Efka dc15xx

CONTROL	dc15OO	AB220A5111
		FP220A5911
	dc155O	AB320A5211
		FP320A5951

KL2334a
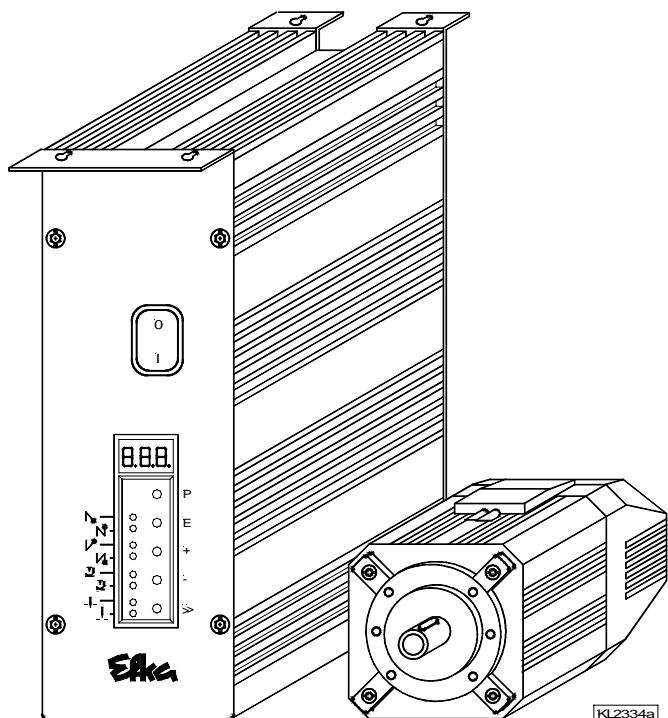
LIST OF PARAMETERS

CONNECTION DIAGRAM
TIMING DIAGRAMS

No. 402301   English

CONTENTS **Page**

1 Use of the C200 Compiler (FP220A..../FP320A....)

The C200 Compiler can <u>only</u> be used with the FP220A and FP320A controls!

The Efka C200 Compiler is a software tool for the programming of functions on the FP220A and/or FP320A controls, with which the user can program a variety of additional user-defined functions.

The compiler provides the following basic functions:

- predetermined functions which are integrated by means of a system file
- approx. 2kB for user programs and data
- error management routine with automatic error marking
- loader for program storing in the control
- a multi-tasking time sharing mechanism
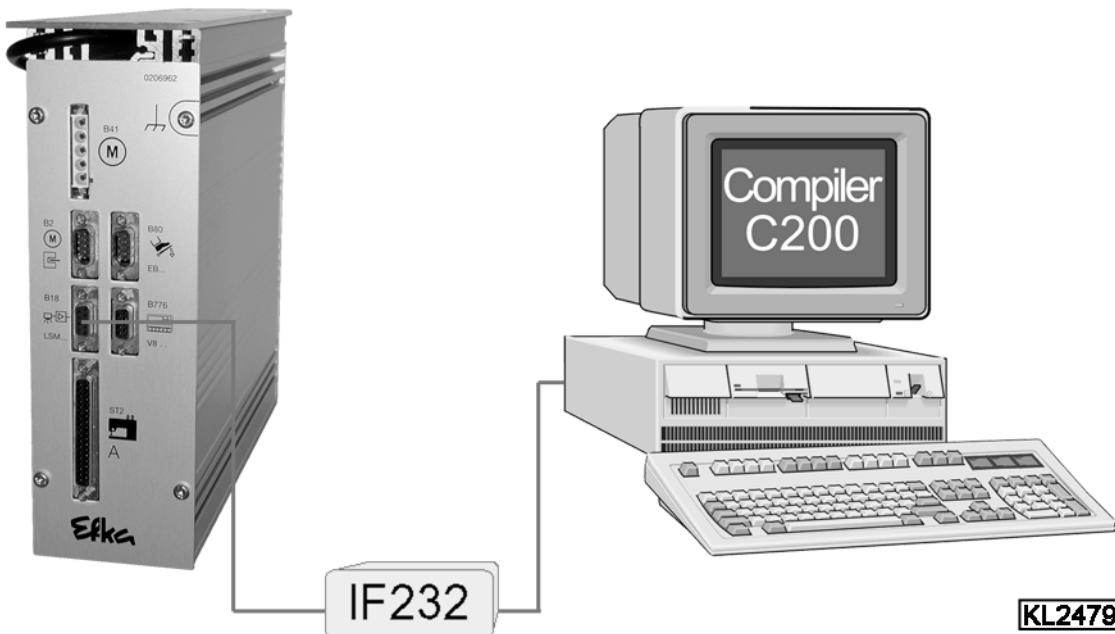
The FP220A..../FP320A.... control (socket B18) and the computer (socket com1) are connected by means of interface IF232-2.

> **Set of special C200 Compiler accessories consisting of:**   **order no. 1113262**
> - **C200 Compiler Software CD-ROM**
> - **C200 Compiler User Manual**
> - **EFKANET IF232-2 Interface**

See C200 Compiler user manual for more information on programming and use of control commands!

2 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**							
	Power transistors ➜		**FL** ST2/35	**VR** ST2/34	**M1** ST2/37	**M2** ST2/28	**M3** ST2/27	**M4** ST2/36	**M5** ST2/32	**M6** ST2/30
0	**Lockstitch: e. g.**	**Functions**	**FL**	**VR**	**FA1**	**FA2**	**FW**	**FA1+2**	**ML**	**MST/HP**
	Brother (737-113, 737-913)	1112814	FL	VR	FA1 +	FA2	FW			
	Aisin (AD3XX, AD158, 3310; EK1)	1112815	FL	VR	FA1 +	FA2	FW			
	Pfaff (563, 953, 1050, 1180)	1112841	FL	VR	FA1	FA2	FW		ML	
	Dürkopp Adler (210, 270)	1112845	FL	VR	FA1 +	FA2	FW			
2	**Lockstitch: e. g.**	**Functions**	**FL**	**VR**		**FA**	**FSPL**	**FL1**	**ML**	**MST**
	Singer (212 UTT)	1112824	FL	VR		FA	FSPL	FL1		
3	**Lockstitch:** e. g. Dürkopp Adler (467)		FL	VR	FA	ML	FW	FSPL	MST/HP	FF2
4	**Chainstitch: e. g. Union Special**	**Functions**	**FL**	**FA-R**	**M1**	**FA-V**	**FW**	**STV**	**ML**	**MST/HP**
	(34000 and 36200 replacement for US80A)	1112865	FL	FA-R		FA-V	FW		ML	
	(CS100 and FS100)	1112905	FL	FA-R	M1	FA-V	FW		ML	
5	**Chainstitch: parallel sequence**	**Functions**	**FL**	**STV**	**M1**	**M2**	**M3**	**M4**	**ML**	**MST/HP**
	Bag sewing machine Union Special	**Functions**	**FL**			**IMP**	**BR**		**ML**	**MST**
	Yamato (VC/VG series)	1113345	FL	STV	FA		FW		ML	
	Kansai (RX 9803)	1113130	FL		FA		FW		ML	
	Pegasus (W500/UT, W600/UT/MS with or without stitch condensing)	1112821	FL	STV	FA	FA	FW			
	Brother (FD3-B257)	1112822	FL	STV	FA	FA	FW			
	Union Special (34700)	1112844	FL	STV	FA	FA	FW		NK/ML	
	Global (CB2803-56)	1112866	FL				FA			
	Rimoldi (F27)	1113096	FL		FW	FAO	FAU		ML	
6	**Chainstitch: tape cutter/fast scissors**		FL	STV	M1	M2	AH1	AH2	ML	MST
7	**Overlock**		FL	KS	M1	M2	AH	FSPL	ML	MST/HP
8	**Backlatch**	**Functions**	**FL**		**PD≤-1**	**PD≥1**	**PD≥1***		**ML**	**MST/HP**
	Pegasus	1113234			PD≤-1	PD≥1				
9	**Backlatch**	**Functions**	**FL**		**PD≤-1**	**PD≥1**	**PD≥1***		**ML**	**MST/HP**
	Yamato (ABT3)	1112826			PD≤-1	PD≥1				
	Yamato (ABT13, ABT17)	1113205			PD≤-1	PD≥1				
10	**Lockstitch: e. g.**	**Functions**	**FL**	**FA-R**	**FSPL**	**FA-V**	**FW**	**VR**	**ML**	**MST/HP**
	Union Special (63900AMZ replacement for US80A) and on Refrey lockstitch machines	1112823	FL	FA-R		FA-V	FW		ML	
13	**Lockstitch:** Pfaff (1425, 1525)	1113324	FL	VR	FA	FSPL	FW	L-STL	ML	HP/FF
14	**Lockstitch: e. g.**	**Functions**	**FL**	**VR**	**FA1+2**	**FA2**	**FW**	**FA1**	**ML**	**MST**
	Juki (5550-6)	1112816	FL	VR	FA1+2		FW			
	Juki (5550-7, 8500-7, 8700-7)	1113132 +	FL	VR	FA1+2	FZ	FW			
	Adapter for position sensors incorporated in the handwheel	1113157								
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/HP
17	**Stitchlock:** Pegasus		FL	LFA		FA	STS		ML	MST/HP
20	**Lockstitch:** Juki (LU1510-7)	1113200	FL	VR	FA	FSPL				HP
	Lockstitch: Juki (DNU1541-7)	1113319	FL	VR	FA	FSPL				HP
	Adapter for position sensors incorporated in the handwheel	1113314								
21	**Chainstitch:** Yamato (stitch lock)	1113345	FL	STS	FA	STV	FW		ML	
22	**Lockstitch:** Brother (B-891)	1113290	FL	VR	FA	FSPL				MST
23	**Lockstitch:** Dürkopp Adler (271...275)		FL	VR	FA	ML	FW	FSPL	HP	MST
24	**Chainstitch:** Pegasus (MHG-100)	1113267	FL		FA	FA	FW			
25	**Lockstitch:** Juki (LU2210, LU2260)	1113350	FL	VR	FA	FSPL				HP
26	**Lockstitch:** e.g. Jentschmann		FL	VR	FA	ML	FW	FSPL	MST/HP	FF2

The signals of outputs M7...M11 depend on the settings of certain parameters, in particular parameter 290!
*) 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	FF2	= Flip-flop 2

3   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!

4   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.

	Code 3112
	E
	F-200
Input parameter 500	F-500
	E
	≫
Parameter for functional sequence "thread trimming operations"	F-290
	E
Parameter for direction of motor rotation	F-161
	E
Parameter for transmission ratio **Important!** The transmission ratio should be determined and indicated as precisely as possible.	F-272
	E
Parameter for type of position sensor	F-270
	E
Parameter for position 1	F-451
	E
Parameter for position 2	F-453
	E — Yes
	No
	P
	End SIR

KL2438a

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!

5 Operating Elements and Socket Connectors

5.1 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	
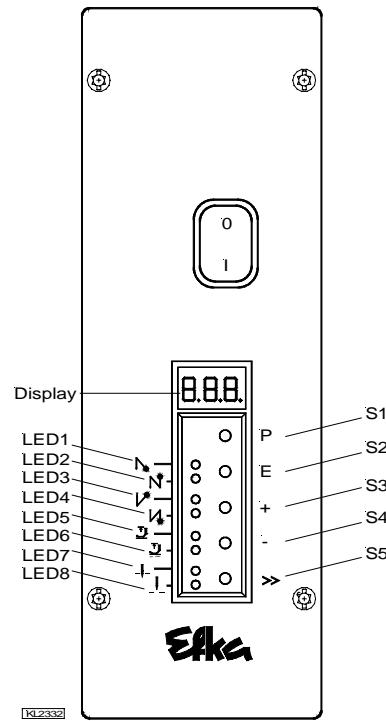
5.2 Position of the Socket Connectors

B2   Socket for commutation transmitter

B18   Socket for   - Light barrier module LSM002
                          - Hall sensor module HSM001
                          - Pulse encoder IPG001
                          - 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
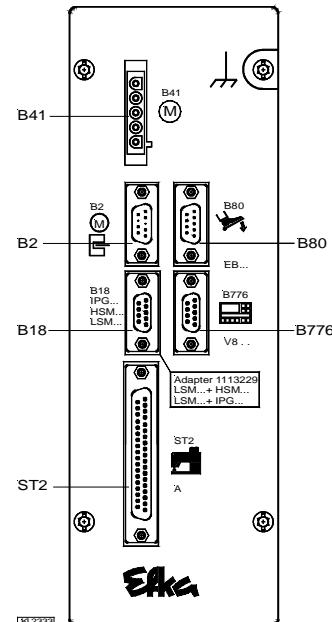
5.3   Connection Diagram

Inputs switched to 0V
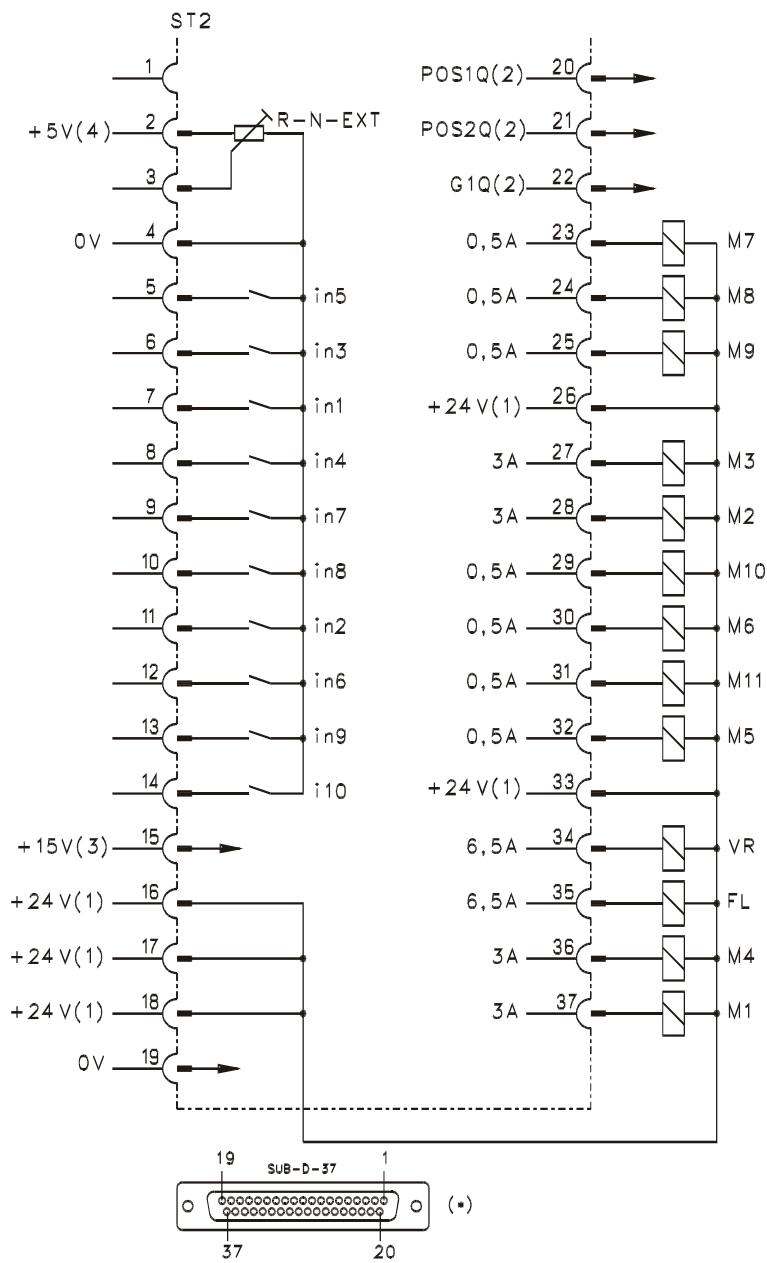
⚠️

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

in1	- Input 1	i10	- Input 10	M9	- Output 9
in2	- Input 2	M1	- Output 1	M10	- Output 10
in3	- Input 3	M2	- Output 2	M11	- Output 11
in4	- Input 4	M3	- Output 3	FL	- Sewing foot lifting
in5	- Input 5	M4	- Output 4	VR	- Backtacking
in6	- Input 6	M5	- Output 5	POS1	- Position 1
in7	- Input 7	M6	- Output 6	POS2	- Position 2
in8	- Input 8	M7	- Output 7	GEN	- 512 generator impulses
in9	- Input 9	M8	- Output 8	R-N-EXT	- External potentiometer for speed limitation (50kΩ)

Inputs switched to +24V
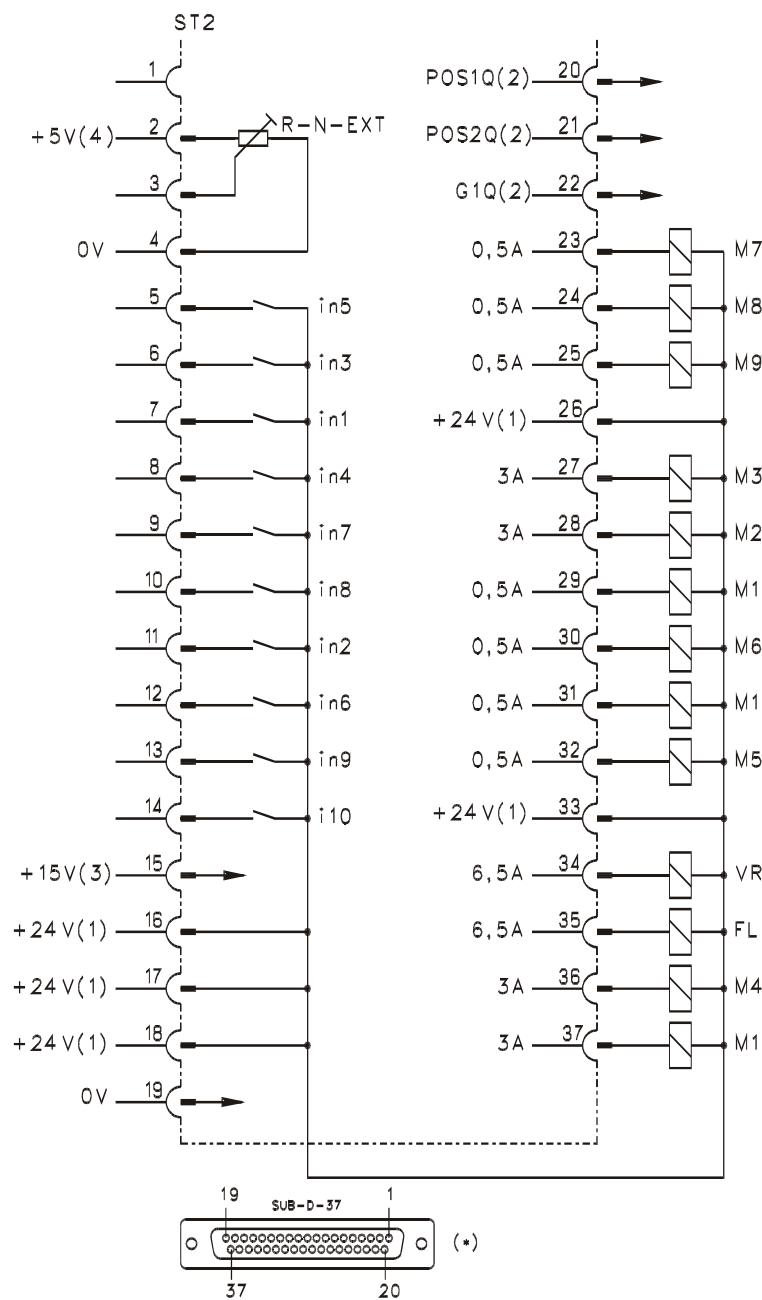
|	ST2				
	1		POS1Q(2)	20	→
+5V(4)	2	R-N-EXT	POS2Q(2)	21	→
	3		G1Q(2)	22	→
0V	4		0,5A	23	M7
	5	in5	0,5A	24	M8
	6	in3	0,5A	25	M9
	7	in1	+24V(1)	26	
	8	in4	3A	27	M3
	9	in7	3A	28	M2
	10	in8	0,5A	29	M10
	11	in2	0,5A	30	M6
	12	in6	0,5A	31	M11
	13	in9	0,5A	32	M5
	14	i10	+24V(1)	33	
+15V(3)	15	→	6,5A	34	VR
+24V(1)	16		6,5A	35	FL
+24V(1)	17		3A	36	M4
+24V(1)	18		3A	37	M1
0V	19	→			

SUB-D-37   19   1
37   20

(*)

BI1164

⚠

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)

Connection of a HSM001 Hall sensor module or an IPG001 pulse encoder   **Connection of a LSM002 light barrier module**
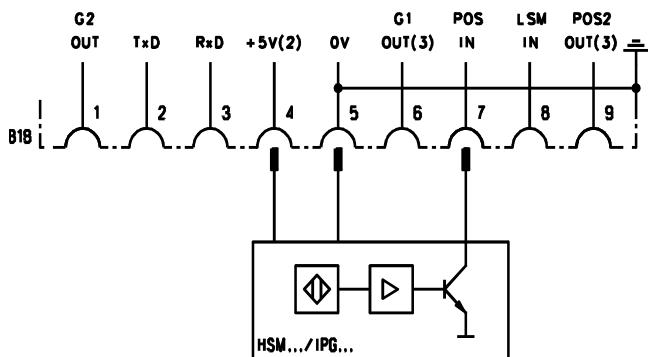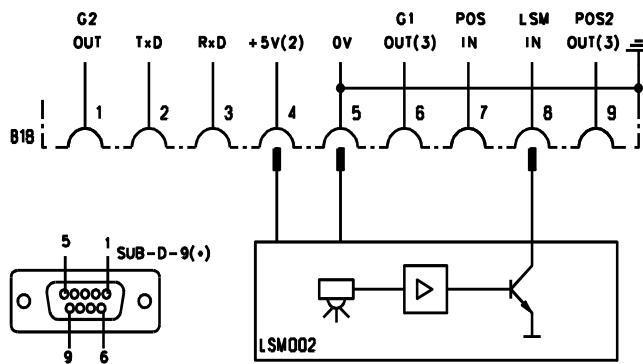

Adapter cord 1113229 in case of multiple assignment of socket B18!

POS2 OUT	- Output for position 2
POS IN	- Input for positions
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
HSM...	- Hall sensor module
IPG...	- Pulse encoder

If parameter 239 is set to >0, it is possible to operate a key at the input of the B18/8 connector.
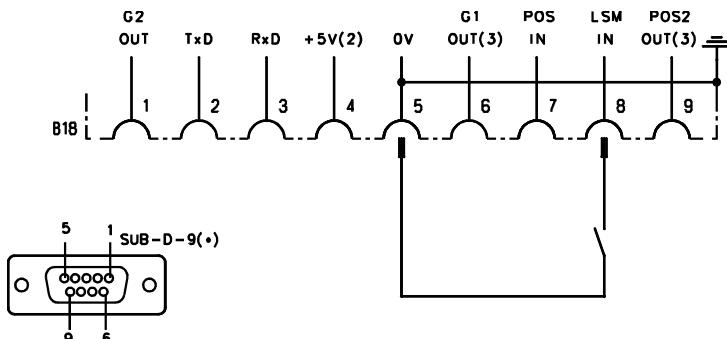
There is a supply voltage of +5V for external devices on the B18/4 socket. After opening the cover, this voltage can be changed to +15V by replugging a multipole connector J1 on the printed circuit board.

+5V = Connect lefthand pins 1 and 2 with jumper
          (factory setting)
+15V = Connect righthand pins 3 and 4 with jumper
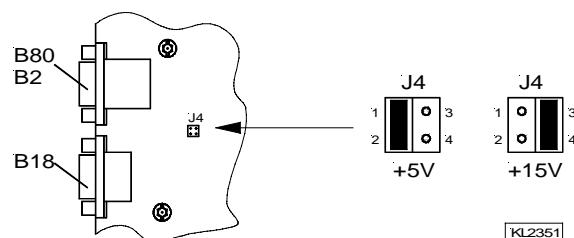
⚠ **ATTENTION!**
Before opening the cover, turn power off!

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)

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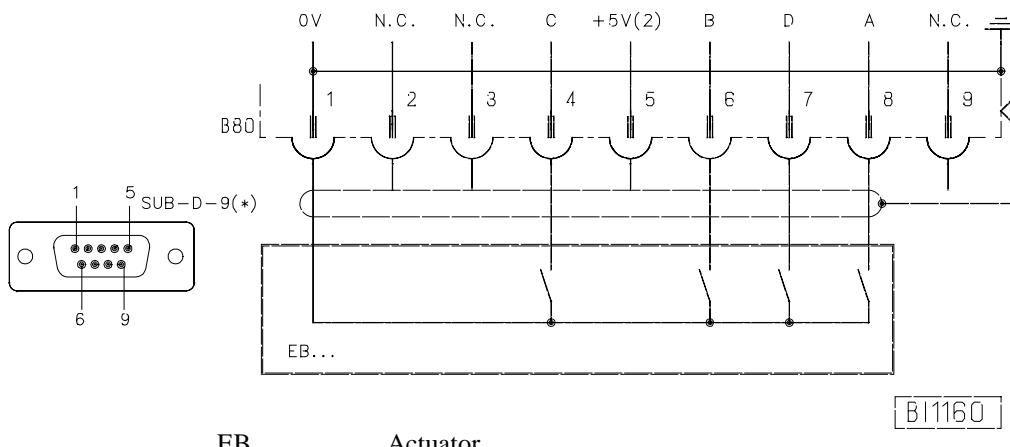
Pedal step ➜	-2	-1	0	½	1	2	3	4	5	6	7	8	9	10	11	12
Input A	L	L	H	H	H	L	L	H	H	L	L	H	H	L	L	H
Input B	L	H	H	L	L	L	H	H	H	H	L	L	L	L	H	H
Input C	H	H	H	H	L	L	L	L	L	L	L	L	H	H	H	H
Input D	H	H	H	H	H	H	H	H	L	L	L	L	L	L	L	L

5.4　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
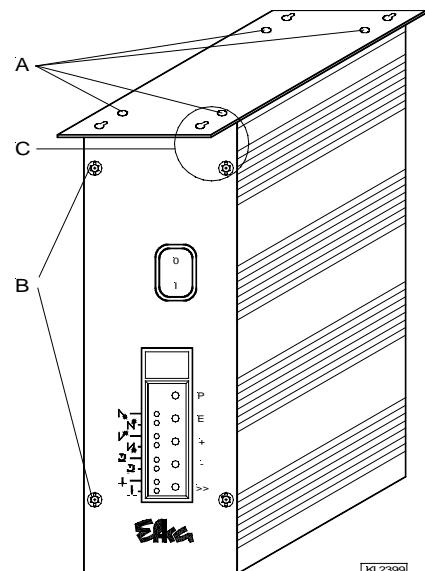
CAUTION!
When the sewing light is connected, it is always current-carrying (230V), even if the control unit is switched off! Only one sewing light with transformer can be connected to the control unit!

