

SERVO-TOP

QE5542

CE

Type

Q360SE

Instruction Manual

Part 3

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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.

Parameter numbers in acute brackets; e.g. <105>, mean the value (content) set for the parameter in question.

Example:

107 Speed for front backtack when <106> = I

I limited by <105>

II limited by <607>

Explanation:

Parameter 107 is valid only the the value (content) of parameter <106> = I.

If parameter 107 is set to I (<107> = I), then the speed for the front backtack is limited by parameter 105, e.g. <105> = 1500. If parameter 107 is set to II (<107> = II), then the speed for the front backtack is limited by the value of parameter 607, e.g. <607> = 4000.

11.3 Parameter survey Q360SE (2Z_944_D.HEX)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Auxiliary drive	ZUSAN	892/893		
Band supply	BZUF	474/475/490		
Brake	DRZAB	723/851		
Chopper	MESSER	486/537		
Control	REG	884/885/886 887/889/890 891/892/893 894/975		
Defect search	HWT	797		
Delay	VERZ	483/730		
Delay stitches	VERST	479		
Direction of rotation	DRR	800		
Edge trimmer	KS	491		
Engine	MOT	897		
Feed reverse	TUM	721	E1	X5:3
Flip-Flop	FF	486/491		
Gather setting	RAFF	487/952/953 954		
Hardware test	HWT	797		
Machine class	MAKL	799		
Needle position	NAPO	521/700/701 702/703		
Operator panel	BDF	681		
Output „B“	AUSGB	491		
Photocell	LS	112/161		
Presser foot	PF	719/729/730	E4	X5:5
Program	PR	491/851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Scissors	SCHERE	486		
Seam monitoring	DOKU	994/995		

Speed	DRZ	605/606/607 609/676/850
Speed decrease	DRZAB	723/851
Speed increase	DRZAN	722
Speed limitation	DB	676
Stacker	STAP	479/480/481 482/483/484 485
Start	START	161/994/995
Start delay	STVERZ	474/729
Stepper motor	SMOT	488/489/855 856/858/859 862/863/952 953/954/956 972/974
Stitchcounter	STZ	476/477/480 481/482
Thread trimming	SN	609
Time needed to switch on	EINZ	475/484/537 889
Timing output	TA	719/721

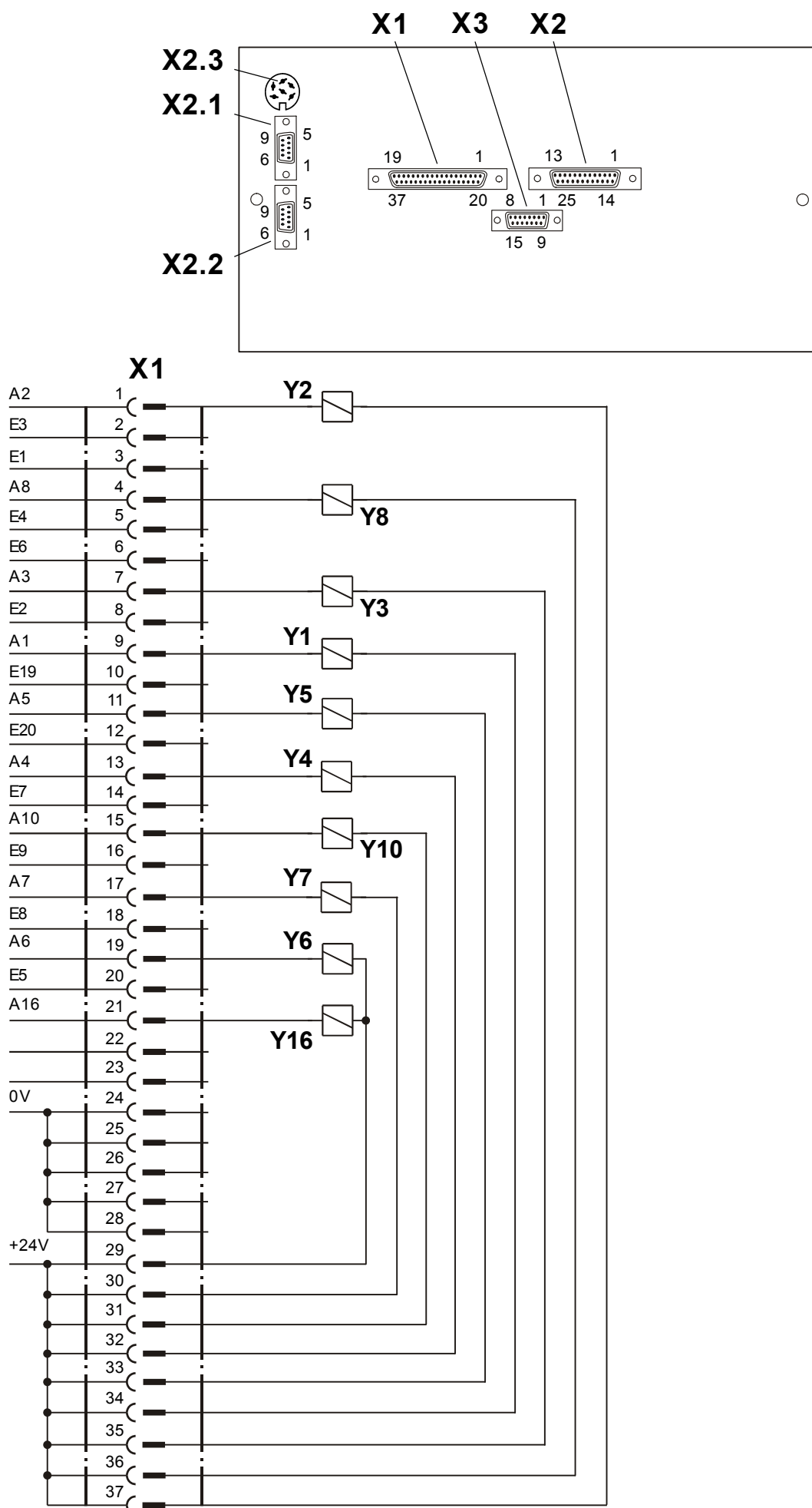
11.4 List of Parameters Q360SE (2Z_944_D.HEX)

