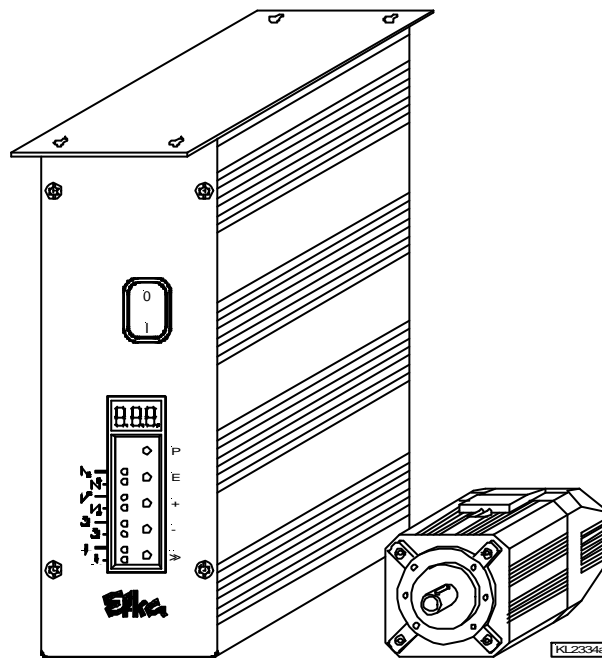


Efka dc 1500

CONTROL

AB220A5111



LIST OF PARAMETERS

CONNECTION DIAGRAM
TIMING DIAGRAMS

No. 402292

English

Efka
FRANKL & KIRCHNER
GMBH & CO KG

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EFKA OF AMERICA INC.

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EFKA ELECTRONIC MOTORS
SINGAPORE PTE. LTD.

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1 Table of Adapter Cords



ATTENTION!

Before switching functional sequences, detach cables from the inputs and outputs! Please ensure that the machine installed provides the functional sequence to be set! Then proceed with the setting using parameter 290!

Setting the functional sequence using parameter 290										
Mode	Designation	Adapter	Outputs							
			FL ST2/35	VR ST2/34	M1 ST2/37	M2 ST2/28	M3 ST2/27	M4 ST2/36	M5 ST2/32	M6 ST2/30
	Power transistors →									
0	Lockstitch; e. g. Brother (737-113, 737-913) Aisin (AD3XX, AD158, 3310; EK1) Pfaff (563, 953, 1050, 1180) Dürkopp Adler (210, 270)	Functions 1112814 1112815 1112841 1112845	FL FL FL FL	VR VR VR VR	FA1 FA1 + FA1 FA1 +	FA2 FA2 FA2 FA2	FW FW FW FW	FA1+2	ML ML	MST
2	Lockstitch; e. g. Singer (212 UTT)	Functions 1112824	FL FL	VR VR		FA FA	FSPL FSPL	FL1 FL1	ML	MST
3	Lockstitch; e. g. Dürkopp Adler (467)		FL	VR	FA	FSPL	FW		ML	MST
4	Chainstitch; e. g. Union Special (34000 and 36200 replacement for US80A) (CS100 and FS100)	Functions 1112865 1112905	FL FL FL	FA-R FA-R FA-R	M1 M1	FA-V FA-V FA-V	FW FW FW	STV	ML ML ML	
5	Chainstitch; parallel sequence Bag sewing machine Union Special Yamato (VC series) Yamato (VG series) Kansai (RX 9803) Pegasus (W500/UT, W600/UT/MS with or without stitch condensing)	Functions Functions 1112818 1113178 1113130 1112821	FL FL FL FL	STV STV STV	M1 FA FA FA	M2 IMP FA	M3 BR FW FW FW	M4	ML ML ML	MST MST
6	Brother (FD3-B257) Union Special (34700) Global (CB2803-56) Rimoldi (F27) Chainstitch; tape cutter/fast scissors	1112822 1112844 1112866 1113096	FL FL FL FL	STV STV	FA FA	FA FA	FW FW FA FAU		NK ML	MST
7	Overlock		FL	KS	M1	M2	AH	FSPL	ML	MST
8	Backlatch Pegasus	Functions 1113234	FL		PD \leq -1 PD \geq -1	PD \geq 1 PD \geq 1	PD \geq 1*		ML	MST
9	Backlatch Yamato (ABT3) Yamato (ABT13, ABT17)	Functions 1112826 1113205	FL		PD \leq -1 PD \leq -1	PD \geq 1 PD \geq 1	PD \geq 1*		ML	MST
10	Lockstitch; e. g. Union Special (63900AMZ replacement for US80A) and on Refrey lockstitch machines	Functions 1112823	FL FL	FA-R FA-R	FSPL	FA-V FA-V	FW FW	VR	ML ML	MST
14	Lockstitch; e. g. Juki (5550-6) Juki (5550-7) (position sensor incorporated in the handwheel)	Functions 1112816 1113132 + 1113157	FL FL FL	VR VR VR	FA1+2 FA1+2 FA1+2	FA2 FZ	FW FW FW	FA1	ML	MST
15	Backlatch Pegasus (SSC100)		FL	KS/KB	KB	KS	FSPL	AH	ML	HP
16	Overlock; feed-off-the-arm machine e.g. Yamato (FD62)		FL	KS	RB	M2	AH	FSPL	ML	MST
17	Chainstitch; Pegasus		FL	LFA		FA	STS		ML	
20	Lockstitch; Juki (LU1510-7)	1113200	FL	VR	FA	FSPL			ML	MST
21	Chainstitch; Yamato (stitch lock)	1113178	FL	STS	FA	STV	FW		ML	
23	Lockstitch; Dürkopp Adler (271...275)		FL	VR	FA	ML	FW	FSPL	HP	MST
24	Chainstitch; Pegasus (MHG-100)	1113267	FL		FA	FA	FW			

*) The signal issued at this output is inverted!

Explanation of letter symbols of the previous page and chapter "Timing Diagrams"
Outputs:

FL	= Sewing foot lifting	FL1	= Sewing foot lifting without pulsing
VR	= Backtacking	STV	= Stitch condensing
FA	= Thread trimmer	FA1	= Thread trimmer pos. 1...1A
FA2	= Thread trimmer pos. 1A...2	FA1+2	= Thread trimmer pos. 1...2
FA-V	= Thread trimmer forward	FA-R	= Thread trimmer backward
FAU	= Bobbin thread trimmer	FAO	= Needle thread trimmer
FSPL	= Thread tension release	AH	= Tape cutter
FW	= Thread wiper	AH1/AH2	= Fast scissors
ML/NK	= Machine running / Needle cooling	KS	= Chain suction
RB	= Chain blowing in opposite direction	STB	= Blow fabric onto stack
KB	= Chain blowing	KS+KB	= Chain suction + blowing
MST	= Machine at standstill	HP/FF1	= High lift for walking foot / flip-flop 1
PD≥1	= Pedal steps 1...12	PD≤-1	= Pedal steps -1 / -2
PD=0	= Pedal step 0	PD-2	= Pedal step -2
L-STL	= Indicator lamp for stitch length	DR-UK	= Reversal of motor direction
FZ	= Thread puller	STS	= Stitch lock
IMP	= Impulse	BR	= Hot thread chain cutting
LFA	= Top cover thread cutter		

2 Putting into Service

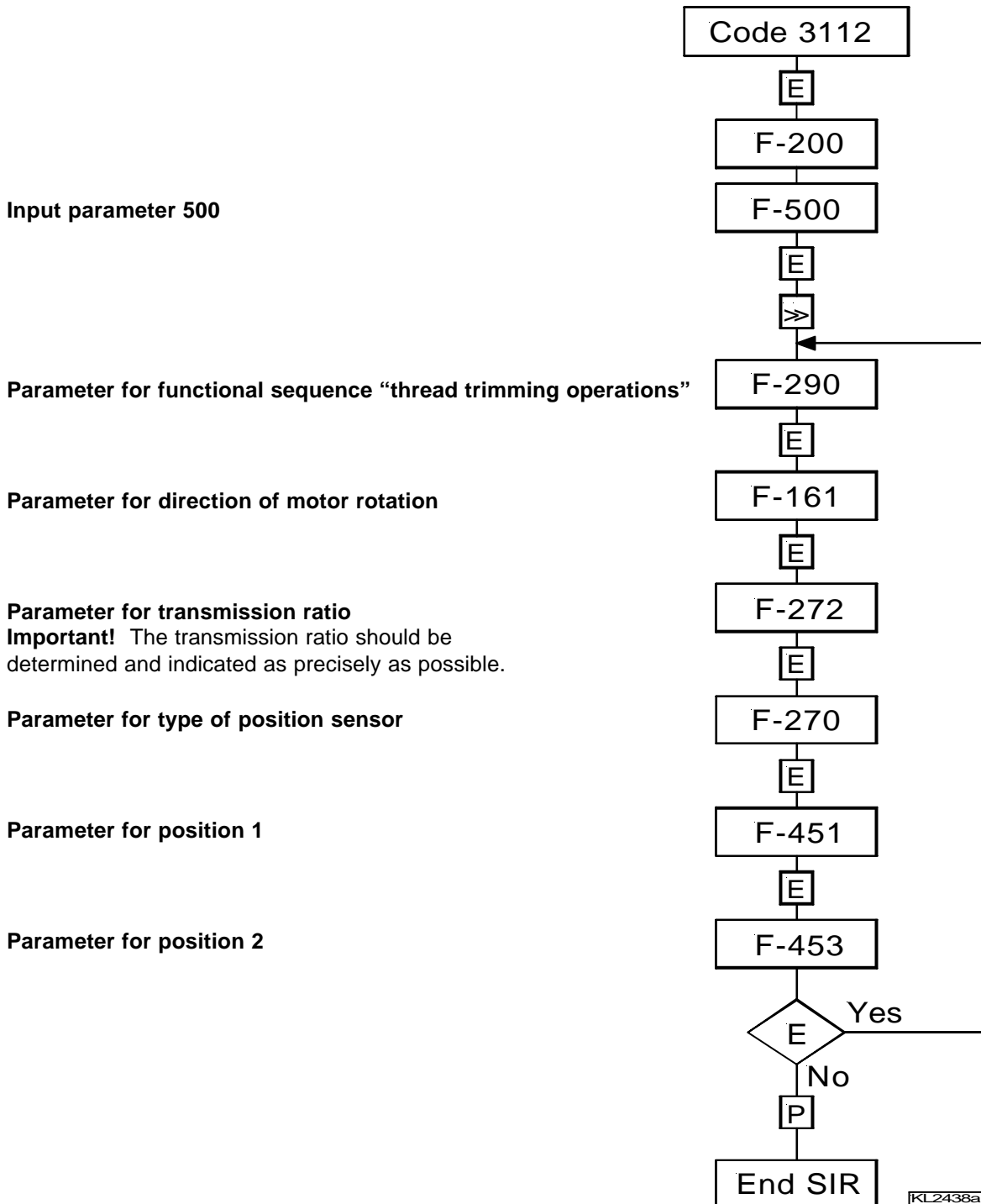
Before putting the control into service, the following must be ensured, checked and/or adjusted:

- **The correct installation of the drive, position transmitter and accompanying devices, if necessary**
- **The correct selection of the trimming operation by means of parameter 290**
- **If necessary, the correct adjustment of the direction of motor rotation by means of parameter 161**
- **The correct selection of the functions of keys (inputs) by means of parameters 240...249**
- **The setting of the transmission ratio between motor shaft and machine shaft by means of parameter 272**
- **The setting of the type of position sensor by means of parameter 270**
- **If necessary, the setting of the number of angular degrees after the sensor position by means of parameter 271**
- **If necessary, the setting of the positions by means of parameter 171 (possible with all settings of parameter 270)**
- **The correct positioning speed by means of parameter 110**
- **The correct maximum speed compatible with the sewing machine by means of parameter 111**
- **The setting of the remaining relevant parameters**
- **Start sewing in order to save the set values**

See instruction manual for details!

3 Setting and Putting into Service with the Aid of the Fast Installation Routine (SIR)

The Fast Installation Routine (SIR) passes through all parameters necessary for programming the functional sequence and the positions.



The values can be varied by pressing the +/- keys. When the parameter is displayed on the V810 control panel, press the E key once more for the value to be displayed.

Exit the routine any time by pressing the P key once, and select a new parameter. Exit programming by pressing the P key twice, and the drive is ready for a new sewing operation.

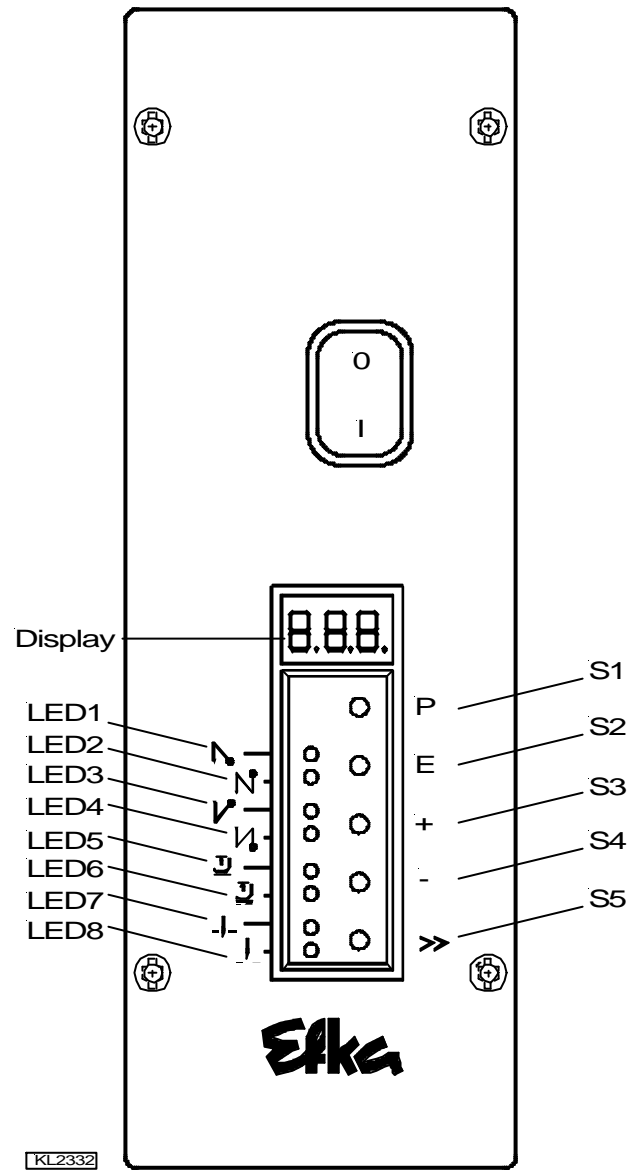
See instruction manual for details!

4 Operating Elements and Socket Connectors

4.1 Position of Operating Elements and Displays

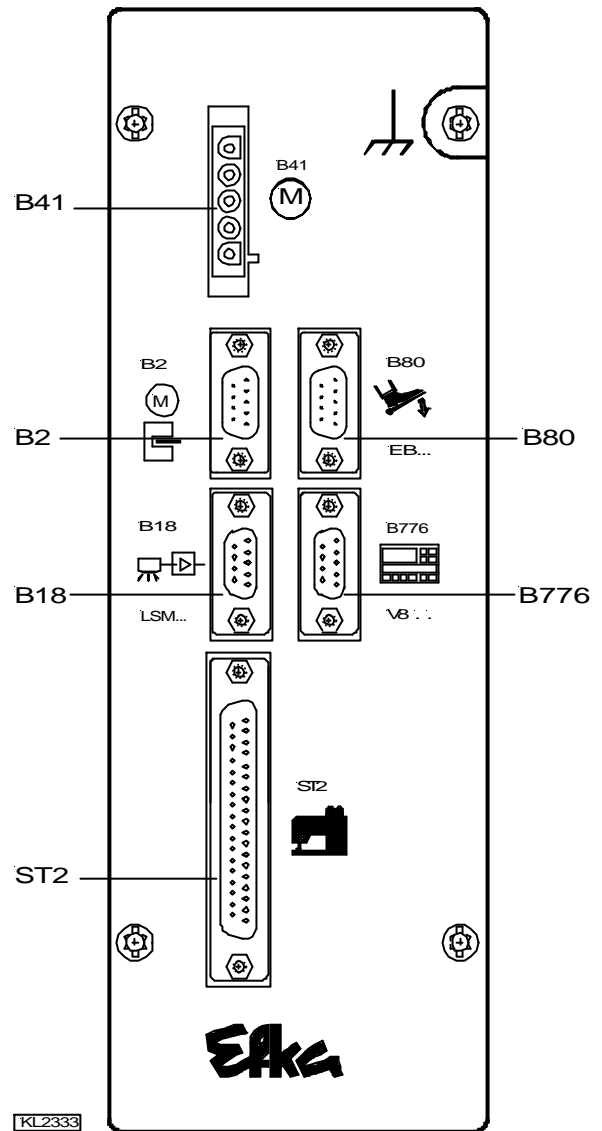
- S1** **P** key
 - Call or exit programming mode
- S2** **E** key
 - Start backtack single / double / off
 - Enter key for modifications in the programming mode
- S3** **+** key
 - End backtack single / double / off
 - Increase of the value indicated in the programming mode
- S4** **-** key
 - Automatic sewing foot lifting at stop in the seam On/Off
 - Automatic sewing foot lifting after thread trimming On/Off
 - Decrease of the value indicated in the programming mode
- S5** **>>** key
 - Basic position 1 or 2
 - Shift key in the programming mode

- LED1** Indicator for single start backtack
- LED2** Indicator for double start backtack
- LED3** Indicator for single end backtack
- LED4** Indicator for double end backtack
- LED5** Indicator for automatic sewing foot lift at stop in the seam
- LED6** Indicator for automatic sewing foot lift after the thread trimming operation
- LED7** Indicator for basic position “needle position 1”
- LED8** Indicator for basic position “needle position 2”
- Display** 3 digits



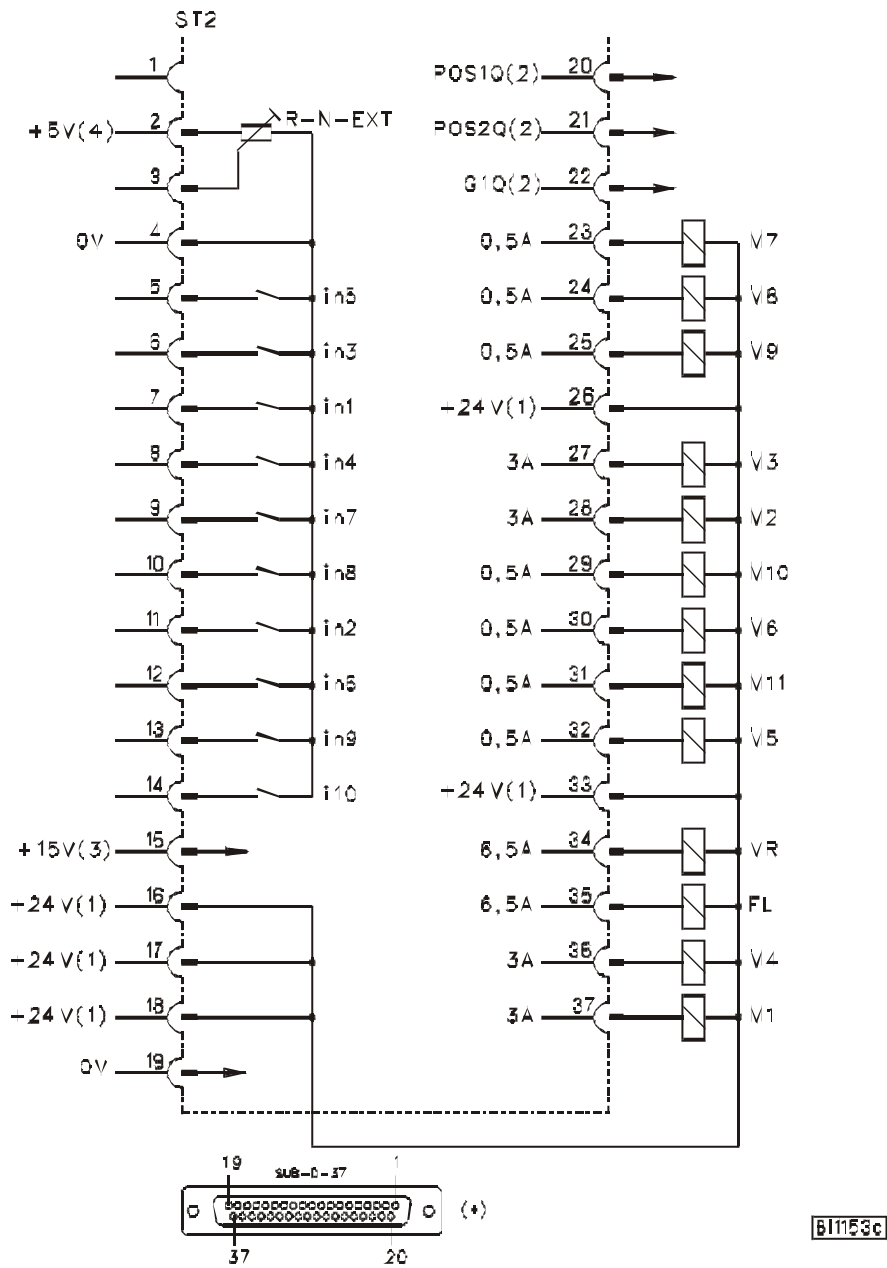
4.2 Position of the Socket Connectors

- B2** Socket for commutation transmitter
- B18** Socket for light barrier module / Hall sensor module / EFKANET (Adapter cord 1113229 in case of multiple assignment)
- B41** Socket for motor power supply
- B80** Socket for actuator
- B776** Socket for V810/V820 control panel
- ST2** Socket for solenoid inputs and outputs / solenoid valves / displays / keys and switches



4.3 Connection Diagram

Inputs switched to 0V



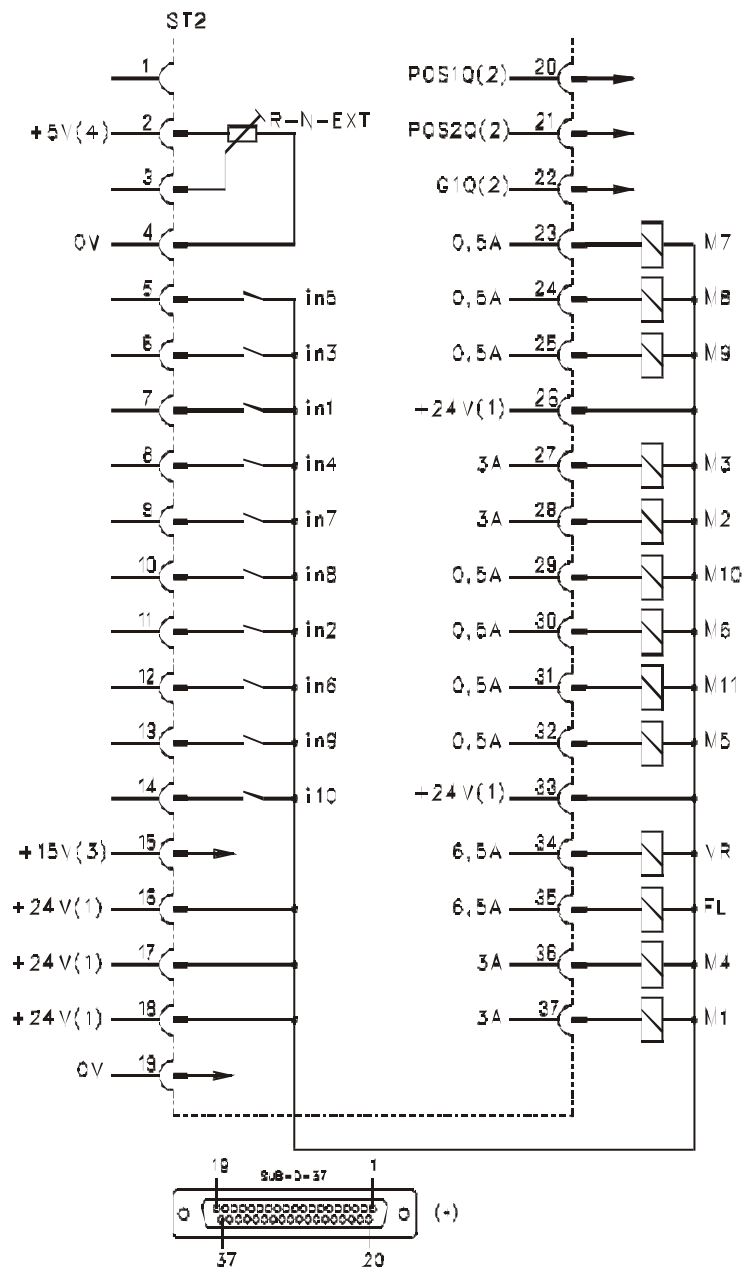
ATTENTION!
 When connecting the outputs, ensure that a total power of 96VA constant load will not be exceeded!

- in1 - Input 1
- in2 - Input 2
- in3 - Input 3
- in4 - Input 4
- in5 - Input 5
- in6 - Input 6
- in7 - Input 7
- in8 - Input 8
- in9 - Input 9

- i10 - Input 10
- M1 - Output 1
- M2 - Output 2
- M3 - Output 3
- M4 - Output 4
- M5 - Output 5
- M6 - Output 6
- M7 - Output 7
- M8 - Output 8

- M9 - Output 9
- M10 - Output 10
- M11 - Output 11
- FL - Sewing foot lifting
- VR - Backtacking
- POS1 - Position 1
- POS2 - Position 2
- GEN - 512 generator impulses
- R-N-EXT - External potentiometer for speed limitation (50kΩ)

Inputs switched to +24V

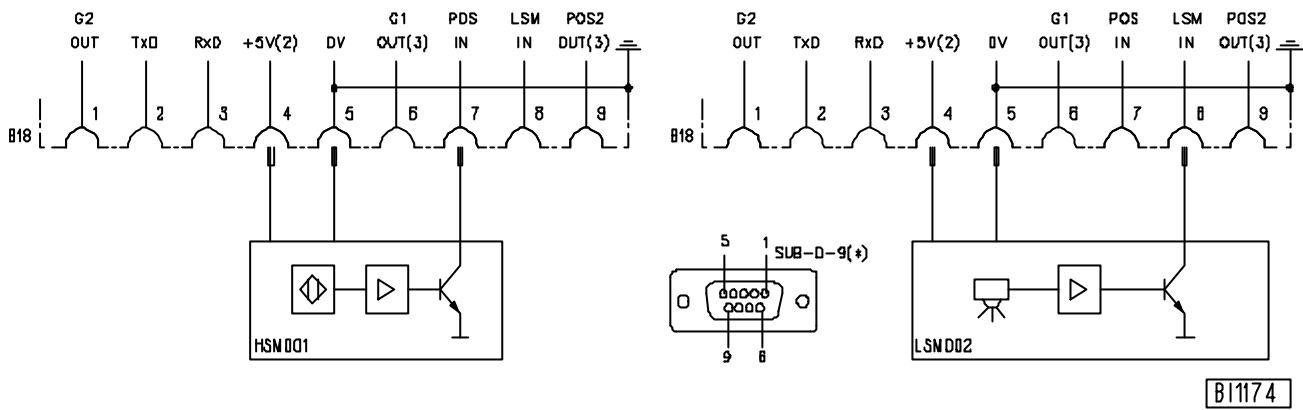


B 11E4

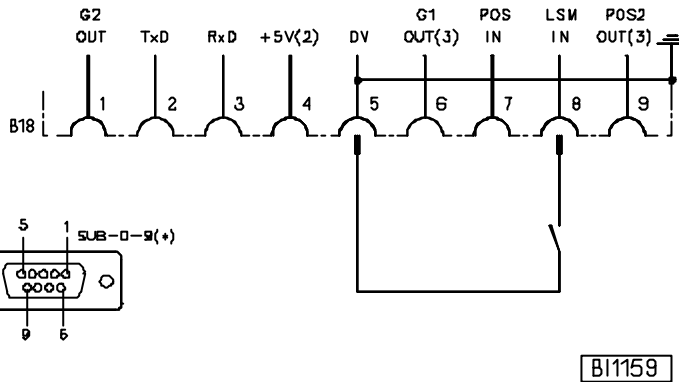
**ATTENTION!**

When connecting the outputs, ensure that a total power of 96VA constant load will not be exceeded!

- 1) Nominal voltage 24V, no-load voltage max. 30V momentarily after power on
- 2) Transistor output with open collector max. 40V, 10mA
- 3) Nominal voltage 15V, $I_{max} = 30mA$
- 4) Nominal voltage 5V, $I_{max} = 20mA$
- *) Front view of the socket (component side) and/or rear view of the plug (soldering side)

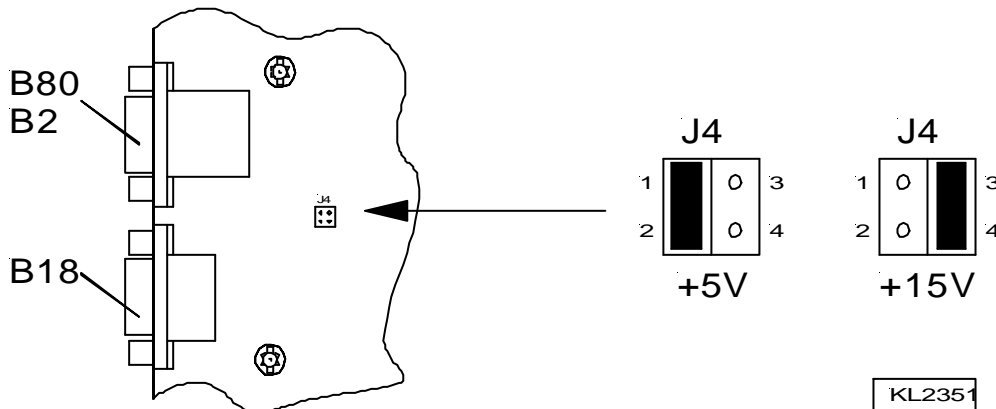


- POS2 OUT - Output for position 2
- POS IN - Input for positions (e.g. connection of a sensor)
- G1/G2 OUT - Output of generator impulses
- TXD/RXD - Serial transmission lines
- LSM IN - Possibility of connecting a light barrier module to socket B18/8 (If parameter 239 = 0, the light barrier function is selected. Identification of the signal when switched to 0V.)
- LSM002 - Reflection light barrier module
- HSM001 - Hall sensor module



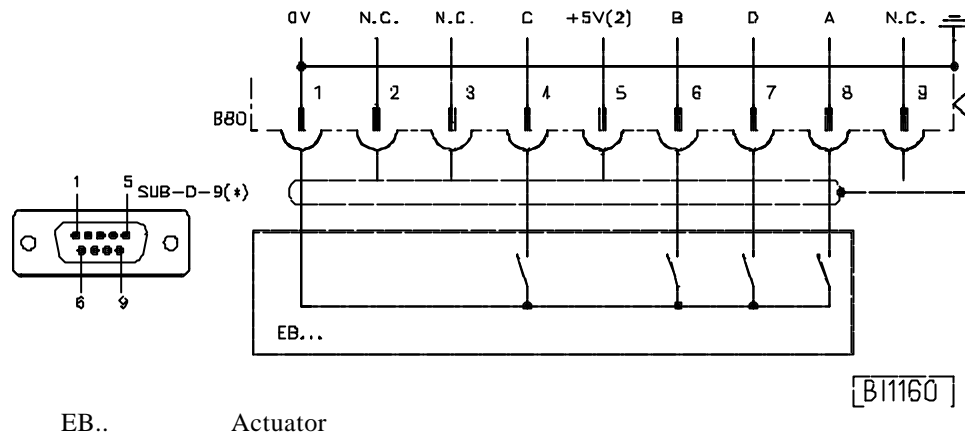
If parameter 239 is set to 1...47, a key can be operated on the input of socket B18/8.

- +5V = Connect lefthand pins 1 and 2 with jumper (factory setting)
- +15V = Connect righthand pins 3 and 4 with jumper



ATTENTION!
Before opening the cover, turn power off!

- 1) Nominal voltage +15V, 100mA (repluggable to +5V, 100mA)
- 2) Transistor output with open collector max. 40V, 10mA
- *) Front view of the socket (component side) and/or rear view of the plug (soldering side)



Pedal step →	-2	-1	0	½	1	2	3	4	5	6	7	8	9	10	11	12
Input A	L	L	H	H	H	L	L	H	H	L	L	H	H	L	L	H
Input B	L	H	H	L	L	L	H	H	H	H	L	L	L	L	H	H
Input C	H	H	H	H	L	L	L	L	L	L	L	L	H	H	H	H
Input D	H	H	H	H	H	H	H	H	L	L	L	L	L	L	L	L

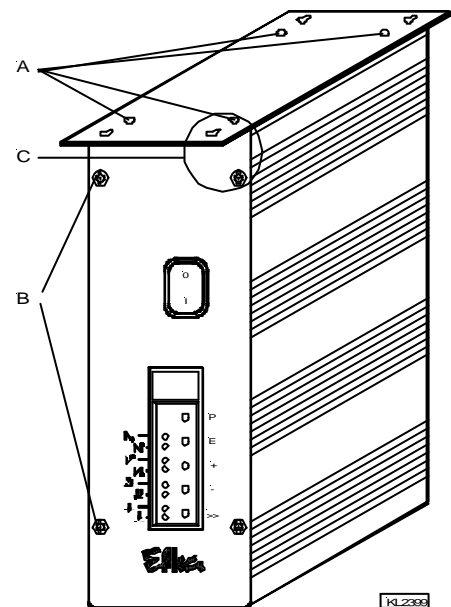
4.4 Connection of a Sewing Light with Transformer



ATTENTION!

Before opening the cover, turn power off!

