

Electro documentation

EPLAN-Ver.: 2.2.5
Build-No.: 6338



ELEKTROINSTALLATIONEN, STEUERUNGSTECHNIK, ANLAGENBAU

Customer SBM Mineral Processing GmbH
Plant designation SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile
Drawing number P13-0006
Commission TME

Manufacturer Elektro Steinschaden GmbH

Make
Type SMR 10/5/4 FU
Location mobil
Mounting site
Special surrounding
Particularities
Degree of protection IP 54

Manufacturing date 10/2012
Weight
Power 150kW
Incoming voltage 3/PEN 400V /50Hz
Control voltage 230V /50Hz
24VDC
Supply line 7x H07RN-F 1X70
Switch cabinet ERA SONDER 1700x800x400
Plinth 100mm
Regulation EN 60204-1

Created on 24.05.2013
Responsible for project
Date changed 02.05.2016
Last editor herbert

Highest page number 54
Number of pages 54

File SMR_TME_eng

			Datum		 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage: TME	ALLE RECHTE VORBEHALTEN	=
			Bearb.	herbert		SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016				
Revision	Datum	Name	Norm		Bez.: Cover sheet	Projekt-Nr.: P13-0006	Seite	1 von 54

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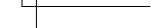
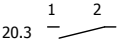
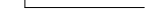
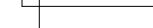
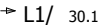
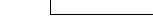
Column X: An automatically generated page was edited. **PLAN5 Inhaltsverzeichnis**

Page	Page description	supplementary page field	Date	Edited by	X
1	Cover sheet		02.05.2016	herbert	
2	Table of contents : 1 - 30		02.05.2016	herbert	
3	Table of contents : 31 - 54		02.05.2016	herbert	
4	Technical specifications		02.05.2016	herbert	
5	Information about changes		02.05.2016	herbert	
6	Motor- and Devicelist		02.05.2016	herbert	
7	Panel view / main distributor		02.05.2016	herbert	
8	Panel view / sub distributor FC crusher		02.05.2016	herbert	
9	Panel view / mains changeover		02.05.2016	herbert	
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11	Primary circuit / feeding		02.05.2016	herbert	
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21	Control circuit safety relay 2		02.05.2016	herbert	
22	Control circuit feeding conveyor		02.05.2016	herbert	
23	Control circuit metal detector		02.05.2016	herbert	
24	Control circuit "crusher safety"		02.05.2016	herbert	
25	Control circuit drives		02.05.2016	herbert	
26	Control circuit SMR-crusher		02.05.2016	herbert	
27	Control circuit converter SMR-crusher		02.05.2016	herbert	
28	Control circuit diesel generator set		02.05.2016	herbert	
29	MPI bus system CPU314C-OP77A and Teleservice		02.05.2016	herbert	
30	PLC overview		02.05.2016	herbert	

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PLAN5 Inhaltsverzeichnis

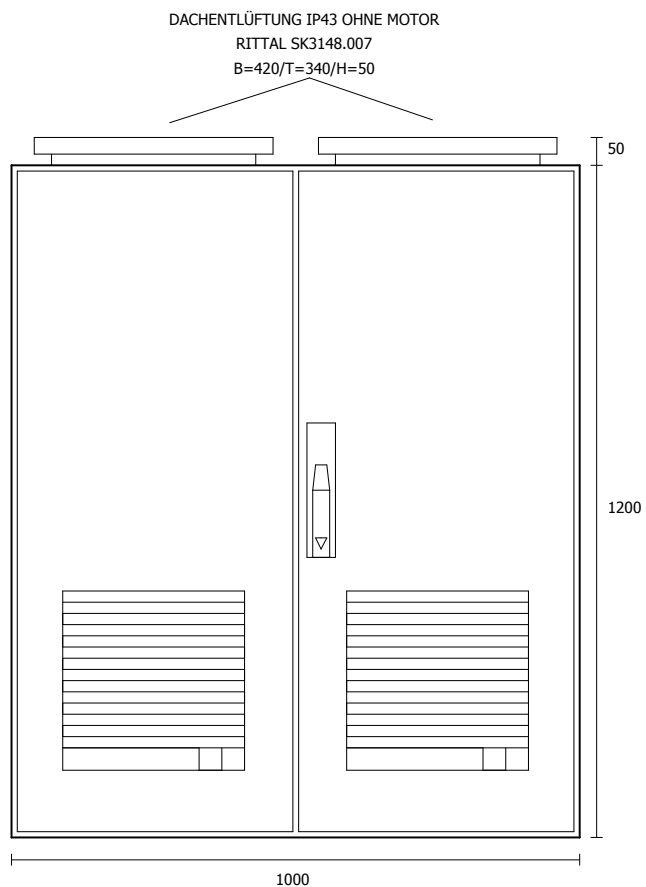
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31	PLC-analogue inputs PEW 752 - PEW 760		02.05.2016	herbert	
32	PLC-analogue outputs PAW 752 - PAW 754		02.05.2016	herbert	
33	PLC-digital inputs E 126.0 - E 126.7		02.05.2016	herbert	
34	PLC-digital inputs E 124.0 - E 124.7		02.05.2016	herbert	
35	PLC-digital inputs E 125.0 - E 125.7		02.05.2016	herbert	
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37	PLC-digital outputs A 125.0 - A 125.7		02.05.2016	herbert	
38	PLC-digital inputs E 0.0 - E 0.7		02.05.2016	herbert	
39	PLC-digital inputs E 1.0 - E 1.7		02.05.2016	herbert	
40	Overview terminal strips		02.05.2016	herbert	X
41	X0		02.05.2016	herbert	X
42	X1		02.05.2016	herbert	X
43	X2		02.05.2016	herbert	X
44	X2		02.05.2016	herbert	X
45	X3		02.05.2016	herbert	X
46	3X0		02.05.2016	herbert	X
47	3X2		02.05.2016	herbert	X
48	3X10		02.05.2016	herbert	X
49	Bill of materials		02.05.2016	herbert	X
50	Bill of materials		02.05.2016	herbert	
51	Bill of materials		02.05.2016	herbert	X
52	Bill of materials		02.05.2016	herbert	X
53	Bill of materials		02.05.2016	herbert	X
54	Bill of materials		02.05.2016	herbert	

Equipment according to EN 81346-2	Wiring colors	Designation, cross reference
A...no primary purpose B...Transducers, prox.-switch, lim.-switch C...Condensators, buffer battery E...Lighting, heaters, fans F...Fuses, thermal relays PTC protection relays ,miniature circuit breakers G...Generators, UPCs K...Relays, timerelays ,auxillary relays, controllers (CPU), EMC-Filters M...Motors, solenoid valves P...Instruments, pilot lamps, hooters Q...Circuit breaker, isolators, contactors load switches R...Resistors, chokes, coils S...Switches, push buttons, commutators T...Transformers, softstarter rectiviers, converters U...Isolator V...Filter W...Cabel, bus-bars, LWL X...Terminal strips, plugs, sockets	Mains : black Neutral wire : light blue Prot. cond. : green/yellow Control: 230VAC after Trafo: red 24VDC (+) : dark blue 24VDC (-) : blue/black External voltage : orange Measurement : white	Equipment identification  Contactor coil  Page  Equipment (see left column)  Page column (0-9)  Cross reference contactors  Page number from switch contact  Page column (0-9)  Contact  Page number from contactor coil  Page column (0-9)  Potential break point with cross reference  Page number from following break point  Page column (0-9)

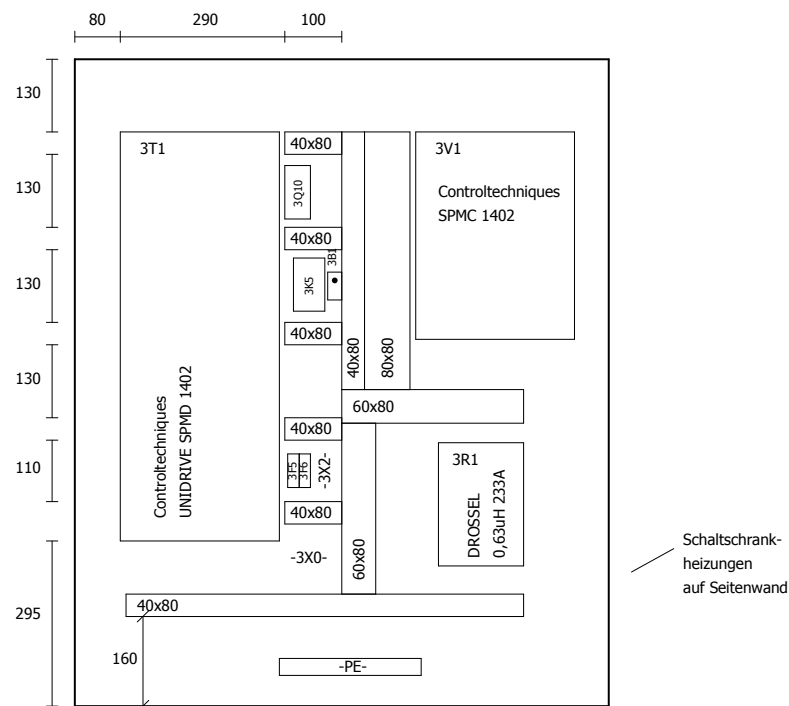
Information about changes

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			Datum		 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage:	TME	ALLE RECHTE VORBEHALTEN		=	
			Bearb.	herbert				SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.:	74132467	+
			Gepr.	02.05.2016							
Revision	Datum	Name	Norm			Bez.:	Information about changes	Projekt-Nr.:	P13-0006	Seite 5 von 54	



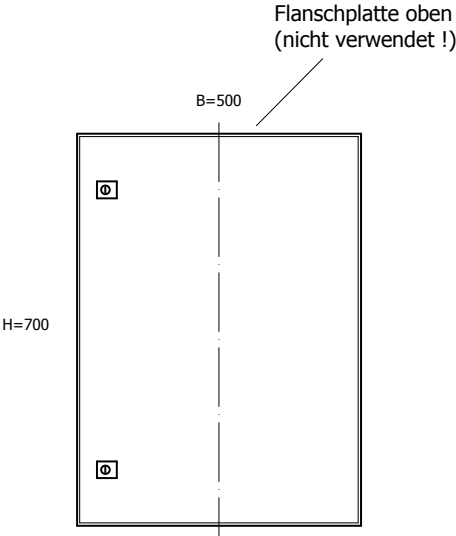
RITTAL CM5120.500
B=1000 / H=1200 / T=400



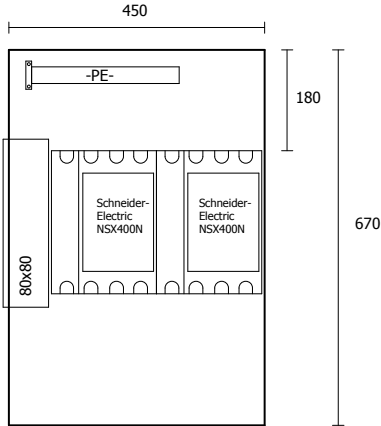
Montageplatte RITTAL CM5120.500
B=940 / H=1150

1 Stk.	CM SCHRANK 1000x1200x400	CM5120.500	RITTAL
2 Stk.	CM BODENBLECH 250MM T=400 B=1000	CM5001.224	RITTAL
2 Stk.	DACHENTLÜFTUNG OHNE MOTOR	SK3148.007	RITTAL
2 Stk.	HALTER FÜR FILTERMATTE 550/700 m³/h	SK3243.200	RITTAL

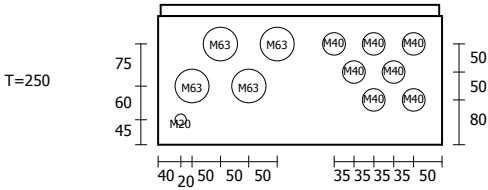
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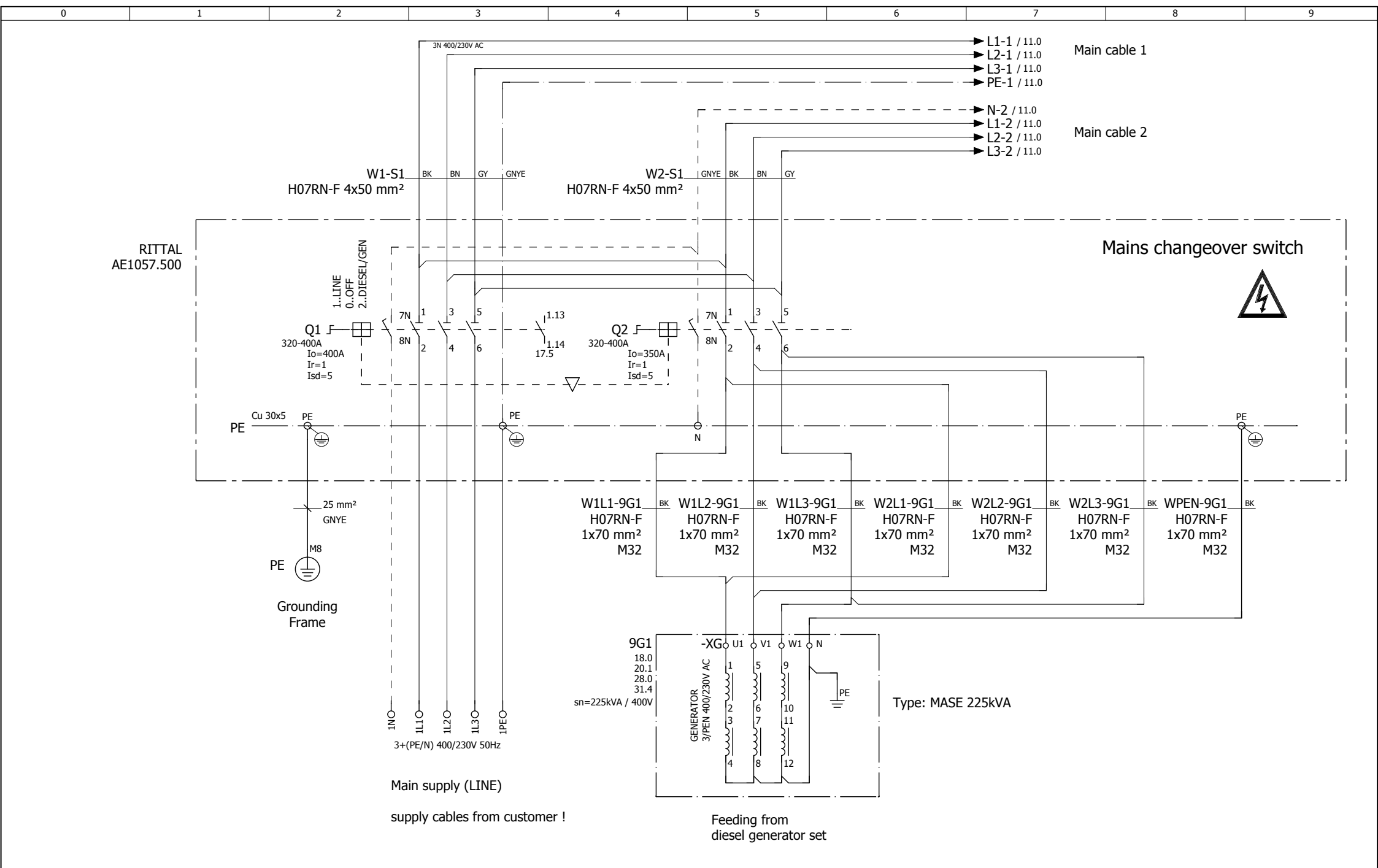
Front view
RITTAL AE1057.500
B=500 / H=700 / T=250
RAL7035



