

1	2	3	4	5	6	7	8	9	10	
A										A
B										B
C										C
D										D
E										E
F										F
1	2	3	4	5	6	7	8	9	10	

MLCOMBO-X

CONTROL PANEL CONNECTION, PIT AND FLOOR WIRING SCHEMES

Version

Standard

Date of Update

:

V1.08

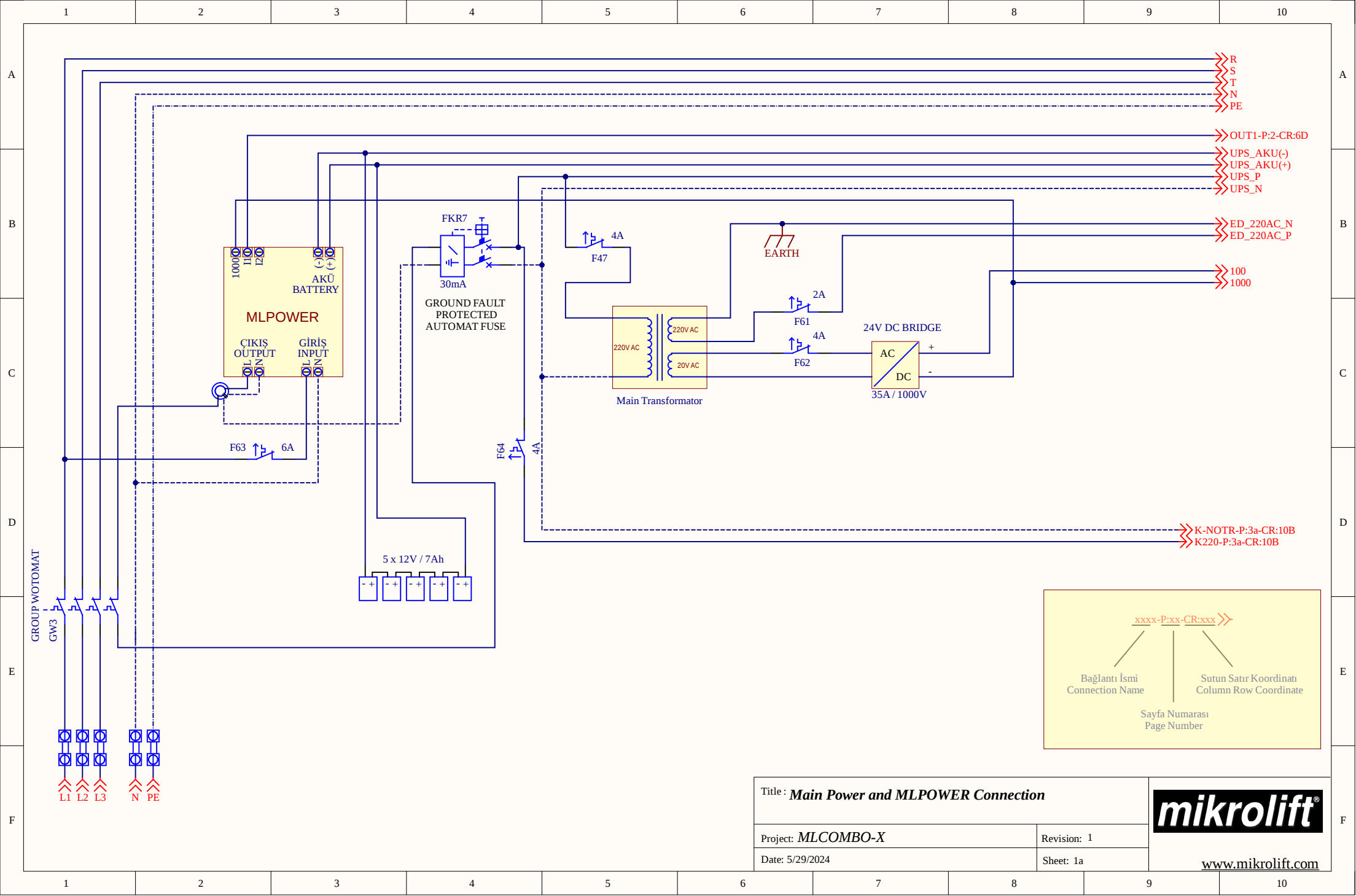
EN81-20

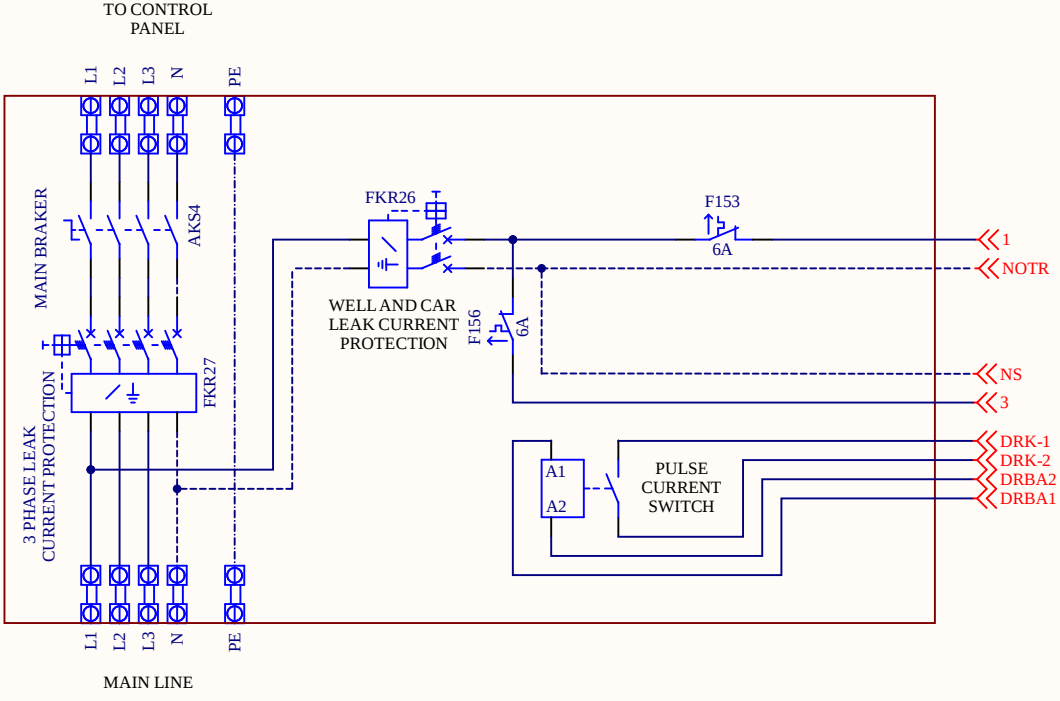
5/29/2024

Important Note

:

These schemes are advisory. Mikrolift reserves the right to change schemes. Our company cannot be held responsible for any changes made by persons other than those within our company.





Title : **Machine Room Electrical Panel**

Project: **MLCOMBO-X**

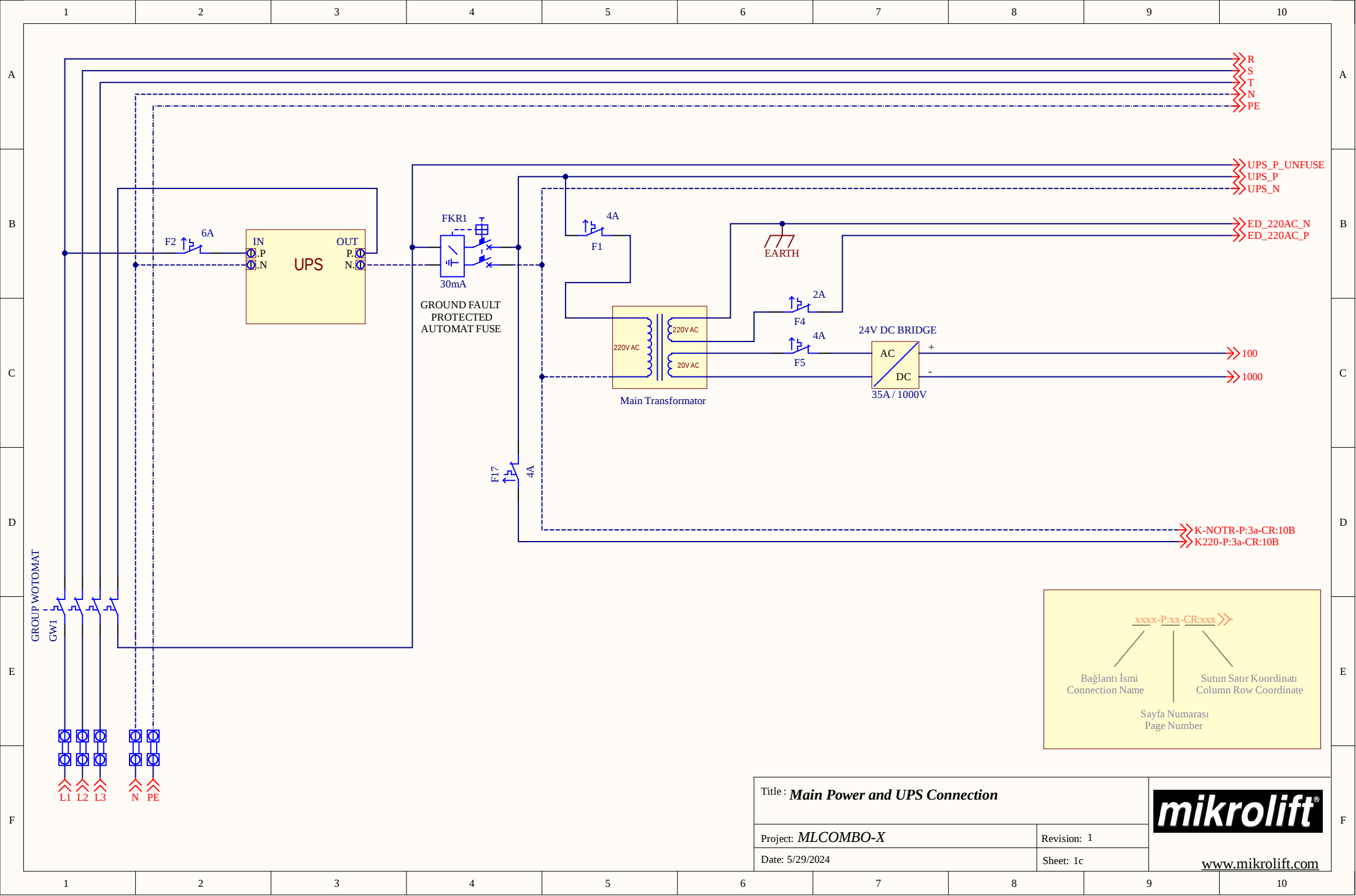
Date: 5/29/2024

Revision: 1

Sheet: 1b



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Title : **Main Power and UPS Connection**

