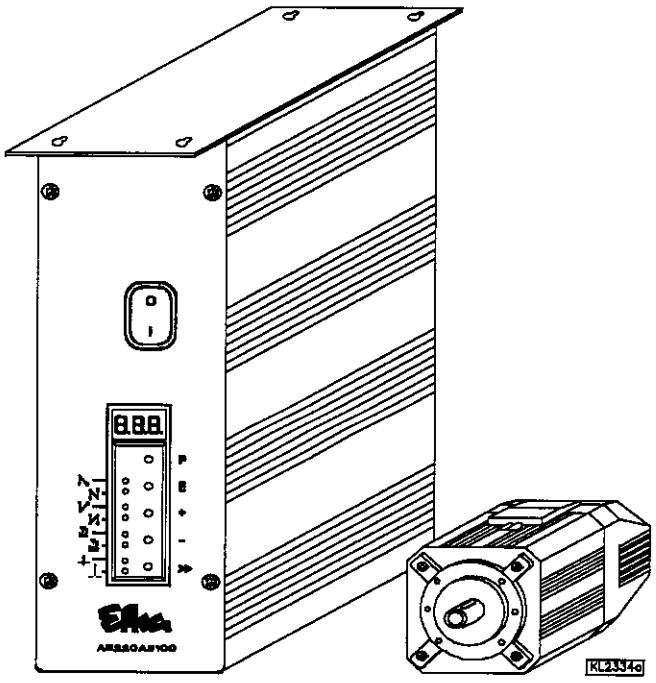
Efka dc1500

CONTROL AB220A5100



PARAMETER LIST

CONNECTION DIAGRAM
TIMING DIAGRAMS

No. 402240 English

Efka
FRANKL & KIRCHNER
GMBH & CO KG

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EFKA OF AMERICA INC.

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EFKA ELECTRONIC MOTORS
SINGAPORE PTE. LTD.

Contents Page

1. Table of Adapter Cords

Attention
Before switching the functional sequences disconnect cables from the inputs and outputs! Please ensure that the machine installed provides the set functional sequence! **Settings with parameter 290 only after power on!**

Setting the functional sequence by using Parameter 290

Mode	Designation	Adapter	Outputs							
	Power transistors ==>	**Functions**	**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**
	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	FSPL	FW		ML	MST
4	**Chainstitch**; e.g. Union Special	**Functions**	FL	FA-R	M1	FA-V	FW	STV	ML	
	(34000, 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**
	Yamato (VC series)	1112818	FL	STV	FA		FW			
	Yamato (VG series)	1113178	FL	STV	FA		FW		ML	
	Kansai (RX 9803)	1112819	FL		FA		FW			
	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	
	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
8	**Backlatch**	**Functions**	**FL**		**PD ≤ -1**	**PD ≥ 1**	**PD ≥ 1***		**ML**	**MST**
	Pegasus	1113171			PD ≤ -1	PD ≥ 1				
9	**Backlatch**	**Functions**	**FL**		**PD ≤ -1**	**PD ≥ 1**	**PD ≥ 1***		**ML**	**MST**
	Yamato (ABT3)	1112826			PD ≤ -1	PD ≥ 1				
	Yamato (ABT13)	1112898			PD ≤ -1	PD ≥ 1				
10	**Lockstitch**; e.g.	**Functions**	**FL**	**FA-R**	**M1**	**FA-V**	**FW**	**STV**	**ML**	**MST**
	Union Special (63900AMZ »replacement for US80A«) and on Refrey lockstitch machines	1112823	FL	FA-R		FA-V	FW		ML	
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) (position sensor integrated in the handwheel)	1113132+ 1113157	FL	VR	FA1+2	FZ	FW			
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

*) The signal emitted at this output is inverted!

Explanation of abbreviations page 1 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 to pos.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	= Lamp stitch length	DR-UK	= Reversal of the direction of rotation
FZ	= Thread puller		

2. Starting Service

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

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

See instruction manual for details!

3. Setting and Starting Service with the Aid of the Fast Installation Routine (SIR)

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

Parameter for functional sequence "thread trimming operations"

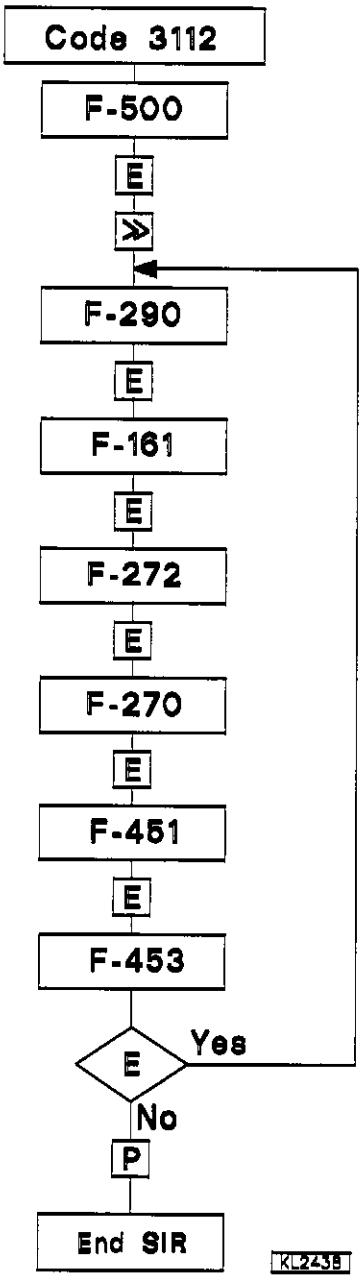
Parameter for direction of rotation of the motor

Parameter for transmission ratio
Important! The transmission ratio should be determined and indicated as precisely as possible.

Parameter for types of position sensors

Parameter for position 1

Parameter for position 2



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

See instruction manual for details!

4. Operating Elements and Socket Connectors

4.1 Position of the Operating Elements and Indicators

S1 Pushbutton **P**
- Recall or exit programming mode

S2 Pushbutton **E**
- Start backtack single / double / off
- Enter button for modifications in the programming mode

S3 Pushbutton +
- End backtack single / double / off
- Increase of the value indicated in the programming mode

S4 Pushbutton -
- 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 Pushbutton > >
- Basic position 1 or 2
- Shift button 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

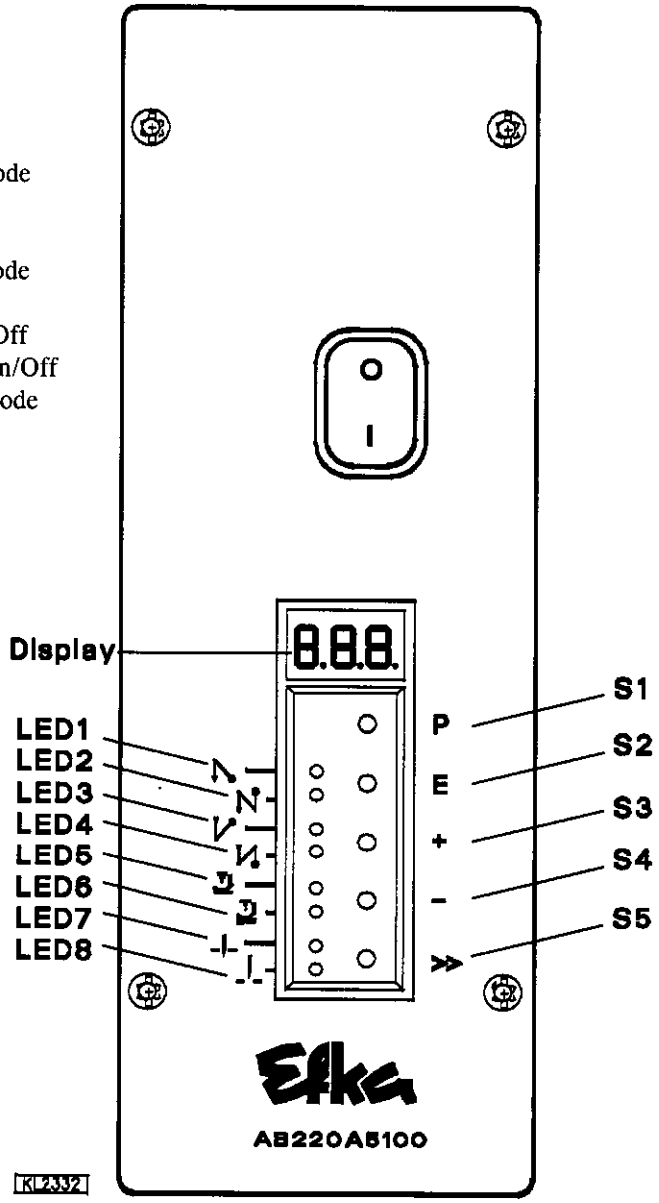
LED5 Indicator for automatic sewing foot lifting at stop in the seam

LED6 Indicator for automatic sewing foot lifting after the trimming operation

LED7 Indicator for basic position "needle position 1"

LED8 Indicator for basic position "needle position 2"

Display 3 digits



4.2 Position of the Socket Connectors

B2 Connection for sensors

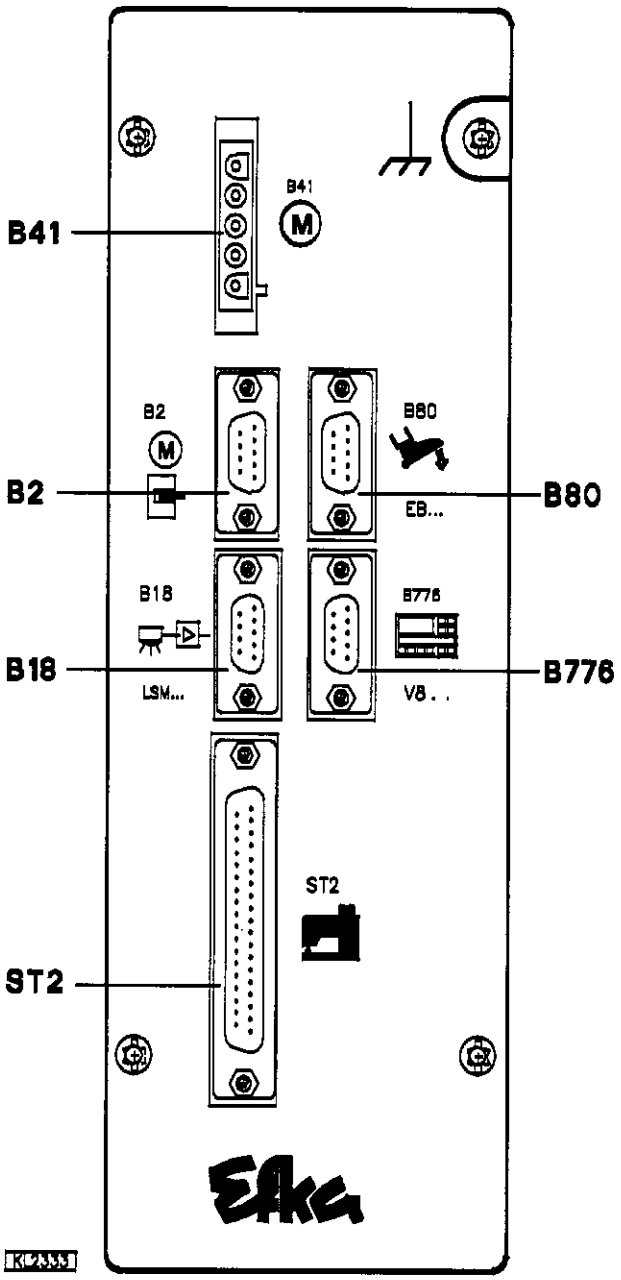
B18 Connection for light barrier module

B41 Connection for motor power supply

B80 Connection for actuator

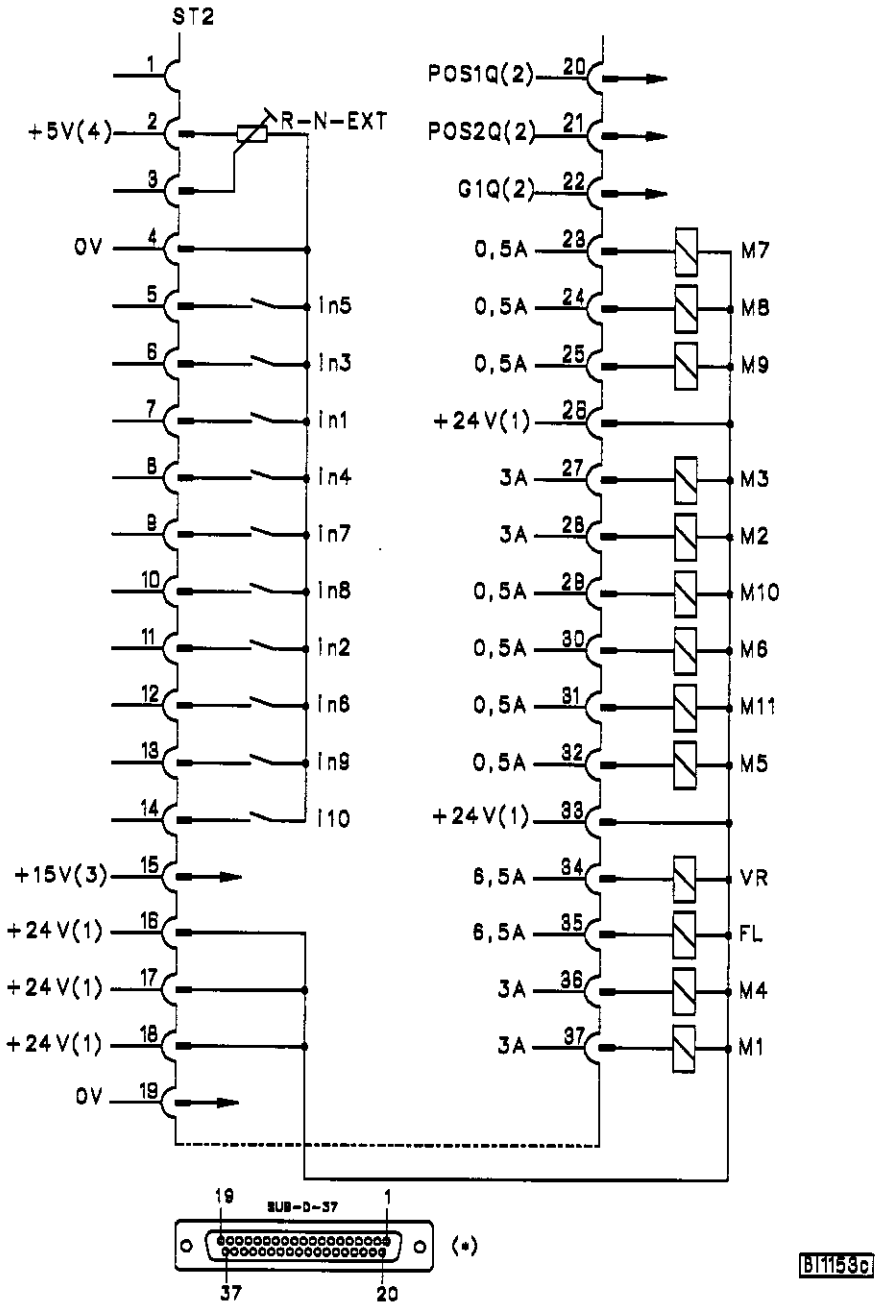
B776 Connection for control panel V810/820

ST2 Connection for inputs and outputs of the solenoids / solenoid valves /displays / pushbuttons and switches



4.3 Connection Diagram

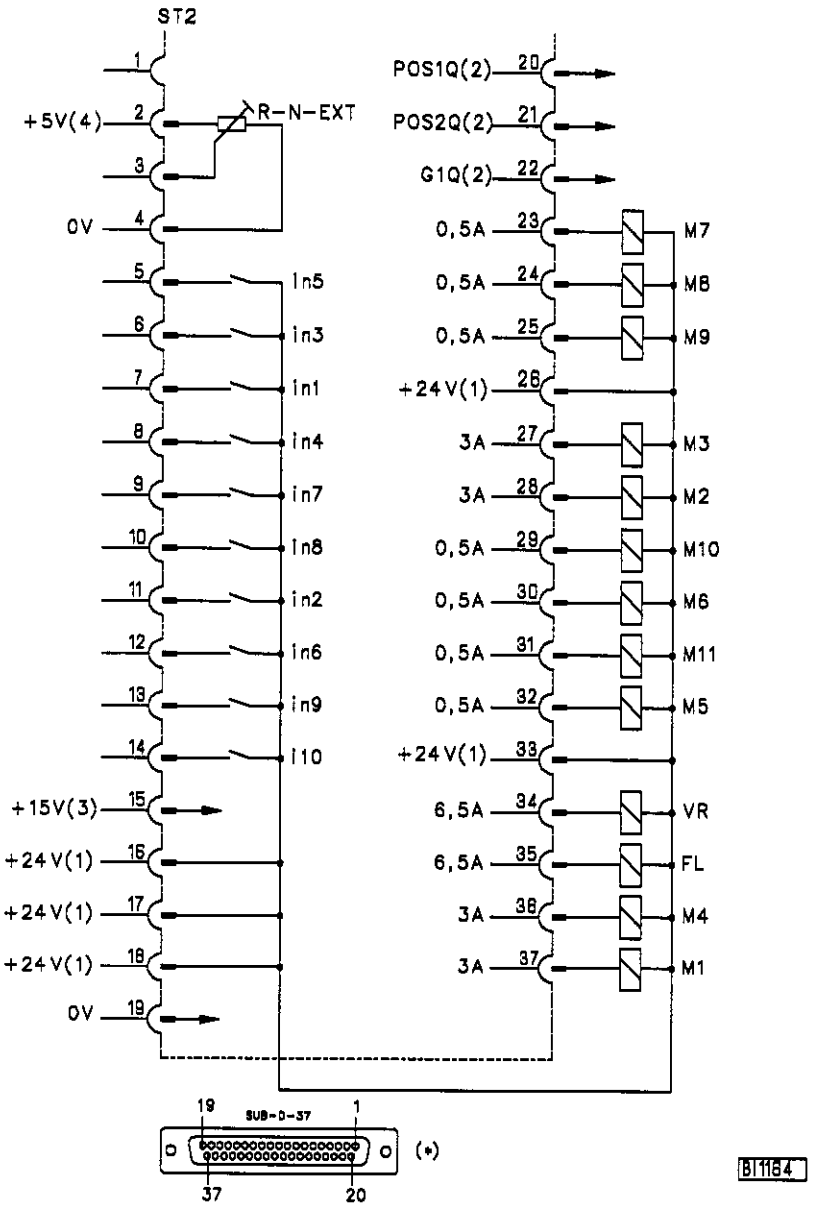
Inputs switched to 0V



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

in1	- Input 1	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	- Generator impulses
in9	- Input 9	M8	- Output 8	R-N-EXT	- External potentiometer for speed limitation (50kΩ)

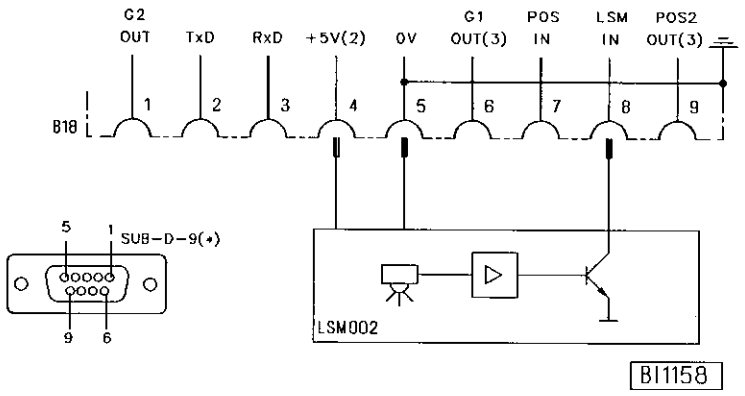
Inputs switched to +24V



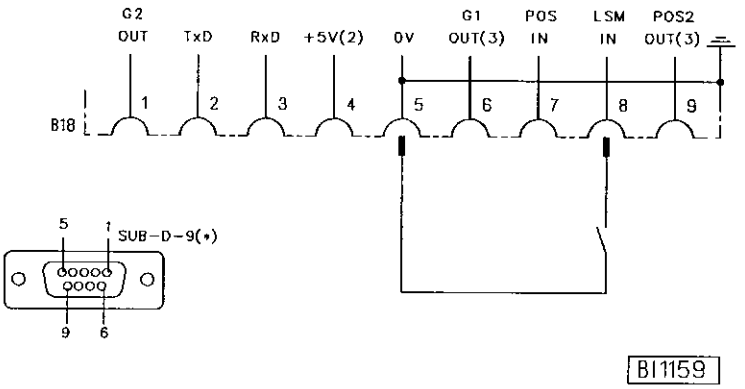
Attention!

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 (soldering side) of the plug

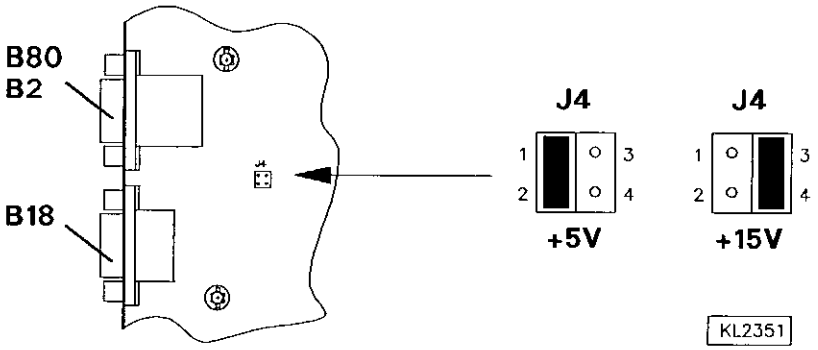


POS2 OUT	- Output for position 2
POS IN	- Input for position
G1/G2 OUT	- Output of the generator impulses
TXD/RXD	- Serial transfer lines
LSM IN	- Possibility of connecting a light barrier module to socket B18/8 (If parameters 239 = 0, the light barrier function is selected. Identification of the signal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



If parameter 239 is set to 1...31, a pushbutton can be operated on the input of socket 18/8.

+15V = Connect right pins 3 and 4 with jumper
+5V = connect left pins 1 and 2 with jumper (factory setting)



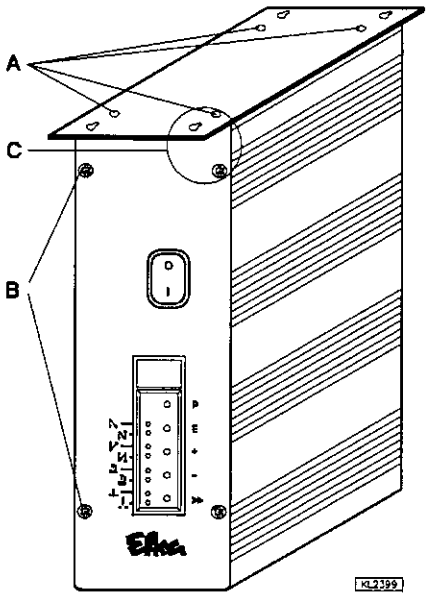
Attention!
Turn power off before opening the cover!

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

4.4 Connection of a Sewing Light with Transformer

Attention!
Turn power off before opening the control box!

- **Switch off the control unit 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

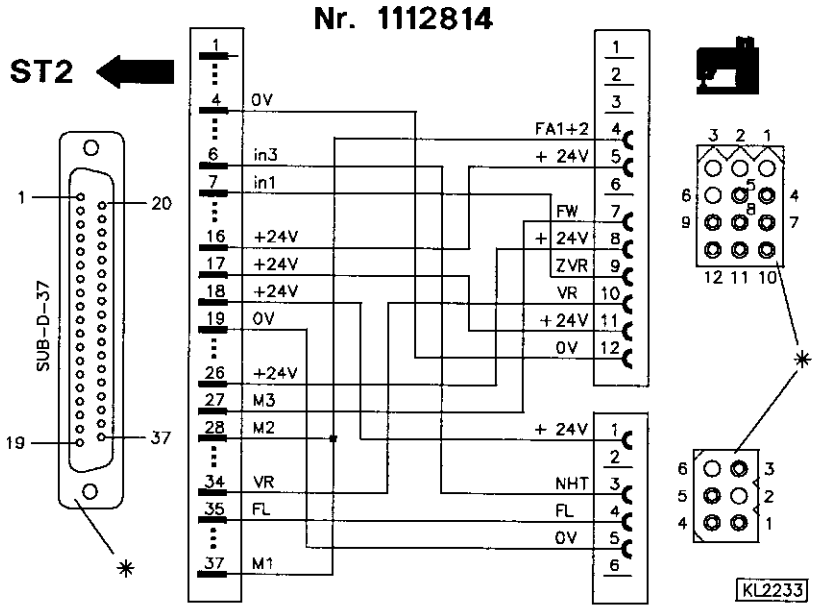


Attention!
After having connected the sewing light it is always current-carrying (230V), even if the control unit is switched off! Only one sewing light with transformer can be connected to the control unit!

