

Circuit diagram 220

1/34

STOLL
THE RIGHT WAY TO KNIT

Computer OKC, Ident. No.: 253 104.00

CMS	420E	520	530	520C									
Typ	579	567	566	570									
Circuit diagram 220.00	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 seperat transformer T2.

The protective motor switch Q1 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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25	Take down and comb		17. Okt. 2007	KEH	
26	signals Take down XR62		17. Okt. 2007	KEH	
27	signal comb XR63		17. Okt. 2007	KEH	
28	signal Take down open XR65		17. Okt. 2007	KEH	
29	signals auxiliary take down XR66		17. Okt. 2007	KEH	
30	signals comb hook XR67		17. Okt. 2007	KEH	

Identification of the plug connectors, sensors and actuators

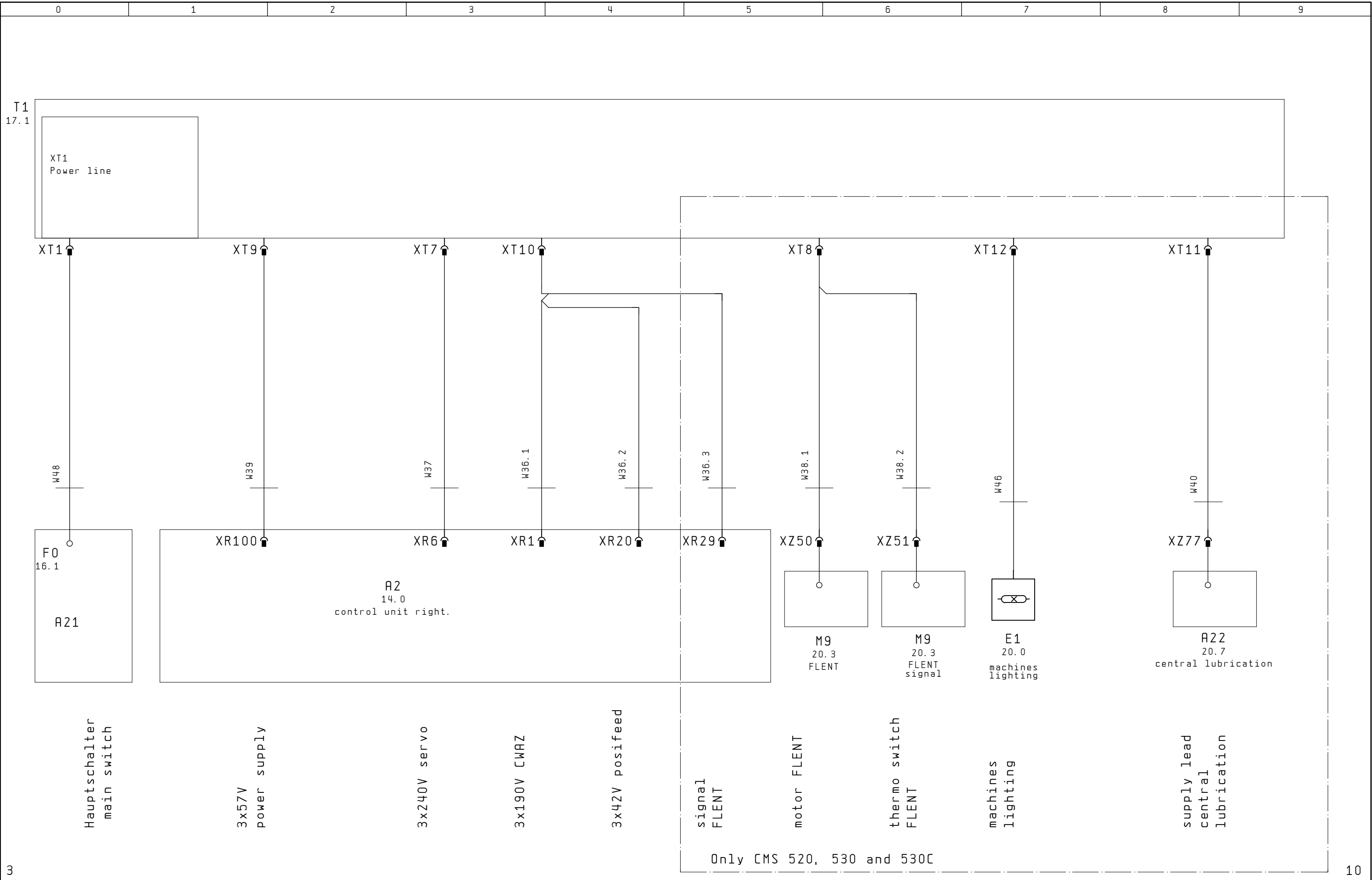
A__	Assemblies
B	Switches
E__	Lighting; Ventilator
F__	Fuses
J__	The card plug connector of the wiring system __ stands for the last three numbers of the respective Ident. number (example: Id.301007→ J007)
K__	Relays
M__	Motors
P__	Signal equipment
Q__	Brakes, magnets
T__	Transformers
W__	cable
V__	Interference 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 420	Ident No. CMS 520, 530, 520C
A2	A2	Control unit on the left co.		253669	253636 (530) 251638 (520)
A6	A6	Control unit on the left co.		301008	301008
A7	A7	Battery plug-in unit		240 167	240 167
A8	A8	Card Engaging		251065	219 983
A10	A10	Magnet switch shrouding covers outside		237 124	237 124
A11	A11	Yarn control device		300 744	300 744
A12	A12	Impulse giver main take-down / comb		----	217 462
A14	A14	Impulse giver auxiliary take-down		251066	220 159
A15	A15	Magnet switch shrouding covers in the middle		251916	229 396
A21	A21	Main switch		250363	250363
A22	A22	Central oil lubricating pump	Partly optional	----	235 068
A23	A23	Length measuring device (STIXX)	optional	236 275	236 275
A24	A24	Shock stop motion (Piezo)		220 011	220 011
A26	A26	Slack tensioner on the left		---	241345
A27	A27	Slack tensioner on the 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
B_S14	S 14	Switch take-down closed		026 259	026 259
B15li	S 15 li	Switch take-down closed	in group A26	----	x
B15re	S 15 re	Slack tensioner on the left	in group A27	x	x
B_S16	S 16	Slack tensioner on the right		026 259	026 259
B_S16a	S 16a	Microswitch Winding plate		222 063	222 063
B20	S 20	Comb reference at the top		214 163	214 163
B21	S 21	Comb reference bottom		214 163	214 163
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

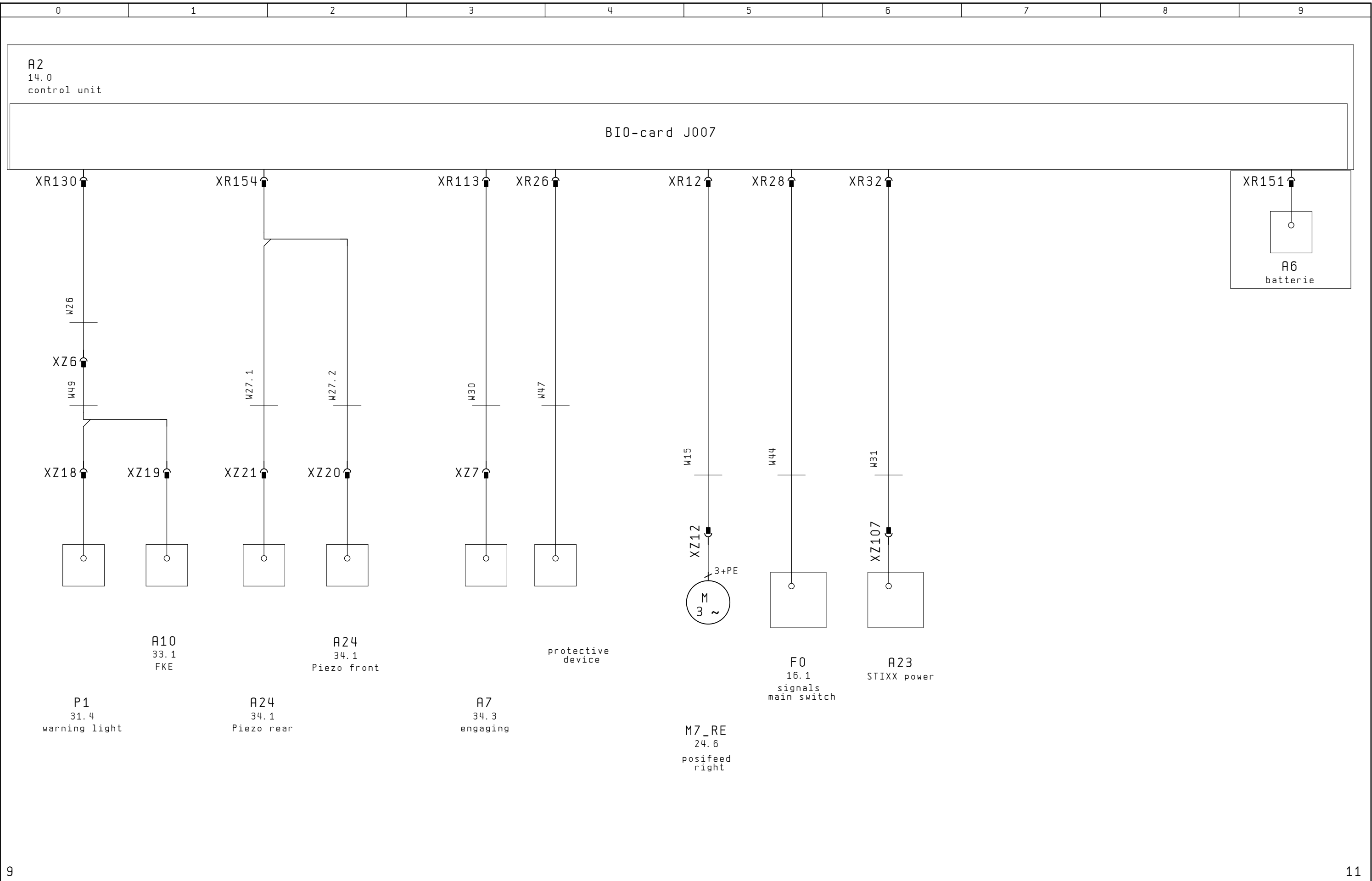
Identifier EN 61346-2	Old Identifier	Designation	Value/function	Ident No. CMS 420	Ident No. CMS 520, 530, 520C
B33.1	S33.1	Switch middle shrouding cover	in group A14	x	x
B33.2	S33.2	Switch middle shrouding cover	in group A14	x	x
B34.1	S34.1	Switch middle shrouding cover	in group A14	x	x
B34.2	S34.2	Switch middle shrouding cover	in group A14	x	x
B38	S38	Reference sensor racking rear	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	Cover plate Comb depressed		026 259	026 259
E1	E1	Machine lighting at the top		----	205 546
E3	LV 1	Ventilator drive motor		----	213 722
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	3,15AT / 440V 6,3AT / 440V	025 261 ---	--- 026809
F 5	F 5	Feed wheel	3,15AT / 440V 6,3AT / 440V	025 261 ---	--- 026809
F 6	F 6	Feed wheel	3,15AT / 440V 6,3AT / 440V	025 261 ---	--- 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
F17	F17	Lighting	3,15AT / 440V	----	025 261
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 STIXX	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	26809	26809