Project: **MLCOMBO-X**

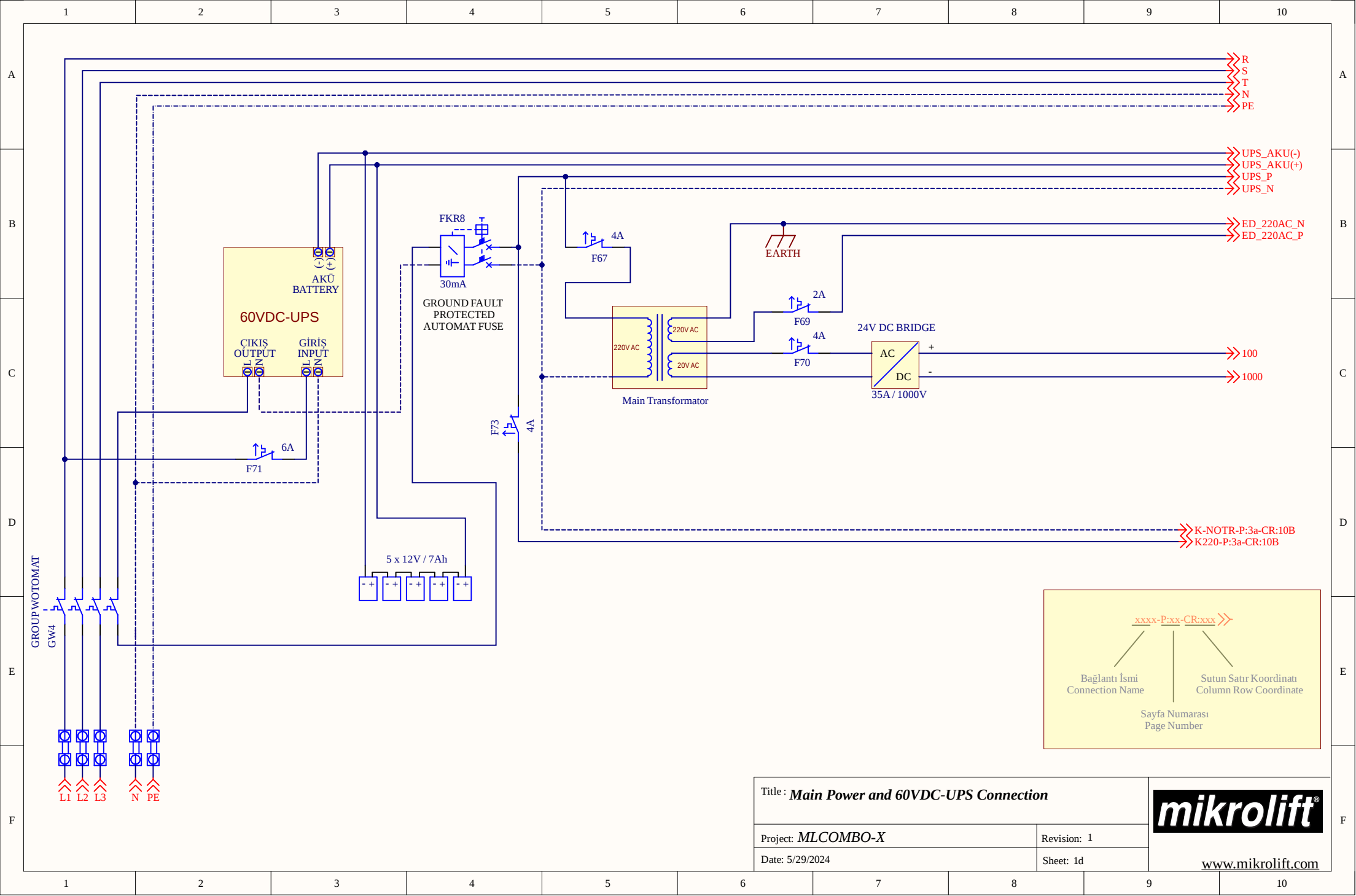
Date: 5/29/2024

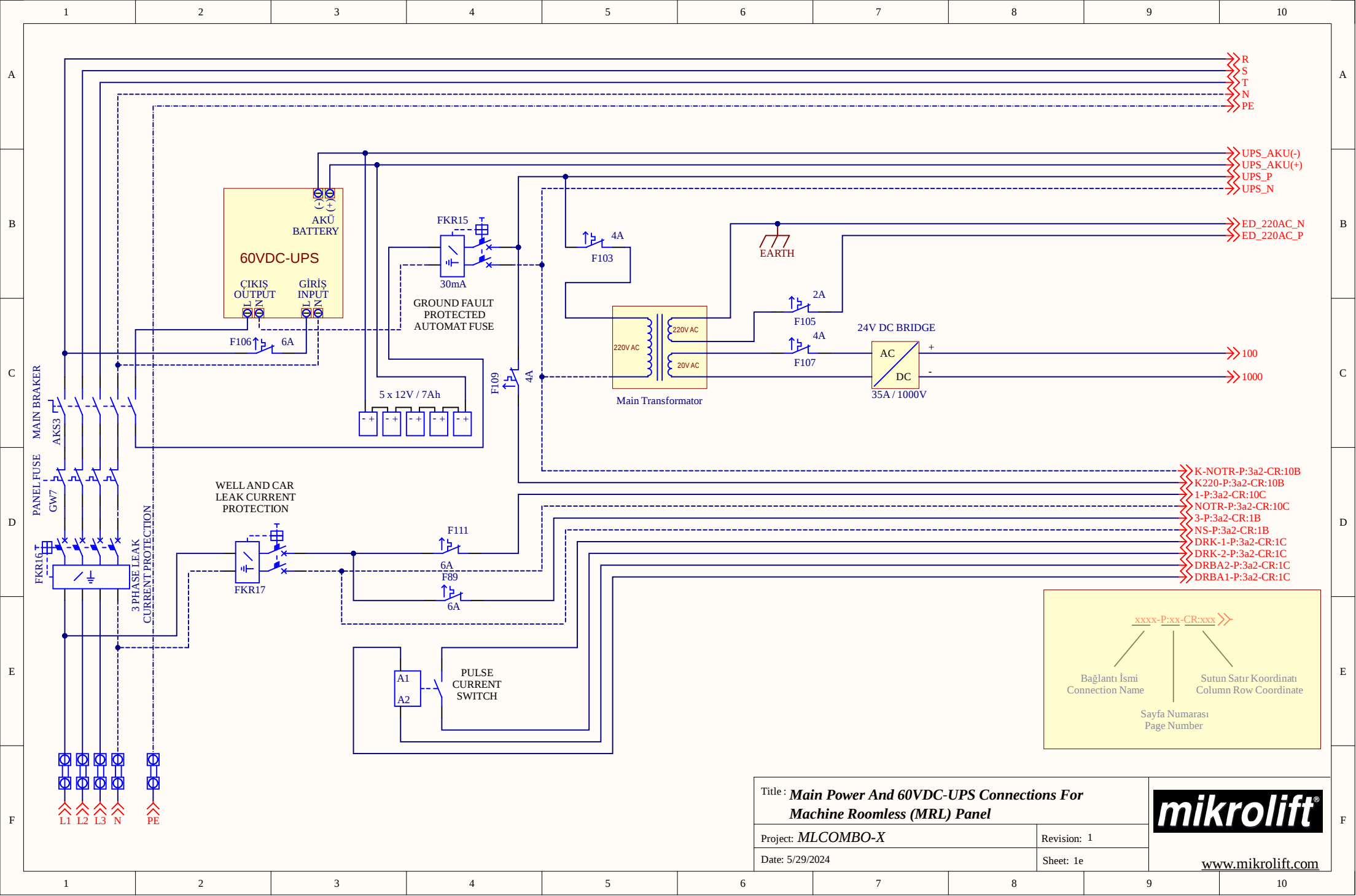
Revision: 1

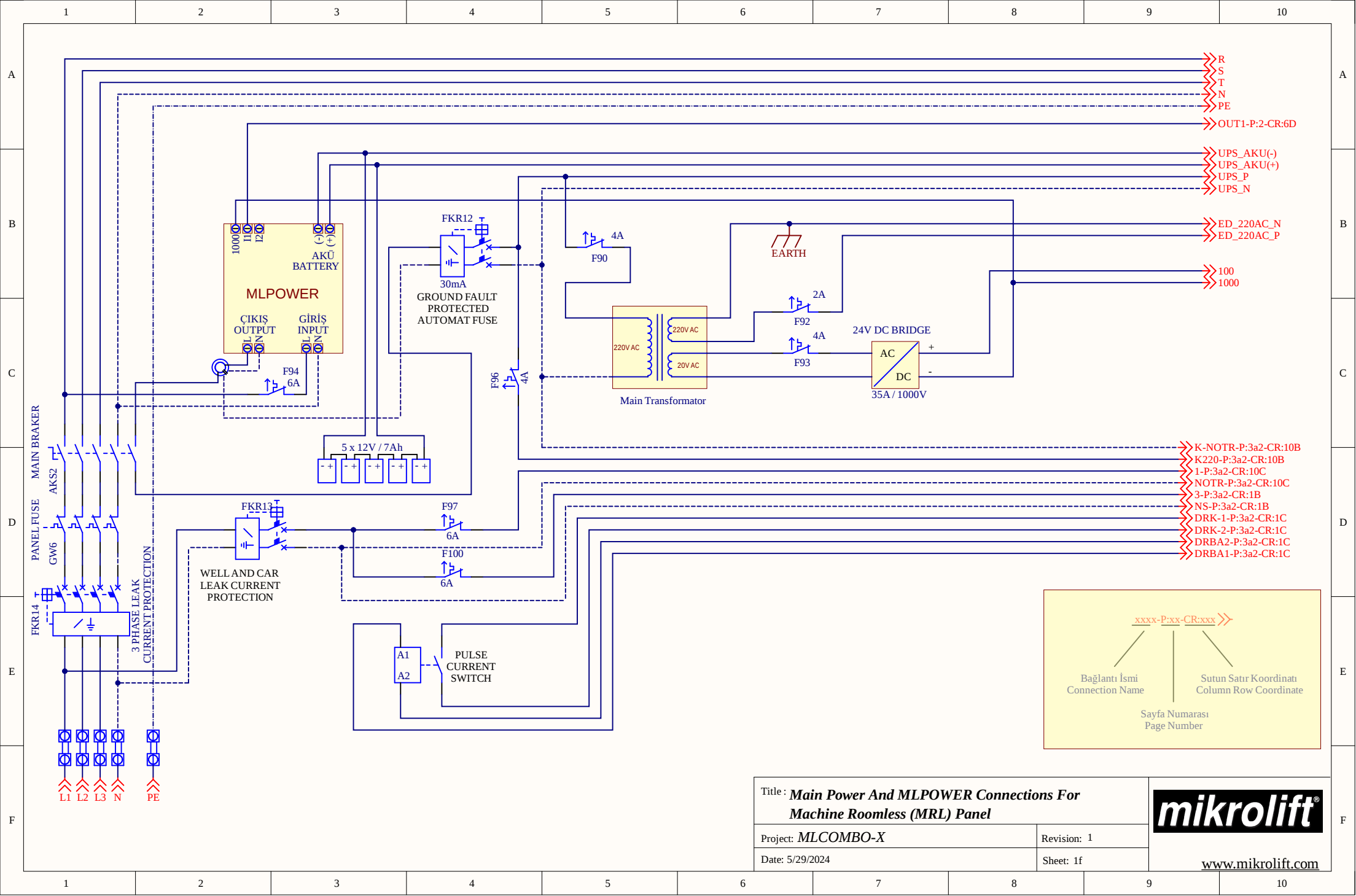
Sheet: 1c

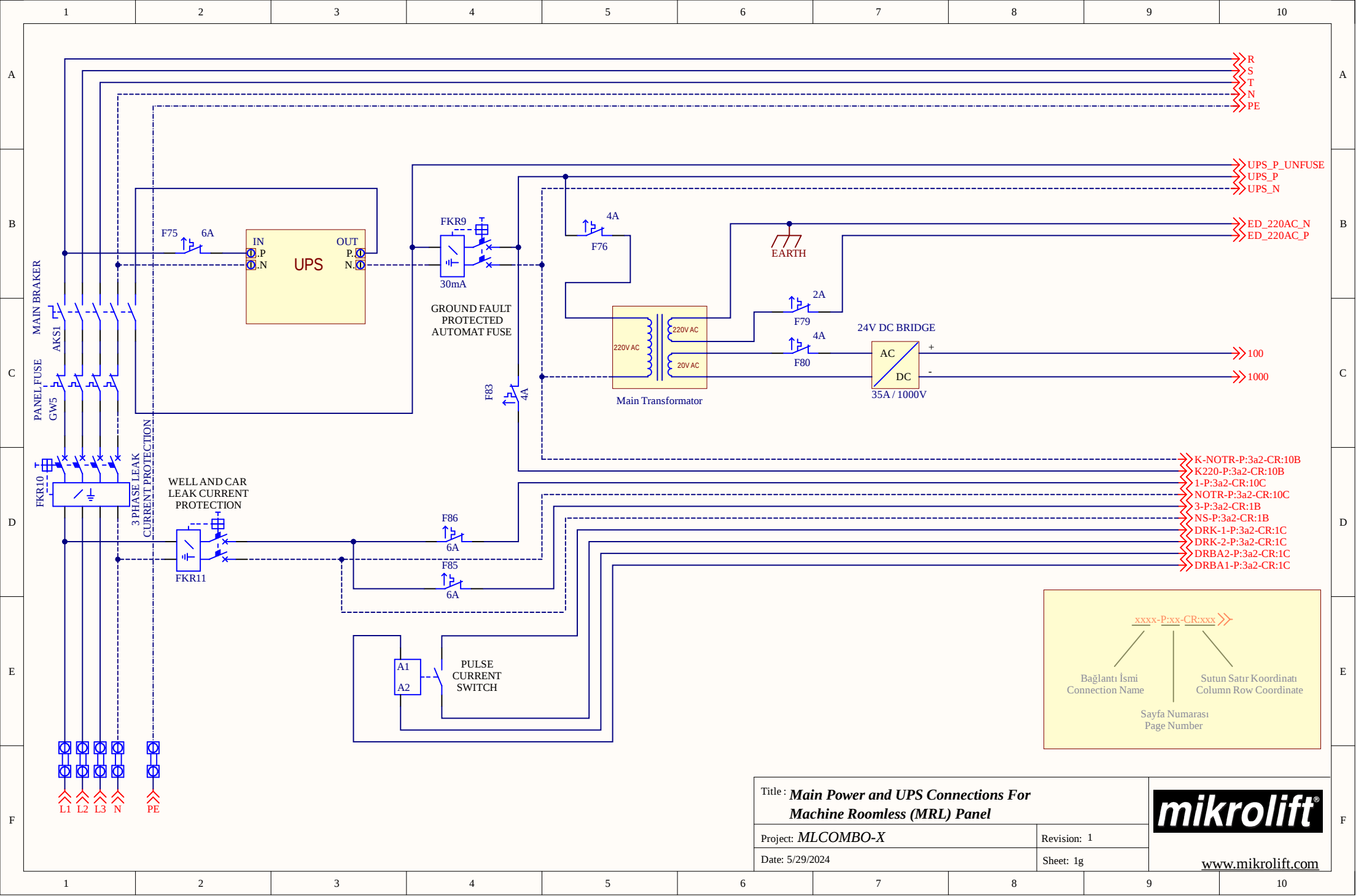
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Title : **190VDC Cam Coil and 190VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

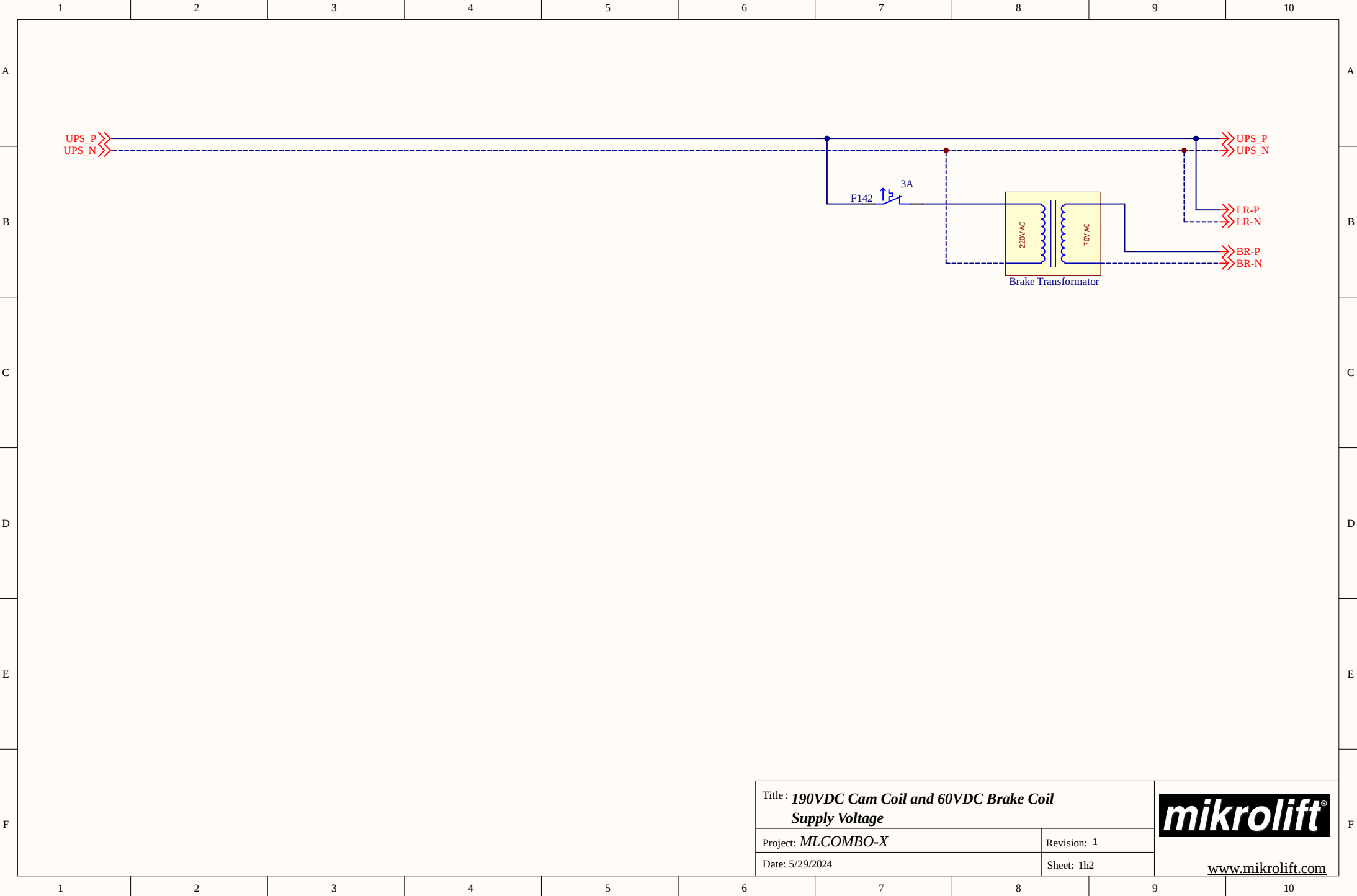
Date: 5/29/2024

Revision: 1

Sheet: 1h1

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Title : **190VDC Cam Coil and 60VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

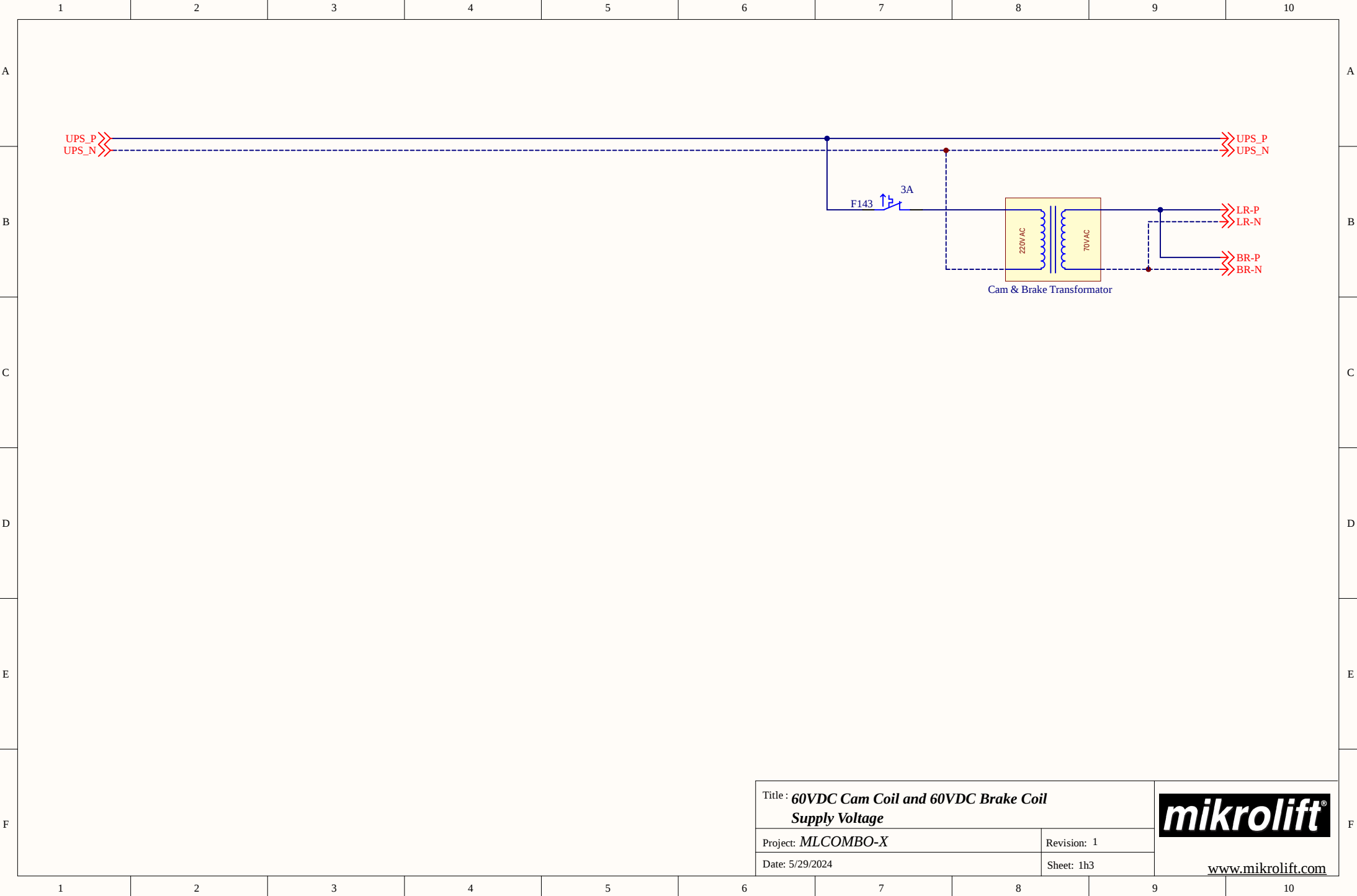
Date: 5/29/2024

Revision: 1

Sheet: 1h2

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Title : **60VDC Cam Coil and 60VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

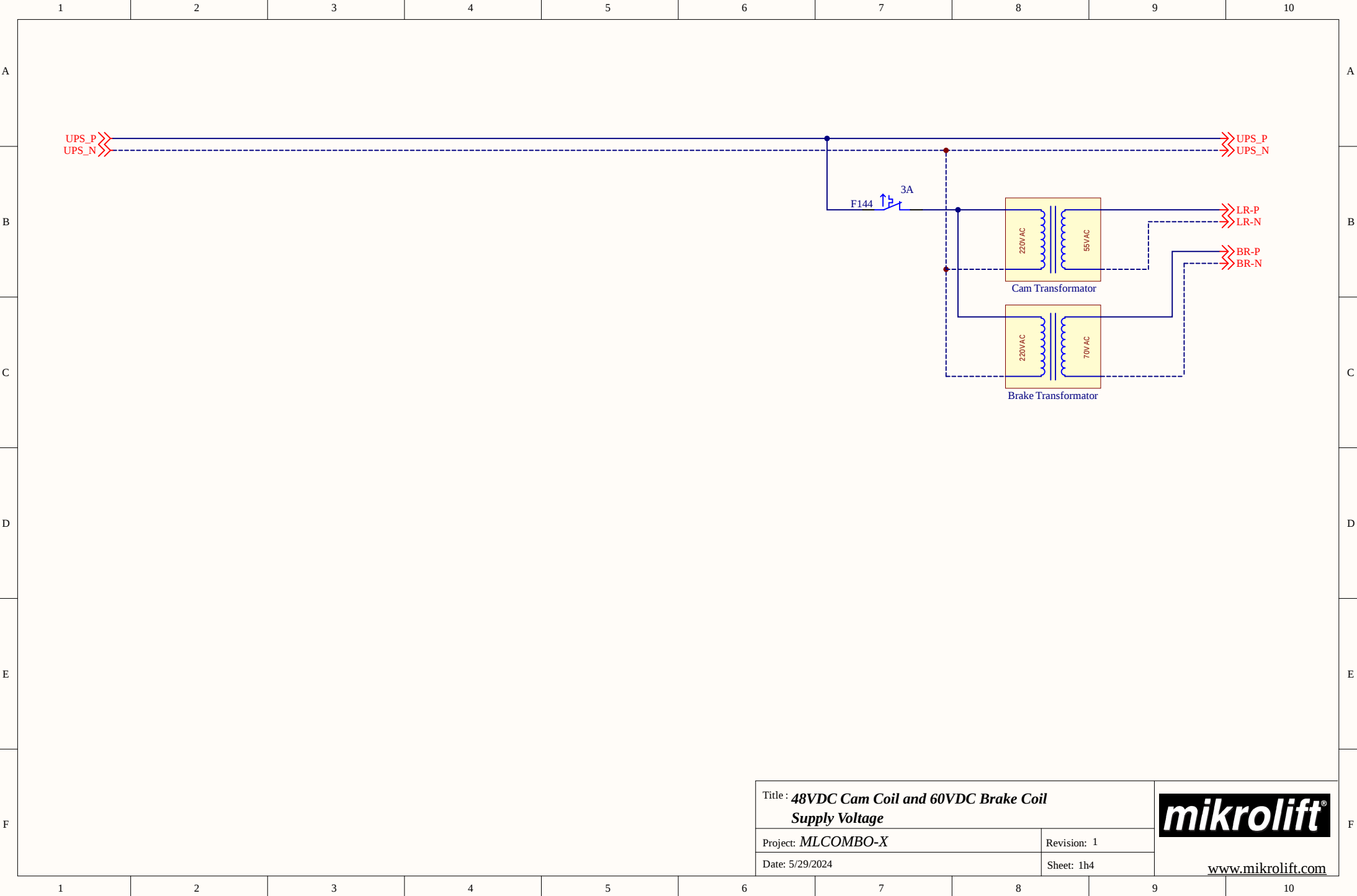
Date: 5/29/2024

Revision: 1

Sheet: 1h3



www.mikrolift.com



Title : **48VDC Cam Coil and 60VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

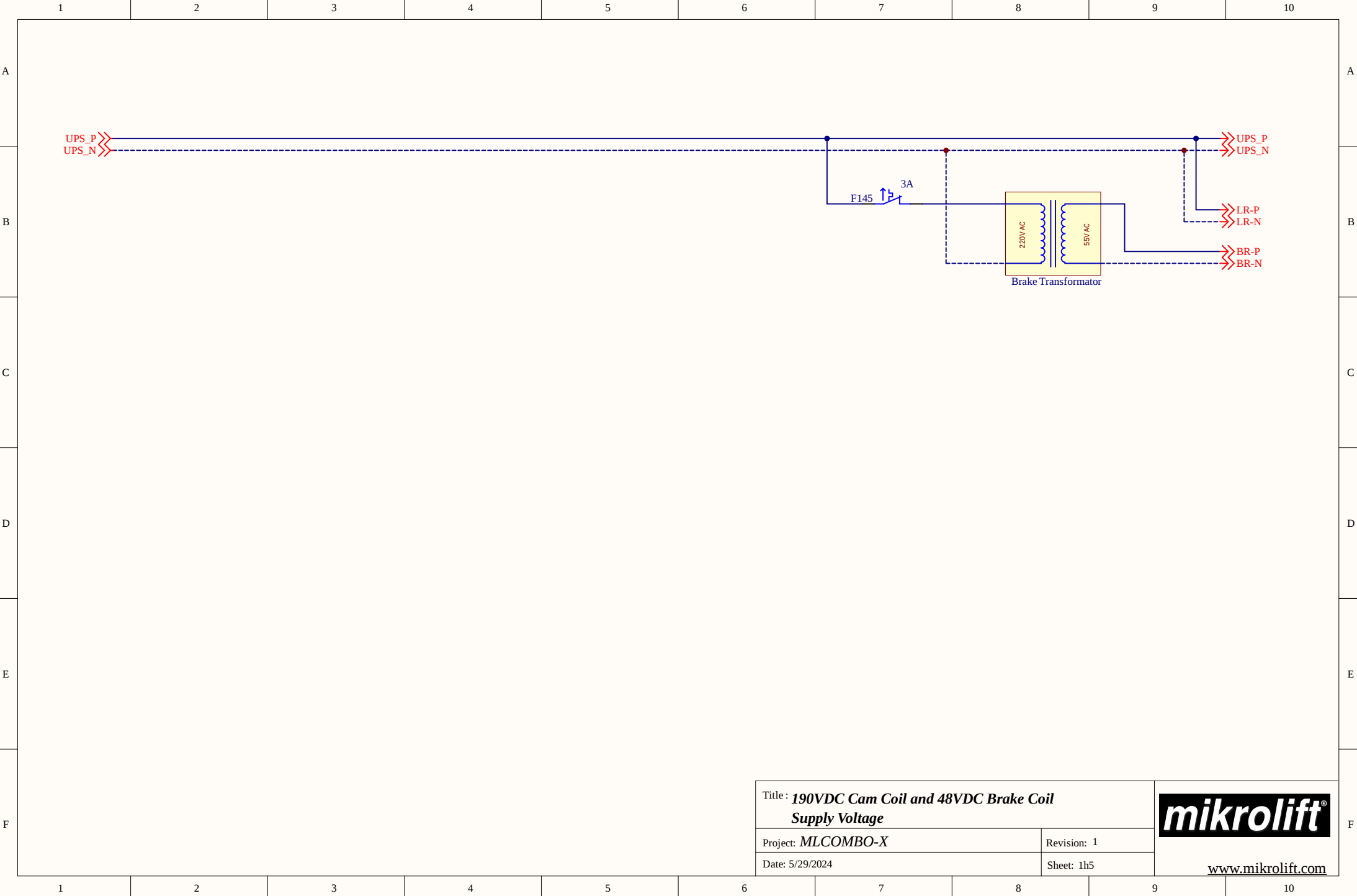
Date: 5/29/2024

Revision: 1

Sheet: 1h4



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Title : **190VDC Cam Coil and 48VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