4.5 Adapter Cords

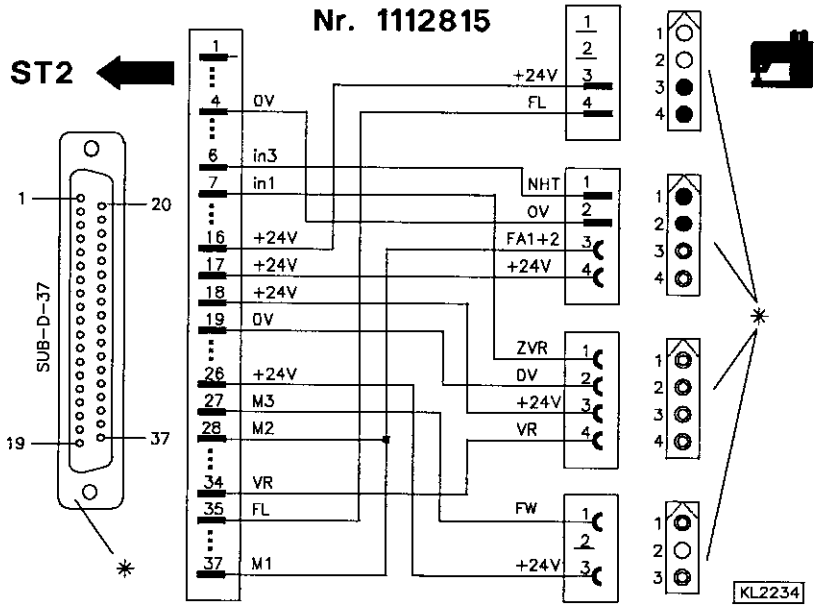
Adapter cord for BROTHER class 737-113 and 737-913

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 0
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 16
	Input in3	=> Parameter 242 = 1



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

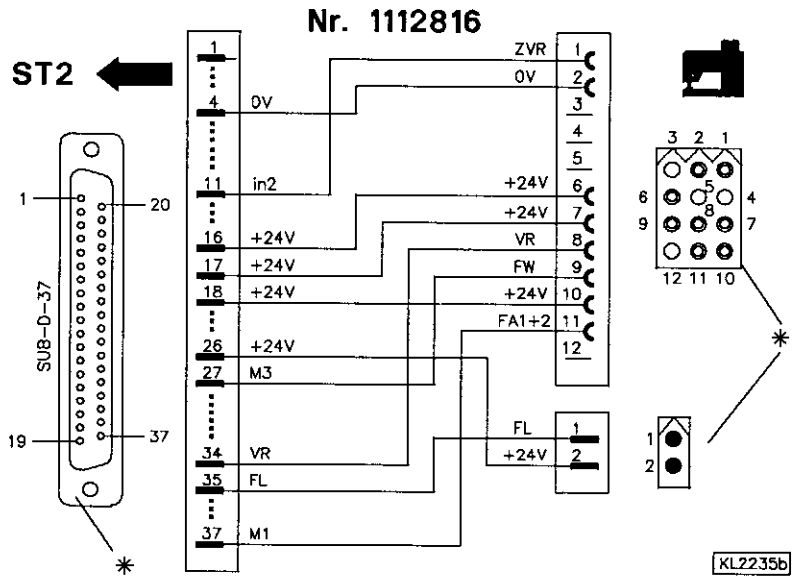
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 0
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 16
	Input in3	=> Parameter 242 = 1



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

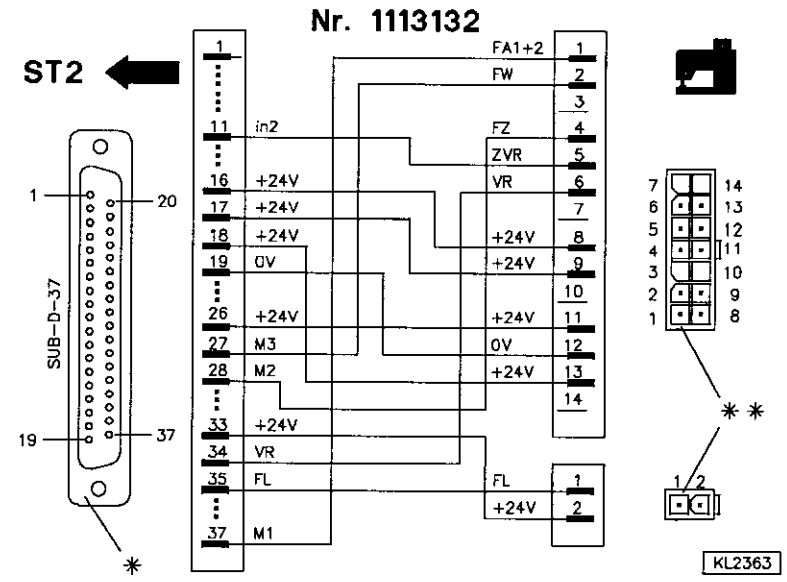
Adapter cord for JUKI class 5550-4

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 14
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 16



Adapter cord for JUKI class 5550-7

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 14
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 16

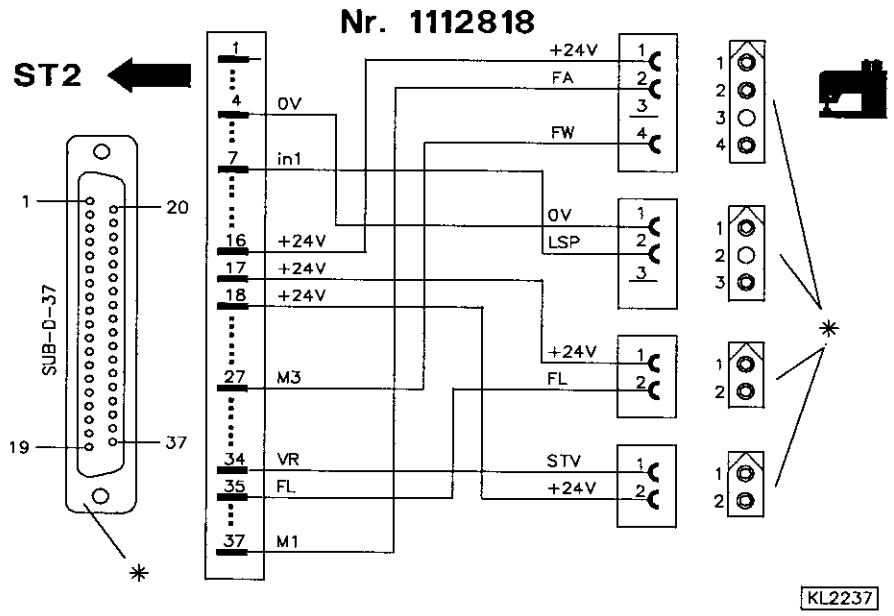


*) Rear view (soldering side) of 37-pole plug (ST2). Front view (component side) of the remaining plugs/sockets.

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

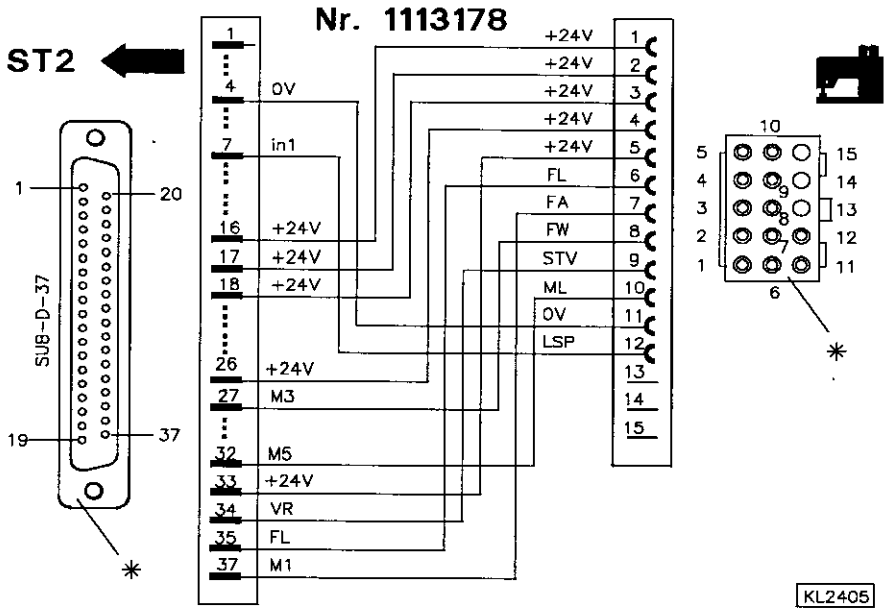
Adapter cord for YAMATO chain stitch machines VC series

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 7



Adapter cord for YAMATO chain stitch machines VG series

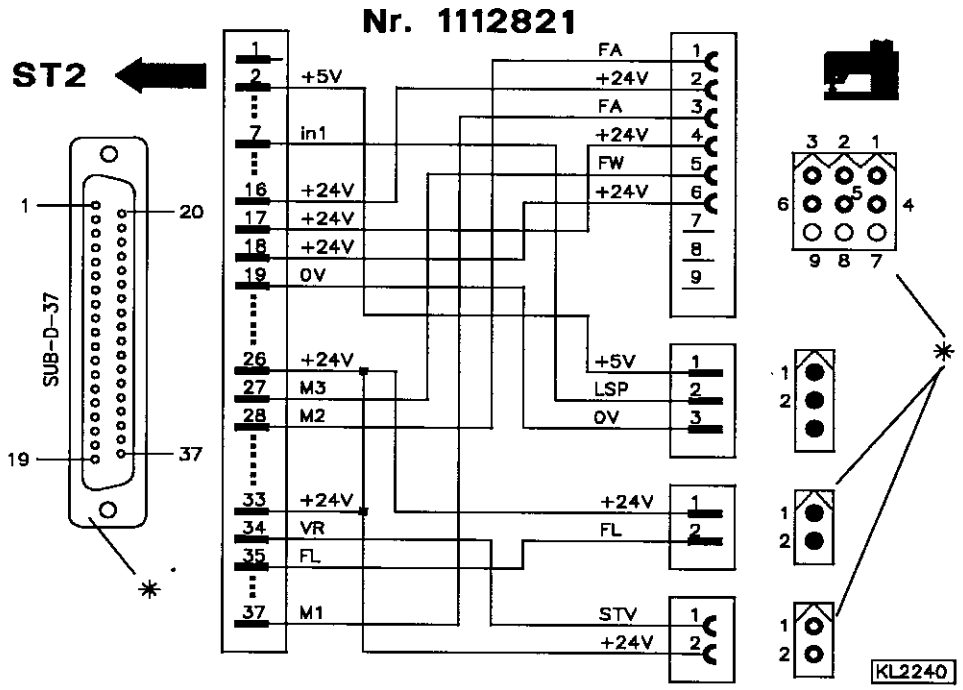
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 7



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

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

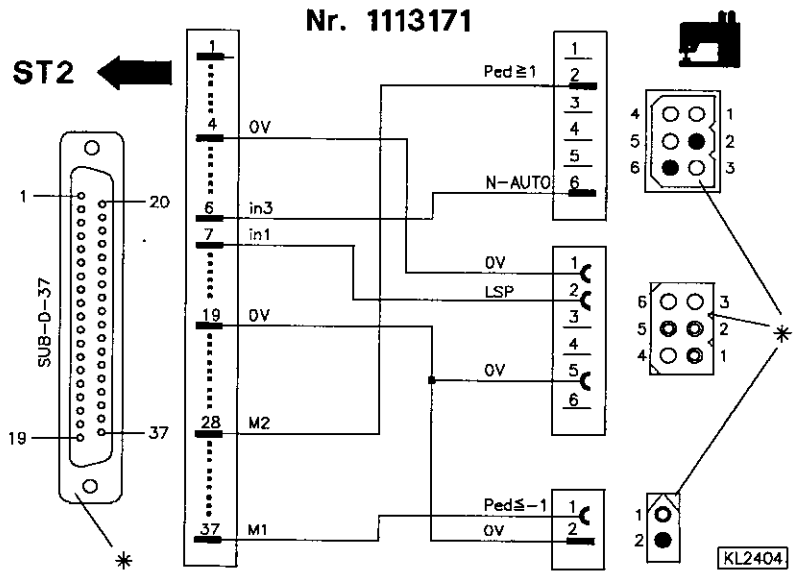
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 7



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

Adapter cord for PEGASUS backlatch machines

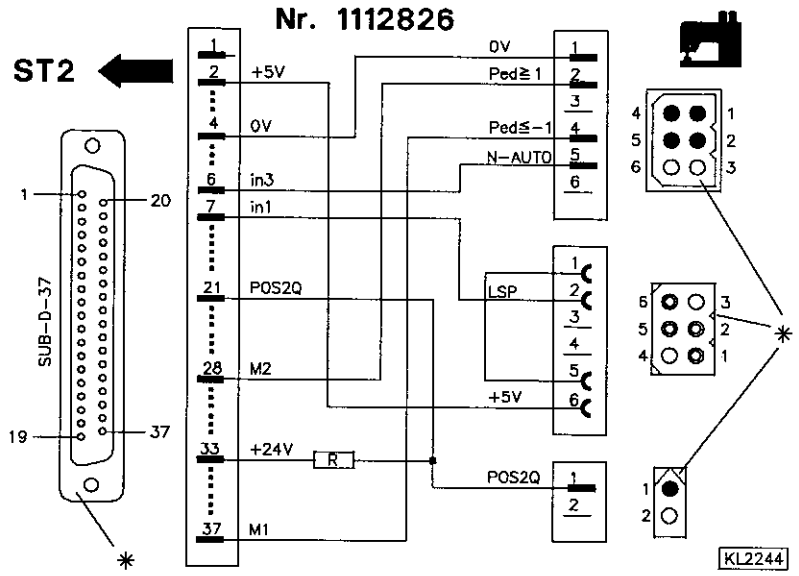
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 8
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 6
	Input in3	=> Parameter 242 = 10



*) Rear view (soldering side) of 37-pole plug (ST2). Front view (component side) and/or rear view (slodering side) of the remaining plugs/sockets.

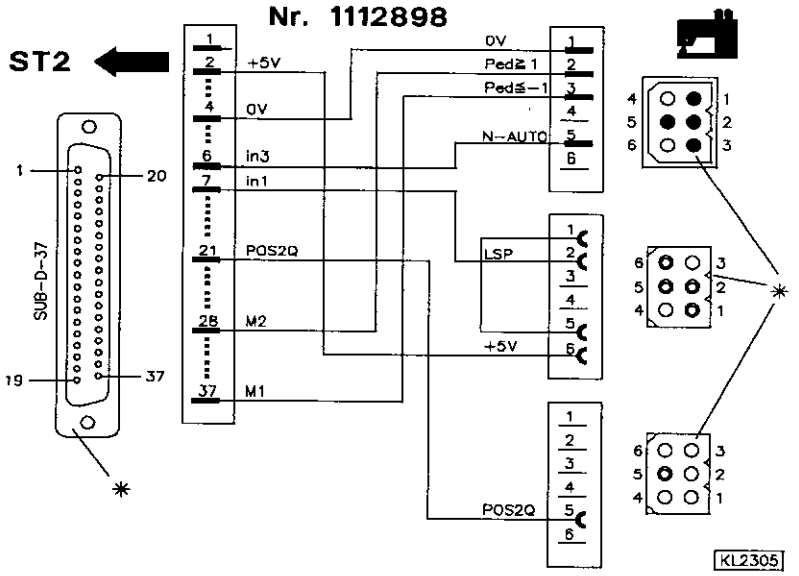
Adapter cord for YAMATO backlatch machines class ABT3

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 9
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 6
	Input in3	=> Parameter 242 = 10



Adapter cord for YAMATO backlatch machines class ABT13

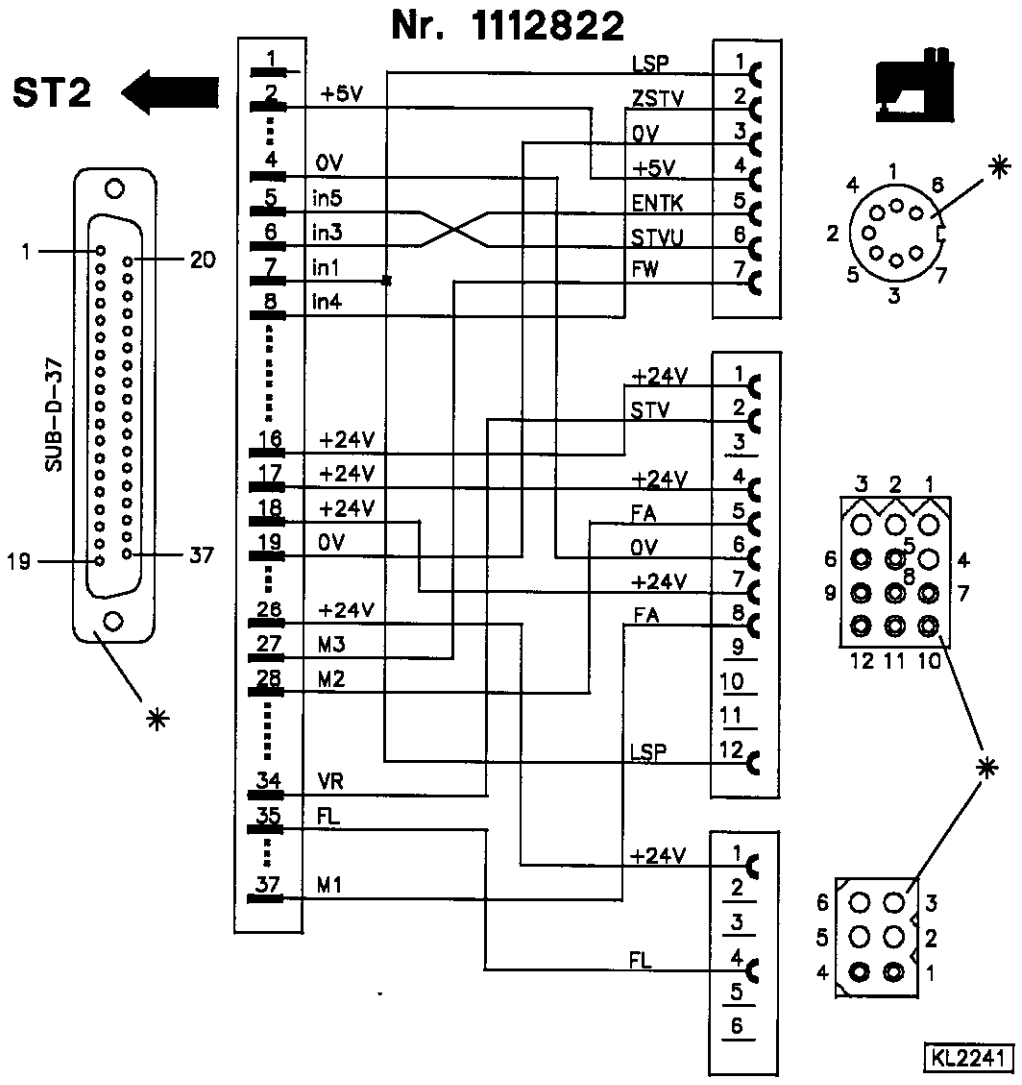
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 9
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 6
	Input in3	=> Parameter 242 = 10



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

Adapter cord for BROTHER class FD3 B257

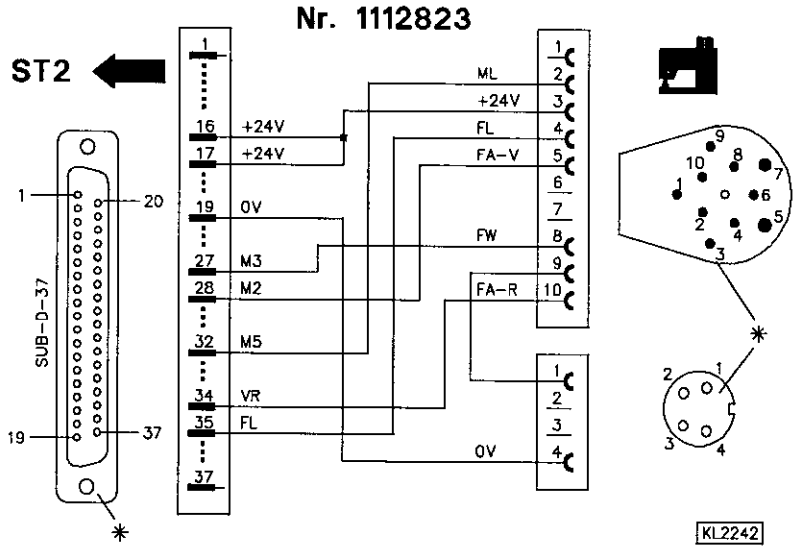
Setting the functional sequence	**Thread trimming mode**	**=> Parameter 290 = 5**
Setting the functions of the pushbuttons	**Input in1**	**=> Parameter 240 = 7**
	Input in3	**=> Parameter 242 = 18**
	Input in4	**=> Parameter 243 = 16**
	Input in5	**=> Parameter 244 = 17**



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

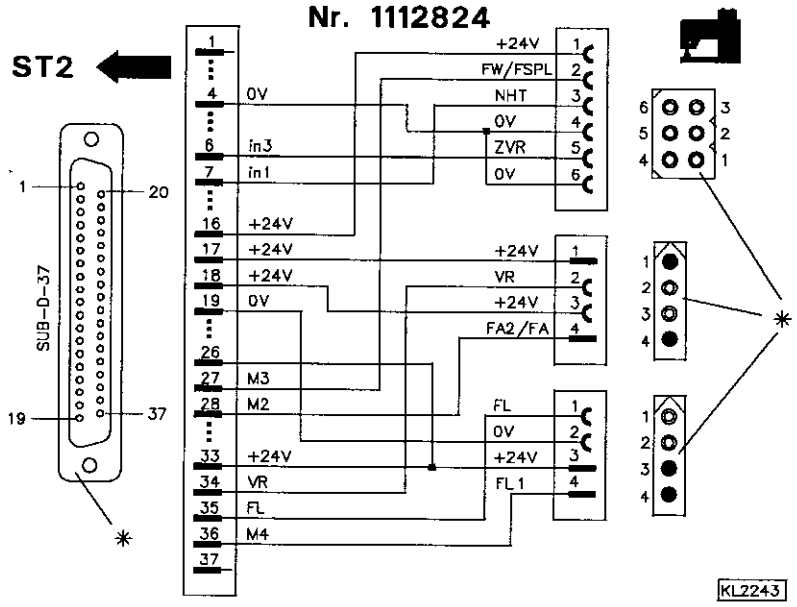
Adapter cord for UNION SPECIAL class 63900AMZ

Setting the functional sequence	**Thread trimming mode**	**=> Parameter 290 = 10**



Adapter cord for SINGER classes 211, 212 and 591

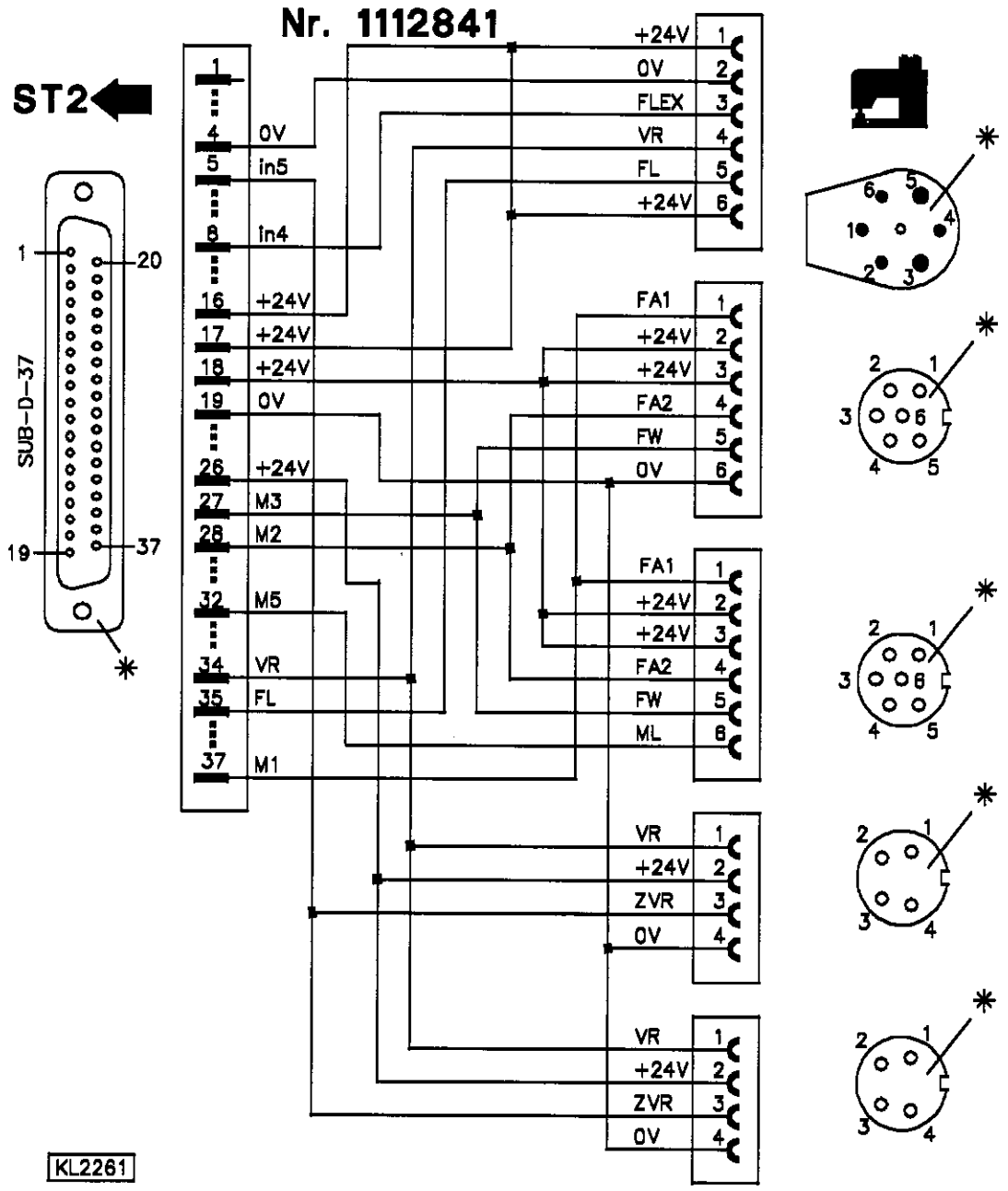
Setting the functional sequence (Singer cl. 212UTT)	**Thread trimming mode**	**=> Parameter 290 = 2**
Setting the functions of the pushbuttons	**Input in1**	**=> Parameter 240 = 1**
	Input in3	**=> Parameter 242 = 16**