6 Connection Scheme of SM210A Stepping Motor Control
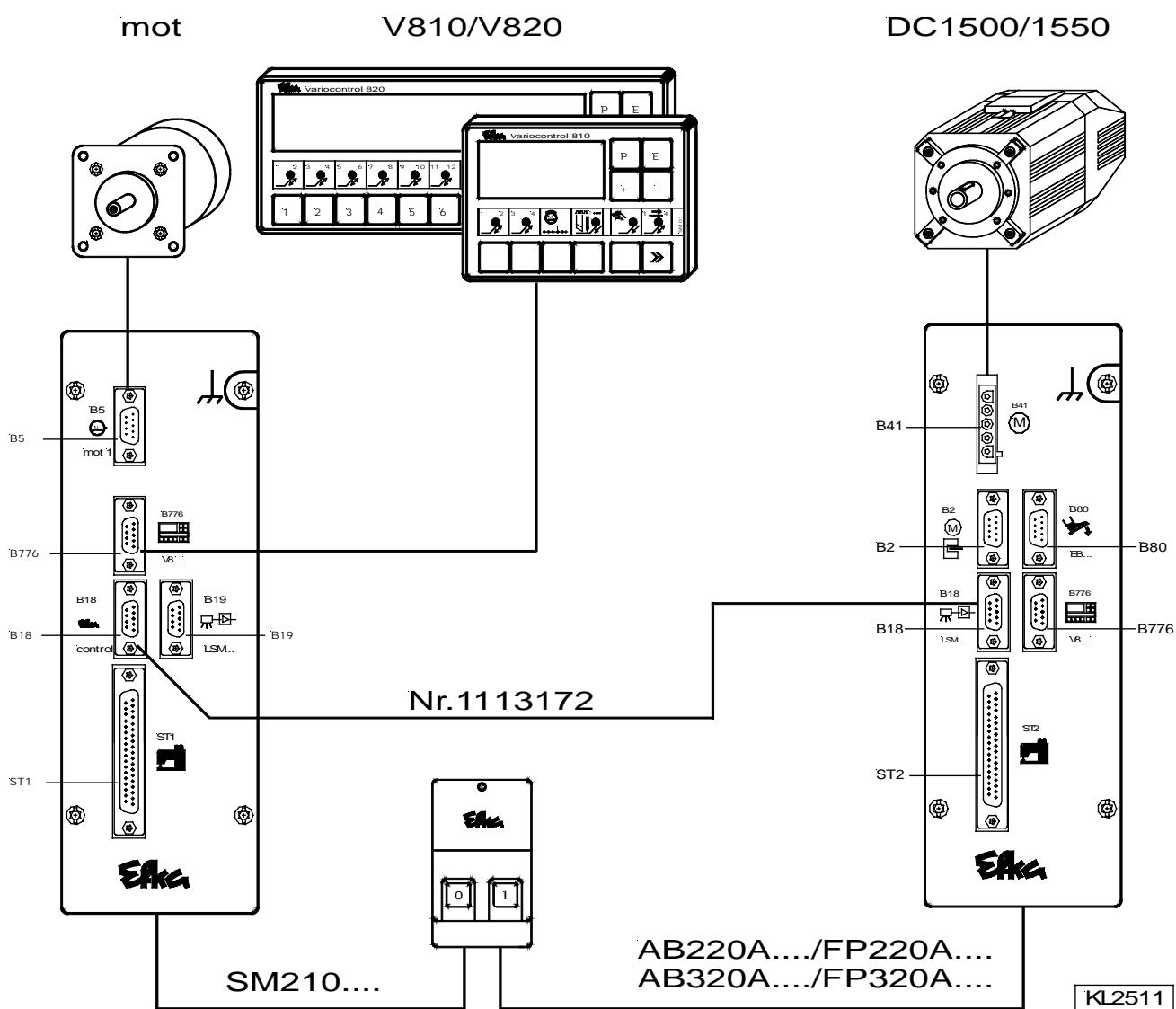
The AB220A.... / AB320A.... FP220A..../ FP320A.... d.c. controls (B18) and the SM210A....stepping motor control (B18) are connected by means of adapter cord no. 1113172.

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. Should an IPG001 pulse encoder or a HSM001 Hall sensor module be necessary besides the light barrier module, use adapter cord no. 1113229, which is to be connected to socket B19 of the SM210A.... stepping motor control.
Unless a stepping motor control is provided, adapter cord no. 1113229 for light barrier module and pulse encoder or Hall sensor module is connected to socket B18 of the sewing drive.

7 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

Nr. 1112815

ST2

SUB- D 37

KL2234
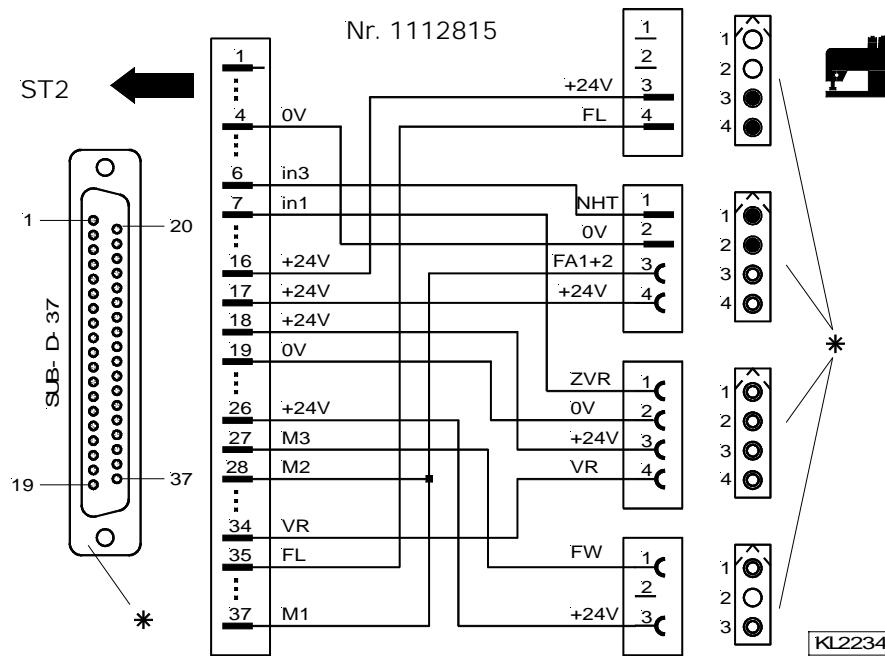
Adapter cord for BROTHER models 737-113 and 737-913

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

Nr. 1112814

ST2

SUB- D 37

KL2233
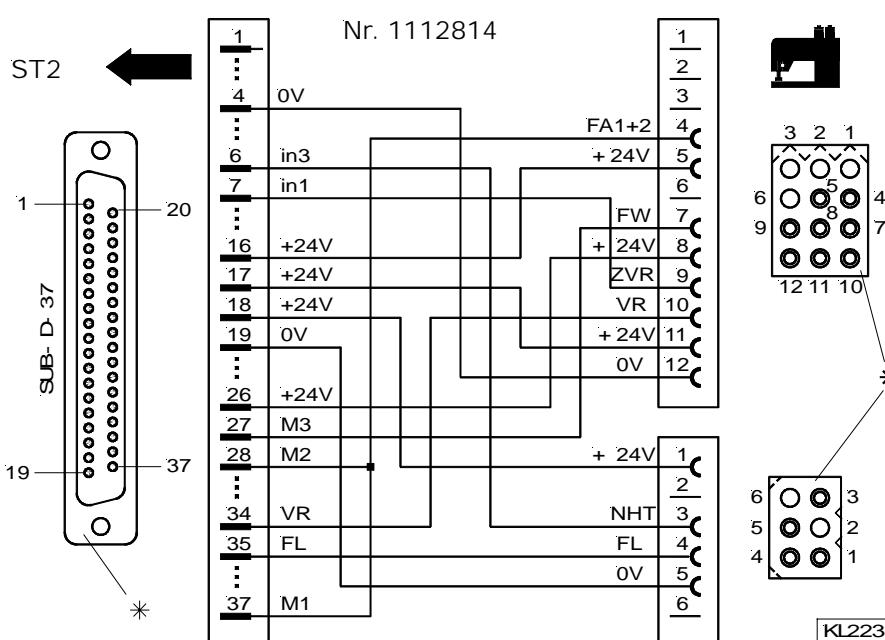
Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113213.

*) 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

Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113213.

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

Adapter cord for BROTHER model B-891

Setting the functional sequence	Thread trimming mode	➜	Set parameter 290	= 22
Setting the functions of the keys	Input in1	➜	Set parameter 240	= 12
(Automatic setting)	Input in2	➜	Set parameter 241	= 22
	Input in3	➜	Set parameter 242	= 2
	Input in4	➜	Set parameter 243	= 14
	Input in5	➜	Set parameter 244	= 17
	Input in6	➜	Set parameter 245	= 16

Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113213.

in2 = Input **speed limitation n11** (flip-flop 2) output ST2/29 is active according to setting of parameter 186 (DB)
in3 = Input **needle up** (NH)
in4 = Input **high lift for walking foot with speed limitation n10** (flip-flop 1) (HP)
in5 = Input **stitch regulator suppression / stitch regulator recall** (VRU)
in6 = Input **intermediate backtack / intermediate stitch condensing** (ZVR)

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

)   **Attention: Note the mark on pin 1 of the connector strips!

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
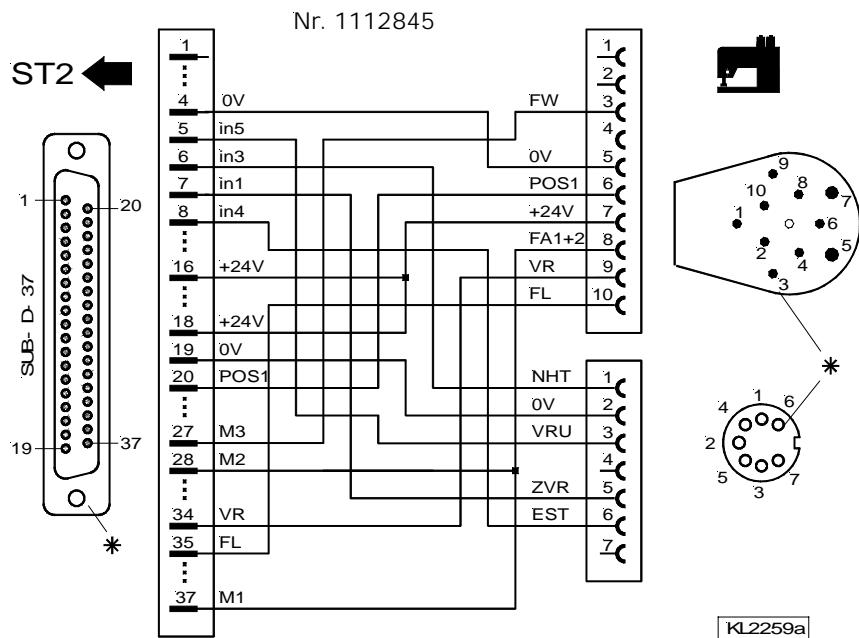
Adapter cord for GLOBAL model CB2803-56

Setting the functional sequence	Thread trimming mode	➜	Set parameter 290	= 5
Setting the functions of the keys	Input in1	➜	Set parameter 240	= 6
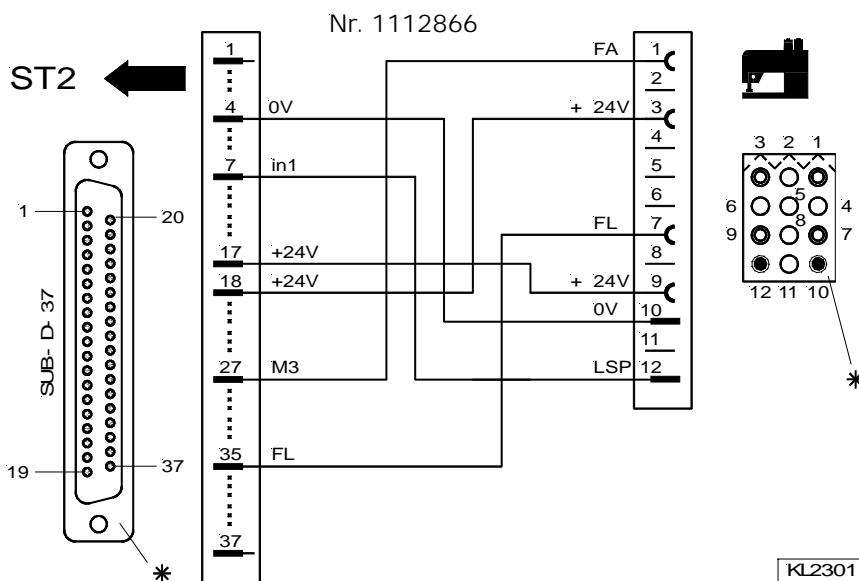
*)   Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

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 in2 | ➔ | Set parameter 241 | = 16 |

Nr. 1112816
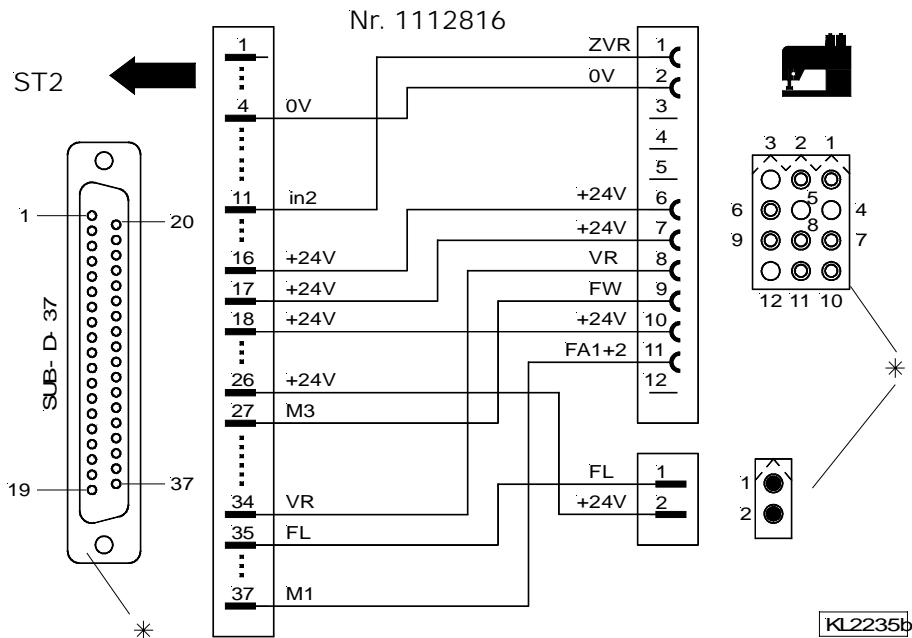
Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113157.

Adapter cord for JUKI model 5550-7, 8500-7, 8700-7

| Setting the functional sequence | Thread trimming mode | ➔ | Set parameter 290 | = 14 |
| Setting the functions of the keys | Input in2 | ➔ | Set parameter 241 | = 16 |

Nr. 1113132
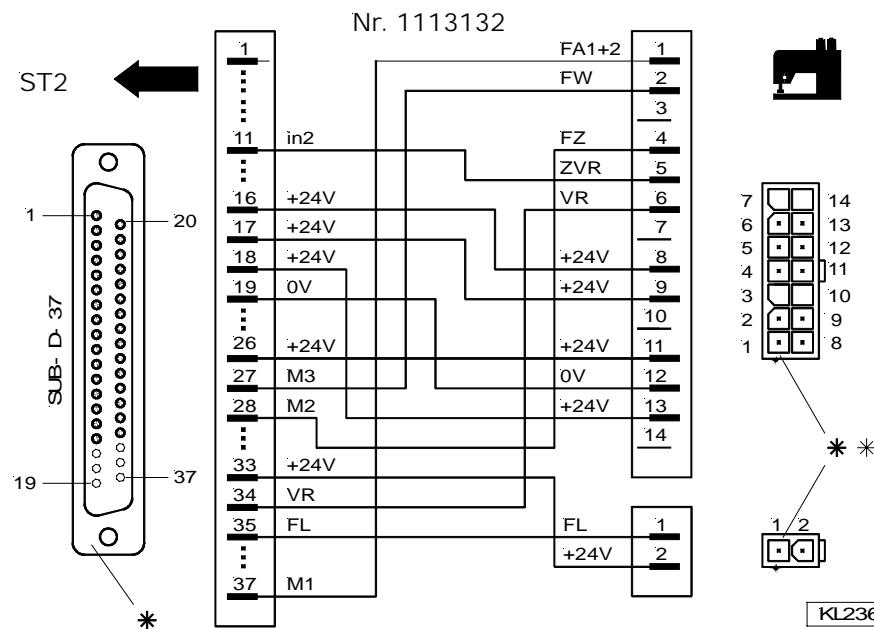
Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113157.

*)   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	Input in1	➜	Set parameter 240	= 13
(Automatic setting)	Input in3	➜	Set parameter 242	= 31
	Input in4	➜	Set parameter 243	= 32
	Input in6	➜	Set parameter 245	= 16
	Input in7	➜	Set parameter 246	= 13

**Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113157.**

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 on 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 JUKI model DNU1541-7

Setting the functional sequence	Thread trimming mode	➔	Set parameter 290	= 20
Setting the functions of the keys	Input in1	➔	Set parameter 240	= 13
(Automatic setting)	Input in2	➔	Set parameter 241	= 1
	Input in3	➔	Set parameter 242	= 31
	Input in4	➔	Set parameter 243	= 32
	Input in5	➔	Set parameter 244	= 17
	Input in6	➔	Set parameter 245	= 16
	Input in7	➔	Set parameter 246	= 13
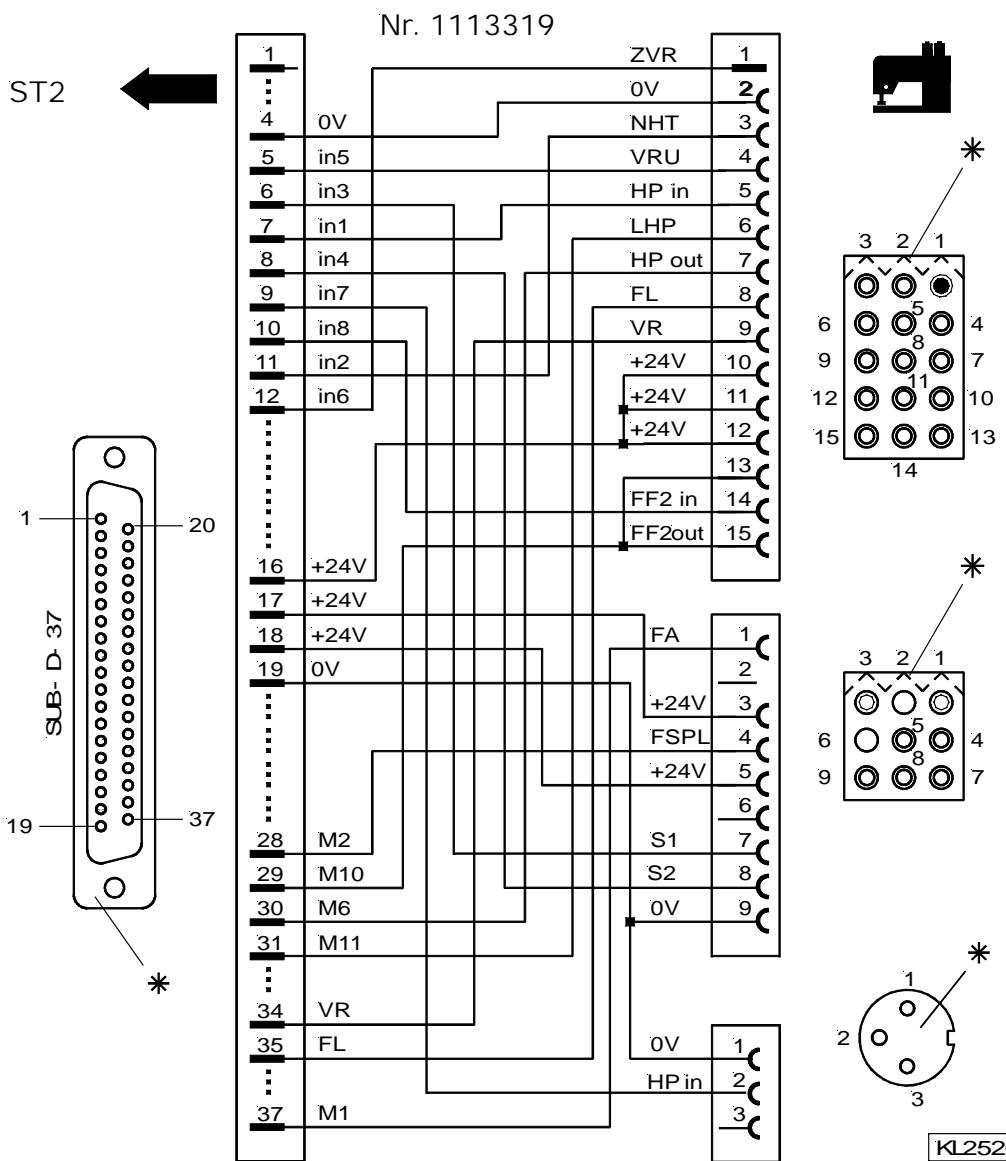
Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113157.

in1 = Input **high lift for walking foot with speed limitation n10** (operational mode not stored) for knee switch

in2 = Input **needle up/down**

in3 = Input **speed limitation bit 0** (S1)

in4 = Input **speed limitation bit 1** (S2)

in5= Input **stitch regulator suppression / stitch regulator recall**

in6 = Input **intermediate backtack**

in7 = Input **high lift for walking foot with speed limitation n10** (operational mode not stored) for additional pushbutton on 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 JUKI model LU2210, LU2260

Setting the functional sequence	Thread trimming mode	➜	Set parameter 290	= 25
Setting the functions of the keys	Input in1	➜	Set parameter 240	= 1
(Automatic setting)	Input in2	➜	Set parameter 241	= 57
	Input in3	➜	Set parameter 242	= 14
	Input in4	➜	Set parameter 243	= 16
	Input in5	➜	Set parameter 244	= 17
	Input in9	➜	Set parameter 248	= 57
	Input i10	➜	Set parameter 249	= 19

Connection of a position sensor incorporated in the machine by means of adapter cord no. 1113157.

in1 = Input **needle up/down (NHT)**

in2 = Input **Juki bobbin thread monitor 2 (FAW2)**

in3 = Input **high lift for walking foot with speed limitation n10 (HP)** (flip-flop 1)

in4 = Input **intermediate backtack / intermediate stitch condensing (ZVR)**

in5 = Input **stitch regulator suppression / stitch regulator recall (VRU)**

in9 = Input **Juki bobbin thread monitor 1 (FAW1)**

i10 = Input **reset bobbin thread monitor (FAU)**

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

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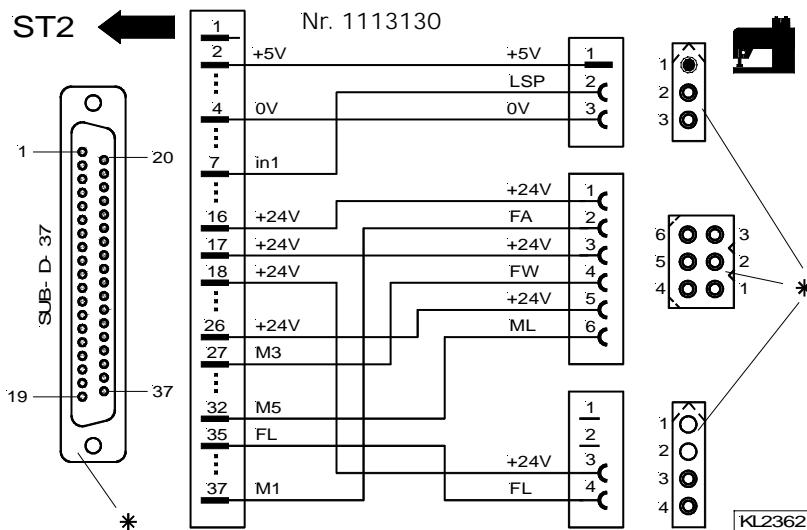
*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

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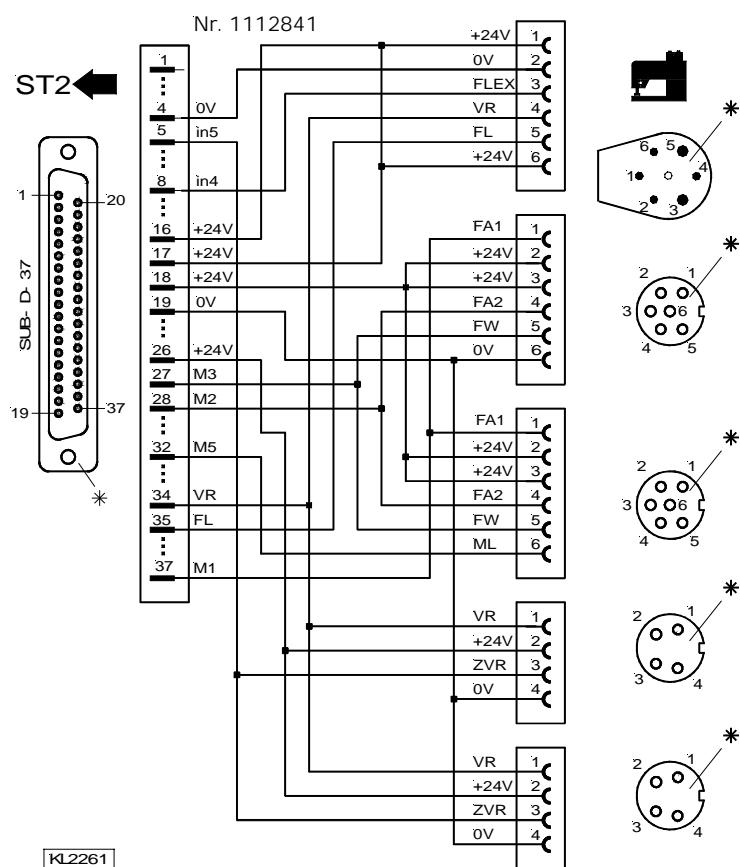
*) Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

Adapter cord for PFAFF model 1425, 1525

Setting the functional sequence	Thread trimming mode	→	Set parameter 290	= 13
Setting the functions of the keys	Input in1	→	Set parameter 240	= 2
(Automatic setting)	Input in2	→	Set parameter 241	= 16
	Input in3	→	Set parameter 242	= 24
	Input in4	→	Set parameter 243	= 11
	Input in5	→	Set parameter 244	= 22
	Input in7	→	Set parameter 246	= 23
	Input in8	→	Set parameter 247	= 14
	Input in9	→	Set parameter 248	= 17
	Input i10	→	Set parameter 249	= 25
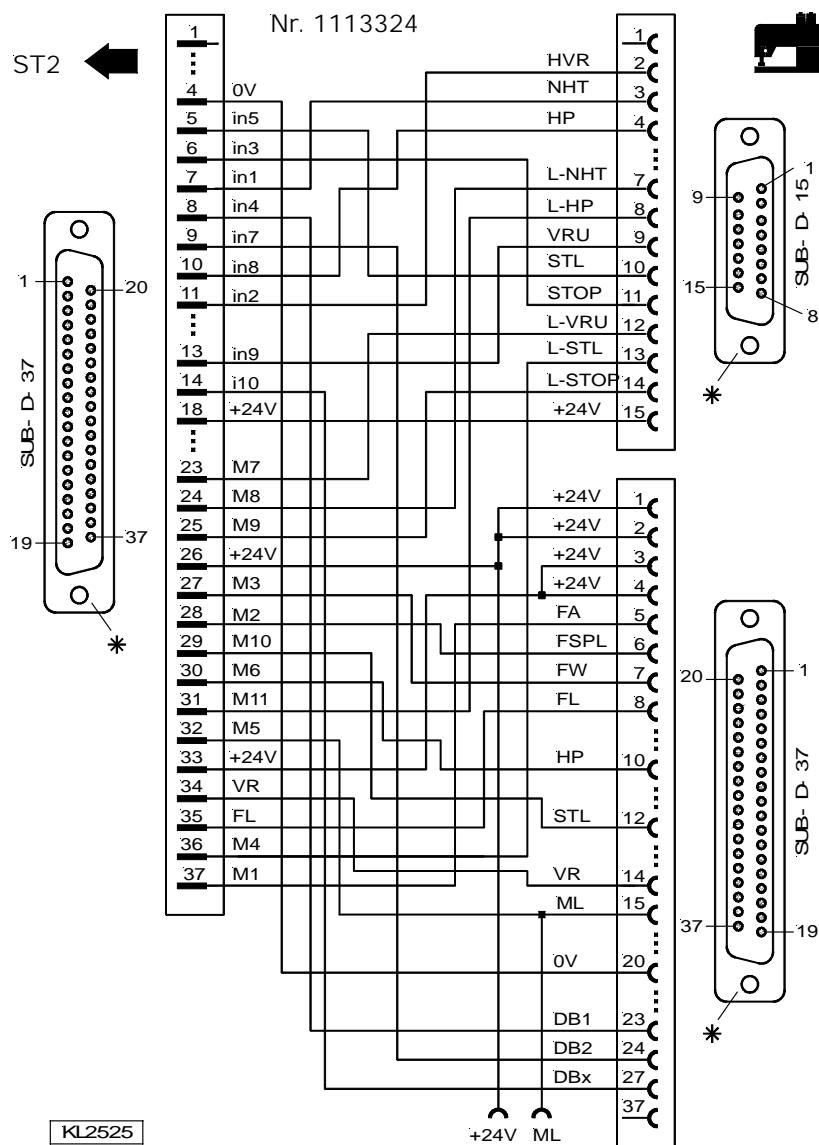
in1 = Input **needle up**
in2 = Input **intermediate backtack**
in3 = Input **needle moves from position 1 to position 2**
in4 = Input **speed limitation n12 with pedal (DB1 = speed limitation 1)**
in5 = Input **flip-flop for speed limitation n11**
in7 = Input **speed limitation n9 (DB2 = speed limitation 2)**
in8 = Input **high lift for walking foot with speed limitation n10 (operational mode stored)**
in9= Input **stitch regulator suppression / stitch regulator recall**
i10 = Input **speed limitation with external potentiometer**

