SERVO-TOP

QE5542

CE

Typ

P148SE

Betriebsanleitung

Teil 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/EWG**
- **Low Voltage Directive 73/23/EWG**

Contents

Page

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.

11.3 Parameter survey P148SE (2A_012_c.ENO)

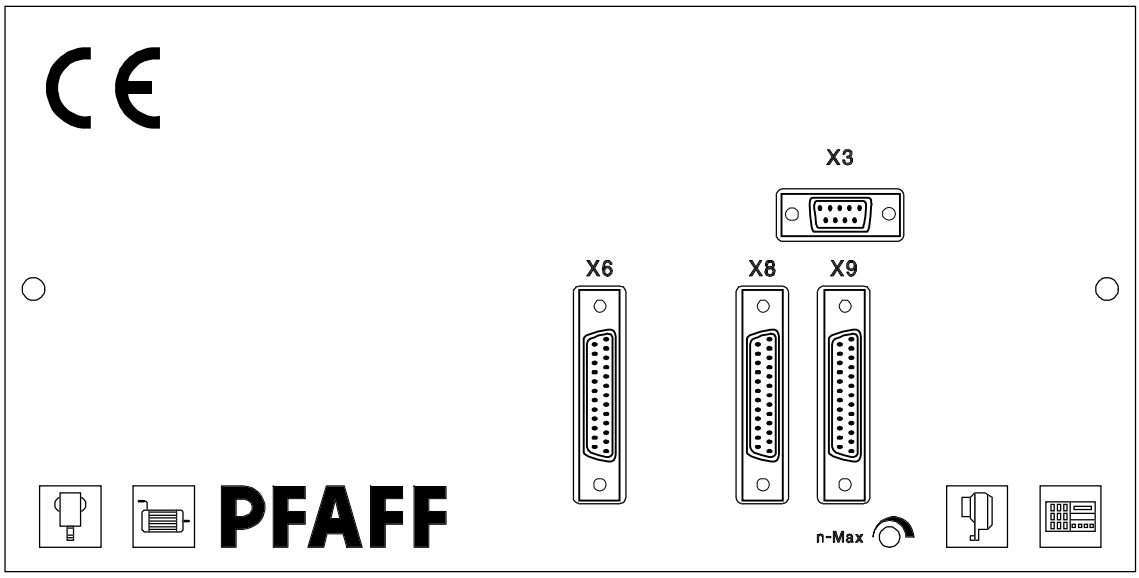
Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Auxiliary drive	ZUSAN	168/805/892 893/899		
Brake	DRZAB	723/851		
Control	REG	884/885/886 887/889/890 891/892/893 894		
Delay	VERZ	191/192/194 196/899		
Direction of rotation	DRR	800/805		
Feed reverse	TUM	721		
Hardware test	HWT	797		
Machine class	MAKL	799		
Needle position	NAPO	706		
Presser foot	PF	719		
Program	PR	851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Soft start	SANL	116		
Speed	DRZ	605/607/609 850/901		
Speed decrease	DRZAB	723/851		
Speed increase	DRZAN	722		
Stitchlength	STL	169		
Thread monitor	FW	620		
Thread trimming	SN	609/706/901	A4	X9:3
Time needed to switch on	EINZ	889		
Timing output	TA	719/721		
Units	STUZ	180		

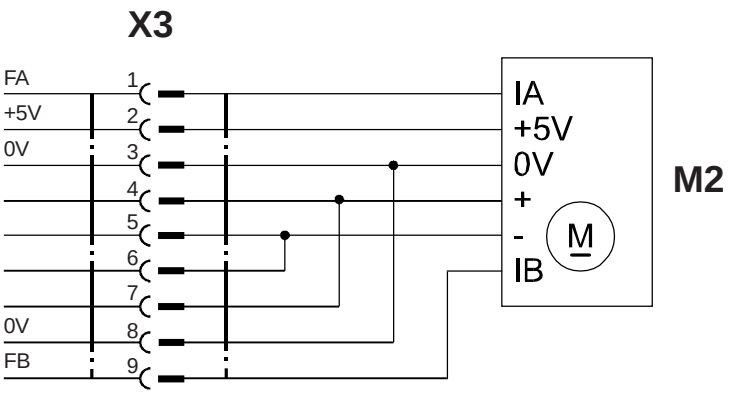
11.4 List of Parameters P148SE (2A_012_c.EN)

