EcoDrive

QE3760/QE5540

CE

Type

YA321EDx

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 1 or 0. 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> = 1
1 limited by <105>
0 limited by <607>

Explanation:
Parameter 107 is valid only the the value (content) of parameter <106> = 1.
If parameter 107 is set to 1 (<107> = 1), then the speed for the front backtack is limited by parameter 105, e.g. <105> = 1500. If parameter 107 is set to 0 (<107> = 0), then the speed for the front backtack is limited by the value of parameter 607, e.g. <607> = 4000.

11.3 Parameter survey YA321EDX (1_Y03_06)

Function	Abbrev'n	Parameter	Input Output	Connection Socket/Contacts
Accelerate	DRZAN	722		
Backtack	RIE	105/110		
Brake	DRZAB	723		
Chopper	MESSER	105/110		
Control	REG	880/884/885 886/887/889 890/999		
Defect search	HWT	797		
Delay	VERZ	189/192/193 194/195/196 197/527/642 643/730/770 999		
Direction of rotation	DRR	800		
Display	ANZ	389/390/605 933		
End backtack	ER	110		
Engine	MOT	897		
Feed reverse	TUM	301/643/721		
Front backtack	AR	105		
Hardware test	HWT	797		
Holder	TUPF	527		
Increments	INKR	902		
Machine class	MAKL	799		
Machine run	ML	904		
Needle position	NAPO	521/700/702 703		
Number of stitches	STZA	112/131/760		
ON period	EINZ	189/192/193 194/195/196 197/389/528 889		
Photocell	LS	112/161/199		
Presser foot	PF	642/651/719 729/730/770		

Program	PR	131
Programming level C	EBC	798
Residual brake	STBR	718
Seam end	NE	110
Seam start	NA	105
Soft start	SANL	116/117
Speed	DRZ	105/110/117 199/605/606 607/609/901
Speed decrease	DRZAB	723
Speed increase	DRZAN	722
Stacker	STAP	527/528
Start	START	161
Start delay	STVERZ	729
Stepper motor	SMOT	1000/1001/1002 1100/1101/1102 1103/1104/1105 1106/1107/1108 1109/1112/1200 1201/1202/1203 1204/1205/1206 1207/1208/1209 1300/1301
Stitch condensation	STVD	105/110
Stitchcounter	STZ	760
Thread monitor	FW	660/760
Thread trimming	SN	609/901
Time needed to switch on	EINZ	189/192/193 194/195/196 197/389/528 889
Timing output	TA	642/643/719 721
Vacuum	SAUG	105/110

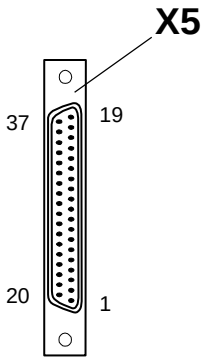
11.4 List of Parameters YA321EDX (1_Y03_06)