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

Nr. 1112821

ST2 ⬅
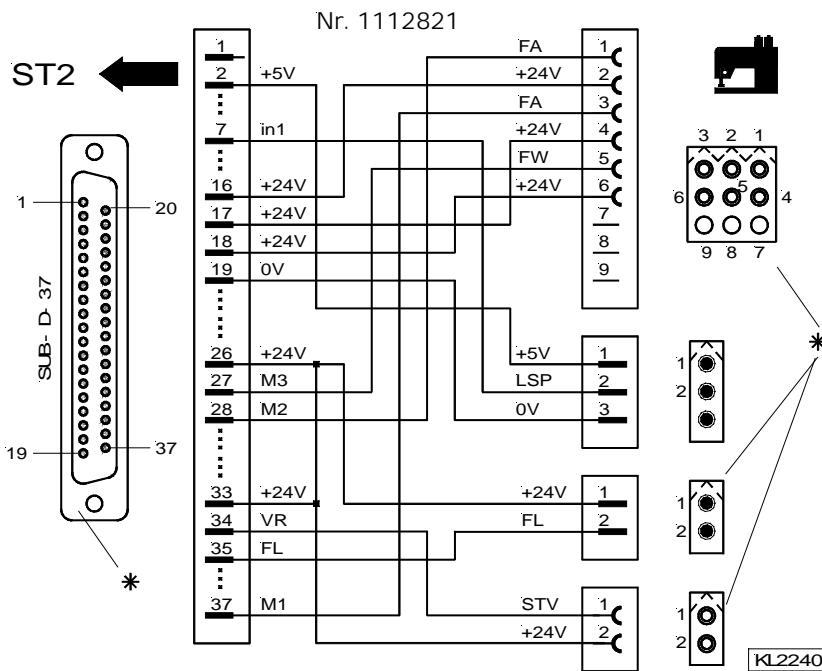
Attention! **When using this adapter cord on a Pegasus machine, the 9-core cable no. 742373-91 must be removed from the machine!**

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

Nr. 1113234

ST2 ⬅

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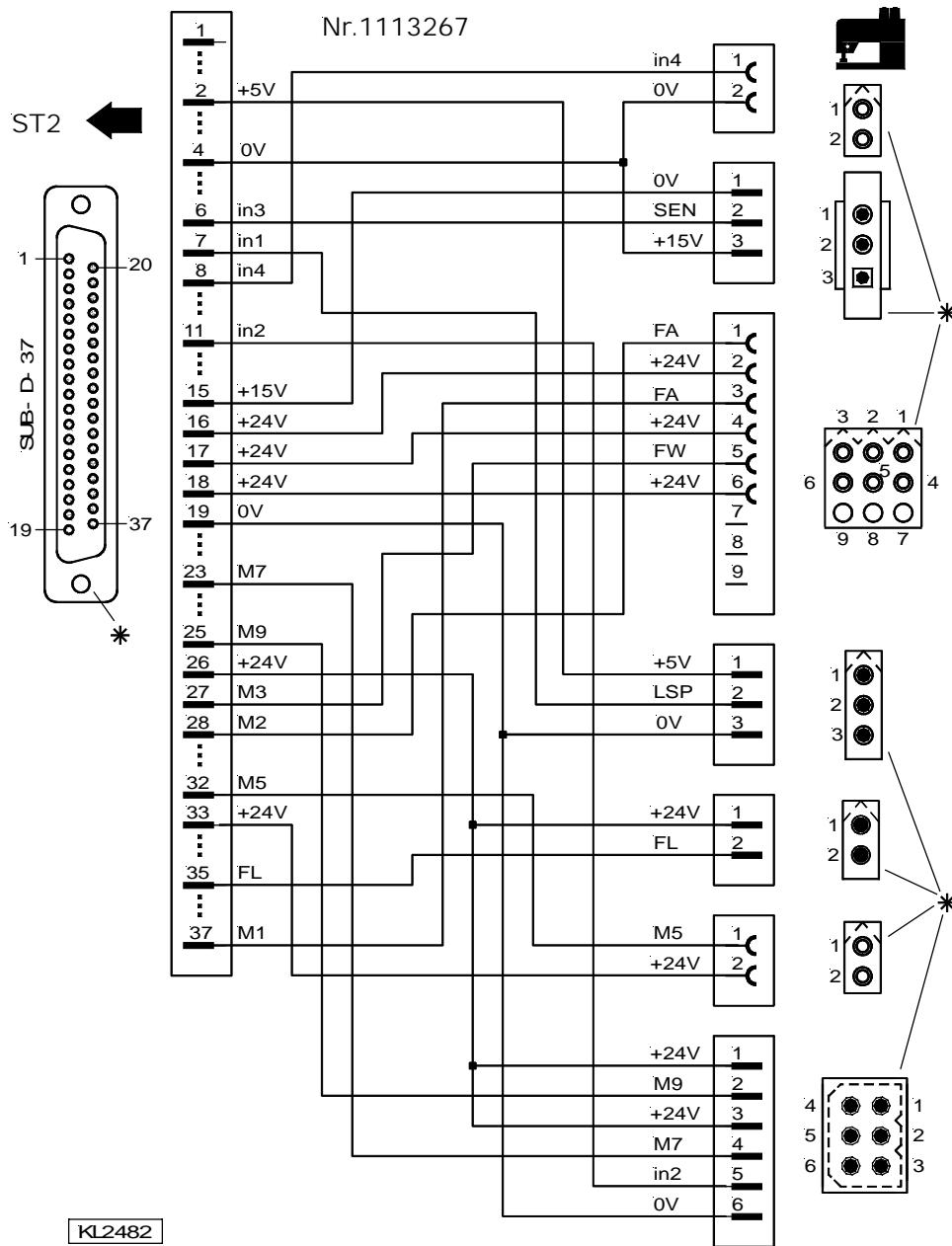
*)   Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

Adapter cord for RIMOLDI model F27

Setting the functional sequence	Thread trimming mode	➜	Set parameter 290	= 5

Nr. 1113096

ST2

SUB- D- 37

Pin	Signal
16	+24V
17	+24V
18	+24V
27	M3
28	M2
32	M5
35	FL
37	M1

Pin	Signal
1	FW
2	ML
3	FAO
4	FAU
5	FL
6	+24V

KL2346
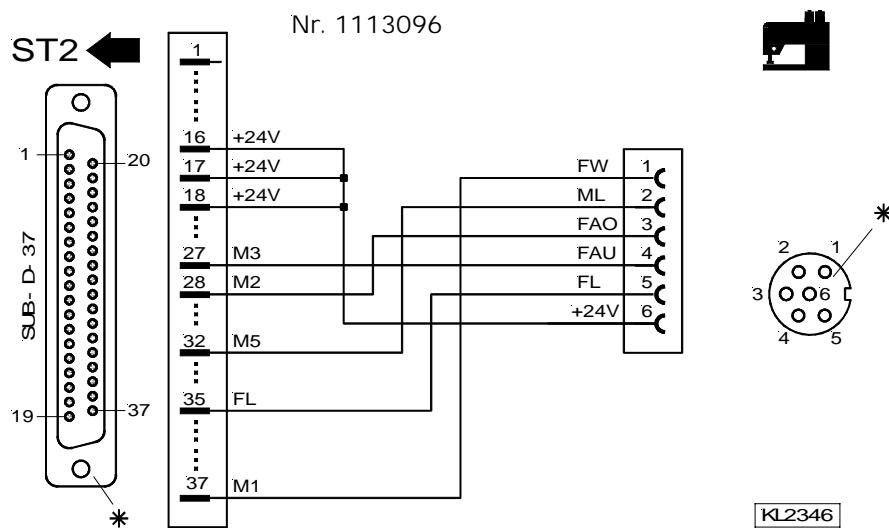
Adapter cord for SINGER models 211, 212 and 591

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
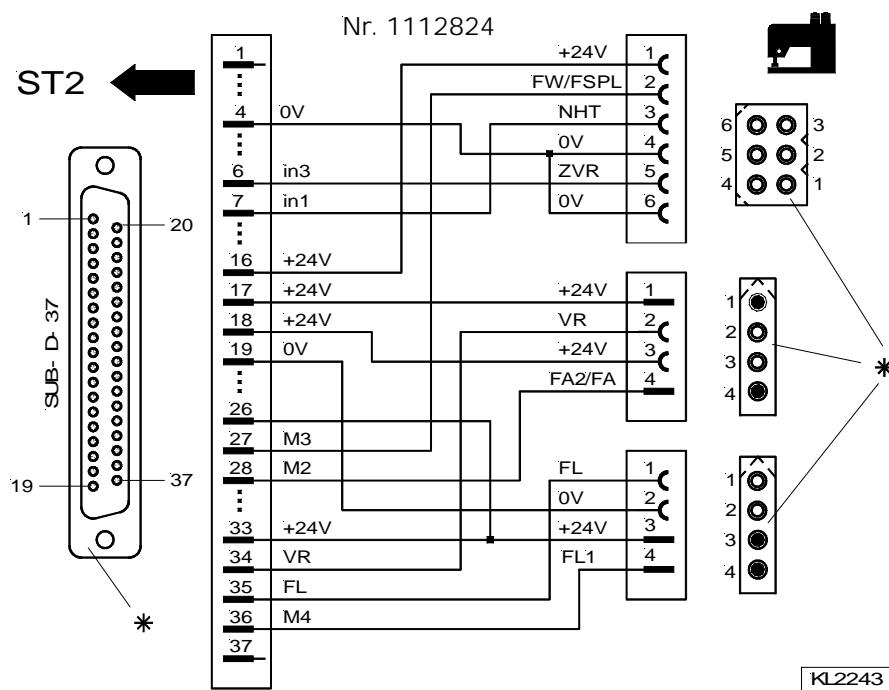
Nr. 1112824

ST2

SUB- D- 37

Pin	Signal
1	
4	0V
6	in3
7	in1
16	+24V
17	+24V
18	+24V
19	0V
26	
27	M3
28	M2
33	+24V
34	VR
35	FL
36	M4
37	

Pin	Signal
1	+24V
2	FW/FSPL
3	NHT
4	0V
5	ZVR
6	0V

Pin	Signal
1	+24V
2	VR
3	+24V
4	FA2/FA

Pin	Signal
1	FL
2	0V
3	+24V
4	FL1

KL2243

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*) 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

Nr. 1112905
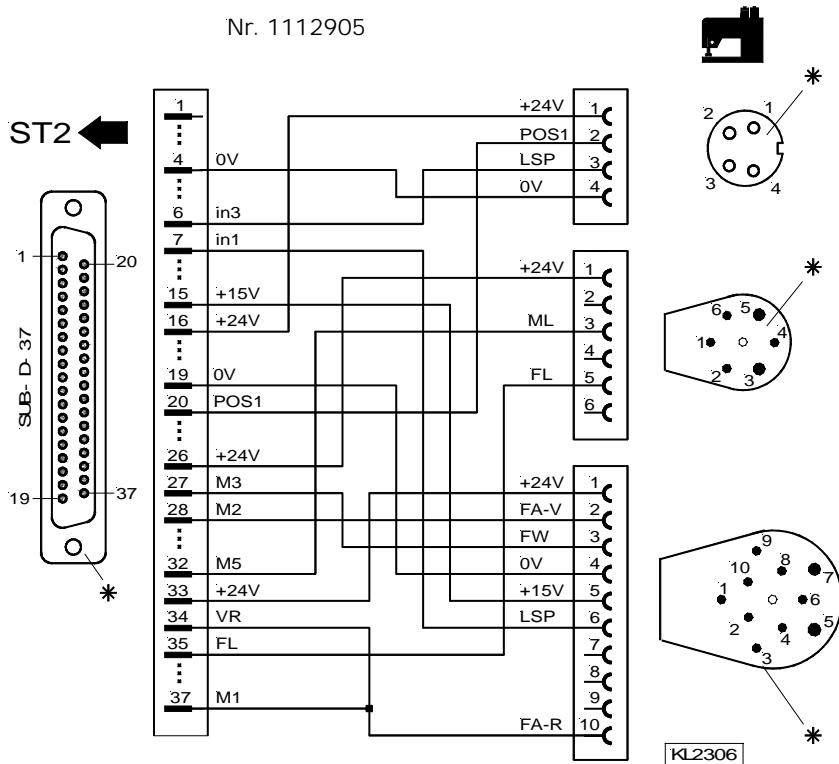
in1 = Input **machine run blockage** for thread trimming control proximity switch
in3 = Input **machine run blockage** for thread monitor

Adapter cord for UNION SPECIAL model 63900AMZ

Setting the functional sequence	Thread trimming mode	➜	Set parameter 290	= 10
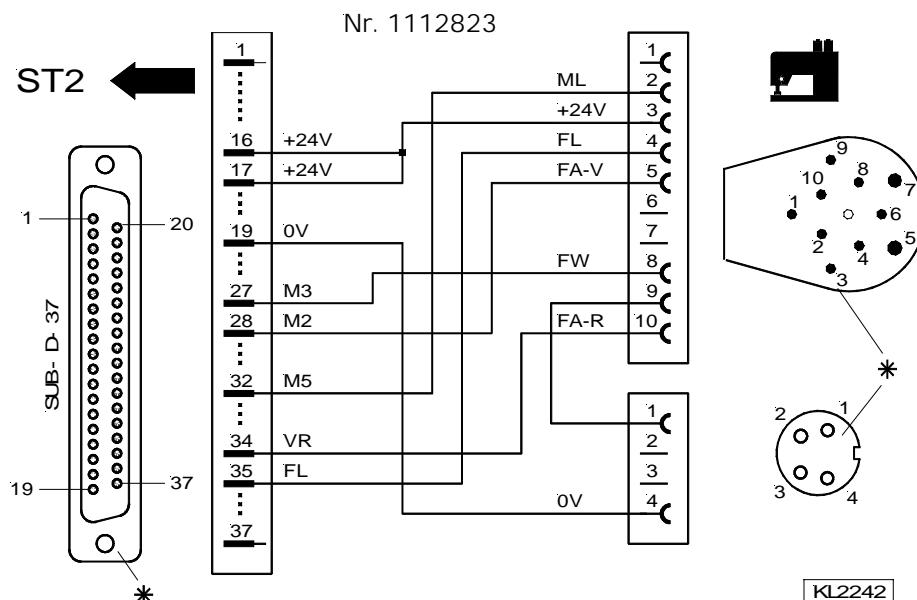
Nr. 1112823

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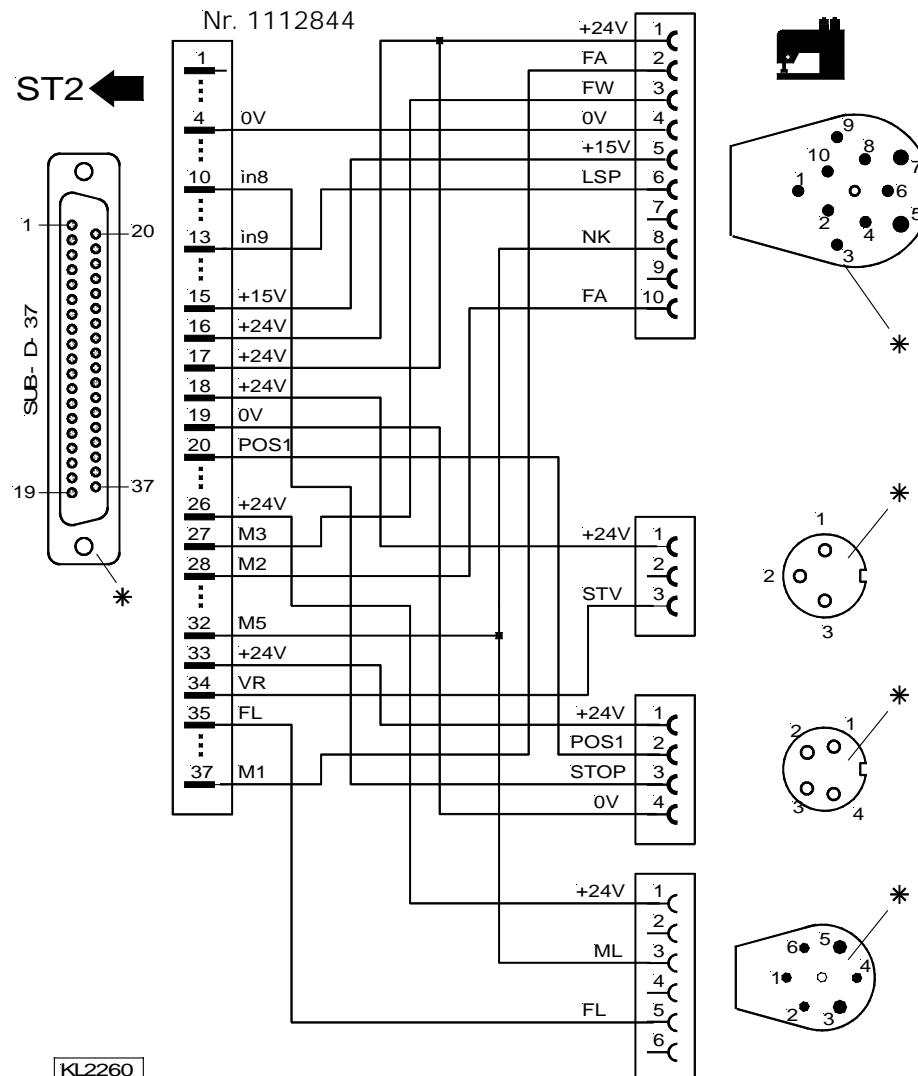
*)   Rear view (soldering side) of 37-pin plug (ST2) and of the remaining sockets.

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
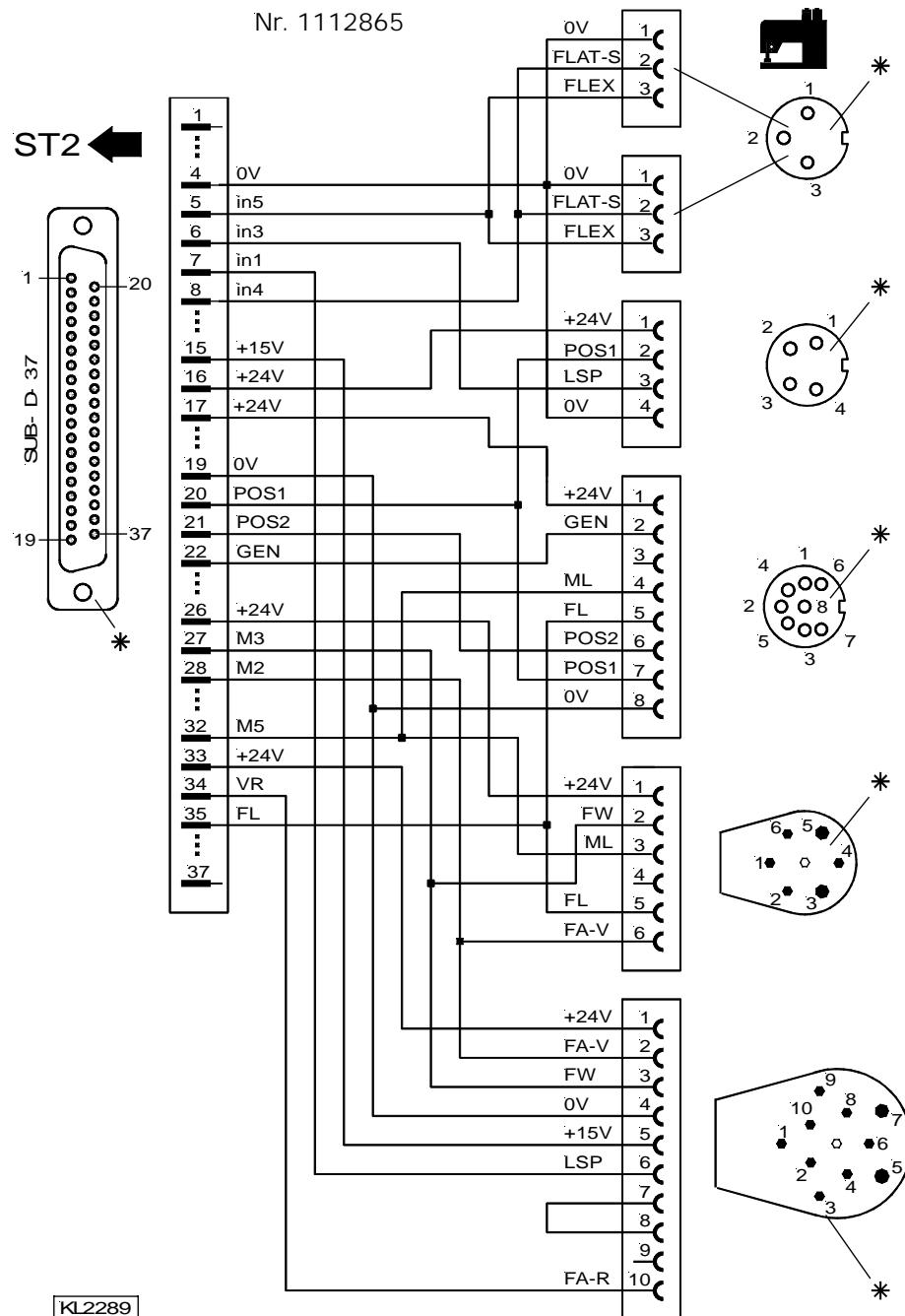
Nr. 1112865

KL2289

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)**
in5 = Input **sewing foot lift with pedal in pos. 0 (neutral)**

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

Adapter cord for YAMATO chainstitch machines VC/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

Nr. 1113345

KL2528
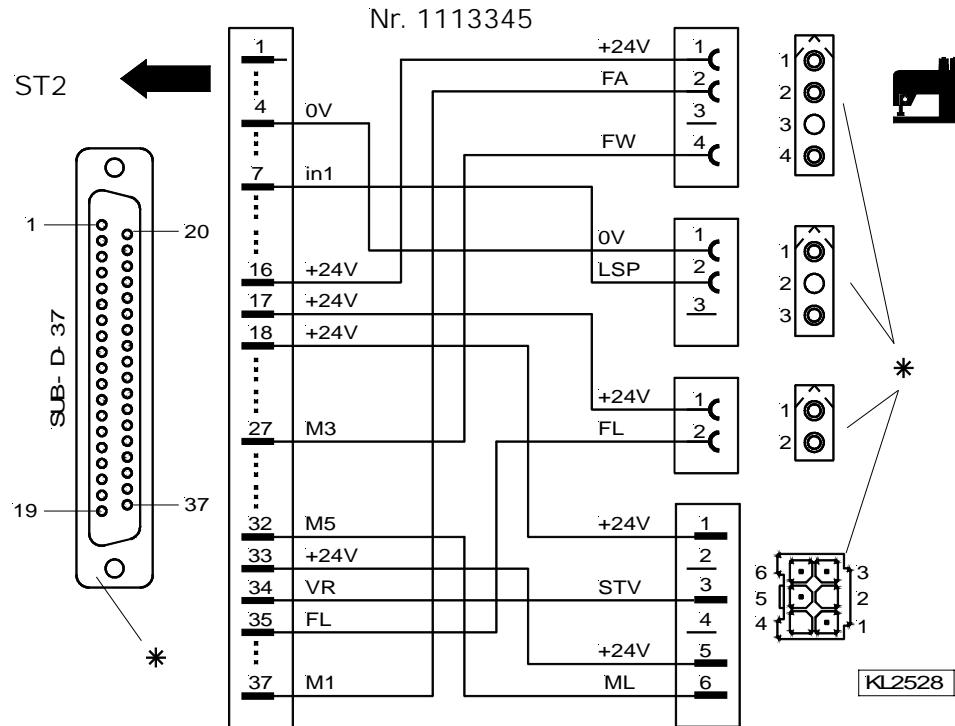
*) Rear view (soldering side) of 37-pin plug (ST2). Front view (component side) of the remaining plugs/sockets.

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	Input in1	➜	Set parameter 240	=	6
(Automatic setting)	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	Input in1	➜	Set parameter 240	=	6
(Automatic setting)	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.