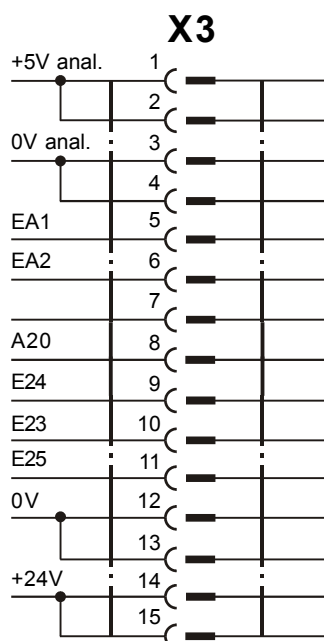
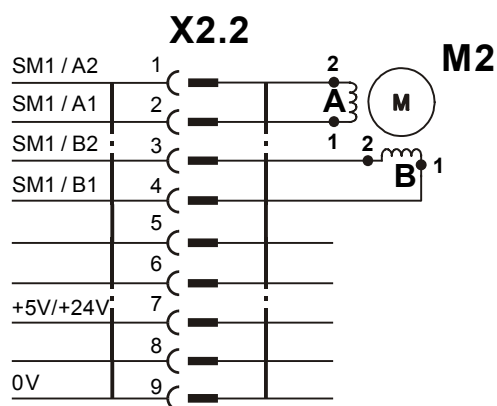
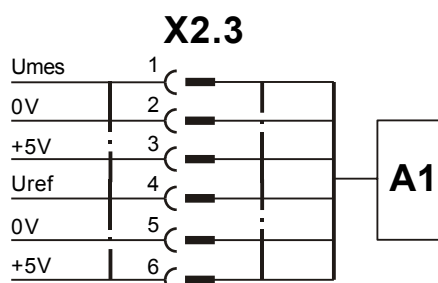
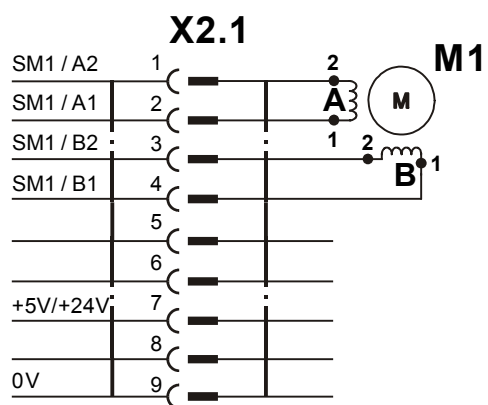
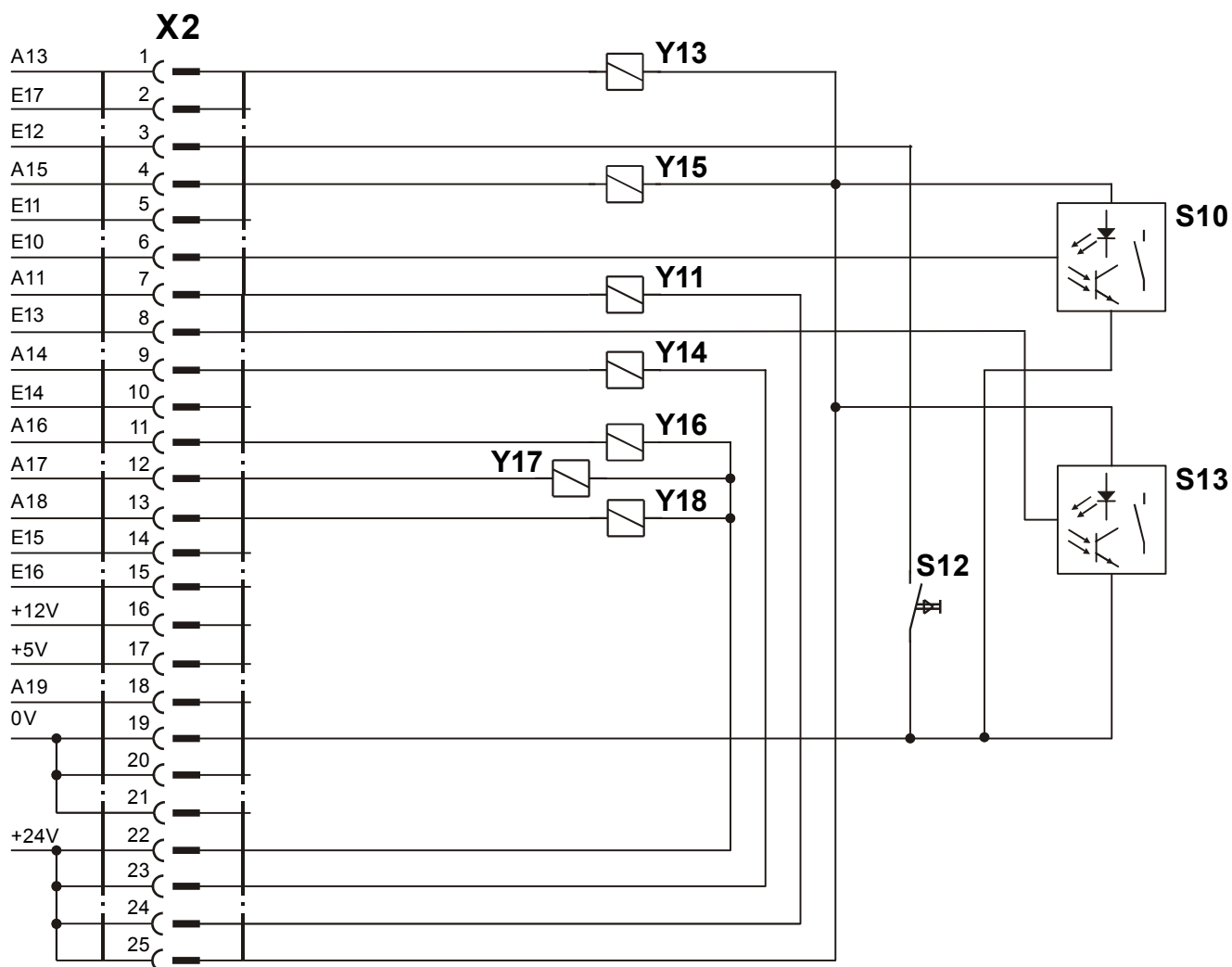
No.	Function (Meaning)	Level	Range Values	of Value	Standard
112	(LS) Number of stitches for light barrier fade-out on knit fabrics (according to stitch size)	B,C	0 - 255	0	Kl. 1, 2
161	(LS/START) Start delay for start of photocell	B,C	0 - 2550	100	Kl. 1, 2
474	(BZUF/STVERZ) tape feed start delayed (00000111)	B,C	0 - 255	1	Kl. 1, 2
475	(BZUF/EINZ) tape advance duration on manual start (at button F4 on OC-TOP)	B,C	0 - 2550	250 100	Kl. 1 Kl. 2
476	(STZ) maximum tolerance for number of stitches	B,C	0 - 255	40	Kl. 1, 2
477	(STZ) minimum tolerance for number of stitches	B,C	0 - 255	40	Kl. 1, 2
478	(SONST) control section active I yes II no	B,C		II	Kl. 1, 2
479	(STAP/VERST) stitches from sewing start until feeder raised	A,B	0 - 255	80	Kl. 1, 2
480	(STAP/STZ) stitches for pleater	A,B	0 - 255	40 15	Kl. 1 Kl. 2
481	(STAP/STZ) plate enable time	A,B	0 - 255	60	Kl. 1, 2
482	(STAP/STZ) stitches for blower on	B,C	0 - 2550	1000	Kl. 1, 2
483	(STAP/VERZ) time for lowering table after light barrier dark	B,C	0 - 2550	150	Kl. 1, 2
484	(STAP/EINZ) time for raising table	B,C	0 - 2550	100	Kl. 1, 2
485	(STAP) stapler on I yes II no	B,C		II	Kl. 1, 2
486	(FF/SCHERE/MESSER) function of output „Ax“ I cutter II chopper (rapid shears)	B,C		II	Kl. 1, 2
487	(RAFF) gather value in manual mode	A,B,C	0 - 99	3	Kl. 1, 2
488	(SMOT) reduction ratio for stepping motor 1	B,C	1 - 100	10	Kl. 1, 2
489	(SMOT) number of steps after stepping motor 1 zero position	B,C	0 - 255	60	Kl. 1, 2
490	(BZUF) tape feed I via sensor II in sync with main drive	B,C		II	Kl. 1, 2
491	(FF/PR/AUSGB/KS) Switch-off of output „A“ after thread trim I yes II no	B,C		II	Kl. 1, 2
521	(NAPO) Needle position at stop before seam end I position 2 (up) II position 1 (down)	B,C		I	Kl. 1, 2
537	(EINZ/MESSER) Chopper duty cycle (ms)	B,C	10 - 2550	50	Kl. 1, 2
605	(DRZ) Actual speed in display I yes II no	B,C		II	Kl. 1, 2
606	(DRZ) Speed: level 1 (min.) (00010001)	B,C	30 - 640	200	Kl. 1, 2
607	(DRZ) Speed: level 12 (max.)	B,C	100 - 10000	4000	Kl. 1, 2
609	(SN/DRZ) Trimming speed 1 (00010011)	B,C	30 - 300	200	Kl. 1, 2
676	(DRZ/DB) Speed adjustment via potentiometer possible I yes II no	B,C		II	Kl. 1, 2
681	(BDF) Operator panel push-button locked I yes II no	B,C		II	Kl. 1, 2
700	(NAPO) Needle position 0 (reference position of the needle)	B,C	0 - 239	0	Kl. 1, 2

