

ERGO 60

PCSCHEMATIC Automation

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Documentation Info

This electrical documentation fits ERGO 60

- ENG. version
- UL approval
- 3P, 200-240V

Notes

There will be several variants of charts like this:

- 1: With and without brakes
- 2: With and without transformer
- 3: UL or CE approvals

Further, it should be noted that there will be some old versions which will be phase objections along the way, this problem will this be rectified.

Revision descriptions

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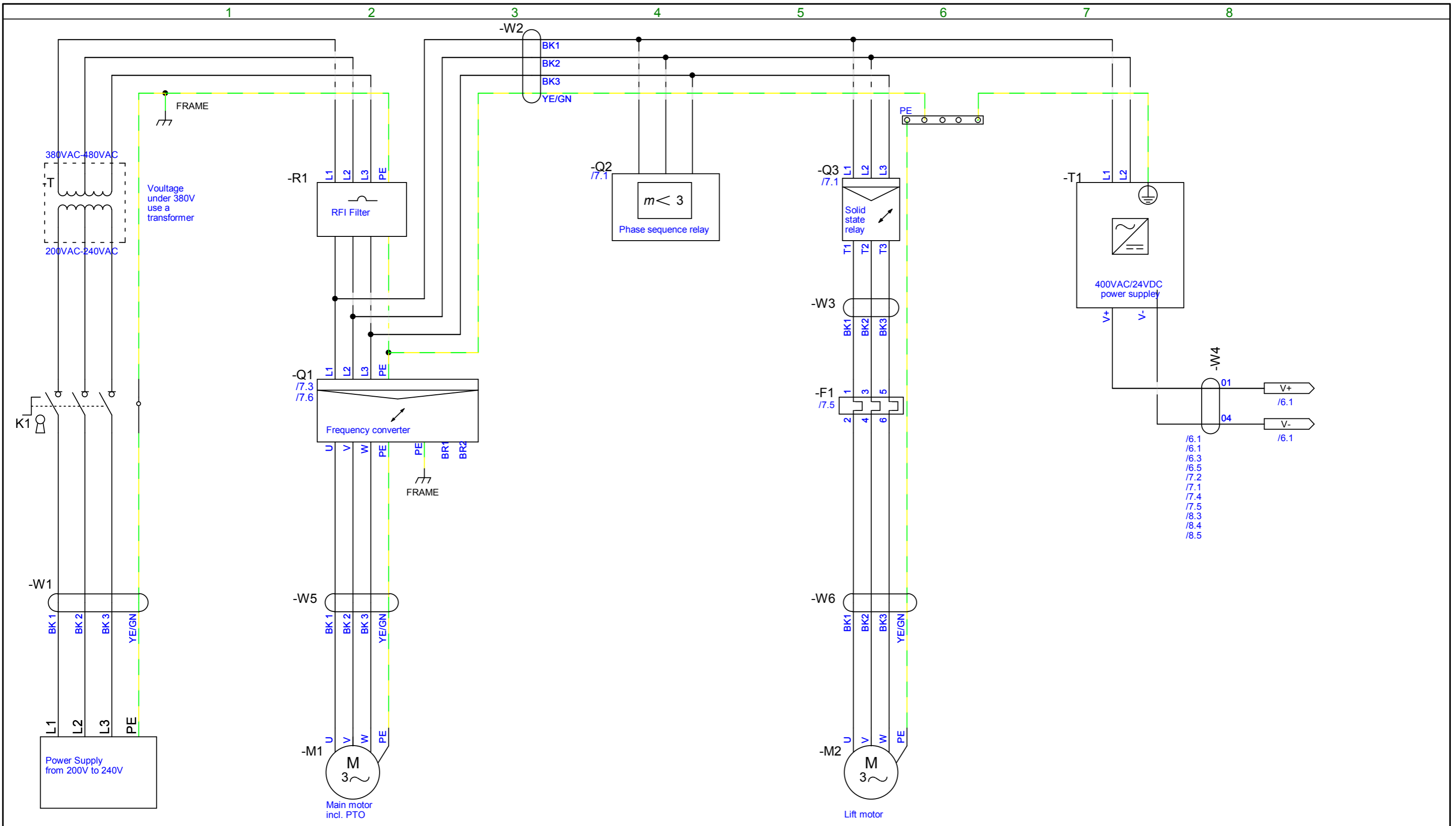
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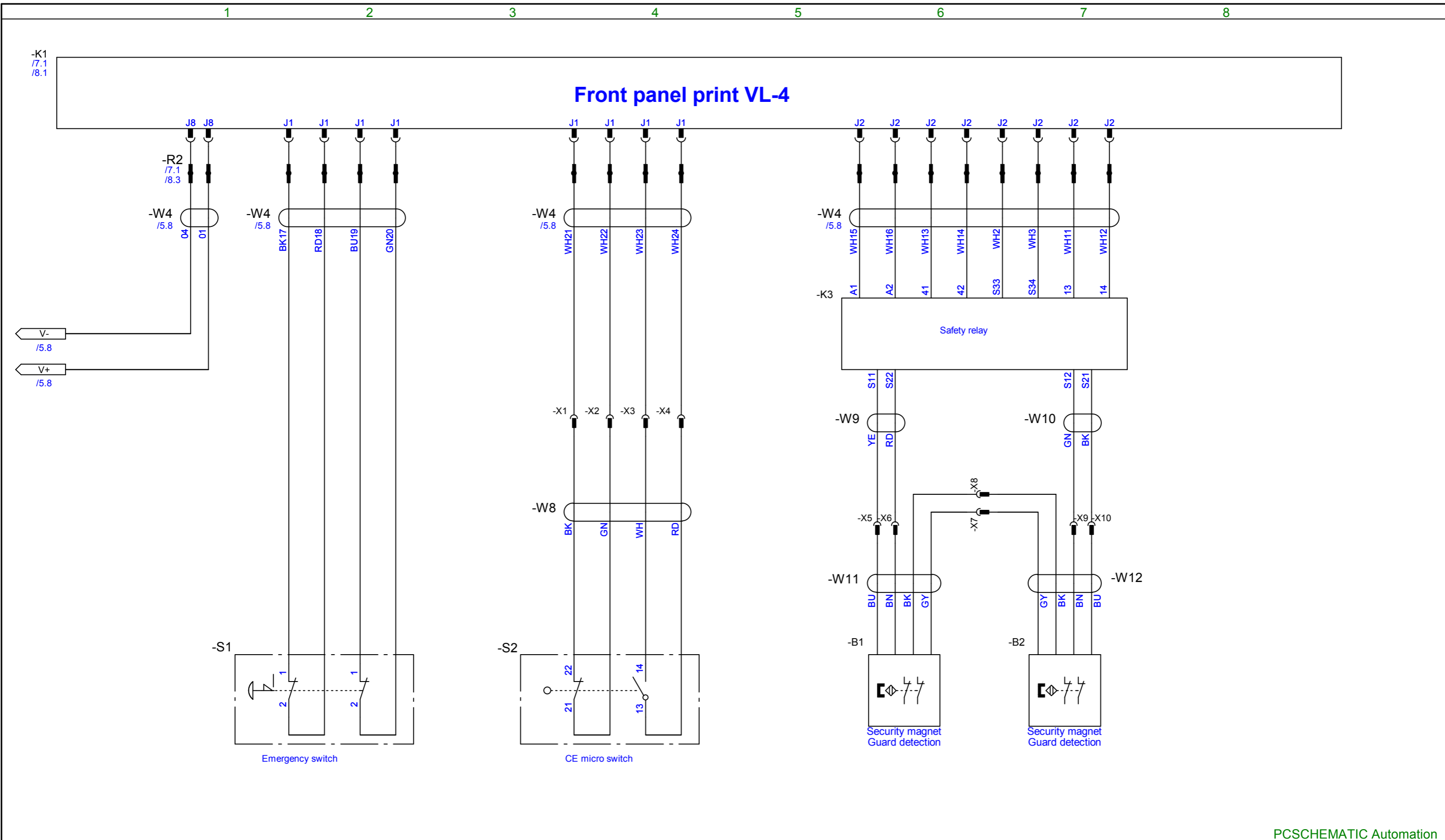


