

Efka vario dc

CONTROL

DA82GV3209

PARAMETER LIST

No. 0402070

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.**

OPERATOR LEVEL

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
F-000 Arv	Start backtack stitches forward		254	0	2	C
F-001 Arr	Start backtack stitches backward		254	0	4	C
F-002 Err	End backtack stitches backward		254	0	2	C
F-003 Erv	End backtack stitches forward		254	0	2	C
F-004 LS	Light barrier compensating stitches		254	0	6	C
F-005 LSF	Number of stitches of the light barrier filter for knitted fabrics		254	0	0	C
F-006 LSn	Number of light barrier seams		15	1	1	C
F-007 Stc	Stitches for the seam with stitch counting		254	0	10	C
F-008 -F-	Setting of pushbutton 3 with a parameter from the technician level 1 = Softstart ON/OFF 2 = Ornamental backtack ON/OFF 3 = High lift walking, operating mode stored=ON/operating mode not stored =OFF 4 = Needle cooling ON/OFF 5 = Reversion ON/OFF		5	1	2	C

Note: On the operator level, the parameter number (F-xxx) is not shown on the display, but only the abbreviation (e.g. ARV) and the actual value (e.g. 004 - for 4 stitches).

OPERATOR LEVEL

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
F-009 LSI	Sensitivity adjustment of the transmitted light barrier (only with V740) Levels 1-7 (fabric ply sensing) can be recalled by means of pushbutton L. Sensitivity separately adjustable for each level by means of pushbuttons +/-. Level 8 (edge sensing) is adjustable only on the technician level (F-009).		255	0	16	C
F-010 cLS	Number of light barrier compensating stitches with stitch length reduction		254	0	8	C
F-080 SAV	Number of start ornamental backtack stitches forward		254	0	3	C
F-081 SAR	Number of start ornamental backtack stitches backward		254	0	3	C
F-082 SER	Number of end ornamental backtack stitches backward		254	0	3	C
F-083 SEV	Number of end ornamental backtack stitches forward		254	0	3	C
F-084 cFW	Number of stitches of the bobbin thread monitor stitch counting		2540	0	0	C
F-085 SFW	Stop after the bobbin thread monitor stitch counting	on/off			on	C
F-086 tFA	Stop time for the thread trimmer	ms	500	0	0	C

Note: On the operator level, the parameter number (F-xxx) is not shown on the display, but only the abbreviation (e.g. ARV) and the actual value (e.g. 004 - for 4 stitches).