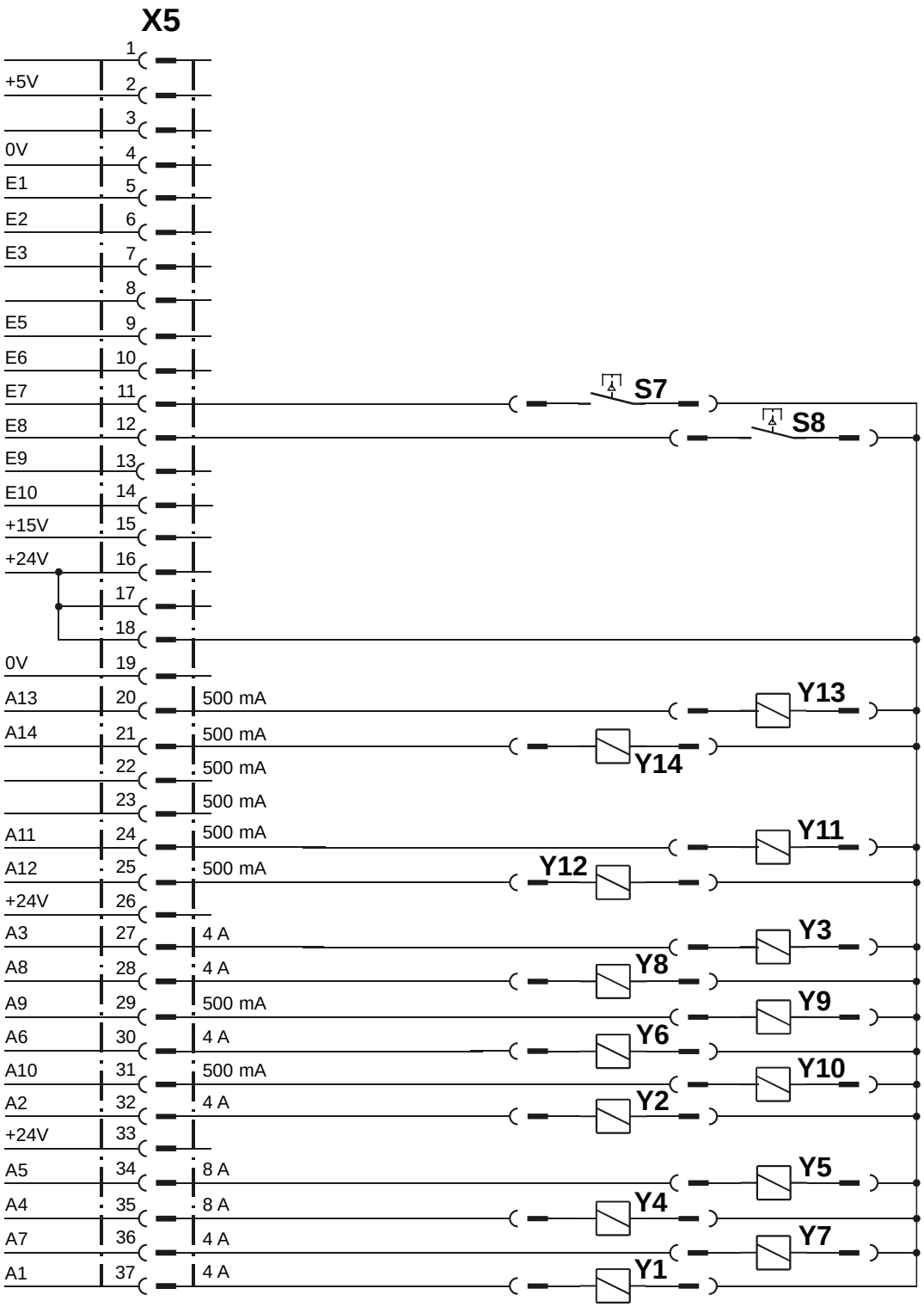
No.	Function (Meaning)	Level	Range of Values	Value	Standard
116	(SANL) Soft start stitches	A,B,C	0000 - 0255	12	Kl. 1
117	(SANL/DRZ) Speed for soft start stitches	B,C	0030 - 4000	1500	Kl. 1
131	(PR/STZA) Stitches for seam section 4	A,B,C	0001 - 0100	6	Kl. 1
161	(LS/START) Start delay for start of photocell	B,C	0000 - 2000	200	Kl. 1
189	(VERZ/EINZ) Delay/on time t1	B,C	0000 - 2000	100	Kl. 1
192	(VERZ/EINZ) Delay/on time t4	B,C	0000 - 5000	400	Kl. 1
193	(VERZ/EINZ) Delay/on time t5	B,C	0010 - 2000	300	Kl. 1
194	(VERZ/EINZ) Delay/on time t6	B,C	0010 - 2000	300	Kl. 1
195	(VERZ/EINZ) Delay/on time t7	B,C	0010 - 2000	300	Kl. 1
196	(VERZ/EINZ) Delay/on time t8	B,C	0010 - 2000	300	Kl. 1
197	(VERZ/EINZ) Delay/on time t9	B,C	0000 - 2000	850	Kl. 1
301	(TUM) Switch-on voltage of the magnet for transport change-over 1 24V 0 32V	C		0	Kl. 1
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
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	0000 - 0010	0	Kl. 1
527	(STAP/TUPF/VERZ) Delay (ms) from stacker on to holder / stopper off	A,B,C	0000 - 0255	10	Kl. 1
528	(EINZ/STAP) Duration (ms) of stacker function	B,C	0010 - 2000	400	Kl. 1
605	(DRZ/ANZ) Actual speed in display 1 yes 0 no	B,C		0	Kl. 1
606	(DRZ) Speed: level 1 (min.)	B,C	0060 - 0600	180	Kl. 1
607	(DRZ) Speed: level 12 (max.)	B,C	0100 - 7500	5500	Kl. 1
609	(SN/DRZ) Trimming speed 1	B,C	0060 - 0300	180	Kl. 1
642	(PF/VERZ/TA) preser foot time from switch-on to voltage reduction (cycling)	C	0010 - 0200	200	Kl. 1
643	(TUM/VERZ/TA) feed reverse time from switch-on to voltage reduction (cycling)	C	0010 - 0200	200	Kl. 1
651	(PF) Presser foot with automatic descent on machine stop 1 yes 0 no	B,C		0	Kl. 1
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
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	53	Kl. 1
703	(NAPO) Needle position 2 (thread take-up lever up)	B,C	0000 - 0255	222	Kl. 1
718	(STBR) Timing of residual brake (0 = brake off)	B,C	0000 - 0100	0	Kl. 1

