

# ERGO 140 VL-4

## 200-240VAC

PCSCHEMATIC Automation

**A/S WODSCHOW & Co.**  
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<b>Projekttitel:</b> ERGO 140 VL-4	<b>Sagsnr.:</b>	<b>Projektrev.:</b>	<b>Side</b> 1
<b>Kunde:</b>			<b>Målestok:</b> 1:1
<b>Sidetitel:</b> Diagram	<b>Tegningsnr.:</b>	<b>Siderev.:</b>	<b>Forrige side:</b>
<b>Filnavn:</b> 35.140-10.02.04_external_use	<b>Konstr. (projekt/side):</b> CE / CE	<b>Sidst udskrevet:</b> 22-12-2017	<b>Næste side:</b> 2
<b>Sideref.:</b>	<b>Godk. (dato/init):</b>	<b>Sidst rettet:</b> 31-07-2017	<b>Antal sider ialt:</b> 25





**Documentation Info**

This electrical documentation fits ERGO 140

- ENG. version
- UL approval
- 200-240VAC

**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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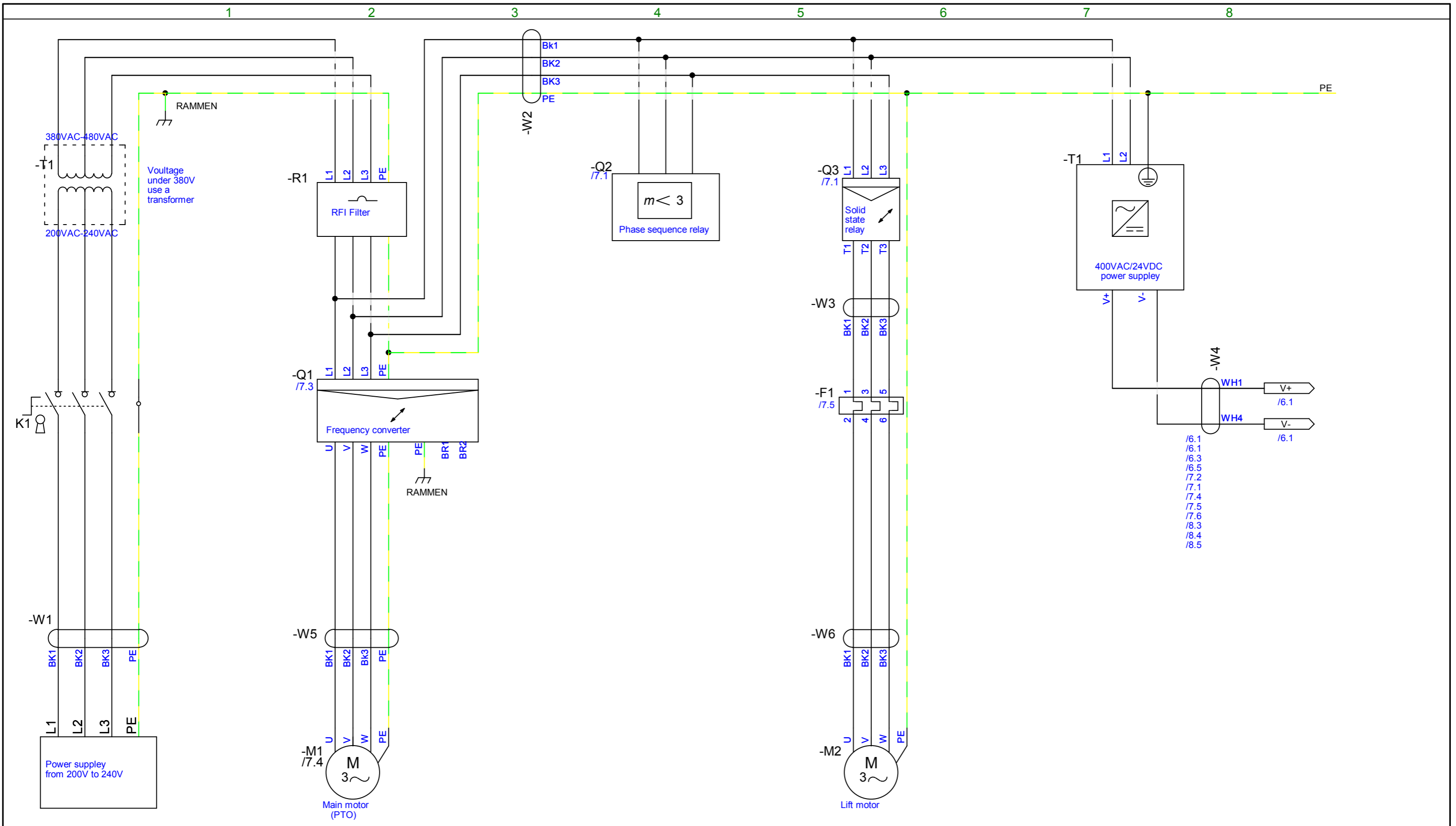
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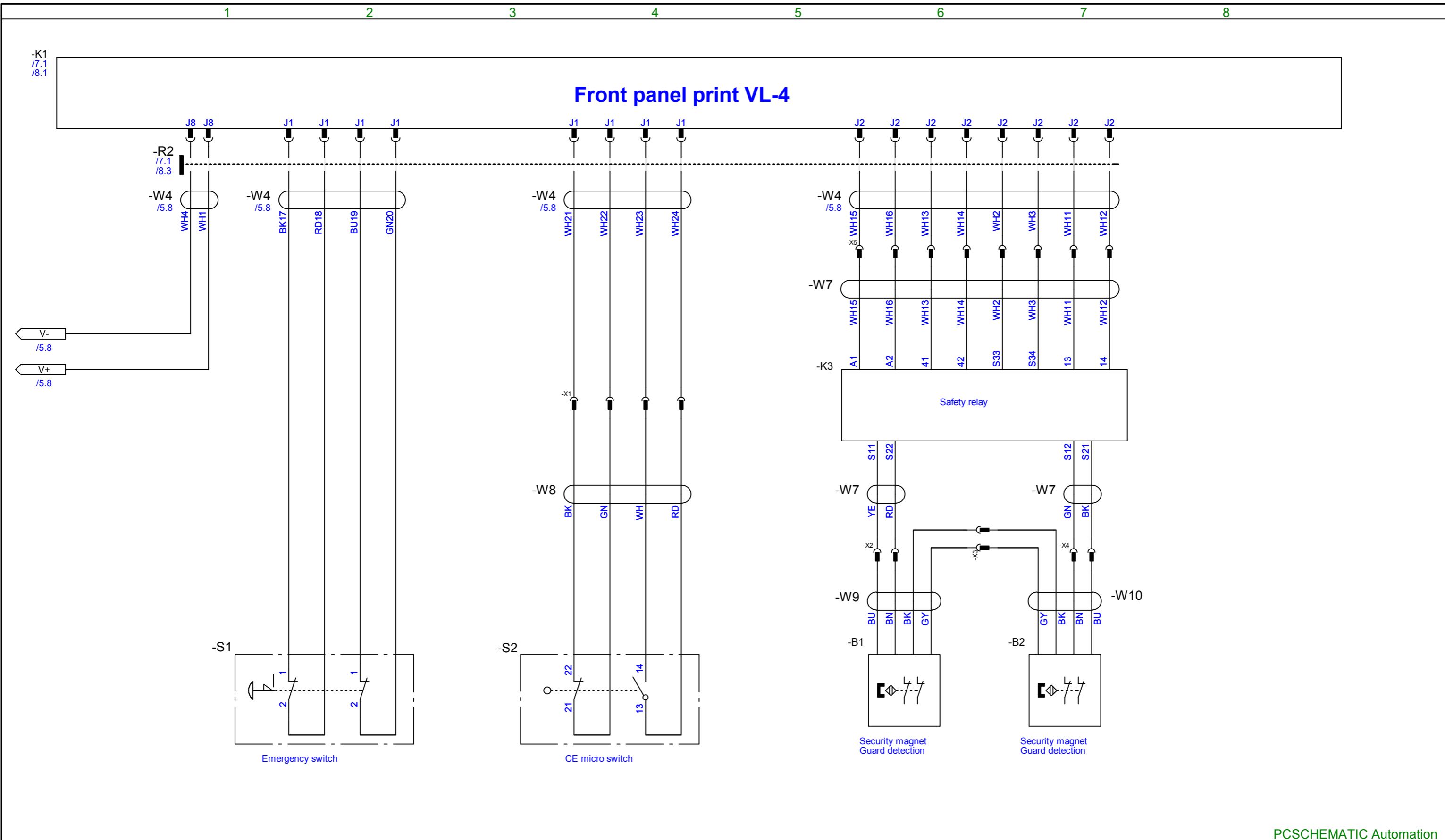
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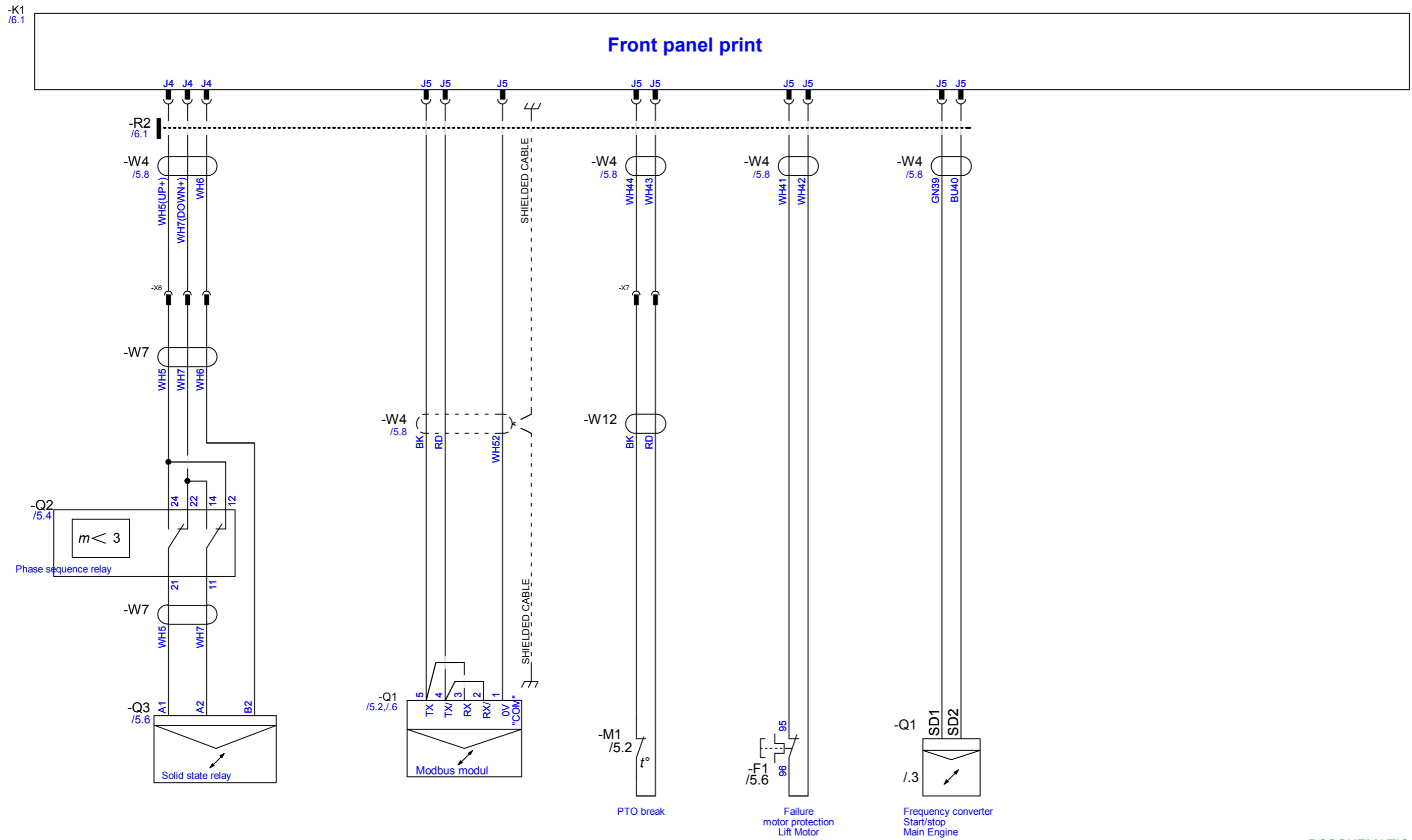
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# Diagrams