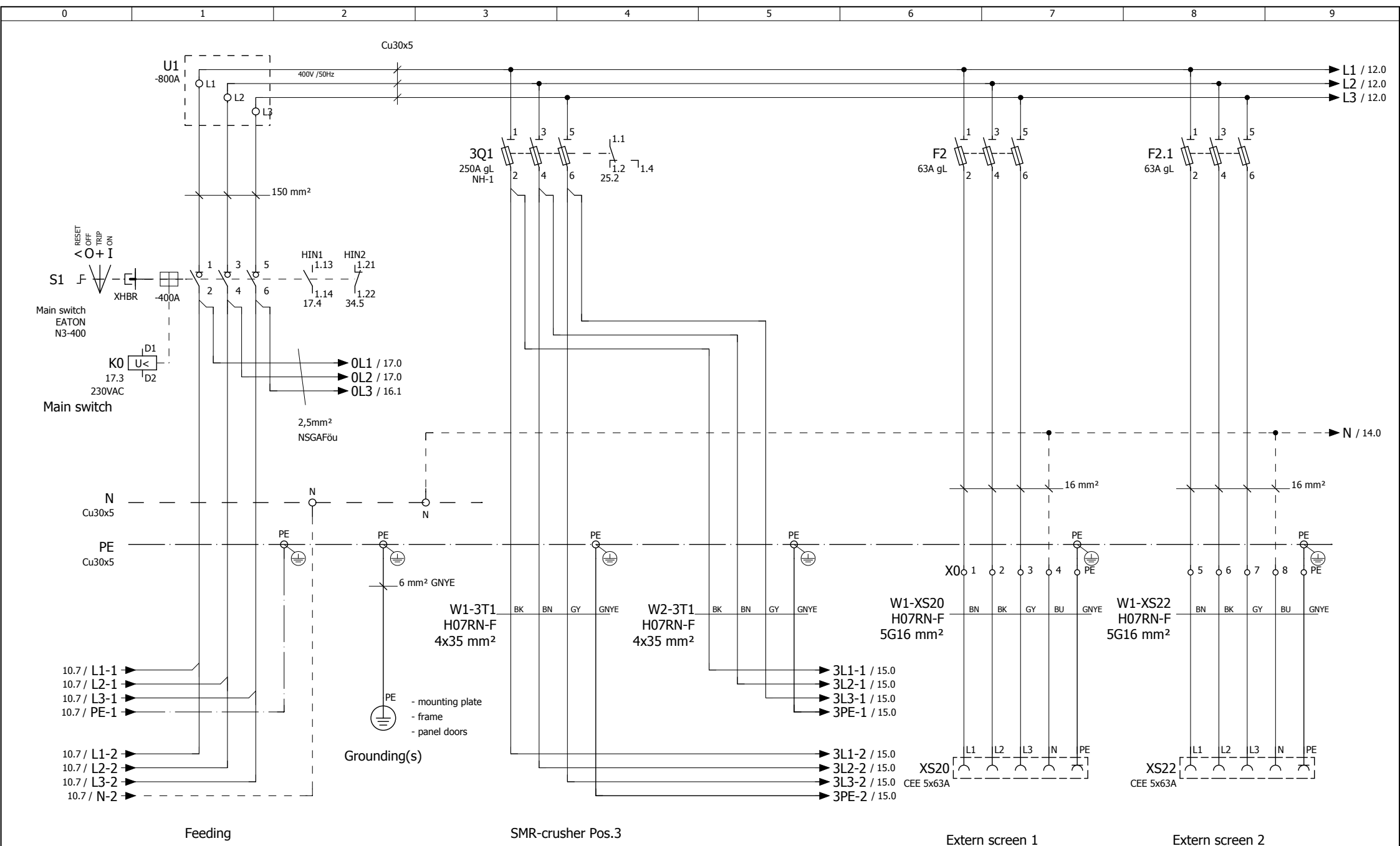
Mounting plate
RITTAL AE1057.500
B=449 / H=670



Bottom view
RITTAL AE1057.500

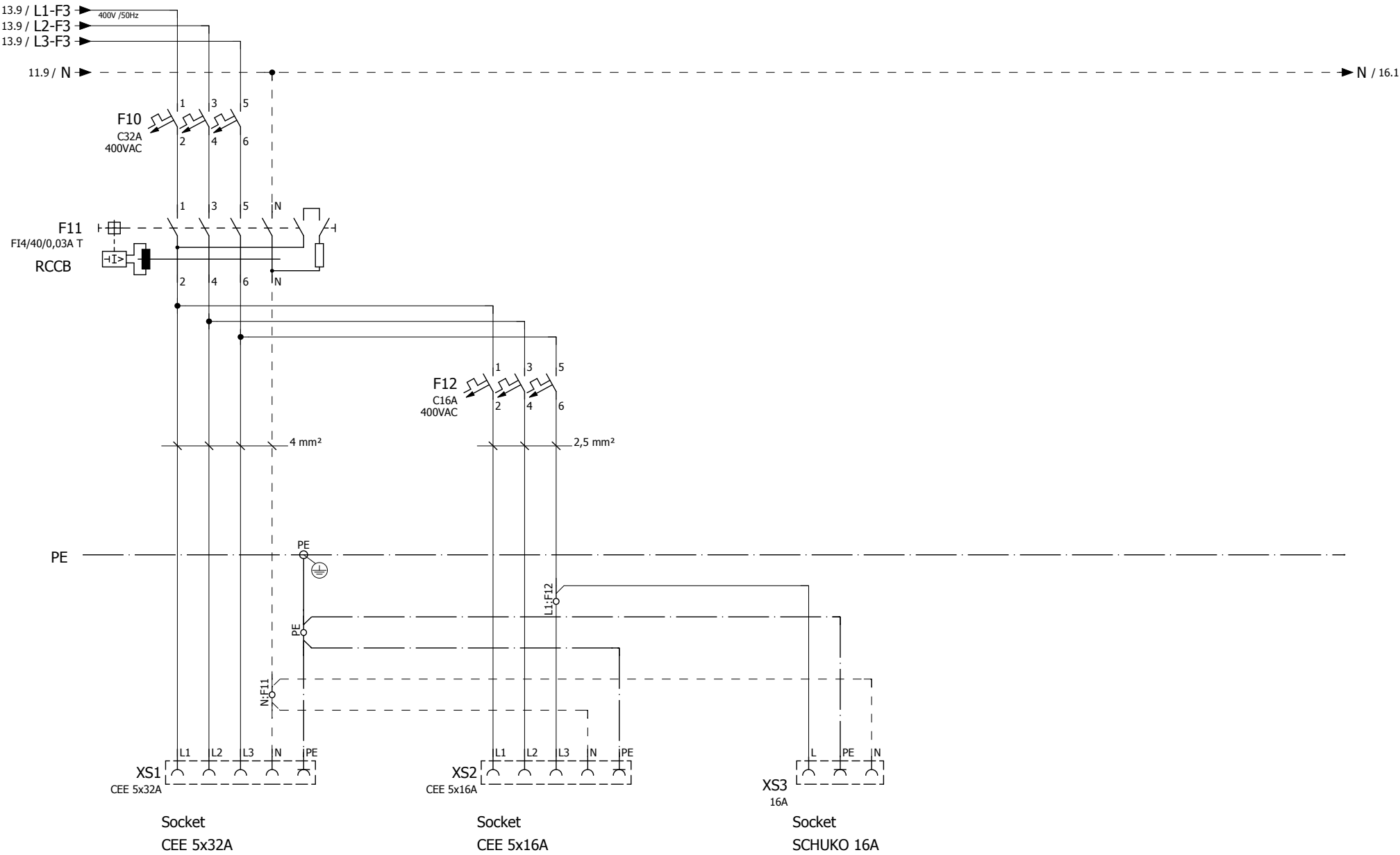


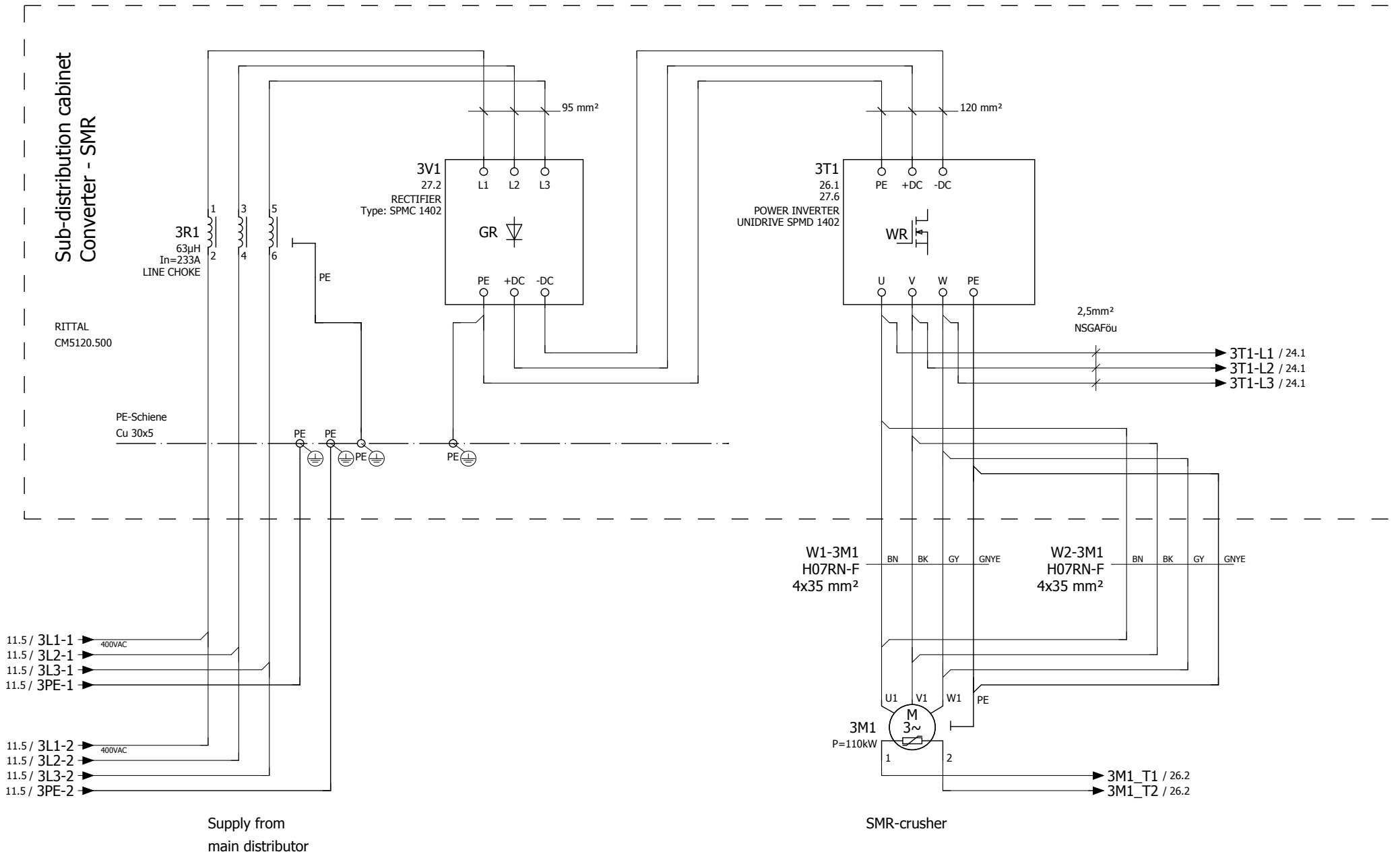
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			Bearb.	herbert	4663 Laakirchen Hauptstraße 35	SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016	Tel.:07613/3663-0 Fax:07613/3663-3	Bez.: Mains changeover switch	Projekt-Nr.: P13-0006	Seite 10 von 54
Revision	Datum	Name	Norm					

