SERVO-TOP

QE5542

CE

Type

P470SE

Instruction Manual

Part 3

QUICK-ROTAN Elektromotoren GmbH
Königstraße 154
67655 Kaiserslautern
Tel: 06 31/2 00 38 80
Fax: 06 31/2 00 38 62

English 98-06-10

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Part 3

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 P470SE (2a_047_0.EN)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Backtack	RIE	523/584		
Backtack inversion	RIV	419/617	E3	X1:3
Backtack suppression	RIUNT	419		
Blower	BLA	668		
Brake	DRZAB	723/851		
Control	REG	884/885/886 887/889/890 891/894		
Decorative backtack	ZRIE	522/523/530 775		
Delay	VERZ	623/730/732 739/740		
Direction of rotation	DRR	800		
End backtack	ER	110/149/604 731/732/740		
Feed reverse	TUM	721/731	E1 A5	X5:3 X4:4
Front backtack	AR	104/105/106 107/148/739		
Hardware test	HWT	797		
Inverse rotation	RDR	618/623/801		
Machine class	MAKL	799		
Needle bar	NASTA	987		
Needle position	NAPO	522/700/701 702/703/705 706/710		
Needle position change-over	NPW	616	E2	X1:1
Needle up without trimming	NHOS	616/710	E2	X1:1
Photocell	LS	111/112/113 199/615		
Presser foot	PF	624/651/719 729/730	E4 A4	X4:3 X4:5
Program	PR	114/851		

Programming level C	EBC	798		
Residual brake	STBR	718		
Safety switch no run	ANLSP	624/665		
Seam end	NE	114/602		
Single stitch	EST	617	E3	X1:3
Soft start	SANL	116/117		
Speed	DRZ	105/106/107 110/117/199 530/605/606 607/608/609 676/850/901		
Speed decrease	DRZAB	723/851		
Speed increase	DRZAN	722		
Start	START	113/603		
Start delay	STVERZ	729		
Stitch condensation	STVD	105/106/107 110/419/617 739		
Stop	STOP	114/624/665	E4	X4:3
Stop time	STOPZ	775		
Target stitch	PEIPO	653/789		
Thread trimming	SN	601/604/609 705/706/732 761/901		
Thread wiper	WI	668/715	A3	X3:5
Time needed to switch on	EINZ	715/889		
Timing output	TA	719/721		

11.4 List of Parameters P470SE (2a_047_0.EN)

No.	Function (Meaning)	Level Values	Range of Value	Standard
104	(AR) Front backtack correction (delayed disabling of feed reverse)	B,C	0-16	8
105	(AR/DRZ/STVD) Speed for front backtack/stitch condensation (11000000)	B,C	100-6400	1200
106	(AR/DRZ/STVD) Speed for front backtack/stitch condensation I variable (treadle-controlled) II constant (corresponding to <105>)	B,C		II
107	(AR/DRZ/STVD) Speed for front backtack/stitch condensation when <106> = I I limited by <105> II limited by <607>	B,C		II
110	(ER/DRZ/STVD) Speed for end backtack/stitch condensation (01100000)	B,C	100-6400	1200
111	(LS) Photocell compensation stitches (number of stitches from photocell clear to seam end)	A,B,C	1-255	6
112	(LS) Number of stitches for photocell fade-out on knit fabrics (number of stitches, according to stitch size)	A,B,C	0-255	0
113	(LS/START) Start with photocell I when photocell is dark only II also when photocell is clear	B,C		II
114	(PR/STOP/NE) Stop before seam end after stitch count (last seam section) I yes II no	B,C		II
116	(SANL) Soft start stitches (11100000)	A,B,C	0-255	0
117	(SANL/DRZ) Speed for soft start stitches (00010000)	B,C	30-640	400
148	(AR) Front backtack I double II single	A,B,C		I
149	(ER) End backtack I double II single	A,B,C		I
199	(DRZ/LS) Speed for photocell compensation stitches	B,C	300-6400	1200
419	(RIV/RIUNT/STVD) Function of external key (on operator panel B2) I backtack/stitch condensation inversion II backtack/stitch condensation suppression (flip-flop function)	B,C		I

