

# EcoDrive

## QE3760/QE5540

### CE

## Type

# PE40ED

## Instruction Manual

## Part 3

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## 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, 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 PE40ED

1\_Q01\_17 (PARAM.ENO)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Backtack	RIE	105/110/305		
Blower	BLA	250/668		
Brake	DRZAB	723		
Chaining-off finger	KEFI	215/216/217		
Chainstitch machine	KES	578/765		
Chopper	MESSE	105/110/714		
Control	REG	880/884/885 886/887/889 890		
Defect search	HWT	797		
Delay	VERZ	189/190/198 216/217/545 623/642/643 716/717/730 765/770/779		
Direction of rotation	DRR	800		
Display	ANZ	605		
Edge trimmer	KS	513/514		
End backtack	ER	110/305		
Engine	MOT	897		
Feed reverse	TUM	301/643/721		
Flip-Flop	FF	513/514		
Front backtack	AR	105/106/305		
Hardware test	HWT	797		
Inverse rotation	RDR	618/623/801		
Linear motor	LINMOT	668		
Lockstitch machine	STS	578		
Machine class	MAKL	790/799		
Needle position	NAPO	521/700/702 703/710		
Needle position change-over	NPW	616		

Needle up without trimming	NHOS	616/710
Number of stitches	STZA	111/112/141 145/215/250 513/514/760
ON period	EINZ	189/190/198 714/715/749 889
Output „B“	AUSGB	513/514
Photocell	LS	111/112/161 188/199/615
Presser foot	PF	624/633/642 651/668/719 729/730/770
Program	PR	206/513/514
Programming level C	EBC	798
Residual brake	STBR	718
Seam end	NE	110/145/206 602
Seam start	NA	105
Soft start	SANL	116/117
Speed	DRZ	105/106/110 117/199/202 586/587/605 606/607/608 609/901
Speed decrease	DRZAB	723
Speed increase	DRZAN	722
Speed limitation	DB	586/587
Start	START	161/188/603
Start delay	STVERZ	729
Starting block	ANLSP	619/624/665
Stitch condensation	STVD	105/106/110
Stitchcounter	STZ	250/760
Stop	STOP	206/619/624 665
Target stitch	PEIPO	653/789
Thread monitor	FW	141/660/760
Thread tension release	FSL	749/779

Thread trimming	SN	609/619/633 714/717/765 901
Thread wiper	WI	668/715/716
Time needed to switch on	EINZ	189/190/198 714/715/749 889
Timing output	TA	642/643/719 721
Unlocking of chain	ENTKET	425
Vacuum	SAUG	105/110/545

## 11.4 List of Parameters PE40ED

1\_Q01\_17 (PARAM.EN)