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

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

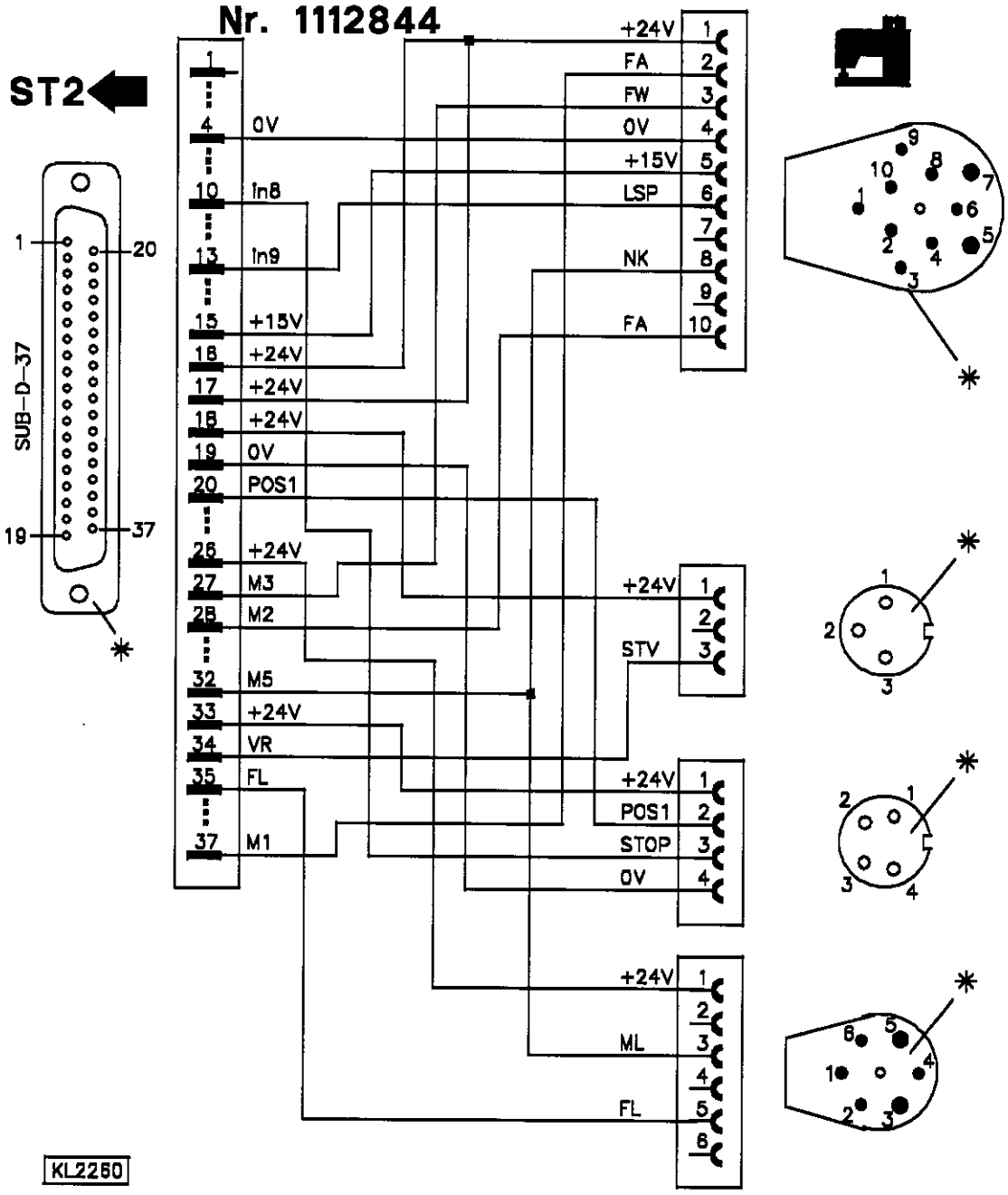
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 0
Setting the functions of the pushbuttons	Input in4	=> Parameter 243 = 12
	Input in5	=> Parameter 244 = 16



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

Adapter cord for UNION SPECIAL class 34700 with stitch lock

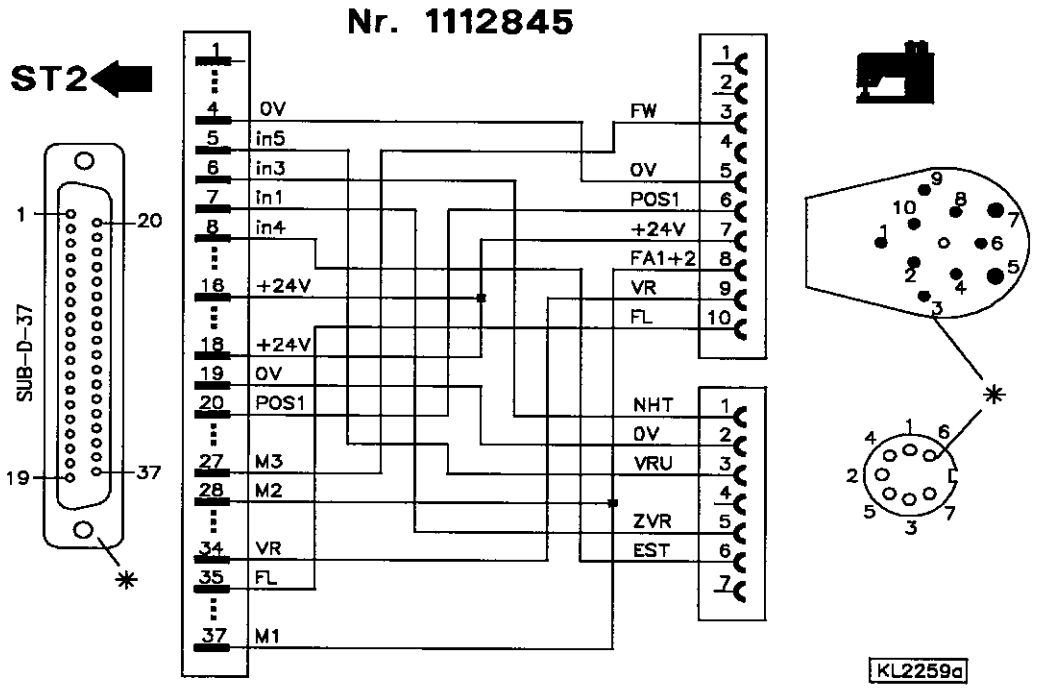
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5
Setting the functions of the pushbuttons	Input in8	=> Parameter 247 = 7
	Input in9	=> Parameter 248 = 6



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

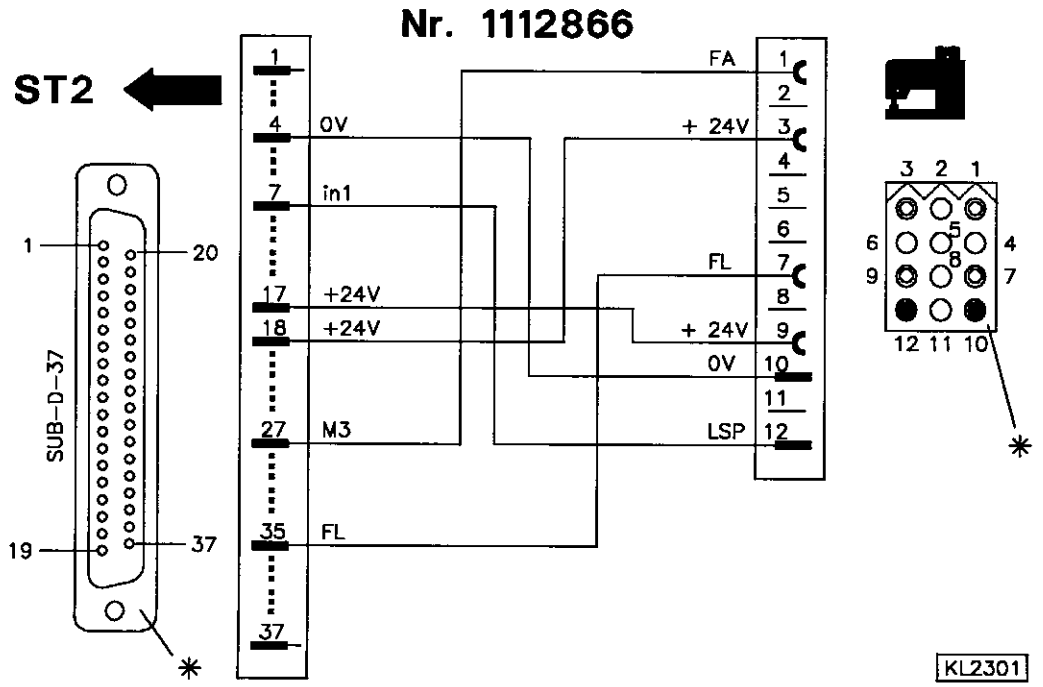
Adapter cord for DÜRKOPP ADLER classes 210, 270

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 0
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 16
	Input in3	=> Parameter 242 = 1
	Input in4	=> Parameter 243 = 3
	Input in5	=> Parameter 244 = 17



Adapter cord for GLOBAL class CB2803-56

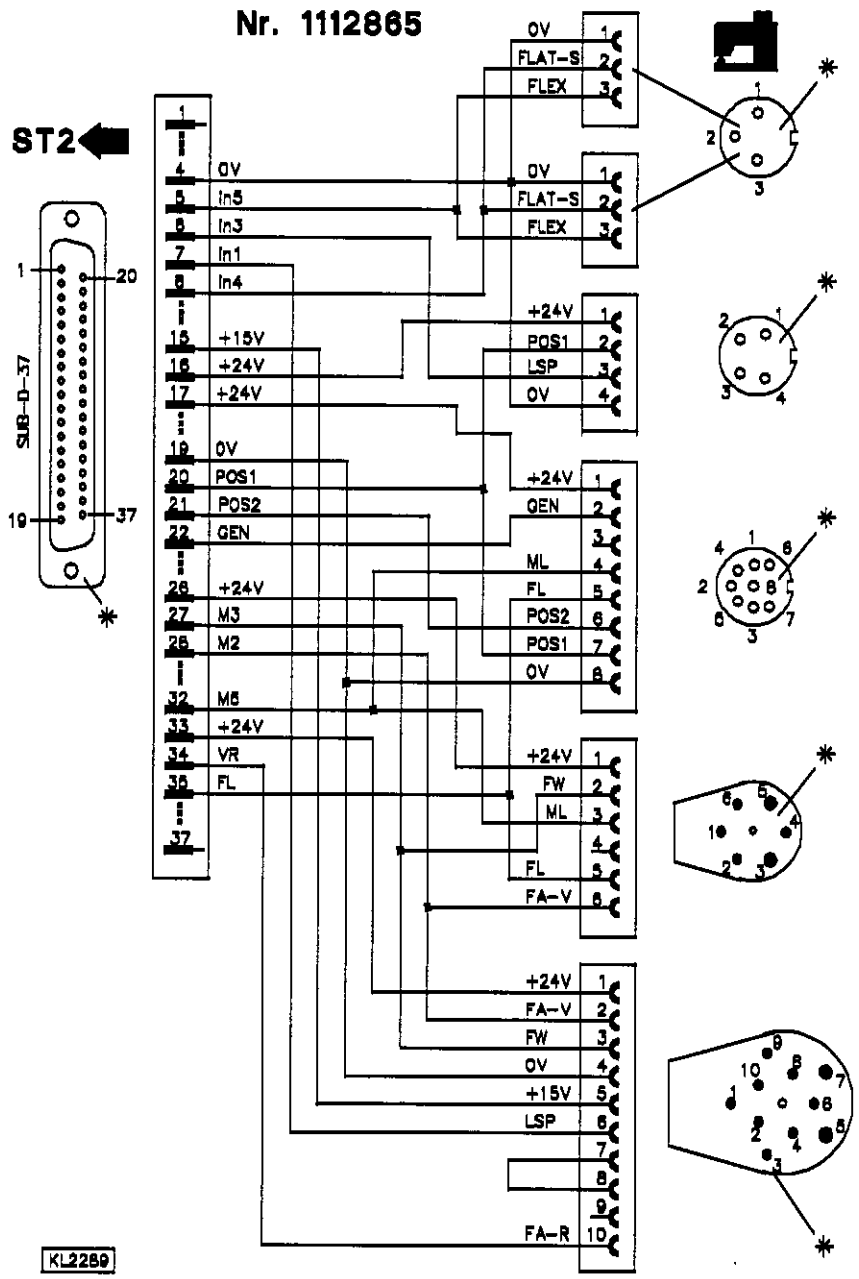
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 6



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

Adapter cord for Union Special classes 34000 and 36200

Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 4
Setting the functions of the pushbuttons	Input in1	=> Parameter 240 = 6
	Input in3	=> Parameter 242 = 6
	Input in4	=> Parameter 243 = 18
	Input in5	=> Parameter 244 = 12



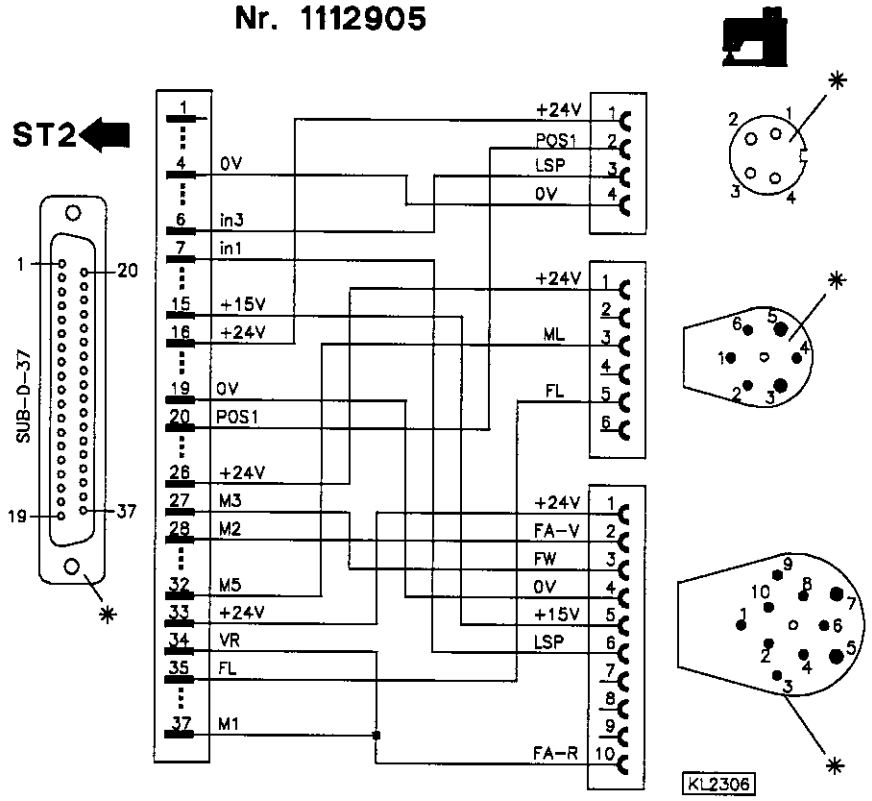
in1 = Input **machine run blockage** for thread trimming control proximity switch
in3 = Input **machine run blockage** for thread monitor
in4 = Input **unlocking the chain** corresponds to function **flatseamer (FLAT-S)**

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

Adapter cord for Union Special classes CS100 and FS100

Setting the functional sequence	**Thread trimming mode**	**=> Parameter 290 = 4**
Setting the functions of the pushbuttons	**Input in1**	**=> Parameter 240 = 6**
	Input in3	**=> Parameter 242 = 6**

Nr. 1112905

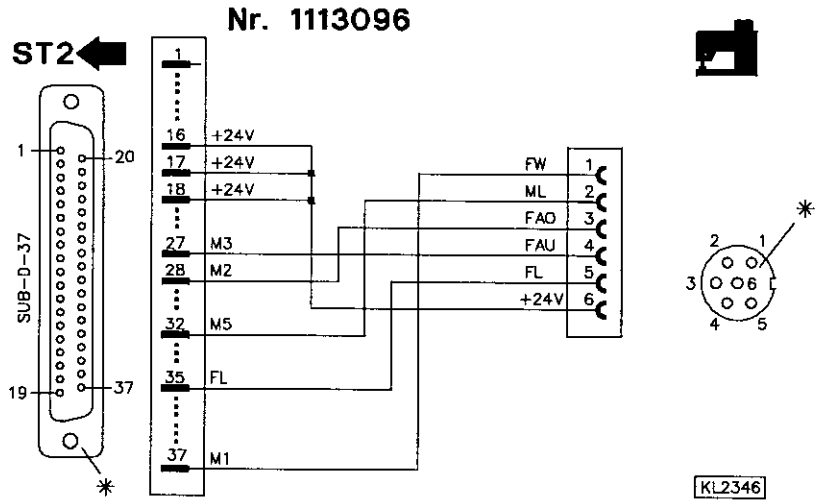


in1 = Input **machine run blockage** for thread trimming control proximity switch
in3 = Input **machine run blockage** for thread monitor

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

Adapter cord for RIMOLDI class F27

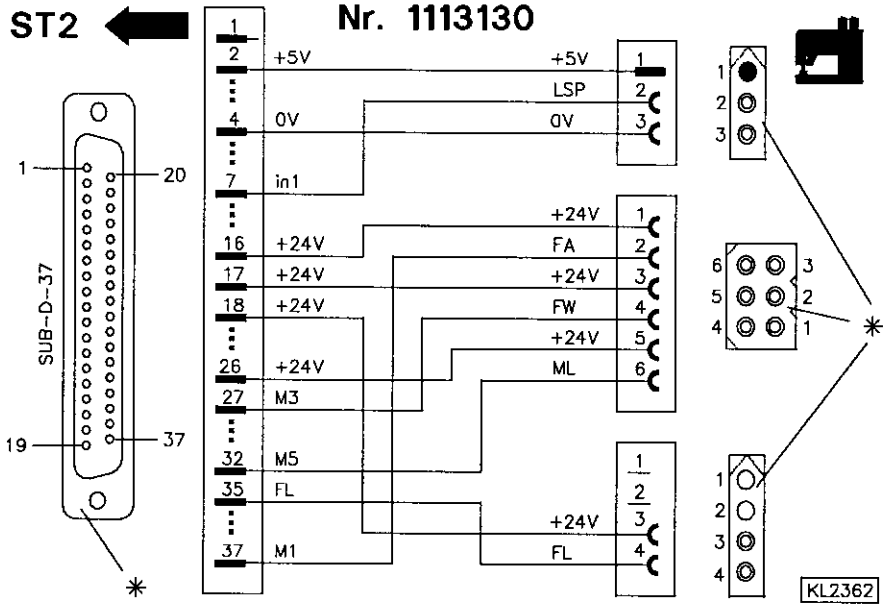
Setting the functional sequence	Thread trimming mode	=> Parameter 290 = 5



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

Adapter cord for KANSAI class RX9803

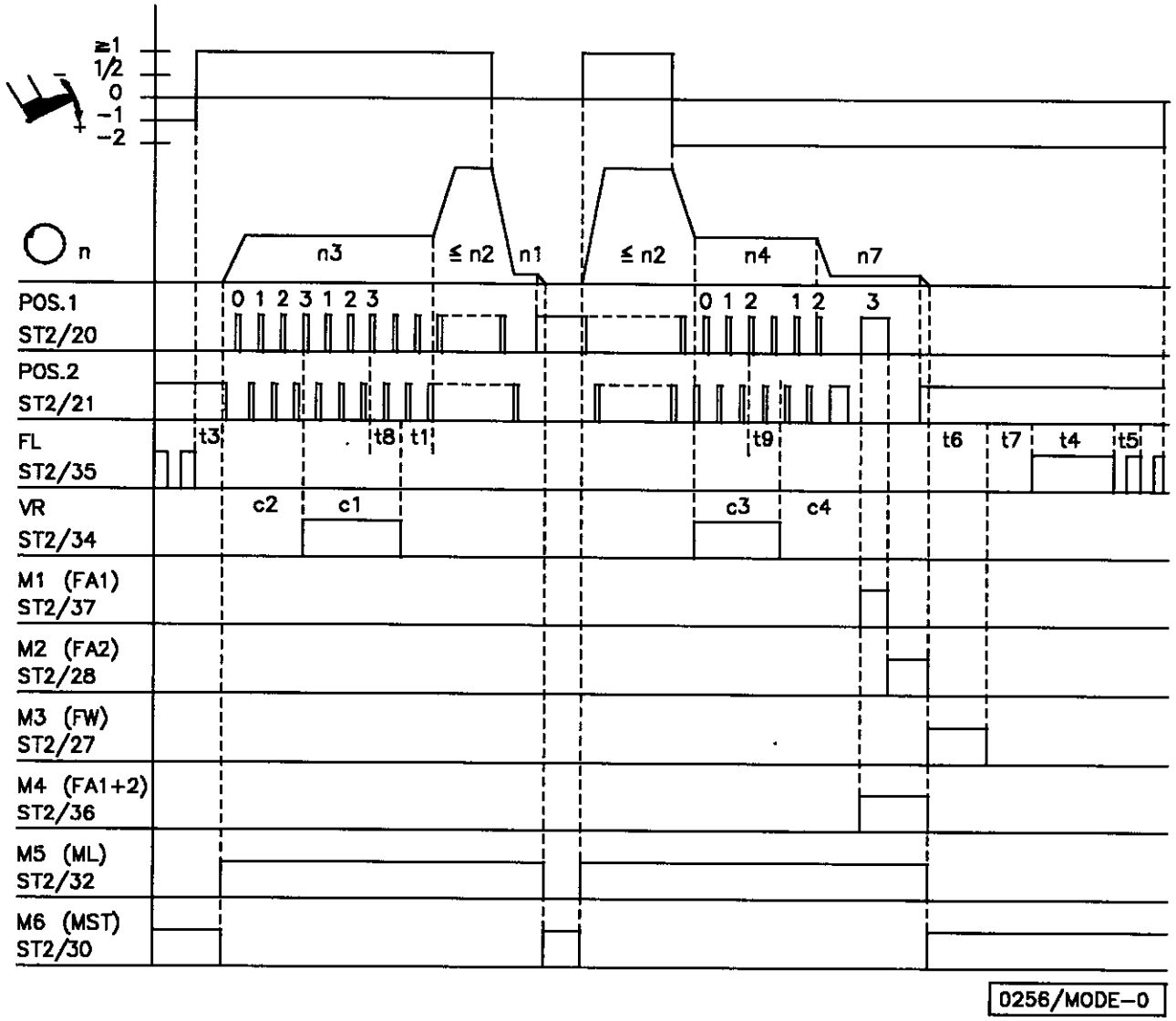
Setting the functional sequence	**Thread trimming mode**	**=> Parameter 290 = 5**
Setting the functions of the pushbuttons	**Input in1**	**=> Parameter 240 = 7**



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

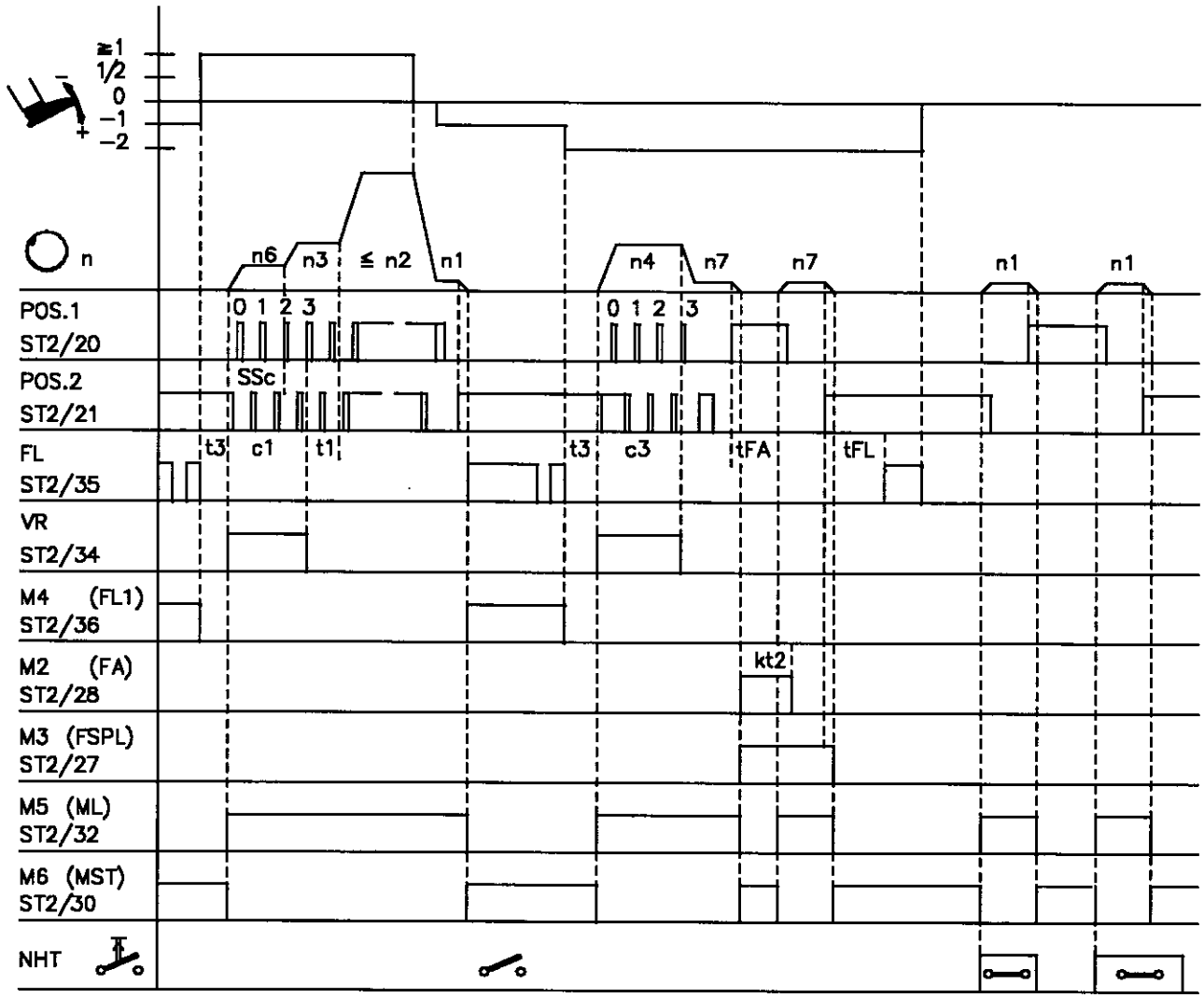
5. Timing Diagrams

Mode 0 (lockstitch)