8 Timing Diagrams

Mode 0 (lockstitch)
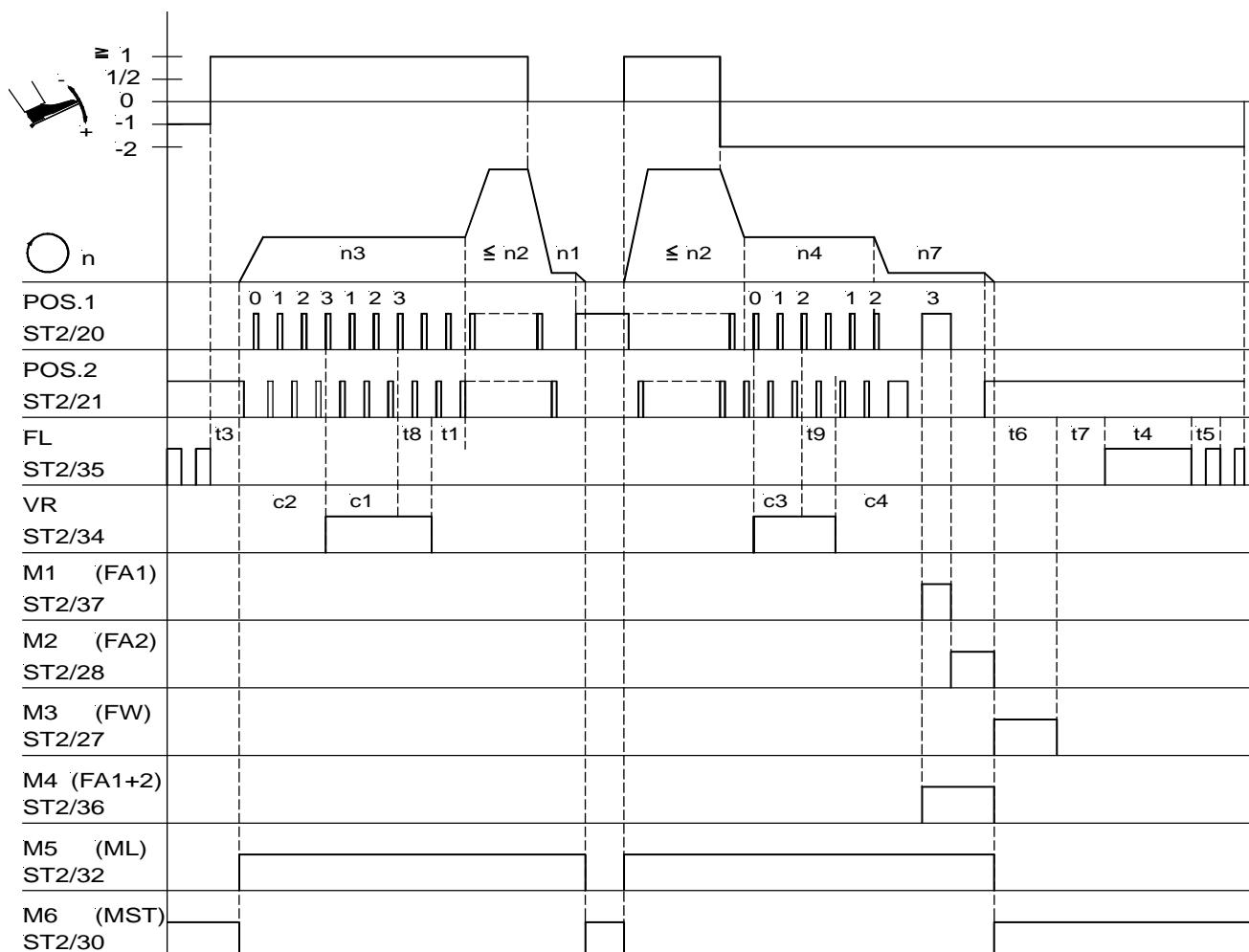
0256/ MODE- 0

Mark	Function		Parameter	Control	V810	V820
FAm	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			
c2	Start backtack stitches forward		000			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
c4	End backtack stitches forward		003			
t8	Start backtack stitch correction		150			
t9	End backtack stitch correction		151			
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			

Mode 2 (lockstitch)

0256/ MODE- 2

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 2		290 = 2			
SSt	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			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
SSc	Softstart stitches		100			
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			
tFA	Stop time for thread trimmer		253			
kt2	Thread trimmer ON period		283			

Mode 3 and/or 26 (lockstitch)
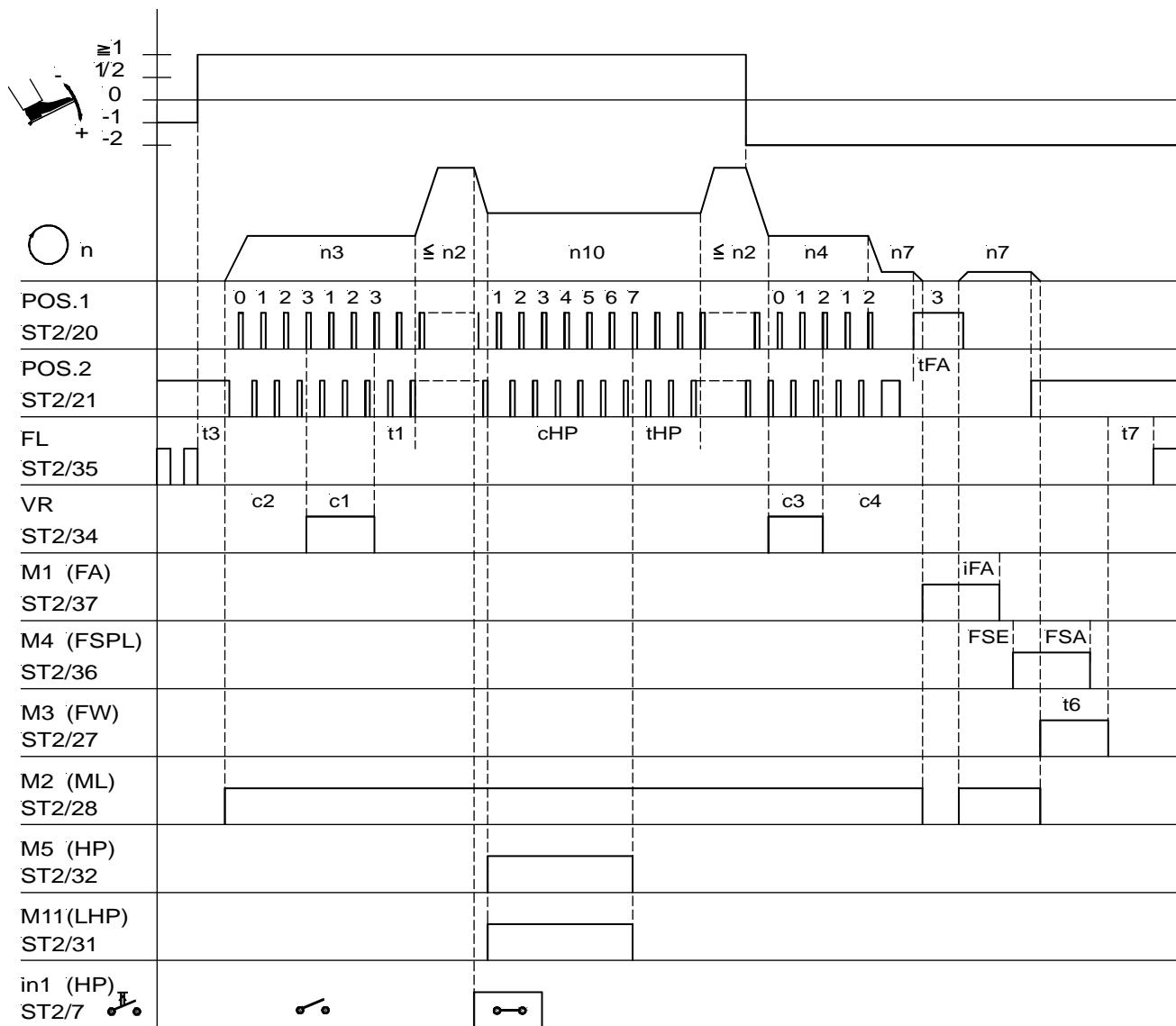
0256/ MODE- 3

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 3 and/or 26		290 = 3/26			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
hP	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			
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			
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			

Mode 4 (chainstitch)
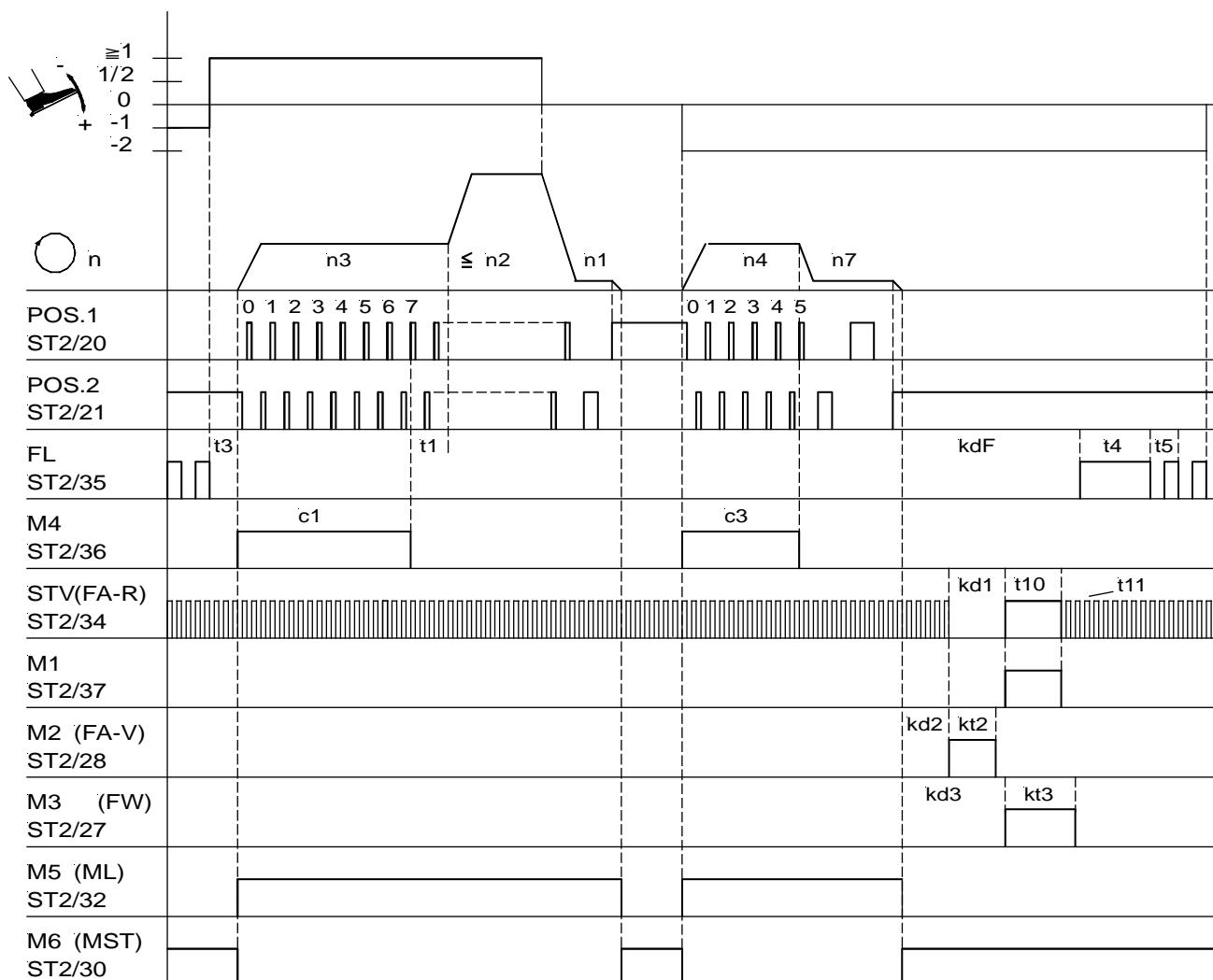
0256/ MODE- 4

Mark	Function		Parameter	Control	V810	V820
FAm	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			
c1	Stitch counting of start stitch condensing		001			
c3	Stitch counting of end stitch condensing		002			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted sewing foot		202			
t10	Full power of thread trimmer backward		212			
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			

Mode 5 (chainstitch)
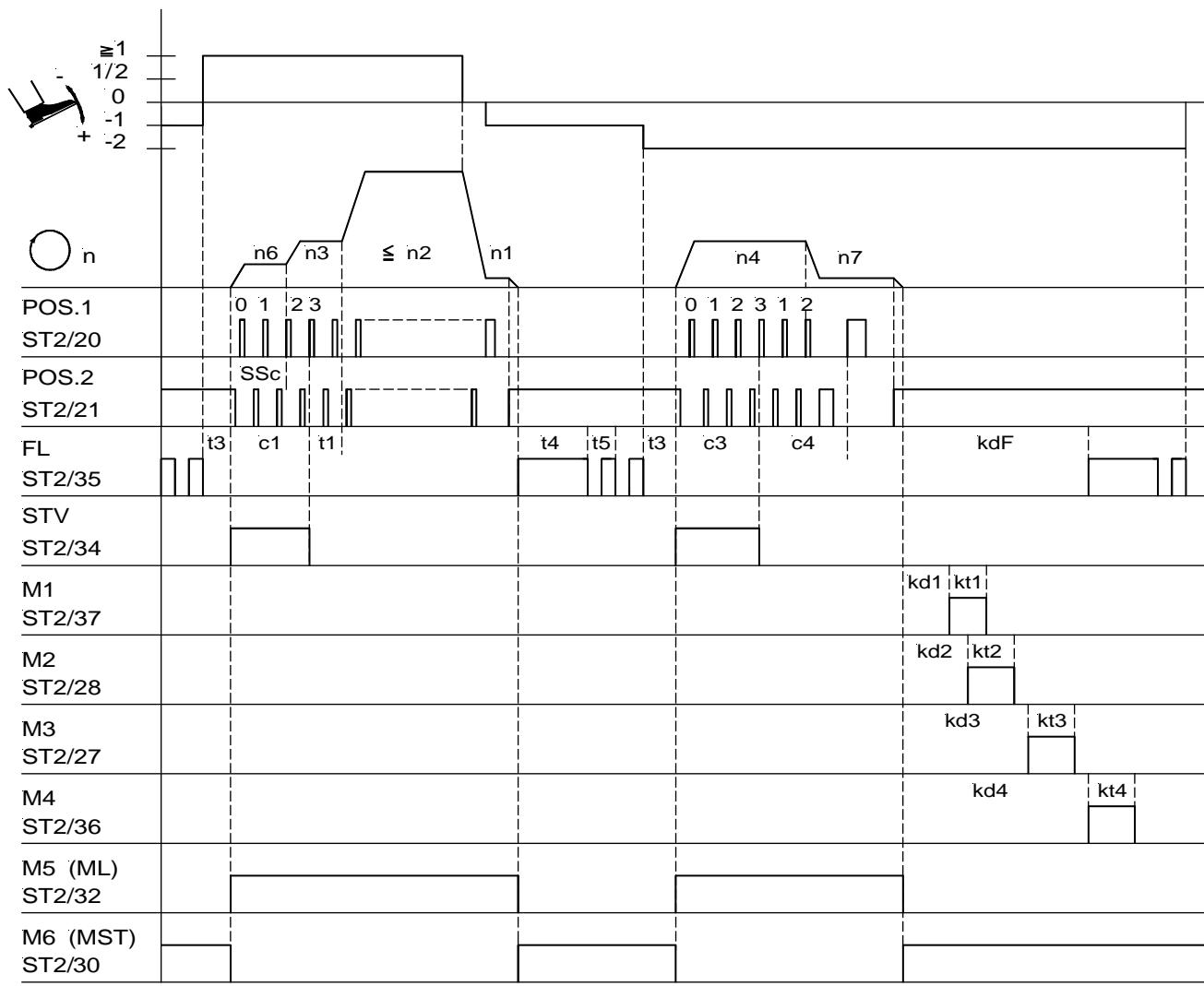
0256/ MODE- 5

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			
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			
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			
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
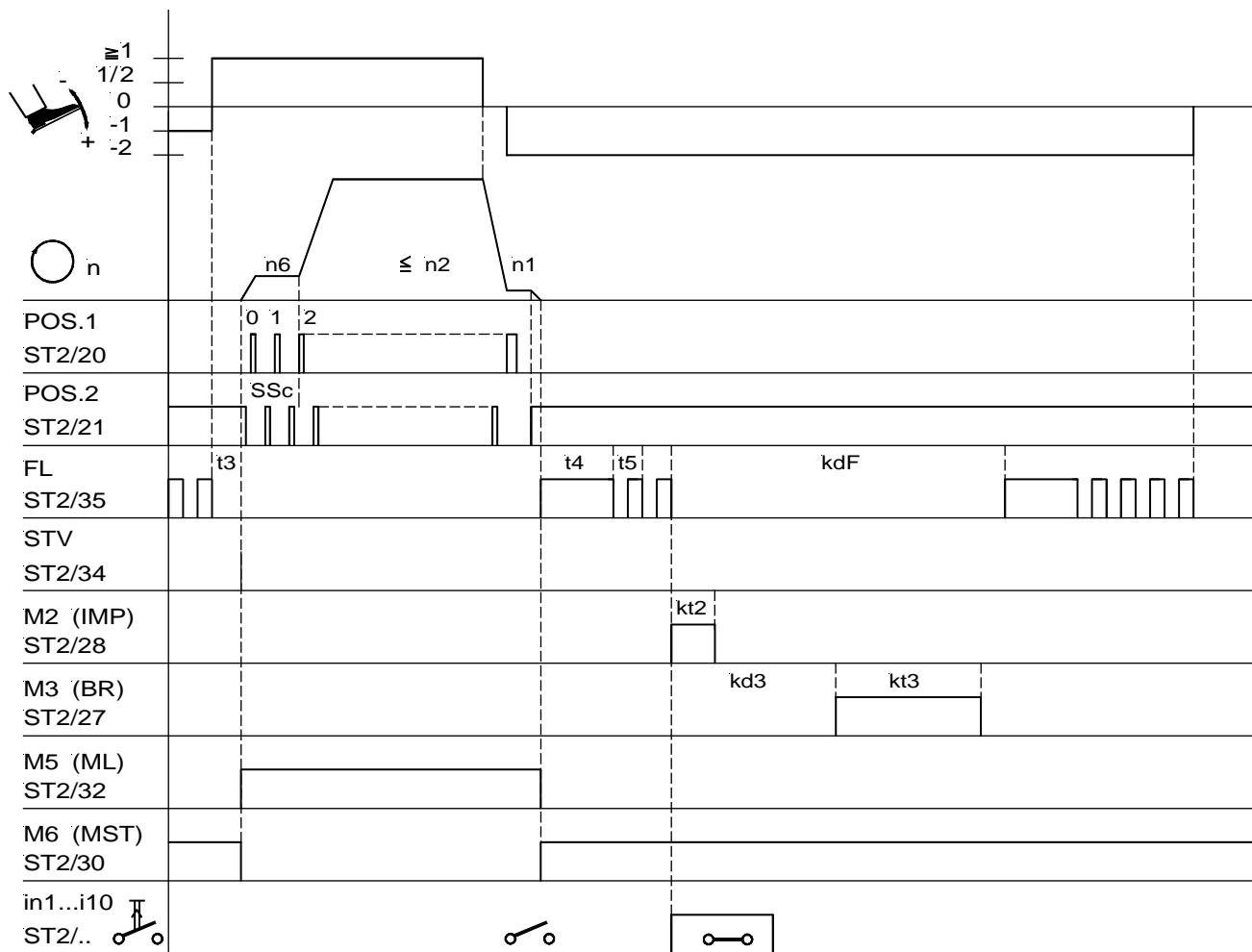
0256/ MODE- 5a

Mark	Function	Parameter	Control	V810	V820
FAm	Mode 5	290 = 5			
SSt	Softstart	134 = 1			
SAk	"Hot thread chain cutting" 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	2.. = 42			
n1	Positioning speed	110			
n2	Maximum speed	111			
n6	Softstart speed	115			
SSc	Softstart stitches	100			
t3	Start delay from lifted sewing foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
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)
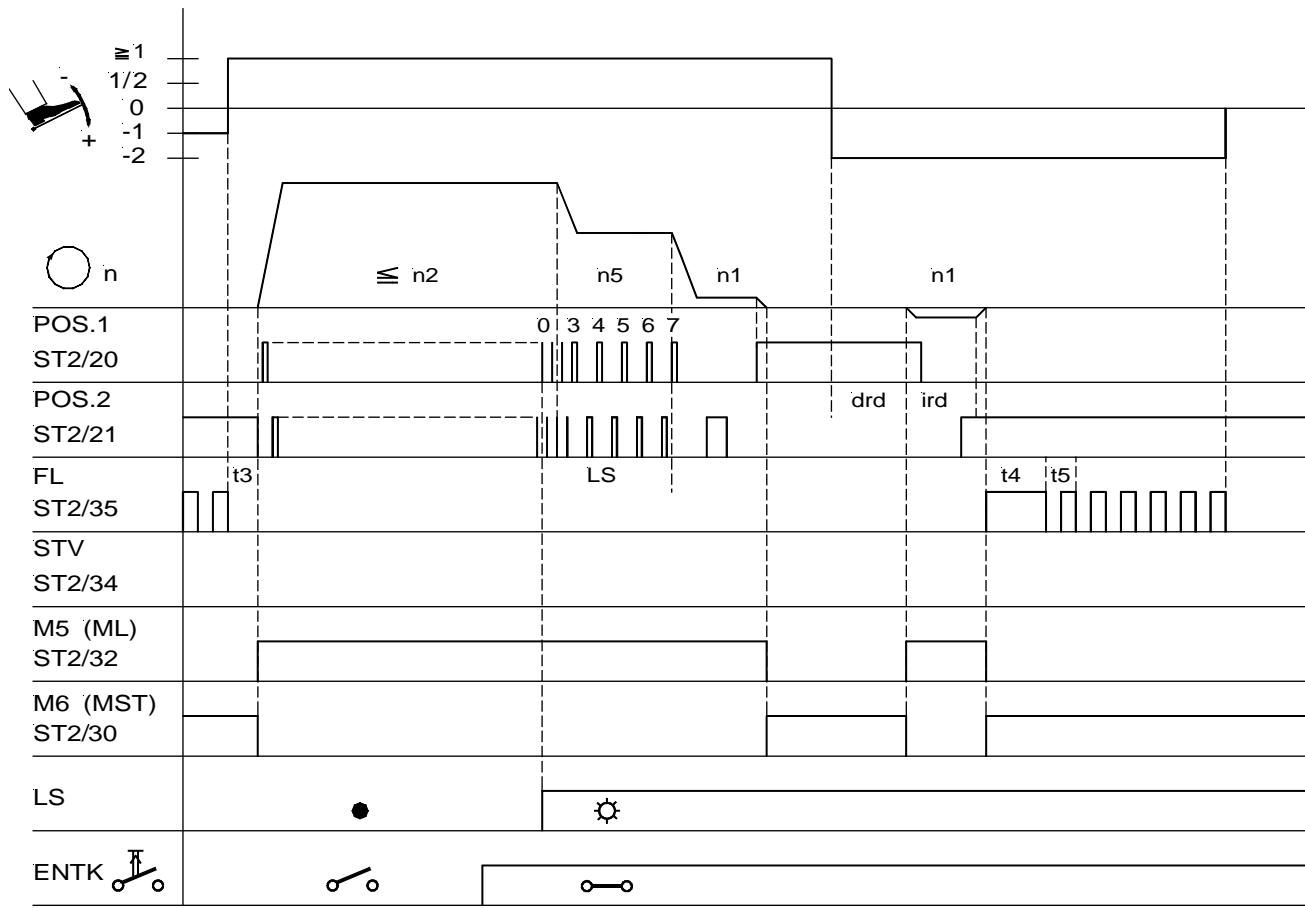
0256/ ENTK- 1

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 5		290 = 5			
drE	Direction of motor rotation	Clockwise	161 = 0			
Frd	Reverse motor rotation		182 = 1			
	Basic position 2	On		S5 key	4 key	7 key
	End stitch condensing and thread trimmer *)	On				
LS	Light barrier		009 = ON			
mEk	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			
LS	Light barrier compensating stitches		004			
ird	Number of reversing increments		180			
drd	Switch-on delay of reverse motor rotation		181			
t3	Start delay from lifted sewing foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
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")
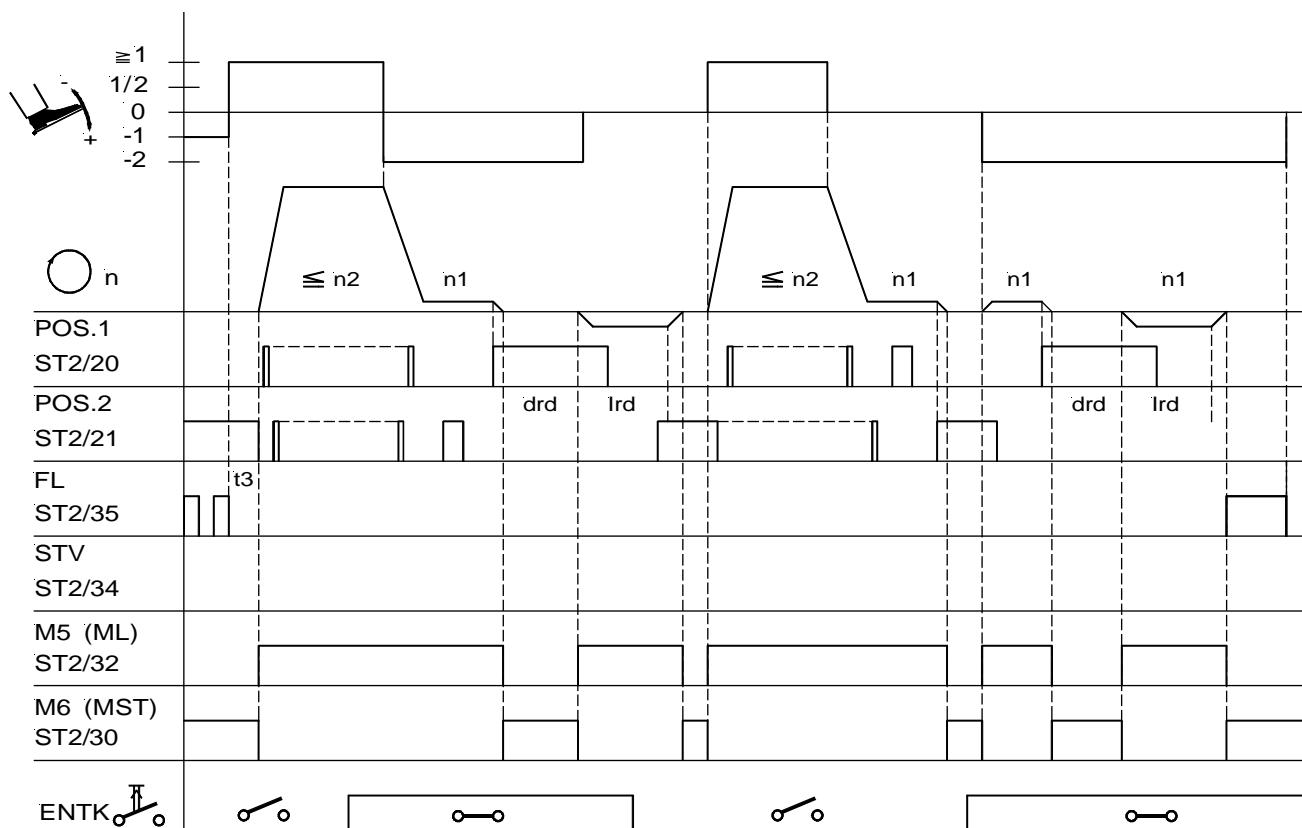
0256/ ENTK- 2

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 5		290 = 5			
drE	Direction of motor rotation	Clockwise	161 = 0			
Frd	Reverse motor rotation		182 = 1			
	Basic position 2	On		S5 key	4 key	7 key
	End stitch condensing and thread trimmer *)	On				
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			
ird	Number of reversing increments		180			
drd	Switch-on delay of reverse motor rotation		181			
t3	Start delay from lifted sewing foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
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
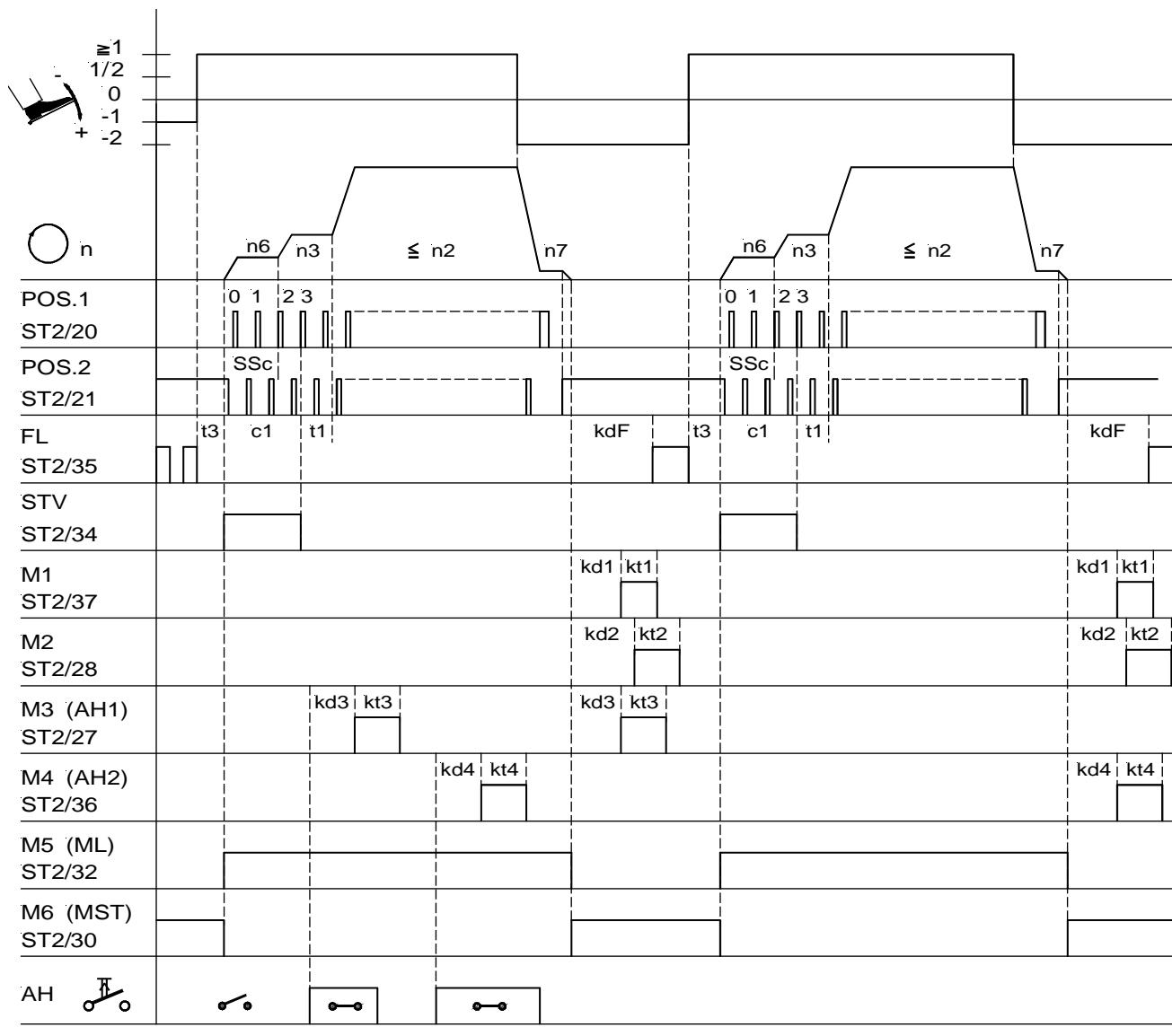
0256/ MODE- 6

