SERVO-TOP

QE5542

CE

Type

YA120SE

Instruction Manual

Part 3

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Contents Part 3

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 YA120SE (2Z_Y00_4.HEX)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Affichage	ANZ	605		
Auxiliary drive	ZUSAN	805/892/893 899		
Brake	DRZAB	723/851		
Control	REG	884/885/886 887/889/890 891/892/893 894		
Control of edge	KST	296		
Defect search	HWT	797		
Delay	VERZ	174/190/192 197/527/730 899		
Direction of rotation	DRR	800/805		
Display	ANZ	605		
Front backtack	AR	105		
Guiding aid	FUEGEH	923		
Hardware test	HWT	797		
Holder	TUPF	527		
Needle position	NAPO	700/701/702 703		
Number of stitches	STZA	141/174/294 543		
Photocell	LS	161/543		
Presser foot	PF	729/730		
Program	PR	851		
Programming level C	EBC	798		
Residual brake	STBR	718		
Seam end	NE	543		
Soft start	SANL	116		
Speed	DRZ	105/296/566 605/606/607 609/676/850		

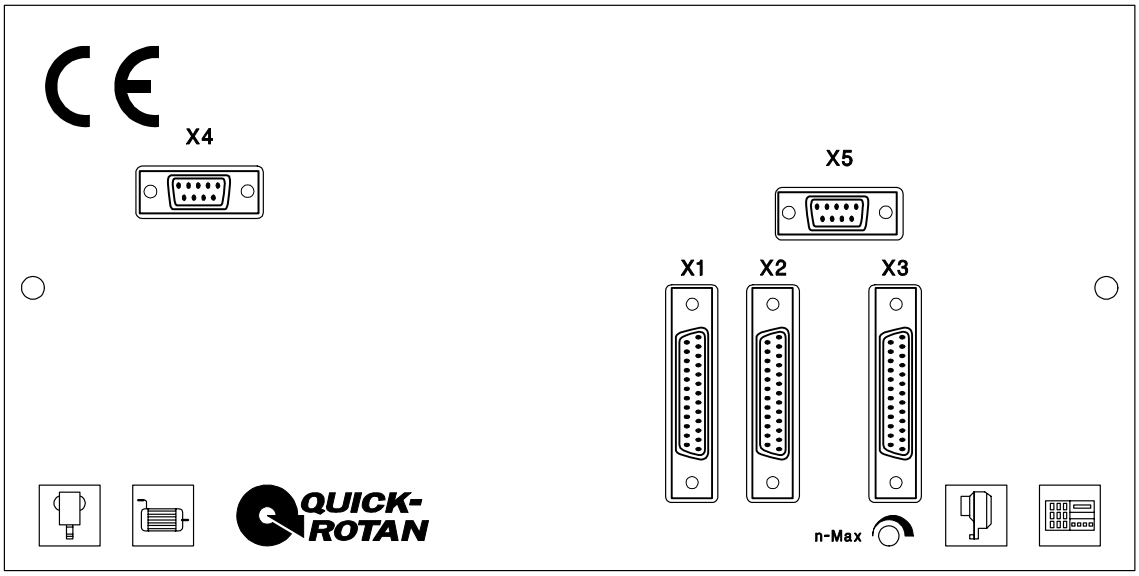
Speed decrease	DRZAB	723/851
Speed increase	DRZAN	722
Speed limitation	DB	676
Stacker	STAP	527/528
Start	START	161
Start delay	STVERZ	729
Stitch condensation	STVD	105
Thread monitor	FW	141
Thread trimming	SN	609
Time needed to switch on	EINZ	175/528/889
Transportation motor	TPM	592/593
Vacuum	SAUG	543

