SERVO-TOP

QE5542

CE

Type

PE15SE

Instruction Manual

Part 3

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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 PE15SE (2A_Q02_3.ENO)

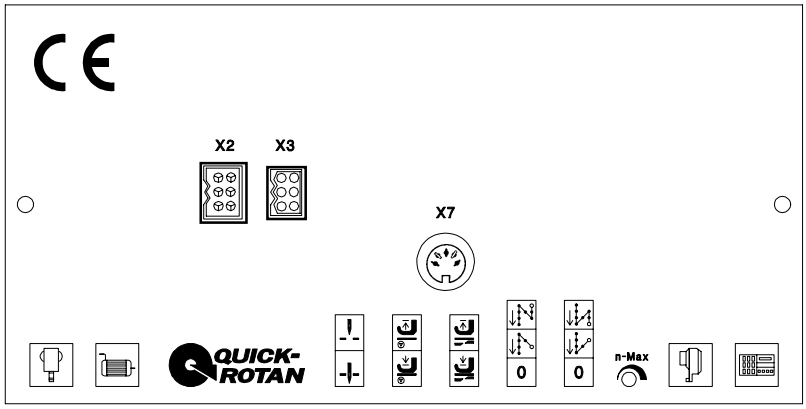
Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Brake	DRZAB	723/851		
Control	REG	884/885/886 887/889/890 891/894		
Defect search	HWT	797		
Delay	VERZ	623		
Direction of rotation	DRR	800		
Engine	MOT	897		
Hardware test	HWT	797		
Inverse rotation	RDR	618/623/801		
Machine class	MAKL	799		
Needle position	NAPO	521/648/700 701/702/703		
Program	PR	851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Soft start	SANL	116/117		
Speed	DRZ	117/202/605 606/607/608 609/676/850 901		
Speed decrease	DRZAB	723/851		
Speed increase	DRZAN	722		
Speed limitation	DB	676		
Start	START	603		
Thread trimming	SN	609/901		
Time needed to switch on	EINZ	889		

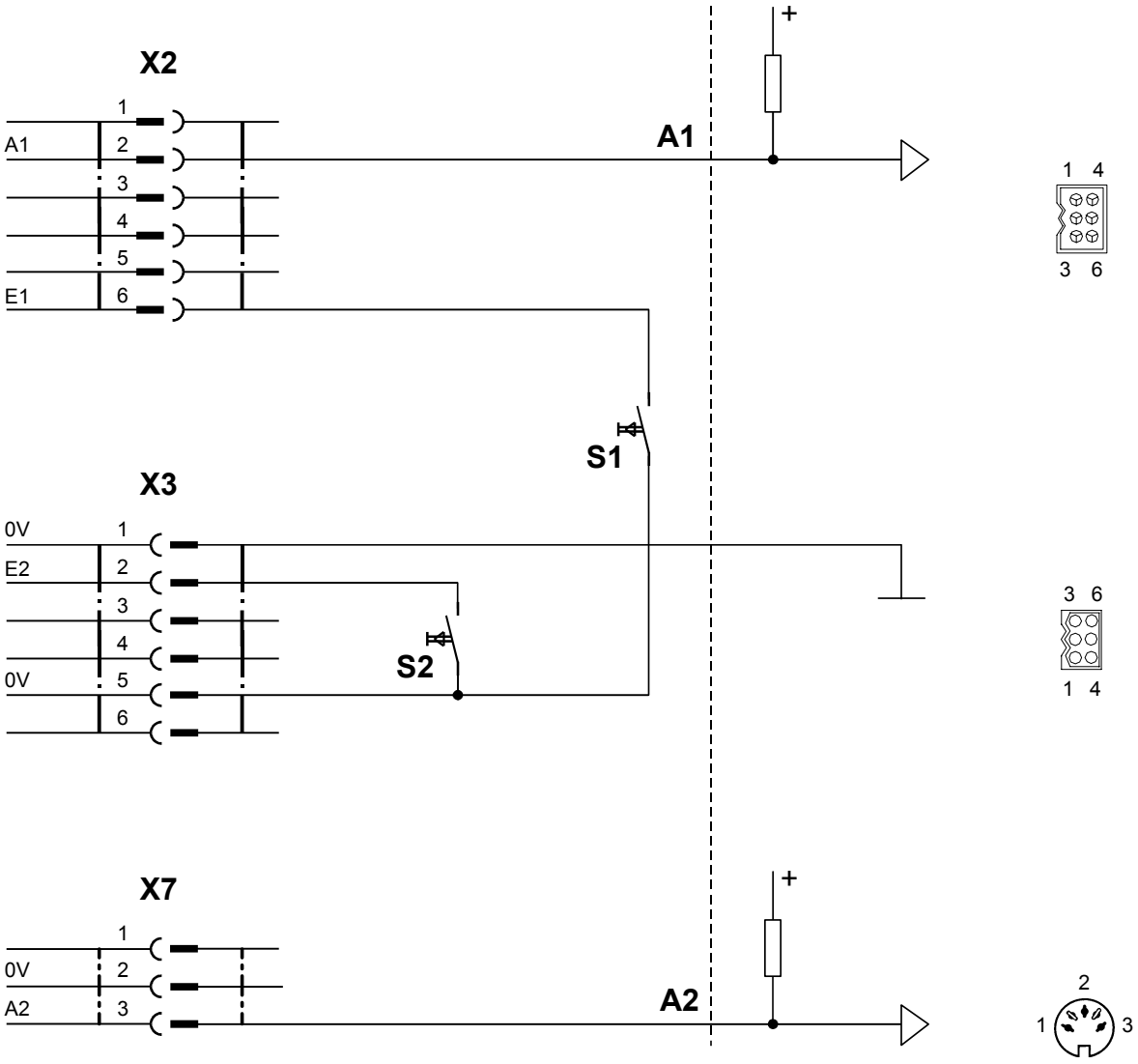
11.4 List of Parameters PE15SE (2A_Q02_3.EN)

