



MACPUAR S.A.
 Leonardo da Vinci, s/n Parc. TA nº13
 Isla de La Cartuja, MP building
 41092 - Seville (Spain)
 Tel. +34 954 63 05 62
 Fax +34 954 65 79 55

Order data

Customer: STANNAH LIFTS LTD

Customer ref.: Electrical wiring diagram MP, typical. Issue 15.07.13

Macpuarsa Ref.: 2013_71_153276

Motor/Central

Controller:

- MicroBASIC
 Via Serie

Electrical:

- 1 Speed
 2 Speeds
 3VF (DSP)
 3VF (YASKAWA)
 3VF (ZIEHL-ABEGG)

- Scalar
 Magnet encoder
 Industrial encoder

Hydraulic:

- Direct starting
 Star/delta starting
 Soft Starter
 Innovator

Power / Voltage:
6.79 HP / 415 V

Frequency:
50 Hz

Features

Installation type:

- Universal
 Down selective
 Up selective
 Full selective

Number of lifts:

- Simplex
 Duplex
 Triplex
 Quadruplex

No. of stops: 4

Sequence:

Change:

P1	P2	P3	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16
0	1	2	3												
1C	1C	1C													

Remarks

* The colors of wires may change without notice.

* Machineroomless lift (SCM)

* You can download the electronic version of this project on our website

General table of contents

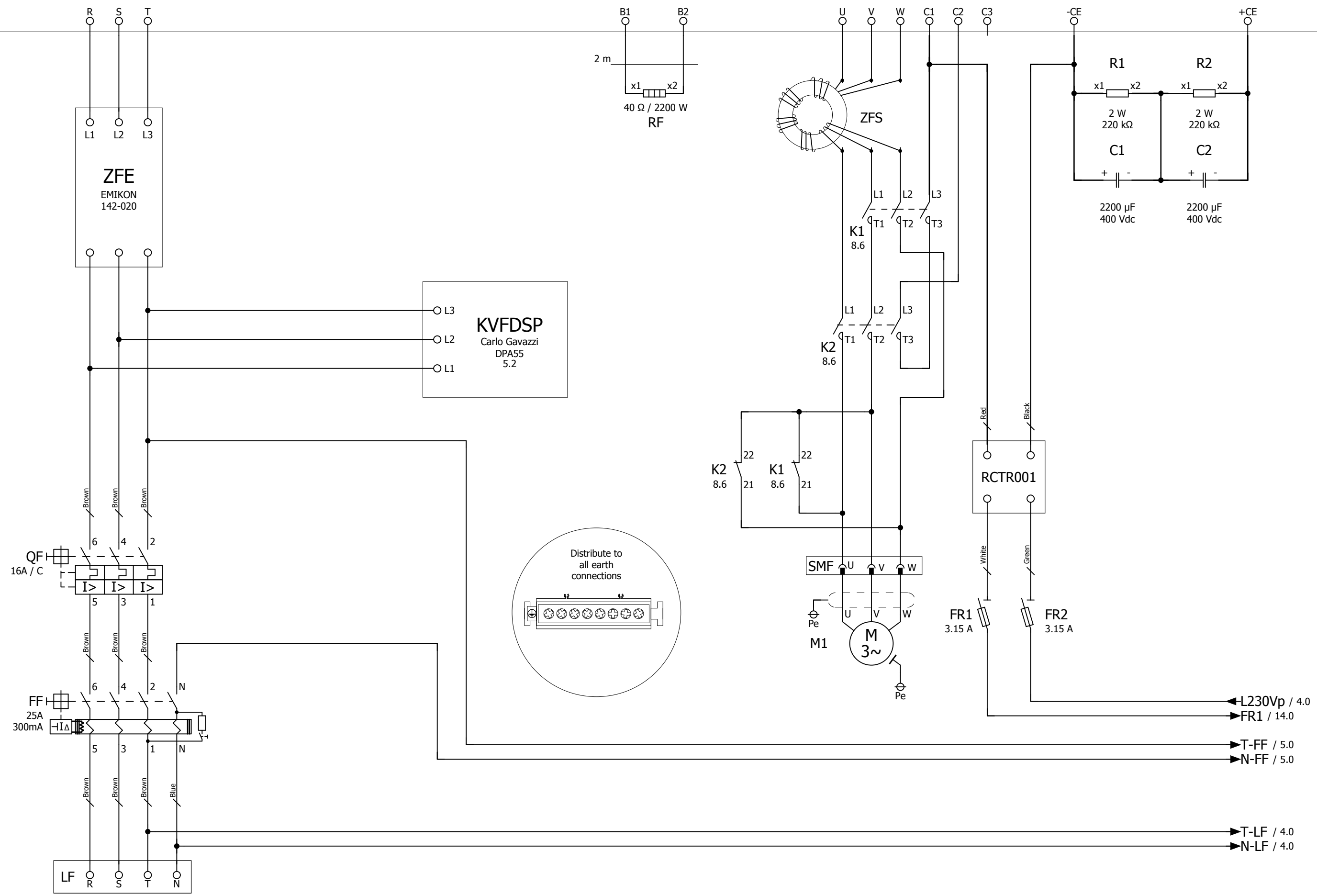
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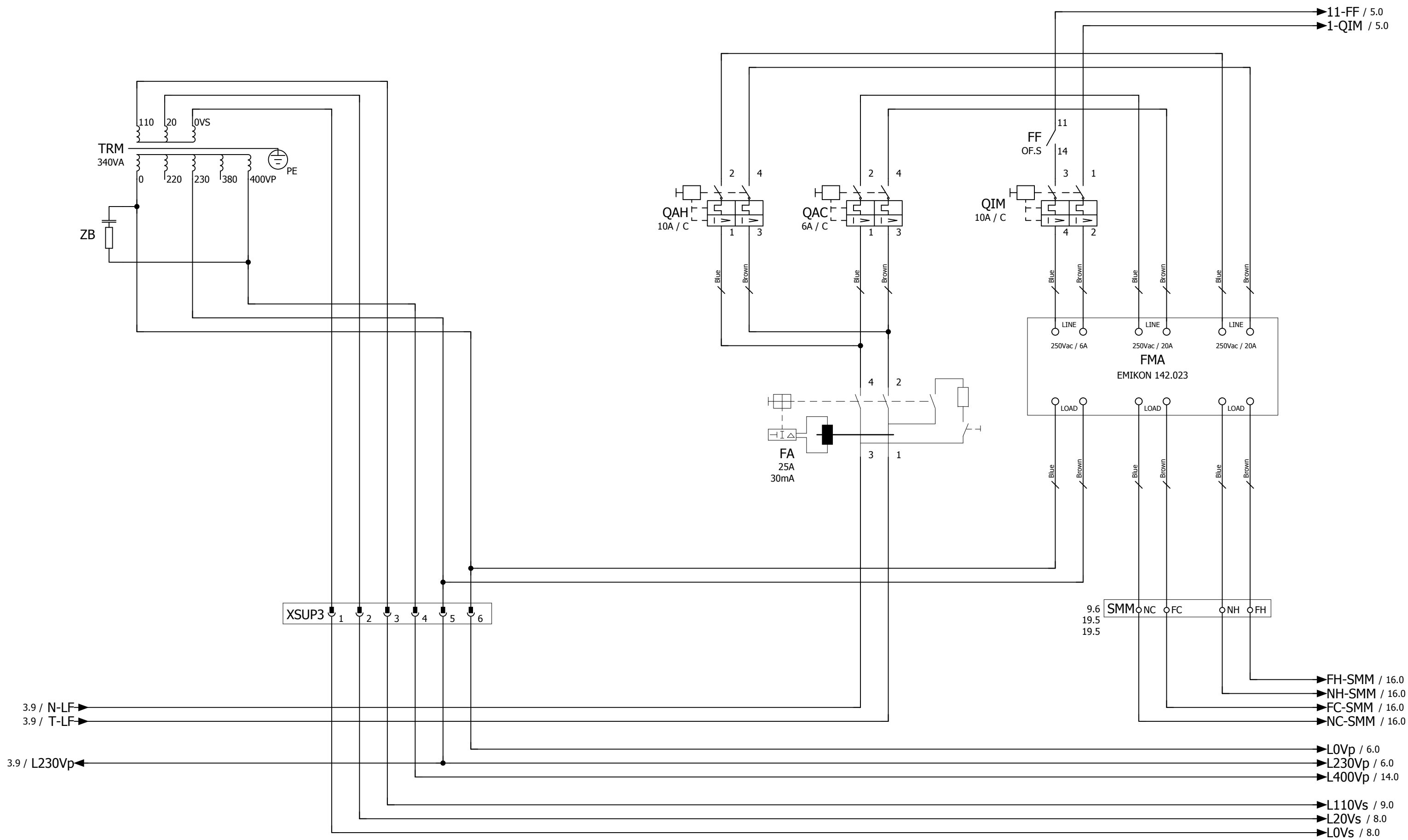
3VFMAC-DSP

14
15



Name	Date	Macpuarsa Ref.:	Customer:	Power wiring
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
			Power / Voltage: 6.79 HP / 415 V	Page 3 / 33





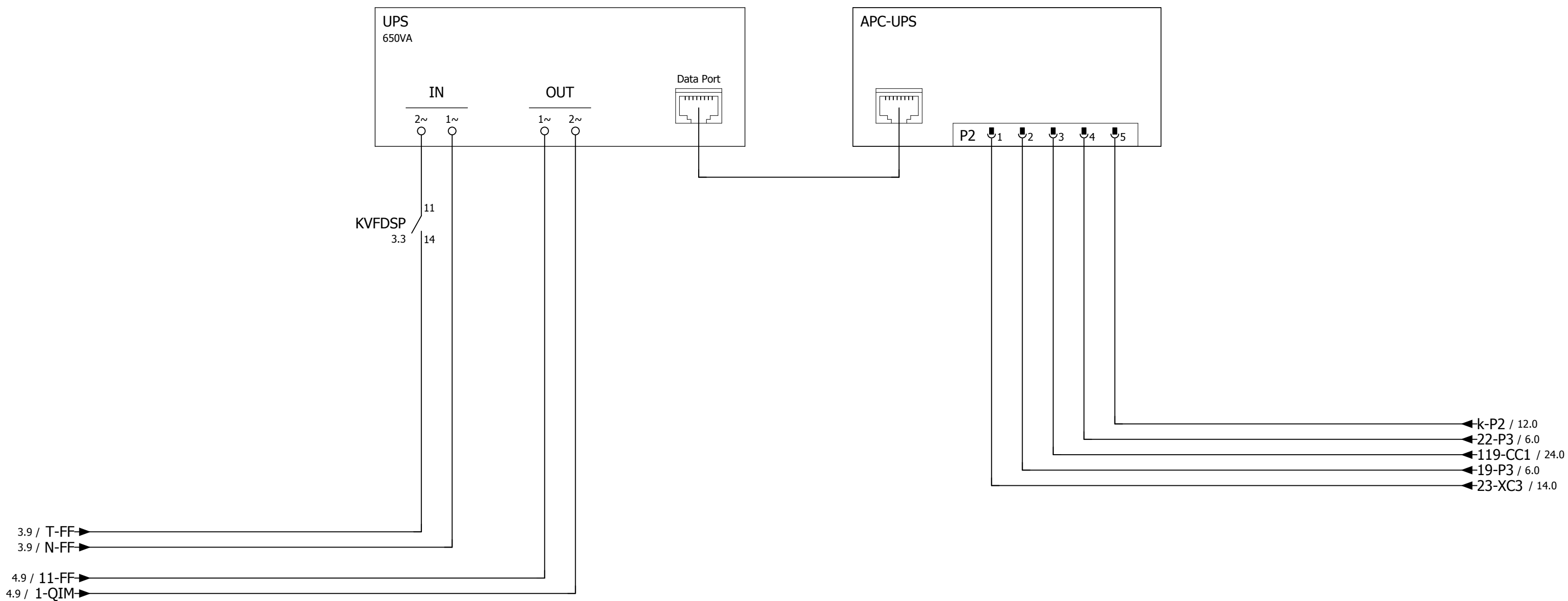
3.9 / N-LF
 3.9 / T-LF
 3.9 / L230Vp

11-FF / 5.0
 1-QIM / 5.0

FH-SMM / 16.0
 NH-SMM / 16.0
 FC-SMM / 16.0
 NC-SMM / 16.0
 L0Vp / 6.0
 L230Vp / 6.0
 L400Vp / 14.0
 L110Vs / 9.0
 L20Vs / 8.0
 L0Vs / 8.0



1. 12 VDC output to inverter during rescue maneuvering.
2. 0 VDC power supply
3. 24 VDC input during rescue maneuvering.
4. 24 VDC power supply
5. 24 VDC output in power absence.



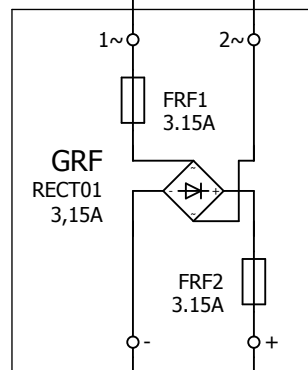
PCB-MicroBASIC

8
10
12
17
18
21
24
25
27

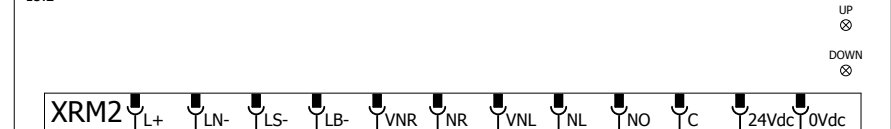
XTS MES TS1 TS2

S1 F--
6.5
8.3
8.4

KRFR
14.6



RESMON
15.2



S1
ZBV-B4
x1 x2

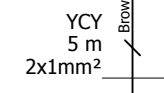
HUP

HDOWN

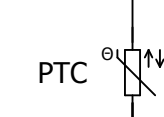
KNR
6.7

KNR
G2R-2
24Vdc

XMAQ1



XMAQ1



RVAR
S20-K300

YBR

BR1 BR2

c-P2 / 8.0
6-XMAQ1 / 14.0

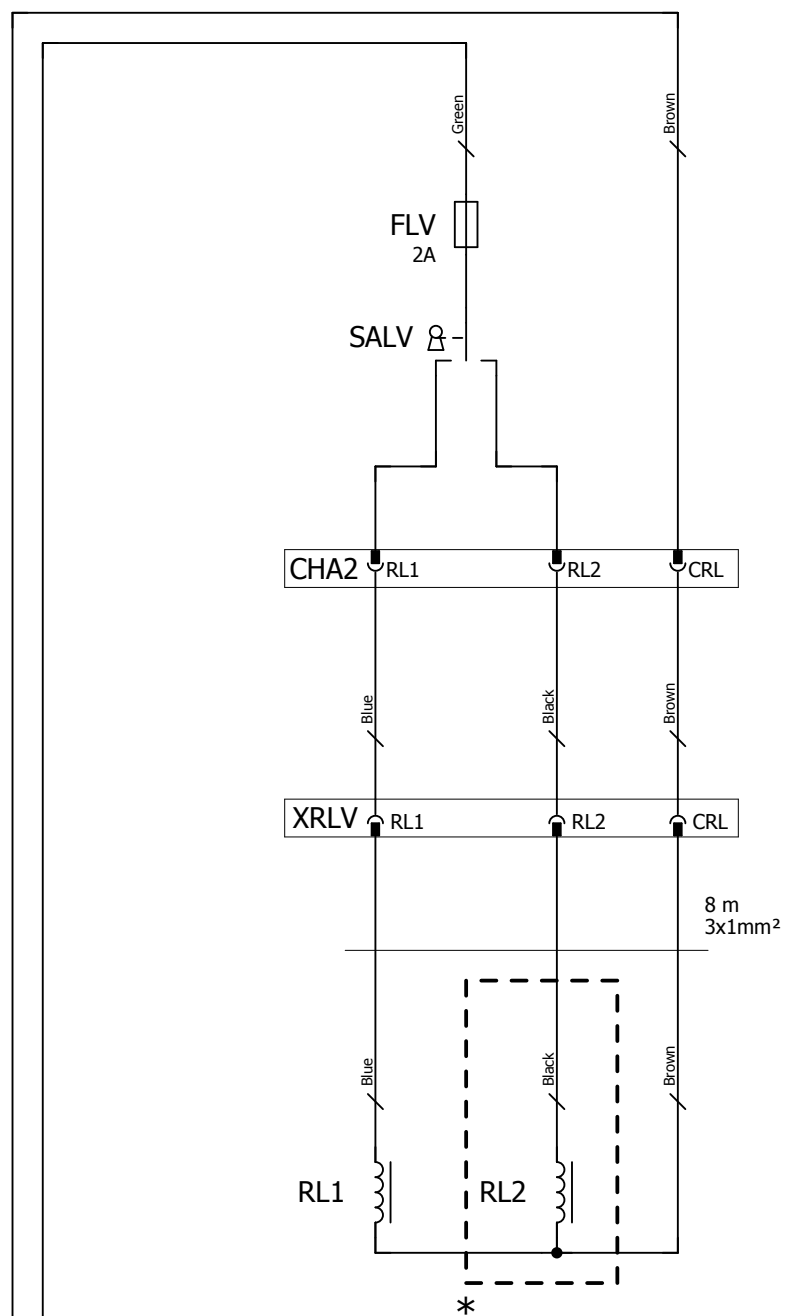
4.9 / L230Vp
4.9 / LOVp
5.9 / 22-P3
5.9 / 19-P3

