

Circuit diagram 222

1/35

STOLL
THE RIGHT WAY TO KNIT

Computer OKC3, Ident. No.: 257 280.00

CMS	502	520	530	520C								
Typ	626	620 628	621 627	629								
Circuit diagram 222	X	X	X	X								

ELECTRICAL DATA OF CMS MACHINES

Mains voltage Three-phase : 400V
±10% 50/60 Hz
Phase number : 3
Rated current F0 : 7A
Main fuse (of customer) : 16 A slow-blow fuse

When the Main Voltage is different to 400V connect the machine over a separat transformer T2.
The protective motor switch F0 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. 4.3.1.

Supply voltage	Rated Current F0
440 V	6,3 A
420 V	6,3 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

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5	caption		27. Mär. 2009	KEX	
6	caption		27. Mär. 2009	KEX	
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8	caption		27. Mär. 2009	KEX	
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10	block diagram control unit		27. Mär. 2009	KEH	
11	block diagram control unit		27. Mär. 2009	KEH	
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21	servo drive and racking		27. Mär. 2009	KEH	
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23	outputs servo HA+V		27. Mär. 2009	KEH	
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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	
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Identification of the plug connectors, sensors and actuators

A__	Assemblies
B	Switches
E__	Lighting; Ventilator
F__	Fuses
J__	The card plug connector of the wiring system __ stands for the last three numbers of the respective Ident. number (example: Id.301007 → 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
A2	A2	Control unit on the left co.		254852	254850 (530) 254852 (520)
A6	A6	Battery plug-in unit		301008	301008
A7	A7	Card Engaging		240 167	240 167
A8	A8	Magnet switch shrouding covers 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 giver auxiliary take-down		----	217 462
A14	A14	Magnet switch shrouding covers in the middle		251066	220 159
A15	A15	Racking – limit switch jack		229396	229 396
A21	A21	Main switch		250363	250363
A22	A22	Central oil lubricating pump	Partly optional	----	235 068
A23re	A23re	Length measuring device	optional	257282	257282
A23li	A23li	Length measuring device	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	Limit switch drive on the left		223 333	223 333
B_S2	S 2	Limit 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	Switch Shrouding cover	in group A8	x	x
B 5.2	S 5.2	Switch Shrouding cover	in group A8	x	x
B 6.1	S 6.1	Switch Shrouding cover	in group A8	x	x
B 6.2	S 6.2	Switch Shrouding cover	in group A8	x	x
B10	S 10	Switch Protective hood on the right		223 350	223 350
B12	S 12	Switch Protective hood 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	Slack tensioner on the left	in group A26	----	x
B15re	S 15 re	Slack tensioner on the right	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 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 absorption turbine	in M 9	----	x
B32	S 32	Switch winding plate feed wheel		008 529	008 529
B33.1	S33.1	Magnet switch shrouding covers in the middle	in group A14	x	x
B33.2	S33.2	Magnet switch shrouding covers in the middle	in group A14	x	x
B34.1	S34.1	Magnet switch shrouding covers in the middle	in group A14	x	x
B34.2	S34.2	Magnet switch shrouding covers in the middle	in group A14	x	x
B38	S38	Magnet switch shrouding covers in the middle	in group A14	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	Cover plate Comb depressed		026 259	026 259

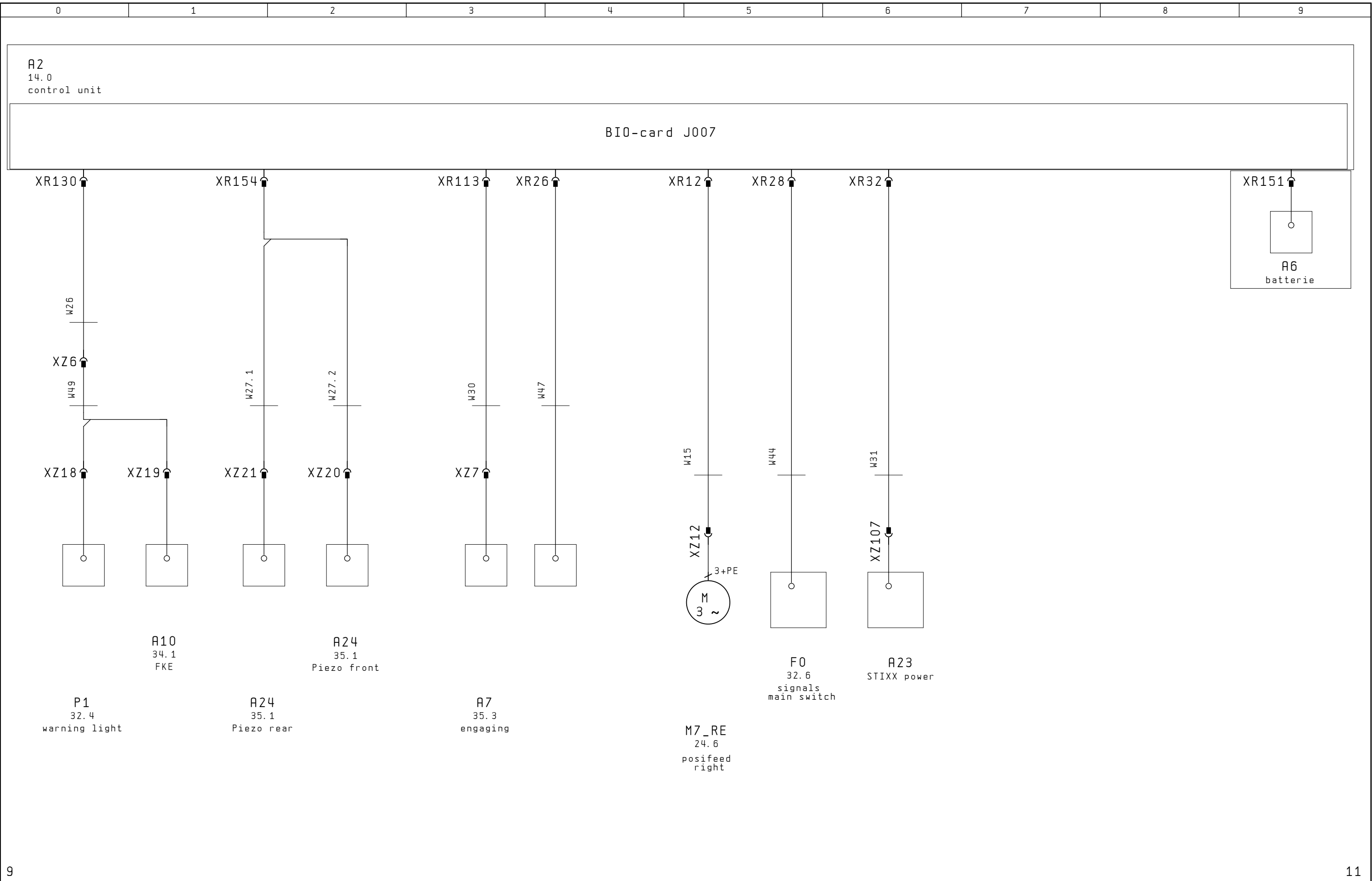
Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
E1	E1	Machine lighting at the top		205 546	205 546
E3	LV 1	Ventilator drive motor		254 872	254 872
E4	LV 2	Ventilator control unit on the right (servo)	in group A2	229 059	229 059
E5	LV 4	Ventilator power supply	in group A2	239 305	239 305
F0	Q1	Protective motor switch	in group A21	235 115	235 115
F 1	F 1	Fabric take-down (WAZ)	3,15AT / 440V	025 261	025 261
F 2	F 2	Fabric take-down (WAZ)	3,15AT / 440V	025 261	025 261
F 3	F 3	Fabric take-down (WAZ)	3,15AT / 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	6,3AT / 440V	026 809	026 809
F12	F12	Power supply	6,3AT / 440V	026 809	026 809
F13	F13	Power supply	6,3AT / 440V	026 809	026 809
F16	F16	Lighting	3,15AT / 440V	025 261	025 261
F17	F17	Lighting	3,15AT / 440V	025 261	025 261
F18	F18	Central oil lubricating pump	2,5AT / 440V	----	217 465
F20	F20	Fluff absorption (FLENT)	2,5AT / 440V	----	217 465
F21	F21	Fluff absorption (FLENT)	2,5AT / 440V	----	217 465
F22	F22	Fluff absorption (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/J007)	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	Warning light complete		240395	240395
P2	H2	Warning light green	in group P1	x	x
P2.1	P2	Warning light yellow	in group P1	x	x
P3	H3	Signal transmitter (horn)	in group P1	x	x
K15A	K15A	Relay fluff absorption	in group T1	----	221 275
K16A	K16A	Relay fluff absorption	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	Rear racking motor		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
M 6	M 6	Comb hook motor		213 872	213 872