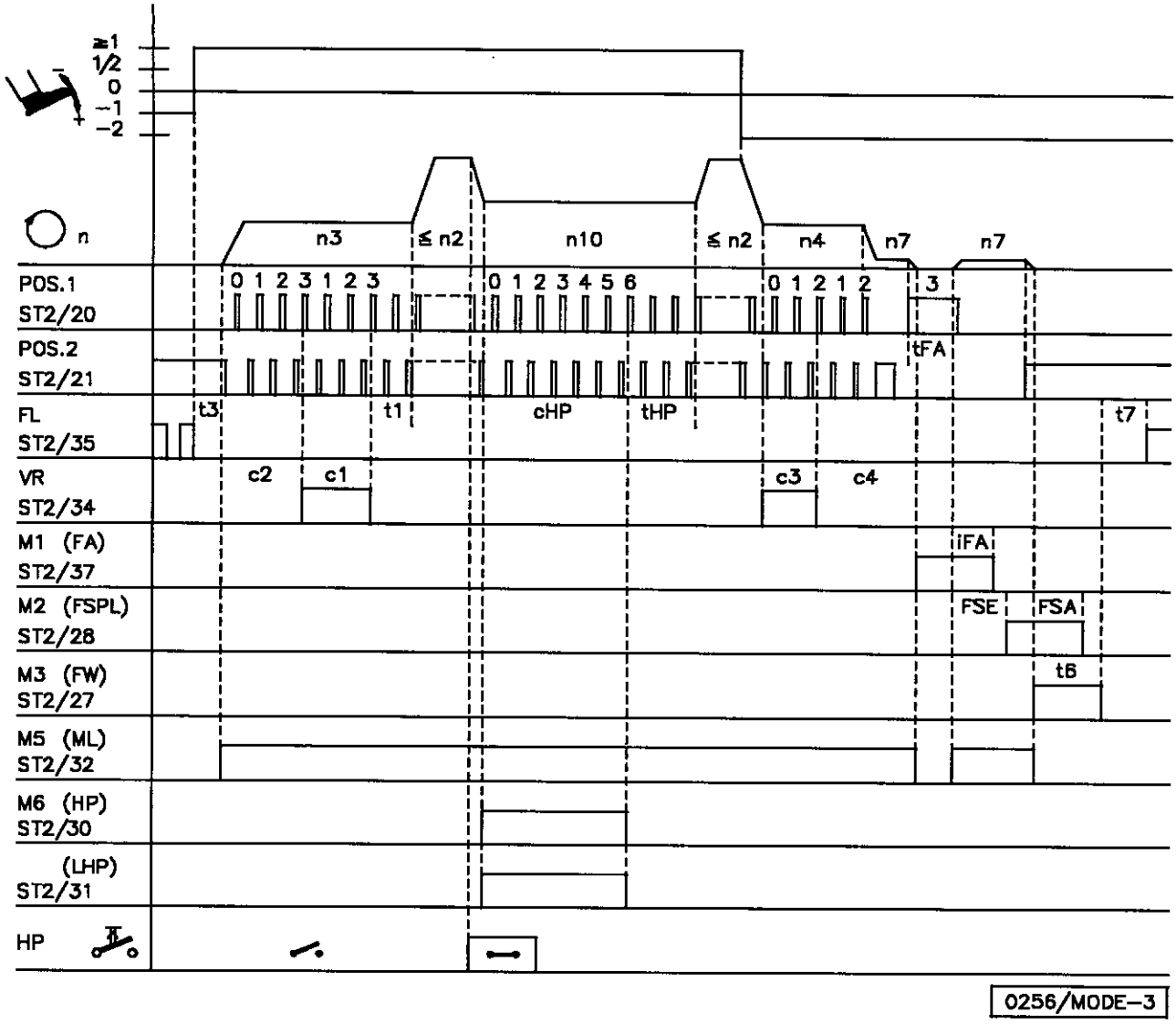
Abbreviation	Function		Param.	Pushbutton Control	Pushbutton V810	Pushbutton V820
	Mode 0	On	290 = 0			
	Double start backtack with stitch correction	On		Pushb. S2	Pushb. 1	Pushb. 1
	Double end backtack with stitch correction	On		Pushb. S3	Pushb. 2	Pushb. 4
n1	Positioning speed		110			
n2	Maximum speed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

Mode 2 (lockstitch)



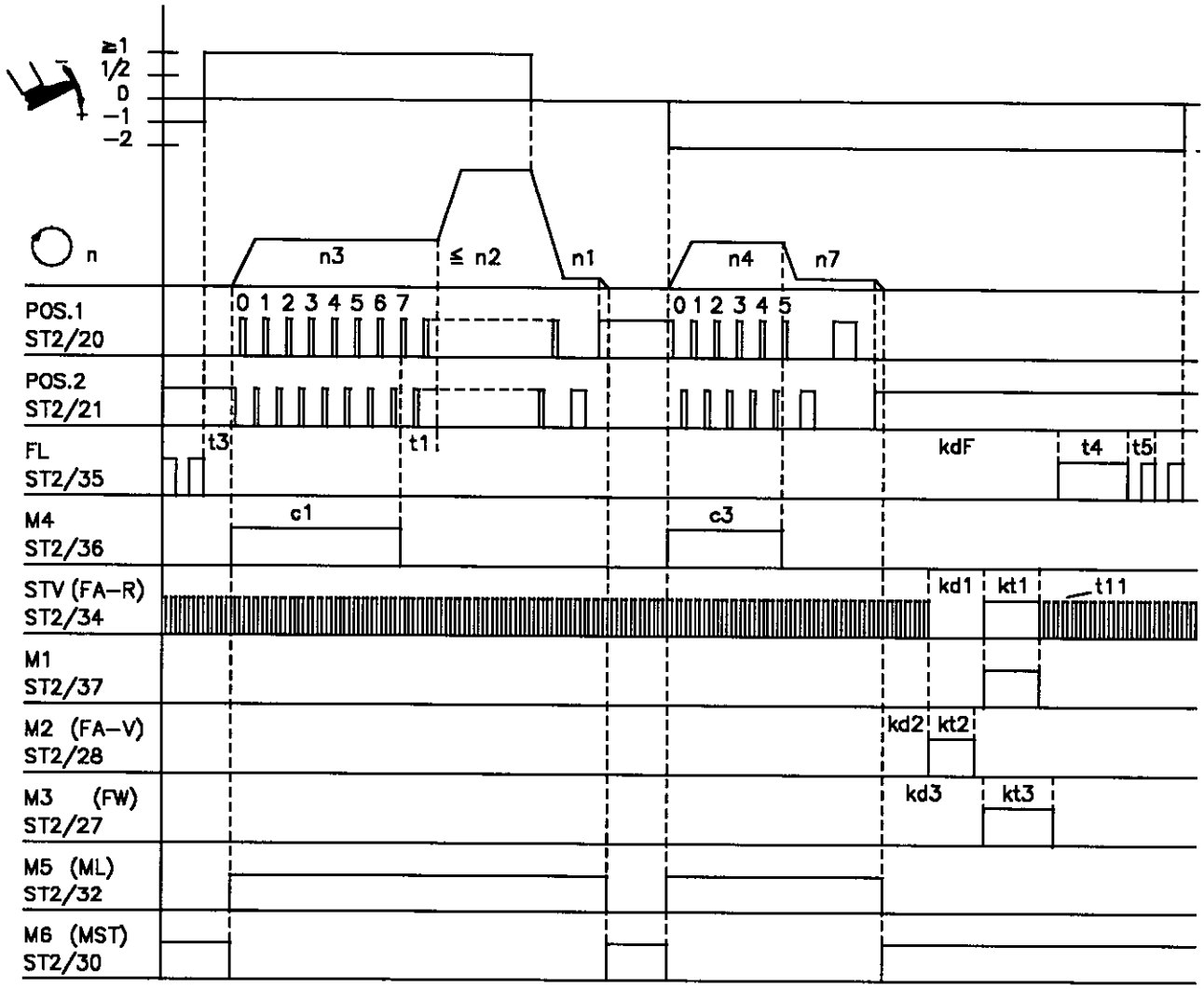
Abbre-viation	Function		Param.	Control	V810	V820
	Mode 2		290 = 2			
	Softstart	On	134 = 1			
	Single start backtack	On		Pushb. S2	Pushb. 1	Pushb. 1
	Single end backtack	On		Pushb. S3	Pushb. 2	Pushb. 4
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Start backtacking speed		112			
n4	End backtacking speed		113			
n6	Softstart speed		115			
n7	Trimming speed		116			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted foot		202			
tFL	Activation delay of sewing foot lifting		211			
kt1	Activation time of thread trimmer		255			
tFA	Stop time for thread trimmer		253			
SSc	Softstart stitches		100			
c1	Start backtack stitches backward		001			
c3	End backtack stitches backward		002			

Mode 3 (lockstitch)



Abbre-viation	Function	Param.	Control	V810	V820
	Mode 3	290 = 3			
	Double start backtack On		Pushb. S2	Pushb. 1	Pushb. 1
	Double end backtack On		Pushb. S3	Pushb. 2	Pushb. 4
	High lift for walking foot	137 = 1			
n2	Maximum speed	111			
n3	Start backtacking speed	112			
n4	End backtacking speed	113			
n7	Trimming speed	116			
n10	High lift walking speed	117			
t6	Activation time of thread wiper	205			
t7	Activation delay of sewing foot after thread wiper	206			
iFA	Activation angle of the thread trimmer	250			
FSA	Activation time of thread tension release	251			
FSE	Delay of thread tension release dependent on angle	252			
tFA	Stop time for thread trimmer	253			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
tHP	Run-out time of the high lift walking speed	152			
cHP	Stitch counting high lift for walking foot	185			

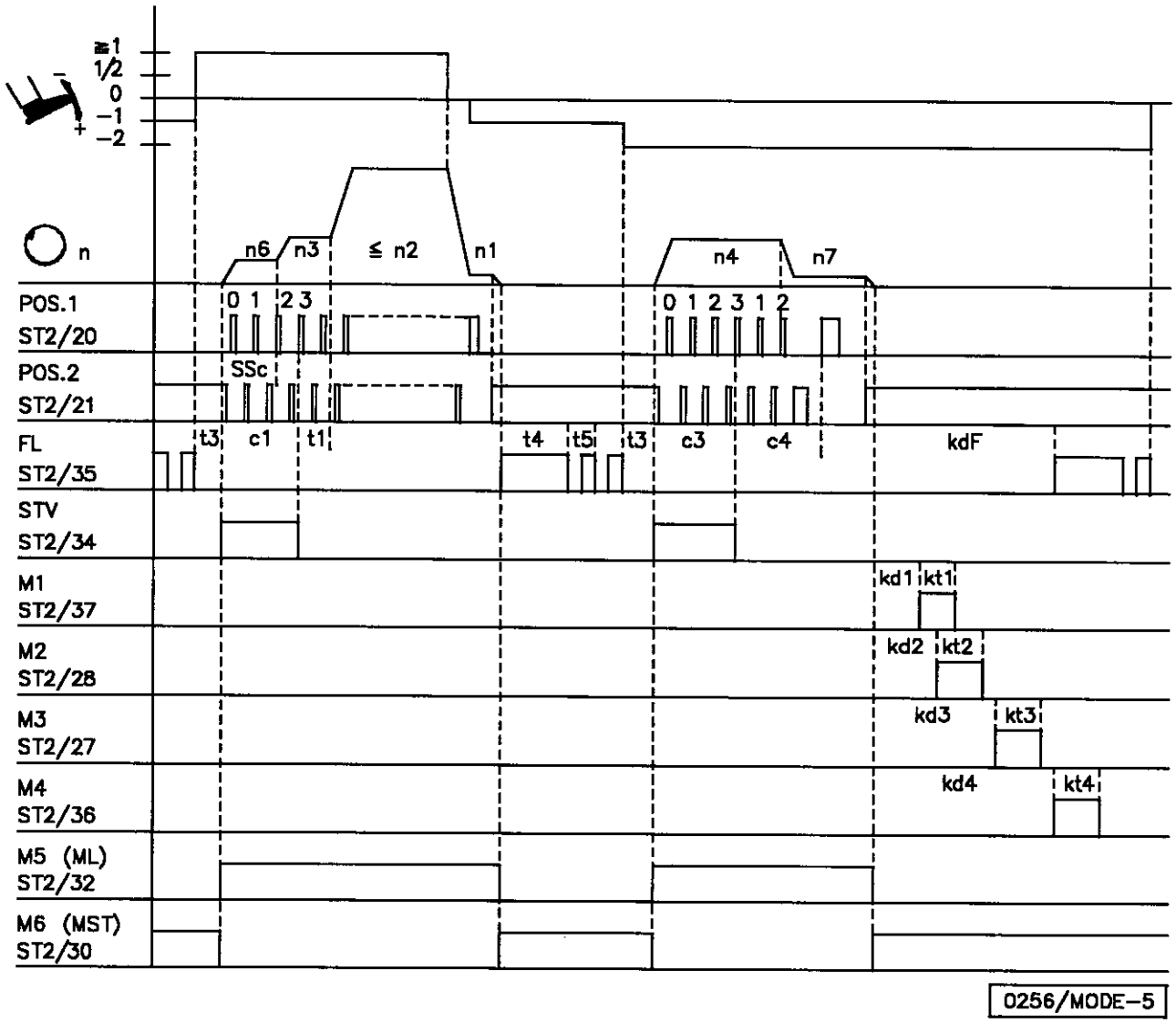
Mode 4 (chainstitch)



0256/MODE–4

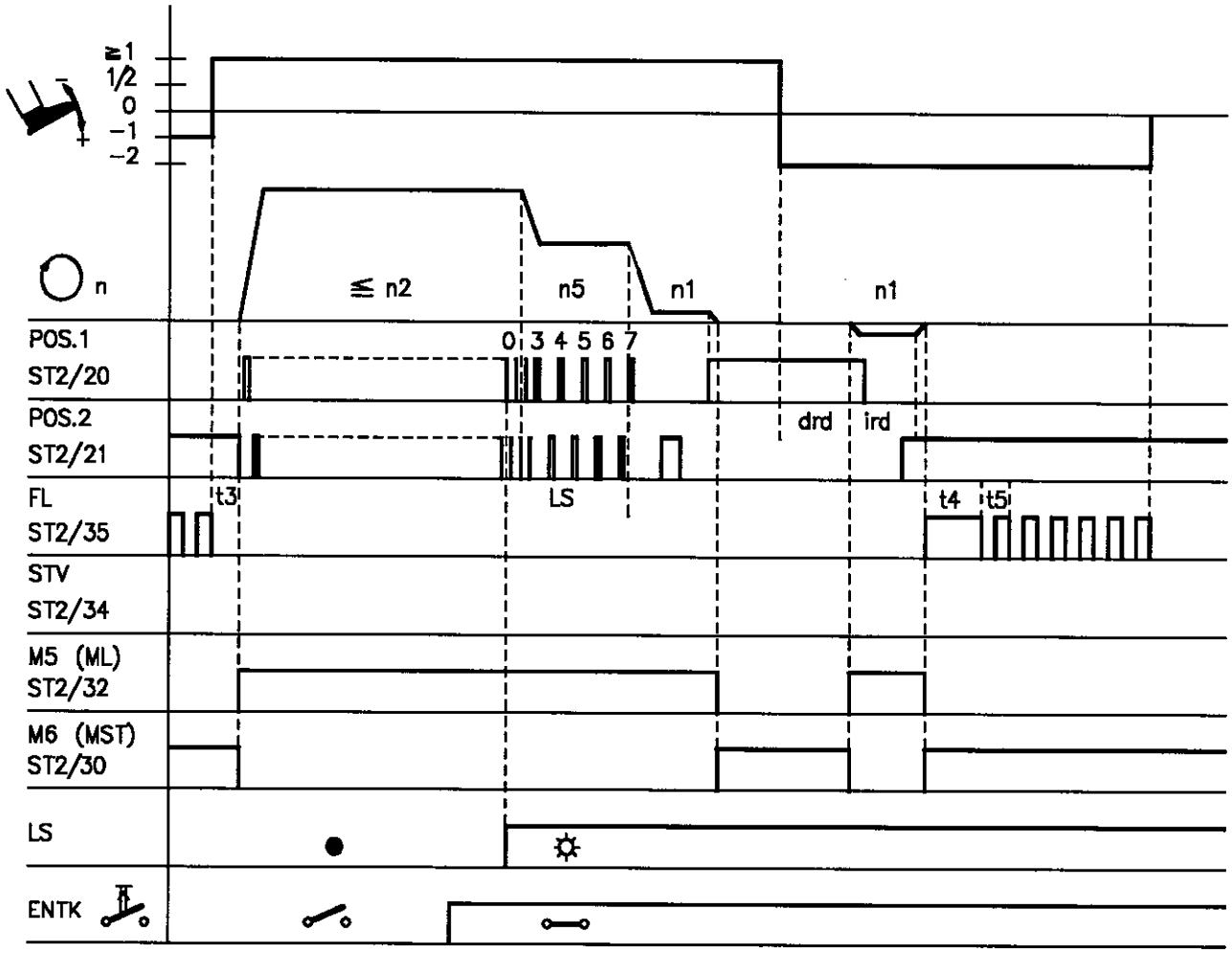
Abbre-viation	Function		Param.	Control	V810	V820
	Mode 4 Start stitch condensing End stitch condensing	 On On	290 = 4	 Pushb. S2 Pushb. S3	 Pushb. 1 Pushb. 2	 Pushb. 1 Pushb. 4
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Start backtacking speed		112			
n4	End backtacking speed		113			
n7	Trimming speed		116			
n12	Automatic speed		118			
t1	Delay until speed release after stitch condensing		200			
t3	Start delay from lifted foot		202			
t11	Holding power output "stitch condensing" of the thread trimmer backward		213			
kd1	Delay times thread trimmer backward		280			
kt1	Activation times thread trimmer backward		281			
kd2	Delay times thread trimmer forward M2		282			
kt2	Activation times thread trimmer forward M2		283			
kd3	Delay times thread wiper M3		284			
kt3	Activation times thread wiper M3		285			
kdF	Activation delay of sewing foot		288			
c1	Counting start stitch condensing		001			
c3	Counting end stitch condensing		002			

Mode 5 (chainstitch)



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

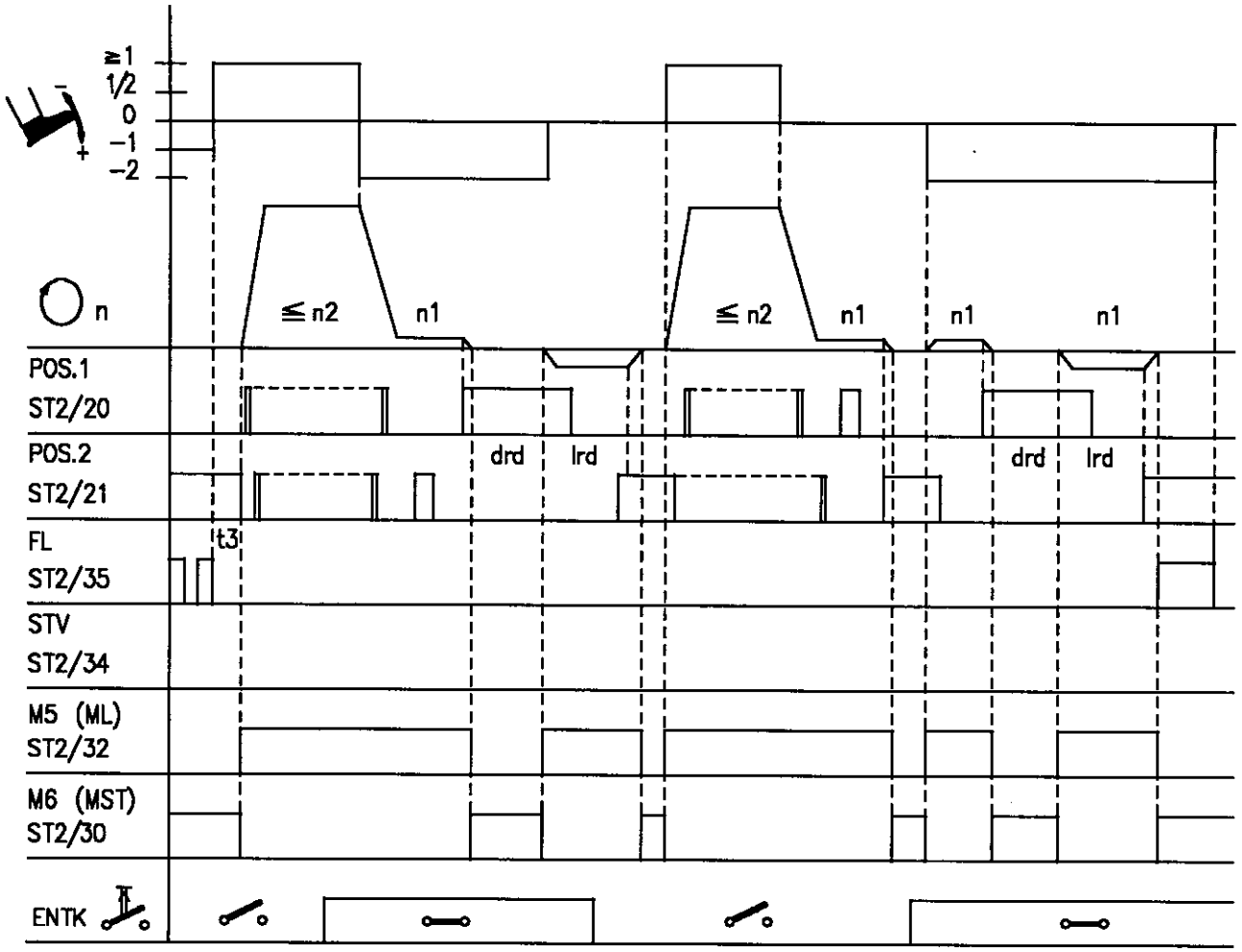
Mode 4, 5, 6 or 7 (function "unlocking the chain" with light barrier)



Abbreviation	Function		Param.	Pushbutton Control	Pushbutton V810	Pushbutton V820
	Mode 5		290 = 5			
	Direction of rotation of the motor	Clockwise	161 = 0			
	Reversion		182 = 1			
	Basic position 2	On		Pushb. S5	Pushb. 4	Pushb. 7
	Stitch condensing and thread trimmer *)	On				
	Light barrier		009 = 1			
	Unlocking 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..	Allocate the function "unlocking the chain" for an output		2..			
n1	Positioning speed		110			
n2	Maximum speed		111			
n5	Speed after light barrier sensing		114			
t3	Start delay from lifted foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
LS	Light barrier compensating stitches		004			
ird	Number of reversion increments		180			
drd	Activation delay of reversion		181			
tGn	Speed gate damping period		222			
dGF	Speed gate 2		224 = 1			
kdF	Delay time until sewing foot lifting On		288			

*) The functions stitch condensing and thread trimmer are suppressed when unlocking the chain.