No.	Function (Meaning)	Level	Range Values	of Value	Standard Value
105	(AR/RIE/DRZ/MESSER/NA/SAUG/STVD) Speed for front backtack/ stitch condensation	B,C	0100 - 3500 0100 - 6400	1400 1200	Kl. 1 Kl. 2, 4 Kl. 3, 5
106	(AR/DRZ/STVD) Speed for front backtack/stitch condensation 1 variable (treadle-controlled) 0 constant (corresponding to <105>)	B,C		0 0 -	Kl. 1 Kl. 4 Kl. 2, 3, 5
110	(ER/RIE/DRZ/MESSER/NE/SAUG/STVD) Speed for end backtack/ stitch condensation	B,C	0100 - 3500 0100 - 6400	1400 1200	Kl. 1 Kl. 4 Kl. 2, 3, 5
111	(LS/STZA) Light barrier compensation stitches 1 (stitches from light barrier clear to seam end)	A,B,C	0001 - 0100 0001 - 0030	8 6	Kl. 1 Kl. 2, 4 Kl. 3, 5
112	(LS/STZA) Number of stitches for light barrier fade-out on knit fabrics (according to stitch size)	A,B,C	0000 - 0100	0	Kl. 1, 2, 4 Kl. 3, 5
116	(SANL) Soft start stitches	A,B,C	0000 - 0030	0	Kl. 1, 2, 3, 4, 5
117	(SANL/DRZ) Speed for soft start stitches	B,C	0030 - 1000 0030 - 0640 0030 - 1000	800 400 600	Kl. 1 Kl. 2, 4, 5 Kl. 3
141	(FW/STZA) Number of stitches until bobbin thread monitor signal becomes active (signal suppression on bobbin thread monitor)	B,C	0000 - 0255 0000 - 0255 0000 - 0255	1 10 12	Kl. 1 Kl. 2 Kl. 3, 4 Kl. 5
145	(NE/STZA) Number of stitches for seam end	B,C	0000 - 0255 0000 - 0255	3 0	Kl. 1, 2 Kl. 4 Kl. 3, 5
161	(LS/START) Start delay for start of photocell	B,C	0000 - 2000	200	Kl. 1, 4 Kl. 2, 3, 5
188	(LS/START) Start by light barrier 1 even when light barrier is light 2 only when light barrier is dark 3 without pedal when light barrier is dark 4 drive start over input	C	0001 - 0003	1	Kl. 1, 2, 3, 4 Kl. 5
189	(VERZ/EINZ) Delay/on time t1	B,C	0000 - 2000	200	Kl. 1, 2, 3 Kl. 4, 5
190	(VERZ/EINZ) Delay/on time t2	B,C	0000 - 2000	200	Kl. 1, 2, 3 Kl. 4, 5
198	(VERZ/EINZ) Delay/on time t10	B,C	0000 - 0200	30	Kl. 1 Kl. 2, 3, 4, 5
199	(DRZ/LS) Speed for light barrier compensation stitches	B,C	0300 - 3500	1200	Kl. 1, 2, 4 Kl. 3, 5
202	(DRZ) Speed reduction	B,C	0300 - 3500	5500	Kl. 5 Kl. 1, 2, 3, 4
206	(NE/PR/STOP) Interrupt/discontinue seam sections at speed = constant (<203> = II) 1 with treadle -2 0 with treadle 0	B,C		0	Kl. 1, 4 Kl. 2, 3, 5
215	(KEFI/STZA) Number of stitches for chaining-off finger	A,B,C	0000 - 0100	5	Kl. 2 Kl. 1, 3, 4, 5
216	(KEFI/VERZ) Delay in start-up time (ms) for chaining-off finger	B,C	0000 - 2500	120	Kl. 2 Kl. 1, 3, 4, 5
217	(KEFI/VERZ) Speed release (ms) after chaining-off finger off	B,C	0000 - 2500	120	Kl. 2 Kl. 1, 3, 4, 5
250	(STZ/BLA/STZA) Stitches for edging blower (hemming)	A,B,C	0000 - 0100	10	Kl. 3 Kl. 1, 2, 4, 5
301	(TUM) Switch-on voltage of the magnet for transport change-over 1 24V 0 32V	C		1	Kl. 1, 2, 3, 4 Kl. 5

