

EcoDrive

QE3760/QE5540

CE

Type

P138ED

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

P138ED

1_021_02 (PARAM.ENO)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Backtack	RIE	105/107/110 364/523/584 585		
Backtack inversion	RIV	773		
Brake	DRZAB	723		
Catcher	FANG	707		
Chopper	MESSE	105/110		
Control	REG	880/884/885 886/887/889 890/900		
Decorative backtack	ZRIE	522/523/530 775		
Defect search	HWT	797		
Delay	VERZ	623/642/643 730/761/770		
Direction of rotation	DRR	800		
Display	ANZ	605/933		
Edge trimmer	KS	387		
End backtack	ER	110		
Engine	MOT	897		
Feed reverse	TUM	301/364/643 721/773		
Front backtack	AR	105/106/107		
Hardware test	HWT	797		
Inverse rotation	RDR	618/623/801		
Machine class	MAKL	799		
Machine run	ML	387		
Needle position	NAPO	522/700/702 703/706/707 710		
Needle up without trimming	NHOS	710		
Number of stitches	STZA	111/112/760		

ON period	EINZ	889
Operator panel	BDF	101
Photocell	LS	111/112/113 199/615
Presser foot	PF	642/651/719 729/730/770
Program	PR	206
Programming level C	EBC	798
Residual brake	STBR	718
Seam end	NE	110/206
Seam start	NA	105
Soft start	SANL	116/117
Speed	DRZ	105/106/107 110/117/199 530/585/605 606/607/608 609/901
Speed decrease	DRZAB	723
Speed increase	DRZAN	722
Speed limitation	DB	585
Start	START	113
Start delay	STVERZ	729
Stitch condensation	STVD	105/106/107 110/364
Stitchcounter	STZ	760
Stop	STOP	206
Stop time	STOPZ	775
Target stitch	PEIPO	653/789
Thread monitor	FW	382/660/760
Thread puller	FZ	761
Thread tension release	FSL	538/707/761
Thread trimming	SN	609/706/901
Time needed to switch on	EINZ	889
Timing output	TA	538/642/643 719/721
Vacuum	SAUG	105/110

11.4 List of Parameters P138ED

1_021_02 (PARAM.EN)