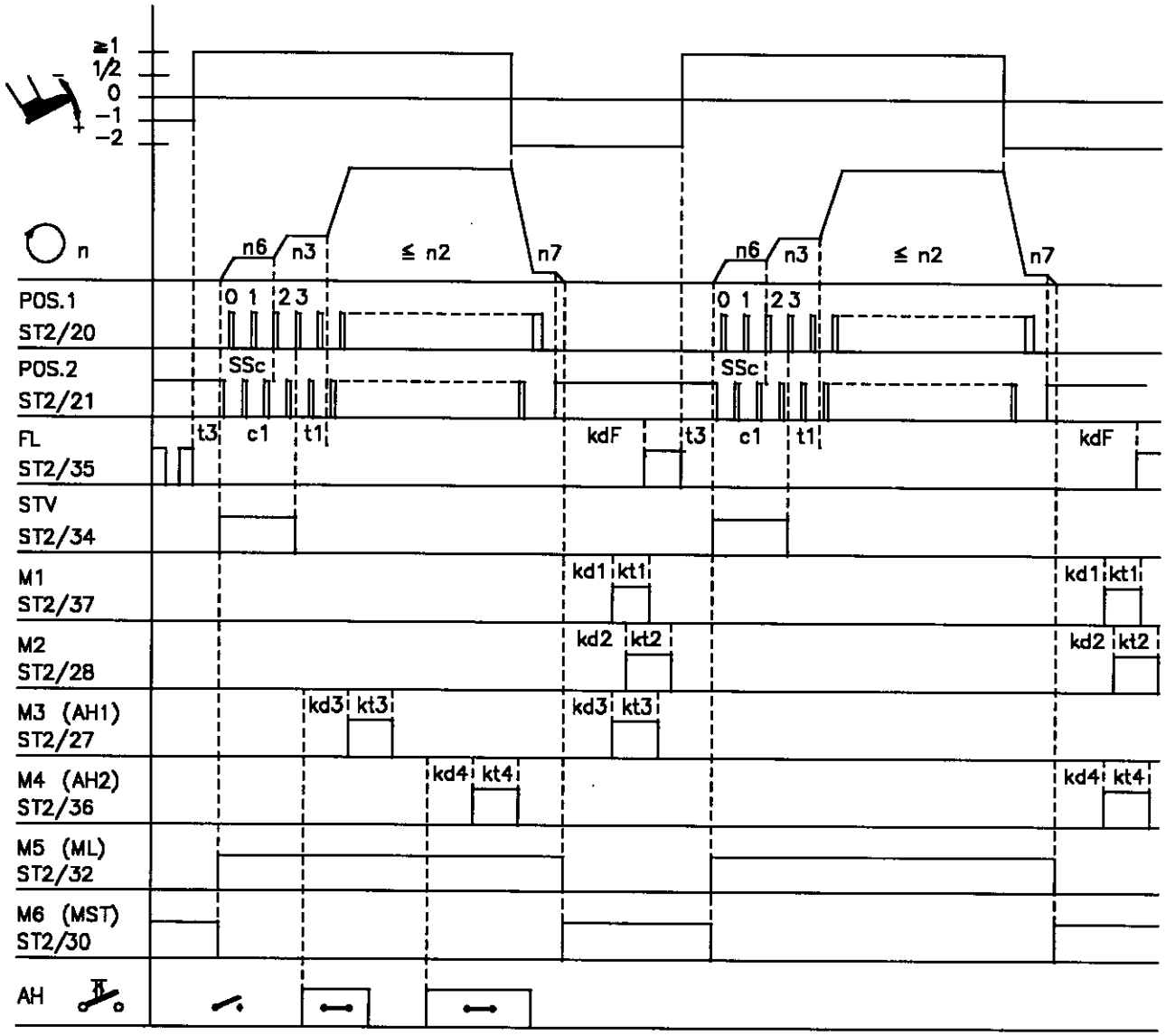
Mode 4, 5, 6 or 7 (function "unlocking the chain")



Abbre-viation	Function		Param.	Pushbutton Control	Pushbutton V810	Pushbutton V820
	Mode 5		290 = 5			
	Direction of rotation of the motor	Clockwise	161 = 0			
	Reversion		182 = 1			
	Basic position 2	On		Pushb. S5	Pushb. 4	Pushb. 7
	Stitch condensing and thread trimmer *)	On				
	Light barrier	On	009			
in7	Machine run blockage effective with open contact		246 = 6			
in8	Automatic speed (n12) without pedal		247 = 10			
in..	Allocate the function "unlocking the chain" for an output		2..			
n1	Positioning speed		110			
n2	Maximum speed		111			
t3	Start delay from lifted foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
ird	Number of reversion increments		180			
drd	Activation delay of reversion		181			
	Speed gate damping period		222			
	Speed gate 2		224 = 1			

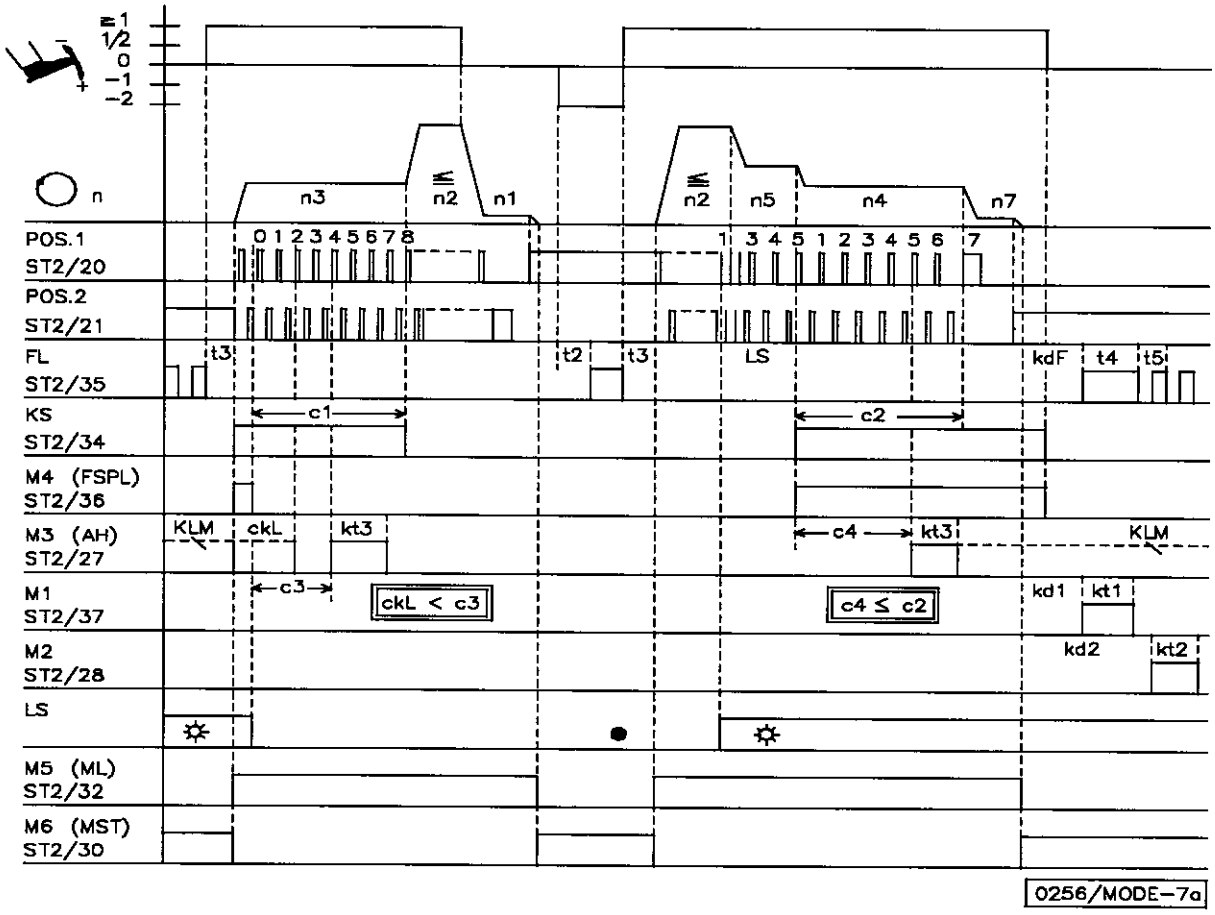
*) The functions stitch condensing and thread trimmer are suppressed when unlocking the chain.

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



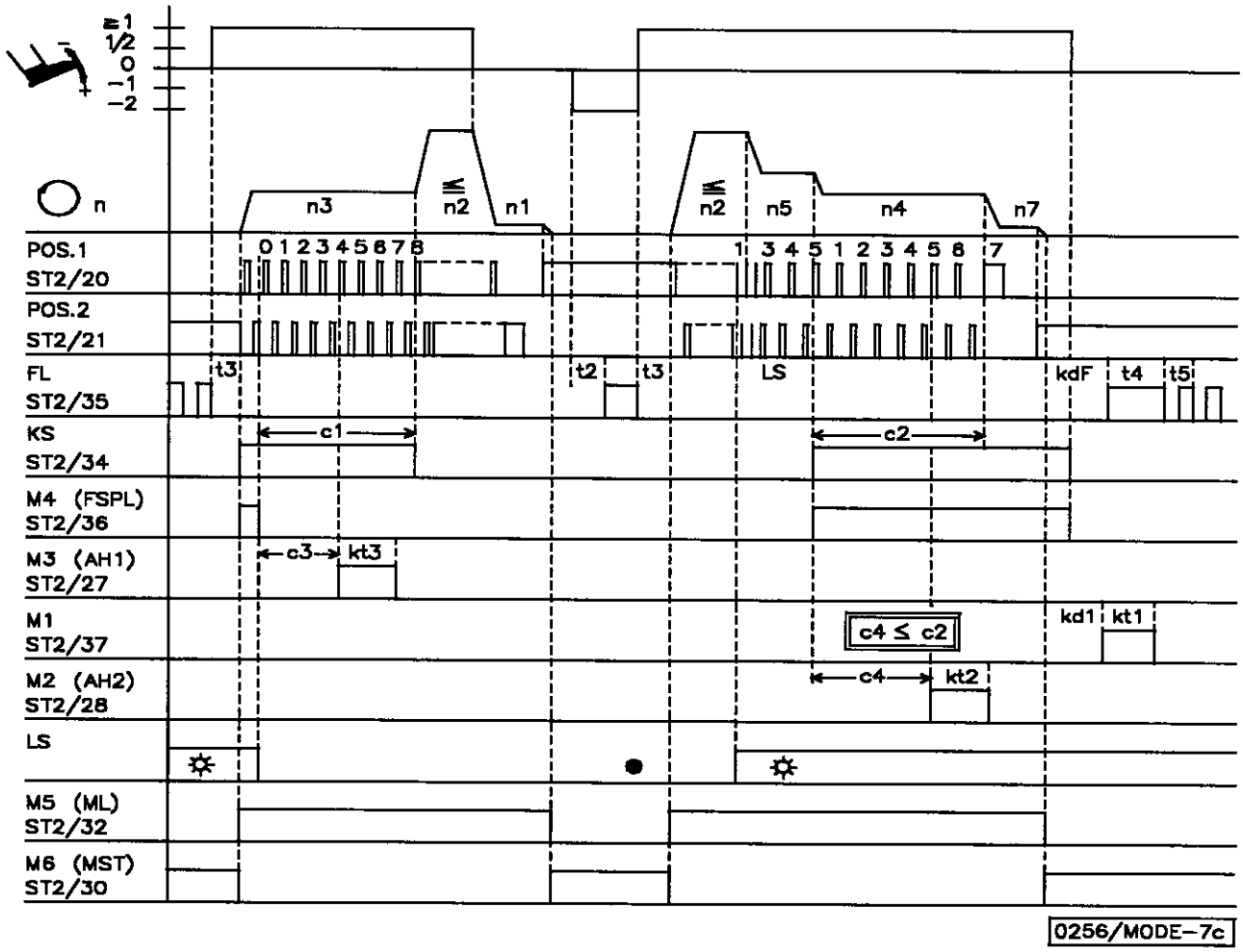
Abbreviation	Function	Param.	Pushbutton Control	Pushbutton V810	Pushbutton V820
	Mode 6 Softstart Start stitch condensing On Chainstitch with fast scissors M3/M4	290 = 6 134 = 1 232 = 1	Pushb. S2	Pushb. 1	Pushb. 1
n2	Maximum speed	111			
n3	Start stitch condensing speed	112			
n6	Softstart speed	115			
n7	Trimming speed	116			
t1	Delay until speed release after stitch condensing	200			
t3	Start delay from lifted foot	202			
c1	Counting start stitch condensing	001			
SSc	Softstart stitches	100			
kd1/kd2	Delay times for M1 / M2	280/282			
kt1/kt2	Activation times for M1 / M2	281/283			
kd3/kd4	Delay times for M3 / M4 (fast scissors AH1/AH2)	284/286			
kt3/kt4	Activation times for M3 / M4 (fast scissors AH1/AH2)	285/287			
kdF	Delay time until sewing foot lifting On	288			

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



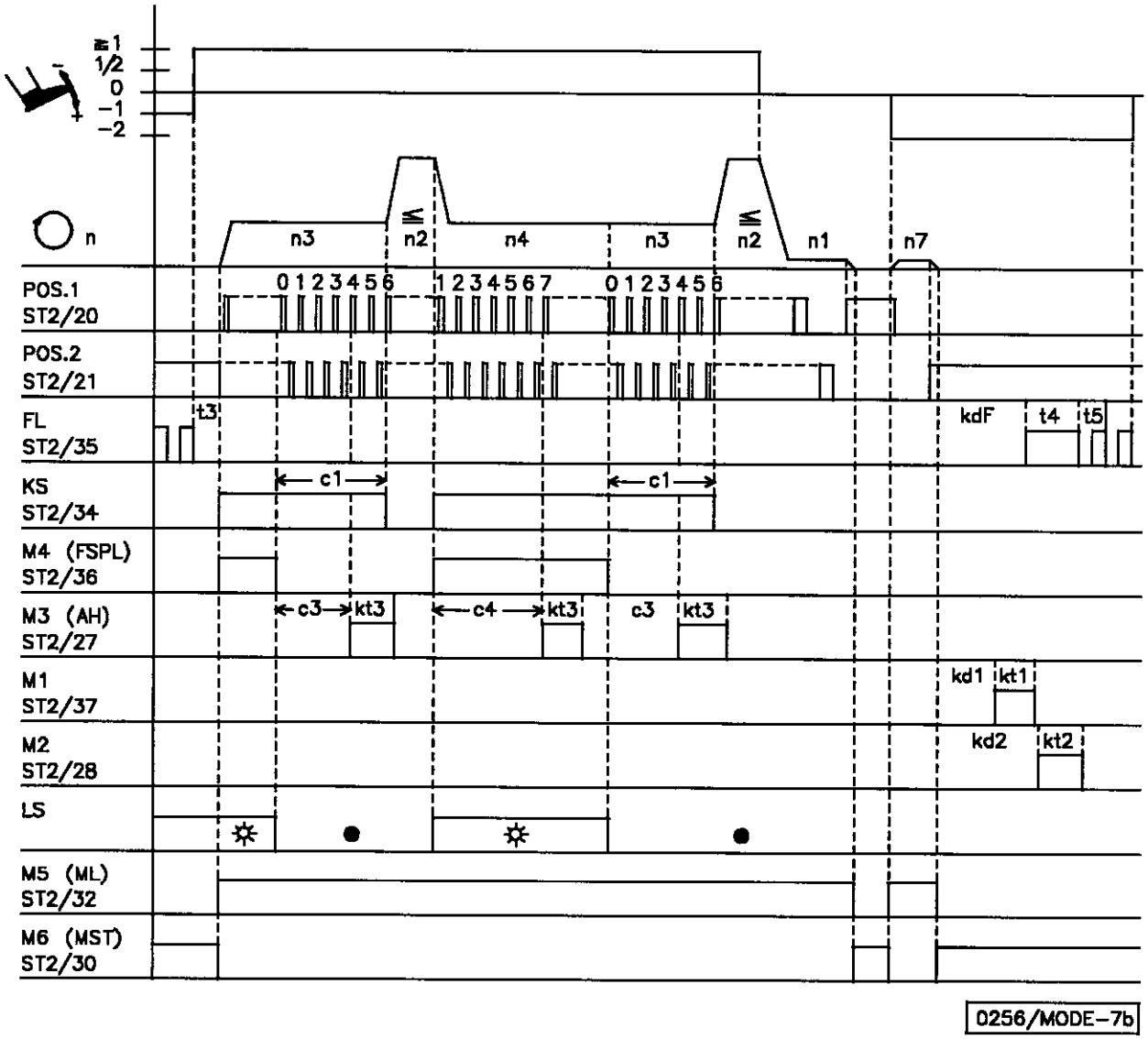
Abbreviation	Function	Param.	Control	V810	V820
	Mode 7	290 = 7			
	Countings c1, c2, c3 and c4 On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Sewing foot lifting at the seam end On		Pushb. S4	Pushb. 3	Pushb. 6
	Light barrier	009 = 1			
	Sequence overlock mode with stop	018 = 0			
	Function pedal in pos. -2	019 = 2			
	Chain suction at the seam end until pedal in pos. 0	022 = 1			
	Start delay with light barrier uncovered	132 = 0			
	Stitch counting at the start of the seam at fixed speed n3	143 = 0			
	Stitch counting at the seam en at fixed speed n4	144 = 0			
	Seam end after counting c2	191 = 1			
	Speed n5 after light barrier sensing	192 = 0			
	Chain suction On after light barrier compensating stitches	193 = 0			
	Function tape cutter	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 chain suction	000			
c1	Start counting chain suction	001			
c3	Start counting tape cutter	002			
c4	End counting tape cutter	003			
LS	Light barrier compensating stitches	004			
KLM	Clamp at the seam end On	020 = 1			
ckL	Run-out stitches clamp at the start of the seam	021			
kd1/kd2	Delay times for M1 / M2	280/282			
kt1/kt2	Activation times for M1 / M2	281/283			
kd3	Delay time tape cutter at the seam end	284			
kt3	Activation time tape cutter	285			
kdF	Delay time until sewing foot lifting On	288			

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



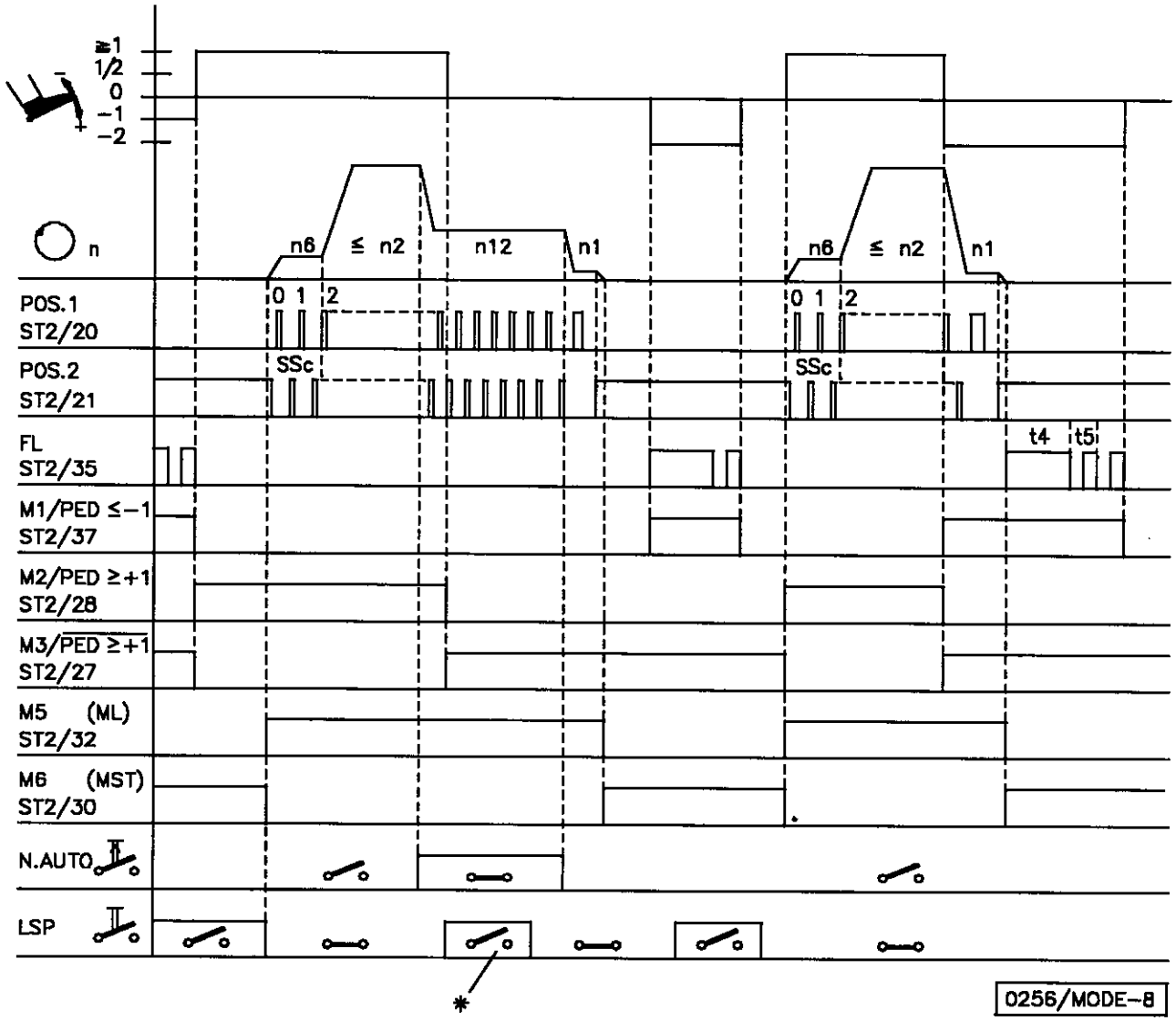
Abbreviation	Function		Param.	Control	V810	V820
	Mode 7		290 = 7			
	Countings c1, c2, c3 and c4	On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Sewing foot lifting at the seam end	On		Pushb. S4	Pushb. 3	Pushb. 6
	Light barrier		009 = 1			
	Sequence overlock mode with stop		018 = 0			
	Function pedal in pos. -2 = blocked		019 = 2			
	Chain suction at the seam end until pedal in pos. 0		022 = 1			
	Start delay with light barrier uncovered		132 = 0			
	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
	Stitch counting at the seam en at fixed speed n4		144 = 0			
	Seam end after counting c2		191 = 1			
	Speed n5 after light barrier sensing		192 = 0			
	Chain suction On after light barrier compensating stitches		193 = 0			
	Function fast scissors		232 = 1			
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Speed for start counting		112			
n4	Speed for end counting		113			
n5	Speed after light barrier sensing		114			
n7	Trimming speed		116			
c2	End counting chain suction		000			
c1	Start counting chain suction		001			
c3	Start counting tape cutter		002			
c4	End counting tape cutter		003			
LS	Light barrier compensating stitches		004			
KLM	Clamp at the seam end Off		020 = 0			
kd1	Delay times for M1		280			
kd2	Delay times for M2		282 = 0			
kt1/kt2	Activation times for M1 / M2		281/283			
kt3	Activation time tape cutter		285			
kdF	Delay time until sewing foot lifting On		288			

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



Abbreviation	Function		Param.	Control	V810	V820
	Mode 7		290 = 7			
	Countings c1, c3 and c4	On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Light barrier		009 = 1			
	Light barrier compensating stitches		004 = 0			
	Sequence overlock mode at the seam end without stop		018 = 1			
	Pedal -1/-2 activated in the seam		019 = 3			
	Chain suction at the seam end until pedal in pos. 0 (neutral)		022 = 1			
	Stitch counting at the start of the seam at fixed speed n3		143 = 0			
	Stitch counting at the seam en at fixed speed n4		144 = 0			
	Function fast scissors		232 = 0			
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Speed for start counting		112			
n7	Trimming speed		116			
t3	Start delay from lifted foot		202			
c1	Start counting chain suction		001			
c3	Start counting tape cutter		002			
c4	End counting tape cutter		003			
kd1/kd2	Delay times for M1 / M2		280/282			
kt1/kt2	Activation times for M1 / M2		281/283			
kt3	Activation time tape cutter		285			
kdF	Delay time until sewing foot lifting On		288			

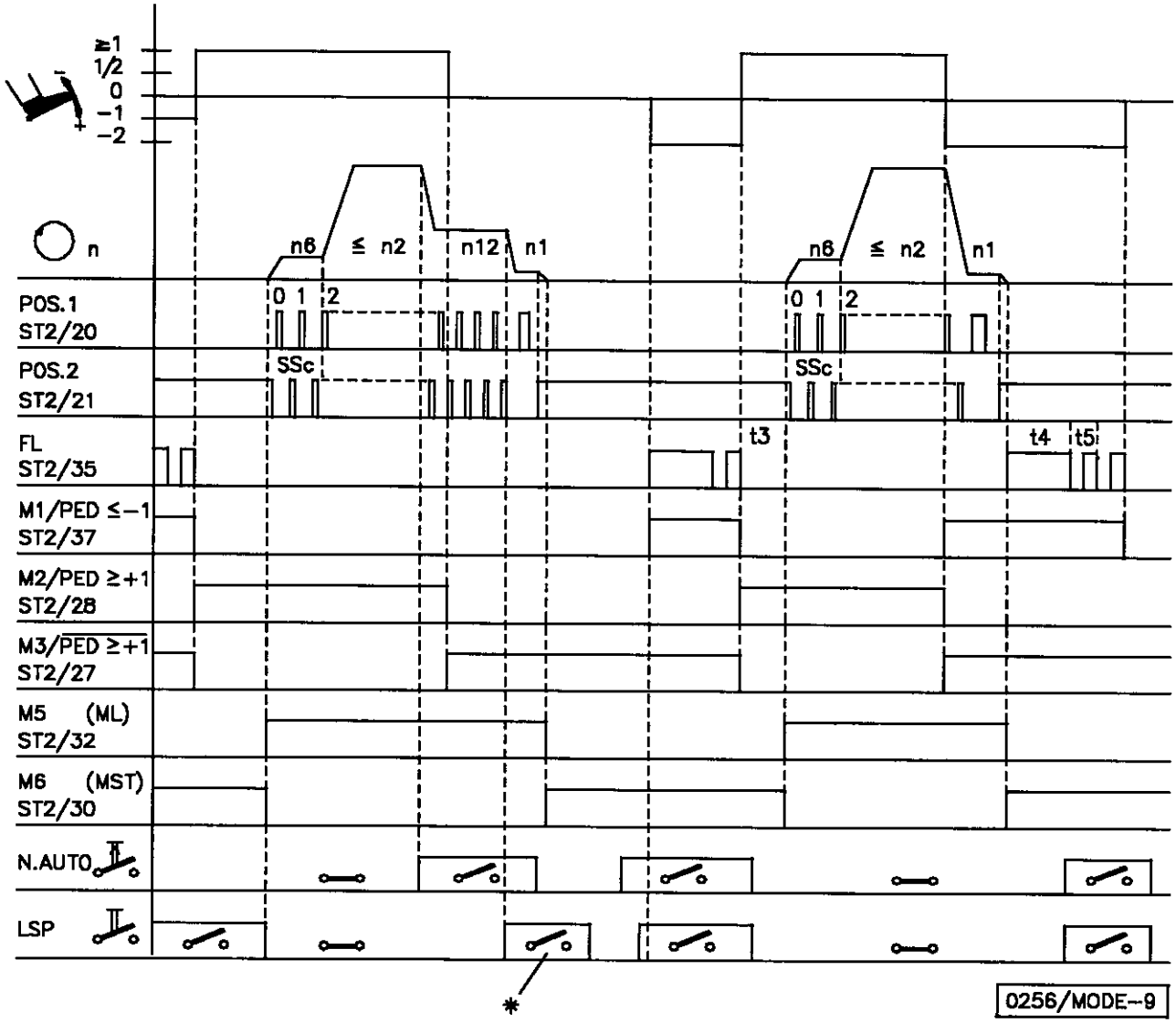
Mode 8 (backlatch Pegasus)



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

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

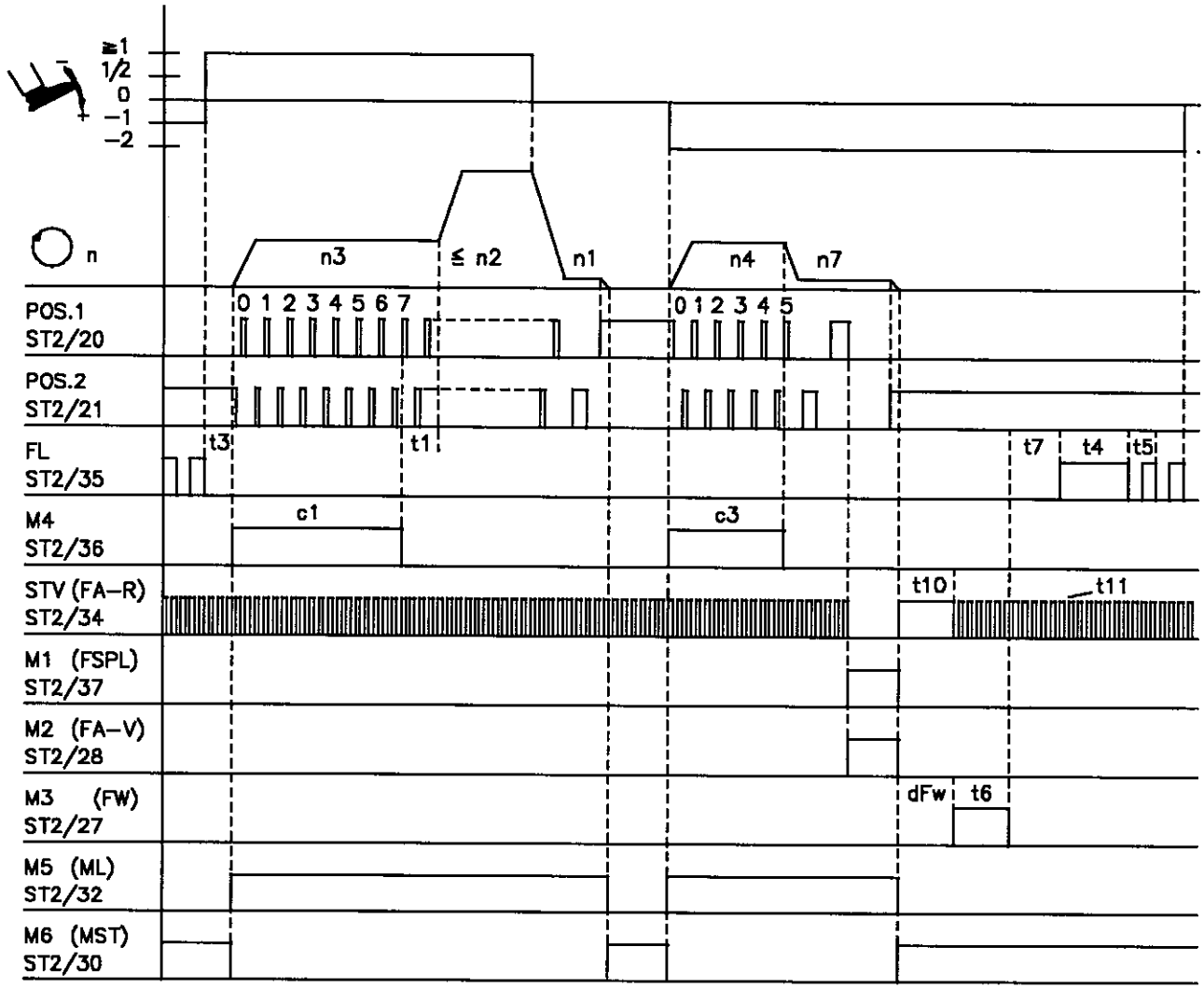
Mode 9 (backlatch Yamato)



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

*) = With this setting, the machine run blockage (safety switch) takes priority over the automatic speed!