305	(RIE/AR/ER) Front-backtack and end-backtack with interruption at pedal zero position 1 yes 0 no	B,C	0 -	Kl. 1 Kl. 2, 3, 4, 5
425	(ENTKET) Unlocking of chain at seam end 1 yes 0 no	B,C	0 -	Kl. 1 Kl. 2, 3, 4, 5
513	(FF/PR/AUSGB/KS/STZA) Stitches before beginning of seam to edge trimmer on	A,B,C	0000 - 0100 5 -	Kl. 1, 4 Kl. 2, 3, 5
514	(FF/PR/AUSGB/KS/STZA) Stitches from edge trimmer on till edge trimmer off	A,B,C	0000 - 0100 5 -	Kl. 1, 4 Kl. 2, 3, 5
521	(NAPO) Needle position at stop before seam end 1 position 2 (up) 0 position 1 (down)	B,C	0 -	Kl. 4, 5 Kl. 1, 2, 3
545	(SAUG/VERZ) Delay (ms) to vacuum off	B,C	0000 - 2000 150 -	Kl. 4 Kl. 1, 2, 3, 5
578	(KES/STS) Type of machine 1 overlock 0 chainstitch or lockstitch (<799>)	C	0 -	Kl. 1 Kl. 2, 3, 4, 5
586	(DRZ/DB) Speed limitation	B,C	0300 - 4800 3000 -	Kl. 1 Kl. 2, 3, 4, 5
587	(DRZ/DB) Speed limitation	C	0100 - 9500 9500 -	Kl. 1, 2, 3, 4 Kl. 5
602	(NE) Seam end at treadle position 1 slightly heeled (-1) 0 fully heeled (-2)	B,C	0 -	Kl. 1, 2 Kl. 3, 4, 5
603	(START) Start after seam end 1 after treadle 0 only 0 immediate start of operation	B,C	1 -	Kl. 1, 2, 4 Kl. 3, 5
605	(DRZ/ANZ) Actual speed in display (<725>) 1 yes 0 no	B,C	0	Kl. 1, 2, 3, 4, 5
606	(DRZ) Speed: level 1 (min.)	B,C	0030 - 0600 200 0030 - 0600 180	Kl. 1, 2, 3 Kl. 4, 5
607	(DRZ) Speed: level 12 (max.)	B,C	0100 - 9500 4000 0100 - 9500 4500	Kl. 1, 2, 3, 4 Kl. 5
608	(DRZ) Acceleration curve (Pedal characteristic) 1 = linear 0 = non linear	B,C	1 -	Kl. 1, 2, 4, 5 Kl. 3
609	(SN/DRZ) Trimming speed 1	B,C	0060 - 0300 200 0060 - 0300 180	Kl. 1, 2, 3 Kl. 4, 5
615	(LS) End recognition when photocell goes 1 from light to dark 0 from dark to light	B,C	0 -	Kl. 1, 2, 4 Kl. 3, 5
616	(NPW/NHOS) Function of external key (input) 1 needle position change-over (NPW) 0 needle up without trimming (NHOS)	B,C	1 0 -	Kl. 1, 2 Kl. 4 Kl. 3, 5
618	(RDR) Inverse rotation after seam end 1 yes 0 no	B,C	0 0 -	Kl. 1, 2 Kl. 5 Kl. 3, 4
619	(SN/ANLSP/STOP) Control of thread trimming (safety switch no run) 1 yes 0 no	B,C	0 -	Kl. 1, 2, 3, 4 Kl. 5
623	(RDR/VERZ) Delay in start-up time (ms) for inverse rotation	B,C	0000 - 2000 100 0000 - 2000 50 -	Kl. 1 Kl. 5 Kl. 2, 3, 4
624	(ANLSP/STOP/PF) Function of external key (input) 1 stop / safety switch no run 0 presser foot	B,C	0 -	Kl. 1 Kl. 2, 3, 4, 5