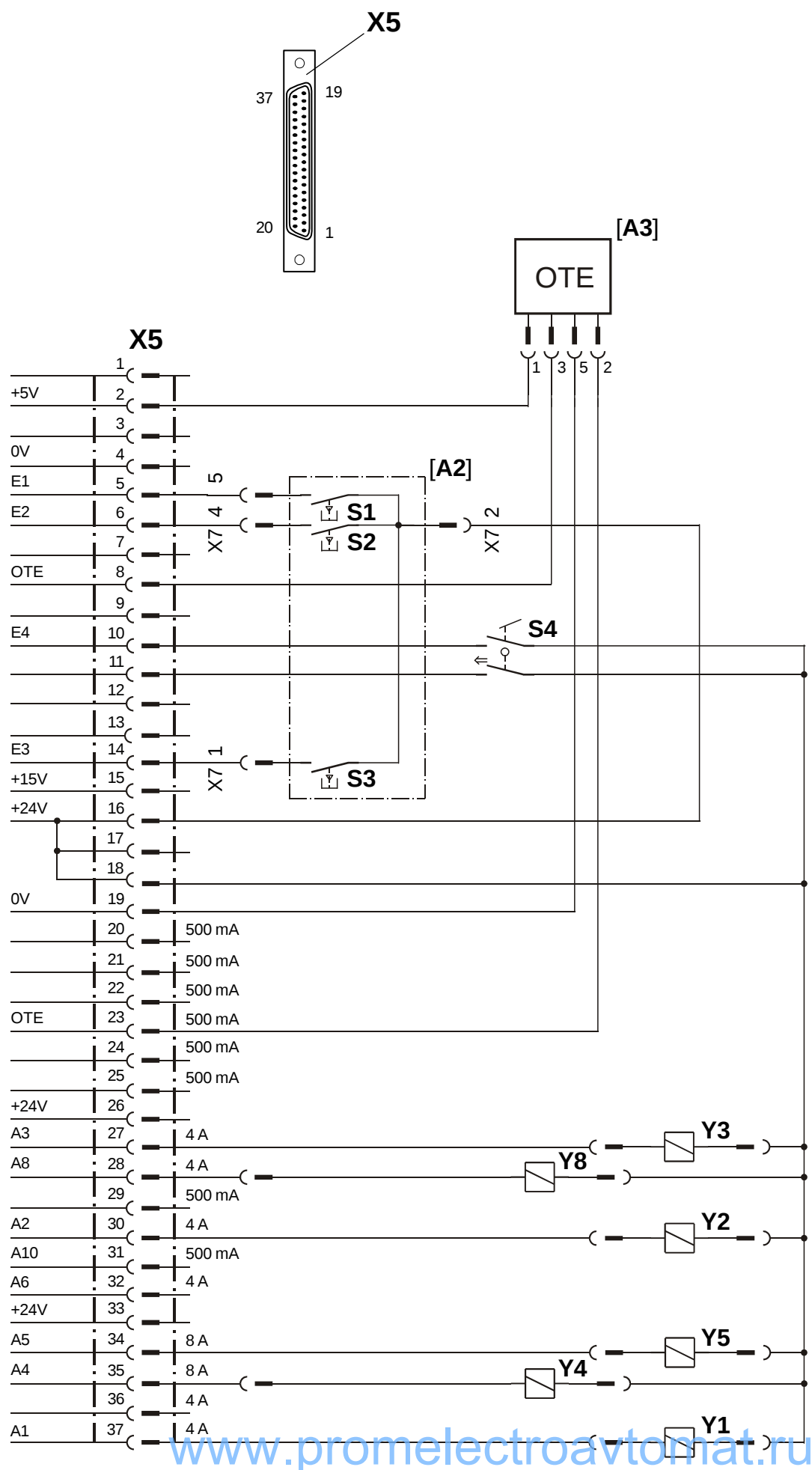
No.	Function (Meaning)	Level	Range Values	of Value	Standard
101	(BDF) Audible signal of the control panel pushbutton 1 = on 0 = off	A,B,C		0	Kl. 1
105	(AR/RIE/DRZ/MESSER/NA/SAUG/STVD) Speed for front backtack / stitch condensation	B,C	0300 - 2000	1200	Kl. 1
106	(AR/DRZ/STVD) Speed for front backtack / stitch condensation 1 variable (treadle-controlled) 0 constant (corresponding to <105>)	B,C		0	Kl. 1
107	(AR/RIE/DRZ/STVD) Speed for front backtack / stitch condensation when <106> = I 1 limited by <105> 0 limited by <607>	B,C		0	Kl. 1
110	(ER/RIE/DRZ/MESSER/NE/SAUG/STVD) Speed for end backtack / stitch condensation	B,C	0300 - 2000	1200	Kl. 1
111	(LS/STZA) Light barrier compensation stitches 1 (stitches from light barrier clear to seam end)	A,B,C	0002 - 0050	10	Kl. 1
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
113	(LS/START) Start with light barrier 1 when light barrier is dark only 0 also when light barrier is clear	B,C		0	Kl. 1
116	(SANL) Soft start stitches	A,B,C	0000 - 0030	0	Kl. 1
117	(SANL/DRZ) Speed for soft start stitches	B,C	0030 - 0640	400	Kl. 1
199	(DRZ/LS) Speed for light barrier compensation stitches	B,C	0300 - 2000	1200	Kl. 1
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
301	(TUM) Switch-on voltage of the magnet for transport change-over 1 24V 0 32V	C		0	Kl. 1
364	(RIE/STVD/TUM) Transport change-over means for 1 Back-tack 0 Stitch condensation	B,C		1	Kl. 1
382	(FW) Switching threshold of the analogue input for the thread monitor	B,C	0000 - 0100	15	Kl. 1
387	(ML/KS) Output (motor run) is active 1 With Pedal = 1D (Motor running) 0 With Pedal = 1 (Lower presser foot)	B,C		1	Kl. 1
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
523	(RIE/ZRIE) Backtack 1 decorative backtack (stitch in stitch) 0 standard backtack	A,B,C		0	Kl. 1
530	(DRZ/ZRIE) Speed (max.) for decorative backtack	B,C	0300 - 2000	1000	Kl. 1
538	(FSL/TA) Timing of output (thread tension release)	B,C	0010 - 0090	40	Kl. 1
584	(RIE) Backtack 1 four times 0 double	B,C		0	Kl. 1