Identifier EN 61346-2	Old Identifier	Designation	Value/function	Ident No. CMS 420	Ident No. CMS 520, 530, 520C
P1	H1	Warning light complete		250205	251 153
P2	H2	Warning light green	in group P1	x	x
P3	H3	Signal transmitter (horn)	in group P1	----	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
K7M	K7M	Relay lighting	in group T1	----	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		----	213 871
M 6	M 6	Comb hook motor		213 872	213 872
M 7	M 7	Friction feed wheels		251743	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
T1	T1	Main transformer		250263	253 299
T2	T2	Series transformer		300 445	300 445
T3	T3	Transformer 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 9	W 9	Cable fabric take-down motor		240 291	240 291
W11	W11	Cable comb motor		240 310	240 310
W12	W12	Cable auxiliary take-down motor		----	240 467
W13	W13	Cable comb hook motor		240 308	240 308
W14	W14	Cable feed wheel on the left		----	240 464
W15	W15	Cable feed wheel on the right		240 294	240 294
W20	W20	Cable switch main take-down		240 312	240 312
W22	W22	Cable racking limit switch		240 292	240 292

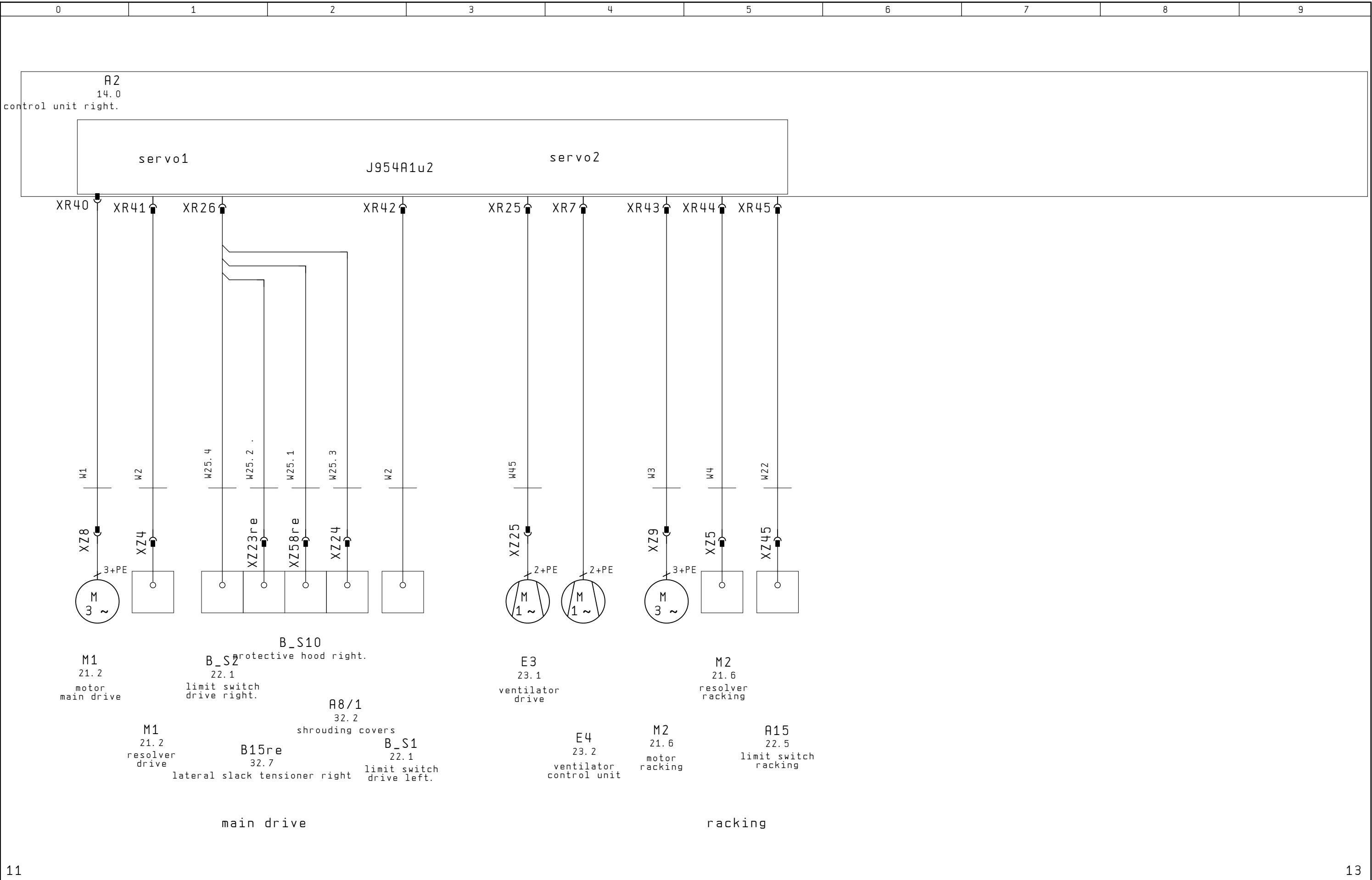
Identifier EN 61346-2	Old Identifier	Designation	Value/function	Ident No. CMS 420	Ident No. CMS 520, 530, 520C
W25	W25	Cable protective units on the right		253441	253441
W26	W26	Cable yarn tensioner , warning light , horn		252587	252587
W27	W27	Cable piezo sensor		240 518	240 518
W28	W28	Cable switch comb		240 311	240 311
W29	W29	Cable switch auxiliary take-down		----	240 468
W30	W30	Cable engaging		252538	252538
W31	W31	Cable Length measuring device	optional	236 718	236 718
W36	W36	Cable Power supply WAZ / feed wheel		250354	240 469
W37	W37	Cable Power supply SERVO		240 502	240 502
W38	W38	Cable Power supply FLUFF ABSORPTION		----	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
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
W47	W47	Cable protective units left		252539	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		252377	240 327
W51	W51	Cable Display LVDS		252376	242 421
W52	W52	Cable USB 1		253706	253706
W53	W53	Cable USB 2		----	253706
V1	Z1	Power filter		219 133	219 133
V3	Z3	Motor interference suppressor fluff absorption		----	008 641