207-pin / 21.0
MES-XTS / 11.0
L230Vp / 7.0
LOVp / 7.0
22-P3 / 8.0
19-P3 / 8.0

14 - 11 6.8

Name	Date	Macpuarsa Ref.:	Customer:	Machine control connector
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
			Power / Voltage: 6.79 HP / 415 V	Page 6 / 33





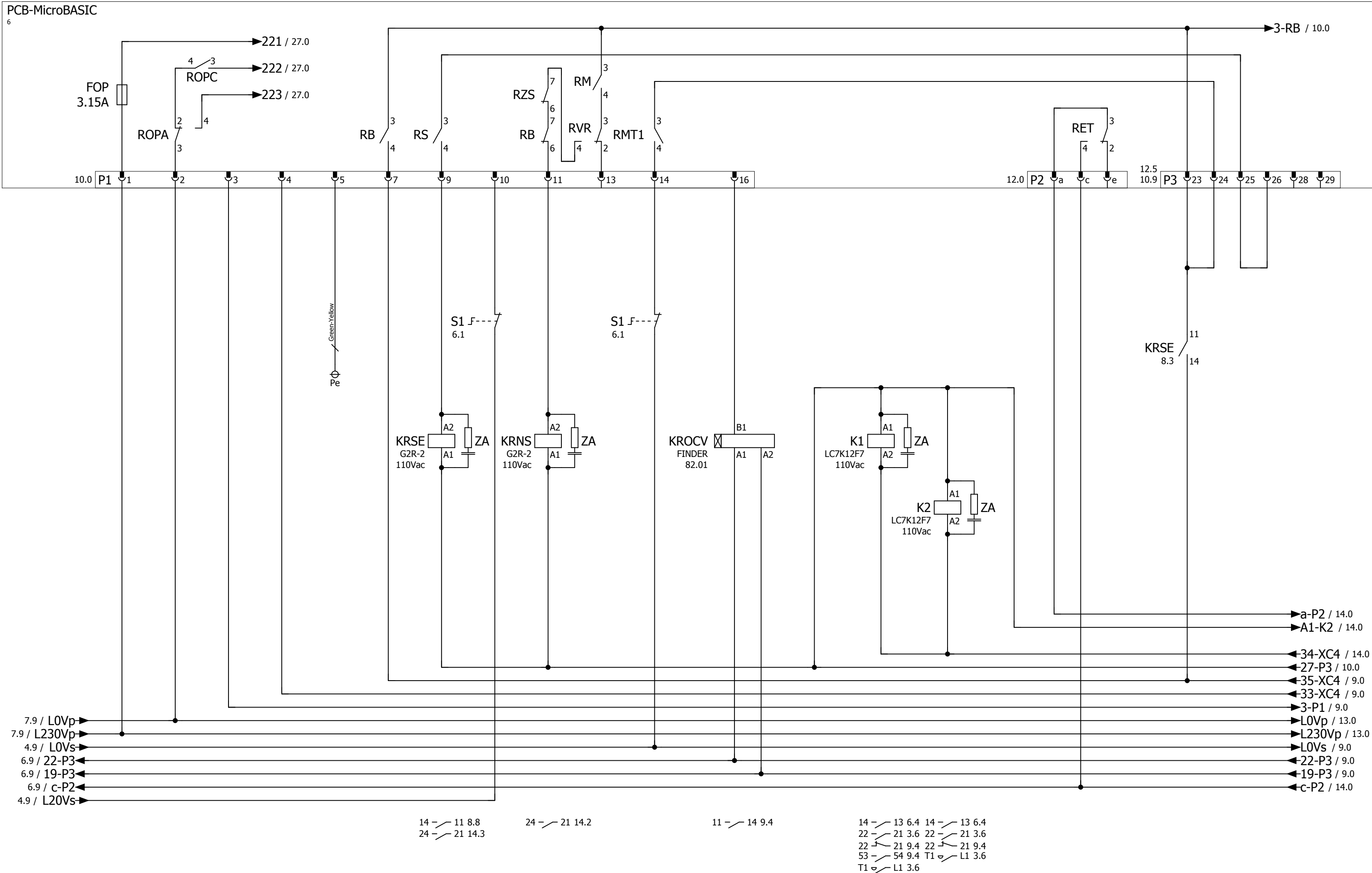
* Connect only the needed coils.

6.9 / L0Vp
6.9 / L230Vp

L0Vp / 8.0
L230Vp / 8.0

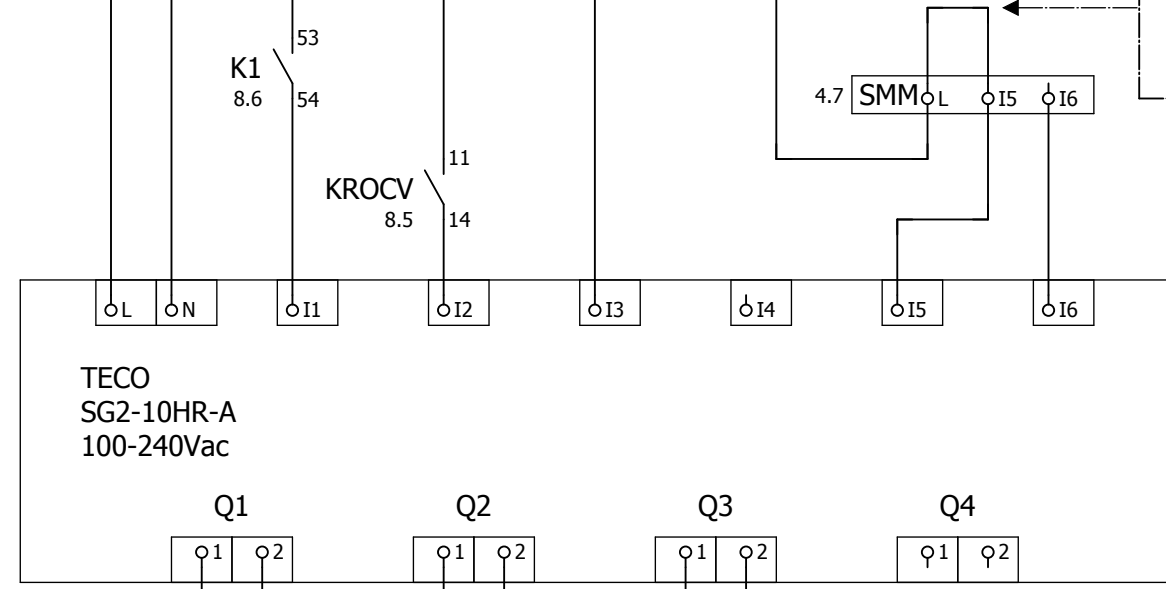
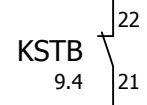
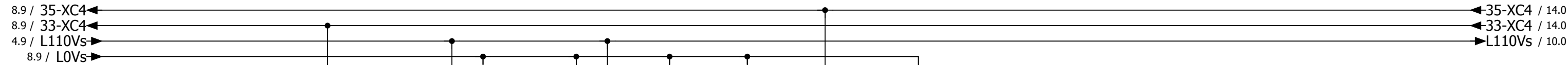
	Name	Date	Macpuarsa Ref.:	Customer:	Overspeed governor
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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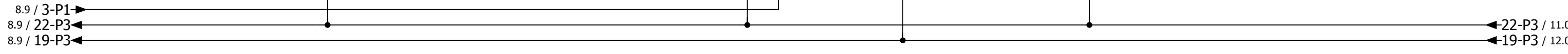
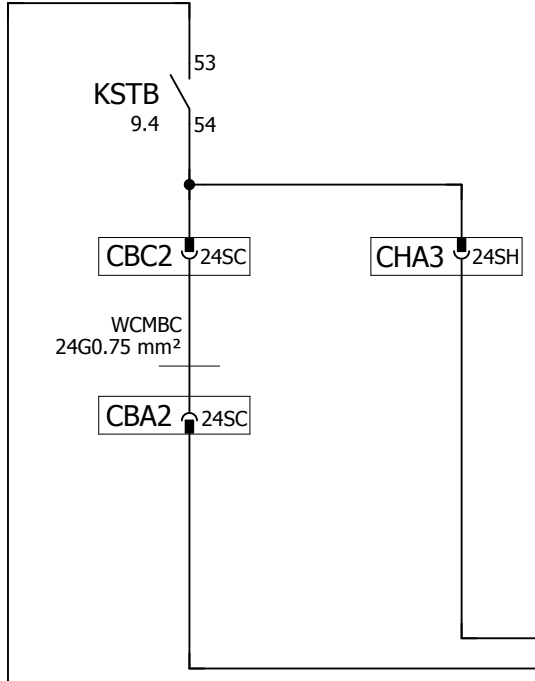
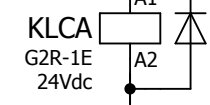
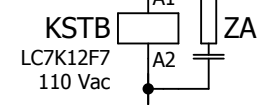
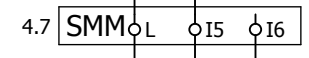


Name	Date	Macpuarsa Ref.:	Customer:	Main contactors
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
			Power / Voltage: 6.79 HP / 415 V	Page 8 / 33





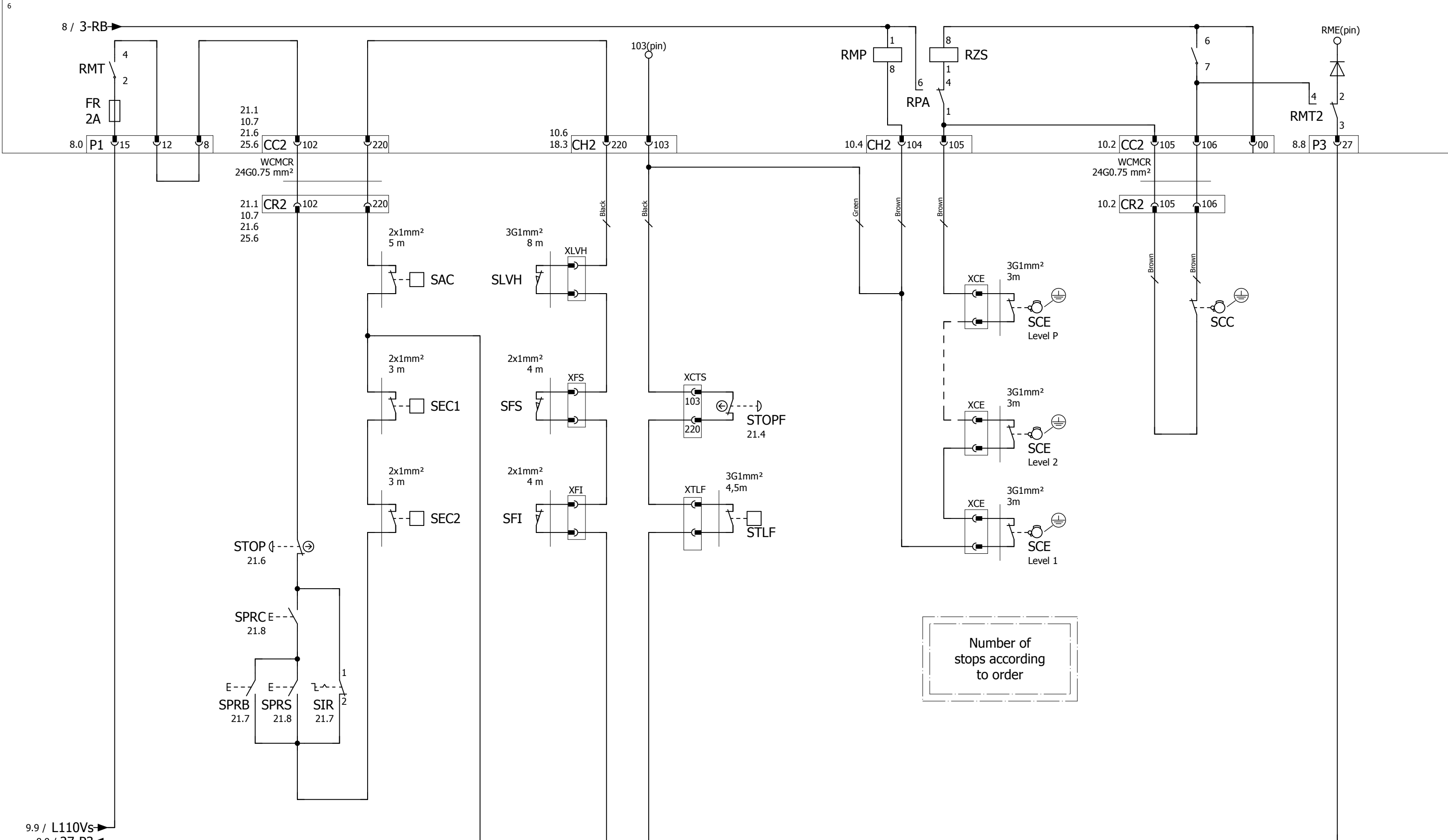
Remove this wire to complete the installation



