

EcoDrive

QE3760/QE5540

CE

Type

Q40ED

Instruction Manual

Part 3

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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, 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 Q40ED 1_904_24 (PARAM.ENO)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Backtack	RIE	105/110/305 364/523/584		
Blower	BLA	668		
Brake	DRZAB	723		
Catcher	FANG	707		
Chopper	MESSE	105/110/427 537/714		
Control	REG	815/880/884 885/886/887 889/890/898 900		
Decorative backtack	ZRIE	522/523/530 775		
Defect search	HWT	797		
Delay	VERZ	189/190/191 192/403/545 623/642/643 716/717/730 761/770/791 939/968/969		
Direction of rotation	DRR	800		
Display	ANZ	389/390/605 933		
Edge trimmer	KS	512/513/514		
End backtack	ER	110/305		
Engine	MOT	897		
Feed reverse	TUM	301/364/643 721/939/968 969		
Flip-Flop	FF	510/512/513 514/515/516		
Front backtack	AR	105/106/305 791		
Hardware test	HWT	797		
Increments	INKR	902		
Inverse rotation	RDR	618/623/801		
Linear motor	LINMOT	668		

Machine class	MAKL	790/799
Machine run	ML	904
Needle cooling	NAKU	119
Needle position	NAPO	521/522/700 702/703/704 705/706/707 710
Needle position change-over	NPW	616
Needle up without trimming	NHOS	616/710
Number of stitches	STZA	111/112/145 404/445/513 514/540/541 542/543/760
ON period	EINZ	119/189/190 191/192/389 537/714/715 743/889
Operator panel	BDF	681
Output „A“	AUSGA	510/515/516
Output „B“	AUSGB	512/513/514
Photocell	LS	111/112/113 161/163/188 199/543/615
Presser foot	PF	427/642/651 668/719/729 730/770
Program	PR	206/304/313 510/512/513 514/515/516 543
Programming level C	EBC	798
Puller	PULL	427/445
Residual brake	STBR	718
Seam end	NE	110/145/206 543
Seam start	NA	105
Soft start	SANL	116/117
Speed	DRZ	105/106/110 117/199/402 403/462/530 586/605/606 607/608/609 901

Speed decrease	DRZAB	723
Speed increase	DRZAN	722
Speed limitation	DB	219/402/586
Speedomat	SPEED	219/501/502
Start	START	113/161/188 540/541/603
Start delay	STVERZ	729
Starting block	ANLSP	619/665
Stepper motor	SMOT	300/816/817 818
Stitch condensation	STVD	105/106/110 364
Stitchcounter	STZ	760
Stop	STOP	206/427/619 665
Stop time	STOPZ	712/775
Stroke adjustment	HV	219/401/402 403/404/427 720
Target stitch	PEIPO	653/789
Thread clamp	FK	985
Thread monitor	FW	660/760
Thread puller	FZ	743/761
Thread tension	FS	673
Thread tension release	FSL	540/542/673 707/761
Thread trimming	SN	609/619/704 705/706/714 717/901
Thread wiper	WI	668/715/716
Time needed to switch on	EINZ	119/189/190 191/192/389 537/714/715 743/889
Timing output	TA	642/643/705 719/720/721
Vacuum	SAUG	105/110/541 543/545