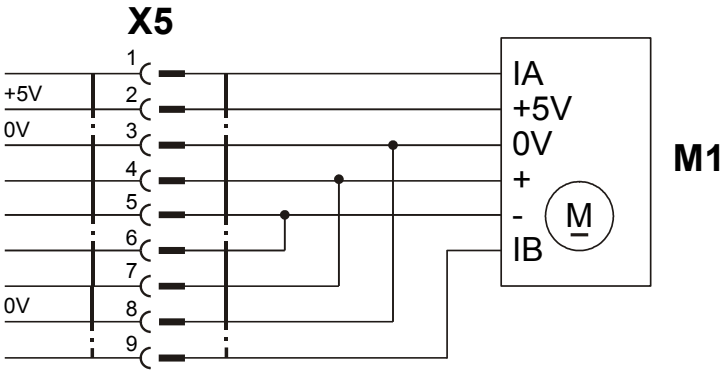
11.4 List of Parameters YA120SE (2Z_Y00_4.HEX)

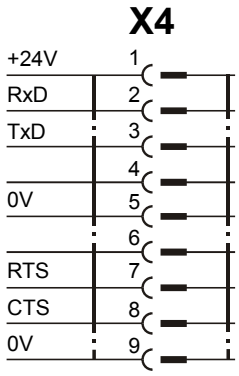
No.	Function (Meaning)	Level	Range Values	of Value	Standard
105	(AR/DRZ/STVD) Speed for front backtack/stitch condensation	A,B,C	100 - 6400	5500	Kl. 1
116	(SANL) Soft start stitches	A,B,C	0 - 255	60	Kl. 1
141	(FW/STZA) Number of stitches until bobbin thread monitor signal becomes active (signal suppression on bobbin thread monitor)	B,C	0 - 255	6	Kl. 1
161	(LS/START) Start delay for start of photocell	A,B,C	0 - 2550	800	Kl. 1
174	(VERZ/STZA) Stitches until output Ax on	A,B,C	0 - 255	20	Kl. 1
175	(EINZ) Time needed to switch on for output Ax	B,C	0 - 255	6	Kl. 1
190	(VERZ) Delay t2	B,C	0 - 2550	60	Kl. 1
192	(VERZ) Delay t4	A,B,C	0 - 2550	1250	Kl. 1
197	(VERZ) Delay t11	B,C	0 - 2550	530	Kl. 1
294	(EINST/STZA) Einschaltdauer (Stiche) für die Schlitzkantensteuerung (SKS)	A,B,C	0 - 255	16	Kl. 1
296	(DRZ/KST) Speed for control of edge	A,B,C	10 - 2550	200	Kl. 1
527	(STAP/TUPF/VERZ) Delay (ms) from stacker on to holder / stopper off	A,B,C	0 - 2550	100	Kl. 1
528	(EINZ/STAP) Duration (ms) of stacker function	B,C	0 - 2550	50	Kl. 1
543	(LS/NE/SAUG/STZA) Number of stitches from light barrier clear to vacuum on	A,B,C	0 - 255	29	Kl. 1
566	(DRZ) Automatic speed is only obtained when the treadle reaches level 12 I yes II no	B,C		I	Kl. 1
592	(TPM) Transportation motor quick	A,B,C	10 - 2550	290	Kl. 1
593	(TPM) Transportation motor slow	A,B,C	10 - 2550	220	Kl. 1
605	(DRZ/ANZ) Actual speed in display I yes II no	B,C		I	Kl. 1
606	(DRZ) Speed: level 1 (min.)	B,C	30 - 640	200	Kl. 1
607	(DRZ) Speed: level 12 (max.)	B,C	100 - 9900	6500	Kl. 1
609	(SN/DRZ) Trimming speed 1	B,C	30 - 300	200	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)	B,C	0 - 239	200	Kl. 1
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0 - 239	24	Kl. 1
718	(STBR) Timing of residual brake (0 = brake off)	C	0 - 100	0	Kl. 1
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	C	1 - 50	45	Kl. 1
723	(DRZAB) Brake ramp 1 gradual 50 steep	C	1 - 50	25	Kl. 1
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0 - 2550	120	Kl. 1
730	(PF/VERZ) Lift delay for presser foot after seam end	C	0 - 2550	30	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