	Name	Date	Macpuarsa Ref.: 2013_71_153276	Customer: STANNAH LIFT LTD	Main contactors
Made	SLM	22/01/2009		Customer ref.:	
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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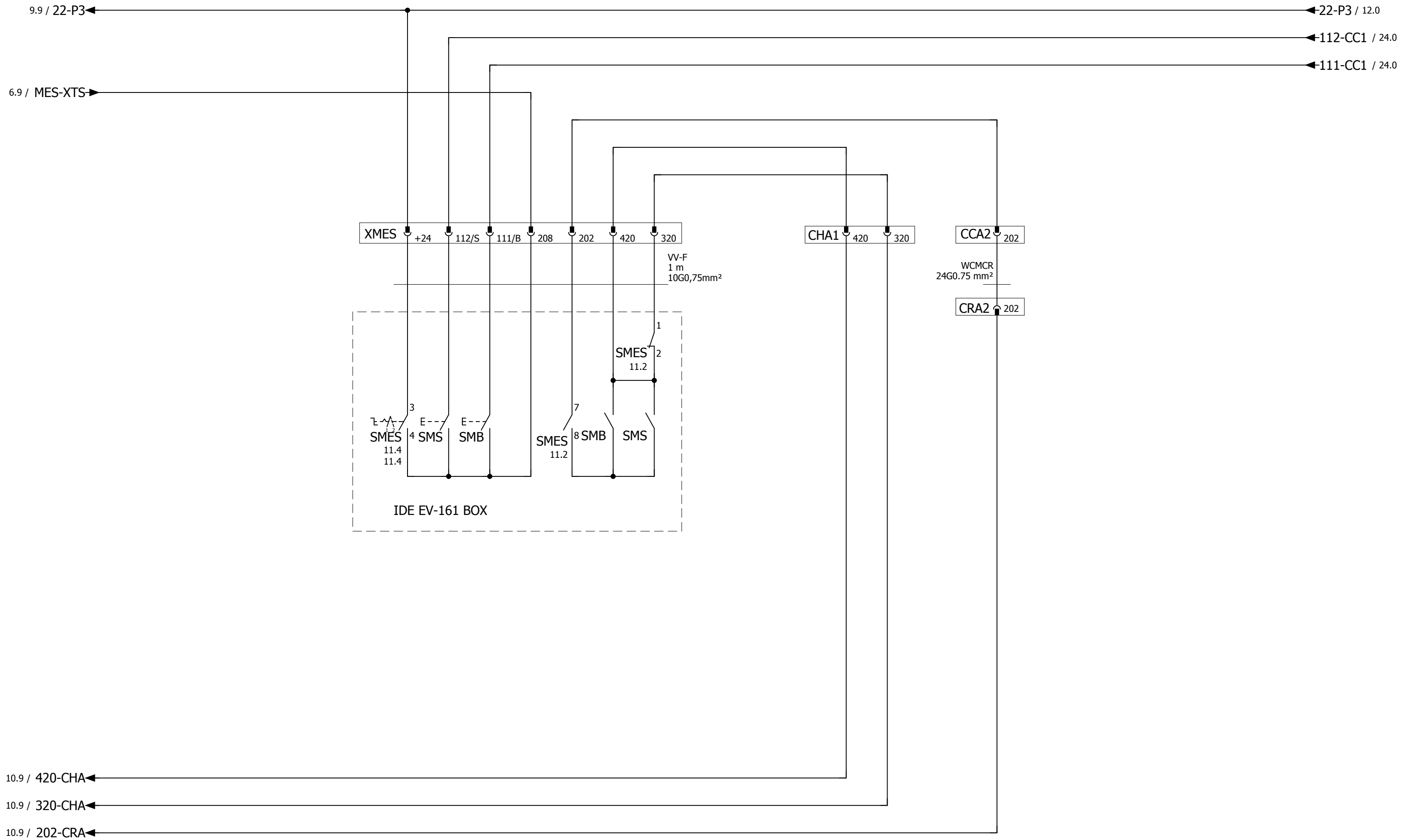


9.9 / L110Vs
8.9 / 27-P3

←420-CHA / 11.0
←320-CHA / 11.0
←202-CRA / 11.0

Name	Date	Macpuarsa Ref.:	Customer:	Safety series
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
			Power / Voltage: 6.79 HP / 415 V	Page 10 / 33





10.9 / 420-CHA

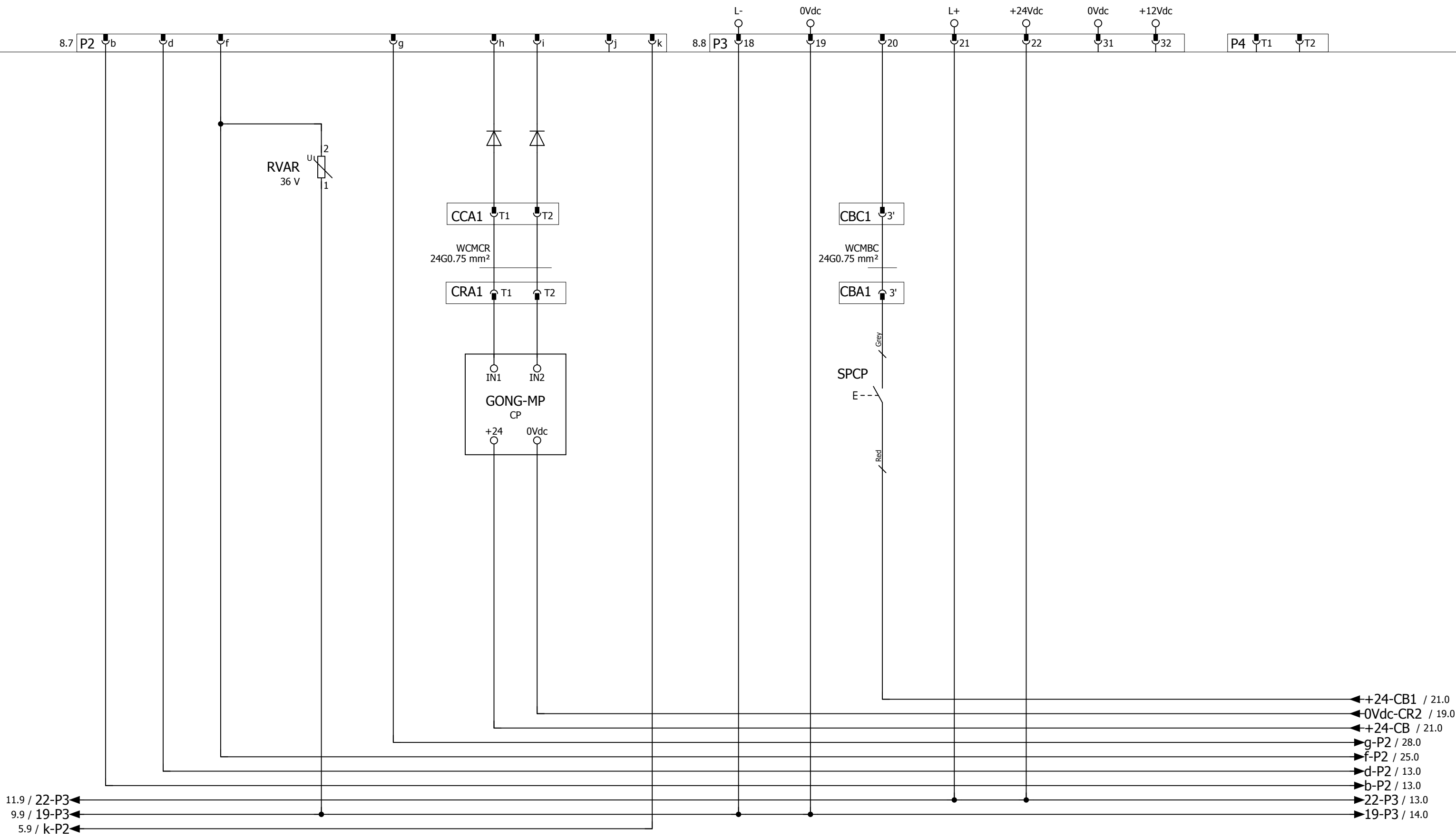
10.9 / 320-CHA

10.9 / 202-CRA

	Name	Date	Macpuarsa Ref.: 2013_71_153276	Customer: STANNAH LIFT LTD	Electrical rescue maneuver
Made	SLM	22/01/2009		Customer ref.:	
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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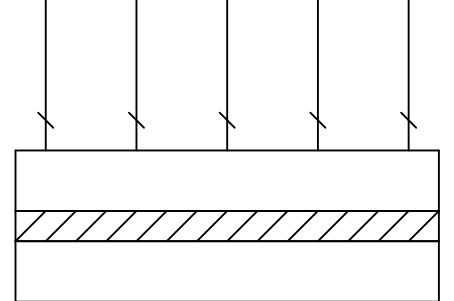
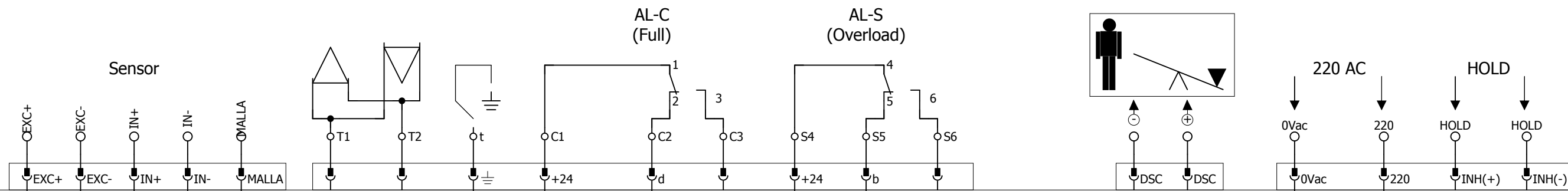
PCB-MicroBASIC
6



- 11.9 / 22-P3 ←
- 9.9 / 19-P3 ←
- 5.9 / k-P2 ←
- +24-CB1 / 21.0
- 0Vdc-CR2 / 19.0
- +24-CB / 21.0
- g-P2 / 28.0
- f-P2 / 25.0
- d-P2 / 13.0
- b-P2 / 13.0
- 22-P3 / 13.0
- 19-P3 / 14.0

	Name	Date	Macpuarsa Ref.:	Customer:	Machine room auxiliary terminals
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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Load cell

LINE LC CELL REFERENCES

	Reference	Capacity
3000 splits	0000555100	300kg
	0000555101	750kg
	0000555102	1200kg
	0000555105	1500kg
	0000555104	3000kg
	0000555106	5000kg
5000 splits	0000555111	750kg
	0000555112	1200kg
	0000555113	1500kg
	0000555114	3000kg

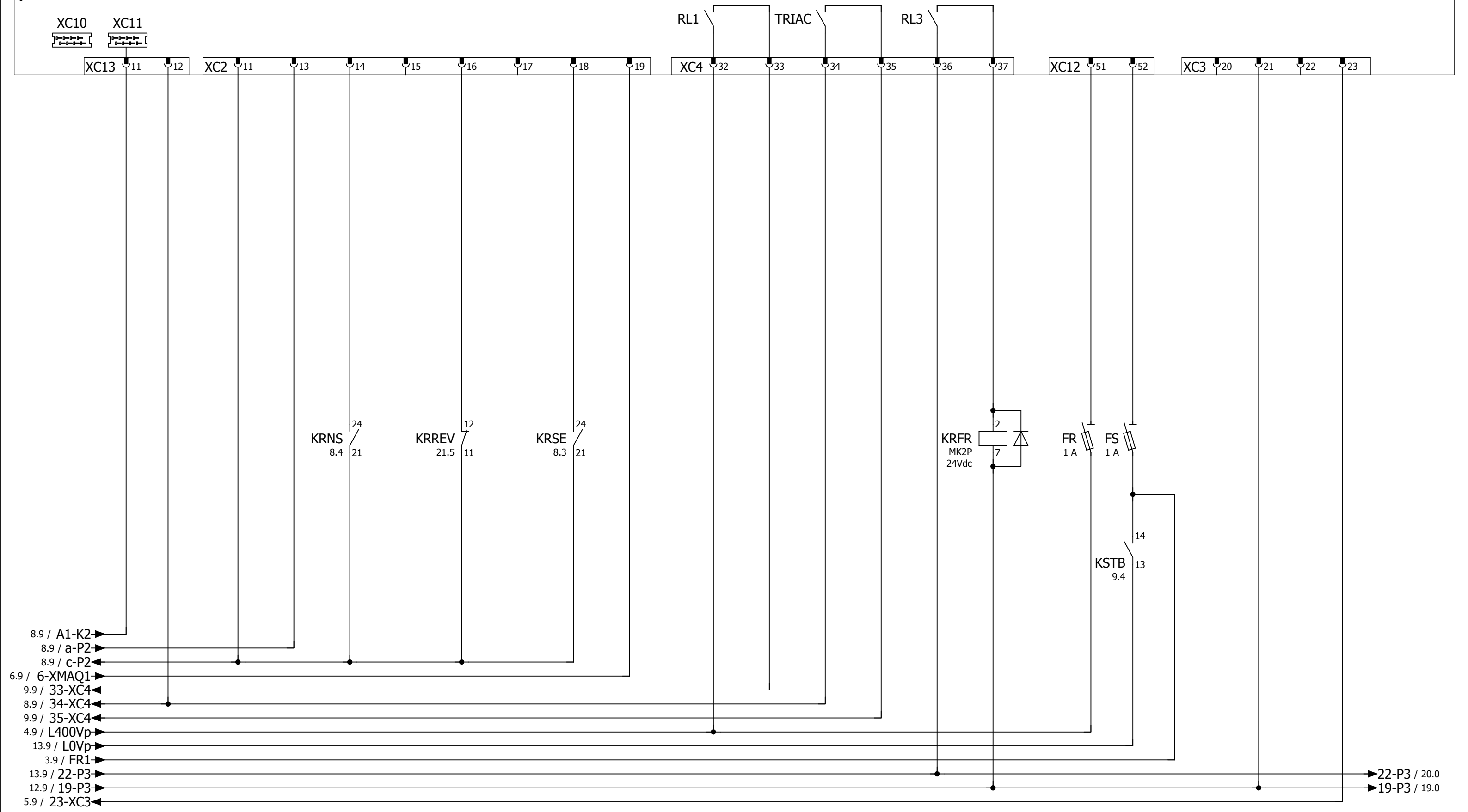
12.9 / d-P2
 12.9 / b-P2
 8.9 / L0Vp
 8.9 / L230Vp
 12.9 / 22-P3

L0Vp / 14.0
 22-P3 / 14.0

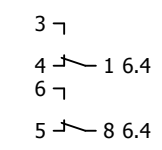
Full/Overload

NOTE: See VK-2P technical dossier

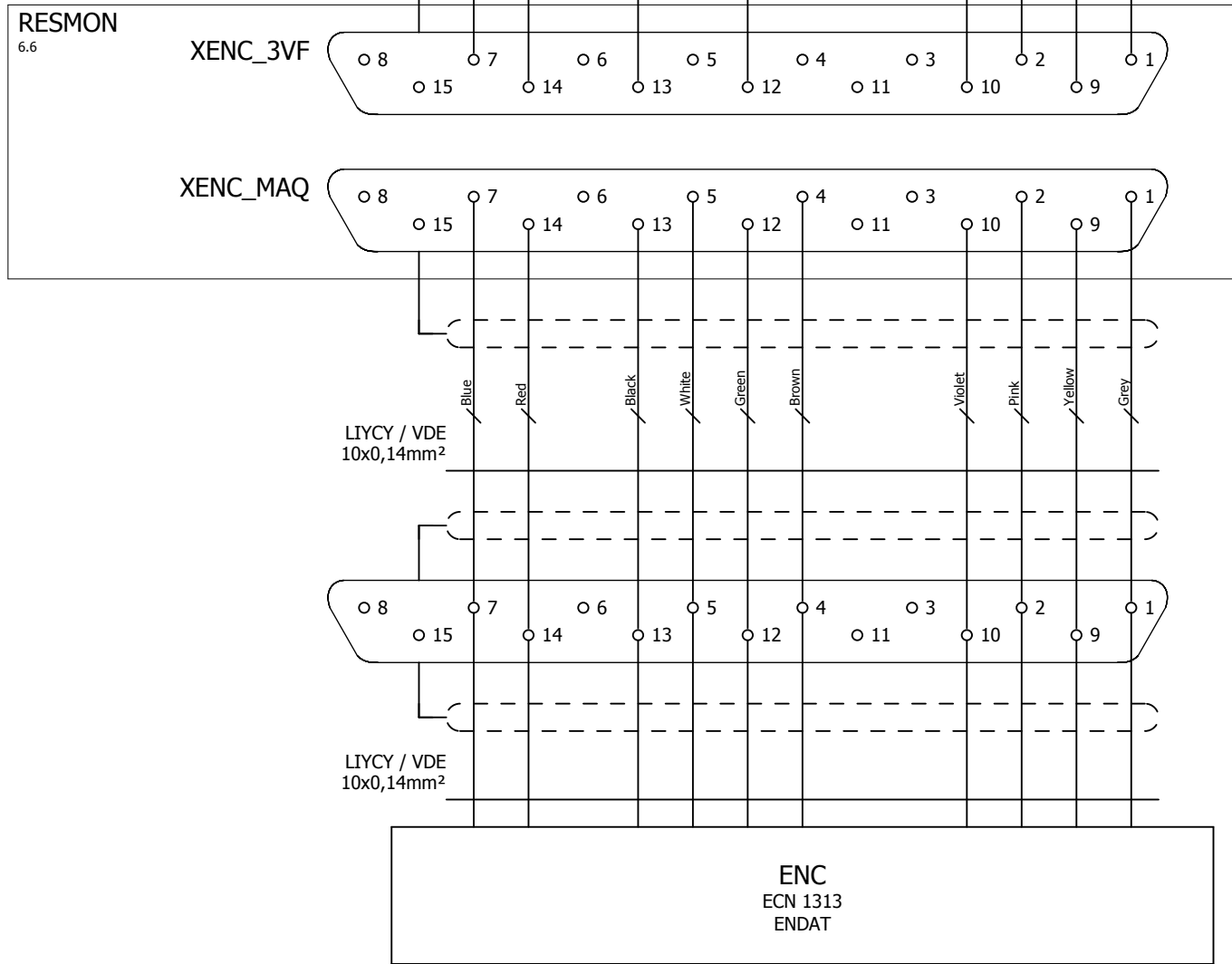
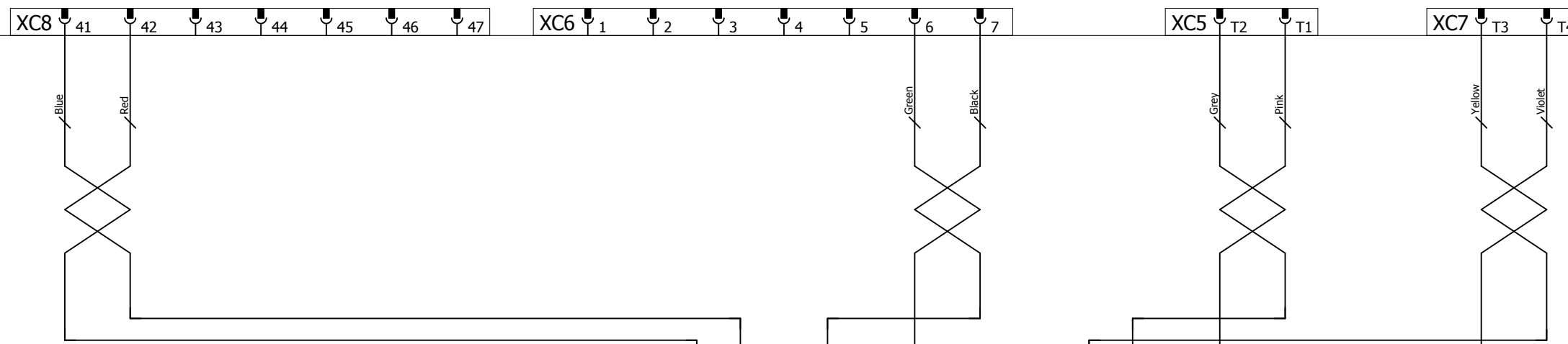
3VFMAC-DSP
3