11.4 List of Parameters Q40ED 1_904_24 (PARAM.EN)

No.	Function (Meaning)	Level	Range Values	of Value	Standard
105	(AR/RIE/DRZ/MESSER/NA/SAUG/STVD) Speed for front backtack/ stitch condensation	B,C	0100 - 3500	1300	Kl. 1
			0100 - 6400	1200	Kl. 2, 3
106	(AR/DRZ/STVD) Speed for front backtack / stitch condensation	B,C		0	Kl. 1, 2
	1 variable (treadle-controlled)			-	Kl. 3
	0 constant (corresponding to <105>)				
110	(ER/RIE/DRZ/MESSER/NE/SAUG/STVD) Speed for end backtack/ stitch condensation	B,C	0100 - 3500	1400	Kl. 1
			0100 - 6400	1200	Kl. 2, 3
111	(LS/STZA) Light barrier compensation stitches	A,B,C	0001 - 0100	8	Kl. 1
	1 (stitches from light barrier clear to seam end)		0001 - 0030	6	Kl. 2
				-	Kl. 3
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, 3
116	(SANL) Soft start stitches	A,B,C	0000 - 0030	1	Kl. 1
			0000 - 0030	0	Kl. 2, 3
117	(SANL/DRZ) Speed for soft start stitches	B,C	0030 - 1000	800	Kl. 1
			0030 - 0640	400	Kl. 2, 3
119	(EINZ/NAKU) Time for needle cooling including time after stop	B,C	0000 - 2000	100	Kl. 1, 2, 3
145	(NE/STZA) Number of stitches for seam end	A,B,C	0000 - 0030	2	Kl. 2
				-	Kl. 1, 3
161	(LS/START) Start delay for start of photocell	B,C	0000 - 2000	100	Kl. 1
			0000 - 2000	50	Kl. 2, 3
163	(LS) Sewing with photocell	B,C		0	Kl. 3
	1 yes			-	Kl. 1, 2
	0 no				
188	(LS/START) Start by light barrier	C	0001 - 0004	1	Kl. 1, 2, 3
	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				
189	(VERZ/EINZ) Delay/on time t1	B,C	0000 - 2000	100	Kl. 2
				-	Kl. 1, 3
190	(VERZ/EINZ) Delay/on time t2	B,C	0000 - 2000	100	Kl. 2
				-	Kl. 1, 3
191	(VERZ/EINZ) Delay/on time t3	B,C	0000 - 2000	1000	Kl. 1
				-	Kl. 2, 3
192	(VERZ/EINZ) Delay/on time t4	B,C	0000 - 2000	250	Kl. 1
				-	Kl. 2, 3
199	(DRZ/LS) Speed for light barrier compensation stitches	B,C	0300 - 3500	1200	Kl. 1, 2
				-	Kl. 3
206	(NE/PR/STOP) Interrupt/discontinue seam sections at speed = constant (<203> = II)	B,C		1	Kl. 1
	1 with treadle -2			0	Kl. 2, 3
	0 with treadle 0				
219	(SPEED/HV/DB) Machine with Speedomat	B,C		0	Kl. 1
	1 yes			-	Kl. 2, 3
	0 no				
300	(SMOT) Service monitoring on / off	C		0	Kl. 1, 2, 3
	1 = on				
	0 = off				
301	(TUM) Switch-on voltage of the magnet for transport change-over	C		0	Kl. 1, 2, 3
	1 24V				
	0 32V				
304	(PR) Stitch compensation at feed reverse for a seam section	B,C	0000 - 0200	0	Kl. 1
				-	Kl. 2, 3

305	(RIE/AR/ER) Front-backtack and end-backtack with interruption at pedal zero position 1 yes 0 no	B,C	0 -	Kl. 2 Kl. 1, 3
313	(PR) Programs are backtack programs (darning programs) 1 yes 0 no	B,C	0000 - 0002 0 -	Kl. 1 Kl. 2, 3
364	(RIE/STVD/TUM) Transport change-over means for 1 Back-tack 0 Stitch condensation	B,C	1 0	Kl. 1 Kl. 2, 3
389	(LFZ/EINZ/ANZ) Display of data 0 = None 1 = Switch-time of the drive 2 = Run time of the motor (the machine)	C	0000 - 0002 0	Kl. 1, 2, 3
390	(FANZ/ANZ) Display of max. 10 stored malfunctions 0 = None 1 = Last malfunction (x) 2 = Last but one malfunction (x-1) 3 = Previous malfunction (x-2) 4 = Previous malfunction (x-3) 5 = Previous malfunction (x-4) 6 = Previous malfunction (x-5) 7 = Previous malfunction (x-6) 8 = Previous malfunction (x-7) 9 = Previous malfunction (x-8) 10 = Previous malfunction (x-9)	C	0001 - 0010 1	Kl. 1, 2, 3
401	(HV) Input „stroke adjustment“ 1 switch operation 0 push-button operation	B,C	0000 - 0002 1 0000 - 0002 0 -	Kl. 1 Kl. 2 Kl. 3
402	(HV/DRZ/DB) Speed at stroke adjustment	B,C	0300 - 3500 2000 -	Kl. 1, 2 Kl. 3
403	(HV/DRZ/VERZ) Delay (ms) of the speed variation at end of stroke adjustment	B,C	0000 - 2000 150 -	Kl. 1, 2 Kl. 3
404	(HV/STZA) Number of stitches with stroke adjustment	A,B,C	0000 - 0020 2 0000 - 0200 0 -	Kl. 1 Kl. 2 Kl. 3
427	(PF/HV/PULL/STOP/MESSER) Operating mode of the input 1 = presser foot 2 = stroke adjustment 3 = control of puller 4 = stop 5 = chopper 6-9 without function	A,B,C	0000 - 0005 1 -	Kl. 1, 2 Kl. 3
445	(PULL/STZA) Stitches for puller delay	B,C	0000 - 0100 10 -	Kl. 1, 2 Kl. 3
462	(DRZ) Function of speed control unit 1 2 speeds only n-min (to position +7) and n-max (from position +8) and one needle position 0 12 speed levels and two needle positions	B,C	0000 - 0002 0 -	Kl. 1 Kl. 2, 3
501	(SPEED) Speedomat: elevation step of presser foot where speed reduction begins = upper kink of characteristic curve (<501> < <502>)	B,C	0001 - 0020 10 -	Kl. 1 Kl. 2, 3
502	(SPEED) Speedomat: elevation step of presser foot where minimum speed (<402>) is reached = lower kink of characteristic curve (<502> > <501>)	B,C	0002 - 0021 19 -	Kl. 1 Kl. 2, 3