719	(PF/TA) Timing output A4 (lifting presser foot) (0 = 100% switched on)	C	0000 - 0090	50	Kl. 1
721	(TUM/TA) Timing output A5 (feed reverse) (0 = 100% switched on)	C	0010 - 0090	50	Kl. 1
722	(DRZAN) Acceleration ramp 1 gradual 50 steep	B,C	0001 - 0060	45	Kl. 1
723	(DRZAB) Brake ramp 1 gradual 50 steep	B,C	0001 - 0050	35	Kl. 1
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	0010 - 2000	50	Kl. 1
760	(FW/SPFW/STZ/STZA) - Stitch count for the remnant thread after the bobbin thread monitor responds with direct bobbin thread monitoring - Multiplicator 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
770	(PF/VERZ) Lifting delay of presser foot at threadle-position „-1“	B,C	0010 - 0250	70	Kl. 1
797	(HWT) Hardware test 1 yes 0 no	C		0	Kl. 1
798	(EBC) Programming level C 1 yes 0 no	B,C		0	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		0	Kl. 1
880	(REG) Starting current max. [A]	C	0001 - 0020	8	Kl. 1
884	(REG) Proportional amplification of the speed control (in general)	C	0001 - 0030	9	Kl. 1
885	(REG) Integral amplification of the speed control	C	0001 - 0255	35	Kl. 1
886	(REG) Proportional amplification of the order controllers	C	0001 - 0025	15	Kl. 1
887	(REG) Differential amplification of the order controllers	C	0001 - 0025	10	Kl. 1
889	(EINZ/REG) Time required for order controlling (0 = always)	C	0000 - 2500	400	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		0	Kl. 1 *
933	(ANZ) Display change-over 1 diagnosis 0 normal display	C		0	Kl. 1
999	(REG/VERZ) Delay for travel-optimised positioning	C		0	Kl. 1
1000	(SMOT) Count of stepping motors	B,C	0000 - 0003	1	Kl. 1
1002	(SMOT) Operating mode 0 = Socket 1 = SM1, Socket 2 = SM2 1 = parallel mode (socket 1 - winder 1 - SM1, socket 2 -winder 2 - SM1)	B,C		0	Kl. 1
1101	(SMOT) Rotational direction SM1 0 = anticlockwise 1 = clockwise	B,C		0	Kl. 1 *
1102	(SMOT) SM1 increment mode 1 = Full increment 2 = Half-increment 3 = Quarter-increment 4 = Eighth-increment	B,C	0001 - 0004	2	Kl. 1