- 8.9 / A1-K2
- 8.9 / a-P2
- 8.9 / c-P2
- 6.9 / 6-XMAQ1
- 9.9 / 33-XC4
- 8.9 / 34-XC4
- 9.9 / 35-XC4
- 4.9 / L400Vp
- 13.9 / L0Vp
- 3.9 / FR1
- 13.9 / 22-P3
- 12.9 / 19-P3
- 5.9 / 23-XC3
- 22-P3 / 20.0
- 19-P3 / 19.0



3VFMAC-DSP
3



LIYCY / VDE
10x0,14mm²

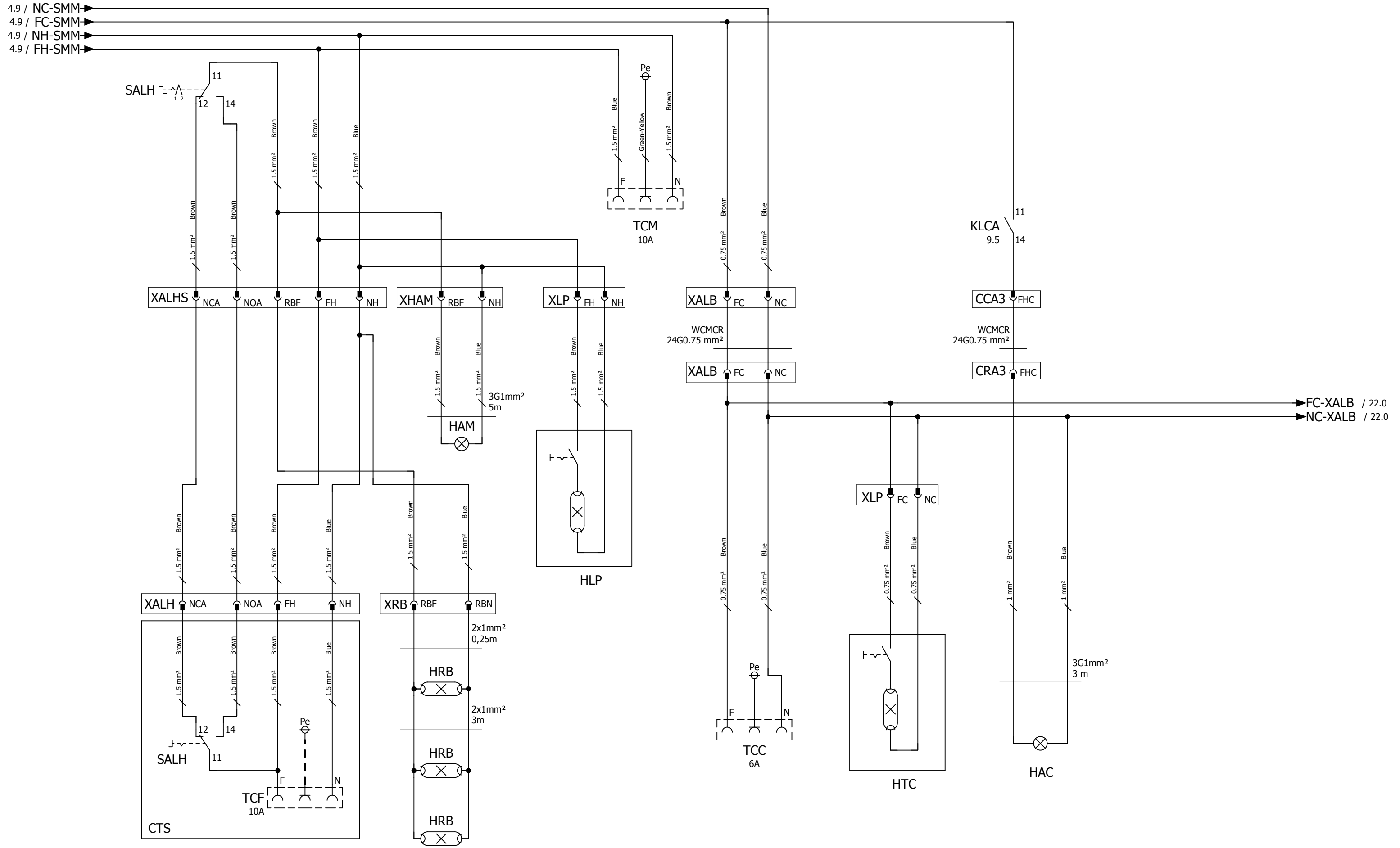
LIYCY / VDE
10x0,14mm²

LIYCY / VDE
10x0,14mm²

ENC
ECN 1313
ENDAT

	Name	Date	Macpuarsa Ref.:	Customer:	Encoder
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
				Power / Voltage: 6.79 HP / 415 V	Page 15 / 33



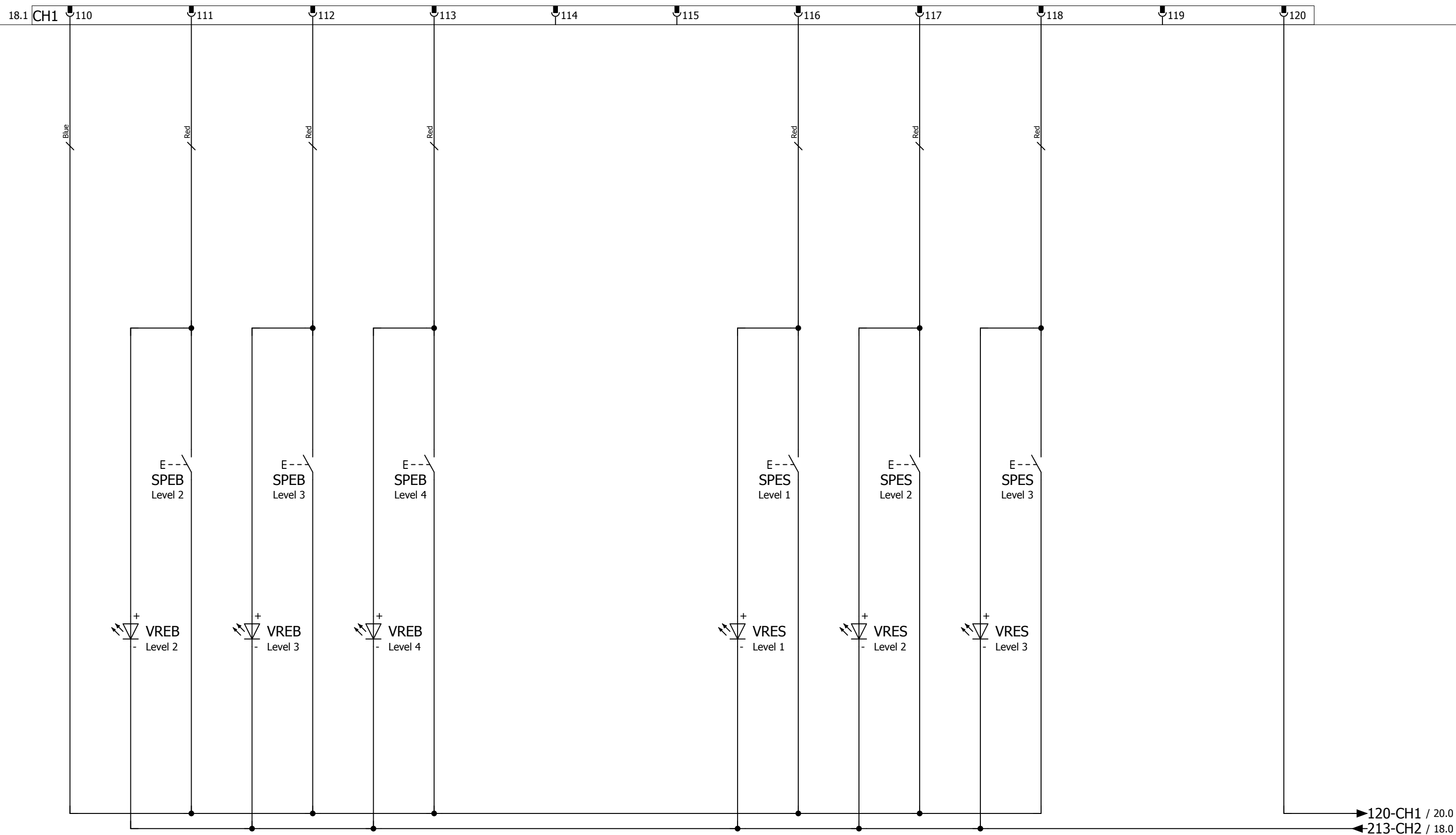


	Name	Date	Macpuarsa Ref.: 2013_71_153276	Customer: STANNAH LIFT LTD	Lighting
Made	SLM	22/01/2009		Customer ref.:	
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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PCB-MicroBASIC

6

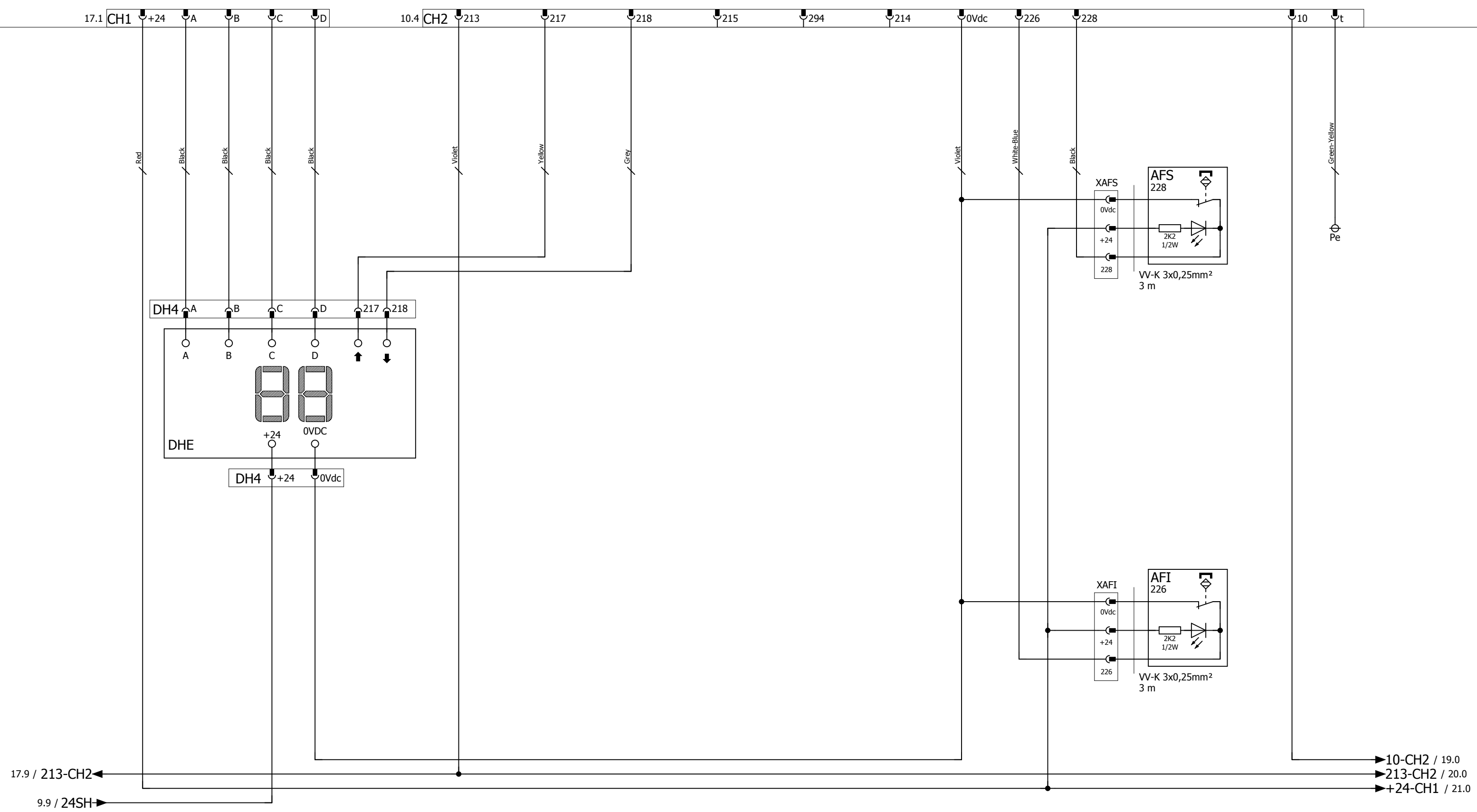


View sequence in the cover of this document

	Name	Date	Macpuarsa Ref.:	Customer:	STANNAH LIFT LTD	Group of landing calls
Made	SLM	22/01/2009	2013_71_153276	Customer ref.:		
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage:	6.79 HP / 415 V	Full selective. Simplex.
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PCB-MicroBASIC
6

