

Circuit diagram 222

Computer type OKC3, ID: 257 280.01

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STOLL
THE RIGHT WAY TO KNIT

CMS	502/502HP	520HP	530HP	520C									
Type	626 637 638	620 628	621 627	629									
Circuit diagram 222	X	X	X	X									

ELECTRICAL DATA OF CMS MACHINES

Mains voltage Three phase current 400V
 ±10% 50/60 Hz
No. of phases: : 3
Rated current F0 : 7 A
Main fuse (of customer): 16 A slow-blow

When the Main Voltage is different to 400V connect the machine over a series transformer. The protective motor switch in the main switch must be set appropriately.

Mains connection:

Caution ! Before connecting check for the mains voltage which is at the operating place of the machine.

When connecting the machine, pay attention to the clockwise phase sequence.

The connection of external electrical and electronical assemblies to the internal wiring of the machine is generally not allowed.

A guarantee for a faultless function of the machine cannot be ensured in those cases.

When operating the machine via a generator take care that the requirement to the mains voltage is carried out according to EN 60204-1 paragr. 4.3.

Supply voltage	Rated current F0
440 V	10.0 A
420 V	10.0 A
400 V	7,0 A
380 V	8,0 A
360 V	8,0 A
340 V	9,0 A
240 V	10,0 A
220 V	10,0 A
200 V	10,0 A

Seite	Seitenbenennung	Seitenzusatzfeld	Datum	Bearbeiter	X
1	cover page		27. Mär. 2009	KEX	
2	contents		27. Mär. 2009	KEX	x
3	contents		27. Mär. 2009	KEX	
4	code The connector, actuator and sensors		27. Mär. 2009	KEX	
5	caption		27. Mär. 2009	KEX	
6	caption		27. Mär. 2009	KEX	
7	caption		27. Mär. 2009	KEX	
8	caption		27. Mär. 2009	KEX	
9	block diagram transformer		27. Mär. 2009	KEH	
10	block diagram control unit		27. Mär. 2009	KEH	
11	block diagram control unit		27. Mär. 2009	KEH	
12	block diagram servo drive and racking		27. Mär. 2009	KEH	
13	block diagram main take down and comb		27. Mär. 2009	KEH	
14	connector definition wiring system		27. Mär. 2009	KEH	
15	connector definition connectors external		27. Mär. 2009	KEH	
16	supply		27. Mär. 2009	KEH	
17	transformer		27. Mär. 2009	KEH	
18	power supply		27. Mär. 2009	KEH	
19	CAN-BUS		27. Mär. 2009	KEH	
20	lighting fluff elemination central lubrication		27. Mär. 2009	KEH	
21	servo drive and racking		27. Mär. 2009	KEH	
22	inputs servo HA+V		27. Mär. 2009	KEH	
23	outputs servo HA+V		27. Mär. 2009	KEH	
24	posifeed		27. Mär. 2009	KEH	
25	Take down and comb		27. Mär. 2009	KEH	
26	signals Take down XR62		27. Mär. 2009	KEH	
27	signal comb XR63		27. Mär. 2009	KEH	
27.1	signal auxiliary take down open XR64		27. Mär. 2009	KEH	
28	signal Take down open XR65		27. Mär. 2009	KEH	
29	signals auxiliary take down XR66		27. Mär. 2009	KEH	

Identification of the plug connectors, actuators and sensors

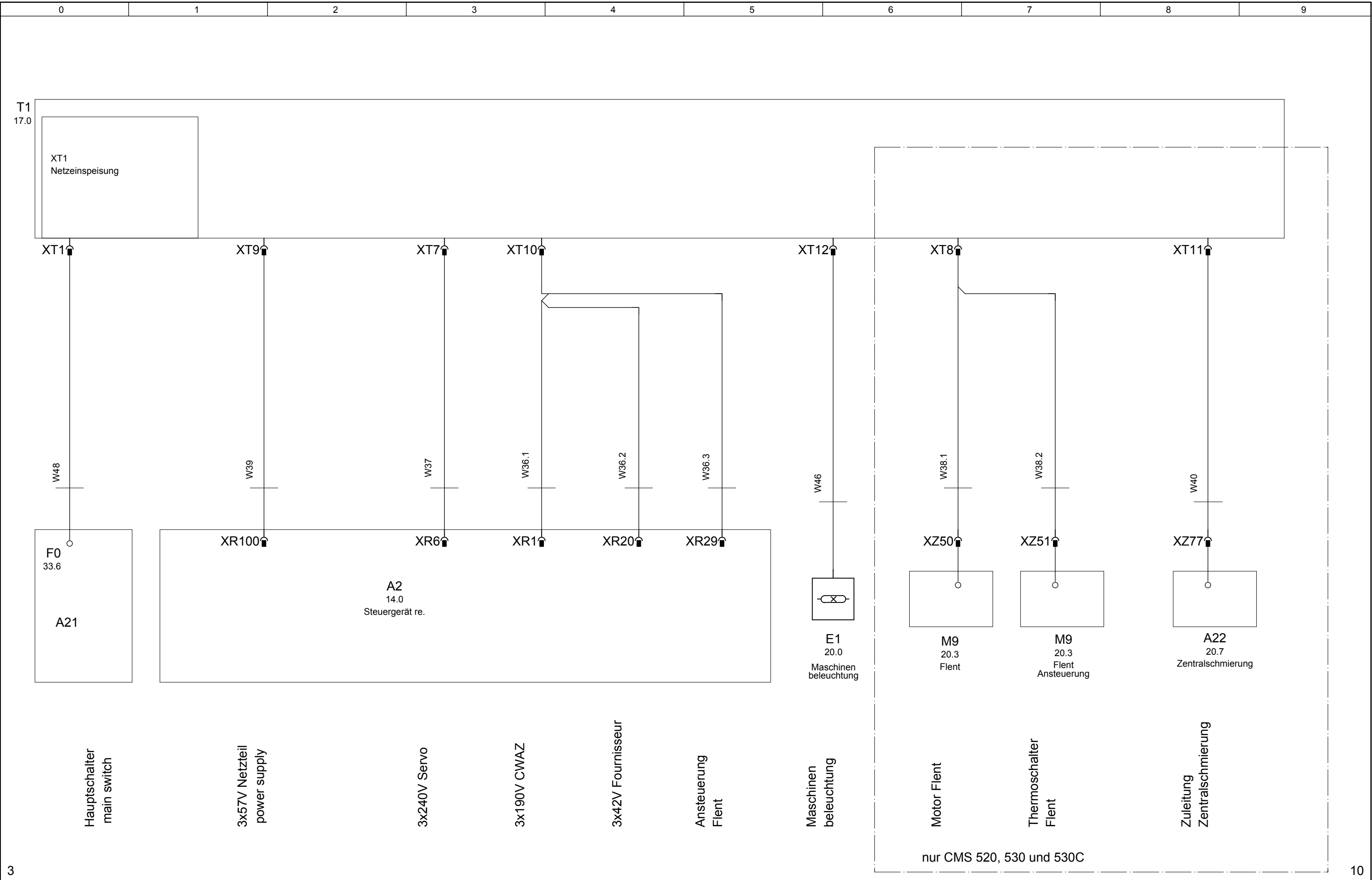
A__	Assemblies
B	Switch
E__	Lighting; Fan
F__	Fuses
J__	The card plug connector of the wiring system stands for the last three numbers of the respective Ident. number (example: Id.301 007 → J007)
K__	Relays
M__	Motors
P__	Signal equipment
Q__	Brakes, magnets
T__	Transformers
W__	cable
V__	Interference suppressors
XR__	Plug connectors on the wiring systems in the left control unit (cable outlets)
XT__	Plug connectors on the transformer
XZ__	Plug connectors on the consumer or switch gear

Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
A6	A6	Battery plug-in unit		301008	301008
A7	A7	Card engaging		240 167	240 167
8A	8A	Magnet switch Needle bed covers on the outside		219 983	219 983
A10	A10	Yarn control device		237 124	237 124
A11	A11	Impulse giver main take-down / comb		300 744	300 744
A12	A12	Impulse sensor Auxiliary take-down		----	217 462
A14	A14	Magnet switch needle bed covers in the middle		251066	220 159
A15	A15	Racking – limit switch board		229396	229 396
A21	A21	Main switch		250363	250363
A22	A22	Central oil lubricating pump	Partly optional	----	235 068
A23re	A23re	Length measuring device right	optional	257282	257282
A23li	A23li	Length measuring device left	optional	257283	257283
A24	A24	Shock stop motion (Piezo)		220 011	220 011
A25	A25	Shock stop motion (Piezo) additional bed		----	----
A26	A26	Slack tensioner left		---	241345
A27	A27	Slack tensioner right		241346	241346
B S1	S 1	End switch drive on the left		223 333	223 333
B S2	S 2	End switch drive on the right		223 333	223 333
B 4.1	S 4.1	Limit switch racking	in group A15	x	x
B 5.1	S 5.1	Cover switch	in group 8A	x	x
B 5.2	S 5.2	Cover switch	in group 8A	x	x
B 6.1	S 6.1	Cover switch	in group 8A	x	x
B 6.2	S 6.2	Cover switch	in group 8A	x	x
B10	S 10	Switch Safety door on the right		223 350	223 350
B12	S 12	Switch Safety door on the left		223 350	223 350
B S13	S 13	Switch fabric sensor 1		----	----
B S14	S 14	Switch take-down closed		026 259	026 259
B15li	S 15 li	Left yarn tensioner	in group A26	----	x
B15re	S 15 re	Right yarn tensioner	in group A27	x	x
B S16	S 16	Microswitch Winding plate		026 259	026 259
B S16a	S 16a	Microswitch front winding plate		222 063	222 063
B20	S 20	Comb reference at the top		231516	231516
B21	S 21	Comb reference at the bottom		231520	231520
B22	S 22	Comb light barrier		243 355	243 355
B S23	S 23	Switch Cover plate Comb		026 259	026 259
B S24	S 24	Switch comb hook		026 259	026 259
B 27	S 27	Float switch central lubrication	in group A22	----	x
B 28	S 28	Oil pressure switch central lubrication	in group A22	----	x
B S30	S 30	Switch auxiliary take-down open		----	026 259
B31	S 31	Thermoswitch Fluff disposal turbine	in M 9	----	x
B32	S 32	Switch winding plate feed wheel		008 529	008 529
B33.1	S33.1	Switch of central cover	in group A14	x	x
B33.2	S33.2	Switch of central cover	in group A14	x	x
B34.1	S34.1	Switch of central cover	in group A14	x	x
B34.2	S34.2	Switch of central cover	in group A14	x	x
B38	S38	Rear racking reference sensor	in group A15	x	x
B41li	S41li	Thermoswitch feed wheel left	in M 7	----	x
B41re	S41re	Thermoswitch feed wheel right	in M 7	x	x
B48	S48	Release signalling switch of main switch	in group A21	236 065	236 065
B S49	S49	Comb safety door pushed		026 259	026 259
E1	E1	Machine lighting at the top		205 546	205 546
E3	LV 1	Fan Drive motor		254 872	254 872

Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
E4	LV 2	Ventilator control unit on the right (servo)	in group A2	229 059	229 059
E5	LV 4	Fan power supply unit	in group 1a	239 305	239 305
F0	Q1	Protective motor switch	in group A21	235 115	235 115
F 1	F 1	Fabric take-down (WAZ)	3.15A, slow- blowing / 440V	025 261	025 261
F 2	F 2	Fabric take-down (WAZ)	3.15A, slow- blowing / 440V	025 261	025 261
F 3	F 3	Fabric take-down (WAZ)	3.15A, slow- blowing / 440V	025 261	025 261
F 4	F 4	Feed wheel	6,3AT / 440V	026809	026809
F 5	F 5	Feed wheel	6,3AT / 440V	026809	026809
F 6	F 6	Feed wheel	6,3AT / 440V	026809	026809
F 8	F 8	Servo	6,3AT / 440V 8AT / 440V	026 809 ---	--- 241866
F 9	F 9	Servo	6,3AT / 440V 8AT / 440V	026 809 ---	--- 241866
F10	F10	Servo	6,3AT / 440V 8AT / 440V	026 809 ---	--- 241866
F11	F11	Power supply unit	6,3AT / 440V	026 809	026 809
F12	F12	Power supply unit	6,3AT / 440V	026 809	026 809
F13	F13	Power supply unit	6,3AT / 440V	026 809	026 809
F16	F16	Lighting	3.15A, slow- blowing / 440V	025 261	025 261
F17	F17	Lighting	3.15A, slow- blowing / 440V	025 261	025 261
F18	F18	Central lubrication	2,5AT / 440V		217 465
F20	F20	Fluff disposal (FLENT)	2,5AT / 440V	----	217 465
F21	F21	Fluff disposal (FLENT)	2,5AT / 440V	----	217 465
F22	F22	Fluff disposal (FLENT)	2,5AT / 440V	----	217 465
F Si1	Si 1	28V protected (switch)	1,0 AF	008 748	008 748
F Si2	Si 2	28V Length measuring device	1,0 AF	008 748	008 748
F Si3	Si 3	Fuse of yarn control unit	1,0 AF	008 748	008 748
F Si4	Si 4	Battery charge	1,0 AF	008 748	008 748
F Si5	Si 5	Ballast servo (on relay card J953)	1,6 AT / 440V	236 229	236 229
F Si6	Si 6	Fuse of battery plug-in unit	6,3AT	026 809	026 809
P1	H1	Signal light complete		240395	240395
P2	H2	Signal light green	in group P1	x	x
P2.1	P2	Signal light yellow	in group P1	x	x
P3	H3	Signal transmitter (horn)	in group P1	x	x
K15A	K15A	Relay Flent	in group T1	----	221 275
K16A	K16A	Relay central lubrication	in group A22	----	x
K99A	K99A	Relay Battery Plug-in unit	in group J007	x	x
K3M	K3M	Relay feed wheel on the right	in group J007	x	x
K4M	K4M	Relay feed wheel on the left	in group J007	x	x
K7M	K7M	Relay lighting	in group T1	221 275	221 275
M 1	M 1	Drive motor		240 740	240 740
M 2	M 2	Racking motor at the rear		241 454	241 454
M 3	M 3	Take-down motor		214 279	214 279
M 4	M 4	Comb motor		214 279	214 279
M 5	M 5	Auxiliary take-down motor		213871 (opt)	213 871

Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
M 6	M 6	Comb hook motor		213 872	213 872
M 7	M 7	Friction feed wheels		219 800	219 800
M 9	M 9	Suction turbine (FLENT)		----	221 172
M 14	M 14	Central lubrication of motor pump	in group A22	----	x
Q1	1Y	Magnet Machine off	in group A21	235 116	235 116
Q2	Y4	Magnet Engaging rod		026 233	026 233
Q5	Y5	Brake motor take-down	in motor M3	x	x
Q6	Y6	Brake motor comb	in motor M4	x	x
Q7	Y7	Magnet take-down catch off	in motor M3	----	----
8q	Y8	Air valve		----	----
T1	T1	Main transformer		250263	253 299
T2	T2	Series transformer		300 445	300 445
T3	T3	Trafo SFE -Feed wheels	optional		x
W 1	W 1	Cable Drive motor		240 295	240 295
W 2	W 2	Cable resolver drive		240 296	240 296
W 3	W 3	Cable Racking motor		240 297	240 297
W 4	W 4	Cable resolver racking		240 298	240 298
W 5	W 5	Cable racking motor rear additional bed /left		----	----
W 6	W 6	Cable resolver racking rear / left additional bed		----	----
W 7	W 7	Cable racking motor front additional bed / right		----	----
W 8	W 8	Cable resolver racking additional bed front / right		----	----
W 9	W 9	Cable of fabric take-down motor		240 291	240 291
W10	W10	Cable Pressure roller motor		----	----
W11	W11	Cable comb motor		240 310	240 310
W12	W12	Cable auxiliary take-down motor		240 467	240 467
W13	W13	Cable comb hook motor		240 308	240 308
W14	W14	Cable Feed wheel on the left		240 464	240 464
W15	W15	Cable Feed wheel on the right		240 294	240 294
W16	W16	Cable CAN		----	----
W17	W17	Cable Electro		----	----
W18	W18	Cable open/close take-down motor		----	----
W19	W19	Open/close cable switch of main take-down		----	----
W20	W20	Cable switch main take-down		240 312	240 312
W22	W22	Cable limit switch racking		240 292	240 292
W23	W23	Rear / left cable limit switch racking additional needle bed		----	----
W24	W24	Front / right cable limit switch racking additional needle bed		----	----
W25	W25	Cable protective devices on the right		253441	253441
W26	W26	Cable Yarn tensioner , warning light , horn		252587	252587
W27	W27	Cable piezo sensor		240 518	240 518
W28	W28	Cable switch comb		240 311	240 311
W29	W29	Cable impulse sensor auxiliary take-down		240 468	240 468
W30	W30	Cable Engaging rod		252538	252538
W31	W31	Cable length measuring device	optional	236 718	236 718
W32	W32	Cable Clamping and cutting drive on the right		----	----
W33	W33	Cable Clamping and cutting drive on the right		----	----
W34	W34	Cable Clamp./Cutting sensors		----	----
W35	W35	Cable connection lights		----	----
W36	W36	Cable power supply fabric take-down / feed wheel		240 469	240 469
W37	W37	Cable power supply SERVO		240 502	240 502
W38	W38	Cable power supply FLENT (fluff disposal)		251231	251231
W39	W39	Cable power supply Power supply unit		240 505	240 505
W40	W40	Cable power supply central lubrication	Partly optional	----	254098

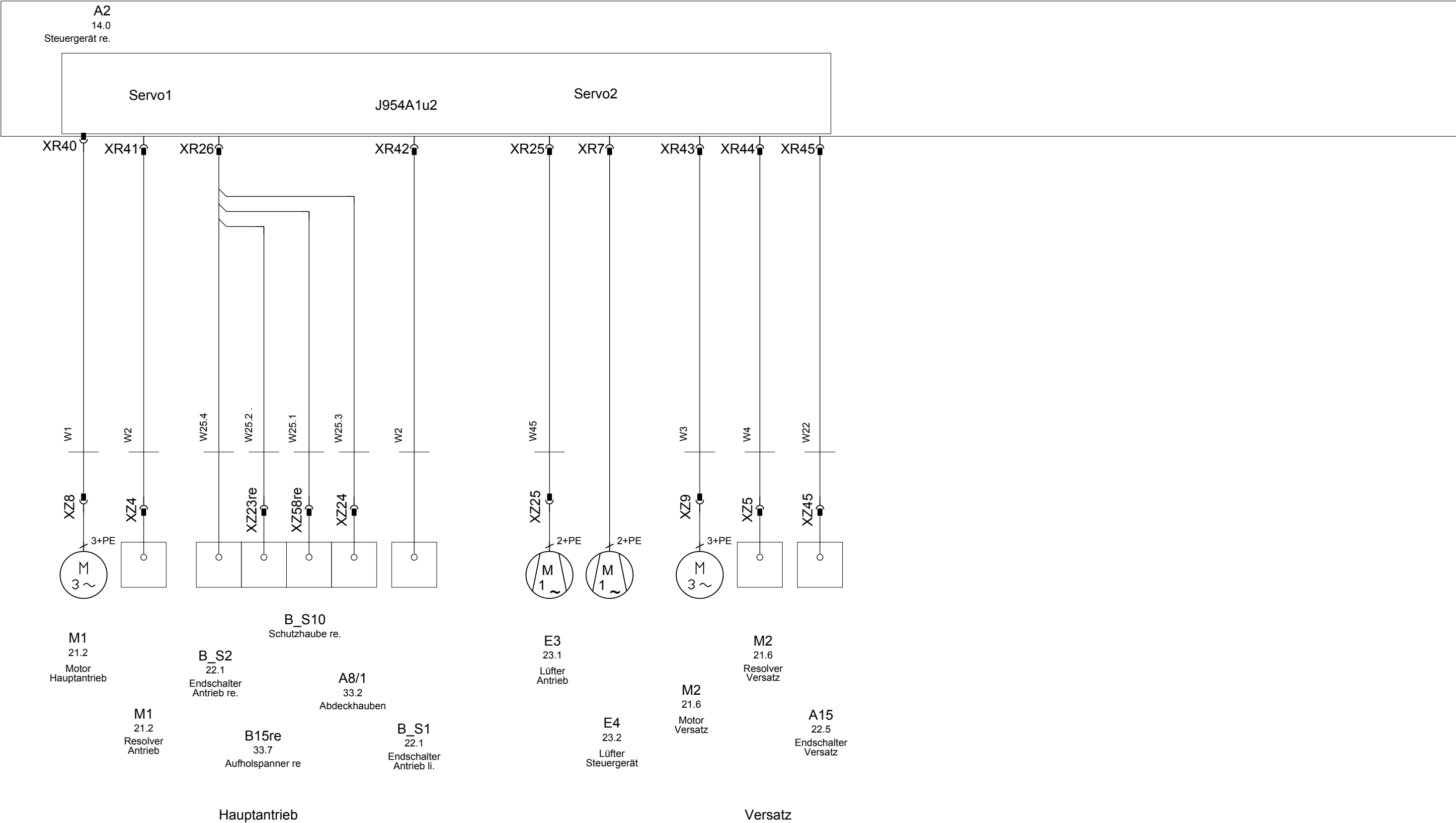
Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
W41	W41	Cable control central lubrication	Partly optional	----	254099
W42	W42	Cable switch pressure motor Auxiliary Take-down		240 472	240 472
W43	W43	Cable switch Cable switch Comb hook /fabric sensor		240 309	240 309
W44	W44	Cable signals main switch		240 517	240 517
W45	W45	Cable ventilator drive		240 293	240 293
W46	W46	Cable power supply Lighting		236 572	236 572
W47	W47	Cable protective devices on the left		253620	253620
W48	W48	Cable mains supply transformer		250364	250364
W49	W49	Cable mains supply yarn control device, signal light		239 749	239 749
W50	W50	Cable Display Color		235283	235283
W51	W51	Cable Display LVDS		242 421	242 421
W52	W52	Cable USB 1		253706	253706
W53	W53	Cable USB 2		253706	253706
W54	W54	Cable yarn guide system		----	----
W55	W55	Cable Piezo additional needle bed		----	----
W56	W56	Cable air valve	optional	----	----
V1	Z1	Power filter		219 133	219 133
V3	Z3	Motor interference suppressor Flent		----	008 641





9 11





0	1	2	3	4	5	6	7	8	9
A2 13.0 Verdrahtungssystem Rückseite									
J000_2=Servo J007_1=BIO E2 J006_2=CWAZ E2 J000_1=Servo J007_1=Bio E2 J006_1=CWAZ E2 J965 B=NCPU J943C=SM-Endstufen J943D=SM-Endstufen J010=IPC P8 J009=Power CPU J923_2=Netzteil J923_1=Netzteil XR1=Stromversorgung WAZ XR6=Stromversorgung Servo XR7=Lüfter_1_Steuergerät XR11=Fournisseur links XR12=Fournisseur rechts XR14=Motor Warenabzug XR15=Motor Kamm XR17=Motor Kammhaken XR20=Stromversorgung 42/24VAC XR25=Lüfter Hauptantriebsmotor XR26=Schutzeinrichtungen, Aufholspanner XR28=Signale Hauptschalter XR29=Ansteuerung Flent XR32=FLM_Power XR35=Motor Hilfsabzug XR40=Motor Achse1 XR41=Resolver Achse1 XR42=Endschalter Achse1 XR43=Motor Achse2 XR44=Resolver Achse2 XR45=Endschalter Achse2 XR62=Sensoren Hauptabzug XR63=Sensoren Kamm XR64=Hilfsabzug offen XR65=Sensoren Hauptabzug XR66=Sensoren Hilfsabzug XR67=Sensoren Kammhaken XR68=Zentralschmierung XR100=Netzteil Zuleitung 57V ~ XR107=Fadenlängenmessung XR113=Einrückstange XR121=Reserve XR130=FKE, Leuchte XR133=CAN XR136=Nadelimpulsgeber hinten XR137=Nadelimpulsgeber vorne XR151=Batterie XR152=Abstellungen, Endschalter li. XR154=Piezogeber Nadelbett vo. + hi. XR161=Fadenführer XR207=Tastatur/Display-Contr. BUS//> XR215=USB 1 XR216=USB 2 XR217=Display LVDS XR332=Schlitten hinten XR333=Schlitten Leistung vorne									
13 15									
Datum Bearb. KEH Gepr. 21.12.10 Änderung Datum Name Norm Urspr. Ers.f. Ers.d. Schaltplan 222 STOLL THE RIGHT WAY TO KNIT H.Stoll GmbH & Co. KG Steckerdefinitionen Verdrahtungssystem Id.Nr. 257 280 Ae.St.01 Bl. 14 35 Bl.									