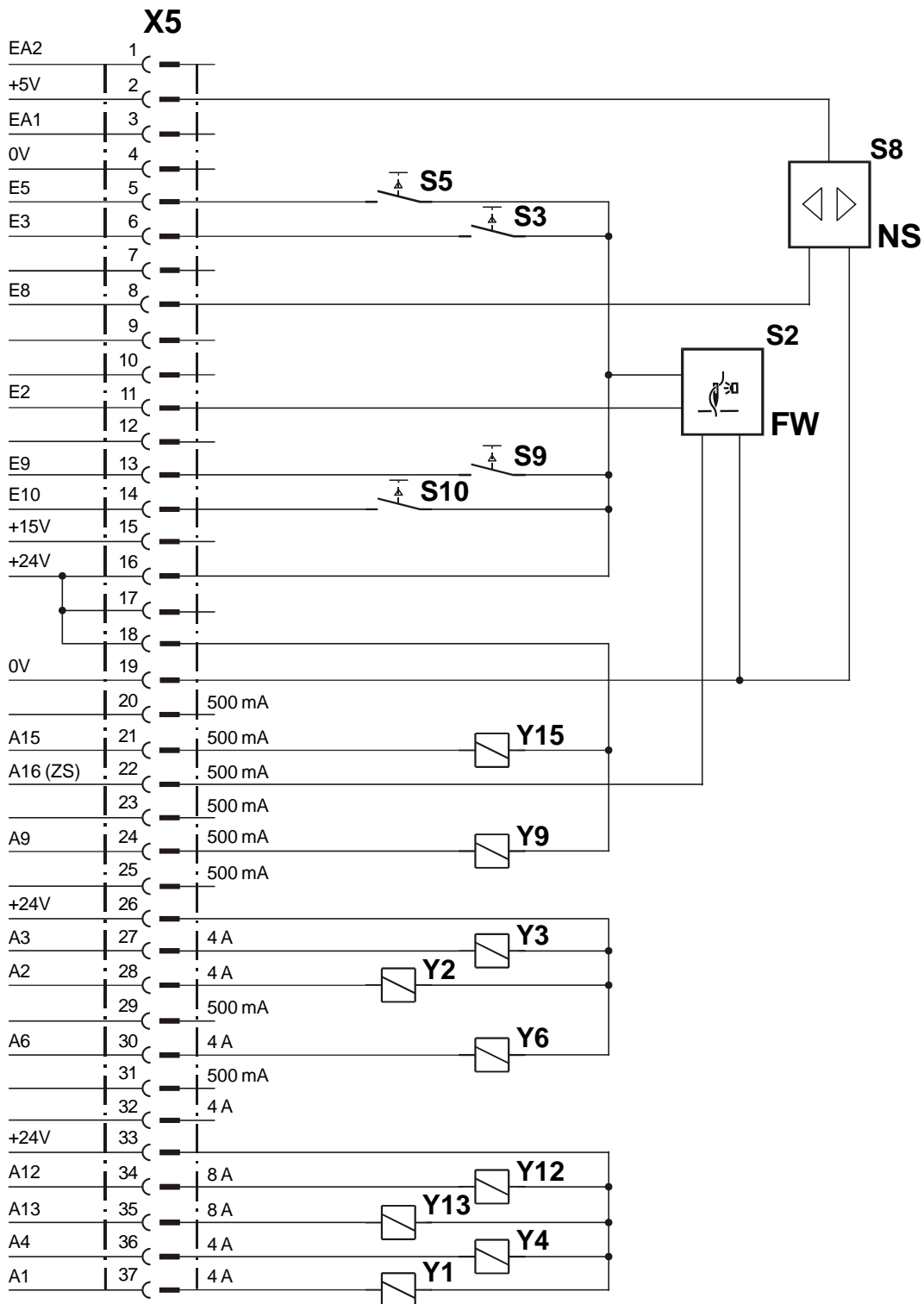
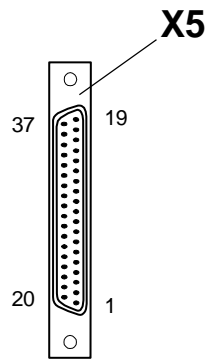