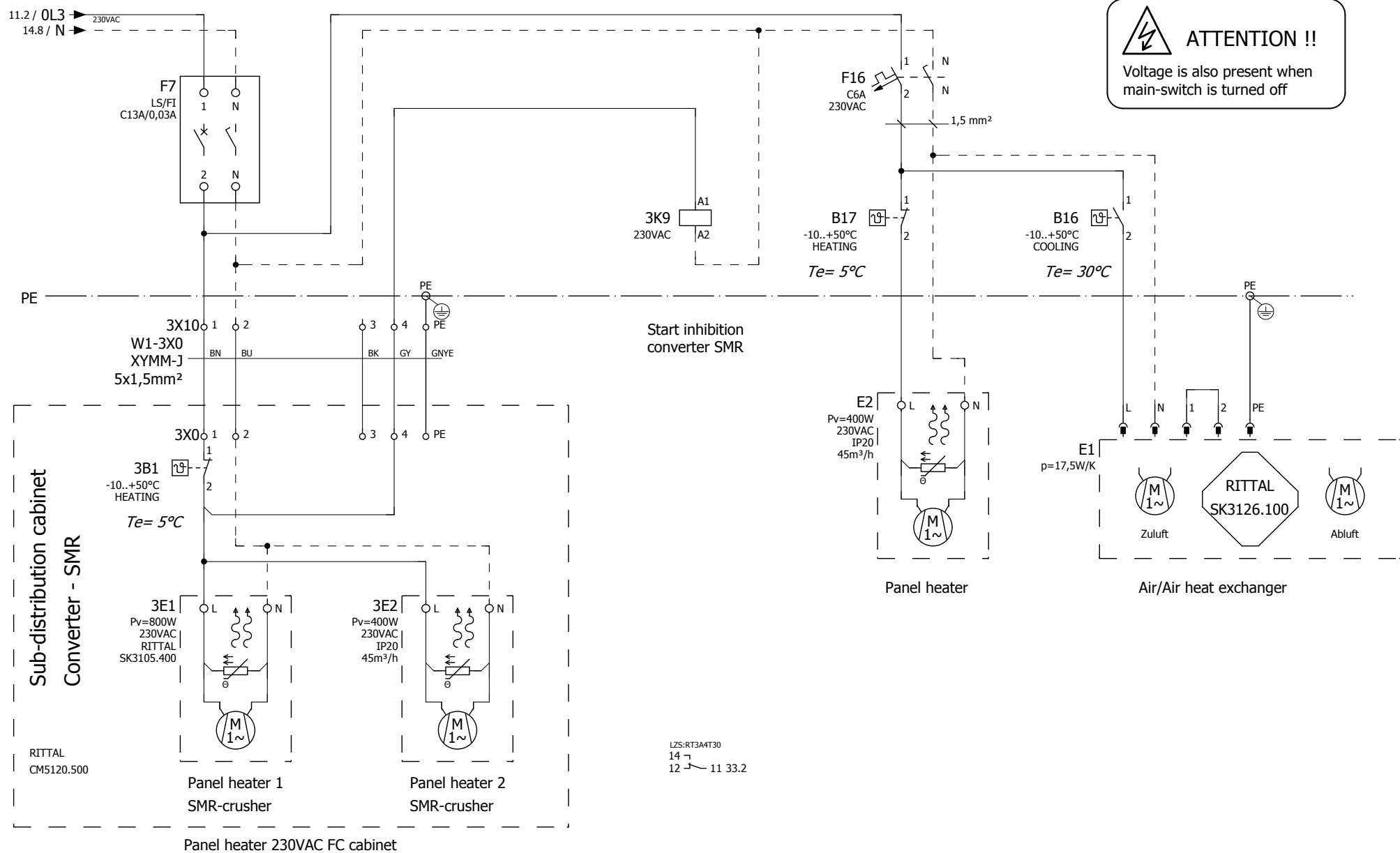


			Datum		 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.: 07613/3663-0 Fax: 07613/3663-3	Anlage: TME	ALLE RECHTE VORBEHALTEN	=
			Bearb. herbert			SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr. 02.05.2016			Primary circuit / feeding	Projekt-Nr.: P13-0006	
Revision	Datum	Name	Norm					Seite 11 von 54

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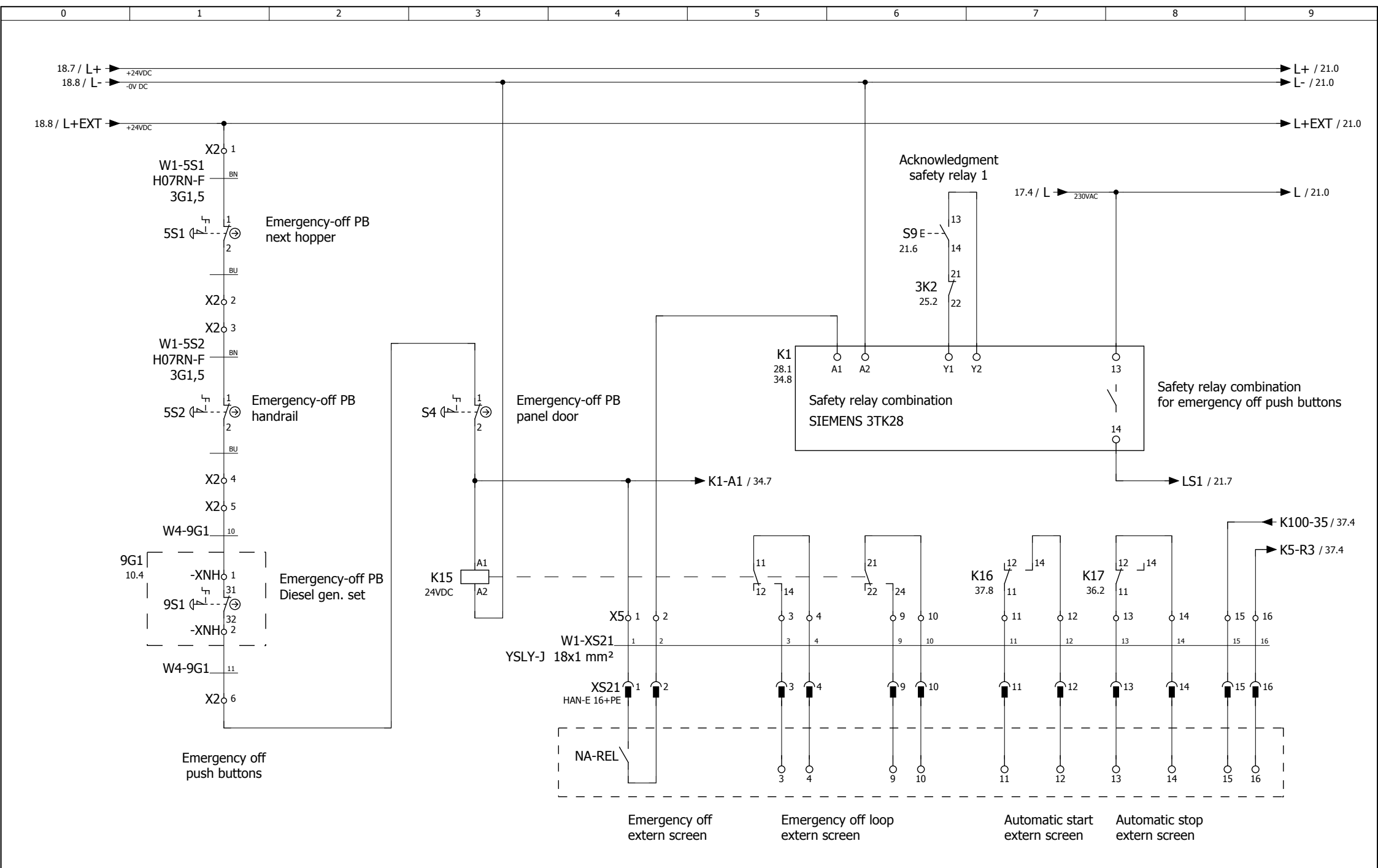