510	(FF/PR//AUSGA) function module for output „A“ Condition: <501> /= <511> 0 no function 1 stitch length changeover 2 overwidth control with speed limit 3 overwidth control without speed limit 4 single stitch with shortened stitch length 5 raise / lower carrier roller 6 raise / lower fabric stop 7 second thread tension 8 selvage cutter manual 9 selvage cutter automatic 10 „Triflex“ function 11 presser foot stroke adjustment	B,C	0000 - 0012 0 -	Kl. 1, 2 Kl. 3
512	(FF/PR/AUSGB/KS) Switch-off of output „B“ (edge trimmer) after thread trim 1 yes 0 no	B,C	0 -	Kl. 1, 2 Kl. 3
513	(FF/PR/AUSGB/KS/STZA) Stitches before beginning of seam to edge trimmer on	B,C	0000 - 0255 0 0000 - 0255 1 -	Kl. 1 Kl. 2 Kl. 3
514	(FF/PR/AUSGB/KS/STZA) Stitches from edge trimmer on till edge trimmer off	B,C	0000 - 0255 0 0000 - 0255 1 -	Kl. 1 Kl. 2 Kl. 3
515	(FF/PR/AUSGA) Outputs „A“ and „LED A“ after thread trimmer 1 as after „mains on“ 0 unchanged	B,C	1 0 -	Kl. 1 Kl. 2 Kl. 3
516	(FF/PR/AUSGA) output „A“ after „mains on“ when <510> = 1 / 6 / 7 1 on 0 off	B,C	0 -	Kl. 1, 2 Kl. 3
521	(NAPO) Needle position at stop before seam end 1 position 2 (up) 0 position 1 (down)	B,C	0 -	Kl. 3 Kl. 1, 2
522	(NAPO/ZRIE) Needle position when stop occurs during decorative backtack (stitch in stitch) 1 position 2 (up) 0 position 1 (down)	B,C	0 -	Kl. 1 Kl. 2, 3
523	(RIE/ZRIE) Backtack 1 decorative backtack (stitch in stitch) 0 standard backtack	A,B,C	0 -	Kl. 1 Kl. 2, 3
530	(DRZ/ZRIE) Speed (max.) for decorative backtack	B,C	0100 - 3000 1000 -	Kl. 1 Kl. 2, 3
537	(EINZ/MESSER) Chopper duty cycle (ms)	B,C	0000 - 2000 100 0000 - 2000 120 -	Kl. 1 Kl. 3 Kl. 2
540	(FSL/START/STZA) Number of stitches from start to thread tension release off	A,B,C	0001 - 0100 6 -	Kl. 3 Kl. 1, 2
541	(SAUG/START/STZA) Number of stitches from start to vacuum off	A,B,C	0001 - 0100 6 -	Kl. 3 Kl. 1, 2
542	(FSL/STZA) Number of stitches from photocell clear to thread tension release on	A,B,C	0001 - 0100 6 -	Kl. 3 Kl. 1, 2
543	(LS/NE/SAUG/STZA/PR) Number of stitches from light barrier clear to vacuum on at programmed sewing	A,B,C	0001 - 0100 6 -	Kl. 3 Kl. 1, 2
545	(SAUG/VERZ) Delay (ms) to vacuum off	A,B,C	0000 - 2000 100 -	Kl. 3 Kl. 1, 2
584	(RIE) Backtack 1 four times 0 double	B,C	0 -	Kl. 1 Kl. 2, 3