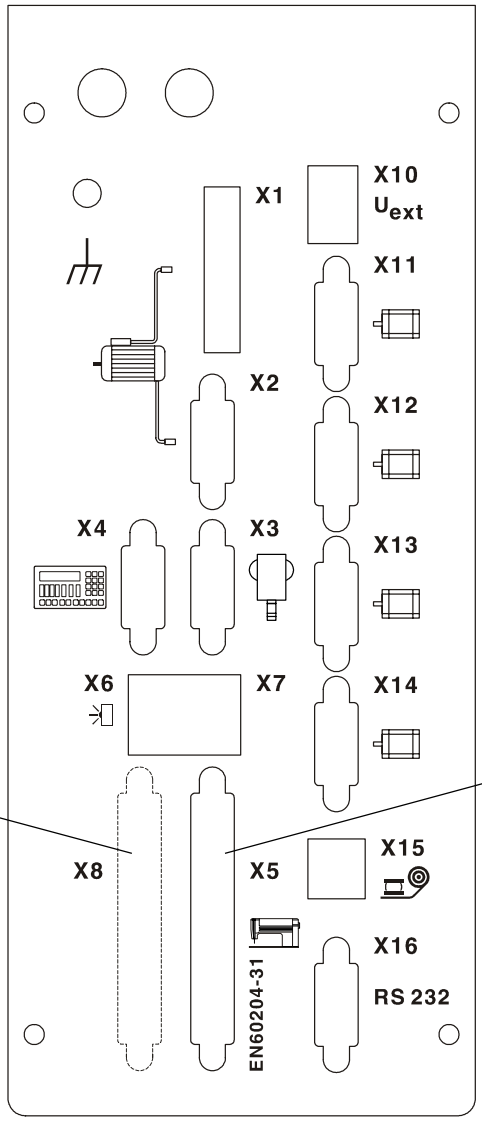
1103	(SMOT) SM1 % maximum current	B,C	0001 - 0100	60	Kl. 1
1104	(SMOT) SM1 % power reduction	B,C	0000 - 0050	0	Kl. 1
1105	(SMOT) SM1 start/stop time (time for 1 increment at start / stop rpm)	B,C	0010 - 4000	500	Kl. 1
1106	(SMOT) Roof time (time for 1 increment in roof) SM1	B,C	0010 - 2000	100	Kl. 1
1107	(SMOT) SM1 acceleration (% increase from start / stop up to roof) SM1	B,C	0001 - 0100	5	Kl. 1
1108	(SMOT) SM1 braking increments (number of braking increments)	B,C	0001 - 0200	15	Kl. 1
1109	(SMOT) SM1 reduction ration (with electrical shaft and tape tensioning)	B,C	0006 - 0255	100	Kl. 1
1112	(SMOT) Speed for SM1 during chain sucking	B,C	0001 - 0255	15	Kl. 1
1300	(SMOT) Incremental motor 3 operating mode (puller, differential adjustment, etc.)	B,C	0000 - 0001	1	Kl. 1
1301	(SMOT) Rotational direction SM3 0 = anticlockwise 1 = clockwise	B,C		1	Kl. 1
1302	(SMOT) SM3 increment mode 1 = Full increment 2 = Half-increment 3 = Quarter-increment 4 = Eighth-increment	B,C	0001 - 0004	2	Kl. 1
1303	(SMOT) SM3 % maximum current	B,C	0001 - 0100	50	Kl. 1
1304	(SMOT) SM3 % power reduction	B,C	0000 - 0050	15	Kl. 1
1305	(SMOT) SM3 start/stop time (time for 1 increment at start / stop rpm)	B,C	0010 - 4000	500	Kl. 1
1306	(SMOT) Roof time (time for 1 increment in roof) SM3	B,C	0010 - 2000	150	Kl. 1
1307	(SMOT) acceleration (% increase from start/stop up to roof) SM3	B,C	0001 - 0100	5	Kl. 1
1308	(SMOT) SM3 braking increments (number of braking increments)	B,C	0001 - 0200	5	Kl. 1
1309	(SMOT) SM3 reduction ration (with electrical shaft and tape tensioning)	B,C	0006 - 0200	10	Kl. 1
1311	(SMOT) Stepping motor 3 adjustment range	B,C	0000 - 0200	65	Kl. 1
1400	(SMOT) Incremental motor 4 operating mode (puller, differential adjustment, etc.)	B,C	0000 - 0001	1	Kl. 1
1401	(SMOT) Rotational direction SM4 0 = anticlockwise 1 = clockwise	B,C		1	Kl. 1
1402	(SMOT) SM4 increment mode 1 = Full increment 2 = Half-increment 3 = Quarter-increment 4 = Eighth-increment	B,C	0001 - 0004	2	Kl. 1
1403	(SMOT) SM4 % maximum current	B,C	0001 - 0100	50	Kl. 1
1404	(SMOT) SM4 % power reduction	B,C	0000 - 0050	14	Kl. 1
1405	(SMOT) SM4 start/stop time (time for 1 increment at start / stop rpm)	B,C	0010 - 4000	500	Kl. 1
1406	(SMOT) Roof time (time for 1 increment in roof) SM4	B,C	0010 - 2000	150	Kl. 1
1407	(SMOT) acceleration (% increase from start/stop up to roof) SM4	B,C	0001 - 0100	5	Kl. 1
1408	(SMOT) SM4 braking increments (number of braking increments)	B,C	0001 - 0200	5	Kl. 1
1409	(SMOT) SM4 reduction ration (with electrical shaft and tape tensioning)	B,C	0006 - 0200	10	Kl. 1
1411	(SMOT) Stepping motor 4 adjustment range	B,C	0000 - 0200	65	Kl. 1