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 6		290 = 6			
SSt	Softstart		134 = 1			
	Start stitch condensing	On		S2 key	1 key	1 key
USS	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			
c1	Stitch counting of start stitch condensing		001			
SSc	Softstart stitches		100			
t1	Delay until speed release after stitch condensing		200			
t3	Start delay from lifted sewing foot		202			
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)

0256/ MODE- 7a

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
UoS	Sequence "overlock mode with stop"		018 = 0			
-Pd	Function "pedal in pos. –2" blocked		019 = 2			
kLm	Clamp at the seam end On		020 = 1			
SPO	Chain suction at the seam end until pedal in pos. 0		022 = 1			
tFS	Beginning of thread tension release at the start of the seam		025 = 0			
LSS	Start blockage with light barrier uncovered		132 = 0			
kSA	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
kSE	Stitch counting at the seam end at fixed speed n4		144 = 0			
mhE	Seam end after count c2		191 = 1			
PLS	Speed n5 after light barrier sensing		192 = 0			
kSL	Chain suction On after light barrier compensating stitches		193 = 0			
USS	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			
ckL	Run-out stitches clamp at the start of the seam		021			
SFS	Stitches from light barrier uncovered until end of thread tension release (M4)		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)
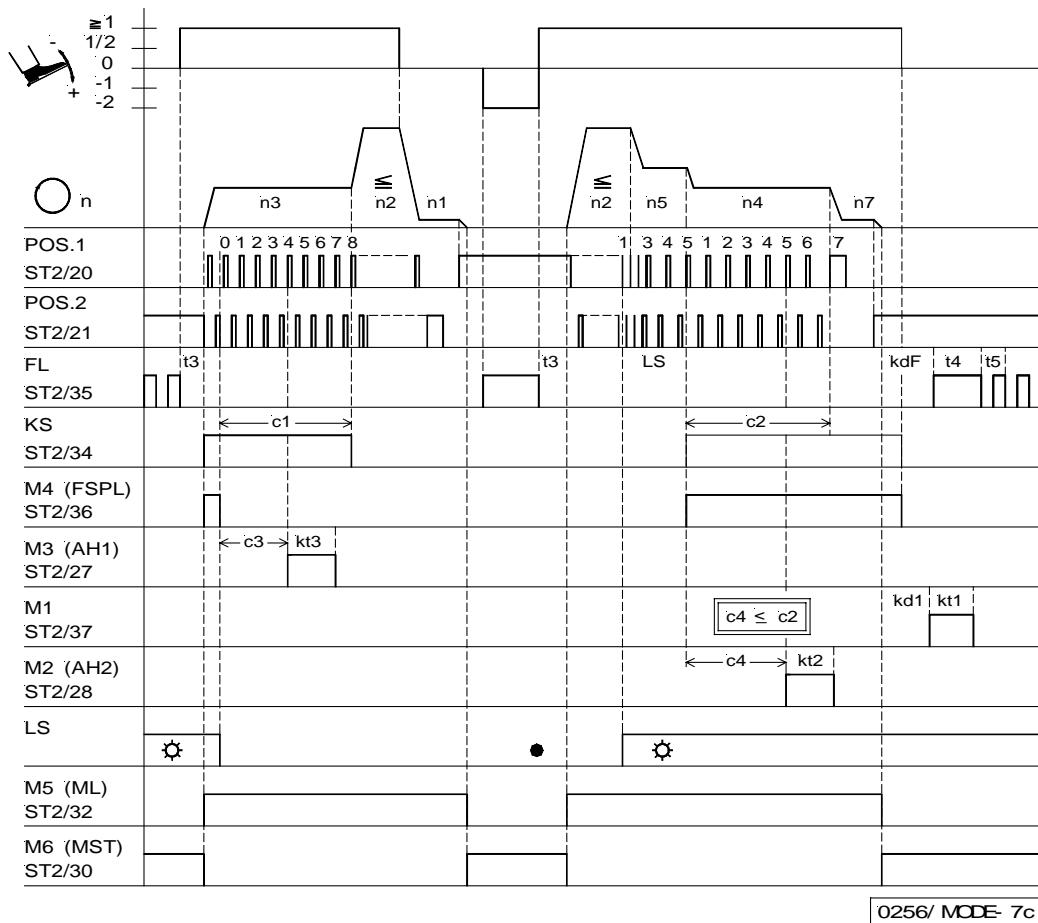
0256/ MODE- 7c

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
UoS	Sequence "overlock mode with stop"		018 = 0			
-Pd	Function "pedal in pos. –2" blocked		019 = 2			
kLm	Clamp at the seam end Off		020 = 0			
SPO	Chain suction at the seam end until pedal in pos. 0		022 = 1			
LSS	Start blockage with light barrier uncovered		132 = 0			
kSA	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
kSE	Stitch counting at the seam end at fixed speed n4		144 = 0			
mhE	Seam end after count c2		191 = 1			
PLS	Speed n5 after light barrier sensing		192 = 0			
kSL	Chain suction On after light barrier compensating stitches		193 = 0			
USS	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			
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)
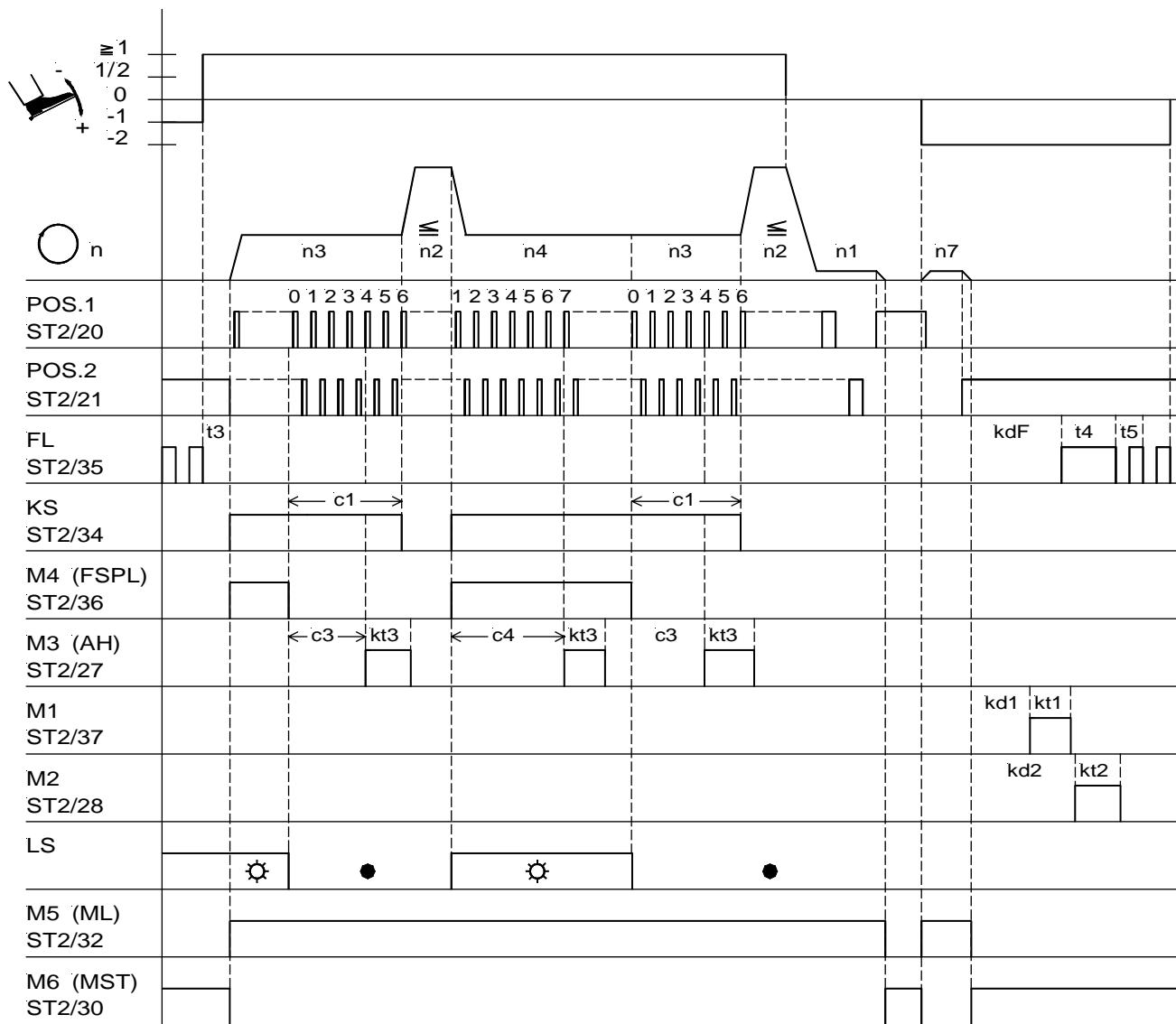
0256/ MODE- 7b

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 7		290 = 7			
	Counts c1, c2, c3 and c4	On		S2/3 key	1/2 key	1/4 key
LS	Light barrier compensating stitches		004 = 0			
LS	Light barrier		009 = 1			
UoS	Sequence "overlock mode at the seam end without stop"		018 = 1			
-Pd	Function "pedal in pos. −1/–2" activated in the seam		019 = 3			
SPO	Chain suction at the seam end until pedal in pos. 0		022 = 1			
kSA	Stitch counting at the start of the seam at fixed speed n3		143 = 1			
kSE	Stitch counting at the seam end at fixed speed n4		144 = 1			
USS	Tape cutter function		232 = 0			
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Speed for start counting		112			
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			
t3	Start delay from lifted sewing foot		202			
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)
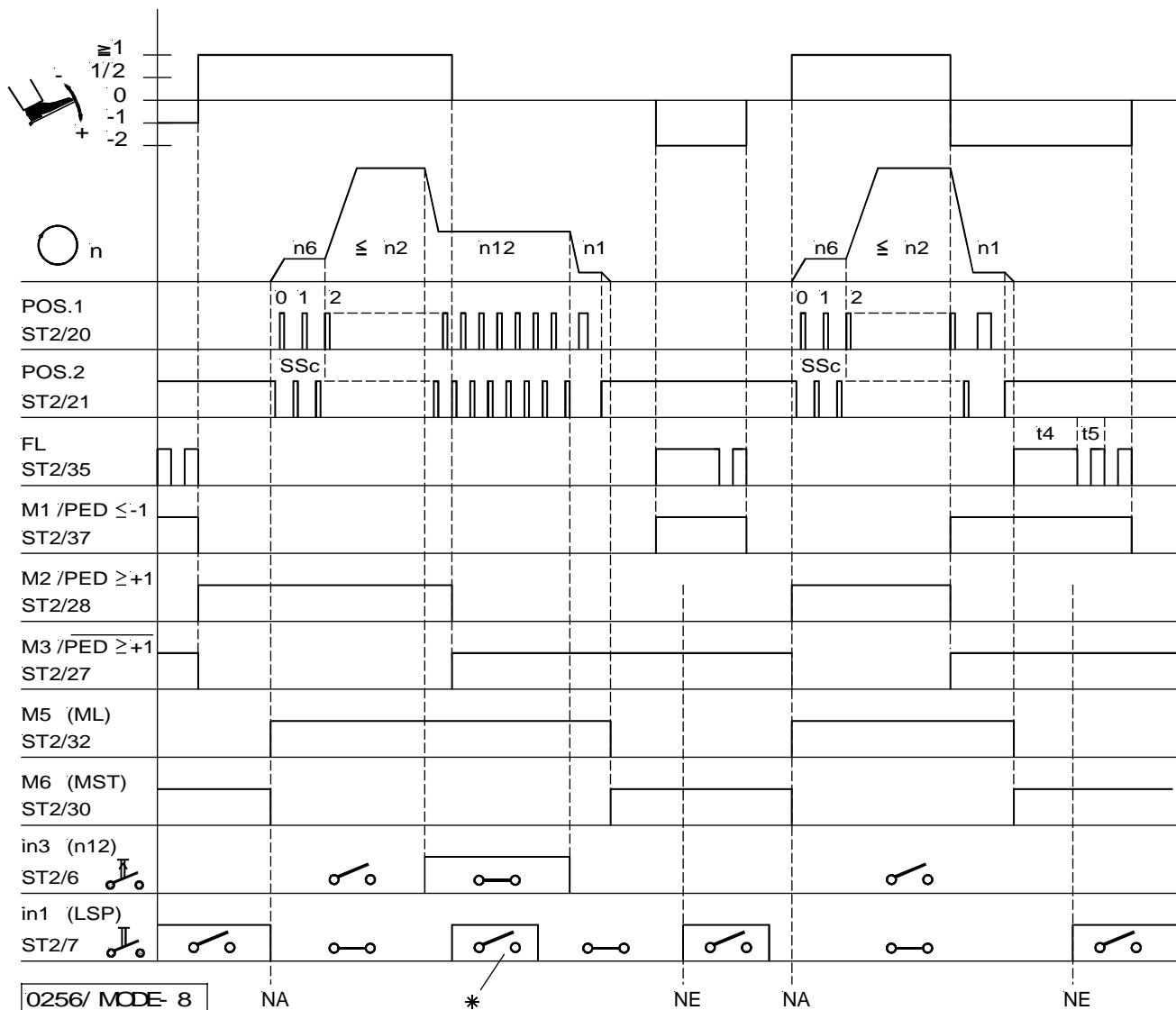
Mark	Function		Parameter	Control	V810	V820
FAm	Mode 8		290 = 8			
	Basic position 2	On		S5 key	4 key	7 key
SSt	Softstart		134 = 1			
in1	Machine run blockage activated with open switch		240 = 6			
in3	n-Auto with closed switch		242 = 10			
n1	Positioning speed		110			
n2	Maximum speed		111			
n6	Softstart speed		115			
n12	Automatic speed		118			
SSc	Softstart stitches		100			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			

*)   When automatic speed is On, machine run blockage (safety switch) does not work!

NA   Start of seam

NE   Seam end

Mode 9 (backlatch Yamato)
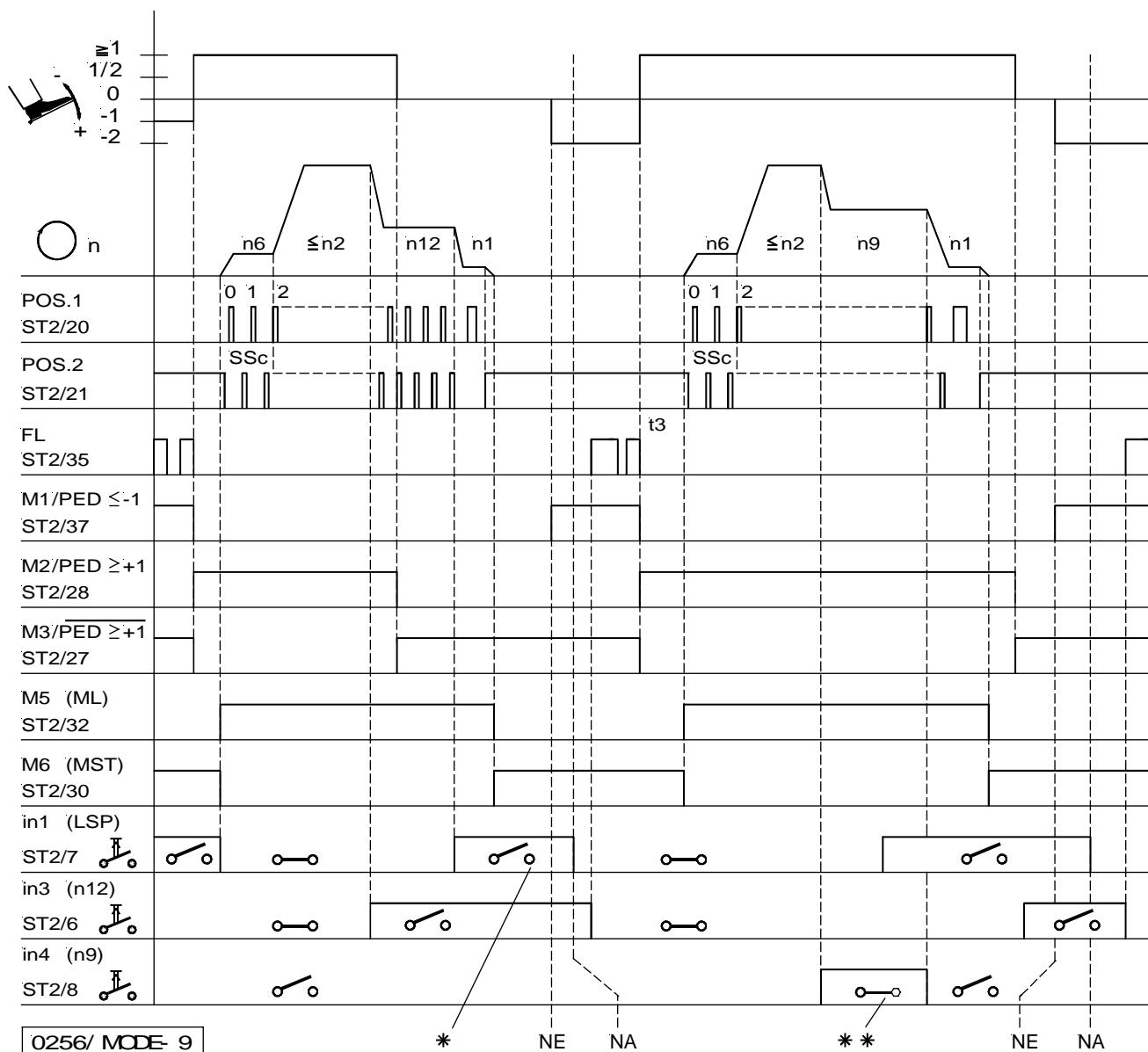
Mark	Function		Parameter	Control	V810	V820
FAm	Mode 9		290 = 9			
	Basic position 2	On		S5 key	4 key	7 key
SSt	Softstart		134 = 1			
in1	Machine run blockage activated with open switch		240 = 6			
in3	Automatic speed with open switch		242 = 10			
	(the function of input 3 is inverted in mode 9)					
PGm	Setting an external sensor to position 2		270 = 1			
	(A sensor must be connected!)					
n1	Positioning speed		110			
n2	Maximum speed		111			
n6	Softstart speed		115			
n12	Automatic speed		118			
SSc	Softstart stitches		100			
t3	Start delay from lifted sewing foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			

*)   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)
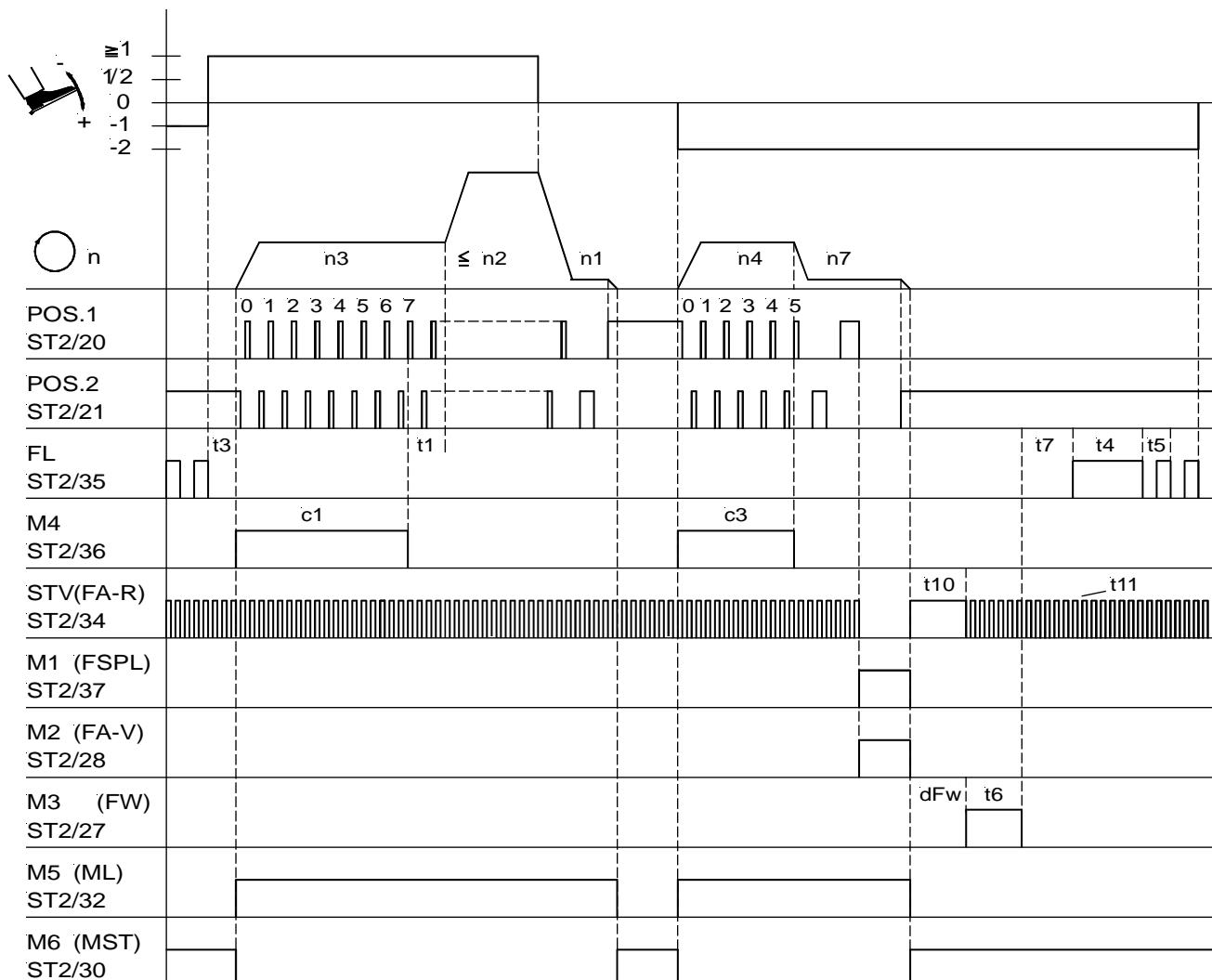
0256/ MODE- 10

Mark	Function		Parameter	Control	V810	V820
FAm	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			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
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			

Mode 13 (lockstitch / Pfaff 1425, 1525)
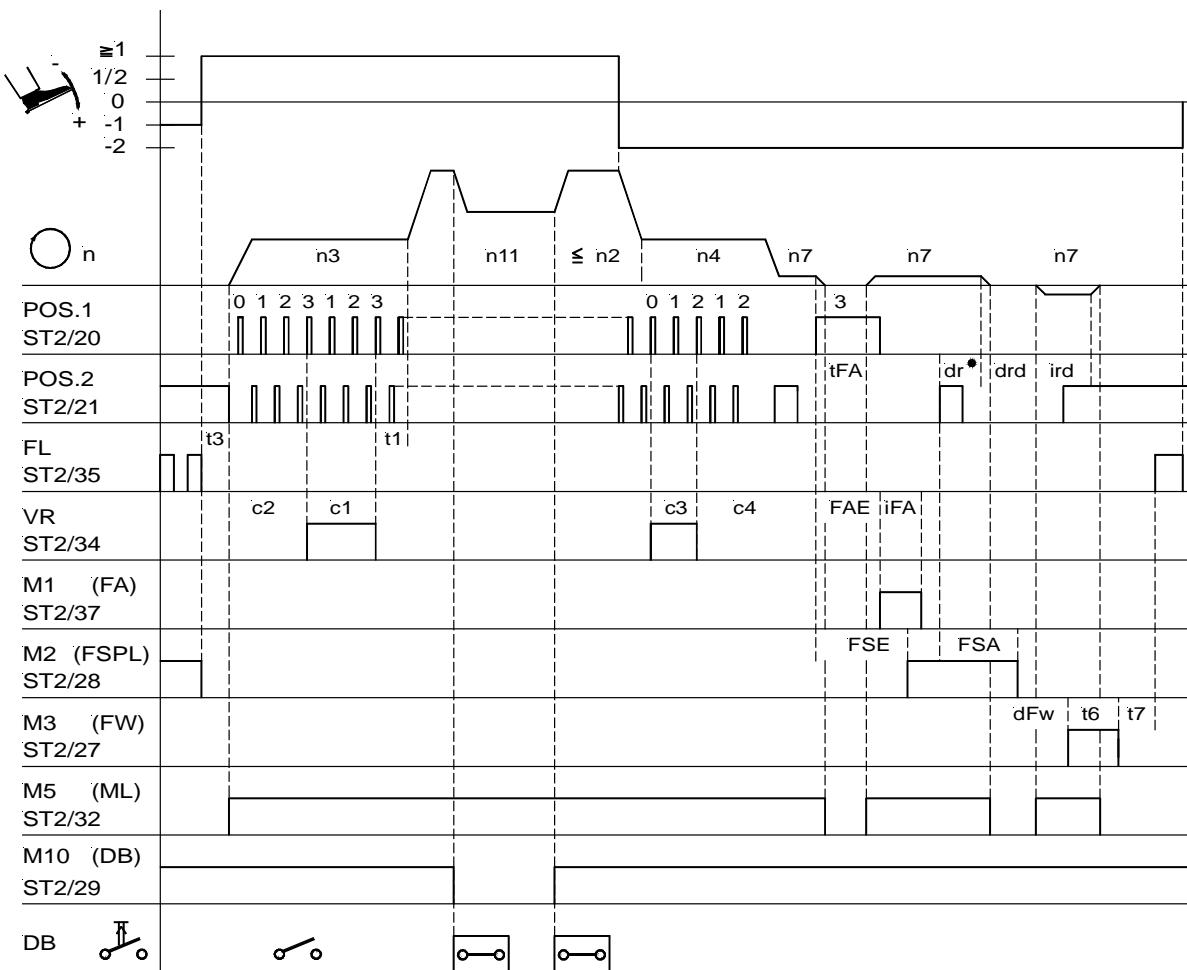
0256/ MODE- 13

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 13		290 = 13			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
FFi	Function "speed limitation n11"		186 = 1			
FFo	Function of signal M10 after power On		187 = 1			
n2	Maximum speed		111			
n3	Start backtack speed		112			
n4	End backtack speed		113			
n7	Trimming speed		116			
n11	Limikted speed n11		123			
c2	Start backtack stitches forward		000			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
c4	End backtack stitches forward		003			
ird	Number of reversing increments		180			
drd	Switch-on delay of reverse motor rotation		181			
dr°	Stop for thread trimming depending on angle		197			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted sewing foot		202			
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			
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			
FAE	Start delay angle of the thread trimmer		259			

Mode 14 (lockstitch)