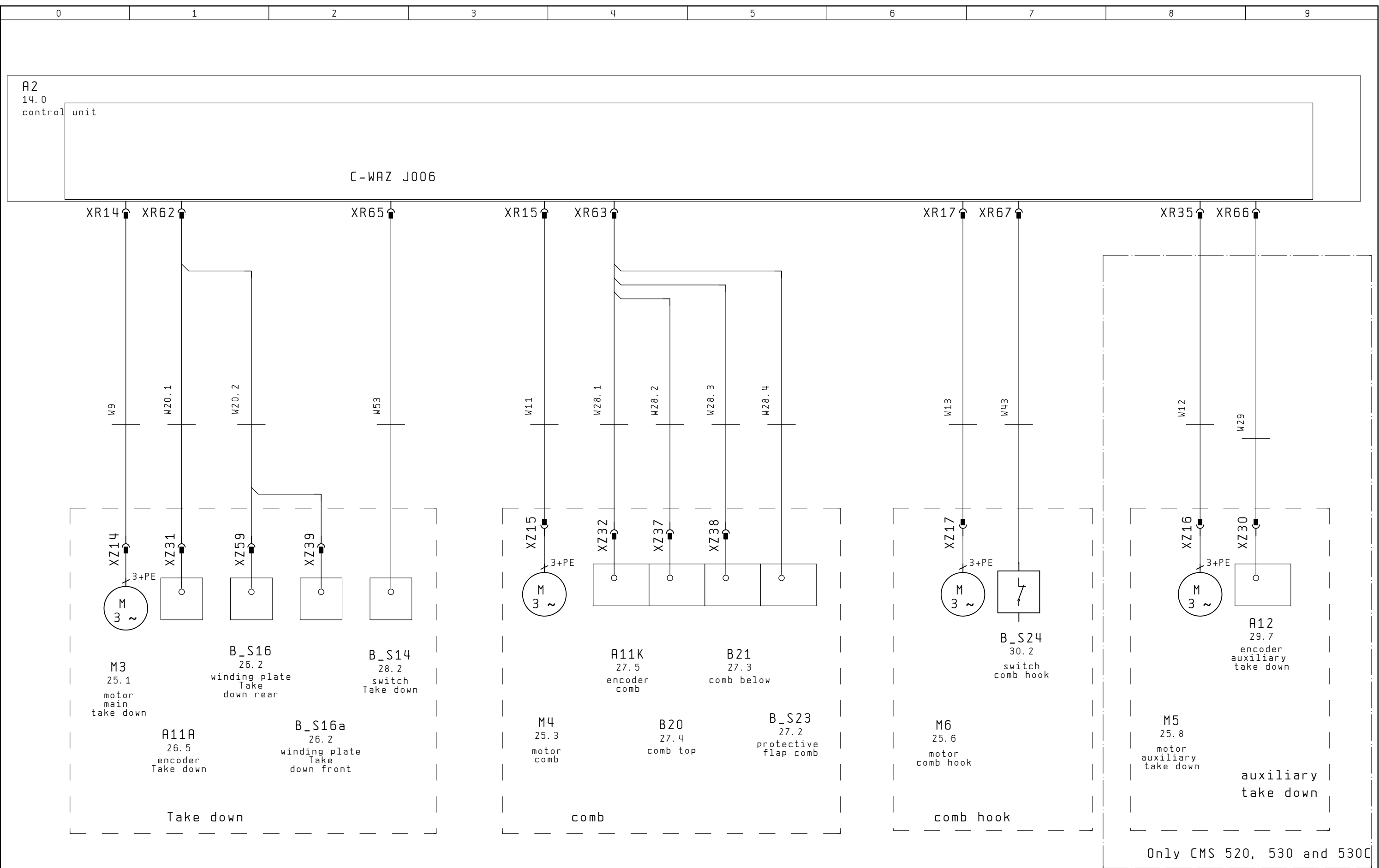


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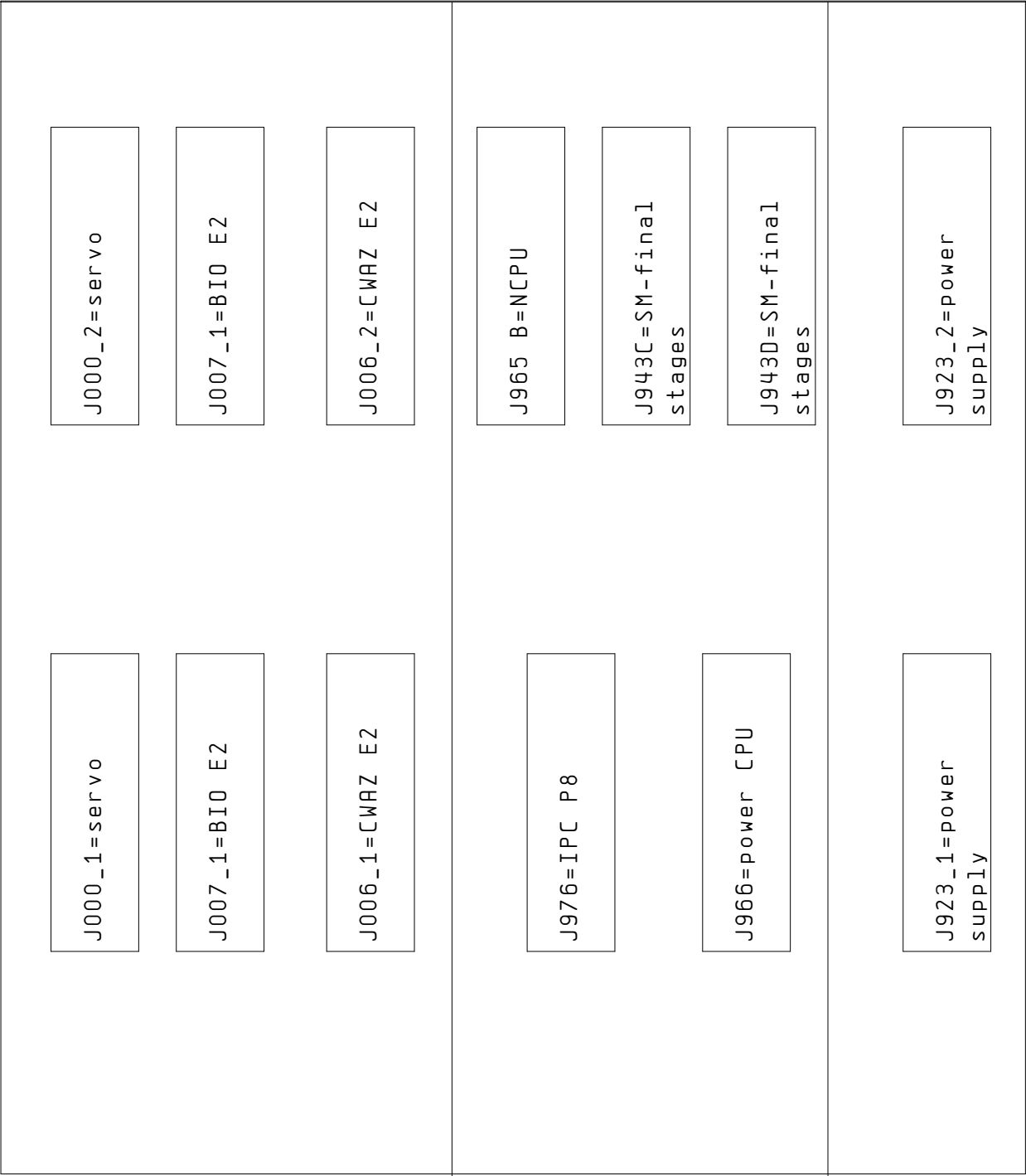




A2
10.0

wiring system 251453

back side



- XR1=power supply WAZ

XR6=power supply servo

XR7=ventilator_1_control unit

XR11=posifeed left

XR12=posifeed right

XR14=motor take down

XR15=motor comb

XR17=motor comb hook

XR20=power supply 42/24VAC

XR25=ventilator main drive motor

XR26=protectiv devices

XR28=signals main switch

XR29=signal FLENT

XR32=STIXX_power

XR35=motor auxiliary take down

XR40=motor Servo1

XR41=resolver Servo1

XR42=limit switch Servo1

XR43=motor Servo2

XR44=resolver Servo2

XR45=limit switch Servo2

XR62=sensors main take down

XR63=sensors comb

XR65=sensors main take down
- XR66=sensors auxiliary take down

XR67=sensors comb hook

XR68=central lubrication

XR100=power supply supply lead 57V ~

XR107=STIXX

XR113=engaging rod

XR121=reserve

XR130=FKE, lamp

XR133=CAN

XR136=needle impuls rear

XR137=needle impuls front

XR151=batterie

XR152=signals, limit switch left.

XR154=piezo needle bed front. + rear.

