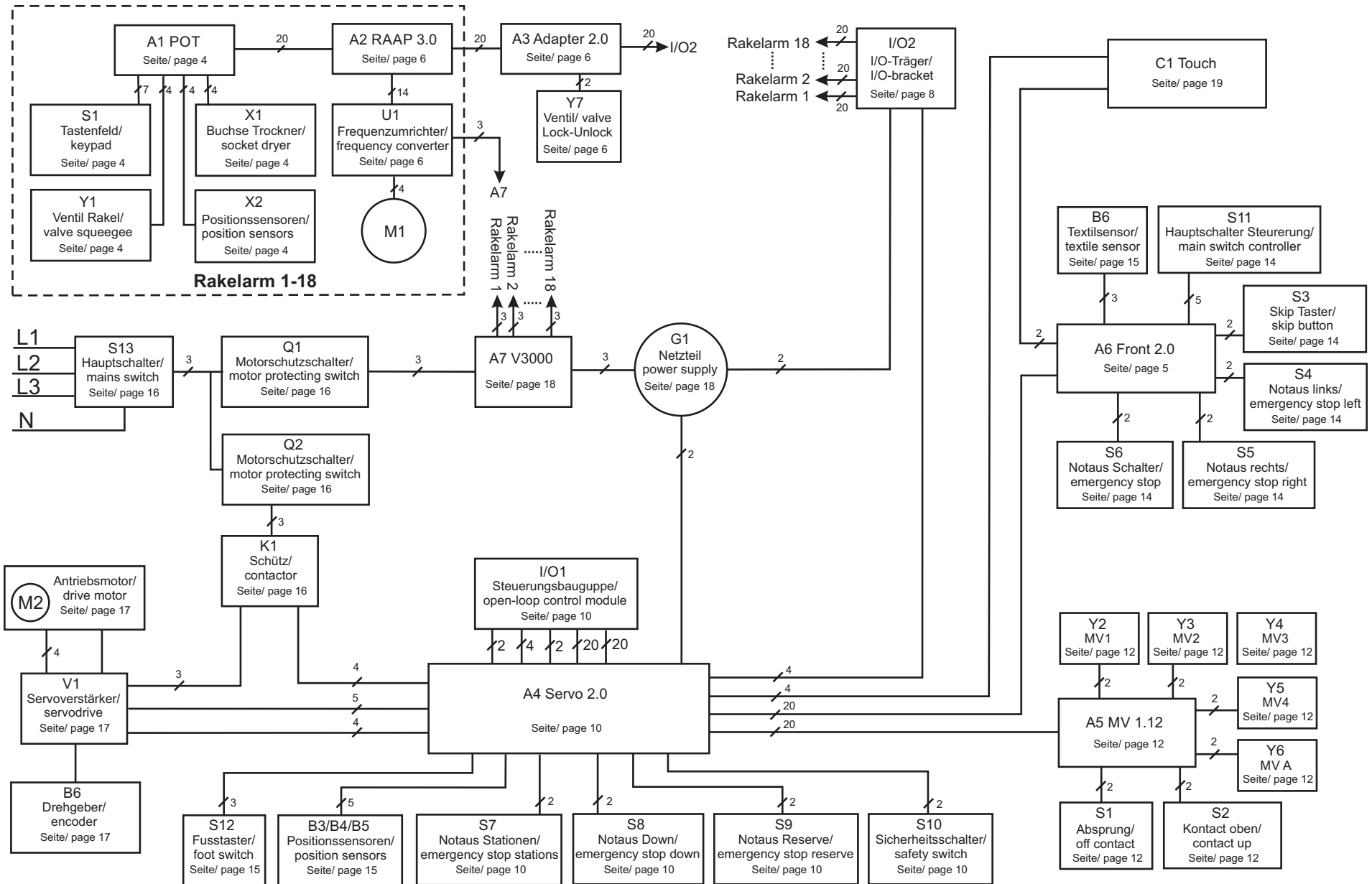


Verdrahtungsplan

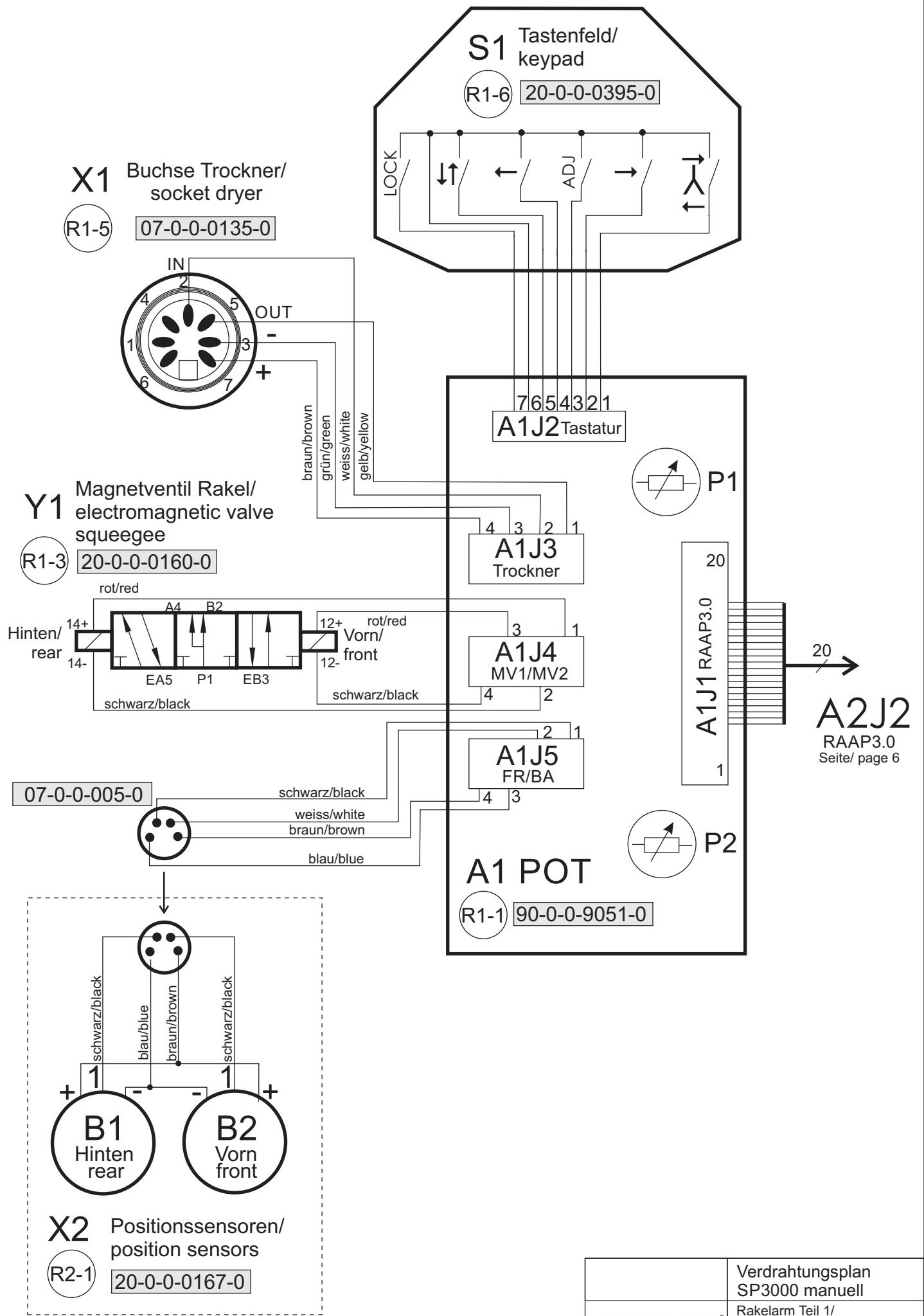
wiring diagram

SYNCHROPRINT 3000

Inhalt:	Seite/ page	Context:
Deckblatt	1	cover sheet
Blockschaltbild	2	wiring diagram
I/O Verbindungen Seite 4	3	I/O connections page 4
Rakelarm Teil 1	4	squeegee arm part 1
I/O Verbindungen Seite 6	5	I/O connections page 6
Rakelarm Teil 2	6	squeegee arm part 2
I/O Verbindungen Seite 8	7	I/O connections page 8
I/O-Träger	8	I/O-bracket
I/O Verbindungen Seite 10	9	I/O connections page 10
Servoplatine	10	servo PCB
I/O Verbindungen Seite 12	11	I/O connections page 12
Magnetventile	12	electromagnetic valves
I/O Verbindungen Seite 14	13	I/O connections page 14
Frontplatine	14	front PCB
Sensoren	15	sensors
Klemmschiene	16	clamping bar
Servoverstärker	17	servodrive
Verteilerplatine	18	distribution PCB
Touch	19	touch

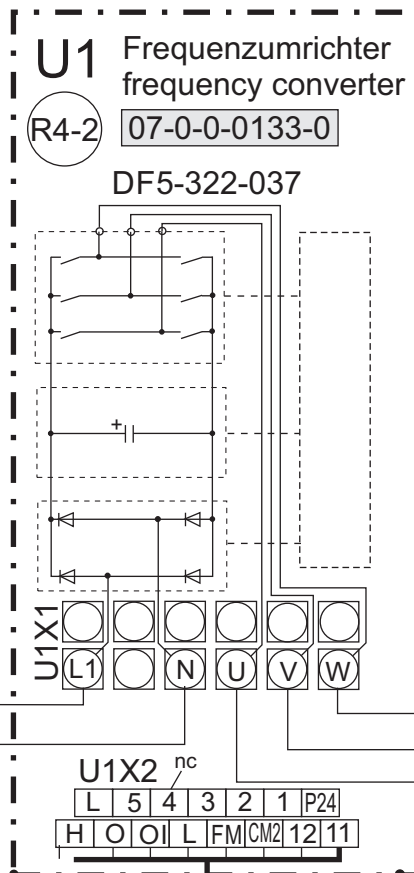


Beschreibung	description	A1 POT 1.4		A2 RAAP 3.0		A3 Adapter 2.0		I/O2	
		A1J1	A1J1	A2J2	A2J1	A3J1	A3J2	X1 or X2	
Y1 MV vorn	Y1 MV front	A1J4 Pin4	Pin 1	Pin 1	Pin 1	Pin 1	Pin 1	Pin 1	OUT 1 or 9
B2 Sensor vorn	B2 sensor front	A1J5 Pin2	Pin 2	Pin 2	Pin 2	Pin 2	Pin 2	Pin 2	IN 1 or 9
Y1 MV hinten	Y1 MV rear	A1J4 Pin2	Pin 3	Pin 3	Pin 3	Pin 3	Pin 3	Pin 3	OUT 2 or 10
B2 Sensor hinten	B2 sensor rear	A1J5 Pin1	Pin 4	Pin 4	Pin 4	Pin 4	Pin 4	Pin 4	IN 2 or 10
X1/5 Trockner	X1/5 dryer	A1J3 Pin1	Pin 5	Pin 5	Pin 5	Pin 5	Pin 5	Pin 5	OUT 3 or 11
S1/7 Tastenfeld LOCK	S1/7 keypad LOCK	A1J2 Pin7	Pin 6	Pin 6	Pin 6	Pin 6	Pin 6	Pin 6	IN 3 or 11
P1/L Potentiometer 1	P1/L potentiometer 1		Pin 7	Pin 7					