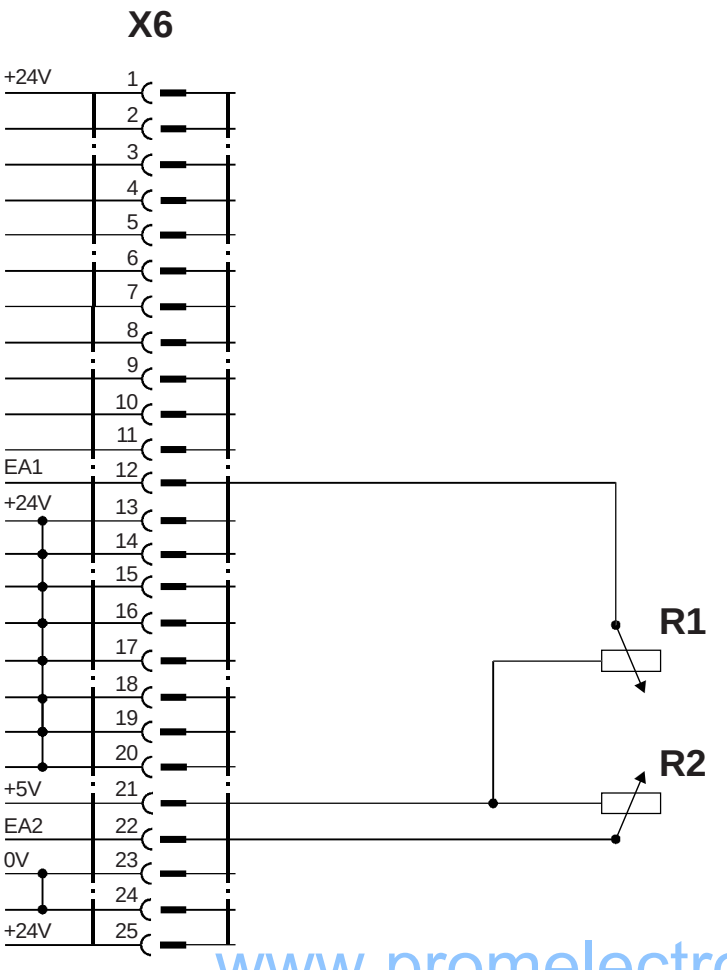
No.	Function (Meaning)	Level	Range of Values	Standard Value
116	(SANL) Soft start stitches (11100000)	A,B,C	0-30	2
168	(ZUSAN) Positioning section (increments) for auxiliary drive	C	0-2550	1800
169	(STL) Correction factor for stitchlength tensioning stitches	C	0-255	0
180	(STUZ) Units displayed I yes II no	B,C		II
191	(VERZ) Delay 3	B,C	0-2550	50
192	(VERZ) Delay 4	B,C	0-2550	150
194	(VERZ) Delay 6	B,C	0-2550	50
196	(VERZ) Delay 8	B,C	0-2550	150
417	(SONST) Display mode I mode 1 II mode 2	B,C		II
433	(SONST) Display change-over I number of stitches II speed (01111000)	B,C		II
605	(DRZ) Actual speed in display I yes II no	B,C		II
607	(DRZ) Speed: level 12 (max.) (01001000)	B,C	100-4000	4000
609	(SN/DRZ) Trimming speed 1	B,C	30-640	200
620	(FW) Thread monitor function I yes II no	A,B,C		II
706	(NAPO/SN) Needle position 6 (start trimming signal 2) (01011000)	B,C	0-239	119
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	50
721	(TUM/TA) Timing output A5 (0 = 100% switching on)	B,C	0-100	50
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	1-50	44
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	1-50	14