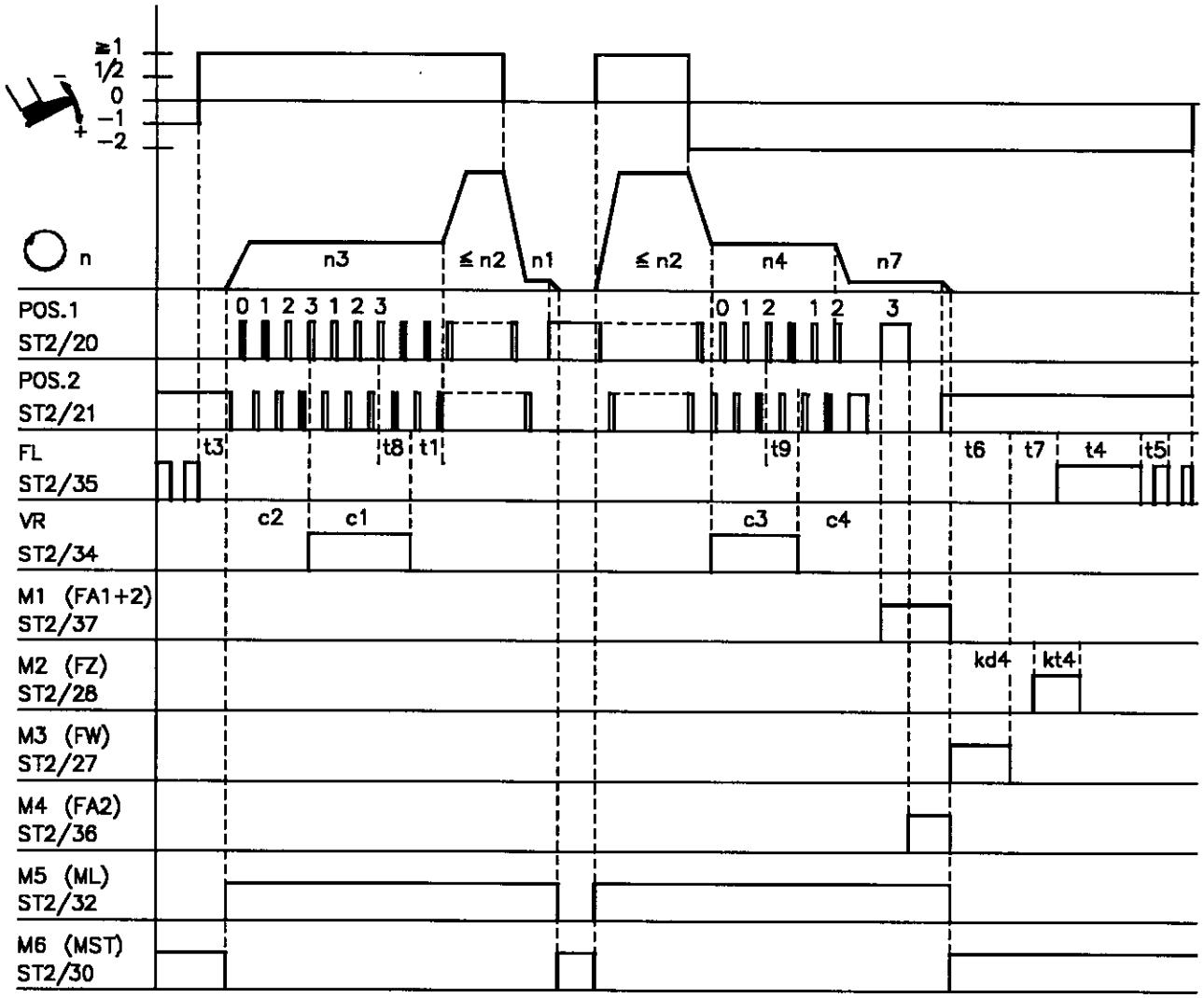
Mode 10 (lockstitch)



0256/MODE–10

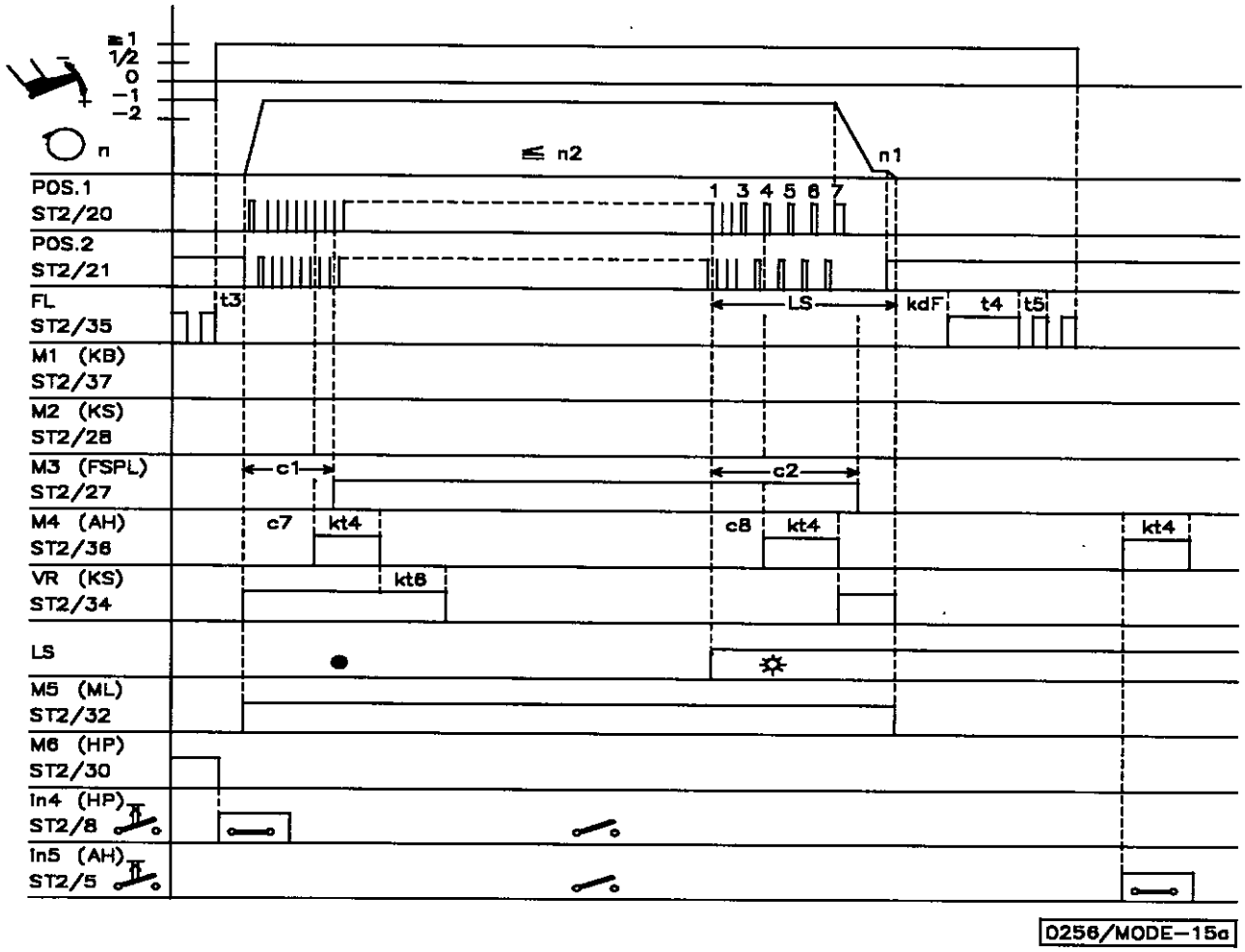
Abbre-viation	Function		Param.	Control	V810	V820
	Mode 10 Single start backtack Single end backtack with stitch correction	On On	290 = 10	Pushb. S2 Pushb. S3	Pushb. 1 Pushb. 2	Pushb. 1 Pushb. 4
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Start backtacking speed		112			
n4	End backtacking speed		113			
n7	Trimming speed		116			
t1	Delay until speed release after start backtack		200			
t3	Start delay from lifted foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
t7	Activation delay of sewing foot after thread wiper		206			
c1	Counting start backtack		001			
c3	Counting end backtack		002			
t6	Thread wiper time		205			
dFw	Activation delay of thread wiper		209			
t11	Holding power output "stitch condensing" of the thread trimmer backward		213			
t10	Activation times thread trimmer backward		212			

Mode 14 (lockstitch / Juki) with external position transmitter parameter 270 = 3



Abbreviation	Function	Param.	Control	V810	V820
	Mode 14 Double start backtack with stitch correction On Double end backtack with stitch correction On	290 = 14	 Pushb. S2 Pushb. S3	 Pushb. 1 Pushb. 2	 Pushb. 1 Pushb. 4
n1	Positioning speed	110			
n2	Maximum speed	111			
n3	Start backtacking speed	112			
n4	End backtacking speed	113			
n7	Trimming speed	116			
t1	Delay until speed release after start backtack	200			
t3	Start delay from lifted foot	202			
t4	Full power of sewing foot lifting	203			
t5	Pulsing of sewing foot lifting	204			
t6	Activation time of thread wiper	205			
t7	Activation delay of sewing foot after thread wiper	206			
t8	Start backtack stitch correction	150			
t9	End backtack stitch correction	151			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
kd4	Delay time output M4	286			
kt4	Activation time output M4	287			

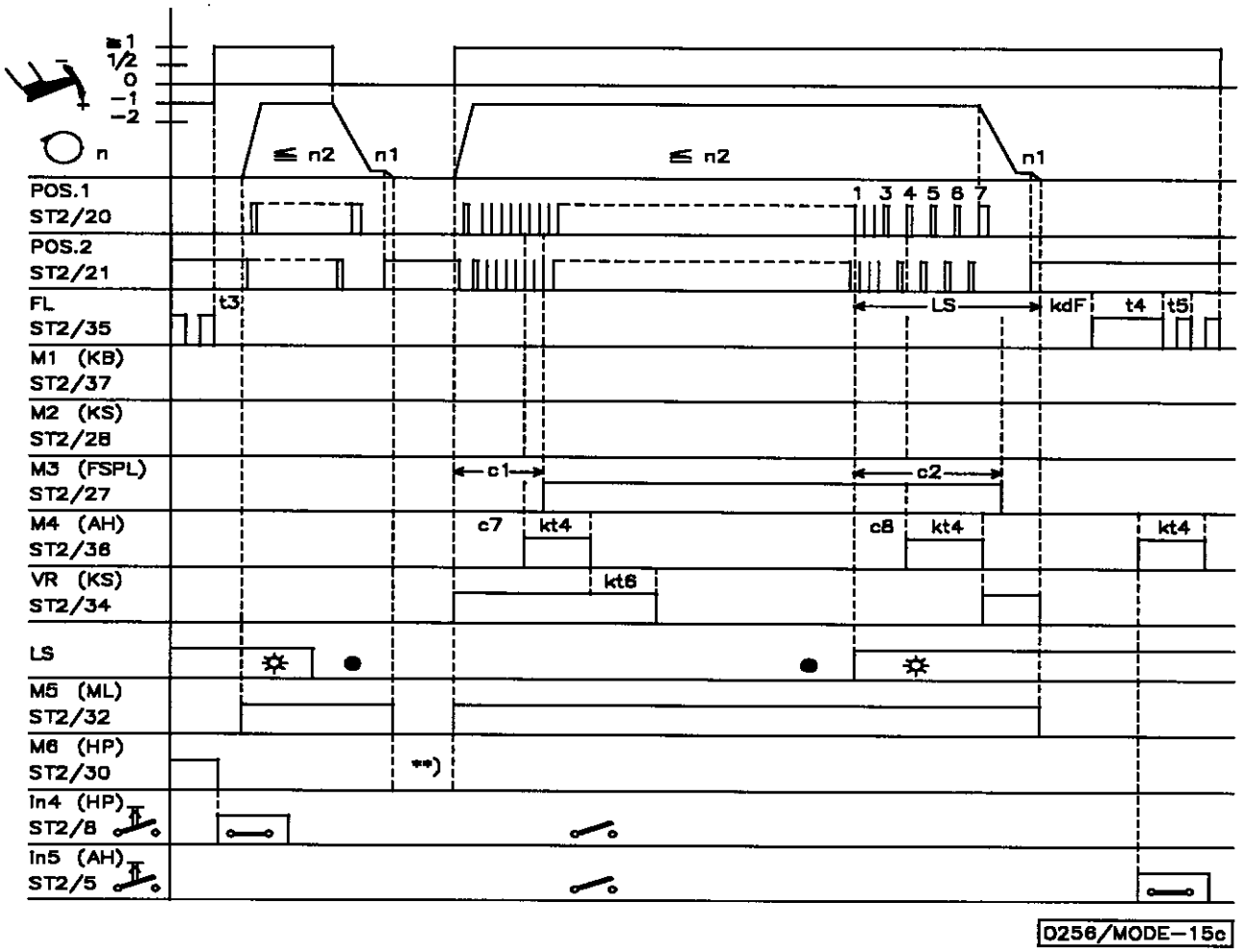
Mode 15 (Pegasus SSC100) sequence when high lift for walking foot is switched off / start of the seam with light barrier covered



Abbre-viation	Function		Param.	Control	V810	V820
	Mode 15		290 = 15			
	Countings c1 and c2	On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Basic position 2	On		Pushb. S5	Pushb. 4	Pushb. 7
	Light barrier		009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal		192 = 1			
in4	Pushbutton for high lift for walking foot operation mode stored		243 = 14			
in5	Pushbutton 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 foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
kdF	Activation delay until sewing foot On		288			
kt6 *)	Delay time of input VR (chain suction)		256			
c7	Start counting until tape cutter M4 On		257			
c8	End counting until tape cutter M4 On		258			
kt4 *)	Activation time of tape cutter M4		287			

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

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

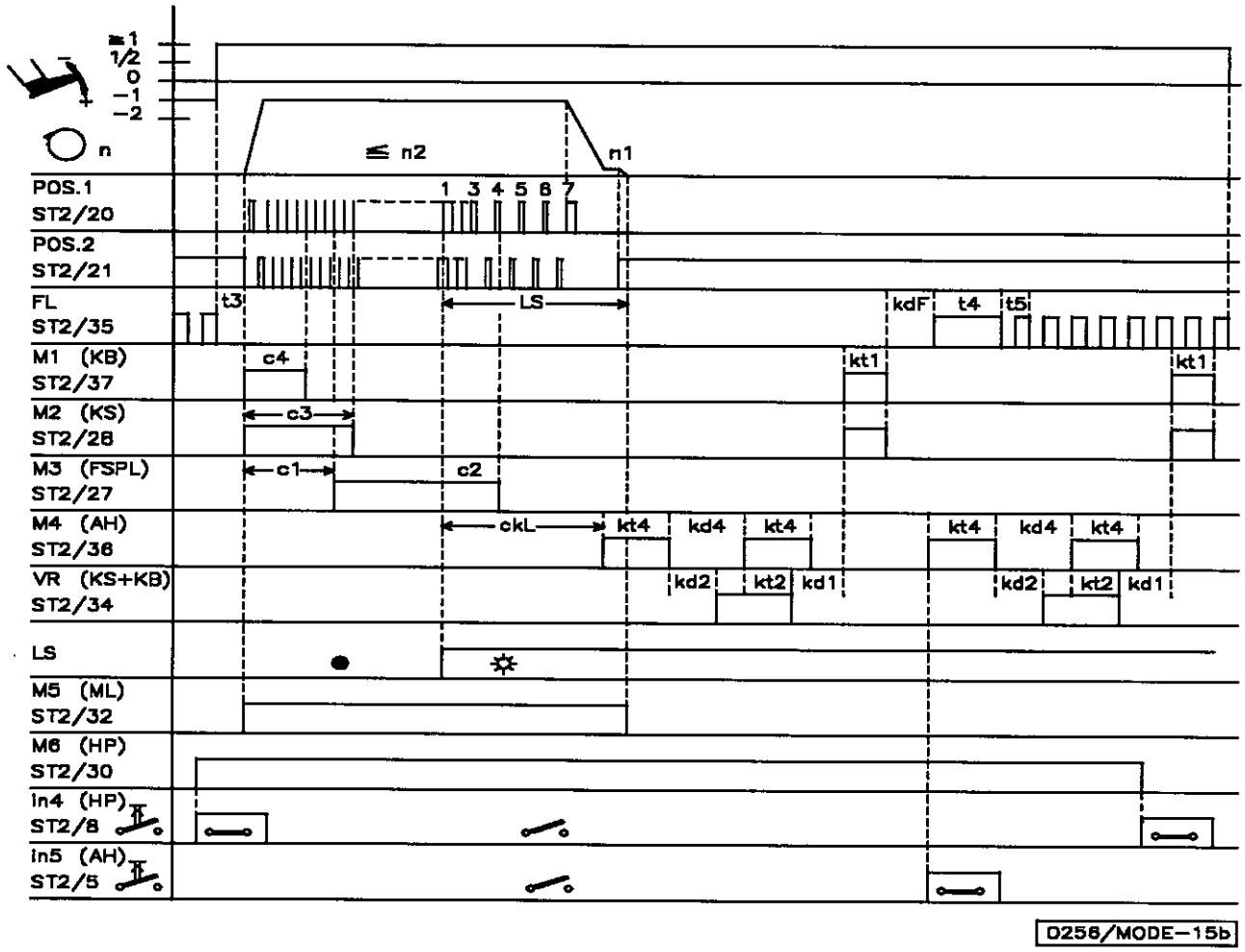


Abbreviation	Function		Param.	Control	V810	V820
	Mode 15		290 = 15			
	Countings c1 and c2	On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Basic position 2	On		Pushb. S5	Pushb. 4	Pushb. 7
	Light barrier		009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal		192 = 1			
in4	Pushbutton for high lift for walking foot operation mode stored		243 = 14			
in5	Pushbutton 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 foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
kdF	Activation delay until sewing foot On		288			
kt6 *)	Delay time of input VR (chain suction)		256			
c7	Start counting until tape cutter M4 On		257			
c8	End counting until tape cutter M4 On		258			
kt4 *)	Activation time of tape cutter M4		287			

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

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

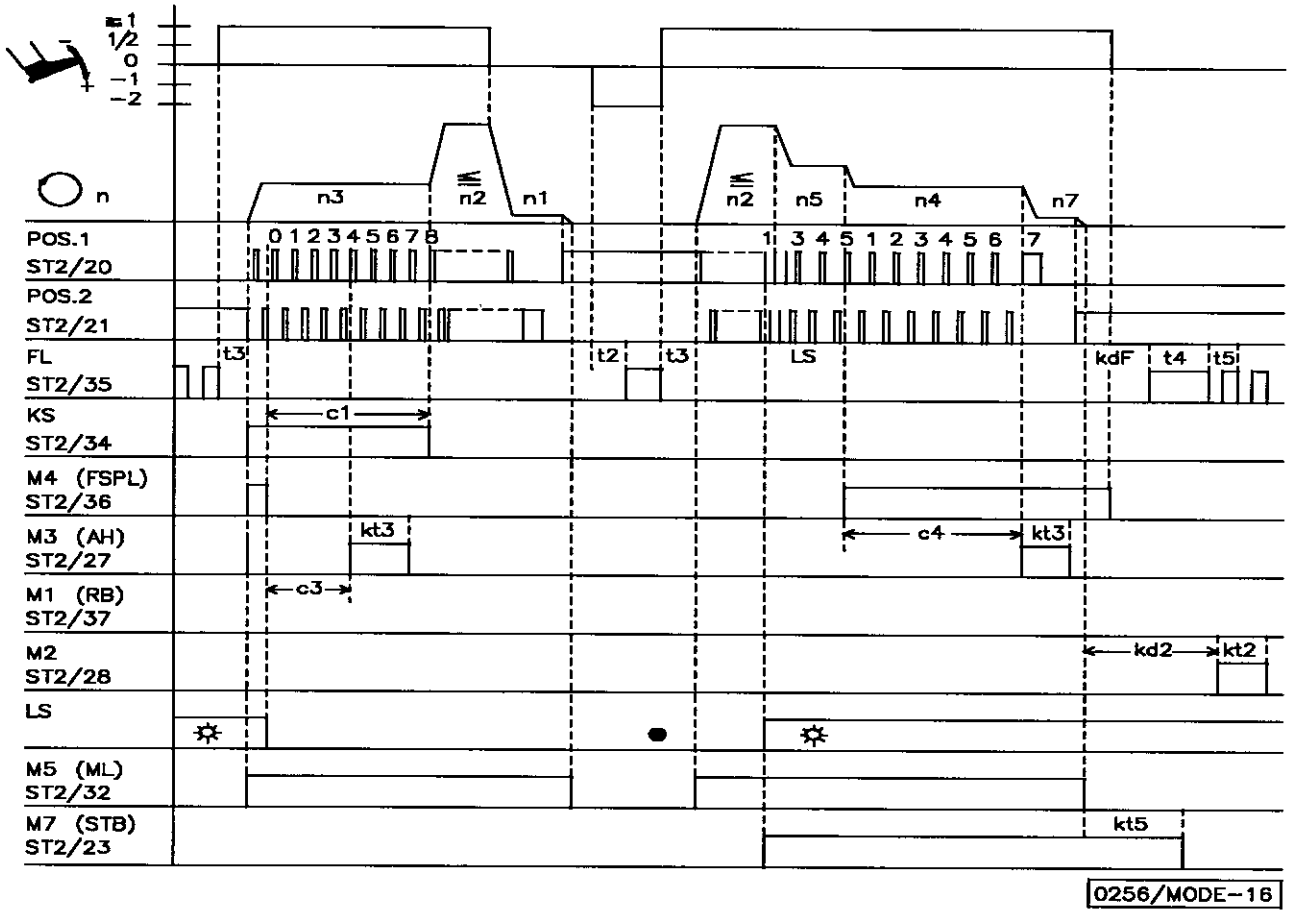
Mode 15 (Pegasus SSC100) sequence when high lift for walking foot is switched on



Abbre-viation	Function		Param.	Control	V810	V820
	Mode 15		290 = 15			
	Countings c1, c2, c3 and c4	On		Pushb. S2/3	Pushb. 1/2	Pushb. 1/4
	Basic position 2	On		Pushb. S5	Pushb. 4	Pushb. 7
	Light barrier		009 = 1			
	Speed of the light barrier compensating stitches depending on the pedal		192 = 1			
	Pushbutton for high lift for walking foot operation mode stored		243 = 14			
	Pushbutton for manual tape cutter		244 = 15			
n1	Positioning speed		110			
n2	Maximum speed		111			
c2	Counting until thread tension release Off		000			
c1	Counting until thread tension release On		001			
c3	Counting chain suction		002			
c4	Counting chain blowing		003			
LS	Light barrier compensating stitches		004			
t3	Start delay from lifted foot		202			
t4	Full power of sewing foot lifting		203			
t5	Pulsing of sewing foot lifting		204			
kdF	Activation delay until sewing foot On		288			
kd1 *)	Delay time output M1 and M2		280			
kt1 *)	Activation time output M1 and M2		281			
kd2 *)	Delay time output ST2/34		282			
kt2 *)	Activation time output ST2/34		283			
kd4 *)	Delay time output M4 (tape cutter)		286			
kt4 *)	Activation time output M4 (tape cutter)		287			