XR161=YC

XR207=keypad/Display-contr. BUS//>

XR215=USB 1

XR216=USB 2

XR217=Display LVDS

XR332=carriage rear

XR333=carriage power front

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

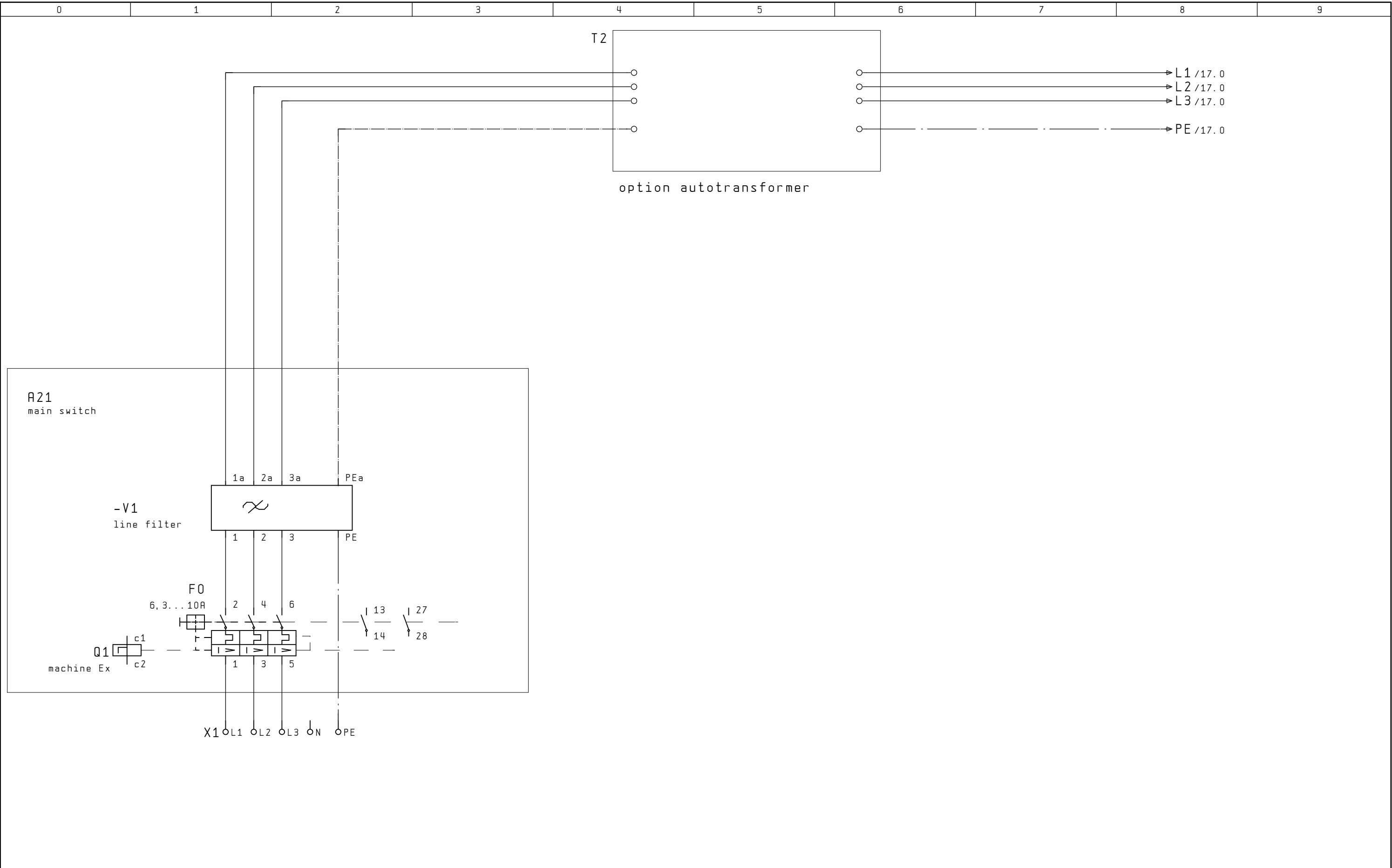
XZ38=position comb below

XZ39=winding plate Take down rear.

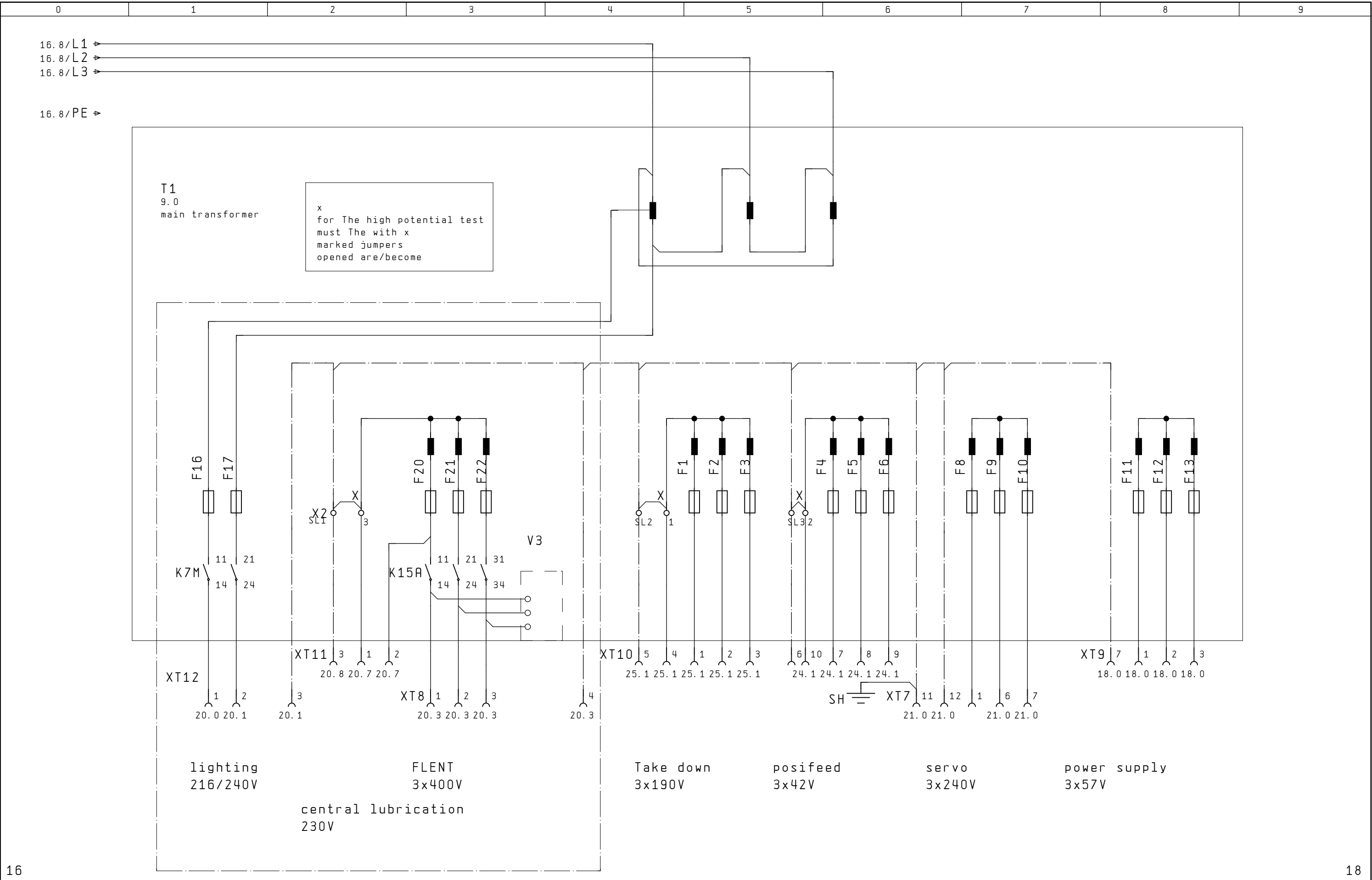
XZ58re=protective hood right

XZ59=winding plate Take down front.