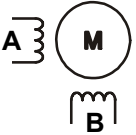
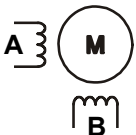
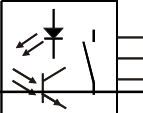
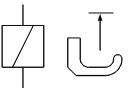
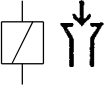
701	(NAPO) Angular adjustment I with handwheel (teach-in) II by keys (+/-)	C		I	Kl. 1, 2
702	(NAPO) Needle position 1 (needle down) (00010111)	B,C	0 - 239	83	Kl. 1, 2
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0 - 239	200	Kl. 1, 2
718	(STBR) Timing of residual brake (0 = brake off)	C	0 - 100	0	Kl. 1, 2
719	(PF/TA) Timing output A4 (0 = 100% switching on)	C	0 - 100	50	Kl. 1, 2
721	(TUM/TA) Timing output A5 (0 = 100% switching on)	C	0 - 100	50	Kl. 1, 2
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	1 - 50	45	Kl. 1, 2
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	1 - 50	20	Kl. 1, 2
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0 - 2550	130	Kl. 1, 2
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0 - 2550	30	Kl. 1, 2
797	(HWT) Hardware test I yes II no	B,C		II	Kl. 1, 2
798	(EBC) Programming level C I yes II no	B,C		II	Kl. 1, 2
799	(MAKL) Machine class which has been selected (00011101)	C	1 - 2	1 2	Kl. 1 Kl. 2
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation	B,C		II	Kl. 1, 2
850	(DRZ) Maximum motor speed	C		4500	Kl. 1, 2
851	(PR/DRZAB) Brake ramp for stitch-count seams I steep II gradual	C		I	Kl. 1, 2
855	(SMOT) maximum speed of stepping motor 2	C	10 - 2550	2500	Kl. 1, 2
856	(SMOT) Start-/stopping speed of stepping motor 2	C	10 - 1000	100	Kl. 1, 2
858	(SMOT) acceleration of stepping motor 2	C	1 - 20	5 -	Kl. 1 Kl. 2
859	(SMOT) reduction ratio of main motor/stepping motor 2	B,C	1 - 99	15	Kl. 1, 2
862	(SMOT) maximum current of stepping motor 2 (255 = 3.6 A)	C	1 - 255	140	Kl. 1, 2
863	(SMOT) stationary current of stepping motor 2 (255 = 3.6 A)	C	0 - 255	70	Kl. 1, 2
884	(REG) Proportional amplification of the speed control (in general)	C	4 - 50	11	Kl. 1, 2
885	(REG) Integral amplification of the speed control	C	0 - 100	30	Kl. 1, 2
886	(REG) Proportional amplification of the order controllers	C	1 - 50	20	Kl. 1, 2
887	(REG) Differential amplification of the order controllers	C	1 - 100	30	Kl. 1, 2
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0 - 1000	400	Kl. 1, 2
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	1 - 50	25	Kl. 1, 2
891	(REG) Proportional amplification of the lower speed controllers for the residual brake	C	1 - 50	20	Kl. 1, 2
892	(REG/ZUSAN) Proportional amplification of speed control for auxiliary drive	C	0 - 50	1	Kl. 1, 2
893	(REG/ZUSAN) Integral amplification of speed control for auxiliary drive	C	0 - 100	4	Kl. 1, 2