Trafo

XT1=Zuleitung

XT7=Servo

XT8=Flent

XT9=Netzteil/Beleuchtung

XT10=Abzug/Kamm/Fournisseur

XT11=Zentralschmierung

XT12=Beleuchtung

Hauptschalter

X1=Netzanschluss Hauptschalter

X2=Zusatzklemmen Trafo

Sensoren / Aktoren extern

XZ4=Resolver Hauptantrieb

XZ5=Resolver Versatz

XZ6=Zwischenstecker FKE,Signalleuchte

XZ7=Einrücken

XZ8=Motor Hauptantrieb

XZ9=Motor Versatz

XZ11=Fournisseur links

XZ12=Fournisseur rechts

XZ14=Motor Abzug

XZ15=Motor Kamm

XZ16=Motor Hilfsabzug

XZ17=Motor Kammhaken

XZ18=Signalleuchte

XZ19=FKE

XZ20=Piezo NB vorne

XZ21=Piezo NB hinten

XZ23re=Aufholspanner rechts

XZ24=Abdeckhauben

XZ31=Impulsgeber Abzug

XZ32=Impulsgeber Kamm

XZ34=Bremse /Temperatur Kamm

XZ35=Bremse /Temperatur Abzug

XZ37=Position Kamm oben

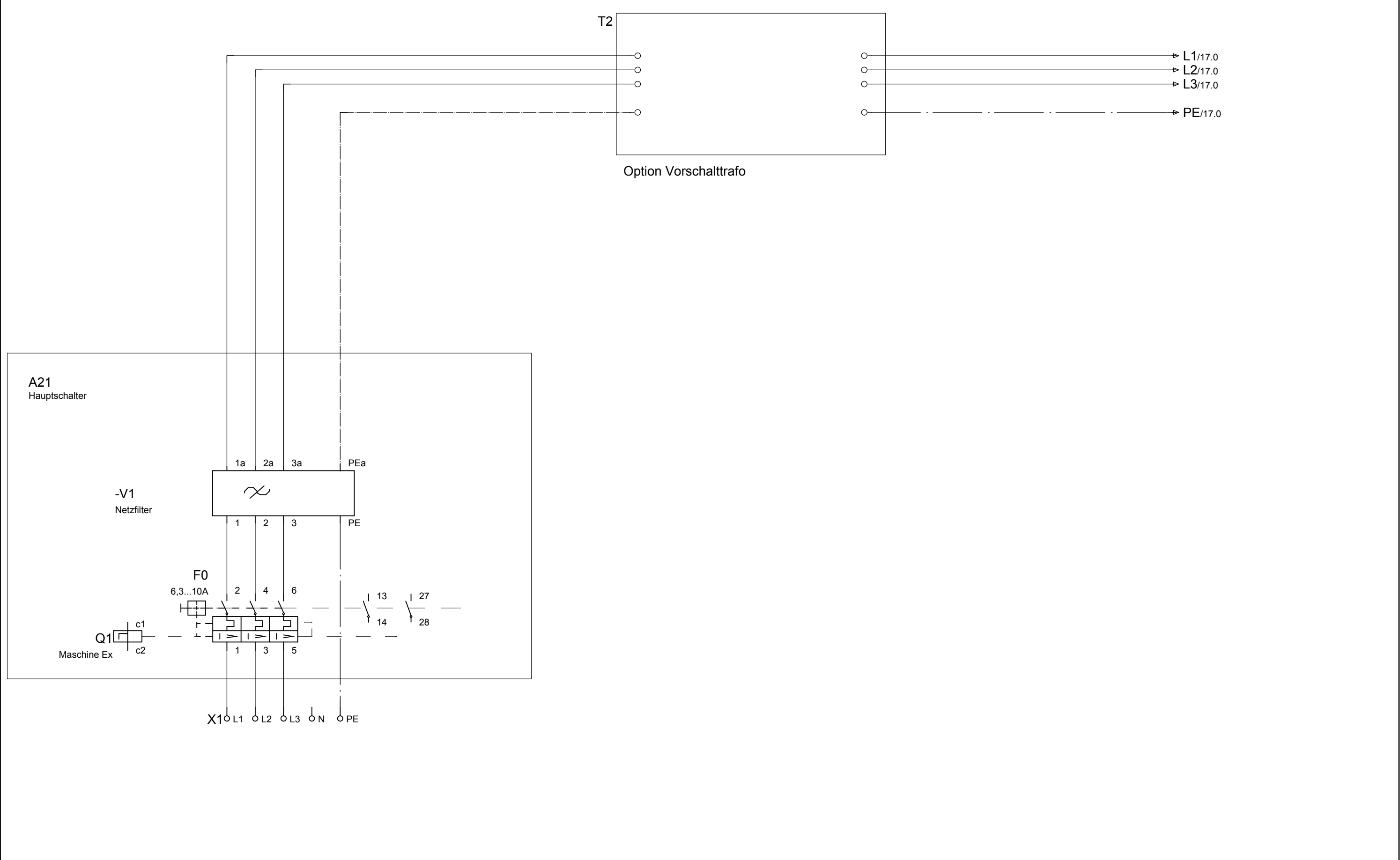
XZ38=Position Kamm unten

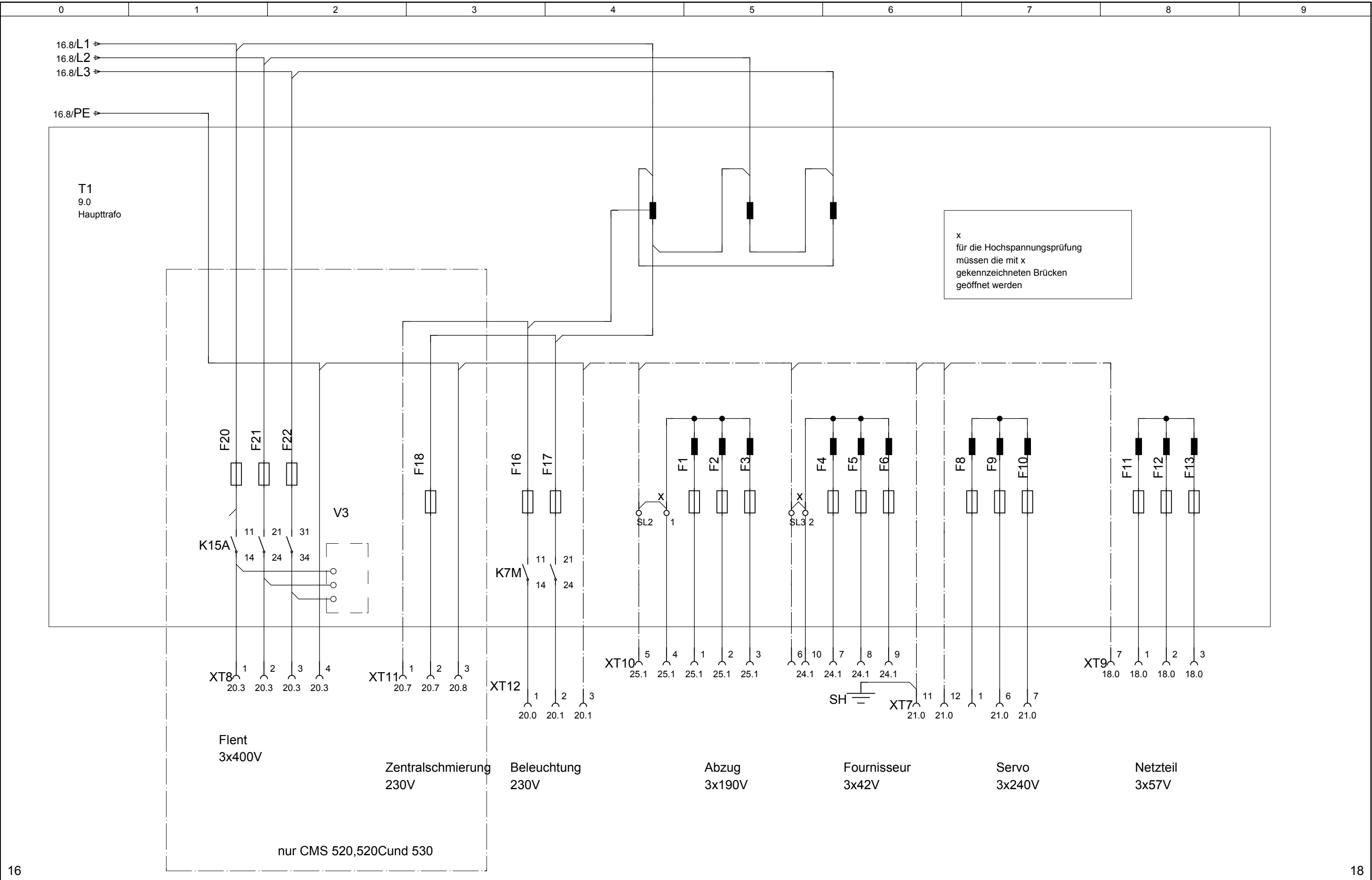
XZ39=Wickelblech Abzug hi.