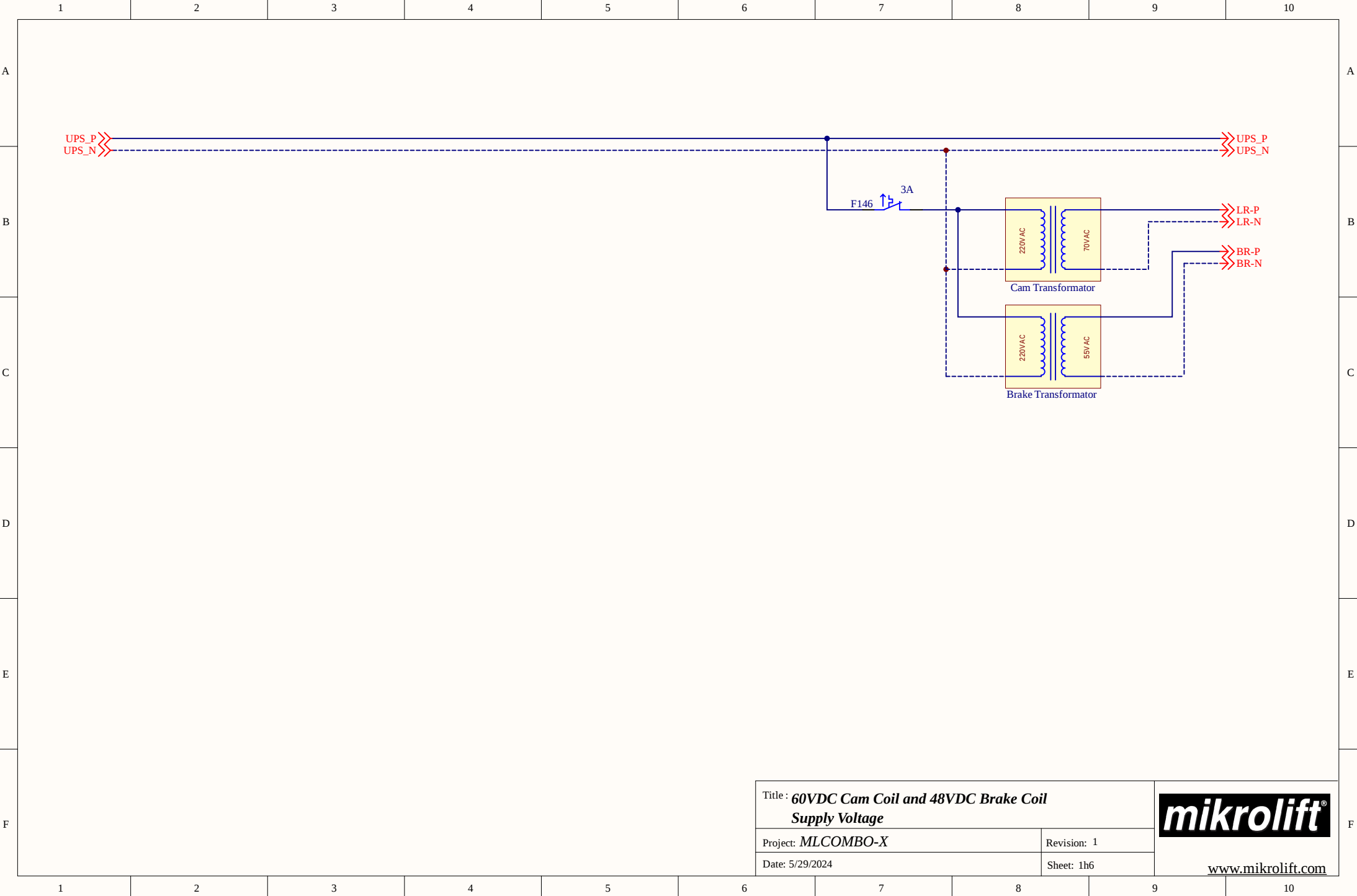
Date: 5/29/2024

Revision: 1

Sheet: 1h5

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Title : **60VDC Cam Coil and 48VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

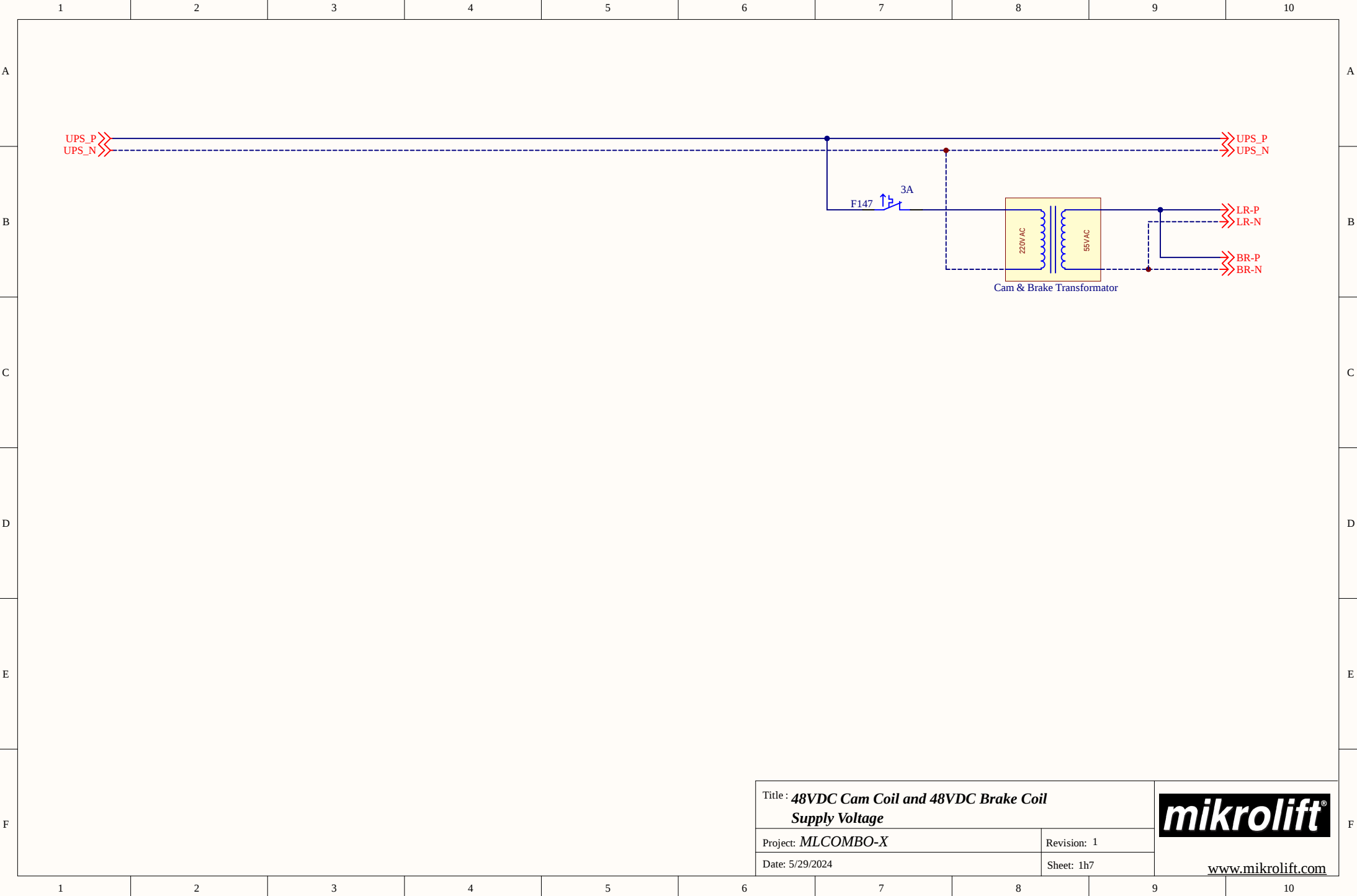
Date: 5/29/2024

Revision: 1

Sheet: 1h6

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Title : **48VDC Cam Coil and 48VDC Brake Coil**
Supply Voltage

Project: **MLCOMBO-X**

Date: 5/29/2024

Revision: 1

Sheet: 1h7

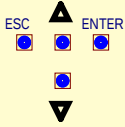
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N-P:1-CR:10A >>

N-P:1-CR:10A
1000-P:1-CR:10B
100-P:1-CR:10B

MLCOMBO-X



MP
130F
KXO2
KXO1
OSG2
OSG1
10B

140
137
135
130
120
10A

RFX1
RFX2
RD1
RD2
RMB1
RMB2

1000
100
KRC
PGFT
OUT1

KN5

KN1

15V
GND
A
-A
B
-B

KN4
KN3
KN2
CAN

Flat Cable 16

Flat Cable 16

Flat Cable 16

6 x 0,50 CABLE

4 x 0,22 CABLE

Flat Cable 16

130F
KXO2
KXO1
OSG2
OSG1
10B

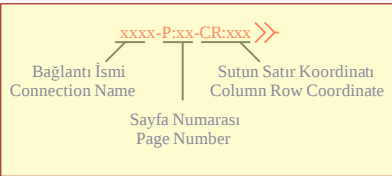
RFX1
RFX2
RD1
RD2
RMB1
RMB2

KRC
PGFT
OUT1

KN5

KN1

KN2
KN3
KN4



Title : **MLCOMBO-X Connection**

Project: **MLCOMBO-X**

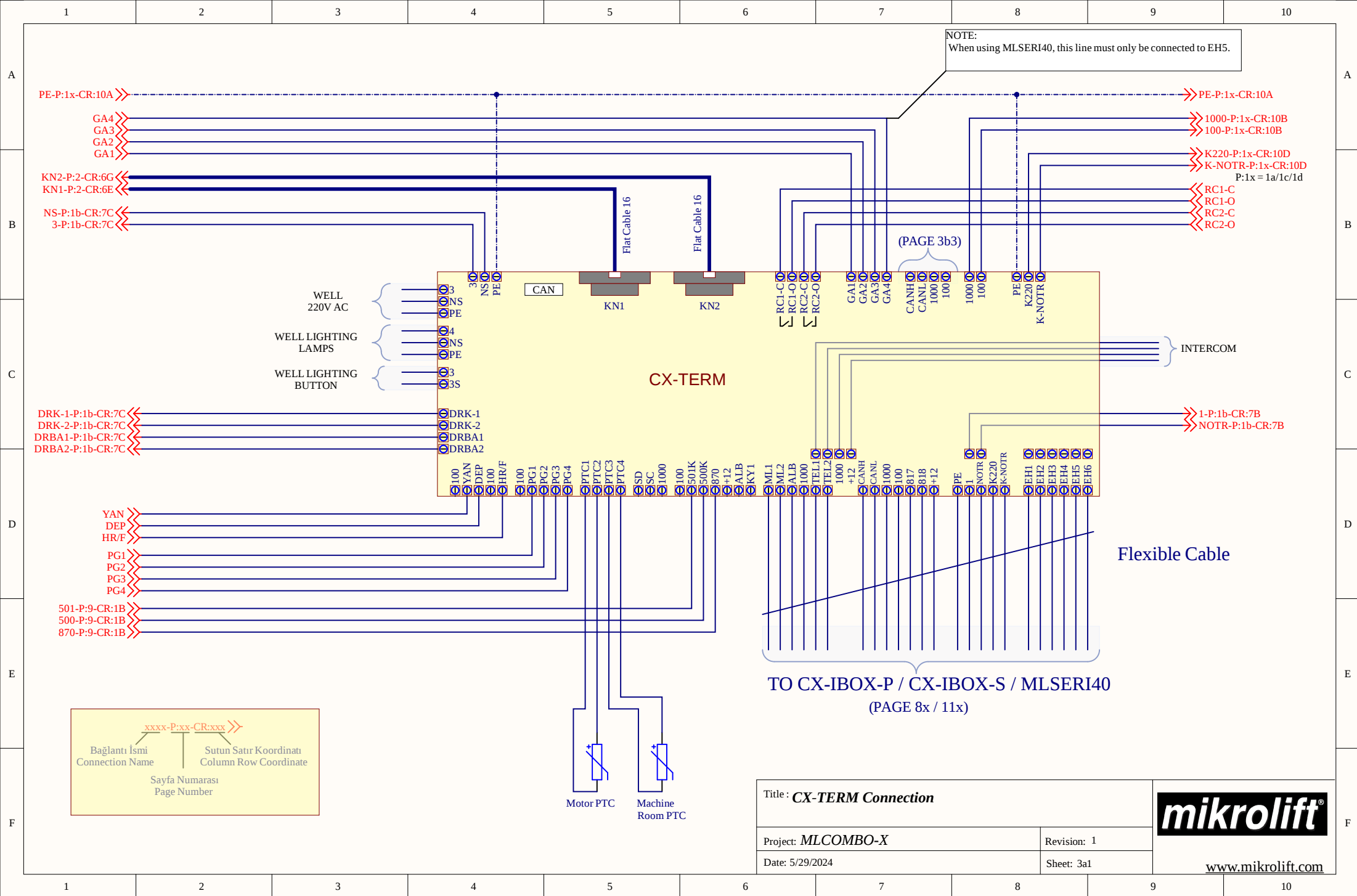
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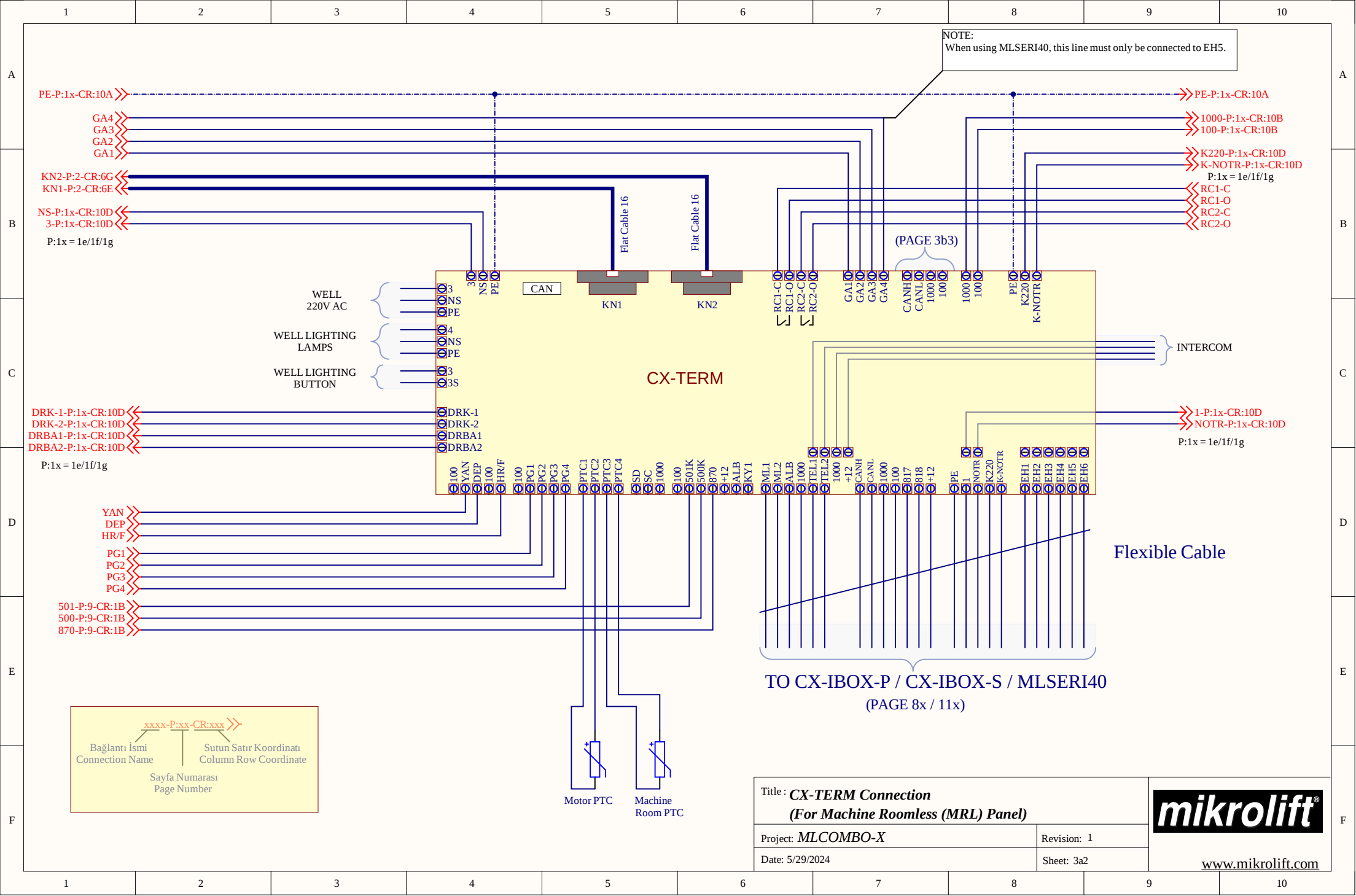
Revision: 1

Sheet: 2

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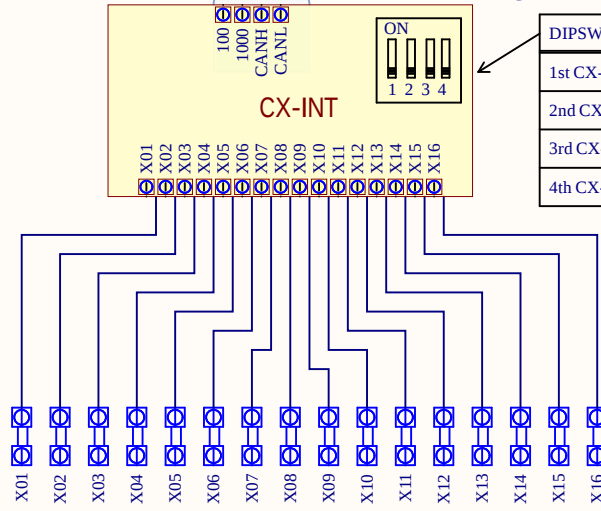




		1	2	3	4	5	6	7	8	9	10																																									
A	CONTROL PANEL			CALL TERMINALS AT CX-TERM-P BOARD																CALL TERMINALS AT 1st CX-INT BOARD																CALL TERMINALS AT 2nd CX-INT BOARD																
				X01	X02	X03	X04	X05	X06	X07	X08	X09	X10	X11	X12	X13	X14	X15	X16	X01	X02	X03	X04	X05	X06	X07	X08	X09	X10	X11	X12	X13	X14	X15	X16	X01	X02	X03	X04	X05	X06	X07	X08	X09	X10	X11	X12	X13	X14	X15	X16	
		UP / DOWN MIX COLLECTIVE (2 - 16 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	NOT USED																NOT USED																	
		UP / DOWN MIX COLLECTIVE (17 - 24 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	NOT USED																									
		DOWN COLLECTIVE (2 - 16 FLOORS)	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	NOT USED																NOT USED																	
		DOWN COLLECTIVE (17 - 24 FLOORS)	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	NOT USED																									
		UP COLLECTIVE (2 - 16 FLOORS)	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	NOT USED																NOT USED																	
		UP COLLECTIVE (17 - 24 FLOORS)	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	NOT USED																									
		SELECTIVE COLLECTIVE (2 - 9 FLOORS)	301	302	303	304	305	306	307	308	309	203	204	205	206	207	208	209	NOT USED																NOT USED																	
		SELECTIVE COLLECTIVE (10 -16 FLOORS)	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315		202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	NOT USED																		
		SELECTIVE COLLECTIVE (17 - 24 FLOORS)	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	317	318	319	320	321	322	323	217	218	219	220	221	222	223	224				