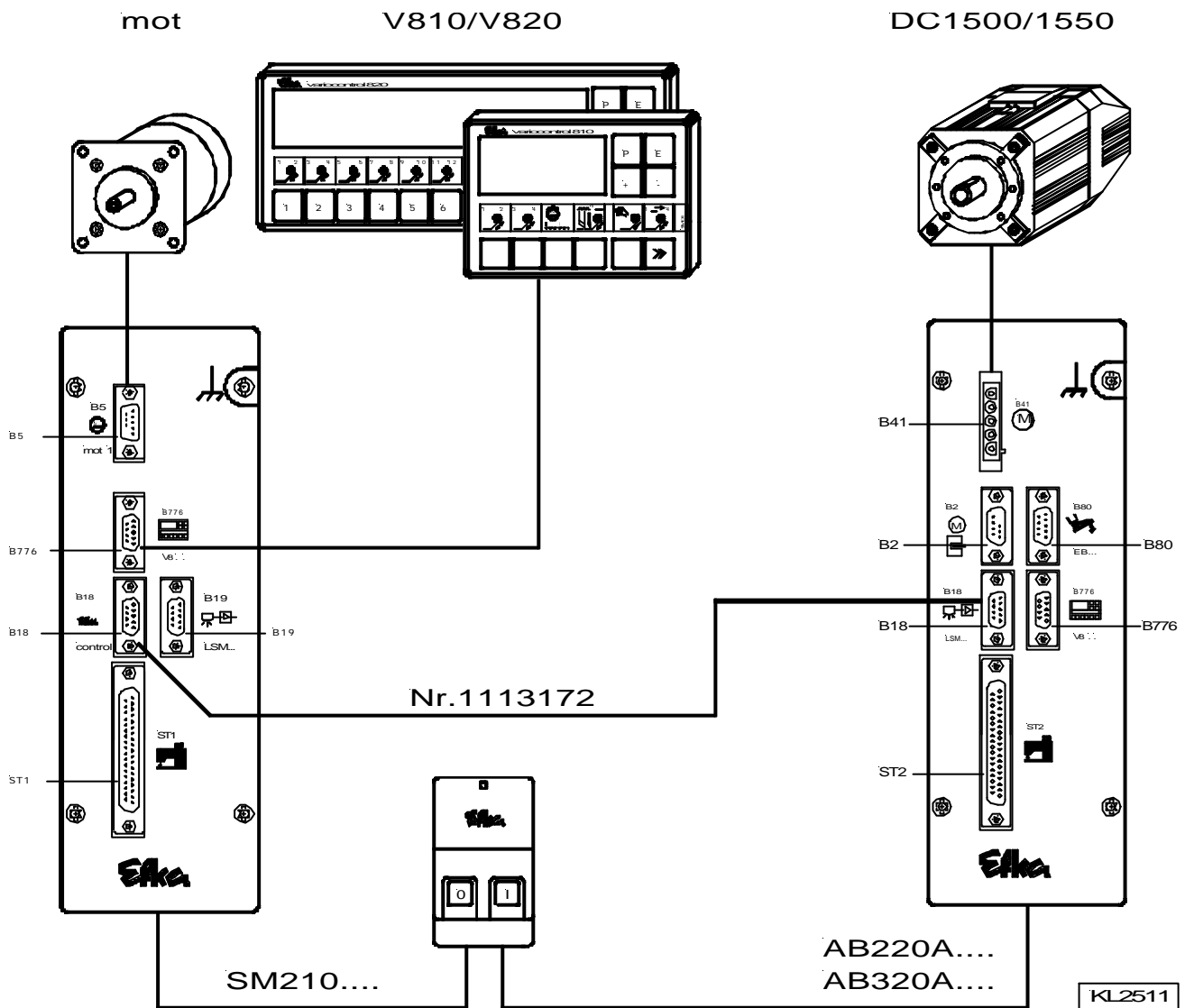
- Switch off the control and remove mains plug from outlet
- Unscrew the control unit from the machine table
- Loosen 4 screws (A)
- Remove the mounting plate
- Loosen 2 screws (B) each at the front and at the rear
- Open the left part of the housing
- Pull the sewing light cable through the cable bushing
- Area (C): Connect strands with clamp on the printed circuit board
- Insert earth lead into plug-in device on the housing part
- Close and screw-connect the housing
- Mount the control unit on the machine table



CAUTION!

When the sewing light is connected, it is always current-carrying (230V), even if the control unit is switched off! Only one sewing light with transformer can be connected to the control unit!

5 Connection Scheme of SM210A Stepping Motor Control



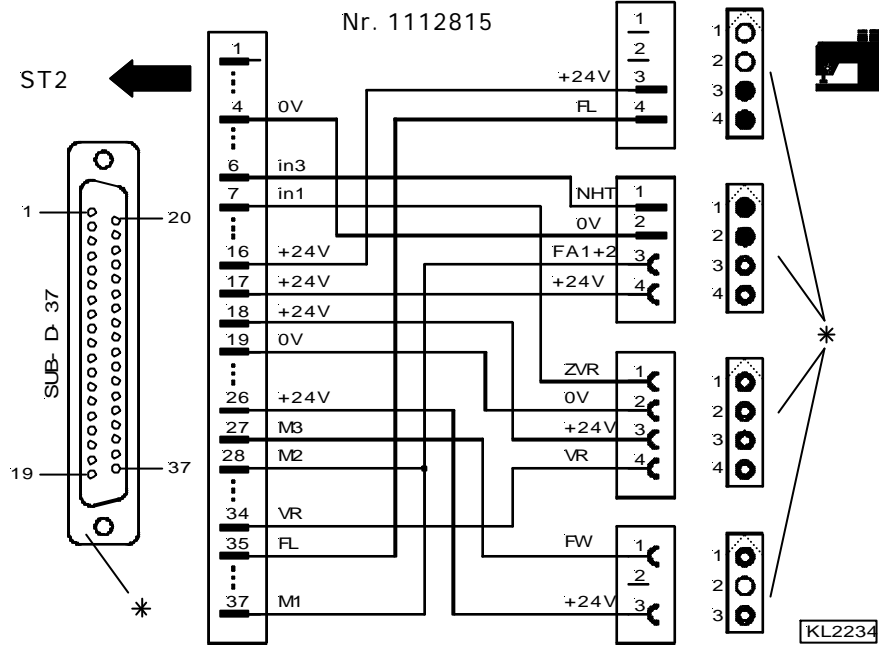
The AB220A.... control (B18) and the SM210A.... stepping motor control (B18) are connected by adapter cord no. 1113172.

If a light barrier is required for the sewing process it must be connected to socket B9 on the stepping motor control. The light barrier signal is transmitted via the connecting cable from the SM210A to the sewing drive.

5.1 Adapter Cords

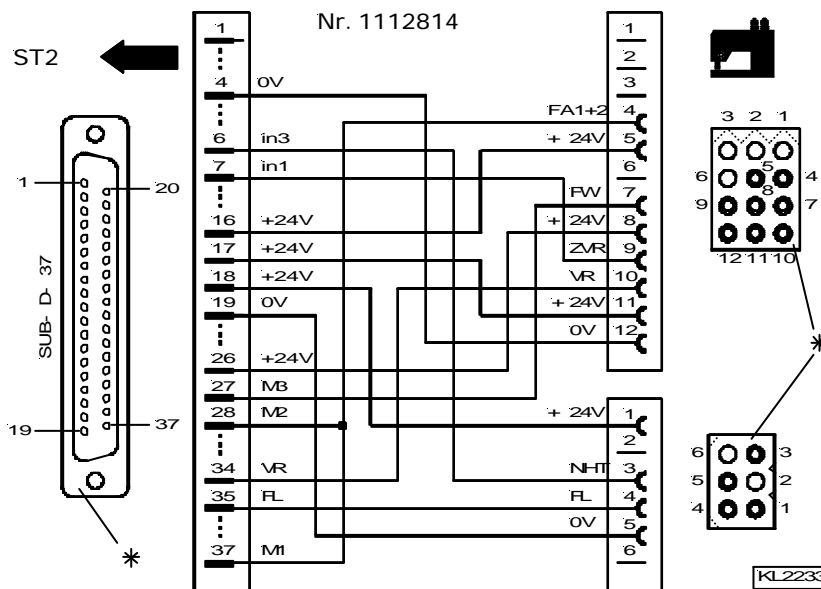
Adapter cord for AISIN models AD3XX, AD158, 3310 and EK1

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 0
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 16
	Input in3	➔	Set parameter 242 = 1



Adapter cord for BROTHER models 737-113 and 737-913

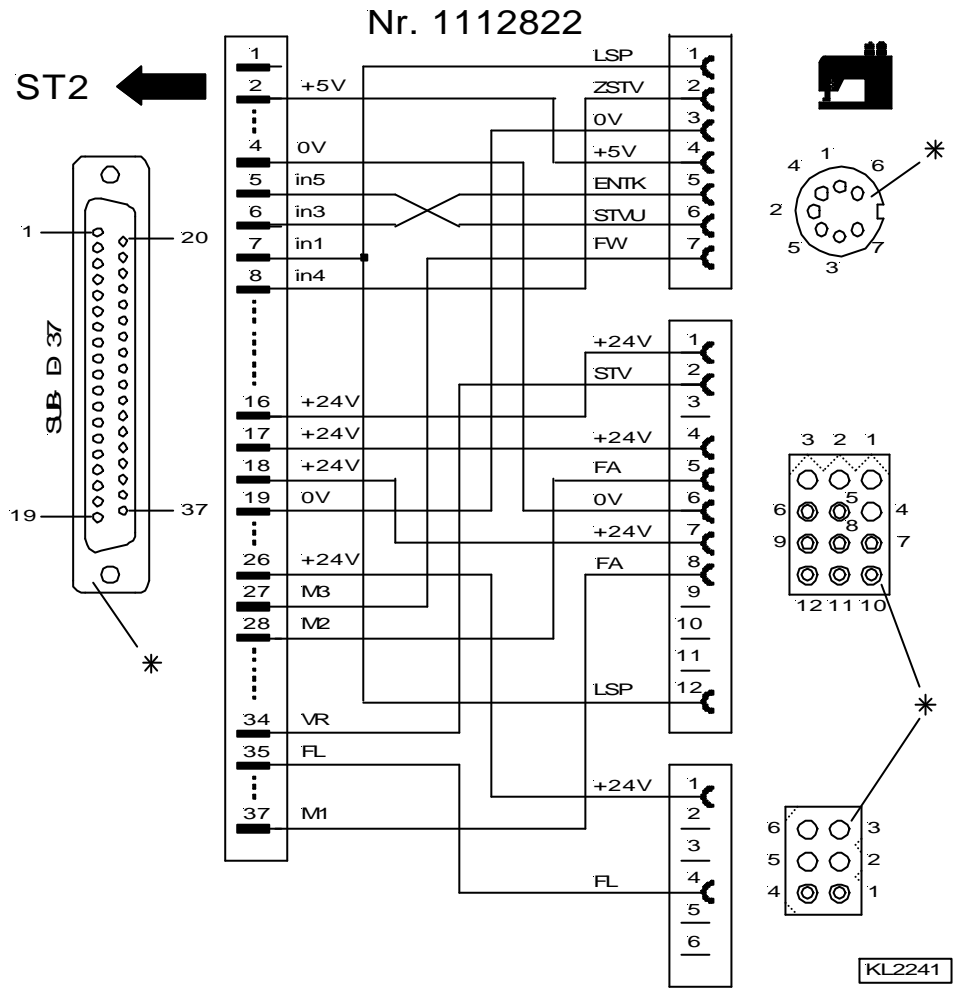
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 0
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 16
	Input in3	➔	Set parameter 242 = 1



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

Adapter cord for BROTHER model FD3 B257

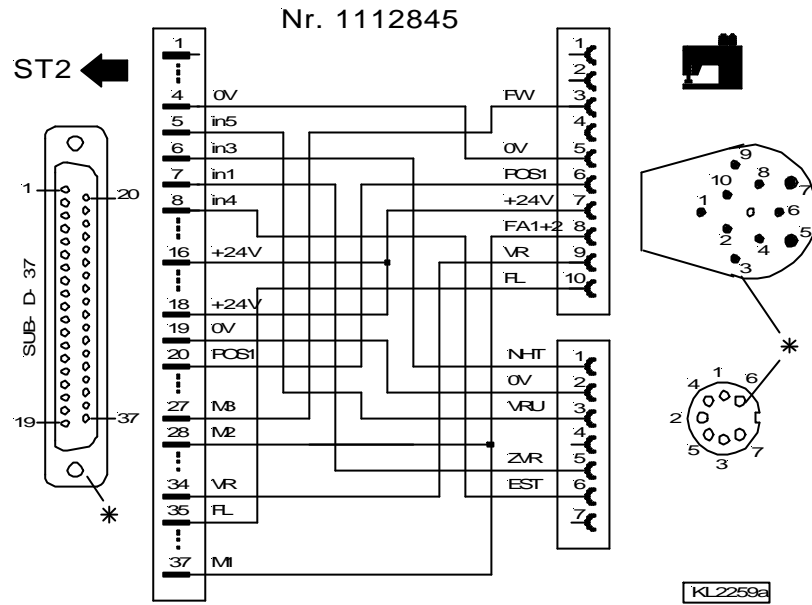
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 7
	Input in3	➔	Set parameter 242 = 18
	Input in4	➔	Set parameter 243 = 16
	Input in5	➔	Set parameter 244 = 17



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

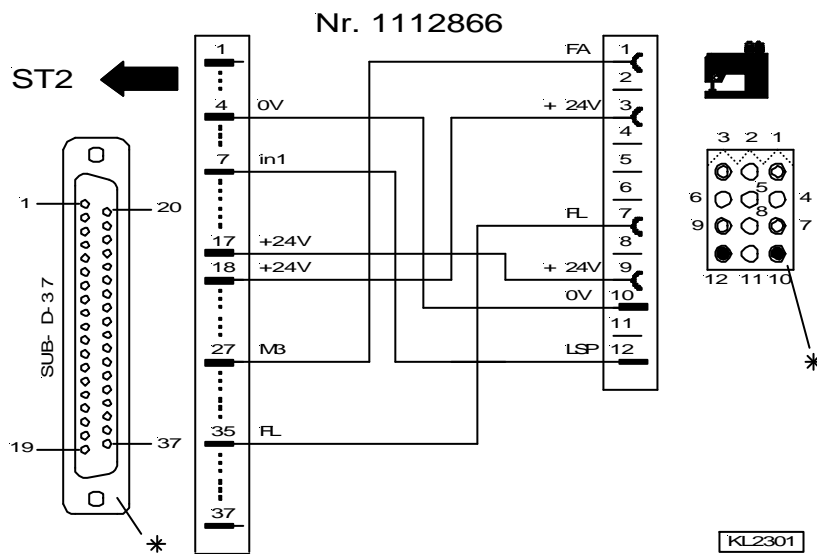
Adapter cord for DÜRKOPP ADLER models 210, 270

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 0
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 16
	Input in3	➔	Set parameter 242 = 1
	Input in4	➔	Set parameter 243 = 3
	Input in5	➔	Set parameter 244 = 17



Adapter cord for GLOBAL model CB2803-56

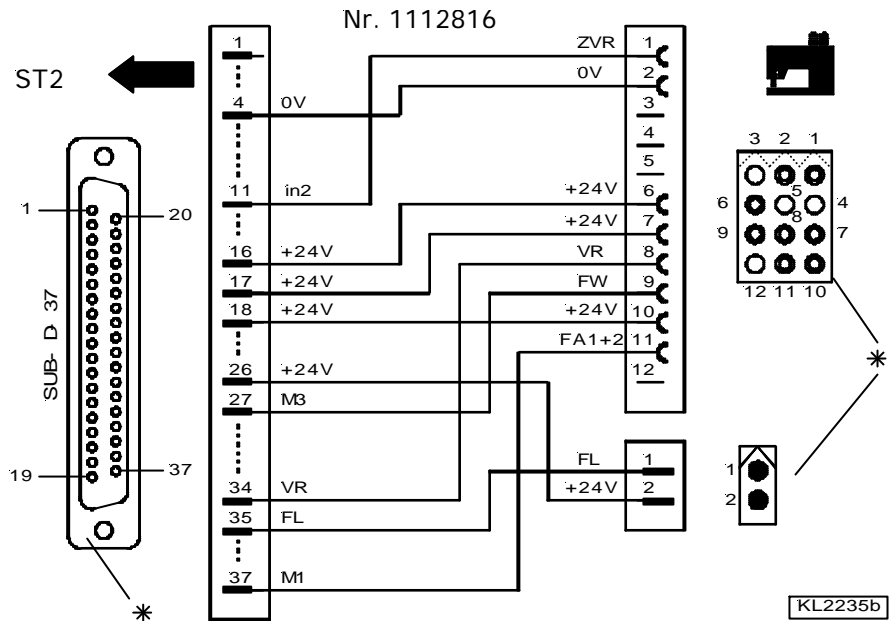
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 6



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

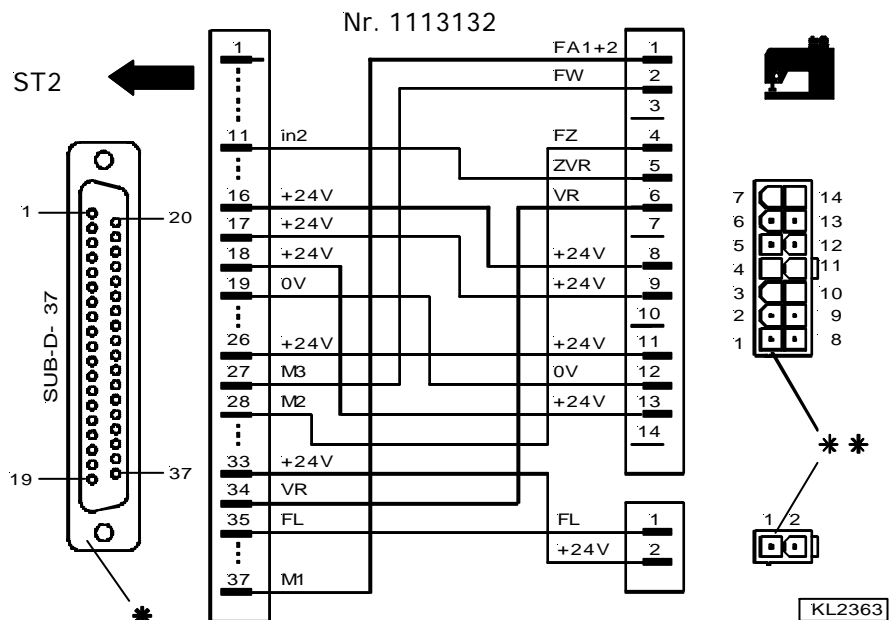
Adapter cord for JUKI model 5550-6

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 14
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 16



Adapter cord for JUKI model 5550-7

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 14
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 16

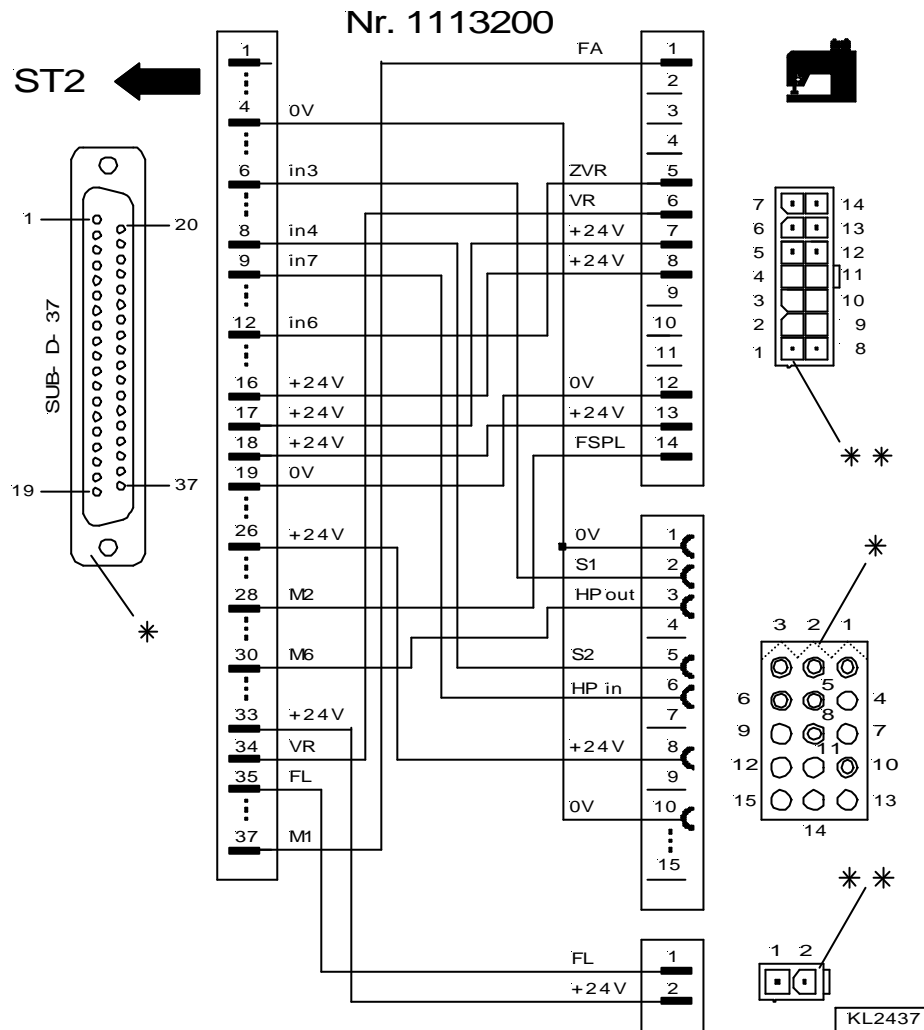


*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

***) Front view (component side) of the Molex Minifit plugs.

Adapter cord for JUKI model LU1510-7

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 20
Setting the functions of the keys (Automatic setting)	Input in1	➔	Set parameter 240 = 13
	Input in3	➔	Set parameter 242 = 31
	Input in4	➔	Set parameter 243 = 32
	Input in6	➔	Set parameter 245 = 16
	Input in7	➔	Set parameter 246 = 13



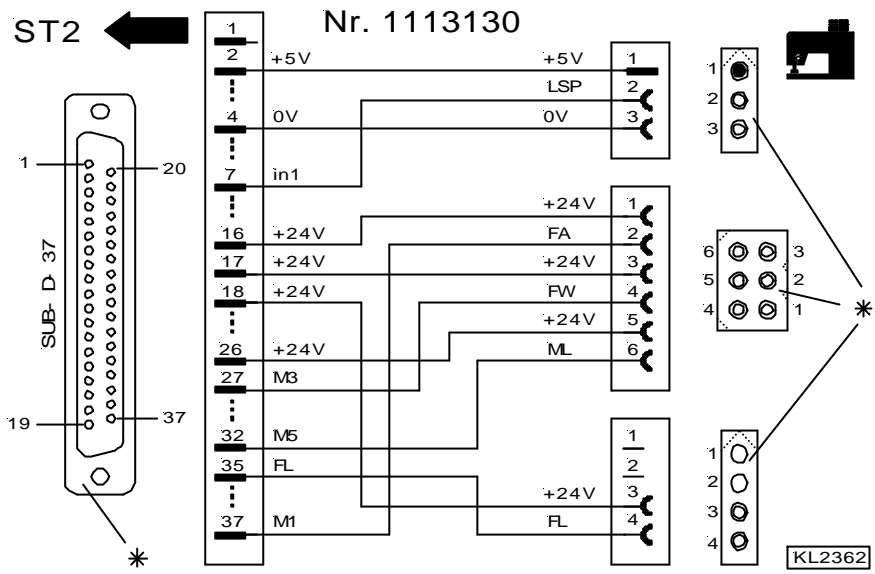
- in1** = Input high lift for walking foot with speed limitation n10 (operational mode not stored) for knee switch
- in3** = Input speed limitation bit 0 (S1)
- in4** = Input speed limitation bit 1 (S2)
- in6** = Input intermediate backtack
- in7** = Input high lift for walking foot with speed limitation n10 (operational mode not stored) for additional pushbutton at the machine head

*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

**) Front view (component side) of the Molex Minifit plugs.

Adapter cord for KANSAI model RX9803

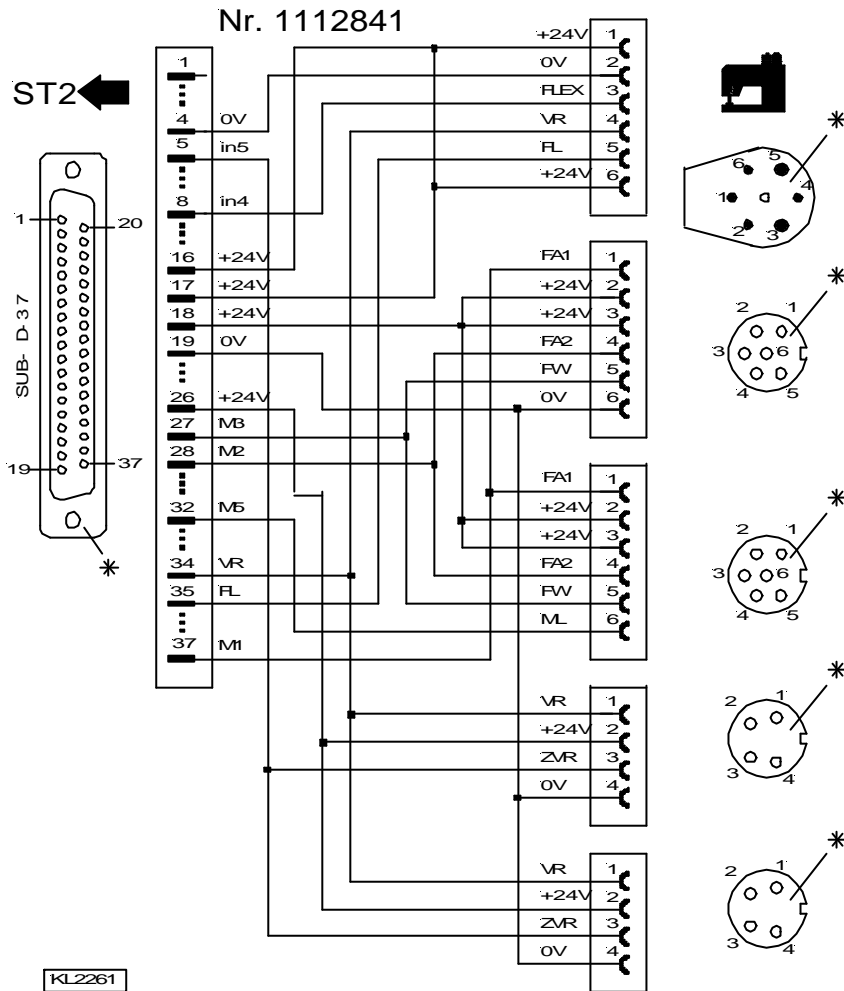
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 7



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

Adapter cord for PFAFF models 563, 953, 1050, 1180 without thread monitor

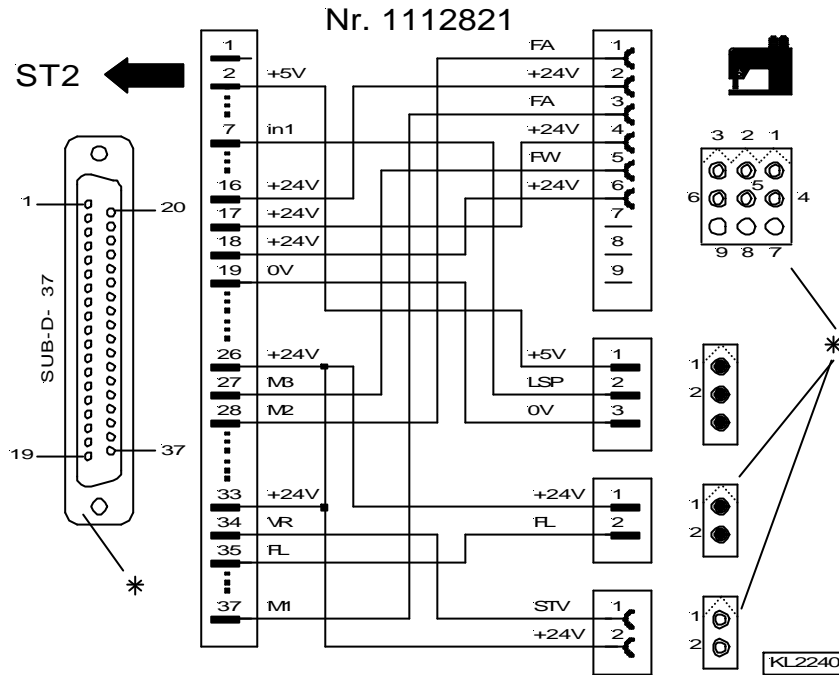
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 0
Setting the functions of the keys	Input in4	➔	Set parameter 243 = 12
	Input in5	➔	Set parameter 244 = 16



*) Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

Adapter cord for PEGASUS models W500/UT, W600/UT/MS with or without stitch condensing

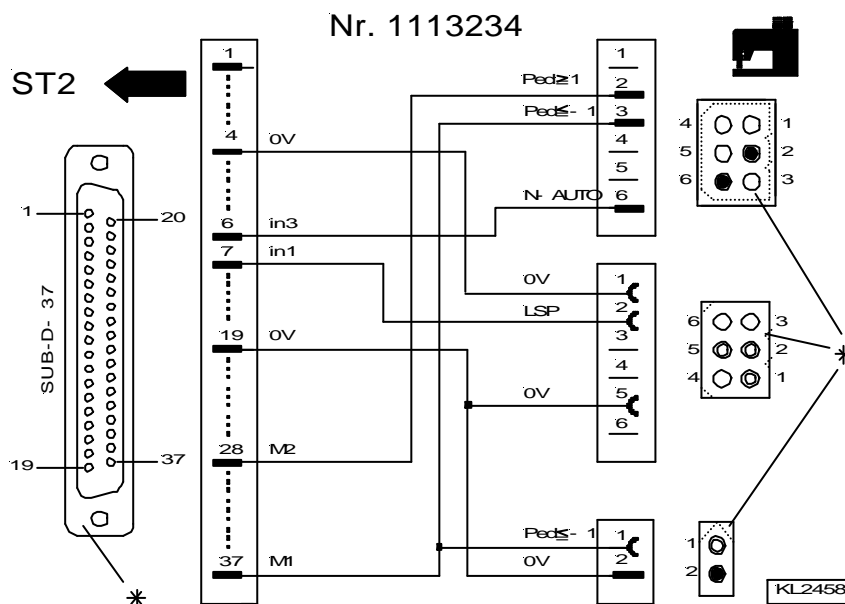
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 7



Attention! When using this adapter cord on a Pegasus machine, the 9-core cable no. 742373-91 must be removed from the machine!