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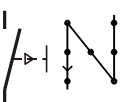
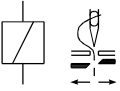
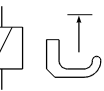
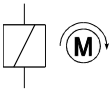
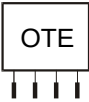
585	(DRZ/DB/RIE) Speed limitation	B,C	0300 - 4800 1200	Kl. 1
605	(DRZ/ANZ) Actual speed in display (<725>)	B,C	0	Kl. 1
	1 yes			
	0 no			
606	(DRZ) Speed: level 1 (min.)	B,C	0030 - 0300 180	Kl. 1
607	(DRZ) Speed: level 12 (max.)	B,C	0300 - 6000 1500	Kl. 1
608	(DRZ) Acceleration curve (Pedal characteristic)	B,C	1	Kl. 1
	1 = linear			
	0 = non linear			
609	(SN/DRZ) Trimming speed 1	B,C	0060 - 0300 180	Kl. 1
615	(LS) End recognition when photocell goes	B,C	0	Kl. 1
	1 from light to dark			
	0 from dark to light			
618	(RDR) Inverse rotation after seam end	B,C	0	Kl. 1
	1 yes			
	0 no			
623	(RDR/VERZ) Delay in start-up time (ms) for inverse rotation	B,C	0000 - 2000 30	Kl. 1
642	(PF/VERZ/TA) presser foot time from switch-on to voltage reduction (cycling)	B,C	0010 - 0150 100	Kl. 1
643	(TUM/VERZ/TA) feed reverse time from switch-on to voltage reduction (cycling)	B,C	0010 - 0150 100	Kl. 1
651	(PF) Presser foot with automatic descent on machine stop	B,C	1	Kl. 1
	1 yes			
	0 no			
653	(PEIPO) Target stitch before sewing	B,C	0	Kl. 1
	1 yes			
	0 no			
660	(FW) Bobbin thread monitoring	A,B,C	0000 - 0002 0	Kl. 1
	0 without (= *II*)			
	1 via a sensor (= **I*)			
	2 by a stitch count			
700	(NAPO) Needle position 0 (reference position of the needle)	B,C	0000 - 0255 0	Kl. 1 *
702	(NAPO) Needle position 1 (needle down)	B,C	0000 - 0255 80	Kl. 1
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0000 - 0255 227	Kl. 1
706	(NAPO/SN) Needle position 6 (start trimming signal 2 (pneumatic thread trimmer))	B,C	0000 - 0255 127	Kl. 1
707	(NAPO/FSL/FANG) Needle position 9 (thread tension release or thread catcher start)	B,C	0000 - 0255 140	Kl. 1
710	(NAPO/NHOS) Needle position 3 (needle up)	B,C	0000 - 0255 227	Kl. 1
718	(STBR) Timing of residual brake (0 = brake off)	B,C	0000 - 0100 0	Kl. 1
719	(PF/TA) Timing output (lifting presser foot)	B,C	0010 - 0060 40	Kl. 1
721	(TUM/TA) Timing output (feed reverse)	B,C	0010 - 0090 40	Kl. 1
722	(DRZAN) Acceleration ramp	B,C	0001 - 0060 50	Kl. 1
	1 gradual			
	50 steep			
723	(DRZAB) Brake ramp	B,C	0001 - 0060 40	Kl. 1
	1 gradual			
	50 steep			
729	(STVERZ/PF) Start delay after lowering presser foot	B,C	0010 - 2000 120	Kl. 1
730	(PF/VERZ) Lift delay for presser foot after seam end	B,C	0000 - 2000 60	Kl. 1
760	(FW/SPFW/STZ/STZA)	A,B,C	0000 - 0250 5	Kl. 1
	- 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			