D	TOP OF THE CAR			CALL TERMINALS AT CX-IBOX-P BOARD																CALL TERMINALS AT 3rd CX-INT BOARD																																
			X01	X02	X03	X04	X05	X06	X07	X08	X09	X10	X11	X12	X13	X14	X15	X16	X01	X02	X03	X04	X05	X06	X07	X08	X09	X10	X11	X12	X13	X14	X15	X16																		
		UP / DOWN MIX COLLECTIVE (2 - 16 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	NOT USED																																	
		UP / DOWN MIX COLLECTIVE (17 - 24 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424																										
		DOWN COLLECTIVE (2 - 16 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	NOT USED																																	
		DOWN COLLECTIVE (17 - 24 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424																										
		UP COLLECTIVE (2 - 16 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	NOT USED																																	
		UP COLLECTIVE (17 - 24 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424																										
		SELECTIVE COLLECTIVE (2 - 9 FLOORS)	401	402	403	404	405	406	407	408	409																	NOT USED																								
		SELECTIVE COLLECTIVE (10 -16 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	NOT USED																																	
		SELECTIVE COLLECTIVE (17 - 24 FLOORS)	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424																										
								Title : Call Definitions (For Parallel, Only CX-INT)																																F												
						Project: MLCOMBO-X																Revision: 1																														
						Date: 5/29/2024																Sheet: 3b2																														
																						www.mikrolift.com																														
		1	2	3	4	5	6	7	8	9	10																																									

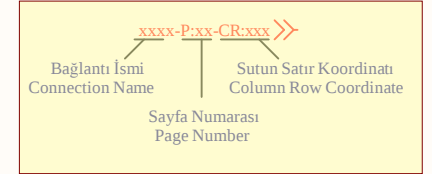
(PAGE 3a)



CX-INT Dipswitch Selection Table

DIPSWITCH	1	2	3	4
1st CX-INT	ON	OFF	OFF	OFF
2nd CX-INT	OFF	ON	OFF	OFF
3rd CX-INT	OFF	OFF	ON	OFF
4th CX-INT	OFF	OFF	OFF	ON

CALL TERMINALS



Title : **CX-INT Connection**

Project: **MLCOMBO-X**

Date: 5/29/2024

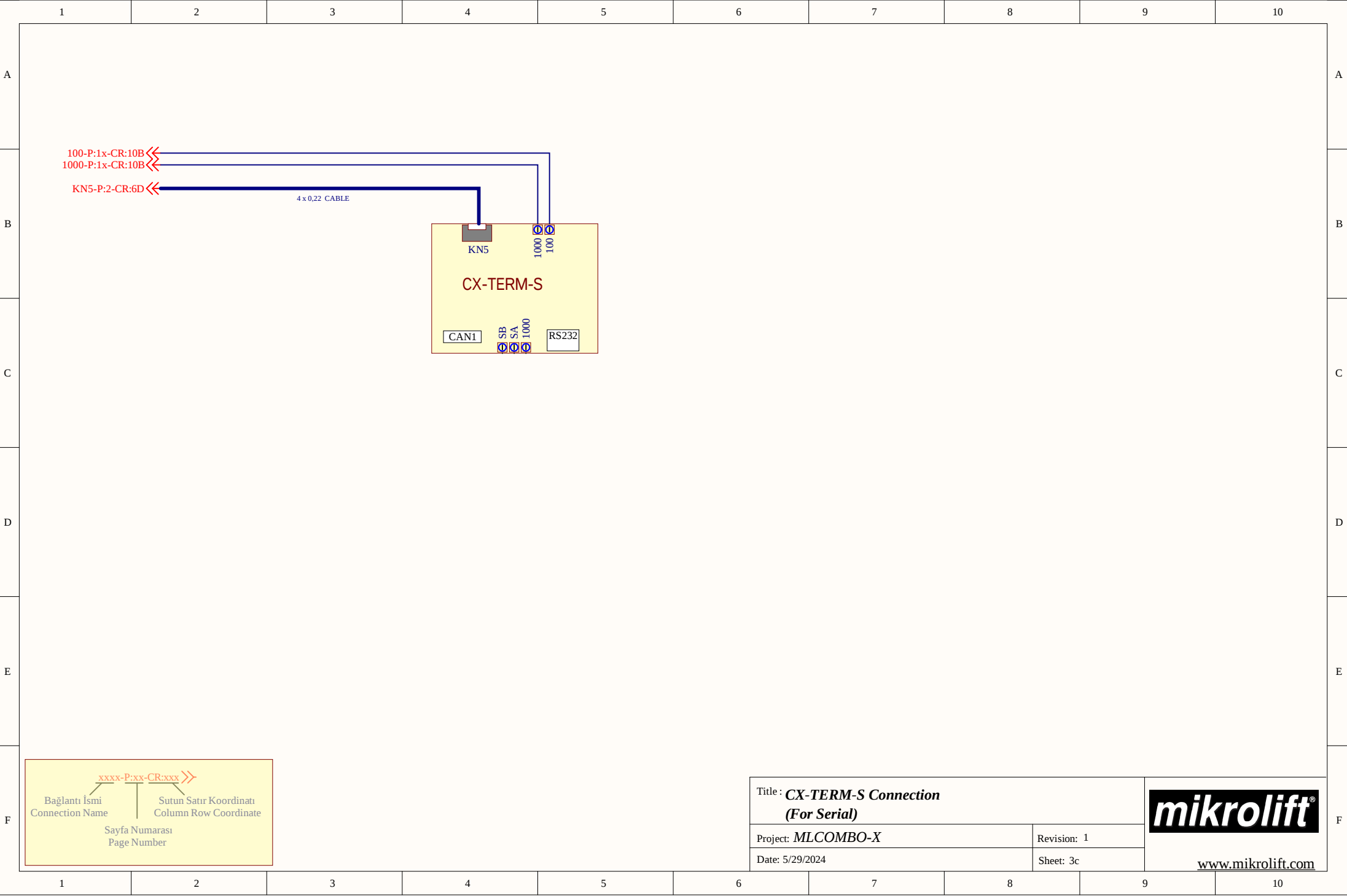
Revision: 1

Sheet: 3b3

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1		2		3		4		5		6		7		8		9		10															
CONTROL PANEL		CALL TERMINALS AT CX-TERM-P BOARD																CALL TERMINALS CX-INT BOARD															
		UP / DOWN MIX COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		UP / DOWN MIX COLLECTIVE (17 - 24 FLOORS)																															
		DOWN COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		DOWN COLLECTIVE (17 - 24 FLOORS)																															
		UP COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		UP COLLECTIVE (17 - 24 FLOORS)																															
		SELECTIVE COLLECTIVE (2 - 9 FLOORS)																NOT USED															
		SELECTIVE COLLECTIVE (10 -16 FLOORS)																															
		SELECTIVE COLLECTIVE (17 - 24 FLOORS)																CALL TERMINALS CX-INT-30 BOARD															
TOP OF THE CAR		CALL TERMINALS AT CX-IBOX-P BOARD																CALL TERMINALS CX-IBOX-P-E8 BOARD															
		UP / DOWN MIX COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		UP / DOWN MIX COLLECTIVE (17 - 24 FLOORS)																															
		DOWN COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		DOWN COLLECTIVE (17 - 24 FLOORS)																															
		UP COLLECTIVE (2 - 16 FLOORS)																NOT USED															
		UP COLLECTIVE (17 - 24 FLOORS)																															
		SELECTIVE COLLECTIVE (2 - 9 FLOORS)																NOT USED															
		SELECTIVE COLLECTIVE (10 -16 FLOORS)																NOT USED															
		SELECTIVE COLLECTIVE (17 - 24 FLOORS)																															
												Title : Call Definitions (For Parallel, After v1.08.02 Versions)																					
												Project: MLCOMBO-X								Revision: 1													
												Date: 5/29/2024								Sheet: 3b4													
1		2		3		4		5		6		7		8		9		10															



UPS_P-P:1x-CR:10B
UPS_N-P:1x-CR:10B
100-P:1x-CR:10B
1000-P:1x-CR:10B

UPS_P-P:1x-CR:10B
UPS_N-P:1x-CR:10B
100-P:1x-CR:10B
1000-P:1x-CR:10B

OSG1-P:2-CR:6B
OSG2-P:2-CR:6B

HR/F-P:3a-CR:1D

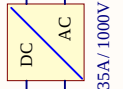
KXO1-P:2-CR:6B

KXO2-P:2-CR:6B

130-P:7-CR:xx

130F-P:2-CR:6B

OSG SELENOID BRIDGE

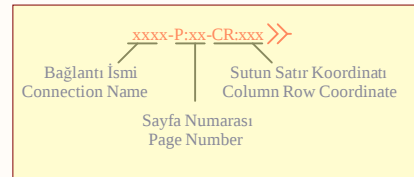


HBR1
HBR2

OSG
Selenoid

BK1
BK2

OSG
Selenoid
NC Contact



Title : **OSG Selenoid Connection**
For 190VDC Coil

Project: **MLCOMBO-X**

Date: 5/29/2024

Revision: 1

Sheet: 4a

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UPS_P-P:1x-CR:10B
UPS_N-P:1x-CR:10B
100-P:1x-CR:10B
1000-P:1x-CR:10B

UPS_P-P:1x-CR:10B
UPS_N-P:1x-CR:10B
100-P:1x-CR:10B
1000-P:1x-CR:10B

OSG1-P:2-CR:6B
OSG2-P:2-CR:6B

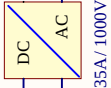
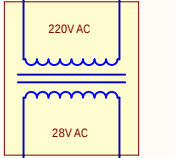
HR/F-P:3a-CR:1D

KFR1 NO1 KXO1-P:2-CR:6B

KFR1 NO2 KFR2 NO1 130-P:7-CR:xx

130F-P:2-CR:6B

OSG SELENOID BRIDGE

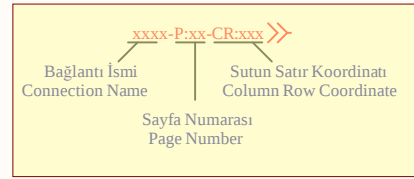


HBR1
HBR2

OSG
Selenoid

BK1
BK2

OSG
Selenoid
NC Contact



Title : **OSG Selenoid Connection**
For 24VDC Coil

Project: **MLCOMBO-X**

Date: 5/29/2024

Revision: 1

Sheet: 4b

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UPS_N-P:1x-CR:10B >>> UPS_N-P:1x-CR:10B

SG_P-P:6x-CR:1B >>>

SET
E

RESET
E

SG-S

N

SG-R

N

A1

A2

Set Selenoid

A1

A2

Reset Selenoid

OVERSPEED GOVERNOR

xxxx-P:xx-CR:xxx >>>
Bağlantı İsmi
Connection Name
Sutun Satır Koordinatı
Column Row Coordinate
Sayfa Numarası
Page Number

Title : **Remote Control For Overspeed Governor**
(For 220VAC Coil)

Project: **MLCOMBO-X**

Revision: 1

Date: 5/29/2024

Sheet: 4c

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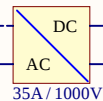
1 2 3 4 5 6 7 8 9 10

A

UPS_N-P:1x-CR:10B >>> UPS_N-P:1x-CR:10B

SG_P-P:6x-CR:1B >>>

B



SET
E

RESET
E

SG-S

N

SG-R

N

A1

A2

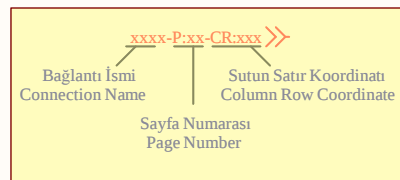
Set Selenoid

A1

A2

Reset Selenoid

OVERSPEED GOVERNOR



E

F

Title : **Remote Control For Overspeed Governor**
(For 190VDC Coil)