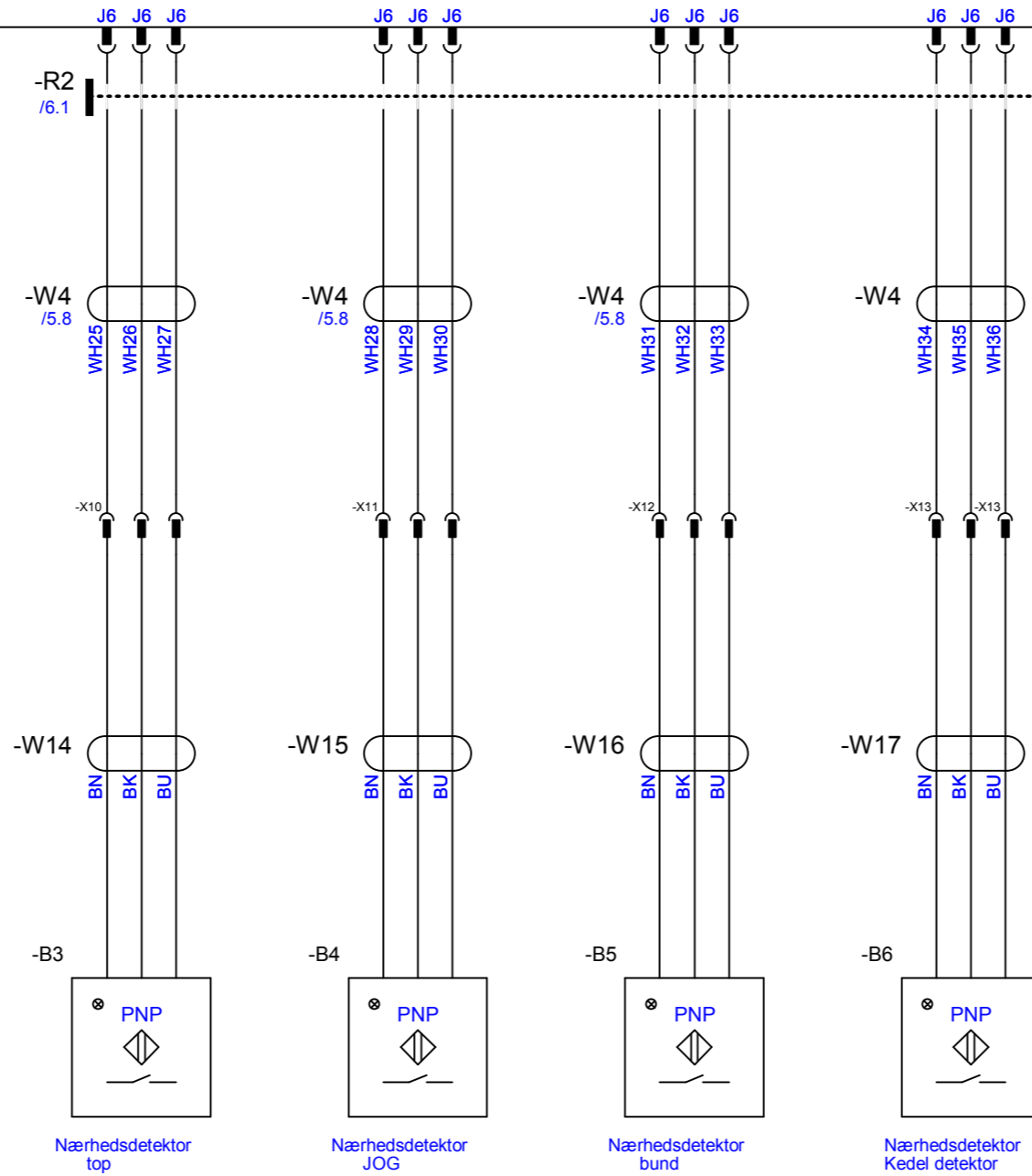
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-K1  
/6.1  
/7.1