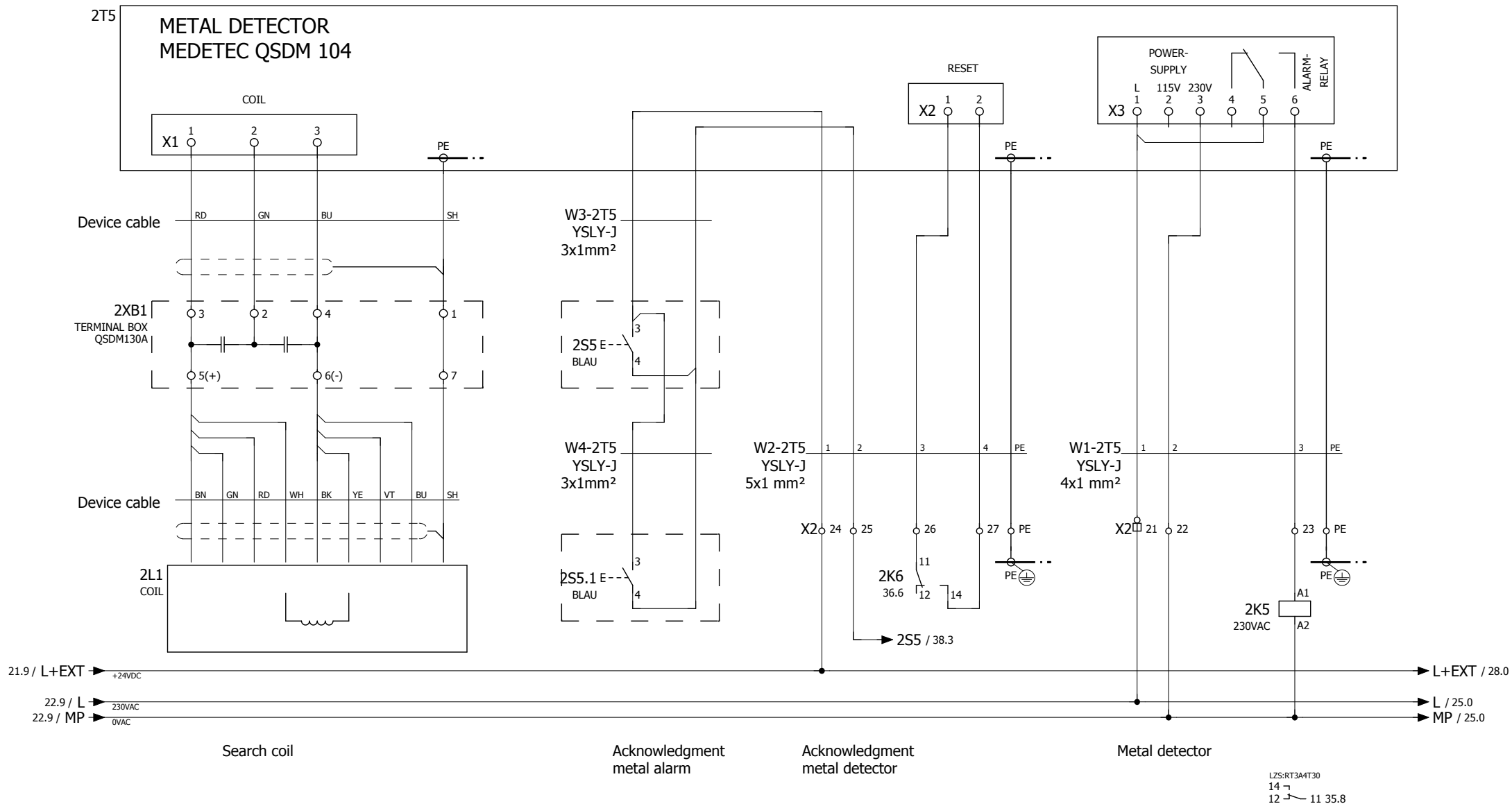


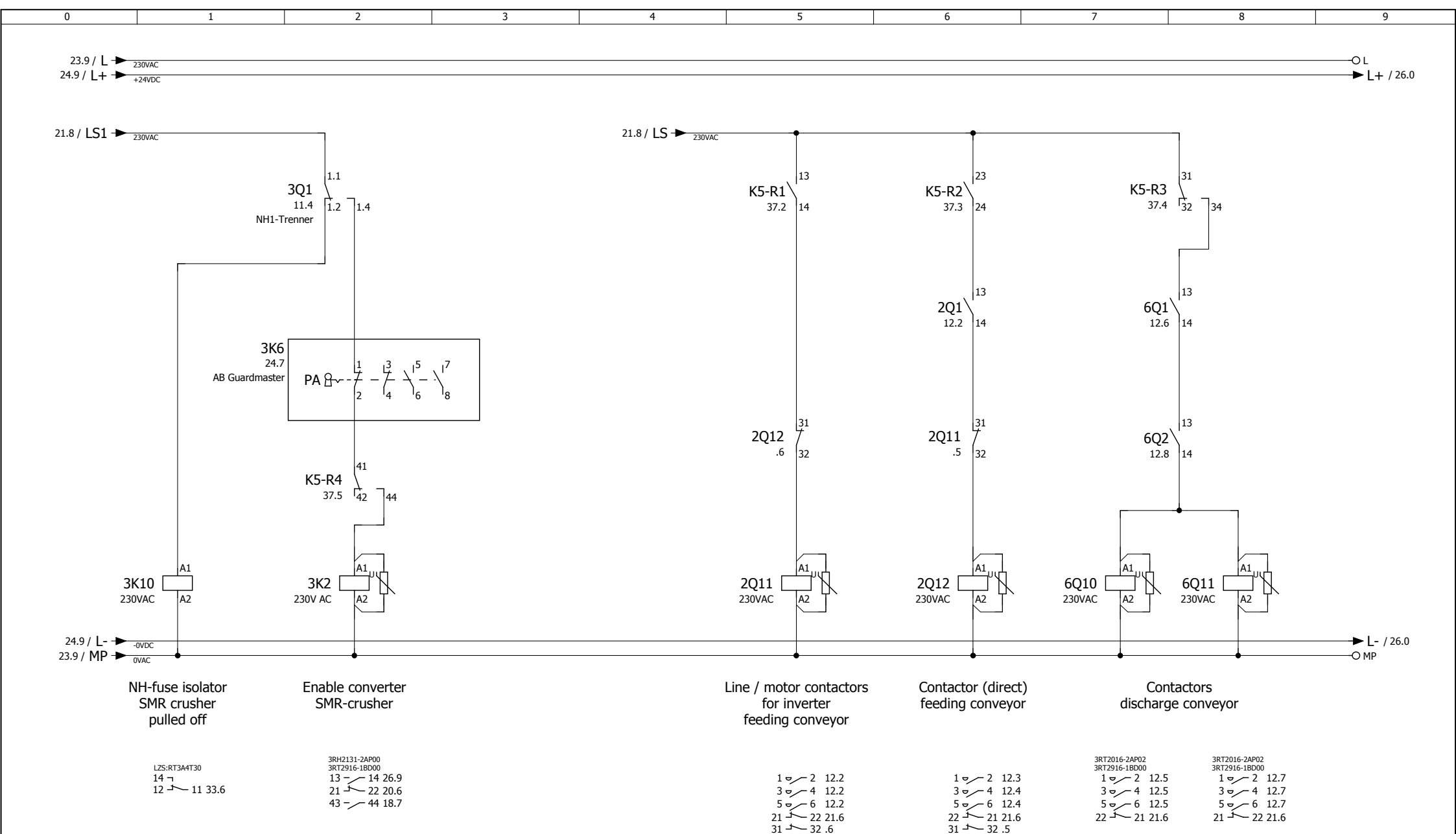
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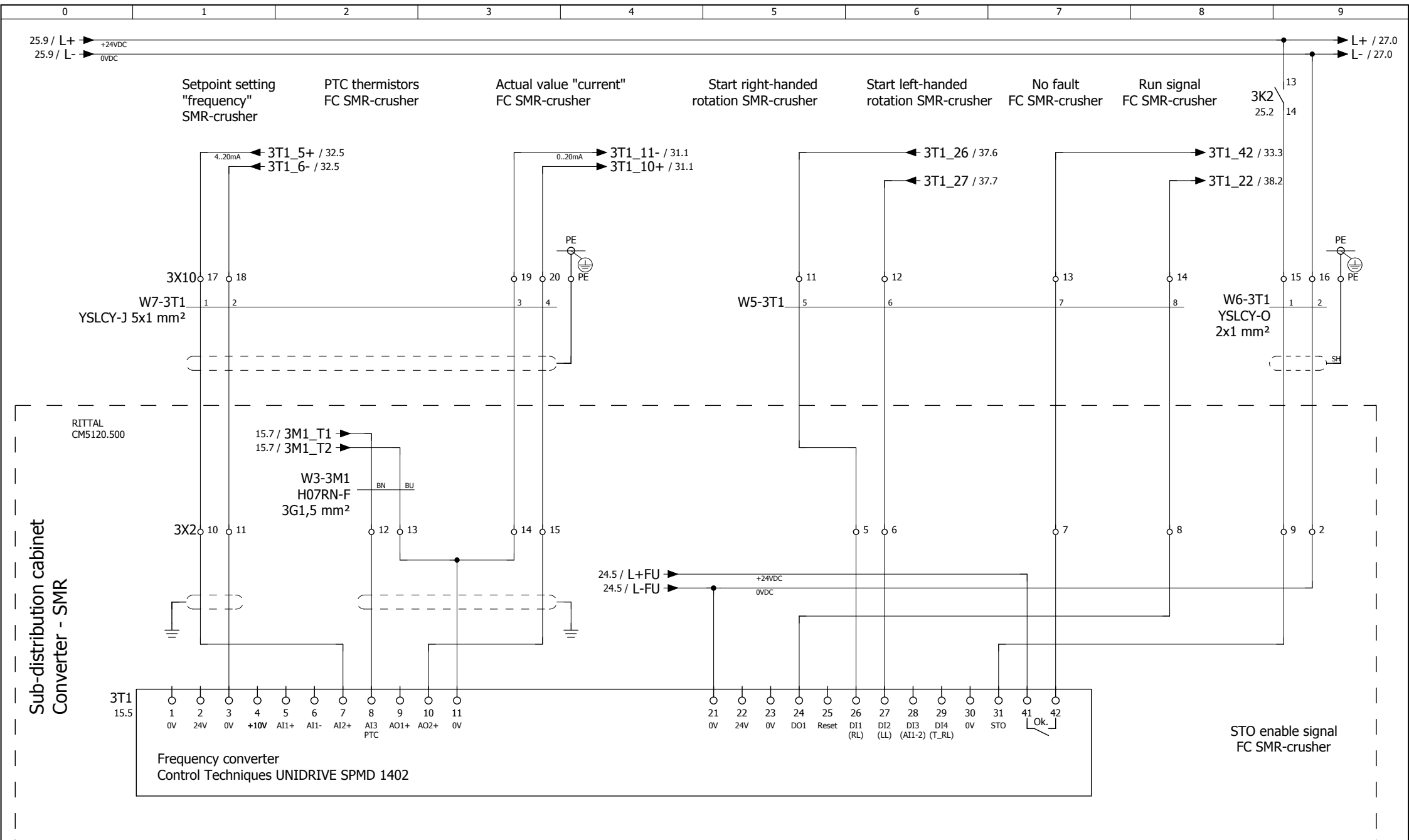
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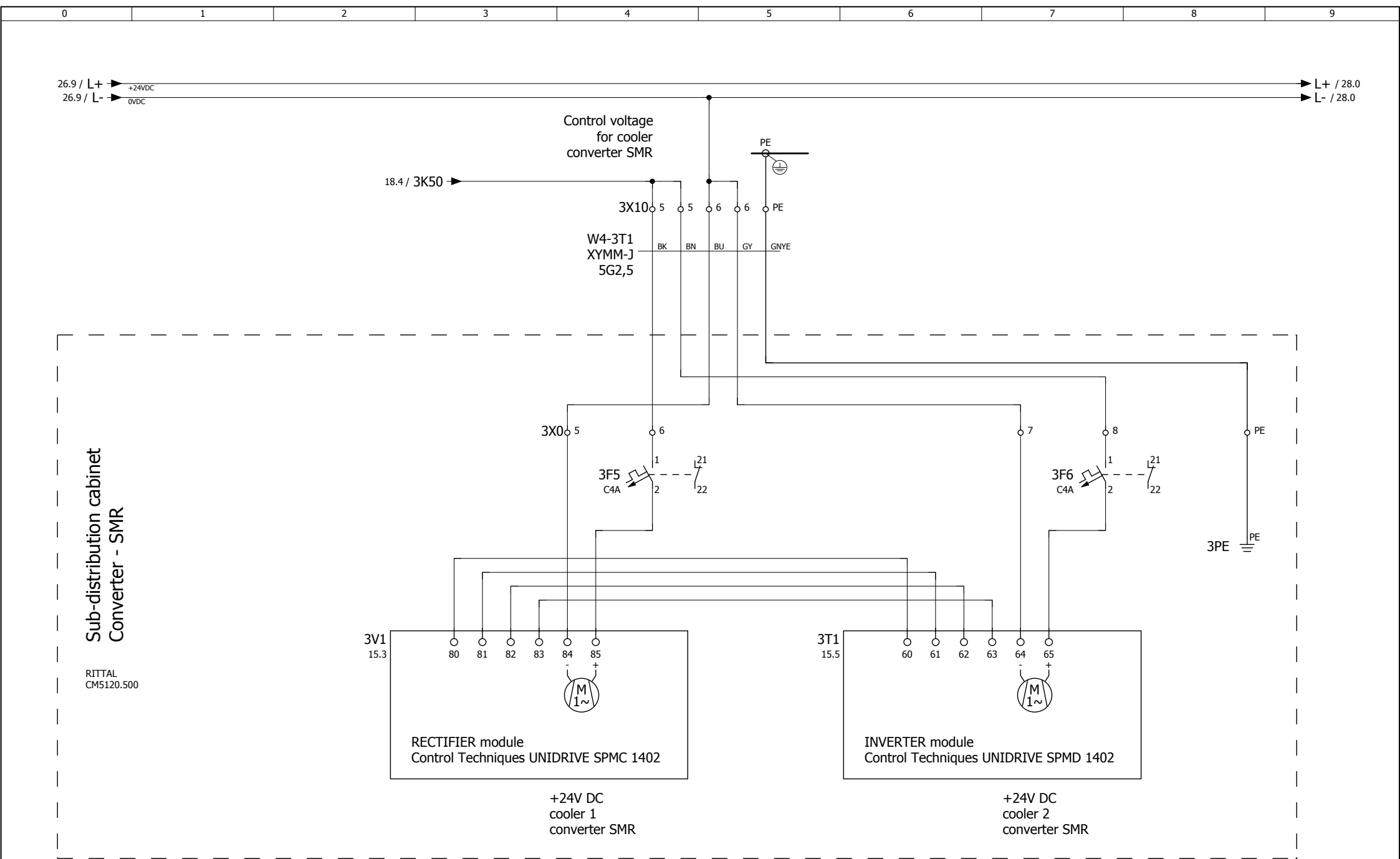
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			Bearb.	herbert		SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016				
Revision	Datum	Name	Norm			Bez.: Control circuit spare	Projekt-Nr.: P13-0006	Seite 19 von 54