S1/1 Tastenfeld Raket	S1/1 keypad squeeze	A1J2 Pin1	Pin 8	Pin 8	Pin 8	Pin 8	Pin 8	Pin 8	IN 4 or 12
P1/O Potentiometer 1	P1/O potentiometer 1		Pin 9	Pin 9					
S1/2 Tastenfeld links	S1/2 keypad left	A1J2 Pin2	Pin 10	Pin 10	Pin 10	Pin 10	Pin 10	Pin 10	IN 5 or 13
P1+2/H Potentiometer 1+2	P1+2/H potentiometer 1+2		Pin 11	Pin 11 — A2J3 Pin 1					
S1/3 Tastenfeld ADJ	S1/3 keypad ADJ	A1J2 Pin3	Pin 12	Pin 12	Pin 12	Pin 12	Pin 12	Pin 12	IN 6 or 14
P2/O Potentiometer 2	P2/O potentiometer 2		Pin 13	Pin 13					
S1/4 Tastenfeld rechts	S1/4 keypad right	A1J2 Pin4	Pin 14	Pin 14	Pin 14	Pin 14	Pin 14	Pin 14	IN 7 or 15
P2/L Potentiometer 2	P2/L potentiometer 2		Pin 15	Pin 15					
S1/5 Tastenfeld Sieb	S1/5 keypad screen	A1J2 Pin5	Pin 16	Pin 16	Pin 16	Pin 16	Pin 16	Pin 16	IN 8 or 16
+24V	+24V		Pin 17	Pin 17	Pin 17	Pin 17	Pin 17	Pin 17	
+24V	+24V		Pin 18	Pin 18	Pin 18	Pin 18	Pin 18	Pin 18	
GND	GND		Pin 19	Pin 19	Pin 19	Pin 19	Pin 19	Pin 19	
GND	GND		Pin 20	Pin 20	Pin 20	Pin 20	Pin 20	Pin 20	



Beschreibung	description	U1 Frequenzumrichter/ frequency converter U1X2	A2 RAAP 3.0	A3 Adapter 2.0	I/O2
GND	GND	L	A2J4 Pin 1	A3J1	X1 or X2
Dig. Eingang 5	dig. input 5	5	A2J4 Pin 2	Pin 15	Pin 15
Dig. Eingang 3	dig. input 3	4	A2J4 Pin 4	Pin 11	OUT 8 or 16
Dig. Eingang 2	dig. input 2	3	A2J4 Pin 5	Pin 11	OUT 6 or 14
Dig. Eingang 1	dig. input 1	2	A2J4 Pin 6		
		1	A2J4 Pin 7		
		P24	A2J3 Pin 1		
+ Poti	+ potentiometer	H	A2J3 Pin 2		
Schleifkontakt Poti	Sliding contact potentiometer	O	A2J3 Pin 3		
		OI	A2J3 Pin 4		
- Poti / GND	- potentiometer / GND	L	A2J3 Pin 5		
		FM	A2J3 Pin 6		
		CM2	A2J3 Pin 7		
		12	A2J3 Pin 8		
		11			