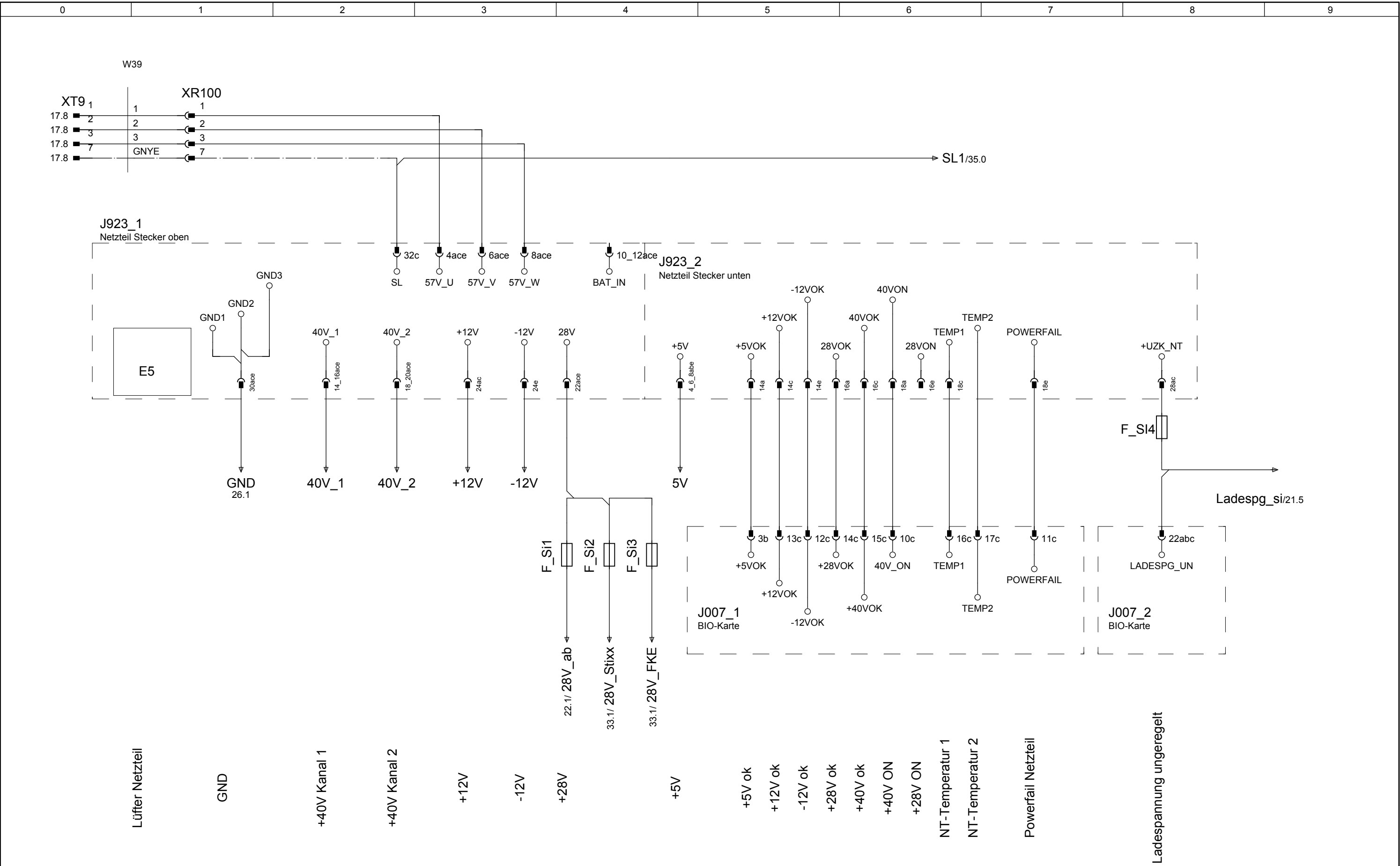
XZ58re=Schutzhaube rechts

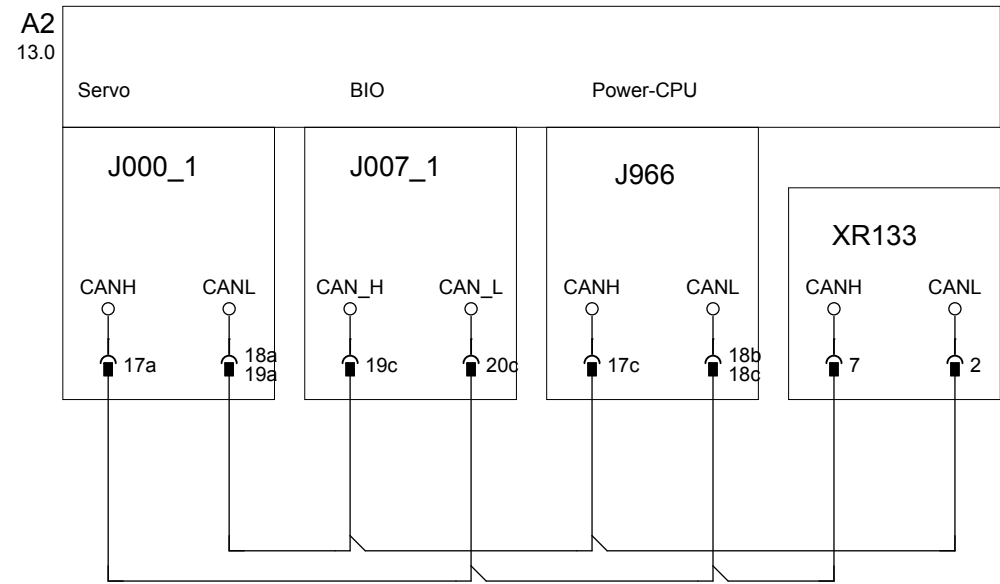
XZ59=Wickelblech Abzug vo.