Project: **MLCOMBO-X**

Date: 5/29/2024

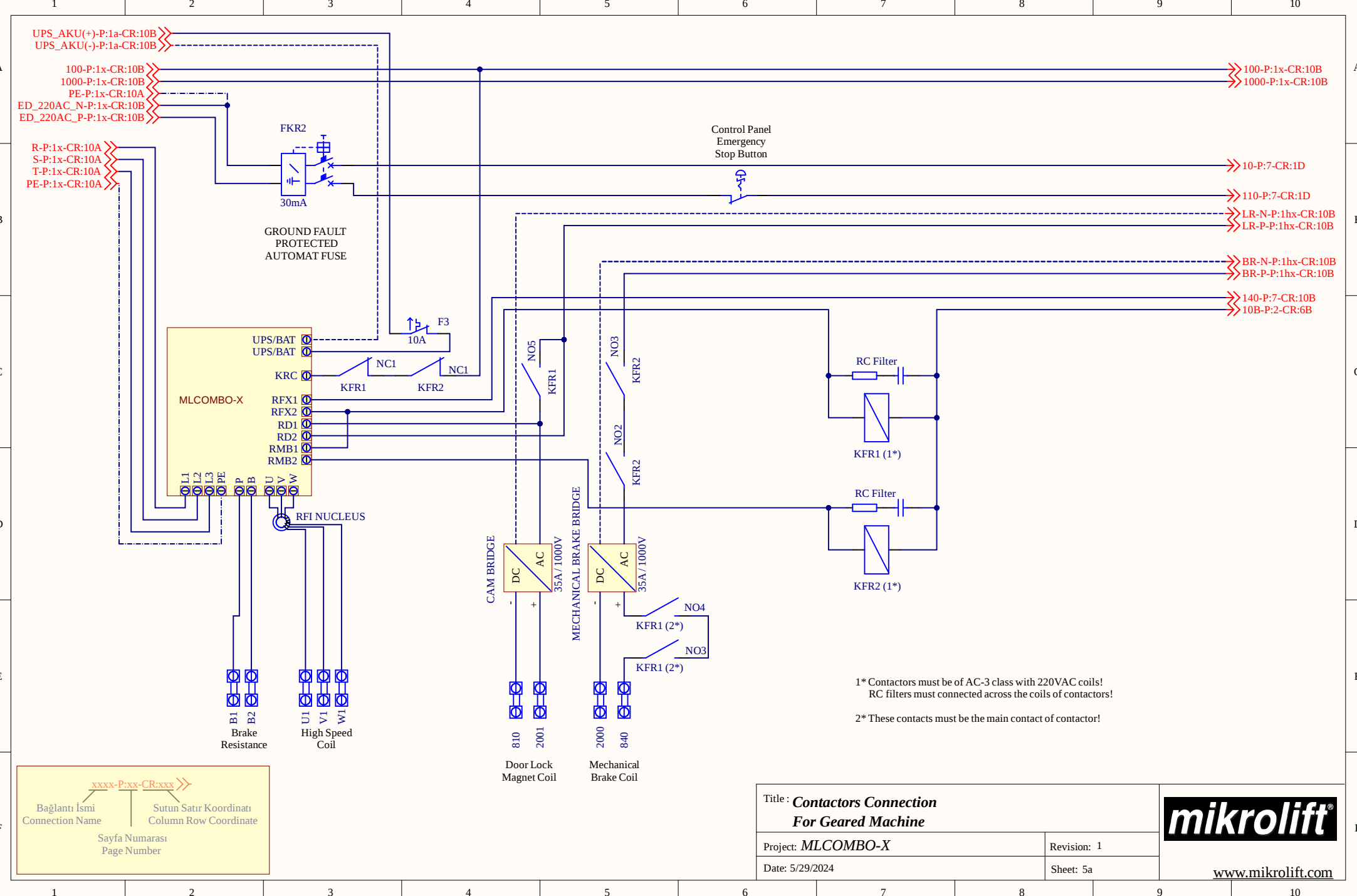
Revision: 1

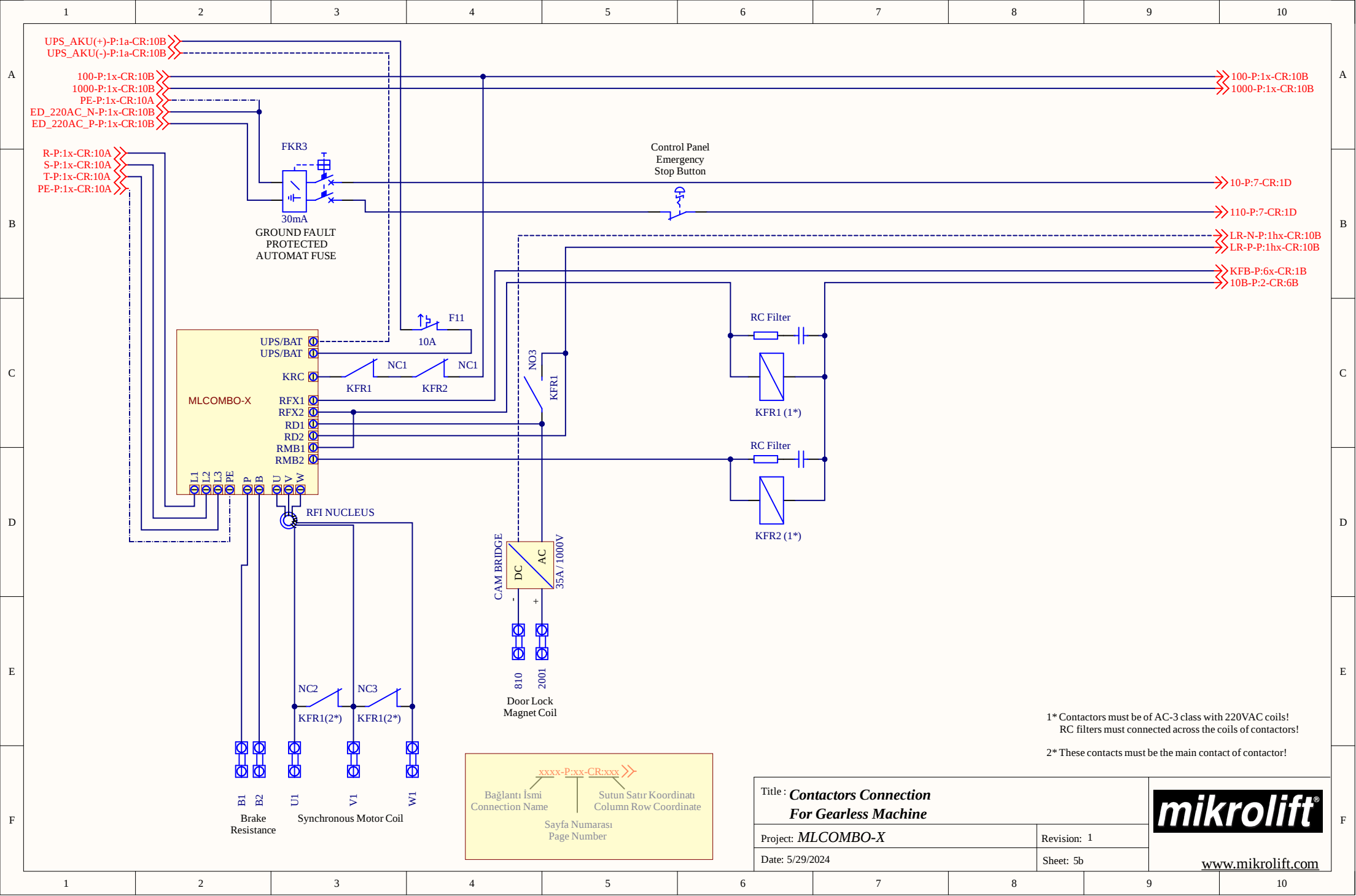
Sheet: 4d

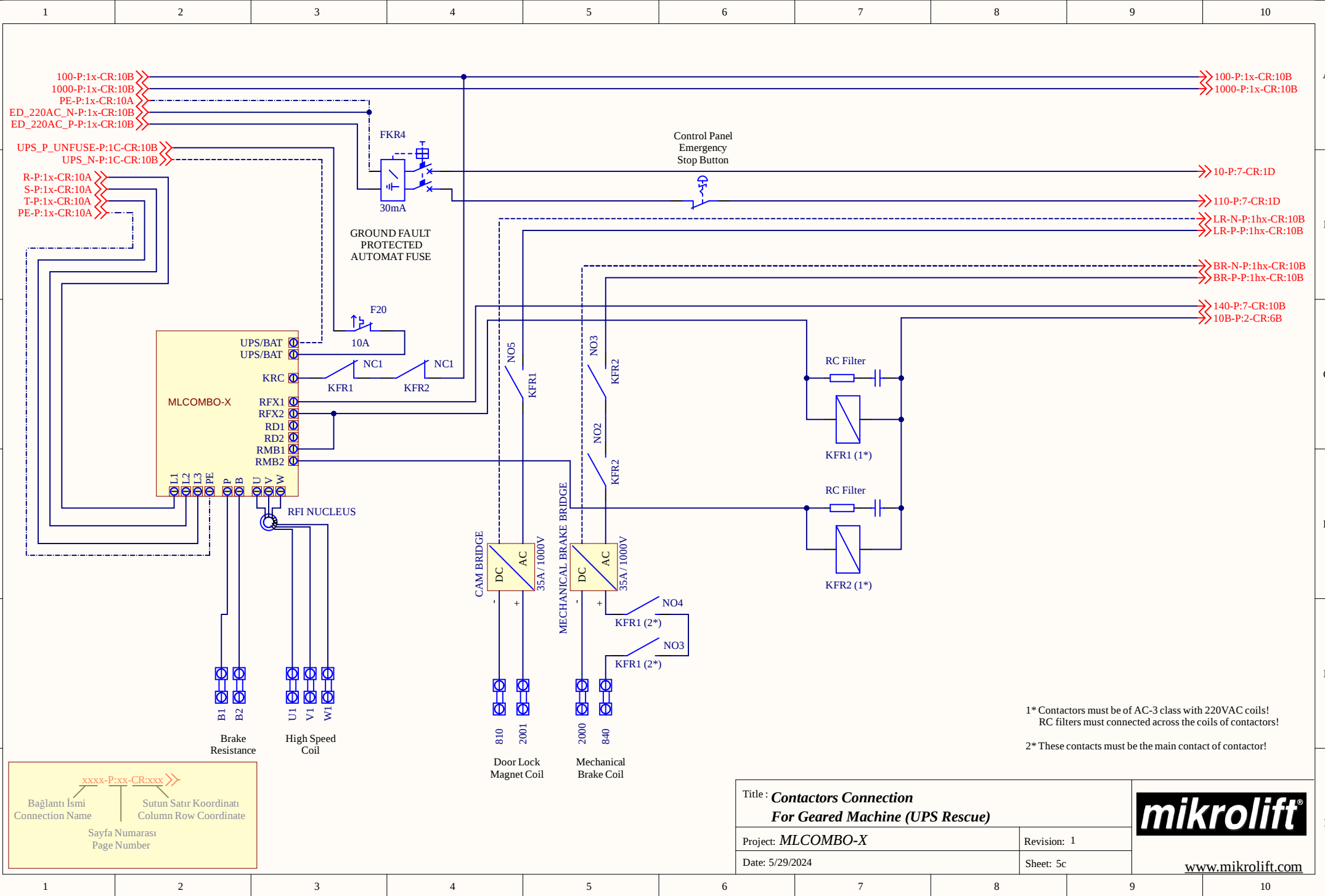
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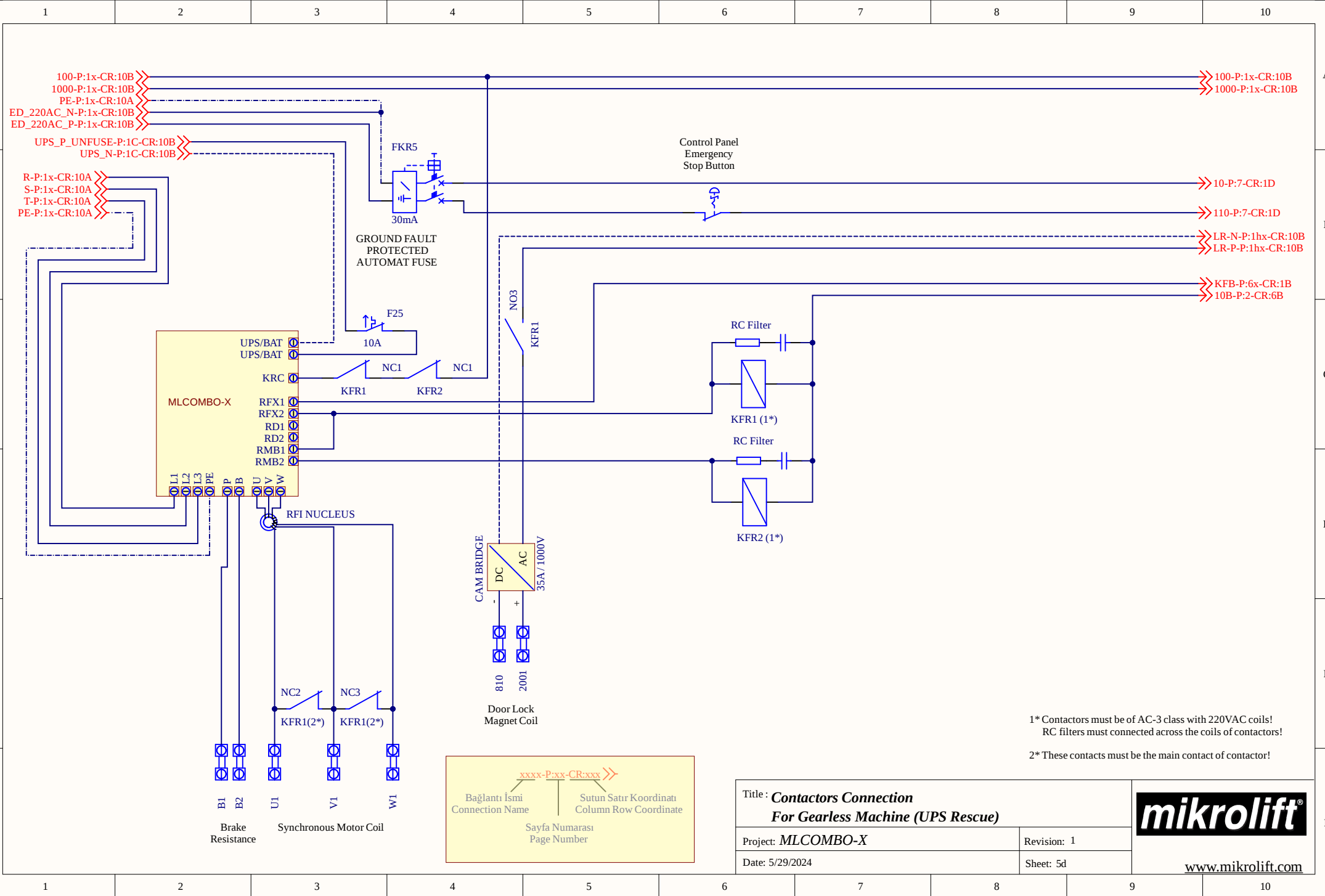
www.mikrolift.com

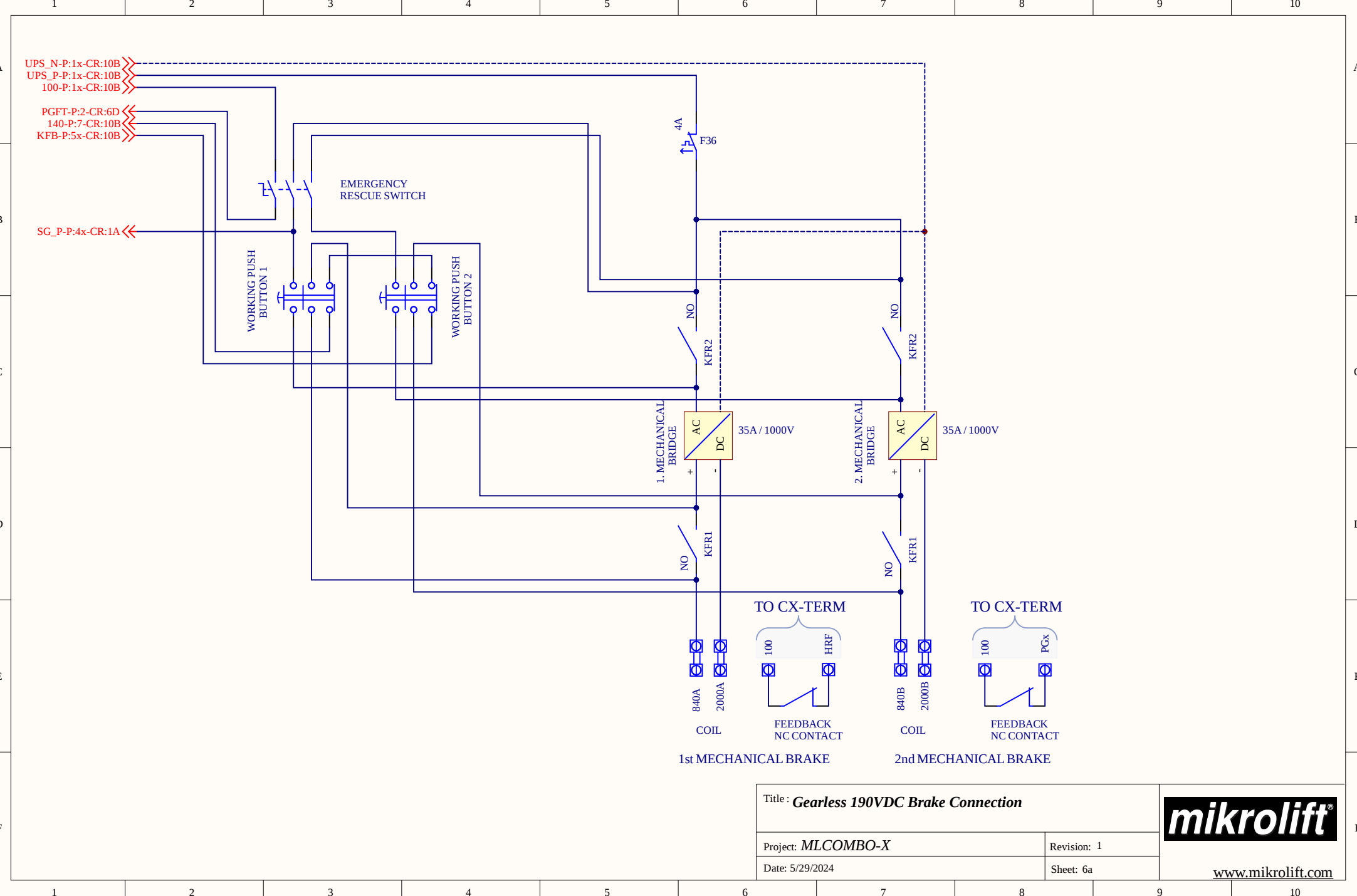
1 2 3 4 5 6 7 8 9 10











Title : **Gearless 190VDC Brake Connection**

Project: **MLCOMBO-X**

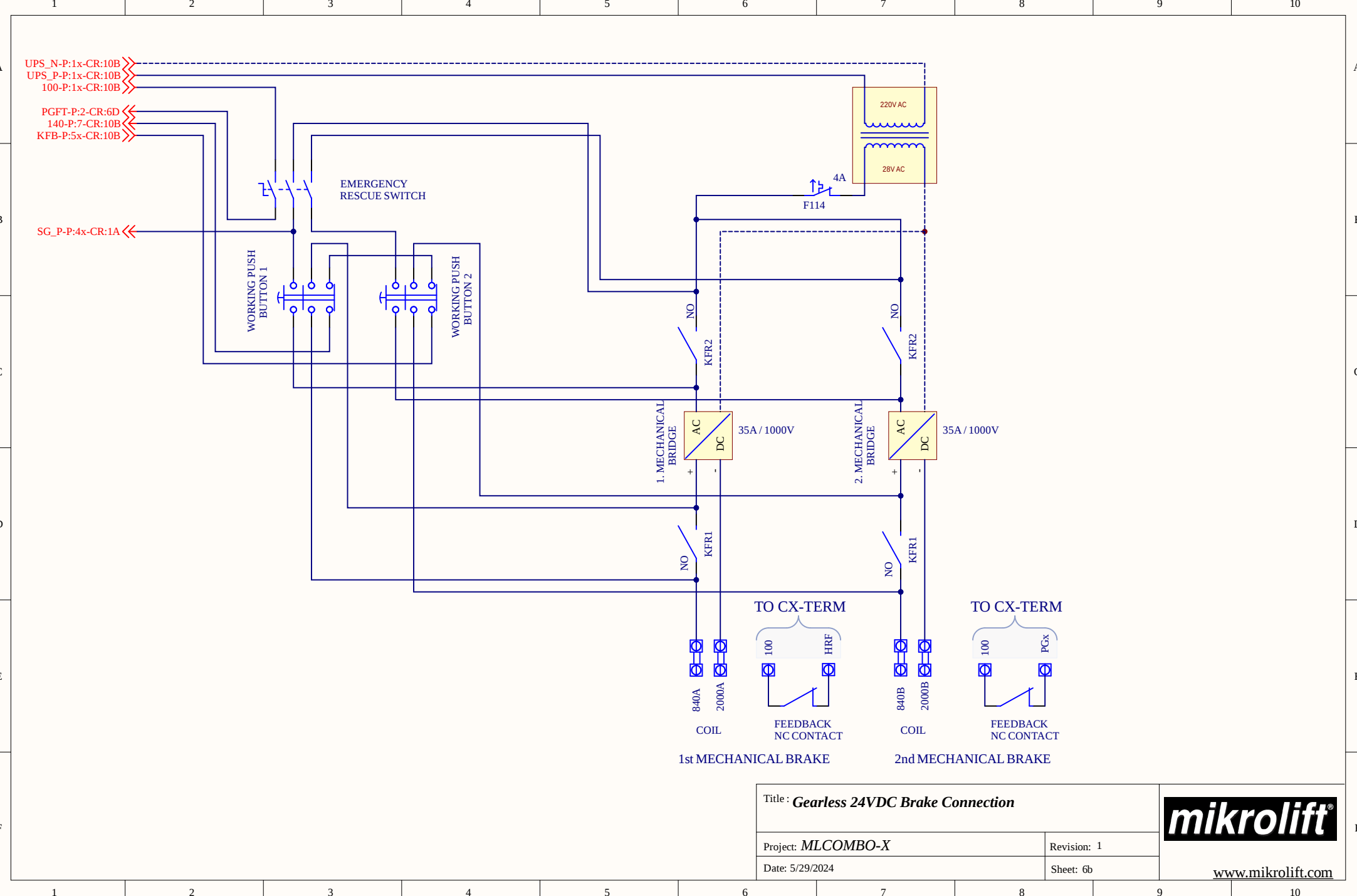
Revision: 1

Date: 5/29/2024

Sheet: 6a



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Title : **Gearless 24VDC Brake Connection**

Project: **MLCOMBO-X**

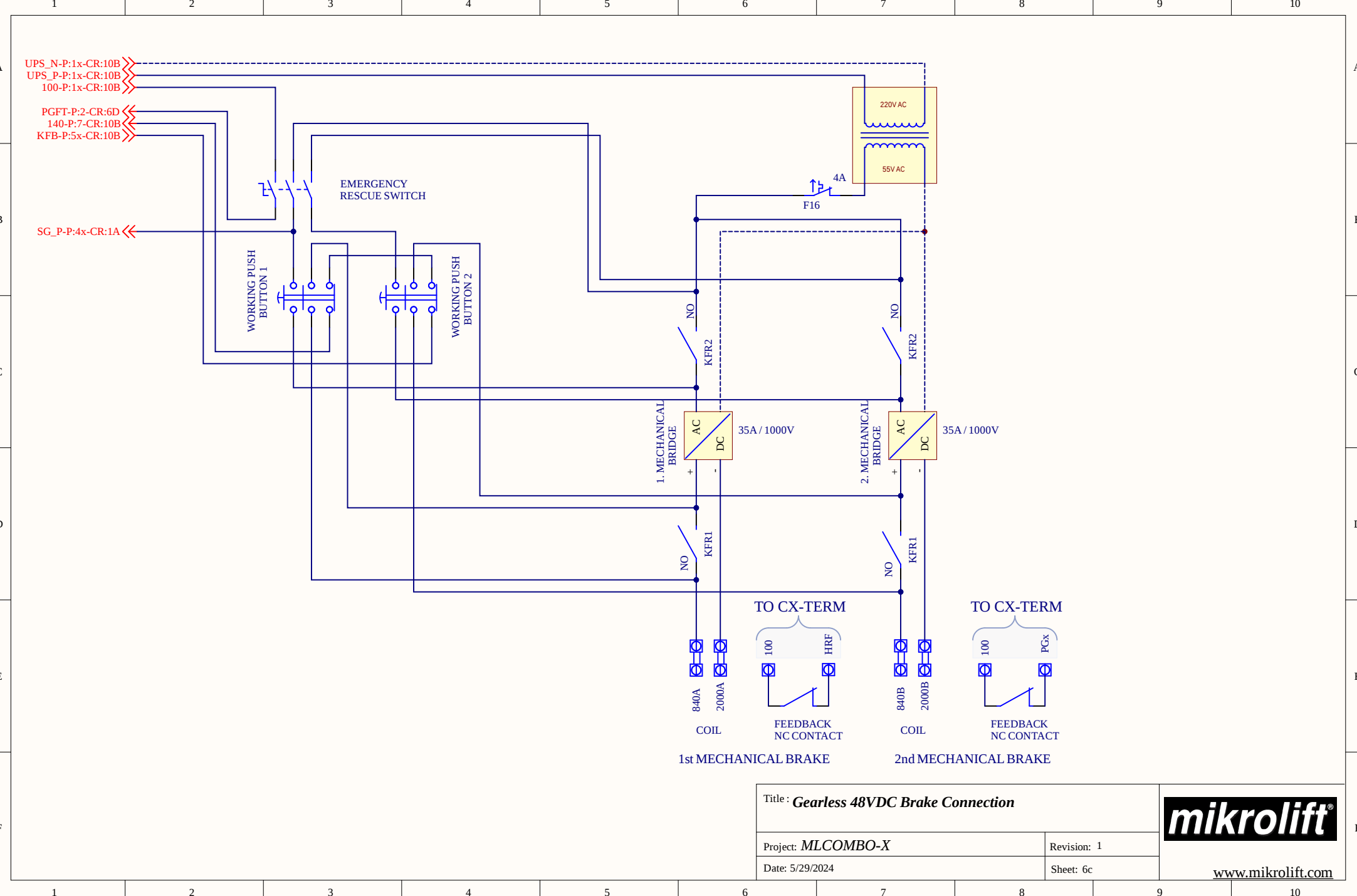
Revision: 1

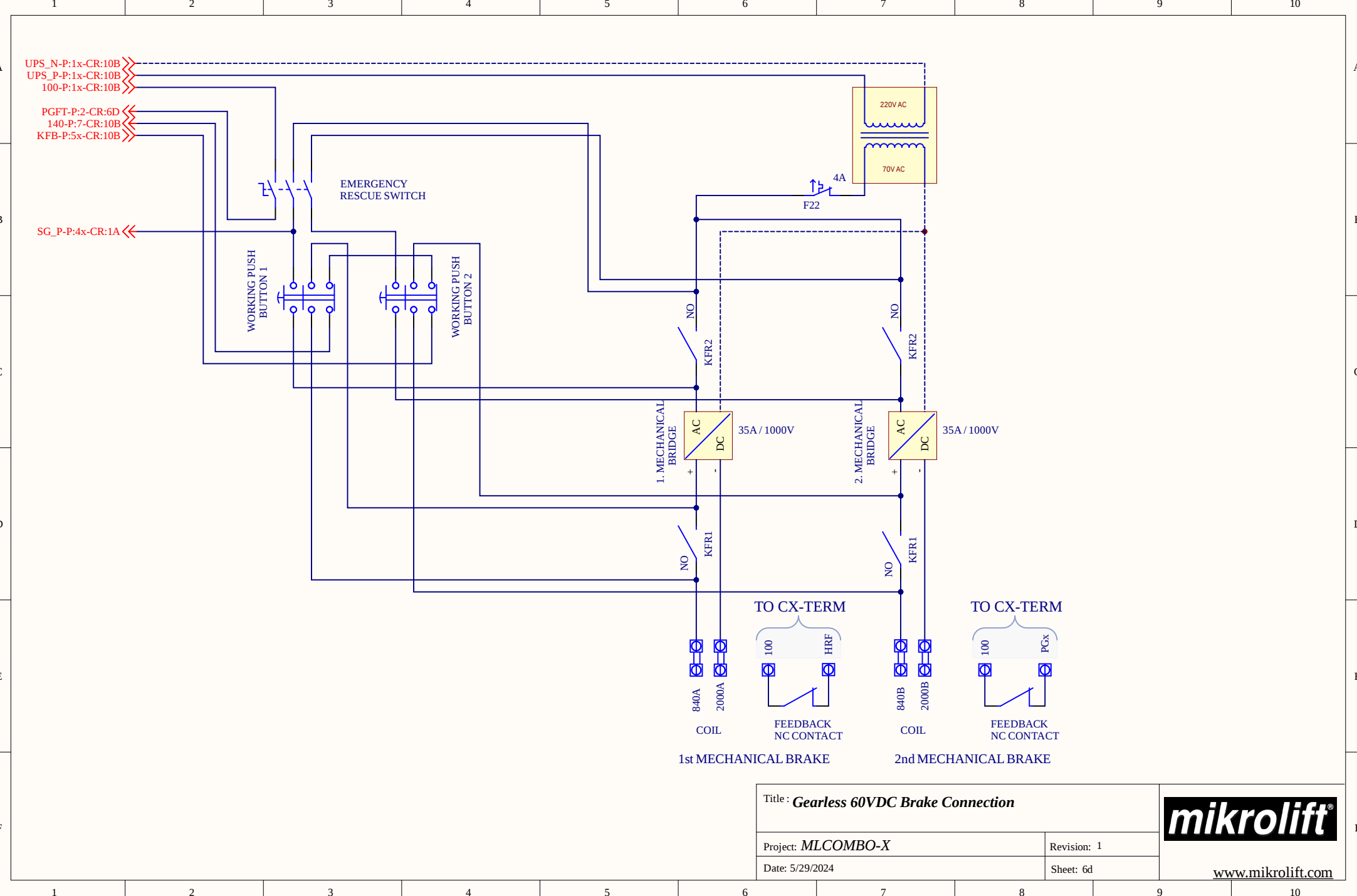
Date: 5/29/2024

Sheet: 6b



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Title : **Gearless 60VDC Brake Connection**

