

SERVO-TOP

QE5542

CE

Type

BE100SE

Instruction Manual

Part 3

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The **CE** symbol confirms that the respective drive system meets the requirements for partial machines of the following EU directives:

- **EMV Directive 89/336/EEG**
- **Low Voltage Directive 73/23/EEG**

Contents

Page

Part 3

11.	Survey and List of Parameters	11.1 - 11.4
11.1	Explanation of Parameter Survey	
11.2	Explanation of Parameter List	
11.3	Parameter Survey	
11.4	List of Parameters	
12.	Electrical Connections Diagram	12.1 - 12.2
13.	Maintenance and Repair	13.1

Technical updatings reserved!

11. Survey and List of Parameters

11.1 Explanation of Parameter Survey

The parameter survey is designed as an aid for finding parameters quickly. It is a summary of references for the parameter list. Listed behind each reference are all parameters which exert an influence on the function described by the reference.

The parameter survey is divided into five columns:

Column 1 shows the references (functions) to which parameters are assigned.

Column 2 shows the abbreviations of the respective functions.

Column 3 shows all parameters (setting numbers) belonging to the respective reference.

Column 4 shows, for each function (reference) which controls inputs or outputs, the applicable indications such as Ex or Ax which can also be found on the connections diagram.

Column 5 shows, for each function (control inputs (Ex) or control outputs (Ax)), the respective plugs with the number of contacts (see connections diagram).

Example for searching a parameter:

Keyword (function): inverse rotation

The parameter survey shows in column 3 the parameter numbers 618, 623, 801.

Suppose that the inverse rotation function is to be enabled. The parameter list shows this function under parameter number 618.

11.2 Explanation of Parameter List

The parameter list is divided into 5 columns. These comprise, in

column 1: the parameter number,

column 2: is the explanation (meaning) of the parameters and the coding system of row 1 of the keys of the mini operator's panel, used when the parameter concerned can be programmed with the mini operator's panel,

column 3: the programming level (A, B, C) on which the parameter in question can be accessed,

column 4: the range of values within which the parameter in question can be set,

column 5: the value of the parameter in question is set on delivery ex factory.

Parameters having "either/or" validity (software switches) can merely be set to value I or II. In the case of such parameters, column 4 is empty.

11.3 Parameter survey BE100SE

(2A_300_6.ENO)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Control	REG	884/885/886 887/889/890 891/894		
Direction of rotation	DRR	800		
Inverse rotation	RDR	618/623/801		
Machine class	MAKL	799		
Needle position	NAPO	675/700/701 702/703/705 706	A5	X1:19
Presser foot	PF	729/730		
Program	PR	851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Soft start	SANL	116/117		
Speed	DRZ	117/605/606 607/609/850	E1	X1:3
Speed decrease	DRZAB	723/851		
Speed increase	DRZAN	722		
Start delay	STVERZ	729		
Thread trimming	SN	601/609/705 706/761	E2 A1 A2 A4	X1:5 X1:1 X1:9 X1:15