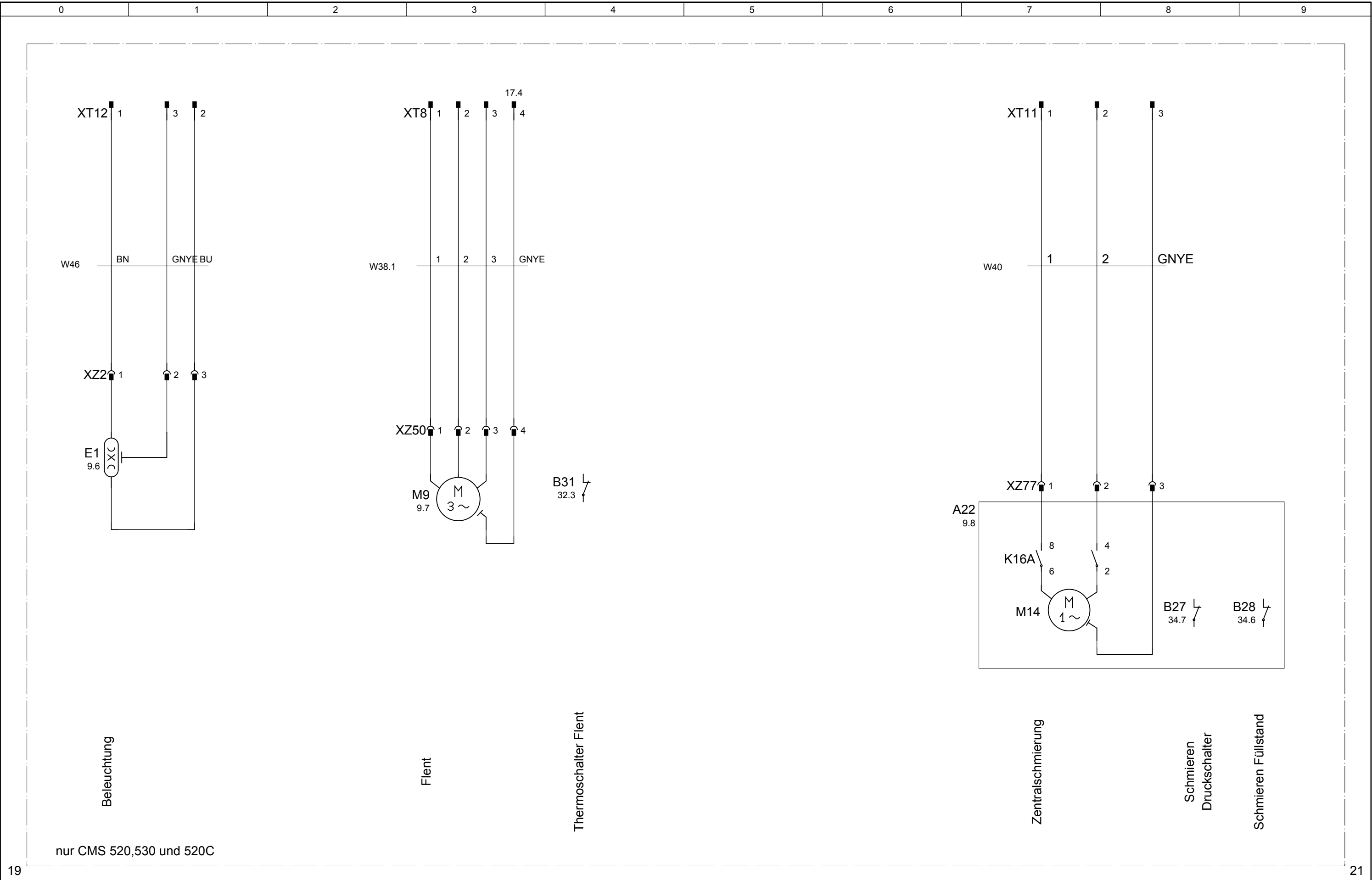
XZ45=Endschalter Versatz

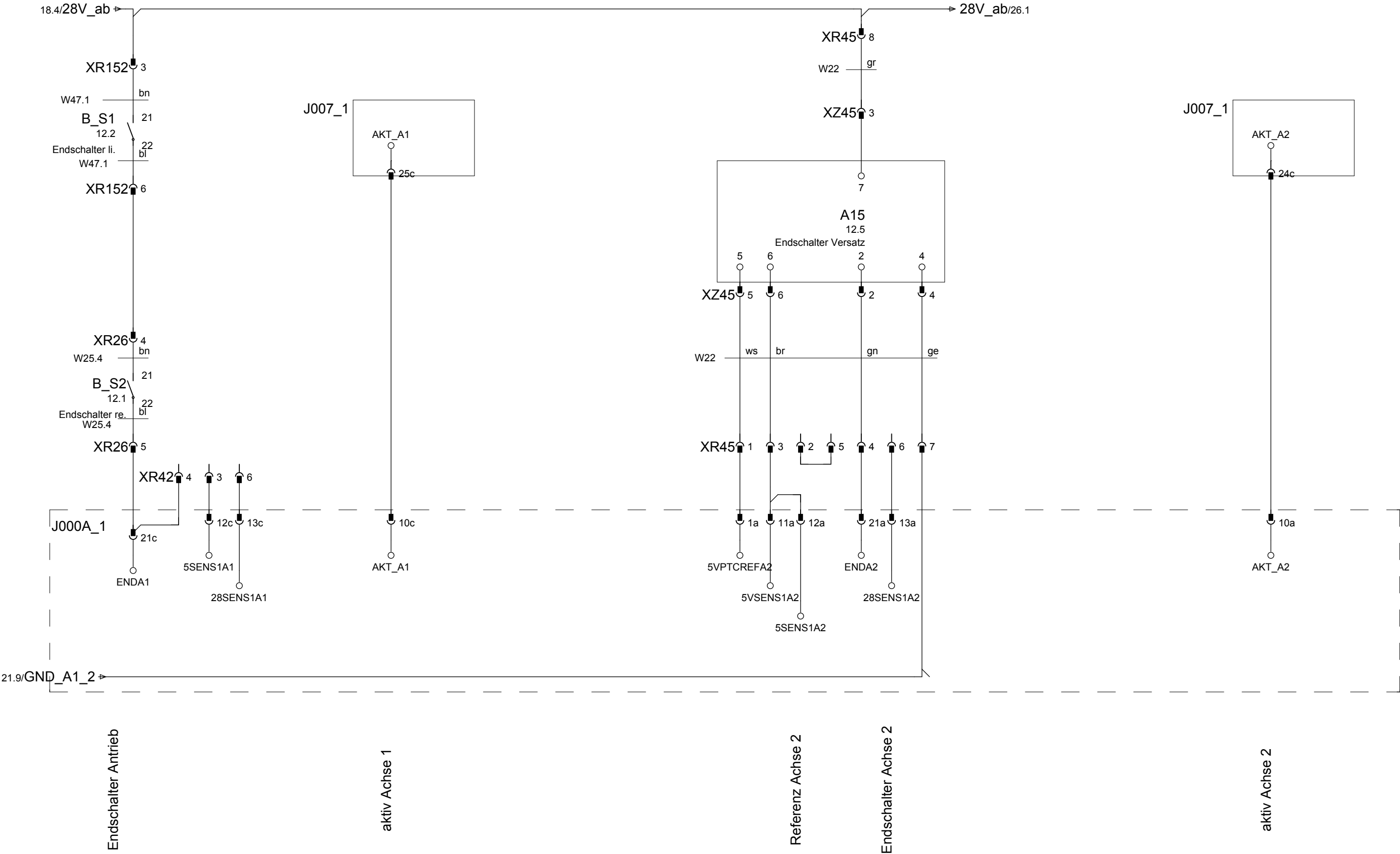


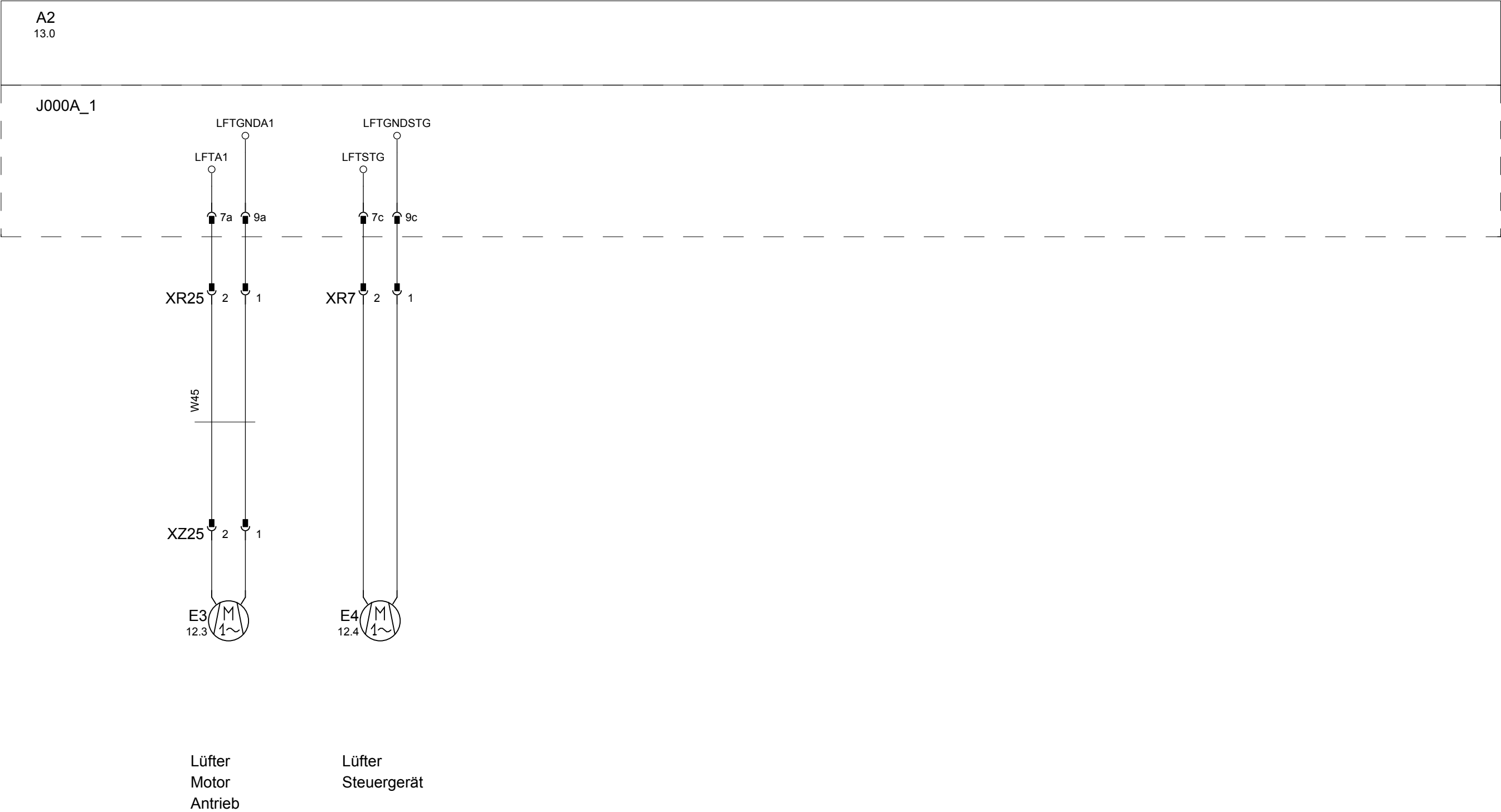


