

SERVO-TOP

QE5542

CE

Type

P144SE

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

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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.

11.3 Parameter survey P144SE

(2A_044_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		
Delay	VERZ	179/189/190 191/192/193		
Direction of rotation	DRR	800		
Hardware test	HWT	797		
Machine class	MAKL	799		
Program	PR	851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Soft start	SANL	116/117		
Speed	DRZ	117/605/606 607/676/850		
Speed decrease	DRZAB	723/851		
Speed increase	DRZAN	722		
Stacker	STAP	528	A4	X1:1
Time needed to switch on	EINZ	185/528/889		
Units	STUZ	180		

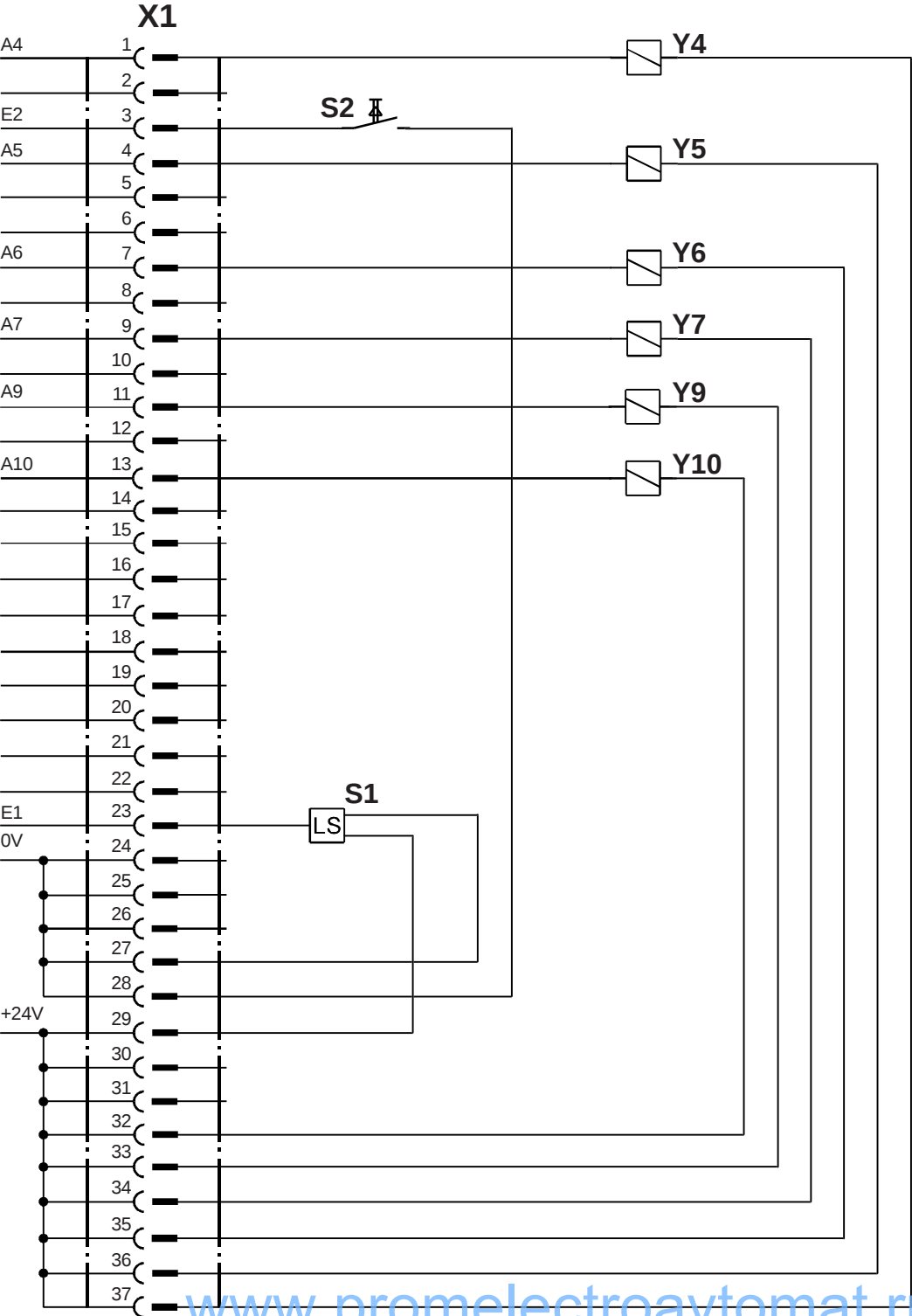
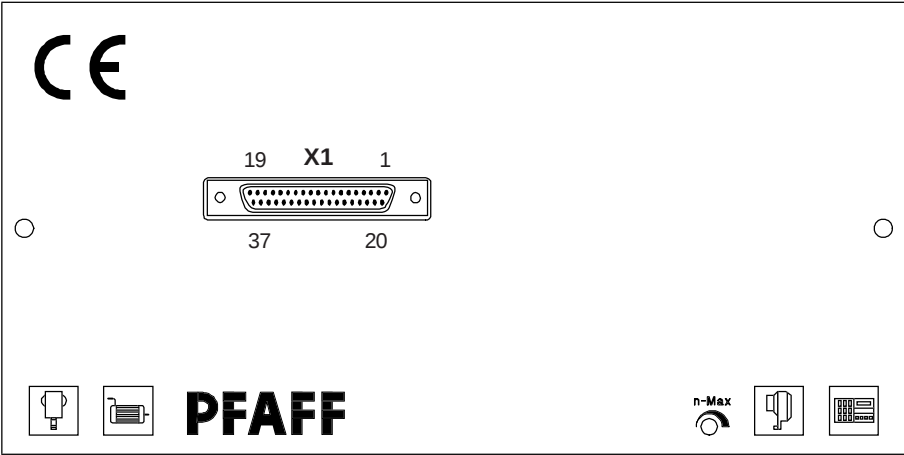
11.4 List of Parameters P144SE

