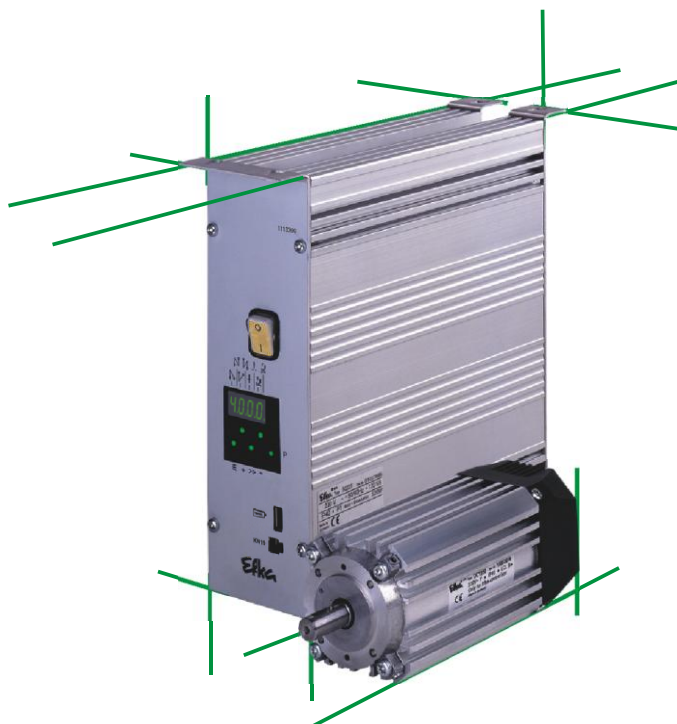


efka dc1550

CONTROL

PF321A6012



List of Parameters

- Connection Diagrams
- Timing Diagrams

Nr. 402338

English

Important Notes

The particulars used in various figures and tables, such as type, program number, speed, etc., serve as examples. They may differ from those in your display.

For current versions of the Instructions for Use and Lists of Parameters, necessary for operating EFKA drives in accordance with regulations, please refer to the EFKA web site **www.efka.net**, page "**Downloads**".

On our web site you will also find the following supplementary instructions for this control:

- ✗ General instructions for use and programming
- ✗ Use with USB Memory Stick
- ✗ Use of the C200 compiler
- ✗ Adapter cords

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1 Table of Machine Functions and Adapter Cords



ATTENTION

Before switching functional sequences, detach cables from the inputs and outputs! It must be absolutely certain that for the functional sequence to be changed the machine provided has been installed! Then proceed with the setting using parameter 290!

Setting the functional sequence using parameter 290

			Functions / Outputs							
	Power transistors →		FL	VR	M1	M2	M3	M4	M5	M6
Mode	Function / Machine	Adapter	ST2/35	ST2/34	ST2/37	ST2/28	ST2/27	ST2/36	ST2/32	ST2/30
0	Lockstitch: Pfaff Powerline 2235 Premium		FL	VR	FA	ML	FW	FSPL	MST/HP	FF2
1	Lockstitch: Pfaff Powerline 2545, 2546		FL	VR	FA	ML	FW	FSPL	MST/HP	FF2

The signals of outputs M7...M11 depend on the settings of certain parameters, in particular parameter 290!

Explanation of letter symbols of the above table and chapter "Timing Diagrams"!

Outputs:

FA	Thread trimmer	HP/FF1	High lift for walking foot / flip-flop 1
FF2	Flip-flop2	ML/NK	Machine running / Needle cooling
FL	Sewing foot lifting	MST	Machine at standstill
FSPL	Thread tension release	VR	Backtacking
FW	Thread wiper		

2 Putting into Service

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

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

See instruction manual for details!

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

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

Input parameter 500

Parameter for functional sequence "thread trimming operations"

Parameter for direction of motor rotation

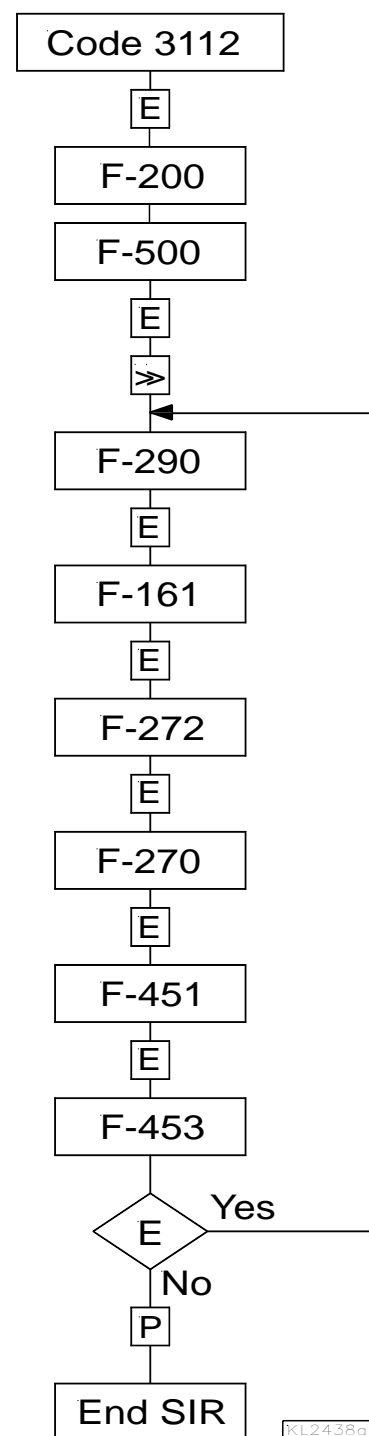
Parameter for transmission ratio

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

Parameter for type of position sensor

Parameter for position 1

Parameter for position 2



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

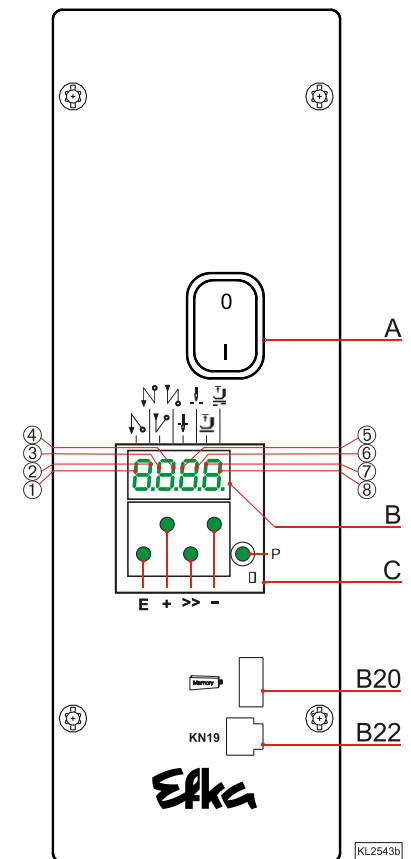
Exit the routine any time by pressing the P key once, and select a new parameter. Exit programming by pressing the P key twice, and the drive is ready for a new sewing operation.

See instruction manual for details!

4 Operating Elements and Socket Connectors

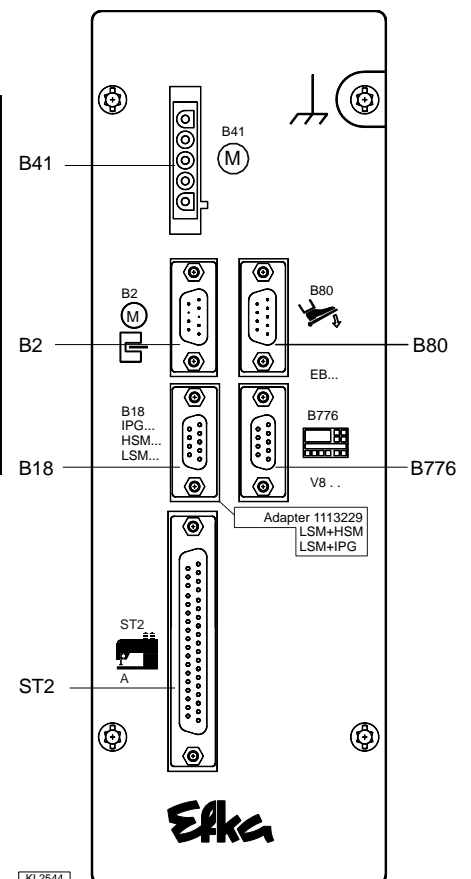
4.1 Positions of the Front Side

A	Power switch
B	Display (4 digit 7 segment display)
C	Control panel (onboard module)
Key	
P	Call or exit programming mode
E	Start backtack single / double / off Enter key for modifications in the programming mode
+	End backtack single / double / off, In the programming mode - increase of the value indicated
>>	Basic position 1 or 2 Shift key in the programming mode
-	Automatic sewing foot lifting at stop in the seam On/Off Automatic sewing foot lifting after thread trimming On/Off In the programming mode - decrease of the value indicated
The upper vertical segments of the 4 digit 7 segment display indicate the switching states of backtacking, foot lifting and basic position.	
1	Single start backtack
2	Double start backtack
3	Single end backtack
4	Double end backtack
5	Basic position "needle position 1"
6	Basic position "needle position 2"
7	Automatic sewing foot lifting at stop in the seam
8	Automatic sewing foot lifting after the thread trimming operation
Connector	
B20	USB Memory Stick
B22	Knee switch