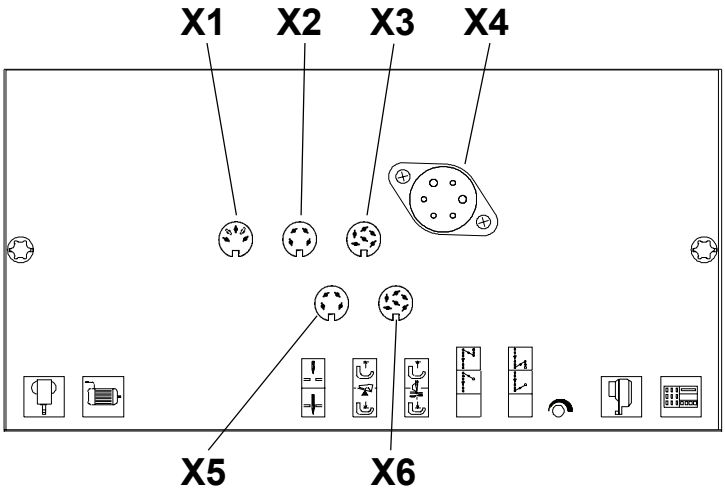
522	(NAPO/ZRIE) Needle position when stop occurs during decorative backtack (stitch in stitch) I position 2 (up) II position 1 (down) (10110000)	B,C		II
523	(RIE/ZRIE) Backtack I decorative backtack (stitch in stitch) II standard backtack (01110000)	A,B,C		II
530	(DRZ/ZRIE) Speed (max.) for decorative backtack (11110000)	B,C	100-6400	1000
584	(RIE) Backtack I four times II double	B,C		II
601	(SN) Trimming I yes II no (00001000)	B,C		I
602	(NE) Seam end at treadle position I slightly heeled (-1) II fully heeled (-2)	B,C		II
603	(START) Start after seam end I after treadle 0 only II immediate start of operation	B,C		I
604	(SN/ER) Trimming after single end backtack I forward II backward	B,C		I
605	(DRZ) Actual speed in display I yes II no	B,C		II
606	(DRZ) Speed: level 1 (min.) (10001000)	B,C	30-640	180
607	(DRZ) Speed: level 12 (max.) (01001000)	B,C	100-10000	1200
608	(DRZ) Speed level curve (treadle characteristic) I linear II not linear	B,C		I
609	(SN/DRZ) Trimming speed 1 (11001000)	B,C	30-300	180
615	(LS) End recognition when photocell goes I from light to dark II from dark to light	B,C		II
616	(NPW/NHOS) Function of external key (input E2) I needle position change-over (NPW) II needle up without trimming (NHOS)	B,C		II
617	(EST/RIV/STVD) Function of external key (input E3) I single stitch (EST) II backtack/stitch condensation inverted (RIV)	B,C		I

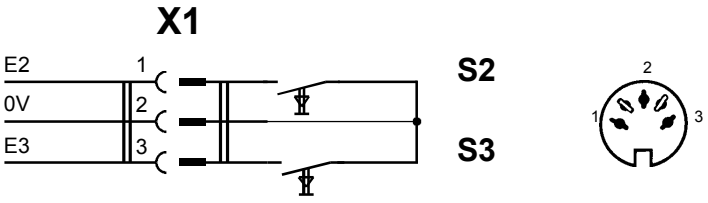
618	(RDR) Inverse rotation after seam end I yes II no (00101000)	B,C		II
623	(RDR/VERZ) Delay in start-up time (ms) for inverse rotation	B,C	0-2550	10
624	(ANLSP/STOP/PF) Function of external key (input E4) I stop/safety switch no run II presser foot	B,C		II
651	(PF) Presser foot with automatic descent on machine stop I yes II no	B,C		I
653	(PEIPO) Target stitch before sewing I yes II no	B,C		II
665	(ANLSP/STOP) Run locking/stop I contact closed II contact open	C		I
668	(BLA/WI) Thread wiper/thread clearer I yes II no (10101000)	B,C		I
676	(DRZ) Speed adjustment via potentiometer possible I yes II no	B,C		I
700	(NAPO) Needle position 0 (reference position of the needle) (01101000)	B,C	0-239	0
701	(NAPO) Angular adjustment I with handwheel (teach-in) II by keys (+/-)	B,C		I
702	(NAPO) Needle position 1 (needle down) (11101000)	B,C	0-239	75
703	(NAPO) Needle position 2 (thread take-up lever up) (00011000)	B,C	0-239	213
705	(NAPO/SN) Needle position 5 (end of trimming signal 1) (10011000)	B,C	0-239	125
706	(NAPO/SN) Needle position 6 (start trimming signal 2) (01011000)	B,C	0-239	119
710	(NAPO/NHOS) Needle position 3 (needle up) (11011000)	B,C	0-239	200
715	(EINZ/WI) Duration (ms) of thread wiper	B,C	0-2550	120
718	(STBR) Timing of residual brake (0 = brake off) (00111000)	B,C	0-100	0
719	(PF/TA) Timing output A4 (0 = 100% switching on)	B,C	0-100	40