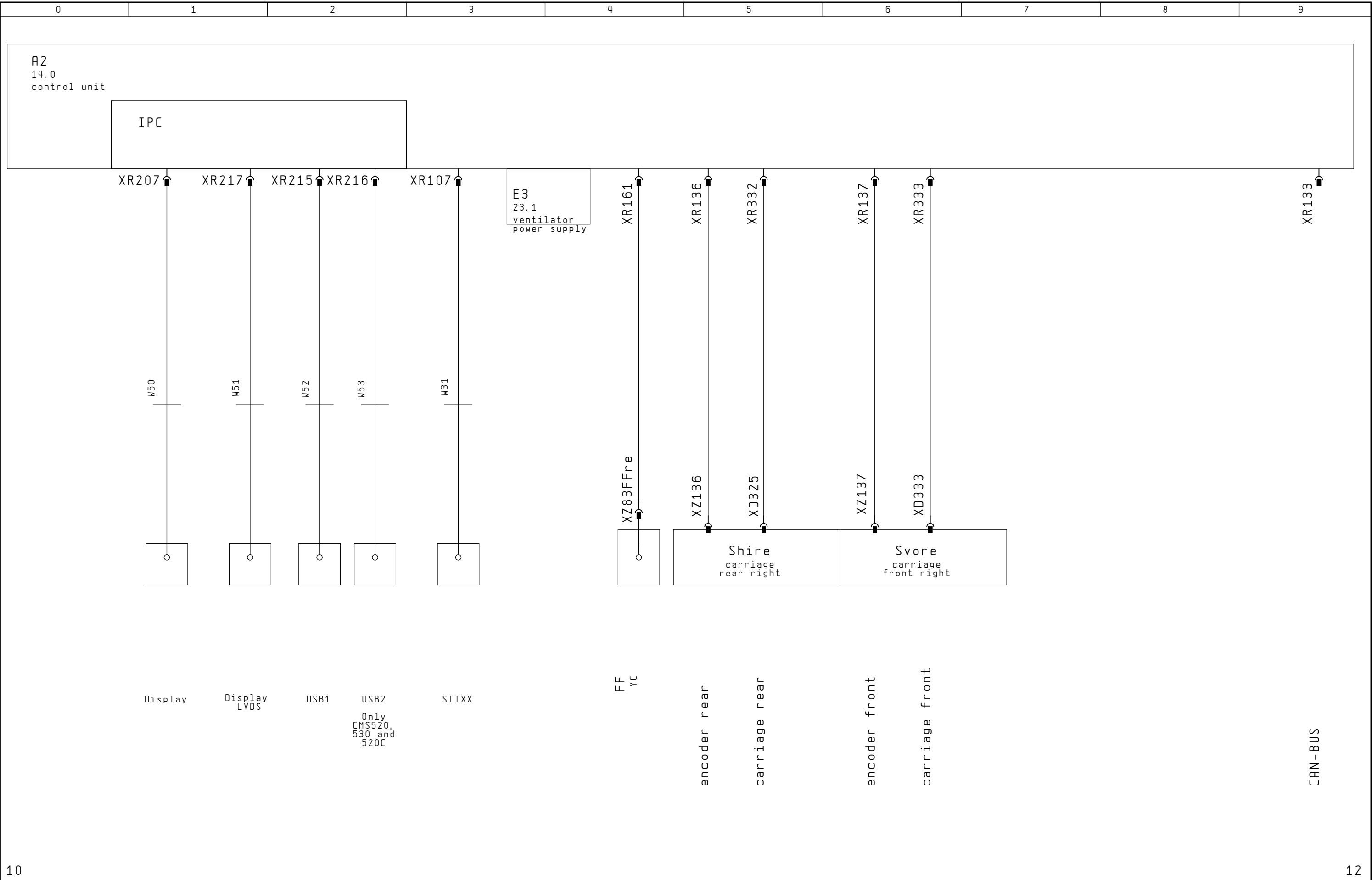
Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
M 7	M 7	Friction feed wheels		219 800	219 800
M 9	M 9	Suction turbine fluff absorption (FLENT)		----	221 172
M 14	M 14	Central lubrication of motor pump	in group A22	----	x
Q1	Y1	Magnet machine execute	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	----	----
Q8	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 / right additional bed		----	----
W 8	W 8	Cable resolver racking additional bed front / right		----	----
W 9	W 9	Cable 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 takedown		----	----
W20	W20	Cable switch main take-down		240 312	240 312
W22	W22	Cable racking limit switch		240 292	240 292
W23	W23	Rear / left cable limit switch racking mains supply		----	----
W24	W24	Front / right cable limit switch racking mains supply		----	----
W25	W25	Cable protective units 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 switch auxiliary take-down		240 468	240 468
W30	W30	Cable engaging		252538	252538
W31	W31	Cable Length measuring device	optional	236 718	236 718
W32	W32	Cable clamp./cutting drive on the right		----	----
W33	W33	Cable clamp./cutting drive on the left		----	----
W34	W34	Cable Clamp./Cutting sensors		----	----
W35	W35	Cable connection lights		----	----
W36	W36	Cable Power supply WAZ / feed wheel		240 469	240 469
W37	W37	Cable Power supply SERVO		240 502	240 502
W38	W38	Cable Power supply FLUFF ABSORPTION		251231	251231
W39	W39	Cable Power supply		240 505	240 505
W40	W40	Cable power supply central lubrication	Partly optional	----	254098
W41	W41	Cable control central lubrication	Partly optional	----	254099
W42	W42	Cable switch pressure motor		240 472	240 472

Identifier EN 61346-2	Old Identifier	Designation	Value/ function	Ident No. CMS 502	Ident No. CMS 520, 530, 520 C
W43	W43	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 units left		253620	253620
W48	W48	Cable mains supply transformer		250364	250364
W49	W49	Cable mains supply yarn control device,warning 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	Cabel Piezo additional needle bed		----	----
W56	W56	Cable air valve	optional	----	----
V1	Z1	Power line filter		219 133	219 133
V3	Z3	Motor interference suppressor fluff absorption		----	008 641