Project: **MLCOMBO-X**

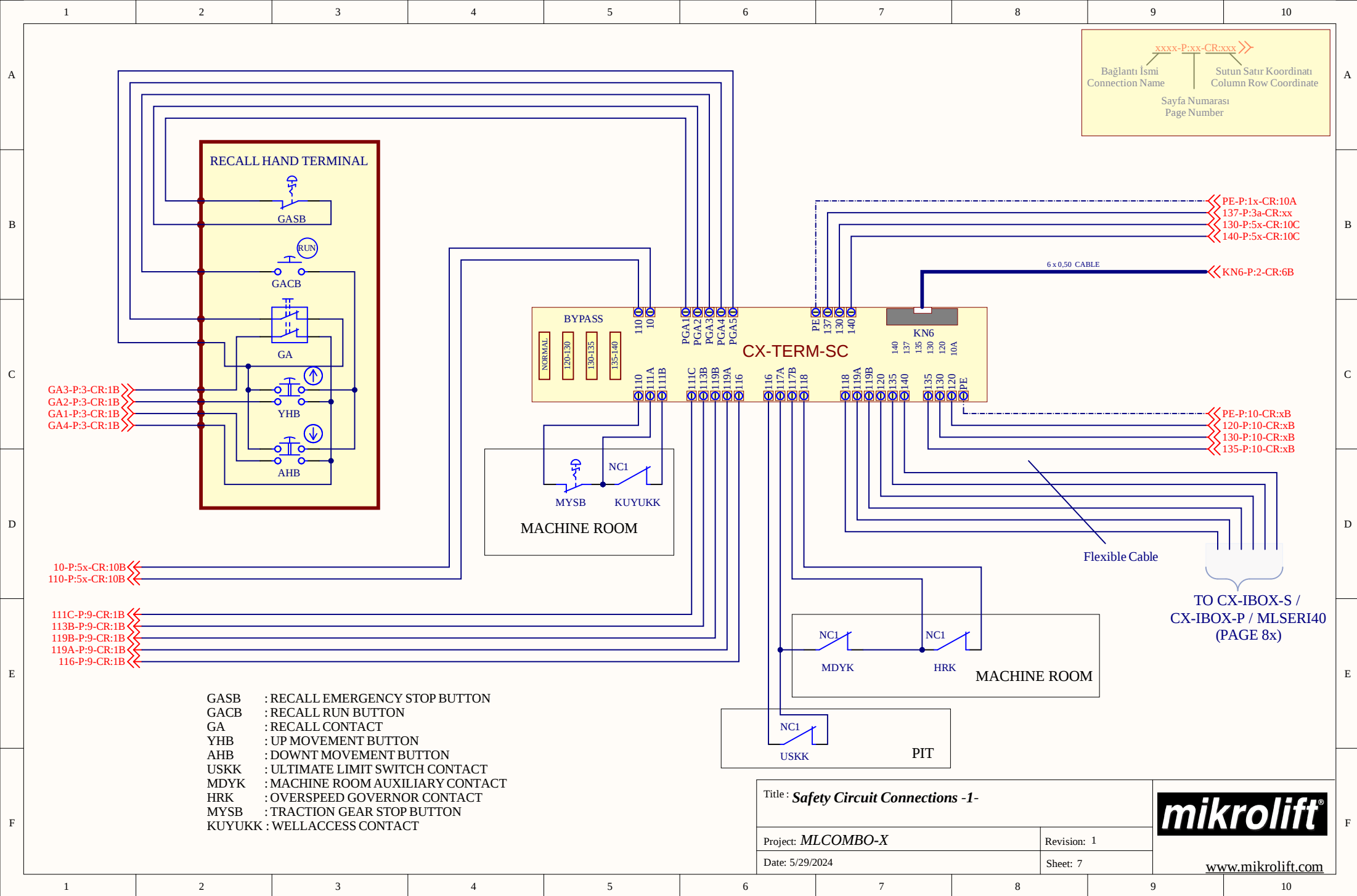
Revision: 1

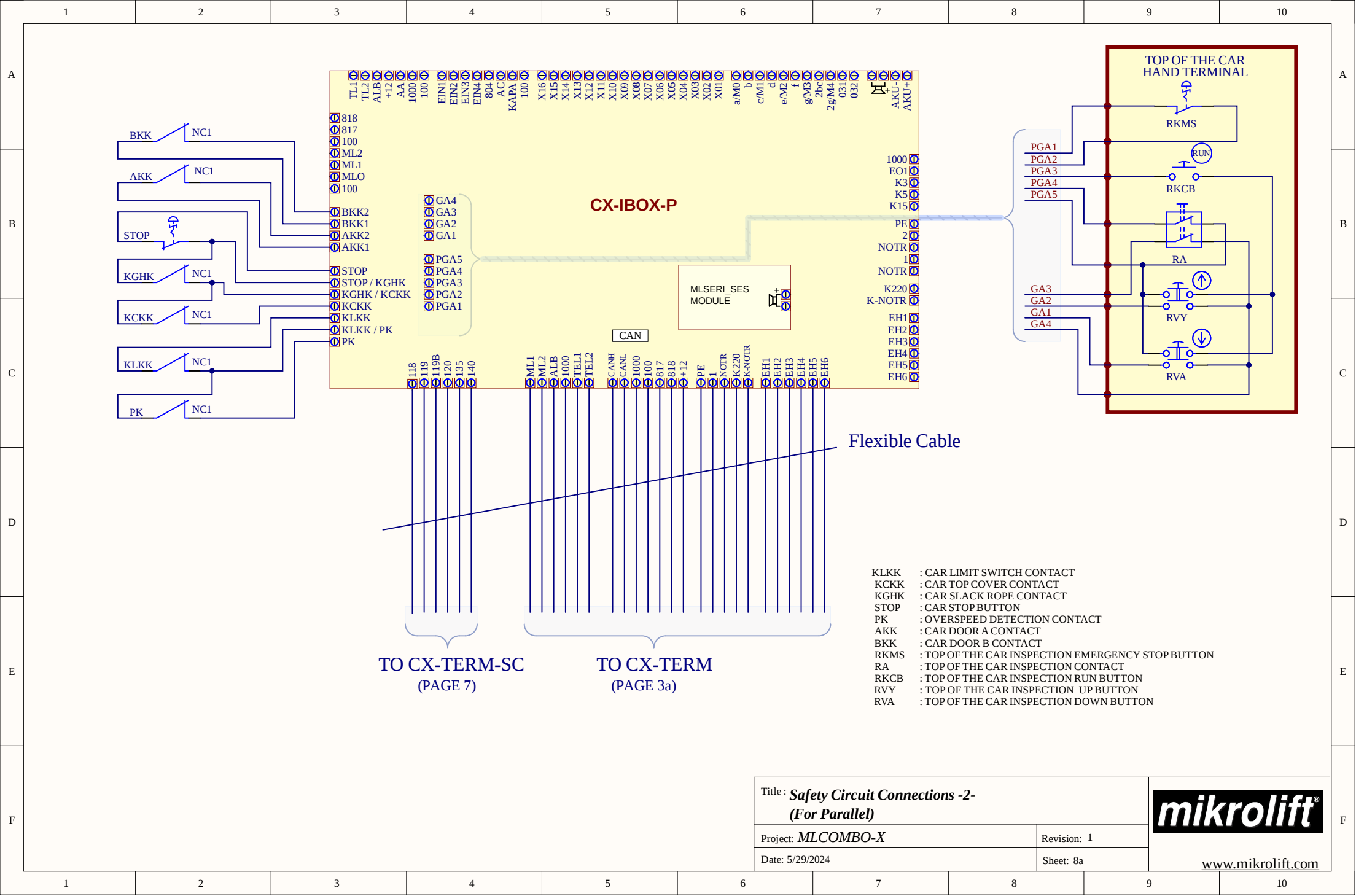
Date: 5/29/2024

Sheet: 6d



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A

B

C

D

E

F

A

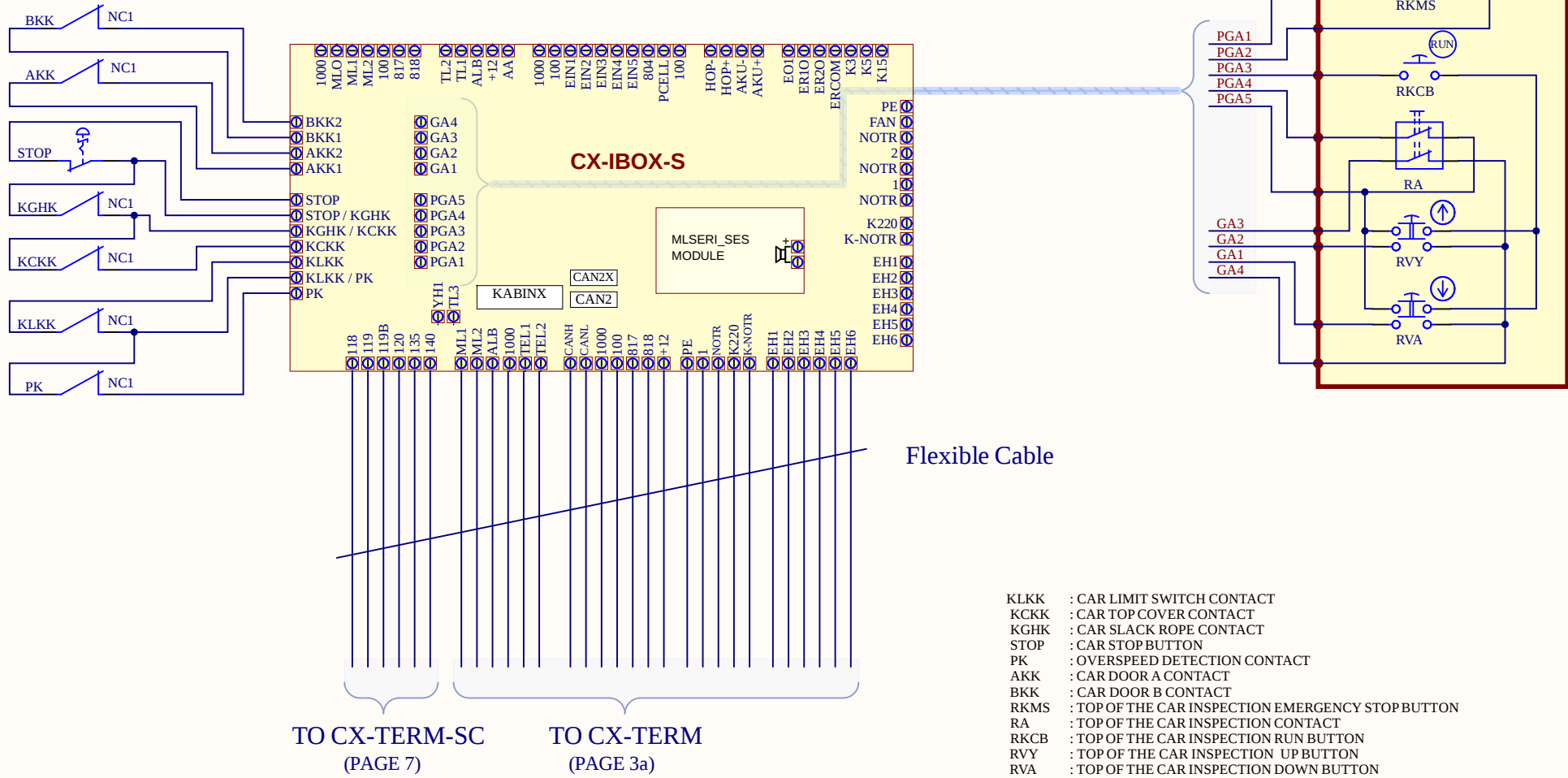
B

C

D

E

F



Title : **Safety Circuit Connections -2- (For Serial)**

Project: **MLCOMBO-X**

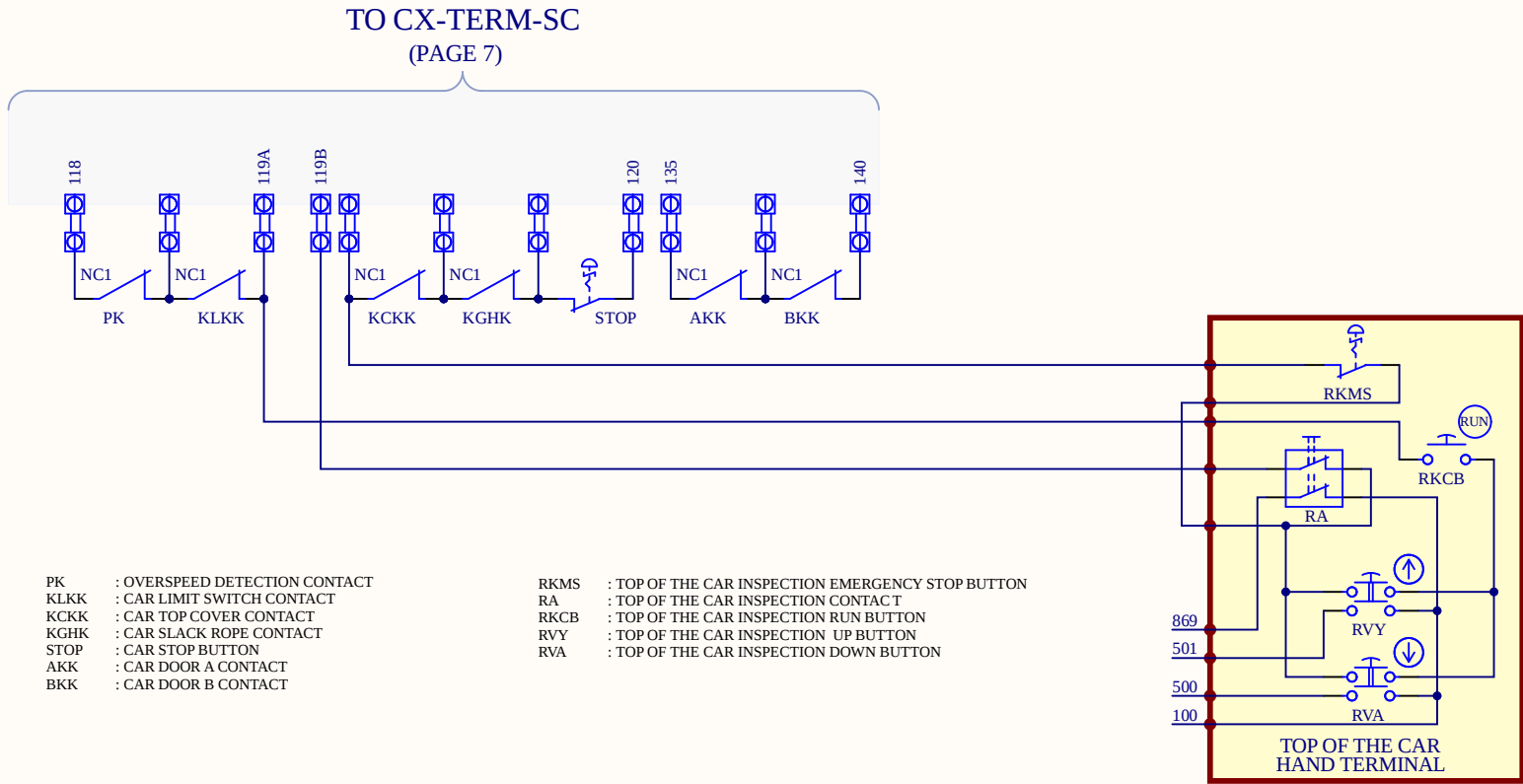
Date: 5/29/2024

Revision: 1

Sheet: 8b

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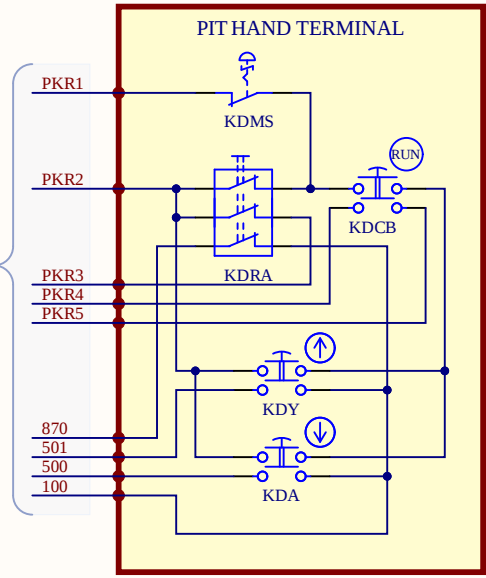
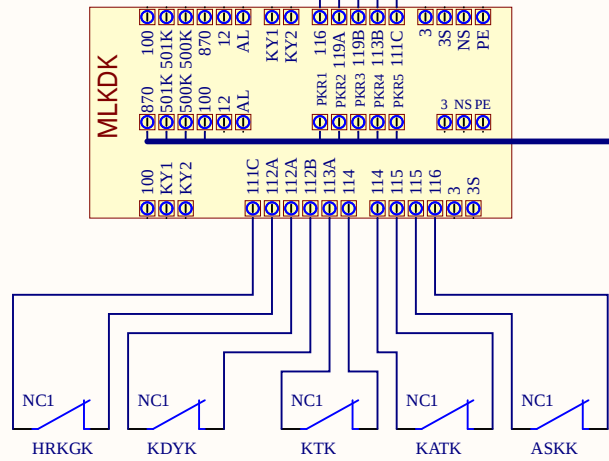


P.S.:IF THERE IS A CONTACT NOT USED IN SAFETY CIRCUIT, IT MUST BE BRIDGED

Title : Safety Circuit Connections -2- (For Parallel With MLSERI40)			
Project: MLCOMBO-X		Revision: 1	
Date: 5/29/2024	Standard :EN81-20	Sheet: 8c	

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111C-P:7-CR:1E
113B-P:7-CR:1E
119B-P:7-CR:1E
119A-P:7-CR:1E
116-P:7-CR:1E



- HRKGK : TENSION WEIGHT CONTACT
- KDYK : PIT AUXILIARY CONTACT
- KTK : BUFFER CONTACT
- KATK : COUNTER WEIGHT BUFFER CONTACT
- ASKK : PIT END LIMIT SWITCH CONTACT
- KDMS : PIT EMERGENCY STOP BUTTON
- KDRA : PIT INSPECTION CONTACT
- KDCB : PIT INSPECTION RUN BUTTON
- KDY : PIT INSPECTION UP BUTTON
- KDA : PIT INSPECTION DOWN BUTTON