633	(SN/PF) Trimming and presser foot 1 with treadle „-2“ only (<602> = II) 0 corresponding to <602>	B,C	0 -	Kl. 1, 2, 4 Kl. 3, 5
642	(PF/VERZ/TA) presser foot time from switch-on to voltage reduction (cycling)	B,C	0010 - 0200 200 0010 - 0100 100 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
643	(TUM/VERZ/TA) feed reverse time from switch-on to voltage reduction (cycling)	B,C	0010 - 0200 200 0010 - 0100 100 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
651	(PF) Presser foot with automatic descent on machine stop 1 yes 0 no	B,C	1 -	Kl. 1, 2, 3, 4 Kl. 5
653	(PEIPO) Target stitch before sewing 1 yes 0 no	B,C	0 -	Kl. 1, 2 Kl. 3, 4, 5
660	(FW) Bobbin thread monitoring 0 without (= *II*) 1 via a sensor (= **I*) 2 by a stitch count	B,C	0000 - 0002 0 -	Kl. 1, 2, 3, 4 Kl. 5
665	(ANLSP/STOP) Run locking/stop 1 contact closed 0 contact open	B,C	0 -	Kl. 1, 3, 4 Kl. 2 Kl. 5
668	(BLA/LINMOT/PF/WI) Thread wiper/thread clearer 1 yes 0 no	A,B,C	1 0 -	Kl. 1, 4 Kl. 2, 3 Kl. 5
700	(NAPO) Needle position 0	B,C	0000 - 0255 0	Kl. 1, 2, 3, 4, 5
*	(reference position of the needle)			
702	(NAPO) Needle position 1 (needle down)	B,C	0000 - 0255 53 0000 - 0255 90	Kl. 1 Kl. 2, 3, 4, 5
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0000 - 0255 222 0000 - 0255 238	Kl. 1 Kl. 2, 3, 4, 5
710	(NAPO/NHOS) Needle position 3 (needle up)	B,C	0000 - 0255 205 0000 - 0255 212 -	Kl. 1 * Kl. 2, 4 Kl. 3, 5
714	(EINZ/SN/MESSER) Duration (ms) for chainstitch trimming or chopper	B,C	0010 - 2500 100 0010 - 0250 60 -	Kl. 1, 2 Kl. 3, 4 Kl. 5
715	(EINZ/WI) Duration (ms) of thread wiper	B,C	0000 - 2500 60 0000 - 2000 120 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
716	(VERZ/WI) Delay in start-up time (ms) for thread wiper	B,C	0000 - 2500 30 0000 - 2000 120 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
717	(SN/VERZ) Delay in start-up time (ms) for trimming method when the machine is not activated by the treadle	B,C	0000 - 2500 100 0000 - 2000 120 -	Kl. 1, 2 Kl. 3, 4 Kl. 5
718	(STBR) Timing of residual brake (0 = brake off)	B,C	0000 - 0100 0	Kl. 1, 2, 3, 4, 5
719	(PF/TA) Timing output (lifting presser foot) (0 = 100% switched on)	B,C	0000 - 0090 50 0010 - 0090 40 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
721	(TUM/TA) Timing output (feed reverse) (0 = 100% switched on)	B,C	0010 - 0090 40 -	Kl. 1, 2, 3, 4 Kl. 5
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	0001 - 0060 50	Kl. 1, 2, 3, 4, 5
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	0001 - 0060 35 0001 - 0060 40	Kl. 1, 4 Kl. 2, 3, 5