Beschreibung	description	A2 RAAP 3.0	A3 Adapter 2.0	I/O2
Y1 MV vorn	Y1 MV front	A2J1	A3J1	X1 or X2
B2 Sensor vorn	B2 sensor front	Pin 1	Pin 1	OUT 1 or 9
Y1 MV hinten	Y1 MV rear	Pin 2	Pin 2	IN 1 or 9
B2 Sensor hinten	B2 sensor rear	Pin 3	Pin 3	OUT 2 or 10
X1/5 Trockner	X1/5 dryer	Pin 4	Pin 4	IN 2 or 10
S1/7 Tastenfeld LOCK	S1/7 keypad LOCK	Pin 5	Pin 5	OUT 3 or 11
FU vor	FC forward	Pin 6	Pin 6	IN 3 or 11
S1/1 Tastenfeld Raket	S1/1 keypad squeeze	Pin 7	Pin 7	OUT 4 or 12
FU zurück	FC back	Pin 8	Pin 8	IN 4 or 12
S1/2 Tastenfeld links	S1/2 keypad left	Pin 9	Pin 9	OUT 5 or 13
FU langsam	FC slow	Pin 10	Pin 10	IN 5 or 13
S1/3 Tastenfeld ADJ	S1/3 keypad ADJ	Pin 11	Pin 11	OUT 6 or 14
Ventil lock/unlock	valve lock/unlock	Pin 12	Pin 12	IN 6 or 14
S1/4 Tastenfeld rechts	S1/4 keypad right	Pin 13	Pin 13	OUT 7 or 15
nicht verwendet	not used	Pin 14	Pin 14	IN 7 or 15
S1/5 Tastenfeld Sieb	S1/5 keypad screen	Pin 15	Pin 15	OUT 8 or 16
+24V	+24V	Pin 16	Pin 16	IN 8 or 16
+24V	+24V	Pin 17	Pin 17	
GND	GND	Pin 18	Pin 18	
GND	GND	Pin 19	Pin 19	
		Pin 20	Pin 20	

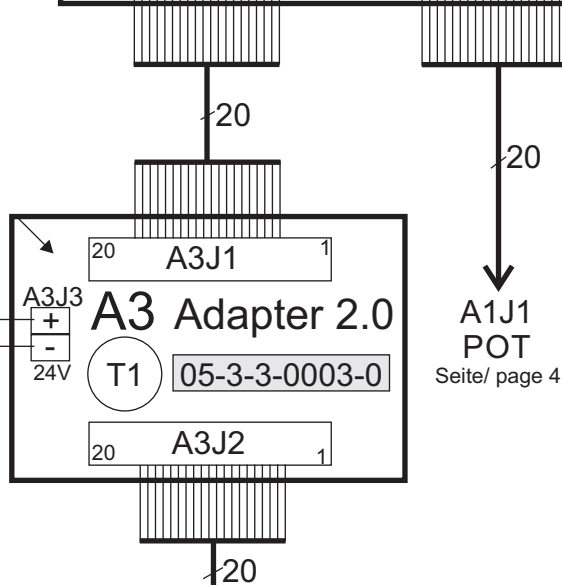
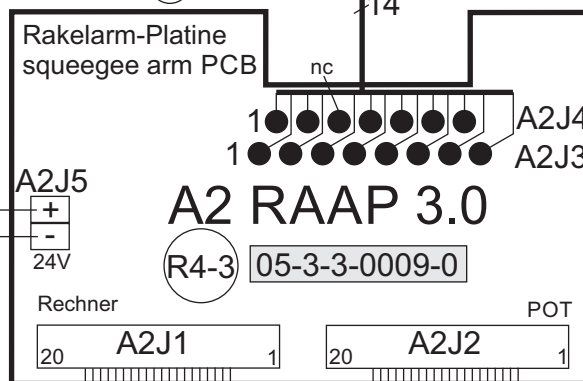
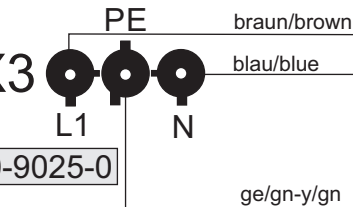


Motor Rakelarm
motor squeegee arm

R4-1 07-0-0-0131-0

M1

A7 V3000
Seite/ page 18



Verdrahtungsplan SP3000 manuell	
Rakelarm Teil 2/ squeegee arm part 2	
REV 1.2	Seite/page 6

Beschreibung	description
Y1 MV vorn	Y1 MV front
B2 Sensor vorn	B2 sensor front
Y1 MV hinten	Y1 MV rear
B2 Sensor hinten	B2 sensor rear
X1/5 Trockner	X1/5 dryer
S1/7 Tastenfeld LOCK FU vor	S1/7 keypad LOCK FC forward
S1/1 Tastenfeld Rakel FU zurück	S1/1 keypad squeegee FC back
S1/2 Tastenfeld links FU langsam	S1/2 keypad left FC slow
S1/3 Tastenfeld ADJ Ventil lock/unlock	S1/3 keypad ADJ valve lock/unlock
S1/4 Tastenfeld rechts nicht verwendet	S1/4 keypad right not used
S1/5 Tastenfeld Sieb +24V	S1/5 keypad screen +24V
+24V	+24V
GND	GND
GND	GND

A2 RAAP 3.0		A2J1	
A1J4 Pin4	—	A1J1 Pin1	—
A1J5 Pin2	—	A1J1 Pin2	—
A1J4 Pin2	—	A1J1 Pin3	—
A1J5 Pin1	—	A1J1 Pin4	—
A1J3 Pin1	—	A1J1 Pin5	—
A1J2 Pin7	—	A1J1 Pin6	—
A1J2 Pin1	—	A1J1 Pin8	—
A1J2 Pin2	—	A1J1 Pin10	—
A1J2 Pin3	—	A1J1 Pin12	—
A1J2 Pin4	—	A1J1 Pin14	—
A1J2 Pin5	—	A1J1 Pin16	—
		A1J1 Pin17	—
		A1J1 Pin18	—
		A1J1 Pin19	—
		A1J1 Pin20	—

A3 Adapter 2.0		A3J2	
A3J1	Pin 1	Pin 1	Pin 1
	Pin 2	Pin 2	Pin 2
	Pin 3	Pin 3	Pin 3
	Pin 4	Pin 4	Pin 4
	Pin 5	Pin 5	Pin 5
	Pin 6	Pin 6	Pin 6
	Pin 7	Pin 7	Pin 7
	Pin 8	Pin 8	Pin 8
	Pin 9	Pin 9	Pin 9
	Pin 10	Pin 10	Pin 10
	Pin 11	Pin 11	Pin 11
	Pin 12	Pin 12	Pin 12
	Pin 13	Pin 13	Pin 13
	Pin 14	Pin 14	Pin 14
	Pin 15	Pin 15	Pin 15
	Pin 16	Pin 16	Pin 16
	Pin 17	Pin 17	Pin 17
	Pin 18	Pin 18	Pin 18
	Pin 19	Pin 19	Pin 19
	Pin 20	Pin 20	Pin 20

I/O2	
X1 or X2	Pin 1
	Pin 2
	Pin 3
	Pin 4
	Pin 5
	Pin 6
	Pin 7
	Pin 8
	Pin 9
	Pin 10
	Pin 11
	Pin 12
	Pin 13
	Pin 14
	Pin 15
	Pin 16
	Pin 17
	Pin 18
	Pin 19
	Pin 20