(2A_044_3.EN)

No.	Function (Meaning)	Level	Range of Values	Standard Value
116	(SANL) Soft start stitches (11100000)	A,B	0-30	0
117	(SANL/DRZ) Speed for soft start stitches (00010000)	B	50-2550	1000
179	(VERZ) Time from clip closed to fold-over ON	B	0-2550	200
180	(STUZ) Units displayed I yes II no	B		II
185	(EINZ) Duty cycle flip-over strap	B	0-2550	250
189	(VERZ) Delay 1	B	0-2550	40
190	(VERZ) Delay 2	B	0-2550	150
191	(VERZ) Delay 3	B	0-2550	600
192	(VERZ) Delay 4	B	0-2550	250
193	(VERZ) Delay 5	B	0-2550	100
528	(EINZ/STAP) Duration (ms) of stacker function	B	0-2550	50
605	(DRZ) Actual speed in display I yes II no	B		II
606	(DRZ) Speed: level 1 (min.)	B	30-640	200
607	(DRZ) Speed: level 12 (max.) (01001000)	B	500-10000	4000
676	(DRZ) Speed adjustment via potentiometer possible I yes II no	B		I
718	(STBR) Timing of residual brake (0 = brake off) (00111000)	B	0-100	3
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B	1-50	44
723	(DRZAB) Brake ramp 1 gradual 50 steep	B	1-50	28
797	(HWT) Hardware test	B		II
798	(EBC) Programming level C I yes II no	B		II
799	(MAKL) Machine class which has been selected (10111000)	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		I
850	(DRZ) Maximum motor speed	C	2000-6000	4000

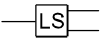
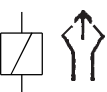
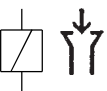
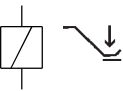
851	(PR/DRZAB) Brake ramp for stitch-count seams	C		I
	I steep			
	II gradual			
884	(REG) Proportional amplification of the speed control (in general)	B,C	4-50	13
885	(REG) Integral amplification of the speed control	C	0-100	30
886	(REG) Proportional amplification of the order controllers	C	1-50	20
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	C		I
	I different			
	II same			
897	(SONST) Commutation transmitter	C		II
	I ABB			
	II QR			
898	(SONST) Number of motor poles	C		II
	I 4 poles			
	II 6 poles			
910	(SONST) Quick internal	C	0-2550	2000

12. Anschlußplan Steckerplatte P144SE



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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 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

S1 	Start / start / start / arranque / start / arranque / start
S2 	Stopp / stop / stop / paragem / stop / parada / stop
Y4 I max 8 A *	 Stapler / stacker / empileur / empilhadeira / impilatore / apiladora / hefinstrument
Y5 I max 8 A *	 Blasen / blower / souffleur / soprador / soffiatore / soplar / blazen
Y6 I max 8 A *	 Saugen / vacuum / aspiration / aspirar / aspirazione / aspiración / zuigen
Y7 I max 8 A *	 Staplerklemme / stacker clamp / pince à l'empileur / pinça empilhadeira / morsetta impilatore / pinza de apiladora / hefinstrument klemmen
Y9 I max 8 A *	 Überwurf blasen / fold-over blowing / soufflage de surjet / soprar pôr / soffiatura rimboeco / soplar doblar / blazen van een omslag
Y10 I max 8 A *	 Kette trennen / undo chain / défaire la chaînette / corta a cadeia / scucire catenella / deshacer cadeneta / tren van een ketting

- Q Die Summe der Lastströme aller gleichzeitig eingeschalteten Stellglieder (Magnete, Magnetventile) darf den Wert von 4A nicht überschreiten (siehe hierzu Kapitel 2. Technische Daten).
- Q 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).
- Q 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").
- Q 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).
- Q La somma delle correnti di carico di tutti gli attuatori inseriti contemporaneamente (magnet, elettrovalvole) non deve essere superiore a 4 A (vedere il capitolo 2. Dati Tecnici).
- Q 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).
- Q De belastingsstroom van alle tegelijkertijd ingeschakelde bedieningsschakels (magneten, magneetventielen) mag in totaal niet meer dan 4 A bedragen (zie hiervoor hoofdstuk 2. Technische gegevens).

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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).

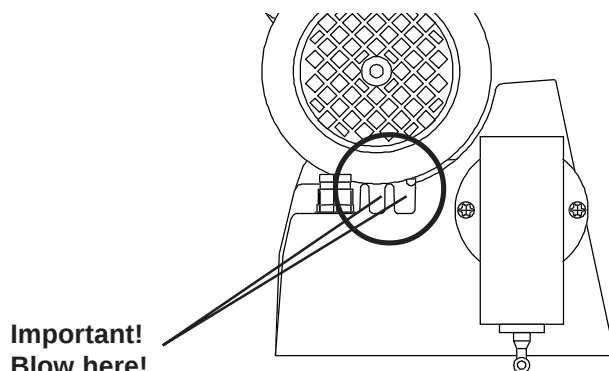


Fig. 13

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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