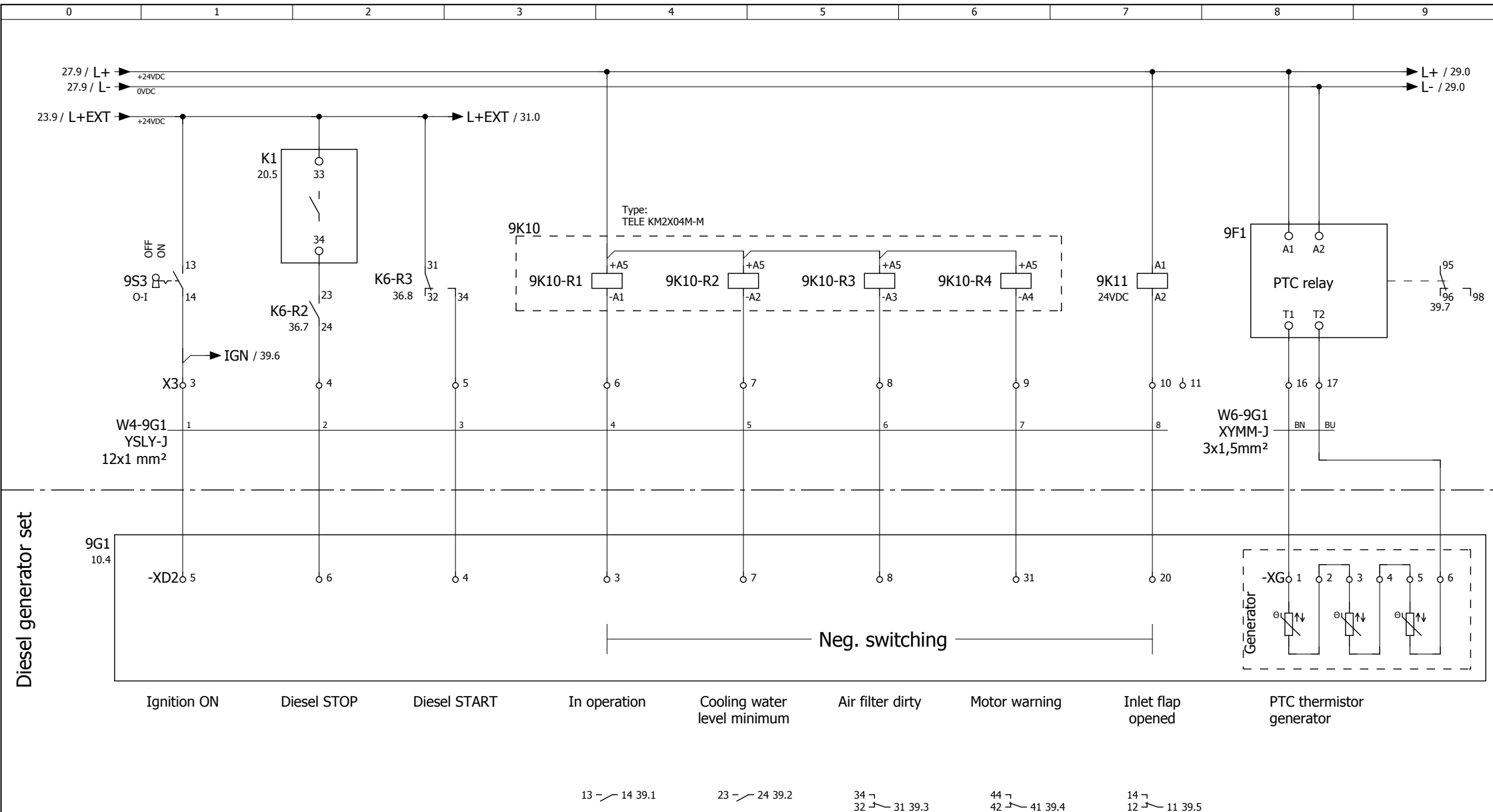


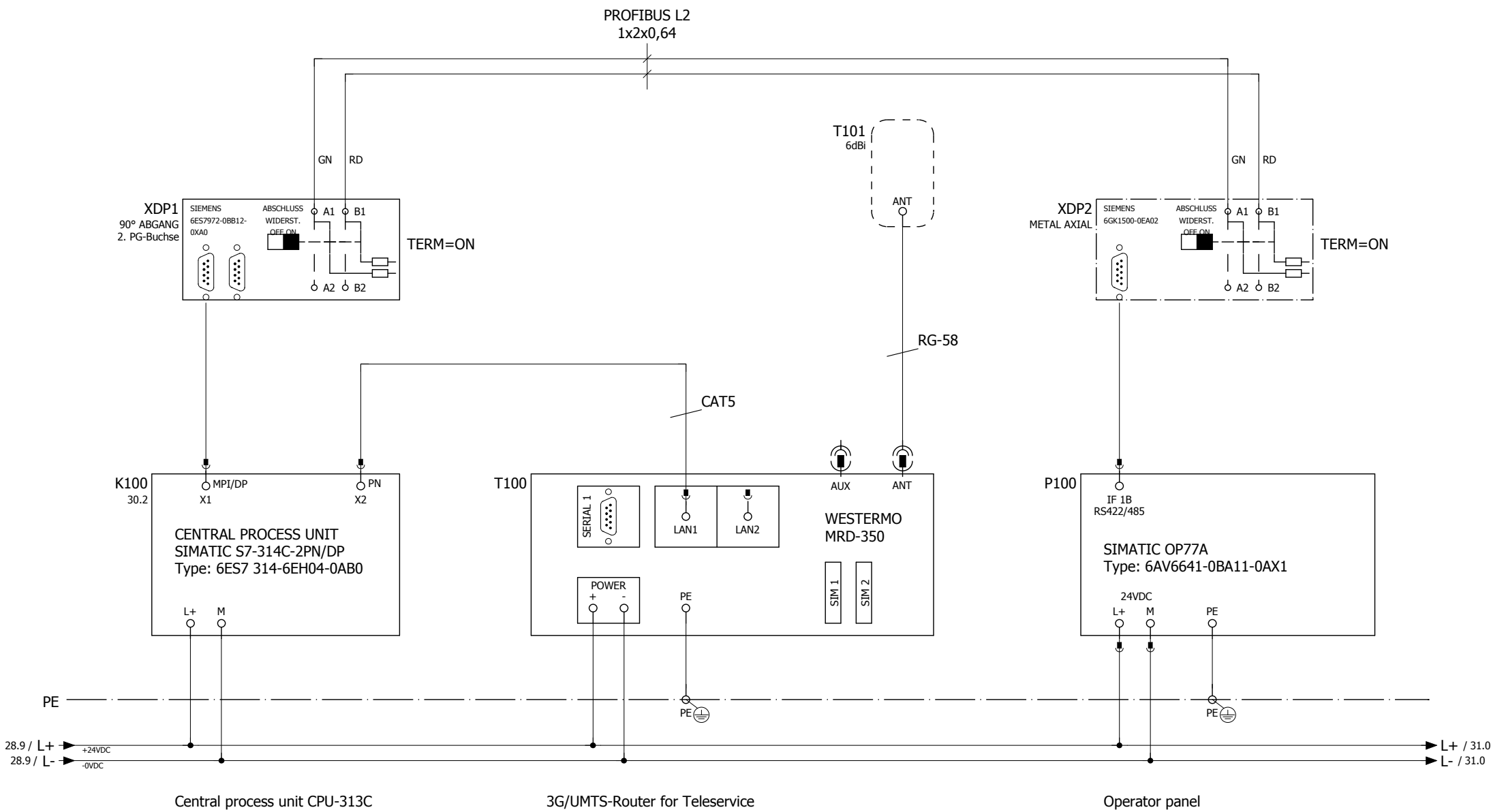


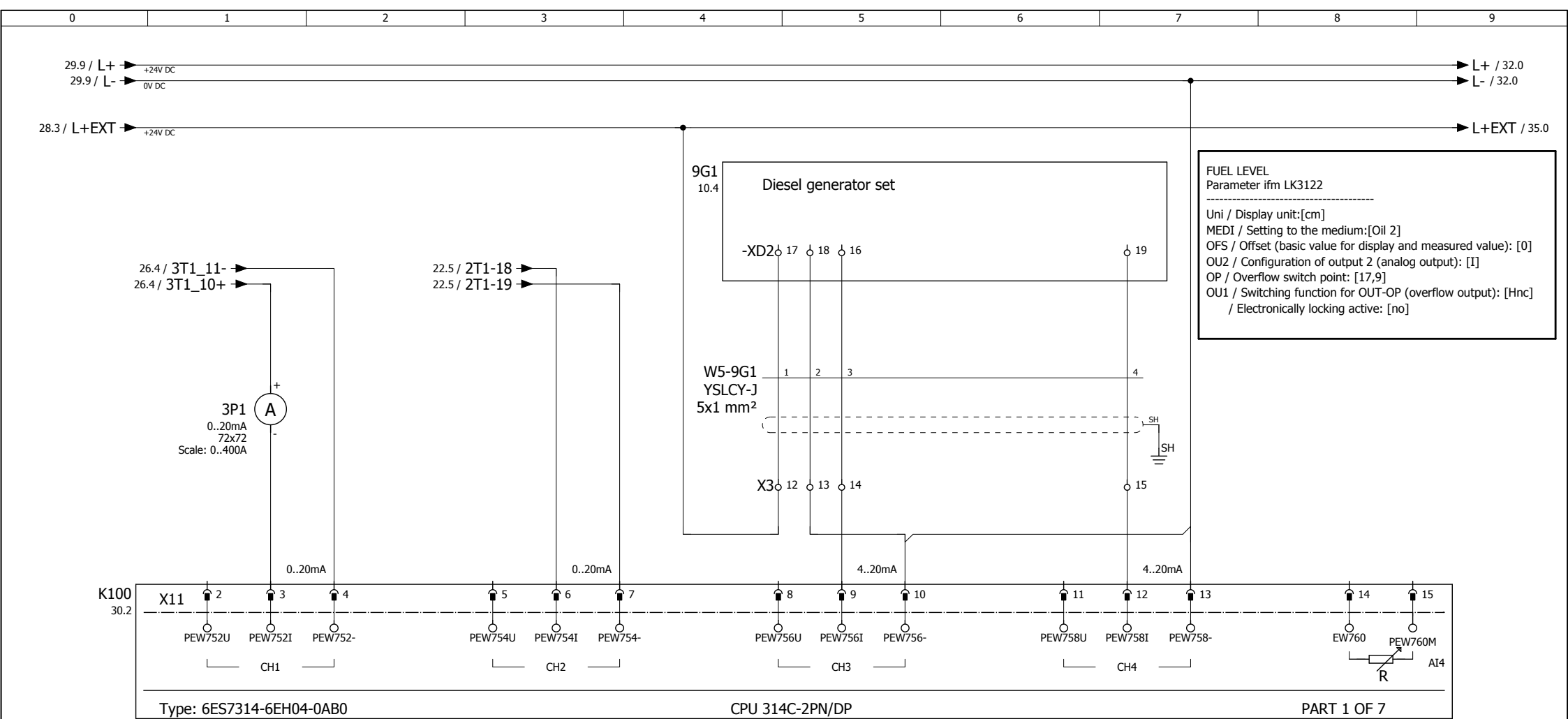


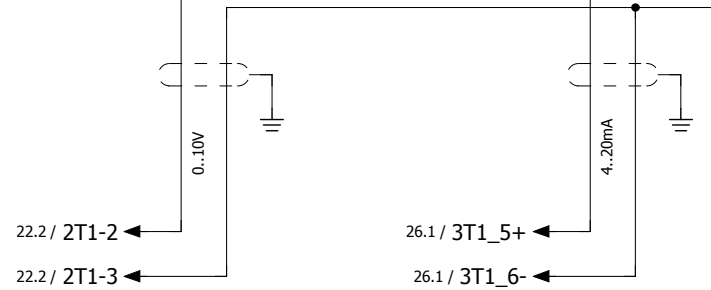
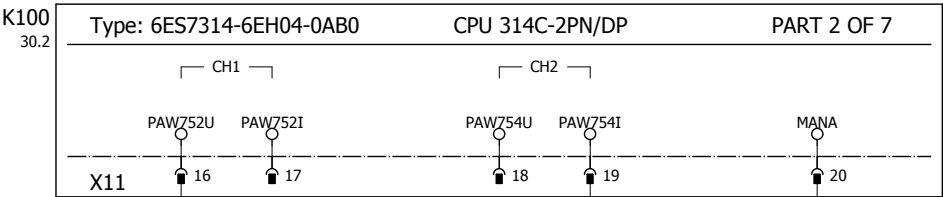
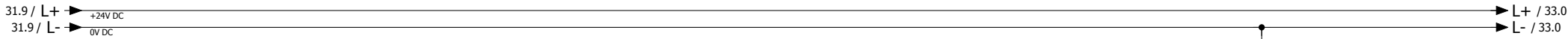