### Front panel print



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# Lists



Component	Article	Type	Description	Position
-B1	AE140-512	Safety magnetic senso		/6.6
-B2	AE140-512	Safety magnetic senso MAM-1822-6		/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	AE140-86.1M	Magnet induktiv sensor		/8.6
-F1	AE140-420.4	Safety relay		/5.6
-K1	AE140-561	Print for VL-4 panel		/6.1
-K3	AE140-420	Safety relay		/6.5
-M1	AE140-85	Main motor incl. PTO		/5.2
-M2	WE140-86M	Lift motor incl. actuator		/5.6
-Q1	AE140-601	Frequency converter		/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 switch in panel		/6.2
-S2	CE61-173.1M	Micro switch CE		/6.3
-T1	AE140-430	3P, transformer 400/230 10 KVA CE		/5.1
-T1	CE61-414	400VAV/24VDC		/5.7
-W1	WE140-194.14M	Power Cable		/5.1
-W4	WE140-542.5	24VDC hovedkredskabel		/5.8
-W7	WE140-194.11M	Cable for controlbox, AWG20		/6.5

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<b>Project title:</b> ERGO 140 VL-4	<b>Case no.:</b>	<b>Project rev.:</b>	<b>Page</b> 10
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From		Cable		To			Type	
	L1	/5.1	<b>-W1</b>	BK1	K1	2	/5.1	Power Cable
	L2	/5.1	<b>-W1</b>	BK2	K1	4	/5.1	Power Cable
	L3	/5.1	<b>-W1</b>	BK3	K1	6	/5.1	Power Cable
	PE	/5.1	<b>-W1</b>	PE	K1	8	/5.1	Power Cable
-Q1	L2	/5.2	<b>-W2</b>	BK2	-Q3	L2	/5.6	Cable drive to electrical box
-Q1	L3	/5.2	<b>-W2</b>	BK3	-Q3	L3	/5.6	Cable drive to electrical box
-Q1	L1	/5.2	<b>-W2</b>	Bk1	-Q2	A2	/5.4	Cable drive to electrical box
-R1	8	/5.2	<b>-W2</b>	PE	-M2	PE	/5.6	Cable drive to electrical box
-Q3	T1	/5.5	<b>-W3</b>	BK1	-F1	1	/5.5	Wire
-Q3	T2	/5.6	<b>-W3</b>	BK2	-F1	3	/5.6	Wire
-Q3	T3	/5.6	<b>-W3</b>	BK3	-F1	5	/5.6	Wire
-K1	4	/7.3	<b>-W4</b>	BK	-Q1	5	/7.3	Afskærmet kabel
-K1	5	/7.3	<b>-W4</b>	RD	-Q1	4	/7.3	Afskærmet kabel
-K1	7	/7.3	<b>-W4</b>	WH52	-Q1	1	/7.3	Afskærmet kabel
			<b>-W4</b>					Afskærmet kabel
-K1	3	/6.1	<b>-W4</b>	BK17	-S1	1	/6.1	Middle conductor, emergency stop
-K1	5	/6.2	<b>-W4</b>	BU19	-S1	1	/6.2	Middle conductor, emergency stop
-K1	6	/6.2	<b>-W4</b>	GN20	-S1	2	/6.2	Middle conductor, emergency stop
-K1	4	/6.2	<b>-W4</b>	RD18	-S1	2	/6.1	Middle conductor, emergency stop
-K1	11	/7.6	<b>-W4</b>	BU40	-Q1	SD2	/7.6	Start/stop
-K1	10	/7.6	<b>-W4</b>	GN39	-Q1	SD1	/7.6	Start/stop
-T1	V+	/5.7	<b>-W4</b>	WH1	-K1	2	/6.1	24VDC hovedkredskabel
			<b>-W4</b>	WH4	-K1	1	/6.1	24VDC hovedkredskabel
-K1	15	/6.6	<b>-W4</b>	WH2	-X5	0	/6.6	Cable safety relay
-K1	16	/6.7	<b>-W4</b>	WH3	-X5	0	/6.7	Cable safety relay

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From		Cable		To			Type	
-K1	17	/6.7	-W4	WH11	-X5	0	/6.7	Cable safety relay
-K1	18	/6.7	-W4	WH12	-X5	0	/6.7	Cable safety relay
-K1	13	/6.6	-W4	WH13	-X5	0	/6.6	Cable safety relay
-K1	14	/6.6	-W4	WH14	-X5	0	/6.6	Cable safety relay
-K1	11	/6.5	-W4	WH15	-X5	0	/6.5	Cable safety relay
-K1	12	/6.6	-W4	WH16	-X5	0	/6.6	Cable safety relay
-K1	1	/7.1	-W4	WH5(UP+)	-X6	0	/7.1	Cable for control lift
-K1	3	/7.1	-W4	WH6	-X6	0	/7.1	Cable for control lift
-K1	2	/7.1	-W4	WH7(DOWN+)	-X6	0	/7.1	Cable for control lift
-K1	7	/6.3	-W4	WH21	-X1	0	/6.3	Cable micro switch
-K1	8	/6.4	-W4	WH22	-X1	0	/6.4	Cable micro switch
-K1	9	/6.4	-W4	WH23	-X1	0	/6.4	Cable micro switch
-K1	10	/6.4	-W4	WH24	-X1	0	/6.4	Cable micro switch
-K1	10	/8.3	-W4	WH25	-X10	0	/8.3	Cable PNP top
-K1	3	/8.3	-W4	WH26	-X10	0	/8.3	Cable PNP top
-K1	2	/8.3	-W4	WH27	-X10	0	/8.3	Cable PNP top
-K1	5	/8.4	-W4	WH28	-X11	0	/8.4	Cable PNP JOG
-K1	4	/8.4	-W4	WH29	-X11	0	/8.4	Cable PNP JOG
-K1	7	/8.4	-W4	WH30	-X11	0	/8.4	Cable PNP JOG
-K1	6	/8.5	-W4	WH31	-X12	0	/8.5	Cable PNP buttom
-K1	9	/8.5	-W4	WH32	-X12	0	/8.5	Cable PNP buttom
-K1	8	/8.5	-W4	WH33	-X12	0	/8.5	Cable PNP buttom
-K1	1	/8.6	-W4	WH34	-X13	0	/8.6	Cable PNP Bowl
-K1	12	/8.6	-W4	WH35	-X13	0	/8.6	Cable PNP Bowl
-K1	11	/8.6	-W4	WH36	-X13	0	/8.6	Cable PNP Bowl
-K1	8	/7.5	-W4	WH41	-F1	95	/7.5	cable for thermo relay
-K1	9	/7.5	-W4	WH42	-F1	96	/7.5	cable for thermo relay
-K1	7	/7.4	-W4	WH43	-X7	0	/7.4	Cabel to PTO