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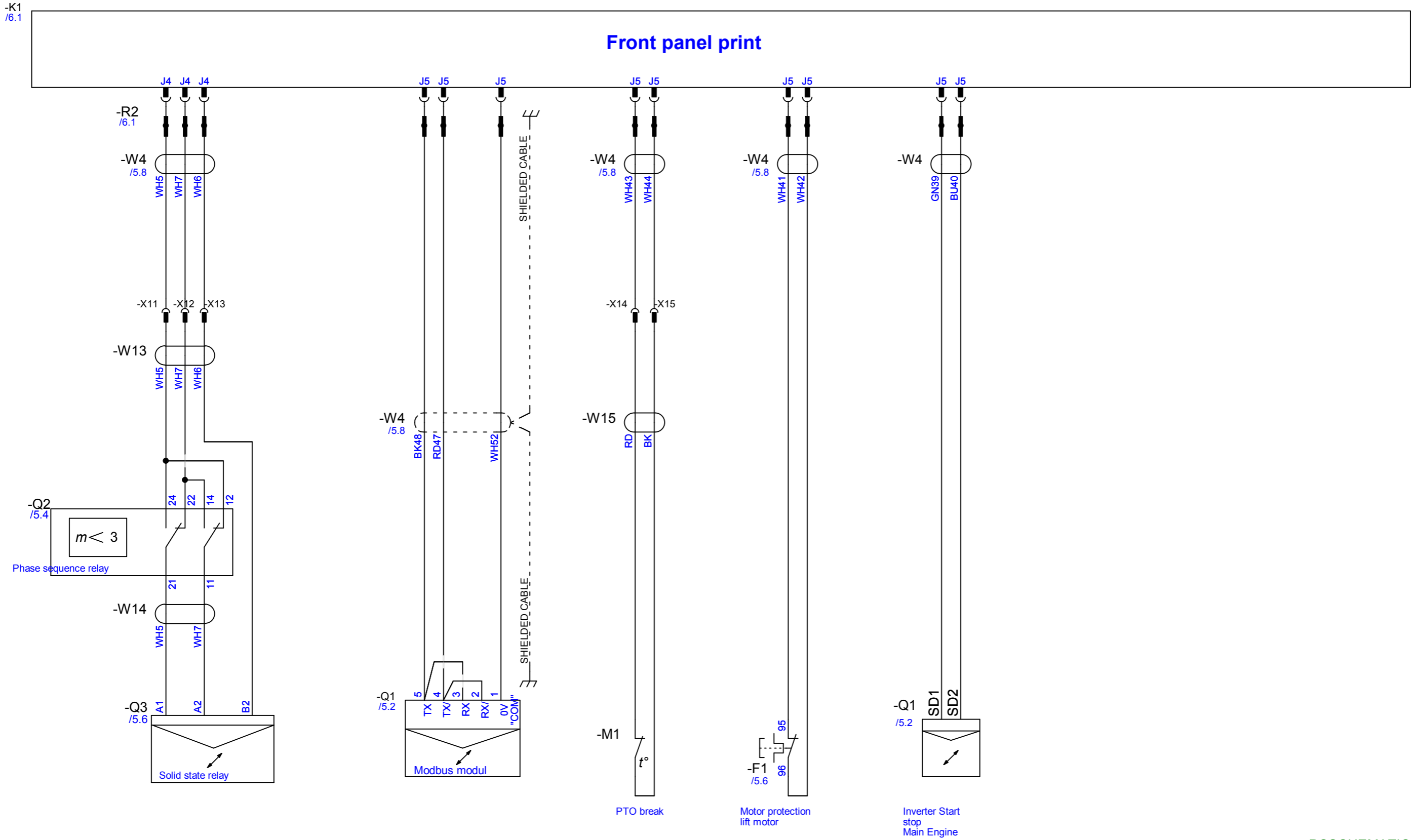
Diagram