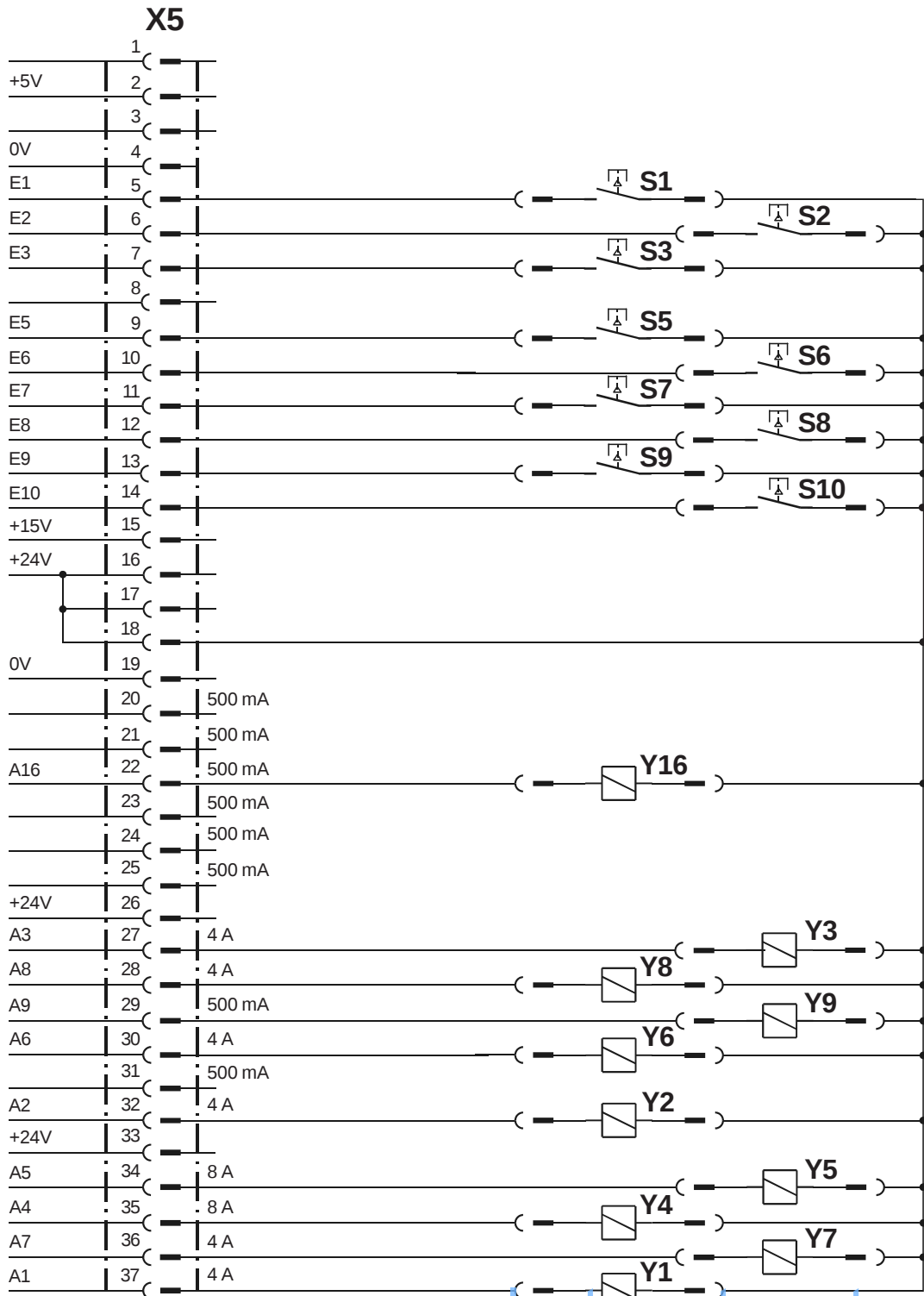
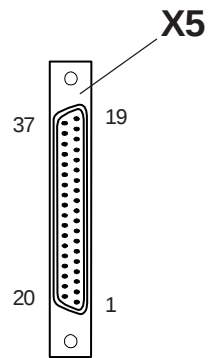
586	(DRZ/DB) Speed limitation	B,C	0300 - 5500	3000	Kl. 1
				-	Kl. 2, 3
603	(START) Start after seam end	B,C		1	Kl. 1, 2
	1 after treadle 0 only			0	Kl. 3
	0 immediate start of operation				
605	(DRZ/ANZ) Actual speed in display (<725>)	B,C		0	Kl. 1, 2, 3
	1 yes				
	0 no				
606	(DRZ) Speed: level 1 (min.)	B,C	0030 - 0600	180	Kl. 1, 2, 3
607	(DRZ) Speed: level 12 (max.)	B,C	0100 - 9000	4000	Kl. 1
			0100 - 9000	2000	Kl. 2, 3
608	(DRZ) Acceleration curve (Pedal characteristic)	B,C		1	Kl. 1, 2, 3
	1 = linear				
	0 = non linear				
609	(SN/DRZ) Trimming speed 1	B,C	0060 - 0300	180	Kl. 1, 2, 3
615	(LS) End recognition when photocell goes	B,C		0	Kl. 1, 2, 3
	1 from light to dark				
	0 from dark to light				
616	(NPW/NHOS) Function of external key (input)	B,C		0	Kl. 1, 2, 3
	1 needle position change-over (NPW)				
	0 needle up without trimming (NHOS)				
618	(RDR) Inverse rotation after seam end	B,C		0	Kl. 1, 3
	1 yes			-	Kl. 2
	0 no				
619	(SN/ANLSP/STOP) Control of thread trimming (safety switch no run)	B,C		0	Kl. 1, 2
	1 yes			-	Kl. 3
	0 no				
623	(RDR/VERZ) Delay in start-up time (ms) for inverse rotation	B,C	0000 - 2000	50	Kl. 1, 3
				-	Kl. 2
642	(PF/VERZ/TA) presser foot time from switch-on to voltage reduction (cycling)	B,C	0010 - 0200	200	Kl. 1
			0010 - 0100	100	Kl. 2, 3
643	(TUM/VERZ/TA) feed reverse time from switch-on to voltage reduction (cycling)	B,C	0010 - 0200	200	Kl. 1
			0010 - 0100	100	Kl. 2, 3
651	(PF) Presser foot with automatic descent on machine stop	B,C		1	Kl. 1, 2, 3
	1 yes				
	0 no				
653	(PEIPO) Target stitch before sewing	B,C		0	Kl. 1, 2
	1 yes			-	Kl. 3
	0 no				
660	(FW) Bobbin thread monitoring	B,C	0000 - 0002	0	Kl. 1, 2, 3
	0 without (= *II*)				
	1 via a sensor (= **I*)				
	2 by a stitch count				
665	(ANLSP/STOP) Run locking/stop	B,C		1	Kl. 1
	1 contact closed			0	Kl. 2, 3
	0 contact open				
668	(BLA/LINMOT/PF/WI) Thread wiper/thread clearer	A,B,C		1	Kl. 1, 2
	1 yes			-	Kl. 3
	0 no				
673	(FS/FSL) Output is at	B,C		1	Kl. 1, 2, 3
	1 thread tension release				
	0 thread tension on				
681	(BDF) Operator panel push-button locked	B,C		0	Kl. 1, 2, 3
	1 yes				
	0 no				
700	(NAPO) Needle position 0 (reference position of the needle)	B,C	0000 - 0255	0	Kl. 1, 2, 3 *
702	(NAPO) Needle position 1 (needle down)	B,C	0000 - 0255	92	Kl. 1
			0000 - 0255	90	Kl. 2, 3