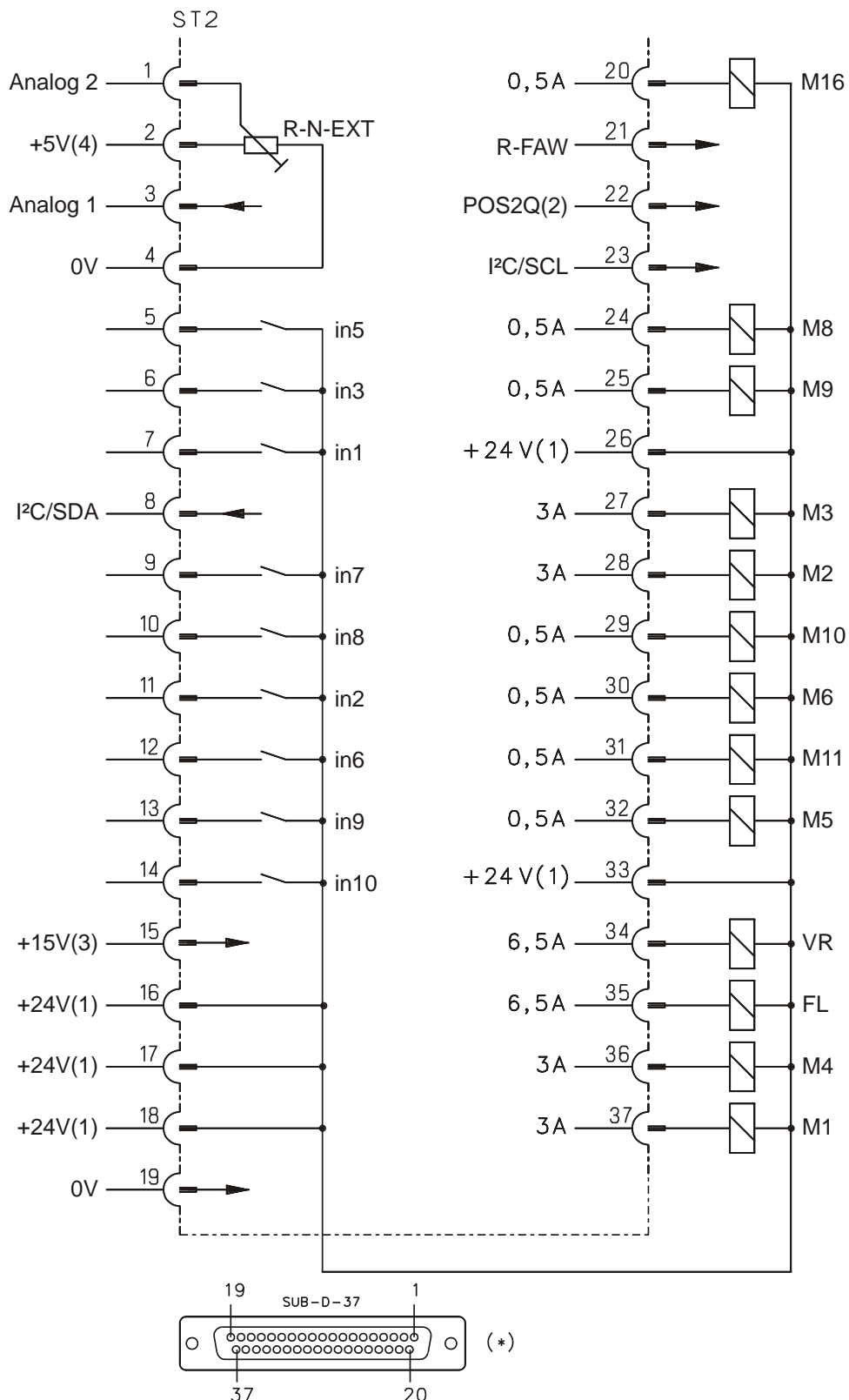
4.2 Positions of the rear side

Connector	
B2	Commutation transmitter
B18	Light barrier module LSM002 - Hall sensor module HSM001 - Pulse encoder IPG001 - EFKANET (Adapter cord 1113229 in case of multiple assignment)
B41	Motor power supply
B80	Actuator
B776	V810/V820/V850 control panel
ST2	Socket for inputs and outputs e. g. solenoids, solenoid valves, displays, keys and switches



4.3 Connection Diagrams

Inputs switched to +24V



Bi2002

1) Nominal voltage +24V, no-load voltage max. +30V momentarily after power on

2) Transistor output with open collector max. +40V, I_{max} 10mA

3) Nominal voltage +15V, I_{max} 30mA

4) Nominal voltage +5V, I_{max} 20mA

*) View: Front view of the control (component side) and/or rear view of the outgoing connecting cable



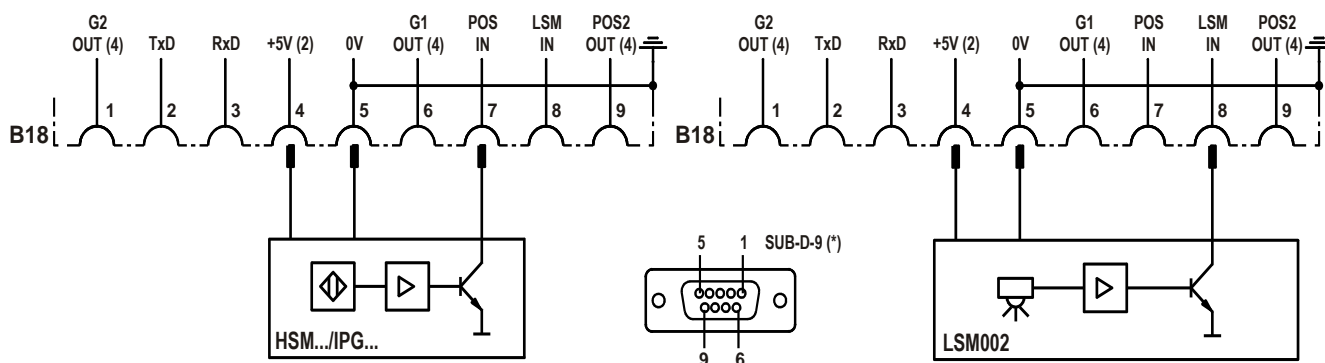
ATTENTION

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

in1	Input 1	i10	Input 1	M9	Output 9
in2	Input 2	M1	Output 1	M10	Output 10
in3	Input 3	M2	Output 2	M11	Output 11
		M3	Output 3	M16	Output 16
in5	Input 5	M4	Output 4	FL	Sewing foot lifting
in6	Input 6	M5	Output 5	VR	Backtacking
in7	Input 7	M6	Output 6	POS2	Position 2
in8	Input 8	M7	Output 7	R-FAW	Reset thread monitor
in9	Input 9	M8	Output 8	R-N-EXT	External potentiometer for speed limitation (50kΩ)
SDA	Serial data			SCL	Serial clock

Connection of a HSM001 Hall sensor module or an IPG001 pulse encoder

Connection of a LSM002 light barrier module

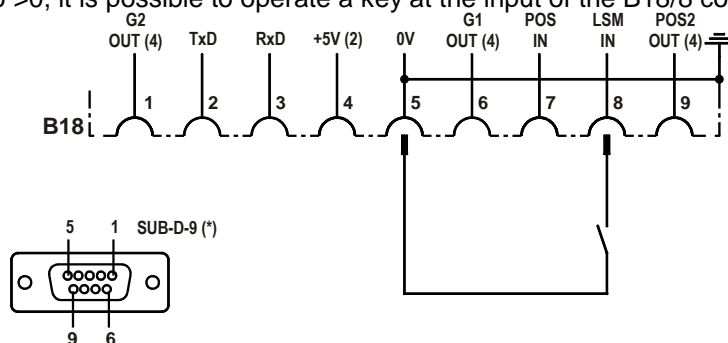


BI1174a

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

POS2 OUT	Output for position 2	LSM IN	Possibility of connecting a light barrier module to socket B18/8
POS IN	Input for positions (e.g. connection of a sensor)	LSM002	Reflection light barrier module
G1/G2 OUT	Output 512 generator impulses	HSM001	Hall sensor module
TXD/RXD	Serial transmission lines	IPG...	Pulse encoder

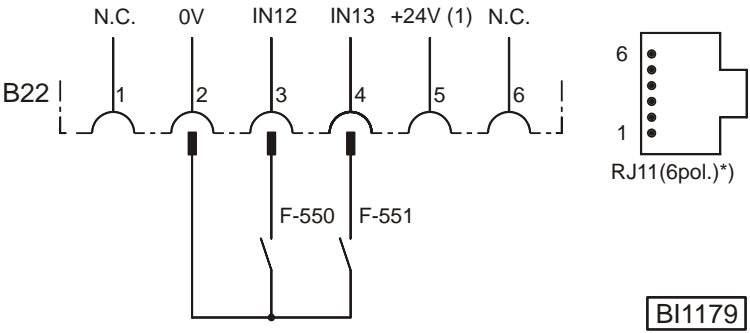
If parameter 239 is set to >0, it is possible to operate a key at the input of the B18/8 connector.