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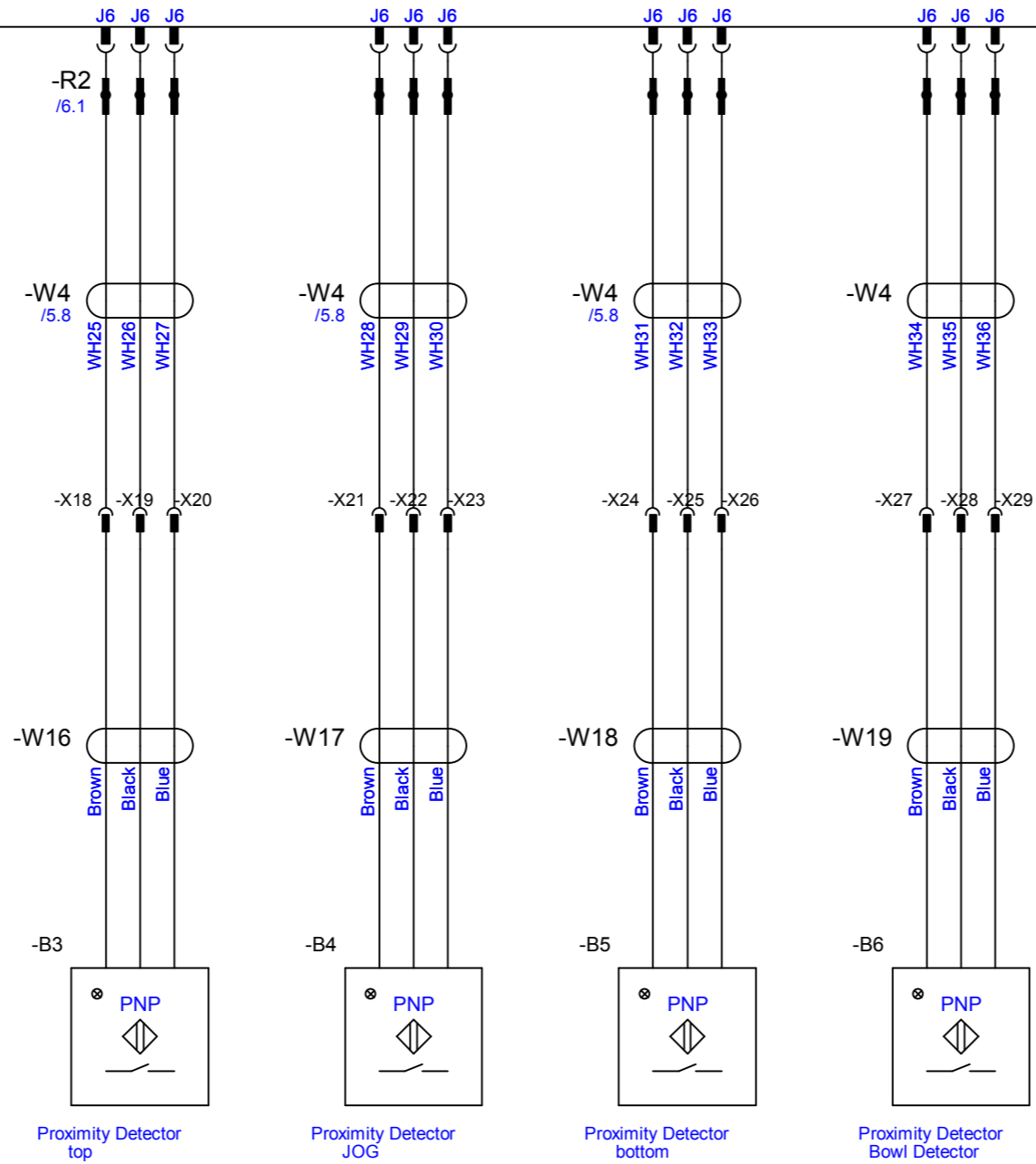
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-K1
/6.1
/7.1