729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0010 - 2000 80 0010 - 2000 120 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0010 - 2000 50 0010 - 2000 120 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
749	(EINZ/FSL) Duration (ms) of thread tension release	B,C	0000 - 2500 130 0000 - 2000 120 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
760	(FW/SPFW/STZ/STZA) - Stitch count for the remnant thread after the bobbin thread monitor responds with direct bobbin thread monitoring - Multiplier for the fixed value (200) for determining the start value of the stitch counter with indirect bobbin thread monitoring	B,C	0000 - 0250 5 -	Kl. 1, 2, 3, 4 Kl. 5
765	(SN/KES/VERZ) Delay in start-up time (ms) for chainstitch trimming	B,C	0010 - 2500 30 0010 - 0250 60 -	Kl. 1, 2 Kl. 3, 4 Kl. 5
770	(PF/VERZ) Lifting delay of presser foot at threadle- position „-1“	B,C	0010 - 0250 200 0010 - 0250 100 -	Kl. 1 Kl. 2, 3, 4 Kl. 5
779	(FSL/VERZ) Delay (ms) until thread tension release on	B,C	0000 - 2500 200 0000 - 2000 120 -	Kl. 1 Kl. 2, 4 Kl. 3, 5
789	(PEIPO) Needle position 10 (target stitch)	B,C	0000 - 0255 248 -	Kl. 1, 2 Kl. 3, 4, 5
790	(MAKL) Program selection for machine classes by operators box	C	0000 - 0009 1 -	Kl. 1, 2, 3, 4 Kl. 5
797	(HWT) Hardware test 1 yes 0 no	C	0	Kl. 1, 2, 3, 4, 5
798	(EBC) Programming level C 1 yes 0 no	B,C	0	Kl. 1, 2, 3, 4, 5
799	(MAKL) Machine class which has been selected	C	0001 - 0005 1 0001 - 0005 2 0001 - 0005 3 0001 - 0005 4 0001 - 0005 5	Kl. 1 Kl. 2 Kl. 3 Kl. 4 Kl. 5
800	(DRR) Direction of motor rotation viewed from belt pulley 1 left-hand rotation 0 right-hand rotation	C	0	Kl. 1, 2, 3, 4, 5 *
801	(RDR) Reverse rotation angle after seam end	B,C	0010 - 0212 100 0010 - 0212 32 -	Kl. 1 Kl. 2, 5 Kl. 3, 4
880	(REG) Starting current max. [A]	C	0001 - 0020 10	Kl. 1, 2, 3, 4, 5
884	(REG) Proportional amplification of the speed control (in general)	C	0003 - 0025 8 0003 - 0020 7	Kl. 1, 4 Kl. 2, 3, 5
885	(REG) Integral amplification of the speed control	C	0001 - 0255 22 0001 - 0255 35	Kl. 1, 2, 3, 4 Kl. 5
886	(REG) Proportional amplification of the order controllers	C	0001 - 0025 10 0001 - 0025 15	Kl. 1, 2, 3, 4 Kl. 5
887	(REG) Differential amplification of the order controllers	C	0001 - 0025 10	Kl. 1, 2, 3, 4, 5
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0000 - 2500 400 0000 - 2500 200	Kl. 1, 2, 3, 4 Kl. 5
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	0001 - 0025 15	Kl. 1, 2, 3, 4, 5
897	(MOT) MINI motor version 1 long 0 short	C	0	Kl. 1, 2, 3, 4, 5

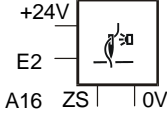
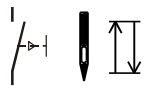
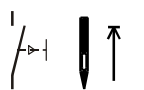
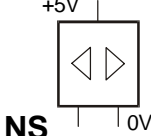
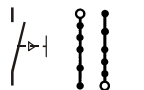
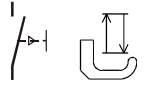
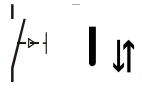
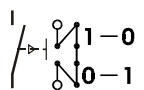
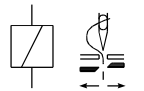

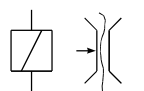
901	(DRZ/SN) Trimming release speed	C	0030 - 0500 350	Kl. 1
			0030 - 0500 300	Kl. 2, 3, 4, 5
933	(ANZ) Display change-over	A,B,C	0	Kl. 1, 2, 3, 4, 5
	1 diagnosis			
	0 normal display			

## 12. Electrical Connections Diagram X5 PE40ED

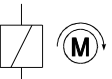

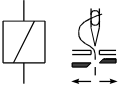
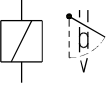
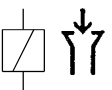
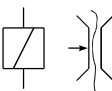
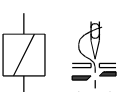
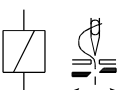
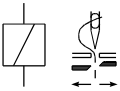


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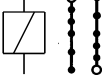
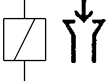
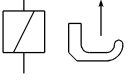
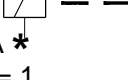