Title : **Safety Circuit Connections - 3 -**

Project: **MLCOMBO-X**

Date: 5/29/2024

Revision: 1

Sheet: 9



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DOOR SOCKET AND LOCK SWITCHES CONNECTIONS

FULL AUTOMATIC

ONLY CAR DOOR AUTOMATIC

CONTROL PANEL

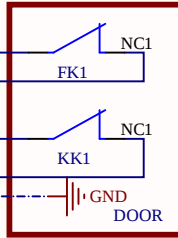
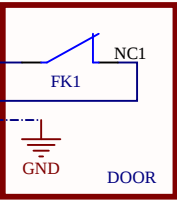
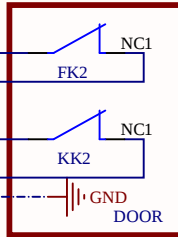
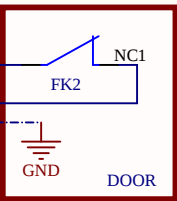
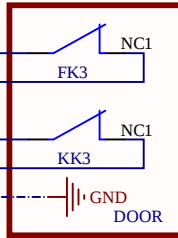
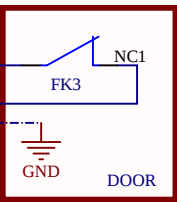
FLOOR 2

FLOOR 1

FLOOR 0

135-P:7-CR:10C
130-P:7-CR:10C
120-P:7-CR:10C
PE-P:7-CR:10C

135-P:7-CR:10C
130-P:7-CR:10C
120-P:7-CR:10C
PE-P:7-CR:10C



FKx : DOOR SOCKET SWITCHES
KKx : DOOR LOCK SWITCHES

Title : **Safety Circuit Connections - 4 -**

Project : **MLCOMBO-X**

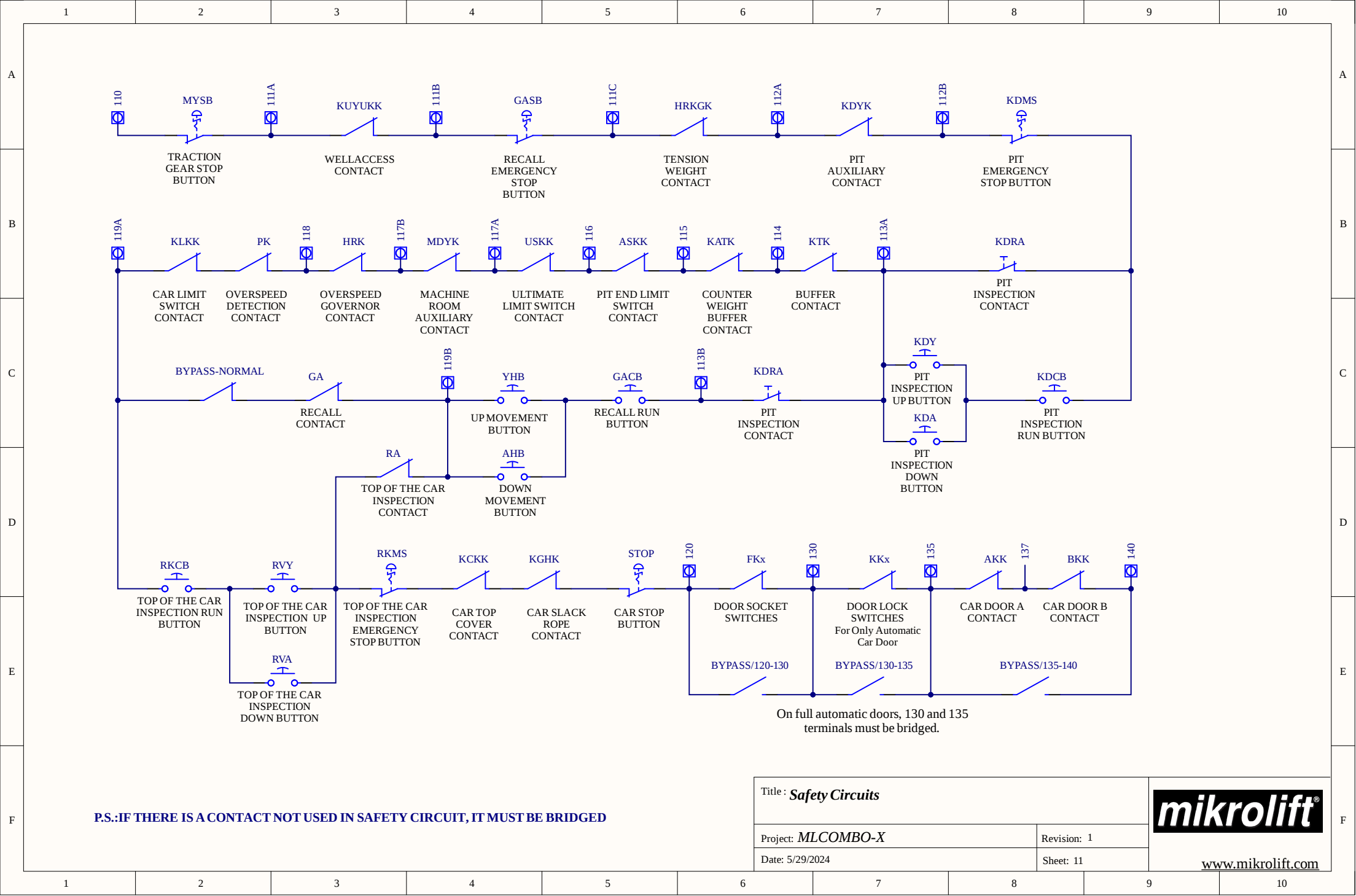
Revision : 1

Date : 5/29/2024

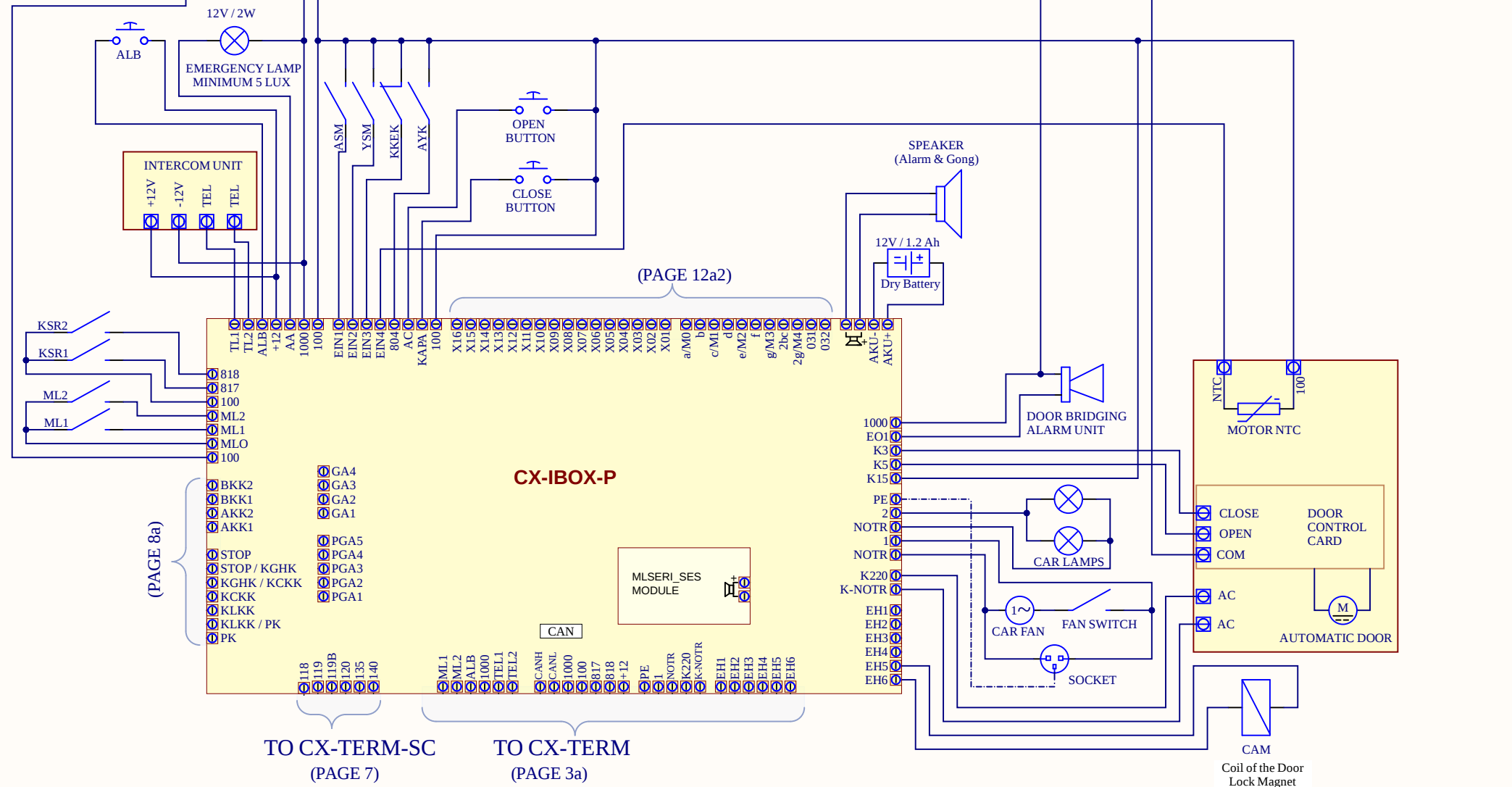
Sheet : 10

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1000-P:1x-CR:10B
100-P:1x-CR:10B



- | | |
|---|---|
| ASM : DOWN RE-LEVELLING MONO-STABILE SWITCH | KSR1 : DOWN LIMIT BI-STABLE SWITCH |
| YSM : UP RE-LEVELLING MONO-STABILE SWITCH | KSR2 : UP LIMIT BI-STABLE SWITCH |
| AYK : OVERLOAD CONTACT | ML1 : DOOR OPEN ZONE MONO STABLE SWITCH |
| KKEK : CAR DOOR EXTRA CONTACT | ML2 : DOOR OPEN ZONE MONO STABLE SWITCH |
| ALB : ALARM BUTTON | |

Title : **Top Of The Car Wiring Connection -1-**
(For Parallel)

Project: **MLCOMBO-X**

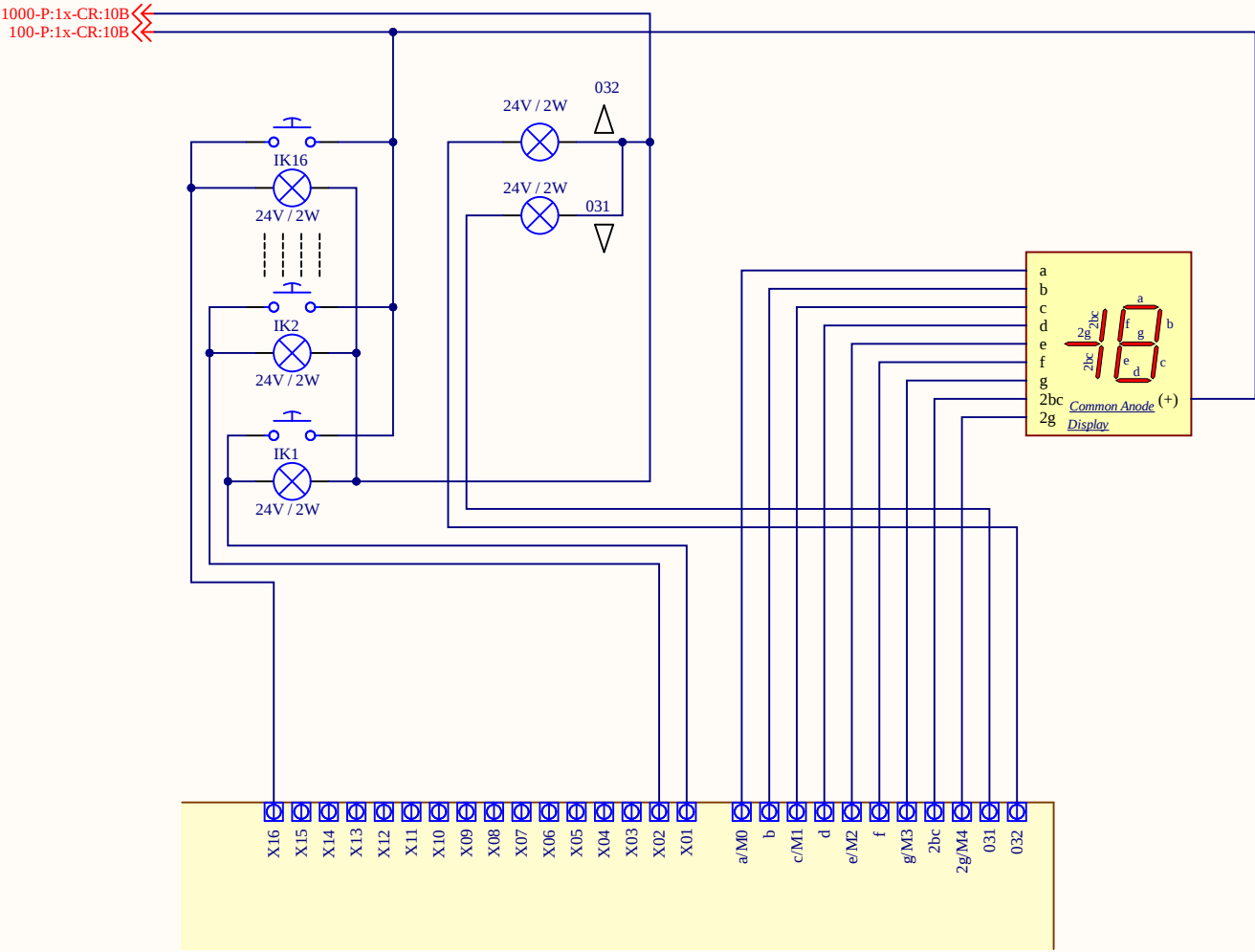
Date: 5/29/2024

Revision: 1

Sheet: 12a1



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Title : **Top Of The Car Wiring Connection -2-
(For Parallel)**