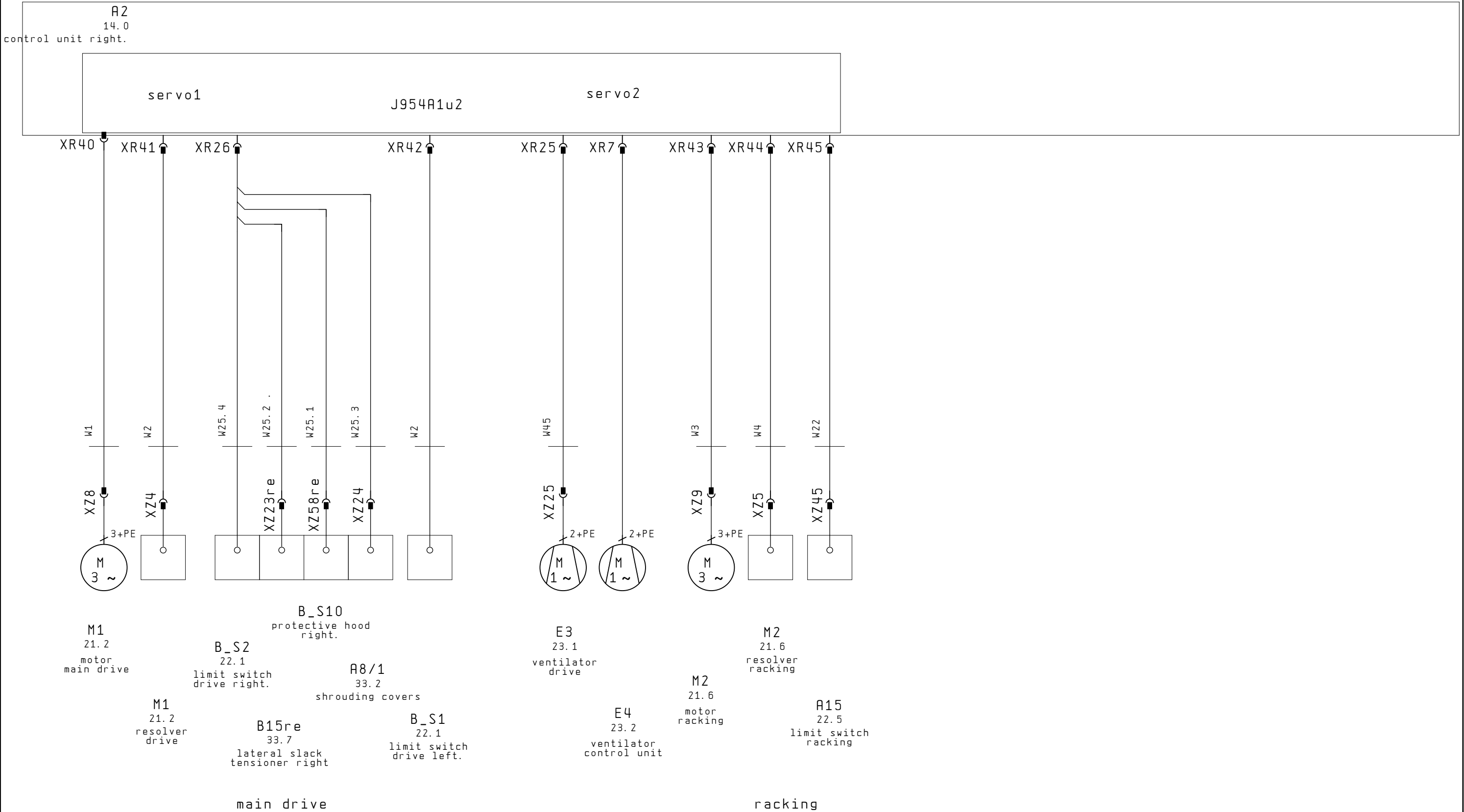


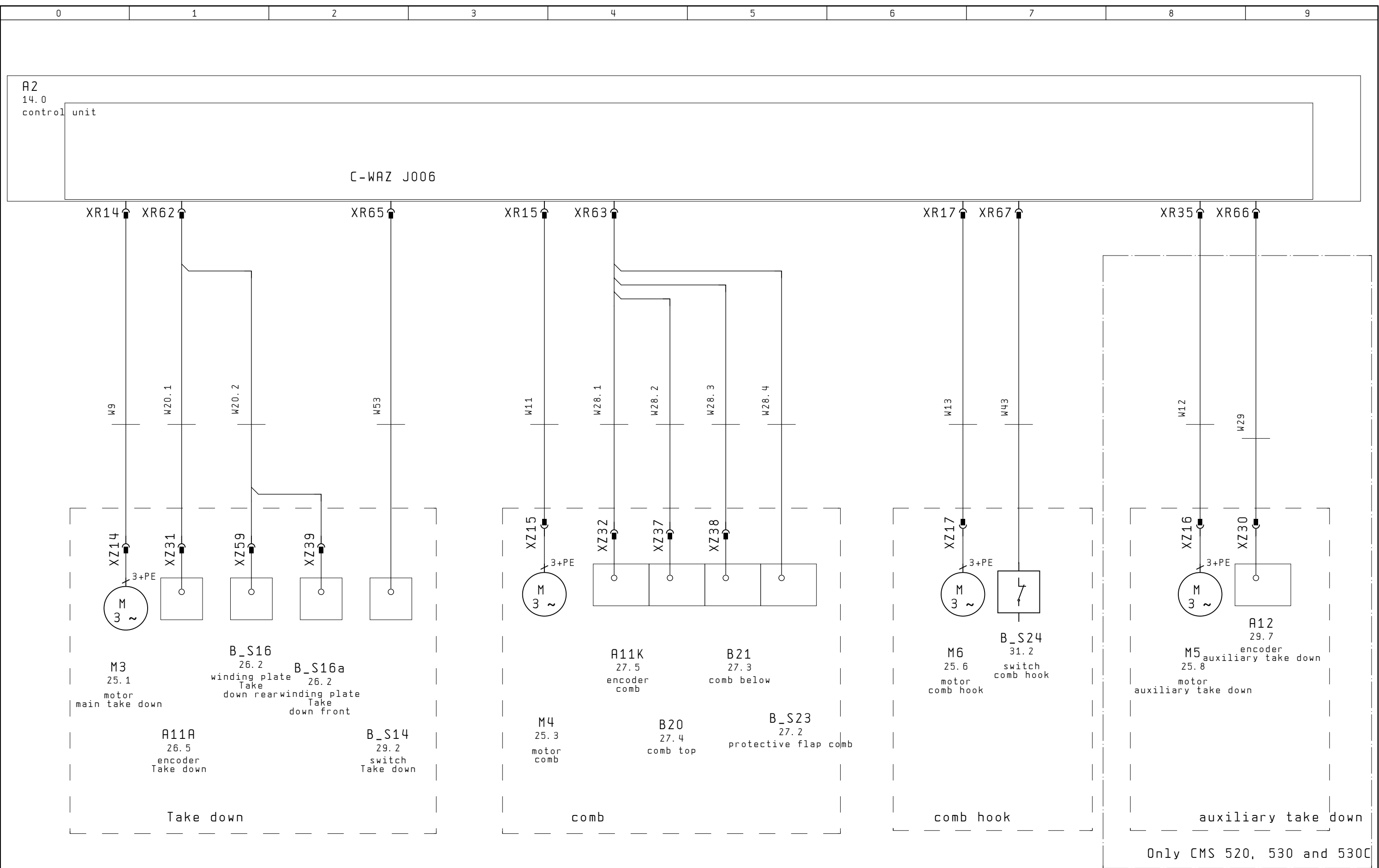
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			Bearb.	KEH								+	
			Gepr.	27. Mär. 2009									
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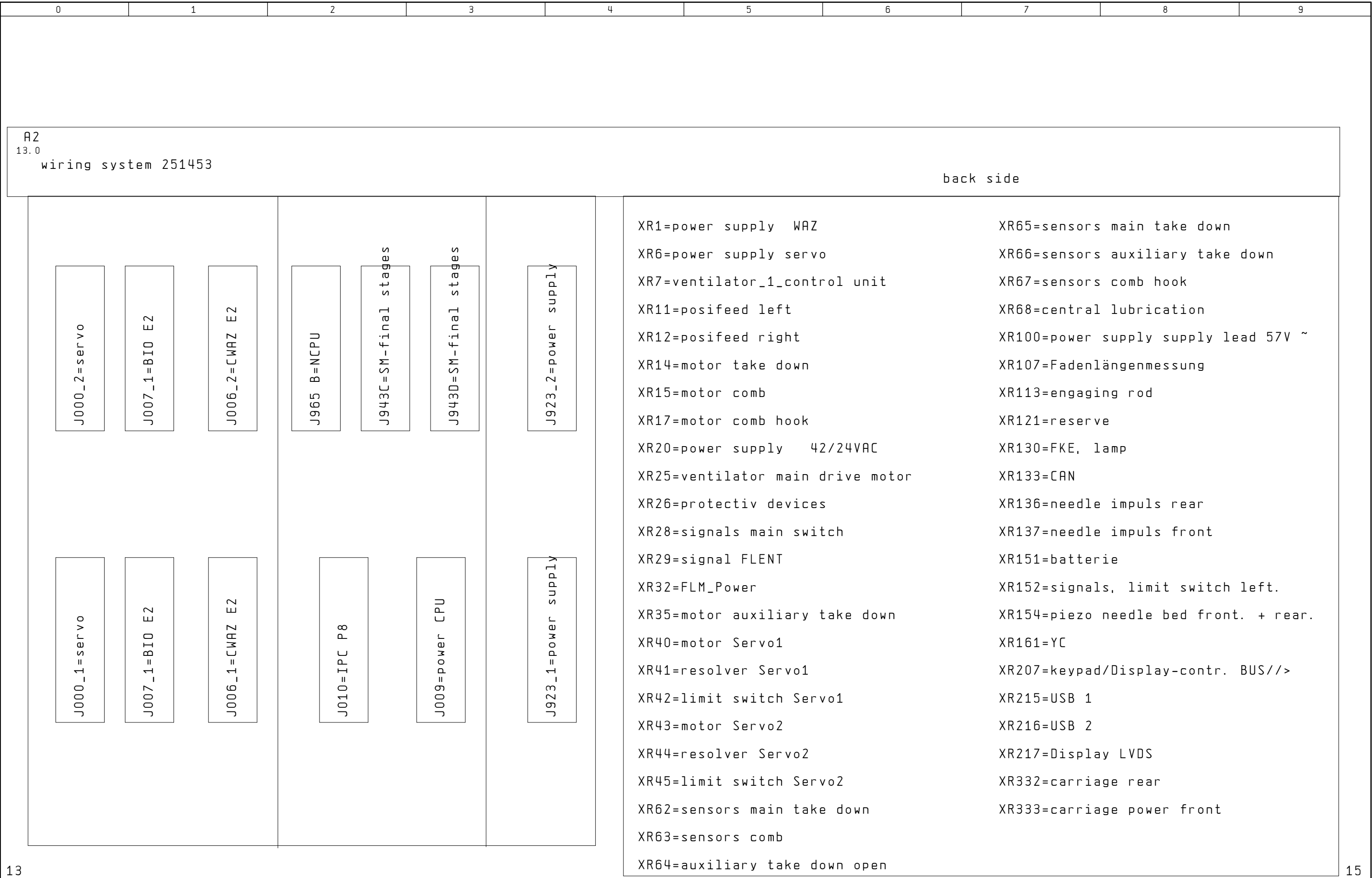




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Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.	Ä. St. 00		B1. 11		
											35 B1.	