703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0000 - 0255 229 0000 - 0255 238	Kl. 1 Kl. 2, 3
704	(NAPO/SN) Needle position 4 (start of trimming signal 1 (magnetic thread trimmer))	B,C	0000 - 0255 100 -	Kl. 1 Kl. 2, 3
705	(NAPO/SN/TA) Needle position 5 (end of trimming signal 1 (magnetic thread trimmer) / clock pulses start of the trimming signal 1)	B,C	0000 - 0255 120 -	Kl. 1 Kl. 2, 3
707	(NAPO/FSL/FANG) Needle position 9 (thread tension release or thread catcher start)	B,C	0000 - 0255 140 -	Kl. 1 Kl. 2, 3
710	(NAPO/NHOS) Needle position 3 (needle up)	B,C	0000 - 0255 232 0000 - 0255 212 -	Kl. 1 Kl. 2 Kl. 3
712	(STOPZ) Time for stop in needle position 1	B,C	0000 - 1000 0 -	Kl. 1 Kl. 2, 3
714	(EINZ/SN/MESSER) Duration (ms) for chainstitch trimming or chopper	B,C	0000 - 2000 120 -	Kl. 2 Kl. 1, 3
715	(EINZ/WI) Duration (ms) of thread wiper	B,C	0000 - 2000 100 0000 - 5000 120 -	Kl. 1 Kl. 2 Kl. 3
716	(VERZ/WI) Delay in start-up time (ms) for thread wiper	B,C	0000 - 2000 120 -	Kl. 2 Kl. 1, 3
717	(SN/VERZ) Delay in start-up time (ms) for trimming method when the machine is not activated by the treadle	B,C	0000 - 2000 120 -	Kl. 2 Kl. 1, 3
718	(STBR) Timing of residual brake (0 = brake off)	B,C	0000 - 0100 0	Kl. 1, 2, 3
719	(PF/TA) Timing output (lifting presser foot)	B,C	0010 - 0100 40	Kl. 1, 2, 3
720	(HV/TA) Timing output (stroke adjustment)	B,C	0010 - 0100 10	Kl. 1, 2, 3
721	(TUM/TA) Timing output (feed reverse)	B,C	0010 - 0100 40	Kl. 1, 2, 3
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	0001 - 0060 50	Kl. 1, 2, 3
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	0001 - 0060 40 0001 - 0060 35	Kl. 1 Kl. 2, 3
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0010 - 2000 100 0010 - 2000 120	Kl. 1 Kl. 2, 3
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0010 - 2000 50 0010 - 2000 120	Kl. 1 Kl. 2, 3
743	(FZ/EINZ) Duration (ms) of thread puller	B,C	0000 - 2000 120 -	Kl. 2 Kl. 1, 3
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 - 0160 5	Kl. 1, 2, 3
761	(FSL/FZ/VERZ) Prolongation thread tension release/ thread puller	B,C	0000 - 2000 50 0000 - 2000 0 -	Kl. 1 Kl. 2 Kl. 3
770	(PF/VERZ) Lifting delay of presser foot at threadle- position „1“	B,C	0010 - 0250 60	Kl. 1, 2, 3
775	(ZRIE/STOPZ) Stop time (ms) with stitch in stitch backtack (decorative backtack)	B,C	0010 - 1000 100 -	Kl. 1 Kl. 2, 3
789	(PEIPO) Needle position 10 (target stitch)	B,C	0000 - 0255 220 0000 - 0255 248 -	Kl. 1 Kl. 2 Kl. 3
790	(MAKL) Program selection for machine classes by operators box	B,C	0000 - 0004 0	Kl. 1, 2, 3