Front panel print



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Lists

Component	Article	Type	Description	Position
				/5.6
-B1	AE140-512M	Guard detection		/6.6
-B2	AE140-512M	Guard detection		/6.7
-B3	AE140-86.1M	Magnet induktiv sensor		/8.3
-B4	AE140-86.1M	Magnet induktiv sensor		/8.4
-B5	AE140-86.1M	Magnet induktiv sensor		/8.5
-B6	R20E-501.7	Magnet induktiv sensor		/8.6
-F1	CE61-420.5	Safety relay		/5.6
-K1	AE140-561	Print for VL4 panel		/6.1
-K3	AE140-420	Safety relay		/6.5
-M1	WE61-85.2	Main motor incl. PTO		/5.2
-M2	CE61-86Z	Lift motor		/5.6
-Q1	CE61-601	Inverter 3kW		/5.2
-Q2	CE61-420.4	Phase sequence relay		/5.4
-Q3	AE140-420.3	Solid state relay		/5.6
-R1	AE140-601.1	RFI Filter		/5.2
-R2	AE140-601.8	Permanent magnet		/6.1
-S1	CE61-174	Emergency in front panel		/6.2
-S2	CE61-173.1M	Micro switch CE		/6.3
-T	AE140-430	3P, transformer 400/230 10 KVA CE		/5.1
-T1	CE61-414	24VDC Power supply 400VSC/24VDC		/5.7
-W1	WE61-194.1M	POWER		/5.1
-W4	WE61-542.5	24VDC main circuit cable		/5.8