transformer

XT1=supply lead

XT7=servo

XT8=FLNT

XT9=power supply/lighting

XT10=Take down/comb/posifeed

XT11=central lubrication

XT12=lighting

main switch

X1=main connection main switch

X2=adittional clamp transformer

sensors / actuator external

XZ4=resolver main drive

XZ5=resolver racking

XZ6=connector FKE,warning light

XZ7=engaging rod

XZ8=motor main drive

XZ9=motor racking

XZ11=posifeed left

XZ12=posifeed right

XZ14=motor Take down

XZ15=motor comb

XZ16=motor auxiliary take down

XZ17=motor comb hook

XZ18=warning light

XZ19=FKE

XZ20=Piezo NB front

XZ21=Piezo NB rear

XZ23re=lateral slack tensioner right

XZ24=shrouding covers

XZ31=encoder Take down

XZ32=encoder comb

XZ34=brake /temperature comb

XZ35=brake /temperature Take down

XZ37=position comb top

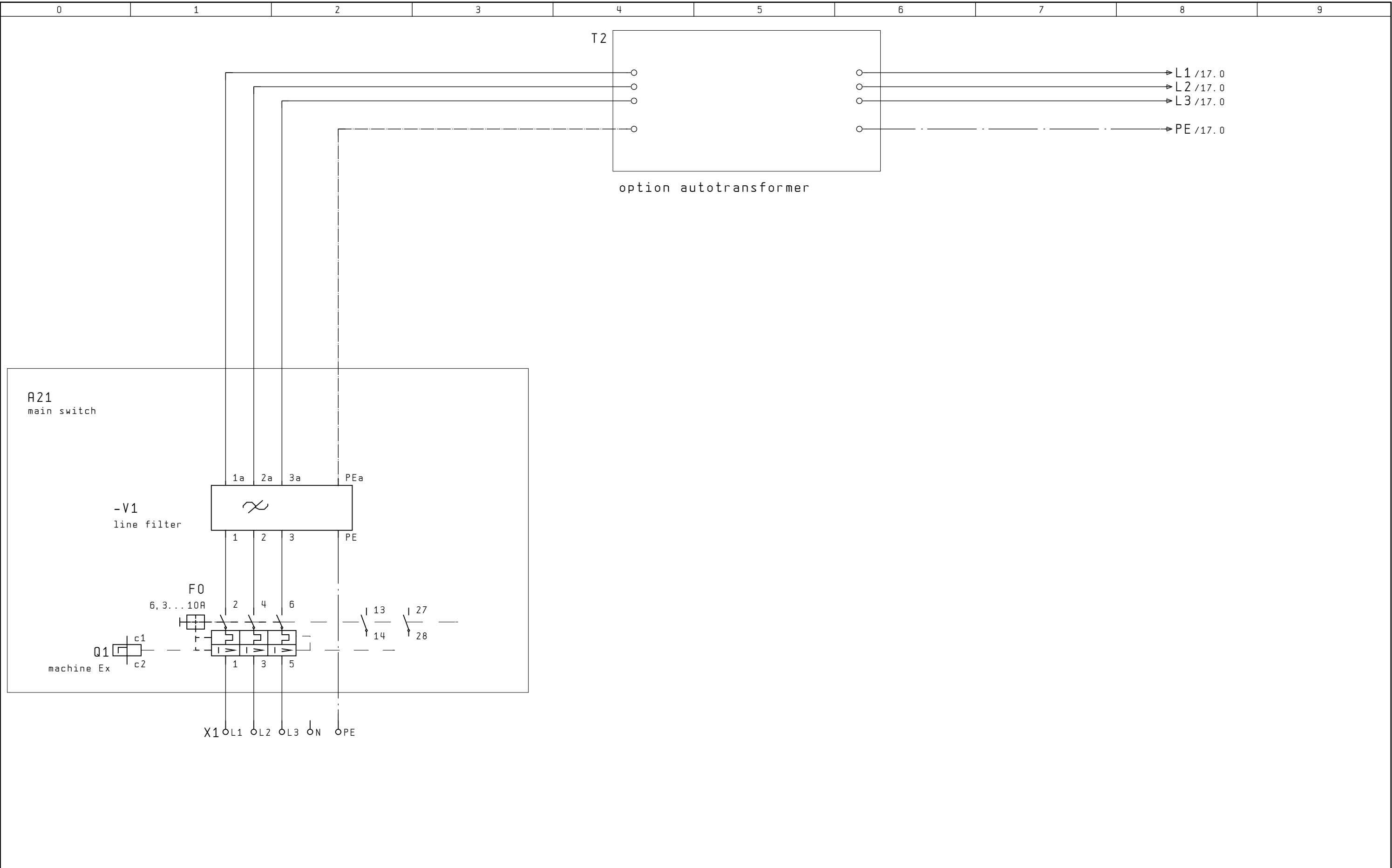
XZ38=position comb below

XZ39=winding plate Take down rear.

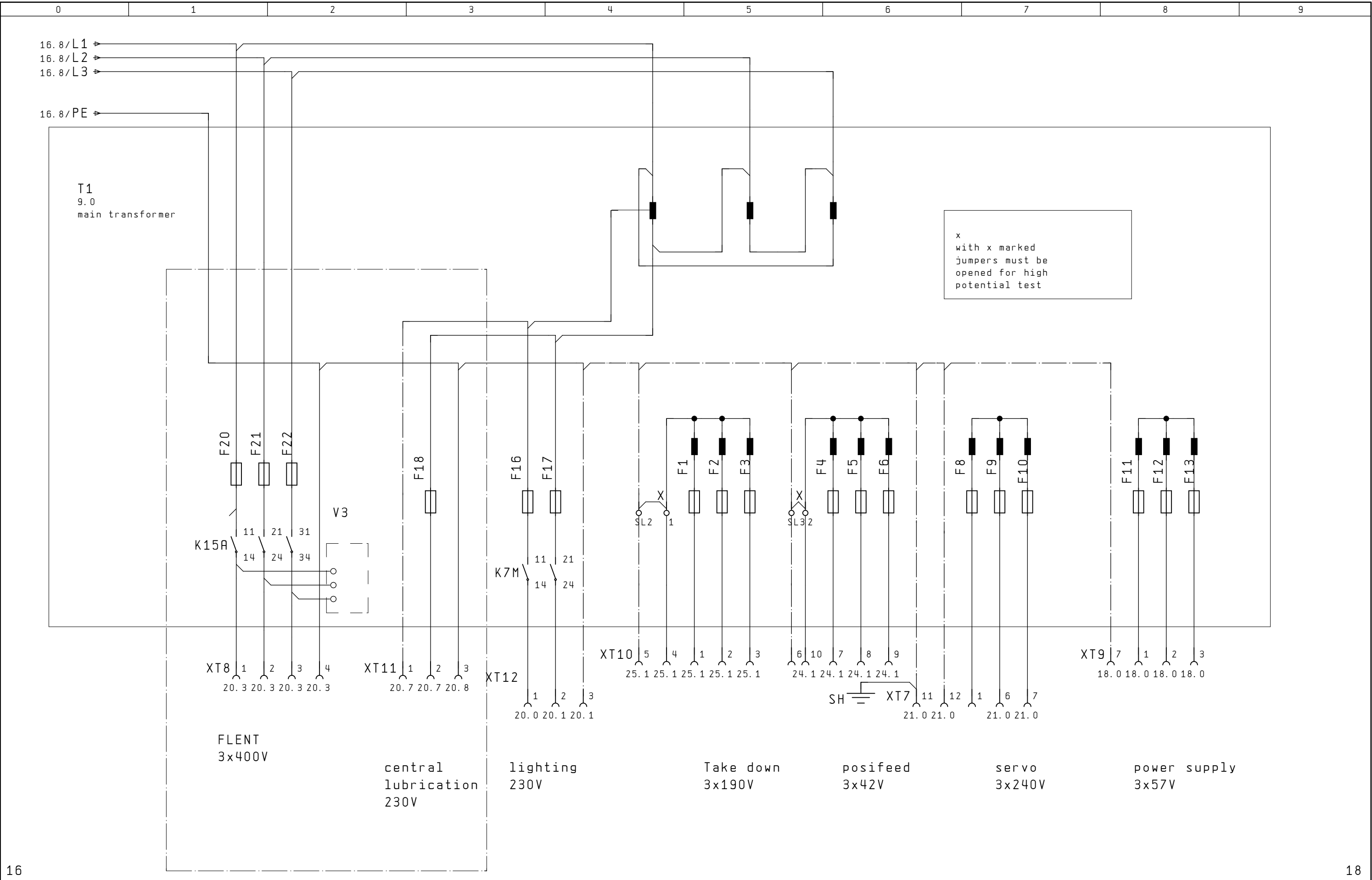
XZ58re=protective hood right

XZ59=winding plate Take down front.