XZ45=limit switch racking



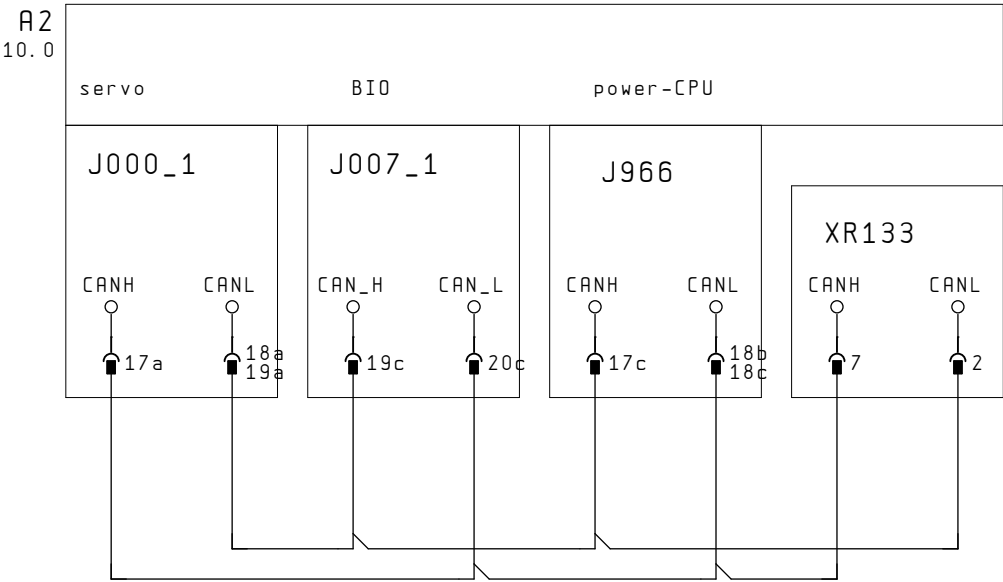
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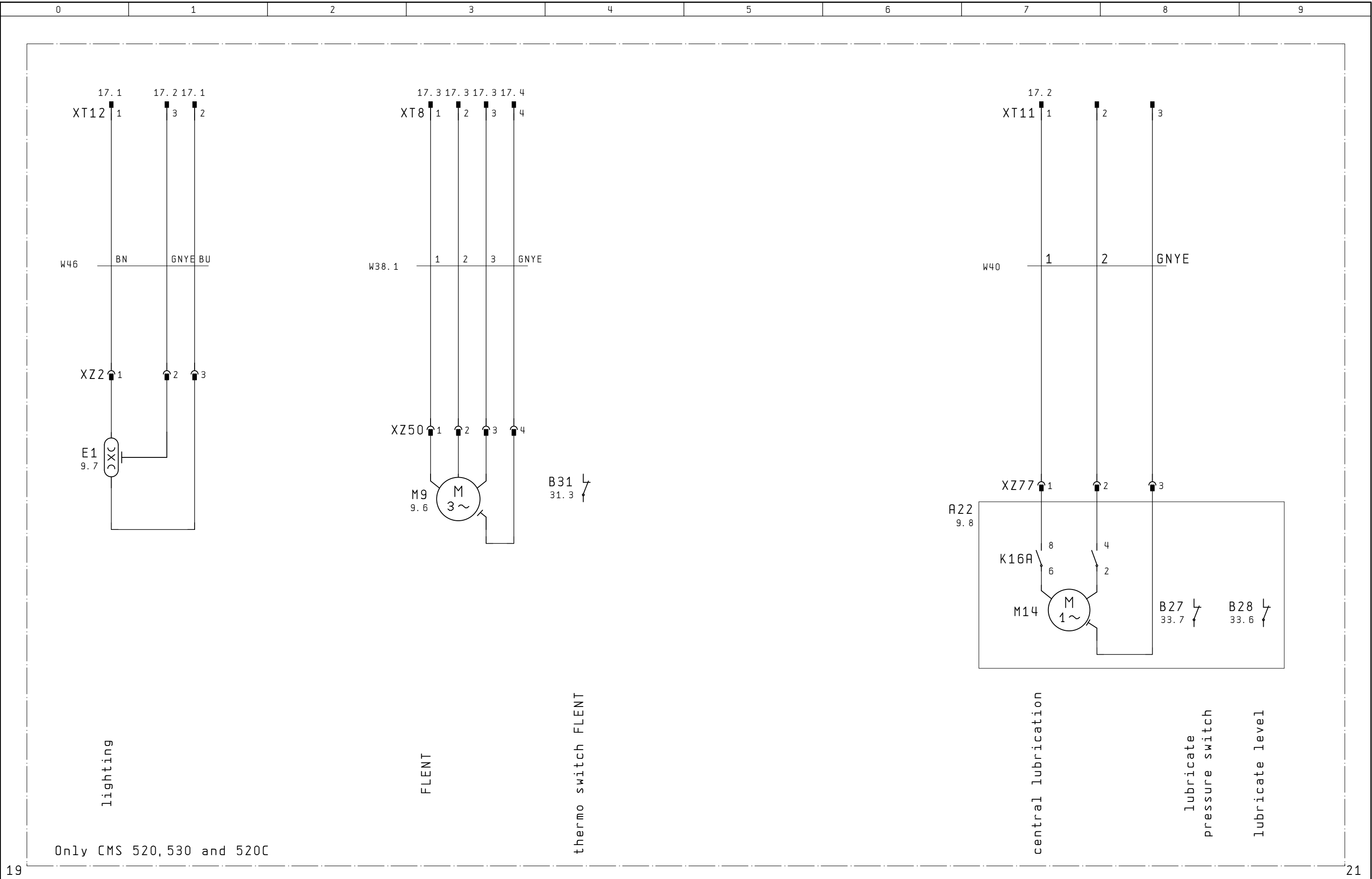


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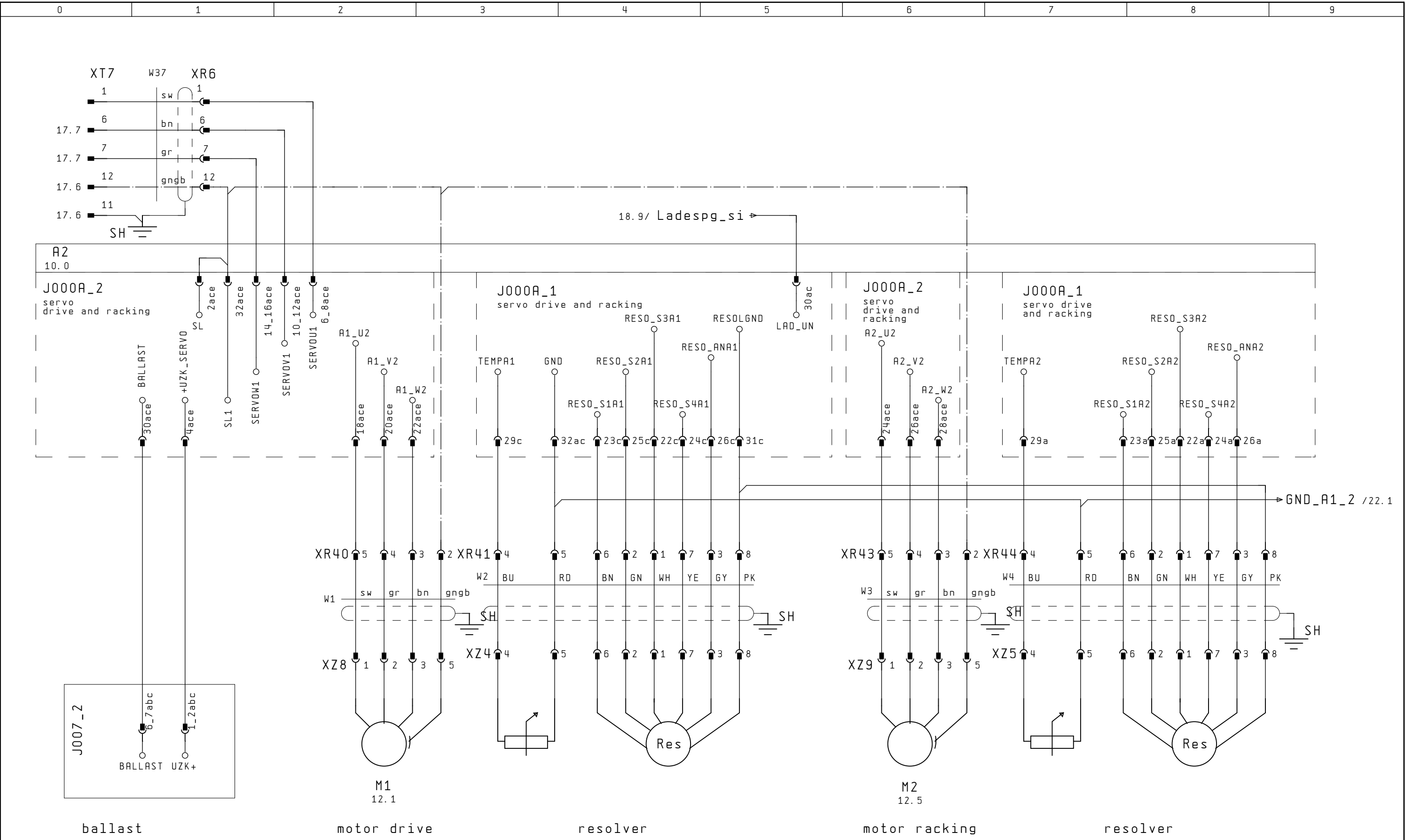