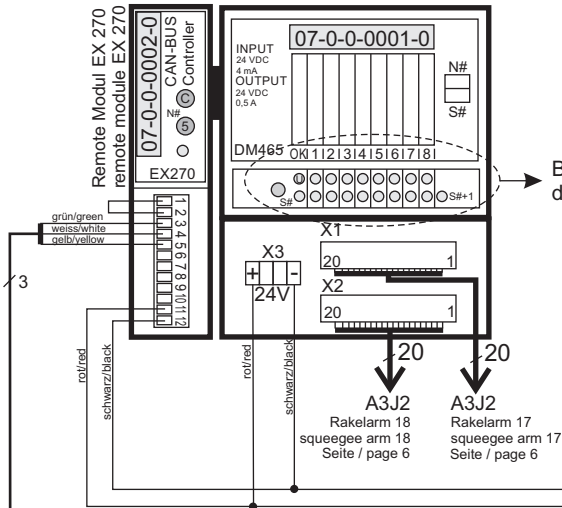
E13-4 I-O Modul DM 465 I-O module DM 465

I/O2 I/O-Träger/
I/O-bracket

- Anzahl I/O-Module Maschinenabhängig
- Max. 4 I/O-Module pro CAN-Controller
- Bei 1+2 I/O-Modulen CAN-Controller EX270
- Bei 3+4 I/O-Modulen CAN-Controller EX470

- number of I/O-modules depends on machine type
- max. 4 I/O modules on one CAN-controller
- At 1+2 I/O modules CAN-controller EX270 is needed
- At 3+4 I/O modules CAN-controller EX470 is needed