11.4 List of Parameters BE100SE

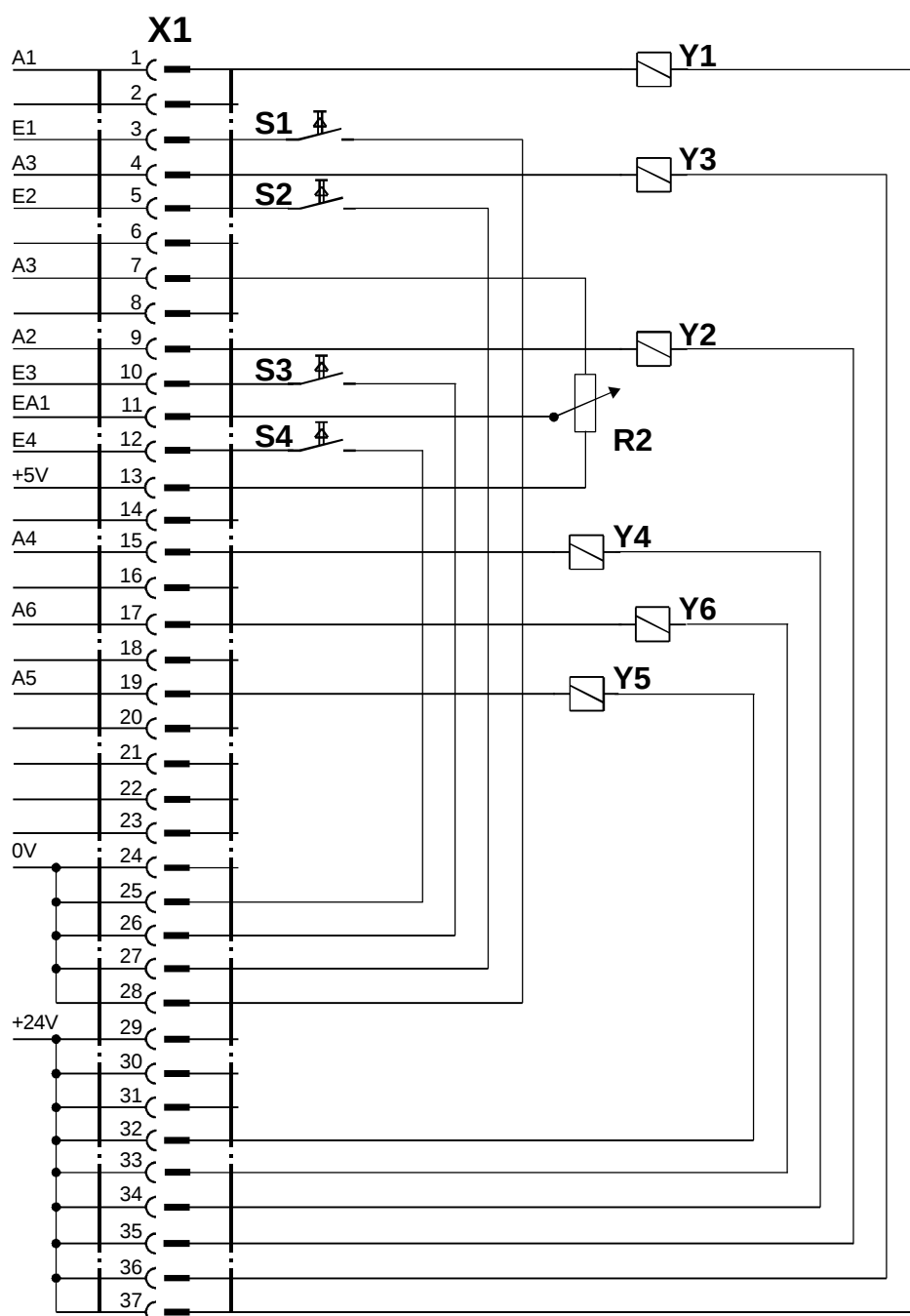
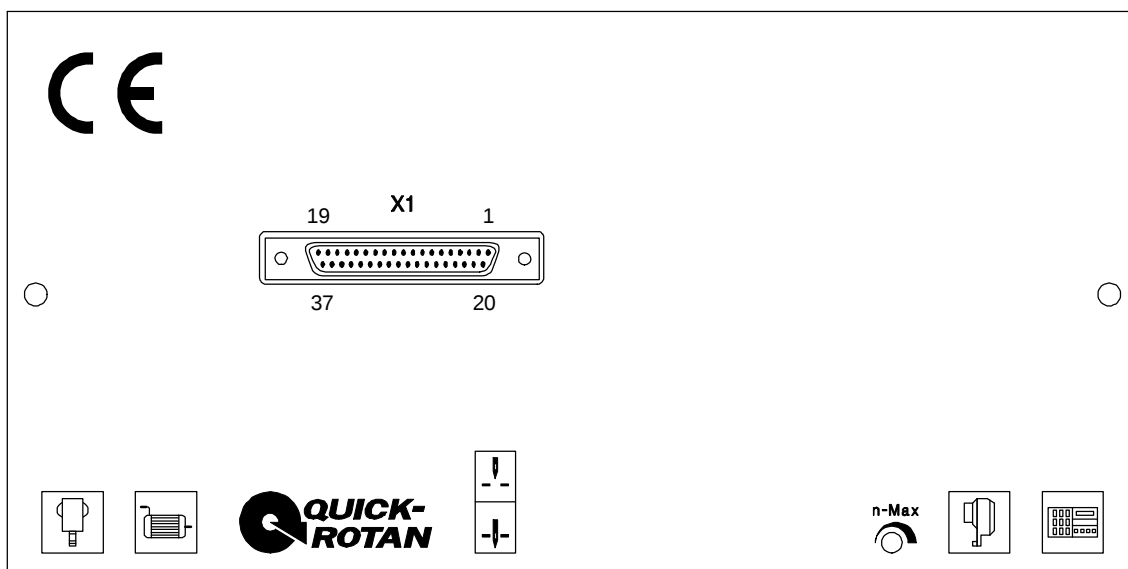
(2A_300_6.EN)