Adapter cord for PEGASUS backlatch machines

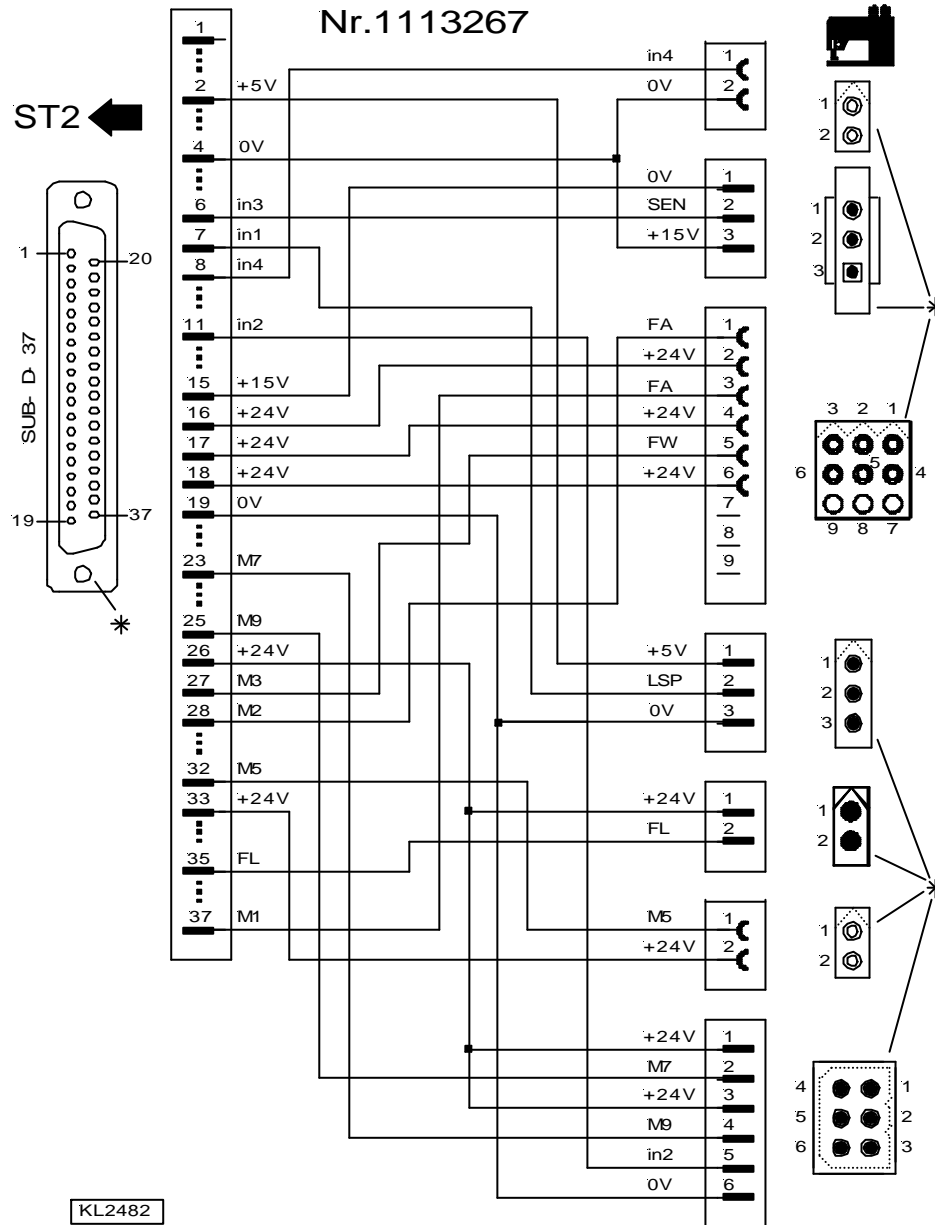
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 8
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 6
(Automatic setting)	Input in3	➔	Set parameter 242 = 10



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

Adapter cord for PEGASUS model MHG

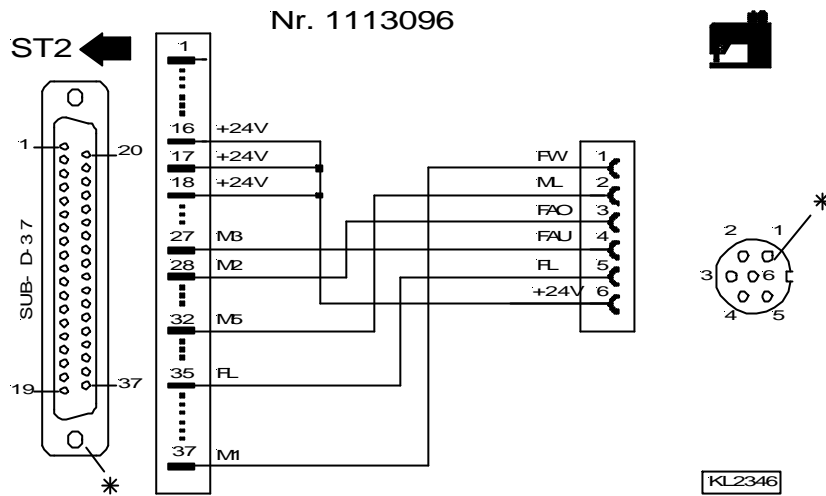
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 24
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 6
	Input in2	➔	Set parameter 241 = 13
	Input in3	➔	Set parameter 242 = 28
	Input in4	➔	Set parameter 243 = 22



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

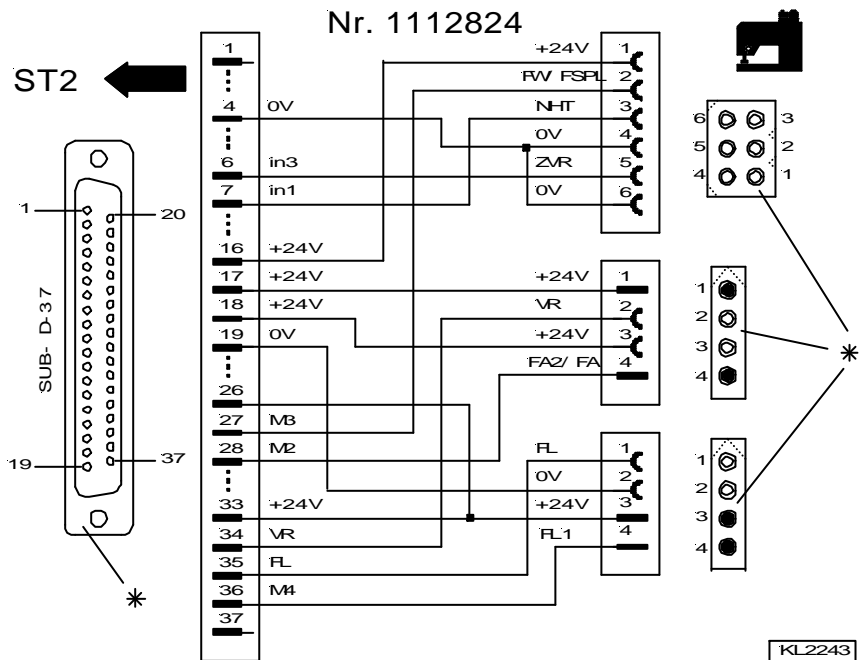
Adapter cord for RIMOLDI model F27

Setting the functional sequence	Thread trimming mode →	Set parameter 290 = 5
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Adapter cord for SINGER models 211, 212 and 591

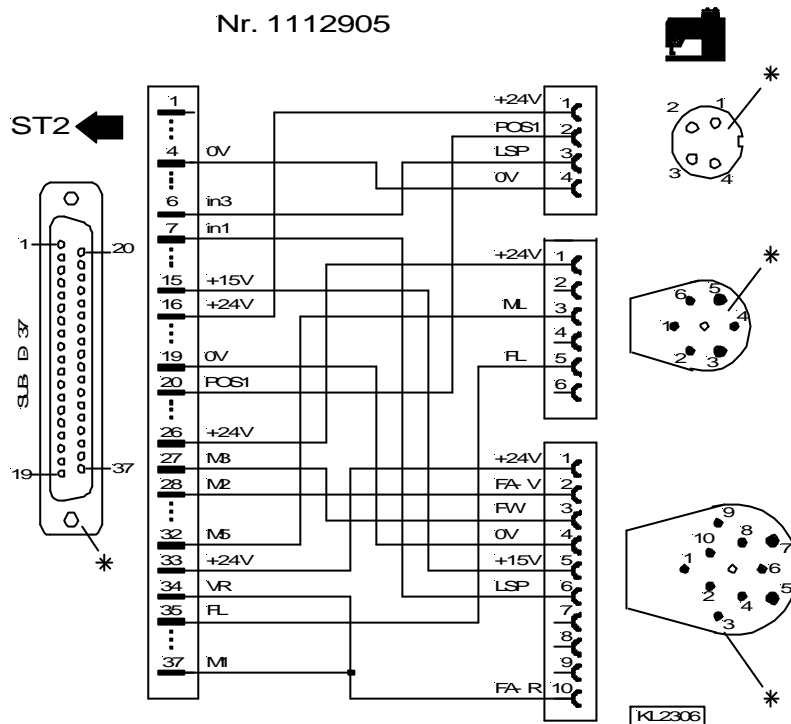
Setting the functional sequence (Singer model 212UTT)	Thread trimming mode →	Set parameter 290 = 2
Setting the functions of the keys	Input in1 →	Set parameter 240 = 1
	Input in3 →	Set parameter 242 = 16



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

Adapter cord for UNION SPECIAL models CS100 and FS100

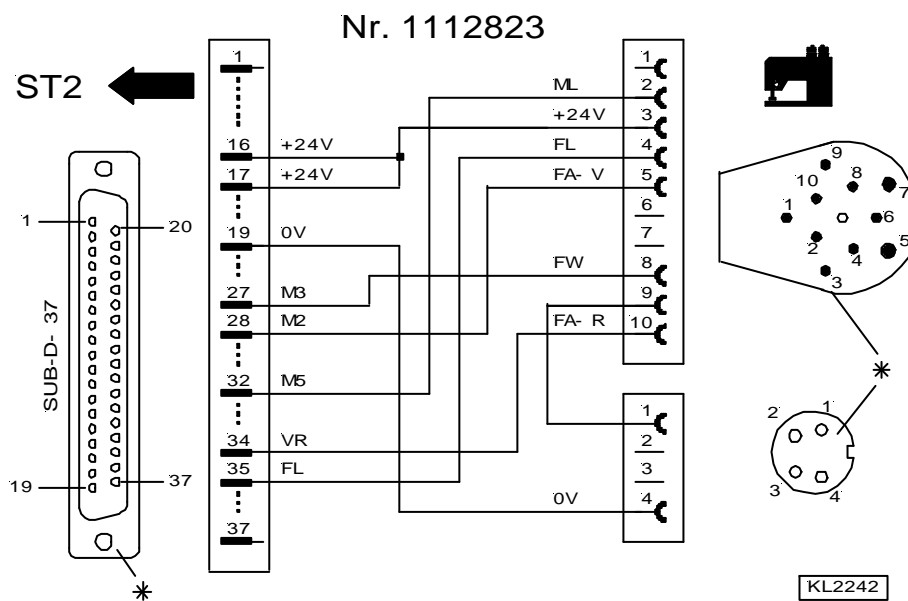
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 4
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 6
	Input in3	➔	Set parameter 242 = 6



in1 = Input machine run blockage for thread trimming control proximity switch
in3 = Input machine run blockage for thread monitor

Adapter cord for UNION SPECIAL model 63900AMZ

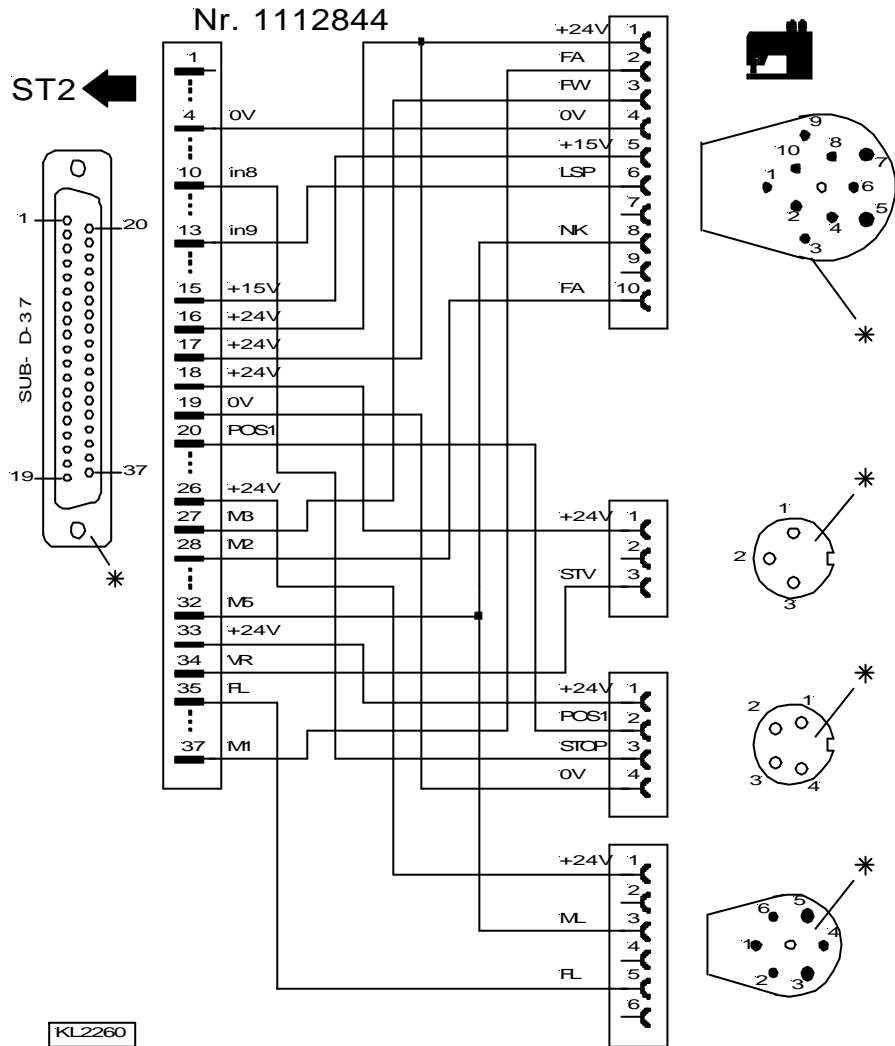
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 10
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*) Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

Adapter cord for UNION SPECIAL model 34700 with stitch lock

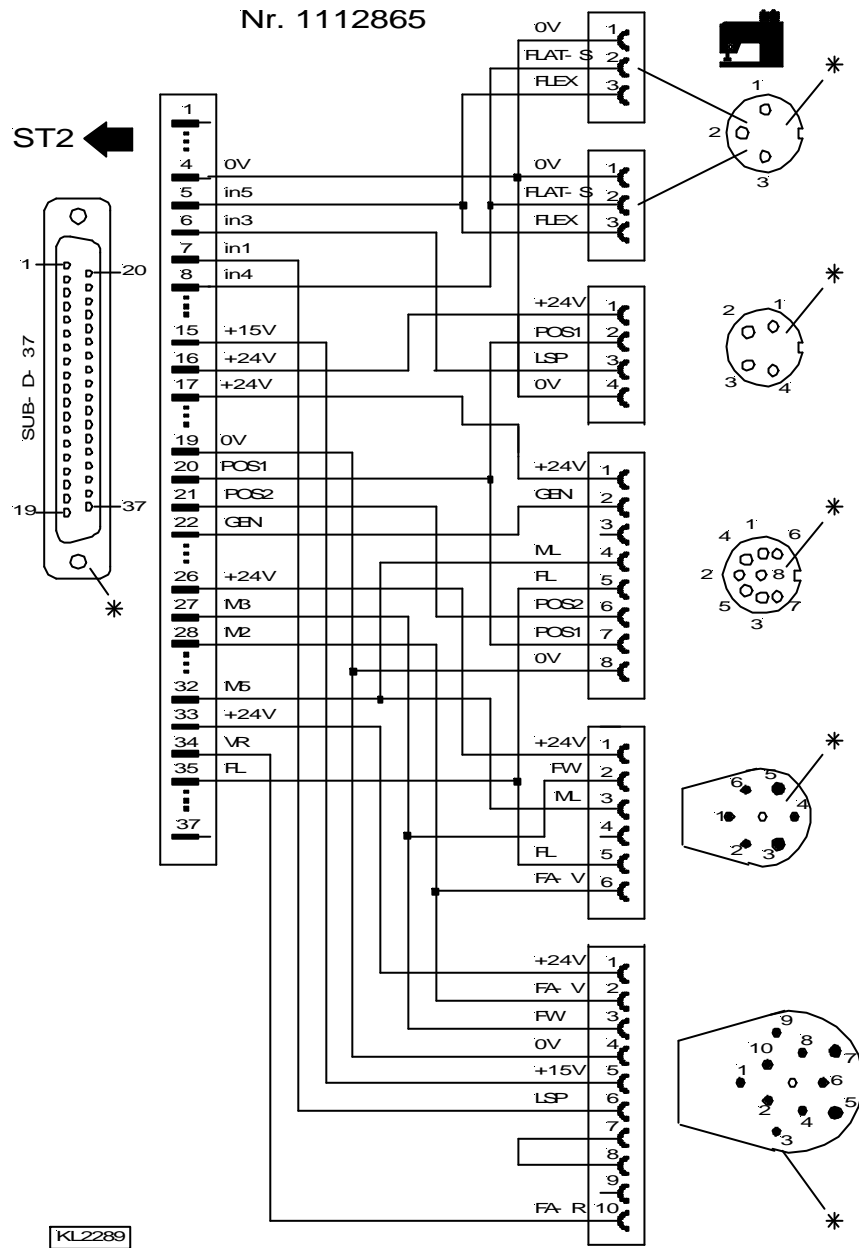
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in8	➔	Set parameter 247 = 7
	Input in9	➔	Set parameter 248 = 6



*) Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

Adapter cord for UNION SPECIAL models 34000 and 36200

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 4
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 6
	Input in3	➔	Set parameter 242 = 6
	Input in4	➔	Set parameter 243 = 18
	Input in5	➔	Set parameter 244 = 12

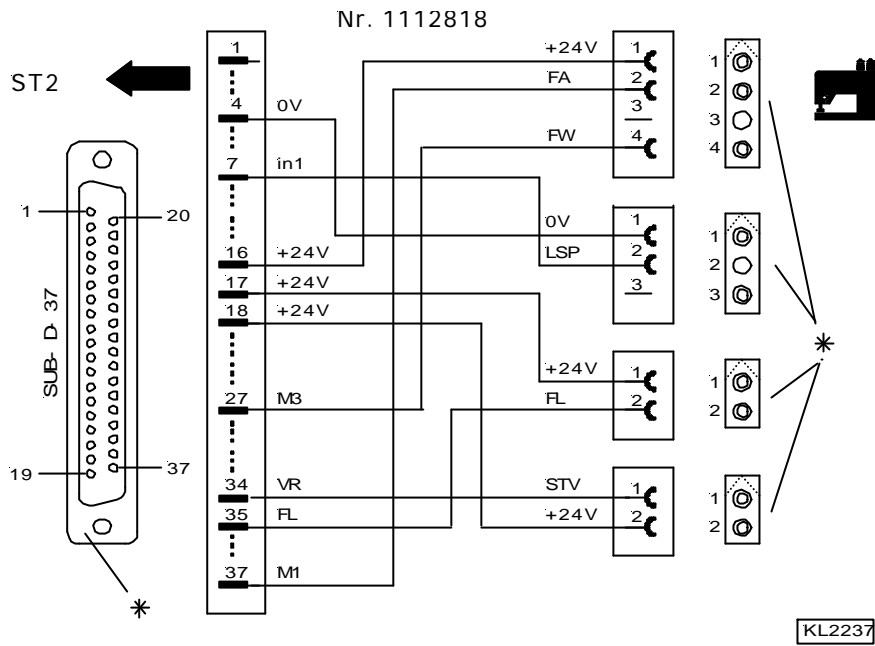


in1 = Input **machine run blockage** for thread trimming control proximity switch
in3 = Input **machine run blockage** for thread monitor
in4 = Input **unlocking the chain** corresponds to function **flatseamer (FLAT-S)**

*) Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

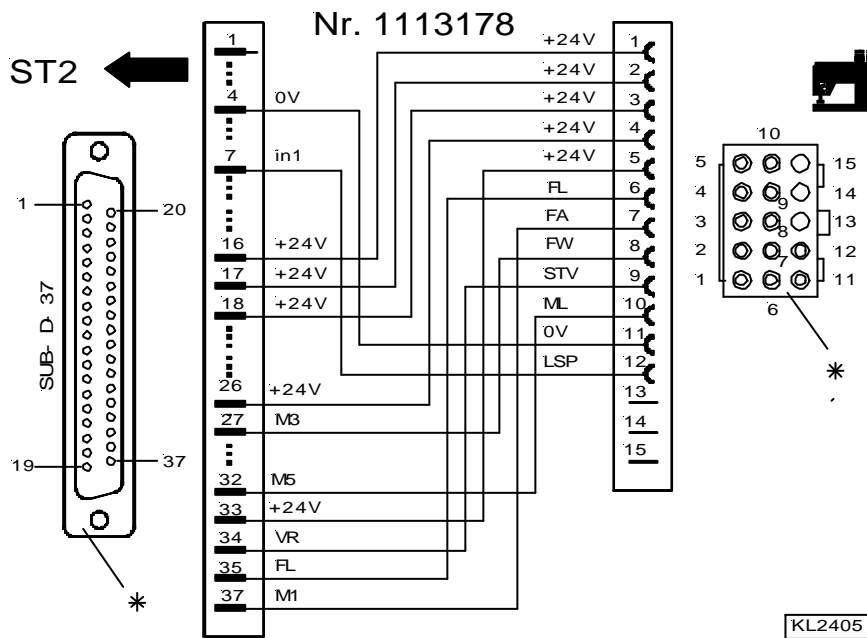
Adapter cord for YAMATO chainstitch machines VC series

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 7



Adapter cord for YAMATO chainstitch machines VG series

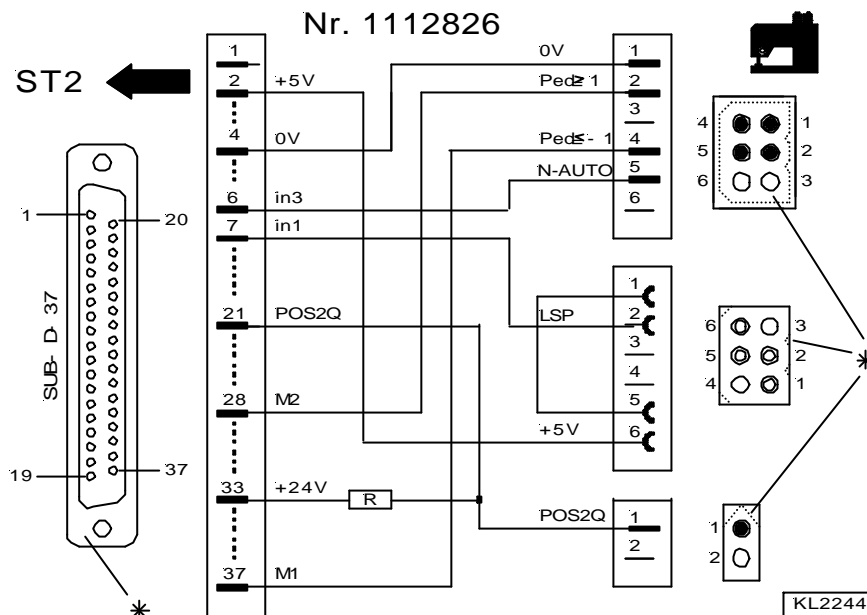
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 5/21
Setting the functions of the keys	Input in1	➔	Set parameter 240 = 7



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

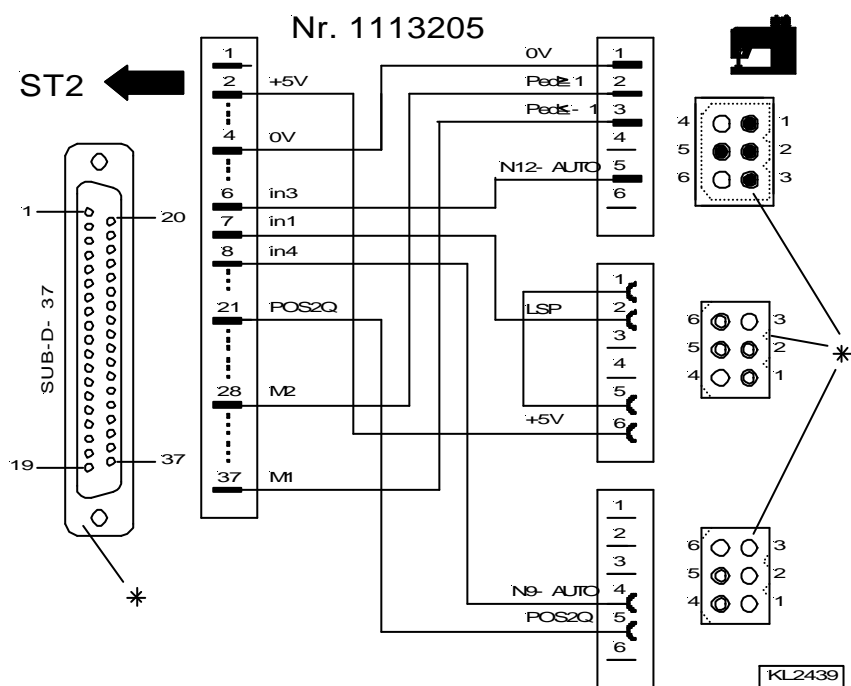
Adapter cord for YAMATO backlatch machine model ABT3

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 9
Setting the functions of the keys (Automatic setting)	Input in1	➔	Set parameter 240 = 6
	Input in3	➔	Set parameter 242 = 10



Adapter cord for YAMATO backlatch machine models ABT13 and ABT17

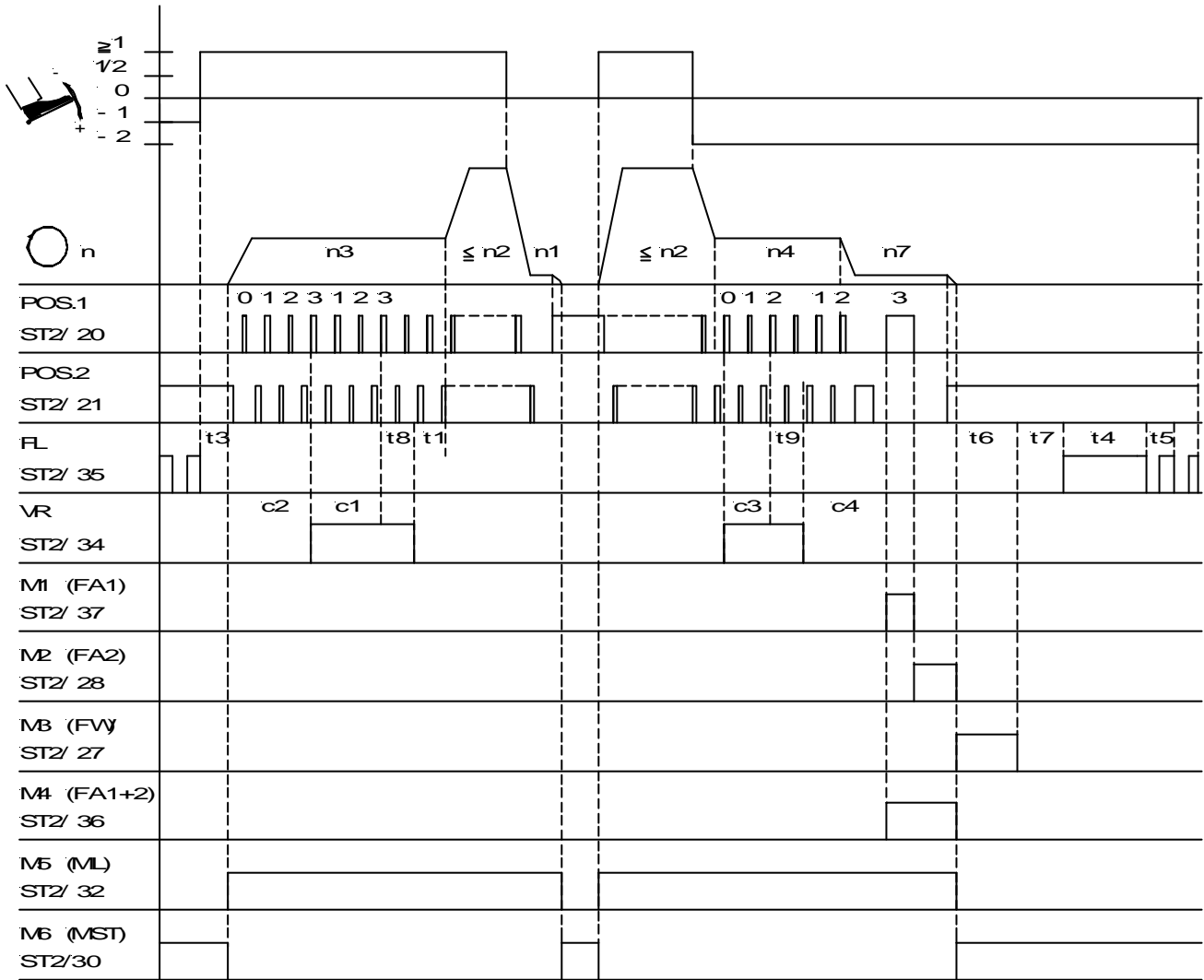
Setting the functional sequence	Thread trimming mode	➔	Set parameter 290 = 9
Setting the functions of the keys (Automatic setting)	Input in1	➔	Set parameter 240 = 6
	Input in3	➔	Set parameter 242 = 10
	Input in4	➔	Set parameter 243 = 34



*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

6 Timing Diagrams

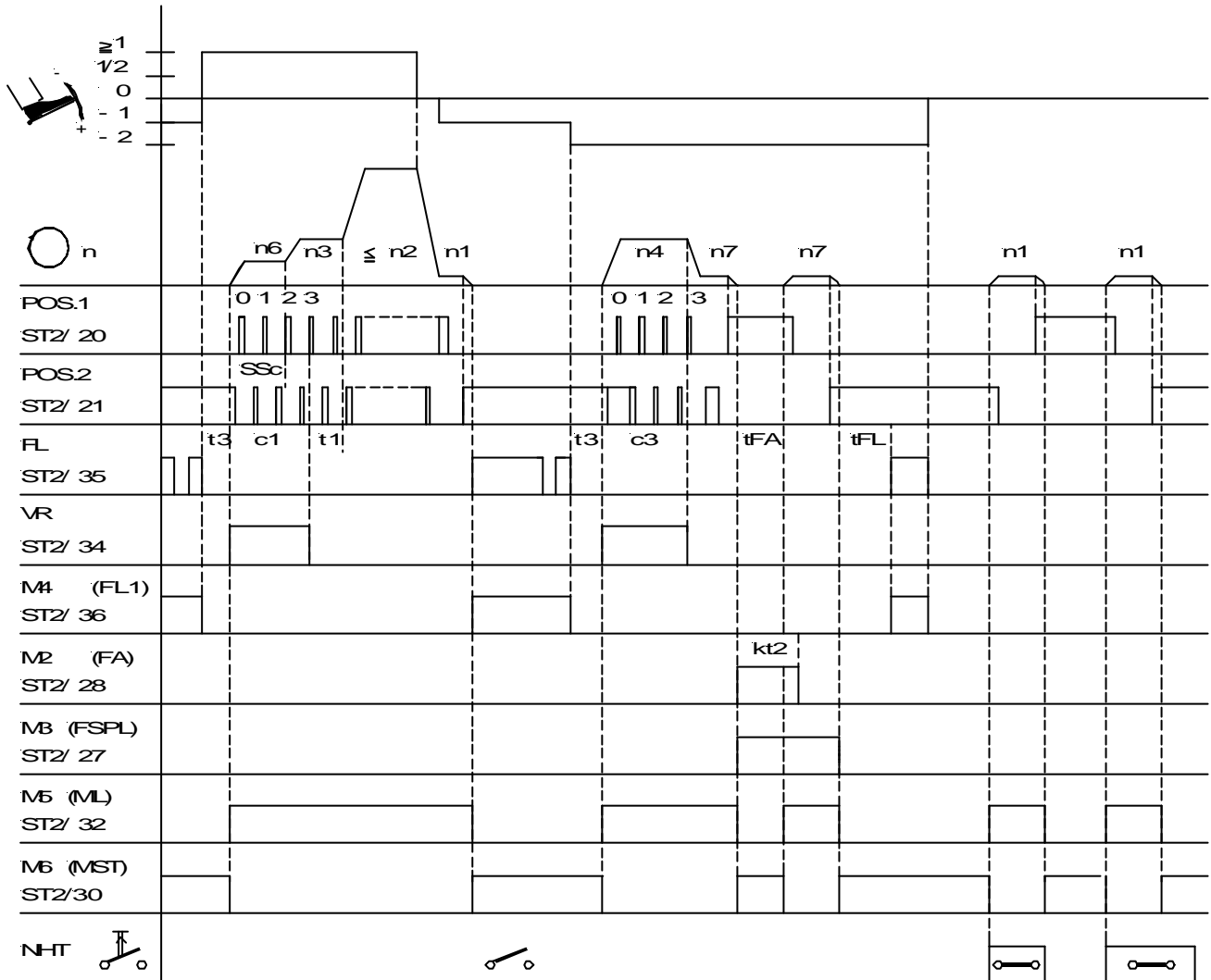
Mode 0 (lockstitch)



0256/ MODE- 0

Mark	Function	Parameter	Control	V810	V820
	Mode 0	290 = 0			
	Double start backtack with stitch correction	On	S2 key	1 key	1 key
	Double end backtack with stitch correction	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
t8	Start backtack stitch correction	150			
t9	End backtack stitch correction	151			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			

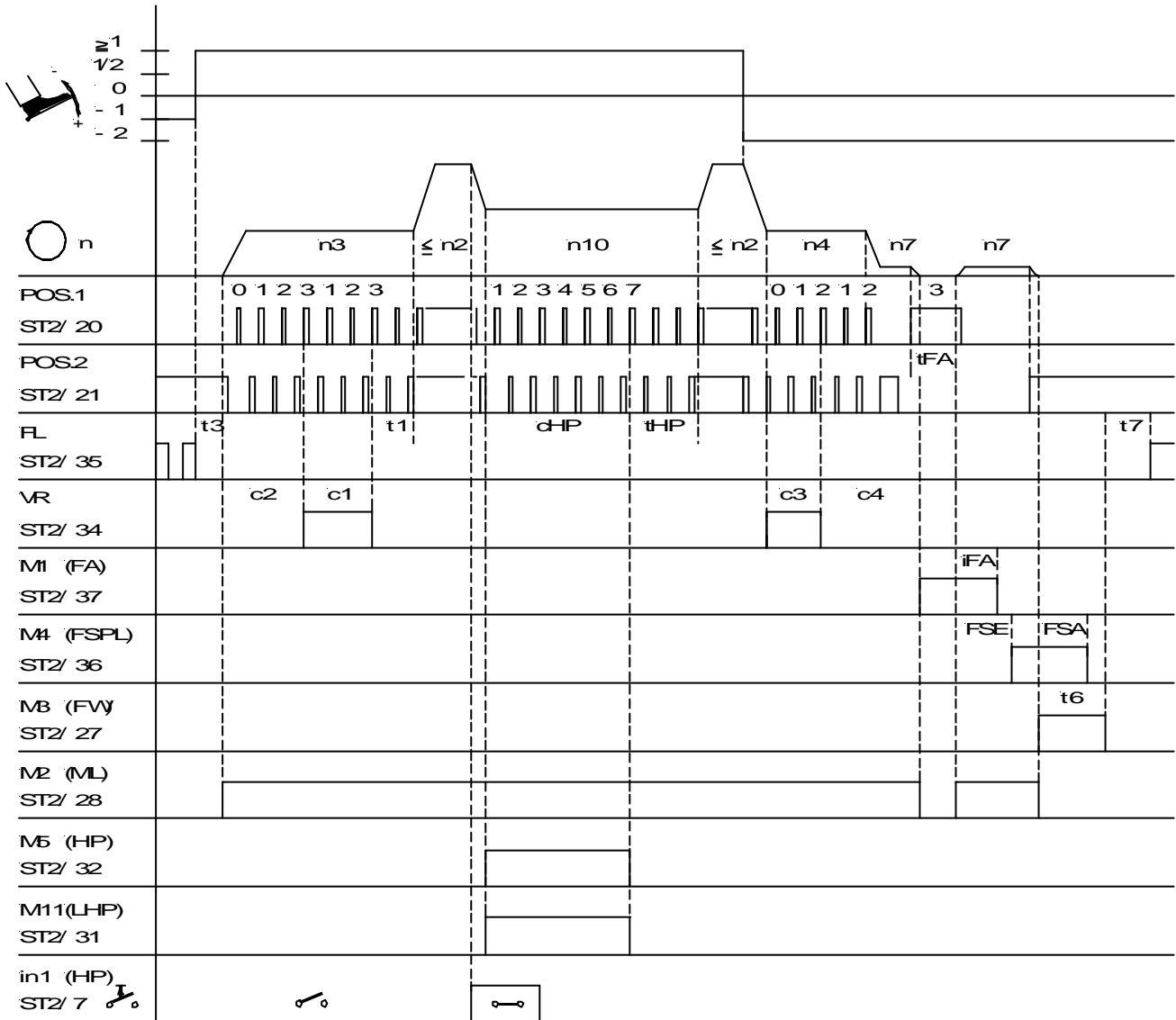
Mode 2 (lockstitch)