No.	Function(Meaning)	Level	Range of Values	Standard Value	
116	(SANL) Soft start stitches (00000111)	A,B	0 - 255	0	Kl. 1
117	(SANL/DRZ) Speed for soft start stitches	B	30 - 640	640	Kl. 1
202	(DRZ) Speed reduction	B,C	300 - 6400	5500	Kl. 1
521	(NAPO) Needle position at stop before seam end I position 2 (up) II position 1 (down)	B,C		II	Kl. 1
603	(START) Start after seam end I after treadle 0 only II immediate start of operation	B,C		II	Kl. 1
605	(DRZ) Actual speed in display I yes II no	B,C		II	Kl. 1
606	(DRZ) Speed: level 1 (min.) (00010001)	B,C	30 - 640	180	Kl. 1
607	(DRZ) Speed: level 12 (max.)	B,C	100 - 10000	4500	Kl. 1
608	(DRZ) Speed level curve (treadle characteristic) I linear II not linear	B,C		I	Kl. 1
609	(SN/DRZ) Trimming speed 1 (00010011)	B,C	30 - 300	200	Kl. 1
618	(RDR) Inverse rotation after seam end I yes II no	B,C		II	Kl. 1
623	(RDR/VERZ) Delay in start-up time (ms) for inverse rotation	B,C	0 - 2550	10	Kl. 1
648	(NAPO) Needle positions I one II two	B,C		II	Kl. 1
676	(DRZ/DB) Speed adjustment via potentiometer possible I yes II no	B,C		I	Kl. 1
700	(NAPO) Needle position 0 (reference position of the needle)	B,C	0 - 239	0	Kl. 1
701	(NAPO) Angular adjustment I with handwheel (teach-in) II by keys (+/-)	B,C		I	Kl. 1
702	(NAPO) Needle position 1 (needle down) (00010111)	B,C	0 - 239	210	Kl. 1
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0 - 239	60	Kl. 1
718	(STBR) Timing of residual brake (0 = brake off)	B,C	0 - 100	0	Kl. 1
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	1 - 50	40	Kl. 1
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	1 - 50	31	Kl. 1
797	(HWT) Hardware test I yes II no	B,C		II	Kl. 1
798	(EBC) Programming level C I yes II no	B,C		II	Kl. 1
799	(MAKL) Machine class which has been selected (00011101)	B,C	1 - 1	1	Kl. 1

800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation	B,C		II	Kl. 1
801	(RDR) Reverse rotation angle after seam end	B,C	5 - 200	30	Kl. 1
850	(DRZ) Maximum motor speed	C		4500	Kl. 1
851	(PR/DRZAB) Brake ramp for stitch-count seams I steep II gradual	C		I	Kl. 1
884	(REG) Proportional amplification of the speed control (in general)	B,C	4 - 50	12	Kl. 1
885	(REG) Integral amplification of the speed control	C	0 - 100	30	Kl. 1
886	(REG) Proportional amplification of the order controllers	C	1 - 50	20	Kl. 1
887	(REG) Differential amplification of the order controllers	C	1 - 100	30	Kl. 1
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0 - 1000	400	Kl. 1
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	1 - 50	25	Kl. 1
891	(REG) Proportional amplification of the lower speed controllers for the residual brake	C	1 - 50	20	Kl. 1
894	(REG) Rotational direction of motor and synchronizer I different II same	C		I	Kl. 1
897	(MOT) MINI motor version I long II short	C		II	Kl. 1
898	(SONST) Number of motor poles I 4 poles II 6 poles	C		II	Kl. 1
901	(DRZ/SN) Trimming release speed	C	30 - 500	400	Kl. 1

12. Electrical Connections Diagram PE15SE





Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
Signification des aimants resp. solenoides et touches / Significação dos imaõs 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 	Drehzahl konstant / speed constant / vitesse constant / rotação constante / velocità costante / velocidad constante / toerental constant
S2 	Drehzahl variabel / speed variable / vitesse variable / rotação variável / velocità variabile / velocidad variable / toerental variabel
A1	Pedal vorwärts / treadle forward / pédale en avant / pedal para a frente / pedale avanti / pedal adelante / pedaal vooruit
A2	Pedal rückwärts / treadle backward / pédale en arrière / pedal para trás / pedale indietro / pedal atrás / pedaal achteruit

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 ist 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).

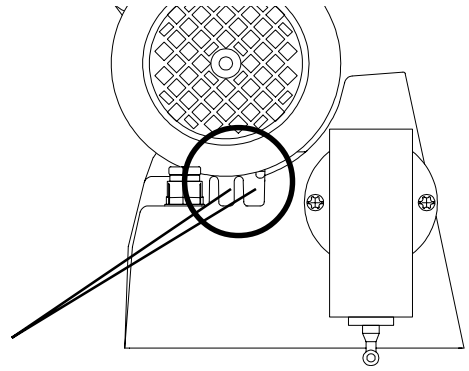


Fig. 13

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.