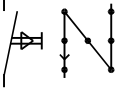
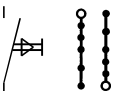
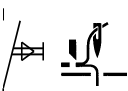
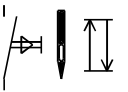
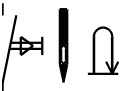
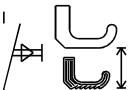
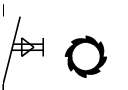
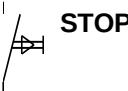
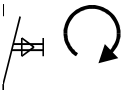
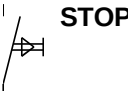
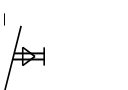
791	(AR/VERZ) Delay before stitch counting (ms) for front backtack	B,C	0	Kl. 1
			-	Kl. 2, 3
797	(HWT) Hardware test	C	0	Kl. 1, 2, 3
	1 yes			
	0 no			
798	(EBC) Programming level C	B,C	0	Kl. 1, 2, 3
	1 yes			
	0 no			
799	(MAKL) Machine class which has been selected	C	0001 - 0003 1	Kl. 1
			0001 - 0003 2	Kl. 2
			0001 - 0003 3	Kl. 3
800	(DRR) Direction of motor rotation viewed from belt pulley	C	1	Kl. 1 *
	1 left-hand rotation		0	Kl. 2, 3
	0 right-hand rotation			
801	(RDR) Reverse rotation angle after seam end	B,C	0010 - 0212 32	Kl. 1, 3
			-	Kl. 2
814	(SONST) Positioning change-over 1 = deceleration ramp in target position 2 = Max. braking at positioning speed and waiting until target position is reached.	C	0001 - 0002 1	Kl. 1, 2, 3
815	(REG) Control behavior 1 = control behavior A 2 = control behavior B	C	0001 - 0002 2	Kl. 1
			0001 - 0002 1	Kl. 2, 3
816	(SMOT) Service interval 1 / hours	C	0000 - 1000 200	Kl. 1, 2, 3
817	(SMOT) Service interval 2 / hours	C	0000 - 1000 500	Kl. 1, 2, 3
818	(SMOT) Service interval 3 / hours	C	0000 - 1000 1000	Kl. 1, 2, 3
880	(REG) Starting current max. [A]	C	0001 - 0050 8	Kl. 1, 2
			0001 - 0050 5	Kl. 3
884	(REG) Proportional amplification of the speed control (in general)	C	0003 - 0035 9	Kl. 1, 2
			0003 - 0035 8	Kl. 3
885	(REG) Integral amplification of the speed control	C	0001 - 0100 35	Kl. 1, 2, 3
886	(REG) Proportional amplification of the order controllers	C	0001 - 0025 8	Kl. 1, 2, 3
887	(REG) Differential amplification of the order controllers	C	0001 - 0015 8	Kl. 1
			0001 - 0100 15	Kl. 2, 3
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0000 - 2500 400	Kl. 1, 2, 3
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	0001 - 0025 15	Kl. 1, 2, 3
897	(MOT) MINI motor version	C	0	Kl. 1, 2, 3
	1 long			
	0 short			
898	(REG) Current limiting for the motor	C	0	Kl. 1, 2, 3
	1 = 15A			
	0 = 10A			
900	(REG) Additional P-Amplification of the speed control	C	0003 - 0035 12	Kl. 1
			-	Kl. 2, 3
901	(DRZ/SN) Trimming release speed	C	0030 - 0500 400	Kl. 1
			0030 - 0500 300	Kl. 2
			-	Kl. 3
902	(INKR) Increments on output	B,C	0000 - 0008 1	Kl. 3
	1 240 increments per revolution		-	Kl. 1, 2
	0 480 increments per revolution			
904	(ML) Output (motor operation) is active	B,C	0	Kl. 1, 2, 3
	1 with motor running			
	0 with motor stationary			
933	(ANZ) Display change-over	C	0000 - 0008 0	Kl. 1, 2, 3
	1 diagnosis			
	0 normal display			
939	(VERZ/TUM) Rate time (premature change-over) for the transport changer when switching on	B,C	0000 - 0200 30	Kl. 1
			-	Kl. 2, 3