0256/ MODE- 14

Mark	Function		Parameter	Control	V810	V820
FAm	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
PGm	Setting an external sensor to position 1		270 = 3			
	(An external sensor must be connected!)					
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Start backtack speed		112			
n4	End backtack speed		113			
n7	Trimming speed		116			
c2	Start backtack stitches forward		000			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
c4	End backtack stitches forward		003			
t8	Start backtack stitch correction		150			
t9	End backtack stitch correction		151			
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			
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
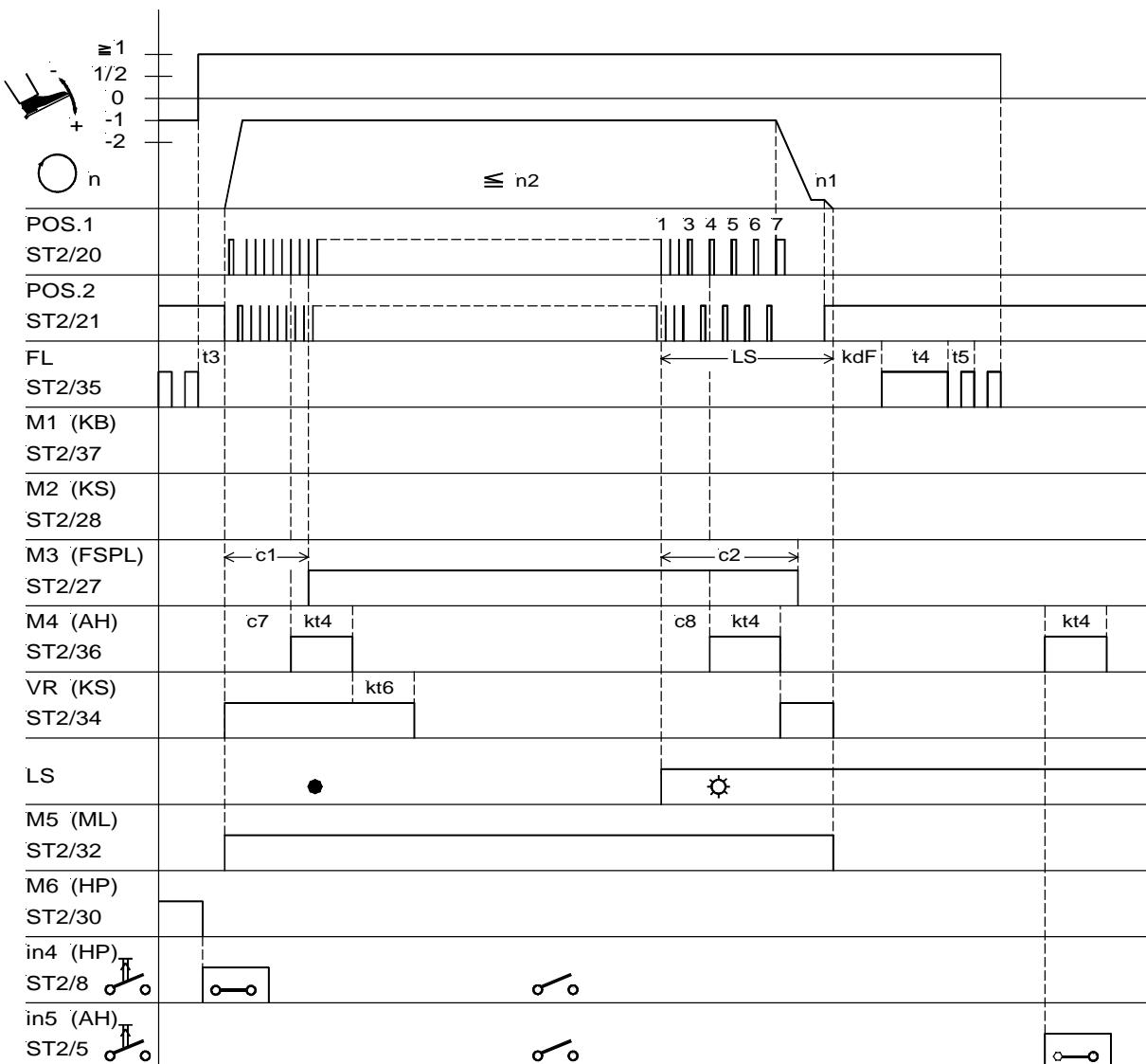
0256/ MODE- 15a

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
PLS	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			
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			
kdF	Delay time until sewing foot lifting On		288			

*) 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
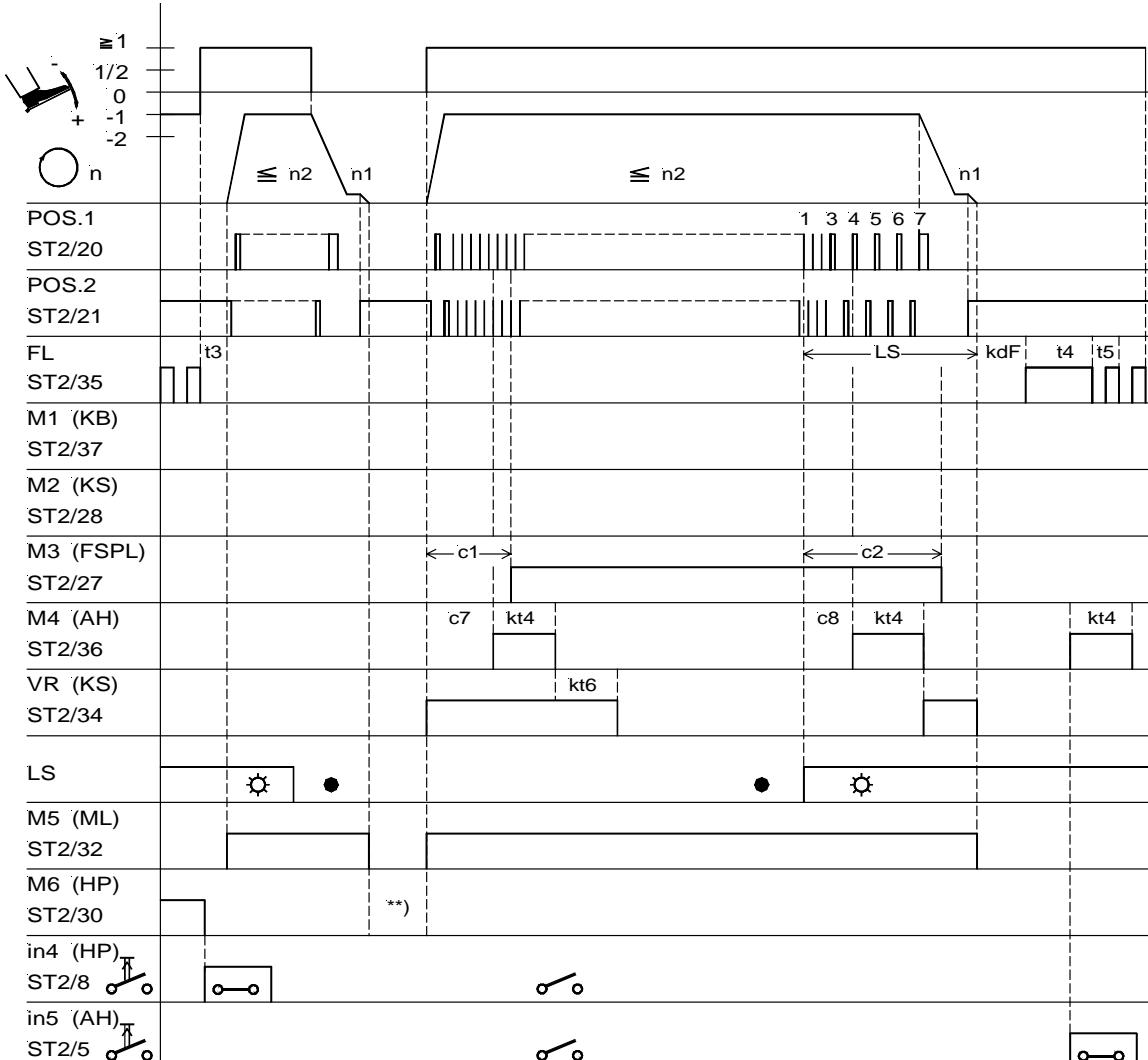
`0256/ MODE- 15c`

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
PLS	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			
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			
kdF	Delay time until sewing foot lifting On		288			

*) 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

```
           ≧1
           1/2
            0
           -1
           -2
        n          ≦ n2              n1

POS.1                    1 3 4 5 6 7
ST2/20

POS.2
ST2/21

FL        t3              ←—LS—→        kdF  t4  t5
ST2/35

M1 (KB)     c4                         kt1              kt1
ST2/37

M2 (KS)    ←—c3—→                      
ST2/28

M3 (FSPL)  ←c1→      c2
ST2/27

M4 (AH)          ←—ckL—→  kt4  kd4  kt4    kt4  kd4  kt4
ST2/36

VR (KS+KB)             kd2  kt2 kd1     kd2  kt2 kd1
ST2/34

LS            ●        ☼
M5 (ML)
ST2/32

M6 (HP)
ST2/30

in4 (HP)
ST2/8

in5 (AH)
ST2/5
```
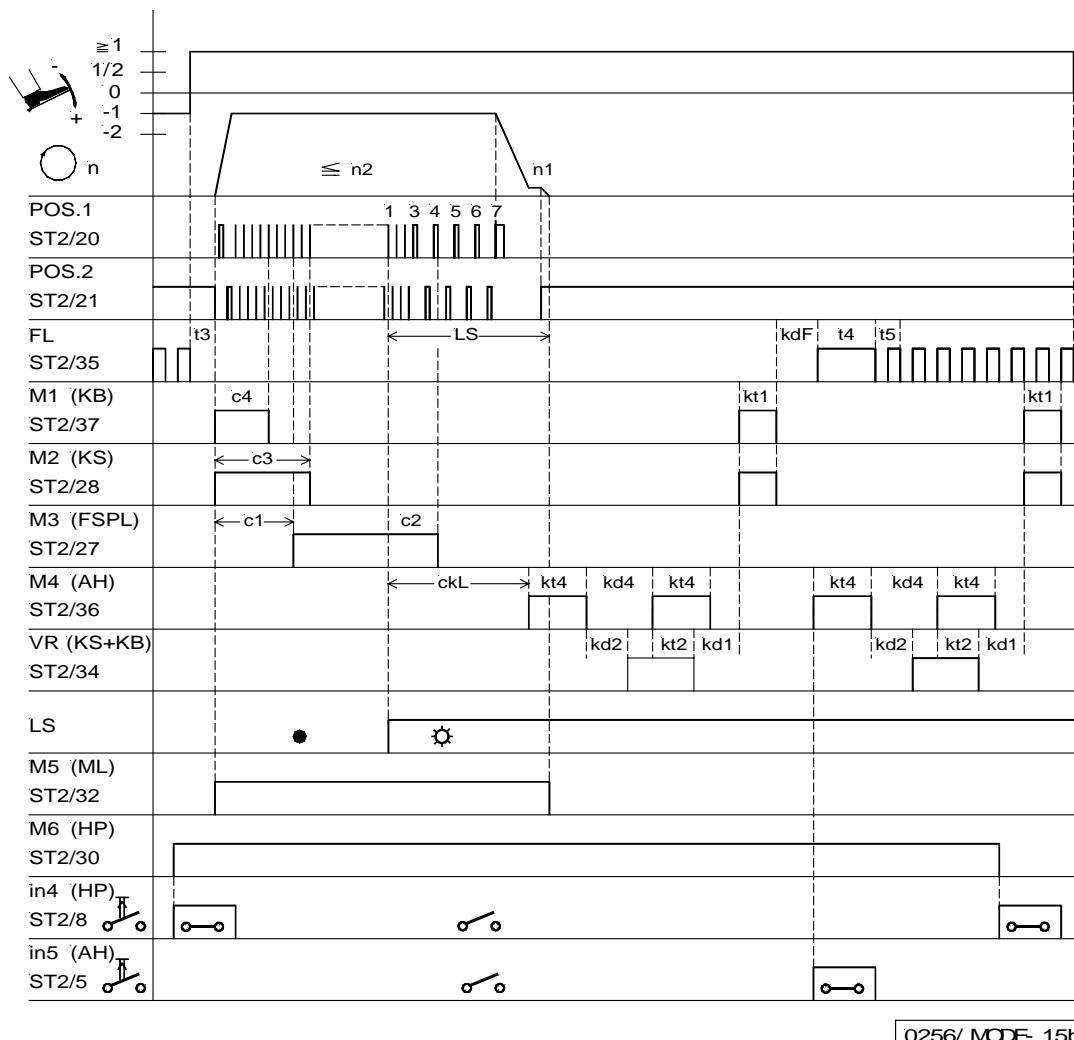
0256/ MODE- 15b

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
PLS	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			
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			
kdF	Delay time until sewing foot lifting On		288			

*) 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- 16
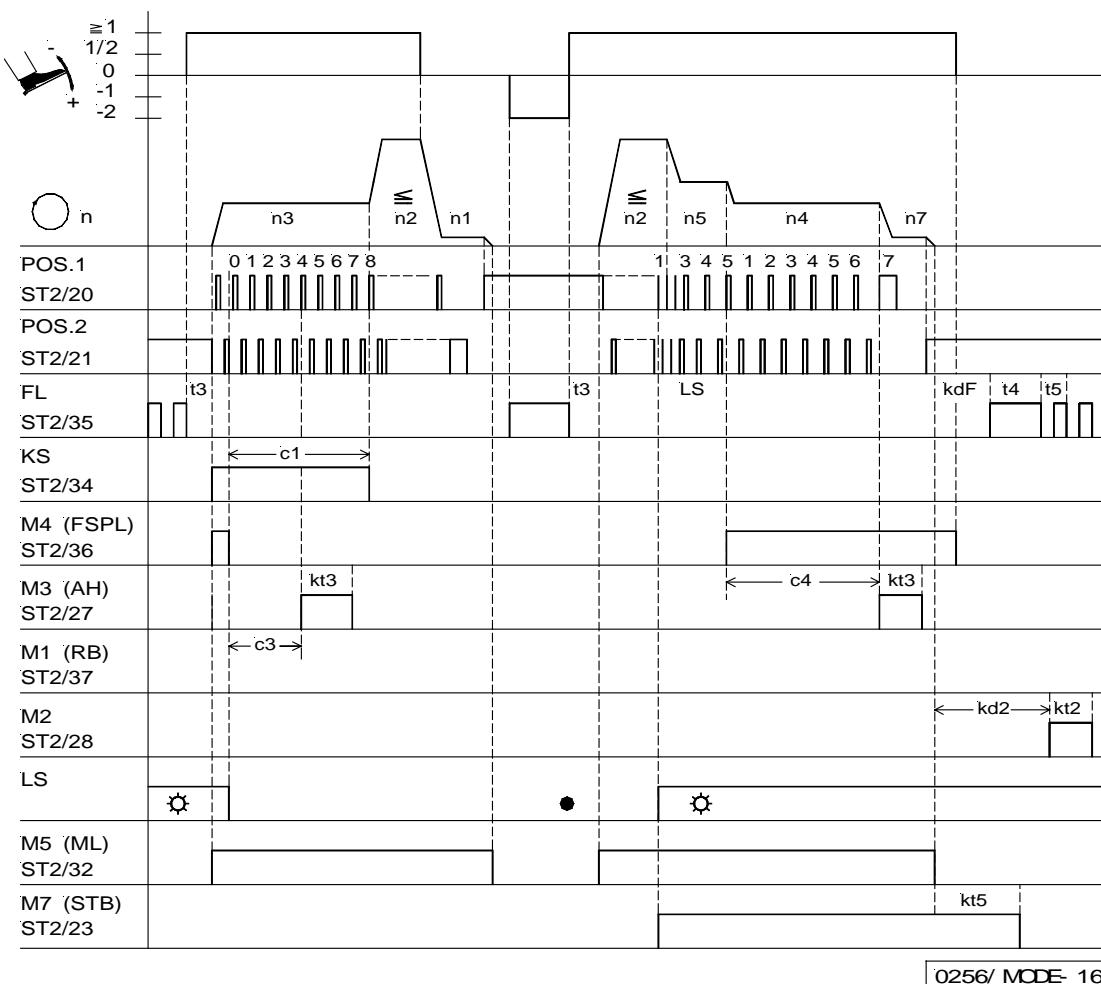
Mark	Function		Parameter	Control	V810	V820
FAm	Mode 16		290 = 16			
	Counts c1, c3 and c4	On		S2/3 key	*)	1/2/4 key
	Basic position 2	On		S5 key	*)	0 key
	Sewing foot lifting at the seam end	On		S4 key	*)	9 key
LS	Light barrier		009 = 1			
UoS	Sequence "overlock mode with stop"		018 = 0			
-Pd	Function "pedal in pos. –2" blocked		019 = 2			
LSS	Start blockage with light barrier uncovered		132 = 0			
kSA	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
kSE	Stitch counting at the seam end at fixed speed n4		144 = 0			
PLS	Speed of the light barrier compensating stitches depending on the pedal		192 = 0			
bLA	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
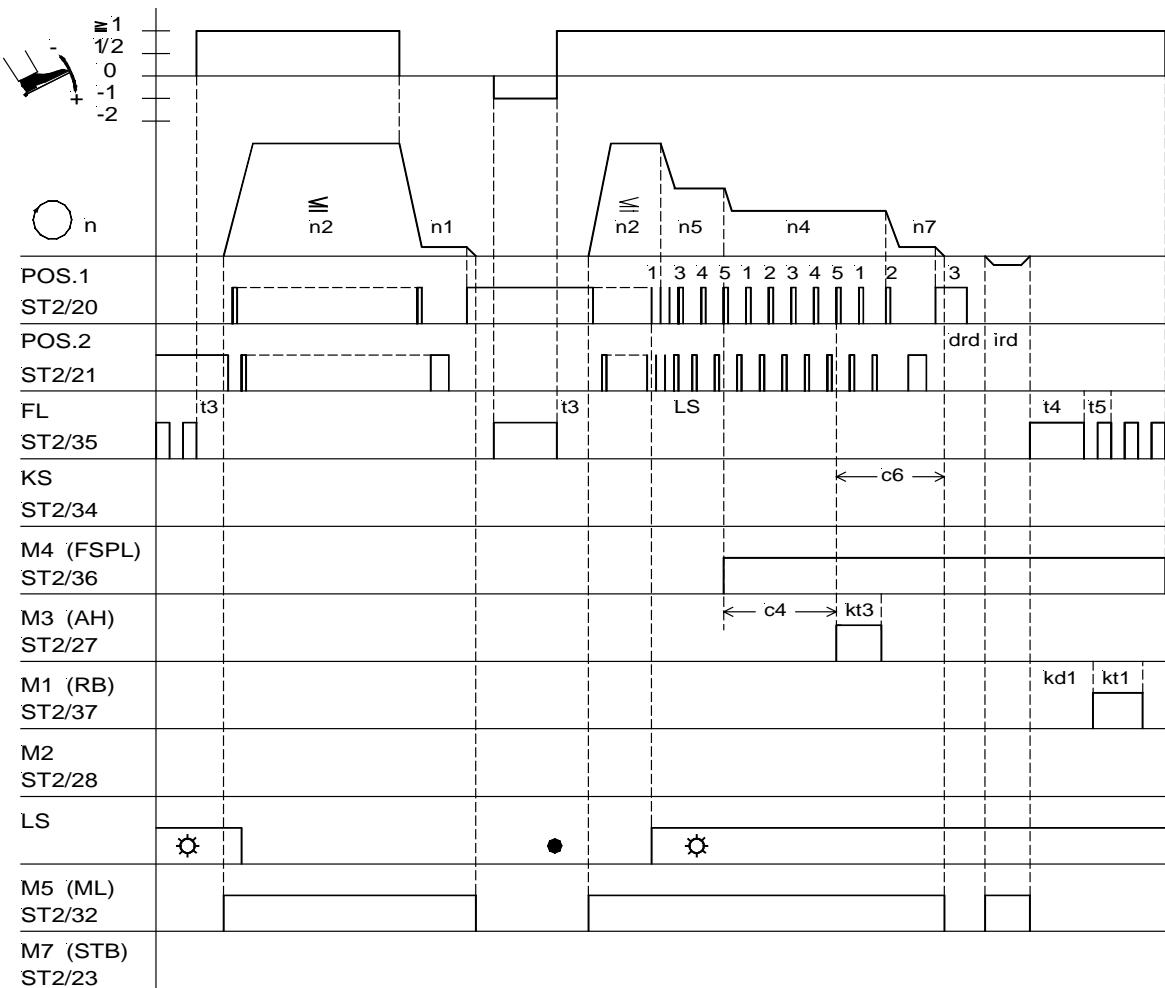
0256/ MODE- 16a

Mark	Function		Parameter	Control	V810	V820
FAm	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
LS	Light barrier		009 = 1			
UoS	Sequence "overlock mode with stop"		018 = 0			
-Pd	Function "pedal in pos. –2" blocked		019 = 2			
LSS	Start blockage with light barrier uncovered		132 = 0			
kSA	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
kSE	Stitch counting at the seam end at fixed speed n4		144 = 0			
PLS	Speed n5 after light barrier sensing		192 = 0			
bLA	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)
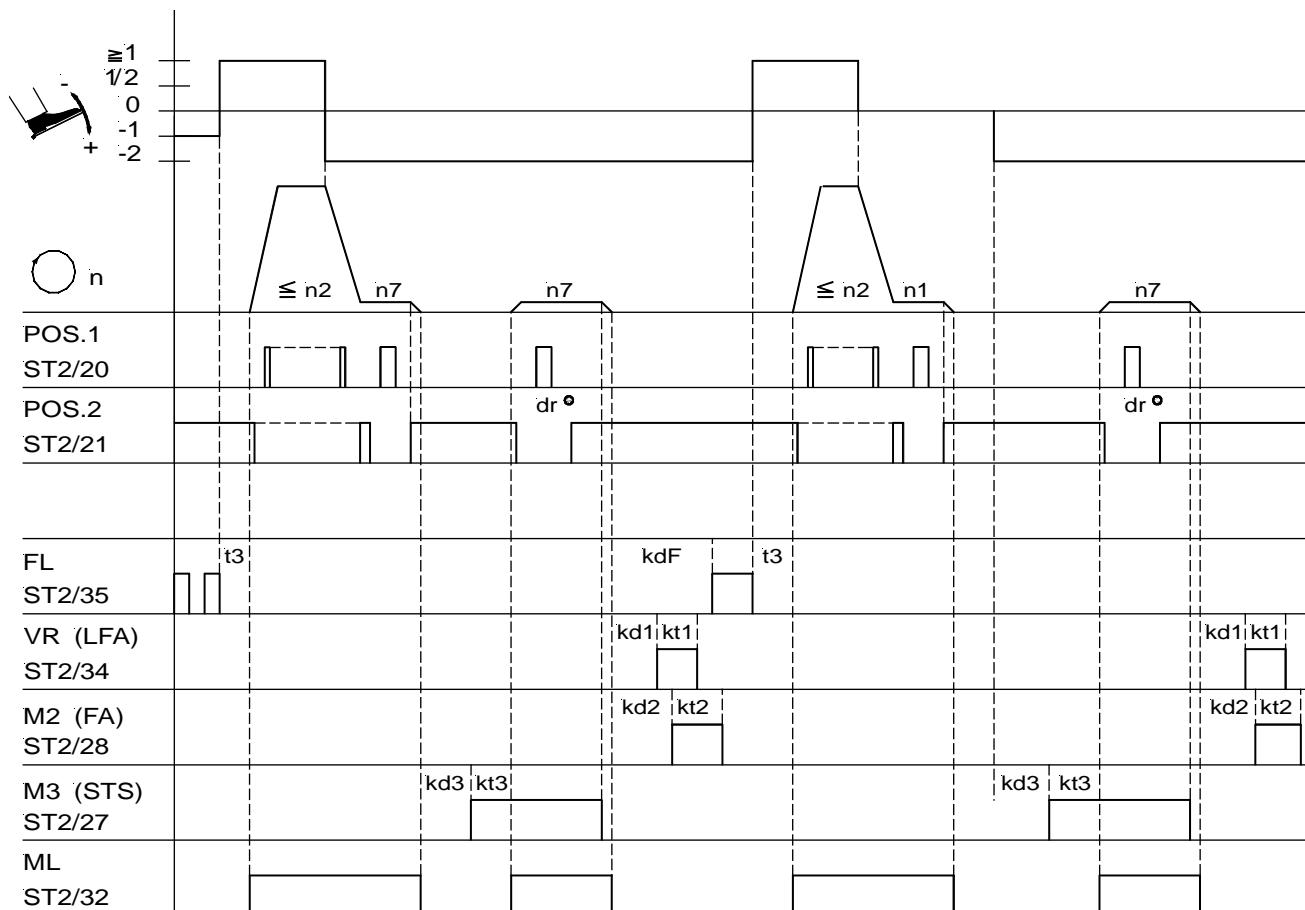
0256/ MODE- 17

Mark	Function		Parameter	Control	V810	V820
FAm	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 / DNU1541-7)
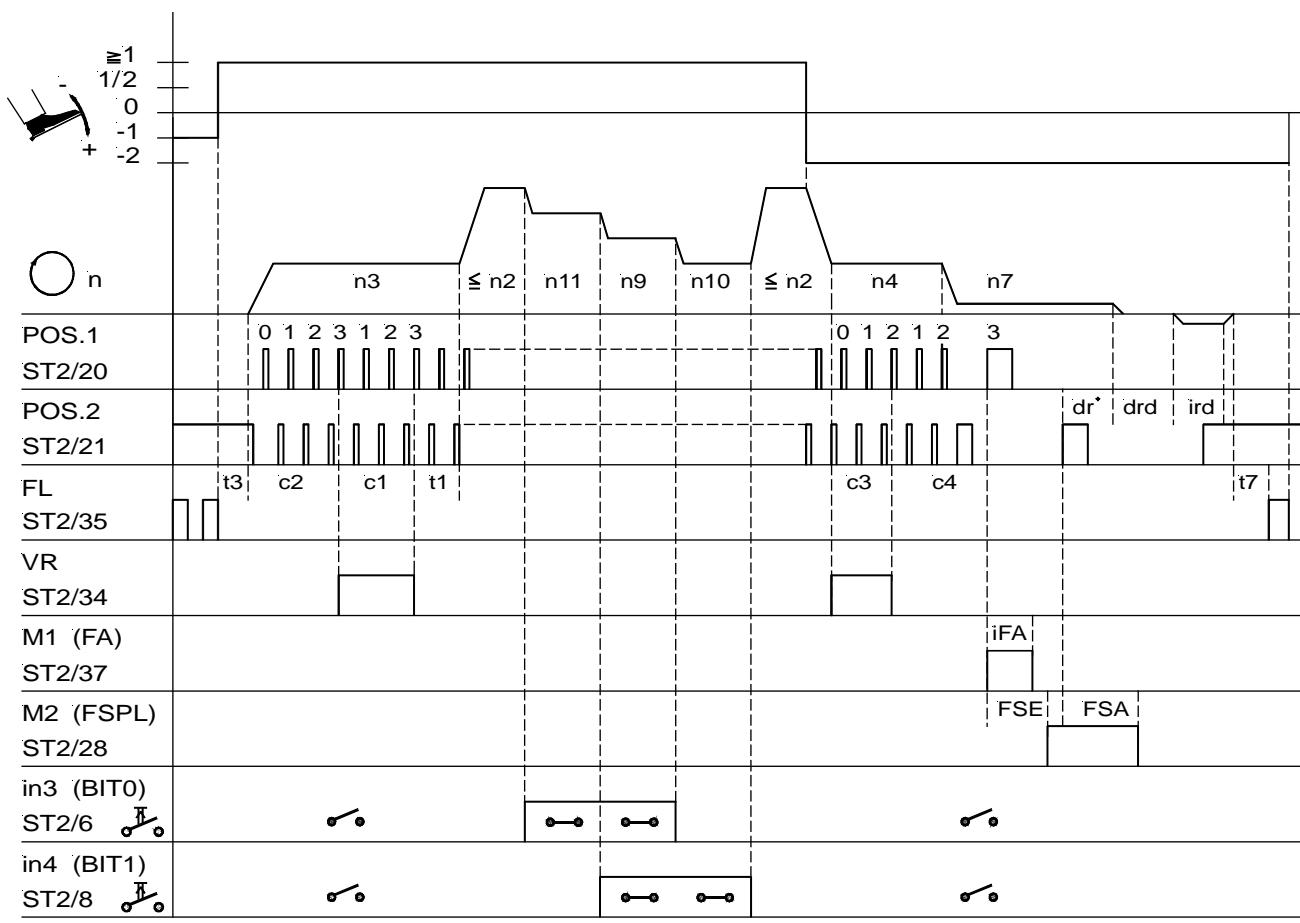
0256/ MODE- 20

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 20		290 = 20			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
Frd	Reverse motor rotation		182 = 1			
in3	Speed limitation bit 0		242 = 31			
in4	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			
c2	Start backtack stitches forward		000			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
c4	End backtack stitches forward		003			
ird	Number of reversing increments		180			
drd	Switch-on delay of reverse motor rotation		181			
dr°	Stop for thread trimming depending on angle		197			
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			
iFA	Activation angle of the thread trimmer		250			
FSA	Thread tension release ON period		251			
FSE	Thread tension release delay depending on angle		252			

Mode 21 (stitch lock)

0256/ MODE- 21

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 21		290 = 21			
StL	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
PGm	Setting an external sensor to position 2 (A sensor must be connected!)		270 = 1			
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			
c1	Counting start stitch condensing		001			
c3	Counting end stitch condensing		002			
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			