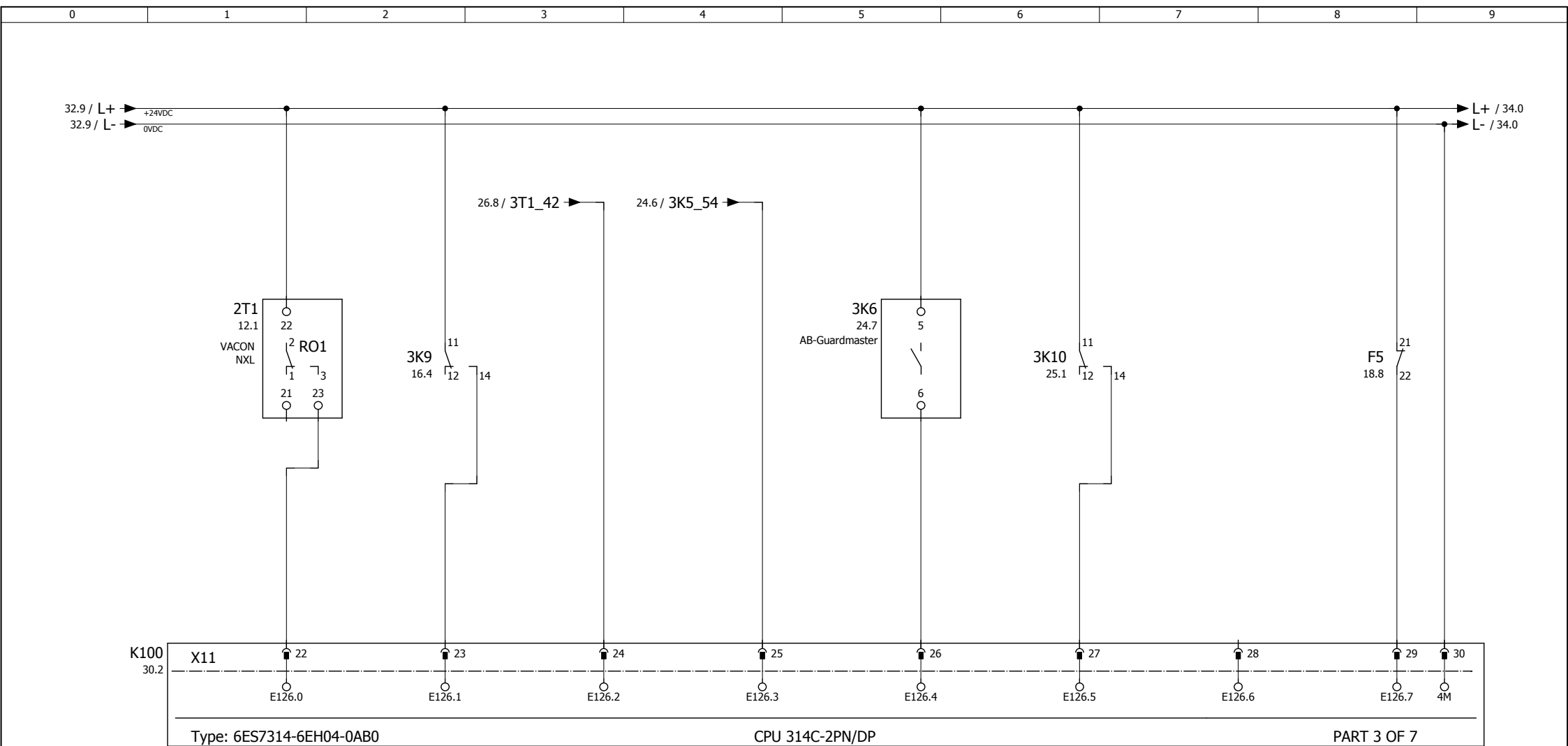






Setpoint value
"frequency" feeding conveyor

Setpoint value
"frequency" SMR-crusher



No fault
frequency converter
feeding conveyor

Panel heater on
Start inhibition
converter SMR

No fault
FC SMR-crusher

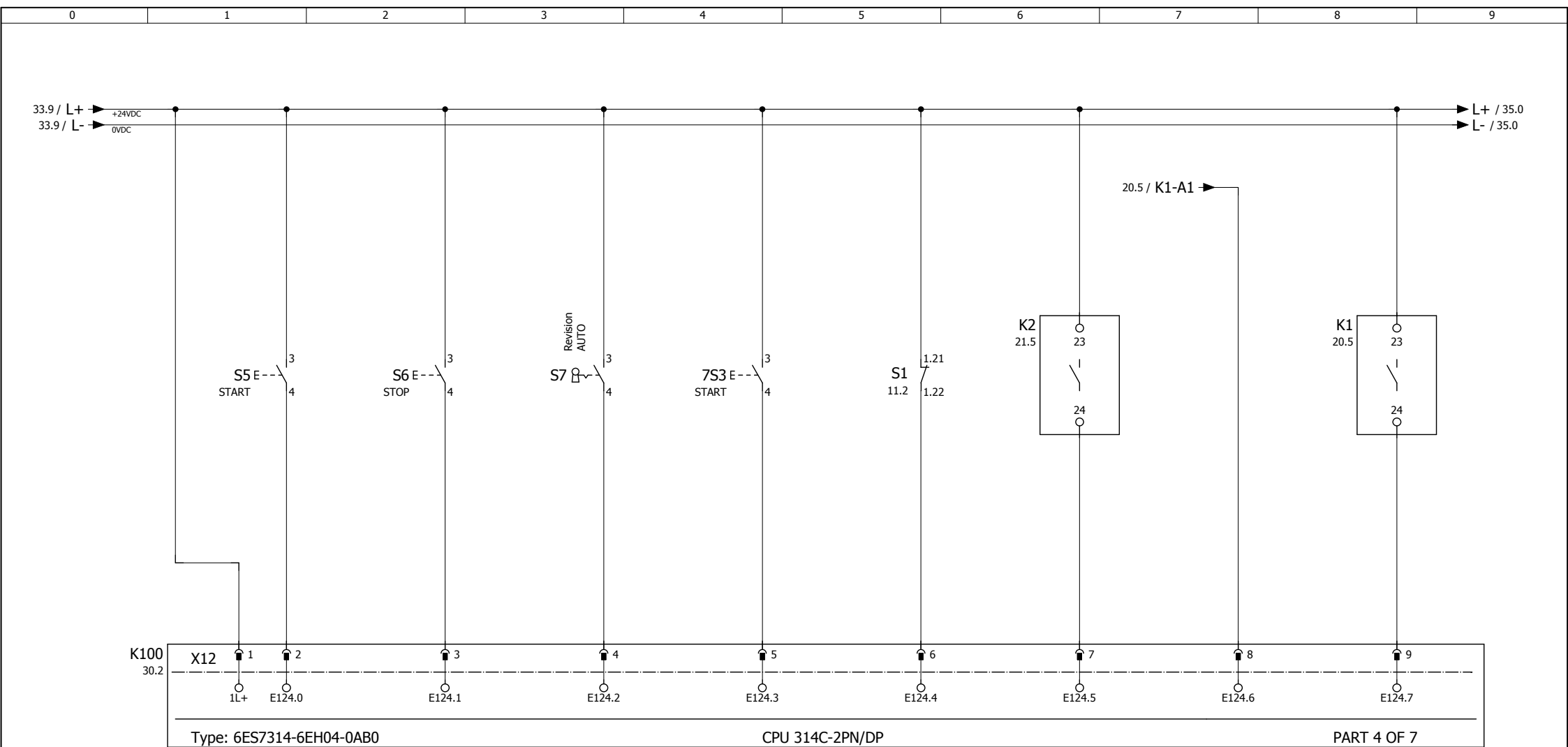
Standstill
SMR-crusher

Pa-Key removed
SMR-crusher
locked

NH-fuse isolator
SMR crusher
pulled off

Spare

Malfunction
control voltage 24VDC
extern



Plant start up

Plant shut down

Operating mode
Automatic

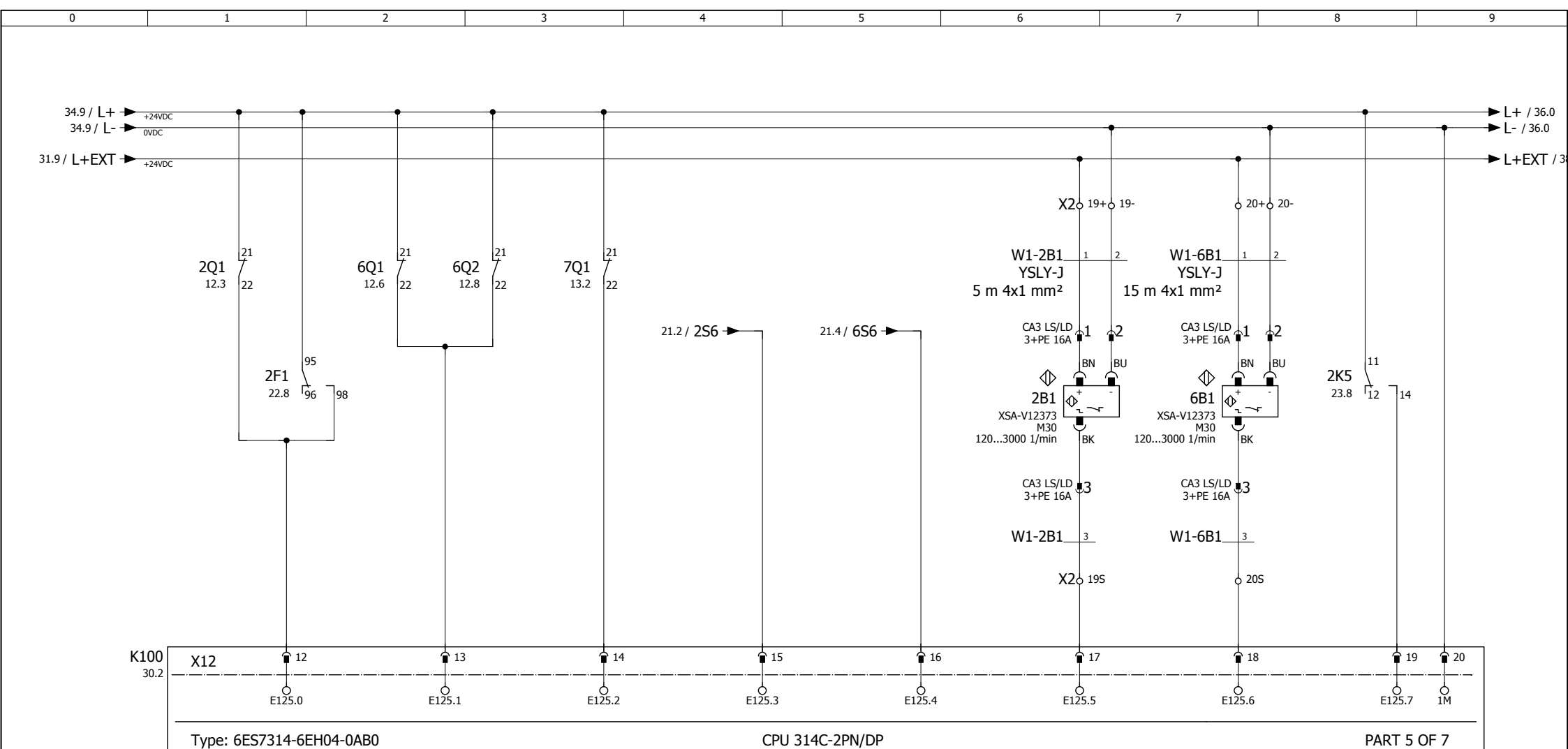
Hydraulic start

Main switch
OFF

Safety relay 2 for
pull cord switches
is ON

Emergency off buttons
ok.

Safety relay 1 for
emergency off switches
is ON



Fault
feeding conveyor

Fault
discharge conveyor

Fault
hydraulic

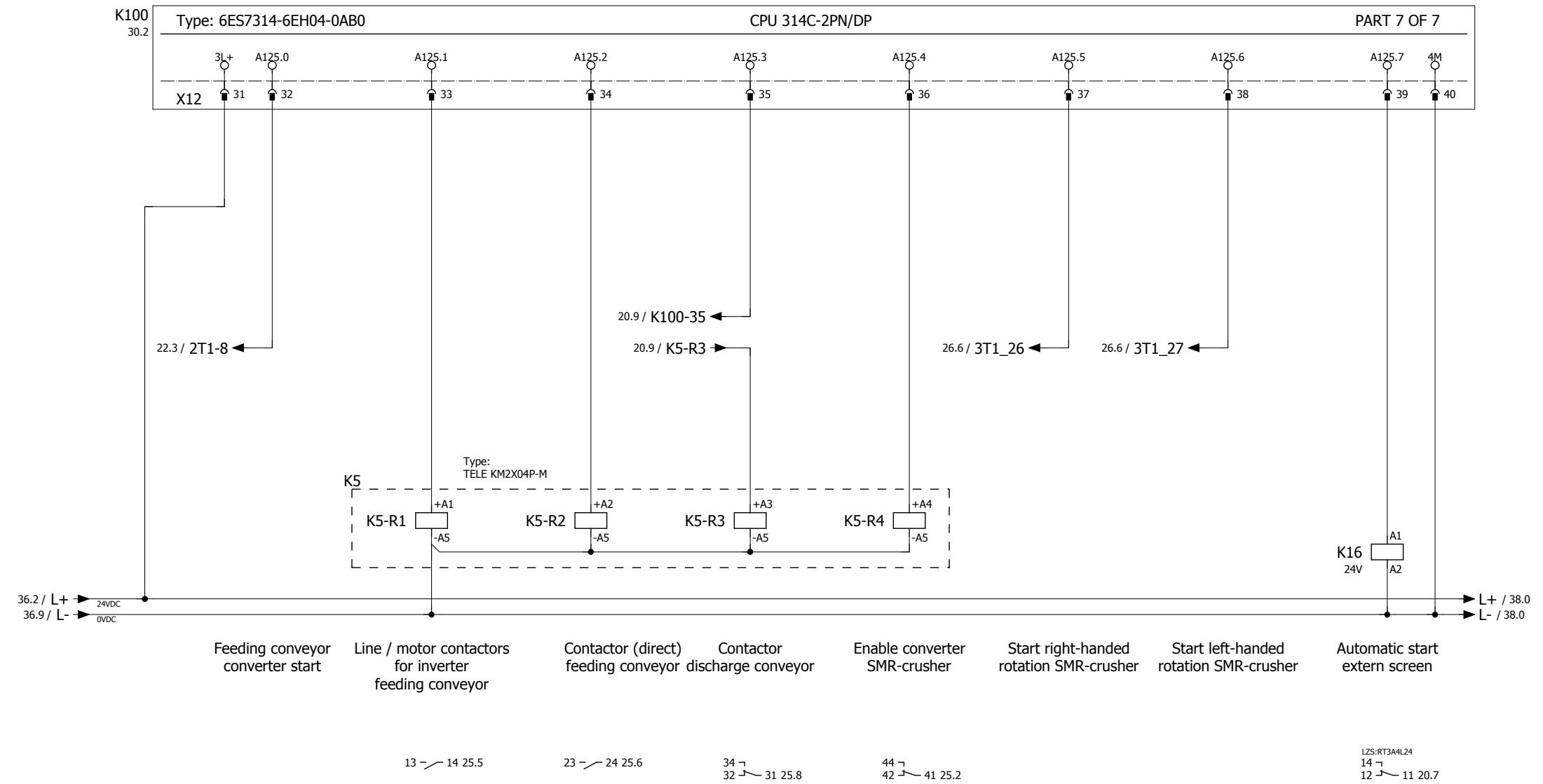
Pull cord switch
feeding conveyor
operated

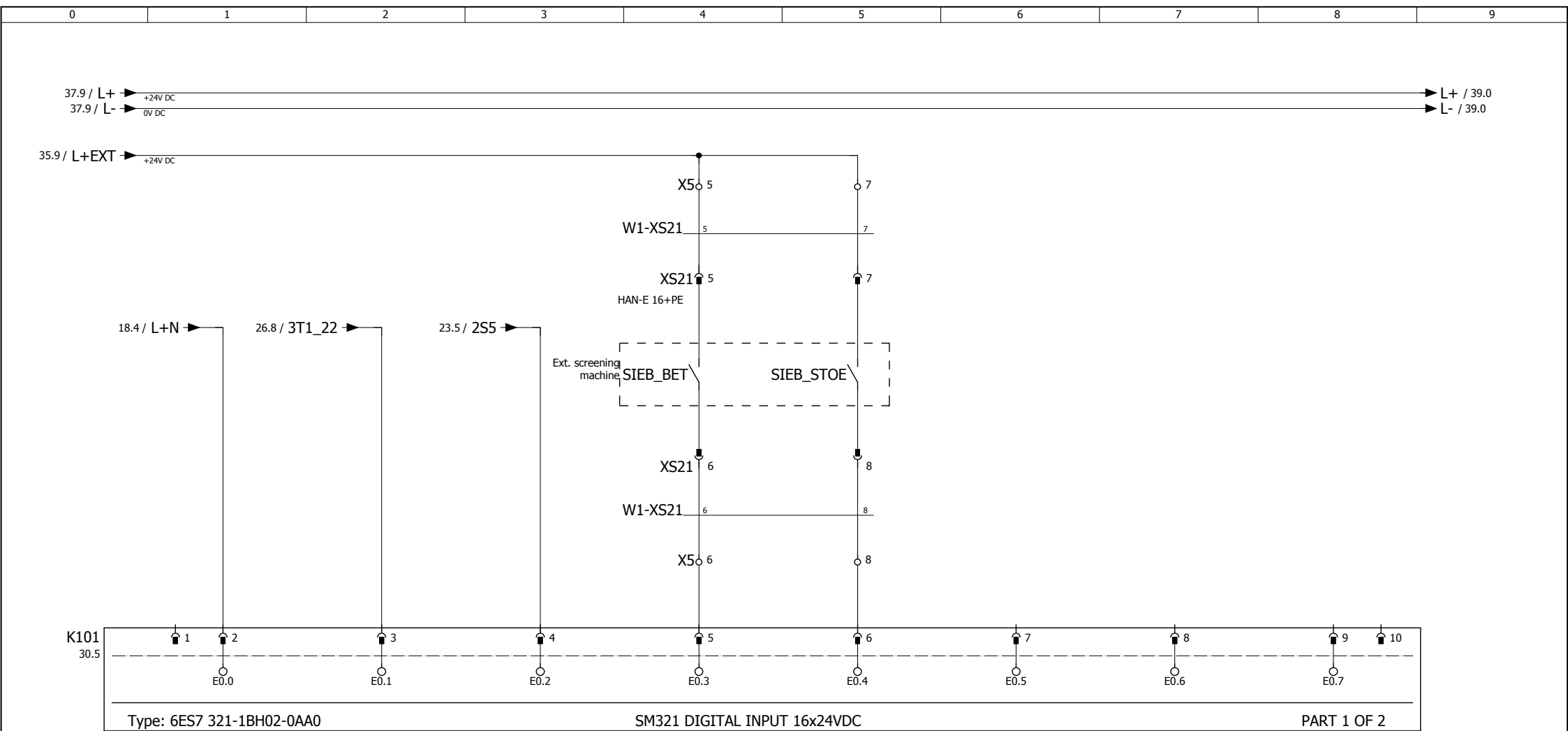
Pull cord switch
discharge conveyor
operated

Speed monitor
feeding conveyor
rpm OK

Speed monitor
discharge conveyor
rpm OK

Metal detector
no fault





LINE operation
+24VDC activated

Run signal
FC SMR-crusher

Acknowledgment
metal alarm

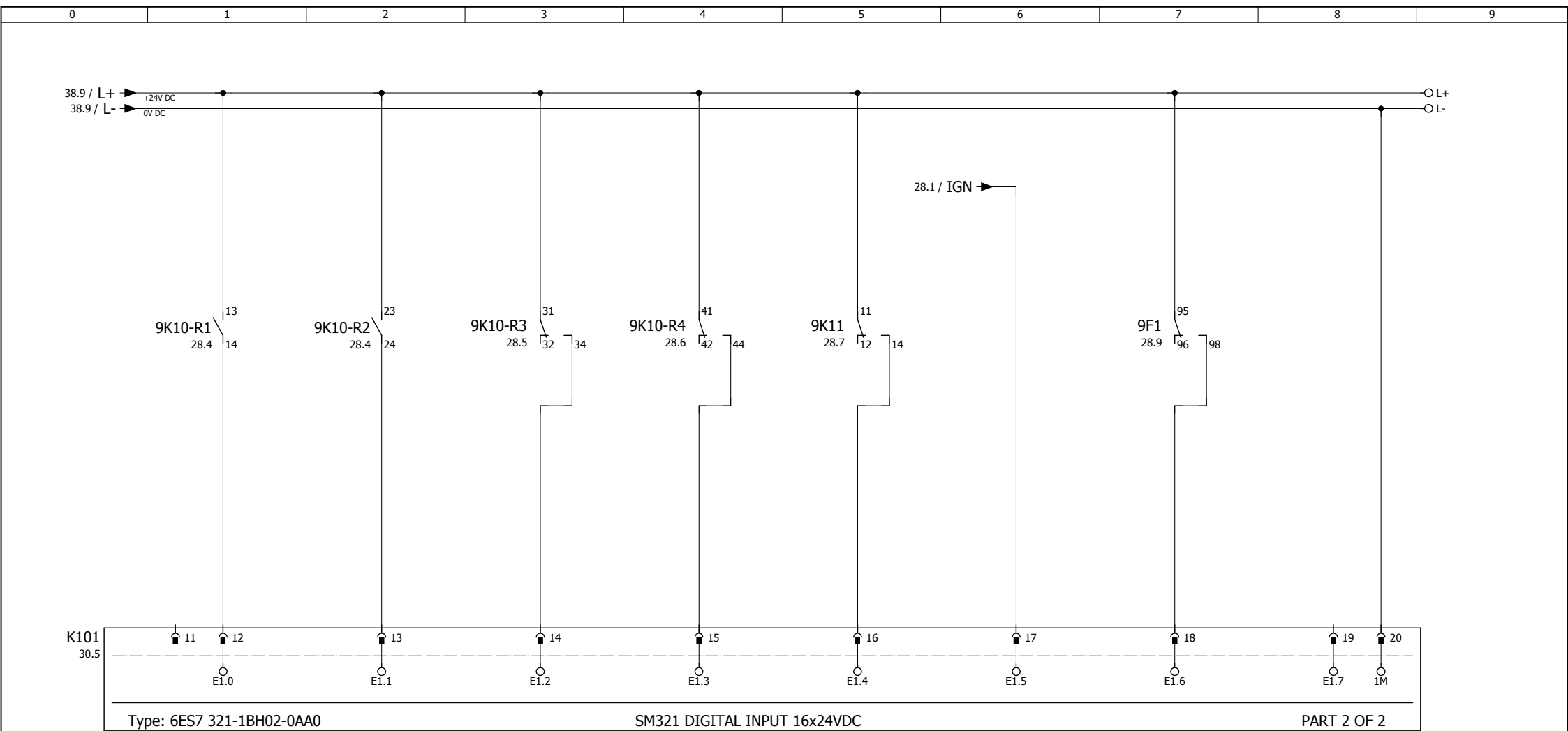
Extern screen
in operation

Extern screen
fault

Spare

Spare

Spare



Diesel gen. set in operation	Diesel gen. set cooling water level minimum	Diesel gen. set air filter dirty	Diesel gen. set motor warning	Diesel gen. set inlet flap opened	Diesel gen. set ignition on	Diesel gen. set generator PTC fault	Spare
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Klemmenleisten- und Steckerübersichtsplan