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From			Cable		To			Type
-K1	6	/7.4	-W4	WH44	-X7	0	/7.4	Cabel to PTO
-Q1	U	/5.2	-W5	BK1	-M1	U	/5.2	Cable for main motor
-Q1	V	/5.2	-W5	BK2	-M1	V	/5.2	Cable for main motor
-Q1	W	/5.2	-W5	Bk3	-M1	W	/5.2	Cable for main motor
-Q1	PE	/5.2	-W5	PE	-M1	PE	/5.2	Cable for 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
-K3	S21	/6.7	-W7	BK	-X4	0	/6.7	Mellemleder
-K3	S12	/6.7	-W7	GN	-X4	0	/6.7	Mellemleder
-K3	S22	/6.6	-W7	RD	-X2	0	/6.6	Mellemleder
-K3	S11	/6.6	-W7	YE	-X2	0	/6.6	Mellemleder
-X5	0	/6.6	-W7	WH2	-K3	S33	/6.6	Cable for controlbox, AWG20
-X5	0	/6.7	-W7	WH3	-K3	S34	/6.7	Cable for controlbox, AWG20
-X5	0	/6.7	-W7	WH11	-K3	13	/6.7	Cable for controlbox, AWG20
-X5	0	/6.7	-W7	WH12	-K3	14	/6.7	Cable for controlbox, AWG20
-X5	0	/6.6	-W7	WH13	-K3	41	/6.6	Cable for controlbox, AWG20
-X5	0	/6.6	-W7	WH14	-K3	42	/6.6	Cable for controlbox, AWG20
-X5	0	/6.5	-W7	WH15	-K3	A1	/6.5	Cable for controlbox, AWG20
-X5	0	/6.6	-W7	WH16	-K3	A2	/6.6	Cable for controlbox, AWG20
-Q2	21	/7.1	-W7	WH5	-Q3	A1	/7.1	Mellemleder
-Q2	11	/7.1	-W7	WH7	-Q3	A2	/7.1	Mellemleder
-X6	0	/7.1	-W7	WH5	-Q2	12	/7.1	Mellemleder
-X6	0	/7.1	-W7	WH6	-Q3	B2	/7.1	Mellemleder
-X6	0	/7.1	-W7	WH7	-Q2	14	/7.1	Mellemleder