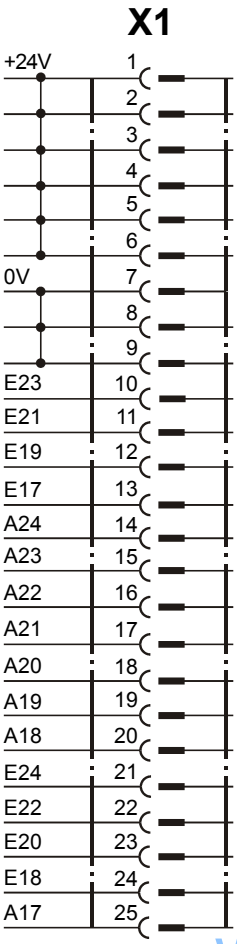
800	(DRR) Direction of motor rotation viewed from belt pulley I left-hand rotation II right-hand rotation	B,C		II	Kl. 1
805	(DRR/ZUSAN) Rotational direction of auxiliary drive I lefthand rotation II righthand rotation	B,C		I	Kl. 1
850	(DRZ) Maximum motor speed	C		4500	Kl. 1
851	(PR/DRZAB) Brake ramp for stitch-count seams I steep II gradual	C		I	Kl. 1
884	(REG) Proportional amplification of the speed control (in general)	C	4 - 50	13	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	200	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
892	(REG/ZUSAN) Proportional amplification of speed control for auxiliary drive	B,C	0 - 50	1	Kl. 1
893	(REG/ZUSAN) Integral amplification of speed control for auxiliary drive	C	0 - 100	4	Kl. 1
894	(REG) Rotational direction of motor and synchronizer I different II same	C		I	Kl. 1
898	(SONST) Number of motor poles I 4 poles II 6 poles	C		II	Kl. 1
899	(VERZ/ZUSAN) Delay of auxiliary drive	C	0 - 100	50	Kl. 1
923	(FUEGEH) guiding aid always on I yes II no	A,B,C		II	Kl. 1

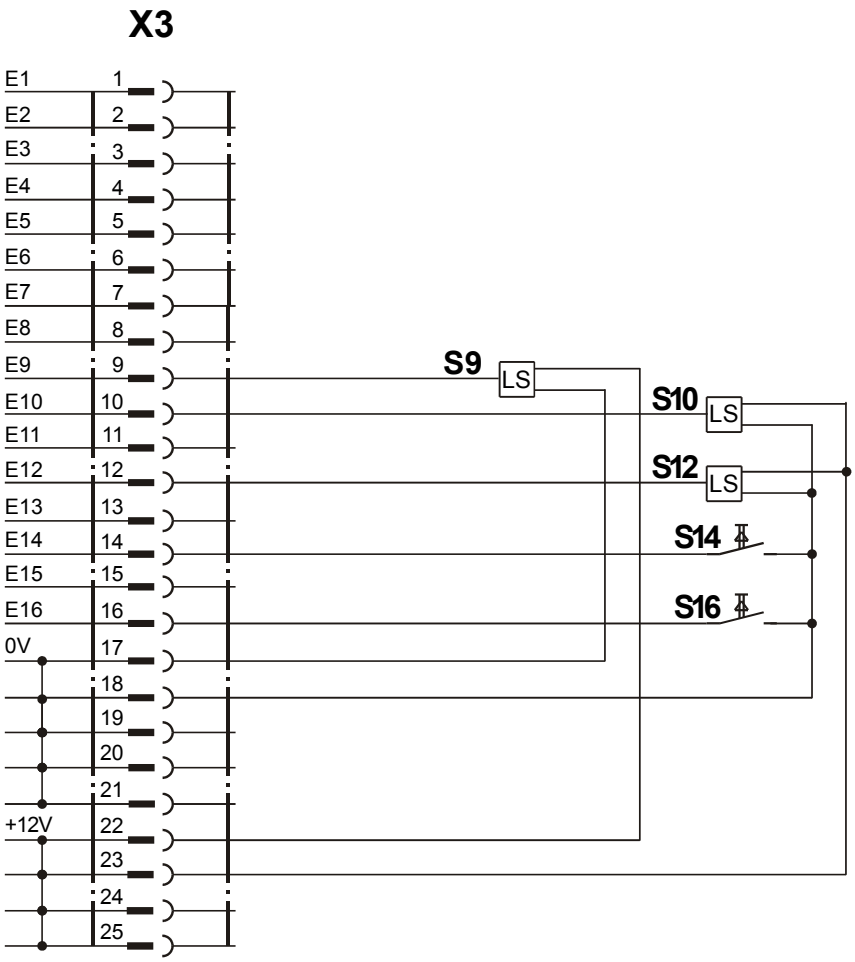
12. Electrical Connections Diagram YA120SE