Beschreibung Seite 10/
description page 10

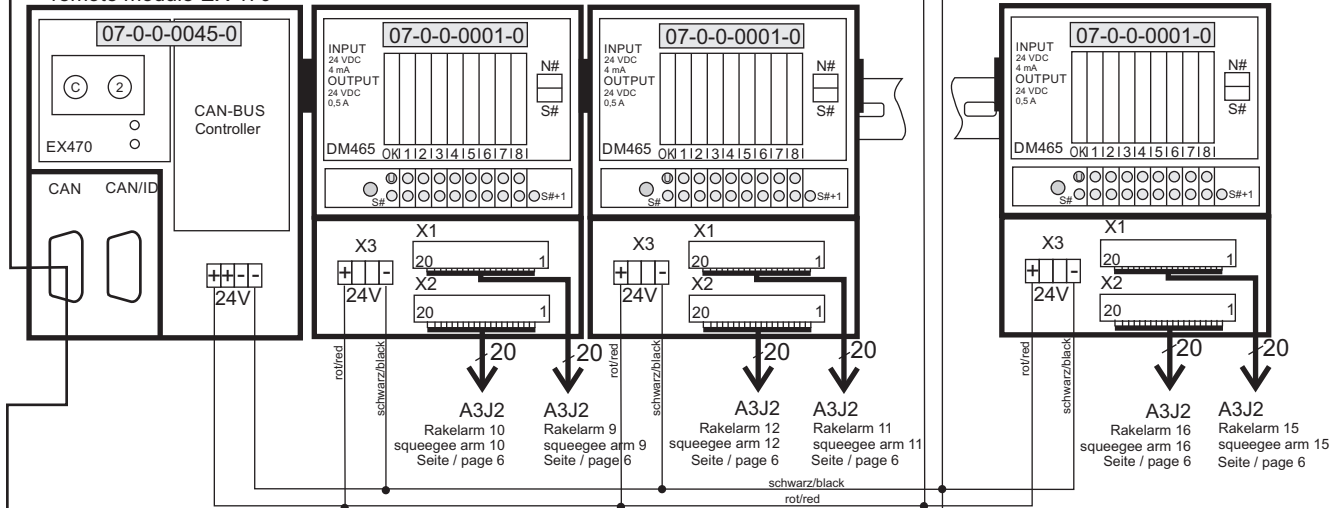


Remote Modul EX 470 remote module EX 470

E13-4 I-O Modul DM 465 I-O module DM 465

E13-4 I-O Modul DM 465 I-O module DM 465

E13-4 I-O Modul DM 465 I-O module DM 465

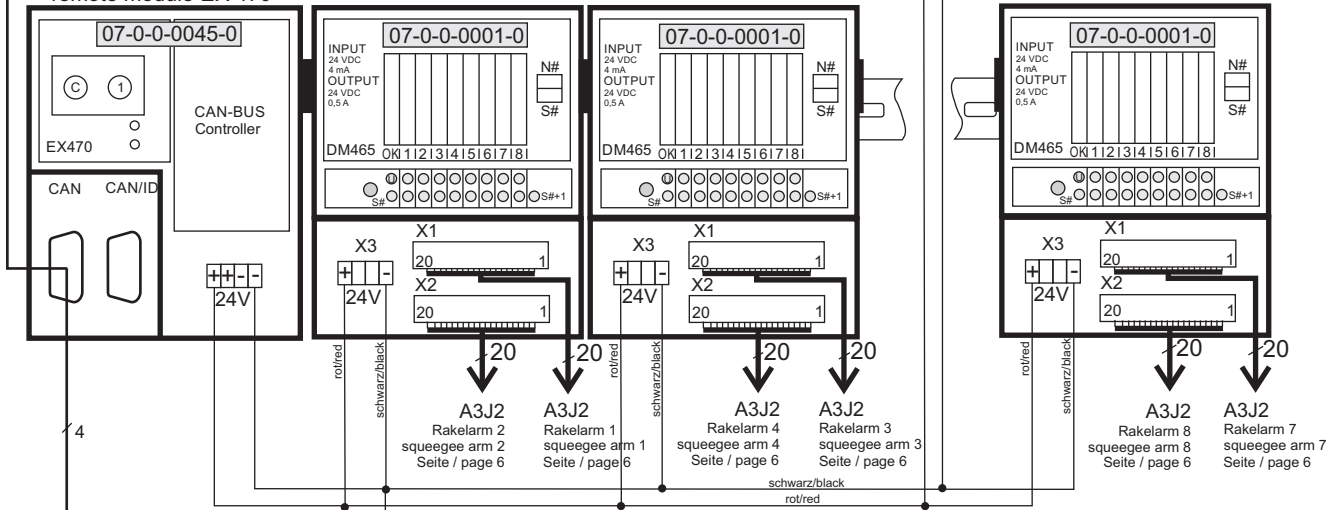


Remote Modul EX 470 remote module EX 470

E13-4 I-O Modul DM 465 I-O module DM 465

E13-4 I-O Modul DM 465 I-O module DM 465

E13-4 I-O Modul DM 465 I-O module DM 465



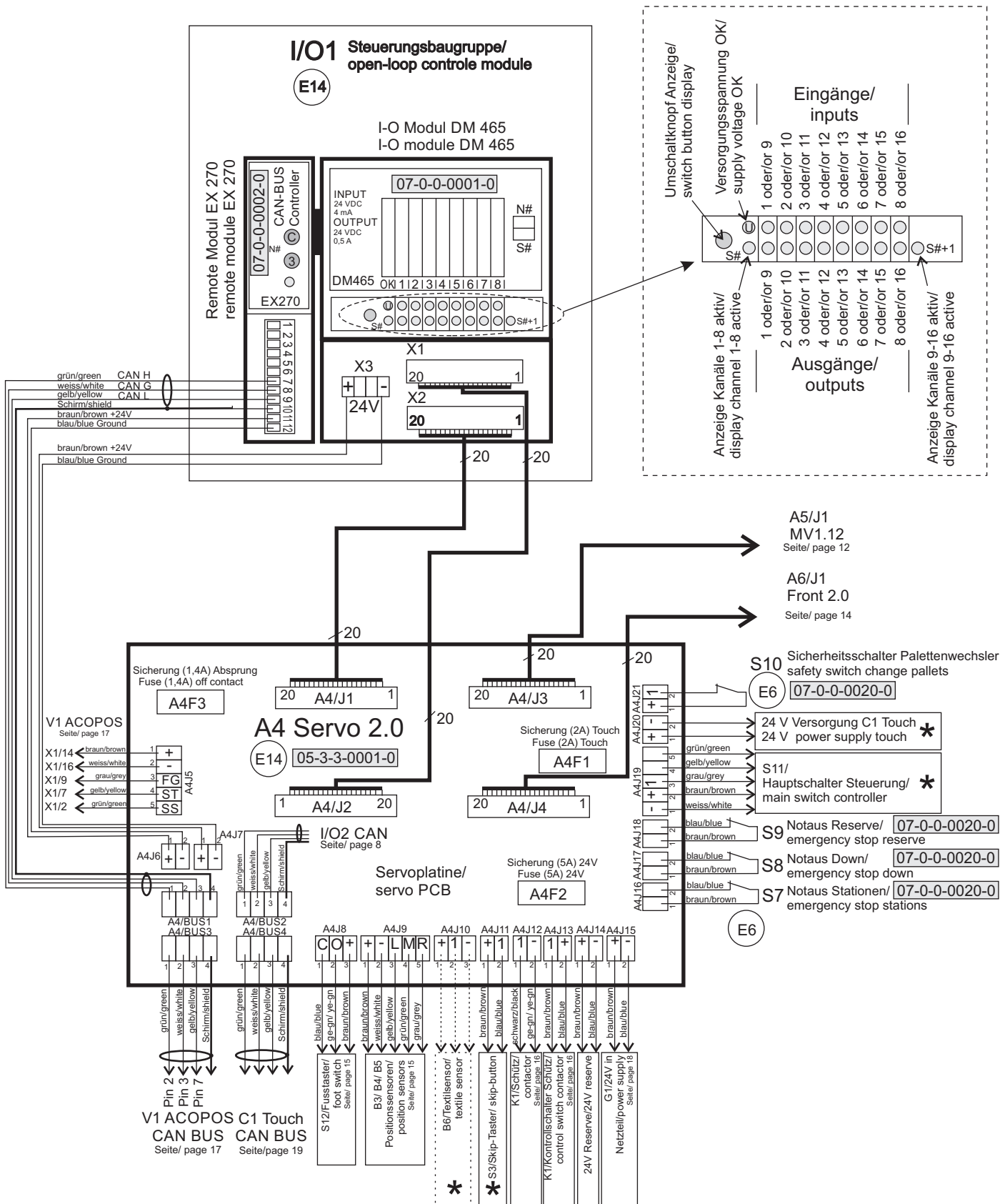
A4 Servo 2.0
BUS2
Seite/ page 10

G1 24V
Seite/ page 12

Beschreibung	description
B5 Positionssensor R B3 Positionssensor L	B5 position sensor R B3 position sensor L
S3 Skip-Taster Sig. / B6 Textilsensor Sig.	S3 skip-button sig. / B6 textile sensor sig.
+24V NOT AUS B4 Positionssensor M S12 Fusstaster C S12 Fusstaster O S1 Reedkontakt Absprung + Y6 MVA Sig.	+24V emergency stop B4 position sensor M S12 foot switch C S12 foot switch O S1 reedcontact off contact + Y6 MVA sig.
S10 Sicherheitsschalter Palettenwechsler S11 Hauptschalter Steuerung Sig.	S10 safety switch change pallets S11 main switch controller sig.
NOT AUS Sig. K1 Kontrollschalter Schütz	emergency stop sig. K1 control switch contactor

**Sonstige Verbindungen/
other connections**

A5 MV 1.12	A4J3 Pin16 — A4J2 Pin1	I/O1X1 Pin1	OUT 1
A5 MV 1.12	A4J3 Pin 5 — A4J2 Pin2	I/O1X1 Pin2	IN 1
A5 MV 1.12	A4J3 Pin14 — A4J2 Pin3	I/O1X1 Pin3	OUT 2
	A4J9 Pin 5 — A4J2 Pin4	I/O1X1 Pin4	IN 2
A5 MV 1.12	A4J3 Pin12 — A4J2 Pin5	I/O1X1 Pin5	OUT 3
	A4J9 Pin3 — A4J2 Pin6	I/O1X1 Pin6	IN 3
A5 MV 1.12	A4J3 Pin10 — A4J2 Pin7	I/O1X1 Pin7	OUT 4
A6 FRONT	A4J10 Pin2 — A4J2 Pin8	I/O1X1 Pin8	IN 4
A5 MV 1.12	A4J3 Pin1 — A4J2 Pin9	I/O1X1 Pin9	OUT 5
A5 MV 1.12	A4J3 Pin6 — A4J2 Pin10	I/O1X1 Pin10	IN 5
A5 MV 1.12	A4J3 Pin4 — A4J2 Pin12	I/O1X1 Pin12	IN 6
	A4J18 Pin2 — A4J2 Pin13	I/O1X1 Pin13	OUT 7
V1	A4J9 Pin4/ A4J5 Pin4	I/O1X1 Pin16	IN 8
	A4J8 Pin1 — A4J1 Pin2	I/O1X2 Pin2	IN 9
	A4J8 Pin2 — A4J1 Pin4	I/O1X2 Pin4	IN 10
A5 MV 1.12	A4J3 Pin2 — A4J1 Pin6	I/O1X2 Pin6	IN 11
A5 MV 1.12	A4J3 Pin3 — A4J1 Pin8	I/O1X2 Pin8	IN 12
	A4J21 Pin2 — A4J1 Pin10	I/O1X2 Pin10	IN 13
A6 FRONT	A4J19 Pin3 — A4J1 Pin12	I/O1X2 Pin12	IN 14
V1	A4J5 Pin 5 A4J1 Pin13	I/O1X2 Pin13	OUT 15
	A4J12 Pin1 — A4J1 Pin14	I/O1X2 Pin14	IN 15
V1	A4J5 Pin 3 — A4J1 Pin15	I/O1X2 Pin15	OUT 16
	A4J13 Pin1 — A4J1 Pin16	I/O1X2 Pin16	IN 16



* in Verbindung mit A6 Front 2.0 Seite 15 keine Belegung
 in connection with A6 Front 2.0 page 14 no pin assignment

Beschreibung	description
S1 Reedkontakt Absprung +	S1 reedcontact off contact +
S1 Reedkontakt Absprung Sig.	S1 reedcontact off contact sig.
Y6 MVA Sig.	Y6 MVA sig.
S2 Reedkontakt Oben Sig.	S2 reedcontact up sig.
Reserve Sig.	reserve sig.
Reserve Sig.	reserve sig.
+24V	+24V
+24V	+24V
Y2 MV1 Hubventil Sig.	Y2 MV1 liftvalve sig.
Y2 MV1 Hubventil Sig.	Y2 MV1 liftvalve sig.
Y3 MV2 Hubventil Sig.	Y3 MV2 liftvalve sig.
Y3 MV2 Hubventil Sig.	Y3 MV2 liftvalve sig.
Y4 MV3 Palettenentriegelungsventil Sig.	Y4 MV3 pallet change valve
Y4 MV3 Palettenentriegelungsventil Sig.	Y4 MV3 pallet change valve
Y5 MV4 Reserve Sig.	Y5 MV4 reserve sig.
Y5 MV4 Reserve Sig.	Y5 MV4 reserve sig.
+24V	+24V
+24V	+24V
GND	GND
GND	GND