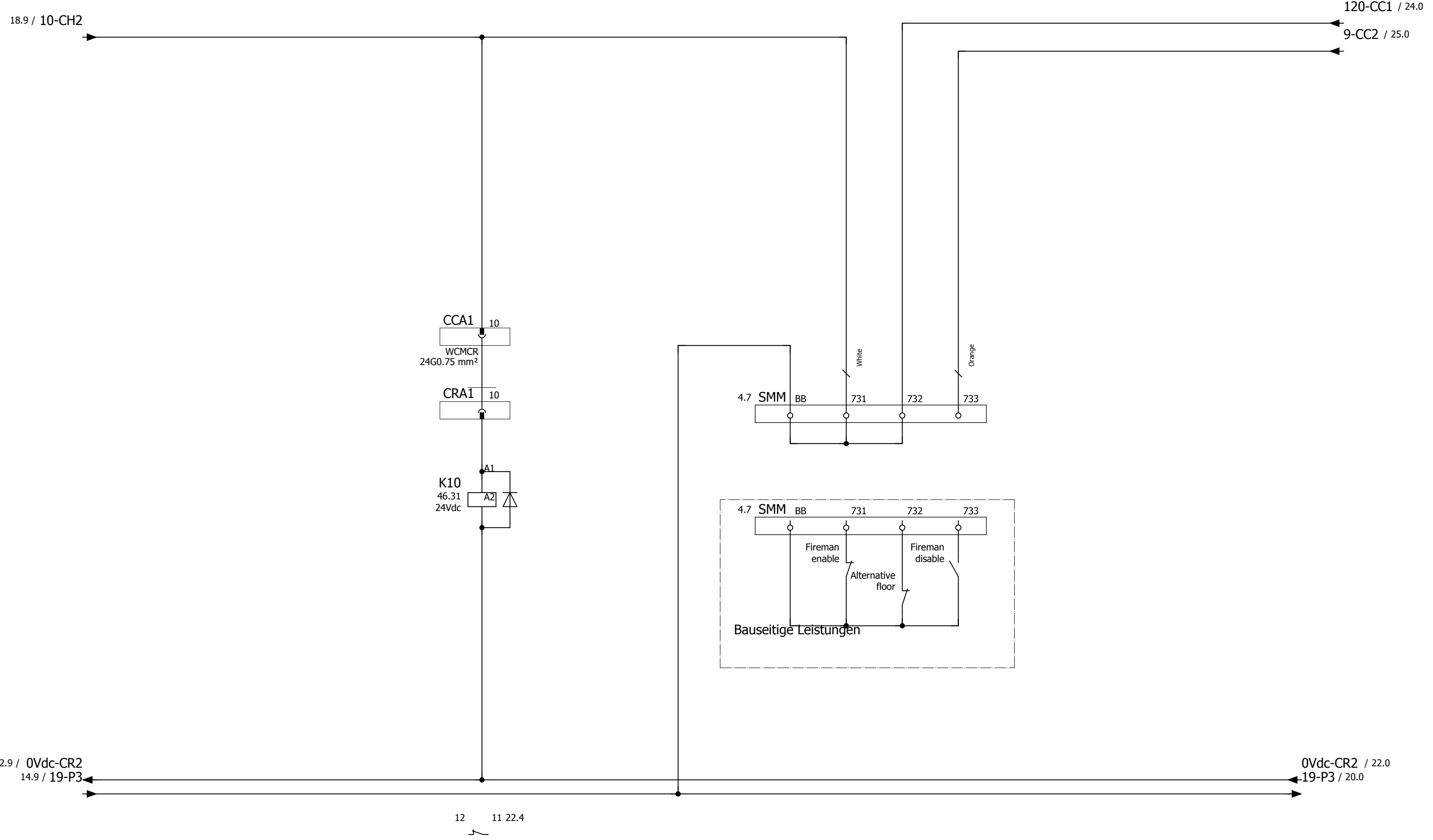


17.9 / 213-CH2 ←
9.9 / 24SH →

→ 10-CH2 / 19.0
→ 213-CH2 / 20.0
→ +24-CH1 / 21.0

	Name	Date	Macpuarsa Ref.:	Customer:	Shaft indications
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage:	6.79 HP / 415 V
					Full selective. Simplex.
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17.9 / 120-CH1

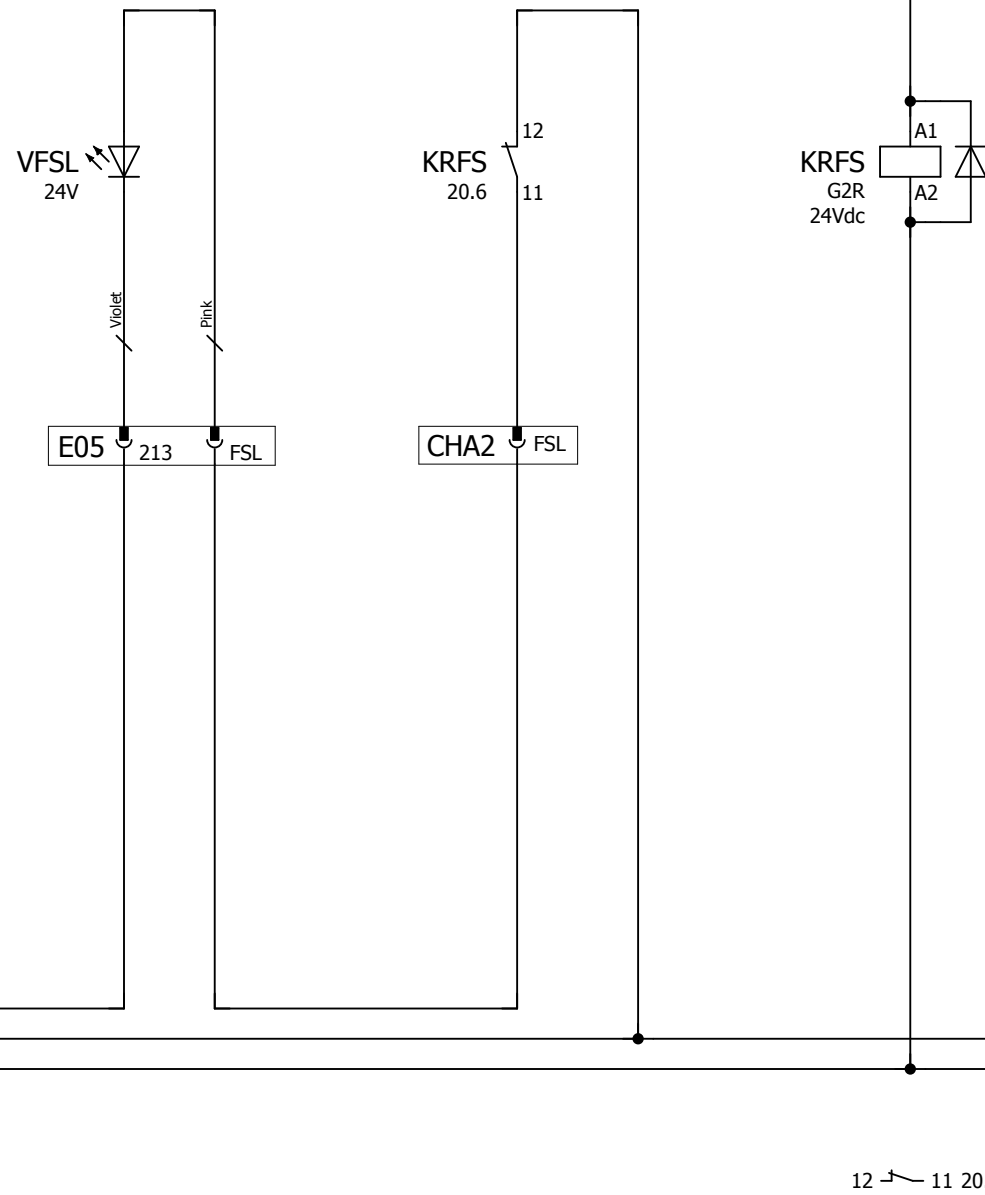
18.9 / 213-CH2

14.9 / 22-P3

19.8 / 19-P3

22-P3 / 21.0

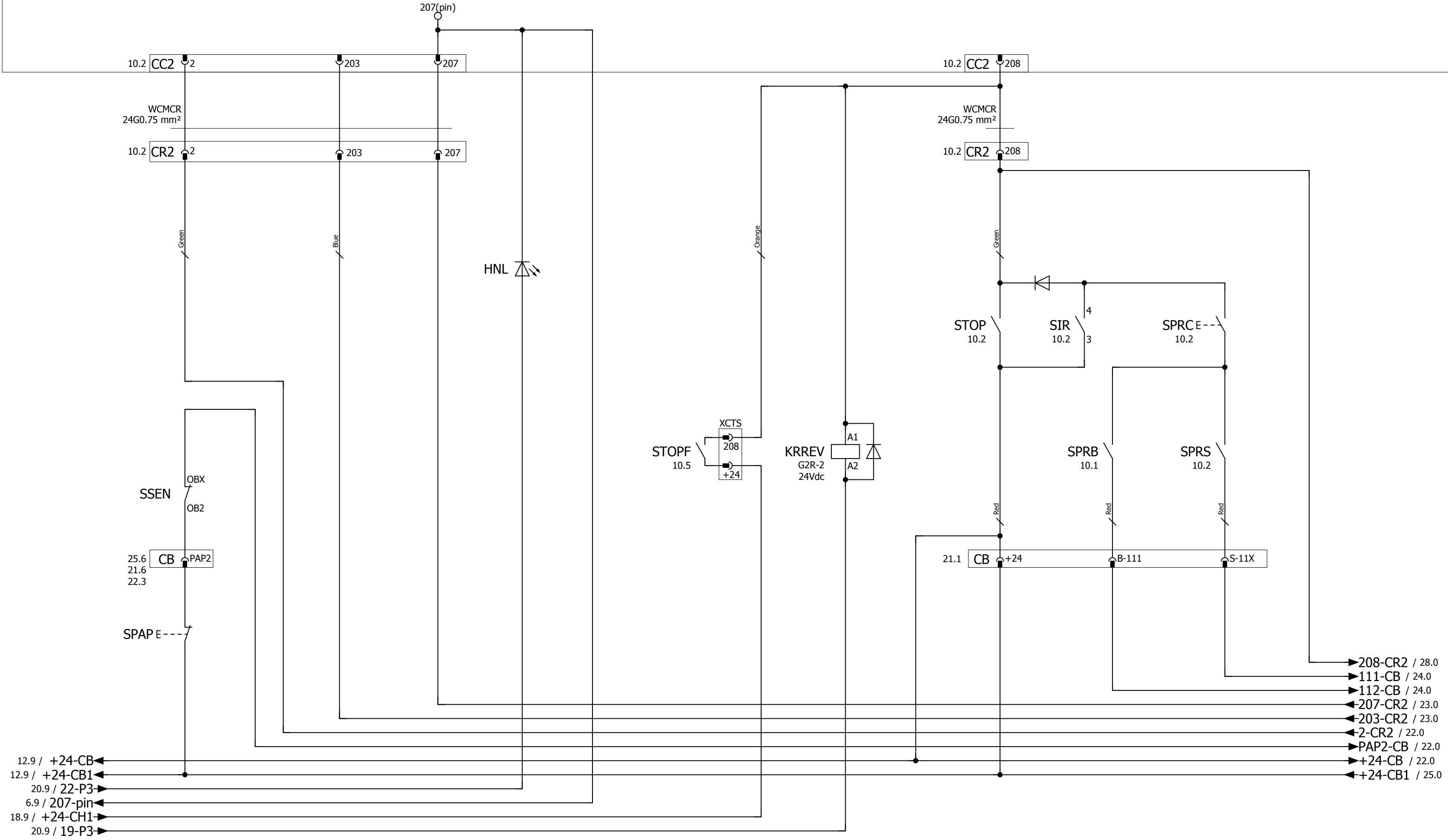
19-P3 / 21.0



	Name	Date	Macpuarsa Ref.:	Customer:	Anzeige außer Betrieb
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage:	6.79 HP / 415 V
					Full selective. Simplex.
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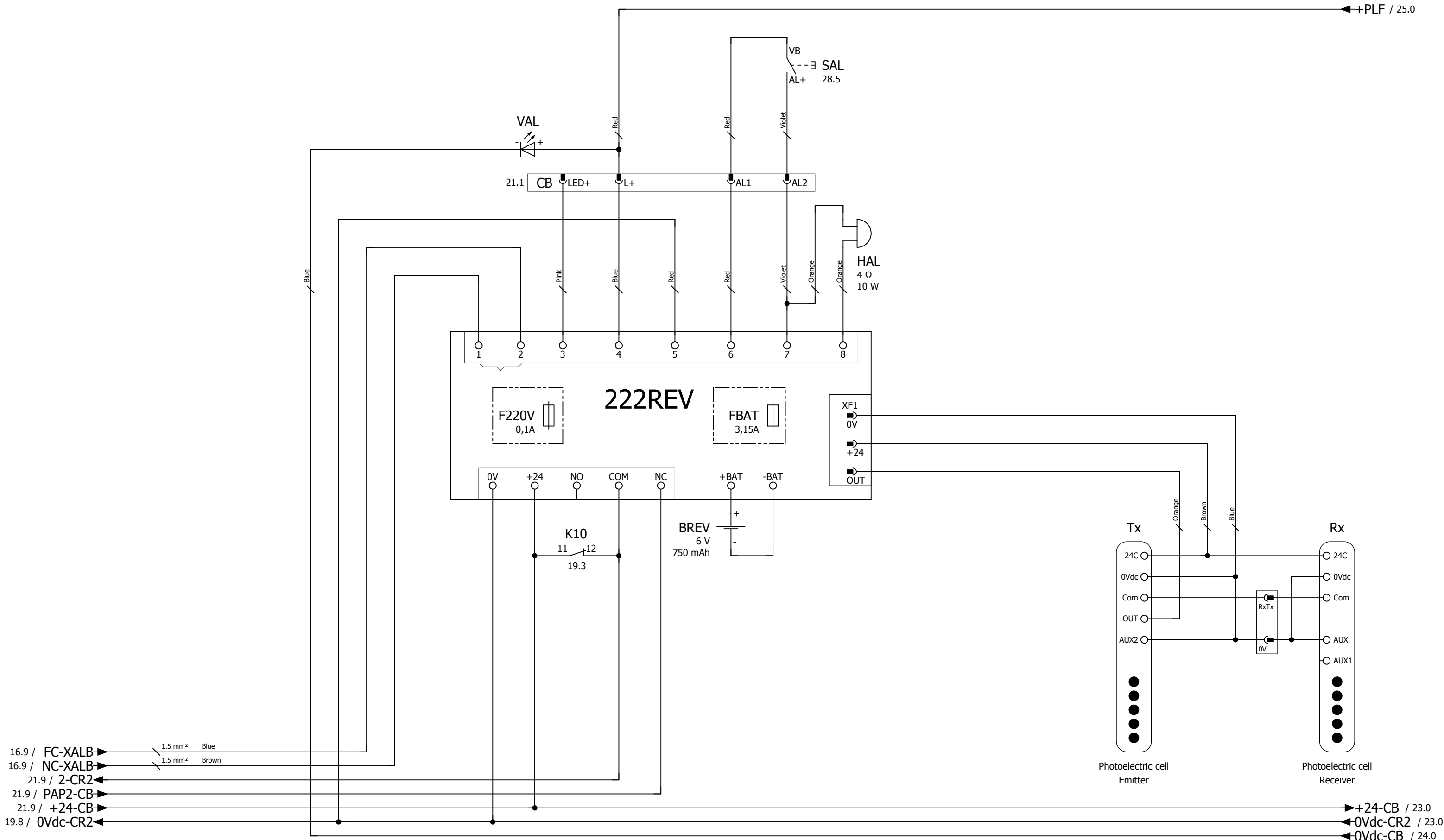
PCB-MicroBASIC
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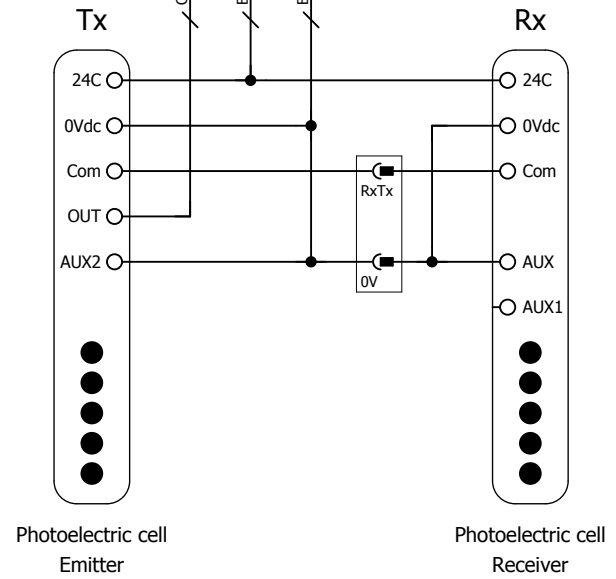
12 11 14.3

	Name	Date	Macpuarsa Ref.:	Customer:	Inspection box
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	Full selective. Simplex.
			Power / Voltage:	6.79 HP / 415 V	Page 21 / 33