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From	Cable	To	Type
POWER L1 /5.1	-W1 BK 1	K1 2 /5.1	POWER
POWER L2 /5.1	-W1 BK 2	K1 4 /5.1	POWER
POWER L3 /5.1	-W1 BK 3	K1 6 /5.1	POWER
POWER PE /5.1	-W1 YE/GN	K1 8 /5.1	POWER
-Q1 L1 /5.2	-W2 BK1	-Q2 A2 /5.4	Cable drive to electrical box
-Q1 L2 /5.2	-W2 BK2	-Q3 L2 /5.6	Cable drive to electrical box
-Q1 L3 /5.2	-W2 BK3	-Q3 L3 /5.6	Cable drive to electrical box
-R1 8 /5.2	-W2 YE/GN	/5.6	Cable drive to electrical box
-Q3 T1 /5.5	-W3 BK1	-F1 1 /5.5	Conductor
-Q3 T2 /5.6	-W3 BK2	-F1 3 /5.6	Conductor
-Q3 T3 /5.6	-W3 BK3	-F1 5 /5.6	Conductor
-T1 V+ /5.7	-W4 01	-R2 0 /6.1	24VDC main circuit cable
	-W4 04	-R2 0 /6.1	24VDC main circuit cable
-R2 0 /6.1	-W4 BK17	-S1 1 /6.1	Conductor, emergency stop to the front panel
-R2 0 /6.2	-W4 BU19	-S1 1 /6.2	Conductor, emergency stop to the front panel
-R2 0 /6.2	-W4 GN20	-S1 2 /6.2	Conductor, emergency stop to the front panel
-R2 0 /6.2	-W4 RD18	-S1 2 /6.1	Conductor, emergency stop to the front panel
-R2 0 /7.3	-W4 BK48	-Q1 5 /7.3	Shielded cable
-R2 0 /7.3	-W4 RD47	-Q1 4 /7.3	Shielded cable
-R2 0 /7.3	-W4 WH52	-Q1 1 /7.3	Shielded cable
	-W4		Shielded cable
-R2 0 /7.6	-W4 BU40	-Q1 SD2 /7.6	Conductor
-R2 0 /7.6	-W4 GN39	-Q1 SD1 /7.6	Conductor
-R2 0 /6.6	-W4 WH2	-K3 S33 /6.6	Cable to safety relay
-R2 0 /6.7	-W4 WH3	-K3 S34 /6.7	Cable to safety relay

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From		Cable	To			Type
-R2	0	/6.7	-W4	WH11	-K3 13 /6.7	Cable to safety relay
-R2	0	/6.7	-W4	WH12	-K3 14 /6.7	Cable to safety relay
-R2	0	/6.6	-W4	WH13	-K3 41 /6.6	Cable to safety relay
-R2	0	/6.6	-W4	WH14	-K3 42 /6.6	Cable to safety relay
-R2	0	/6.5	-W4	WH15	-K3 A1 /6.5	Cable to safety relay
-R2	0	/6.6	-W4	WH16	-K3 A2 /6.6	Cable to safety relay
-R2	0	/7.1	-W4	WH5	-X11 0 /7.1	
-R2	0	/7.1	-W4	WH6	-X13 0 /7.1	
-R2	0	/7.1	-W4	WH7	-X12 0 /7.1	
-R2	0	/6.3	-W4	WH21	-X1 0 /6.3	Cable micro switch
-R2	0	/6.4	-W4	WH22	-X2 0 /6.4	Cable micro switch
-R2	0	/6.4	-W4	WH23	-X3 0 /6.4	Cable micro switch
-R2	0	/6.4	-W4	WH24	-X4 0 /6.4	Cable micro switch
-R2	0	/8.3	-W4	WH25	-X18 0 /8.3	Cable PNP top
-R2	0	/8.3	-W4	WH26	-X19 0 /8.3	Cable PNP top
-R2	0	/8.3	-W4	WH27	-X20 0 /8.3	Cable PNP top
-R2	0	/8.4	-W4	WH28	-X21 0 /8.4	Cable PNP JOG
-R2	0	/8.4	-W4	WH29	-X22 0 /8.4	Cable PNP JOG
-R2	0	/8.4	-W4	WH30	-X23 0 /8.4	Cable PNP JOG
-R2	0	/8.5	-W4	WH31	-X24 0 /8.5	Cable PNP bund
-R2	0	/8.5	-W4	WH32	-X25 0 /8.5	Cable PNP bund
-R2	0	/8.5	-W4	WH33	-X26 0 /8.5	Cable PNP bund
-R2	0	/8.6	-W4	WH34	-X27 0 /8.6	Cable PNP Bowl
-R2	0	/8.6	-W4	WH35	-X28 0 /8.6	Cable PNP Bowl
-R2	0	/8.6	-W4	WH36	-X29 0 /8.6	Cable PNP Bowl
-R2	0	/7.5	-W4	WH41	-F1 95 /7.5	Cable termoe relay
-R2	0	/7.5	-W4	WH42	-F1 96 /7.5	Cable termoe relay
-R2	0	/7.4	-W4	WH43	-X14 0 /7.4	Cable to PTO