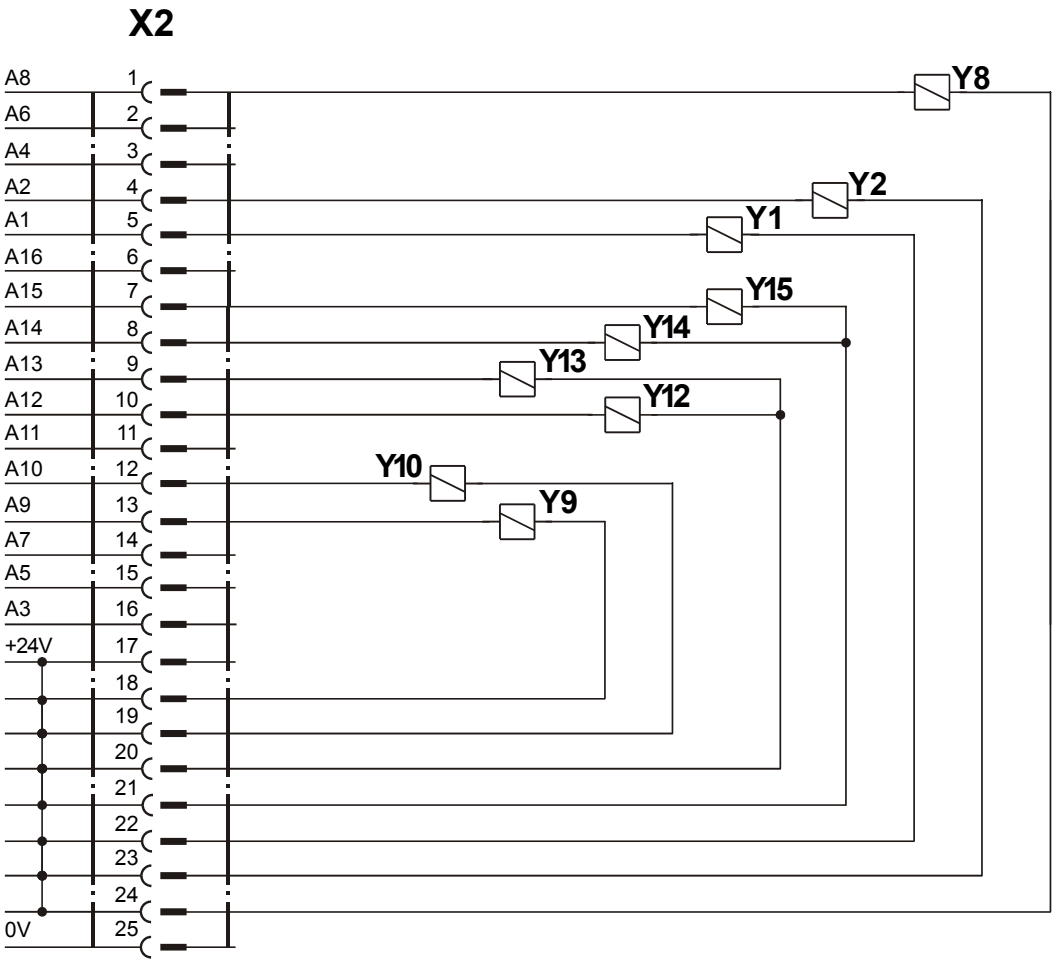




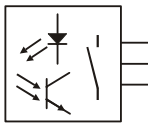
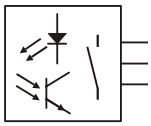
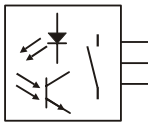
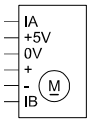
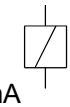
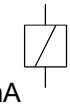
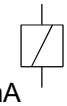
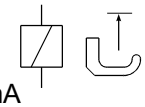
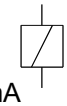
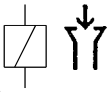




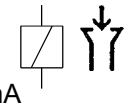
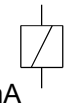




Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
Signification des aimants resp. solenoides et touches / Significação dos imaõs e/ou as solenoidas e teclas
Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los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

S9 	Start - stopp / start - stop / start - stop / arranque - paragem / start - stop / arranque - parada / start - stop
S10 	Stapler / stacker / empileur / empilhadeira / impilatore / apiladora / hefinstrument
S12 	Kantensteuerung
S14 	Stopp / stop / stop / paragem / stop / parada / stop
S16 	Start manuell / start manuell
M1 	Bandantrieb / tape feed / transport de ruban / transporte de cinta / trasporto nastro / transportador de cinta / bandtransport
Y1 I max 100 mA 	Stapler / stacker / empileur / empilhadeira / impilatore / apiladora / hefinstrument
Y2 I max 100 mA 	Konturenarm / contour arm / bras de contour / braço de contorno / braccio di contorno / brazo de contorno / contourarm