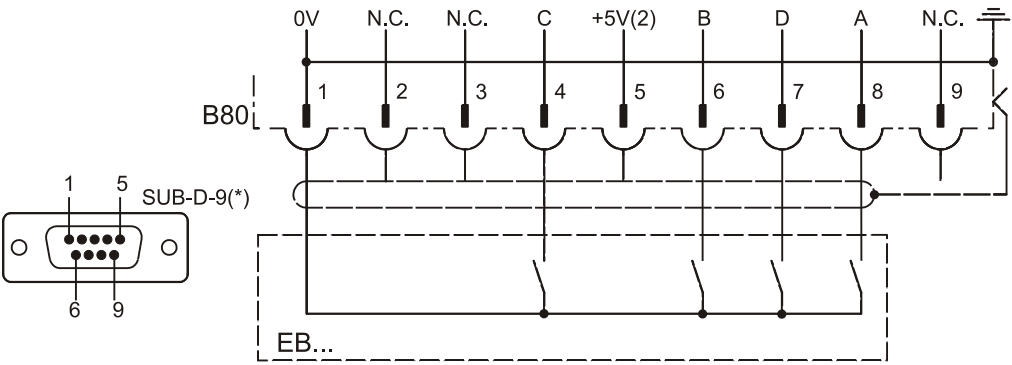
BI1159a

There is a supply voltage of +5V on the B18/4 socket for external devices. This voltage can be switched to +15V using parameter 362.

- 2) Nominal voltage +5V, I_{max} 100mA (switchable to +15V, I_{max} 100mA)
- 4) Logic level output +5V, I_{max} 10mA
- *) View: Front view of the control (component side) and/or rear view of the outgoing connecting cable



IN12	Input 12, function programmable using parameter 550	IN13	Input 13, function programmable using parameter 551
------	---	------	---



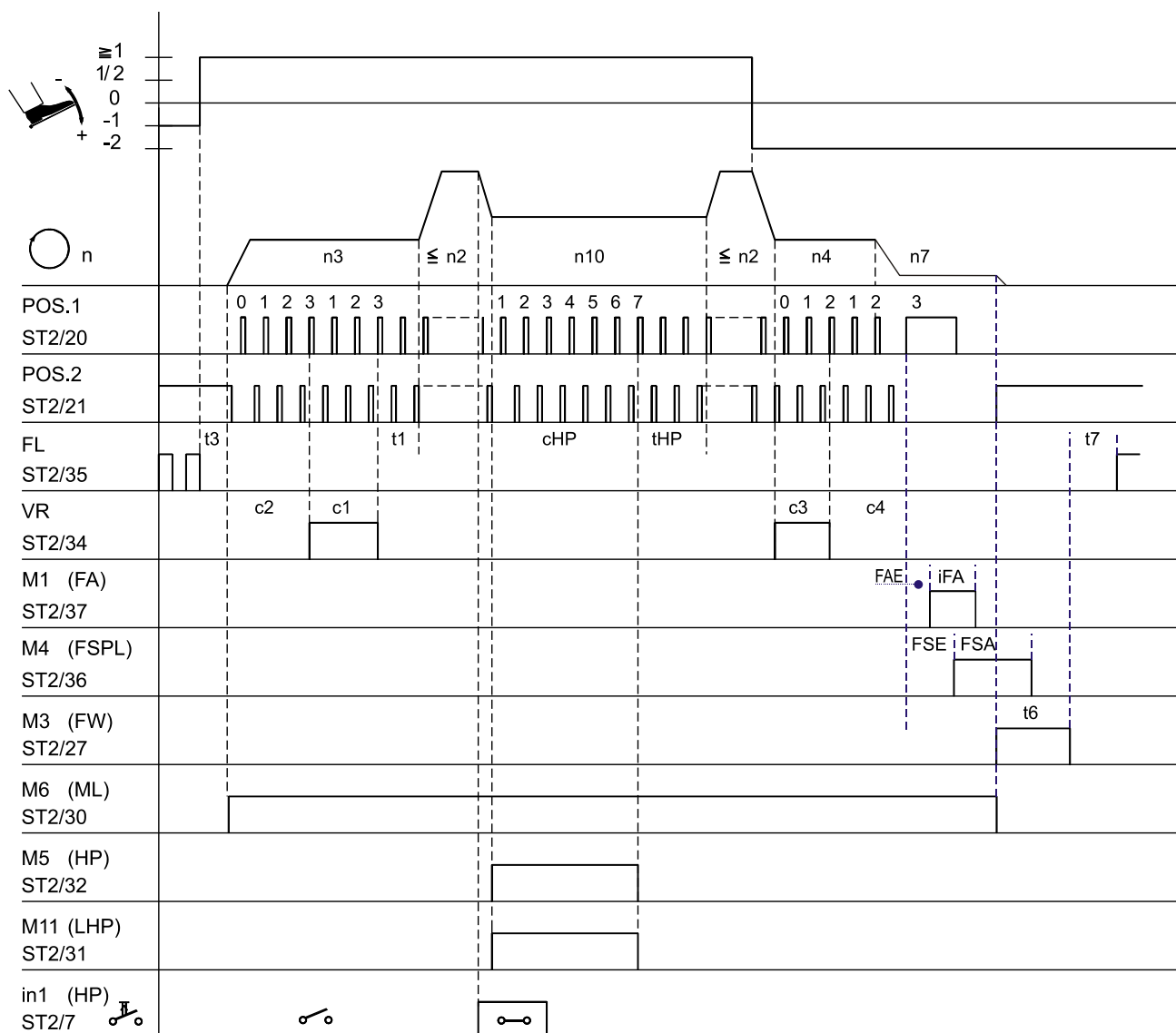
EB.. = actuator

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

2) Nominal voltage +5V, I_{max} 20mA
*) View: Front view of the control (component side) and/or rear view of the outgoing connecting cable

5 Timing Diagrams

Mode 0+1 (lockstitch)



PF321A6012/MODE-01

Mark	Function	Parameter	Control	V810	V820/V850
FAm	Mode 1	290 = 1			
	Double start backtack		Key S2	Key 1	Key 1
	Double end backtack		Key S3	Key 2	Key 4
hP	High lift for walking foot function activated/deactivated	137 = 1			
n2	Maximum speed	111			
n3	Start backtack speed	112			
n4	End backtack speed	113			
n7	Trimming speed	116			
n10	High lift walking speed	117			
c2	Start backtack stitches forward	000			
c1	Start backtack stitches backward	001			
c3	End backtack stitches backward	002			
c4	End backtack stitches forward	003			
thP	High lift walking speed run-out time	152			
chP	Minimum number of stitches for high lift for walking foot	185			
t6	Thread wiper ON period	205			
t7	Sewing foot switch-on delay after thread wiper	206			
iFA	Thread trimmer activation angle	250			
FSA	Switch-off delay of thread tension release	251			
FSE	Switch-on delay angle of thread tension release	252			

6 List of Parameters

6.1 Operator Level

NOTE

The preset values indicated apply to mode 0 (parameter 290 = 0).

Parameter	Designation	Unit	max	min	Preset	Ind.
000 c2	- Number of stitches of start backtack forward - Number of stitches of start stitch condensing without stitch regulator - Number of stitches of end counting chain suction	Stitches	254	0	2	
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	
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	
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	
004 LS	Light barrier compensating stitches	Stitches	254	0	7	
005 LSF	Number of stitches of the light barrier filter for knitted fabrics	Stitches	254	0	1	
006 LSn	Number of light barrier seams		15	1	1	
007 Stc	Number of stitches for the seam with stitch counting	Stitches	254	0	20	
008 -F	A parameter from the technician level is assigned to key 9 on the V820/V850 control panel 1 = Softstart On/Off 2 = Ornamental backtack On/Off 3 = Start of sewing blocked with light barrier uncovered On/Off 4 = Unlocking the chain On/Off 5 = Signal A1 and/or A2 On/Off with slide-in strip 1...4 (left-hand arrow = A1, right-hand arrow = A2) 6 = Signal A1 On/Off 7 = Signal A2 On/Off 8 = Backtack repetition On/Off		8	1	1	
009 LS	Light barrier On/Off		1	0	0	
013 FA	Thread trimmer On/Off		1	0	1	
014 Fw	Thread wiper/thread trimmer On/Off		1	0	1	
015 StS	Stitch counting On/Off		1	0	0	
019 -Pd	Automatic sewing foot lifting with pedal forward at the seam end, if light barrier or stitch counting is On 0 = Automatic sewing foot Off 1 = Automatic sewing foot On 2 = Pedal in pos. -2, thread trimming disabled. (Function only if parameter 009 = 1) 3 = Pedal in pos. -1 and -2 enabled in the seam. 4 = Pedal in pos. -1 and -2 blocked in the seam. (Function only if parameter 009 = 1)		4	0	3	
023 AFL	Automatic sewing foot lifting with pedal forward at the seam end, if light barrier or stitch counting is On Automatic sewing foot Off Automatic sewing foot On		1	0	1	