894	(REG) Rotational direction of motor and synchronizer I different II same	C		I	Kl. 1, 2
897	(MOT) MINI motor version I long II short	C		II	Kl. 1, 2
898	(SONST) Number of motor poles I 4 poles II 6 poles	C		II	Kl. 1, 2
934	(SONST) Selector for the displaychoice in the diagnosis mode (<933>=I)	C	0 - 5	0	Kl. 1, 2
952	(SMOT/RAFF) gathering value 3 of stepping motor axis 1	C	0 - 255	3	Kl. 1, 2
953	(SMOT/RAFF) gathering value 4 of stepping motor axis 1	C	1 - 4	1	Kl. 1, 2
954	(SMOT/RAFF) gathering value 5 of stepping motor axis 1	C	0 - 255	5	Kl. 1, 2
956	(SMOT) maximum current of stepping motor 1 (255 = 3.6 A)	C	0 - 25500	1400	Kl. 1, 2
972	(SMOT) number of stepping motor axes 0 none 1 one (only the first) 2 one (only the second) 3 two	B,C	0 - 2	0	Kl. 1, 2
974 C	(SMOT) 1 - 127 motor 2 after mains on I automatically II via input signal		approach ref. position with stepping 50 Kl. 1, 2		
975	(REG) integral gain for stepping motor 1 and stepping motor 2	C	1 - 127	3	Kl. 1, 2
994	(DOKU/START) start recorded seam manually via I knee-operated switch II light barrier	B,C	10 - 2550	300	Kl. 1, 2
995	(DOKU/START) start recorded seam manually when contact I closed II open	B,C	1 - 255	30	Kl. 1, 2
996	Kein Kommentar vorhanden	B,C	1 - 255	2	Kl. 1, 2