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From			Cable		To			Type
-R2	0	/7.4	-W4	WH44	-X15	0	/7.4	Cable to PTO
-Q1	U	/5.2	-W5	BK 1	-M1	U	/5.2	Cable main motor
-Q1	V	/5.2	-W5	BK 2	-M1	V	/5.2	Cable main motor
-Q1	W	/5.2	-W5	BK 3	-M1	W	/5.2	Cable main motor
-Q1	PE	/5.2	-W5	YE/GN	-M1	PE	/5.2	Cable main motor
-F1	2	/5.5	-W6	BK1	-M2	U	/5.5	Cable for lift motor
-F1	4	/5.6	-W6	BK2	-M2	V	/5.6	Cable for lift motor
-F1	6	/5.6	-W6	BK3	-M2	W	/5.6	Cable for lift motor
		/5.6	-W6	YE/GN	-M2	PE	/5.6	Cable for lift motor
-X1	0	/6.3	-W8	BK	-S2	22	/6.3	Cable micro switch
-X2	0	/6.4	-W8	GN	-S2	21	/6.3	Cable micro switch
-X4	0	/6.4	-W8	RD	-S2	13	/6.4	Cable micro switch
-X3	0	/6.4	-W8	WH	-S2	14	/6.4	Cable micro switch
-K3	S22	/6.6	-W9	RD	-X6	0	/6.6	Conductor
-K3	S11	/6.6	-W9	YE	-X5	0	/6.6	Conductor
-K3	S21	/6.7	-W10	BK	-X10	0	/6.7	Conductor
-K3	S12	/6.7	-W10	GN	-X9	0	/6.7	Conductor
-X8	0	/6.6	-W11	BK	-B1	3	/6.6	Cable bowl detection
-X6	0	/6.6	-W11	BN	-B1	2	/6.6	Cable bowl detection
-X5	0	/6.6	-W11	BU	-B1	1	/6.6	Cable bowl detection
-X7	0	/6.6	-W11	GY	-B1	4	/6.6	Cable bowl detection

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From		Cable		To		Type	
-X8	0	/6.6	-W12 BK	-B2	2	/6.7	Cable bowldetection
-X9	0	/6.7	-W12 BN	-B2	3	/6.7	Cable bowldetection
-X10	0	/6.7	-W12 BU	-B2	4	/6.7	Cable bowldetection
-X7	0	/6.6	-W12 GY	-B2	1	/6.7	Cable bowldetection
-X11	0	/7.1	-W13 WH5	-Q2	12	/7.1	Conductor
-X13	0	/7.1	-W13 WH6	-Q3	B2	/7.1	Conductor
-X12	0	/7.1	-W13 WH7	-Q2	14	/7.1	Conductor
-Q2	21	/7.1	-W14 WH5	-Q3	A1	/7.1	Conductor
-Q2	11	/7.1	-W14 WH7	-Q3	A2	/7.1	Conductor
-X15	0	/7.4	-W15 BK	-M1	2	/7.4	PTO kabel
-X14	0	/7.4	-W15 RD	-M1	1	/7.4	PTO kabel
-X19	0	/8.3	-W16 Black	-B3		/8.3	PNP Sensor cable top
-X20	0	/8.3	-W16 Blue	-B3		/8.3	PNP Sensor cable top
-X18	0	/8.3	-W16 Brown	-B3		/8.3	PNP Sensor cable top
-X22	0	/8.4	-W17 Black	-B4		/8.4	PNP Sensor cable JOG
-X23	0	/8.4	-W17 Blue	-B4		/8.4	PNP Sensor cable JOG
-X21	0	/8.4	-W17 Brown	-B4		/8.4	PNP Sensor cable JOG
-X25	0	/8.5	-W18 Black	-B5		/8.5	PNP Sensor cable bottom
-X26	0	/8.5	-W18 Blue	-B5		/8.5	PNP Sensor cable bottom
-X24	0	/8.5	-W18 Brown	-B5		/8.5	PNP Sensor cable bottom
-X28	0	/8.6	-W19 Black	-B6		/8.6	PNP Sensor cable bowl