Operator Level

Parameter	Designation	Unit	max	min	Preset	Ind.
024 FSP	Coupled thread tension release and sewing foot lifting. The function can be activated only with a thread trimmer that depends on the angle. 0 = No coupling 1 = Coupled thread tension release and sewing foot at the seam end with thread trimmer off. 2 = Coupled thread tension release and sewing foot in the seam and at the seam end with thread trimmer off. 3 = Coupled thread tension release and sewing foot always effective.		3	0	0	
026 APd	Characteristic of the "analog pedal" 0 = Analog function off 1 = 12-level, like previous pedal function 2 = continuously variable 3 = 24-level 4 = 60-level (progressive) 5 = 60-level (progressive)		5	0	4	
027 tEi	0 = Part counter Off 1 = Day counter display, always On 2 = Total counter display, always On 3 = Day counter display, retrievable with F1 key (3 sec) 4 = Total counter display, retrievable with F1 key (3 sec.) 5 = Day counter on seam end display (3 sec) 6 = Total counter at seam end display (3 sec)		6	0	0	B
030 rFw	0 = Bobbin thread monitor Off 1 = Bobbin thread monitor with stop 2 = Bobbin thread monitor without stop 3 = Bobbin thread monitor with stop and start blockage after thread trimming 4 = as 1, but display of remaining stitches 5 = as 2, but display of remaining stitches 6 = as 3, but display of remaining stitches		6	0	0	
031 cFw	Number of stitches for bobbin thread monitor	Stitches	25500 ***))	0	0	
038 khP	Coupling of high lift for walking foot with the second thread tension release 0 = Off 1 = Coupling on		1	0	0	
039 kFL	Coupling of thread tension release with sewing foot lifting 0 = Off 1 = Thread tension release with sewing foot lifting 2 = 2. Thread tension release with sewing foot lifting 3 = 1. + 2. Thread tension release with sewing foot lifting 4 = 1. + 2. Thread tension release with sewing foot lifting at end of seam		4	0	4	
040 ZPS	Zig-zag position 0 = Off 1 = Left 2 = Right		2	0	0	
044 FkL	Thread Wiper/Thread clamp *1) 0 = Thread wiper function On 1 = Thread clamp function On 2 = Thread clamp function and sewing foot lifting	Degrees	2	0	1	
045 k1	Thread clamp activation point	Degrees	359	0	95	
046 k1_	Thread clamp deactivation point	Degrees	359	0	220	
047 nF	Sewing foot lifting activation point if thread clamp function = on	Degrees	359	0	95	
048 nF_	Sewing foot lifting deactivation point if thread clamp function = on	Degrees	359	0	115	
061 P8E	Target stitch position	Degrees	359	0	350	

*1) On the end of the seam, the thread clamp function is coupled with the sewing foot lifting. The thread clamp is turned off after 30 seconds.

***)) The 3-digit value displayed must be multiplied by 100.

Operator Level

Parameter	Designation	Unit	max	min	Preset	Ind.
062 PSt	Target stitching function/move to needle function by key 0 = Move to needle function by key 1 = Move to target stitch position	Degrees	1	0	1	
070 PAv	Number of stitches of start multiple backtack forward	Degrees	254	0	3	
071 PAr	Number of stitches of start multiple backtack backward	Degrees	254	0	2	
072 PEr	Number of stitches on end multiple backtack forward section	Degrees	254	0	2	
073 PEv	Number of stitches on end multiple backtack backward section	Degrees	254	0	3	
074 ArP	Execution type of start multiple backtack 1 = Flying backtack 2 = Ornamental backtack		2	1	2	
075 ErP	Execution type of end multiple backtack 1 = Flying backtack 2 = Ornamental backtack		2	1	2	
080 SAV	number of stitches for initial ornamental backtack forwards	Stitches	254	0	3	
081 SAR	number of stitches for initial ornamental backtack backwards	Stitches	254	0	3	
082 SEr	number of stitches for final ornamental backtack backwards	Stitches	254	0	3	
083 SEv	number of stitches for final ornamental backtack forwards	Stitches	254	0	3	
086 vct	Counted forward section in manual ornamental backtack On/Off		1	0	1	
087 chr	0 = Manual backtack at speed n13 (parameter 109) 1..255 = Manual ornamental backtack at speed n9 (parameter 122)	Stitches	255	0	0	
090 wAr	Repetition of the initial/ multiple backtack		255	0	3	
091 wEr	Repetition of the final/ multiple backtack		255	0	3	
092 Fwr	Backtack repetition On/Off		1	0	0	
093 KSt	Number of stitch locks	Stitches	254	0	0	
094 tKS	Start delay in stitch locks	ms	500	0	100	

6.2 Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.
100 SSc	Number of softstart stitches	Stitches	255	0	2	
101 EvA	Switch-on delay for the backtacking solenoid in the initial backtack	ms	255	0	43	
102 AvA	Power-off delay for the backtacking solenoid in the initial backtack	ms	255	0	4	
103 EvE	Switch-on delay for the backtacking solenoid in the final backtack	ms	255	0	43	
104 AvE	Power-off delay for the backtacking solenoid in the final backtack	ms	255	0	5	
108 PEr	Stop position of the ornamental backtack 1 = Position 1 leading 2 = Position 2 leading 3 = Position 1 trailing		3	1	1	
109 n13	Speed of manual backtack	RPM	9900	200	1500	
110 n1	Positioning speed	RPM	390	70	200	
111 n2	Upper limit setting range of the maximum speed	RPM	9900	n2_	3800	
112 n3	Start backtacking speed	RPM	9900	200	1200	
113 n4	End backtacking speed	RPM	9900	200	1200	
114 n5	Speed after light barrier sensing	RPM	9900	200	1200	
115 n6	Softstart speed	RPM	1500	70	500	
116 n7	Trimming speed	RPM	500	70	200	
117 n10	High lift for walking speed limitation	RPM	9900	400	1000	
118 n12	Automatic speed for stitch counting	RPM	9900	400	3500	
119 nSt	Speed stage graduation 1 = linear 2 = slightly progressive 3 = highly progressive		3	1	2	
121 n2	Lower limit setting range of the maximum speed	RPM	n2_	200	400	
122 n9	Limited speed n9	RPM	9900	200	2000	
123 n11	Limited speed n11	RPM	9900	200	2500	
124 toP	Speed limitation using ext. potentiometer (minimum value)	RPM	9900	Pa.125	4000	
125 bot	Speed limitation using ext. Potentiometer (minimum value)	RPM	Pa.125	0	200	
127 AkS	Audible signal of machine run blockage and bobbin thread monitor On/Off		1	0	0	
128 ASd	Start delay, when command "start" is given by covering the light barrier (see parameter 129)	ms	2000	0	0	
129 ALS	Machine start by covering the light barrier (only in conjunction with parameter 132 = 1) 0 = Function Off 1 = Light barrier covered → pedal forward (>1) → machine run pedal controlled. 2 = Pedal forward (>1) → light barrier covered → machine run pedal controlled. 3 = Light barrier covered → machine run at automatic speed n12 (without pedal) Attention! If 129 = 3, the machine starts immediately after covering the light barrier without influence by the pedal! It can be stopped only by uncovering the light barrier or by machine run blockage! If machine run blockage is disabled, the machine starts immediately even if the light barrier is still covered!		3	0	0	

Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.
130 LSF	Light barrier filter for knitted fabrics		1	0	0	
131 LSd	0 = Light barrier sensing "covered" 1 = Light barrier sensing uncovered		1	0	1	
132 LSS	0 = Machine start possible with light barrier uncovered or covered. 1 = Machine start blocked with light barrier uncovered if parameter 131 = 1. Start blocked if light barrier darkened,		1	0	1	
133 LSE	Thread trimming operation, when completing the seam after light barrier sensing On/Off		1	0	1	
134 SSt	Softstart On/Off		1	0	0	
135 SrS	Ornamental backtack On/Off		1	0	0	
136 FAr	0 = Trimming stitch backward Off 1 = Trimming stitch backward On with single end backtack 2 = Trimming stitch or positioning stitch always backward at the seam end		2	0	0	
137 hP	High lift for walking foot function activated/deactivated		1	0	1	
138 Slu	0 = Stitch length in the automatic backtacks 1 = Backtack stitch length as predefined (normal or short) 2 = Backtack stitch length short		1	0	0	
139 nIS	Display of machine speed On/Off		1	0	0	
140 dnE	Delay of seam end with pedal in pos. -2	ms	2550	0	0	
141 SGn	Speed status for the seam with stitch counting 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = fixed speed (parameter 118) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 118) 3 = at fixed speed (parameter 118) can be interrupted by full heelback 4 = at fixed speed (parameter 110) can be interrupted by full heelback.		4	0	0	
142 SFn	Speed status for the free seam and for the seam with light barrier 0 = Speed controllable by the pedal up to the set maximum speed (parameter 111) 1 = Fixed speed (parameter 118) without influence by the pedal (machine stop by pressing the pedal to the basic position) 2 = Limited speed controllable by the pedal up to the set limit (parameter 118) 3 = At fixed speed (parameter 118) can be interrupted by full heelback (only for seams with light barrier).		3	0	0	
150 t8	Stitch correction of the double start backtack (prolongation of the stitch regulator ON period /not effective with ornamental backtack)	ms	500	0	0	
151 t9	Stitch correction of the double end backtack (prolongation of the stitch regulator ON period / not effective with ornamental backtack)	ms	500	0	0	
152 thP	High Lift Walking Speed Run-Out Time	ms	500	80	150	
153 brt	Braking power at machine standstill		50	0	10	
155 LSG	Mode signal run 0 = Signal Off. 1 = Signal run On. 2 = Signal "run" enabled when the speed is >3000 RPM. 3 = Signal with pedal <> 0. 4 = Signal enabled only after motor synchronization (one rotation at positioning speed after power On)		4	0	1	

Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.
156 t05	Switch-off delay for the signal "run" or signal with pedal in pos. 0 (neutral)	ms	2550	0	0	
161 drE	Direction of motor rotation 0 = Clockwise rotation 1 = Counterclockwise rotation		1	0	1	
162 n2A	Start backtack speed whenever the backtack can be interrupted by pedal in pos. 0 (neutral) (parameter 164)	RPM	9900	200	600	
163 n2E	End backtack speed whenever the backtack can be interrupted by pedal in pos. 0 (neutral) (parameter 164)	RPM	9900	200	600	
164 StP	Start and end backtack can be interrupted by pedal in pos. 0 (neutral) On/Off		1	0	0	
170 Sr1	Setting the reference position: - Press the E key - Press the >> key. - Turn handwheel until symbol on display goes off. Then set the handwheel to the reference position. - Press the P key twice					
171 Sr2	Setting the needle positions: 1E = Start position 1 2E = Start position 2 1A = End position 1 2A = End position 2	Degrees	359	0	26 319 200 355	
172 Sr3	Display on the control: Pos. 1 bis 1A (LED-segment 5 lights up) Pos. 2 bis 2A (LED-segment 6 lights up)					
172 Sr3	Display on the V810 control panel: Pos. 1 to 1A (left-hand arrow above key 4 On) Pos. 2 to 2A (right-hand arrow above key 4 On)					
172 Sr3	Display on the V820/V850 control panel: Pos. 1 to 1A (left-hand arrow above key 7 On) Pos. 2 to 2A (right-hand arrow above key 7 On)					

Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.																																																												
173 Sr4	<p>Testing of signal inputs and outputs and the keypad on machine head</p> <p>1 Inputs</p> <p>1.1 Inputs to the control</p> <p>By actuating the switches connected to the control, the function of these switches is checked and displayed on the control. With the switch open, OFF appears (only in the control panel of the control) and with the switch closed, the corresponding input in1...i10, i11 (LSM), i12, i13 appears (on the V810/820/850, also the number of the connector socket and pin).</p> <p>1.2 Multiple-function key bar on machine head</p> <p>Upon pressing one of the keys S1...S8, its number appears in the display. On the V810/820/850 also in## and on.</p> <p>2 Outputs</p> <p>2.1 Outputs of control</p> <table><tr><th>Output</th><th>Socket</th></tr><tr><td>Backtacking</td><td>ST2/34</td></tr><tr><td>Sewing foot lifting</td><td>ST2/35</td></tr><tr><td>M1</td><td>ST2/37</td></tr><tr><td>M2</td><td>ST2/28</td></tr><tr><td>M3</td><td>ST2/27</td></tr><tr><td>M4</td><td>ST2/36</td></tr><tr><td>M5</td><td>ST2/32</td></tr><tr><td>M6</td><td>ST2/30</td></tr><tr><td>M7</td><td>ST2/21</td></tr><tr><td>M8</td><td>ST2/24</td></tr><tr><td>M9</td><td>ST2/25</td></tr><tr><td>M10</td><td>ST2/29</td></tr><tr><td>M11</td><td>ST2/31</td></tr></table> <p>2.2 LEDs of the multiple-function key bar on the machine head</p> <table><tr><th>LED</th><th>in/over key</th></tr><tr><td>01</td><td>in S1 (thread monitor)</td></tr><tr><td>02</td><td>in S1 (oil sensor)</td></tr><tr><td>03</td><td>above S2</td></tr><tr><td>04</td><td>above S3</td></tr><tr><td>05</td><td>above S4</td></tr><tr><td>06</td><td>above S5</td></tr><tr><td>07</td><td>above S6</td></tr><tr><td>08</td><td>above S7</td></tr><tr><td>09</td><td>above S8</td></tr><tr><td>10</td><td>in S2</td></tr><tr><td>11</td><td>in S3</td></tr><tr><td>12</td><td>in S4</td></tr><tr><td>13</td><td>in S5</td></tr><tr><td>14</td><td>in S6</td></tr><tr><td>15</td><td>in S7</td></tr></table>	Output	Socket	Backtacking	ST2/34	Sewing foot lifting	ST2/35	M1	ST2/37	M2	ST2/28	M3	ST2/27	M4	ST2/36	M5	ST2/32	M6	ST2/30	M7	ST2/21	M8	ST2/24	M9	ST2/25	M10	ST2/29	M11	ST2/31	LED	in/over key	01	in S1 (thread monitor)	02	in S1 (oil sensor)	03	above S2	04	above S3	05	above S4	06	above S5	07	above S6	08	above S7	09	above S8	10	in S2	11	in S3	12	in S4	13	in S5	14	in S6	15	in S7					
Output	Socket																																																																	
Backtacking	ST2/34																																																																	
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02	in S1 (oil sensor)																																																																	
03	above S2																																																																	
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05	above S4																																																																	
06	above S5																																																																	
07	above S6																																																																	
08	above S7																																																																	
09	above S8																																																																	
10	in S2																																																																	
11	in S3																																																																	
12	in S4																																																																	
13	in S5																																																																	
14	in S6																																																																	
15	in S7																																																																	
174 LnG	Language selection 1 = German 2 = English		2	1	1																																																													
176 Sr6	Service routine for total operating hours display. The process is as with display example of parameter 177.																																																																	

Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.
177 Sr7	Service routine for display of hours since the last service. Display example for the operator control panel: Press the E key → Display Sr7= Press the >> key → Display h t Press the E key → Display 0000 Press the >> key → Display h h Press the E key → Display 0000 Press the E key → Display Min Press the E key → Display 00 Press the E key → Display SEc Press the E key → Display 00 Press the E key → Display MS Press the E key → Display 000 Press the E key → Display rES Press the E key again to restart routine, or press the P key twice to return to operational status Display example for the V810 control panel: Press the E key → Display Sr7 [°] Press the >> key → Display hoUr Press the E key → Display 000000 Press the E key → Display Min Press the E key → Display 00 Press the E key → Display SEc Press the E key → Display 00 Press the E key → Display MSEc Press the E key → Display 000 Press the E key → Display rES F2 Press the P key twice → Display e.g. Ab320A Display example for the V820/V850 control panel: Press the E key → Display F-177 Sr7 [°] Press the >> key → Display hoUr 000000 Press the E key → Display Min 00 Press the E key → Display SEc 00 Press the E key → Display MSEc 000 Press the E key → Display rES F2 Press the P key twice → Display e.g. Ab320A					
178 ci	No function				00000	
179 Sr5	Display of control program number with index and more identification numbers. The data is displayed in sequence by keystroke. Display example for the operator control panel: Press the E key → Display Sr5= Press the >> key → Display e.g. 5211 (prog. no) Press the E key → Display e.g. A (Index) Press the E key → Display e.g. 06 (Year) Press the E key → Display e.g. 10 (Month) Press the E key → Display e.g. 24 (Day) Press the E key → Display e.g. 16 (Hour) Press the E key → Display e.g. -- Press the E key → Display e.g. ---- Press the E key again to restart routine, or press the P key twice to return to operational status					