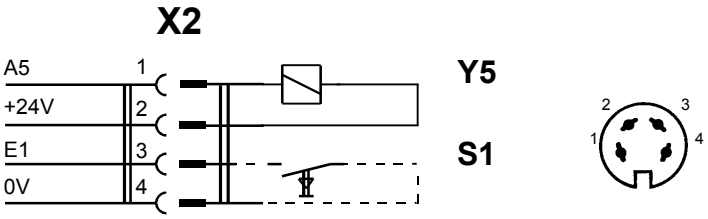
721	(TUM/TA) Timing output A5 (0 = 100% switching on)	B,C	0-100	40
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	1-50	40
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	1-50	31
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0-2550	120
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0-2550	50
731	(TUM/ER) Time required to correct feed reverse at end backtack	B,C	0-2550	40
732	(SN/ER/VERZ) Delay (ms) for trimming after single end backtack	B,C	0-2550	30
739	(AR/STVD/VERZ) Delay (ms) for speed after front backtack/stitch condensation	B,C	0-2550	120
740	(ER/VERZ) Delay before stitch counting for end backtack	B,C	0-2550	0
761	(SN) Extension of thread trimming after positioning	B,C	0-2550	0
775	(ZRIE/STOPZ) Stop time (ms) with stitch in stitch backtack (decorative backtack)	B,C	0-2550	100
789	(PEIPO) Angle for target stitch	B,C	0-239	225
797	(HWT) Hardware test	B,C		II
798	(EBC) Programming level C I yes II no	B,C		II
799	(MAKL) Machine class which has been selected (10111000)	B,C	1-1	1
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation (01111000)	B,C		II
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 amplification of the speed control (in general)	B,C	4-50	12
885	(REG) Integral amplification of the speed control	C	0-100	30
886	(REG) Proportional amplification of the order controllers	C	1-50	20
887	(REG) Differential amplification of the order controllers	C	1-100	30
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0-1000	400
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	1-50	25

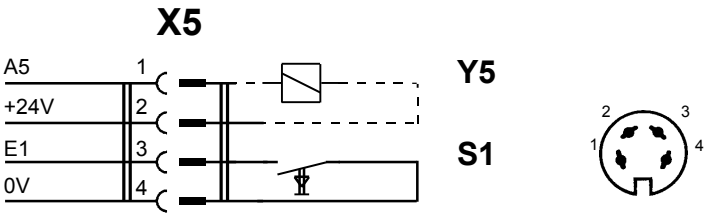
891	(REG) Proportional amplification of the lower speed controllers for the residual brake	C	1-50	20
894	(REG) Rotational direction of motor and synchronizer I different II same	C		I
901	(DRZ/SN) Trimming release speed	C	30-500	300
987	(NASTA) Cancel position for needle bars	B,C		II

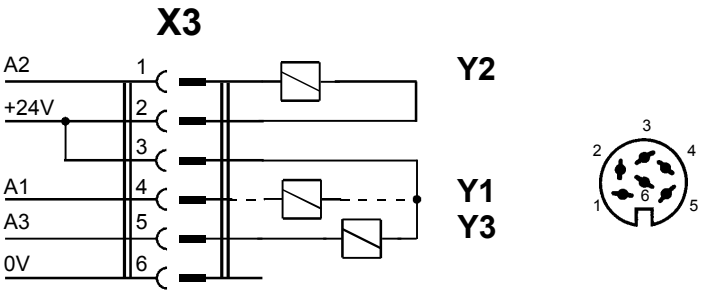
12. Electrical Connections Diagram P470SE