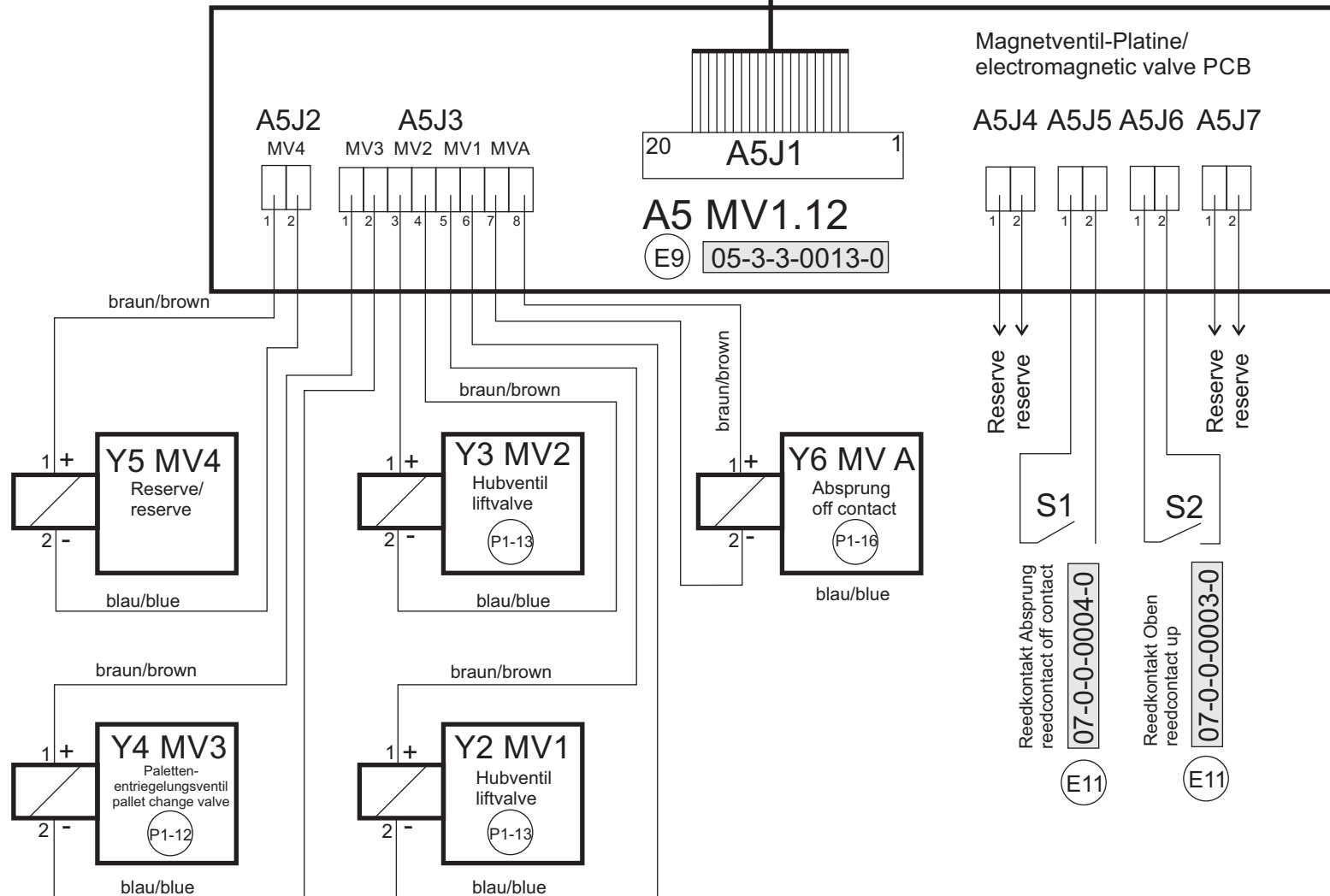
+24V contacts: A5J3 Pin8 / A5J6 Pin1 / A5J7 Pin1

GND contacts: A5J2 Pin2 / A5J3 Pin2 / A5J3 Pin4 / A5J3 Pin6 / A5J4 Pin2

A5 MV 1.12	A4 Servo 2.0	I/O1
A5J5 Pin1	A4J3 Pin1	I/O1X1 Pin9
A5J5 Pin2	A4J3 Pin2	I/O1X2 Pin6
A5J3 Pin 7	A4J3 Pin3	I/O1X2 Pin8
A5J6 Pin 2	A4J3 Pin4	I/O1X1 Pin12
A5J4 Pin1	A4J3 Pin5	I/O1X1 Pin2
A5J7 Pin2	A4J3 Pin6	I/O1X1 Pin10
A5J4 Pin2	A4J3 Pin7	
A5J6 Pin 1	A4J3 Pin8	
A5J3 Pin5	A4J3 Pin9	
A5J3 Pin5	A4J3 Pin10	I/O1X1 Pin7
A5J3 Pin3	A4J3 Pin11	
A5J3 Pin3	A4J3 Pin12	I/O1X1 Pin5
A5J3 Pin1	A4J3 Pin13	
A5J3 Pin1	A4J3 Pin14	I/O1X1 Pin3
A5J2 Pin1	A4J3 Pin15	
A5J2 Pin1	A4J3 Pin16	I/O1X1 Pin1
A5J7 Pin1	A4J3 Pin17	
A5J3 Pin 8	A4J3 Pin18	
	A4J3 Pin19	
	A4J3 Pin20	

A4J3 Servo
Seite/ page 10

20



Beschreibung	description
S4/S5/S6 NOTAUS P2 S3 Skip-Taster Sig. S3 Skip-Taster + B6 Textilsensor Sig. B6 Textilsensor +	S4/S5/S6 emergency stop P2 S3 skip-button sig. S3 skip-button + B6 textile sensor Sig. B6 textile sensor +
S4/S5/S6 NOTAUS P1 B6 Textilsensor - +24V Touch GND Touch	S4/S5/S6 emergency stop P1 B6 textile sensor - +24V touch GND touch
S11 Hauptschalter Steuerung P4	S11 main switch controller P4
S11 Hauptschalter Steuerung P5 S11 Hauptschalter Steuerung Sig. S11 Hauptschalter Steuerung + +24V S11 Hauptschalter Steuerung - GND	S11 main switch controller P5 S11 main switch controller Sig. S11 main switch controller + +24V S11 main switch controller - GND

A6 Front 2.0
A6J7 Pin 2 — A6J1 Pin 1
A6J8 Pin 5 — A6J1 Pin 2
A6J8 Pin 4 — A6J1 Pin 3
A6J8 Pin 2 — A6J1 Pin 4
A6J8 Pin 1 — A6J1 Pin 5
A6J5 Pin 1 — A6J1 Pin 6
A6J8 Pin 3 — A6J1 Pin 8
A6J4 Pin 1 — A6J1 Pin 9
A6J4 Pin 2 — A6J1 Pin 10
A6J3 Pin 4 — A6J1 Pin 11
A6J3 Pin 4 — A6J1 Pin 12
A6J3 Pin 4 — A6J1 Pin 13
A6J3 Pin 4 — A6J1 Pin 14
A6J3 Pin 5 — A6J1 Pin 15
A6J3 Pin 3 — A6J1 Pin 16
A6J3 Pin 2/ — A6J1 Pin 17
A6J2 Pin 1 — A6J1 Pin 18
A6J3 Pin 1/ — A6J1 Pin 19
A6J2 Pin 2 — A6J1 Pin 20