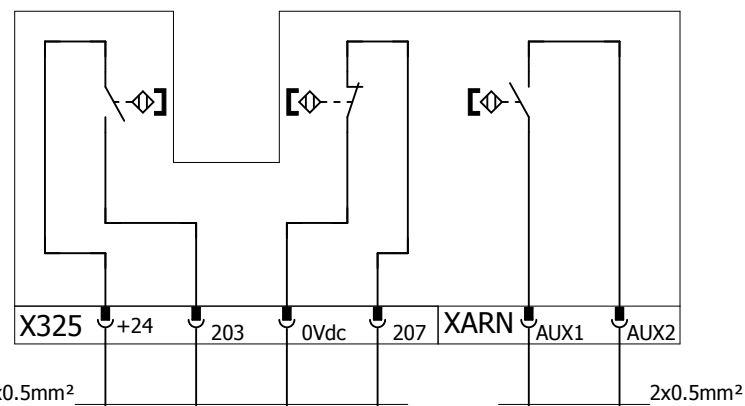


- 16.9 / FC-XALB
- 16.9 / NC-XALB
- 21.9 / 2-CR2
- 21.9 / PAP2-CB
- 21.9 / +24-CB
- 19.8 / 0Vdc-CR2



MAC 325P

Pulses Level



4x0.5mm²

2x0.5mm²

Brown

Blue

Black

Grey

Blue

Brown

22.9 / +24-CB

21.9 / 203-CR2

21.9 / 207-CR2

22.9 / 0Vdc-CR2

AUX2-XARN / 28.0

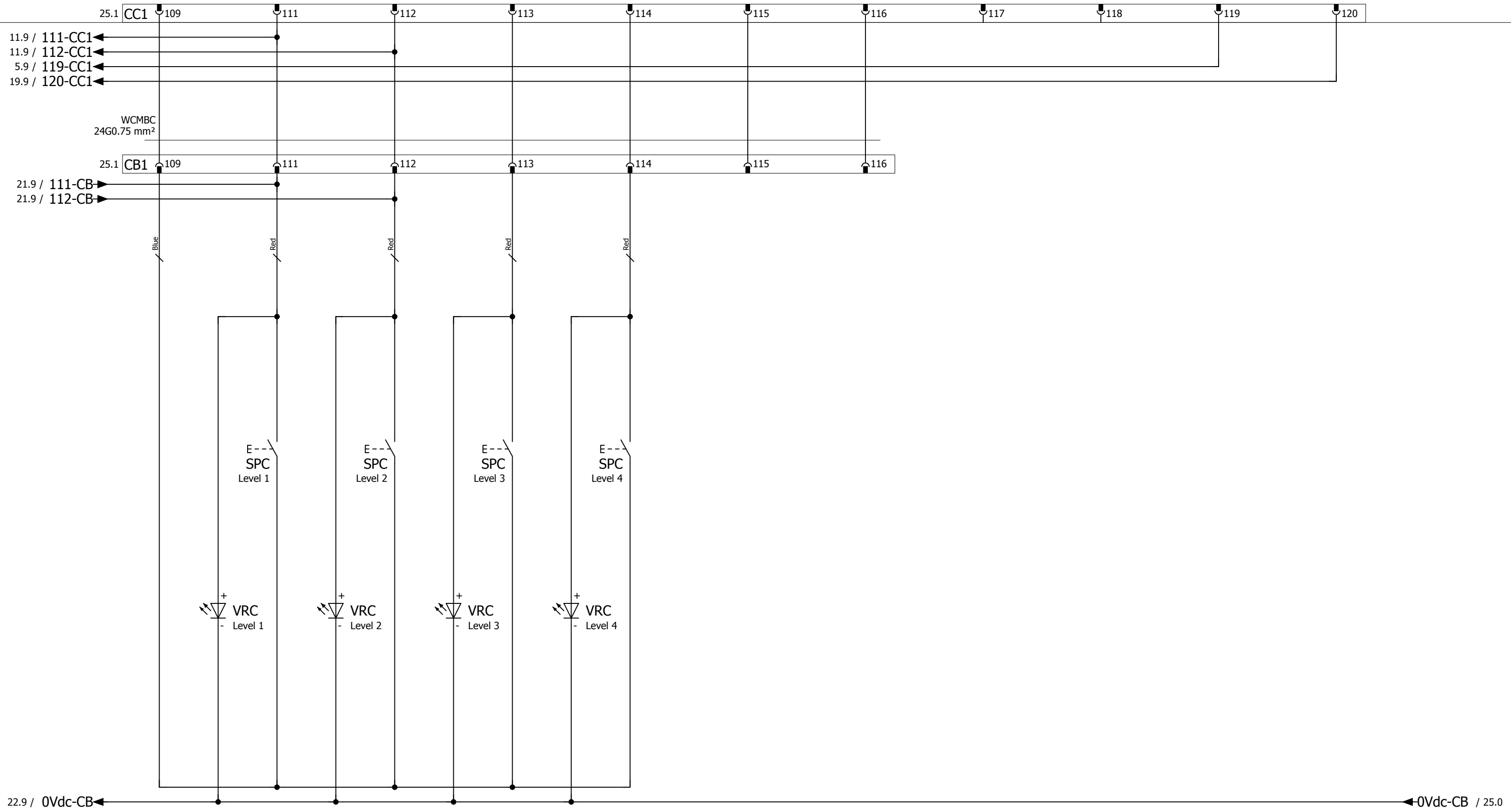
AUX1-XARN / 28.0

0Vdc-CR2 / 25.0

	Name	Date	Macpuarsa Ref.:	Customer:	Magnetic switch
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.
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PCB-MicroBASIC
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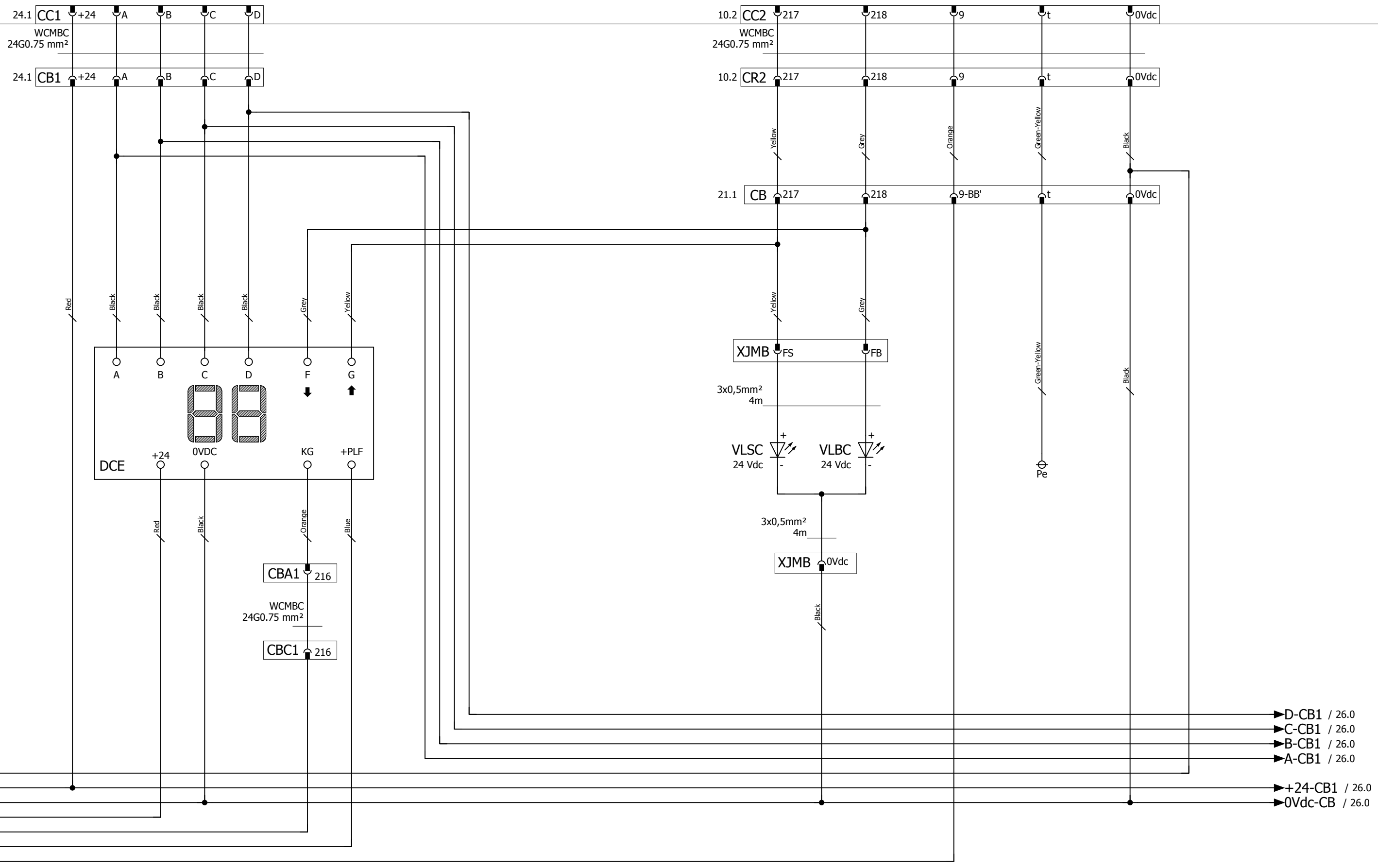


View sequence in the cover of this document

	Name	Date	Macpuarsa Ref.:	Customer:	STANNAH LIFT LTD	Group of car calls
Made	SLM	22/01/2009	2013_71_153276	Customer ref.:		
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage:	6.79 HP / 415 V	Full selective. Simplex.
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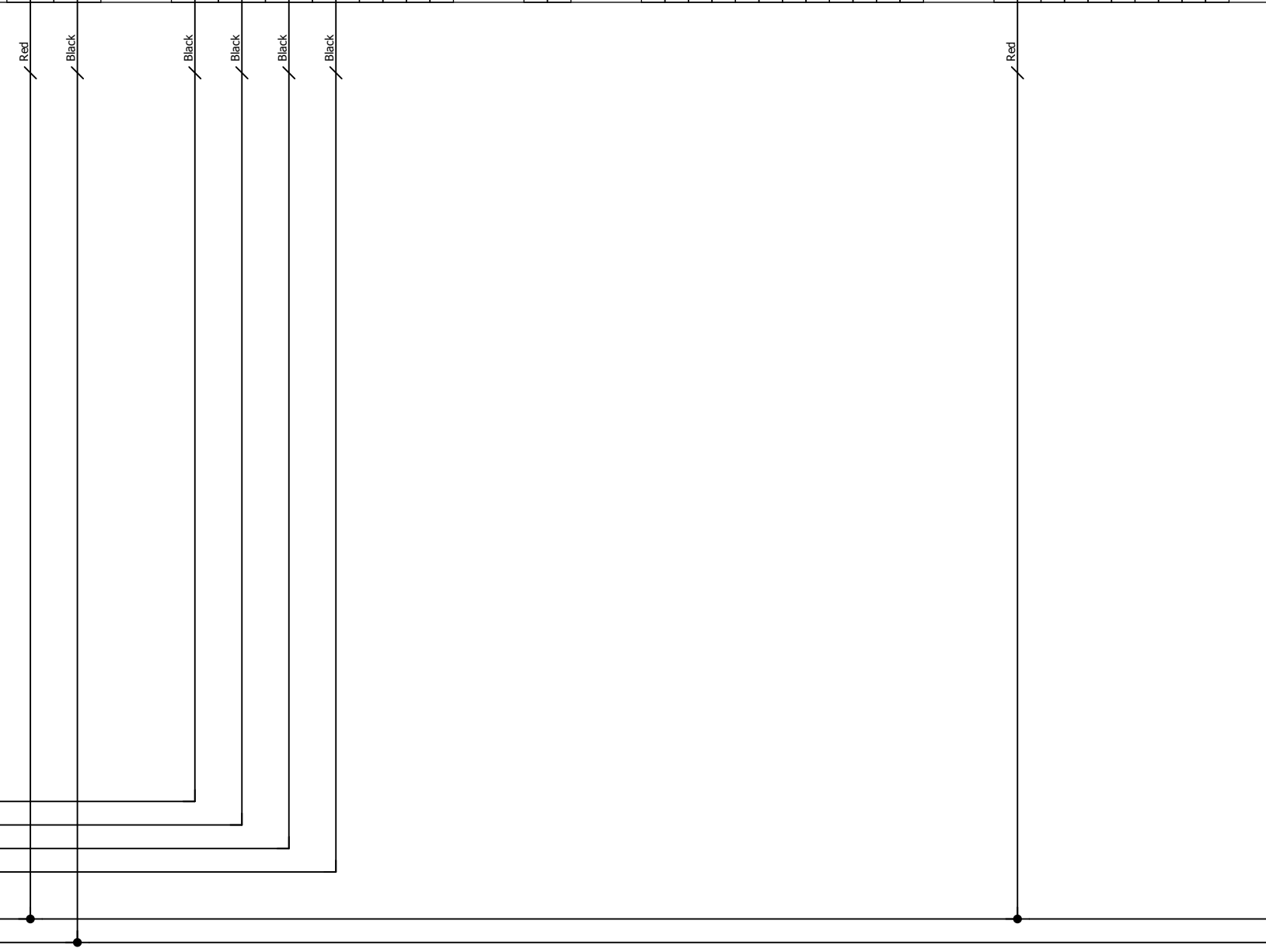
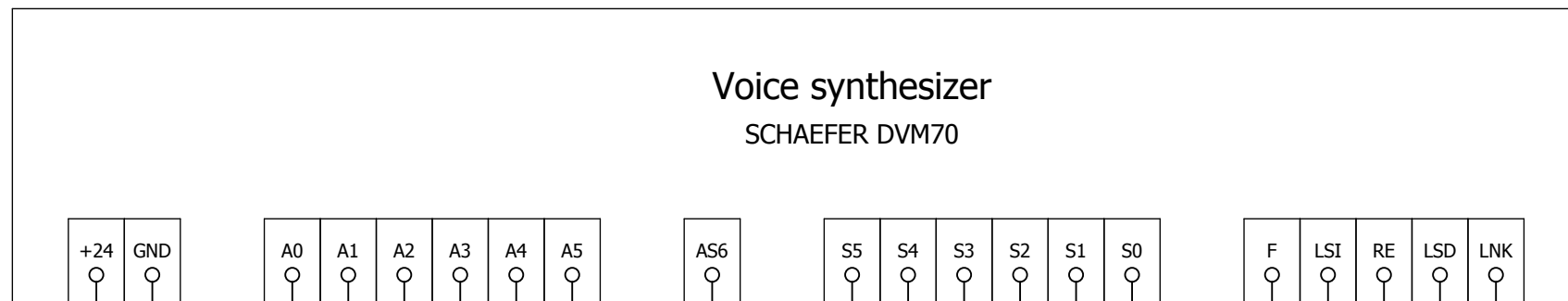
PCB-MicroBASIC
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- 23.9 / 0Vdc-CR2
- 21.9 / +24-CB1
- 24.9 / 0Vdc-CB
- 9.9 / 24SC
- 12.9 / f-P2
- 22.9 / +PLF
- 19.9 / 9-CC2
- D-CB1 / 26.0
- C-CB1 / 26.0
- B-CB1 / 26.0
- A-CB1 / 26.0
- +24-CB1 / 26.0
- 0Vdc-CB / 26.0

Name	Date	Macpuarsa Ref.:	Customer:	Car indications
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	Full selective. Simplex.
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	
Power / Voltage:			6.79 HP / 415 V	Page 25 / 33