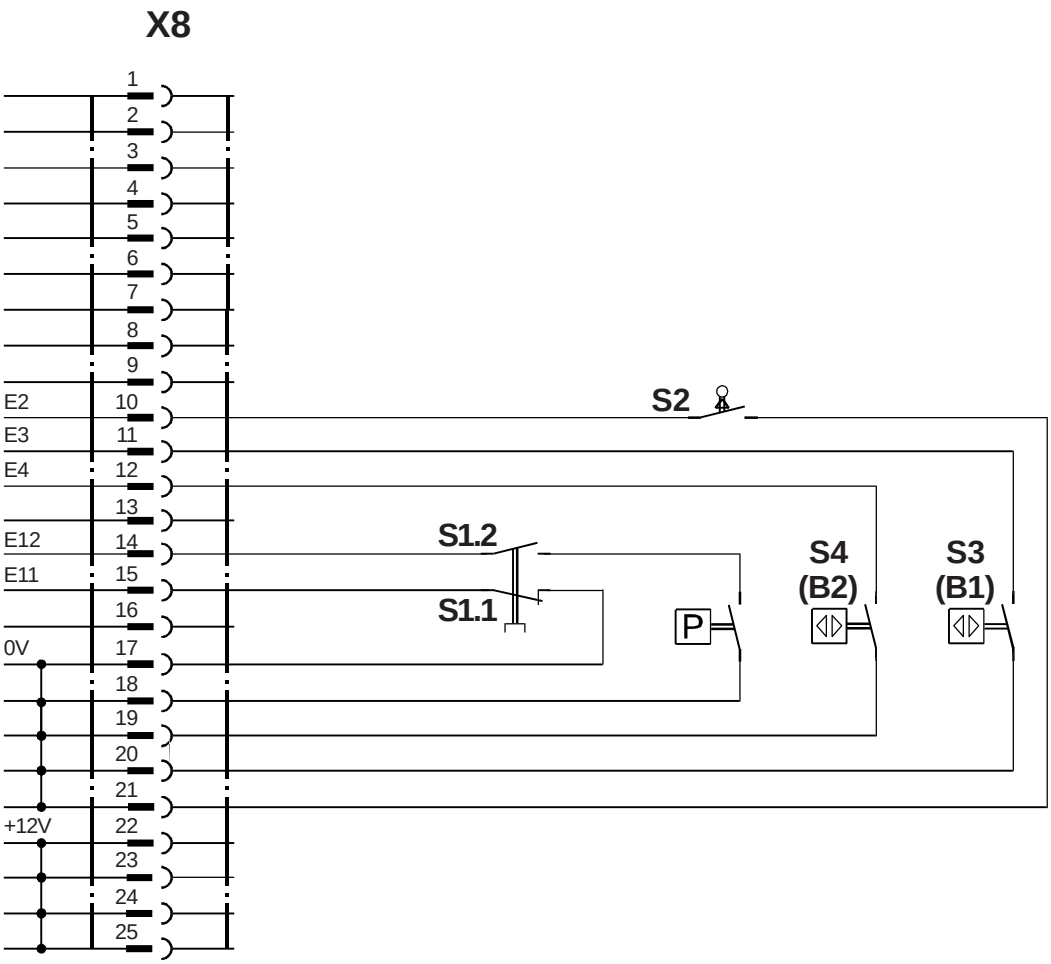
797	(HWT) Hardware test	B,C		II
798	(EBC) Programming level C I yes II no	B,C		II
799	(MAKL) Machine class which has been selected (10111000)	C	1-1	1
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation (01111000)	C		I
805	(DRR/ZUSAN) Rotational direction of auxiliary drive I lefthand rotation II righthand rotation (01111000)	C		II
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)	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
892	(REG/ZUSAN) Proportional amplification of speed control for auxiliary drive	C	0-100	50
893	(REG/ZUSAN) Integral amplification of speed control for auxiliary drive	C	0-255	100
894	(REG) Rotational direction of motor and synchronizer I different II same	C		I
899	(VERZ/ZUSAN) Delay of auxiliary drive	C	0-150	20
901	(DRZ/SN) Trimming release speed	C	30-500	300