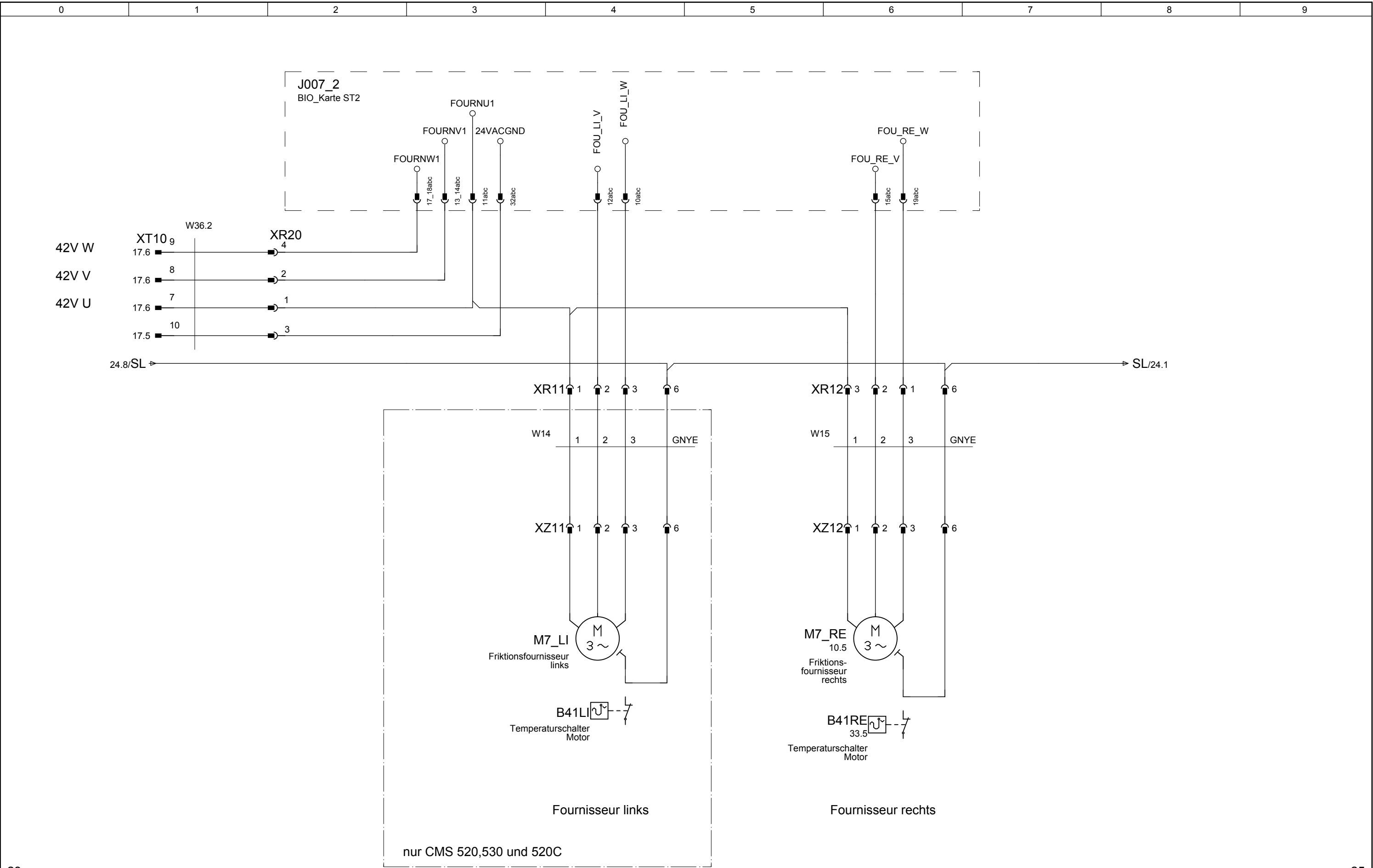




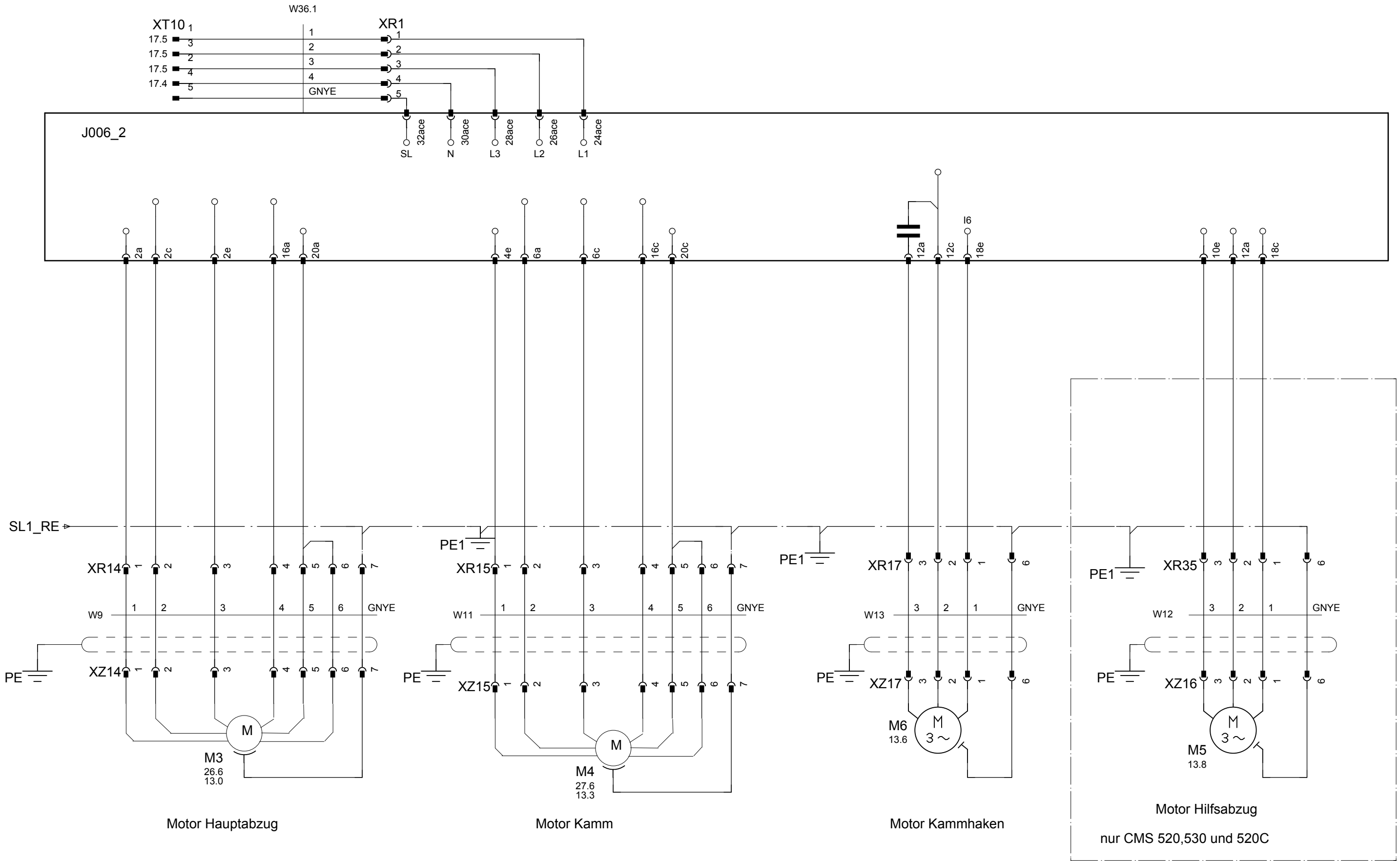


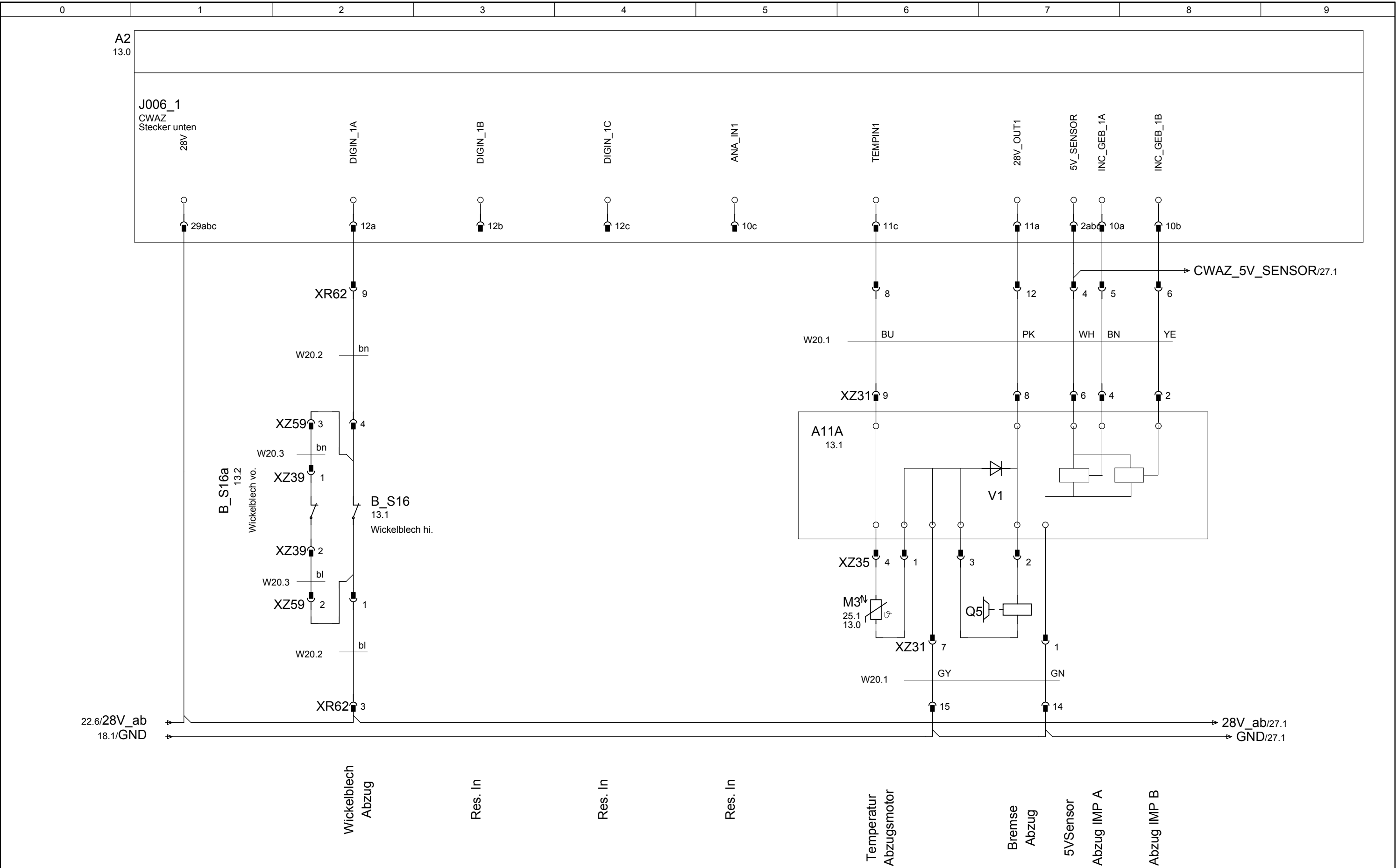


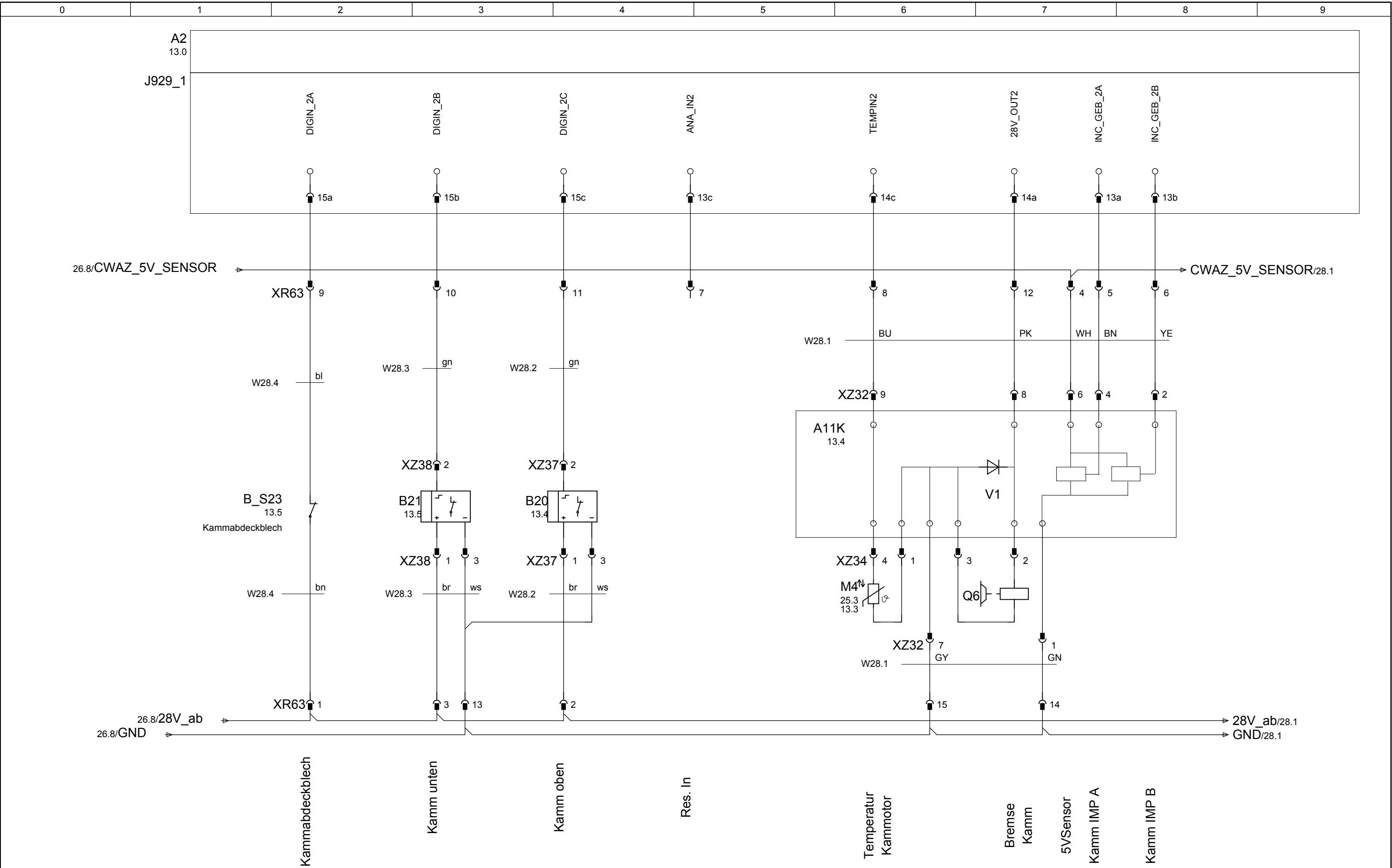