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

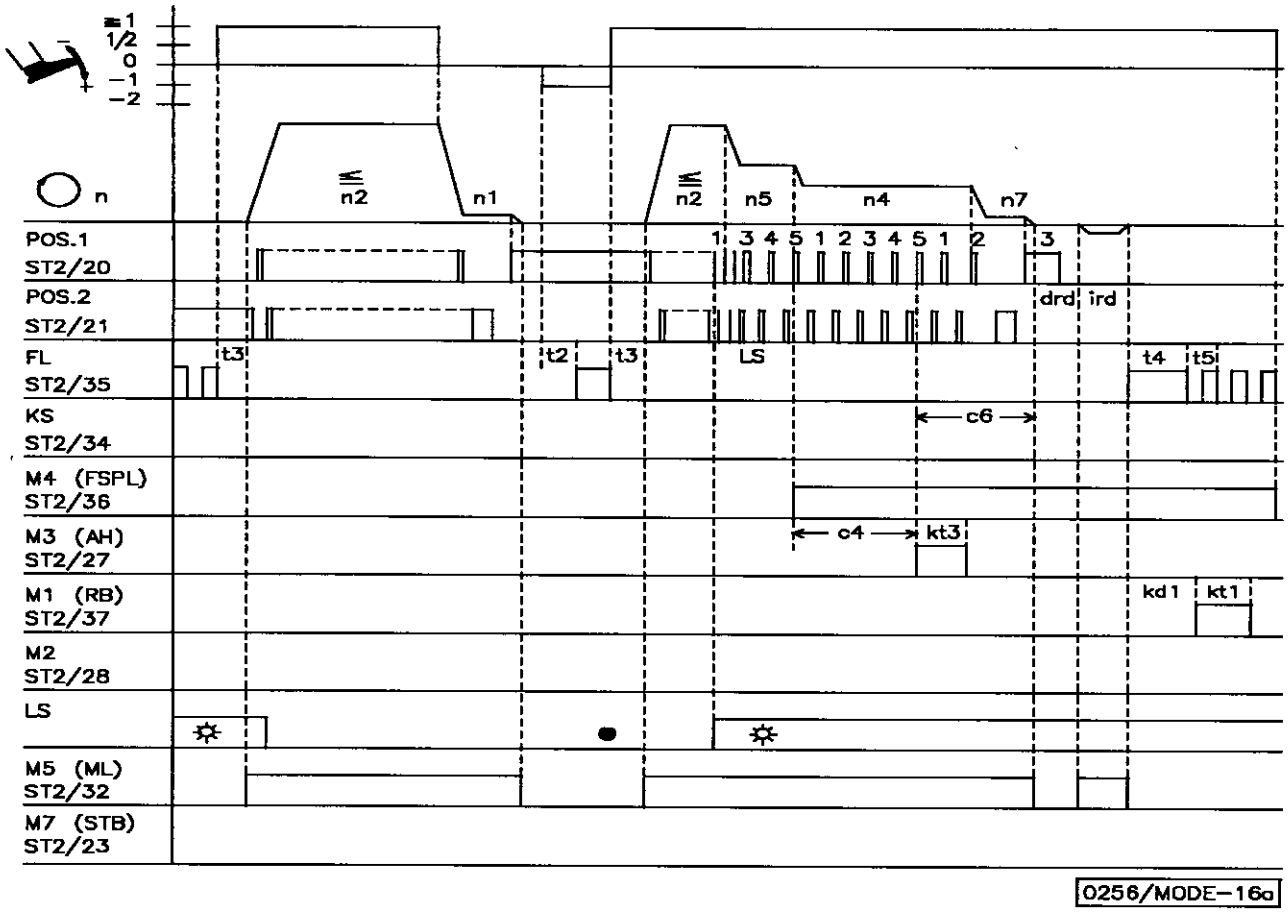
Mode 16 (feed-off-the-arm machine) without unlocking the chain automatically



Abbreviation	Function		Param.	Control	V810	V820
	Mode 16		290 = 16			
	Countings c1, c3 and c4	On		Pushb. S2/3	*	Pushb. 1/2/4
	Basic position 2	On		Pushb. S5	*	Pushb. 0
	Sewing foot lifting at the seam end	On		Pushb. S4	*	Pushb. 9
	Seam end after counting c2	ON				Pushb. 6
	Light barrier		009 = 1			
	Sequence overlock mode with stop		018 = 0			
	Function pedal in pos. -2 = blocked		019 = 2			
	Start delay with light barrier uncovered		132 = 0			
	Speed of the light barrier compensating stitches depending on the pedal		192 = 0			
	Blow fabric onto stack M7 from light barrier uncovered onwards		194 = 1			
n1	Positioning speed		110			
n2	Maximum speed		111			
n3	Speed for start counting		112			
n4	Speed for end counting		113			
n5	Speed after light barrier sensing		114			
n7	Trimming speed		116			
c1	Start counting chain suction		001			
c3	Start counting tape cutter		002			
c4	End counting tape cutter		003			
LS	Light barrier compensating stitches		004			
kd2	Delay time output ST2/34		282			
kt2	Activation time output ST2/34		283			
kt3	Activation time tape cutter		285			
kdF	Activation delay until sewing foot lifting On			288		
kt5	Switch-off delay of blowing fabric onto stack at the seam end		289			

*) Control panel V810 cannot be used for the functions in mode 16.

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



Abbreviation	Function		Param.	Control	V810	V820
	Mode 16		290 = 16			
	Countings c4	On		Pushb. S3	*	Pushb. 2/4
	Basic position 1	On		Pushb. S5	*	Pushb. 0
	Unlock the chain with chain blowing in opposite direction	On			*	Pushb. 8
	Light barrier		009 = 1			
	Sequence overlock mode with stop		018 = 0			
	Start delay with light barrier uncovered		132 = 0			
	Speed of the light barrier compensating stitches depending on the pedal		192 = 0			
	Blow fabric onto stack M7 from light barrier uncovered onwards		194 = 1			
n1	Positioning speed		110			
n2	Maximum speed		111			
n4	Speed for end counting		113			
n5	Speed after light barrier sensing		114			
n7	Trimming speed		116			
c4	End counting tape cutter		003			
LS	Light barrier compensating stitches		004			
ird	Number of reversion increments		180			
drd	Activation delay of reversion		181			
kd1	Delay time output M1 and M2		280			
kt1	Activation time output M1 and M2		281			
c6	Run-out stitches when unlocking the chain		184			

*) Control panel V810 cannot be used for the functions in mode 16.

6. Parameter List

6.1 PRESET VALUES DEPENDING ON THE MODE

The preset values which are different in the various modes are listed in the table below. When switching the mode (parameter 290), these values change automatically. The preset values of the following parameter list refer to the setting of parameter 290 = 0!

Operator Level

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

Technician Level

Mode => Parameter	0	2	3	4	5	6	7	8	9	10	14	15	16
100	-	-	-	-	-	-	-	-	-	1	-	-	-
** 110	-	-	-	180	-	-	-	250	250	180	-	-	-
** 111	-	-	-	5000	-	-	-	-	-	4500	-	7500	3800
** 112	-	-	-	-	-	-	-	-	-	-	-	-	3800
** 113	-	-	-	-	-	-	-	-	-	-	-	-	3800
** 115	-	-	-	-	-	-	-	-	-	700	-	-	-
** 116	-	-	-	-	-	-	-	-	-	-	-	-	-
** 117	-	-	-	-	-	-	-	-	-	-	-	9900	-
** 118	-	-	-	-	-	-	-	-	-	-	-	-	-
119	-	-	-	-	-	-	-	-	-	-	-	-	1
** 122	-	-	-	-	-	-	-	-	-	-	-	-	-
** 123	-	-	-	-	-	-	-	-	-	-	-	-	-
130	-	-	-	-	-	-	1	-	-	-	-		1
131	-	-	-	-	-	-	-	-	-	-	-	1	-
132	-	-	-	-	-	-	0	-	-	-	-	0	0
134	-	-	-	-	-	-	-	-	-	1	-	0	0
139	-	-	-	-	-	-	-	-	-	-	-	-	-
153	-	-	-	-	-	-	-	-	-	-	0	-	-
161	-	-	-	0	0	0	0	0	0	0	-	0	0
180	-	-	-	-	-	-	-	-	-	14	-	-	-
181	-	-	-	-	-	-	-	-	-	230	-	-	-
182	-	-	-	-	-	-	1	-	-	1	-	-	1
184	-	-	-	-	-	-	-	-	-	-	-	-	20
190	-	-	-	0	-	-	2	-	-	-	-	-	1
192	-	-	-	-	-	-	1	-	-	-	-	1	1
194	-	-	-	-	-	-	-	-	-	-	-	-	1

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

- = For the positions marked with "-" the preset values listed in the parameter list are used!

** When programming the 3-digit and/or 4-digit control parameter values, the 2-digit and/or 3-digit value displayed must be multiplied by 10.

Supplier Level

Mode => Parameter	0	2	3	4	5	6	7	8	9	10	14	15	16
201	-	-	-	160	-	-	-	-	-	-	-	-	-
202	-	-	-	-	-	-	-	0	0	-	-	-	-
203	-	-	-	350	-	-	-	-	-	-	-	-	-
204	-	-	-	-	-	-	-	-	-	12	-	-	-
** 205	-	-	-	-	-	-	-	-	-	240	-	-	-
206	-	-	-	-	-	-	-	-	-	150	-	-	-
209	-	-	-	-	-	-	-	-	-	100	-	-	-
211	-	-	-	-	-	-	-	-	-	-	-	-	-
212	-	-	-	100	-	-	-	-	-	100	-	-	-
213	-	-	-	12	-	-	-	-	-	12	-	100	-
234	-	-	-	-	-	-	-	0	0	-	-	-	-
240	-	-	-	6	-	-	-	6	6	-	-	-	15
241	-	-	-	-	-	-	-	-	-	-	16	-	-
242	-	-	-	3	-	-	-	10	10	-	-	-	-
243	-	-	-	-	-	-	-	1	1	-	-	14	15
244	-	-	-	-	-	-	-	-	-	-	-	15	-
245	-	-	-	-	-	-	-	12	12	-	-	-	-
246	-	-	-	-	-	-	-	-	-	-	-	-	-
247	-	-	-	-	-	-	-	-	-	-	-	-	-
248	-	-	-	-	-	-	-	-	-	-	-	-	-
250	-	-	-	-	-	-	-	-	-	-	-	-	-
251	-	-	-	-	-	-	-	-	-	-	-	-	-
252	-	-	-	-	-	-	-	-	-	-	-	-	-
** 253	-	-	-	-	-	-	-	-	-	-	-	-	-
254	-	-	-	-	-	-	-	-	-	-	-	-	-
255	-	-	-	25	-	-	-	-	-	25	-	-	-
270	-	-	-	-	-	-	-	1	1	-	3	-	-
271	-	-	-	-	-	-	-	-	-	-	200	-	-
** 274	-	-	-	-	-	-	-	-	-	-	-	-	0
** 275	-	-	-	-	-	-	-	-	-	-	-	-	100
** 280	x	x	x	100	-	-	100	x	x	x	-	10	0
** 281	-	-	-	-	-	-	-	-	-	280	-	50	1000
** 282	x	0	x	0	-	-	200	x	x	x	x	30	200
** 283	-	-	-	200	-	-	-	-	-	-	-	100	-
** 284	x	x	x	-	-	0	0	x	x	150	x	-	0
** 285	x	x	x	-	-	-	-	x	x	70	x	-	-
** 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
** 288	x	x	x	-	-	-	-	x	x	x	x	-	-
291	-	-	-	-	5	5	8	7	7	-	-	7	7
292	-	-	-	-	3	3	5	5	5	-	-	5	7
293	-	-	-	-	-	-	-	-	-	-	-	-	-
294	-	-	-	-	-	-	-	-	-	-	-	14	-

Further Functions

Mode => Pushbutton on control	0	2	3	4	5	6	7	8	9	10	14	15	16
Basic pos.	1	1	1	1	2	2	2	2	2	1	1	2	2
Single start backtack	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON
Double start backtack	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF
Single end backtack	OFF	OFF	OFF	ON	ON	ON	ON	OFF	OFF	OFF	OFF	ON	ON
Double end backtack	ON	ON	ON	OFF	OFF	OFF	ON	OFF	OFF	ON	ON	ON	OFF

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

- = For the positions marked with "-" the preset values listed in the parameter list are used!

** When programming the 3-digit and/or 4-digit control parameter values, the 2-digit and/or 3-digit value displayed must be multiplied by 10.

6.2 OPERATOR LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
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
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
002 c3	- Number of stitches of end backtack backward - Number of stitches of end stitch condensing with stitch regulator - Number of stitches of tape cutter at the start of the seam	stitches	254	0	2 *)	A
003 c4	- Number of stitches of end backtack forward - Number of stitches of end stitch condensing without stitch regulator - Number of stitches of tape cutter at the seam end	stitches	254	0	2 *)	A
004 LS	Light barrier compensating stitches	stitches	254	0	7 *)	A
005 LSF	Number of stitches of the light barrier filter for knitted fabrics	stitches	254	0	1	A
006 LSn	Number of light barrier seams		15	1	1	A
007 Stc	Number of stitches for the seam with stitch counting	stitches	254	0	20	A
008 -F-	Setting of pushbutton 9 on the Veriocontrol V820 with a parameter from the technician level 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		4	1	1 *)	A
009 LS	Light barrier ON/OFF		1	0	0 *)	A
013 FA	Thread trimmer ON/OFF		1	0	1 *)	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

OPERATOR LEVEL

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
014 FW	Thread wiper ON/OFF		1	0	1 *)	A
015 StS	Stitch counting ON/OFF		1	0	0	A
018 UoS	OFF = Sequence overlock mode with stop ON = Sequence overlock mode without stop (parameter 022 must also be set at "1")		1	0	0	A
019 -Pd	0 = Pedal in pos. -1 blocked in the seam; with pedal in pos. -2, only sewing foot lifting in the seam is possible (function only if parameter 009 = 1) 1 = Pedal in pos. -1, sewing foot lifting in the seam blocked 2 = Pedal in pos. -2, thread trimming in the seam blocked (function only if parameter 009 = 1) 3 = Pedal in pos. -1 and -2 activated in the seam		3	0	3 *)	A
020 kLM	Clamp at the seam end ON/OFF		1	0	0	A
021 ckL	Run-out stitches clamp at the start of the seam	stitches	254	0	2 *)	A
022 SPO	0 = Chain suction until the end of counting c2 ON = Chain suction at the seam end until pedal in pos. 0 (neutral)		1	0	0	A
023 AFL	Automatic sewing foot lifting with pedal forward at the seam end, if light barrier or stitch counting is switched on 0 = Automatic sewing foot Off 1 = Automatic sewing foot On		1	0	1	A
030 rFw	0 = Bobbin thread monitor OFF 1 = Bobbin thread monitor with stop 2 = Bobbin thread monitor without stop		2	0	0	A
031 cFw	Bobbin thread monitor counting	stitches	25500 ***)	0	0	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

***) When programming the 5-digit parameter values on the control and/or Variocontrol, the 3-digit value displayed must be multiplied by 100.

6.3 TECHNICIAN LEVEL

Code no. 190 with control operation
Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
100 SSc	Number of softstart stitches		254	0	2 *)	A
110 n1	Positioning speed	RPM	390 **)	70	200 *)	A
111 n2-	Upper limit setting range n-max	RPM	9900 **)	n2_	4000 *)	A
112 n3	Start backtacking speed	RPM	9900 **)	200	1200 *)	A
113 n4	End backtacking speed	RPM	9900 **)	200	1200 *)	A
114 n5	Speed after light barrier sensing	RPM	9900 **)	200	1200	A
115 n6	Softstart speed	RPM	1500 **)	70	500 *)	A
116 n7	Trimming speed	RPM	500 *)	70	200 *)	A
117 n10	High lift walking speed	RPM	9900 **)	400	1000 *)	A
118 n12	Automatic speed for stitch counting	RPM	9900 **)	400	3500 *)	A
119 nSt	Speed stage graduation 1 = linear 2 = slightly progressive 3 = highly progressive		3	1	2	A
121 n2_	Lower limit setting range (n-max)	RPM	n2- **)	400	400	A
122 n9	Limited speed n9	RPM	9900 **)	200	2000 *)	A
123 n11	Limited speed n11	RPM	9900 **)	200	2500 *)	A
124 toP	Speed limitation for external potentiometer (maximum value)	RPM	9900 **)	Pa. 125	4000	A
125 bot	Speed limitation for external potentiometer (minimum value)	RPM	Pa. 124 **)	400	400	A
126 Pot	Function speed limitation for external potentiometer 0 = Function external potentiometer Off 1 = External potentiometer always active 2 = External potentiometer only active if one of the inputs in1...i10 has been selected and activated		2	0	0	A
127 AkS	Acoustic signal of the machine run blockage and of the bobbin thread monitor ON/OFF		1	0	0	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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. Prg. No.
128 ASd	Start delay, when starting command is given by covering the light barrier (see parameter 129)	ms	2000 **)	0	0	A
129 ALS	Machine start by covering the light barrier (only in conjunction with parameter 132 = 1) 0 = Function Off 1 = Light barrier covered => pedal forward (>1) => pedal controlled machine run 2 = Pedal forward (>1) => light barrier covered => pedal controlled machine run 3 = Light barrier covered => machine run at automatic speed n12 (without pedal) **Attention! When 129 = 3, the machine starts immediately after covering the light barrier, without using the pedal! It stops only by uncovering the light barrier or by using the safety switch!** **If the machine run blockage is deactivated and the light barrier is still covered, the machine starts immediately!**		3	0	0	A
130 LSF	Light barrier filter for knitted fabrics		1	0	0 *)	A
131 LSd	0 = Light barrier sensing "covered" 1 = Light barrier sensing "uncovered"		1	0	1 *)	A
132 LSS	0 = Machine start is possible with light barrier uncovered or covered. 1 = Machine start blockage, when light barrier "uncovered", if parameter 131 = 1. Machine start blockage, when light barrier "covered", if parameter 131 = 0.		1	0	1 *)	A
133 LSE	Thread trimmer, when completing the seam after light barrier sensing ON/OFF		1	0	1	A
134 SSt	Softstart ON/OFF		1	0	0 *)	A
135 SrS	Ornamental backtack ON/OFF		1	0	0	A
136 FAr	Trimming stitch backward ON/OFF		1	0	0	A
137 HP	High lift for walking foot ON/OFF		1	0	0	A
139 nIS	Display of machine speed ON/OFF		1	0	0 *)	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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. Prg. No.
141 SGn	Speed status for a 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 pushing the pedal to the basic position) 2 = limited speed controllable by the pedal up to the set limit (parameter 118) 3 = at fixed speed (parameter 118), can be interrupted by full heelback 4 = at fixed speed (parameter 110), can be interrupted by full heelback		4	0	0	A
142 SFn	Speed status for the free seam and for the seam with light barrier 0 = speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = fixed speed (parameter 118), without influence by the pedal (machine stop by pushing 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		3	0	0	A
143 kSA	Stitch counting at the start of the seam 0 = at fixed speed 1 = pedal controlled speed		1	0	1	A
144 kSE	Stitch counting at the seam end 0 = at fixed speed 1 = pedal controlled speed		1	0	1	A
150 t8	Stitch correction of the double start backtack (prolongation of the operating time of the stitch regulator / not effective with ornamental backtack)	ms	500	0	0	A
151 t9	Stitch correction of the double end backtack (prolongation of the operating time of the stitch regulator / not effective with ornamental backtack)	ms	500	0	0	A
152 tHP	Run-out time high lift walking speed	ms	500	80	150	A
153 brt	Braking power at machine standstill		50	0	10 *)	A
155 LSG	Mode signal "run" 0 = Signal OFF 1 = Signal "run" ON 2 = Switch signal "run" on and/or switch the inverted signal "run" off, if the speed > 3000 RPM 3 = Signal with pedal < > 0		3	0	1	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

TECHNICIAN LEVEL

Code no. 190 with control operation
Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
156 t05	Switch-off delay of the signal "run" or signal with pedal in pos. 0 (neutral)	ms	2550 **)	0	0	A
161 drE	Direction of rotation of the motor 0 = Clockwise rotation 1 = Counterclockwise rotation		1	0	1 *)	A
170 Sr1	**Setting the reference position:** - Press pushbutton **E** - Press pushbutton >> - Turn handwheel until symbol on display goes off. Then set the handwheel to the reference position. - Press pushbutton **P** twice					H
171 Sr2	**Setting the needle positions:** 1E = Start position 1 2E = Start position 2 1A = End position 1 2A = End position 2	degree	359	0	56 281 98 323	H H H H
172 Sr3	**Display on the control:** Pos. 1 to 1A (LED 7 lights up) Pos. 2 to 2A (LED 8 lights up)					A
172 Sr3	**Display on the control panel V810:** Pos. 1 to 1A (left arrow above pushbutton 4 ON) Pos. 2 to 2A (right arrow above pushbutton 4 ON)					
172 Sr3	**Display on the control panel V820:** Pos. 1 to 1A (left arrow above pushbutton 7 ON) Pos. 2 to 2A (right arrow above pushbutton 7 ON)					
173 Sr4	Checking of the signal outputs and inputs using the incorporated control panel or control panels V810/V820 01 = Backtacking on socket ST2/34 02 = Sewing foot lifting 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 ON/OFF = By actuating the switches connected to the control the function of these switches is checked and displayed with "ON/OFF".					A

*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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. Prg. No.
179	Sr5	Control program number with index and identification number. The data will be displayed in succession by pressing the appropriate pushbutton. **Display on control panel V810:** Press pushbutton **E** => Display **Sr5 [°]** Press pushbutton **>>** => Display e. g. **5100A** Press pushbutton **E** => Display e. g. **981019** Press pushbutton **E** => Display e. g. **15** Press pushbutton **P** 2x => Display **Ab220A** **Display on control panel V820:** Press pushbutton **E** => Display **F-179 Sr5 [°]** Press pushbutton **>>** => Display e. g. **5100A** Press pushbutton **E** => Display e. g. **98101915** Press pushbutton **P** 2x => Display **4000 Ab220A** Example of control display see instruction manual!					A
180	rd	Number of reversion increments	degree	359	0	175 *)	H
181	drd	Activation delay of reversion	ms	990	0	10 *)	A
182	Frd	Reversion ON/OFF		1	0	0 *)	A
184	c6	Number of run-out stitches when unlocking the chain	stitches	254	0	20 *)	A
185	cHP	Stitch counting high lift for walking foot	stitches	254	0	0	A
190	MEK	Function "unlock the chain" in modes 5, 6 and 7 (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 - with light barrier or - pedal in pos. -2 (parameter 019) without cutting at the seam end 3 = Unlocking the chain automatically - with light barrier or - pedal in pos. -2 (parameter 019) with cutting and run-out stitches (parameter 184) at the seam end, then unlock the chain (only if parameter 290 = 7)		3	0	1 *)	A
191	MHE	Seam end in the overlock mode by end counting c2 or c4 0 = Seam end after counting c4 - tape cutter 1 = Seam end after counting c2 - chain suction		1	0	0	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

TECHNICIAN LEVEL

Code no. 190 with control operation
Code no. 1907 with control panel operation

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
192 PLS	Speed of the light barrier compensating stitches 0 = Speed n5 after light barrier sensing 1 = Speed pedal controlled		1	0	0 *)	A
193 KSL	Switching on the signal chain suction and thread tension release 0 = Thread tension release and chain suction after the light barrier compensating stitches 1 = Chain suction from light barrier uncovered onwards and thread tension release after the light barrier compensating stitches		1	0	0	A
194 bLA	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

*) Depending on the selected mode; see table at the beginning of the parameter list!

6.4 SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
200 t1	Delay until speed release after start backtack	ms	500	0	100	A
201 t2	Activation delay of sewing foot lifting with half heelback	ms	500	20	80 *)	A
202 t3	Start delay after switching off the sewing foot lift signal	ms	500	0	50 *)	A
203 t4	Time of full power of sewing foot lifting	ms	600	0	500 *)	A
204 t5	Holding power for sewing foot lifting 1...100% 1% = low holding power 100% = high holding power	%	Pa.254	1	40 *)	A
205 t6	Thread wiper time	ms	2550 **)	0	120 *)	A
206 t7	Delay end of thread wiping until sewing foot lifting ON	ms	800	0	40 *)	A
207 br1	Braking effect when modifying the preset value ≤ 4 stages		55	1	15	A
208 br2	Braking effect when modifying the preset value ≥ 5 stages		55	1	35	A
209 dFw	Activation delay of thread wiper	ms	2550 **)	0	0 *)	A
210 tSr	Stop time for switching the stitch regulator in the ornamental backtack	ms	500	0	140	A
211 tFL	Activation delay of sewing foot lifting with thread wiper off	ms	500	0	60 *)	A
212 t10	Time of full power of backtacking	ms	600	0	500 *)	A
213 t11	Holding power for backtacking and/or thread trimmer backward 1...100% 1% = low holding power 100% = high holding power	%	Pa.255	1	40 *)	A

*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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. Prg. No.
220 ALF	Accelerating power of the drive		55	1	35	A
221 dGn	Speed gate 1	RPM	990 **)	50	100	A
222 tGn	Speed gate damping period (effective only if parameter 224 = 0)	ms	990	0	120	A
223 dG2	Speed gate 2	RPM	6500 **)	200	1600	A
224 dGF	Speed gate 2 On/Off		1	0	1	A
232 USS	Overlock with fast scissors On/Off 0 = Tape cutter 1 = Fast scissors (set parameter 282 = 0)		1	0	0	A
234 PdO	New start after machine run blockage 0 = New start after deactivating the machine run blockage without influence by the pedal (e. g. with automats) 1 = New start after deactivating the machine run blockage only if the pedal had been put to position 0		1	0	1 *)	F
235 bkS	With braking curve in the overlock mode On/Off 0 = Braking curve Off 1 = Braking curve for accurate stop with chain suction at the seam end On		1	0	1	F
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 Exception is parameter 239 = 14. With this setting, the high lift for walking foot is performed with speed limitation operation mode not stored		31	0	0	H

*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without coontrol panel), the 2-digit and/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. Prg. No.
240 in1	**Selection of the input function on socket ST2/7 and B4/1 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 without pedal (n12) 11 = Limited speed with pedal (n12) 12 = Sewing foot lifting with pedal in position 0 (neutral) 13 = High lift for walking foot with speed limitation n10 (operation mode not stored) 14 = High lift for walking foot with speed limitation n10 (operation mode stored) 15 = Tape cutter / fast scissors (in chainstitch and overlock mode) 16 = Intermediate backtack / intermediate stitch condensing 17 = Stitch regulator suppression/recall 18 = Unlock the chain (**Attention!** Set parameter 182 = 1) 19 = Reset bobbin thread monitor if parameter 030 = >0 20 = Handwheel running in the direction of rotation according to parameter 161 21 = Handwheel running in the opposite direction of rotation according to parameter 161 22 = Speed limitation with external potentiometer on/off 23 = External light barrier 24 = No function 25 = No function 26 = Manual stacker 27 = Switch to the next pattern in "Teach-in" 28 = Switch back to the previous pattern in "Teach-in" 29 = Seamer signal off (see parameter 296) 30 = High lift for walking foot if sewing foot is On 31 = No function		31	0	31 *)	H

*) Depending on the selected mode; see table at the beginning of the parameter list!

SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
241 in2	**Selection of the input function on socket ST2/11 and B4/3 for input 2** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
242 in3	**Selection of the input function on socket ST2/6 and B4/4 for input 3** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
243 in4	**Selection of the input function on socket ST2/8 and B4/5 for input 4** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
244 in5	**Selection of the input function on socket ST2/5 and B4/6 for input 5** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
245 in6	**Selection of the input function on socket ST2/12 and B4/7 for input 6** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
246 in7	**Selection of the input function on socket ST2/9 for input 7** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
247 in8	**Selection of the input function on socket ST2/10 input 8** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
248 in9	**Selection of the input function on socket ST2/13 input 9** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31 *)	H
249 i10	**Selection of the input function on socket ST2/14 input 10** 0 = No function All other functions of the pushbuttons as with parameter 240		31	0	31	H

*) Depending on the selected mode; see table at the beginning of the parameter list!

SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
250 iFA	Activation angle of the thread trimmer (1 increment = 0.7°)	incr.	500	0	180 *)	A
251 FSA	Switch-off delay of thread tension release	ms	990	0	50 *)	A
252 FSE	Activation delay of thread tension release (1 increment = 0.7°)	incr.	500	0	0 *)	A
253 tFA	Stop time for thread trimmer	ms	500 **)	0	70 *)	A
254 EF-	Upper limit (pa. 204) operating time for sewing foot lift 1...100	%	100	1	100 *)	A
255 EV-	Upper limit (pa.213) operating time for backtacking and/or thread trimmer backward 1...100	%	100	1	100 *)	A
256 kt6	Delay time of output VR (chain suction) Function only if parameter 290 = 15	ms	2550 **)	0	250	F
257 c7	Start counting until tape cutter M4 On Function only if parameter 290 = 15	stitches	254	0	5	F
258 c8	End counting until tape cutter M4 On Function only if parameter 290 = 15	stitches	254	0	15	F
260 ihr	Handwheel increments carried out when the pushbutton is pressed once (in1...i10)	incr.	500 **)	0	10	H
261 nhr	Speed for the handwheel	RPM	150 **)	30	50	A
262 dhr	Delay time until the pushbutton is pressed down causing the handwheel to rotate continuously (in1...i10). Pressing the pushbutton briefly < preset value of parameter 262: increments set with parameter 260 are carried out. Keeping the pushbutton pressed down > preset value of parameter 262: handwheel rotates continuously.	ms	2550 **)	0	200	H
263 ihP	0 = Signal "high lift for walking foot" (M6), when pushbutton is closed 1 = Signal "high lift for walking foot" (M6), when pushbutton is open (function only if parameter 137 = 1)		1	0	0	A
264 iS1	0 = Signal "manual stacker" (M7), when pushbutton is closed 1 = Signal "manual stacker" (M7), when pushbutton is open (function in each mode except mode 16)		1	0	0	A

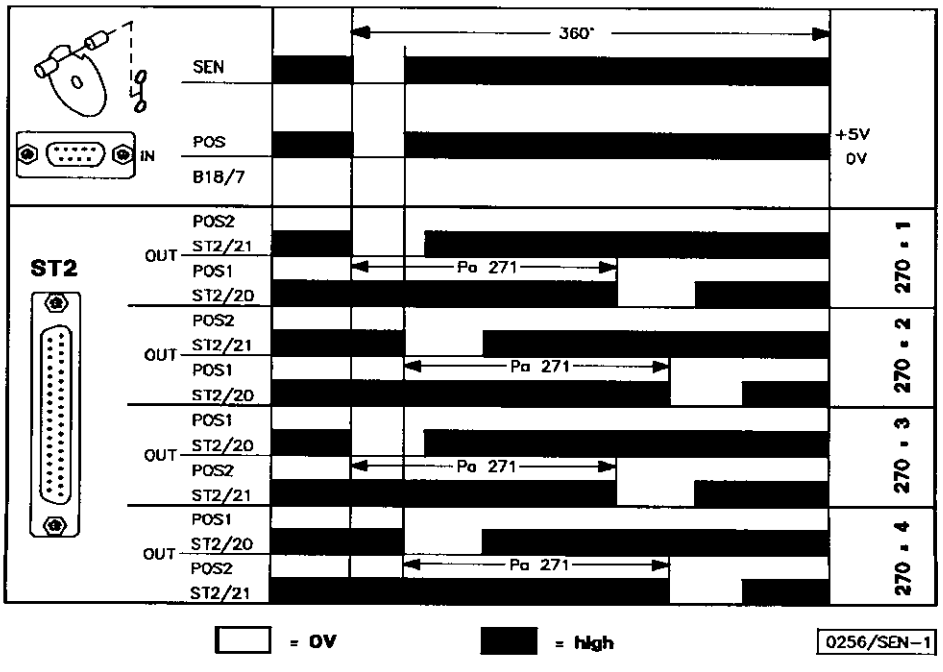
*) Depending on the selected mode; see table at the beginning of the parameter list!

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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

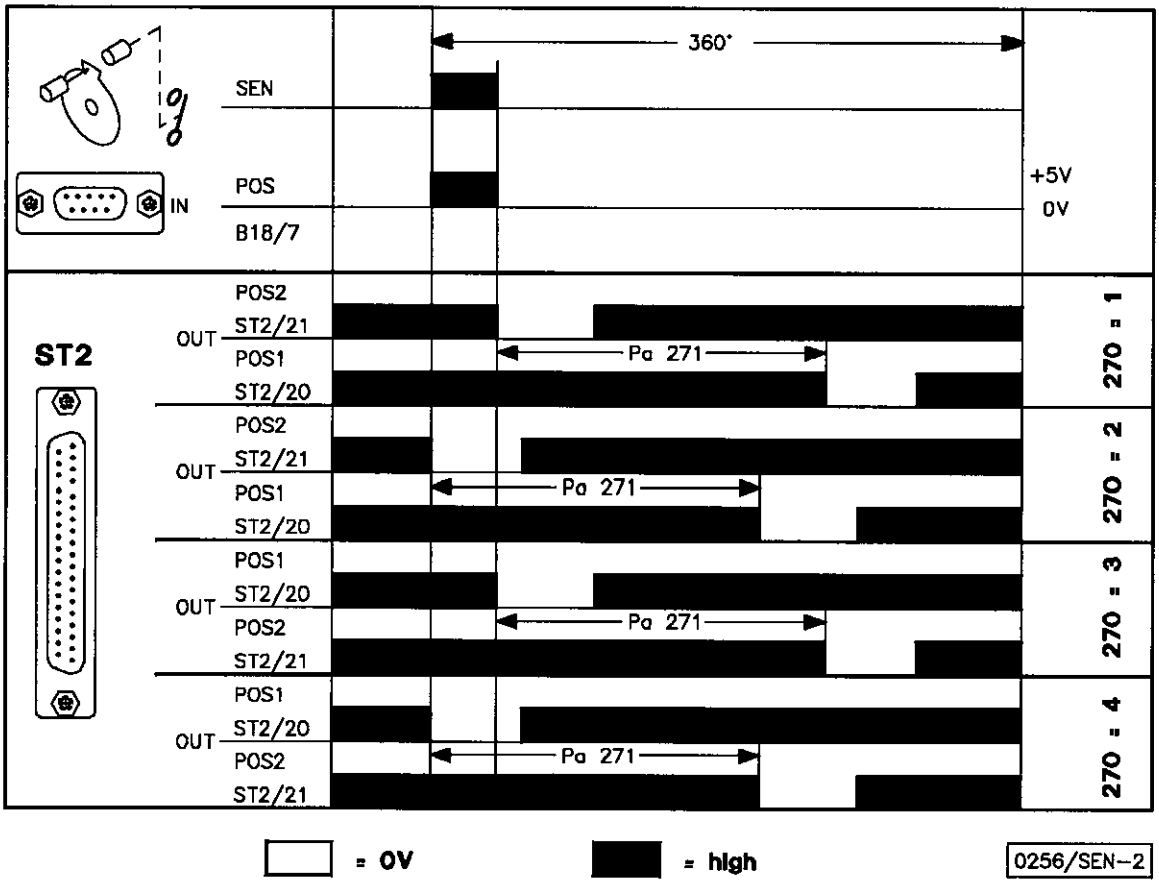
Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
265 ktS	Activation time for manual stacker (M7)	ms	2550 **)	0	500	A
266 inr	0 = Speed reduction (n12), when pushbutton is closed 1 = Speed reduction (n12), when pushbtton is open		1	0	0	A
269 PSv	Positioning shift		100	0	15	A
270 PGM	Connection of a sensor e.g. light barrier sensor to light barrier socket B18/7. Selection of the desired function. 0 = The positions are generated through the transmitter incorporated in the motor and can be set with parameter 171 1 = Setting the sensor at position 2: Set position 1 with parameter 271, starting from leading edge pos. 2 2 = Setting the sensor at position 2: Set position 1 with parameter 271, starting from trailing edge pos. 2 3 = Setting the sensor at position 1: Set position 2 with parameter 271, starting from leading edge pos. 1 4 = Setting the sensor at position 1: Set position 2 with parameter 271, starting from trailing edge pos. 1 5 = No position sensor is available. The drive stops unpositioned. The thread trimmer function is suppressed with this setting.		5	0	0 *)	A



SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
270 PGM	Connection of a sensor e.g. proximity sensor to light barrier socket B18/7. Selection of the desired function. 0 = Function as in table on previous page! 1 = Setting the sensor at position 2: Set position 1 with parameter 271, starting from trailing edge pos. 2 2 = Setting the sensor at position 2: Set position 1 with parameter 271, starting from leading edge pos. 2 3 = Setting the sensor at position 1: Set position 2 with parameter 271, starting from trailing edge pos. 1 4 = Setting the sensor at position 1: Set position 2 with parameter 271, starting from leading edge pos. 1 5 = Function as on table on previous page!		5	0	0 *)	A



OUT (position window) = npn transistor (emitter to 0V) is conductive.
Width of position window cannot be adjusted!

SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
271 PGr	Number of angular degrees after the sensor position on the machine handwheel		255	0	180 *)	A
272 trr	Transmission ratio between motor shaft and machine shaft **(The transmission ratio should be determined and indicated as precisely as possible!)**		255	020	100	A
273 ASi	Signals M8, M9, M10 On/Off (0 = Off, 1 = On)		1	0	0	A
274 Ad1	Delay time for signal M8 at the start of the seam	ms	2550 **)	0	40 *)	A
275 At1	Activation time for signal M8 at the start of the seam	ms	2550 **)	0	150 *)	A
276 Ad2	Delay time for signal M9 at the start of the seam	ms	2550 **)	0	50	A
277 At2	Activation time for signal M9 at the start of the seam	ms	2550 **)	0	60	A
278 Ad3	Delay time for signal M10 at the start of the seam	ms	2550 **)	0	40	A
279 At3	Activation time for signal M10 at the start of the seam	ms	2550 **)	0	350	A
280 kd1	Delay time output M1	ms	2550 **)	0	0 *)	A
281 kt1	Activation time output M1	ms	2550 **)	0	100 *)	A
282 kd2	Delay time output M2	ms	2550 **)	0	100 *)	A
283 kt2	Activation time output M2	ms	2550 **)	0	100 *)	A
284 kd3	Delay time output M3	ms	2550 **)	0	200 *)	A
285 kt3	Activation time output M3	ms	2550 **)	0	100 *)	A
286 kd4	Delay time output M4	ms	2550 **)	0	300 *)	A
287 kt4	Activation time output M4	ms	2550 **)	0	100 *)	A
288 kdF	Delay time until sewing foot On	ms	2550 **)	0	380 *)	A
289 kt5	Activation time output M7	ms	2550 **)	0	1000	A

*) Depending on the selected mode; see table at the beginning of the parameter list!
*) When programming the 3-digit and/or 4-digit control parameter values (without control panel, the 2-digit and/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. Prg. No.
290 AUt	0 = **Mode lockstitch;** (thread trimmer 1, 2, 3, 1+2); e.g. Brother, Dürkopp Adler, Mitsubishi, Pfaff, Toyota »Insertable strip for V810 and V820 = 1« 2 = **Mode lockstitch;** e.g. Singer (212 UTT) »Insertable strip for V810 and V820 = 1« 3 = **Mode lockstitch;** e.g Dürkopp Adler (cl. 767, N291) »Insertable strip for V810 and V820 = 1« 4 = **Mode chainstitch;** e.g. (US80A) »Insertable strip for V810 = 5« »Insertable strip for V820 = 3« 5 = **Mode chainstitch in general** M1, M2, M3 and M4 parallel sequence »Insertable strip for V810 = 5« »Insertable strip for V820 = 3« 6 = **Mode chainstitch with tape cutter** and/or **fast scissors** and **M1/M2** at the seam end »Insertable strip for V810 = 5« »Insertable strip for V820 = 3« 7 = **Mode overlock;** e.g. (AC62AV1461) »Insertable strip for V810 = 7« »Insertable strip for V820 = 5« 8 = **Mode backlatch;** Pegasus »Insertable strip for V810 = 7« »Insertable strip for V820 = 5« 9 = **Mode backlatch;** Yamato »Insertable strip for V810 = 7« »Insertable strip for V820 = 5« 10 = **Mode lockstitch;** Union Special (63900AMZ »replacement for US80A«) and on Refrey lockstitch machines »Insertable strip for V810 and V820 = 1« 14 = **Mode lockstitch;** Juki (5550-4, 5550-7) »Insertable strip for V810 and V820 = 1« 15 = **Mode backlatch;** Pegasus (SSC100) 16 = **Mode overlock;** feed-off-the-arm machines e.g. Yamato (FD62) »Insertable strip for V820 = 7« Modes 1, 9, 11...13 are selectable but not operative!		16	0	5	F

Note:
When selecting the trimming mode with parameter 290, the connected Variocontrol V810 and/or V820 is automatically sensed and the corresponding insertable strip number is selected with parameter 291 and/or 292. Should a different strip be inserted, its number can be set with parameter 291 and/or 292, after selecting the trimming mode.

SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
291 810	Select insertable strip number for control panel V810 (illustrations of insertable strips see the following chapter 5.5)		8	1	1 *)	A
292 820	Select insertable strip number for control panel V820 (illustrations of insertable strips see the following chapter 5.5)		10	1	1 *)	H
293 tF1	**Selection of the input function by pushbutton (A) "F1" on Variocontrol V810/V820** 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 (operation mode not stored) 14 = High lift for walking foot with speed limitation n10 (operation 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 20...31 = No function		31	0	17 *)	H
294 tF2	**Selection of the input function by pushbutton (B) "F2" on Variocontrol V810/V820** Functions of the pushbutton as with parameter 293		31	0	1 *)	H
	Switch proximity switches for inputs in2, in7, in8, in9		1	0	0	A
296 M08	**Functions of signal M8** 0 = Signal M8 Off. 1 = Signal **seamer** is switched **on** at the start of the seam with **pedal < 0** and in the seam with **machine running**. 2 = Signal **seamer** is switched **on** at the start of the seam with **pedal < 0**, in the seam **always active**. 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.		5	0	0	H

*) Depending on the selected mode; see table at the beginning of the parameter list!

SUPPLIER LEVEL

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

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
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. 2 = Signal M11 is switched on whenever the light barrier is covered. 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 emitted. When signal M11 is emitted, signal M6 (machine at standstill) is also immediately emitted. 5 = Signal M11 is switched on from **"light barrier sensing"**, **"pedal in pos. -2"** or **"pushbutton seamer signal off"** onwards.		5	0	0	H
298 nSo	Backtack synchronization On/Off		1	0	0	A
299 nrS	Backtack synchronization speed	RPM	3000 **)	200	400	A
300 AA1	Selectable power transistors for signal A1 0 = No function 1 = Signal on output M1 2 = Signal on output M2 3 = Signal on output M3 4 = Signal on output M4 5 = Signal on output M5 6 = Signal on output M6 7 = Signal on output M7 8 = Signal on output M8 9 = Signal on output M9 10 = Signal on output M10 11 = Signal on output M11 12 = Signal on output VR		12	0	0	F
301 So1	Emission of signal A1 over time or until seam end 0 = Signal until seam end 1 = Signal over time		1	0	0	F
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		2	0	0	F
303 do1	Delay of signal A1 0 = No delay until signal On 1 = Delay until signal On		1	0	1	F

**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/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. Prg. No.
304 dt1	Delay time until signal A1 On	ms	2550 **)	0	0	F
305 St1	Operating time of signal A1	ms	2550 **)	0	0	F
306 nA1	Speed mode when signal A1 is activated 0 = Pedal controlled speed 1 = Speed n9 2 = Speed n11		2	0	0	F
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	F
311 So2	Emission of signal A2 over time or until seam end 0 = Signal until seam end 1 = Signal over time		1	0	0	F
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 signals when the drive stops at the seam end		2	0	0	F
313 do2	Delay of signal A2 0 = No delay until signal On 1 = Delay until signal On		1	0	1	F
314 dt2	Delay time until signal A2 On	ms	2550 **)	0	0	F
315 St2	Operating time of signal A2	ms	2550 **)	0	0	F
316 nA2	Speed mode when signal A2 is activated 0 = Pedal controlled speed 1 = Speed n9 2 = Speed n11		2	0	0	F

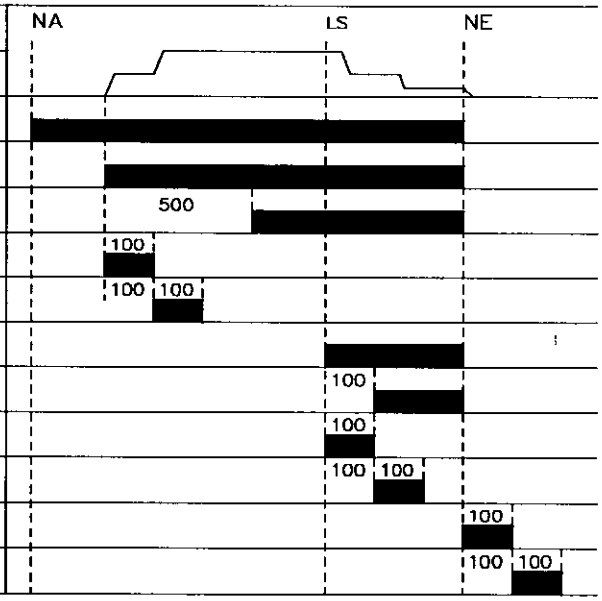
**) When programming the 3-digit and/or 4-digit control parameter values (without control panel), the 2-digit and/or 3-digit value displayed must be multiplied by 10.

SUPPLIER LEVEL

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

320	bP0	Deactivation time of signals A1 und A2 0 = Signals effective until seam end 1 = Signals effective until pedal is in position 0 (neutral)	1	0	0	F
321	Std	Suppression of the seam, when 0 stitches are set	1	0	0	F
322	dkn	0 = Correction seam Off 1 = Correction seam On 2 = Interruption of seam and/or pattern with thread trimmer	2	0	0	F
323	FLn	0 = Sewing foot after power On, as programmed 1 = Sewing foot lifted after power On This function is active only if Teach-in is On!	1	0	0	H
500	Sir	Recall of Fast Installation Routine (SIR) (see description on page 3)				

A1	Pa.301	Pa.302	Pa.303	Pa.304	Pa.305
A2	Pa.311	Pa.312	Pa.313	Pa.314	Pa.315
	0	0	0	0	0
	0	0	1	0	0
	0	0	1	500ms	0
	1	0	0	0	100ms
	1	0	1	100ms	100ms
	0	1	0	0	0
	0	1	1	100ms	0
	1	1	0	0	100ms
	1	1	1	100ms	100ms
	1	2	0	0	100ms
	1	2	1	100ms	100ms



0267/BILD1

7. Error Messages

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

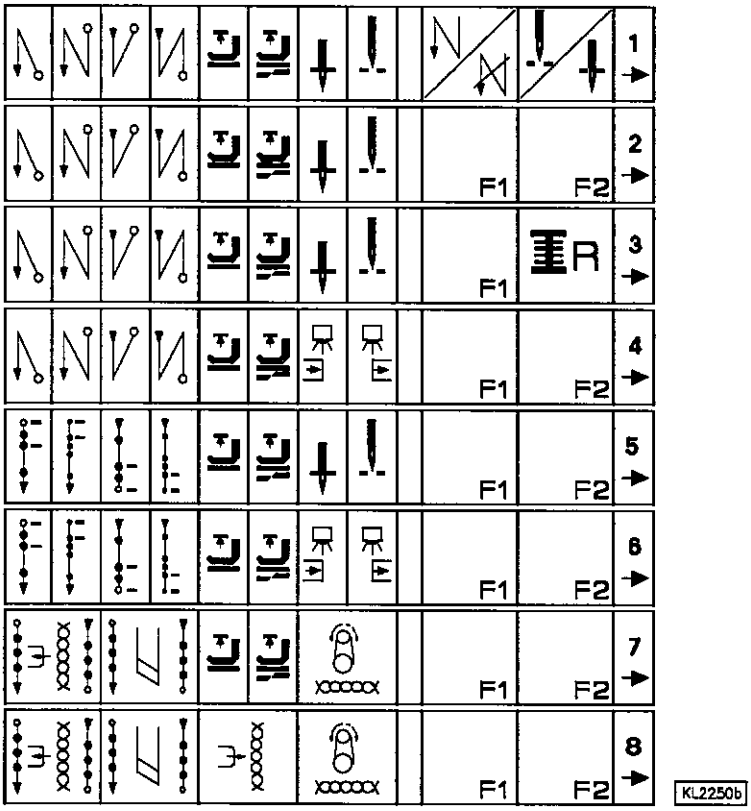
Programming Functions and Values (Parameters)			
On the control	**On the V810**	**On the V820**	**Signification**
Returns to 000 and/or to the last parameter number	Returns to 0000 and/or to the last parameter number	Like with V810 InF F1 is displayed	Wrong code number or parameter number input

Serious Situation			
On the control	**On the V810**	**On the V820**	**Signification**
E1	InF E1	InFo E1	After power On, position transmitter or commutation transmitter defective or connecting cables have been changed by mistake. During machine run or after a sewing operation, only position transmitter defects can be identified.
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 locks or does not reach the desired speed
E4	InF E4	InF E4	Control disturbed by deficient grounding or loose contact

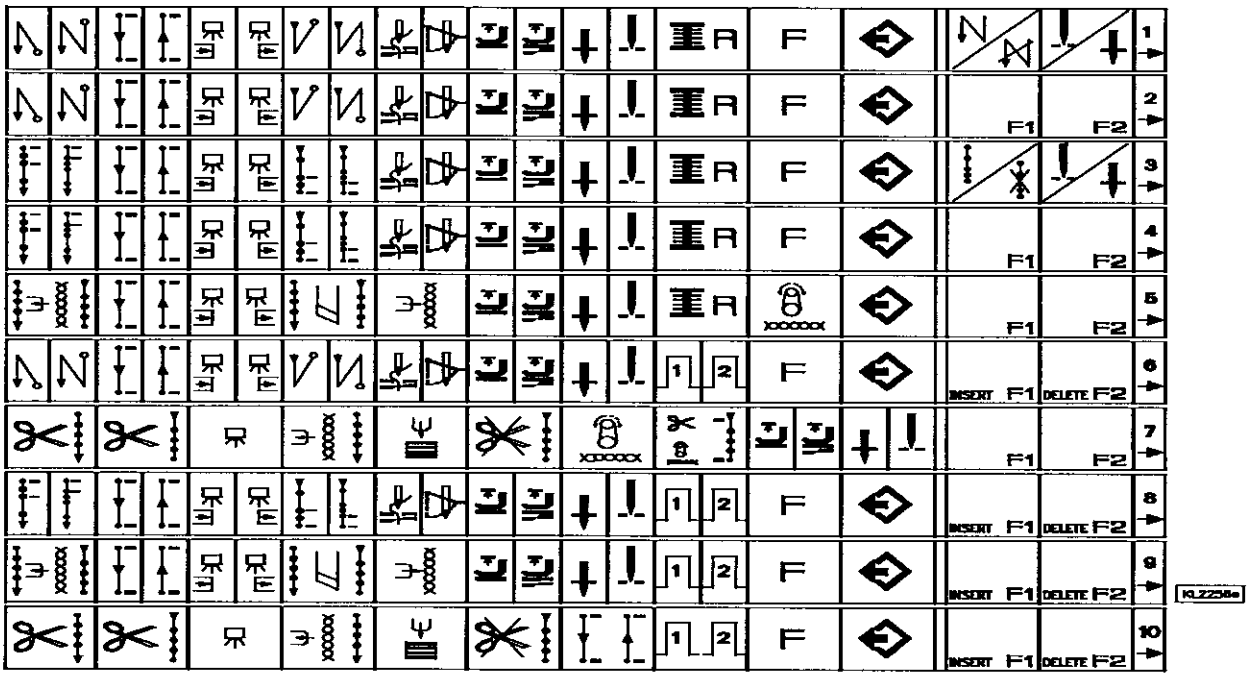
Hardware Disturbance			
On the control	**On the V810**	**On the V820**	**Signification**
H1	InF H1	InF H1	Commutation transmitter cord or frequency converter disturbed
H2	InF H2	InF H2	Processor disturbed

8. Insertable Strips for Control Panel V810/V820

Insertable strips for control panel V810



Insertable strips for control panel V820



Note

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

For your notes:

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FRANKL & KIRCHNER GMBH & CO KG

SCHEFFELSTRASSE 73 - D-68723 SCHWETZINGEN
TEL.: (06202)2020 - TELEFAX: (06202)202115
email: info@efka.net - http://www.efka.net

Efka

OF AMERICA INC.

3715 NORTHCREST ROAD - SUITE 10 - ATLANTA - GEORGIA 30340
PHONE: (770)457-7006 - TELEFAX: (770)458-3899 - email: efkaus@aol.com

Efka

ELECTRONIC MOTORS SINGAPORE PTE. LTD.

67, AYER RAJAH CRESCENT 05-03 - SINGAPORE 139950
PHONE: 7772459 - TELEFAX: 7771048 - email: efkaems@cyberway.com.sg

3(3)-241000 H (402240EN)