0256/ MODE- 2

Mark	Function	Parameter	Control	V810	V820
	Mode 2	290 = 2			
	Softstart	134 = 1			
	Single start backtack	On	S2 key	1 key	1 key
	Single end backtack	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n6	Softstart speed	115			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
tFL	Switch-on delay of sewing foot lifting	211			
kt2	Thread trimmer ON period	283			
tFA	Stop time for thread trimmer	253			
SSc	Softstart stitches	100			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			

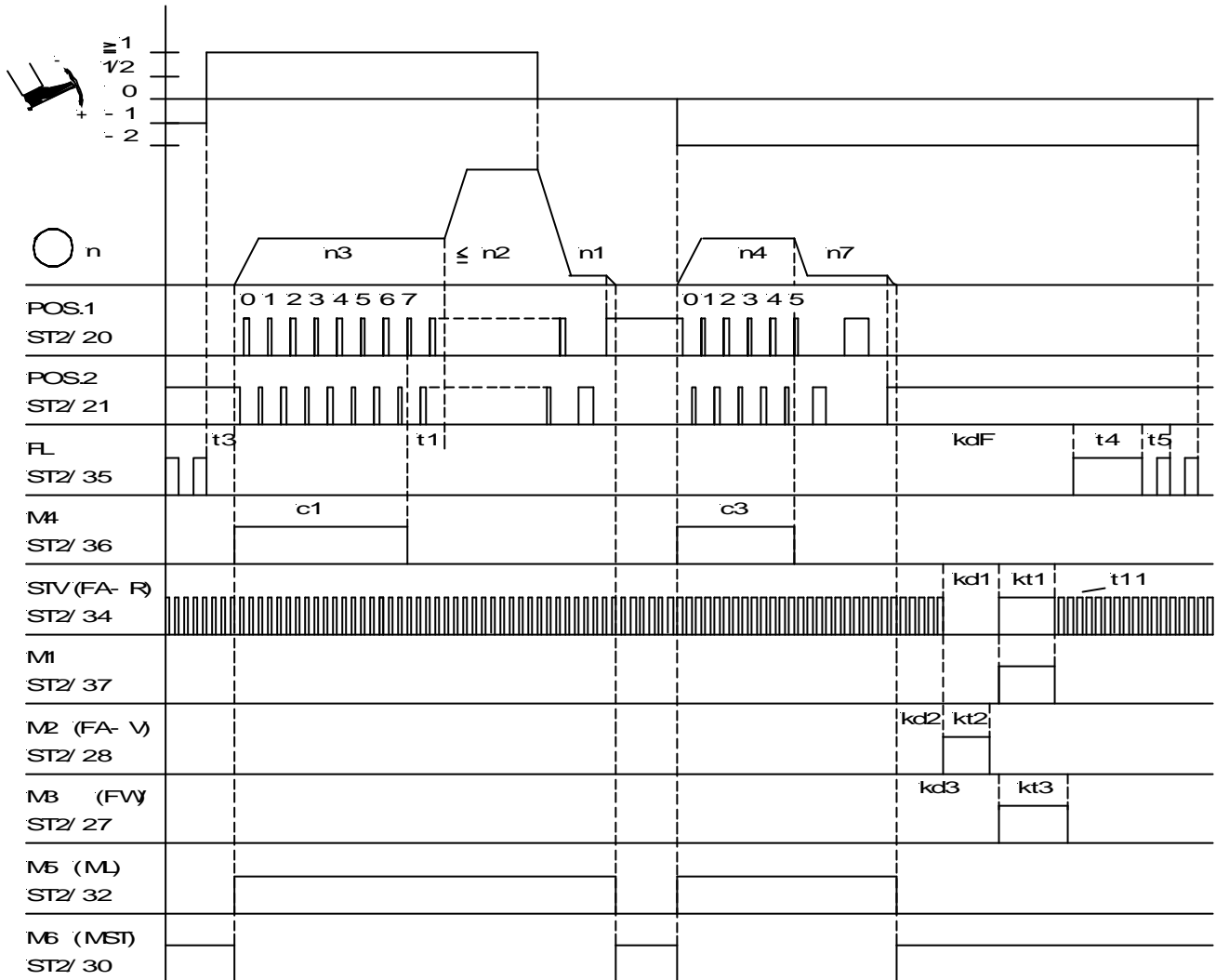
Mode 3 (lockstitch)



0256/ MODE- 3

Mark	Function	Parameter	Control	V810	V820
	Mode 3	290 = 3			
	Double start backtack	On	S2 key	1 key	1 key
	Double end backtack	On	S3 key	2 key	4 key
	High lift for walking foot	137 = 1			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
n10	High lift walking speed	117			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
iFA	Activation angle of the thread trimmer	250			
FSA	Thread tension release ON period	251			
FSE	Thread tension release delay depending on angle	252			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
tHP	High lift walking speed run-out time	152			
cHP	Stitch counting high lift for walking foot	185			

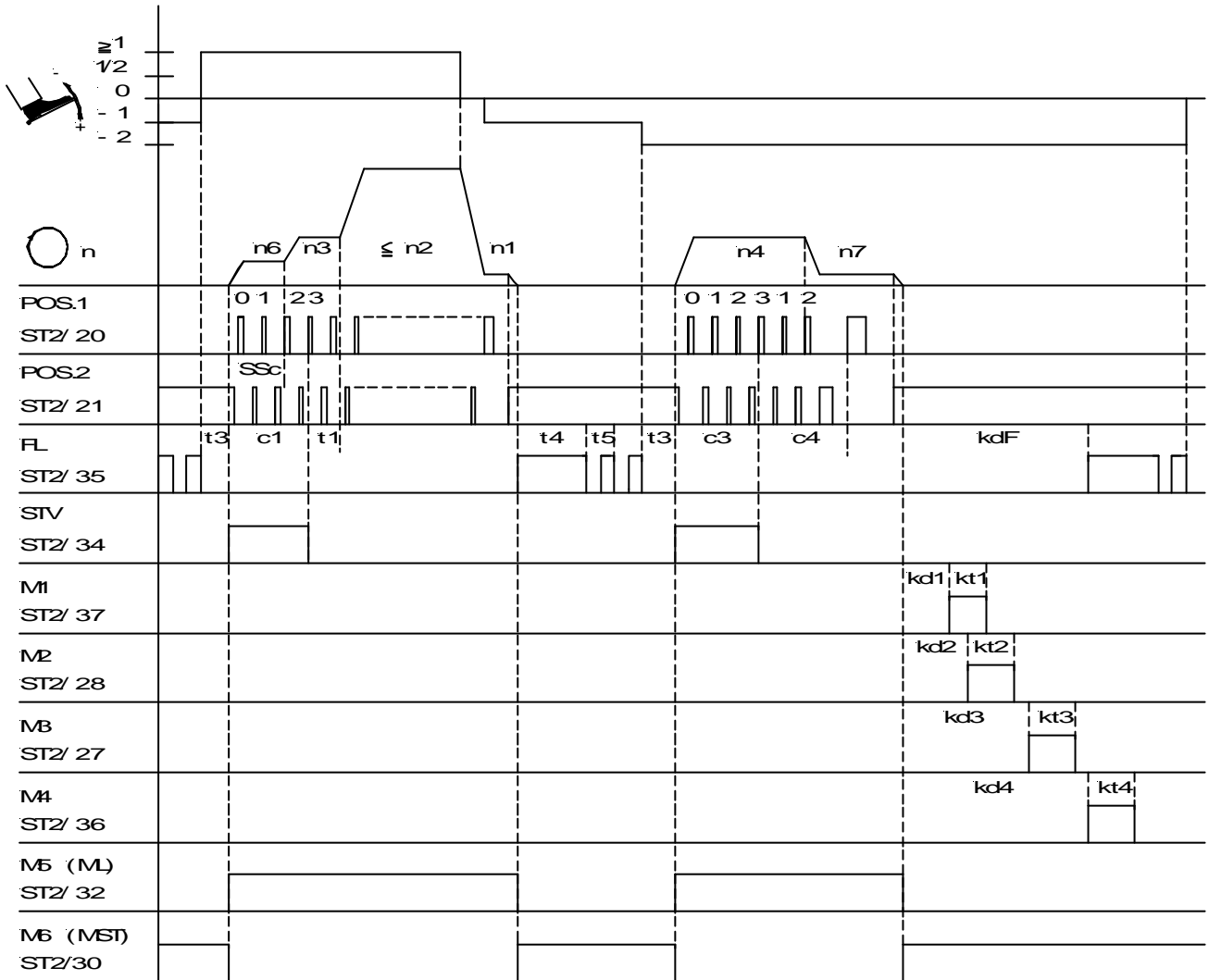
Mode 4 (chainstitch)



0256/ MODE 4

Mark	Function	Parameter	Control	V810	V820
	Mode 4	290 = 4			
	Start stitch condensing	On	S2 key	1 key	1 key
	End stitch condensing	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
n12	Automatic speed	118			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t11	Holding power output "stitch condensing" of the thread trimmer backward	213			
kd1	Delay time of the thread trimmer backward	280			
kt1	ON period of the thread trimmer backward	281			
kd2	Delay time of the thread trimmer forward M2	282			
kt2	ON period of the thread trimmer forward M2	283			
kd3	Delay time of the thread wiper M3	284			
kt3	ON period of the thread wiper M3	285			
kdF	Switch-on delay of sewing foot lifting	288			
c1	Stitch counting of start stitch condensing	001			
c3	Stitch counting of end stitch condensing	002			

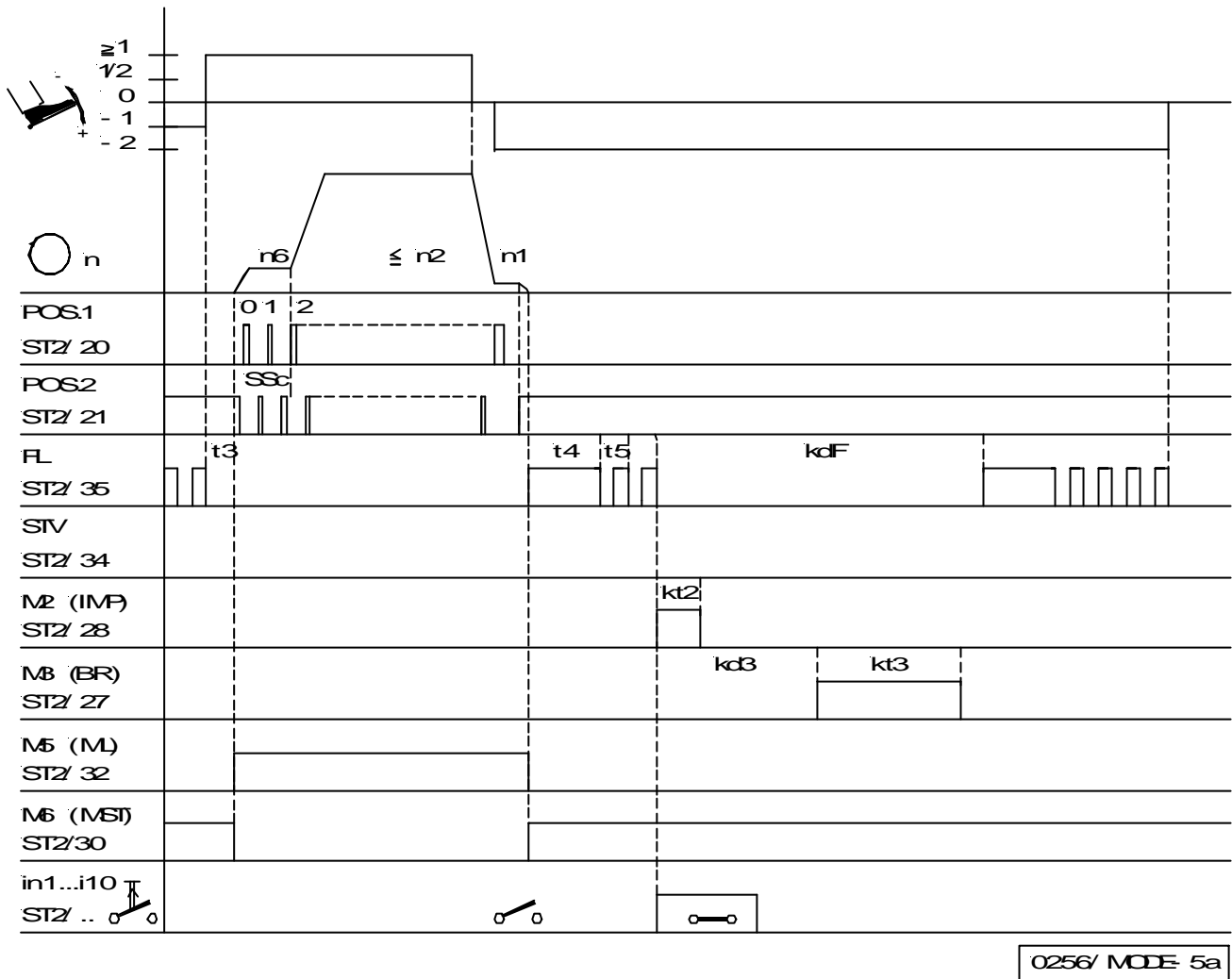
Mode 5 (chainstitch)



0256/ MODE 5

Mark	Function	Parameter	Control	V810	V820
	Mode 5	290 = 5			
	Softstart	134 = 1			
	Start stitch condensing	On	S2 key	1 key	1 key
	End stitch condensing	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start stitch condensing speed	112			
n4	End stitch condensing speed	113			
n6	Softstart speed	115			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
c1	Stitch counting of start stitch condensing	001			
c3	Stitch counting of end stitch condensing	002			
c4	Stitch counting at the seam end without stitch regulator	003			
SSc	Softstart stitches	100			
kdF	Switch-on delay of sewing foot lifting	288			
kd1-kd4	Delay times of outputs M1...M4	280/2/4/6			
kt1-kt4	ON periods of outputs M1...M4	281/3/5/7			

Mode 5 (chainstitch) Union Special, bag sewing machine



Mark	Function	Parameter	Control	V810	V820
SAK	Mode 5	290 = 5			
	Softstart	134 = 1			
	"Hot thread chain cutting" (M3) by means of knee switch and sewing foot lift by means of pedal	198 = 1			
in1...i10	Function "hot thread chain cutting" (M3) by means of knee switch	24x = 42			
n1	Positioning speed	110			
n2	Maximum speed	111			
n6	Softstart speed	115			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
SSc	Softstart stitches	100			
kd2	Delay time for output M2	282 = 0			
kt2	ON period for output M2	283 = 50ms			
kd3	Delay time for output M3	284 = 1500ms			
kt3	ON period for output M3	285 = 1400ms			
kdF	Switch-on delay of sewing foot lifting	288 = 2550ms			

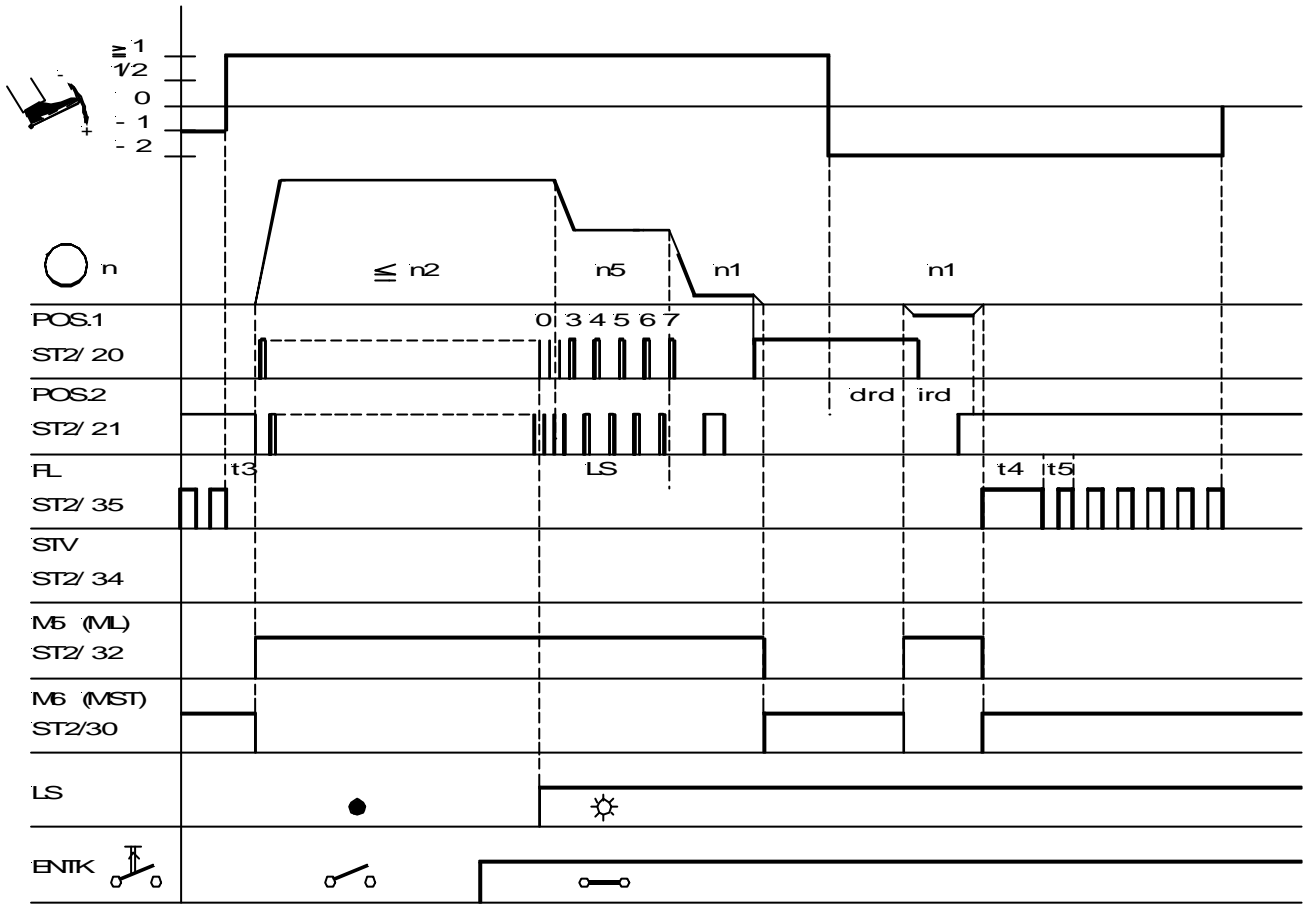
Settings using parameter 198:

Parameter 198 = 0 The signals **hot thread chain cutting** and **sewing foot lift** are enabled by means of pedal.

Parameter 198 = 1 The signal **hot thread chain cutting** is enabled by means of knee switch and **sewing foot lift** by means of pedal.

Parameter 198 = 2 The signal **hot thread chain cutting** is enabled by means of pedal and **sewing foot lift** by means of knee switch.

Mode 4, 5, 6 or 7 (function “unlocking the chain” with light barrier)

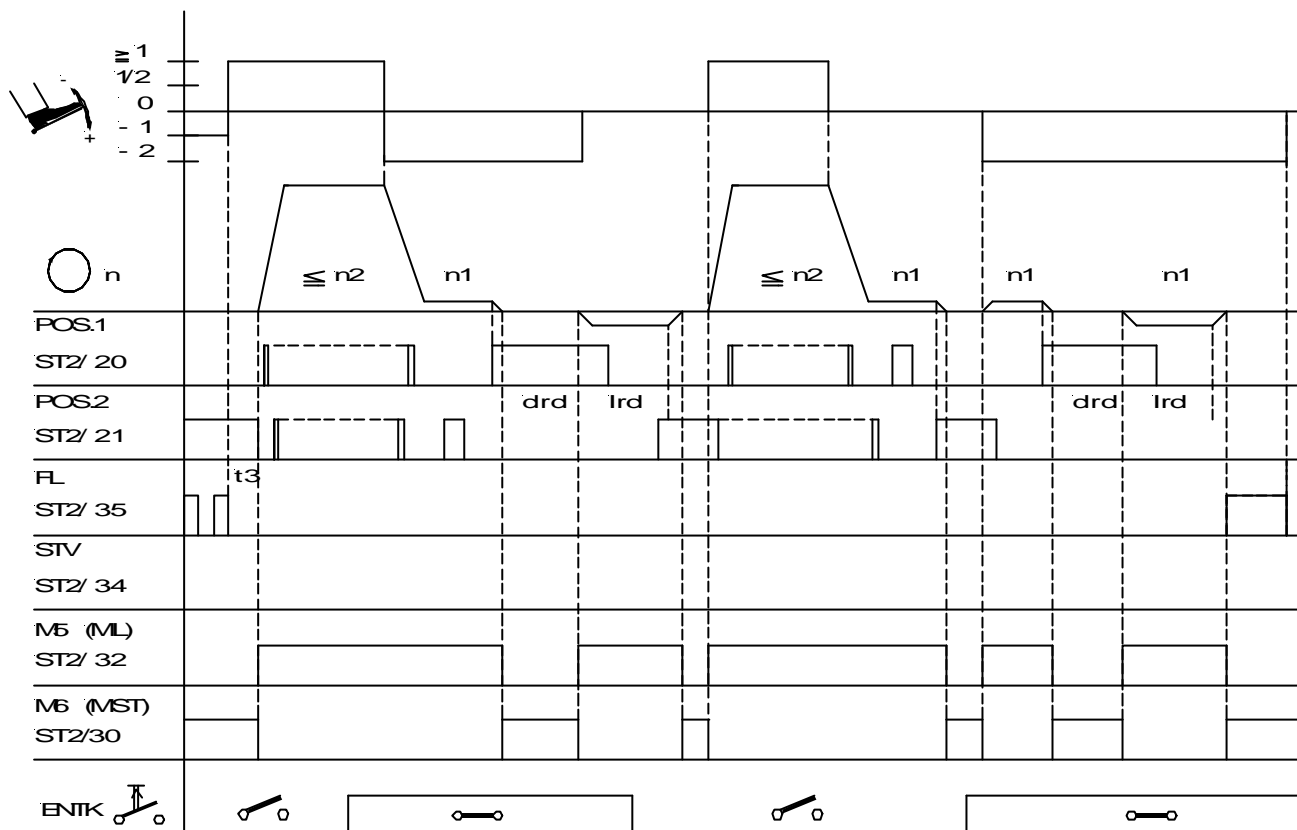


0256/ ENTK- 1

Mark	Function	Parameter	Control	V810	V820
drE	Mode 5	290 = 5			
Frd	Direction of motor rotation	161 = 0			
	Reverse motor rotation	182 = 1			
	Basic position 2	On	S5 key	4 key	7 key
	End stitch condensing and thread trimmer *)	On			
	Light barrier	009 = ON			
	Unlock the chain automatically with light barrier	190 = 2			
in7	Machine run blockage effective with open contact	246 = 6			
in8	Automatic speed n12 without pedal	247 = 10			
in..	Assign the function “unlocking the chain” to an output	2..			
n1	Positioning speed	110			
n2	Maximum speed	111			
n5	Speed after light barrier sensing	114			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
LS	Light barrier compensating stitches	004			
ird	Number of reversing increments	180			
drd	Switch-on delay of reverse motor rotation	181			
tGn	Speed gate damping period	222			
dGF	Speed gate 2	224 = 1			
kdF	Switch-on delay of sewing foot lifting	288			

*) When unlocking the chain, the functions “stitch condensing” and “thread trimmer” are suppressed!

Mode 4, 5, 6 or 7 (function “unlocking the chain”)

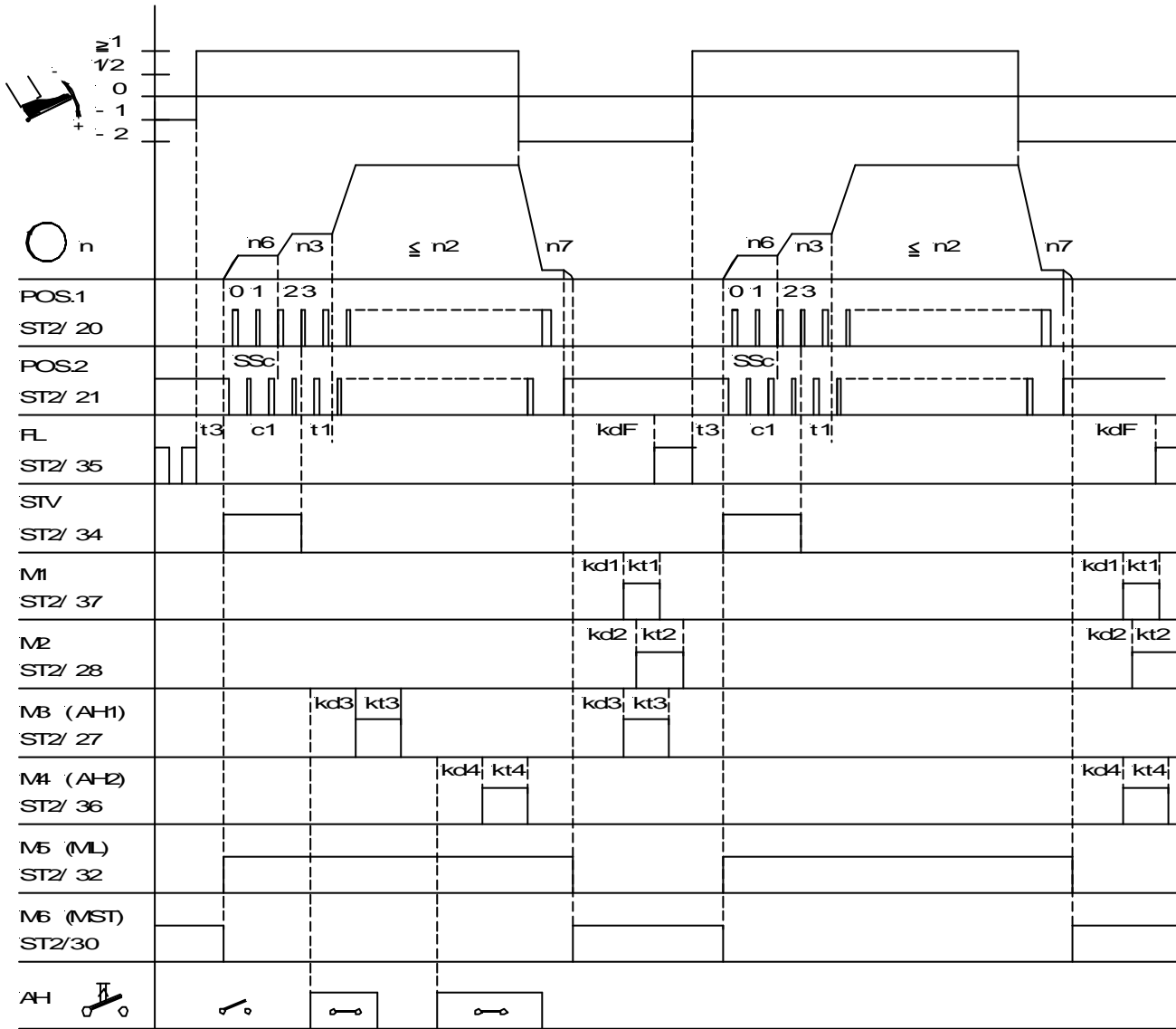


0256/ ENTK- 2

Mark	Function	Parameter	Control	V810	V820
drE	Mode 5	290 = 5			
Frd	Direction of motor rotation	Clockwise			
	Reverse motor rotation	161 = 0			
	Basic position 2	182 = 1			
	End stitch condensing and thread trimmer *)	On	S5 key	4 key	7 key
in7	Machine run blockage effective with open contact	246 = 6			
in8	Automatic speed n12 without pedal	247 = 10			
in..	Assign the function “unlocking the chain” to an output	2..			
n1	Positioning speed	110			
n2	Maximum speed	111			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
ird	Number of reversing increments	180			
drd	Switch-on delay of reverse motor rotation	181			
tGn	Speed gate damping period	222			
dGF	Speed gate 2	224 = 1			

*) When unlocking the chain, the functions “stitch condensing” and “thread trimmer” are suppressed!

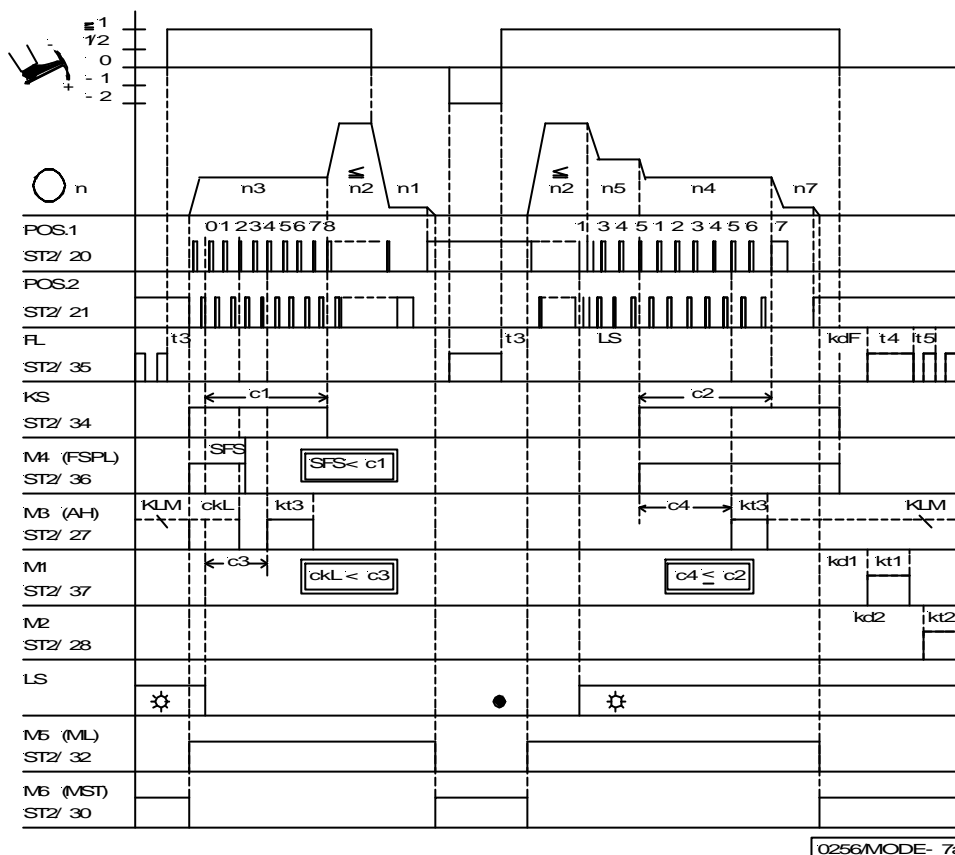
Mode 6 (chainstitch with fast scissors) parameter 232 = 1



0256/ MODE- 6

Mark	Function	Parameter	Control	V810	V820
	Mode 6	290 = 6			
	Softstart	134 = 1			
	Start stitch condensing	On	S2 key	1 key	1 key
	Chainstitch with fast scissors M3/M4	232 = 1			
n2	Maximum speed	111			
n3	Start stitch condensing speed	112			
n6	Softstart speed	115			
n7	Trimming speed	116			
t1	Delay until speed release after stitch condensing	200			
t3	Start delay from lifted sewing foot	202			
c1	Stitch counting of start stitch condensing	001			
SSc	Softstart stitches	100			
kd1/kd2	Delay times of outputs M1/M2	280/282			
kt1/kt2	ON periods of outputs M1/M2	281/283			
kd3/kd4	Delay times of outputs M3/M4 (AH1/AH2)	284/286			
kt3/kt4	ON periods of outputs M3/M4 (AH1/AH2)	285/287			
kdF	Switch-on delay of sewing foot lifting	288			

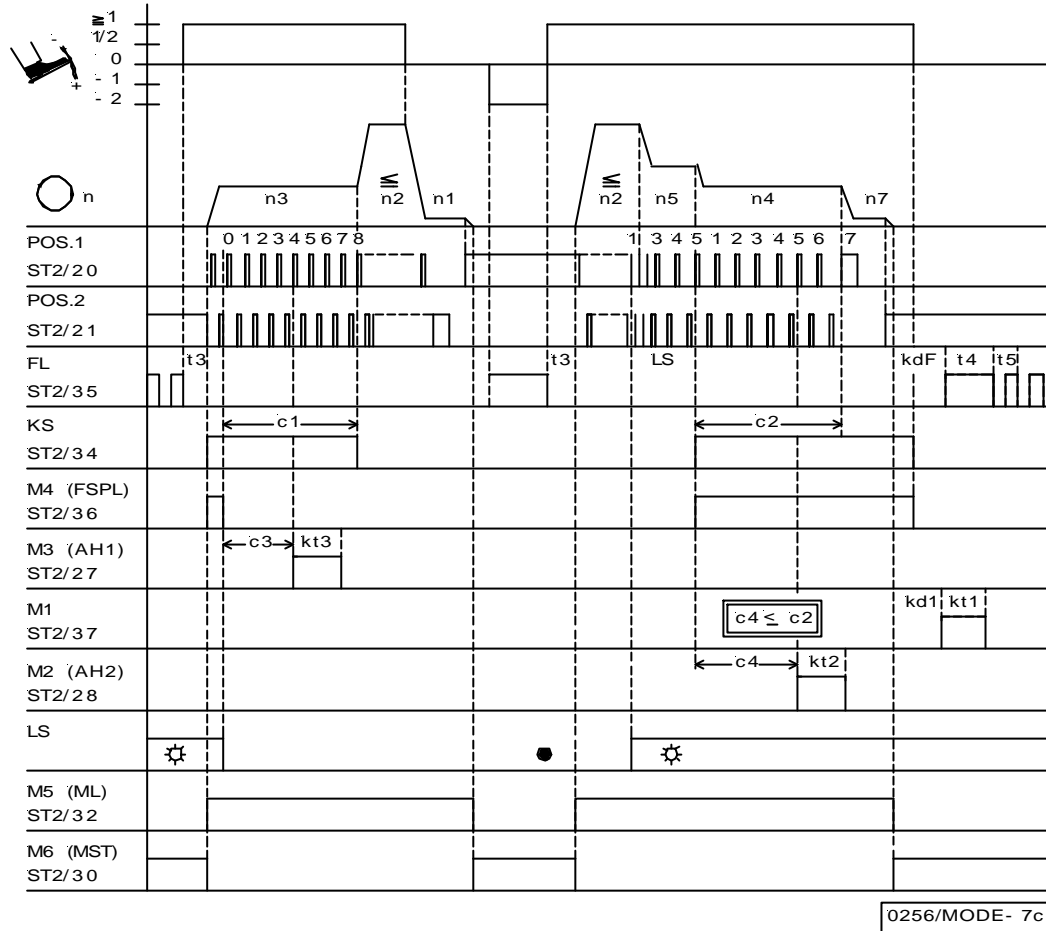
Mode 7 (overlock) parameter 232 = 0 (tape cutter) / parameter 018 = 0 (seam end with stop)