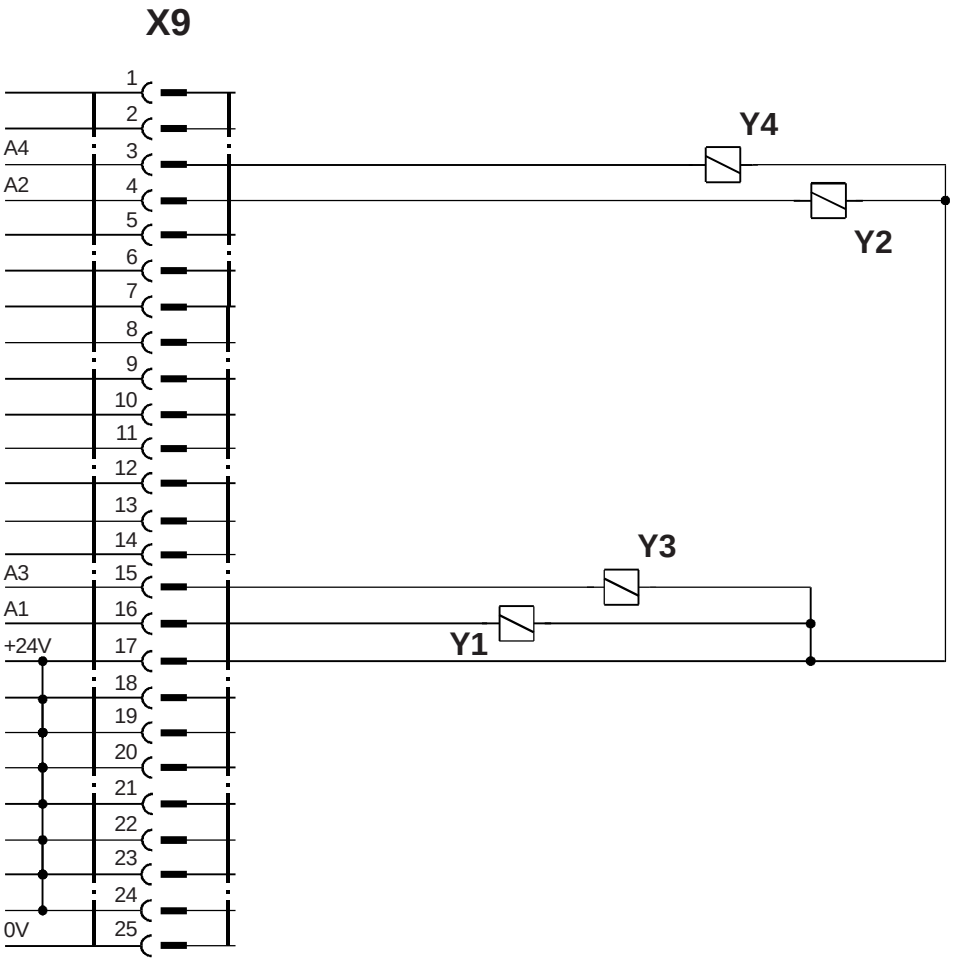
12. Anschlußplan Steckerplatte P148SE



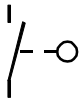
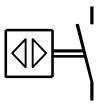
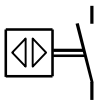
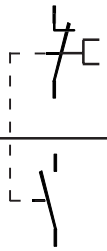
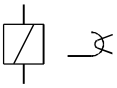
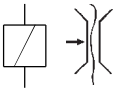
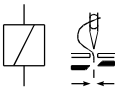








Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
Signification des aimants resp. solenoides et touches / Significação dos imaõs e/ou as solenoidas e teclas
Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los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

S2 	Klammerfreigabe / clamp release / relâchement de serre-étoffe / liberação da pinça / consenso della graffetta / liberación de la abrazadera / vrijgeven klem
S3 **(B1)** 	STOP / stop / stop / paragem / stop / parada / stop
S4 **(B2)** 	Spannstich / tensioning stitch / point tendu / pontos tensores / punto tenditore / puntada tensor / spansteek
S1.1 	Klammer absenken / lowering of work retaining clamp / descente de l'étrier de retenue / baixar o sujeitador de tecido / abbassamento del fermostoffa / bajada de la pinza de retención / neerlaten van de stofklemmen
S1.2	Start / start / start / arranque / start / arranque / start
R1 	Stichdichte / stitch density / densité de point / densidade dos pontos / densità punti / densidad de la puntada / steekdichtheid
R2 	Riegellänge / backtack length / longueur de bridage / comprimento do remate / lunghezza dell'affrancatura / longitud del remate / strooklengte
Y1 I max 100 mA 	Klammer anheben / lifting of work retaining clamp / relevage de l'étrier de retenue / levantar o sujeitador de tecido / sollevamento del fermostoffa / elevación de la pinza de retención / optillen van de stofklemmen
Y2 I max 100 mA 	Fadenzieher / thread puller / tire-fil / tirar de linhas / tirafilo / tirahilos / draadtrekker
Y3 I max 100 mA 	Fadenspannungslösen / thread tension release / détendeur de fil / soltar tensão da linha / sbloccaggio tendifilo / detensión del hilo / verbreken van de draadspanning
Y4 I max 100 mA 	Fadenschneider / thread trimmer / coupe-fil / cortar linha / rasafilo / cortahilos / draadsnijder
M2	Nebenantrieb / auxiliary drive / moteur auxiliaire / motor auxiliar / motor ausiliario / motor auxiliario / hulp motor

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).

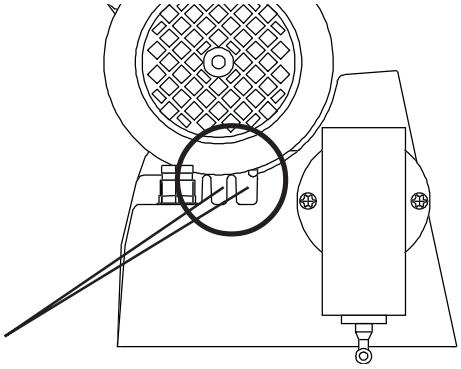


Fig. 13

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.