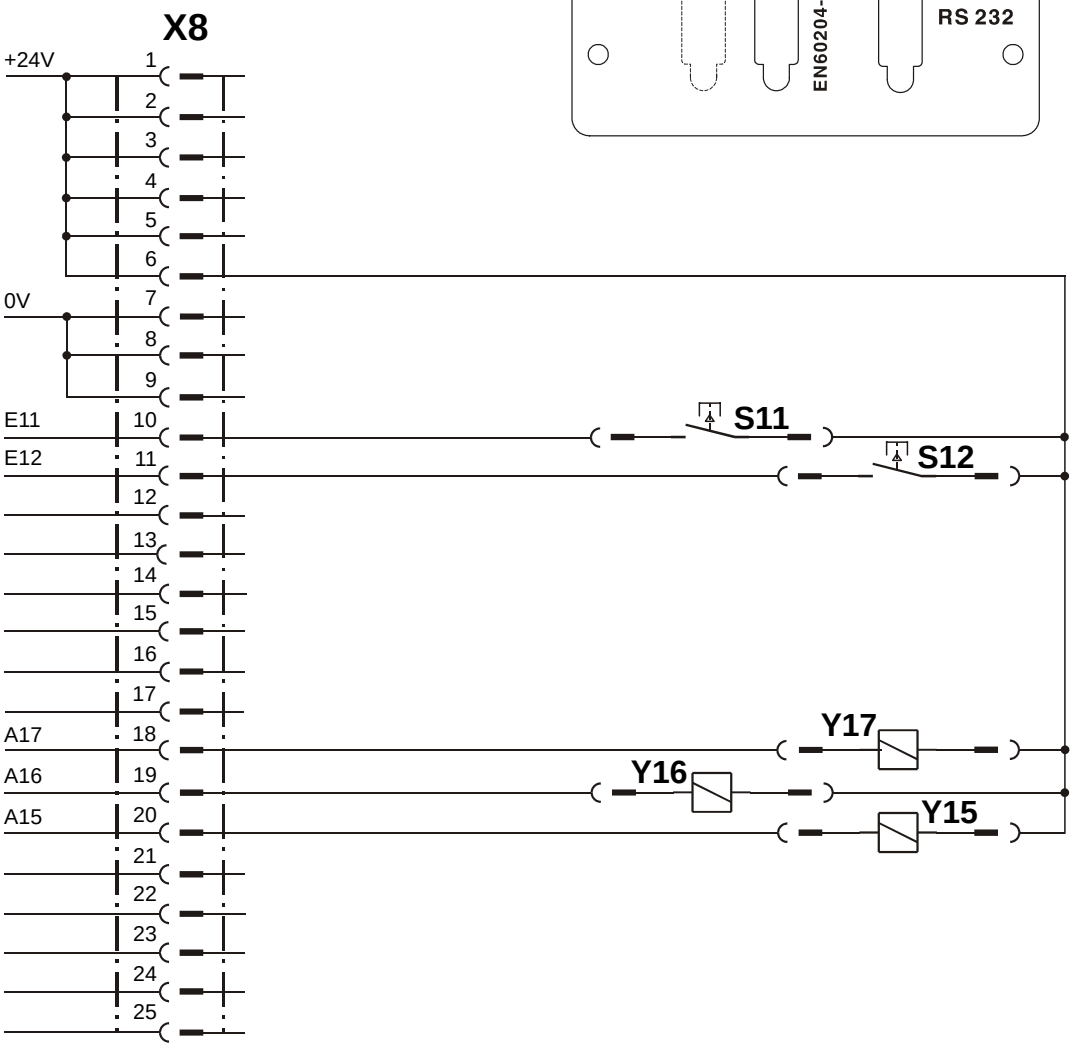
12. Electrical Connections Diagram X5 YA321EDx