0256MODE- 7a

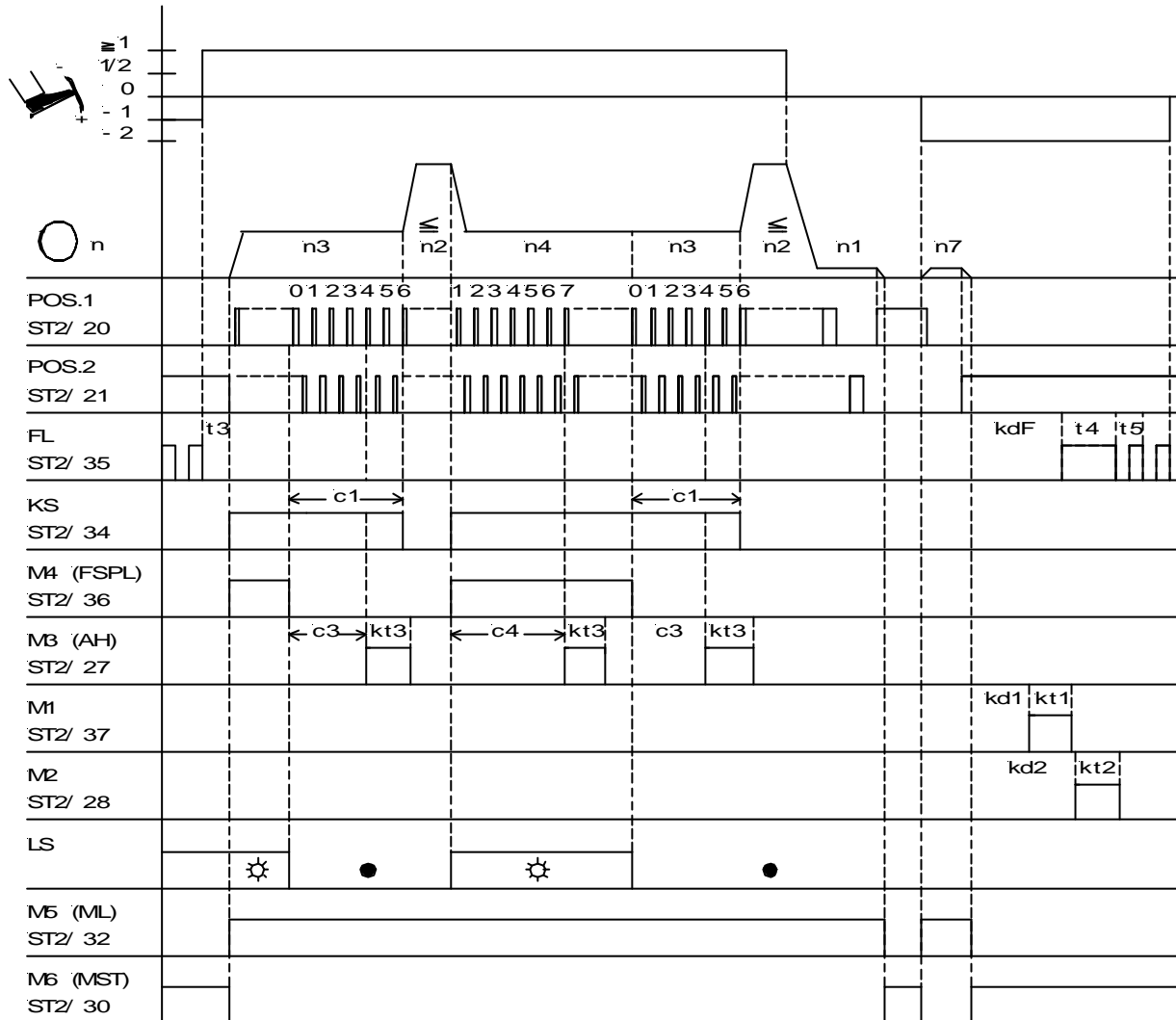
Mark	Function	Parameter	Control	V810	V820
	Mode 7	290 = 7			
	Counts c1, c2, c3 and c4	On			
	Sewing foot lifting at the seam end	On	S2/3 key	1/2 key	1/4 key
	Light barrier		S4 key	3 key	6 key
	Sequence "overlock mode with stop"	009 = 1			
	Function "pedal in pos. -2" blocked	018 = 0			
	Chain suction at the seam end until pedal in pos. 0	019 = 2			
	Beginning of thread tension release at the start of the seam	022 = 1			
		025 = 0			
	Start blockage with light barrier uncovered	132 = 0			
	Stitch counting at the start of the seam at fixed speed n3	143 = 1			
	Stitch counting at the seam end at fixed speed n4	144 = 1			
	Seam end after count c2	191 = 1			
	Speed n5 after light barrier sensing	192 = 0			
	Chain suction On after light barrier compensating stitches	193 = 0			
	Tape cutter function	232 = 0			
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start counting	112			
n4	Speed for end counting	113			
n5	Speed after light barrier sensing	114			
n7	Trimming speed	116			
c2	End counting for chain suction	000			
c1	Start counting for chain suction	001			
c3	Start counting for tape cutter	002			
c4	End counting for tape cutter	003			
LS	Light barrier compensating stitches	004			
kLM	Clamp at the seam end	On			
ckL	Run-out stitches clamp at the start of the seam	020 = 1			
SFS	Stitches from light barrier uncovered until end of thread tension release (M4)	021			
		157			
kd1/kd2	Delay times of outputs M1/M2	280/282			
kt1/kt2	ON periods of outputs M1/M2	281/283			
kt3	ON period of tape cutter	285			
kdF	Switch-on delay of sewing foot lifting	288			

Mode 7 (overlock) parameter 232 = 1 (fast scissors) / parameter 018 = 0 (seam end with stop)



Mark	Function	Parameter	Control	V810	V820
	Mode 7	290 = 7			
	Counts c1, c2, c3 and c4	On	S2/3 key	1/2 key	1/4 key
	Sewing foot lifting at the seam end	On	S4 key	3 key	6 key
	Light barrier	009 = 1			
	Sequence "overlock mode with stop"	018 = 0			
	Function "pedal in pos. -2" blocked	019 = 2			
	Chain suction at the seam end until pedal in pos. 0	022 = 1			
	Start blockage with light barrier uncovered	132 = 0			
	Stitch counting at the start of the seam at fixed speed n3	143 = 1			
	Stitch counting at the seam end at fixed speed n4	144 = 1			
	Seam end after count c2	191 = 1			
	Speed n5 after light barrier sensing	192 = 0			
	Chain suction On after light barrier compensating stitches	193 = 0			
	Function "fast scissors"	232 = 1			
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start counting	112			
n4	Speed for end counting	113			
n5	Speed after light barrier sensing	114			
n7	Trimming speed	116			
c2	End counting for chain suction	000			
c1	Start counting for chain suction	001			
c3	Start counting for tape cutter	002			
c4	End counting for tape cutter	003			
LS	Light barrier compensating stitches	004			
kLM	Clamp at the seam end	Off			
kd1	Delay time of output M1	280			
kd2	Delay time of output M2	282 = 0			
kt1/kt2	ON periods of outputs M1/M2	281/283			
kt3	ON period of tape cutter	285			
kdF	Switch-on delay of sewing foot lifting	288			

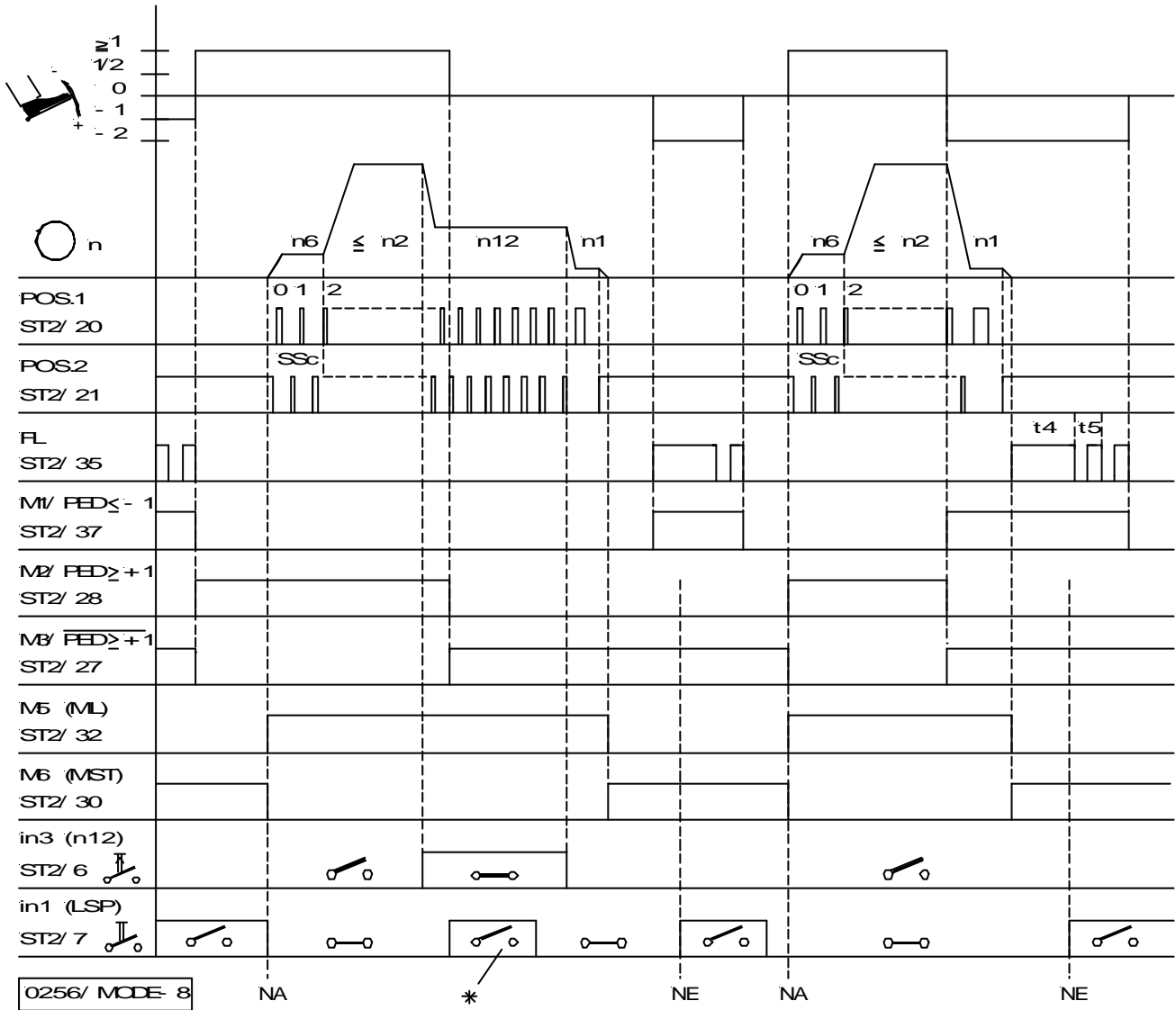
Mode 7 (overlock) parameter 232 = 0 (tape cutter) / parameter 018 = 1 (seam end without stop)



0256/ MODE- 7b

Mark	Function	Parameter	Control	V810	V820
	Mode 7	290 = 7			
	Counts c1, c2, c3 and c4	On	S2/3 key	1/2 key	1/4 key
	Light barrier compensating stitches	004 = 0			
	Light barrier	009 = 1			
	Sequence "overlock mode at the seam end without stop"	018 = 1			
	Function "pedal in pos. -1/-2" activated in the seam	019 = 3			
	Chain suction at the seam end until pedal in pos. 0	022 = 1			
	Stitch counting at the start of the seam at fixed speed n3	143 = 1			
	Stitch counting at the seam end at fixed speed n4	144 = 1			
	Tape cutter function	232 = 0			
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start counting	112			
n7	Trimming speed	116			
t3	Start delay from lifted sewing foot	202			
c1	Start counting for chain suction	001			
c3	Start counting for tape cutter	002			
c4	End counting for tape cutter	003			
kd1/kd2	Delay times of outputs M1/M2	280/282			
kt1/kt2	ON periods of outputs M1/M2	281/283			
kt3	ON period of tape cutter	285			
kdF	Switch-on delay of sewing foot lifting	288			

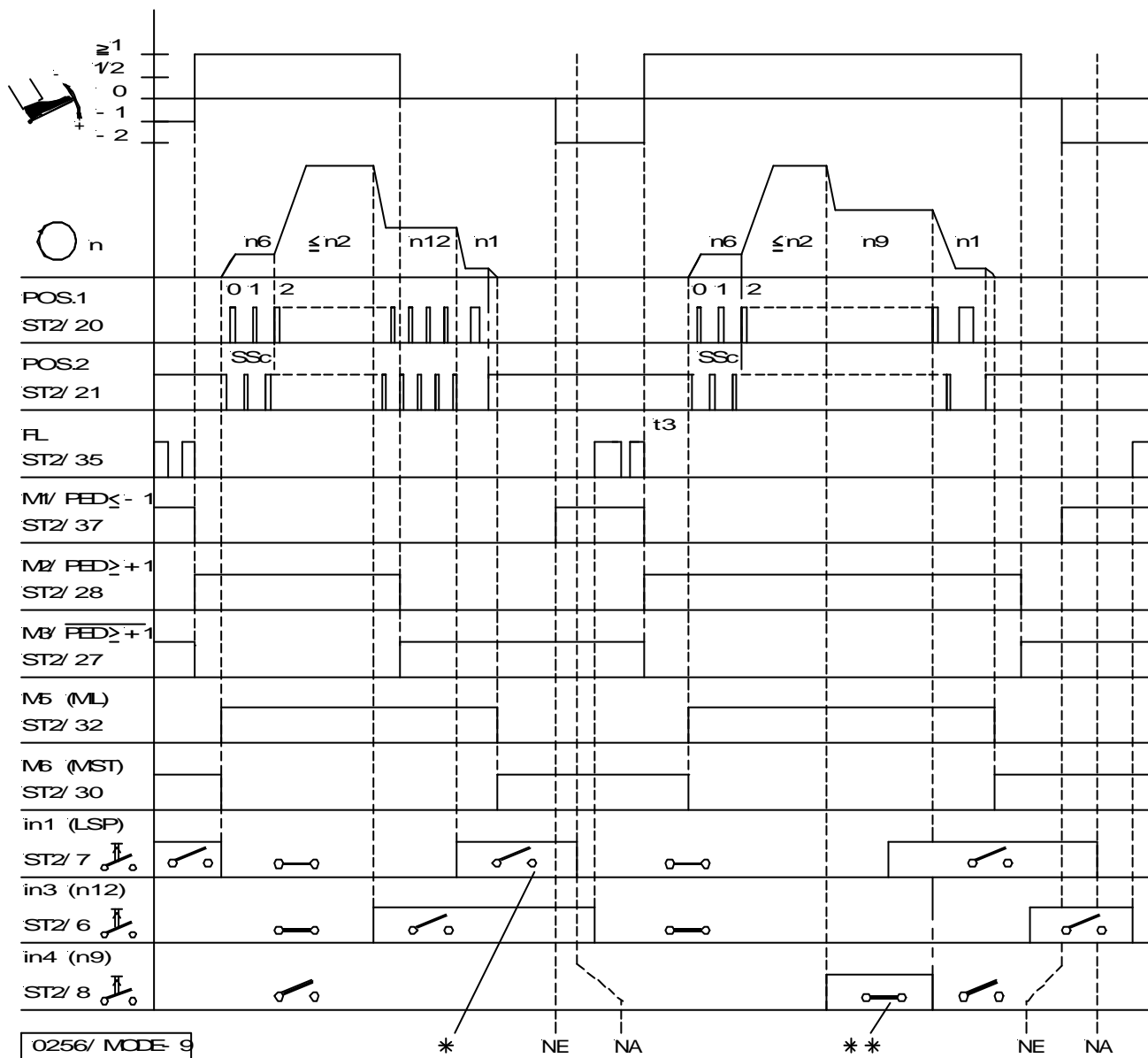
Mode 8 (backlatch Pegasus)



Mark	Function	Parameter	Control	V810	V820
SSt	Mode 8	290 = 8	S5 key	4 key	7 key
	Basic position 2	On			
	Softstart	134 = 1			
in1	Machine run blockage activated with open switch	240 = 6			
in3	n-Auto with closed switch	242 = 10			
n1	Positioning speed	110			
n2	Maximum speed	111			
n6	Softstart speed	115			
n12	Automatic speed	118			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
SSc	Softstart stitches	100			

*) When automatic speed is On, machine run blockage (safety switch) does not work!
 NA Start of seam
 NE Seam end

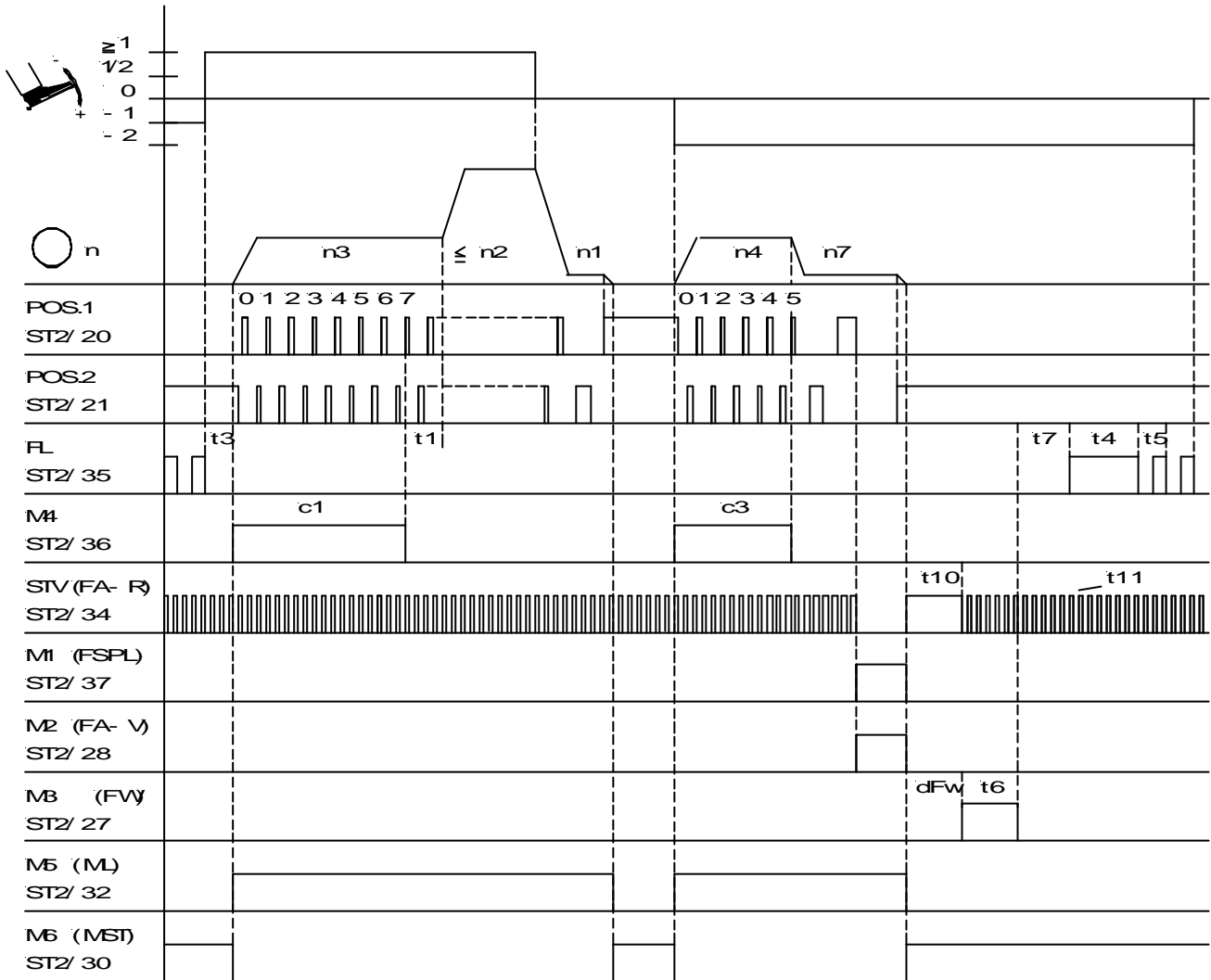
Mode 9 (backlatch Yamato)



Mark	Function	Parameter	Control	V810	V820
	Mode 9				
	Basic position 2	On			
SSt	Softstart	290 = 9	S5 key	4 key	7 key
in1	Machine run blockage activated with open switch	134 = 1			
in3	Automatic speed with open switch (the function of input 3 is inverted in mode 9)	240 = 6 242 = 10			
n1	Positioning speed	110			
n2	Maximum speed	111			
n6	Softstart speed	115			
n12	Automatic speed	118			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
SSc	Softstart stitches	100			

- *) With this setting, machine run blockage (safety switch) takes priority over automatic speed!
- **) Automatic speed n9 takes priority over machine run blockage (safety switch)!
- NA Start of seam
- NE Seam end

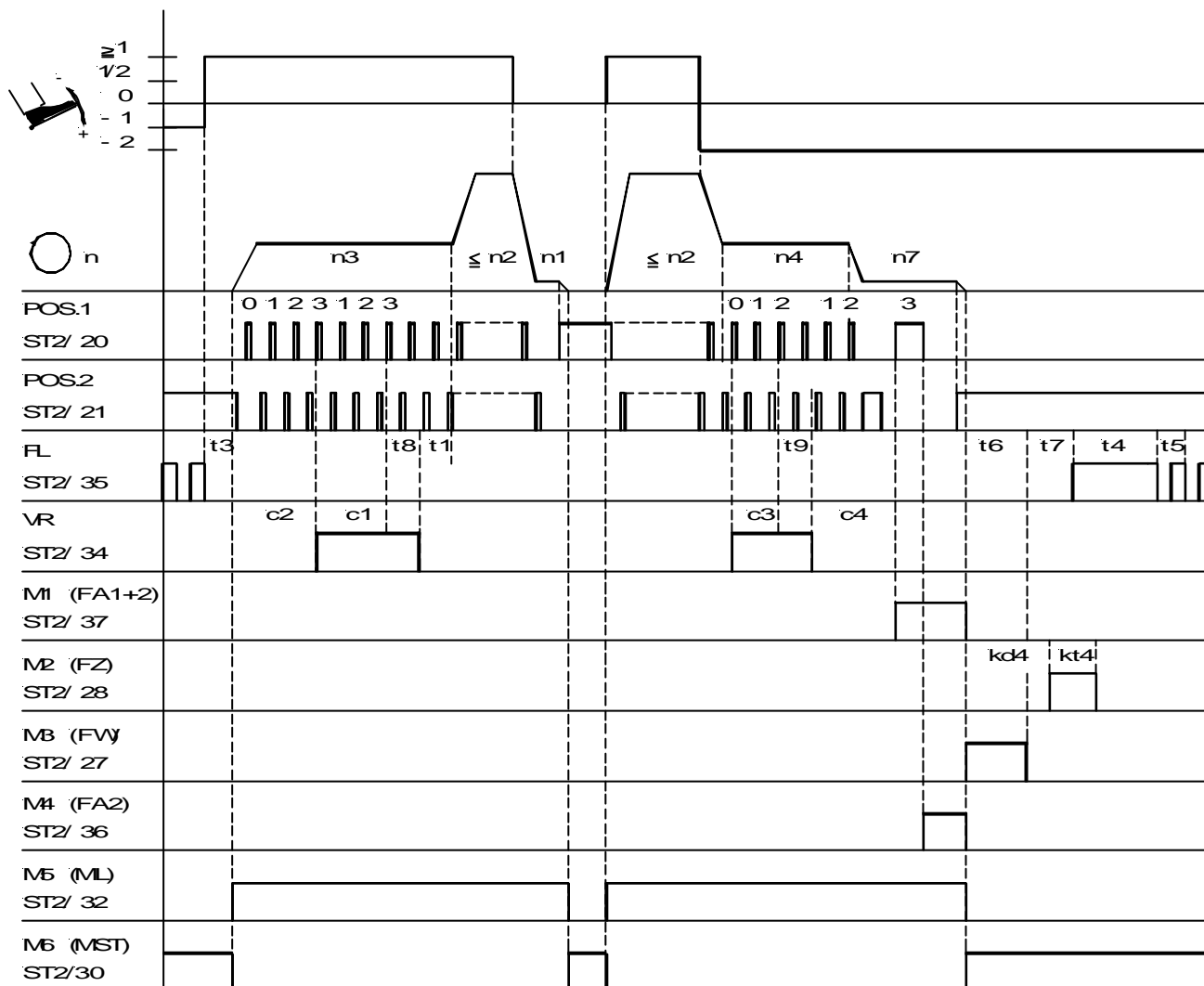
Mode 10 (lockstitch)



0256/ MODE 10

Mark	Function	Parameter	Control	V810	V820
	Mode 10	290 = 10			
	Single start backtack	On	S2 key	1 key	1 key
	Single end backtack	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
dFW	Switch-on delay of the thread wiper	209			
t10	Full power of thread trimmer backward	212			
t11	Holding power output "stitch condensing" of the thread trimmer backward	213			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			

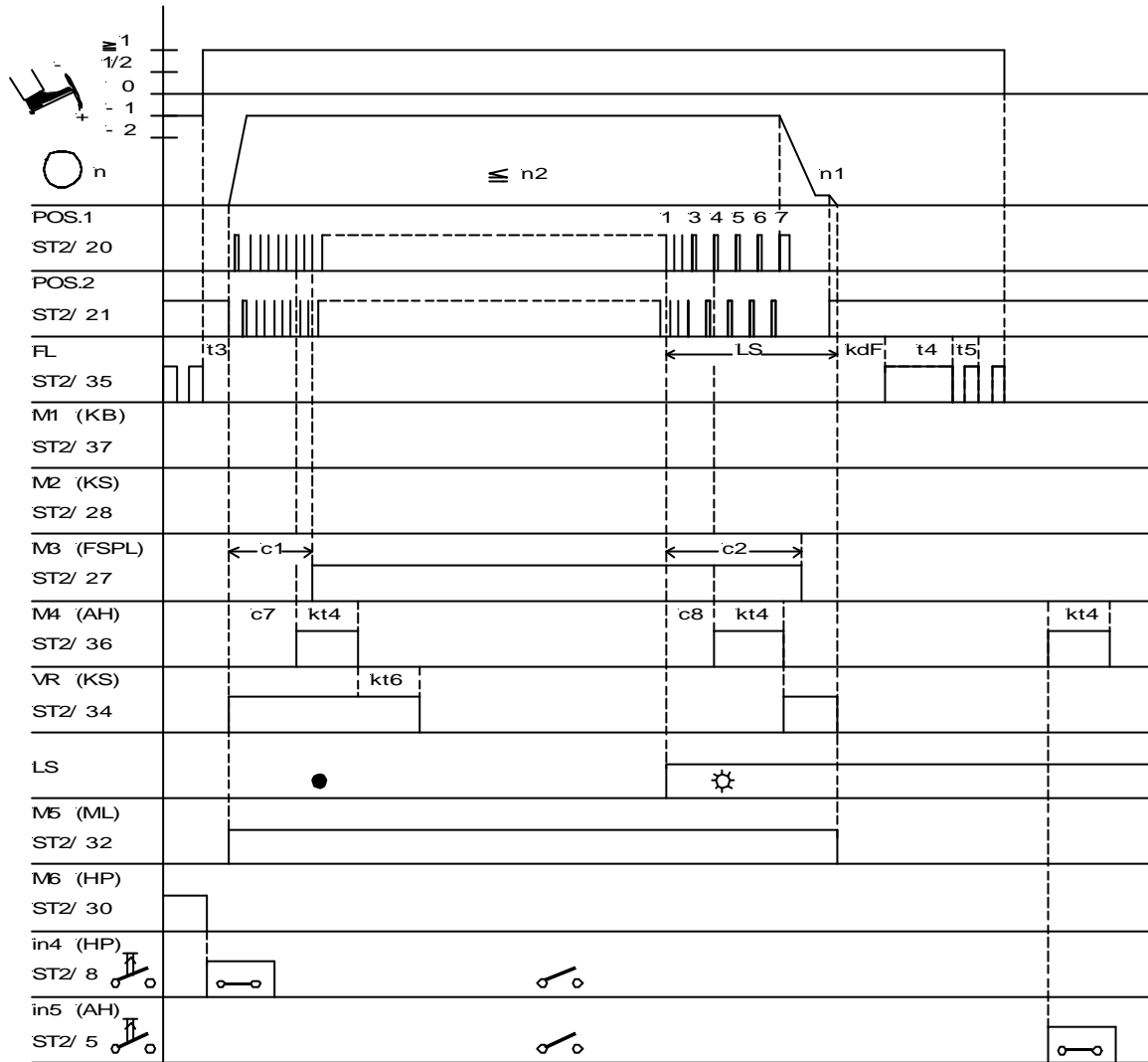
Mode 14 (lockstitch)



0256/ MODE- 14

Mark	Function	Parameter	Control	V810	V820
	Mode 14	290 = 14			
	Double start backtack with stitch correction	On	S2 key	1 key	1 key
	Double end backtack with stitch correction	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
t8	Start backtack stitch correction	150			
t9	End backtack stitch correction	151			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
kd4	Delay time output M2	286			
kt4	ON period output M2	287			

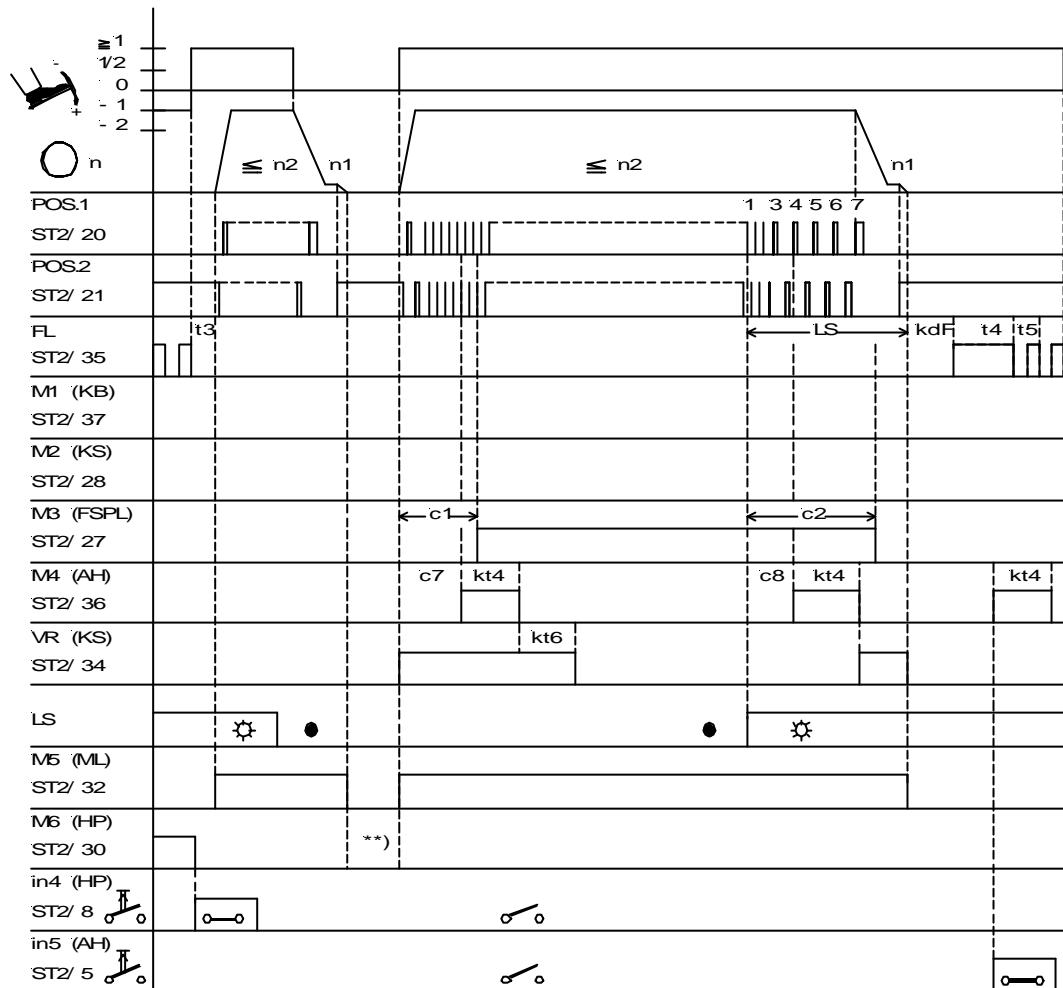
Mode 15 (Pegasus SSC100) sequence when high lift for walking foot is Off / start of seam with light barrier covered



0256/MODE- 15a

Mark	Function	Parameter	Control	V810	V820
	Mode 15	290 = 15			
	Tape cutting	On		2 key	4 key
	Counts c1 and c2	On	S2/3 key	1 key	1/5 key
	Basic position 2	On	S5 key	4 key	7 key
	Light barrier	009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal	192 = 1			
in4	Key for high lift for walking foot operational mode stored	243 = 14			
in5	Key for manual tape cutter	244 = 15			
n1	Positioning speed	110			
n2	Maximum speed	111			
c2	Stitch counting until thread tension release Off	000			
c1	Stitch counting until thread tension release On	001			
LS	Light barrier compensating stitches	004			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
kdF	Delay time until sewing foot lifting On	288			
kt6 *)	Delay time of output VR (chain suction)	256			
c7	Start counting until tape cutter M4 On	257			
c8	End counting until tape cutter M4 On	258			
kt4 *)	ON period of tape cutter M4	287			

*) The value displayed on the control unit must be multiplied by 10. **Example:** The displayed value 10 corresponds to 100ms.