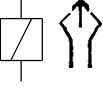
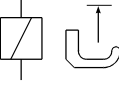
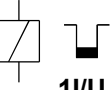
12. Anschlußplan Stecker Q360SE





A1		Bandspannungssensor / tape tension sensor
M1		Schrittmotor 1 für Bandtransport / stepping motor 1 for tape feed / moteur pas à pas 1 pour transport de ruban / motor de impulsos 1 para transporte de cinta / motore a impulsi 1 per trasporto nastro / motor paso a paso 1 para transportador de cinta / stappenmotor 1 voor de bandtransport
M2		Schrittmotor 2 für Differentialtransport / stepping motor 2 for differential transport / moteur pas à pas 2 pour differential transport / motor de impulsos 2 para differential transport / motore a impulsi 2 per differential transport / motor paso a paso 2 para transportador de differential / stappenmotor 2 voor de differentialtransport
S10		Lichtschranke: Tisch / light sensor: table /
S12		Hacker / chopper / chopper / guilhotina / taglio / guillotina / afhakker
S13		Lichtschranke: Start / Stop light sensor: Start / Stop
Y1 I max 8 A * <486>=I		
Y1 I max 8 A * <486>=II		Schere vorwärts / sissors forwards
Y2 I max 8 A *		Transport absenken / transport down
Y3 I max 8 A *		Schere rückwärts / sissors backwards
Y4 I max 8 A *		Presserfuß heben / presser foot up / pied presseur en haut / calcador em cima / alzapiedino su / prensatelas arriba / drukvoet optillen
Y5 I max 8 A *		Kette saugen / vacuum chain / aspiration de chaînette / aspirar de cadeia / aspirare catenella / aspirar cadeneta / zuigen van een ketting

Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
 Signification des aimants resp. solenoides et touches / Significação dos imãs 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

Y6 I max 8 A * <799> = 2		Blech / plate
Y7 I max 8 A *		Falter / folder
Y8 I max 8 A *		Start Transportmotor / start transport motor
Y10 I max 8 A *		Kette blasen / blow chain / Soufflage de chaînette / soprar de cadeia / soffiatura catenella / soplar cadeneta / blazen van een ketting
Y11 I max 8 A *		Abfall saugen / vacuum waste
Y13 I max 8 A *		Tisch absenken / table down
Y14 I max 8 A *		Presserfuß2 heben / presser foot2 up / pied presseur2 en haut / calcador2 em cima / alzapiedino2 su / prensatelas2 arriba / drukvoet2 optillen
Y15 I max 8 A *		Tisch anheben / table up
Y16 I max 100 mA	 1I/U	Zählsignal / count signal / signal de comptage / sinal de contagem / segnale conteggio / señal del contador / telsignaal
Y17 I max 100 mA FA		480 Impulse pro Umdrehung / 480 pulses per revolution / 480 impulsions/révolution / 480 impulsos/rotação / 480 impulsi/giro / 480 impulsos/revolución / 480 pulsen per omwenteling
Y18 I max 100 mA FB		480 Impulse pro Umdrehung / 480 pulses per revolution / 480 impulsions/révolution / 480 impulsos/rotação / 480 impulsi/giro / 480 impulsos/revolución / 480 pulsen per omwenteling

- * Die Summe der Lastströme aller gleichzeitig eingeschalteten Stellglieder (Magnete, Magnetventile) darf den Wert von 4A nicht überschreiten (siehe hierzu Kapitel 2. Technische Daten).
- * The total of load currents of all servos activated simultaneously (solenoids, solenoid valves) is not allowed to exceed 4 amps (see also section 2. Technical Specifications).
- * Le total des courants de charge de tous les vérins (aimants, électro-vannes) activés simultanément ne doit pas dépasser 4 A (voir aussi le chapitre 2. "caractéristiques techniques").
- * A soma das correntes sob carga de todos os actuadores ligados ao mesmo tempo (ímans, solenóides) não pode ultrapassar o valor de 4A (ver também capítulo 2. Dados Técnicos).
- * La somma delle correnti di carico di tutti gli attuatori inseriti contemporaneamente (magneti, elettrovalvole) non deve essere superiore a 4 A (vedere il capitolo 2. Dati Tecnici).
- * La suma de las corrientes bajo carga de todos los elementos de todos los componentes de regulación conectados simultáneamente (imanes, válvula magnética) no podrá sobrepasar el valor de 4A (véase también el capítulo 2. de datos técnicos).
- * De belastingsstroom van alle tegelijkertijd ingeschakelde bedieningsschakels (magneten, magneetventielen) mag in totaal niet meer dan 4 A bedragen (zie hiervoor hoofdstuk 2. Technische gegevens).

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).

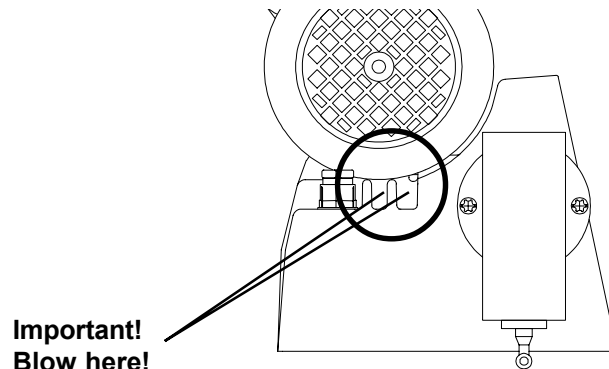


Fig. 13

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.