WUPR001D 24.02.1994

[illegible]

			Datum	01.10.2012	 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage:	TME	ALLE RECHTE VORBEHALTEN	=	
			Bearb.	herbert				SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016						
Revision	Datum	Name	Norm			Bez.:	Overview terminal strips	Projekt-Nr.: P13-0006	Seite 40 von 54	

Klemmenplan

ESKK01D 19.11.02

[illegible]

			Datum	01.10.2012	 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage:	TME	ALLE RECHTE VORBEHALTEN	=
			Bearb.	herbert			SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016					
Revision	Datum	Name	Norm			Bez.:	X0	Projekt-Nr.: P13-0006	Seite 41 von 54

Klemmenplan										ESKK01D 19.11.02													
Funktionstext					YSLY-J 4G1,5 mm²	YSLY-J 4G1,5 mm²	YSLY-J 4G1,5 mm²	YSLCY-J 4x2,5 mm²	Kabeltyp	Leistenbezeichnung							Kabeltyp						
					W1-7XS1	W1-6M2	W1-6M1	W1-2M1	Kabelname	Zielbezeichnung 1 extern	Anschluß	Klemmen- nummer	Brücken	Geräte- Anschluß	Zielbezeichnung 2 intern	Anschluß	Kabelname					Seite Pfad	
Feeding conveyor								1		2M1	U1	1	•		2Q11	2						12.2	
=								2		2M1	V1	2	•		2Q11	4						12.2	
=								3		2M1	W1	3	•		2Q11	6						12.2	
=							PE	2M1		PE	PE	•		PE								12.2	
Discharge conveyor motor 1							1			6M1	U1	4	•		6Q10	2							12.5
=							2			6M1	V1	5	•		6Q10	4							12.5
=							3			6M1	W1	6	•		6Q10	6							12.5
=							PE	6M1		PE	PE	•		PE									12.6
Discharge conveyor motor 2						1				6M2	U1	7	•		6Q11	2							12.7
=						2				6M2	V1	8	•		6Q11	4							12.7
=						3			6M2	W1	9	•		6Q11	6							12.7	
=						PE			6M2	PE	PE	•		PE								12.8	
Hydraulic					1				7XS1	L1	10	•		7Q10	2							13.1	
=					2				7XS1	L2	11	•		7Q10	4							13.1	
=					3				7XS1	L3	12	•		7Q10	6						13.2		
=					PE				7XS1	PE	PE	•		PE							13.2		
													</										

ESKK01D 19.11.02

			Datum	01.10.2012	 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage:	TME	ALLE RECHTE VORBEHALTEN	=
			Bearb.	herbert			SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016					
Revision	Datum	Name	Norm			Bez.:	X2	Projekt-Nr.: P13-0006	Seite 43 von 54

			Datum	01.10.2012	 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage:	TME	ALLE RECHTE VORBEHALTEN	=
			Bearb.	herbert			SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-Nr.: 74132467	+
			Gepr.	02.05.2016					
Revision	Datum	Name	Norm			Bez.:	X2	Projekt-Nr.: P13-0006	Seite 44 von 54

Funktionstext					XYMM-J 3G1,5 mm²	YSLCY-J 5G1 mm²		XYMM-J 5G2,5 mm²	Kabeltyp	Leistenbezeichnung						Kabeltyp						
					W6-9G1	W5-9G1	W4-9G1	W3-9G1	Kabelname	Zielbezeichnung 1 extern	Anschluß	Klemmen- nummer	Brücken	Geräte- Anschluß	Zielbezeichnung 2 intern	Anschluß	Kabelname					Seite Pfad
Control voltage +24V DC from Diesel/Gen.								BN		9G1-XD2	1	1	↓		V1	AC						18.1
=								BK		9G1-XD2	1	1	↓									18.1
=								GY		9G1-XD2	2	2	↓									18.1
=								BU		9G1-XD2	2	2	↓		C1	-						18.1
=								GNYE		9G1-XD2	PE	PE	•		PE	PE						18.1
Ignition ON							1			9G1-XD2	5	3	•	E1.5	9S3	14						28.1
Diesel STOP							2			9G1-XD2	6	4	•		K6-R2	24						28.2
Diesel START							3			9G1-XD2	4	5	•		K6-R3	34						28.3
In operation							4			9G1-XD2	3	6	•		9K10-R1	-A1						28.4
Cooling water level minimum							5			9G1-XD2	7	7	•		9K10-R2	-A2						28.4
Air filter dirty							6			9G1-XD2	8	8	•		9K10-R3	-A3						28.5
Motor warning							7			9G1-XD2	31	9	•		9K10-R4	-A4						28.6
Inlet flap opened							8			9G1-XD2	20	10	•		9K11	A2						28.7
Spare												11	•									28.7
					1					9G1-XD2	17	12	•		K6-R3	31						31.4
=						2				9G1-XD2	18	13	•	MANA	K100	10						31.5
Actual value coolant temperature diesel						3				9G1-XD2	16	14	•	PEW756I	K100	9						31.5
Actual value fuel level						4				9G1-XD2	19	15	•	PEW758I	K100	12						31.7
PTC thermistor generator					BN					9G1-XG	1	16	•		9F1	T1						28.8
=					BU					9G1-XG	6	17	•		9F1	T2						28.8

3X0

Funktionstext

Kabeltyp

H07RN-F 5G2.5 mm²

belname

W4-3T1

Seite
Pfad

Panel heater 230VAC FC cabinet

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+24V DC cooler 1 converter SMR

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Rev

Datum	01.10.2012
Bearb.	herbert
Gepr.	02.05.2016



Elektro Steinschaden GmbH
4663 Laakirchen | Hauptstraße 35
Tel.: 07613/3663-0 | Fax: 07613/3663-1

Anlage:	TME
	SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile
3 Bez :	3X0

ALLE RECHTE VORBEHALTEN	
Auftrags-.Nr.:	74132467
Projekt-Nr.:	P13-0006

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Seite 46 von 54

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Parts list

Device tag	Quantity	designation	Type number	manufacturer	Part number	Page / path
	1	Control cabinet IP55 RAL7035 1700x800x400	TYP 5	ERA	ERA.TYP 5	
	1	Viewing window 597x377x60	FT2760.000	RITTAL	RIT.2760000	7
	1	Hinged locking P=2	FT2772.000	RITTAL	RIT.2772000	7
	3	Busbar support 3-pol. 60mm	SV9340.010	RITTAL	RIT.9340010	7
	2	End cover SV9340	SV9340.070	RITTAL	RIT.9340070	7
	1	Compact control cabinet IP55 RAL7035 1000x1200x400	CM5120.500	RITTAL	RIT.5120500	8
	2	Gland plate 420x250	CM5001.224	RITTAL	RIT.5001224	8
	2	Passive vent attachment RAL7035	SK3148.007	RITTAL	RIT.3148007	8
	2	Exit filter 3243-3245 RAL7035	SK3243.200	RITTAL	RIT.3243200	8
	1	Compact control cabinet IP66 RAL7035 700x500x250	AE1057.500	RITTAL	RIT.1057500	9
Q1	1	Power circuit breaker 4P 400A 50kA	LV432408	Schneider Electric	SE.LV432408	10
Q1	1	Tripping unit Micrologic 2.3 4P 144-400A	LV432085	Schneider Electric	SE.LV432085	10
Q1	2	Terminal cover 4P NS400-630	32563	Schneider Electric	SE.32563	10
Q1	1	Auxiliary contact 1CO / OF,SD,SDE,SDV	29450	Schneider Electric	SE.29450	10
Q1	1	Mechanical interlock 2x NSX400/630	LV432614	Schneider Electric	SE.LV432614	10
Q2	1	Power circuit breaker 4P 400A 50kA	LV432408	Schneider Electric	SE.LV432408	10
Q2	1	Tripping unit Micrologic 2.3 4P 144-400A	LV432085	Schneider Electric	SE.LV432085	10
Q2	2	Terminal cover 4P NS400-630	32563	Schneider Electric	SE.32563	10
F2	1	NH isolator NH-000, 3PSS60	3NP1123-1BC20	SIEMENS	SIE.3NP1123-1BC20	11
F2	3	NH fuse 63A gL/gG 500V NH-000	3NA7822	SIEMENS	SIE.3NA7822	11

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Parts list

Device tag	Quantity	designation	Type number	manufacturer	Part number	Page / path
F2.1	1	NH isolator NH-000, 3PSS60	3NP1123-1BC20	SIEMENS	SIE.3NP1123-1BC20	11
F2.1	3	NH fuse 63A gL/gG 500V NH-000	3NA7822	SIEMENS	SIE.3NA7822	11
N	2	Busbar support 1-pol. 60mm	SV9340.030	RITTAL	RIT.9340030	11
PE	2	Busbar support 1-pol. 60mm	SV9340.030	RITTAL	RIT.9340030	11
3Q1	1	NH isolator NH-1, 3PSS60	3NP1143-1BC10	SIEMENS	SIE.3NP1143-1BC10	11
3Q1	1	Auxiliary contact 1CO, 3NP11 NH-1,2,3	3NP1940-1FA00	SIEMENS	SIE.3NP1940-1FA00	11
3Q1	3	NH fuse 250A gL/gG 500V NH-1	3NA7144	SIEMENS	SIE.3NA7144	11
S1	1	Switch disconnecter, three-pole 400A	N3-400	EATON	EAT.N3-400	11
S1	1	Rotary handle NZM3	NZM3-XHBR	EATON	EAT.NZM3-XHBR	11
S1	1	Undervoltage release NZM2/3 208-240VAC	NZM2/3-XU208-240AC	EATON	EAT.NZM2/3-XU208-240AC	11
S1	1	Auxiliary contact 1 NC	M22-K01	EATON	EAT.M22-K01	11
S1	1	Auxiliary contact 1 NO	M22-K10	EATON	EAT.M22-K10	11
S1	1	Cover 3pol. NZM3	NZM3-XKSA	EATON	EAT.NZM3-XKSA	11
U1	1	Connection adapter 3P 800A RiLine60	SV9342.300	RITTAL	RIT.9342300	11
XS20	1	Female receptacle CEE 63A 5p 6h 400V IP67	135-6	PC-Electric	PCE.135-6	11
XS22	1	Female receptacle CEE 63A 5p 6h 400V IP67	135-6	PC-Electric	PCE.135-6	11
F3	1	NH isolator NH-000, 3PSS60	3NP1123-1BC20	SIEMENS	SIE.3NP1123-1BC20	12
F3	3	NH fuse 63A gL/gG 500V NH-000	3NA7822	SIEMENS	SIE.3NA7822	12
2Q1	1	Motor overload switch 14-20A S0 CLASS 10	3RV2021-4BA10	SIEMENS	SIE.3RV2021-4BA10	12
2Q1	1	Auxiliary contact 1NO + 1NC	3RV2901-2E	SIEMENS	SIE.3RV2901-2E	12
2Q1	1	Compact busbar 5x S00/S0 45mm 63A	3RV1915-1DB	SIEMENS	SIE.3RV1915-1DB	12
2Q1	1	Incoming supply block 3P 63A S00/S0	3RV2915-5B	SIEMENS	SIE.3RV2915-5B	12
6Q1	1	Motor overload switch 4,5-6,3A S00 CLASS 10	3RV2011-1GA10	SIEMENS	SIE.3RV2011-1GA10	12
6Q1	1	Auxiliary contact 1NO + 1NC	3RV2901-2E	SIEMENS	SIE.3RV2901-2E	12
6Q2	1	Motor overload switch 4,5-6,3A S00 CLASS 10	3RV2011-1GA10	SIEMENS	SIE.3RV2011-1GA10	12
6Q2	1	Auxiliary contact 1NO + 1NC	3RV2901-2E	SIEMENS	SIE.3RV2901-2E	12
2T1	1	Converter NXL 7,5/11kW 380-500V MF5/IP21	NXL00235C2H1SSS	VACON AT	VAC.NXL00235C2H1SSS	12
7Q1	1	Motor overload switch 5,5-8A S00 CLASS 10	3RV2011-1HA10	SIEMENS	SIE.3RV2011-1HA10	13
7Q1	1	Auxiliary contact 1NO + 1NC	3RV2901-2E	SIEMENS	SIE.3RV2901-2E	13
7Q2	1	Motor overload switch 5,5-8A S00 CLASS 10	3RV2011-1HA10	SIEMENS	SIE.3RV2011-1HA10	13
7Q2	1	Moulded plastic housing IP55, 54mm, S00/S0	3RV1923-1CA00	SIEMENS	SIE.3RV1923-1CA00	13
7XS1	1	CEE-plug ProTop 16A 5p 6h 400V IP44	AM 13A	Mennekes	MEN.AM 13A	13
7XS1	1	CEE-coupling ProTop 16A 5p 6h 400V IP44	AM 15A	Mennekes	MEN.AM 15A	13
F10	1	Miniature circuit-breaker 6kA 3P C32	5SY6332-7	SIEMENS	SIE.5SY6332-7	14
F11	1	Ground fault current circuit breaker AC,40/4 30mA 4TE+UE	5SM3344-0LA	SIEMENS	SIE.5SM3344-0LA	14

			Datum		 Elektro Steinschaden GmbH 4663 Laakirchen Hauptstraße 35 Tel.:07613/3663-0 Fax:07613/3663-3	Anlage: TME	ALLE RECHTE VORBEHALTEN	=
			Bearb.	herbert		SLH116084 ELECTRIC SMR 10/5/4 FU semi-mobile	Auftrags-.Nr.: 74132467	+
			Gepr.	02.05.2016				
Revision	Datum	Name	Norm		Bez.: Bill of materials	Projekt-Nr.: P13-0006	Seite 50	von 54