Mode 15 (Pegasus SSC100) sequence when high lift for walking foot is Off / start of seam with light barrier uncovered


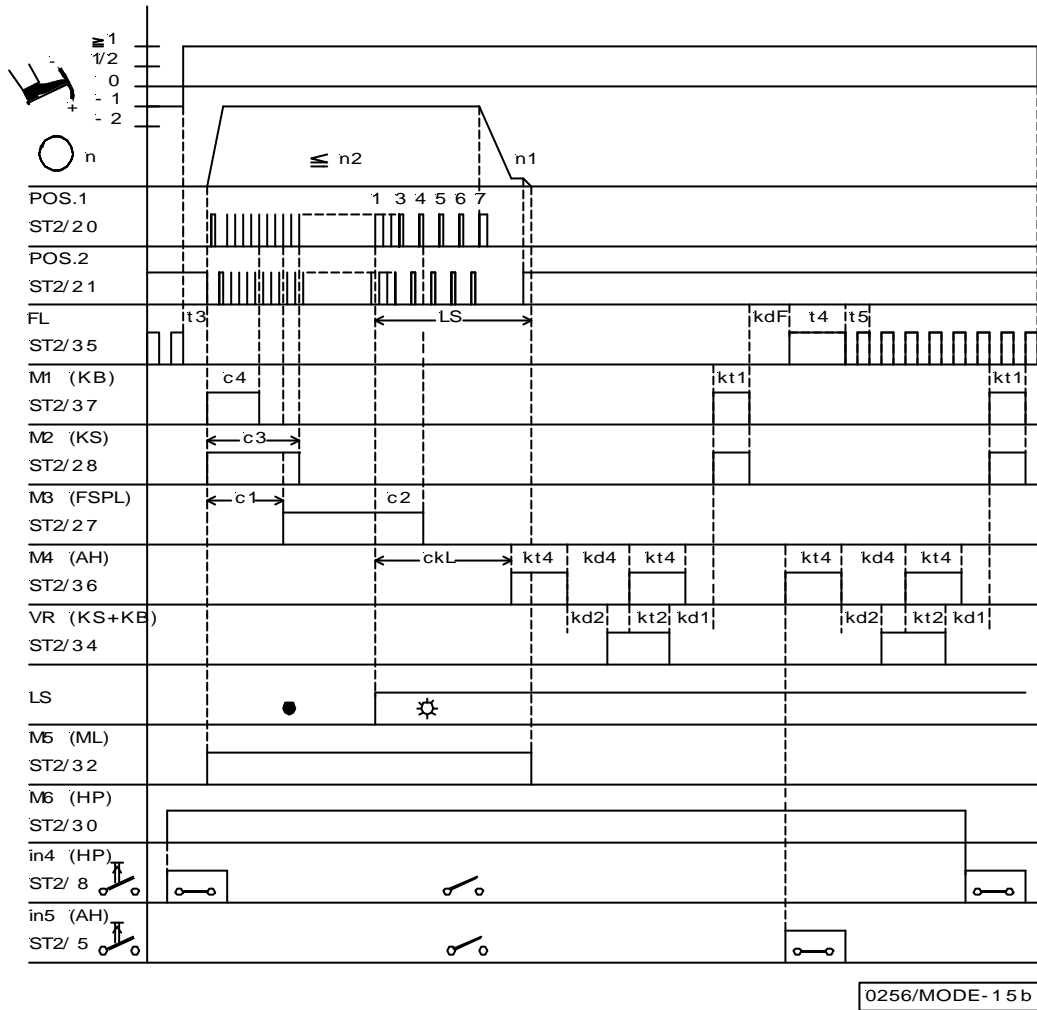
0256/MODE-15c

Mark	Function	Parameter	Control	V810	V820
	Mode 15	290 = 15			
	Tape cutting	On		2 key	4 key
	Counts c1 and c2	On	S2/3 key	1 key	1/5 key
	Basic position 2	On	S5 key	4 key	7 key
	Light barrier	009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal	192 = 1			
in4	Key for high lift for walking foot operational mode stored (M6 inverted)	243 = 14			
in5	Key for manual tape cutter	244 = 15			
n1	Positioning speed	110			
n2	Maximum speed	111			
c2	Stitch counting until thread tension release Off	000			
c1	Stitch counting until thread tension release On	001			
LS	Light barrier compensating stitches	004			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
kdF	Delay time until sewing foot lifting On	288			
kt6 *)	Delay time of output VR (chain suction)	256			
c7	Start counting until tape cutter M4 On	257			
c8	End counting until tape cutter M4 On	258			
kt4 *)	ON period of tape cutter M4	287			

*) The value displayed on the control unit must be multiplied by 10. **Example:** The displayed value 10 corresponds to 100ms.

**) Programming is possible at intermediate stop before tape cutting at the start of the seam!

Mode 15 (Pegasus SSC100) sequence when high lift for walking foot is On

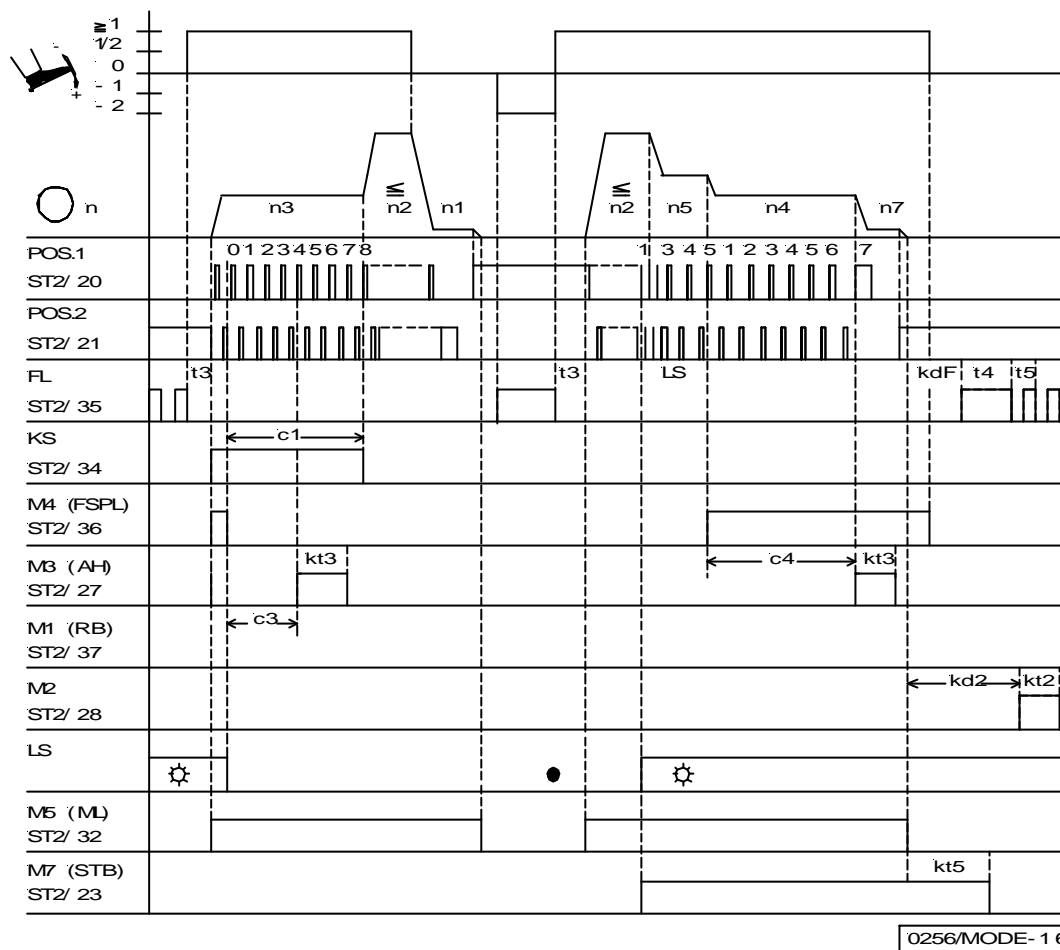


0256/MODE-15 b

Mark	Function	Parameter	Control	V810	V820
	Mode 15	290 = 15			
	Tape cutting	On		2 key	4 key
	Counts c1 and c2	On	S2/3 key	1 key	1/5 key
	Basic position 2	On	S5 key	4 key	7 key
	Light barrier	009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal	192 = 1			
in4	Key for high lift for walking foot operational mode stored	243 = 14			
in5	Key for manual tape cutter	244 = 15			
n1	Positioning speed	110			
n2	Maximum speed	111			
c2	Stitch counting until thread tension release Off	000			
c1	Stitch counting until thread tension release On	001			
c3	Counting for chain suction	002			
c4	Counting for chain blowing	003			
LS	Light barrier compensating stitches	004			
ckL	Counting after light barrier uncovered until tape cutter On	021			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
kdF	Delay time until sewing foot lifting On	288			
kd1 *)	Delay time of output M1 and M2	280			
kt1 *)	ON period of output M1 and M2	281			
kd2 *)	Delay time of output ST2/34	282			
kt2 *)	ON period of output ST2/34	283			
kd4 *)	Delay time of output M4 (tape cutter)	286			
kt4 *)	ON period of tape cutter M4 (tape cutter)	287			

*) The value displayed on the control unit must be multiplied by 10. **Example:** The displayed value 10 corresponds to 100ms.

Mode 16 (feed-off-the-arm machine) without automatically unlocking the chain with tape cutter (232 = 0)

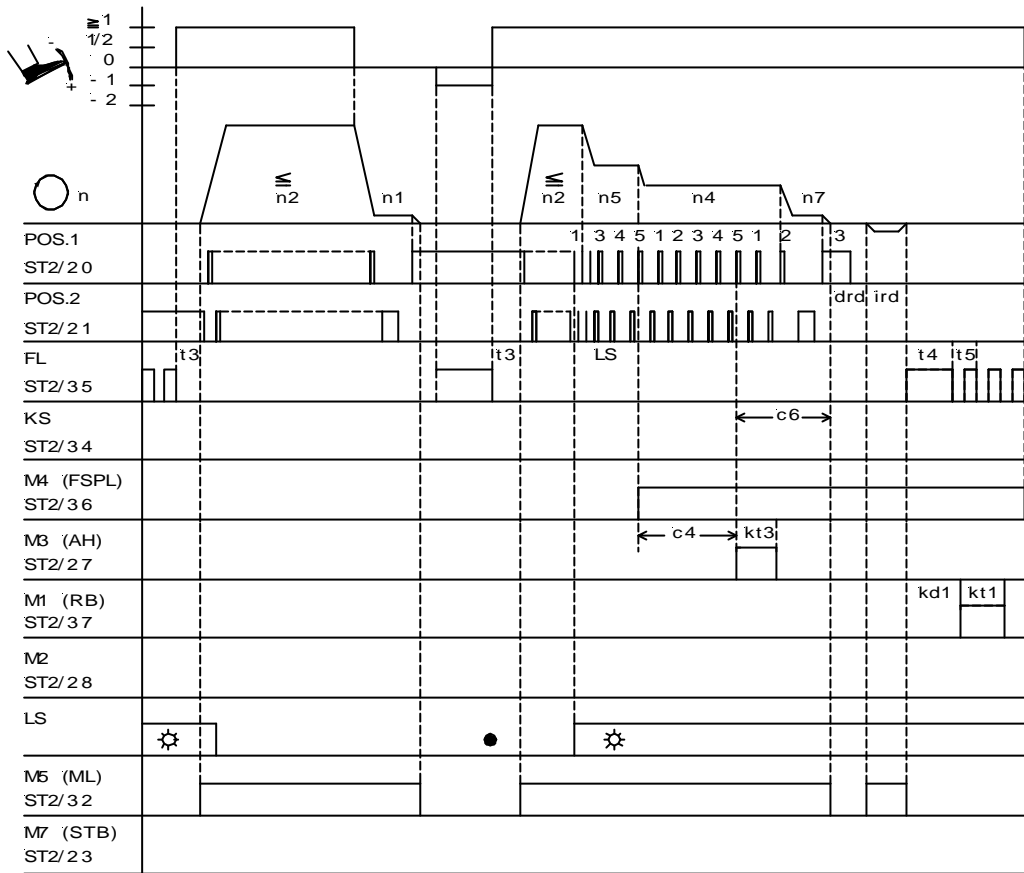


0256/MODE- 1 6

Mark	Function	Parameter	Control	V810	V820
	Mode 16	290 = 16			
	Counts c1, c3 and c4	On	S2/3 key	*)	1/2/4 key
	Basic position 2	On	S5 key	*)	0 key
	Sewing foot lifting at the seam end	On	S4 key	*)	9 key
	Light barrier	009 = 1			
	Sequence "overlock mode with stop"	018 = 0			
	Function "pedal in pos. -2" blocked	019 = 2			
	Start blockage with light barrier uncovered	132 = 0			
	Stitch counting at the start of the seam at fixed speed n3	143 = 1			
	Stitch counting at the seam end at fixed speed n4	144 = 1			
	Seam end after count c2	191 = 0			
	Speed of the light barrier compensating stitches depending on the pedal	192 = 0			
	Blow fabric onto stack M7 from light barrier uncovered onwards	194 = 1			
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start counting	112			
n4	Speed for end counting	113			
n5	Speed after light barrier sensing	114			
n7	Trimming speed	116			
c1	Start counting for chain suction	001			
c3	Start counting for tape cutter	002			
c4	End counting for tape cutter	003			
LS	Light barrier compensating stitches	004			
kd2	Delay time of output M2	282			
kt2	ON period of output M2	283			
kt3	ON period of tape cutter	285			
kdF	Switch-on delay until sewing foot lifting On	288			
kt5	Switch-off delay "blow fabric onto stack at the seam end"	289			

*) The V810 control panel cannot be used for the functions in mode 16!

Mode 16 (feed-off-the-arm machine) automatically unlocking the chain with tape cutting / 8 key on V820 On

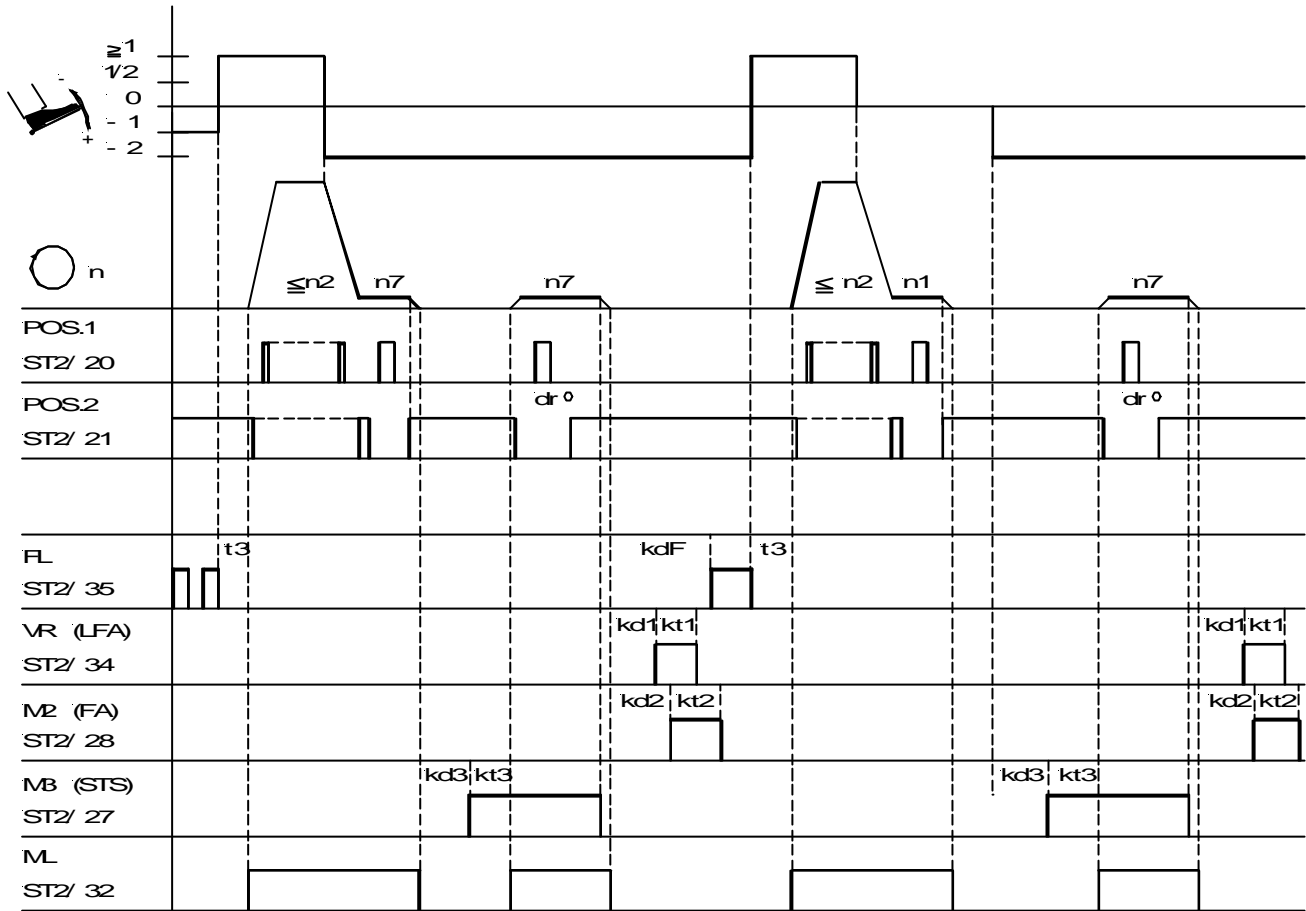


0256/MODE- 16a

Mark	Function	Parameter	Control	V810	V820
	Mode 16	290 = 16			
	Counts c4	On	S2/3 key	*)	1/2/4 key
	Basic position 1	On	S5 key	*)	0 key
	Unlock the chain with chain blowing in opposite direction	On		*)	8 key
	Light barrier	009 = 1			
	Sequence "overlock mode with stop"	018 = 0			
	Function "pedal in pos. -2" blocked	019 = 2			
	Start blockage with light barrier uncovered	132 = 0			
	Stitch counting at the seam end at fixed speed n4	144 = 1			
	Speed n5 after light barrier sensing	192 = 0			
	Blow fabric onto stack M7 from light barrier uncovered onwards	194 = 1			
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start counting	112			
n4	Speed for end counting	113			
n5	Speed after light barrier sensing	114			
n7	Trimming speed	116			
c4	End counting for tape cutter	003			
LS	Light barrier compensating stitches	004			
ird	Number of reversing increments	180			
drd	Switch-on delay of reverse motor rotation	181			
c6	Number of run-out stitches when unlocking the chain	184			
kd1	Delay time of output M1	280			
kt1	ON period of output M1	281			

*) The V810 control panel cannot be used for the functions in mode 16!

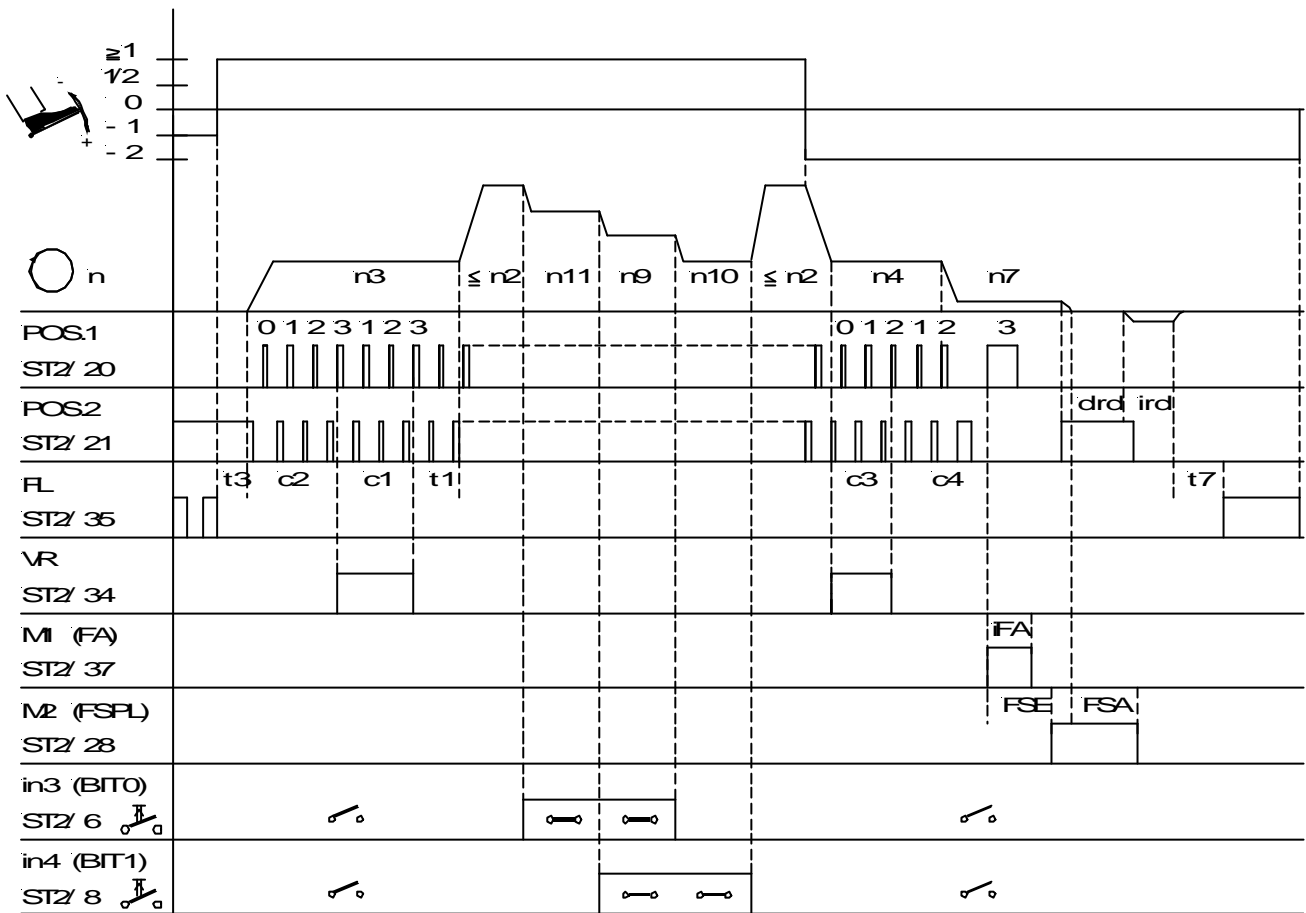
Mode 17 (stitch lock Pegasus)



0256/ MODE- 17

Mark	Function	Parameter	Control	V810	V820
	Mode 17	290 = 17			
	Basic position 2	On	S5 key	4 key	7 key
	Thread trimmer and thread wiper	On	S3 key		5 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n7	Trimming speed	116			
dr°	Stop for thread trimming depending on angle	197			
t3	Start delay from lifted sewing foot	202			
kd1	Delay time of the top cover thread cutter LFA	280			
kt1	ON period of the top cover thread cutter LFA	281			
kd2	Delay time of the thread trimmer FA	282			
kt2	ON period of the thread trimmer FA	283			
kd3	Delay time of the stitch lock function STS	284			
kt3	ON period of the stitch lock function STS	285			
kdF	Switch-on delay until sewing foot lifting On	288			

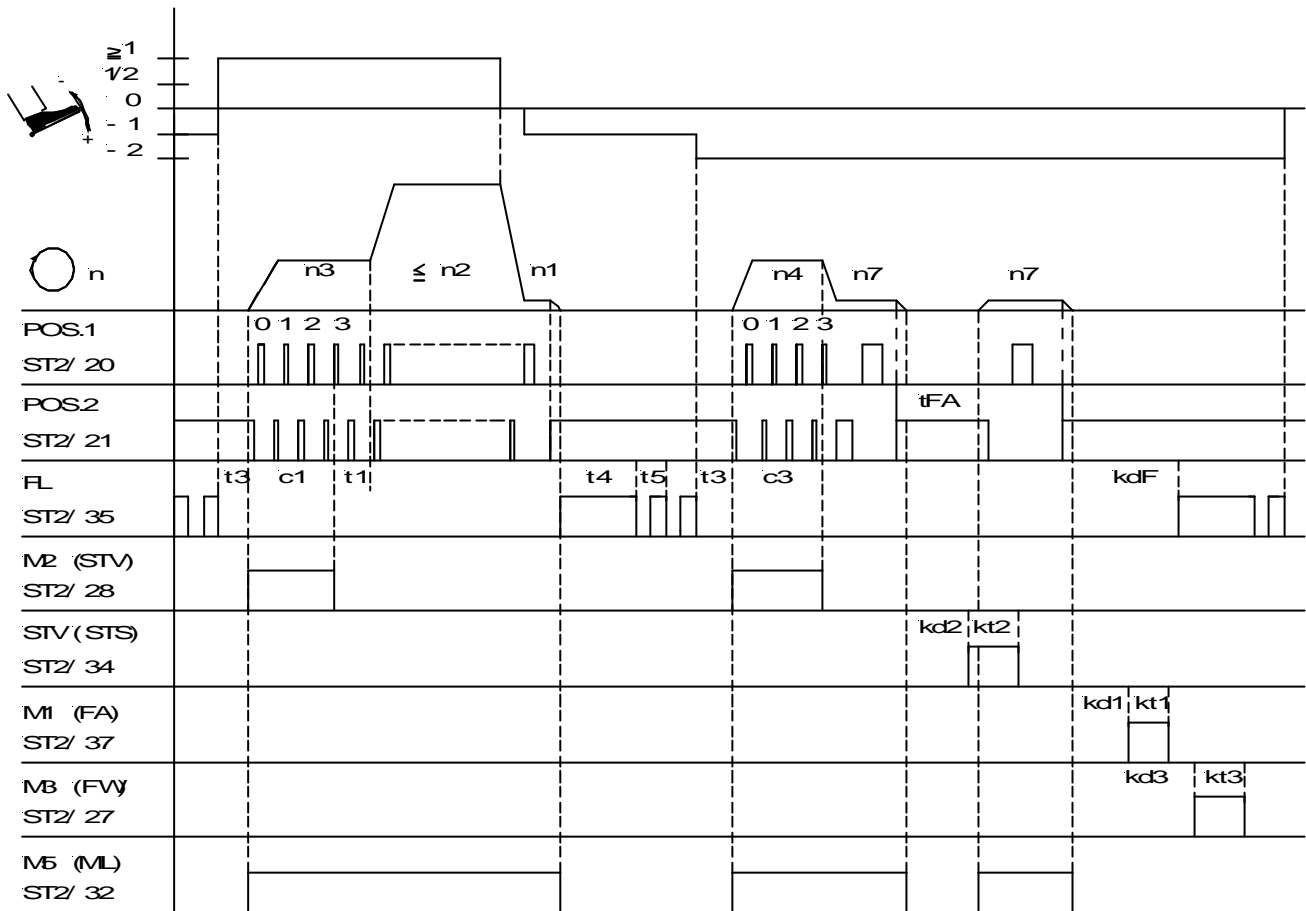
Mode 20 (lockstitch Juki LU1510-7)



0256/ MODE 20

Mark	Function	Parameter	Control	V810	V820
	Mode 20	290 = 20			
	Double start backtack	On	S2 key	1 key	1 key
	Double end backtack	On	S3 key	2 key	4 key
in3	Reverse motor rotation	182 = 1			
in4	Speed limitation bit 0	242 = 31			
	Speed limitation bit 1	243 = 32			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
n9	Automatic speed	122			
n10	Automatic speed	117			
n11	Automatic speed	123			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted sewing foot	202			
t7	Sewing foot switch-on delay after thread wiper	206			
ird	Number of reversing increments	180			
ird	Switch-on delay of reverse motor rotation	181			
iFA	Activation angle of the thread trimmer	250			
FSA	Thread tension release ON period	251			
FSE	Thread tension release delay depending on angle	252			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			

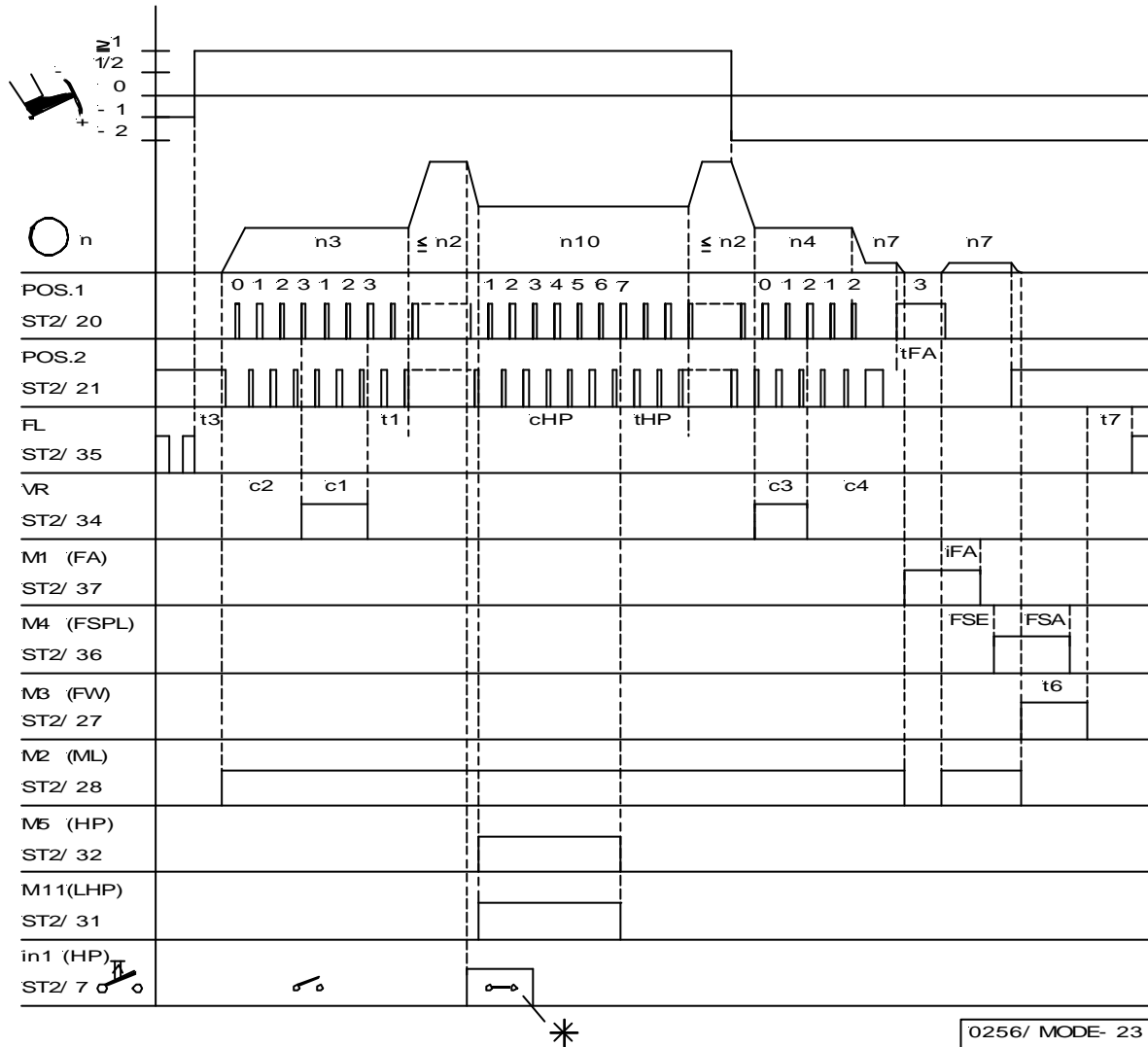
Mode 21 (stitch lock)



0256/ MODE- 21

Mark	Function	Parameter	Control	V810	V820
	Mode 21	290 = 21			
	Stitch lock function	196 = 1			
	Start stitch condensing	On	S2 key	1 key	1 key
	End stitch condensing	On	S3 key	2 key	4 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Speed for start stitch condensing	112			
n4	Speed for end stitch condensing	113			
n7	Trimming speed	116			
t1	Delay until speed release after stitch condensing	200			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
tFA	Stop time for drive	253			
kd1	Delay time thread trimmer	280			
kt1	ON period thread trimmer	281			
kd2	Delay time stitch lock	282			
kt2	ON period stitch lock	283			
kd3	Delay time thread wiper	284			
kt3	ON period thread wiper	285			
kdF	Switch-on delay until sewing foot lifting On	288			
c1	Counting start stitch condensing	001			
c3	Counting end stitch condensing	002			

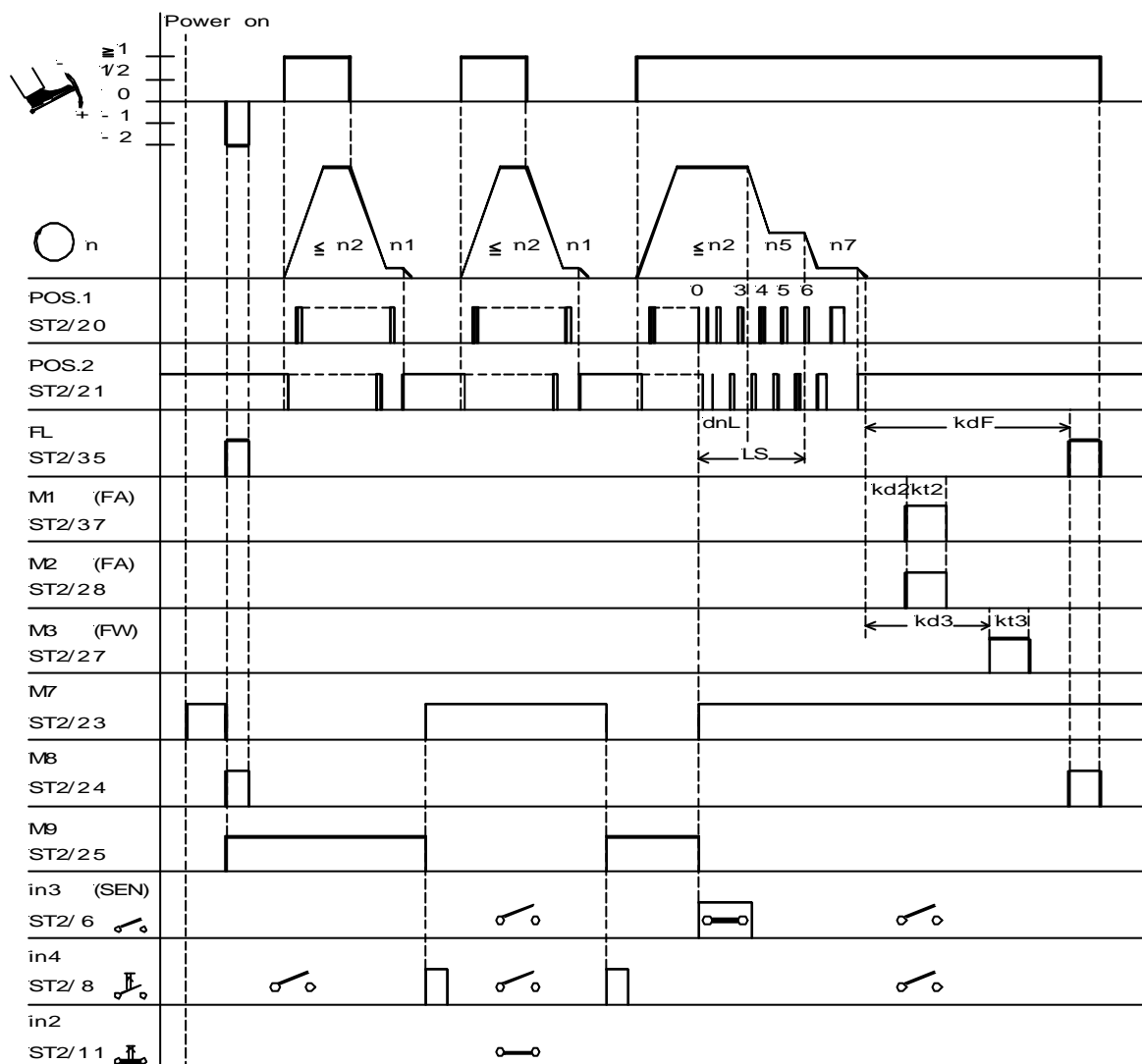
Mode 23 (lockstitch)



Mark	Function	Parameter	Control	V810	V820
	Mode 23	290 = 23			
	Double start backtack	On	S2 key	1 key	1 key
	Double end backtack	On	S3 key	2 key	4 key
	High lift for walking foot	137 = 1			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
n10	High lift walking speed	117			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
iFA	Activation angle of the thread trimmer	250			
FSA	Thread tension release ON period	251			
FSE	Thread tension release delay depending on angle	252			
tFA	Stop time for thread trimmer	253			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
tHP	High lift walking speed run-out time	152			
cHP	Stitch counting high lift for walking foot	185			

*) If the key is pressed down longer than the cHP count, high lift for walking foot remains On as well. If the key is pressed briefly, high lift for walking foot is On during counting, as shown in the timing diagram.