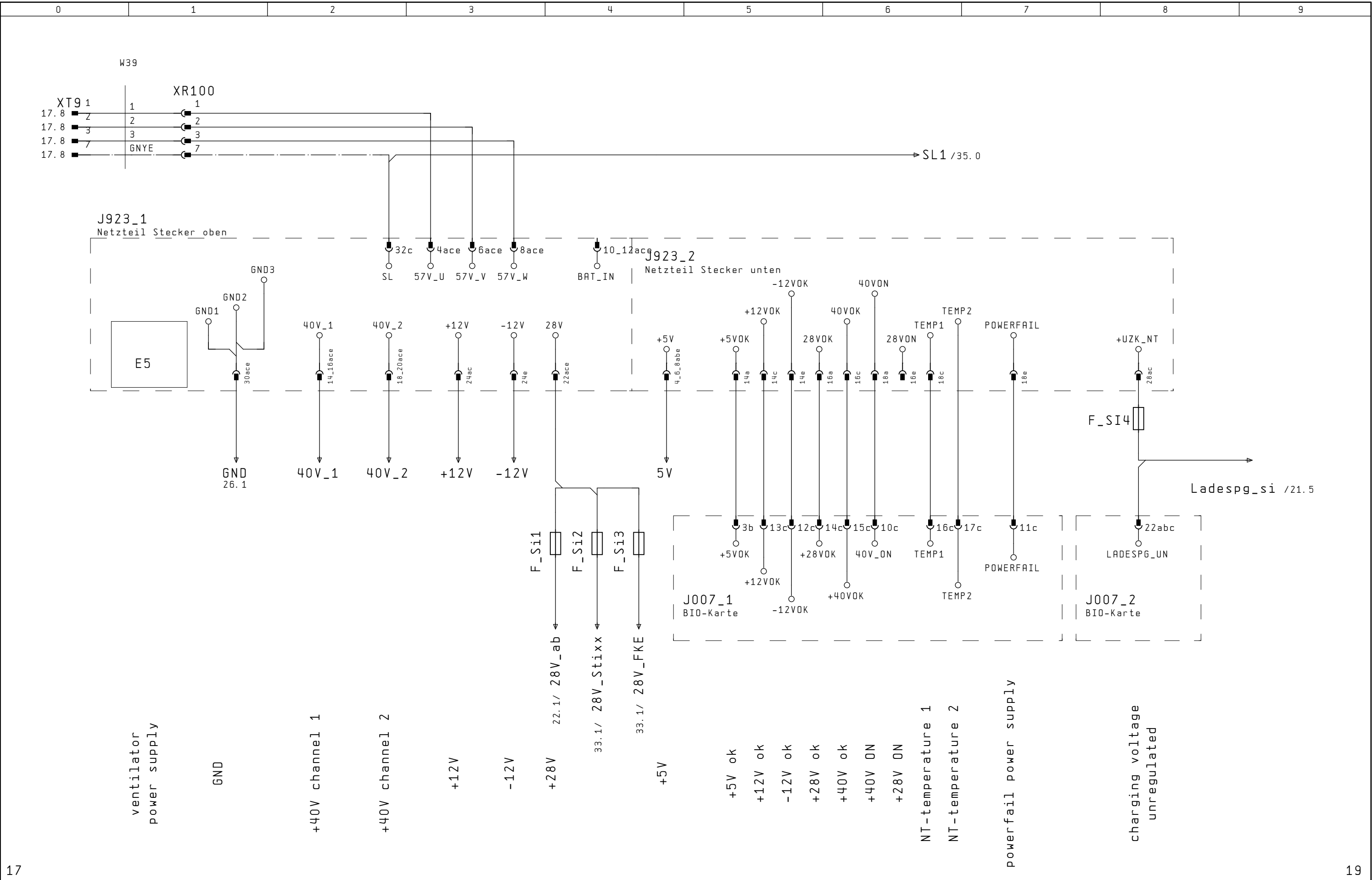
XZ45=limit switch racking



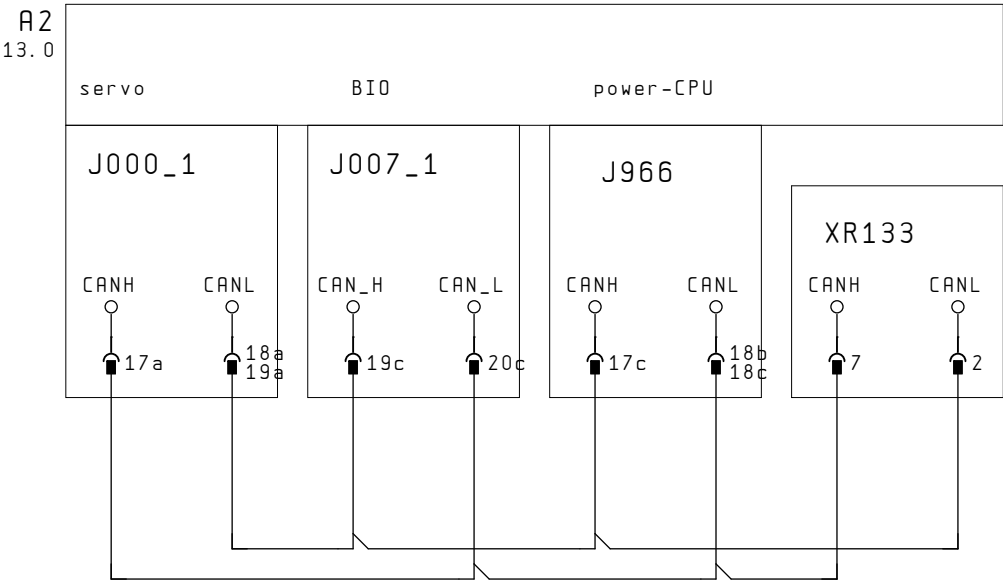
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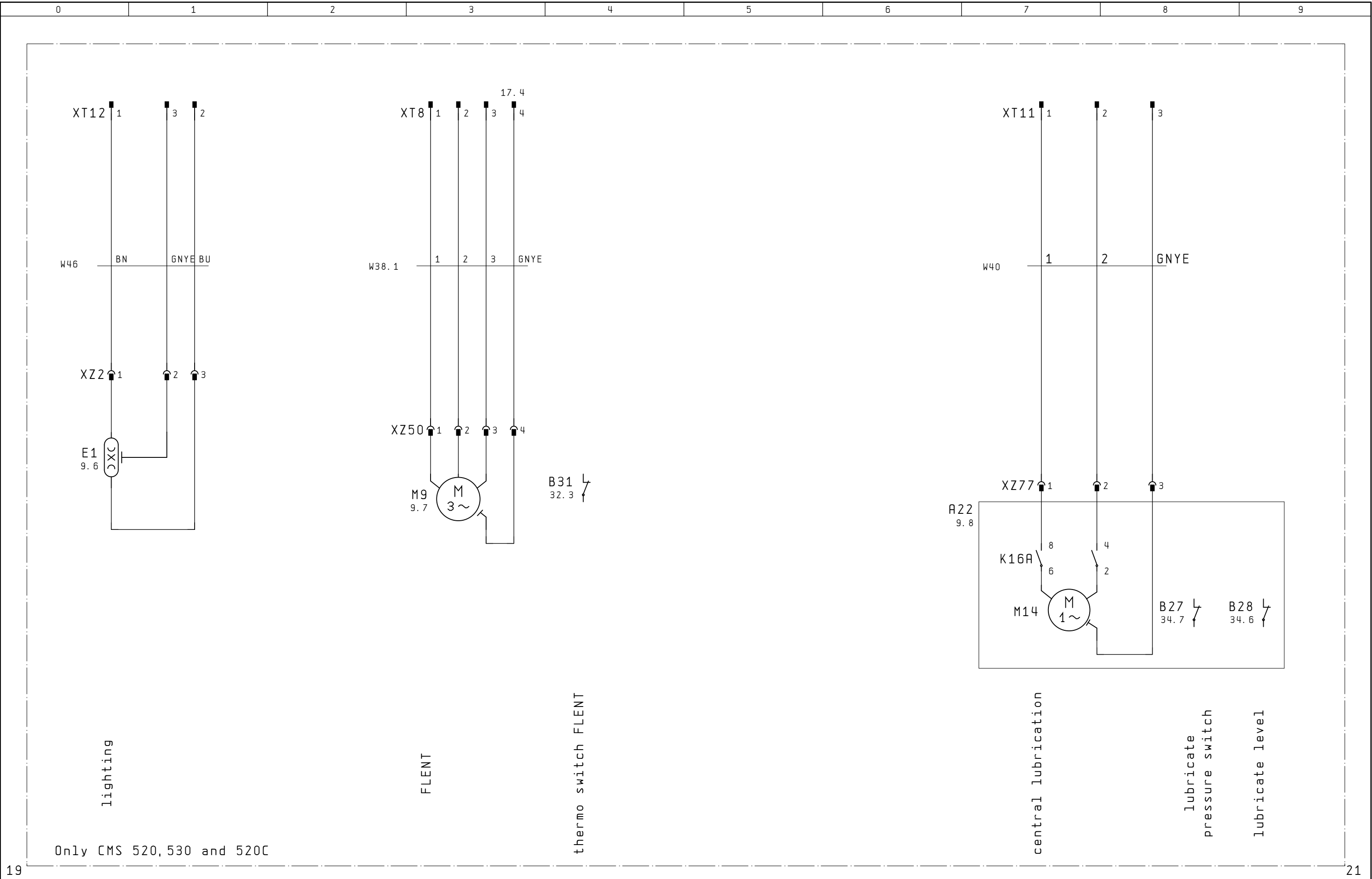


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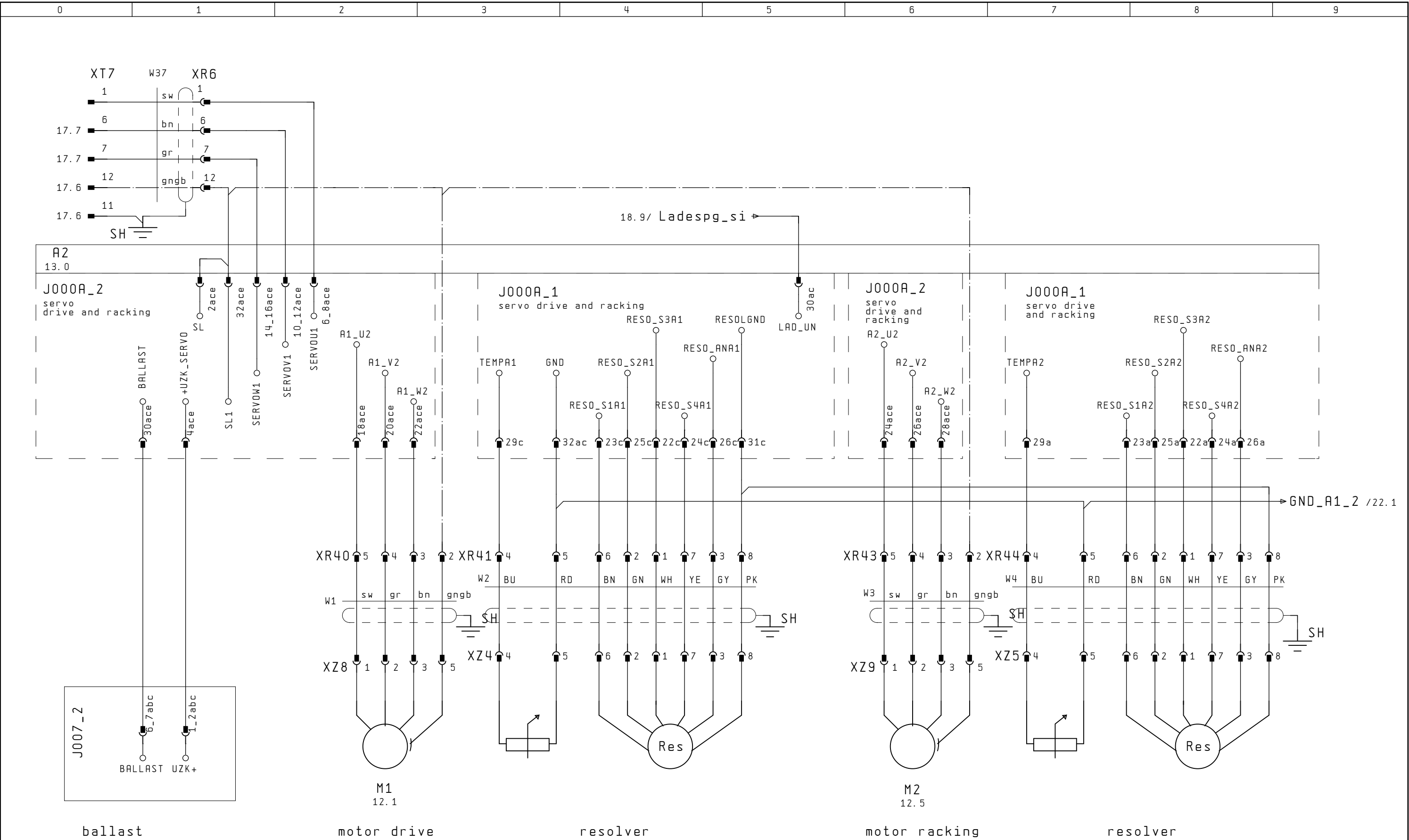