Technician Level

Code No. 1907

Parameter	Designation	Unit	max	min	Preset	Ind.
179 Sr5	Display example for the operator control panel: Press the E key → Display Sr [°] Press the >> key → Display e.g. 5211A Press the E key → Display e.g. 010823 Press the E key → Display e.g. 15 Press the E key → Display e.g. 1F68 Press the P key twice → Display Ab320A Display example for the V820/V850 control panel: Press the E key → Display F-179 Sr5 [°] Press the >> key → Display e.g. PrG 5211A Press the E key → Display e.g. dAt 01082315 Press the E key → Display e.g. Chk 1F68 Press the E key → Display e.g. 132650210015 Press the E key → Display e.g. Skn 01047543 Press the P key twice → Display 4000 Ab320A					
180 rd	Reversing angle	Degrees	359	0	175	
181 drd	Switch-on delay of reverse motor rotation	ms	990	0	10	
182 Frd	Reverse motor rotation On/Off		1	0	0	
183 FFm	Disabling of flip-flop functions at the seam end 0 = Flip-flop 1 (M6) and flip-flop 2 (M10) not disabled at the seam end 1 = Flip-flop 1 (M6) disabled at the seam end 2 = Flip-flop 2 (M10) disabled at the seam end 3 = Flip-flop 1 (M6) and flip-flop 2 (M10) disabled at the seam end		3	0	0	
185 chP	Minimum number of stitches for high lift for walking foot	Stitches	254	0	0	
186 FFi	Function "speed limitation n11" 0 = Speed limitation n11 On, when signal M10 is On. Speed limitation n11 Off, when signal M10 is Off. 1 = Speed limitation n11 Off, when signal M10 is On. Speed limitation n11 On, when signal M10 is Off.		1	0	1	
187 FFo	Function of signal M10 after "power On" (flip-flop 2) on socket ST2/29 0 = Signal M10 Off / speed limitation n11 according to setting of parameter 186 1 = Signal M10 On / speed limitation n11 according to setting of parameter 186		1	0	1	

6.3 Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
200 t1	Delay until speed release after start backtack	ms	500	0	100	
201 t2	Sewing foot switch-on delay after thread wiper with half heelback	ms	500	20	80	
202 t3	Start delay after disabling the sewing foot lifting signal	ms	500	0	50	
203 t4	Time of full power of sewing foot lifting	ms	600	0	500	
204 t5	Holding power for sewing foot lifting 1...100% 1% → low holding power 100% → high holding power	%	Pa.254	1	40	
205 t6	Thread wiper time	ms	2550	0	120	
206 t7	Delay from end of thread wiper until sewing foot lifting On	ms	800	0	40	
207 br1	Braking effect when varying the preset value ≤ 4 stages (indicated values only with transmission ratio 1:1)		55	1	20	
208 br2	Braking effect when varying the preset value ≥ 5 stages (indicated values only with transmission ratio 1:1)		55	1	30	
209 dFw	Thread wiper switch-on delay	ms	2550	0	0	
210 tSr	Stop time for switching the stitch regulator in the ornamental backtack	ms	500	0	140	
211 tFL	Sewing foot lifting switch-on delay with thread wiper off	ms	500	0	60	
212 t10	Time of full power of backtacking or thread trimmer forward	ms	600	0	500	
213 t11	Holding power for backtacking or thread trimmer backward 1...100% 1% → low holding power 100% → high holding power	%	Pa.255	1	40	
216 FLS	Fast de-excitation of foot lifting solenoid On/Off		1	0	1	
217 Sr	Number of operating hours before service in steps of 10 (operating hours recording enabled if set at "0").	Std	99900 ***)	00000	00000	
219 br3	Braking power at stop of the drive		55	1	10	
220 ALF	Accelerating power of the drive (indicated values only with transmission ratio 1:1)		55	1	10	
221 dGn	Speed gate 1	RPM	990	50	100	
222 tGn	Speed gate damping period (effective only if parameter 224 = 0)	ms	990	0	20	
223 dG2	Speed gate 2	RPM	6500	200	1600	
224 dGF	Speed gate 2 On/Off		1	0	1	
225 br4	Setting the braking curve for the light barrier and machine run blockage (values only with transmission ratio 1:1)		55	1	55	
229 dF	Delay of heelback (-2)	ms	2000	0	0	B
231 Sn1	Execution of the first stitch after Power On at positioning speed		1	0	0	
234 PdO	New start after machine run blockage 0 = New start after disabling machine run blockage without influence by the pedal (e. g. with automats) 1 = New start after disabling machine run blockage only if pedal in pos. 0		1	0	1	
238 EnP	Software debouncing for all inputs: 0 = No debouncing 1 = Debouncing		1	0	1	
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.		98	0	0	

***) The 4-digit value displayed must be multiplied by 10.

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
240 in1	Selection of the input functions on socket ST2/7 for input 1 0 = No function 1 = Needle up/down 2 = Needle up. 3 = Single stitch (basting stitch) 4 = Full stitch 5 = Needle to position 2 6 = Machine run blockage effective with open contact 7 = Machine run blockage effective with closed contact 8 = Machine run blockage unpositioned effective with open contact 9 = Machine run blockage unpositioned effective with closed contact 10 = Automatic speed n12 without pedal (N.O. contact) 11 = Limited speed n12 pedal controlled. (see parameter 266). 12 = Sewing foot lifting with pedal in position 0 (neutral). 13 = High lift for walking foot with speed limitation n10 (operational mode not stored) 14 = High lift for walking foot (flip-flop 1) with speed limitation n10. Set parameter 137 to 1. 15 = No function 16 = Intermediate backtack / intermediate stitch condensing 17 = Stitch regulator suppression / recall. 18 = No function 19 = Reset bobbin thread monitor if parameter 030 = >0. 20 = Move to target position in direction of rotation, according to setting of parameter 161 and 062 = 1 21 = Move to target position against direction of rotation, according to setting of parameter 161 and 062 = 1 22 = Speed limitation n11 (flip-flop 2). Output ST2/29 is enabled according to setting of parameter 186. 23 = No function 24 = Stop function (see instruction manual) 25 = Speed limitation with ext. potentiometer On/Off (see parameter 126) 26 = No function 27 = No function 28 = External light barrier (according to setting of parameter 131). 29 = No function 30 = High lift for walking foot, if sewing foot is On. 31 = Function "speed limitation bit0" (speed n11) 32 = Function "speed limitation bit1" (speed n10) (bit0 + bit1 = speed n9). 33 = Speed n9 pedal controlled. 34 = Automatic speed n9 can be suspended by pressing the pedal to pos. 0 (neutral). 35 = Automatic speed n9 can be interrupted by pressing the pedal to pos. -2. 36 = Automatic speed n9 without pedal. 37 = Speed n12 pedal controlled (break contact) 38 = Automatic speed n12 without pedal (break contact [N.C.]) 39 = Switch to the next pattern in TEACH IN. 40 = Switch back to the previous pattern in TEACH IN. 41 = No function 42 = No function 43 = No function		98	0	14	

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
240 in1	44 =Function like pressing the pedal to pos. -2 45 =Positioned stop, machine run blockage and sewing foot lifting 46...47 = No function 48 =Signal A1 is issued 49 =Signal A1 switchable as flip-flop 50 =No function 51 =Signal A2 is issued 52 =Signal A2 switchable as flip-flop 53 =No function 54 =Function like pressing the pedal to step 12. If start backtack or softstart is enabled, it will be performed. 55 =Reversal of the direction of rotation 56 =2. Sensor for bobbin thread monitoring (see F-835) 57 =Sensor for bobbin thread monitoring (see F-835) 58...65 = No function 66 =Thread trimming is suppressed 67 =Thread trimming and backtacking are suppressed 68 =Interruption of seam in TEACH IN and switch to next seam 69 =Interruption of seam in TEACH IN and switch to preceding seam 70 =No function 71 =No function 72 =Switching of basic position (see F-329) 73...76 = No function 77 =Switch stitch length flip-flop 78...83 = No function 84 =Move toward reference point 85 =Reference point reached 86...89 = No function 90 =Sensor for zig-zag position (see F-040) 91 =No function 92 =No function 93 =Threading in 94 =Multifunction keys (programmable) 95 =Multiple backtack 96 =Backtack disabling of all automatic backtacking 97 =Single stitch backwards 98 =Edge trimmer On/Off					
241 in2	Selection of input function on socket ST2/11 for input 2 0 = No function All other functions of the keys as with parameter 240		98	7	0	
242 in3	Selection of input function on socket ST2/6 for input 3 0 = No function All other functions of the keys as with parameter 240		98	0	0	
244 in5	Selection of input function on socket ST2/5 for input 5 0 = No function All other functions of the keys as with parameter 240		98	56	0	
245 in6	Selection of input function on socket ST2/12 for input 6 0 = No function All other functions of the keys as with parameter 240		98	31	0	
246 in7	Selection of input function on socket ST2/9 for input 7 0 = No function All other functions of the keys as with parameter 240		98	0	49	
247 in8	Selection of input function on socket ST2/10 for input 8 0 = No function All other functions of the keys as with parameter 240		98	0	0	