A4 Servo 2.0
A4J4 Pin 1
A4J4 Pin 2 — A4J2 Pin 8
A4J4 Pin 3
A4J4 Pin 4 — A4J2 Pin 8
A4J4 Pin 5
A4J4 Pin 6
A4J4 Pin 7
A4J4 Pin 8
A4J4 Pin 9
A4J4 Pin 10
A4J4 Pin 11
A4J4 Pin 12
A4J4 Pin 13
A4J4 Pin 14
A4J4 Pin 15
A4J4 Pin 16 — A4J1 Pin 12
A4J4 Pin 17
A4J4 Pin 18
A4J4 Pin 19
A4J4 Pin 20

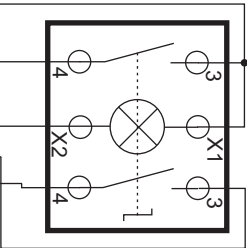
I/O1
I/O1X1 Pin8 IN 4
I/O1X1 Pin8 IN 4
I/O1X2 Pin12 IN 14

S11 Hauptschalter Steuerung

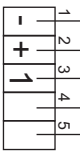
main switch controller

E2

07-0-0-0012-0



weiss/white
braun/brown
grau/grey
gelb/yellow
grün/green



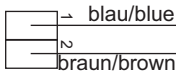
A6J3

24 V Versorgung Touch
24 V power supply touch
Seite / page 19

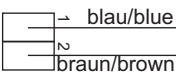
braun/brown
blau/blue



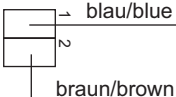
A6J4



A6J5



A6J6



A6J7

NOTAUS Links Mikroschalter
emergency stop left microswitch
07-0-0-0020-0

E6

NOTAUS Rechts Mikroschalter
emergency stop right microswitch
07-0-0-0020-0

E6

NOTAUS Schalter
emergency stop button
90-0-0-9043-0

E3



S6

S4

S5

A6 Front 2.0

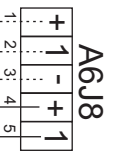
E5

20-0-0-0434-0

A6J2
+ - 24V
Reserve



A6J1



A6J8

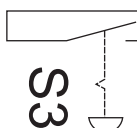
blau/blue
braun/brown

A4J4 Servo
Seite/ page 10

S3 Skip-Taster
skip-button

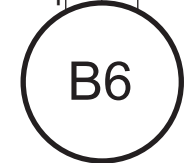
20-0-0-0394-0

Textilsensor
textile sensor
Seite/ page 15



A6 Front A6J8
Seite/ page 14
oder/ or
A4 Servo 2.0
Seite/ page 10

A4J10/1 A6J3/1
A4J10/2 A6J3/2
A4J10/3 A6J3/3

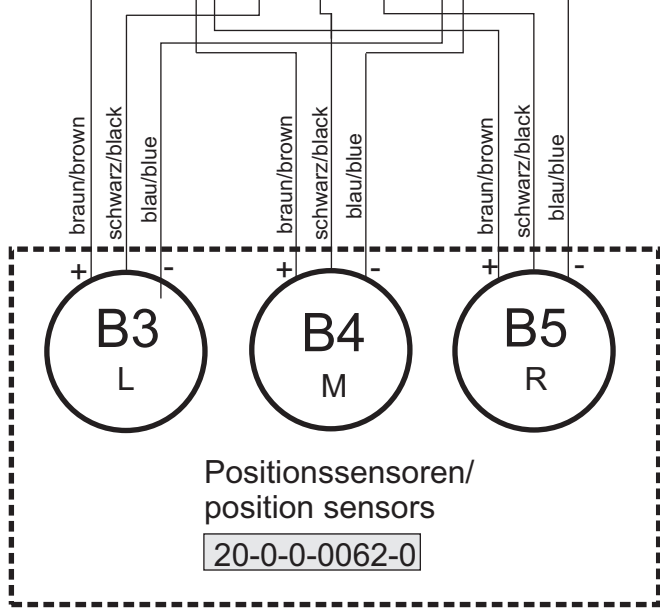
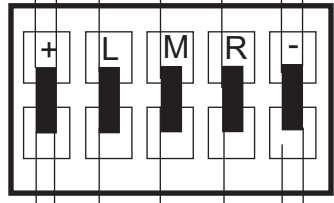


Textilsensor
textile sensor
10-0-0-0436-0

A4 Servo 2.0
Seite/ page 10

A4J9/1
A4J9/3
A4J9/4
A4J9/5
A4J9/2

X5
20-0-0-0438-0



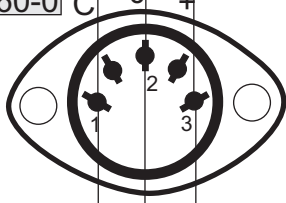
Positionssensoren/
position sensors
20-0-0-0062-0