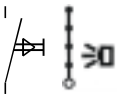
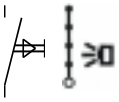
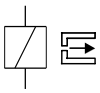
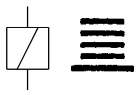
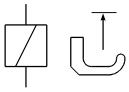
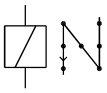
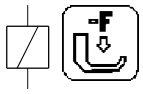
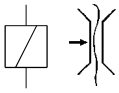


Back of the control box

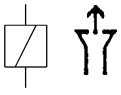




Bedeutung der Magnete bzw. Magnetventile, Taster / Meaning of magnets and/or solenoids and keys
Signification des aimants resp. solenoides et touches / Significação dos imaõs e/ou as solenoidas e teclas
Significato dei magneti, delle valvole magnetiche e dei tasti / Significación de los imanes y/o los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

S7  **STOP**	STOP / Anlaufsperre
S8 	Lichtschranke Start-Stop / light barrier start-stop
S11 	Lichtschranke Vorladestation / light barrier preload station
S12 	Näherungsschalter Vorladestation / proximity switch pre load station
Y1 I max 4 A 	Schmalstreifen / small band
Y2 I max 4 A 	Kette saugen / chain vacuum / aspiration de chaînette / aspirar de cadeia / aspirazione catenella / aspiración cadeneta / zuigen van een ketting
Y3 I max 4 A 	Stapler / stacker / empileur / empilhadeira / impilatore / apiladora / hefinstrument
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
Y6 I max 4 A 	Presserfußdruck / presser foot pressure / pression du pied presseur / pressão do calcador / pressione alzapiedino / presión del prensatelas / naaivoetdruk
Y7 I max 4 A 	Fadenspannungslösen / thread tension release / détendeur de fil / soltar tensão da linha / sbloccaggio tendifilo / detensión del hilo / verbreken van de draadspanning
Y8 I max 4 A 	Konturenarm / material guidance

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

Y9  I max 4 A	Stoffabfall / material waste
Y10  I max 4 A	Fügehilfe-Versatz / adding assistance-disalignment
Y11  I max 4 A	Fügehilfe-Position / adding assistance-position
Y12  I max 500 mA	Stoffhalter / material clamp
Y13  I max 500 mA	Blasen / blowing / soufflage / soprar / soffiatura / soplar / blazen
Y14  I max 500 mA	Stoffhalter zurück / material clamp back
Y15  I max 4 A	Vorladestation / preload station
Y16  I max 4 A	Vorladestation übergeben / handed over preload station
Y16  I max 4 A	Vorladestation schließen / close preload station

- 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).