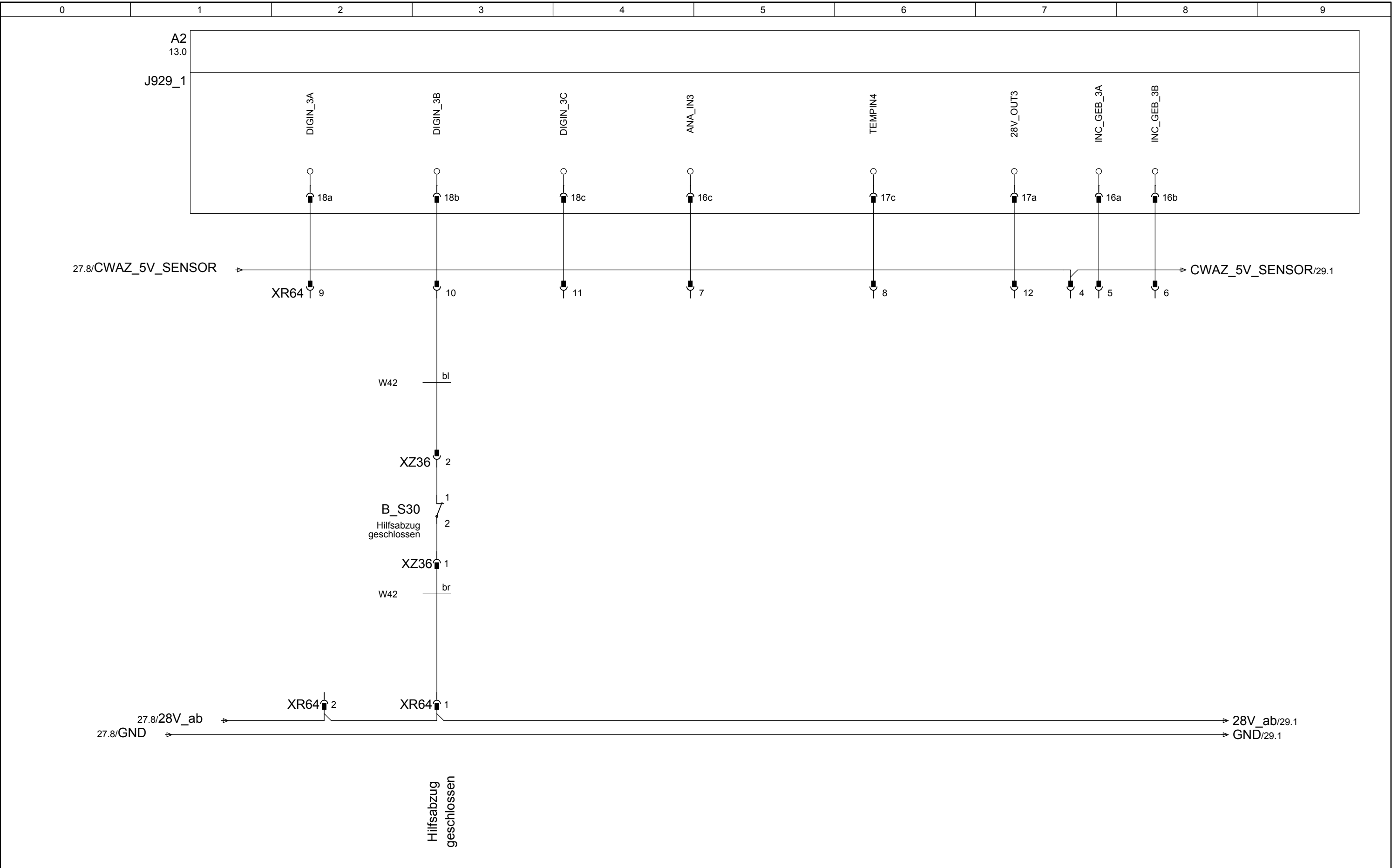


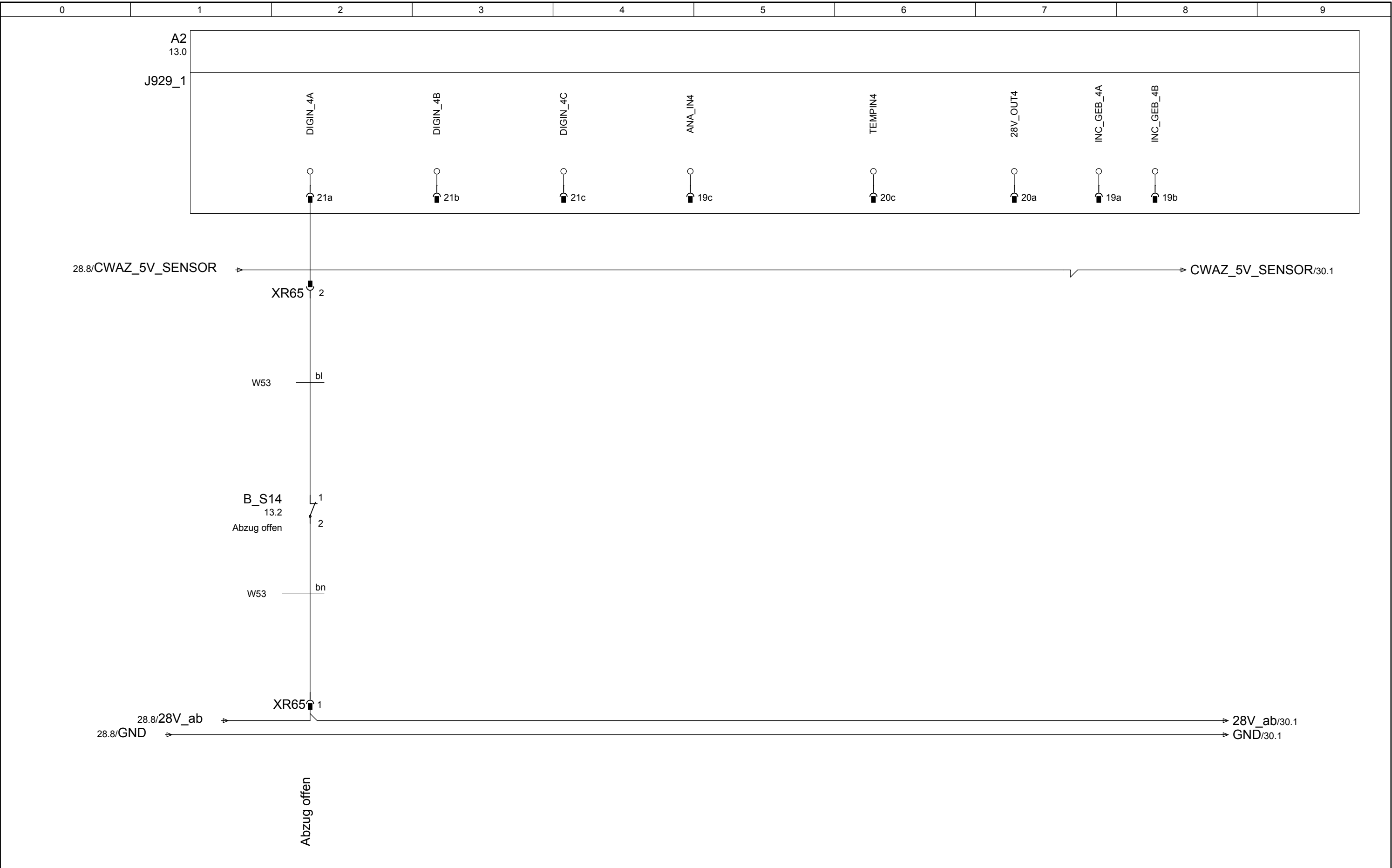
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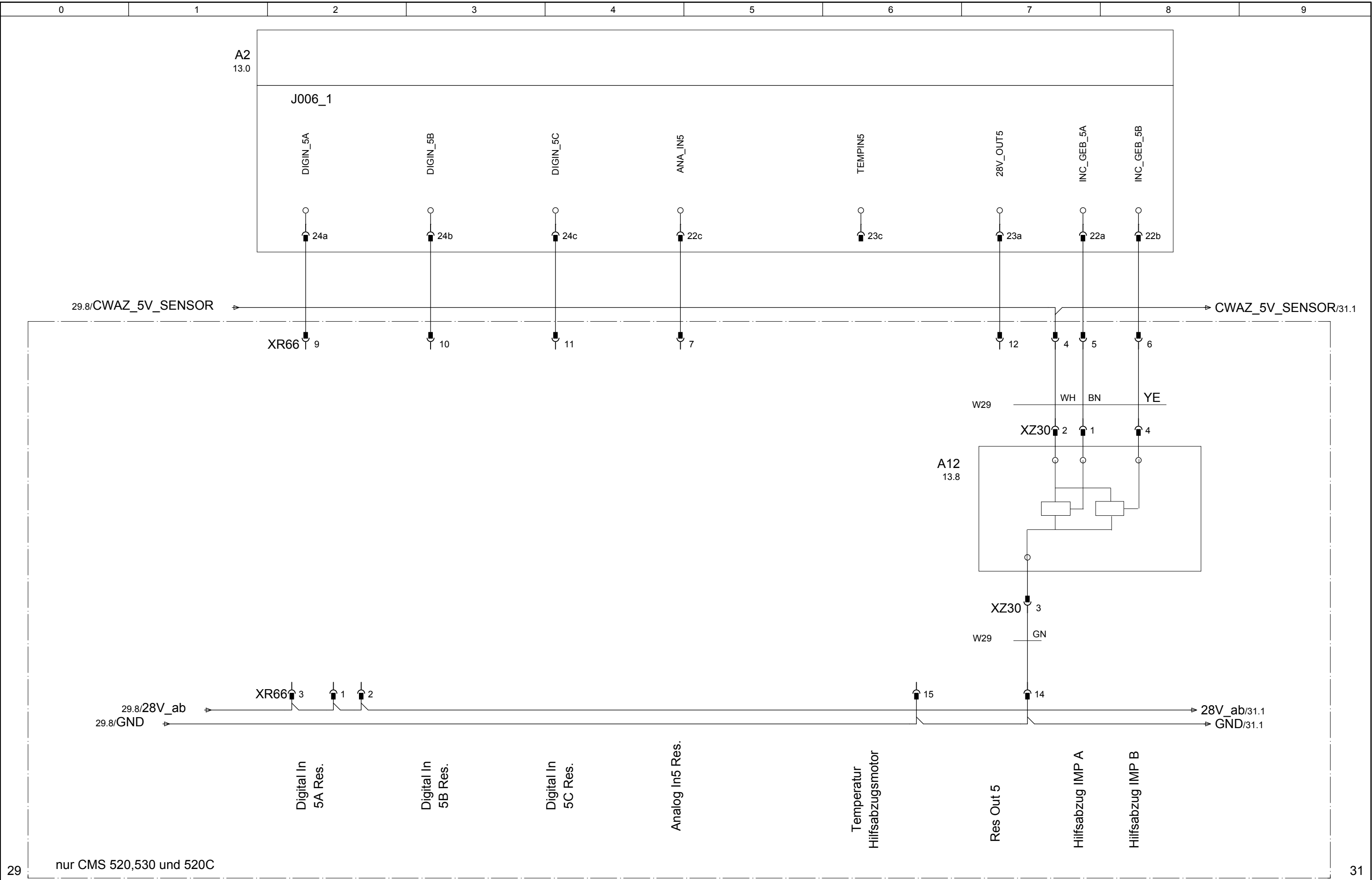