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From		Cable	To		Type
-X1	0	/6.3	<b>-W8</b>	BK	-S2 22 /6.3 Kabel micro switch
-X1	0	/6.4	<b>-W8</b>	GN	-S2 21 /6.3 Kabel micro switch
-X1	0	/6.4	<b>-W8</b>	RD	-S2 13 /6.4 Kabel micro switch
-X1	0	/6.4	<b>-W8</b>	WH	-S2 14 /6.4 Kabel micro switch
-X3	0	/6.6	<b>-W9</b>	BK	-B1 3 /6.6 Kabel til kedel detektion
-X2	0	/6.6	<b>-W9</b>	BN	-B1 2 /6.6 Kabel til kedel detektion
-X2	0	/6.6	<b>-W9</b>	BU	-B1 1 /6.6 Kabel til kedel detektion
-X3	0	/6.6	<b>-W9</b>	GY	-B1 4 /6.6 Kabel til kedel detektion
-X3	0	/6.6	<b>-W10</b>	BK	-B2 1 /6.7 Kabel til kedel detektion
-X4	0	/6.7	<b>-W10</b>	BN	-B2 4 /6.7 Kabel til kedel detektion
-X4	0	/6.7	<b>-W10</b>	BU	-B2 3 /6.7 Kabel til kedel detektion
-X3	0	/6.6	<b>-W10</b>	GY	-B2 2 /6.7 Kabel til kedel detektion
-X7	0	/7.4	<b>-W12</b>	BK	-M1 1 /7.4 PTO kabel
-X7	0	/7.4	<b>-W12</b>	RD	-M1 2 /7.4 PTO kabel
-X10	0	/8.3	<b>-W14</b>	BK	-B3 /8.3 PNP Sensor kabel top
-X10	0	/8.3	<b>-W14</b>	BN	-B3 /8.3 PNP Sensor kabel top
-X10	0	/8.3	<b>-W14</b>	BU	-B3 /8.3 PNP Sensor kabel top
-X11	0	/8.4	<b>-W15</b>	BK	-B4 /8.4 PNP Sensor kabel JOG
-X11	0	/8.4	<b>-W15</b>	BN	-B4 /8.4 PNP Sensor kabel JOG
-X11	0	/8.4	<b>-W15</b>	BU	-B4 /8.4 PNP Sensor kabel JOG
-X12	0	/8.5	<b>-W16</b>	BK	-B5 /8.5 PNP sensor kabel bund
-X12	0	/8.5	<b>-W16</b>	BN	-B5 /8.5 PNP sensor kabel bund





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9	Part list			21-12-2017
10	Component list			21-12-2017
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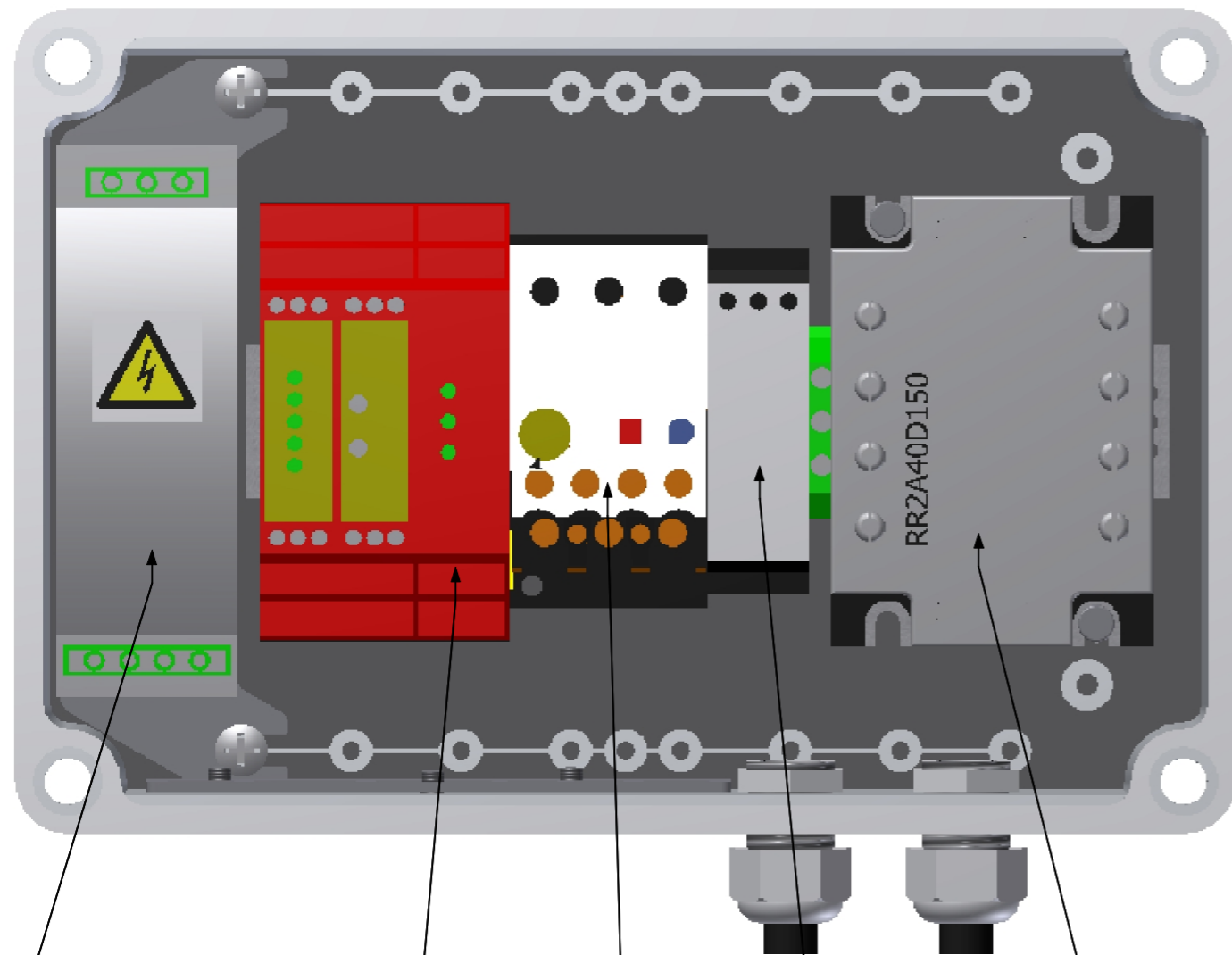
Page no.	Title	Page remarks	Revision	Last edit
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20	Diagram			22-12-2017
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# Arrangement