No.	Function (Meaning)	Level	Range of Values	Standard Value
116	(SANL) Soft start stitches (11100000)	A,B	0-255	0
117	(SANL/DRZ) Speed for soft start stitches (00010000)	B	30-640	400
601	(SN) Trimming I yes II no (00001000)	B		I
605	(DRZ) Actual speed in display I yes II no	B		II
606	(DRZ) Speed: level 1 (min.) (10001000)	B	30-640	180
607	(DRZ) Speed: level 12 (max.) (01001000)	B	100-10000	1500
609	(SN/DRZ) Trimming speed 1 (11001000)	B	30-400	180
618	(RDR) Inverse rotation after seam end I yes II no (00101000)	B		II
623	(RDR) Delay in start-up time (ms) for inverse rotation	B	0-2550	100
675	(NAPO) Automatic needle change-over into position 2 (up) after enabling I yes II no	B		I
700	(NAPO) Needle position 0 (reference position of the needle) (01101000)	B	0-239	0
701	(NAPO) Angular adjustment I with handwheel (teach-in) II by keys (+/-)	B		I
702	(NAPO) Needle position 1 (needle down) (11101000)	B	0-239	229
703	(NAPO) Needle position 2 (thread take-up lever up) (00011000)	B	0-239	125
705	(NAPO/SN) Needle position 5 (end of trimming signal 1) (10011000)	B	0-239	39
706	(NAPO/SN) Needle position 6 (start trimming signal 2) (01011000)	B	0-239	33
718	(STBR) Timing of residual brake (0 = brake off) (00111000)	B	0-100	0

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722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B	1-50	45
723	(DRZAB) Brake ramp 1 gradual 50 steep	B	1-50	40
729	(STVERZ/PF) Start delay after lowering presser foot	B	0-2550	0
730	(PF) Lift delay for presser foot after seam end	B	0-2550	0
761	(SN) Extension of thread trimming after positioning	B	0-2550	0
798	(EBC) Programming level C I yes II no	B		II
799	(MAKL) Machine class which has been selected (10111000)	B	1-1	1
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation (01111000)	B,C		I
801	(RDR) Reverse rotation angle after seam end	B,C	5-200	30
850	(DRZ) Maximum motor speed	C	2000-6000	4500
851	(PR/DRZAB) Brake ramp for stitch-count seams I steep II gradual	C		I
884	(REG) Proportional part of the speed control (in general)	B,C	4-50	10
885	(REG) Integral part of the speed control	C	0-100	30
886	(REG) Proportional part of the order controllers	C	1-100	20
887	(REG) Differential part of the order controllers	C	1-100	30
889	(REG) Time required for order controlling (0 = always)	C	0-1000	400
890	(REG) Proportional part of the superior order controllers for the residual brake	C	1-100	25
891	(REG) Proportional part of the lower speed controllers for the residual brake	C	1-100	20
894	(REG) Rotational direction of synchronizer during sewing operation (self teaching) I right-hand rotation II left-hand rotation	C		I
897	(SONST) Quick internal	C		II
898	(SONST) Quick internal	C		II

12. Anschlußplan Steckerplatte BE100SE



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Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
 Signification des aimants resp. solenoides et touches / Significação dos ímãs e/ou as solenoidas e teclas
 Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los solenoides
 y pulsadores / Betekenis van de magneten resp. magneetkleppen, toetsen