Y8 I max 100 mA 	Transport Schmalstreifen / transport narrow strip / transport de bande étroite / transporte de filete / trasporto striscia stretto / transportador de banda estrecha / smalband transport
Y9 I max 100 mA 	Presserfuß heben / presser foot up / pied presseur en haut / calcador em cima/ alzapiedino su / prensatelas arriba / drukvoet optillen
Y10 I max 100 mA 	Fügehilfe-Position / position contour guide / positionnement guide-contour / posicionamento de guiar da contorno / posizionamento a guida contorno / posicionamiento de guía para contornos / positioneren leidende contour
Y12 I max 100 mA 	Stempel / Stoffhalter
Y13 I max 100 mA 	Stoffabfall saugen / material waste vacuuming / aspiration de déchets / aspirar de descida / aspirare immondizie / aspirar de desechos / afval zuigen

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

Y14  I max 100 mA	Kette saugen / chain vacuuming / aspiration de chaînette / aspirar de cadeia / aspirare catenella / aspirar cadeneta / zuigen van een ketting
Y15  I max 100 mA	Fügehilfe-Verschluß / contour guide lock / fermeture guide-contour / fechado de guiar da contorno / serratura di guida contorno / cerradura de guía para contornos / sluiten leidende contour

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).

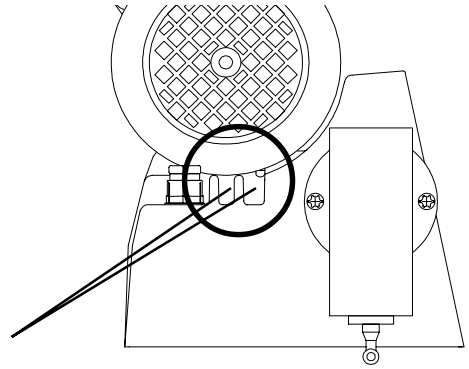


Fig. 13

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.