Mode 22 (lockstitch Brother B-891)
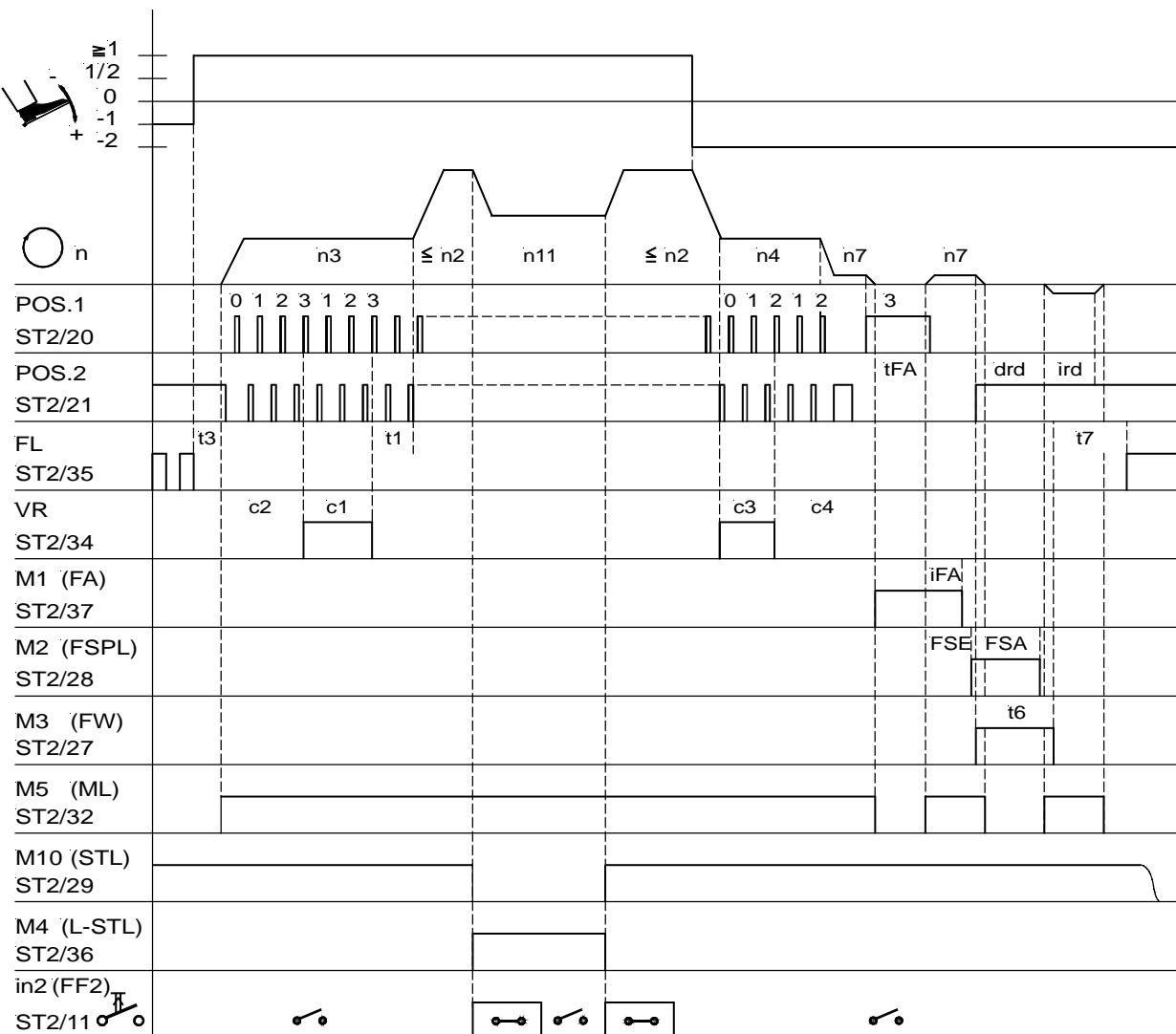
0256/ MODE- 22

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 22		290 = 22			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
Pot	External potentiometer is active		126 = 1			
FFi	Function "speed limitation"		186 = 1			
in2	Flip-flop for limited speed n11 and signal M10		241 = 22			
n2	Maximum speed		111			
n3	Start backtack speed		112			
n4	End backtack speed		113			
n7	Trimming speed		116			
n11	Limikted speed n11		123			
c2	Start backtack stitches forward		000			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			
c4	End backtack stitches forward		003			
ird	Number of reversing increments		180			
drd	Switch-on delay of reverse motor rotation		181			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted sewing foot		202			
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			

Mode 23 (lockstitch)
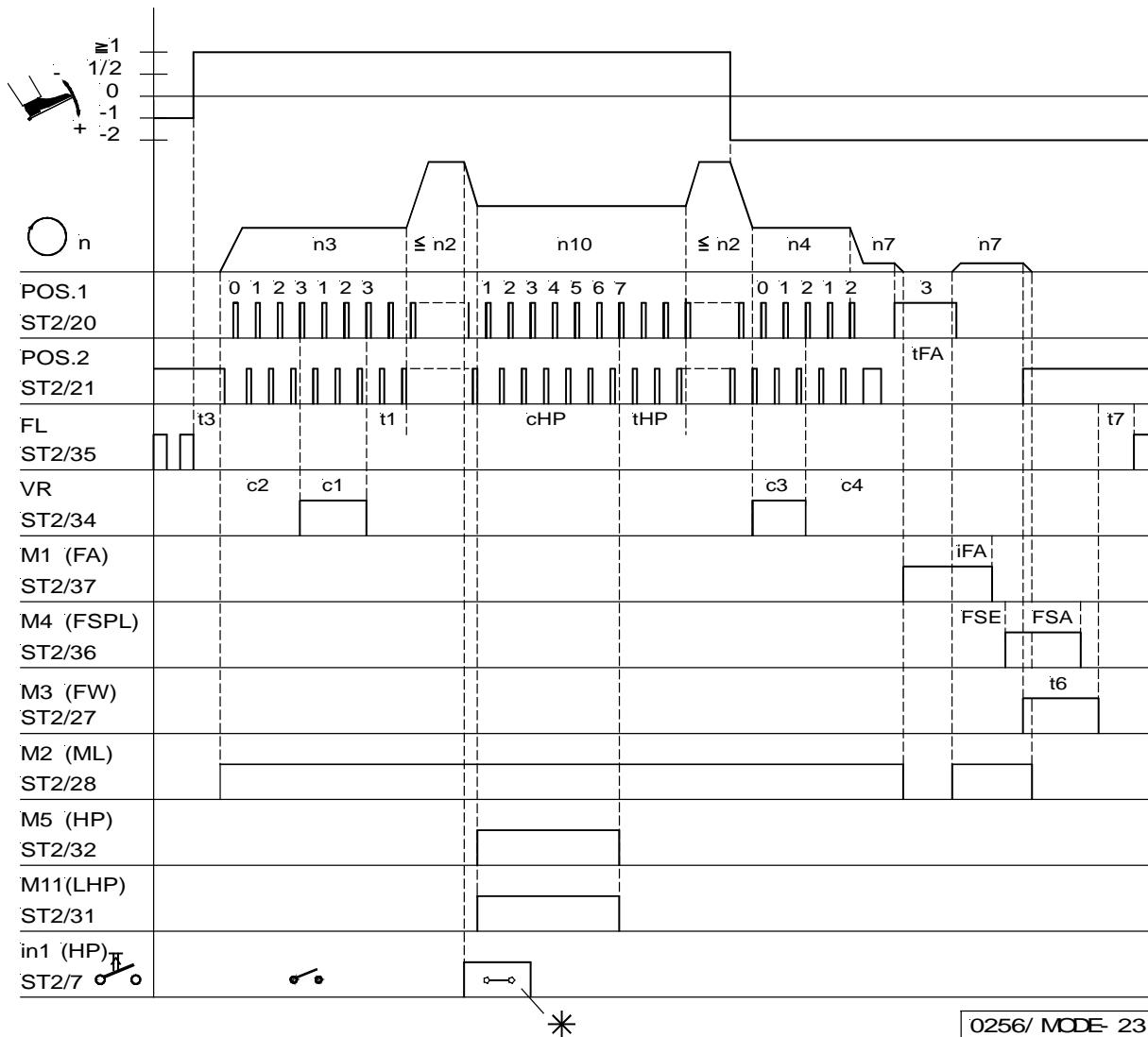
0256/ MODE- 23

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 23		290 = 23			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
hP	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			
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			
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			

*)   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
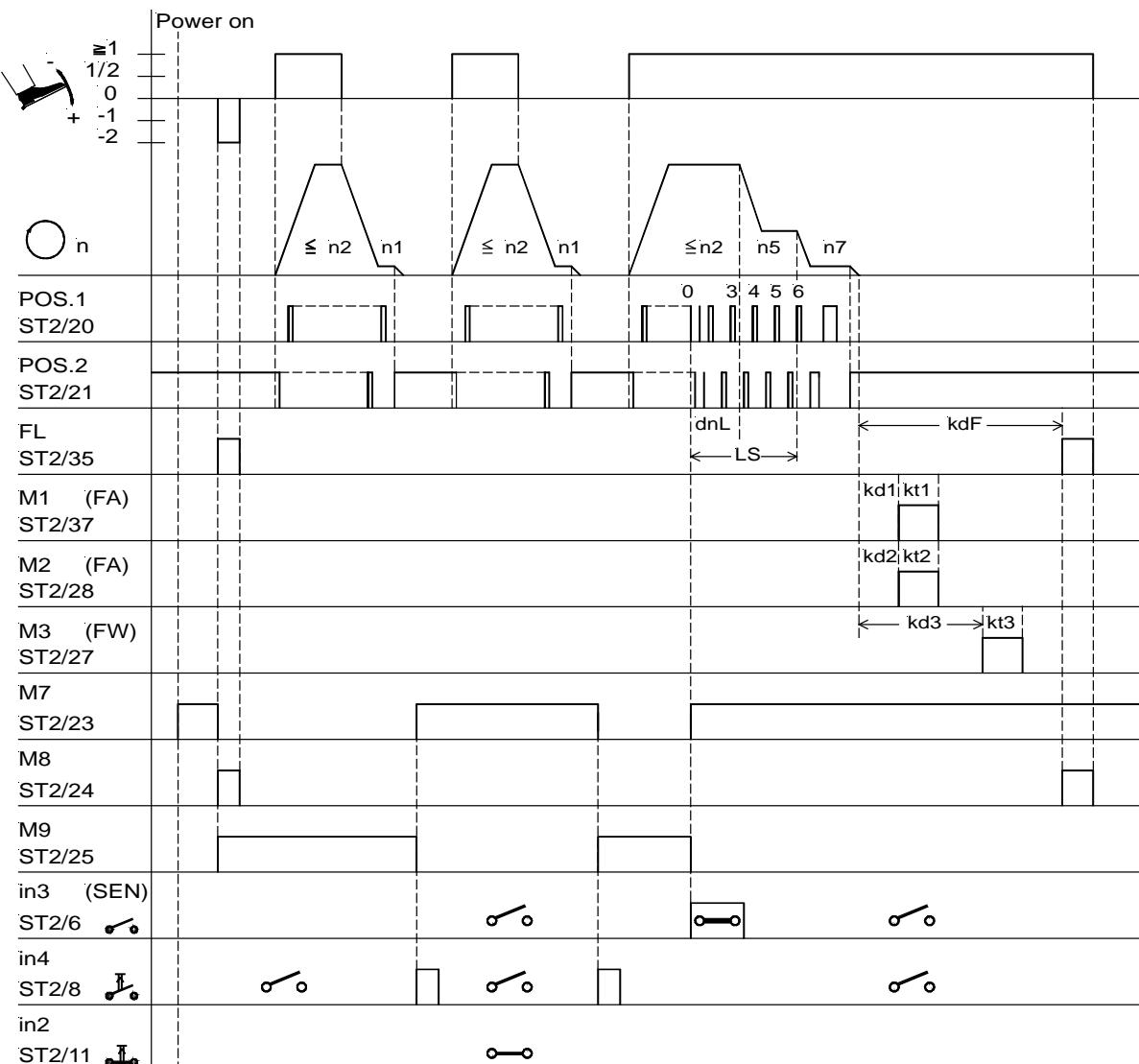
0256/ MODE- 24

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 24		290 = 24			
	Basic position 2	On		S5 key	4 key	7 key
LS	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			
kd1/kd2	Delay time of the thread trimmer M1 and M2		280/282			
kt1/kt2	ON period of the thread trimmer M1 and M2		281/283			
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=14
in3   = Sensor input   Pa. 242=28
in4   = Knee switch "hemming guide"   Pa. 243=22

Mode 24 (Pegasus MHG-100) "sleeve hemming" On
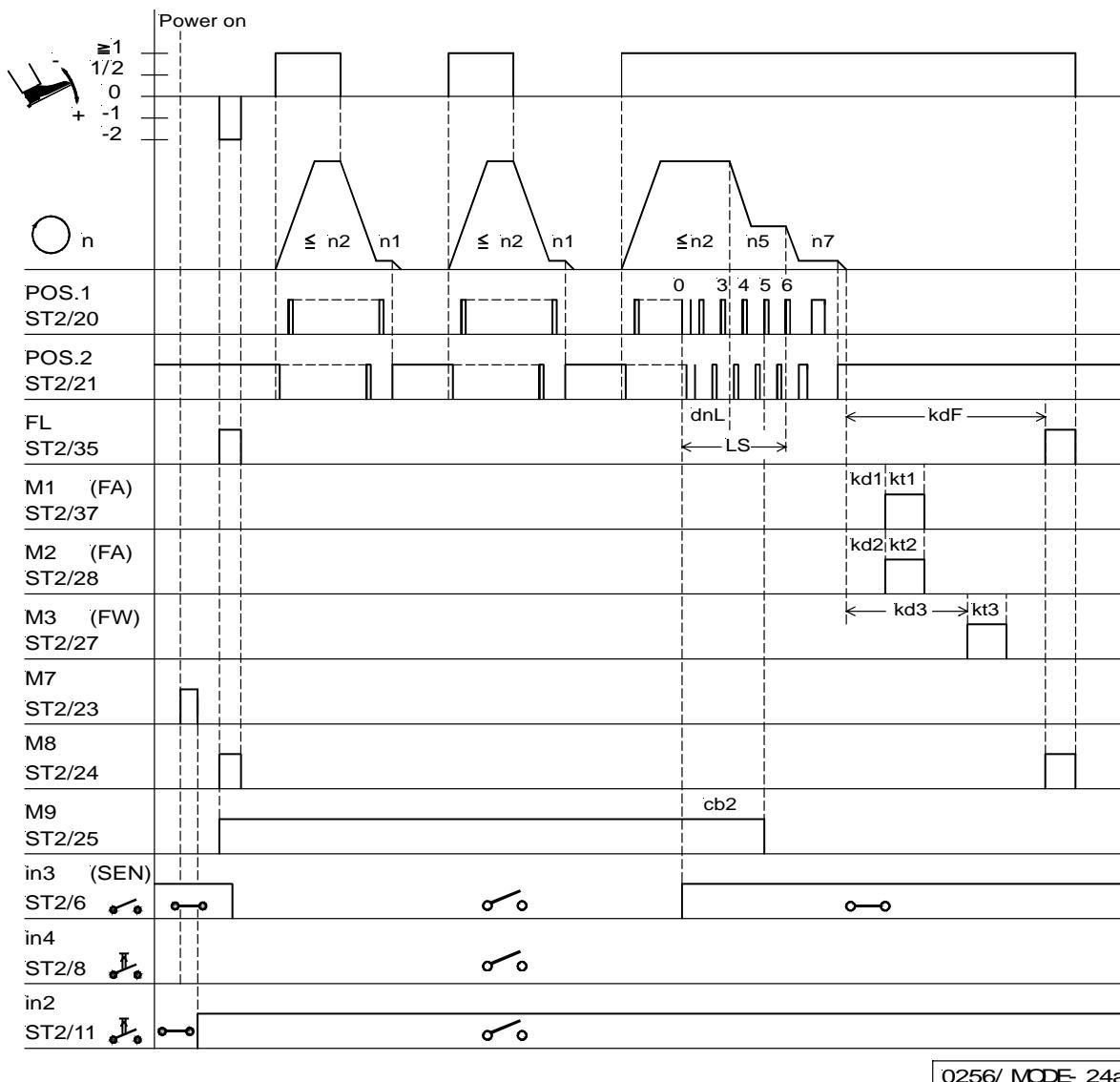
0256/ MODE- 24a

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 24		290 = 24			
	Basic position 2	On		S5 key	4 key	7 key
LS	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			
kd1/kd2	Delay time of the thread trimmer M1 and M2		280/282			
kt1/kt2	ON period of the thread trimmer M1 and M2		281/283			
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=14
in3 = Sensor input   Pa. 242=28
in4 = Knee switch "hemming guide"   Pa. 243=22

Mode 25 (lockstitch Juki LU2210/LU2260)
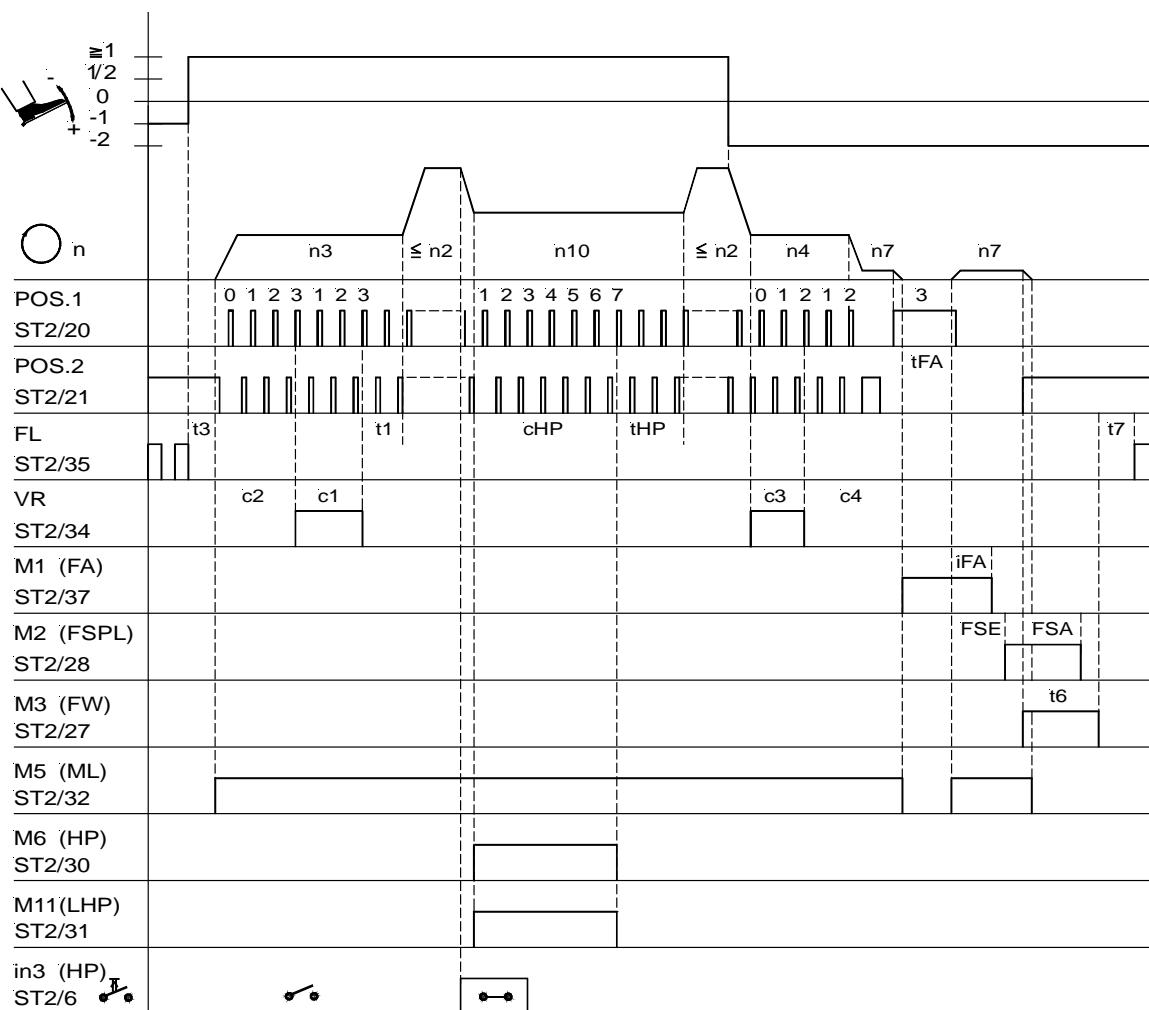
0256/ MODE- 25

Mark	Function		Parameter	Control	V810	V820
FAm	Mode 25		290 = 25			
	Double start backtack	On		S2 key	1 key	1 key
	Double end backtack	On		S3 key	2 key	4 key
Pot	External potentiometer is active		126 = 3			
hP	High lift for walking foot		137 = 1			
in3	High lift for walking foot with speed limitation n10		242 = 14			
PGm	Setting an external sensor to position 1 (A sensor must be connected!)		270 = 3			
n2	Maximum speed		111			
n3	Start backtack speed		112			
n4	End backtack speed		113			
n7	Trimming speed		116			
n10	High lift walking speed		117			
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			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted sewing foot		202			
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			

9   List of Parameters

9.1   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 ➜ Parameter	0	2	3	4	5	6	7	8	9	10	13	14	15	16	17	20	21	22	23	24	25	26
000	-	-	-	-	-	-	-	-	-	-	-	-	6	30	-	-	-	-	-	-	-	4
001	-	-	-	2	-	-	-	-	2	-	-	-	2	17	-	-	-	-	-	-	-	4
002	-	-	-	-	-	-	-	-	-	-	-	-	10	-	-	-	-	-	3	-	-	5
003	-	-	-	-	-	-	-	-	-	-	-	-	10	18	-	-	-	-	3	-	-	4
004	-	-	-	-	-	-	0	-	-	-	-	-	25	0	-	-	-	-	-	35	-	18
005	-	-	-	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	2
007	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	-	0
008	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-
009	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	1	-	1
013	-	-	-	-	-	-	-	0	0	-	-	-	0	-	-	-	-	-	-	-	-	1
014	-	0	-	-	-	-	0	0	0	-	-	-	0	0	0	0	-	-	0	-	-	1
019	-	-	-	-	-	-	2	-	-	-	-	-	2	2	1	-	-	-	-	-	-	-
021	-	-	-	-	-	-	-	-	-	-	-	-	23	-	-	-	-	-	-	-	-	-

Technician Level

Mode ➜ Parameter	0	2	3	4	5	6	7	8	9	10	13	14	15	16	17	20	21	22	23	24	25	26
100	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
** 109	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
** 110	-	-	-	180	-	-	-	250	250	180	180	-	-	-	-	-	-	-	180	-	-	-
** 111	-	-	-	5000	-	-	-	-	-	4500	3000	-	7500	3800	-	2500	5500	3500	4800	5000	3500	3200
** 112	-	-	-	-	-	-	-	-	-	-	1100	-	3800	-	600	900	1700	-	-	-	-	800
** 113	-	-	-	-	-	-	-	-	-	-	1100	-	3800	-	600	900	1700	-	-	-	-	800
** 114	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1700	2000	-	1000
** 115	-	-	-	-	-	-	-	-	-	700	-	-	-	-	-	-	-	-	800	-	-	-
** 116	-	-	-	-	-	-	-	-	-	-	180	-	-	-	-	-	-	-	180	-	-	180
** 117	-	-	-	-	-	-	-	-	-	2000	-	-	9900	-	800	-	-	-	2000	9900	2000	-
** 118	-	-	-	-	-	-	-	-	-	3000	-	-	2500	-	3000	-	-	-	-	-	-	-
119	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
** 122	-	-	-	-	-	-	-	-	6000	-	1500	-	-	-	1400	-	-	-	-	-	-	-
** 123	-	-	-	-	-	-	-	-	-	-	2000	-	-	-	2000	-	3500	-	9900	-	-	-
** 124	-	-	-	-	-	-	-	-	-	-	2200	-	-	-	-	-	3500	-	-	-	-	-
** 125	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2000	-	-	-	-	-	-
126	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	1	-	-	3	2
130	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-	-	-	1
131	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
132	-	-	-	-	-	-	0	-	-	-	-	-	0	0	-	-	-	-	-	0	-	-
133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
134	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	1	-	-	1	-	-	-
135	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	-	-	1
137	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	-
145	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-
152	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-
153	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	4	-	-	06	-	4	20
155	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1
156	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1000
158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-
161	-	-	-	0	0	0	0	0	0	0	-	-	0	0	0	-	0	-	-	0	-	-
180	-	-	-	-	-	-	-	-	-	14	3	-	-	-	-	70	-	40	14	-	32	6
181	-	-	-	-	-	-	-	-	-	230	-	-	-	-	-	-	-	-	-	0	-	100
182	-	-	-	-	-	-	1	-	-	1	1	-	1	-	1	-	1	-	1	-	1	1
186	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
187	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	1	-	-	-
190	-	-	-	0	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
192	-	-	-	-	-	-	1	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-
194	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-
196	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-
197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	360	50	-	40	-	-	40

- = 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	13	14	15	16	17	20	21	22	23	24	25	26
200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	50	-	-	-
201	-	-	-	160	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-	-	-
202	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	80	-	-	250
203	-	-	-	350	-	-	-	-	-	-	-	-	-	-	-	-	-	-	200	-	-	-
204	-	-	-	-	-	-	-	-	-	12	-	-	-	-	-	100	-	-	100	-	-	-
** 205	-	-	-	-	-	-	-	-	-	240	-	-	-	-	-	-	-	-	100	-	-	250
206	-	-	-	-	-	-	-	-	-	150	-	-	-	-	-	-	-	-	50	-	-	0
207	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5	-	-	10	-	5	13
208	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	20	6
209	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-	-	-	-	-
210	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-
211	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	0	-	-	-
212	-	-	-	100	-	-	-	-	-	100	-	-	-	-	-	-	-	-	200	-	-	-
213	-	-	-	12	-	-	-	-	-	12	-	-	100	-	-	-	-	-	50	-	-	-
220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	8
234	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-
240	-	-	13	6	-	-	-	6	6	-	2	-	15	-	-	14	-	12	13	6	1	17
241	-	-	7	-	-	-	-	-	-	-	16	16	-	-	-	2	-	22	07	13	57	0
242	-	-	1	3	-	-	-	10	38	-	24	-	-	-	-	31	-	2	01	28	14	-
243	-	-	22	-	-	-	-	1	34	-	11	14	15	-	-	32	-	14	-	22	16	-
244	-	-	16	-	-	-	-	-	-	-	22	-	15	-	-	17	-	17	-	16	17	-
245	-	-	19	-	-	-	-	12	12	-	-	-	-	-	-	16	-	16	-	-	-	-
246	-	-	33	-	-	-	-	-	-	-	33	-	-	-	-	14	-	-	-	33	-	-
247	-	-	31	-	-	-	-	-	-	-	14	-	-	-	-	22	-	-	-	11	-	-
248	-	-	28	-	-	-	-	-	-	-	17	-	-	-	-	57	14	-	-	28	57	-
249	-	-	17	-	-	-	-	-	-	-	25	-	-	-	-	19	-	-	-	17	-	6
250	-	-	-	-	-	-	-	-	-	-	210	-	-	-	-	-	-	60	280	-	30	150
** 251	-	-	-	-	-	-	-	-	-	-	110	-	-	-	-	-	-	100	-	-	-	150
** 252	-	-	-	-	-	-	-	-	-	-	210	-	-	-	-	-	-	180	-	-	-	240
** 253	-	-	-	-	-	-	-	-	-	-	0	-	-	-	0	0	-	-	0	-	20	0
255	-	-	-	25	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-
260	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-
262	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	-	-	-	-	-
269	-	-	-	-	-	-	-	-	25	-	-	-	-	-	-	-	-	-	-	-	-	-
270	-	-	-	-	-	-	-	-	1	-	-	3	-	-	-	-	1	-	-	-	3	0
271	-	-	-	-	-	-	-	-	-	-	200	-	-	-	-	-	4	-	-	-	240	-
272	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	88	-
** 274	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	-	-
** 275	-	-	-	-	-	-	-	-	-	-	-	-	-	100	-	-	-	-	-	-	-	-
** 280	x	x	x	100	-	-	100	x	x	x	x	-	10	100	-	-	x	-	-	100	-	-
** 281	-	-	-	-	-	-	-	-	-	-	280	-	50	1000	-	-	250	-	-	-	-	-
** 282	x	0	x	0	-	-	200	x	x	x	x	x	30	200	-	-	40	-	-	-	-	-
** 283	-	-	-	200	-	-	-	-	-	-	-	-	-	-	-	-	80	-	-	-	-	-
** 284	x	x	x	-	-	0	0	x	x	150	0	x	-	0	-	-	300	-	-	230	-	-
** 285	x	x	x	-	-	-	-	x	x	70	120	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	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	-	-	-	-	-	-	-	-
296	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-
297	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1

Further Functions Switchable by Means of the Control Keys

Modus → Parameter	0	2	3	4	5	6	7	8	9	10	13	14	15	16	17	20	21	22	23	24	25	26
Basic pos.	1	1	1	1	2	2	2	2	2	1	1	1	2	2	2	1	1	1	1	2	1	1
Single start backtack	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Double start backtack	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	ON	ON	OFF	ON	ON
Single end backtack	OFF	OFF	OFF	ON	ON	ON	OFF	OFF	OFF	OFF	OFF	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
Double end backtack	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	ON	OFF	OFF	ON	ON	ON	ON	OFF	ON	ON

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.