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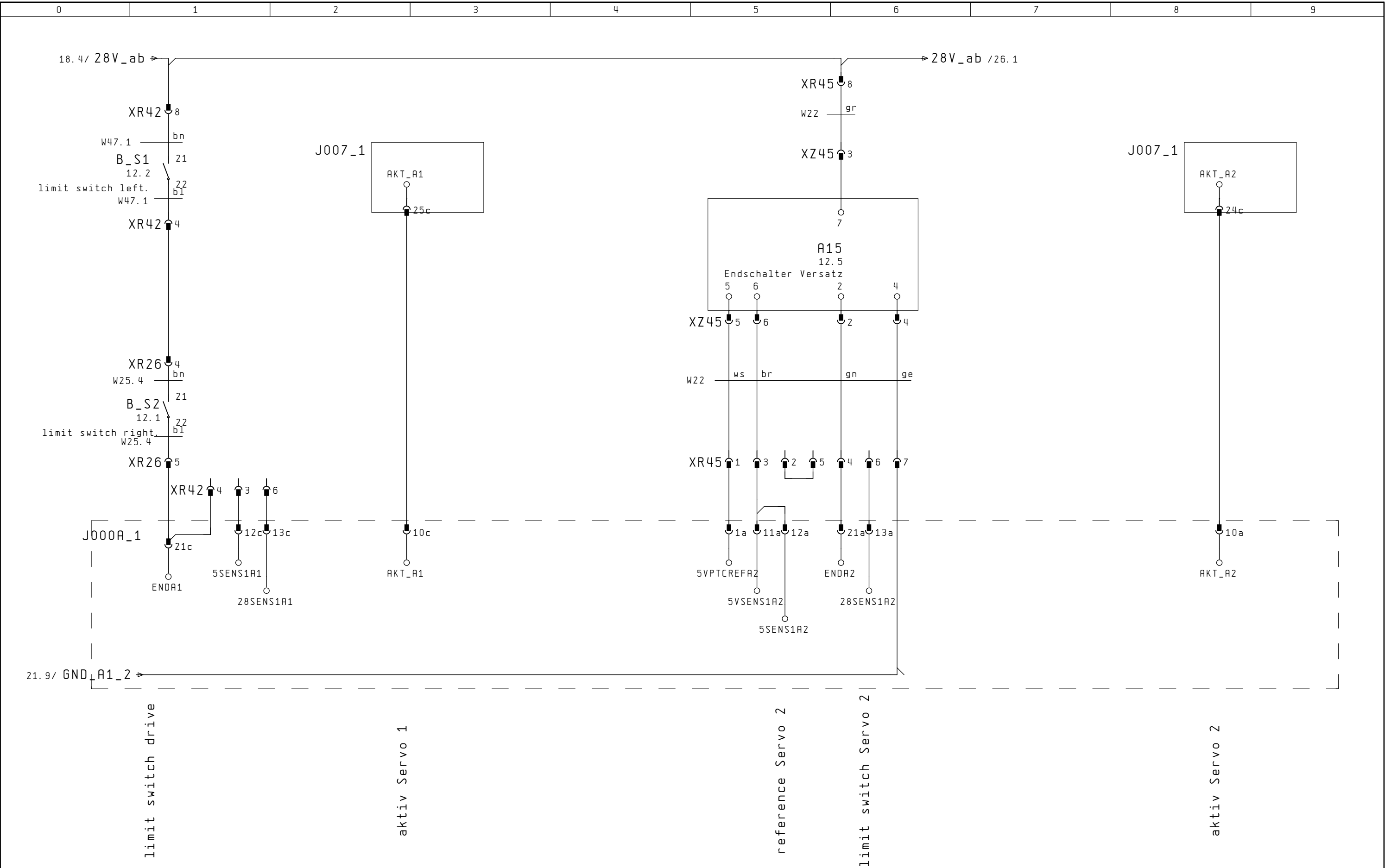




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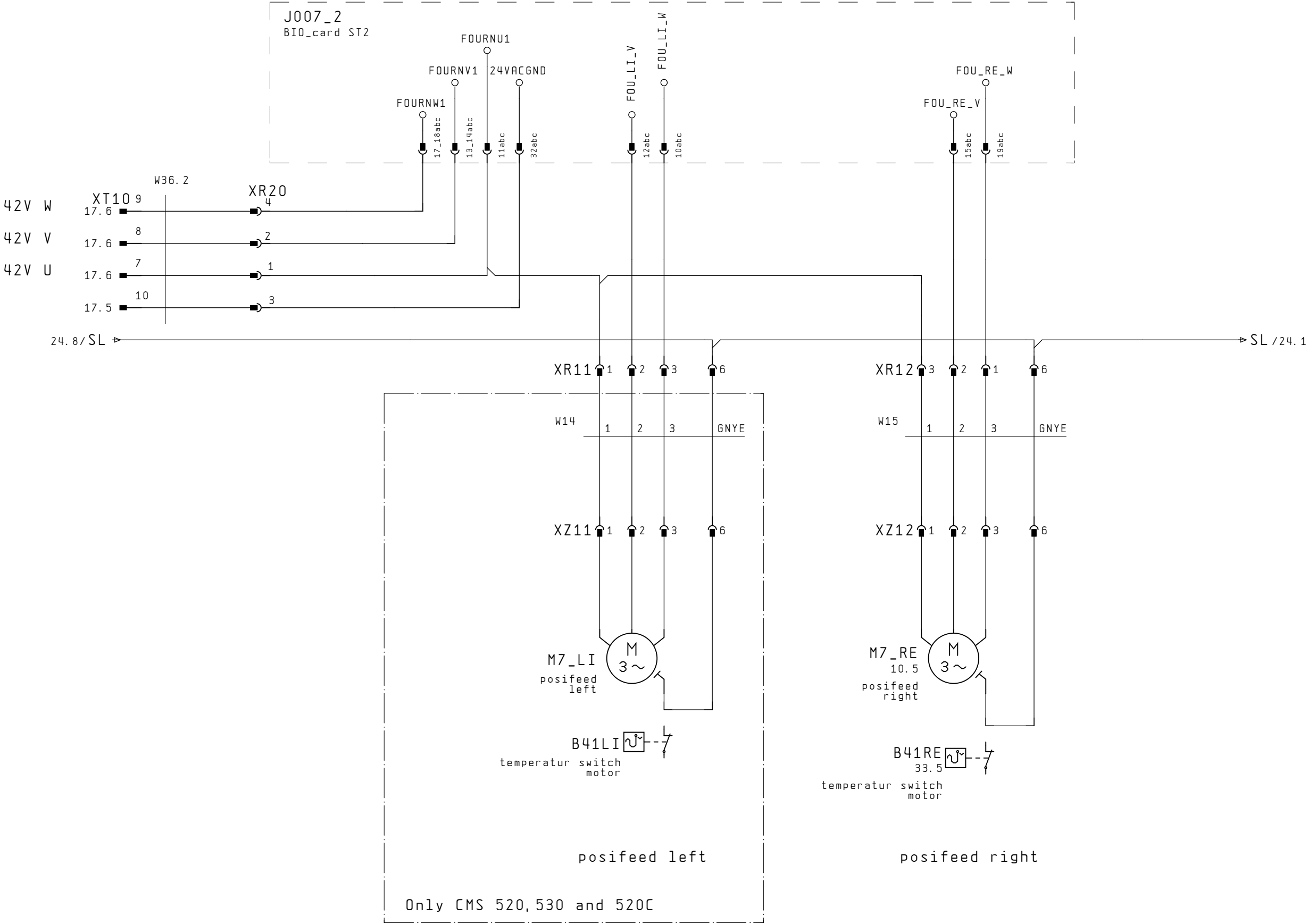
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										35 B1.		