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 0 Stitches/Countings						
F-100 SSc	Softstart stitches		20	0	2	C
Group 1 Speeds						
F-110 n1	Positioning speed	RPM	390	70	150	C
F-111 n2-	Upper limit of the maximum speed (n-maxmax)	RPM	5000	n2_	4000	C
F-112 n3	Start backtack speed	RPM	3000	200	1500	C
F-113 n4	End backtack speed	RPM	3000	200	1500	C
F-114 n5	Speed after light barrier sensing	RPM	3000	200	1500	C
F-115 n6	Softstart speed	RPM	1500	70	800	C
F-116 n7	Trimming speed	RPM	500	70	150	C
F-117 n10	High lift walking speed = speed limitation (DB2000)	RPM	2500	400	2000	C
F-118 n12	Automatic/ stitch counting speed, depending on speed mode	RPM	5000	400	1500	C
F-119 nSt	Speed stage graduation 1 = linear 2 = slightly progressive 3 = highly progressive		3	1	2	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 2 Speeds and Switching Functions						
F-121 n2_	Lower limit of the maximum speed (n-maxmin)	RPM	n2-	400	400	C
F-128 ASd	Start delay, when starting command is given by covering the light barrier (only if F-129 = on)	ms	2000	0	0	C
F-129 ALS	<p>Automatic start with light barrier; machine start by covering the light barrier, without previously heeling the pedal back to the basic position</p> <p>Additional prerequisites:</p> <ul style="list-style-type: none"> - F-132 = on - Function light barrier sensing switched on at the control panel - Initiation of the <u>first</u> seam section "normal" (Pedal in basic position) - Cover light barrier - Push pedal forward - Keep pedal pushed forward <p>Deactivate this function by heeling the pedal back to the basic position.</p>	on/off			off	C
Group 3 Switching Functions						
F-130 LSF	Light barrier filter for knitted fabrics	on/off			off	C
F-131 LSD	Light barrier sensing "uncovered" (on) / "covered" (off)	on/off			on	C
F-132 LSS	Blocking of machine start, when light barrier "uncovered"	on/off			on	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 3 Switching Functions						
F-133 LSE	Thread trimming, when completing the seam by light barrier sensing	on/off			on	C
F-134 SSt	Softstart	on/off			on	C
F-135 SrS	Ornamental backtack	on/off			off	C
F-136 FAr	Trimming stitch backward	on/off			off	C
F-138 hPr	High lift walking operating mode stored/not stored	on/off			off	C
F-139 nIS	Display of machine speed	on/off			on	C
Group 4 Switching Functions						
F-140 nh1	Mode needle up/down needle up /down (pushbutton on ST2/6) 1 = Needle up 2 = Needle up/down 3 = Single stitch 4 = Single stitch with stitch length reduction		4	1	1	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 4 Switching Functions						
F-141 SGn	<p>Speed mode for a seam with stitch counting</p> <p>0 = speed can be controlled by the pedal up to the set maximum speed (F-111)</p> <p>1 = fixed speed (F-118) without influence by the pedal (Machine stop by heeling the pedal back to the basic position)</p> <p>2 = limited speed can be controlled by the pedal up to the set limit (F-118)</p> <p>3 = with fixed speed (F-118), can be interrupted by full heelback</p>		3	0	1	C
F-142 SFn	<p>Speed mode for the free seam and for the seam with light barrier</p> <p>0 = speed can be controlled by the pedal up to the set maximum speed (F-111)</p> <p>1 = fixed speed (F-118) without influence by the pedal (Machine stop by heeling the pedal back to the basic position)</p> <p>2 = limited speed can be controlled by the pedal up to the set limit (F-118)</p> <p>3 = with fixed speed (F-118), can be interrupted by full heelback (only in conjunction with light barrier on, otherwise as in mode 0)</p>		3	0	0	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 4 Switching Functions						
F-143 MnF	Mode pushbutton speed limitation (DB2000) (pushbutton on ST2/9) 1 = Speed limited (n10) (DB2000) 2 = Speed fixed (n10)		2	1	1	C
F-144 nh2	Mode pushbutton needle up/down (pushbutton on B3/1) 1 = Needle up 2 = Half stitch 3 = Single stitch 4 = Single stitch with stitch length reduction		4	1	4	C
F-145 StL	Stitch length reduction with speed limitation (pushbutton on B372) 1 = Stitch length reduction without speed limitation 2 = Stitch length reduction with speed limitation (DB2000) 3 = Stitch length reduction with speed limitation (DB3000)		3	1	1	C
F-146 MFd	Reduction of pressure foot pressure with speed limitation (pushbutton on B3/4) 1 = Reduction of pressure foot pressure with speed limitation (DB2000) 2 = Reduction of pressure foot pressure with speed limitation (DB3000)		2	1	1	C
F-147 Fc3	Function of the pushbutton on B3/3 1 = Reduction of thread tension 2 = Backtack suppression/recall		2	1	1	C