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<p><b>FW</b> </p>	<p>Fadenwächter / thread monitor / garde-fil /                  guarda da linha / controllafilo / guardahilos /                  draadcontrole                  A16 : Zählsignal / count signal, E2 : Fadenfehler / thread error</p>
<p><b>S3</b> </p> <p>&lt;616&gt; = I</p>	<p>Nadelpositionswechsel / needle position change-over /                  changement de position d'aiguille / troca de posição da agulha /                  cambio di posizione dell'ago / cambio de posición de aguja /                  naaldpositie-verwisseling</p>
<p><b>S3</b> </p> <p>&lt;616&gt; = II</p>	<p>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</p>
<p><b>S8</b> </p>	<p>Näherungsschalter-STOP/Anlaufsperr / reed switch-STOP/Safety switch no run /                  STOP/Verrouillage de remise en marche / STOP/Bloqueio de arranque /                  STOP/Blocco avviamento / STOP/Bloqueo de repuesta en marcha /                  STOP/Startblokkering</p>
<p><b>S5</b> </p>	<p>Stichverdichtung / stitch condensation / rétrécissement des points /                  condensação dos pontos / addensamento punti / condensación de puntadas /                  steekverdichting</p>
<p><b>S9</b> </p> <p>&lt;799&gt; = 1                  &lt;790&gt; = 1,2,3,4,7,8</p>	<p>Presserfuß / presser foot / pied presseur /                  calcador / alzapiedino / prensatelas /                  drukvoet</p>
<p><b>S9</b> </p> <p>&lt;799&gt; = 1                  &lt;790&gt; = 5,6</p>	<p>Kettelfinger / chaining-off finger / crochet de remmaillage /                  dedo remalhador / levetta di rimettaggio / dedo de remaller /                  klemvinger</p>
<p><b>S10</b> </p>	<p>Stichverdichtung invertieren / invert stitch condensation /                  inverser la rétrécissement des points / inverter o condensação dos pontos /                  invertire la addensamento punti / invertir la condensación de puntadas /                  inverteren op steekverdichting</p>
<p><b>Y1</b> </p> <p>I max                  4 A *</p> <p>&lt;799&gt; = 1                  &lt;790&gt; =                  2,6,8</p>	<p>Fadenschneiden oben / thread trimmer up /                  coupe-fil en haut / corte de linhas em cima /                  rasafilo su / cortahilos arriba / draadsnijder boven</p>
<p><b>Y1</b> </p> <p>I max                  4 A *</p> <p>&lt;799&gt; = 1                  &lt;790&gt; = 3</p>	<p>Fadenschneiden unten / thread trimmer down /                  coupe-fil en bas / corte de linhas em baixo /                  rasafilo giù / cortahilos abajo / draadsnijder beneden</p>
<p><b>Y1</b> </p> <p>I max                  4 A *</p> <p>&lt;799&gt; = 1,3                  &lt;790&gt; = 4</p>	<p>Fadenspannung lösen / thread tension release / détenteur de fil /                  soltar tensão da linha / sbloccaggio tendifilo / detensión del hilo /                  verbreken van de draadspanning</p>

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<p><b>Y2</b>                  I max                  4 A *                  &lt;799&gt; = 1</p> 	<p>Motor läuft / motor runs / moteur en marche /                  motor em movimento / motore in moto / motor en marcha /                  loop van de machine</p>
<p><b>Y2</b>                  I max                  4 A *                  &lt;799&gt; = 3</p> 	<p>Stapler - Überwurfbügel / stacker - fabric conveyer</p>
<p><b>Y3</b>                  I max                  4 A *                  &lt;799&gt; = 1                  &lt;790&gt; = 1</p> 	<p>Fadenschneiden unten / thread trimmer down /                  coupe-fil en haut / corte de linhas em cima /                  rasafilo su / cortahilos arriba / draadsnijder boven</p>
<p><b>Y3</b>                  I max                  4 A *                  &lt;799&gt; = 1                  &lt;790&gt; = 3,4,5,7</p> 	<p>Fadenwischer / thread wiper / écarteur de fil /                  retira-linhas / scartafilo / retirahilos /                  draadwisser</p>
<p><b>Y3</b>                  I max                  4 A *                  &lt;799&gt; = 3</p> 	<p>Kette saugen / chain vacuum /                  aspiration de chaînette / aspirar de cadeia /                  aspirazione catenella / aspiración cadeneta / zuigen van een ketting</p>
<p><b>Y4</b>                  I max                  4 A *                  &lt;799&gt; = 1                  &lt;790&gt; = 1, 3</p> 	<p>Fadenspannung lösen / thread tension release / détenteur de fil /                  soltar tensão da linha / sbloccaggio tendifilo / detensión del hilo /                  verbreken van de draadspanning</p>
<p><b>Y4</b>                  I max                  4 A *                  &lt;799&gt; = 1                  &lt;790&gt; = 2,5,6,7,8</p> 	<p>Fadenschneiden unten/Fadenspannung lösen /                  thread trimmer down/thread tension release /                  coupe-fil en haut/détendeur de fil /                  corte de linhas em cima/soltar tensão da linha /                  rasafilo su/sbloccaggio tendifilo /                  cortahilos arriba/detensión del hilo /                  draadsnijder boven/verbreken van de draadspanning</p>
<p><b>Y4</b>                  I max                  4 A *                  &lt;799&gt; = 1                  &lt;790&gt; = 4</p> 	<p>Fadenschneiden unten / thread trimmer down /                  coupe-fil en haut / corte de linhas em cima /                  rasafilo su / cortahilos arriba / draadsnijder boven</p>
<p><b>Y4</b>                  I max                  4 A *                  &lt;799&gt; = 3</p> 	<p>Fadenschneiden / thread trimmer /                  coupe-fil / corte de linhas /                  rasafilo / cortahilos / draadsnijder</p>