968	(VERZ/TUM) Rate time for feed reverse during switching off	B,C	0000 - 0200 30 -	Kl. 1 Kl. 2, 3
969	(VERZ/TUM) Switching off angel for presserfoot during thread wiping at seam start	B,C	0000 - 0255 100	Kl. 1, 2, 3
985	(FK) Switch on angle for thread clamp	B,C	0000 - 0255 100 -	Kl. 1 Kl. 2, 3
986	(FK) Switch off angle for thread clamp	B,C	0000 - 0255 206 -	Kl. 1 Kl. 2, 3
989	(FK/FZ/NA) Thread clamp at seam start 0 = Thread clamp off 1 = Thread clamp on 2 = Presserfoot lifting with thread clamp	B,C	0000 - 0002 0 -	Kl. 1 Kl. 2, 3
998	(REG) KE constant of the motor [Volt/1000 rpm]	B,C	0000 - 0002 0 -	Kl. 1 Kl. 2, 3

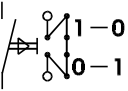
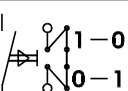
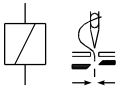
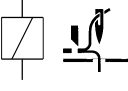
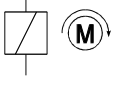
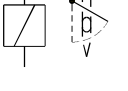
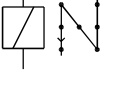
12. Electrical Connections Diagram X5 Q40ED

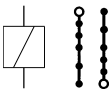
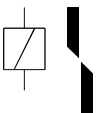
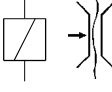
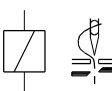
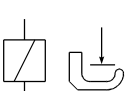
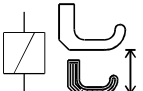
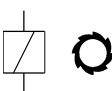


Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
 Signification des aimants resp. solenoides et touches / Significação dos imãs e/ou as solenoidas e teclas
 Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los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