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
248 in9	Selection of input function on socket ST2/13 for input 9 0 = No function All other functions of the keys as with parameter 240		98	0	57	
249 i10	Selection of input function on socket ST2/14 for input 10 0 = No function All other functions of the keys as with parameter 240		98	0	0	
250 iFA	Thread trimmer activation angle	Degrees	359	0	192	
251 FSA	Switch-off delay of thread tension release	ms	990	0	117	
252 FSE	Switch-on delay angle of thread tension release	Degrees	359	0	130	
254 EF	Stop time for thread trimmer Upper limit (pa. 204) duty ratio for sewing foot lifting 1...100	%	100	1	100	
255 EV-	Stop time for thread trimmer 213) duty ratio for backtacking/thread trimmer backward 1...100	%	100	1	100	
259 FAE	Switch-on delay angle of the thread trimmer	Degrees	359	0	69	
260 ihr	Number of steps (increments) for position change for each key press	Incr.	500	0	20	
261 nhr	Speed during target stitch/needle position move by key	RPM	150	30	30	
262 dhr	Delay time with key held until continuous change in position	ms	2550	0	500	
269 PSv	Positioning shift	Incr.	100	0	15	
270 PGm	Connection of a position sensor, e.g. Hall sensor module or light barrier to socket B18/7. 0 = The positions are generated using the transmitter incorporated in the motor and can be set using parameter 171 1 = Setting the sensor to position 2. Set position 1 using parameter 171. Start measuring from leading edge position 2. 2 = Setting the sensor to position 2. Set position 1 using parameter 171. Start measuring from trailing edge position 2. 3 = Setting the sensor to position 1. Set position 2 using parameter 171. Start measuring from leading edge position 1. 4 = Setting the sensor to position 1. Set position 2 using parameter 171. Start measuring from trailing edge position 1. 5 = No position sensor available. The drive stops unpositioned. The thread trimmer function is suppressed with this setting. 6 = The positions are determined by preset values. If necessary, the reference position must be set and the position angle preset values corrected.		6	0	6	
272 trr	Transmission ratio between motor shaft and machine shaft (calculation formula see instruction manual!) The transmission ratio should be determined and indicated as precisely as possible!		9999	015	993	
290 FAm	Selection of machine specific mode 0 = Lockstitch: Pfaff model 2235 Premium »Slide-in strip for V810/V820(V850) = 1/1 « 1 = Lockstitch: Pfaff model 2545, 2546 »Slide-in strip for V810/V820(V850) = 1/1 «		1	0	1	

Supplier Level

Code No. 3112

NOTE

A connected V810 or V820/V850 control panel is sensed and assigned to the corresponding slide-in strip number. Should a different strip be inserted, it can be selected using parameter 291 and 292, respectively. The setting is retained until the next mode change.

Parameter	Designation	Unit	max	min	Preset	Ind.
291 810	Select the slide-in strip number for the V810 control panel (illustration see chapter "Slide-in strip for V810/V820/V850"). At setting 0 , keys 1...4 are disabled.		9	0	1	
292 820	Select the slide-in strip number for the V820/V850 control panel (illustration see chapter "Slide-in strip for V810/V820/V850"). At setting 0 , keys 1...0 are disabled.		12	0	1	
293 tF1	Selection of the input function using key (A) "F1" on the V810/V820/V850 control panel 0 = Key F1 is disabled 1 = Needle up/down 2 = Needle up 3 = Single stitch (basting stitch) 4 = Full stitch 5 = Needle to position 2 6...12 = No function 13 = High lift for walking foot with speed limitation n10 (operational mode not stored) 14 = High lift for walking foot with speed limitation n10 (operational mode stored) 15 = No function 16 = Intermediate backtack/intermediate stitch condensing 17 = Stitch regulator suppression / recall 18 = No function 19 = Reset bobbin thread monitor if parameter 030 = >0 20..68 = No function 69 = Return to last seam (TEACH IN) 70 = No function 71 = No function 73..74 = No function 99 = Reset part counter 100 = Day counter/Total counter display		100	0	17	B B
294 tF2	Selection of the input function using key (B) "F2" on the V810/V820/V850 control panel Functions of the key as with parameter 293, but at setting 0 key F2 is disabled.		100	0	1	
299 nrS	Stitch locks speed	RPM	3000	150	400	B
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	5	
301 So1	Signal A1 is issued 0 = Signal until seam end (according to setting of parameter 320) 1 = Signal over time 2 = Signal until seam end and drive stops 3 = Signal during stitch counting (according to setting of parameter 309) 4 = Signal A1 as puller function		4	0	4	

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
302 tr1	Starting point for signal A1 0 = Start at the beginning of the seam 1 = Start of the signal triggered by light barrier sensing 2 = Start of the signal when the drive stops at the seam end 3 = Start from light barrier covered onwards at the beginning of the seam 4 = Signal A1 switchable only manually		4	0	0	
303 do1	Delay of signal A1 0 = No delay until signal On 1 = Delay over time until signal On 2 = Delay over stitches until signal On		2	0	0	
304 dt1	Delay time until signal A1 On	ms	2550	0	0	
305 St1	ON period of signal A1	ms	2550	0	0	
306 nA1	Speed mode when signal A1 is On 0 = Pedal controlled speed 1 = Limited speed n9 2 = Limited speed n11		2	0	0	
307 A1	Signal A1 On/Off		1	0	1	
308 dA1	Stitches delaying signal A1	Stitches	999	0	0	
309 cA1	Stitch counting during signal A1	Stitches	999	0	0	
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	
311 So2	Issue signal A2 0 = Signal until seam end (according to setting of parameter 320) 1 = Signal over time 2 = Signal until seam end and drive stops 3 = Signal during stitch counting (according to setting of parameter 319) 4 = Signal A2 as puller function		4	0	0	
312 tr2	Starting point for signal A2 0 = Start at the beginning of the seam 1 = Start of the signal triggered by light barrier sensing 2 = Start of the signal when the drive stops at the seam end 3 = Start from light barrier covered onwards at the beginning of the seam 4 = Signal A2 switchable only manually		4	0	0	
313 do2	Delay of signal A2 0 = No delay until signal On 1 = Delay over time until signal On 2 = Delay over stitches until signal On		2	0	1	
314 dt2	Delay time until signal A2 On	ms	2550	0	0	
315 St2	ON period of signal A2	ms	2550	0	0	

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

0256/BILD3

NA = Start of seam

LS = Light barrier bright or dark on seam end

LS-D = Light barrier uncovered → covered (parameter 131 = 1 and parameter 132 = 0)

NE = Seam end

FA-E = End thread trimming operation

P=0 = Pedal in pos. 0 (neutral)

St = Stitches

Parameter 320 = 0 → Signals enabled according to setting of parameter 301/311.**Parameter 320 = 1** → Signals enabled until pedal is in pos. 0 (neutral).

1) Seam end after stitch counting or light barrier sensing

2) Seam end after pedal in pos. -2

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

0256/BILD4

See above for explanation of letter symbols.

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
316 nA2	Speed mode when signal A2 is On 0 = Pedal controlled speed 1 = Limited speed n9 2 = Limited speed n11		2	0	0	
317 A2	Signal A2 On/Off		1	0	0	
318 dA2	Stitches delaying signal A2	Stitches	999	0	0	
319 cA2	Stitch counting during signal A2	Stitches	999	0	0	
320 bP0	Switch-off time of signals A1 and A2 0 = Signals effective until seam end 1 = Signals effective until pedal is in pos. 0 (neutral)		1	0	0	
321 Std	Suppression of the seam when 0 stitches are set 0 = Suppression Off 1 = Suppression On		1	0	0	
322 dkn	0 = Correction seam Off 1 = Correction seam On 2 = Interruption of seam or pattern by thread trimmer 3 = Interruption of seam or pattern by thread trimmer, for plug program in TEACH-IN		3	0	0	
323 FLn	0 = Sewing foot is not lifted after power On 1 = Sewing foot is lifted after power On This function is only active when TEACH-IN is on		1	0	0	
324 ti	0 = TEACH IN Off. 1 = TEACH IN On. TEACH IN programming is possible only with V820/V850. Execution of the program is also possible without the V820/V850 control panel.		1	0	0	

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
325 cti	Erasing all TEACH IN data - Input code number 3112 after power On - Press the E key - Input parameter 325 - Press the E key - Input 3112 - Press the P key - The display briefly shows "deleted", and a short acoustic signal is issued. - Press the P key - all TEACH IN programs have been erased!					
326 EPE	Disabling the P and E keys on the control panels and the P key on the control 0 = The P and E keys are Off 1 = The P key is On and the E key is Off 2 = The P key is Off and the E key is On 3 = The P and E keys are On		3	0	3	
327 EPm	Disabling the + and - on the control panels		1	0	1	
328 ob	Disabling the + and - on the control panels 0 = Key + and key - off 1 = Keys + and - are On					
329 UGr	Functions of input switching of basic position 0 = Function off 1 = If input is active, set basic position 1. If input is inactive, the control or control panel setting is effective. 2 = If input is active, set basic position 2. If input is inactive, the control or control panel setting is effective. 3 = If input is active, set basic position 1. If input is inactive, set basic position 2. 4 = The basic position changes with each keystroke.		1	0	1	
330 kA1	Coupled signal A1 and sewing foot lifting or backtacking 0 = Coupling off 1 = Coupling with sewing foot lifting 2 = Coupling with backtacking 3 = Coupling with sewing foot lifting and backtacking		3	0	0	
331 A1I	Signal A1 inverted		1	0	1	
335 kA2	Coupled signal A2 and sewing foot lifting or backtacking 0 = Coupling off 1 = Coupling with sewing foot lifting 2 = Coupling with backtacking 3 = Coupling with sewing foot lifting and backtacking		3	0	0	
336 A2I	Signal A2 inverted		1	0	0	
340 1L	Lower switching threshold of input IN1	%	100	0	30	
341 1L	Upper switching threshold of input IN1	%	100	0	80	
342 2L	Lower switching threshold of input IN2	%	100	0	30	
343 2h	Upper switching threshold of input IN2	%	100	0	80	
344 3L	Lower switching threshold of input IN3	%	100	0	30	
345 3h	Upper switching threshold of input IN3	%	100	0	80	
346 4L	Lower switching threshold of input IN4	%	100	0	30	
347 4h	Upper switching threshold of input IN4	%	100	0	80	
348 5L	Lower switching threshold of input IN5	%	100	0	30	
349 5h	Upper switching threshold of input IN5	%	100	0	80	
350 6L	Lower switching threshold of input IN6	%	100	0	30	
351 6h	Upper switching threshold of input IN6	%	100	0	80	