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Group 4 Switching Functions						
F-148 Fc5	Function of the pushbutton on B3/5 1 = Speed limitation (DB3000) 2 = Intermediate backtack		2	1	1	C
F-149 Fc6	Function of the pushbutton on B3/6 1 = High lift walking 2 = Reduction of thread tension		2	1	1	C
Group 5 Time Functions						
F-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	C
F-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	C
F-152 thP	Run-out time of the high lift walking speed after switching off the high lift walking	ms	500	80	100	C
F-153 brt	Braking power at machine standstill	ms	50	0	6	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 6 DC Motor						
F-161 drE	Direction of rotation of the motor 0 = clockwise rotation (cw) 1 = counterclockwise rotation (ccw)		1	0	1	C
Group 7 Service Functions						
F-170 Sr1	Setting of the reference position (Position 0) = Thread lever right before the bottom dead center (position D on the handwheel)					C
F-171 Sr2	Setting of the needle positions 1 = needle behind the bottom dead center, initiation of thread trimming 1A = internal switching point (within the program) 2 = thread lever before the upper dead center, end of trimming sequence 2A = internal switching point (within the program) The positions 3 and 3A are to be set to 000		510	0	416 472 154 230	C C C C
F-172 Sr3	Display of the position windows Position 1 to 1A (LED next to pushbutton 1 lights up) Position 2 to 2A (LED next to pushbutton 2 lights up)					C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 7 Service Functions						
F-173 Sr4	Checking of the power and signal outputs by pressing the pushbuttons on the Variocontrol					C
Sr4	Pushbutton 1 = Backtacking Pushbutton 2 = Presser foot lifting Pushbutton 3 = Thread trimmer Pushbutton 4 = Thread wiper Pushbutton 5 = Stitch length reduction Pushbutton 6 = Thread tension release Pushbutton 7 = Reduction of thread tension Pushbutton 8 = Needle cooling/under-edge trimmer Pushbutton 9 = not used Pushbutton 0 = Switch to 4_1 to check further outputs		ST2/34, B4/6 ST2/35 ST2/37 ST2/27 ST2/30 ST2/36, B4/5, B5/5 ST2/20 ST2/28			
4_1	Pushbutton 1 = Motor running Pushbutton 2 = High lift walking Pushbutton 3 = - Pushbutton 4 = LED single stitch with stitch length reduction Pushbutton 5 = LED stitch length reduction with speed limitation Pushbutton 6 = - Pushbutton 7 = LED high lift limitation Pushbutton 8 = not used Pushbutton 9 = not used Pushbutton 0 = Switch to 4_2 to check further outputs		ST2/26 ST2/32 ST2/22 B3/9 B3/10 ST2/18 ST2/31			

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
4_2	Pushbutton 1 = LED reduction of pressure foot pressure		B3/12			
	Pushbutton 2 = LED reduction of thread tension/back-tack suppression/recall		B3/11			
	Pushbutton 3 = Reduction of pressure foot pressure		B3/12			
	Pushbutton 4 = LED bobbin thread monitor left		ST2/23			
	Pushbutton 5 = Flip-flop		B5/6			
	Pushbutton 6 = LED high lift limitation/reduction of thread tension		B3/14			
	Pushbutton 7 = LED backtack suppression/recall		ST2/24			
	Pushbutton 8 = LED speed limitation 3000/intermediate backtack (works only in conjunction with pushbutton on B3/5)		B3/13			
	Pushbutton 9 = not used					
	Pushbutton 0 = Switch to 4_3 to check further outputs					
4_3	Pushbutton 1 = LED stitch length reduction		ST2/29			
	Pushbutton 2 = -		ST2/17			
	Pushbutton 3 = -		ST2/16			
	Pushbutton 4 = -		ST2/15			
	Pushbutton 5 = not used					
	Pushbutton 6 = not used					
	Pushbutton 7 = not used					
	Pushbutton 8 = not used					
	Pushbutton 9 = not used					
	Pushbutton 0 = Switch to SR4 to check further outputs					

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
	Test of inputs (external pushbuttons and switches) By actuating the switches connected to the control the function of these switches is checked and displayed with "on/off".					C
F-174	Mechanical adjustment of light barrier					C
F-178	Language selection				dEU--USA ESP--Fra	C
F-179	Display of the program number with index (top line) and identification number (bottom line)					C
Group 8 Functions for Specific Types						
F-180 Ird	Number of reversion increments		400	10	20	C
F-181 drd	Activation delay for reversion	ms	990	0	20	C
F-182 Frd	Reversion	on/off			off	C
F-183 dnk	Switch-off delay of needle cooling after stop	ms	5000	0	2500	C
F-184 chP	Minimum number of stitches in high lift walking		100	0	0	C
F-185 Fnk	Function of the output needle cooling/under-edge trimmer 1 = Needle cooling 2 = Under-edge trimmer		2	1	1	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 9 Functions for Specific Types						
F-190 iFA	Switch-on angle of thread trimmer (increments*)		450	0	450	C
F-191 FSA	Switch-off delay of thread tension release (increments*)		990	0	50	C
F-192 FSE	Activation delay of thread tension release (increments*)		450	0	0	C
F-195 rFW	Bobbin thread monitor with chainstitch trimmer	on/off			off	C
F-197 FMb	Function Memory Box	on/off			off	C
F-198 Foc	Format Memory Card	on/off			off	C