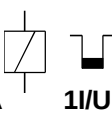
S1  <799> = 1	Transportumstellung von Hand / manual feed reverse / renversement de marche manuel / mudança do transporte manual / commutazione trasporto a mano / inversión de transporte manual / handmatige transportomschakeling
S1  <799> = 2	Stichverdichtung / stitch condensation / rétrécissement des points / condensação dos pontos / addensamento punti / condensación de puntadas / steekverdichting
S1  <799> = 3	Abhacker / chopper / chopper / guilhotina / taglio / guillotine / afhakker
S2  <616> = I	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
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  	Einzelstich / single stitch / point unique / ponto individual / punto singolo / puntada individual / enkele steek
S5  <427> = 2	Hubverstellung / stroke adjustment / variation de course / alteração do curso / regolazione della corsa / ajuste de carrera / hefhoogteverstelling
S5  <427> = 3	Puller / puller / puller / puller / puller / estirar / puller
S5  <427> = 1	STOP / Anlaufsperr
S6  <799> = 1, 2, 3	Drehzahlbegrenzung / speed limitation / limitation de vitesse / limitação das rotações / limitazione velocità / limitación de velocidad / beperking van het toerental
S7  <799> = 1, 2, 3	STOP
S8  <188> = 4	START / AUTOSTART

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

S9  <799> = 1, 2, 3	FLIP-FLOP
S10  <799> = 1, 3	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
S10  <799> = 2	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
Y1  I max 4 A * <799> = 1, 2	Fadenschneider vorwärts / thread trimmer forward / coupe-fil en avant / corte de linhas para a frente / rasafilo avanti / cortahilos adelante / draadsnijder voorwaarts
Y1  I max 4 A * <799> = 3	Abhacker / chopper / chopper / guilhotina / taglio / guillotina / afhakker
Y2  I max 4 A * <799> = 1, 2, 3	Motor läuft / motor runs / moteur en marche / motor em movimento / motore in moto / motor en marcha / loop van de machine
Y3  I max 4 A * <799> = 1, 2	Fadenwischer / thread wiper / écarteur de fil / retira-linhas / scartafilo / retirahilos / draadwisser
Y3  I max 4 A * <799> = 3	Kette blasen / chain blowing / soufflage de chaînette / soprar de cadeia / soffiatura catenella / soplar cadeneta / blazen van een ketting
Y4  I max 8 A * <799> = 1, 2, 3	Presserfuß heben / lifting presser foot / relevage du pied presseur / levantar do calcador / sollevamento del alzapiedino / elevación de prensatelas / drukvoet optillen
Y5  I max 8 A * <799> = 1	Transportumsteller / feed reverse / renversement de marche / mudança do transporte / commutazione trasporto / inversión de transporte / transportomschakeling

Y5 I max 8 A * <799> = 2		Stichverdichtung / stitch condensation / rétrécissement des points / condensação dos pontos / addensamento punti / condensación de puntadas / steekverdichting
Y5 I max 4 A * <799> = 3		Kette saugen / chain vacuum / aspiration de chaînette / aspirar de cadeia / aspirazione catenella / aspiración cadeneta / zuigen van een ketting
Y6 I max 4 A * <799> = 1, 2 <510>		Flip-Flop
Y6 I max 4 A * <799> = 3		Schnelle Schere rückwärts / fast scissors backward / ciseaux rapide en arrière / tesoura rápida para trás / forbici rapida indietro / tijeras rapida atrás / snelle schaar achterwaarts
Y7 I max 4 A * <799> = 1, 2, 3		Fadenspannungslösen / thread tension release / détenteur de fil / soltar tensão da linha / sbloccaggio tendifilo / detensión del hilo / verbreken van de draadspanning
Y8 I max 4 A * <799> = 1, 2		Fadenschneider magnet. / magn. thread trimmer / coupe-fil magnétique / corte de linhas magnético / rasafilo magnetico / cortahilos magnético / draadsnijder magnetisch
Y9 I max 500 mA <799> = 1, 2 <427> = 1		Presserfuß senken / presser foot down / pied presseur en bas / calcador em baixo / alzapiedino giù / prensatelas abajo / drukvoet laten zakken
Y9 I max 500 mA <799> = 1, 2 <427> = 2		Hubverstellung / stroke adjustment / variation de course / alteração do curso / regolazione della corsa / ajuste de carrera / hefhoogteverstelling
Y9 I max 500 mA <799> = 1, 2 <427> = 3		Puller / puller / puller / puller / puller / estirar / puller

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Y16 I max 500 mA		Zählsignal / count signal / signal de comptage / sinal de contagem / segnale conteggio / señal del contador / telsignaal
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- * 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 atuadores 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).

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