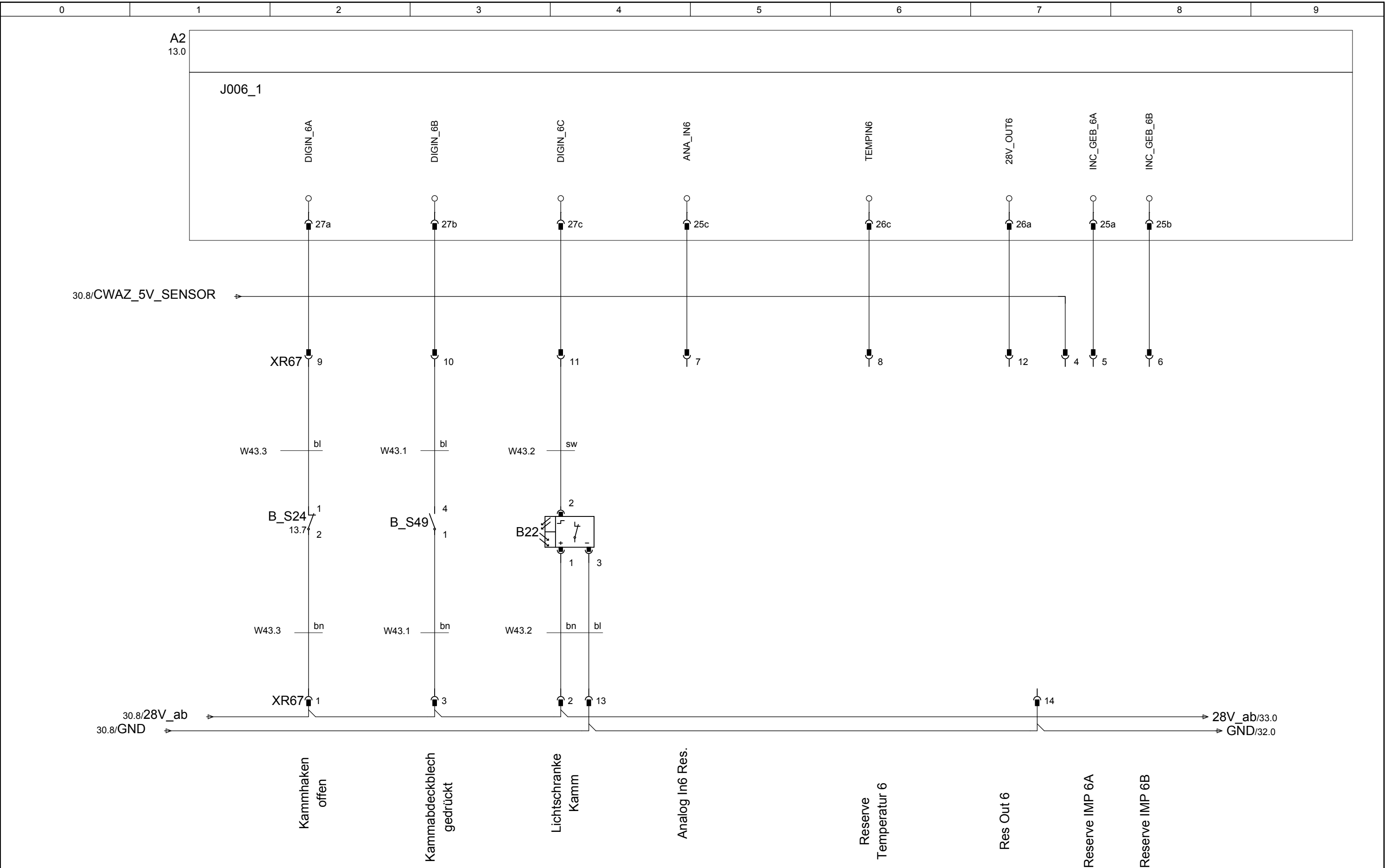




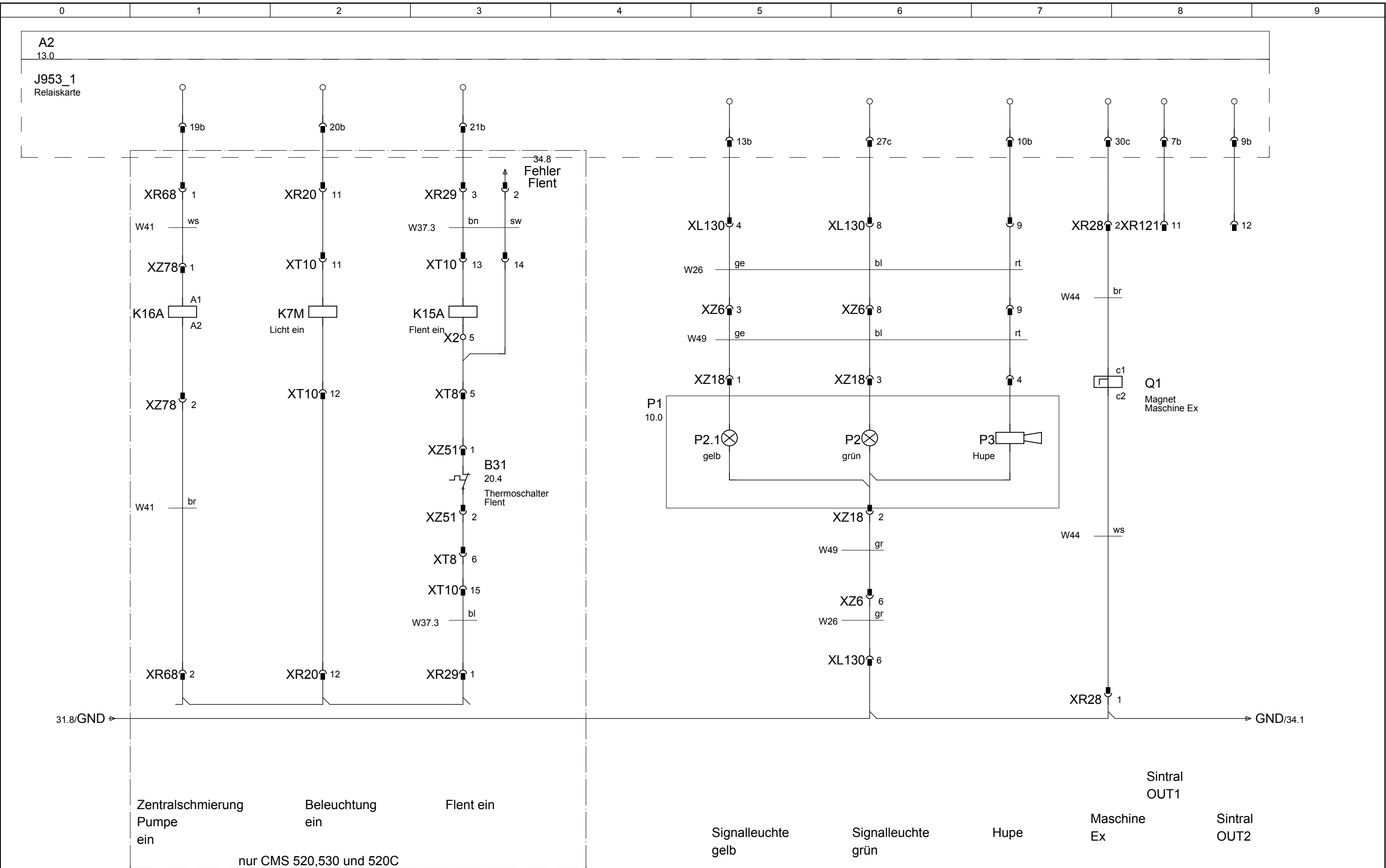


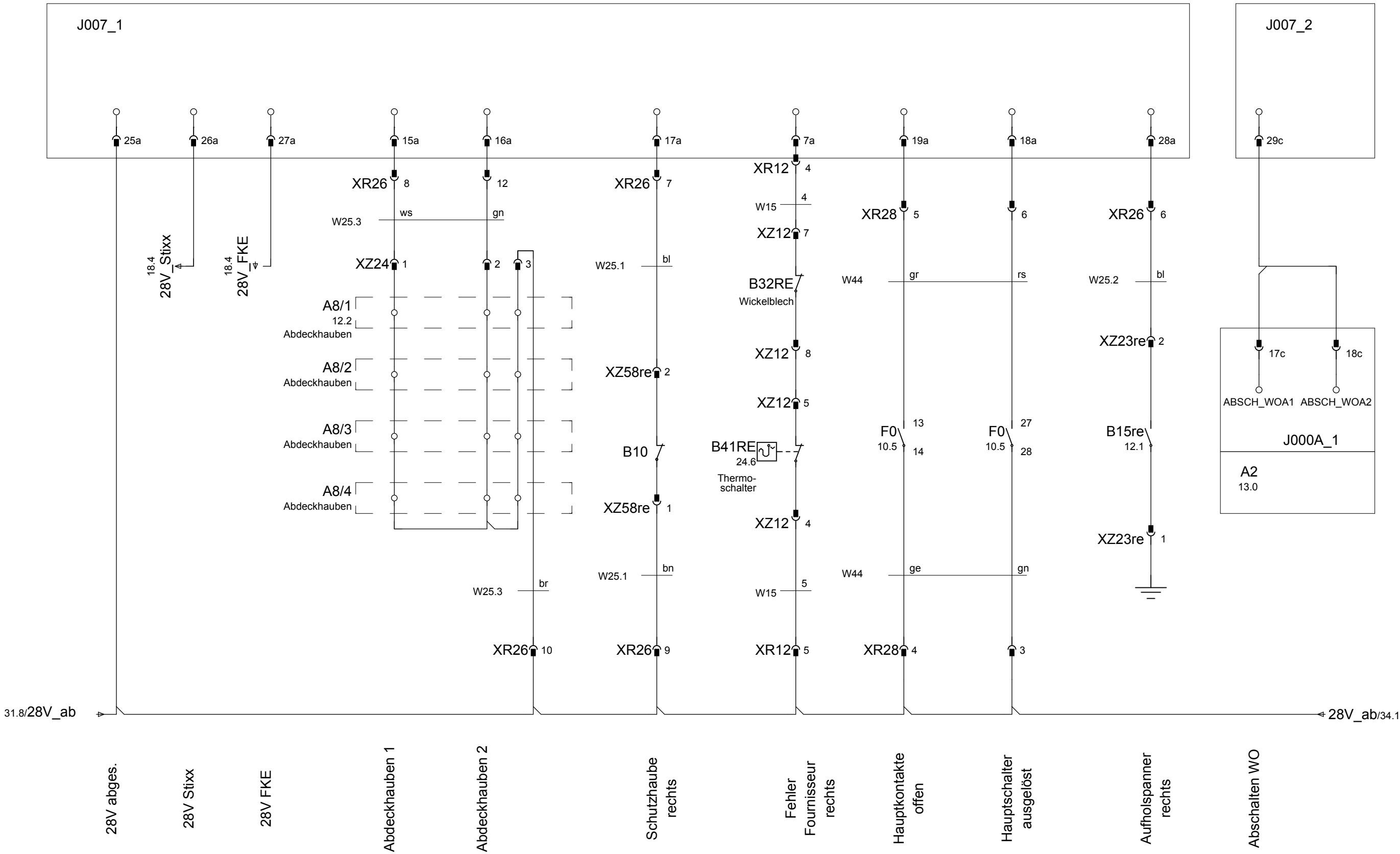


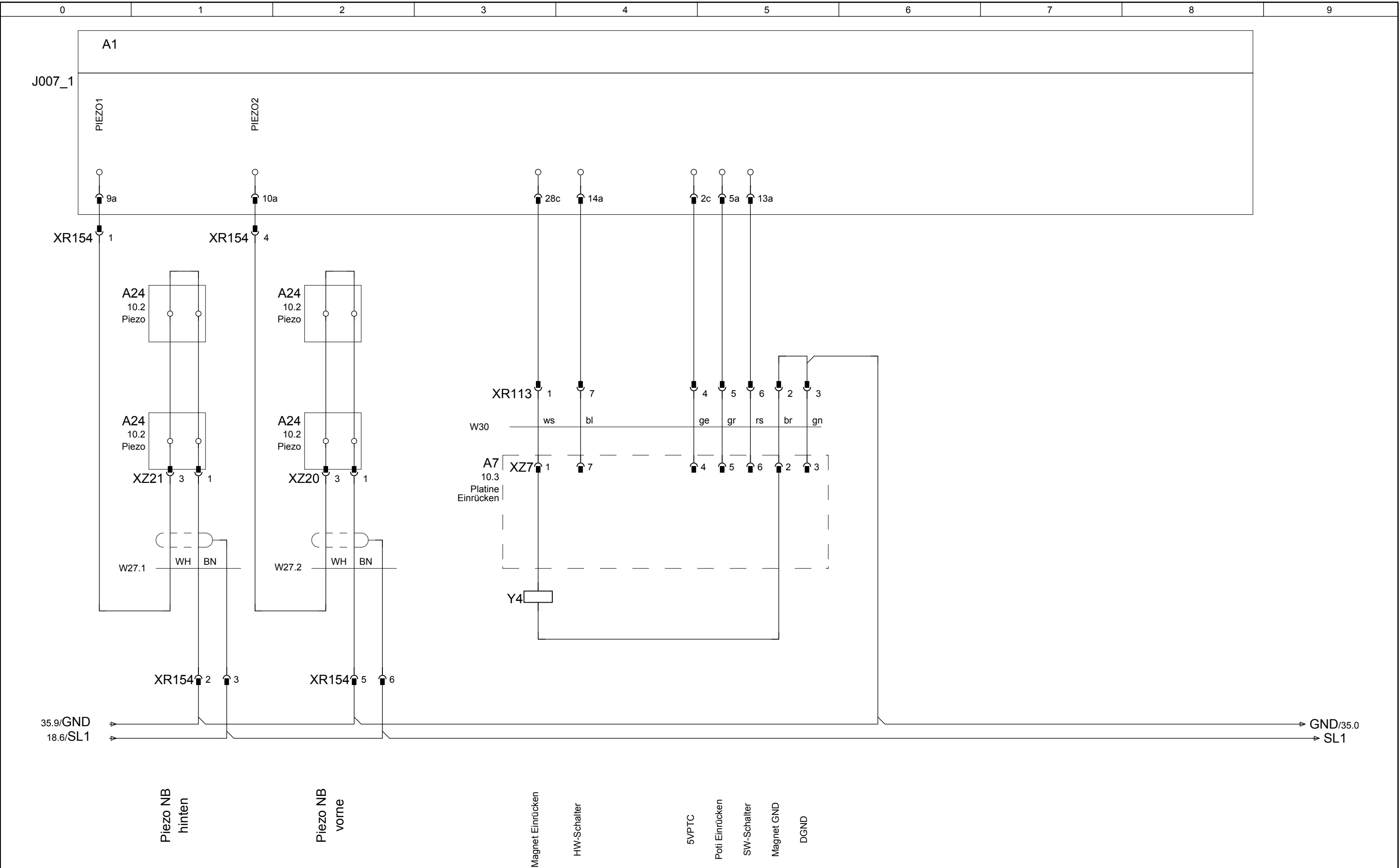




			Datum		Schaltplan 222	STOLL THE RIGHT WAY TO KNIT	H.Stoll GmbH & Co. KG	Signale Kammhaken XR67	Id.Nr. 257 280		=	
			Bearb.	KEH							+	
			Gepr.	21.12.10								
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.		Ae.St.01		Bl.	31
											35 Bl.	







			Datum		Schaltplan 222	STOLL THE RIGHT WAY TO KNIT	H.Stoll GmbH & Co. KG	Eingänge BIO-Karte	Id.Nr. 257 280		=
			Bearb.	KEH							+
			Gepr.	21.12.10					Ae.St.01		Bl. 35
Änderung	Datum	Name	Norm		Urspr.	Ers.f.	Ers.d.				35 Bl.