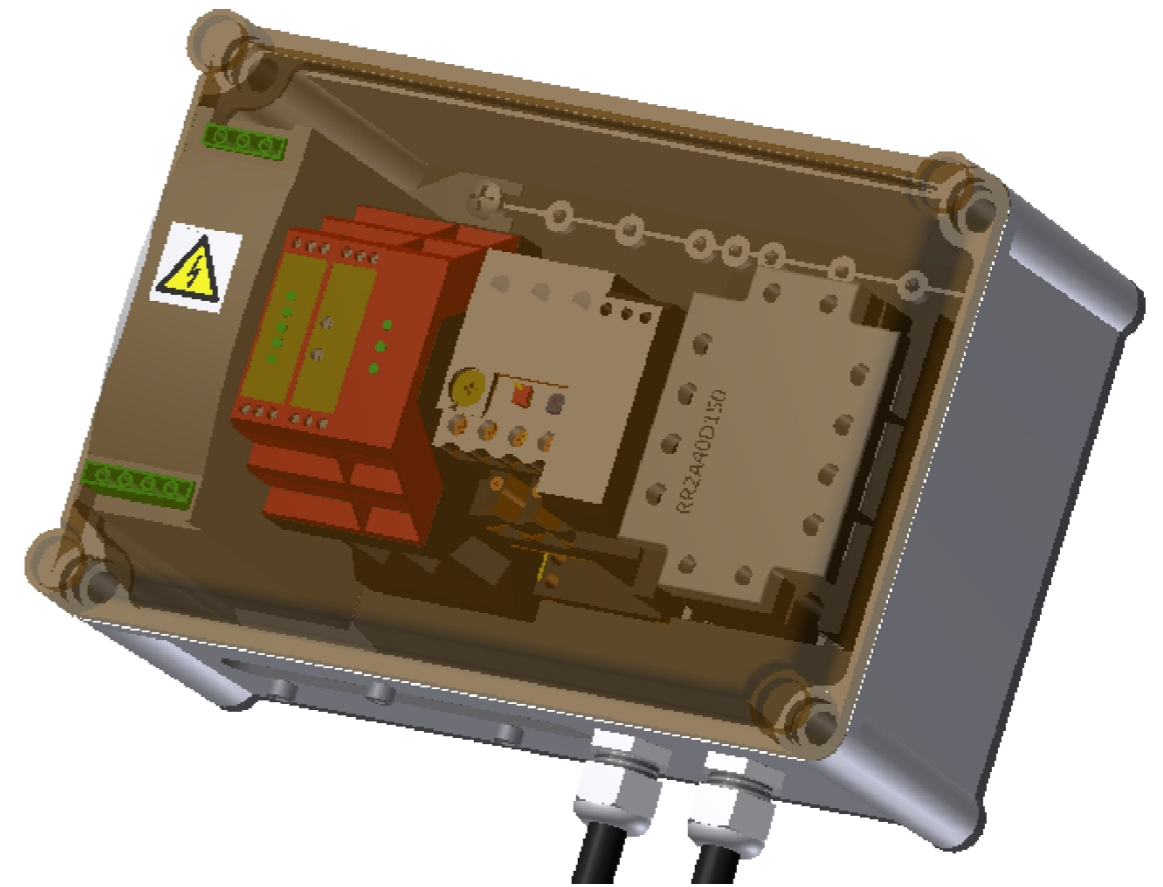
400VAC/24VDC  
power supply  
Item no. CE61-414

Safety relay  
Item no. CE61-420

Over Current Relay  
Item no. AE140-420.4

Phase sequencing relay  
Item no. CE61-420.4

Solid state relay  
Item no. CE140-420.3



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