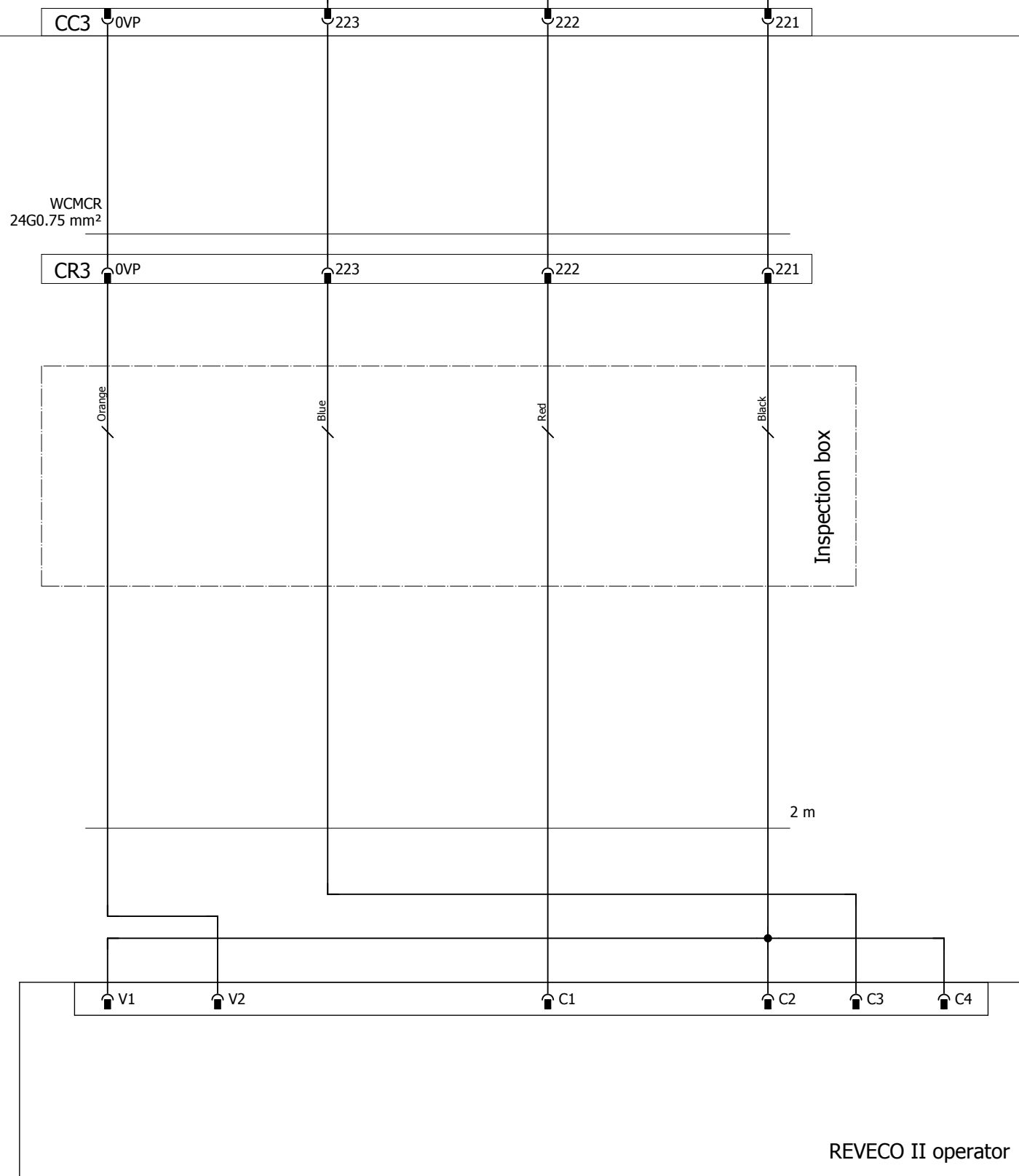
	Name	Date	Macpuarsa Ref.: 2013_71_153276	Customer: STANNAH LIFT LTD	Voice synthesizer	
Made	SLM	22/01/2009		Customer ref.:		
Revised	SLM	15/07/2013	3VFMAC_10HP	Power / Voltage: 6.79 HP / 415 V	Full selective. Simplex.	Page 26 / 33



PCB-MicroBASIC

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8.1 / 221
8.1 / 222
8.1 / 223

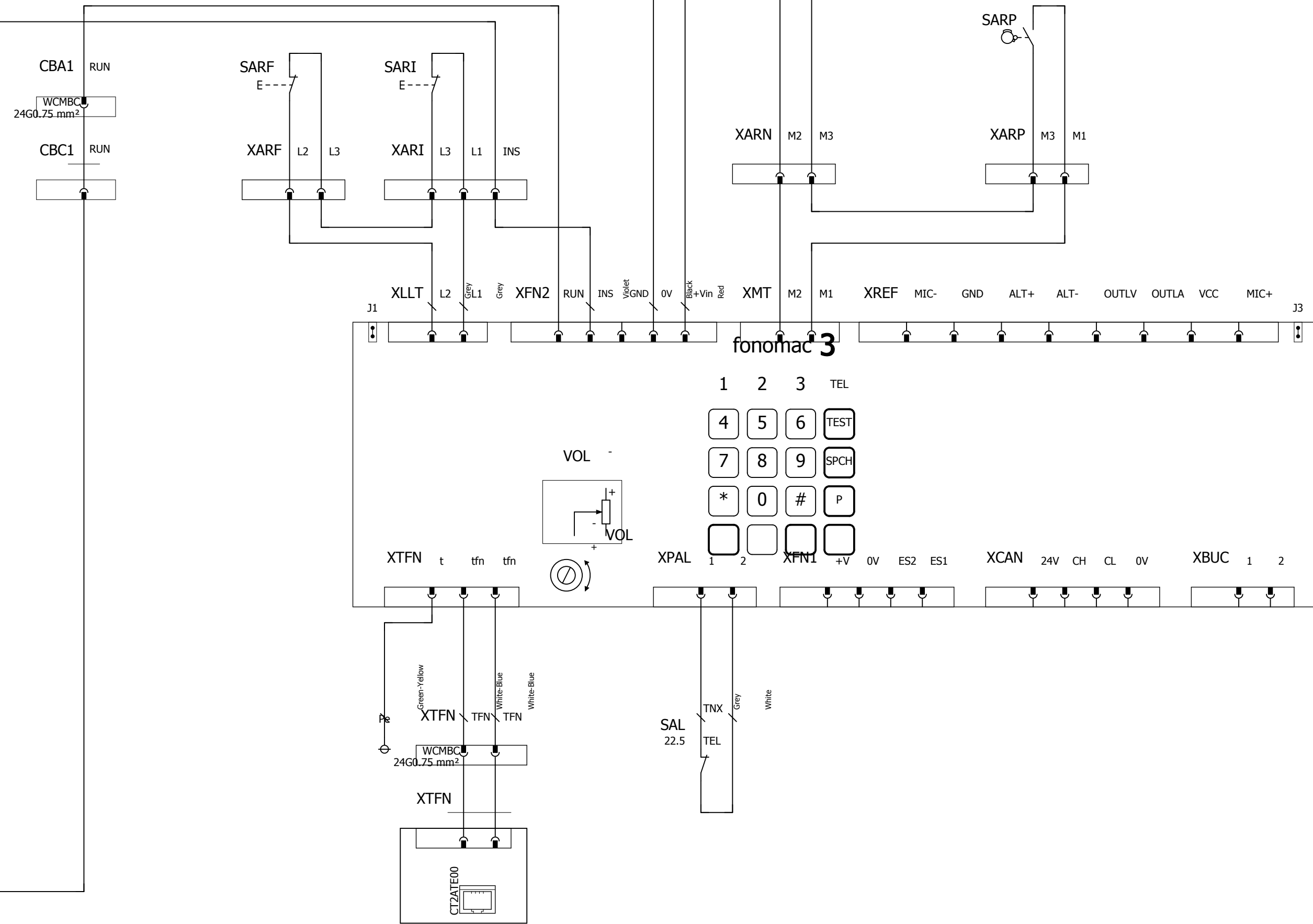


Door operator control unit

	Name	Date	Macpuarsa Ref.:	Customer:	Operator
Made	SLM	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	SLM	15/07/2013	3VFMAC_10HP	Customer ref.:	
				Power / Voltage:	6.79 HP / 415 V
					Full selective. Simplex.
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23.9 / AUX2-XARN
 23.9 / AUX1-XARN
 26.9 / +24-CB1
 26.9 / 0Vdc-CB
 21.9 / 208-CR2

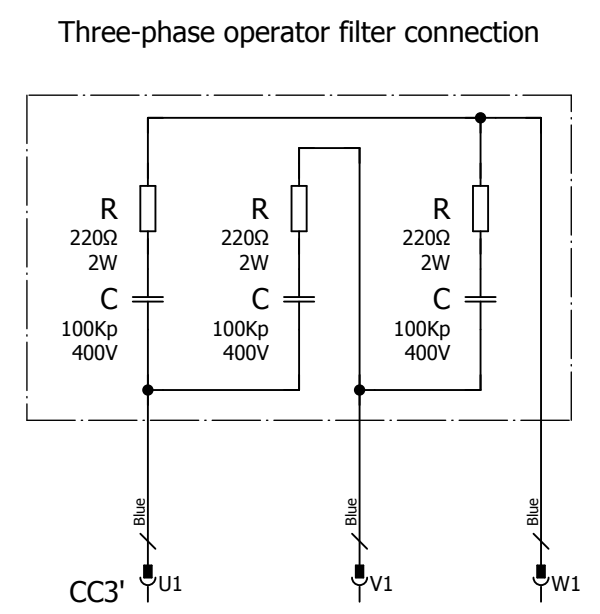
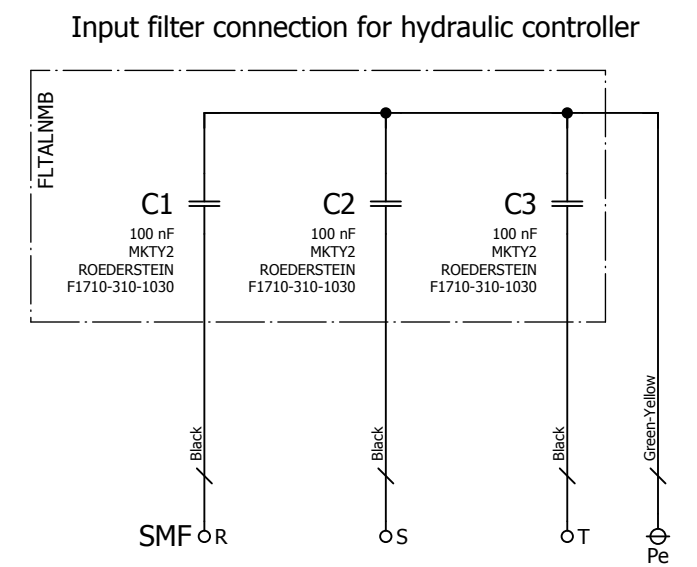
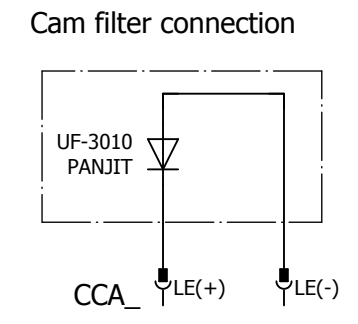
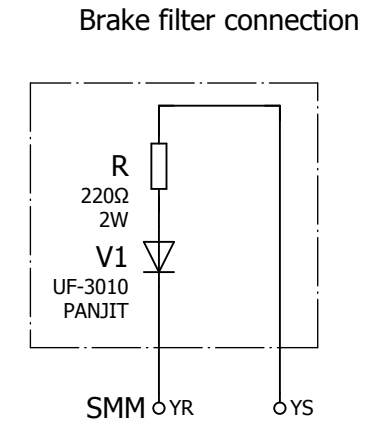
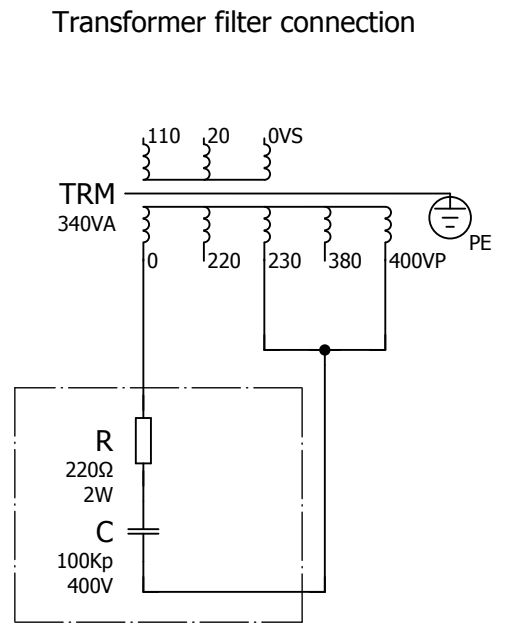
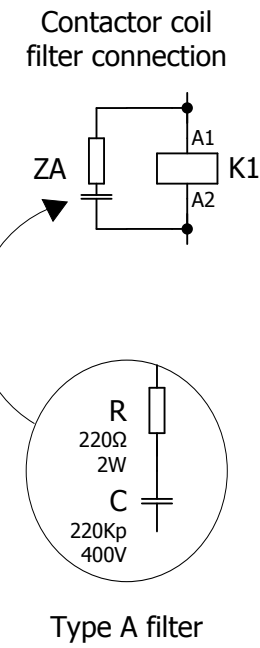
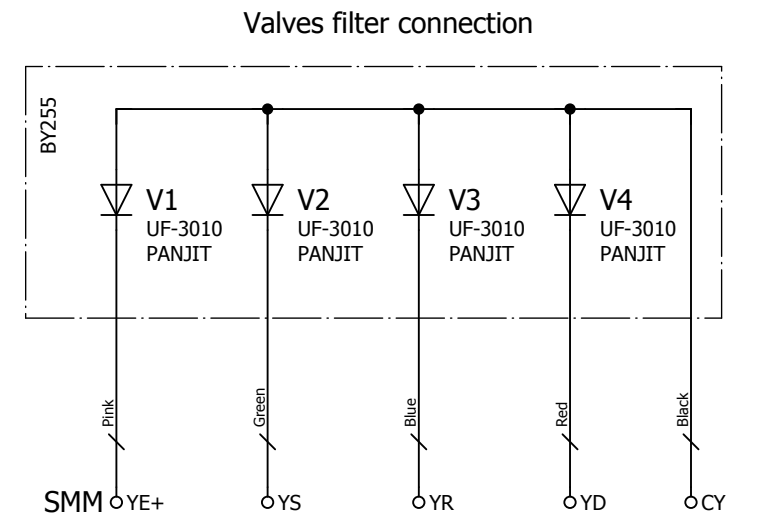
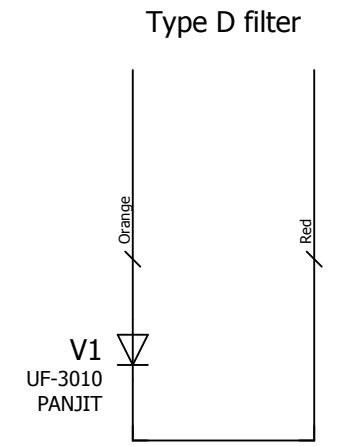
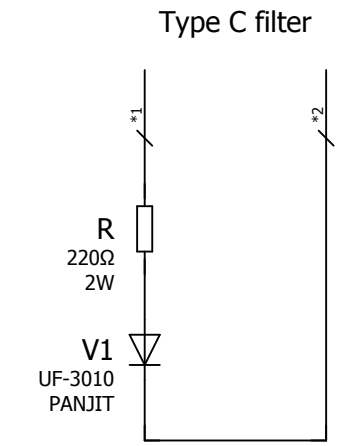
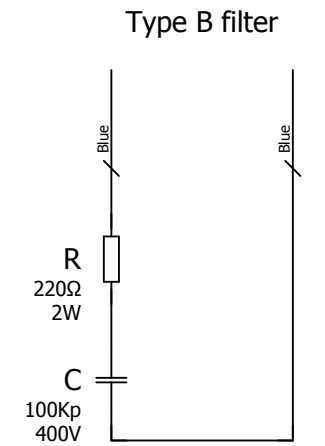
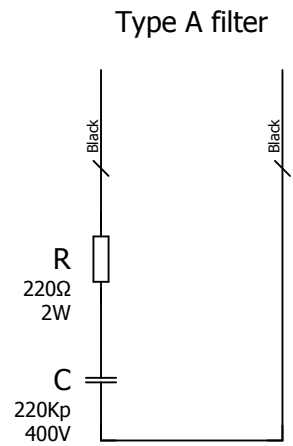