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19	21									
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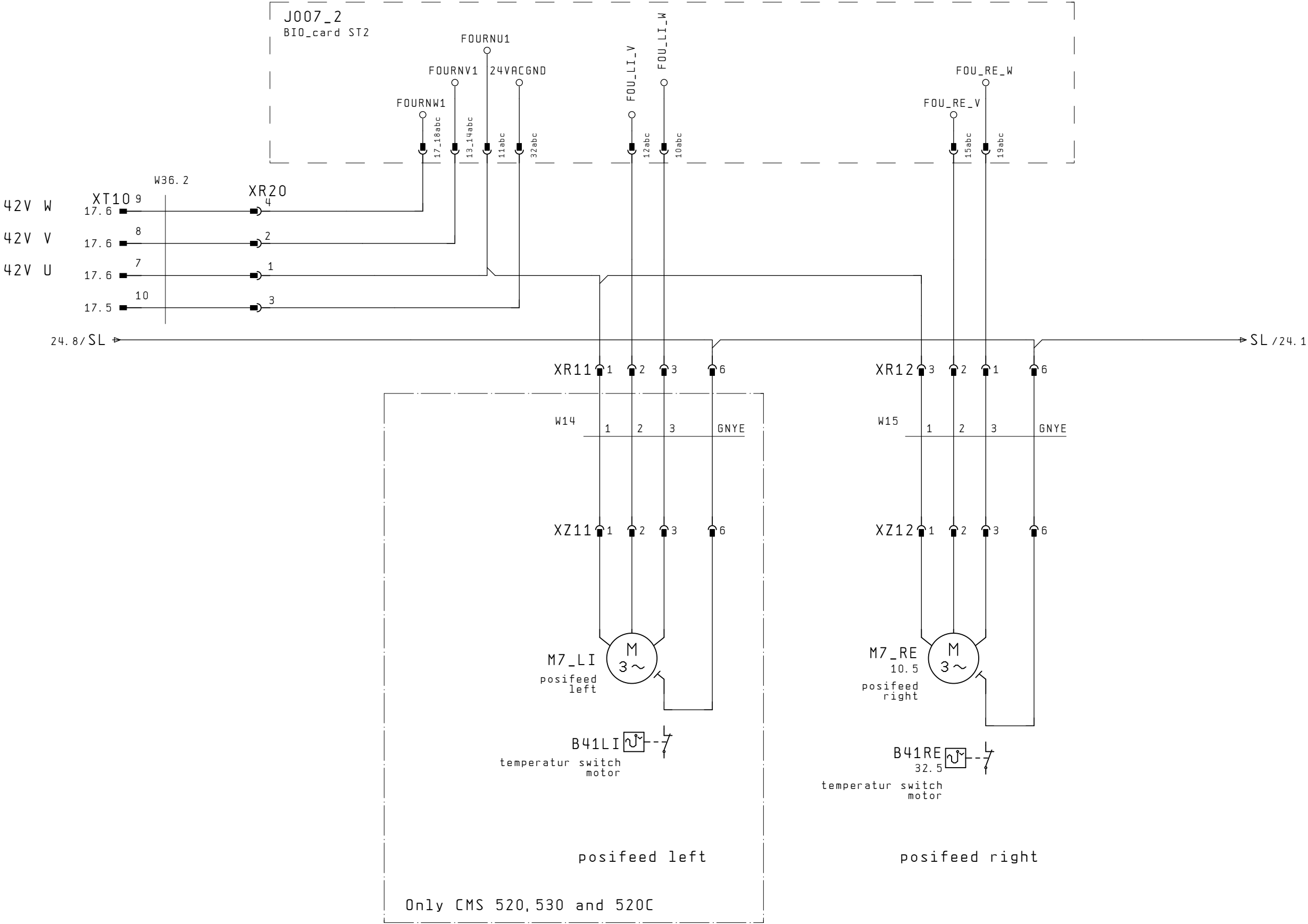
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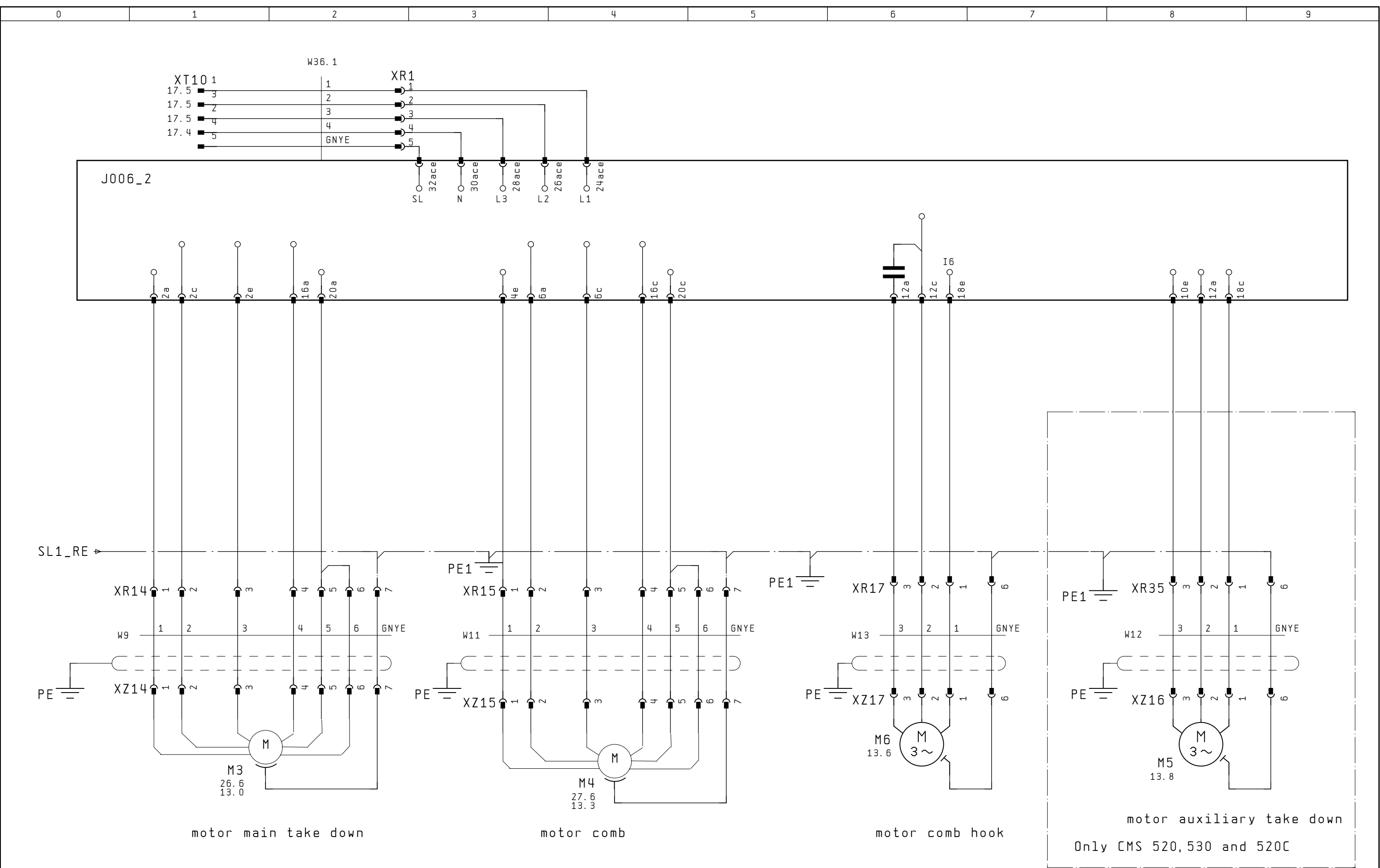
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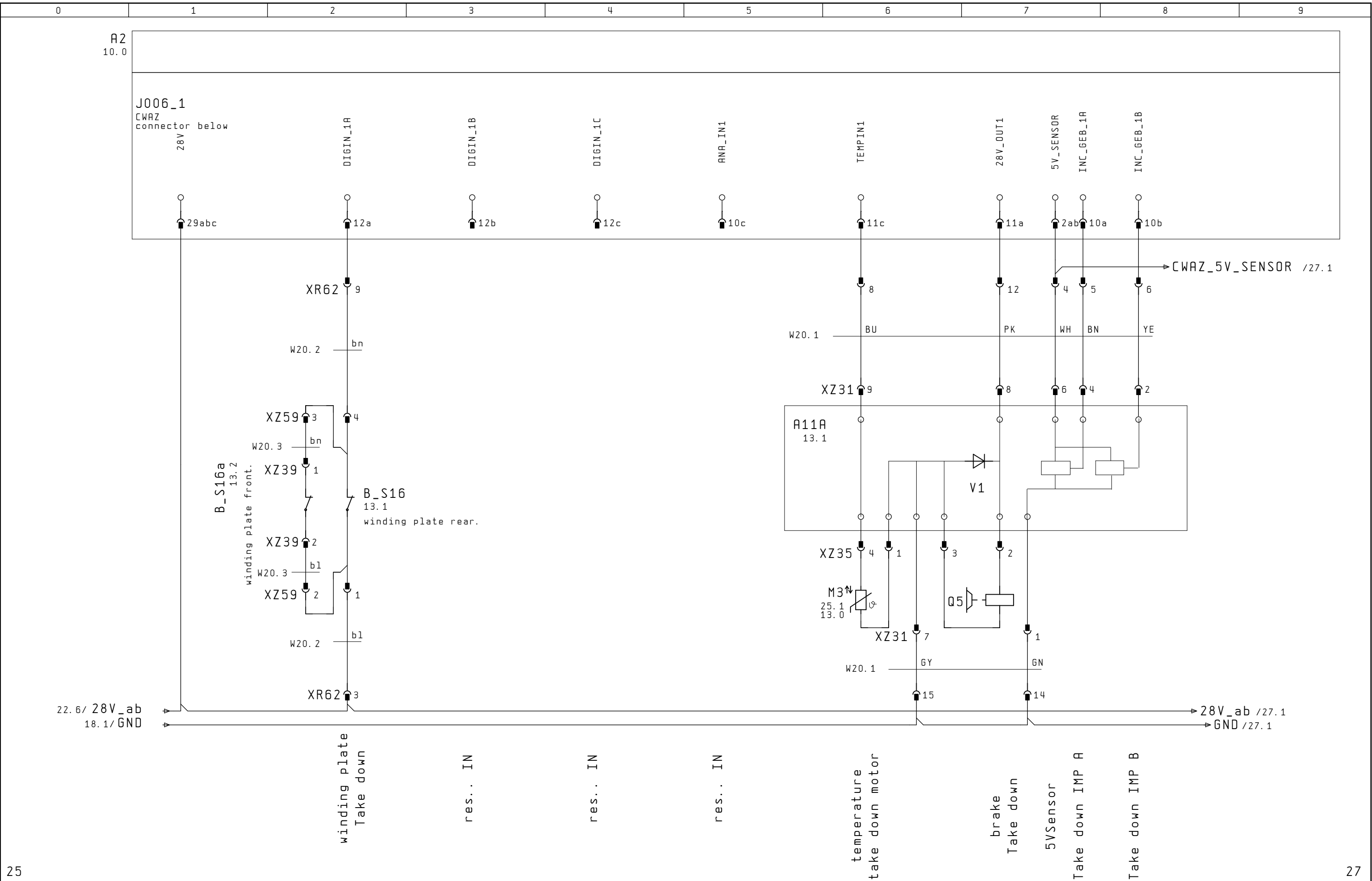
ventilator
motor
drive