Mode 24 (Pegasus MHG-100) "bottom hemming" On



0256/ MODE- 24

Mark	Function	Parameter	Control	V810	V820
	Mode 24 Basic position 2 Light barrier	290 = 24 009 = 1	S5 key	4 key	7 key
n1	Positioning speed	110			
n2	Maximum speed	111			
n5	Light barrier speed	114			
n7	Trimming speed	116			
LS	Light barrier compensating stitches	004			
dnL	Delay time until light barrier speed release	158			
kd2	Delay time of the thread trimmer M1 and M2	282			
kt2	ON period of the thread trimmer M1 and M2	283			
kd3	Delay time of the thread wiper M3	284			
kt3	ON period of the thread wiper M3	285			
kdF	Switch-on delay until sewing foot On	288			

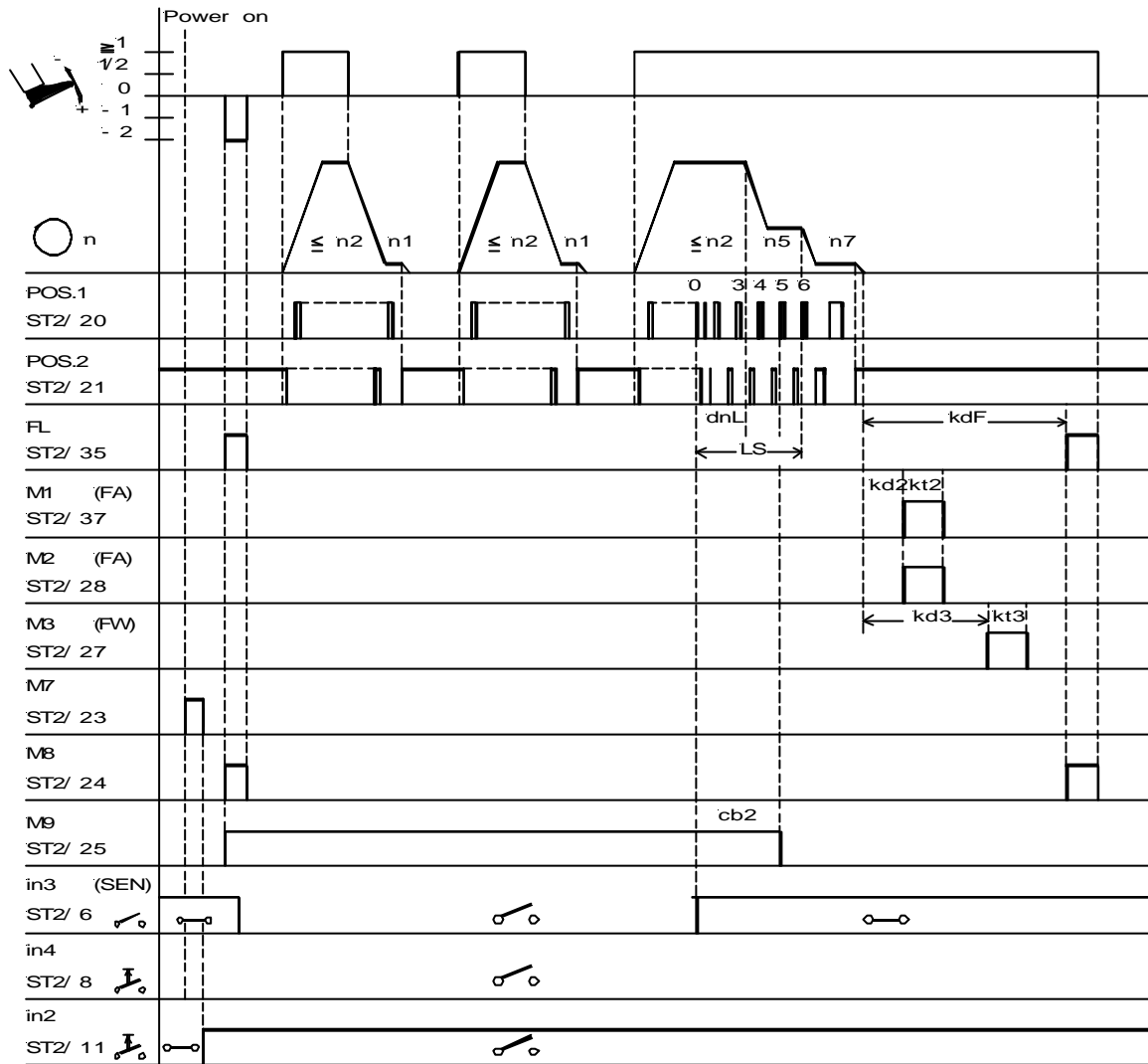
Outputs:

- FL = Sewing foot lifting
M1/M2 = Thread trimmer
M3 = Thread wiper
M7 = Hemming guide
M8 = Hemming blow 1
M9 = Hemming blow 2
M6 = Display "bottom/sleeve hemming"

Inputs:

- in1 = Machine run blockage Pa. 240= 6
in2 = Switch bottom/sleeve hemming Pa. 241=13
in3 = Sensor input Pa. 242=28
in4 = Knee switch "hemming guide" Pa. 243=22

Mode 24 (Pegasus MHG-100) "sleeve hemming" On



0256/MODE- 24a

Mark	Function	Parameter	Control	V810	V820
	Mode 24	290 = 24			
	Basic position 2	On	S5 key	4 key	7 key
	Light barrier	009 = 1			
n1	Positioning speed	110			
n2	Maximum speed	111			
n5	Light barrier speed	114			
n7	Trimming speed	116			
LS	Light barrier compensating stitches	004			
dnL	Delay time until light barrier speed release	158			
cb2	Stitches until signal M9 "hemming blow 2" Off	159			
kd2	Delay time of the thread trimmer M1 and M2	282			
kt2	ON period of the thread trimmer M1 and M2	283			
kd3	Delay time of the thread wiper M3	284			
kt3	ON period of the thread wiper M3	285			
kdF	Switch-on delay until sewing foot On	288			

Outputs:

- FL = Sewing foot lifting
- M1/M2 = Thread trimmer
- M3 = Thread wiper
- M7 = Hemming guide
- M8 = Hemming blow 1
- M9 = Hemming blow 2
- M6 = Display "bottom/sleeve hemming"

Inputs:

- in1 = Machine run blockage Pa. 240= 6
- in2 = Switch bottom/sleeve hemming Pa. 241=13
- in3 = Sensor input Pa. 242=28
- in4 = Knee switch "hemming guide" Pa. 243=22

7 List of Parameters

7.1 Preset Values Depending on Mode

The preset values which are different in the various modes are listed in the table below. When switching the mode by means of parameter 290, these values change automatically.

Operator Level

Mode → 0 Parameter	2	3	4	5	6	7	8	9	10	14	15	16	17	20	21	23	24
000	-	-	-	-	-	-	-	-	-	-	-	6	30	-	-	-	-
001	-	-	-	2	-	-	-	-	-	2	-	2	17	-	-	-	-
002	-	-	-	-	-	-	-	-	-	-	-	10	2	-	-	-	3
003	-	-	-	-	-	-	-	-	-	-	-	10	18	-	-	-	3
004	-	-	-	-	-	-	0	-	-	-	-	25	0	-	-	-	35
005	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0
007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10
008	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	2
009	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	1
013	-	-	-	-	-	-	-	0	0	-	-	0	-	-	-	-	-
014	-	0	-	-	-	-	0	0	0	-	-	0	0	0	0	-	0
019	-	-	-	-	-	-	2	-	-	-	-	2	2	1	-	-	3
021	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-

Technician Level

Mode → Parameter	0	2	3	4	5	6	7	8	9	10	14	15	16	17	20	21	23	24
100	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
** 110	-	-	-	180	-	-	-	250	250	180	-	-	-	-	-	-	180	-
** 111	-	-	-	5000	-	-	-	-	-	4500	-	7500	3800	-	2500	5500	4800	5000
** 112	-	-	-	-	-	-	-	-	-	-	-	-	3800	-	600	-	1700	-
** 113	-	-	-	-	-	-	-	-	-	-	-	-	3800	-	600	-	1700	-
** 114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700	2000
** 115	-	-	-	-	-	-	-	-	-	700	-	-	-	-	-	-	800	-
** 116	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	180	-
** 117	-	-	-	-	-	-	-	-	-	-	-	9900	-	-	1800	-	2000	9900
** 118	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2500	-	3000	-
119	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
** 122	-	-	-	-	-	-	-	6000	-	-	-	-	-	-	-	-	-	-
** 123	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2400	-	-	9900
130	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
132	-	-	-	-	-	-	0	-	-	-	-	0	0	-	-	-	-	0
134	-	-	-	-	-	-	-	-	-	1	-	-	-	-	1	-	1	-
135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
137	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1
152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
153	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	06	-
158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100
161	-	-	-	0	0	0	0	0	0	0	-	0	0	0	-	0	-	0
180	-	-	-	-	-	-	-	-	-	14	-	-	-	-	45	-	14	-
181	-	-	-	-	-	-	-	-	-	230	-	-	-	-	-	-	0	-
182	-	-	-	-	-	-	1	-	-	1	-	-	1	-	1	-	-	-
184	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
190	-	-	-	0	-	-	2	-	-	-	-	-	-	-	-	-	-	-
192	-	-	-	-	-	-	1	-	-	-	-	1	1	-	-	-	-	-
194	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-
196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-
197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-

x = The positions marked with "x" are not used in the functional sequence!

- = For the positions marked with "-" the preset values listed in the List of Parameters are used !

** = When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Mode → Parameter	0	2	3	4	5	6	7	8	9	10	14	15	16	17	20	21	23	24
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-
201	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	200	-	-
202	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	80	-
203	-	-	-	350	-	-	-	-	-	-	-	-	-	-	-	-	200	-
204	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	-	-	-
** 205	-	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	100	-
206	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-	-	50	-
207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-
209	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-
210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-
211	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-
212	-	-	-	100	-	-	-	-	-	100	-	-	-	-	-	-	200	-
213	-	-	-	12	-	-	-	-	-	12	-	100	-	-	-	-	50	-
234	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-
240	-	-	13	6	-	-	-	6	6	-	-	-	15	-	13	-	13	6
241	-	-	7	-	-	-	-	-	-	-	16	-	-	-	-	-	07	14
242	-	-	1	3	-	-	-	10	38	-	-	-	-	-	31	-	01	28
243	-	-	22	-	-	-	-	1	34	-	-	14	15	-	32	-	0	22
244	-	-	16	-	-	-	-	-	-	-	-	15	-	-	-	-	16	-
245	-	-	19	-	-	-	-	12	12	-	-	-	-	-	16	-	0	-
246	-	-	33	-	-	-	-	-	-	-	-	-	-	-	13	-	33	-
247	-	-	31	-	-	-	-	-	-	-	-	-	-	-	-	-	11	-
248	-	-	28	-	-	-	-	-	-	-	-	-	-	-	-	14	28	-
249	-	-	17	-	-	-	-	-	-	-	-	-	-	-	-	-	17	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	280	-
** 253	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	0	-
255	-	-	-	25	-	-	-	-	-	25	-	-	-	-	-	-	-	-
260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
262	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-
269	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-
270	-	-	-	-	-	-	-	-	1	-	3	-	-	-	-	1	-	-
271	-	-	-	-	-	-	-	-	-	-	200	-	-	-	-	4	-	-
272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
** 274	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-
** 275	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-
** 280	x	x	x	100	-	100	x	x	x	x	10	100	100	100	x	x	100	-
** 281	-	-	-	-	-	-	-	-	-	280	-	50	1000	-	-	250	-	-
** 282	x	0	x	0	-	200	x	x	x	x	30	200	-	-	40	-	-	-
** 283	-	-	-	200	-	-	-	-	-	-	100	-	-	-	80	-	-	-
** 284	x	x	x	-	-	0	0	x	x	150	x	-	0	-	300	-	230	-
** 285	x	x	x	-	-	-	-	x	x	70	x	-	-	70	-	680	-	-
** 286	x	x	x	x	-	0	0	x	x	x	x	100	0	-	-	-	-	-
** 287	x	x	x	x	-	-	0	x	x	x	x	50	0	-	-	-	-	0
** 288	x	x	x	-	-	-	-	x	x	x	x	-	-	200	-	-	-	-
291	-	-	-	-	5	5	8	7	7	-	-	7	7	5	-	5	-	5
292	-	-	-	-	3	3	5	5	5	-	-	5	7	3	-	3	-	3
293	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
294	-	-	-	-	-	-	-	-	-	-	-	14	-	-	-	-	-	-

Further Functions Switchable by Means of the Control Keys

Mode →	0	2	3	4	5	6	7	8	9	10	14	15	16	17	20	21	23	24
Basic pos	1	1	1	1	2	2	2	2	2	1	1	2	2	2	1	1	1	2
Single start	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
backtack																		
Double start	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF	OFF	ON	ON	ON	OFF
backtack																		
Single end	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF
backtack																		
Double end	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF	OFF	ON	ON	ON	OFF
backtack																		

Note

The preset values of the following list of parameters refer to the setting of parameter 290 = 0.

- x = The positions marked with "x" are not used in the functional sequence!
- = For the positions marked with "-" the preset values listed in the List of Parameters are used !
- ** = When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

7.2 Operator Level

The preset values of the following list of parameters refer to the setting of parameter 290 = 0.

Parameter	Designation	Unit	max	min	Preset	Ind.
000 c2	- Number of stitches of start backtack forward - Number of stitches of start stitch condensing without stitch regulator - Number of stitches of end counting "chain	stitches	254	0	2 *)	A
001 c1	- Number of stitches of start backtack backward - Number of stitches of start stitch condensing with stitch regulator - Number of stitches of start counting "chain	stitches	254	0	4 *)	A
002 c3	- Number of stitches of end backtack backward - Number of stitches of end stitch condensing with stitch regulator - Number of stitches of tape cutter at the start of the seam	stitches	254	0	2 *)	A
003 c4	- Number of stitches of end backtack forward - Number of stitches of end stitch condensing without stitch regulator - Number of stitches of tape cutter at the seam end	stitches	254	0	2 *)	A
004 LS	Light barrier compensating stitches	stitches	254	0	7 *)	A
005 LSF	Number of stitches of the light barrier filter for knitted fabrics	stitches	254	0	1	A
006 LSn	Number of light barrier seams		15	1	1 *)	A
007 Stc	Number of stitches for the seam with stitch counting	stitches	254	0	20	A
008 -F-	A parameter from the technician level is assigned to the 9 key on the V820 control panel 1 = Softstart On/Off 2 = Ornamental backtack On/Off 3 = Sewing start blocked with light barrier uncovered On/Off 4 = Unlocking the chain On/Off 5 = Signals A1 and/or A2 On/Off with slide-in strips 1...4 (lefthand arrow = A1, righthand arrow = A2)		5	1	1 *)	A
009 LS	Light barrier On/Off		1	0	0 *)	A
013 FA	Thread trimmer On/Off		1	0	1 *)	A
014 FW	Thread wiper On/Off		1	0	1 *)	A
015 StS	Stitch counting On/Off		1	0	0	A
018 UoS	0 = Sequence "overlock mode with stop" 1 = Sequence "overlock mode without automatic stop. When the command "run" is given, the drive runs at the preselected speed. With pedal in pos. 0 or light barrier covered , the program switches to the next start of a seam without issuing signals M1/M2. 2 = As with setting "1". But with pedal in pos. 0 signals M1/M2 will be issued, and the program switches to the next start of a seam. 3 = As with setting "1". But with pedal in pos. -2 signals M1/M2 will be issued, and the program switches to the next start of a seam. Intermediate stop and sewing foot lift with pedal in pos. -1 are possible.		3	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Operator Level

Parameter	Designation	Unit	max	min	Preset	Ind.	
019	-Pd	0 = Pedal in pos. -1 disabled in the seam. With pedal in pos. -2 in the seam, only sewing foot lifting is possible. (Function only if parameter 009 = 1) 1 = Pedal in pos. -1, sewing foot lifting disabled in the seam. 2 = Pedal in pos. -2, thread trimming disabled. (Function only if parameter 009 = 1) 3 = Pedal in pos. -1 and -2 enabled in the seam. 4 = Pedal in pos. -1 and -2 blocked in the seam. (Function only if parameter 009 = 1)	4	0	3 *)	A	
020	kLM	Clamp at the seam end On/Off	1	0	0	A	
021	ckL	Run-out stitches clamp at the start of the seam	stitches	254	0	2 *)	A
022	SPo	0 = Chain suction until the end of count c2 1 = Chain suction at the seam end until pedal in pos. 0 (neutral) 2 = Chain suction until the drive is at standstill and the switch-off delay (parameter 237) has elapsed	2	0	0	A	
023	AFL	Automatic sewing foot lifting with pedal forward at the seam end, if light barrier or stitch counting is On 0 = Automatic sewing foot Off 1 = Automatic sewing foot On	1	0	1	E	
025	tFS	Start counting (pa. 157) for thread tension release at the start of the seam 0 = Start counting at the start of the seam 1 = Start counting when the light barrier is covered	1	0	1	A	
030	rFw	0 = Bobbin thread monitor Off 1 = Bobbin thread monitor with stop 2 = Bobbin thread monitor without stop 3 = Bobbin thread monitor with stop and start blockage after thread trimming 4 = As 1, but display of remaining stitches 5 = As 2, but display of remaining stitches 6 = As 3, but display of remaining stitches	6	0	0	A	
031	cFw	Number of stitches for bobbin thread monitor	stitches	25500 ***)	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 5-digit (max) parameter values on the control or control panel, the 3-digit value displayed must be multiplied by 100.

7.3 Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
100	SSc	Number of softstart stitches	stitches	254	0	2 *)	A
110	n1	Positioning speed	RPM	390 **)	70	200 *)	A
111	n2-	Upper limit setting range of the maximum speed	RPM	9900 **)	n2_	4000 *)	A
112	n3	Start backtacking speed	RPM	9900 **)	200	1200 *)	A
113	n4	End backtacking speed	RPM	9900 **)	200	1200 *)	A
114	n5	Speed after light barrier sensing	RPM	9900 **)	200	1200 *)	A
115	n6	Softstart speed	RPM	1500 **)	70	500 *)	A
116	n7	Trimming speed	RPM	500 **)	70	200 *)	A
117	n10	High lift walking speed	RPM	9900 **)	400	1000 *)	A
118	n12	Automatic speed for stitch counting	RPM	9900 **)	400	3500 *)	A
119	nSt	Speed stage graduation 1 = linear 2 = slightly progressive 3 = highly progressive		3	1	2 *)	A
121	n2_	Lower limit setting range of the maximum speed	RPM	n2- **)	400	400	A
122	n9	Limited speed n9	RPM	9900 **)	400	2000 *)	A
123	n11	Limited speed n11	RPM	9900 **)	400	2500 *)	A
124	toP	Speed limitation by means of ext. potentiometer (maximum value)	RPM	9900 **)	Pa.125	4000	A
125	bot	Speed limitation by means of ext. potentiometer (minimum value)	RPM	Pa.124 **)	400	400	A
126	Pot	Function "speed limitation by means of external potentiometer" 0 = Function "external potentiometer" Off 1 = External potentiometer always active 2 = External potentiometer active only if one of inputs in1...i10 has been selected and enabled 3 = Speed depending on high lift by means of potentiometer e. g. on JUKI (LU2210/ 2260) 4 = Speed depending on high lift by means of potentiometer e. g. on Dürkopp Adler (767)		4	0	0	A
127	AkS	Audible signal of machine run blockage and bobbin thread monitor On/Off		1	0	0	A
128	Asd	Start delay, when command "start" is given by covering the light barrier (see parameter 129)	ms	2000 **)	0	0	A
129	ALS	Machine start by covering the light barrier (only in conjunction with parameter 132 = 1) 0 = Function Off 1 = Light barrier covered → pedal forward (>1) → machine run pedal controlled 2 = Pedal forward (>1) → light barrier covered → machine run pedal controlled 3 = Light barrier covered → machine run at automatic speed n12 (without pedal) Caution! If 129 = 3, the machine starts immediately after covering the light barrier without influence by the pedal! It can be stopped only by uncovering the light barrier or by machine run blockage! If machine run blockage is disabled, the machine starts immediately even if the light barrier is still covered!		3	0	0	A
130	LSF	Light barrier filter for knitted fabrics		1	0	0 *)	A
131	LSd	0 = Light barrier sensing "covered" 1 = Light barrier sensing "uncovered"		1	0	1 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
132 LSS	0 = Machine start possible with light barrier uncovered or covered. 1 = Machine start blocked with light barrier uncovered if parameter 131 = 1. Machine start blocked with light barrier covered if parameter 131 = 0.		1	0	0 *)	A
133 LSE	Thread trimming operation, when completing the seam after light barrier sensing On/Off		1	0	1 *)	A
134 SSt	Softstart On/Off		1	0	0 *)	A
135 SrS	Ornamental backtack On/Off		1	0	0	A
136 FAr	Trimming stitch backward On/Off		1	0	0	A
137 hP	High lift for walking foot On/Off		1	0		A
139 nIS	Display of machine speed On/Off		1	0	0 *)	A
141 SGn	Speed status for the seam with stitch counting 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = Fixed speed (parameter 118) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 118) 3 = At fixed speed (parameter 118) can be interrupted by full heelback 4 = At fixed speed (parameter 110) can be interrupted by full heelback.		4	0	0	A
142 SFn	Speed status for the free seam and for the seam with light barrier 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = Fixed speed (parameter 118) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 118) 3 = At fixed speed (parameter 118) can be interrupted by full heelback (only for seams with light barrier).		3	0	0	A
143 kSA	Stitch counting at the start of the seam (e. g. chain suction) 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = Fixed speed (parameter 112) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 112) 3 = At fixed speed (parameter 112), can be suspended or interrupted depending on the setting of parameter 019.		3	0	1	A
144 kSE	Stitch counting at the seam end (e. g. chain suction) 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = Fixed speed (parameter 113) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 113) 3 = At fixed speed (parameter 113), can be suspended or interrupted depending on the setting of parameter 019.		3	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

**) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
150	t8	Stitch correction of the double start backtack (prolongation of the stitch regulator ON period / not effective with ornamental backtack)	ms	500	0	0	A
151	t9	Stitch correction of the double end backtack (prolongation of the stitch regulator ON period / not effective with ornamental backtack)	ms	500	0	0	A
152	thP	Run-out time of the high lift walking speed	ms	500	80	150 *)	A
153	brt	Braking power at machine standstill		50	0	10 *)	A
155	LSG	Mode signal "run" 0 = Signal Off. 1 = Signal "run" On. 2 = Signal "run" enabled when the speed is >3000 RPM. 3 = Signal with pedal <-> 0. 4 = Signal enabled only after motor synchronization (one rotation at positioning speed after power On)		4	0	1	A
156	t05	Switch-off delay for the signal "run" or signal with pedal in pos. 0 (neutral)	ms	2550 **)	0	0	A
157	SFS	Stitches until thread tension release Off after light barrier covered at the start of the seam (effective only in overlock mode)	stitches	254	0	0	A
158	dnL	Delay time until light barrier speed release	ms	500	0	0 *)	A
159	cb2	Stitches after light barrier uncovered until signal M9 "hemming blow 2" Off	stitches	254	0	10	A
161	drE	Direction of motor rotation 0 = Clockwise rotation 1 = Counterclockwise rotation		1	0	1 *)	A
170	Sr1	Setting the reference position: - Press the E key. - Press the >> key. - Turn handwheel until symbol on display goes off. Then set the handwheel to the reference position. - Press the P key twice.					
171	Sr2	Setting the needle positions: 1E = Start position 1 2E = Start position 2 1A = End position 1 2A = End position 2	degrees	359	0	56 281 98 323	A A A A
172	Sr3	Display on the control: Pos. 1 to 1A (LED 7 lights up) Pos. 2 to 2A (LED 8 lights up)					
172	Sr3	Display on the V810 control panel: Pos. 1 to 1A (lefthand arrow above the 4 key On) Pos. 2 to 2A (righthand arrow above the 4 key On)					
172	Sr3	Display on the V820 control panel: Pos. 1 to 1A (lefthand arrow above the 7 key On) Pos. 2 to 2A (righthand arrow above the 7 key On)					

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
173 Sr4	<p>Checking of the signal outputs and inputs using the incorporated control panel or the V810/V820 control panels</p> <p>01 = Backtacking on socket ST2/34 02 = Sewing foot lift on socket ST2/35 03 = Output M1 on socket ST2/37 04 = Output M3 on socket ST2/27 05 = Output M2 on socket ST2/28 06 = Output M4 on socket ST2/36 07 = Output M5 on socket ST2/32 08 = Output M11 on socket ST2/31 09 = Output M6 on socket ST2/30 10 = Output M9 on socket ST2/25 11 = Output M8 on socket ST2/24 12 = Output M7 on socket ST2/23 13 = Output M10 on socket ST2/29</p> <p>OFF/ON = By actuating the switches connected to the control, the function of these switches is checked and displayed on the control. OFF is displayed with open switch and the activated input in1...i10 with closed switch.</p>					
179 Sr5	<p>Control program number with index and identification number. Upon pressing the appropriate key the data will be displayed in succession.</p> <p>V810 control panel display example: Press the E key → Display e. g. Sr [°] Press the >> key → Display e. g. 5111A Press the E key → Display e. g. 010823 Press the E key → Display e. g. 15 Press the P key twice → Display Ab220A</p> <p>V820 control panel display example: Press the E key → Display F-179 Sr5 [°] Press the >> key → Display e. g. 5111A Press the E key → Display e. g. 01082315 Press the P key twice → Display 4000 Ab220A</p> <p>See instruction manual for control display example.</p>					
180 rd	Number of reversing increments	degrees	359	0	175 *)	A
181 drd	Switch-on delay of reverse motor rotation	ms	990	0	10 *)	A
182 Frd	Reverse motor rotation On/Off		1	0	0 *)	A
183 FFm	<p>Disabling of flip-flop functions at the seam end</p> <p>0 = Flip-flop 1 (M6) and flip-flop 2 (M10) not disabled at the seam end 1 = Flip-flop 1 (M6) disabled at the seam end 2 = Flip-flop 2 (M10) disabled at the seam end 3 = Flip-flop 1 (M6) and flip-flop 2 (M10) disabled at the seam end</p>		3	0	0	A
184 c6	Number of run-out stitches when unlocking the chain	stitches	254	0	20 *)	A
185 chP	Stitch counting high lift for walking foot	stitches	254	0	0	A
186 FFi	<p>Function "speed limitation n11"</p> <p>0 = Speed limitation n11 On, when signal M10 is On. Speed limitation n11 Off, when signal M10 is Off. 1 = Speed limitation n11 Off, when signal M10 is On. Speed limitation n11 On, when signal M10 is Off.</p>		1	0	0 *)	A
187 FFo	<p>Function of signal M10 after "power On" (flip-flop 2) on socket ST2/29</p> <p>0 = Signal M10 Off / speed limitation n11 according to setting of parameter 186 1 = Signal M10 On / speed limitation n11 according to setting of parameter 186</p>		1	0	0 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
188	hP	Minimum speed level for high lift for walking foot Maximum speed level for high lift for walking foot Assignment of maximum speed (parameter 111) and minimum speed (parameter 117) to the 21 speed levels depending on high lift. Display example: 2740 05 11 19 05 = Display of the level up to which the maximum speed is effective. 19 = Display of the level up to which the minimum speed is effective. 11 = Display of the speed level depending on high lift set on the potentiometer. 2740 = Corresponding speed See instruction manual on how to change the setting!	21 21	1 1		A A	
190	MEK	Function "unlock the chain" in modes 5, 6, 7 and 16 (parameter 290) 0 = Unlocking the chain Off 1 = Unlocking the chain manually (with pedal in pos. -2 without cutting at the seam end) 2 = Unlocking the chain automatically - by means of light barrier or - pedal in pos. -2 (parameter 019) without cutting at the seam end 3 = Unlocking the chain automatically - by means of light barrier or - pedal in pos. -2 (parameter 019) with cutting and run-out stitches (parameter 184) at the seam end, then unlocking the chain (only if parameter 290 = 7 and 16) 4 = Unlocking the chain only with pedal in pos. -2. No unlocking the chain with seam end by means of light barrier, cutting and run-out stitches.	4	0	1 *)	A	
191	MHE	Seam end in the overlock mode by end count c2 or c4 0 = Seam end after count c4 – tape cutter 1 = Seam end after count c2 – chain suction	1	0	0	A	
192	PLS	Speed of the light barrier compensating stitches 0 = Speed n5 after light barrier sensing 1 = Speed pedal controlled	1	0	0 *)	A	
193	kSL	Enable chain suction signal and thread tension release 0 = Thread tension release and chain suction after the light barrier compensating stitches 1 = Chain suction from light barrier uncovered onwards and thread tension release after the light barrier compensating stitches	1	0	0	A	
194	Stb	Function "blow fabric onto stack" (only if parameter 290 = 16) 0 = Blow fabric onto stack at the seam end 1 = Blow fabric onto stack from light barrier uncovered onwards	1	0	0 *)	A	
195	LSc	Stitches for light barrier monitoring (light barrier monitoring is off, when set to "0").	stitches	2550 **)	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Technician Level

Code no. 190 with control operation

Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
196 StL	Function "stitch lock" (parameter 290 = 21) 0 = Stitch lock Off Output ST2/34 (STV) = Stitch condensing 1 = Stitch lock On Output ST2/28 (M2) = Stitch condensing Output ST2/34 (STV) = Stitch lock Attention! Upon switching the parameter from 0 to 1 or vice versa, the output function changes accordingly!		1	0	1 *)	A
197 dr°	Stop for thread trimming depending on angle	degrees	720	0	0 *)	A
198 SAK	Functions with chainstitch machines e. g. bag sewing machine (parameter 290 = 5) 0 = Function "thread trimming" or "hot thread chain cutting" and sewing foot lift using the pedal. 1 = Function "thread trimming" or "hot thread chain cutting" by means of knee switch and sewing foot lift using the pedal. 2 = Function "thread trimming" or "hot thread chain cutting" using the pedal and sewing foot lift by means of knee switch.		2	0	0	A
199 FSn	0 = Thread tension release On at the seam end until pedal in pos. 0 (neutral). 1 = Thread tension release On at the seam end or at the start of the seam. 2 = As with setting 1, but thread tension release is enabled immediately after "power on". This parameter is effective only in the overlock mode!		2	0	0 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