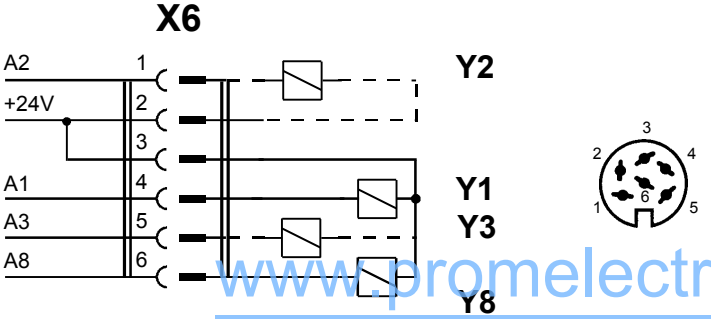


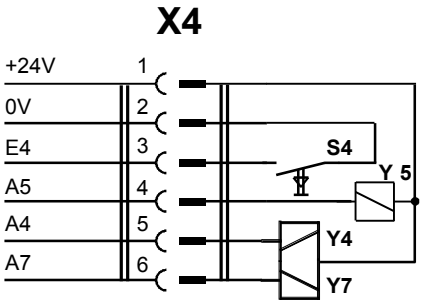


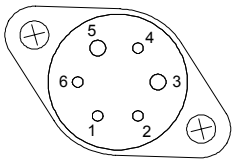




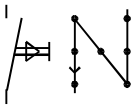
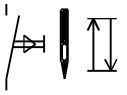
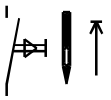
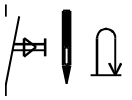
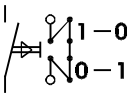
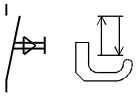
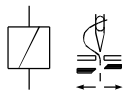
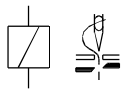
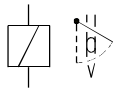




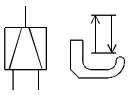
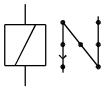
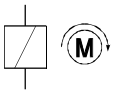




Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
Signification des aimants resp. solenoides et touches / Significação dos imaõs e/ou as solenoidas e teclas
Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los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

S1 	Transportumstellung von Hand / manual feed reverse / renversement de marche manuel / mudança do transporte manual / commutazione trasporto a mano / inversión de transporte manual / handmatige transportomschakeling
S2 	<616> = I: Nadelpositionswechsel / needle position change-over / changement de position d´aiguille / troça de posição da agulha / cambio di posizione dell´ago / cambio de posición de aguja / naaldpositie-verwisseling
S2 	<616> = II: Nadel hoch ohne Schneiden / needle up without thread trimming / aiguille en haut sans coupe / agulha para cima sem corte de linhas / ago su senza taglio / aguja arriba sin corte / naald omhoog zonder snijden
S3 	<617> = I: Einzelstich / single stitch / point unique / ponto individual / punto singolo / puntada individual / enkele steek
S3 	<617> = II: Nachfolgende Riegelfunktion invertieren / invert subsequent backtack function / inverser la prochaine fonction de bridage / inverter o próximo remate / invertire la funzione d'affr. successiva / invertir la próxima función de remate / inverteren op elkaar volgende hechtfunctie
S4 	<624> = I: STOP
S4 	<624> = II: Presserfuß heben / lifting presser foot / relevage du pied presseur / levantar do calcador / sollevamento del alzapiedino / elevación de prensatelas / drukvoet optillen
Y1 I max 10 A * 	Fadenschneider pneumatisch / pneum. thread trimmer / coupe-fil pneumatique / corte de linhas pneumático / rasafilo pneumatico / cortahilos neumático / draadsnijder pneumatisch
Y2 I max 10 A * 	Fadenschneider magnet. / magn. thread trimmer / coupe-fil magnétique / corte de linhas magnético / rasafilo magnetico / cortahilos magnético / draadsnijder magnetisch
Y3 I max 10 A * 	Fadenwischer / thread wiper / écarteur de fil / retira-linhas / scartafilo / retirahilos / draadwisser

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

Y4/Y7  I max 10 A *	**Y4**: Presserfuß heben / lifting presser foot / relevage du pied presseur / levantar do calcador / sollevamento del alzapiedino / elevación de prensatelas / drukvoet optillen **Y7**: Presserfuß senken / lowering presser foot / descente du pied presseur /baixar o calcador / abbassare del alzapiedino / bajar el prensatelas / drukvoet laten zakken
Y5  I max 10 A *	Transportumsteller / feed reverse / renversement de marche / mudança do transporte / commutazione trasporto / inversión de transporte / transportomschakeling
Y8  I max 300 mA	Maschinenlauf / motor runs / moteur en marche / motor em movimento / motore in moto / motor en marcha / loop van de machine

* 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).