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Page no.	Title	Page remarks	Revision	Last edit
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2	Indeks			28-12-2016
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6	Diagram			21-12-2017
7	Diagram		01	21-12-2017
8	Diagram			21-12-2017
	Lists			
9	Parts List			21-12-2017
10	Component list			21-12-2017
11	Cable list			21-12-2017
16	Comments (log)			22-12-2017

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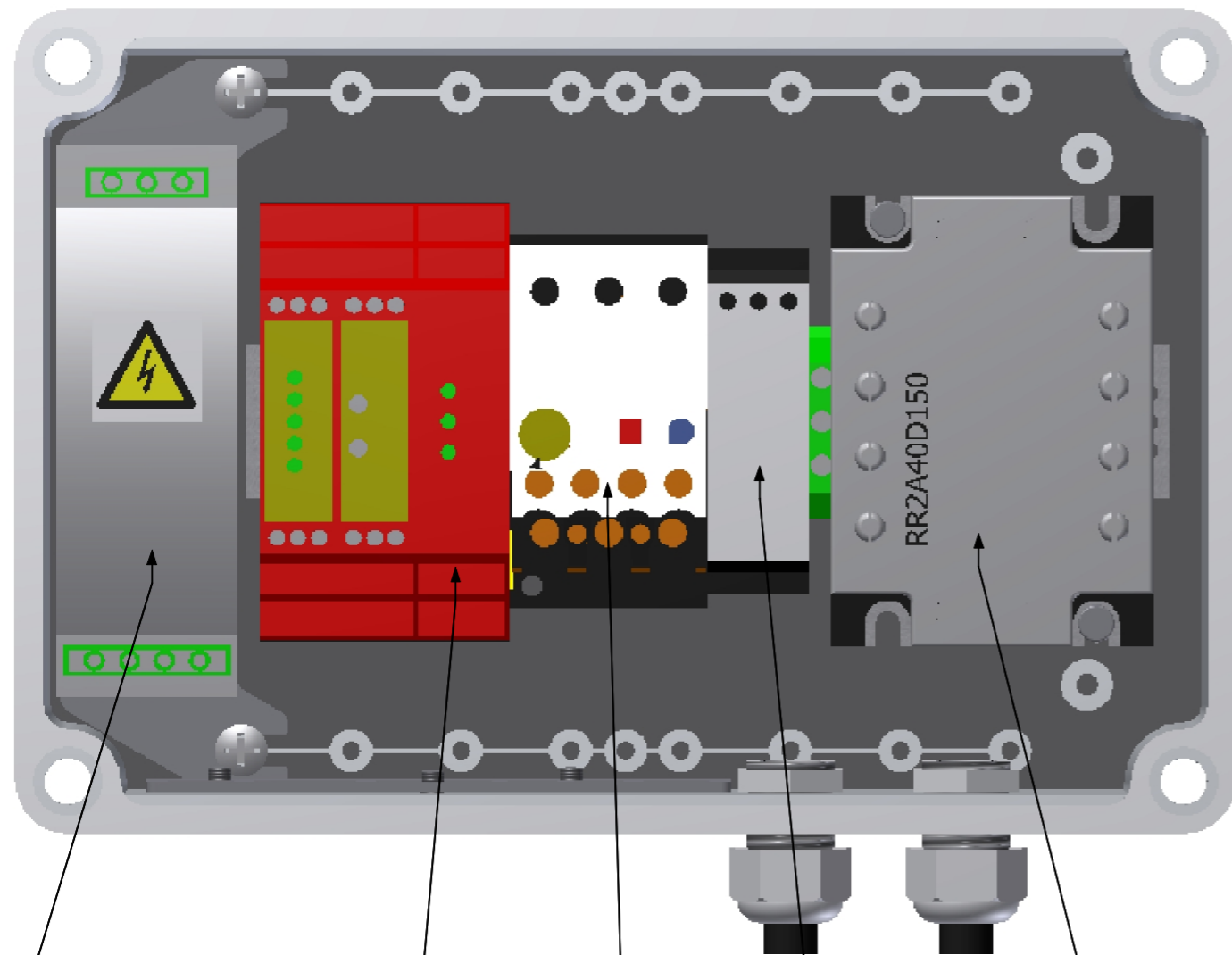
Page no.	Title	Page remarks	Revision	Last edit
	Arrangement			
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19	Cable connection			22-12-2017
	PCB diagram			
20	Diagram			22-12-2017
21	Diagram			28-12-2016