12.9 / g-P2

Telephone

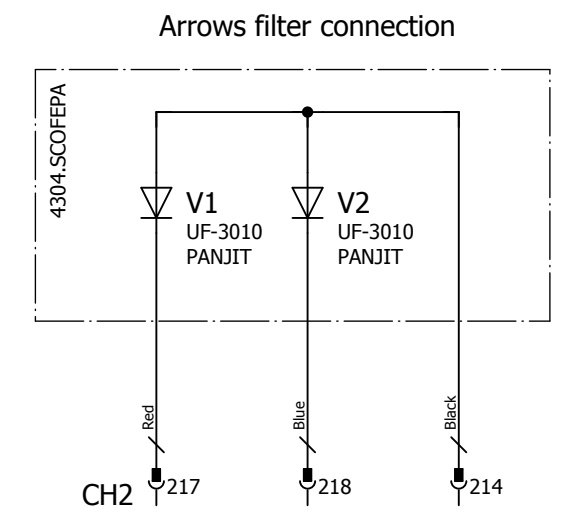
Name	Date	Macpuarsa Ref.:	Customer:	Full selective. Simplex.
Made	22/01/2009	2013_71_153276	STANNAH LIFT LTD	
Revised	15/07/2013	3VFMAC_10HP	Customer ref.:	
Power / Voltage:				Page 28 / 33

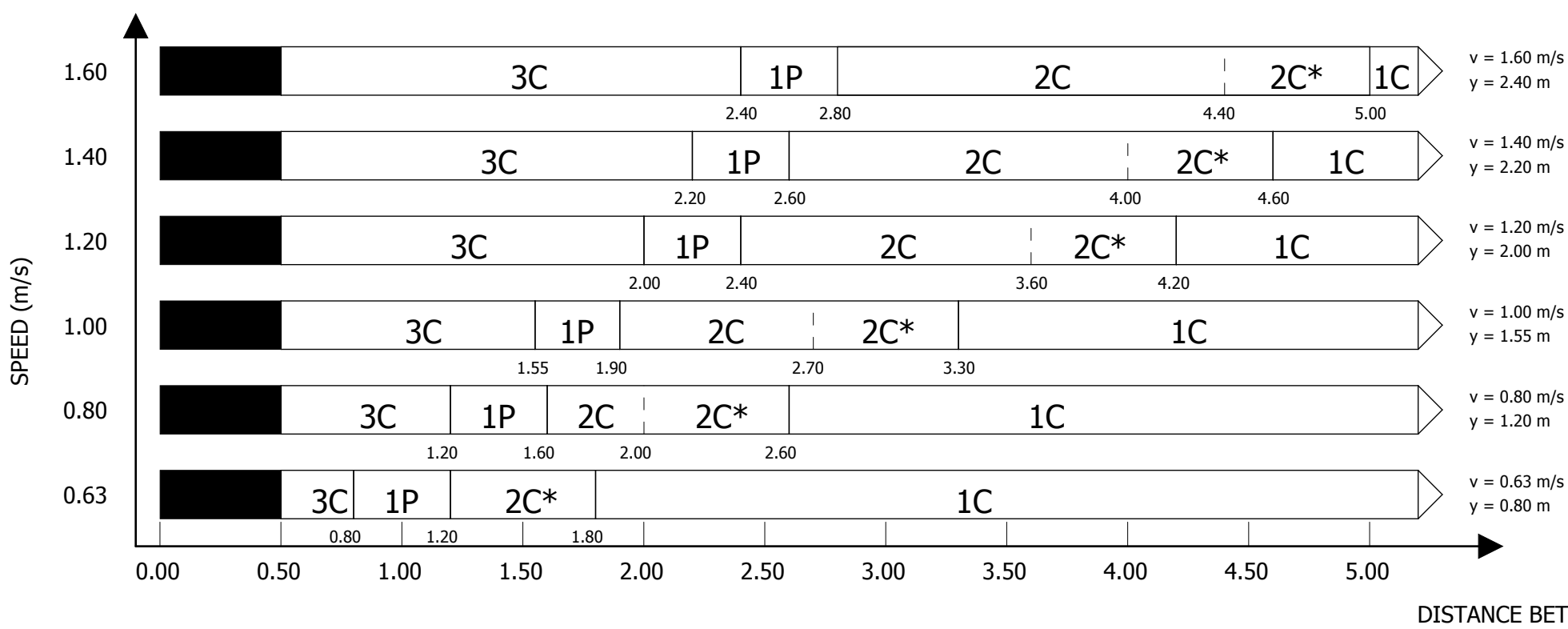




(-)	Resistor	(+)
Green	470 Ohm / 220V	Red
Pink	220 Ohm / 110V	Red
Yellow	100 Ohm / 60V	Red

Brake voltage	Filter type
220/380 Vac	→ Type B filter
110 Vac	→ Type A filter



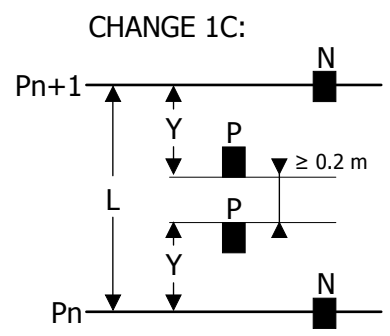
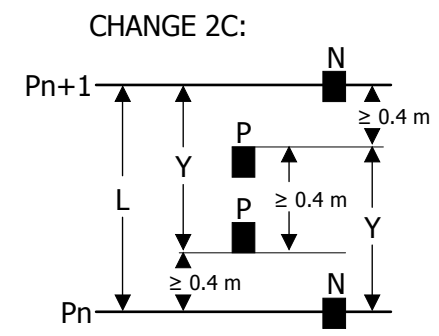
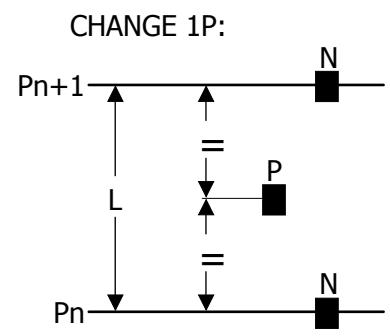
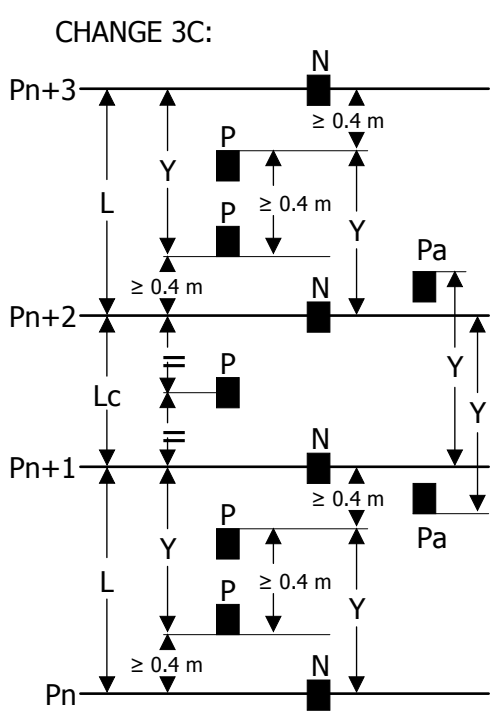


OPERATION MODE:

1. Choose the lift speed and distance between each floor and the next upper one in the control unit.
The control unit itself will inform of which type of change is necessary (1P, 1C, 2C ou 3C) and the braking distance (y).
- It will coincide with the information of the attached diagram.
- 2.- Place pulse magnets (P) for that floor, according to the type of change.

CAPTION:

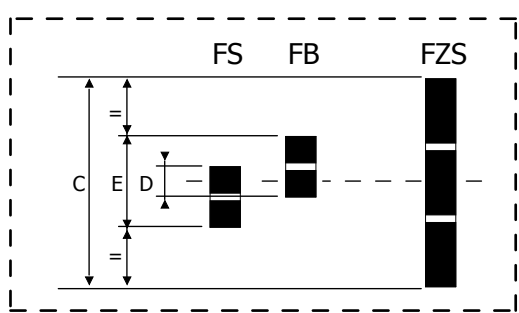
- Y: braking distance
- Y': increased braking distance
- L: distance between floors
- Lc: short distance between floors
- N: screen (or magnet) level
- P: screen (or magnet) pulse
- Pa: screen (or magnet) additional pulse
- FB: Re-leveling screen in descent
- FS: Re-leveling screen in ascent
- FZS: Sicherheitszone
- C: Safety area (40 cm)
- D: Stopping area to level (10 cm)
- E: Series bridging area (20 cm)



Operation mode:

- CHANGE 1C: Speed change with the first pulse (P) previous to the landing.
- CHANGE 2C: Speed change with the second pulse (P) previous to the landing.
- CHANGE 1P: Speed change with the previous level (N) in runs between non-consecutive landings. In runs between consecutive landings speed is slow.

CHANGE 3C: In runs between non-consecutive landings speed change is made with the additional pulse (Pa). In runs between consecutive landings speed is slow. This type of change is not possible in several consecutive landings. Change 3C is possible in upper and lower landings. In this case terminal stopping switch is installed at the height of the additional pulse (Pa).



If error F26 appears it's recommended to increase the 'C' length by adding a magnet and keeping the equidistance between FS and FB.

APPLICATION RANGE:

- $L < Y$
 - $Y < L \leq Y + 0.4$
 - $Y + 0.4 < L \leq 2Y + 0.4$
 - $2Y + 0.4 < L < 2Y + 0.2$
 - $L \geq 2Y + 0.2$
- CHANGE 3C
CHANGE 1P
CHANGE 2C
CHANGE 2C*
CHANGE 1C

* Range where change 2C is applied, increasing braking distance on the basis of:
 $Y' = (L + 0.4) / 2$



Abbreviation	Description	Page
AFI	Lower terminal stopping switch	18
AFS	Upper terminal stopping switch	18
BR1	Brake monitoring contact	6
BR2	Brake monitoring contact	6
BREV	Emergency battery	22
C1	Capacitors	3
C2	Capacitors	3
CB	Control station - inspection box connector	25
CB1	Travelling cable - control operations panel connector	24
CBA1	Car auxiliary connector	12
CBA2	Car auxiliary connector	9
CBC1	Car auxiliary connector	12
CBC2	Car auxiliary connector	9
CC1	Car terminal strip connections 1	24
CC2	Car terminal strip connections 2	21
CC3	Car terminal strip connections 3	27
CCA1	Inspection box auxiliary connector	19
CCA2	Inspection box auxiliary connector	11
CCA3	Inspection box auxiliary connector	16
CH1	Shaft terminal strip connections 1	17
CH2	Shaft terminal strip connections 2	10
CHA1	Shaft auxiliary connector	11
CHA2	Shaft auxiliary connector	7
CHA3	Shaft auxiliary connector	9
CR2	Inspection box-controller connector	21
CR3	Inspection box-controller connector	27
CRA1	Inspection box auxiliary connector	19
CRA2	Inspection box auxiliary connector	11
CRA3	Inspection box auxiliary connector	16
CT2ATE00	Telephone socket in controller	28
CTS	Pit box	16
DCE	Car display	25

Abbreviation	Description	Page
DHE	Landing display	18
ENC	Industrial encoder	15
FA	Lighting differential switch	4
FF	Power differential switch	3
FLV	Fuses	7
FMA	Controller and lighting filter	4
FP	Fuses	13
FR	Fuses	14
FR1	Fuses	3
FR2	Fuses	3
FS	Fuses	14
GONG-MP	Electronic gong	12
GRF	Brake rectifier	6
HAC	Car Lighting	16
HAL	Car Top loudspeaker	22
HDOWN	Down LED on sidestand of cabinet	6
HLP	Portable Luminaire	16
HNL	Level led	21
HRB	String of lights in shaft	16
HTC	Car roof light	16
HUP	Up LED on sidestand of cabinet	6
K1	Run contactor	8
K2	Run contactor	8
KRFR	Brake relay	14
KRFS	Brake relay	20
KRNS	Rated speed relay	8
KROCV	Time-controlled light / ventilation relay	8
KRREV	Inspection relay	21
KRSE	Direction relay	8
KVFDSP	Phases monitor relay	3
LF	Power supply	3
M1	Motor/Central	3



Abbreviation	Description	Page
MAC325P	Magnetic switch MAC 325P	23
P1	MicroBASIC PCB strip P1	8
P2	MicroBASIC PCB strip P2	8
P3	MicroBASIC PCB strip P3	12
P4	MicroBASIC PCB strip P4	12
PTC	Temperature probe	6
Pe	Earth connection	3
QAC	Car lighting switch	4
QAH	Shaft lighting switch	4
QF	Power thermomagnetic switch	3
QIM	General Switch	4
R1	Resistor	3
R2	Resistor	3
RESMON	Rescue with monitoring device PCB	6
RF	Braking resistor	3
RVAR	Varistor	12
SAC	Safety gear contact	10
SAL	Car alarm button	22
SALH	Shaft lighting switch	16
SALV	Overspeed governor actuation key switch	7
SARF	Alarm push button on car bottom	28
SARI	Inspection box alarm pushbutton	28
SARP	Car door completely open contact	28
SCC	Car door lock contact	10
SCE	Landing lock series	10
SEC1	Car lock device contact	10
SEC2	Car lock device contact	10
SFI	Lower final limit switch	10
SFS	Upper final limit switch	10
SIR	Inspection switch	10
SLVH	Overspeed governor	10
SMB	Down pushbutton electrical rescue manoeuvre	11

Abbreviation	Description	Page
SMES	Electrical rescue maneuver selector	11
SMF	Machine room terminals. Power wiring	3
SMM	Machine room terminals. Control wiring	4
SMS	Up pushbutton electrical rescue manoeuvre	11
SPAP	Door open push-button	21
SPC	Car call pushbutton	24
SPCP	Close door pushbutton	12
SPEB	Down landing call pushbutton	17
SPES	Up landing call pushbutton	17
SPRB	Inspection Down push-button	10
SPRC	Inspection common push-button	10
SPRS	Inspection Up push-button	10
SSEN	Sensitivity microswitch contact	21
STLF	Overspeed governor cable tension contact	10
STOP	Inspection stop push-button	10
STOPF	Pit stop button	10
TCC	Inspection box power socket	16
TCF	Power socket in shaft CTS	16
TCM	Power socket in electric protection controller	16
TRM	Control unit transformer	4
UPS	Uninterrupted power supply	5
VAL	Alarm push-button light	22
3VFMAC-DSP	3VFMAC-DSP Frequency converter	3
VFSL	Out of service indicator	20
VLBC	Car down light	25
VLSC	Car up light	25
VOL	Volume control potentiometer	28
VRC	Car call register	24
VREB	Down landing call register	17
VRES	Up landing call register	17
WCMB	Travelling cable - Car control station	9
WCMBR	Travelling cable - Inspection box	10



Abbreviation	Description	Page
X325	Magnetic switch 325 connector	23
XAFI	Lower terminal stopping switch connector	18
XAFS	Upper terminal stopping switch connector	18
XALB	Car lighting connector	16
XALH	Shaft lighting connector	16
XALHS	Shaft lighting connector	16
XARN	Lift on level contact	23
XARP	Car door completely open contact	28
XBUC	Induction loop connector	28
XCAN	CAN bus communication connector	28
XCE	Door lock connector	10
XCTS	Shaft stop pushbutton connector	10
XFI	Lower final limit switch connector	10
XFN1	Generic input/output connector	28
XFN2	External power supply connector	28
XFS	Upper final limit switch connector	10
XLLT	Technician alarm connector	28
XLVH	Overspeed governor contact connector	10
XMAQ1	Machine control connector	6
XMES	Electrical rescue maneuver connector	11
XMT	Call filtering connector	28
XPAL	Alarm pushbutton connector	28
XRB	Connector for string of lights	16
XREF	Refurbishment kit connector	28
XRLV	Shaft speed governor connector	7
XTFN	Telephone line connector	28
XTLF	Overspeed governor cable tension contact connector	10
XTS	Thermal probe connector	6
YBR	Electromagnetic brake	6
ZA	Type A filter	8
ZB	Type B filter	4
ZFE	Input filter	3

Abbreviation	Description	Page
ZFS	Output filter	3