*) 1 increment corresponds to approx. 0.7° angle of rotation of the position transmitter

SUPPLIER LEVEL

Code No. 3112

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 0 Time Functions						
F-200 t1	Delay of speed release after start backtack	ms	500	50	100	C
F-201 t2	Activation delay of presser foot lifting with half heelback	ms	500	20	80	C
F-202 t3	Start delay after presser foot lifting	ms	500	0	120	C
F-203 t4	Time of full power of presser foot lifting	ms	600	0	320	C
F-204 t5	Holding power for presser foot lifting Stages 0, 1...7 Stage 0 = 100 % Stage 1 = 12.5% Stage 7 = 87.5%		7	0	3	C
F-205 t6	Thread wiper time	ms	500	0	100	C
F-206 t7	Delay between thread wiper off until presser foot lifting on	ms	800	0	30	C
F-207 br1	Braking effect when modifying the set value ≤ 4 stages		255	1	25	C
F-208 br2	Braking effect when modifying the set value ≥ 5 stages		255	1	60	C

SUPPLIER LEVEL**Code No. 3112**

Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 1 Time Functions						
F-210 tSr	Stop time for commutation of the stitch regulator for ornamental backtack	ms	500	0	80	C
F-211 tFL	Activation delay of presser foot lifting, when thread wiper is off	ms	500	0	0	C
F-212 t10	Time of full power of backtacking	ms	600	0	500	C
F-213 t11	Holding power for backtacking Stages 0, 1...7 Stage 0 = 100% Stage 1 = 12.5 % Stage 7 = 87.5 % Stage 1 = low holding power Stage 7 = high holding power	ms	7	0	4	C
Group 2 Speeds						
F-220 ALF	Accelerating power of the drive		255	5	32	C
Group 3 Switching Functions						
F-231 Sn1	Execution of the first stitch at positioning speed after power ON	on/off			off	C

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Parameter	Designation	Unit	max	min	Preset	Ind. Prg. No.
Group 8 Functions for Specific Types						
F-280 SEL	Display machine series 1 = series N291 (RSEL=100R)		1	1	1	C
F-281 Pd0	Restart sewing after blocking of machine run on = only if pedal is in neutral position off = immediate start	on/off			on	C
F-282 LoS	Functioning of the switch for blocking of machine run 0 = make contact (N.O.) 1 = break contact (N.C.)		1	0	0	C
F-283 LSP	Function blocking of machine run 0 = Function off 1 = Blockage 1, without positioning 2 = Blockage 2, with positioning		2	0	1	C
Group 9 Speeds for Specific Types						
F-290 n9	Speed limitation for manual backtack / ornamental backtack	RPM	3000	200	2000	C
F-291 n11	Speed limitation DB3000	RPM	3000	500	3000	C

STATUS DISPLAYS

Display	Designation
InFo A1	Pedal not in neutral position, when switching on
InFo A3	The position to which all other position values refer has not been stored (reference position missing)
InFo A4	Control panel cannot be clearly identified
InFo A5	Emergency run, no valid machine select can be identified
InFo F1	Wrong code or function number
InFo E1	Position transmitter not connected or defective, mains voltage too low
InFo E2	Mains voltage too low or power off > on too short
InFo E3	Machine locks or does not reach the desired speed
InFo E4	Control disturbed by defective grounding or loose contact
InFo H1	Commutation transmitter cord or frequency converter disturbed
InFo H2	Processor disturbed

For your notes:

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