A4 Servo 2.0
Seite/ page 10

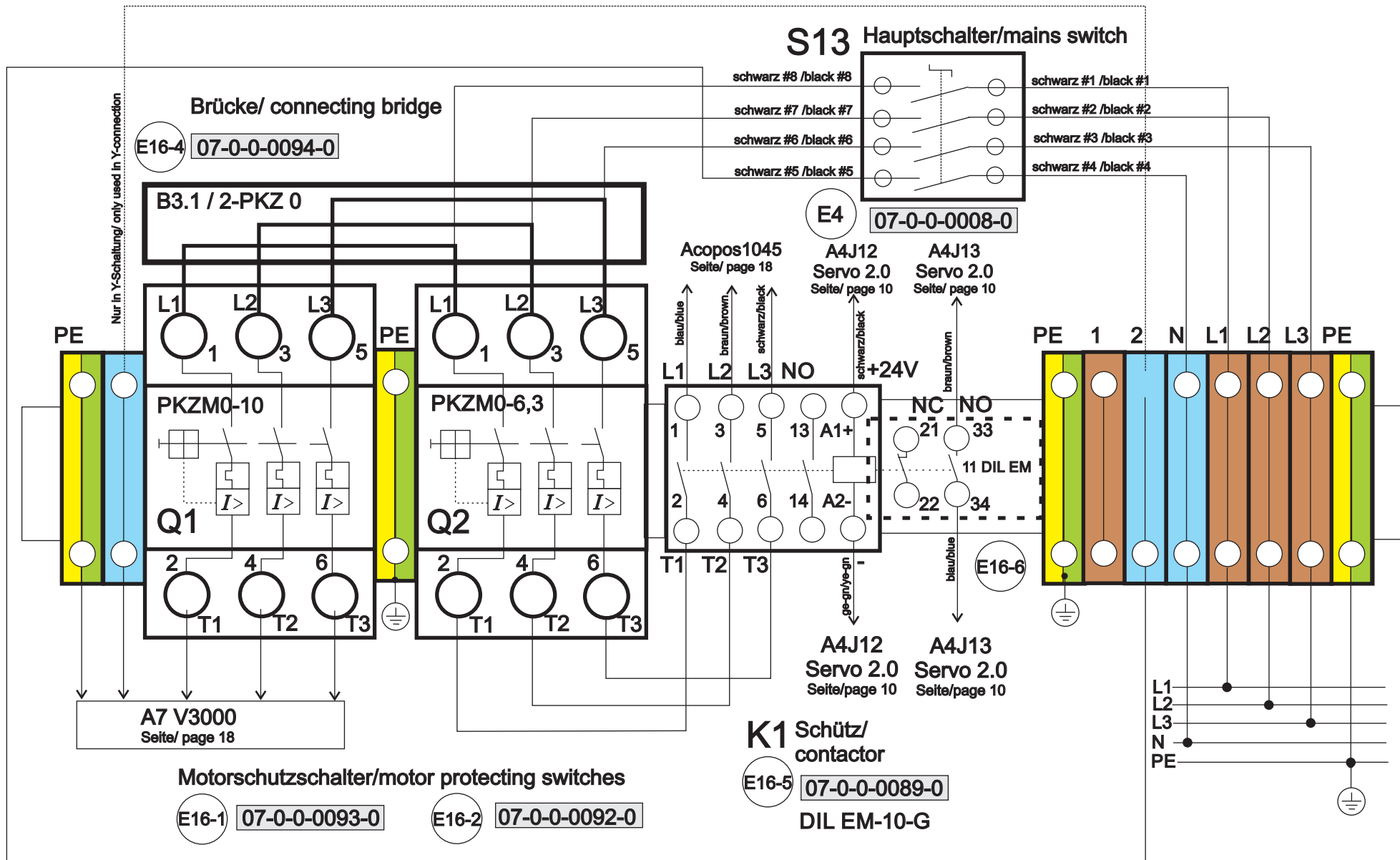
A4J8/1
A4J8/2
A4J8/3

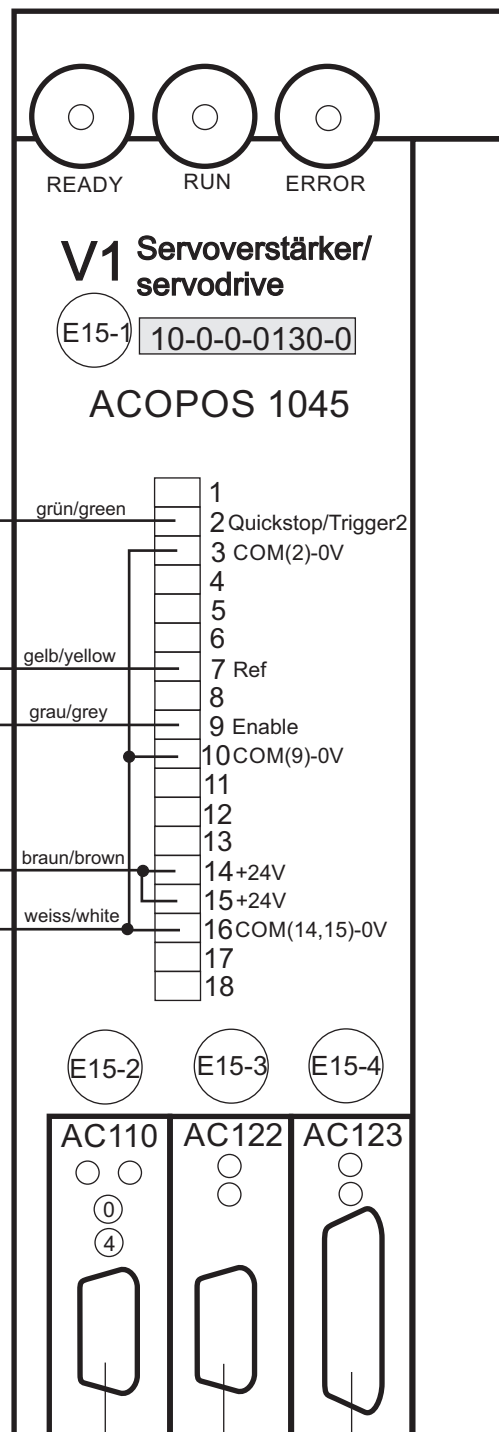
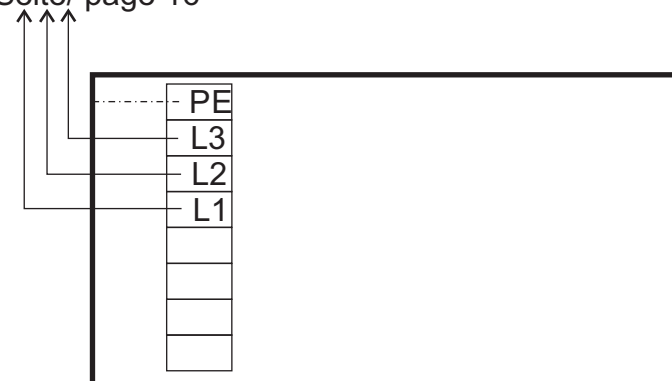
X4

07-0-0-0160-0



S12
Fusstaster/
foot switch
20-0-0-9005-0



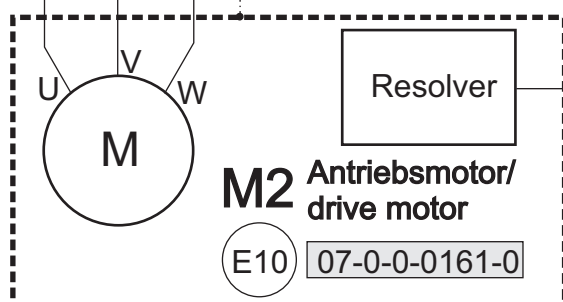
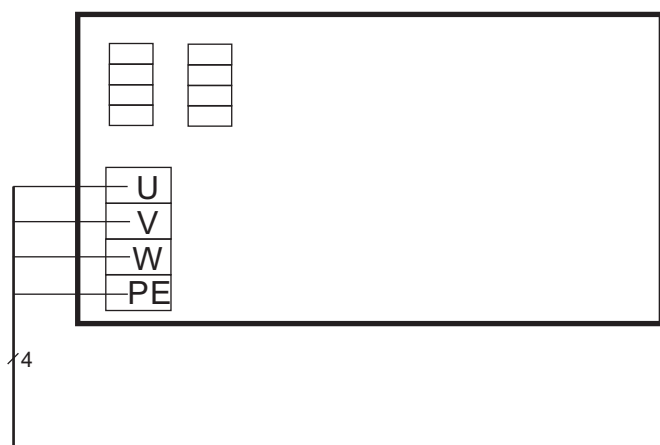


A4 Servo2.0
A4J5/5 SS
Seite/ page 10

E15-9

A4 Servo2.0
A4J5/4 ST
Seite/ page 10
A4 Servo2.0
A4J5/3 FG
Seite/ Page 10

A4 Servo2.0
A4J5/1 +
Seite/ page 10
A4 Servo2.0
A4J5/2 -
Seite/ page 10



A4 Servo2.0
A4/BUS 3
Seite/ page 10

CAN
↓
Resolver

B6 Drehgeber/
encoder

E7 20-0-0-0128-0

— $\triangle$ -Schaltung/ $\triangle$ -Schaltung/
— Y-Schaltung/ Y-Connection

L1,L2,L3 → PMZM0-10 Seite/ page 16

L1,L2,L3,N → PMZM0-10 Seite/ page 16

Bei Y-Schaltung: 2A träge/ at Y-Connection: 2A Type T
 Bei $\triangle$ -Schaltung: 4A träge/ at $\triangle$ -Connection: 4A Type T