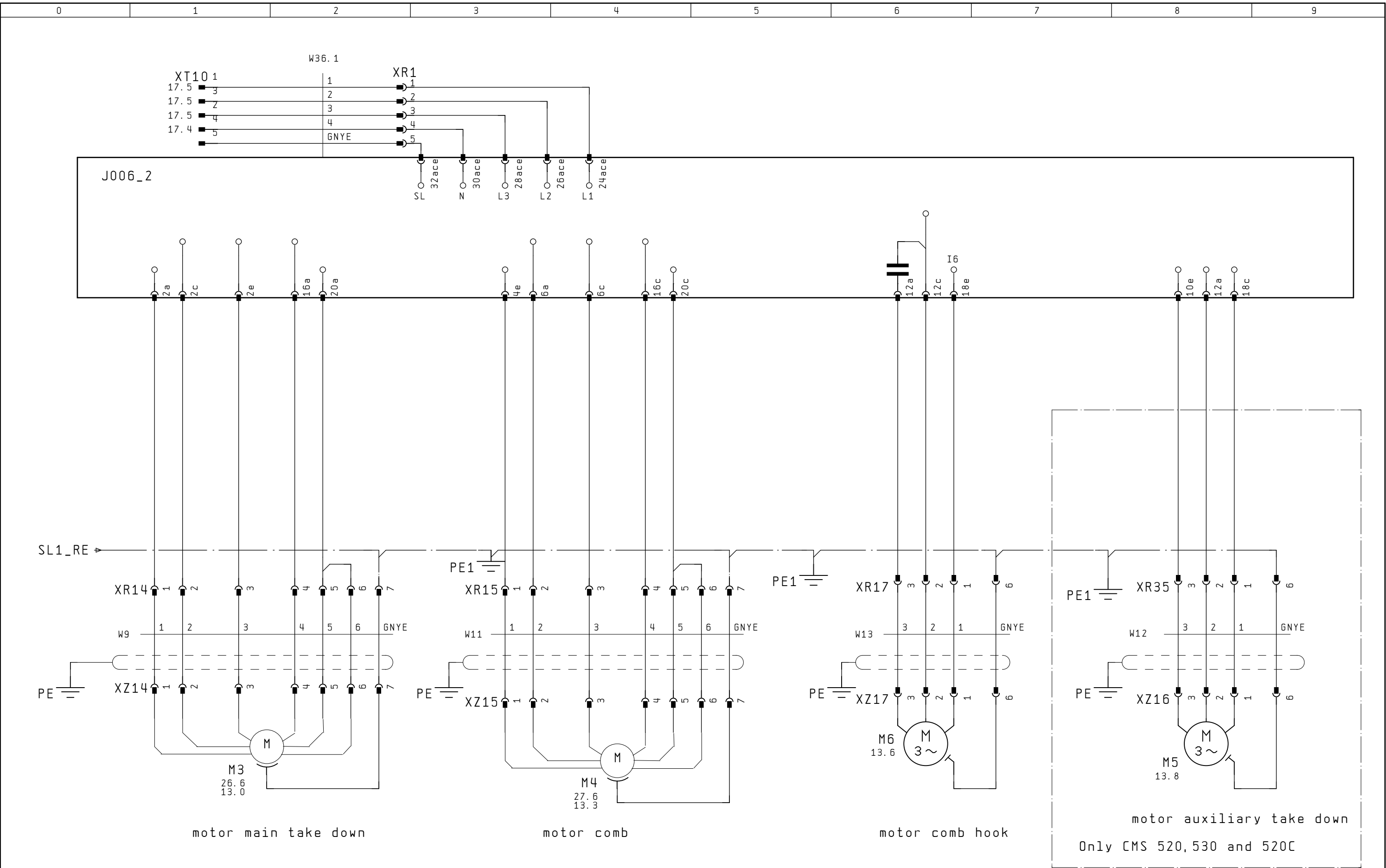


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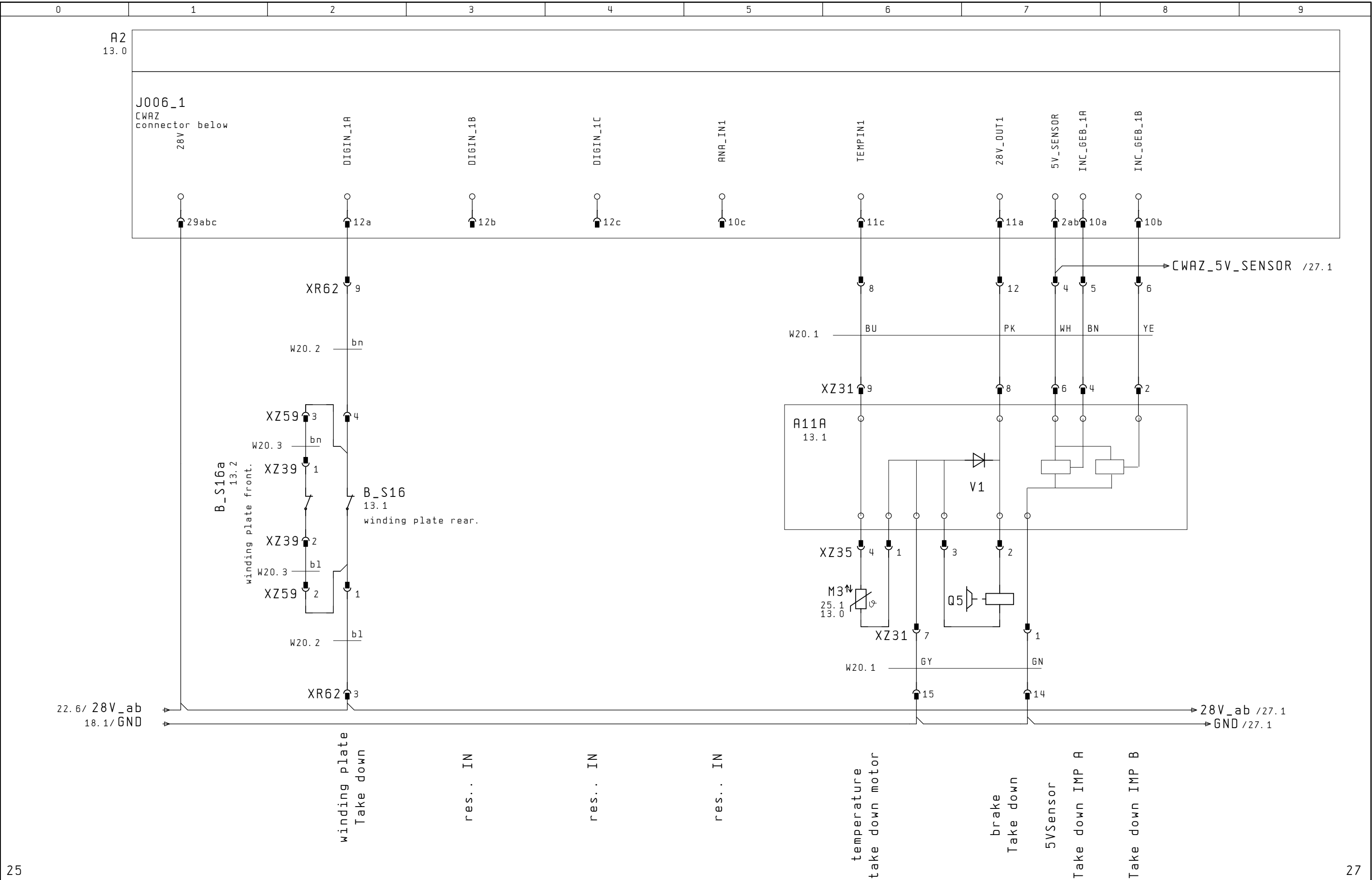
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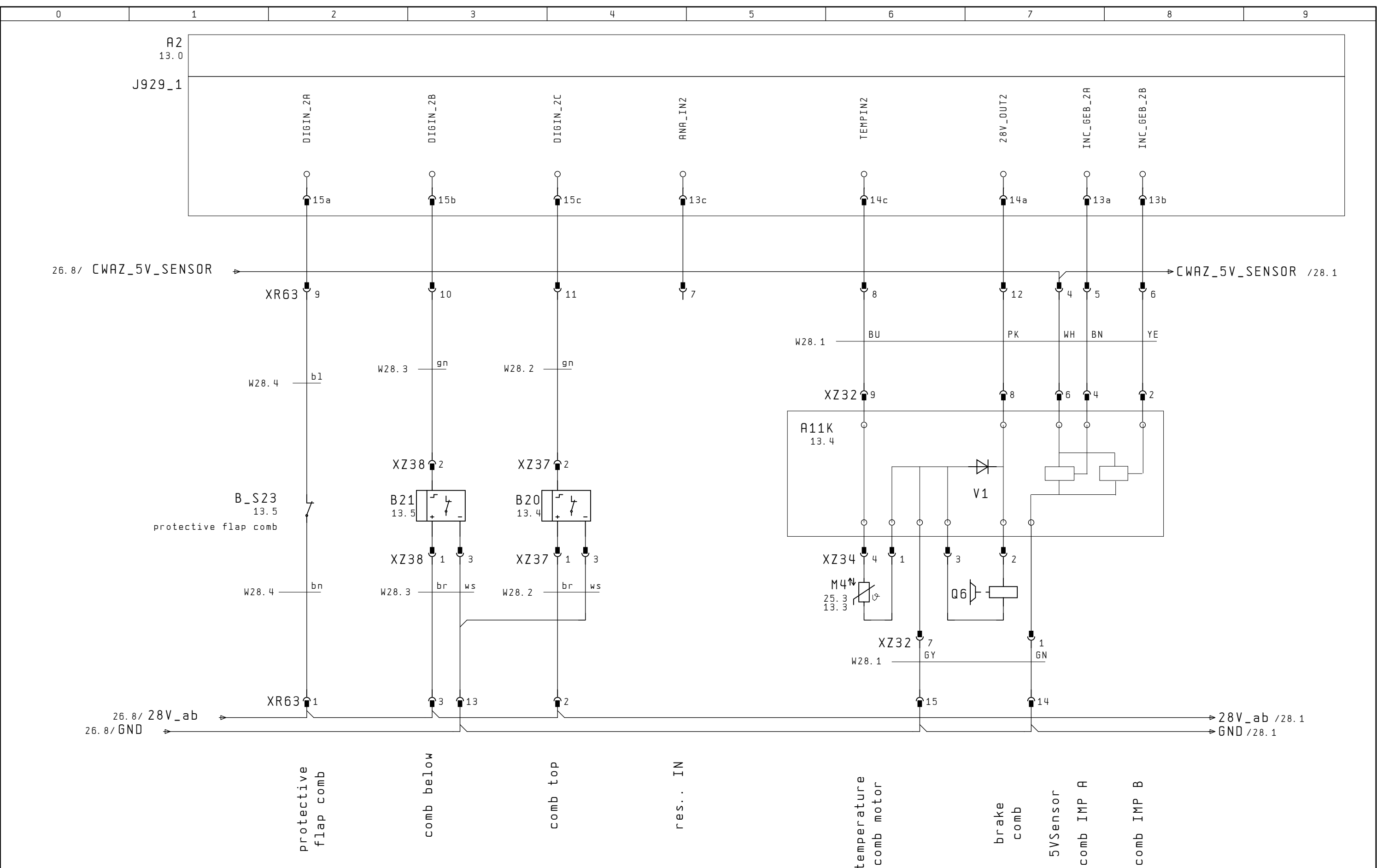