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Parts list

Device tag	Quantity	designation	Type number	manufacturer	Part number	Page / path
F12	1	Miniature circuit-breaker 6kA 3P C16	5SY6316-7	SIEMENS	SIE.5SY6316-7	14
L1:F12	2	Feed-through terminal 0,2-6mm² In=41A, GY	282-901	WAGO	WAGO.282-901	14
XS1	1	Build-on socket 20° CEE 32A 5p 6h 400V IP44	AM1500	Mennekes	MEN.AM1500	14
XS2	1	Build-on socket 20° CEE 16A 5p 6h 400V IP44	AM1473	Mennekes	MEN.AM1473	14
XS3	1	Socket SCHUKO 2P+PE 230V IP44	2230	PCE	PCE.2230	14
3R1	1	Mains line choke 3P 400V 63uH 245A	INL401 245A, 63uH	Controltechniques	CT.INL401 245A, 63uH	15
3T1	1	Inverter module 132/110kW, 380-480VAC IP20	SPMD 1402	Controltechniques	CT.SPMD 1402	15
3T1	1	Operator panel Unidrive SP1-6	Keypad LED	Controltechniques	CT.Keypad LED	15
3T1	1				CT.SM-Control Master	15
3V1	1	Rectifier module 185/160kW, 380-480VAC IP20	SPMC 1402	Controltechniques	CT.SPMC 1402	15
B16	1	Temperature controller -10..50°C 1NO BU	8MR2170-1CB	SIEMENS	SIE.8MR2170-1CB	16
B17	1	Temperature controller -10..50°C 1NC RD	8MR2170-1CA	SIEMENS	SIE.8MR2170-1CA	16
3B1	1	Temperature controller -10..50°C 1NC RD	8MR2170-1CA	SIEMENS	SIE.8MR2170-1CA	16
E1	1	Air/air heat exchanger pv=17,5W/K	SK3126.100	RITTAL	RIT.3126100	16
E2	1	Enclosure heating P=400W 230VAC IP20	02810.0-00	STEGO	STE.02810.0-00	16
3E1	1	Enclosure heating P=800W 230VAC	SK3105.400	RITTAL	RIT.3105400	16
3E2	1	Enclosure heating P=400W 230VAC IP20	02810.0-00	STEGO	STE.02810.0-00	16
F7	1	RCBO AC,30mA 1P+N C13 10kA	5SU1354-1KK13	SIEMENS	SIE.5SU1354-1KK13	16
F16	1	Miniature circuit-breaker 6kA 1P+N C6	5SY6506-7	SIEMENS	SIE.5SY6506-7	16
3K9	1	Relay, complete device 230VAC 1CO	LZS:RT3A4T30	SIEMENS	SIE.LZS:RT3A4T30	16
3X0	8	Four-conductor feed-through terminal 0,08-2,5mm² In=20A, GY	280-833	WAGO	WAGO.280-833	16
3X0	2	Protective conductor terminal 0,08-2,5mm² In=20A, GNYE	280-837	WAGO	WAGO.280-837	16
3X10	11	Double-level terminal 0,08-2,5mm² In=20A, GY	280-519	WAGO	WAGO.280-519	16
3X10	5	Double-level terminal 0,08-2,5mm² In=20A, GNYE	280-517	WAGO	WAGO.280-517	16
K10	1	Auxiliary contactor 3NO+1NC AC 230V 50/60Hz S00	3RH2131-2AP00	SIEMENS	SIE.3RH2131-2AP00	17
K10	1	Suppressor element, varistor 127-240VAC S00	3RT2916-1BD00	SIEMENS	SIE.3RT2916-1BD00	17
P10	1	Voltmeter 0-500VAC 72x72	FQ0307/500V	ISKRA	ISK.FQ0307/500V	17
Q3	1	Trafo overload switch 1,1-1,6A S00	3RV2411-1AA10	SIEMENS	SIE.3RV2411-1AA10	17
T1	1	Transformer STI 0,4kVA 400/230V	STI0,4(400/230)	Trafomodern	TRM.STI0,4(400/230)	17
3T3	1	Power supply unit S7-300 DC24V 10A	6ES7307-1KA02-0AA0	SIEMENS	SIE.6ES7307-1KA02-0AA0	17
C1	1	Buffer module SITOP 24VDC 40A	6EP1961-3BA01	SIEMENS	SIE.6EP1961-3BA01	18
F4	1	Miniature circuit-breaker 6kA 1P C2	5SY6102-7	SIEMENS	SIE.5SY6102-7	18
F5	1	Miniature circuit-breaker 6kA 1P C2	5SY6102-7	SIEMENS	SIE.5SY6102-7	18
F5	1	Auxiliary contact 1NO+1NC	5ST3010	SIEMENS	SIE.5ST3010	18
K3	1	Auxiliary contactor 4NO DC 24V S00	3RH2140-2BB40	SIEMENS	SIE.3RH2140-2BB40	18

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Parts list

Device tag	Quantity	designation	Type number	manufacturer	Part number	Page / path
K3	1	Suppressor element, varistor 24-70VDC S00	3RT2916-1BB00	SIEMENS	SIE.3RT2916-1BB00	18
K50	1	Automotive relay 1CO 30/40A 24VDC	V23134A1053C643	TE Connectivity	TE.V23134A1053C643	18
3K50	1	Automotive relay 1NO 40A 24VDC	V23134B1053C642	TE Connectivity	TE.V23134B1053C642	18
P1	1	Lamp socket with LED UC24V GN Fdzg	3SB3403-1PC	SIEMENS	SIE.3SB3403-1PC	18
S3	1	Key-operated switch 22mm Ronis-SB30 I-O-II /T	3SB3000-4ED01	SIEMENS	SIE.3SB3000-4ED01	18
S3	2	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	18
V1	1	Bridge Rectifier 200V 35A GBPC4	GBPC3502	VISHAY	VSY.GBPC3502	18
K1	1	EMERGENCY STOP safety switching device 3NO+1NC 24VDC Fdzg	3TK2821-2CB30	SIEMENS	SIE.3TK2821-2CB30	20
K15	1	Relay, complete device 24VDC 2CO	LZS:RT4A4L24	SIEMENS	SIE.LZS:RT4A4L24	20
S4	1	Emergency stop pushbutton 22mm D=40mm	3SB3000-1HA20	SIEMENS	SIE.3SB3000-1HA20	20
S4	1	Switch-element with mount. monitoring 1NC	3SB3400-0M	SIEMENS	SIE.3SB3400-0M	20
S9	1	Illuminated pushbutton 22mm GN	3SB3001-0AA41	SIEMENS	SIE.3SB3001-0AA41	20
S9	1	Switching element 2NO	3SB3400-0D	SIEMENS	SIE.3SB3400-0D	20
5S1	1	Emergency stop switch D=40mm IP65 1NC	3SB3801-0DF3	SIEMENS	SIE.3SB3801-0DF3	20
5S2	1	Emergency stop switch D=40mm IP65 1NC	3SB3801-0DF3	SIEMENS	SIE.3SB3801-0DF3	20
K2	1	EMERGENCY STOP safety switching device 3NO+1NC 24VDC Fdzg	3TK2821-2CB30	SIEMENS	SIE.3TK2821-2CB30	21
2F1	1	PTC Motor protection tripping unit 24VDC 1CO	3RN1000-2AB00	SIEMENS	SIE.3RN1000-2AB00	22
2K5	1	Relay, complete device 230VAC 1CO	LZS:RT3A4T30	SIEMENS	SIE.LZS:RT3A4T30	23
2S5	1	Empty enclosure 1x 22mm GY 1xM20	3SB3801-0AA3	SIEMENS	SIE.3SB3801-0AA3	23
2S5	1	Pushbutton 22mm BU	3SB3000-0AA51	SIEMENS	SIE.3SB3000-0AA51	23
2S5	1	Switching element 1NO Fdzg	3SB3423-0B	SIEMENS	SIE.3SB3423-0B	23
2S5	1	Protective shroud 22mm IP67	3SB3921-0AH	SIEMENS	SIE.3SB3921-0AH	23
2S5.1	1	Empty enclosure 1x 22mm GY 1xM20	3SB3801-0AA3	SIEMENS	SIE.3SB3801-0AA3	23
2S5.1	1	Pushbutton 22mm BU	3SB3000-0AA51	SIEMENS	SIE.3SB3000-0AA51	23
2S5.1	1	Switching element 1NO Fdzg	3SB3423-0B	SIEMENS	SIE.3SB3423-0B	23
2S5.1	1	Protective shroud 22mm IP67	3SB3921-0AH	SIEMENS	SIE.3SB3921-0AH	23
3K5	1	Standstill monitor 3NO+1NC SAFEMASTER SIL3/PLe	LH5946.48	DOLD	EDS.0059266	24
3K6	1	Solenoid Key Release Unit SRUE 24VDC Pa-Key	440T-MSRUE11PA	Allen-Bradley	AB.440T-MSRUE11PA	24
3K6	1	Pa-Key	440T-AKEYE10PA	Allen-Bradley	AB.440T-AKEYE10PA	24
3Q10	1	Motor overload switch 4,5-6,3A S00 CLASS 10	3RV2011-1GA10	SIEMENS	SIE.3RV2011-1GA10	24
3X2	15	Four-conductor feed-through terminal 0,08-2,5mm² In=20A, GY	280-833	WAGO	WAGO.280-833	24
3X2	2	Protective conductor terminal 0,08-2,5mm² In=20A, GNYE	280-837	WAGO	WAGO.280-837	24
3K2	1	Auxiliary contactor 3NO+1NC AC 230V 50/60Hz S00	3RH2131-2AP00	SIEMENS	SIE.3RH2131-2AP00	25
3K2	1	Suppressor element, varistor 127-240VAC S00	3RT2916-1BD00	SIEMENS	SIE.3RT2916-1BD00	25
3K10	1	Relay, complete device 230VAC 1CO	LZS:RT3A4T30	SIEMENS	SIE.LZS:RT3A4T30	25

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Parts list

Device tag	Quantity	designation	Type number	manufacturer	Part number	Page / path
2Q11	1	Contactora 7,5kW/400V 3P 1NO/1NC AC230V S0	3RT2025-2AL20	SIEMENS	SIE.3RT2025-2AL20	25
2Q11	1	Suppressora element, varistor 127-240VAC S0	3RT2926-1BD00	SIEMENS	SIE.3RT2926-1BD00	25
2Q11	1	Auxiliary block 1NO+1NC S00/S0	3RH2911-2HA11	SIEMENS	SIE.3RH2911-2HA11	25
2Q12	1	Contactora 7,5kW/400V 3P 1NO/1NC AC230V S0	3RT2025-2AL20	SIEMENS	SIE.3RT2025-2AL20	25
2Q12	1	Suppressora element, varistor 127-240VAC S0	3RT2926-1BD00	SIEMENS	SIE.3RT2926-1BD00	25
2Q12	1	Auxiliary block 1NO+1NC S00/S0	3RH2911-2HA11	SIEMENS	SIE.3RH2911-2HA11	25
6Q10	1	Contactora 4,0kW/400V 3P+1NC AC230V S00	3RT2016-2AP02	SIEMENS	SIE.3RT2016-2AP02	25
6Q10	1	Suppressora element, varistor 127-240VAC S00	3RT2916-1BD00	SIEMENS	SIE.3RT2916-1BD00	25
6Q11	1	Contactora 4,0kW/400V 3P+1NC AC230V S00	3RT2016-2AP02	SIEMENS	SIE.3RT2016-2AP02	25
6Q11	1	Suppressora element, varistor 127-240VAC S00	3RT2916-1BD00	SIEMENS	SIE.3RT2916-1BD00	25
9F1	1	PTC Motor protection tripping unit 24VDC 1CO	3RN1000-2AB00	SIEMENS	SIE.3RN1000-2AB00	28
9K10	1	Interface relay, fourfold 24VDC NPN	KM2X04M-M	Tele Haase	TH.KM2X04M-M	28
9K11	1	Interface relay 24VDC 1CO	3TX7004-1LB00	SIEMENS	SIE.3TX7004-1LB00	28
9S3	1	Key-operated switch 22mm Ronis-SB30 O-I /R	3SB3000-4HD11	SIEMENS	SIE.3SB3000-4HD11	28
9S3	1	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	28
P100	1	Operator panel OP77A	6AV6641-0BA11-0AX1	SIEMENS	SIE.6AV6641-0BA11-0AX1	29
XDP1	1	PROFIBUS plug 90° + PG	6ES7972-0BB12-0XA0	SIEMENS	SIE.6ES7972-0BB12-0XA0	29
XDP2	1	PROFIBUS plug axial Metall	6GK1500-0EA02	SIEMENS	SIE.6GK1500-0EA02	29
K100	1	Central process unit CPU314C-2PN/DP	6ES7314-6EH04-0AB0	SIEMENS	SIE.6ES7314-6EH04-0AB0	30
K100	1	Micro Memory Card NFLASH 64kB	6ES7953-8LF20-0AA0	SIEMENS	SIE.6ES7953-8LF20-0AA0	30
K100	2	Front connector S7-300 40-pol.	6ES7392-1AM00-0AA0	SIEMENS	SIE.6ES7392-1AM00-0AA0	30
K101	1	Digital input module 16x24VDC	6ES7321-1BH02-0AA0	SIEMENS	SIE.6ES7321-1BH02-0AA0	30
K101	1	Front connector S7-300 20-pol.	6ES7392-1AJ00-0AA0	SIEMENS	SIE.6ES7392-1AJ00-0AA0	30
3P1	1	Moving coil ammeter 0-20mA 72x72	BQ0307	ISKRA	ISK.BQ0307	31
S5	1	Pushbutton 22mm GN	3SB3000-0AA41	SIEMENS	SIE.3SB3000-0AA41	34
S5	1	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	34
S5	1	Protective shroud 22mm IP67	3SB3921-0AH	SIEMENS	SIE.3SB3921-0AH	34
S6	1	Pushbutton 22mm RD	3SB3000-0AA21	SIEMENS	SIE.3SB3000-0AA21	34
S6	1	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	34
S6	1	Protective shroud 22mm IP67	3SB3921-0AH	SIEMENS	SIE.3SB3921-0AH	34
S7	1	Key-operated switch 22mm Ronis-SB30 O-I /R	3SB3000-4HD11	SIEMENS	SIE.3SB3000-4HD11	34
S7	1	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	34
7S3	1	Pushbutton 22mm WH	3SB3000-0AA61	SIEMENS	SIE.3SB3000-0AA61	34
7S3	1	Switching element 1NO Fdzg	3SB3403-0B	SIEMENS	SIE.3SB3403-0B	34
7S3	1	Protective shroud 22mm IP67	3SB3921-0AH	SIEMENS	SIE.3SB3921-0AH	34

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