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<b>Y6</b>  I max 4 A * <799> = 3	Stofftransport / work transport
<b>Y9</b>  I max 4 A * <799> = 3	Stoffhalter / work holder
<b>Y12</b>  I max 4 A * <799> = 2 <790> = 5,6	Kettelfinger / chaining-off finger / crochet de remmaillage / dedo remalhador / levetta di rimettaggio / dedo de remaller / klemvinger
<b>Y12</b>  I max 8 A * <799> = 1 <790> = 7,8	Stichverdichtung / stitch condensation / rétrécissement des points / condensação dos pontos / addensamento punti / condensación de puntadas / steekverdichting
<b>Y12</b>  I max 4 A * <799> = 3	Kettelfinger saugen / vacuum chaining-off finger / aspiration crochet de remmaillage / aspirar dedo remalhador / aspirazione levetta di rimettaggio / aspiración dedo de remaller / klemvinger zuigen
<b>Y13</b>  I max 8 A *	Presserfuß heben / lifting presser foot / relevage du pied presseur / levantar do calcador / sollevamento del alzapiedino / elevación de prensatelas / drukvoet optillen
<b>Y15</b>  I max 500 mA * <799> = 1	Nadel oben / needle up / aiguille en haut / agulha em cima / ago su / aguja arriba / naald boven
<b>Y15</b>  I max 500 mA * <799> = 3	Blasen hintere Düse / blow rear pipe /

- \* 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).

# Appendix adaptor cable

## Important Notice!

Your newly purchased **EcoDrive** control system is designed to be connected to a sewing machine/system via connector X5. This connector X5 is a 37 pole sub-d jack as shown in the wiring diagram.

*The connections/wiring of X5 is **not identical nor compatible** with the connections of the same type of jack X5 of the **Ministop control box**, nor with the same type of 37 pole sub-d jack of a **Servo control box**!*

In order to avoid damage to the control box, you may only connect the **EcoDrive** to machines wired according to VDMA Regulations

### EN 60204-31

If you wish to replace a Ministop or Servotop control box with an EcoDrive, you must either use the appropriate adapter cable or rewire your machine!

We offer following adapter cables:

Replacement for Q40MS:	Q40ED with adapter	Art.-No. 55.591
Replacement for P40/51/52/47 MS	P40ED with adapter	Art.-No. 55.592
Replacement for PE40MS	PE40ED with adapter	Art.-No. 55.580
Y-Adapter for synchronizer (position control unit)		Art.-No. 55.570
Extension cable for synchronizer (position control unit) 1,5m		Art.-No. 55.506
Extension cable for speed control unit 1,5m		Art.-No. 55.507
Extension cable for operator panel EcoTop 5m		Art.-No. 55.573
Serial data cable for Q-Prog		Art.-No. 55.577