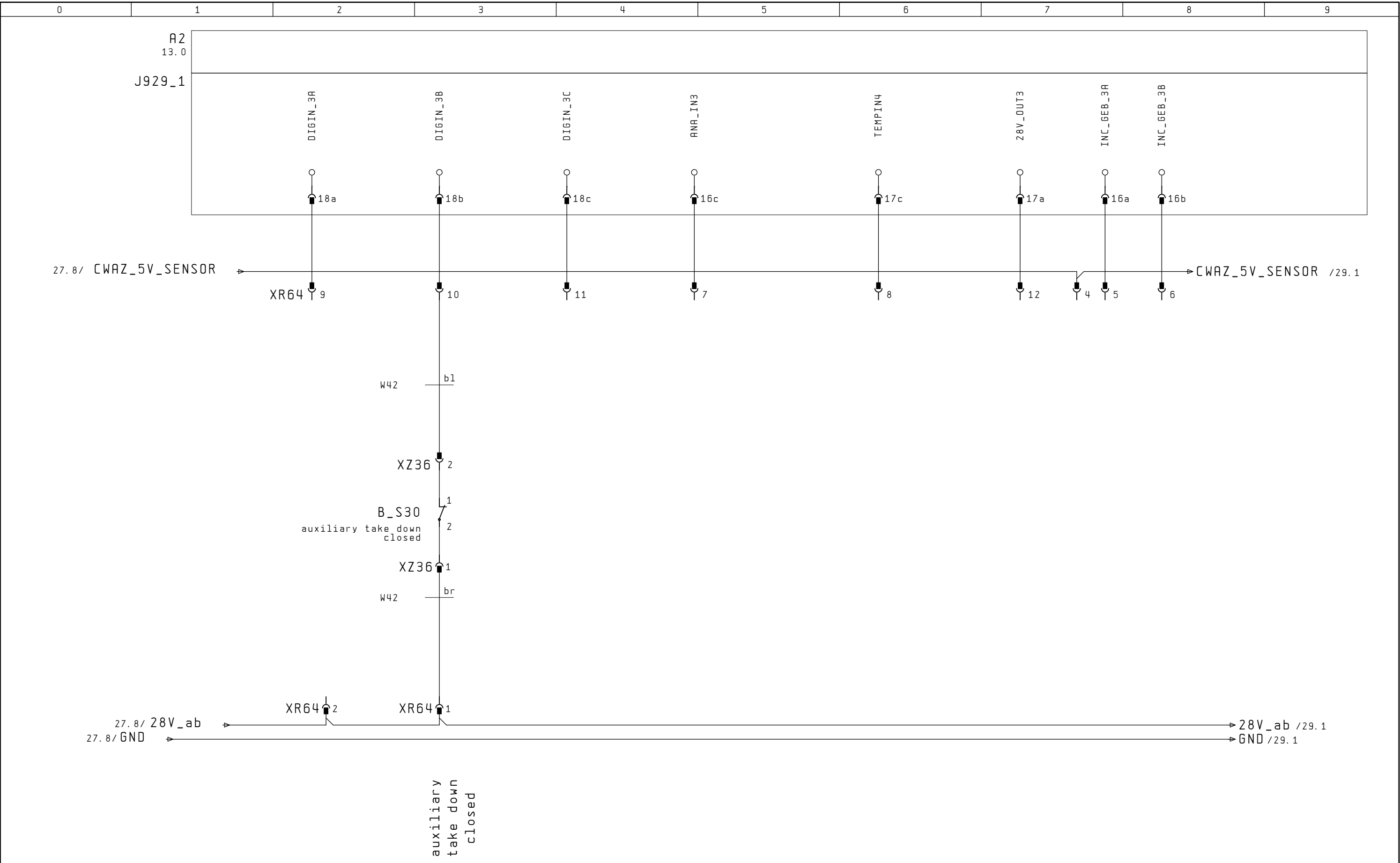
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			Gepr. 27. Mär. 2009								Ä. St. 00	
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.				35 B1.	



			Datum		circuit diagram 222		H. Stoll GmbH & Co. KG	signals Take down XR62	Id. Nr. 257 280		=	
			Bearb. KEH								+	
			Gepr. 27. Mär. 2009									
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.		Ä. St. 00		B1. 26	
												35 B1.

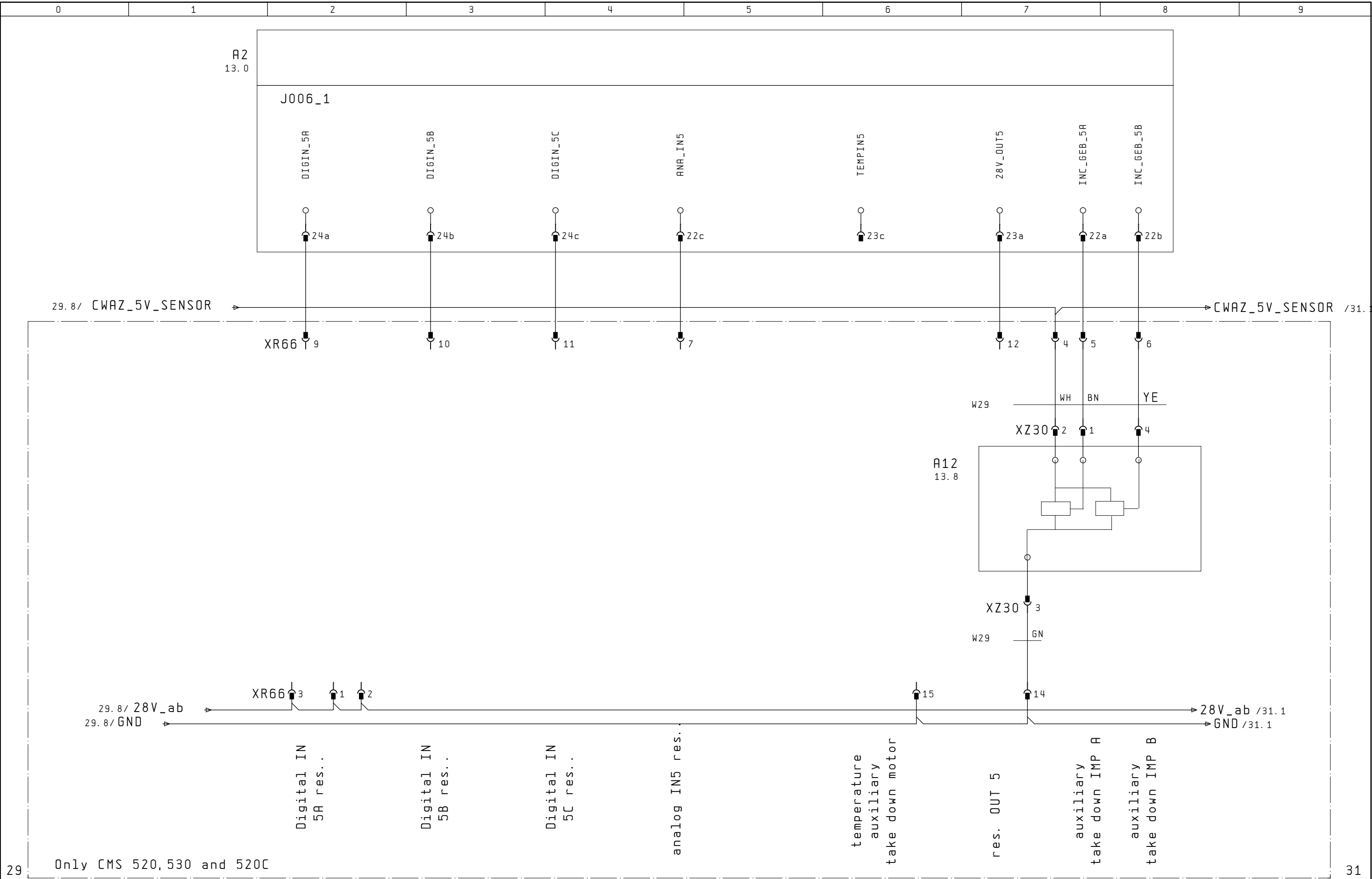


			Datum		circuit diagram 222	H. Stoll GmbH & Co. KG	signal comb XR63	Id. Nr. 257 280		=		
			Bearb.	KEH						+		
			Gepr.	27. Mär. 2009							B1.	27
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.	Ä. St. 00				35 B1.



			Datum		circuit diagram 222	H. Stoll GmbH & Co. KG	signal auxiliary take down open XR64	Id. Nr. 257 280		=		
			Bearb.	KEH						+		
			Gepr.	27. Mär. 2009							B1.	28
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.	Ä. St. 00				35 B1.

			Datum		 STOLL THE RIGHT WAY TO KNIT		H. Stoll GmbH & Co. KG	signal Take down open XR65	Id. Nr. 257 280		=	
			Bearb. KEH							+		
			Gepr. 27. Mär. 2009	circuit diagram 222							Ä. St. 00	
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.					35 B1.



			Datum		circuit diagram 222	STOLL H. Stoll GmbH & Co. KG	signals auxiliary take down	Nr. 257 280	=	B1.	30
			Bearb.	KEH							
			Gepr.	27. Mär. 2009							
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.		A. St. 00		35 B1.