S1 	Freigabe analoge Drehzahl / release analog speed / déverrouillage vitesse analogue / desbloqueo da rotação análogo / consenso velocità analogo / desbloqueo velocidad análogo / vrijgave analoge snelheid
S2 	Fadenschneiden / thread trimmer / coupe-fil / corte de linhas / rasafilo / cortahilos / draadsnijder
S3 	Stopp ohne Position / stop without position / stop sans position / paragem sem posição / stop senza posizione / parada sin posición / stop zonder positie
S4 	Stopp mit Position / stop with position / stop avec position / paragem com posição / stop con posizione / parada com posición / stop met positie
R2 	Drehzahl / speed / vitesse / rotação / velocità / velocidad / toerental
Y1 I max 8 A * 	Fadenschneider pneumatisch / pneum. thread trimmer / coupe-fil pneumatique / corte de linhas pneumático / rasafilo pneumatico / cortahilos neumático / draadsnijder pneumatisch
Y2 I max 8 A * 	Fadenschneider magnet. / magn. thread trimmer / coupe-fil magnétique / corte de linhas magnético / rasafilo magnetico / cortahilos magnético / draadsnijder magnetisch
Y3 I max 8 A * 	Motorlauf / motor runs / moteur en marche / motor em movimento / motore in moto / motor en marcha / loop van de machine
Y4 I max 8 A * 	Fertigmeldung Fadenschneiden / finish signal thread trimming / signal d'exécution coupe-fil / sinal de execução corte de linhas / segnalazione finito rasafilo / señal de ejecución cortahilos / eindsignaal draadsnijder
Y5 I max 8 A * 	Position Nadel oben / position needle up / position aiguille en haut / posição em cima / posizione ago su / posición aguja arriba / positie naald boven
Y6 I max 8 A * 	480 Impulse pro Umdrehung / 480 pulses per revolution / 480 impulsions/révolution / 480 impulsos/rotação / 480 impulsi/giro / 480 impulsos/revolución / 480 pulsen per omwenteling

13. Maintenance and Repair



!! Before starting maintenance or repair work, switch off the SERVO-TOP, separate the drive system from mains power (for instance by pulling out the mains plug) and wait for the motor to come to a complete stop.

General maintenance work must only be done by specially trained personnel paying close attention to the operating instructions.

The SERVO-TOP is largely maintenance-free.

However, make sure to perform the following maintenance work:

Depending on the operating conditions, clean the drive system regularly, at least once a week, from any dust or lint. Make sure in particular that the ventilation louvres and cooling fins of the motor, especially the cooling fins between the motor and the control box, are perfectly clean (Fig. 13).

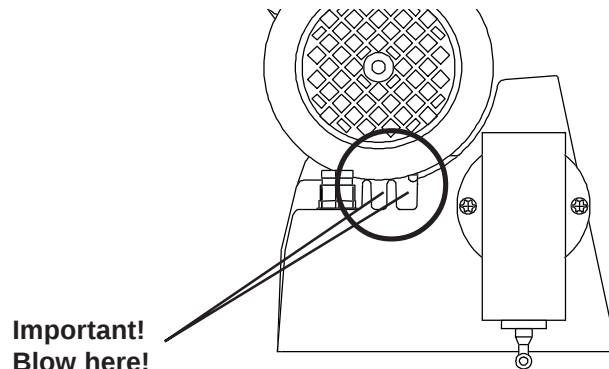


Fig. 13

Remove any threads caught on the synchronizer shaft or on the belt pulley and/or motor shaft.

Check if the drive system is perfectly secured to the stand and that the accessories (synchronizer on machine shaft, speed control unit on control box) are safely mounted in their respective positions.

Check the drive belt for any wear and for correct tension.
Incorrect belt tension can increase noise and vibrations.



When opening covers or removing parts, apart from those removable by hand, live elements can be exposed.
Connections can also be electrically live.

If you require to open the drive system before starting maintenance or repair work or before replacing any parts, disconnect the drive system from any and all power sources.

If maintenance or repair work on the open unit is unavoidable, this may only be done by qualified personnel familiar with the risks involved. Observe all regulations as per EN 50110.

There can still be capacitors carrying a charge in the power electronics system, even when the drive system has been disconnected from all power sources. To avoid injury by electrical shock, it is therefore essential to wait at least 10 minutes between mains power shutoff and opening the control box.

In order to protect semi-conductor components from overvoltage, use only high-resistivity measuring equipment when making checks on the control system.

Any repair or servicing work requiring skilled knowhow may only be done by qualified personnel authorized by Quick-Rotan.

We emphasize that in accordance with the product liability law we are under no responsibility for damages caused by our products if these are due to

- unqualified repair
- the use of components not authorized by us
- actions made by any persons not authorized by us.

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