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Arrangement



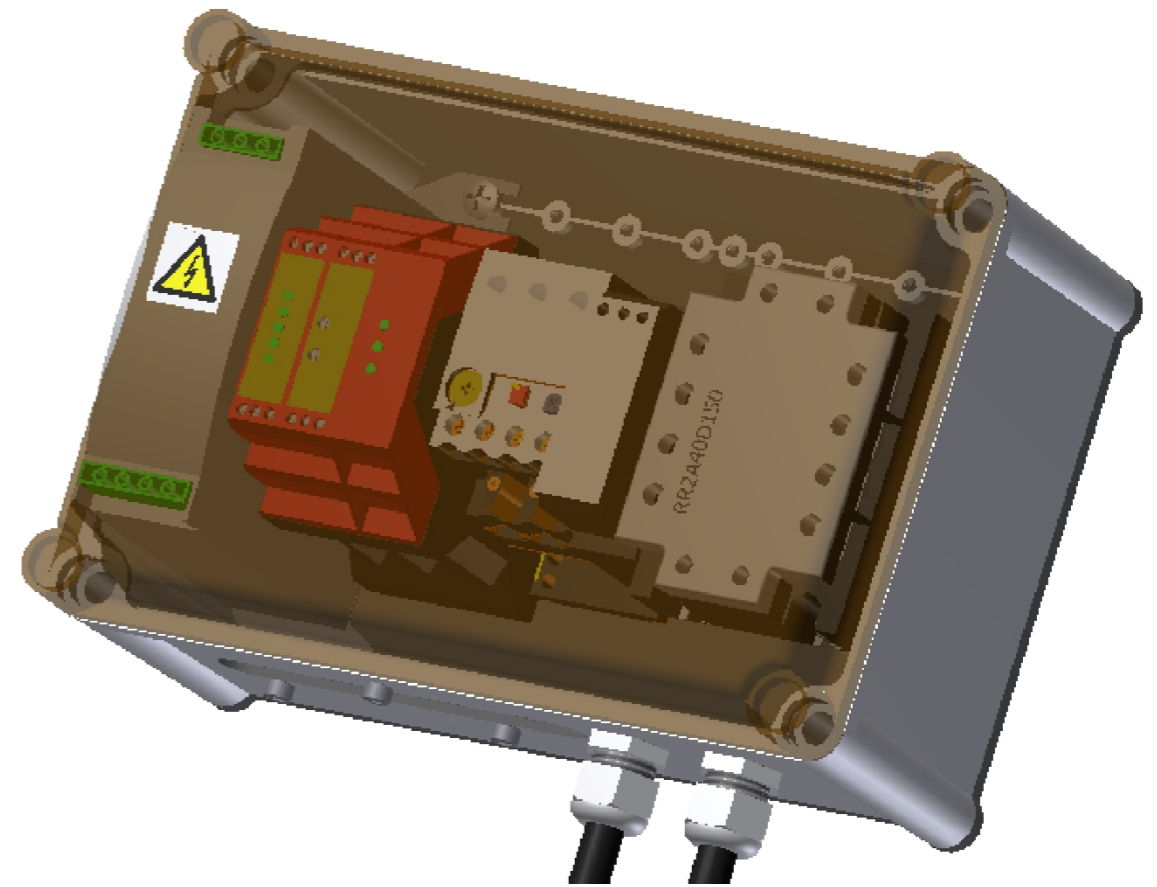
400VAC/24VDC
power supply
Part no. CE61-414

Safety relay
Part no. AE140-420

Safety relay
part no. AE140-420.4

Phase sequence relay
part no. CE61-420.4

Solid state relay
part no. CE140-420.3



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