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
352 7L	Lower switching threshold of input IN7	%	100	0	30	
353 7h	Upper switching threshold of input IN7	%	100	0	80	
354 8L	Lower switching threshold of input IN8	%	100	0	30	
355 8h	Upper switching threshold of input IN8	%	100	0	80	
356 9L	Lower switching threshold of input IN9	%	100	0	30	
357 9h	Upper switching threshold of input IN9	%	100	0	80	
358 10L	Lower switching threshold of input IN10	%	100	0	30	
359 10h	Upper switching threshold of input IN10	%	100	0	80	
360 11L	Lower switching threshold of input LSM	%	100	0	30	
361 11h	Upper switching threshold of input LSM	%	100	0	80	
362 15V	Switch +5V/+15V on B18 0 = +5V 1 = +15V		1	0	0	
370 n2	Direct input of maximum speed	RPM	F-111	F-121	Display	
371 SOP	Speed: "move toward reference point"	RPM	1000	70	100	
372 dOP	Direction of rotation: "move toward reference point" 0 = Clockwise rotation 1 = Counterclockwise rotation		1	0	0	
373 MOP	Mode "move toward reference point" 0 = Run until input active 1 = Run until input active and again inactive 2 = Run until input active and again inactive then move toward motor reference point		2	0	0	
396 FSL	Speed reference setting by frequency On/Off		1	0	0	
399 cFP	Delete all compiler data (code input required)					
401 EEP	Immediate storage of all changed data - Input code number 3112 after power On - Press the E key - Input parameter 401 - Press the E key - Set display from 0 to 1 - Press the E or P key - All data are stored		1	0	0	
436 An2	Activation of analog input 2 (0 = inactive, 1 = active)		1	0	0	
467 MOT	Selection of motor 1 = DC1500 2 = DC1550		2	1	1	
500 Sir	Recall of Fast Installation Routine (SIR) (see chapter "Fast Installation Routine (SIR)")					
501	High lift for walking foot - measurement value of potentiometer for minimum lift		255	0	Machine-dependent	
502	High lift for walking foot - measurement value of potentiometer for maximum lift		255	0	Machine-dependent	
503 Pot	Speed Limitation Depending on High Lift 0 = deactivated 1 = activated		1	0	1	
510	Transfer parameter settings from control to Memory Stick					
511	Transfer parameter settings from Memory Stick to control					
512	Compare control and Memory Stick parameter settings					
513	Delete parameter setting file from Memory Stick					
514	Transfer array data from control to Memory Stick					
515	Transfer array data from Memory Stick to control					
516	Compare control and Memory Stick array data					
517	Delete array file from Memory Stick					
518	Transfer seam pattern from control to Memory Stick					
519	Transfer seam pattern from Memory Stick to control					
520	Compare control and Memory Stick seam pattern					
521	Delete seam pattern file from Memory Stick					
523	Transfer compiler program from Memory Stick to control					
526	Transfer control software from control to Memory Stick					
527	Transfer control software from Memory Stick to control					
528	Compare control and Memory Stick control software					
529	Delete control software file from Memory Stick					

Supplier Level

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind.
550 in12	Selection of input function on socket B22/3 for input 12 0 = No function All other functions of the keys as with parameter 240		98	0	0	
551 in13	Selection of input function on socket B22/4 for input 13 0 = No function All other functions of the keys as with parameter 240		98	0	0	
835 PFw	Mode of bobbin thread monitoring via sensor 0 = Function Off 1 = Stop after bobbin thread stitch counting 2 = No stop after bobbin thread stitch counting 3 = Like mode 1, but for two bobbin thread monitoring sensors. 4 = Like mode 2, but for two bobbin thread monitoring sensors.		4	0	0	
836 cPF	Number of stitches for the bobbin thread stitch count		9990	0	0	
840 S1	Selection of function for key 1 (multifunction key) on multiple-function key bar on machine head. 0 = No function All other functions of the keys as with parameter 240		98	0	94	
841 S2	Like parameter 840, for key 2		98	0	16	
842 S3	Like parameter 840, for key 3		98	0	1	
843 S4	Like parameter 840, for key 4		98	0	14	
844 S5	Like parameter 840, for key 5		98	0	17	
845 S6	Like parameter 840, for key 6		98	0	22	
846 S7	Like parameter 840, for key 7		98	0	93	
847 S8	Like parameter 840, for key 8		98	0	24	
850 reS	Reset function - 3112 = Reset all parameters to values of mode 1 (also those changed by the compiler and/or teach-in) - 1012 = Reset of all parameters except 290, reference position, needle positions, 161, 250, 252, 259, 270, and 272 - 1304 = "Cold start" - reset of all parameters except 290 (also those changed by teach-in) - 3250 = Reset of all parameters changed by teach-in (like parameter 325) - 5580 = Formatting of top part detection module					

7 Error Displays

On the control	On the V810	On the V820/V850	Signification
General Information			
A1	InF A1	InF A1	Pedal not in neutral position when turning the machine on
A2	-StoP- blinking	-StoP- blinking + symbol display	Machine run blockage
A3	InF A3	InF A3	Reference position is not set
A6	InF A6	InF A6	Light barrier monitoring
A7	Symbol blinking	Symbol blinking	Bobbin thread monitor
A8	InF A8	InF A8	No stepping motor control connected
A500	FileFI	File Full	Max. number of files (99) on Memory Stick exceeded
A501	noFile	noFile	File not found on Memory Stick
A503	not EQ	not EQ	Data on Memory Stick and in the control is not equal
C1	InF C1	InF C1	Operating hours counter has reached or exceeded the service time
C2			Fatal exception error
C3			Program error
Programming Functions and Values (Parameters)			
Returns to 0000 or to last parameter number		Like V810 + display InF F1	Wrong code or parameter number input
Serious Condition			
E1	InF E1	InF E1	The external pulse encoder e.g. IPG... is defective or not connected
E2	InF E2	InF E2	Line voltage too low, or time between power Off and power On too short
E3	InF E3	InF E3	Machine blocked or does not reach the desired speed
E4	InF E4	InF E4	Control disturbed by deficient grounding or loose contact
E7	InF E7	InF E7	24 V power supply unit overload
E8	InF E8	InF E8	Too much data for the EEPROM or flash memory
E9	InF E9	InF E9	EEPROM or flash memory defective
E10	InF E10	InF E10	Short-circuit on output (output FL, VR, M1, M2, M3, M4 or M10)
E11	InF E11	InF E11	Thermal overload of output stage transistor
E12	InF E12: 003	InF E12: 003	Short-circuit on output M5
E12	InF E12: 004	InF E12: 004	Short-circuit on output M9
E12	InF E12: 005	InF E12: 005	Short-circuit on output M11
E12	InF E12: 006	InF E12: 006	Short-circuit on output M7
E12	InF E12: 008	InF E12: 008	Short-circuit on output M8
E12	InF E12: 009	InF E12: 009	Short-circuit on output M6
Programming and Data Transfer			
F1	InF F1	InF F1	Parameter unavailable; wrong code number
F3	InF F3	InF F3	Wrong thread trimming mode selected in TEACH IN
F4	InF F4	InF F4	Invalid slide-in strip selected in TEACH IN
F5	InF F5	InF F5	TEACH IN, wrong program number when switching from one program to the next
F6	InF F6	InF F6	TEACH IN, too much data in EEPROM
F7	InF F7	InF F7	RS232 timeout
F8	InF F8	InF F8	RS232, error in data transfer, NAK received

Hardware Disturbance			
H1	InF H1	InF H1	Commutation transmitter cord or frequency converter disturbed
H2	InF H2	InF H2	Processor disturbed
Free Programming			
U1	InF U1	InF U1	Compiler, invalid code, unknown command
U2	InF U2	InF U2	Invalid system function
U3	InF U3	InF U3	Invalid input/output number
U4	InF U4	InF U4	Too many user variables
U5	InF U5	InF U5	Too many system variables
U6	InF U6	InF U6	User program too large for memory
U7	InF U7	InF U7	Invalid or undefined key in Variocontrol
U8	InF U8	InF U8	Unknown device address
U9	InF U9	InF U9	Fatal exception error

For your notes:

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