761	(FSL/FZ/VERZ) Prolongation thread tension release / thread puller	B,C	0000 - 0080 0	Kl. 1
770	(PF/VERZ) Lifting delay of presser foot at threadle- position „-1“	B,C	0010 - 0250 80	Kl. 1
773	(TUM/RIV) Function of Input 1 = Feed reverse manuel 2 = Backtack inversion	B,C	0001 - 0002 1	Kl. 1
775	(ZRIE/STOPZ) Stop time (ms) with stitch in stitch backtack (decorative backtack)	B,C	0010 - 1000 100	Kl. 1
789	(PEIPO) Needle position 10 (target stitch)	B,C	0000 - 0255 240	Kl. 1
797	(HWT) Hardware test 1 yes 0 no	C	0	Kl. 1
798	(EBC) Programming level C 1 yes 0 no	A,B,C	0000 - 0020 1	Kl. 1
799	(MAKL) Machine class which has been selected	C	0001 - 0001 1	Kl. 1 *
800	(DRR) Direction of motor rotation viewed from belt pulley 1 left-hand rotation 0 right-hand rotation	C	0000 - 0001 1	Kl. 1 *
801	(RDR) Reverse rotation angle after seam end	B,C	0010 - 0200 30	Kl. 1
880	(REG) Starting current max. [A]	C	0001 - 0020 5	Kl. 1
884	(REG) Proportional amplification of the speed control (in general)	B,C	0003 - 0024 10	Kl. 1
885	(REG) Integral amplification of the speed control	C	0010 - 0080 50	Kl. 1
886	(REG) Proportional amplification of the order controllers	C	0001 - 0015 8	Kl. 1
887	(REG) Differential amplification of the order controllers	C	0001 - 0015 8	Kl. 1
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0000 - 2500 200	Kl. 1
890	(REG) Proportional amplification of the superior order controllers for the residual brake	C	0001 - 0025 15	Kl. 1
897	(MOT) MINI motor version 1 long 0 short	C	0000 - 0001 0	Kl. 1 *
900	(REG) Additional P-Amplification of the speed control	B,C	0001 - 0024 10	Kl. 1
901	(DRZ/SN) Trimming release speed	B,C	0030 - 0500 400	Kl. 1
933	(ANZ) Display change-over 1 diagnosis 0 normal display	C	0	Kl. 1
939	(VERZ/TUM) Rate time (premature change-over) for the transport changer when switching on	B,C	0010 - 0200 30	Kl. 1

12. Electrical Connections Diagram X5 P138ED



Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
 Signification des aimants resp. solenoides et touches / Significação dos ímãs 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 	Mehrweite / extra width / largeur additionnelle / largura adicional / superampiezza / anchura adicional / extra wijdte
S2 	Reset innerhalb der Schulternaht / reset within the shoulder seam
S3 	Transportumstellung von Hand / manual feed reverse / renversement de marche manuel / mudança do transporte manual / commutazione trasporto a mano / inversión de transporte manual / handmatige transportomschakeling
S4 	Programm - Start / program start
Y1 I max 10 A * 	Fadenschneider pneumatisch / pneum. thread trimmer / coupe-fil pneumatique / corte de linhas pneumático / rasafilo pneumático / cortahilos neumático / draadsnijder pneumatisch
Y2 I max 10 A * 	Lineal / ruler règle / régua / regolo / regla / liniaal
Y3 I max 10 A * 	Mehrweite / extra width / largeur additionnelle / largura adicional / superampiezza / anchura adicional / extra wijdte
Y4 I max 8 A * 	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 * 	Transportumsteller / feed reverse / renversement de marche / mudança do transporte / commutazione trasporto / inversión de transporte / transportomschakeling
Y8 I max 300 mA 	Maschinenlauf / motor runs / moteur en marche / motor em movimento / motore in moto / motor en marcha / loop van de machine
[A2]	Tastergehäuse an der Nähmaschine / key case at the sewing machine
[A3] 	Oberteilerkennung / sewing machine identify unit

- * 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).