7.4 Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
200	t1	Delay until speed release after start backtack	ms	500	0	100 *)	A
201	t2	Sewing foot lift switch-on delay with half heelback	ms	500	20	80 *)	A
202	t3	Start delay after disabling the sewing foot lift signal	ms	500	0	50 *)	A
203	t4	Time of full power of sewing foot lifting	ms	600	0	500 *)	A
204	t5	Holding power for sewing foot lifting 1...100% 1% → low holding power 100% → high holding power	%	pa. 254	1	40 *)	A
205	t6	Thread wiper time	ms	2550 **)	0	120 *)	A
206	t7	Delay from end of thread wiper until sewing foot lifting On	ms	800	0	40 *)	A
207	br1	Braking effect when modifying the preset value ≤ 4 stages		55	1	15	A
208	br2	Braking effect when modifying the preset value ≥ 5 stages		55	1	35	A
210	tSr	Stop time for switching the stitch regulator in the ornamental backtack	ms	500	0	140	A
211	tFL	Sewing foot lift switch-on delay with thread wiper off	ms	500	0	60 *)	A
212	t10	Time of full power of backtacking or thread trimmer forward	ms	600	0	500	A
213	t11	Holding power for backtacking or thread trimmer backward 1...100% 1% → low holding power 100% → high holding power	%	pa. 255	1	40 *)	A
219	br3	Positioning power at stop of the drive		55	1	10	A
220	ALF	Accelerating power of the drive		55	1	35	A
221	dGn	Speed gate 1	RPM	990 **)	50	100	A
222	tGn	Speed gate damping period (effective only if parameter 224 = 0)	ms	990	0	120	A
223	dG2	Speed gate 2	RPM	6500 **)	200	1600	A
224	dGF	Speed gate 2 On/Off		1	0	1	A
225	br4	Setting of the braking curve for the light barrier and machine run blockage (with ratio 1:1)		110	1	110	A
232	USS	Overlock with fast scissors On/Off 0 = Tape cutter 1 = Fast scissors (set parameter 282 = 0)		1	0	0	A
234	PdO	New start after machine run blockage 0 = New start after disabling machine run blockage without influence by the pedal (e. g. with automats) 1 = New start after disabling machine run blockage only if pedal in pos. 0		1	0	1	A
235	bkS	Braking curve in the overlock mode On/Off 0 = Braking curve Off 1 = Braking curve On for precise stop upon chain suction at the seam end		1	0	0	A
236	FLP	0 = Sewing foot lift possible in all positions 1 = Sewing foot lift possible in position 2 2 = Sewing foot lift at the seam end stored with pedal backward. Storing undone with pedal slightly forward.		2	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
237	tkS	Switch-off delay for chain suction at the seam end, if parameter 022 = 2.	ms	2550 **)	0	0	A
238	EnP	Software debouncing for all inputs: 0 = No debouncing 1 = With debouncing		1	0	1	A
239	FEL	Selection of the input function on socket B18/5 0 = Light barrier function, if 009 = 1 All other functions as with parameter 240.		47	0	0	A
240	in1	Selection of the input functions on socket ST2/7 for input 1 0 = No function 1 = Needle up/down 2 = Needle up 3 = Single stitch (basting stitch) 4 = Full stitch 5 = Needle to position 2 6 = Machine run blockage effective with open contact 7 = Machine run blockage effective with closed contact 8 = Machine run blockage unpositioned effective with open contact 9 = Machine run blockage unpositioned effective with closed contact 10 = Automatic speed n12 without pedal 11 = Limited speed n12 pedal controlled (see parameter 266) 12 = Sewing foot lifting with pedal in position 0 (neutral) 13 = High lift for walking foot with speed limitation n10 (operational mode not stored) 14 = High lift for walking foot (flip-flop 1) with speed limitation n10 15 = Tape cutter / fast scissors: function only in chainstitch and overlock mode 16 = Intermediate backtack / intermediate stitch condensing 17 = Stitch regulator suppression / recall 18 = Unlocking the chain: can be activated by keystroke, but will be executed only at the seam end 19 = Reset bobbin thread monitor if parameter 030 = >0 20 = Handwheel running in the direction of rotation according to the setting of parameter 161 21 = Handwheel running in the opposite direction of rotation according to the setting of parameter 161 22 = Speed limitation n11 (flip-flop 2). Output ST2/29 is enabled according to setting of parameter 186 23 = No function 24 = No function 25 = Speed limitation with ext. potentiometer On/Off (see parameter 126) 26 = Manual stacker 27 = Unlocking the chain, function is performed upon pressing the key 28 = External light barrier (according to the setting of parameter 131)		47	0	0 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

**) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
240 in1	29 = "Hemmer foot" signal Off (see parameter 296), function effective only in the seam 30 = High lift for walking foot, if sewing foot is On 31 = Function "speed limitation bit0" (speed n11) 32 = Function "speed limitation bit1" (speed n10) (bit0 + bit1 = speed n9). 33 = Speed n9 pedal controlled 34 = Automatic speed n9 can be suspended by pressing the pedal to pos. 0 (neutral) 35 = Automatic speed n9 can be interrupted by pressing the pedal to pos. -2 36 = Automatic speed n9 without pedal 37 = Speed n12 pedal controlled (break contact) 38 = Automatic speed n12 without pedal (break contact [N.C.]) 39 = Switch to the next pattern in TEACH IN 40 = Switch back to the previous pattern in TEACH IN 41 = Tape cutting only at machine standstill 42 = Enable hot thread chain cutting or sewing foot lifting. Function effective only in the chain stitch mode. 43..47 = No function					
241 in2	Selection of input function on socket ST2/11 for input 2 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
242 in3	Selection of input function on socket ST2/6 for input 3 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
243 in4	Selection of input function on socket ST2/8 for input 4 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
244 in5	Selection of input function on socket ST2/5 for input 5 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
245 in6	Selection of input function on socket ST2/12 for input 6 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
246 in7	Selection of input function on socket ST2/9 for input 7 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
247 in8	Selection of input function on socket ST2/10 for input 8 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
248 in9	Selection of input function on socket ST2/13 for input 9 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A
249 i10	Selection of input function on socket ST2/14 for input 10 0 = No function All other functions of the keys as with parameter 240		47	0	0 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
250	iFA	Thread trimmer activation angle	degrees	259	0	180 *)	A
251	FSA	Switch-off delay of thread tension release	ms	990	0	50 *)	A
252	FSE	Switch-on delay angle of thread tension release	degrees	259	0	0 *)	A
253	tFA	Stop time for thread trimmer	ms	500 **)	0	70 *)	A
254	EF-	Upper limit (pa. 204) duty ratio for sewing foot lift 1...100	%	100	1	100 *)	A
255	EV-	Upper limit (pa. 213) duty ratio for backtacking or thread trimmer backward 1...100	%	100	1	100 *)	A
256	kt6	Delay time of output VR (chain suction), (function only if parameter 290 = 15)	ms	2550 **)	0	250	A
257	c7	Start counting until tape cutter M4 On (function only if parameter 290 = 15)	stitches	254	0	5	A
258	c8	End counting until tape cutter M4 On (function only if parameter 290 = 15)	stitches	254	0	15	A
260	ihr	Handwheel increments carried out when the key is pressed once (in1...i10)	incr.	500	0	10 *)	A
261	nhr	Handwheel speed	RPM	150 **)	30	50	A
262	dhr	Delay time until the key is pressed down causing the handwheel to rotate continuously (in1...i10). Pressing the key briefly < preset value of parameter 262: increments set by means of parameter 260 are carried out. Keeping the key pressed down > preset value of parameter 262: handwheel rotates continuously.	ms	2550 **)	0	200 *)	A
263	ihP	0 = Signal "high lift for walking foot" (M6), when key is closed. 1 = Signal "high lift for walking foot" (M6), when key is open. (Function only if parameter 137 = 1)		1	0	0	A
264	iS1	0 = Signal "manual stacker" (M7), when key is closed. 1 = Signal "manual stacker" (M7), when key is open. (Function in all modes except mode 16)		1	0	0	A
265	ktS	ON period of manual stacker (M7)	ms	2550 **)	0	500	A
266	inr	0 = Limited speed n12 pedal controlled, when key is closed. 1 = Limited speed n12 pedal controlled, when key is open. (Function if parameters 240...249 = 11)		1	0	0	A
269	PSv	Positioning shift	degrees	100	0	15 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

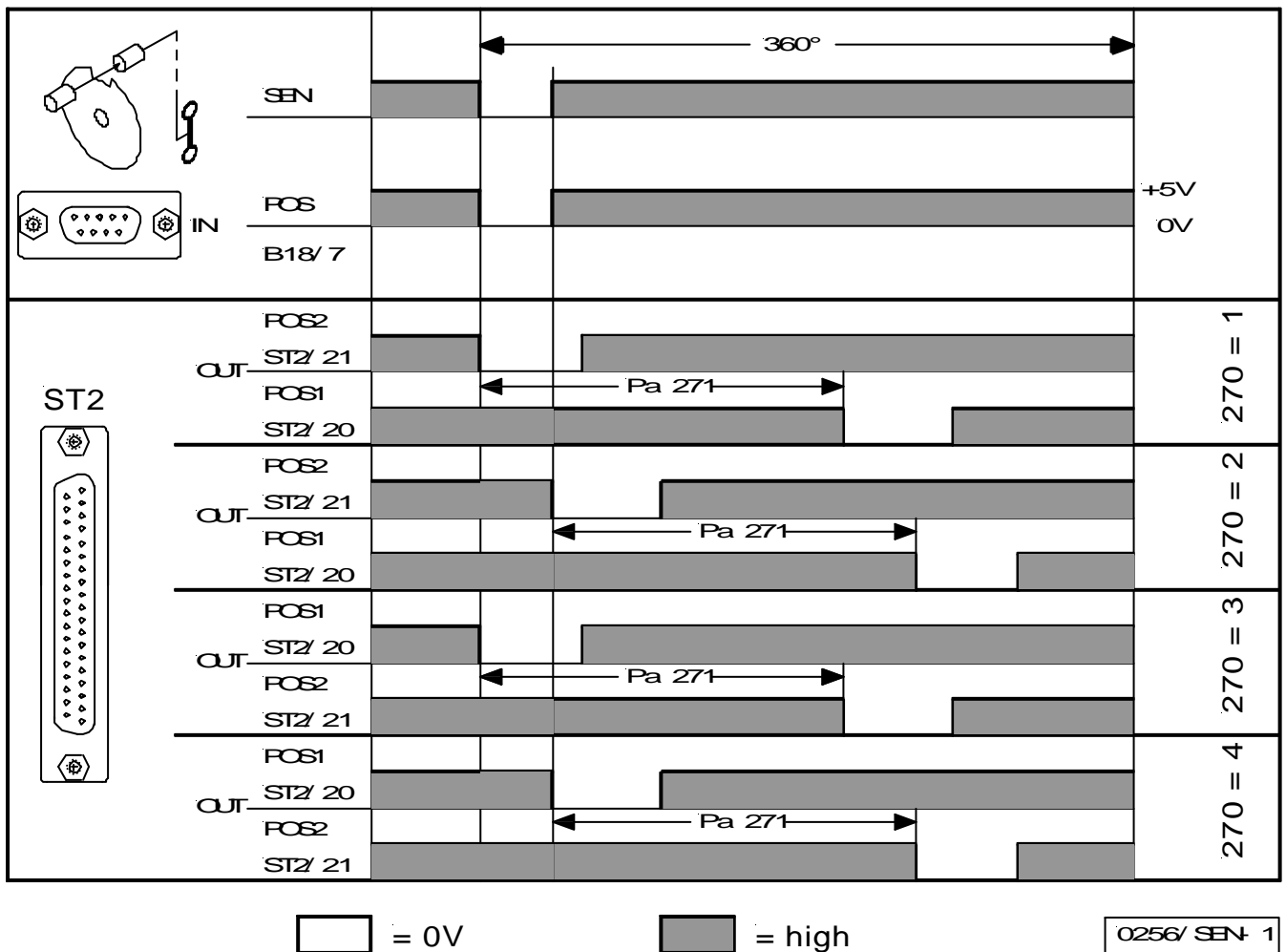
**) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
270 PGM	<p>Connection of a sensor e. g. light barrier sensor to light barrier socket B18/7. Selection of the desired function!</p> <p>0 = The positions are generated by means of the transmitter incorporated in the motor and can be set by means of parameter 171.</p> <p>1 = Setting the sensor to position 2. Set position 1 using parameter 271, starting from leading edge position 2.</p> <p>2 = Setting the sensor to position 2. Set position 1 using parameter 271, starting from trailing edge position 2.</p> <p>3 = Setting the sensor to position 1. Set position 2 using parameter 271, starting from leading edge position 1.</p> <p>4 = Setting the sensor to position 1. Set position 2 using parameter 271, starting from trailing edge position 1.</p> <p>5 = No position sensor available. The drive stops unpositioned. The thread trimmer function is suppressed with this setting.</p>		5	0	0 *)	A

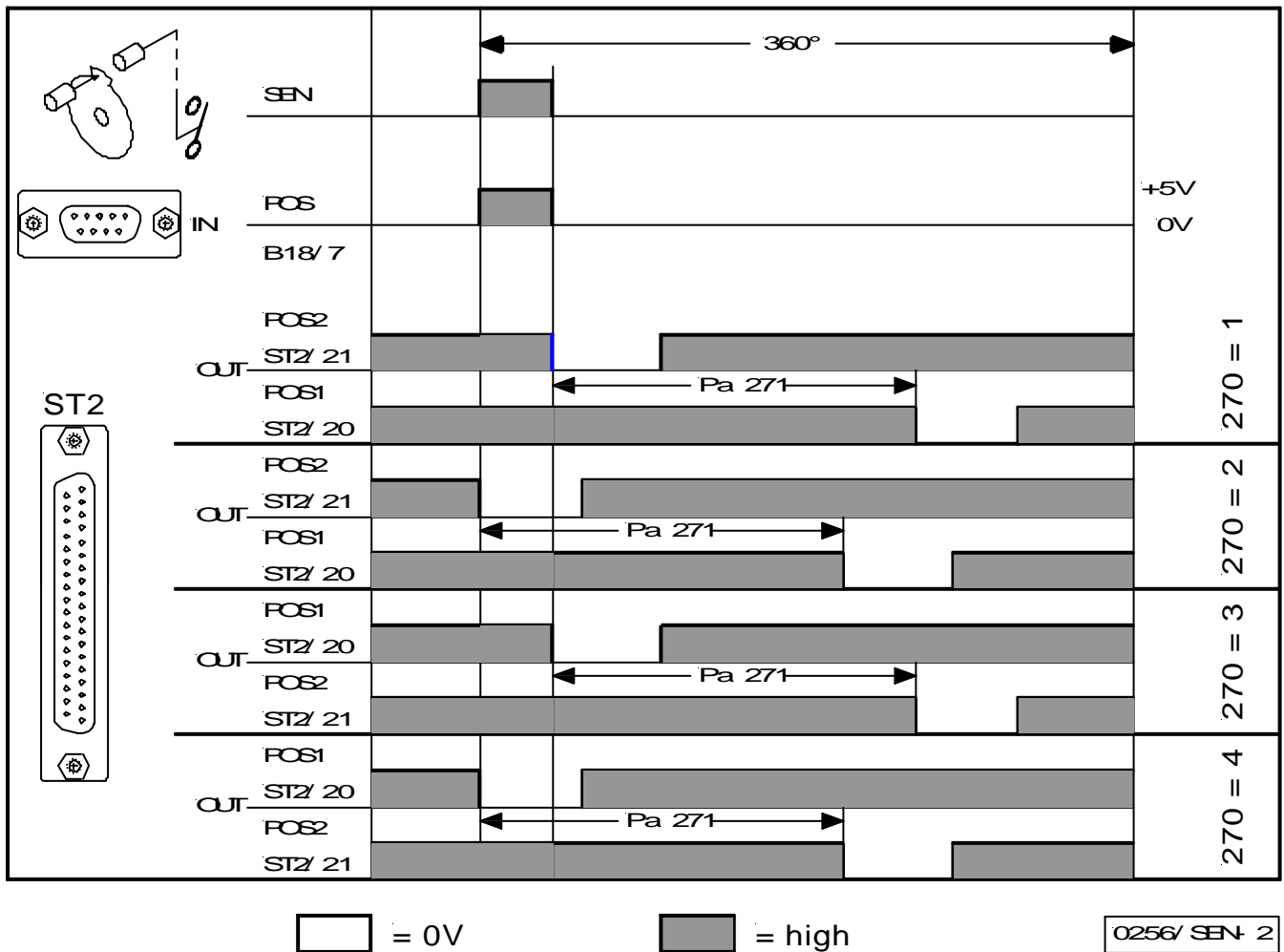


*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Supplier Level

Code no. 311 with control operation
 Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
270 PGM	Connection of a sensor e. g. light barrier sensor to light barrier socket B18/7. Selection of the desired function! 0 = Function as in table on previous page! 1 = Setting the sensor to position 2. Set position 1 using parameter 271, starting from trailing edge position 2. 2 = Setting the sensor to position 2. Set position 1 using parameter 271, starting from leading edge position 2. 3 = Setting the sensor to position 1. Set position 2 using parameter 271, starting from trailing edge position 1. 4 = Setting the sensor to position 1. Set position 2 using parameter 271, starting from leading edge position 1. 5 = Function as in table on previous page!		5	0	0 *)	A



*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
271	PGr	Number of angular degrees after the sensor position on the machine handwheel	degrees	255	0	180 *)	A
272	trr	Transmission ratio between motor shaft and machine shaft (calculation formula see instruction manual!) The transmission ratio should be determined and indicated as precisely as possible!		255	020	100 *)	A
273	Asi	Signals M8, M9, M10 On/Off (0 = Off, 1 = On)		1	0	0	A
274	Ad1	Delay time of signal M8 at the start of the seam	ms	2550 **)	0	40 *)	A
275	At1	ON period of signal M8 at the start of the seam	ms	2550 **)	0	150 *)	A
276	Ad2	Delay time of signal M9 at the start of the seam	ms	2550 **)	0	50	A
277	At2	ON period of signal M9 at the start of the seam	ms	2550 **)	0	60	A
278	Ad3	Delay time of signal M10 at the start of the seam	ms	2550 **)	0	40	A
279	At3	ON period of signal M10 at the start of the seam	ms	2550 **)	0	350	A
280	kd1	Delay time output M1	ms	2550 **)	0	0 *)	A
281	kt1	ON period output M1	ms	2550 **)	0	100 *)	A
282	kd2	Delay time output M2	ms	2550 **)	0	100 *)	A
283	kt2	ON period output M2	ms	2550 **)	0	100 *)	A
284	kd3	Delay time output M3	ms	2550 **)	0	200 *)	A
285	kt3	ON period output M3	ms	2550 **)	0	100 *)	A
286	kd4	Delay time output M4	ms	2550 **)	0	300 *)	A
287	kt4	ON period output M4	ms	2550 **)	0	100 *)	A
288	kdF	Delay time until sewing foot On	ms	2550 **)	0	380 *)	A
289	kt5	ON period output M7	ms	2550 **)	0	1000	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
290 FAM	<p>0 = Lockstitch mode: (FA1, FA2, FA3, FA1+FA2); e. g. Brother Dürkopp Adler, Mitsubishi, Pfaff, Toyota »Slide-in strip for V810 and V820 = 1«</p> <p>2 = Lockstitch mode: e. g. Singer (212 UTT) »Slide-in strip for V810 and V820 = 1«</p> <p>3...= Lockstitch mode: e. g. Dürkopp Adler (models 767, N291) strip for V810 and V820 = 1«</p> <p>4 = Chainstitch mode: e. g. (US80A) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«</p> <p>5 = Chainstitch mode in general: M1, M2, M3 and M4 parallel sequence »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«</p> <p>6 = Chainstitch mode with tape cutter and/or fast scissors and M1 / M2 at the seam end »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«</p> <p>7 = Overlock mode: e. g. (AC62AV1461) »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5«</p> <p>8 = Backlatch mode: Pegasus »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5«</p> <p>9 = Backlatch mode: Yamato »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5«</p> <p>10 = Lockstitch mode: Union Special (63900AMZ »replacement for US80A«) and on Refrey lockstitch machines »Slide-in strip for V810 and V820 = 1«</p> <p>14 = Lockstitch mode: Juki (5550-6, 5550-7) »Slide-in strip for V810 and V820 = 1«</p> <p>15 = Backlatch mode: Pegasus (SSC100) »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5«</p> <p>16 = Overlock mode: feed-off-the-arm machines e. g. Yamato (FD62) »Slide-in strip for V820 = 7«</p> <p>17 = Chainstitch mode: Pegasus (stitch lock) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«</p> <p>20 = Lockstitch mode: Juki (LU1510-7) »Slide-in strip for V810 and V820 = 1«</p> <p>21 = Chainstitch mode with stitch lock: Yamato (VG2730-156M) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«</p> <p>23 = Lockstitch mode: Dürkopp Adler (271...275) »Slide-in strip for V810 and V820 = 1«</p> <p>24 = Chainstitch mode: Pegasus (MHG-100) Modes 1, 11...13, 18, 19, 22 are selectable, but their functions correspond to mode 0!</p>		24	0	5	A

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Note

When selecting the trimming mode by means of parameter 290, the connected V810 or V820 control panel is automatically sensed and the corresponding slide-in strip number is selected by means of parameter 291 and 292, respectively. Should a different strip be inserted, its number can be set by means of parameter 291 and 292, respectively, after having selected the trimming mode.

Parameter	Designation	Unit	max	min	Preset	Ind.
291 810	Select slide-in strip number for the V810 control panel (illustrations of slide-in strips see the following chapter 9)		12	1	1 *)	A
292 820	Select slide-in strip number for the V820 control panel (illustrations of slide-in strips see the following chapter 9)		10	1	1 *)	A
293 tF1	Selection of the input function by means of the (A) key "F1" on the V810/V820 control panel 0 = No function 1 = Needle up/down 2 = Needle up 3 = Single stitch (basting stitch) 4 = Full stitch 5 = Needle to position 2 6...12 = No function 13 = High lift for walking foot with speed limitation n10 (operational mode not stored) 14 = High lift for walking foot with speed limitation n10 (operational mode stored) 15 = Tape cutter / fast scissors (in chainstitch and overlock mode) 16 = Intermediate backtack/intermediate stitch condensing 17 = Stitch regulator suppression / recall 18 = No function 19 = Reset bobbin thread monitor if parameter 030 = >0		19	0	17 *)	A
294 tF2	Selection of the input function by means of the (B) key "F2" on the V810/V820 control panel Functions of the key as with parameter 293		19	0	1 *)	C
295 nAM	Switch proximity switches for inputs in2, in7, in8, in9		1	0	0	A
296 M08	Functions of signal M8 0 = Signal M8 Off 1 = Signal hemmer foot On at the start of the seam with pedal in pos. -1 or -2 and in the seam with machine running 2 = Signal hemmer foot On at the start of the seam with pedal in pos. -1 or -2 and remains active in the seam 3 = Signal M8 as center cutter 4 = Signal M8 with needle up / down 5 = Signal M8 alternating with M3 with "fast scissors" on overlock machines in mode 16, if parameter 232=1 has been selected		5	0	0 *)	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
297 M11	Functions of signal M11 0 = Function according to setting of parameter 290. 1 = Signal M11 is switched on whenever the light barrier is uncovered (pa. 131 = 1) or covered (pa. 131 = 0) 2 = Signal M11 is switched on whenever the light barrier is covered (pa. 131 = 1) or uncovered (pa. 131 = 0) 3 = Signal M11 is switched on only after light barrier uncovered and/or covered until seam end 4 = Signal M11 is switched on as with setting 3. Signal M5 (machine running), however, is switched off while signal M11 is issued. When signal M11 is issued, signal M6 (machine at standstill) is also immediately issued. 5 = Signal M11 is switched on from "light barrier sensing", "pedal in pos. -2" or "hemmer foot signal" key off" onwards.		5	0	0	A
298 nSo	Backtack synchronization On/Off		1	0	0	A
299 nrS	Backtack synchronization speed	RPM	3000 **)	200	400	A
300 AA1	Selectable power transistors for signal A1 0 = No function 1 = Signal on output M1 2 = Signal on output M2 3 = Signal on output M3 4 = Signal on output M4 5 = Signal on output M5 6 = Signal on output M6 7 = Signal on output M7 8 = Signal on output M8 9 = Signal on output M9 10 = Signal on output M10 11 = Signal on output M11 12 = Signal on output VR		12	0	0	A
301 So1	Issue signal A1 0 = Signal until seam end (according to setting of parameter 320) 1 = Signal over time 2 = Signal until seam end and drive stops 3 = Signal during stitch counting (according to setting of parameter 309)		3	0	0	A
302 tr1	Starting point for signal A1 0 = Start at the beginning of the seam 1 = Start of the signal triggered by light barrier sensing 2 = Start of the signal when the drive stops at the seam end 3 = Start from light barrier covered onwards at the beginning of the seam		3	0	0	A
303 do1	Delay of signal A1 0 = No delay until signal On 1 = Delay over time until signal On 2 = Delay over stitches until signal On		2	0	1	A
304 dt1	Delay time until signal A1 On	ms	2550 **)	0	0	A
305 St1	ON period of signal A1	ms	2550 **)	0	0	A
306 nA1	Speed mode when signal A1 is On 0 = Pedal controlled speed 1 = Limited speed n9 2 = Limited speed n11		2	0	0	A

*) Depending on the selected mode. See table at the beginning of the List of Parameters!

**) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation

Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.	
307	A1	Signal A1 On/Off	1	0	0	A	
308	dA1	Stitches delaying signal A1	stitches	999	0	0	A
309	cA1	Stitch counting during signal A1	stitches	999	0	0	A
310	AA2	Selectable power transistors for signal A2 0 = No function 1 = Signal on output M1 2 = Signal on output M2 3 = Signal on output M3 4 = Signal on output M4 5 = Signal on output M5 6 = Signal on output M6 7 = Signal on output M7 8 = Signal on output M8 9 = Signal on output M9 10 = Signal on output M10 11 = Signal on output M11 12 = Signal on output VR	12	0	0	A	
311	So2	Issue signal A2 0 = Signal until seam end (according to setting of parameter 320) 1 = Signal over time 2 = Signal until seam end and drive stops 3 = Signal during stitch counting (according to setting of parameter 319)	3	0	0	A	
312	tr2	Starting point for signal A2 0 = Start at the beginning of the seam 1 = Start of the signal triggered by light barrier sensing 2 = Start of the signal when the drive stops at the seam end 3 = Start from light barrier covered onwards at the beginning of the seam	3	0	0	A	
313	do2	Delay of signal A2 0 = No delay until signal On 1 = Delay over time until signal On 2 = Delay over stitches until signal On	2	0	1	A	
314	dt2	Delay time until signal A2 On	ms	2550 **)	0	0	A
315	St2	ON period of signal A2	ms	2550 **)	0	0	A
316	nA2	Speed mode when signal A2 is On 0 = Pedal controlled speed 1 = Limited speed n9 2 = Limited speed n11	2	0	0	A	
317	A2	Signal A2 On/Off	1	0	0	A	
318	dA2	Stitches delaying signal A2	stitches	999	0	0	A
319	cA2	Stitch counting during signal A2	stitches	999	0	0	A
320	bP0	Switch-off time of signals A1 and A2 0 = Signals effective until seam end 1 = Signals effective until pedal is in pos. 0 (neutral)	1	0	0	A	
321	Std	Suppression of the seam when 0 stitches are set 0 = Suppression Off 1 = Suppression On	1	0	0	A	
322	dkn	0 = Correction seam Off 1 = Correction seam On 2 = Interruption of seam or pattern by thread trimmer	2	0	0	A	

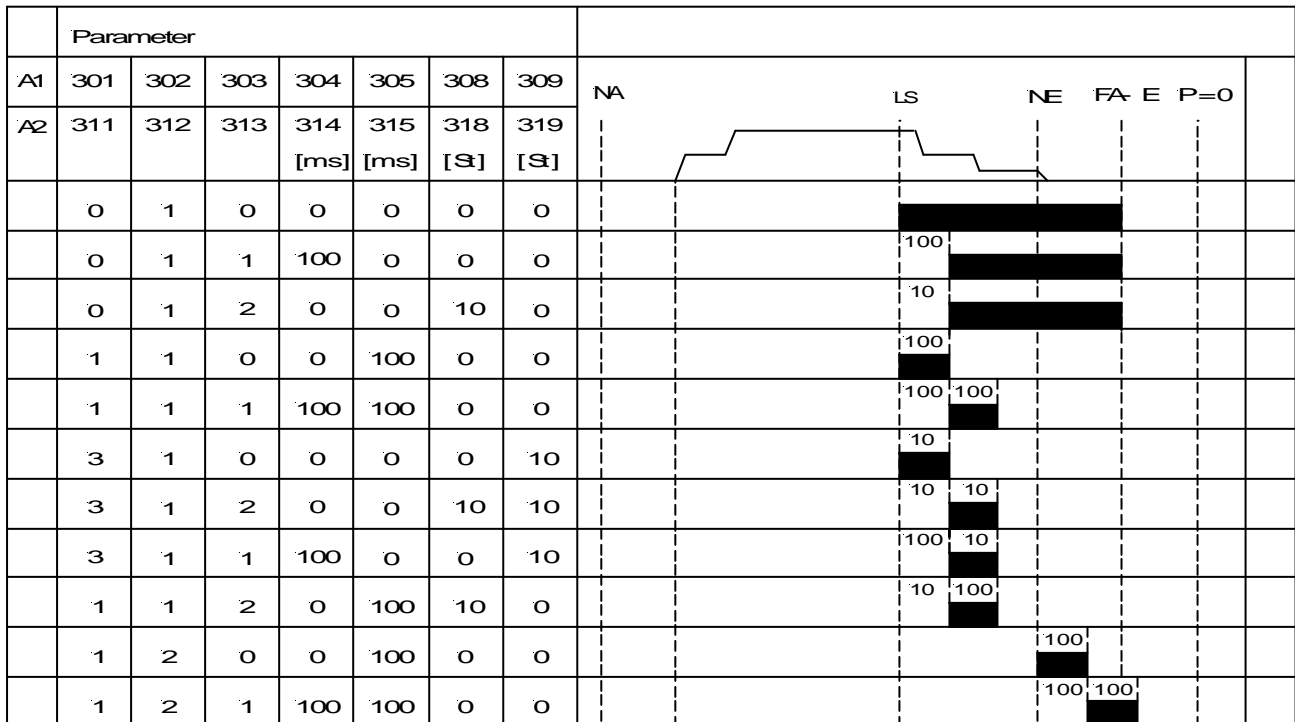
*) Depending on the selected mode. See table at the beginning of the List of Parameters!

***) When programming the 3-digit or 4-digit control parameter values (without control panel), the 2-digit or 3-digit value displayed must be multiplied by 10.

Supplier Level

Code no. 311 with control operation
 Code no. 3112 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind.
323 FLn	0 = Sewing foot is not lifted after power On 1 = Sewing foot is lifted after power On This function is enabled only if TEACH IN is On		1	0	0	A
324 ti	0 = TEACH IN Off 1 = TEACH IN On TEACH IN programming is possible only with V820. Execution of pattern is possible without V820.		1	0	0	A
325 cti	Erasing all TEACH IN data - Input code number 3112 after power On - Press the E key - Input parameter 325 - Press the E key - Input 3112 - Press the P key - The display briefly shows "deleted", and a short audible signal is issued - Press the P key - all TEACH IN programs have been erased!					A
401 EEP	Immediate storage of all changed data - Input code number 3112 after power On - Press the E key - Input parameter 401 - Press the E key - Set display from 0 to 1 - Press the E or P key - All data are stored		1	0	0	A
500 Sir	Recall of Fast Installation Routine (SIR) (see description on page 8!)					



0256/ BILD4

See next page for explanation of letter symbols!

		Parameter												
A1	301	302	303	304	305	308	309	NA	LS- D		NE	FA- E	P=0	
A2	311	312	313	314 [ms]	315 [ms]	318 [St]	319 [St]							
	0	0	0	0	0	0	0							1)
	0	0	0	0	0	0	0							2)
	1	0	0	0	100	0	0		100					
	1	0	1	100	100	0	0		100	100				
	3	0	0	0	0	0	10		10					
	3	0	2	0	0	10	10		10	10				
	3	0	1	100	0	0	10		100	10				
	1	0	2	0	100	10	0		10	100				
	2	0	0	0	0	0	0							1)
	2	0	0	0	0	0	0							2)
	0	0	1	100	0	0	0		100					
	0	0	2	0	0	10	0		10					
	1	3	0	0	100	0	0			100				
	1	3	1	100	100	0	0			100	100			
	3	3	0	0	0	0	10			10				
	3	3	2	0	0	10	10			10	10			
	3	3	1	100	0	0	10			100	10			
	1	3	2	0	100	10	0			10	100			
	2	3	0	0	0	0	0							
	0	3	0	0	0	0	0							
	0	3	1	100	0	0	0			100				
	0	3	2	0	0	10	0			10				
	2	3	1	100	0	0	0			100				
	2	3	2	0	0	10	0			10				

0256/ BILD3

NA = Start of seam
 LS = Light barrier uncovered or covered at the seam end
 LS-D = Light barrier uncovered → covered (parameter 131 = 1 and parameter 132 = 0)
 NE = Seam end
 FA-E = End thread trimming operation
 P=0 = Pedal in pos. 0 (neutral)
 St = Stitches

Parameter 320 = 0 → Signals enabled according to setting of parameter 301/311.

Parameter 320 = 1 → Signals enabled until pedal is in pos. 0 (neutral).

- 1) Seam end after stitch counting or light barrier sensing
 2) Seam end after pedal in pos. -2

8 Error Displays

General Information			
On the control	On the V810	On the V820	Signification
A1	InF A1	InFo A1	Pedal not in neutral position, when turning the machine on
A2	-StoP- blinking	-StoP- blinking + symbol display	Machine run blockage
A3	InF A3	InFo A3	Reference position is not set
A7	Symbol blinking	Symbol blinking	Bobbin thread monitor

Programming Functions and Values (Parameters)			
On the control	On the V810	On the V820	Signification
Returns to 000 or to last parameter number	Returns to 0000 or to last parameter number	Like V810 + display InFo F1	Wrong code number or parameter number input

Serious Condition			
On the control	On the V810	On the V820	Signification
E1	InF E1	InFo E1	After power On, position transmitter or commutation transmitter defective, or connecting cables have been changed by mistake. During operation or after a sewing cycle, only position transmitter defects can be identified.
E2	InF E2	InFo E2	Line voltage too low, or time between power off and power on too short.
E3	InF E3	InFo E3	Machine blocked or does not reach the desired speed.
E4	InF E4	InFo E4	Control disturbed by deficient grounding or loose contact.
E9	InF E9	InFo E9	EEPROM defective.

Hardware Disturbance			
On the control	On the V810	On the V820	Signification
H1	InF H1	InFo H1	Commutation transmitter cord or frequency converter disturbed.
H2	InF H2	InFo H2	Processor disturbed

9 Slide-in Strips for the V810/V820 Control Panels

Slide-in strips for the V810 control panel

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