9.2 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 suction"	stitches	254	0	2	*)	A/A/A/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 suction"	stitches	254	0	4	*)	A/A/A/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/A/A/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/A/A/A
004	LS	Light barrier compensating stitches	stitches	254	0	7	*)	A/A/A/A
005	LSF	Number of stitches of the light barrier filter for knitted fabrics	stitches	254	0	1		A/A/A/A
006	LSn	Number of light barrier seams		15	1	1	*)	A/A/A/A
007	Stc	Number of stitches for the seam with stitch counting	stitches	254	0	20		A/A/A/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) 6 = Signal A1 On/Off 7 = Signal A2 On/Off		7	1	1	*)	F/F/F/E
009	LS	Light barrier On/Off		1	0	0	*)	A/A/A/A
013	FA	Thread trimmer On/Off		1	0	1	*)	A/A/A/A
014	FW	Thread wiper On/Off		1	0	1	*)	A/A/A/A
015	StS	Stitch counting On/Off		1	0	0		A/A/A/A
017	SAb	Stop when tape cutting at the seam end On/Off (function effective only in the overlock mode)		1	0	0		A/A/A/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. 4 = If the light barrier is covered during the end count for chain suction, the program switches immediately to the next start of a seam. If the end count has been completed and the light barrier remains uncovered, the drive stops immediately.		4	0	0		C/C/C/B

*)   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/A/A/A
020	kLM	Clamp at the seam end On/Off		1	0	0	A/A/A/A
021	ckL	Run-out stitches clamp at the start of the seam	stitches	254	0	2 *)	A/A/A/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/A/A/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	A/A/A/A
024	FSP	Coupled thread tension release and sewing foot lift. The function can be activated only with a thread trimmer that depends on the angle. (Modes 3, 13, 20, 22, 23, 25) 0 = No coupling 1 = Coupled thread tension release and sewing foot at the seam end with thread trimmer off. 2 = Coupled thread tension release and sewing foot in the seam and at the seam end with thread trimmer off. 3 = Coupled thread tension release and sewing foot always effective.		3	0	0	C/C/C/B
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/A/A/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/A/A/A
031	cFw	Number of stitches for bobbin thread monitor	stitches	25500 ***)	0	0	A/A/A/A
035	UFw	0 = External bobbin thread monitor Off 1 = Bobbin thread monitor with stop after stitch counting (prameter 036) 2 = Bobbin thread monitor without stop		2	0	0	F/F/F/E
036	cUF	Number of stitches for Juki bobbin thread monitor	stitches	5000 **)	0	0	F/F/F/E

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

9.3 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/A/A/A
109	n13	Speed of manual backtack	RPM	9900	**)	200	1500	*)	E/E/E/D
110	n1	Positioning speed	RPM	390	**)	70	200	*)	A/A/A/A
111	n2-	Upper limit setting range of the maximum speed	RPM	9900	**)	n2_	4000	*)	A/A/A/A
112	n3	Start backtacking speed	RPM	9900	**)	200	1200	*)	A/A/A/A
113	n4	End backtacking speed	RPM	9900	**)	200	1200	*)	A/A/A/A
114	n5	Speed after light barrier sensing	RPM	9900	**)	200	1200		A/A/A/A
115	n6	Softstart speed	RPM	1500	**)	70	500	*)	A/A/A/A
116	n7	Trimming speed	RPM	500	**)	70	200	*)	A/A/A/A
117	n10	High lift walking speed	RPM	9900	**)	400	1000	*)	A/A/A/A
118	n12	Automatic speed for stitch counting	RPM	9900	**)	400	3500	*)	A/A/A/A
119	nSt	Speed stage graduation 1 = linear 2 = slightly progressive 3 = highly progressive		3		1	2	*)	A/A/A/A
121	n2_	Lower limit setting range of the maximum speed	RPM	n2-	**)	400	400		A/A/A/A
122	n9	Limited speed n9	RPM	9900	**)	400	2000	*)	A/A/A/A
123	n11	Limited speed n11	RPM	9900	**)	400	2500	*)	A/A/A/A
124	toP	Speed limitation by means of ext. potentiometer (maximum value)	RPM	9900	**)	Pa.125	4000		A/A/A/A
125	bot	Speed limitation by means of ext. potentiometer (minimum value)	RPM	Pa.124	**)	200	200		F/F/F/E
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/A/A/A
127	AkS	Audible signal of machine run blockage and bobbin thread monitor On/Off		1		0	0		A/A/A/A
128	Asd	Start delay, when command "start" is given by covering the light barrier (see parameter 129)	ms	2000	**)	0	0		A/A/A/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/A/A/A
130	LSF	Light barrier filter for knitted fabrics		1		0	0	*)	A/A/A/A
131	LSd	0 = Light barrier sensing "covered" 1 = Light barrier sensing "uncovered"		1		0	1	*)	A/A/A/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/A/A/A
133	LSE	Thread trimming operation, when completing the seam after light barrier sensing On/Off		1	0	1	*)	A/A/A/A
134	SSt	Softstart On/Off		1	0	0	*)	A/A/A/A
135	SrS	Ornamental backtack On/Off		1	0	0		A/A/A/A
136	FAr	0 = Trimming stitch backward Off 1 = Trimming stitch backward On with single end backtack 2 = Trimming stitch or positioning stitch at the seam end always backward		2	0	0		C/C/C/B
137	hP	High lift for walking foot On/Off		1	0	0		A/A/A/A
139	nIS	Display of machine speed On/Off		1	0	0	*)	A/A/A/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/A/A/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/A/A/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	0		A/A/A/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/A/A/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.

145	Shv	Speed status for the manual backtack
		0 = Speed controllable by the pedal up to the set
		  maximum speed (parameter 111)
		1 = Fixed speed (parameter 109) 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 109)
				2	0	0	*)	F/F/F/E

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/A/A/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/A/A/A
152	thP	Run-out time of the high lift walking speed	ms	500	80	150	*)	A/A/A/A
153	brt	Braking power at machine standstill		50	0	10	*)	A/A/A/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/A/A/A
156	t05	Switch-off delay for the signal "run" or signal with pedal in pos. 0 (neutral)	ms	2550 **)	0	0		A/A/A/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/A/A/A
158	dnL	Delay time until light barrier speed release	ms	500	0	0	*)	A/A/A/A
159	cb2	Stitches after light barrier uncovered until signal M9 "hemming blow 2" Off	stitches	254	0	10		A/A/A/A
161	drE	Direction of motor rotation 0 = Clockwise rotation 1 = Counterclockwise rotation		1	0	1	*)	A/A/A/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 A/A/A/A A/A/A/A 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	Checking of the signal outputs and inputs using the incorporated control panel or the V810/V820 control panels 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 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.						
178	ci	No function				00000		F/F/F/E
179	Sr5	Control program number with index and more identification numbers. Upon pressing the appropriate key the data will be displayed in succession. **V810 control panel display example:** Press the **E** key ➔ Display e. g. **Sr** [°] Press the **>>** key ➔ Display e. g. **5211A** Press the **E** key ➔ Display e. g. **010823** Press the **E** key ➔ Display e. g. **15** Press the **E** key ➔ Display e. g. **1F68** Press the **P** key twice➔ Display **Ab320A** **V820 control panel display example:** Press the **E** key ➔ Display **F-179 Sr5** [°] Press the **>>** key ➔ Display e. g. **PrG 5211A** Press the **E** key ➔ Display e. g. **dAt 01082315** Press the **E** key ➔ Display e. g. **chk 1F68** Press the **E** key ➔ Display e. g. **132650210015** Press the **E** key ➔ Display e. g. **Skn 01047543** Press the **P** key twice➔ Display **4000 Ab320A** See instruction manual for control display example.						
180	rd	Number of reversing increments	degrees	359	0	175 *)		A/A/A/A
181	drd	Switch-on delay of reverse motor rotation	ms	990	0	10 *)		A/A/A/A
182	Frd	Reverse motor rotation On/Off		1	0	0 *)		A/A/A/A

183	FFm	Disabling of flip-flop functions at the seam end
		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
				3	0	0		A/A/A/A

184	c6	Number of run-out stitches when unlocking the chain	stitches	254	0	20 *)		A/A/A/A
185	chP	Stitch counting high lift for walking foot	stitches	254	0	0		A/A/A/A

186	FFi	Function "speed limitation n11"
		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.
				1	0	0 *)		A/A/A/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.
187 FFo	Function of signal M10 after "power On" (flip-flop 2) on socket ST2/29 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		1	0	0 *)	A/A/A/A
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/A/A A/A/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)
	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/A/A/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/A/A/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/A/A/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/A/A/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/A/A/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.
195	LSc	Stitches for light barrier monitoring (light barrier monitoring is off, when set to "0").	stitches	2550	**)	0	0		A/A/A/A
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/A/A/A
197	dr°	Stop for thread trimming depending on angle	degrees	720		0	0	*)	A/A/A/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/A/A/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/A/A/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.

9.4 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/A/A/A
201	t2	Sewing foot lift switch-on delay with half heelback	ms	500		20	80	*)	A/A/A/A
202	t3	Start delay after disabling the sewing foot lift signal	ms	500		0	50	*)	A/A/A/A
203	t4	Time of full power of sewing foot lifting	ms	600		0	500	*)	A/A/A/A
204	t5	Holding power for sewing foot lifting 1...100% 1% ➜ low holding power 100% ➜ high holding power	%	pa. 254		1	40	*)	A/A/A/A
205	t6	Thread wiper time	ms	2550	**)	0	120	*)	A/A/A/A
206	t7	Delay from end of thread wiper until sewing foot lifting On	ms	800		0	40	*)	A/A/A/A
207	br1	Braking effect when modifying the preset value ≤ 4 stages (indicated values only with transmission ratio 1:1) **Values with the AB220A.... / FP220A.... controls** **Values with the AB320A.... / FP320A.... controls**		55 55		1 1	15 20		A/A/A/A A/A/A/A
208	br2	Braking effect when modifying the preset value ≥ 5 stages (indicated values only with transmission ratio 1:1) **Values with the AB220A.... / FP220A.... controls** **Values with the AB320A.... / FP320A.... controls**		55 55		1 1	35 30		A/A/A/A A/A/A/A
209	dFw	Thread wiper start delay	ms	2550	**)	0	0	*)	A/A/A/A
210	tSr	Stop time for switching the stitch regulator in the ornamental backtack	ms	500		0	140		A/A/A/A
211	tFL	Sewing foot lift switch-on delay with thread wiper off	ms	500		0	60	*)	A/A/A/A
212	t10	Time of full power of backtacking or thread trimmer forward	ms	600		0	500		A/A/A/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/A/A/A
214	rAt	No function		160		040	080		F/F/F/E
219	br3	Braking power at stop of the drive **Values with the AB220A.... / FP220A.... controls** **Values with the AB320A.... / FP320A.... controls**		55 55		1 1	10 10		A/A/A/A A/A/A/A
220	ALF	Accelerating power of the drive (indicated values only with transmission ratio 1:1) **Values with the AB220A.... / FP220A.... controls** **Values with the AB320A.... / FP320A.... controls**		55 55		1 1	35 20		A/A/A/A A/A/A/A
221	dGn	Speed gate 1	RPM	990	**)	50	100		A/A/A/A
222	tGn	Speed gate damping period (effective only if parameter 224 = 0)	ms	990		0	20		F/F/F/E
223	dG2	Speed gate 2	RPM	4500	**)	200	1600		F/F/F/E
224	dGF	Speed gate 2 On/Off		1		0	1		A/A/A/A
225	br4	Setting the braking curve for the light barrier and machine run blockage (values only with transmission ratio 1:1) **Values with the AB220A.... / FP220A.... controls** **Values with the AB320A.... / FP320A.... controls**		55 55		1 1	55 55		A/A/A/A A/A/A/A
231	Sn1	Execution of the first stitch after Power On at positioning speed		1		0	0	*)	A/A/A/A
232	USS	Overlock with fast scissors On/Off 0 = Tape cutter 1 = Fast scissors (set parameter 282 = 0)		1		0	0		A/A/A/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.
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/A/A/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/A/A/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/A/A/A
237	tkS	Switch-off delay for chain suction at the seam end, if parameter 022 = 2.	ms	2550　**)**	0	0	A/A/A/A
238	EnP	Software debouncing for all inputs: 0 = No debouncing 1 = With debouncing		1	0	1	A/A/A/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.		66	0	0	F/F/F/E
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		66	0	0　*)	F/F/F/E

*)　　　　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.
		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 = Needle to position 2 (see instruction manual)						
		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 setting of parameter 131)						
		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 = No function						
		44 = Function like pressing the pedal to pos. -2						
		45..47 = No function						
		48 = Signal A1 is issued						
		49 = Signal A1 switchable as flip-flop						
		50 = No function						
		51 = Signal A2 is issued						
		52 = Signal A2 switchable as flip-flop						
		53 = No function						
		54 = Function like pressing the pedal to step 12. If start backtack or softstart is enabled, it will be performed.						
		55 = Reversal of the direction of rotation						
		56 = No function						
		57 = Input for Juki bobbin thread monitor						
		58..65 = No function						
		66 = Thread trimming is suppressed						
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		66	0	0 *)		F/F/F/E
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		66	0	0 *)		F/F/F/E

*) 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.
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
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		66		0	0	*)	F/F/F/E
250	iFA	Thread trimmer activation angle	degrees	359		0	180	*)	A/A/A/A
251	FSA	Switch-off delay of thread tension release	ms	990		0	50	*)	A/A/A/A
252	FSE	Switch-on delay angle of thread tension release	degrees	359		0	0	*)	A/A/A/A
253	tFA	Stop time for thread trimmer	ms	500	**)	0	70	*)	A/A/A/A
254	EF-	Upper limit (pa. 204) duty ratio for sewing foot lift 1...100	%	100		1	100	*)	A/A/A/A
255	EV-	Upper limit (pa. 213) duty ratio for backtacking/ thread trimmer backward 1...100	%	100		1	100	*)	A/A/A/A
256	kt6	Delay time of output VR (chain suction), (function only if parameter 290 = 15)	ms	2550	**)	0	250		A/A/A/A
257	c7	Start counting until tape cutter M4 On (function only if parameter 290 = 15)	stitches	254		0	5		A/A/A/A
258	c8	End counting until tape cutter M4 On (function only if parameter 290 = 15)	stitches	254		0	15		A/A/A/A
259	FAE	Switch-on delay angle of the thread trimmer	degrees	359		0	0	*)	C/C/C/B
260	ihr	Handwheel increments carried out when the key is pressed once (in1...i10)	incr.	500		0	10	*)	A/A/A/A
261	nhr	Handwheel speed	RPM	150	**)	30	50		A/A/A/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/A/A/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.
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/A/A/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/A/A/A
265	ktS	ON period of manual stacker (M7)	ms	2550 **)	0	500	A/A/A/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/A/A/A
269	PSv	Positioning shift	degrees	100	0	15 *)	A/A/A/A

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


= 0V   = high   0256/ SEN- 1

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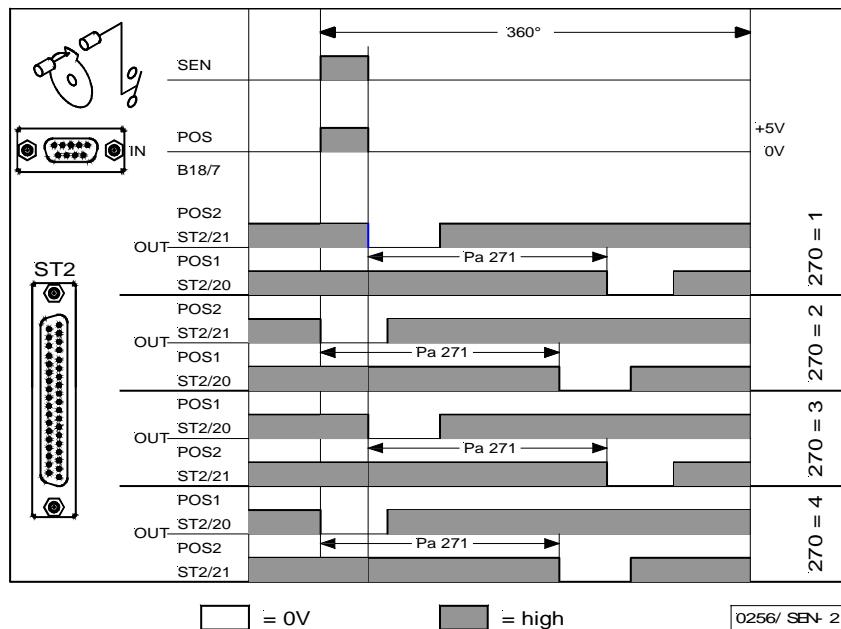
*)   Depending on the selected mode. See table at the beginning of the List of Parameters!

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/A/A/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		015	100	*)	A/A/A/A
273	ASi	Signals M8, M9, M10 On/Off (0 = Off, 1 = On)		1		0	0		A/A/A/A
274	Ad1	Delay time of signal M8 at the start of the seam	ms	2550	**)	0	40	*)	A/A/A/A
275	At1	ON period of signal M8 at the start of the seam	ms	2550	**)	0	150	*)	A/A/A/A
276	Ad2	Delay time of signal M9 at the start of the seam	ms	2550	**)	0	50		A/A/A/A
277	At2	ON period of signal M9 at the start of the seam	ms	2550	**)	0	60		A/A/A/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

278	Ad3	Delay time of signal M10 at the start of the seam	ms	2550	**)	0	40		A/A/A/A
279	At3	ON period of signal M10 at the start of the seam	ms	2550	**)	0	350		A/A/A/A
280	kd1	Delay time output M1	ms	2550	**)	0	0	*)	A/A/A/A
281	kt1	ON period output M1	ms	2550	**)	0	100	*)	A/A/A/A
282	kd2	Delay time output M2	ms	2550	**)	0	100	*)	A/A/A/A
283	kt2	ON period output M2	ms	2550	**)	0	100	*)	A/A/A/A
284	kd3	Delay time output M3	ms	2550	**)	0	200	*)	A/A/A/A
285	kt3	ON period output M3	ms	2550	**)	0	100	*)	A/A/A/A
286	kd4	Delay time output M4	ms	2550	**)	0	300	*)	A/A/A/A
287	kt4	ON period output M4	ms	2550	**)	0	100	*)	A/A/A/A
288	kdF	Delay time until sewing foot On	ms	2550	**)	0	380	*)	A/A/A/A
289	kt5	ON period output M7	ms	2550	**)	0	1000		A/A/A/A
290	FAM	**0** = **Lockstitch mode:** (FA1, FA2, FA3, FA1+FA2): e. g. Brother Dürkopp Adler, Mitsubishi, Pfaff, Toyota »Slide-in strip for V810 and V820 = 1« **2** = **Lockstitch mode:** e. g. Singer (212 UTT) »Slide-in strip for V810 and V820 = 1« **3**...= **Lockstitch mode:** e. g. Dürkopp Adler (models 767, N291) »Slide-in strip for V810 and V820 = 1« **4** = **Chainstitch mode:** e. g. (US80A) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3« **5** = **Chainstitch mode** in general**:** M1, M2, M3 and M4 parallel sequence »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3« **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« **7** = **Overlock mode:** e. g. (AC62AV1461) »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5« **8** = **Backlatch mode:** Pegasus »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5« **9** = **Backlatch mode:** Yamato »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5« **10** = **Lockstitch mode:** Union Special (63900AMZ »replacement for US80A«) and on Refrey lockstitch machines »Slide-in strip for V810 and V820 = 1« **13** = **Lockstitch mode:** Pfaff (1425, 1525) »Slide-in strip for V810 and V820 = 1« **14** = **Lockstitch mode:** Juki (5550-6, 5550-7) »Slide-in strip for V810 and V820 = 1« **15** = **Backlatch mode:** Pegasus (SSC100) »Slide-in strip for V810 = 7« »Slide-in strip for V820 = 5« **16** = **Overlock mode:** feed-off-the-arm machines e. g. Yamato (FD62) »Slide-in strip for V820 = 7« **17** = **Chainstitch mode:** Pegasus (stitch lock) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«		26	0	5		C/C/C/B

*)   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.
	20 =	**Lockstitch mode:** Juki (LU1510-7 /DNU1541-7) »Slide-in strip for V810 and V820 = 1«					
	21 =	**Chainstitch mode with stitch lock:** Yamato (VG2730-156M) »Slide-in strip for V810 = 5« »Slide-in strip for V820 = 3«					
	22 =	**Lockstitch mode:** Brother (B-891) »Slide-in strip for V810 and V820 = 1«					
	23 =	**Lockstitch mode:** Dürkopp Adler (271...275) »Slide-in strip for V810 and V820 = 1«					
	24 =	**Chainstitch mode:** Pegasus (MHG-100)					
	25 =	**Lockstitch mode:** Juki (LU2210/LU2260) »Slide-in strip for V810 and V820 = 1«					
	26 =	**Lockstitch mode:** Jentschmann »Slide-in strip for V810 and V820 = 1« Modes 1, 11, 12, 18, 19 are selectable, but their functions correspond to mode 0!					

> **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 (illustration see chapter "Slide-in Strips for the V810/V820 Control Panels)		8	0	5	*)	A/A/A/A
292	820	Select slide-in strip number for the V820 control panel (illustration see chapter "Slide-in Strips for the V810/V820 Control Panels)		10	0	3	*)	A/A/A/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/A/A/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	*)	A/A/A/A
295	nAM	Switch proximity switches for inputs in2, in7, in8, in9		1	0	0		A/A/A/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.
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/A/A/A
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. 6 = Signal M11 is On, when the key on input in 2 is open. Signal M11 is switched off after the section set by means of parameter 007 has been executed, when the key on input in2 is closed. At drive standstill, signal M11 is switched off immediately.		6	0	0	F/F/F/E
298	nSo	Backtack synchronization On/Off		1	0	0	A/A/A/A
299	nrS	Backtack synchronization speed	RPM	3000 **)	200	400	A/A/A/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/A/A/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) 4 = Signal A1 as puller function		4	0	0	F/F/F/E

*)   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.
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 4 = Signal A1 only manually switchable		4		0	0	A/A/A/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/A/A/A
304	dt1	Delay time until signal A1 On	ms	2550	**)	0	0	A/A/A/A
305	St1	ON period of signal A1	ms	2550	**)	0	0	A/A/A/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/A/A/A
307	A1	Signal A1 On/Off		1		0	0	A/A/A/A
308	dA1	Stitches delaying signal A1	stitches	999		0	0	A/A/A/A
309	cA1	Stitch counting during signal A1	stitches	999		0	0	A/A/A/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/A/A/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) 4 = Signal A2 as puller function		4		0	0	F/F/F/E
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 4 = Signal A2 only manually switchable		4		0	0	A/A/A/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/A/A/A
314	dt2	Delay time until signal A2 On	ms	2550	**)	0	0	A/A/A/A
315	St2	ON period of signal A2	ms	2550	**)	0	0	A/A/A/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.

	Parameter							NA	LS-D		NE	FA-E	P=0	
A1	301	302	303	304	305	308	309							
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					

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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

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

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See previous page for explanation of letter symbols!

Supplier Level

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

Parameter		Designation	Unit	max	min	Preset	Ind.
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/A/A/A
317	A2	Signal A2 On/Off		1	0	0	A/A/A/A
318	dA2	Stitches delaying signal A2	stitches	999	0	0	A/A/A/A
319	cA2	Stitch counting during signal A2	stitches	999	0	0	A/A/A/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/A/A/A
321	Std	Suppression of the seam when 0 stitches are set 0 = Suppression Off 1 = Suppression On		1	0	0	A/A/A/A
322	dkn	0 = Correction seam Off 1 = Correction seam On 2 = Interruption of seam or pattern by thread trimmer		2	0	0	A/A/A/A
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/A/A/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/A/A/A

Supplier Level

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

Parameter		Designation	Unit	max	min	Preset	Ind.
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 acoustic signal is issued - Press the P key - all TEACH IN programs have been erased!					A/A/A/A
330	kA1	Coupled signal A1 and sewing foot lifting or backtacking 0 = Coupling off 1 = Coupling with sewing foot lifting 2 = Coupling with backtacking 3 = Coupling with sewing foot lifting and backtacking		3	0	0	F/F/F/E
335	kA2	Coupled signal A2 and sewing foot lifting or backtacking 0 = Coupling off 1 = Coupling with sewing foot lifting 2 = Coupling with backtacking 3 = Coupling with sewing foot lifting and backtacking		3	0	0	F/F/F/E
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/A/A/A
500	Sir	Recall of Fast Installation Routine (SIR) (see description on page 8!)					

10 Error Displays

General Information			
On the control	**On the V810**	**On the V820**	**Signification**
A1	InF A1	InF A1	Pedal not in neutral position, when turning the machine on
A2	-StoP- blinking	-StoP- blinking + symbol display	Machine run blockage
A3	InF A3	InF A3	Reference position is not set
A6	InF A6	InF A6	Light barrier monitoring
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	InF E1	The external pulse encoder e.g. IPG... is defective or not connected.
E2	InF E2	InF E2	Line voltage too low, or time between power off and power on too short.
E3	InF E3	InF E3	Machine blocked or does not reach the desired speed.
E4	InF E4	InF E4	Control disturbed by deficient grounding or loose contact.
E9	InF E9	InF E9	EEPROM defective.

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

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

Slide-in strips for the V810 control panel
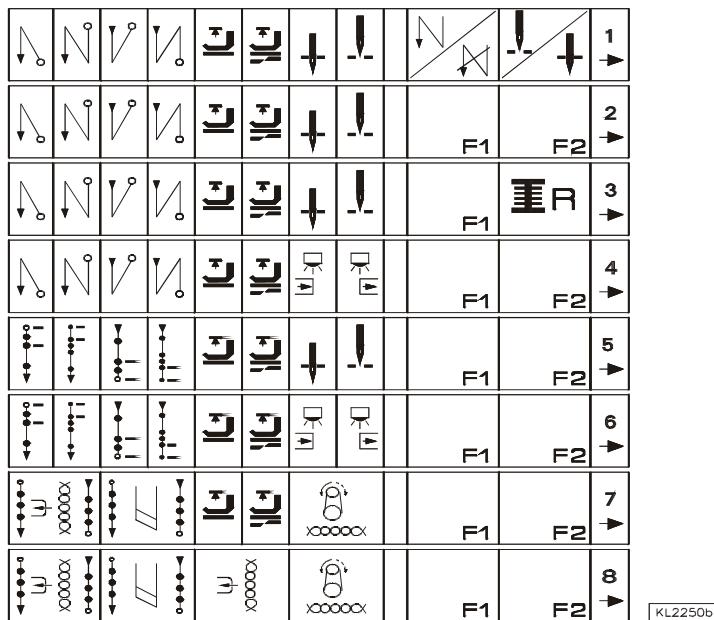
Slide-in strips for the V820 control panel

| **Note** |
| When changing the setting of parameters 291 / 292, the V810 / V820 functions change as well, save function keys F1 / F2 which are influenced by parameters 293 /294. |