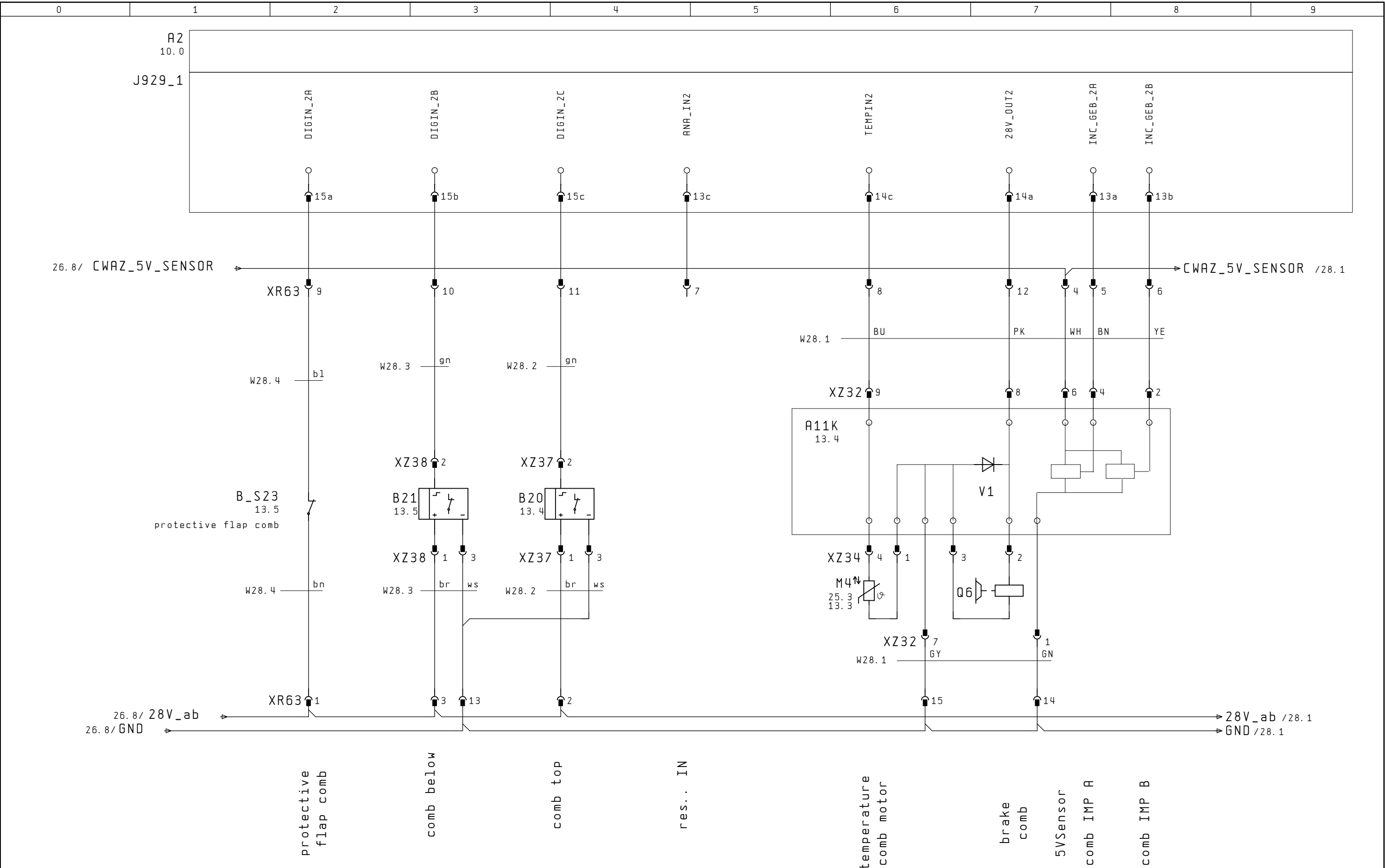
ventilator
control unit



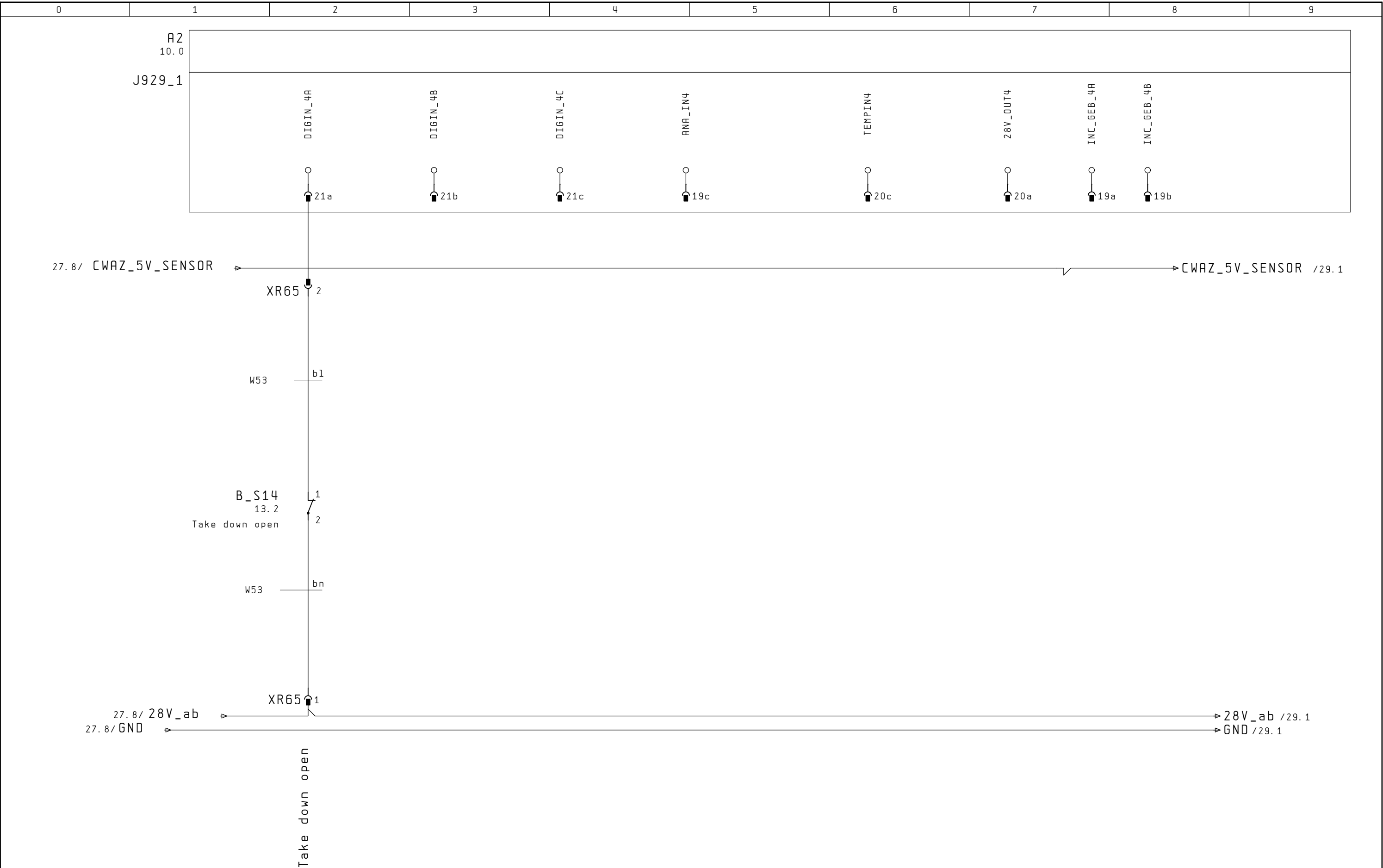


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			Gepr. 17. Okt. 2007									
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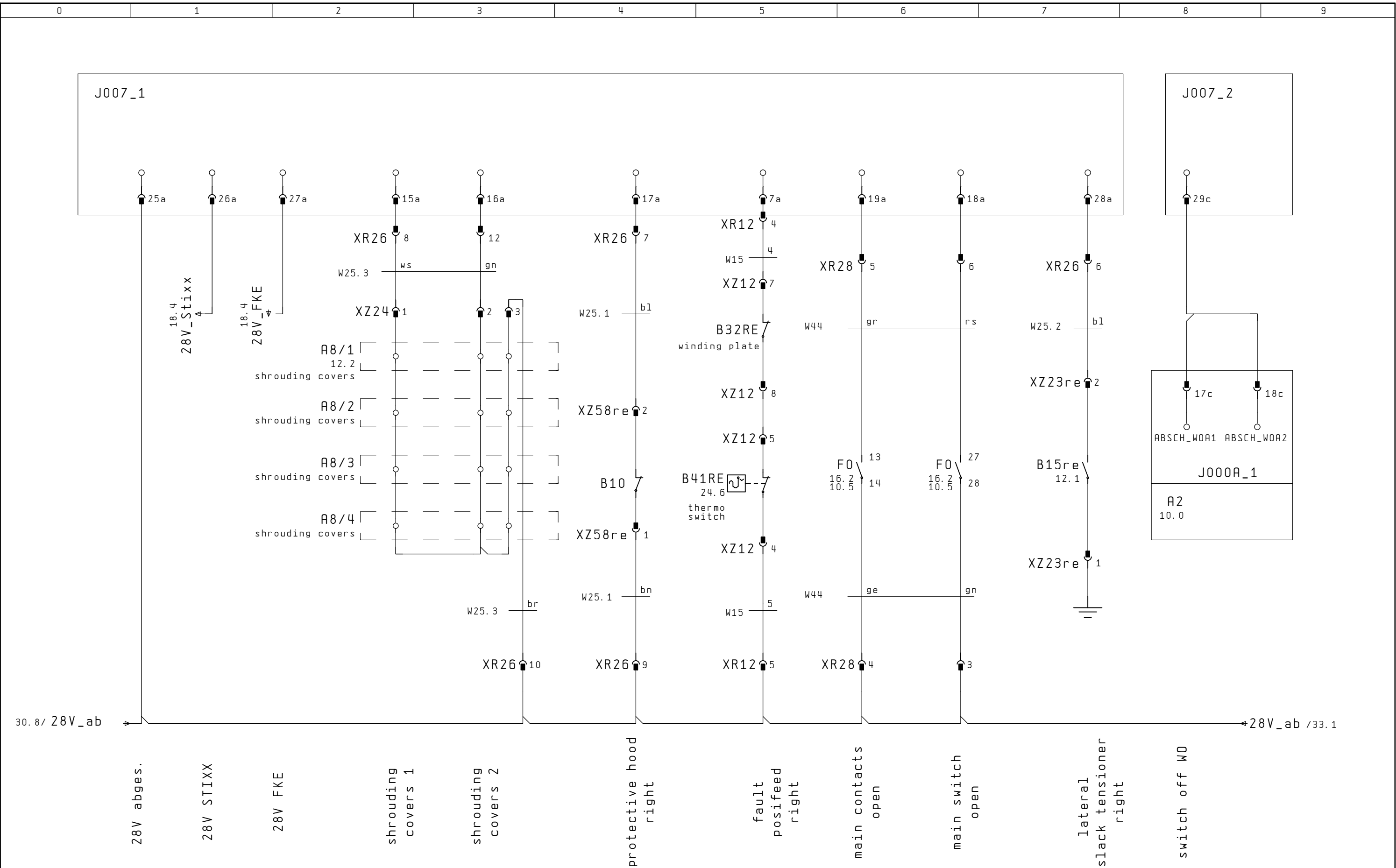




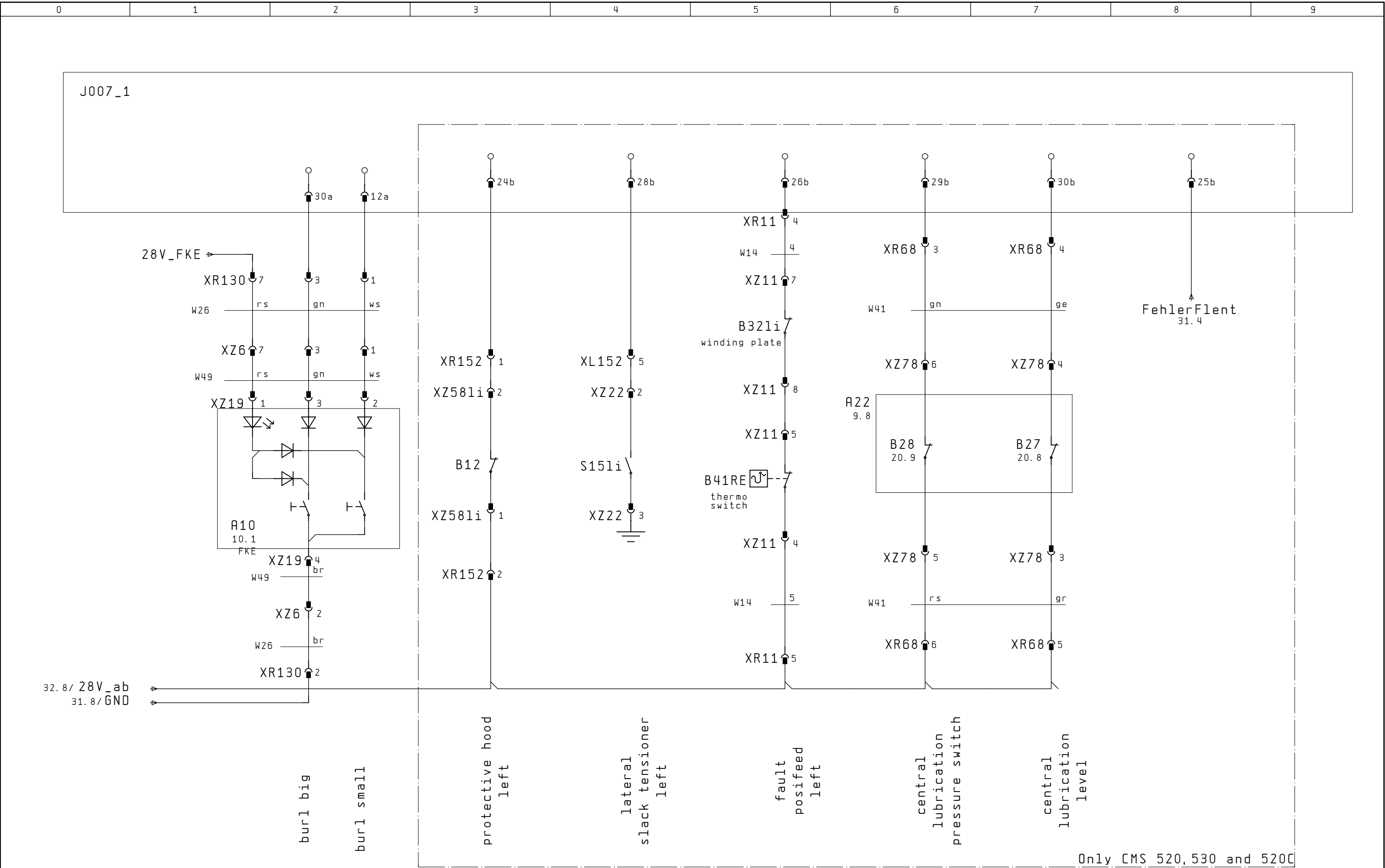
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			Bearb.	KEH								
			Gepr.	17. Okt. 2007								
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			Datum		circuit diagram 220	H. Stoll GmbH & Co. KG	signal Take down open XR65	Id. Nr. 253104_00			
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			Datum		circuit diagram 220	STOLL THE RIGHT WAY TO KNIT	H. Stoll GmbH & Co. KG	inputs BIO-card	Id. Nr. 253104_00			
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			Gepr.	17. Okt. 2007								
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.				B1.	32
											34 B1.	



			Datum		circuit diagram 220	STOLL THE RIGHT WAY TO KNIT	H. Stoll GmbH & Co. KG	inputs BIO-card	Id. Nr. 253104_00		
			Bearb.	KEH							
			Gepr.	17. Okt. 2007							
Änderung	Datum	Name	Norm		Urspr.	Ers. f.	Ers. d.			B1.	33
										34 B1.	