Project: **MLCOMBO-X**

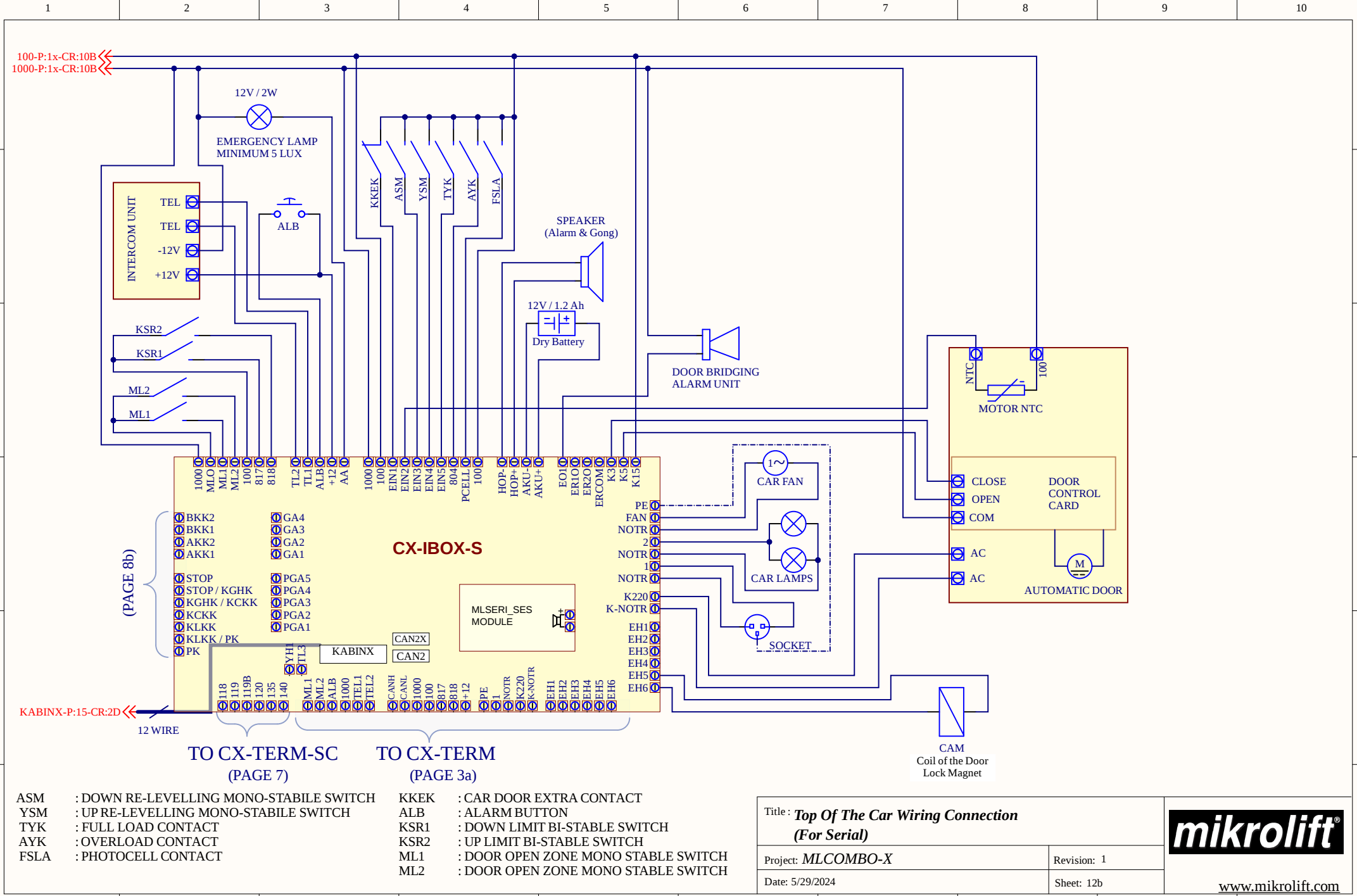
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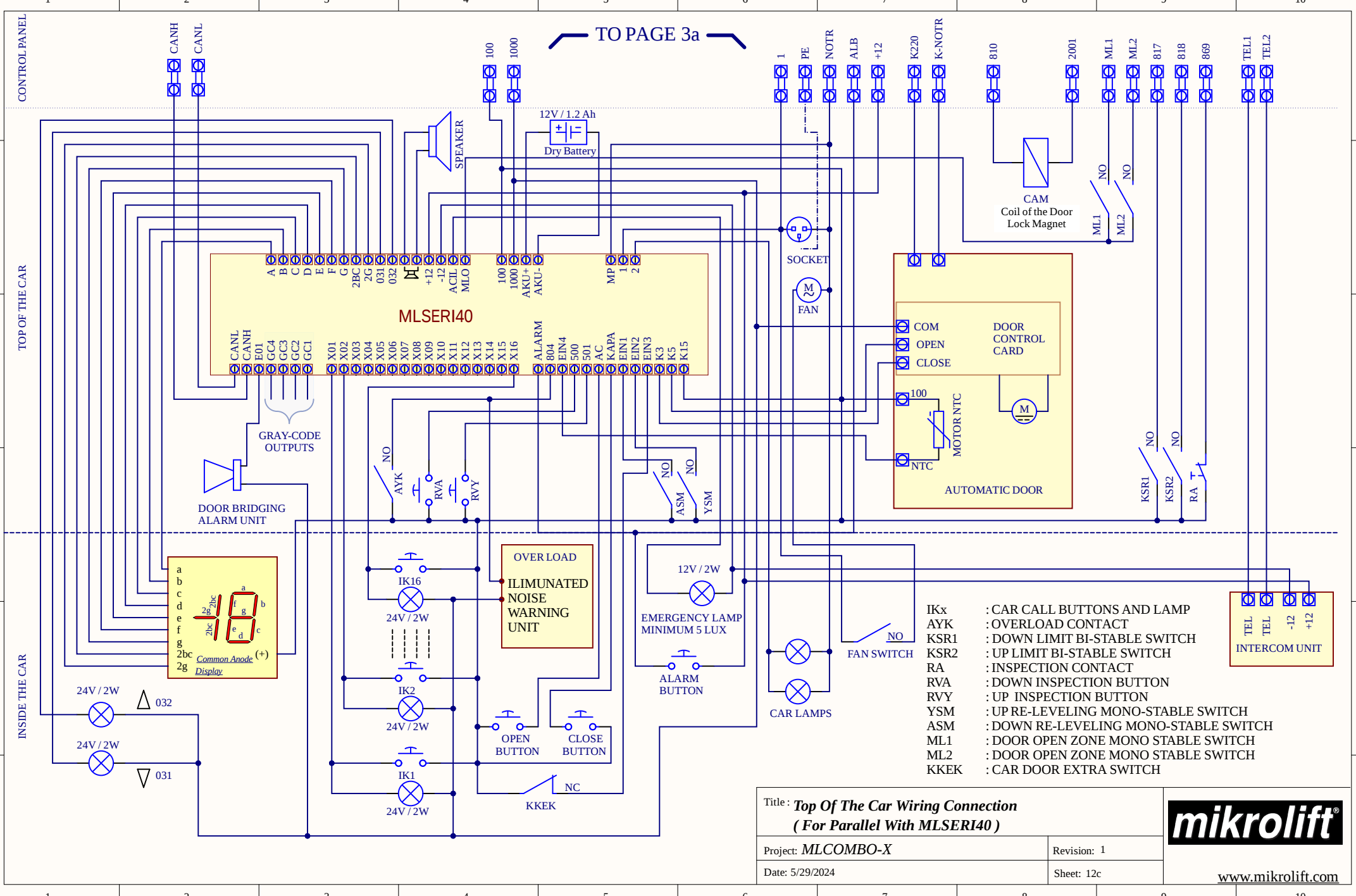
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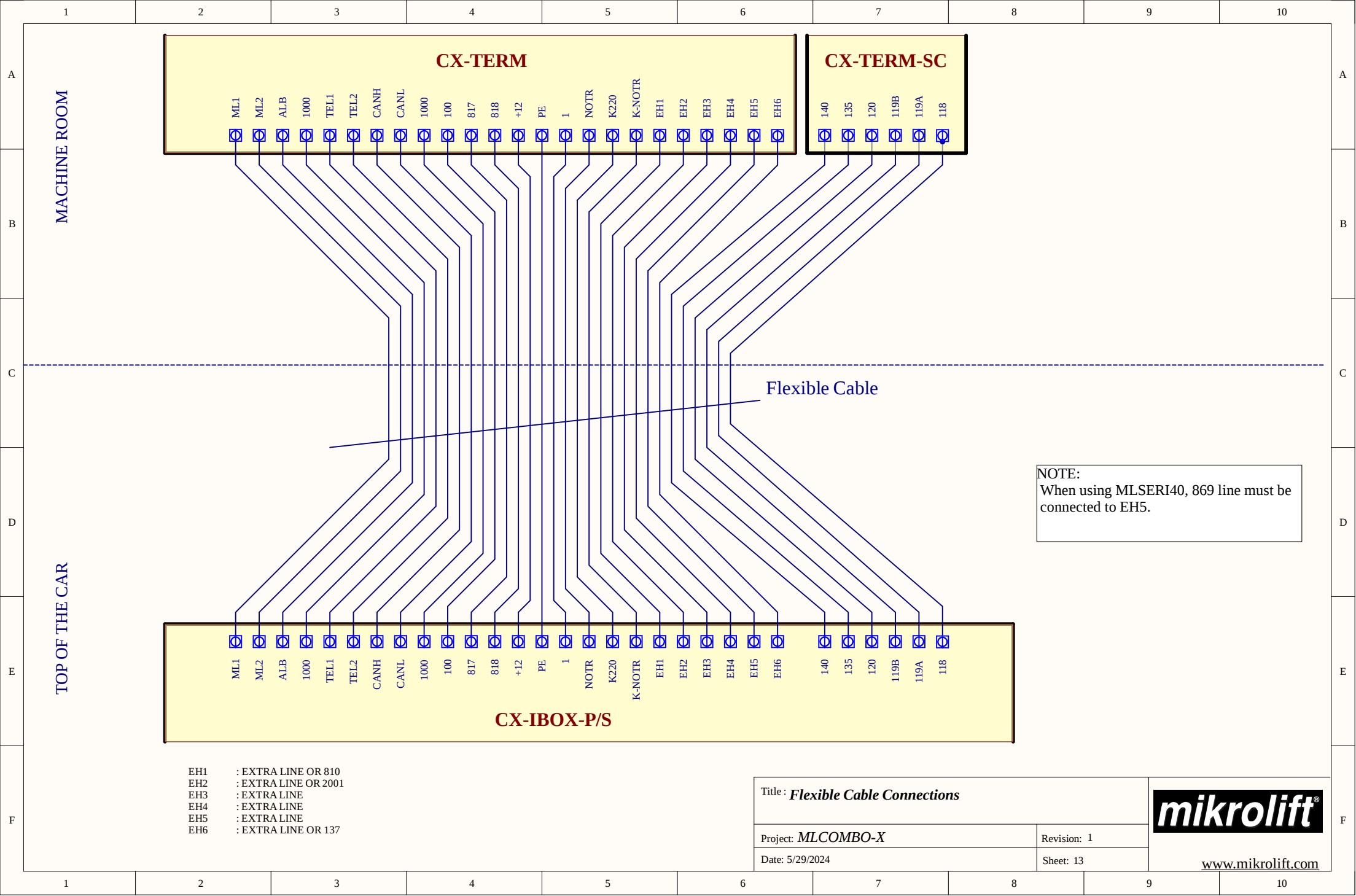
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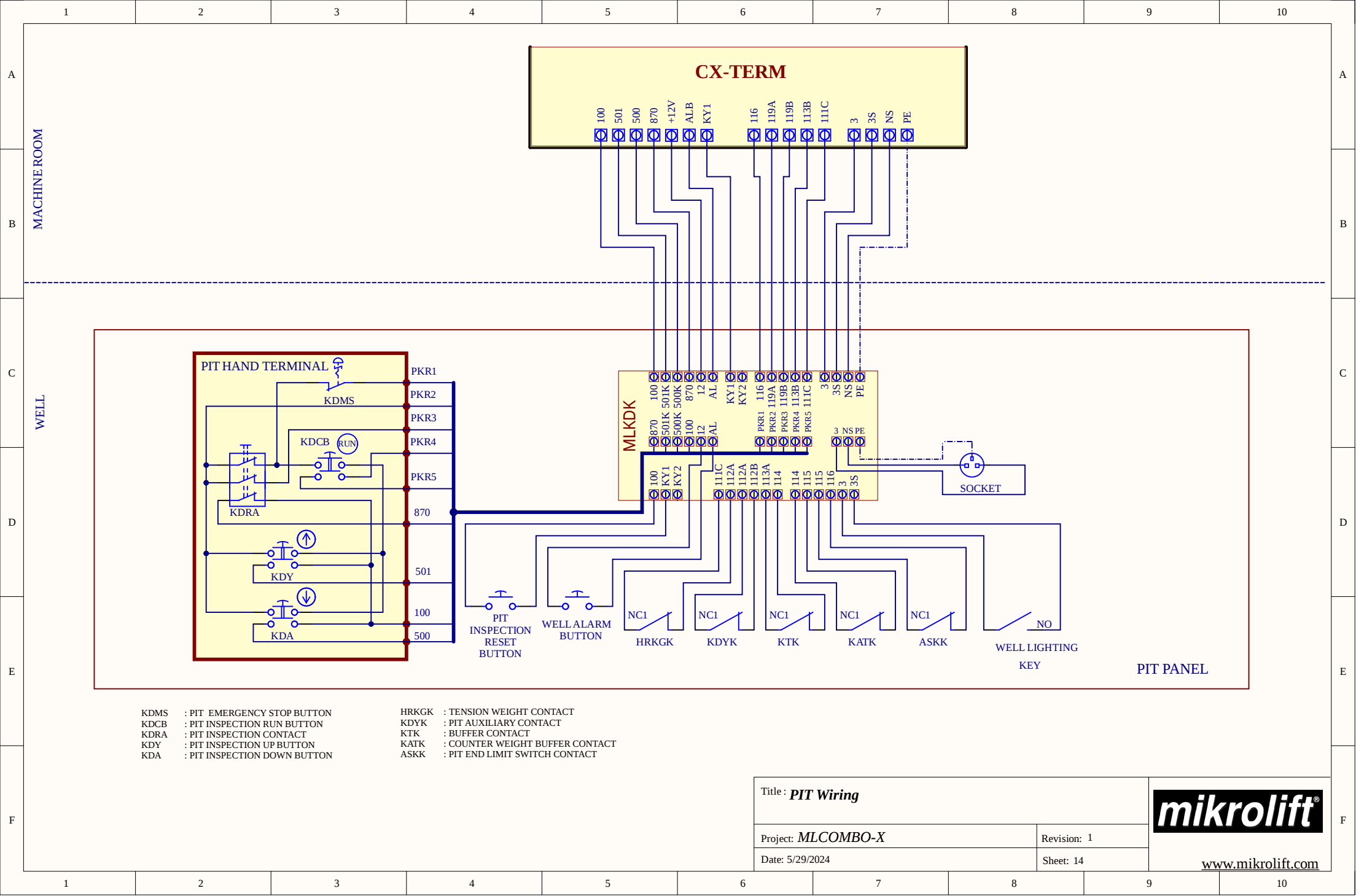
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Title : **PIT Wiring**

Project: **MLCOMBO-X**

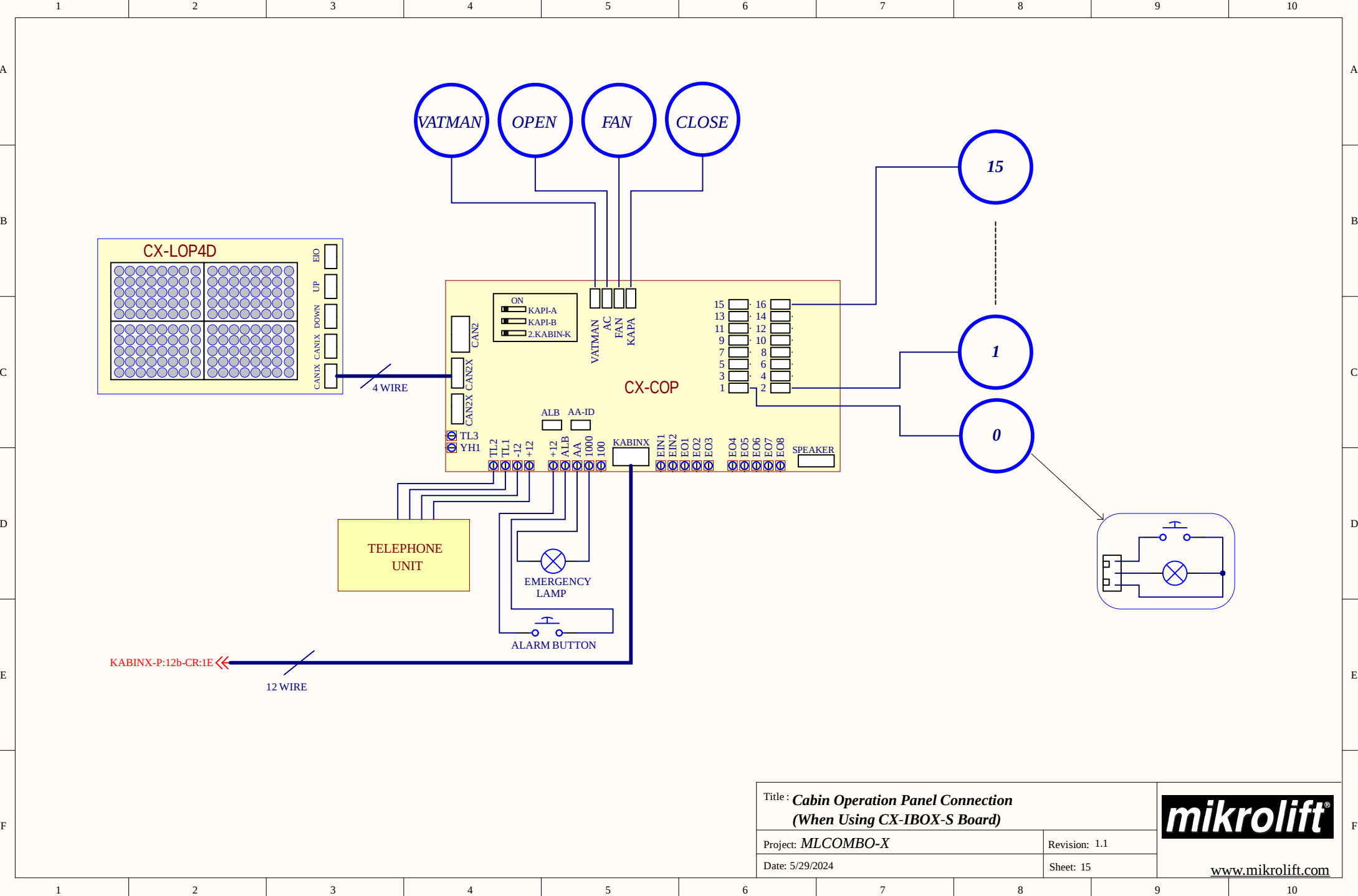
Date: 5/29/2024

Revision: 1

Sheet: 14

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Title : **Cabin Operation Panel Connection**
(When Using CX-IBOX-S Board)

Project: **MLCOMBO-X**

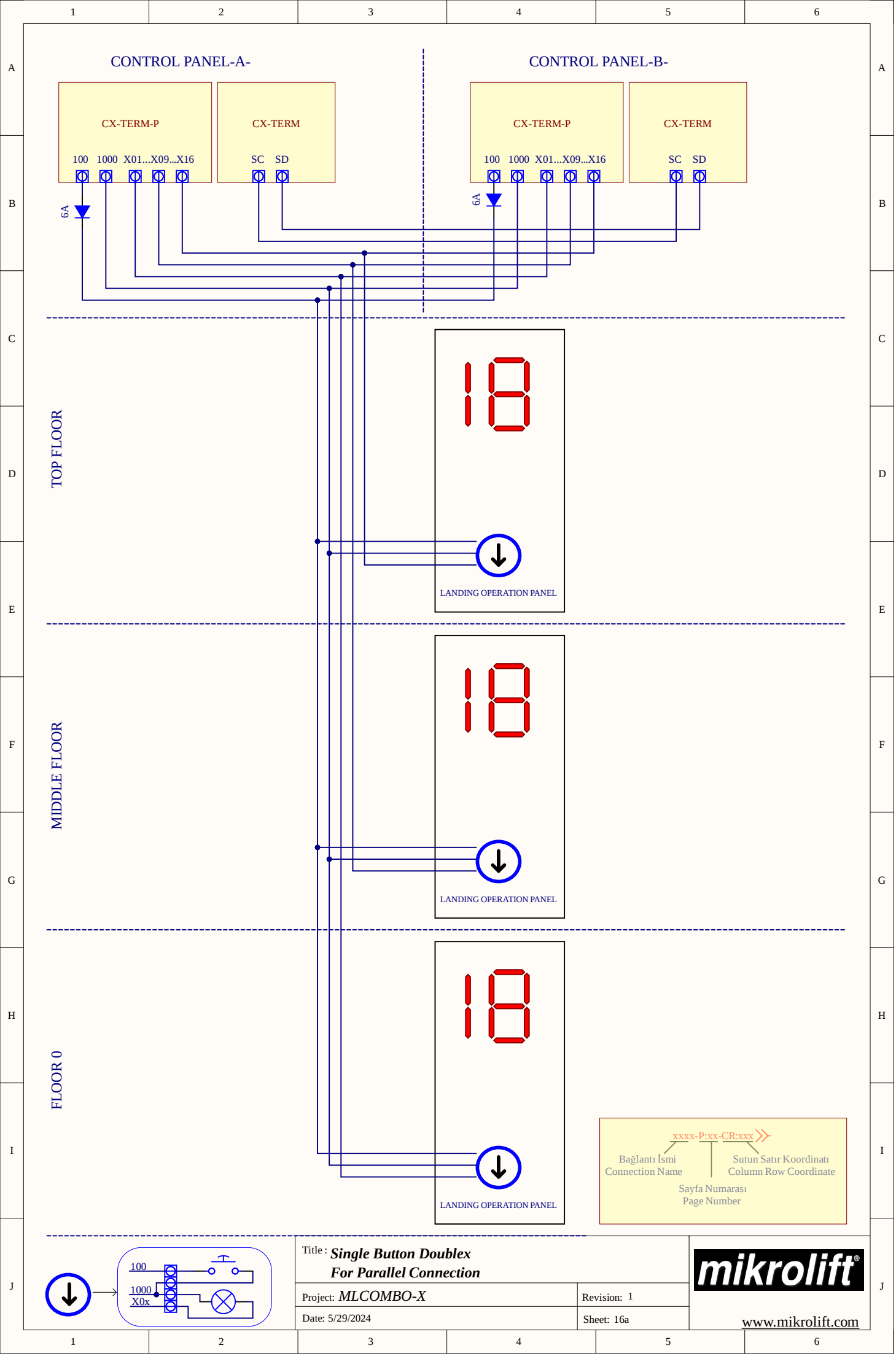
Date: 5/29/2024

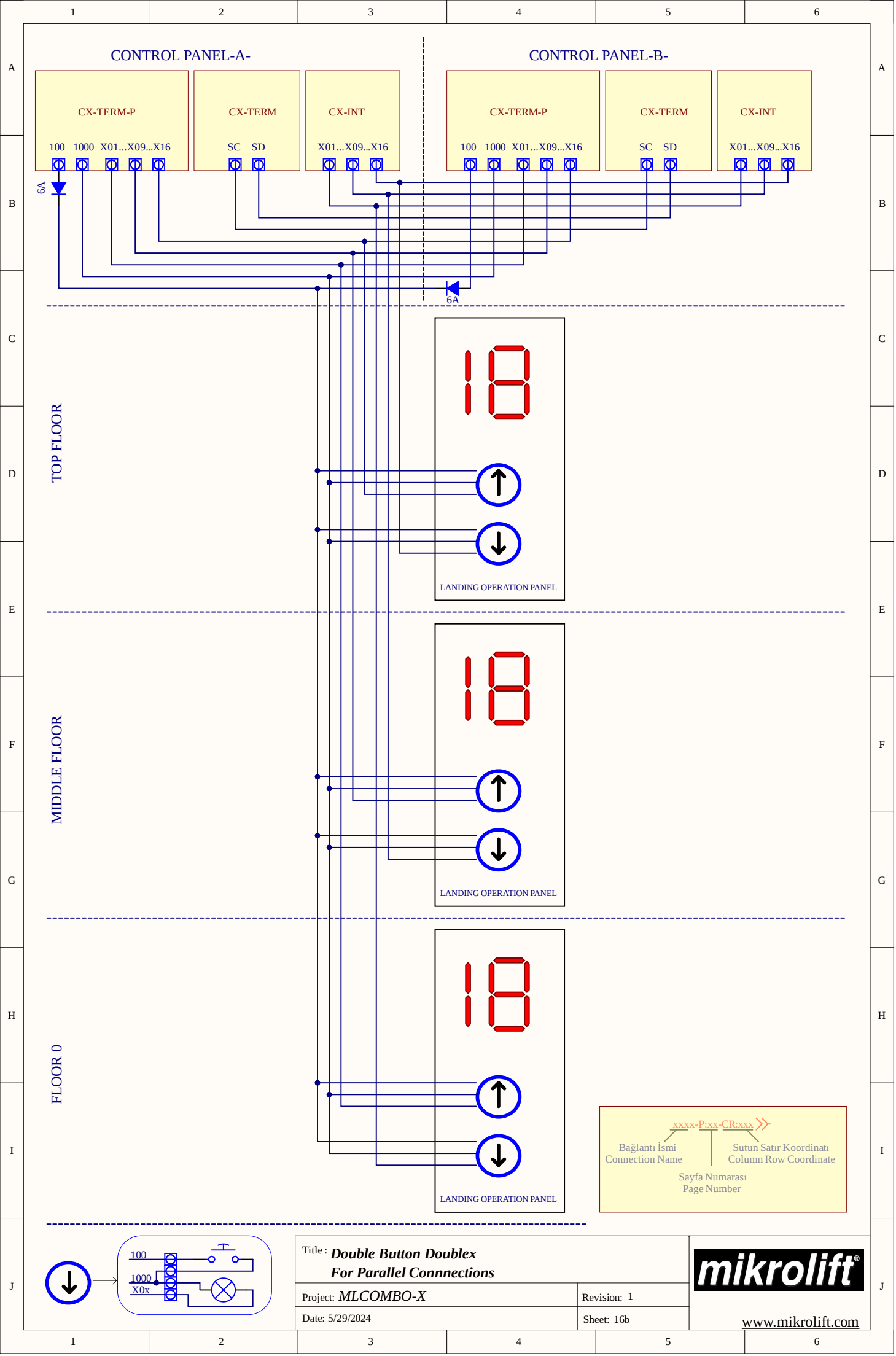
Revision: 1.1

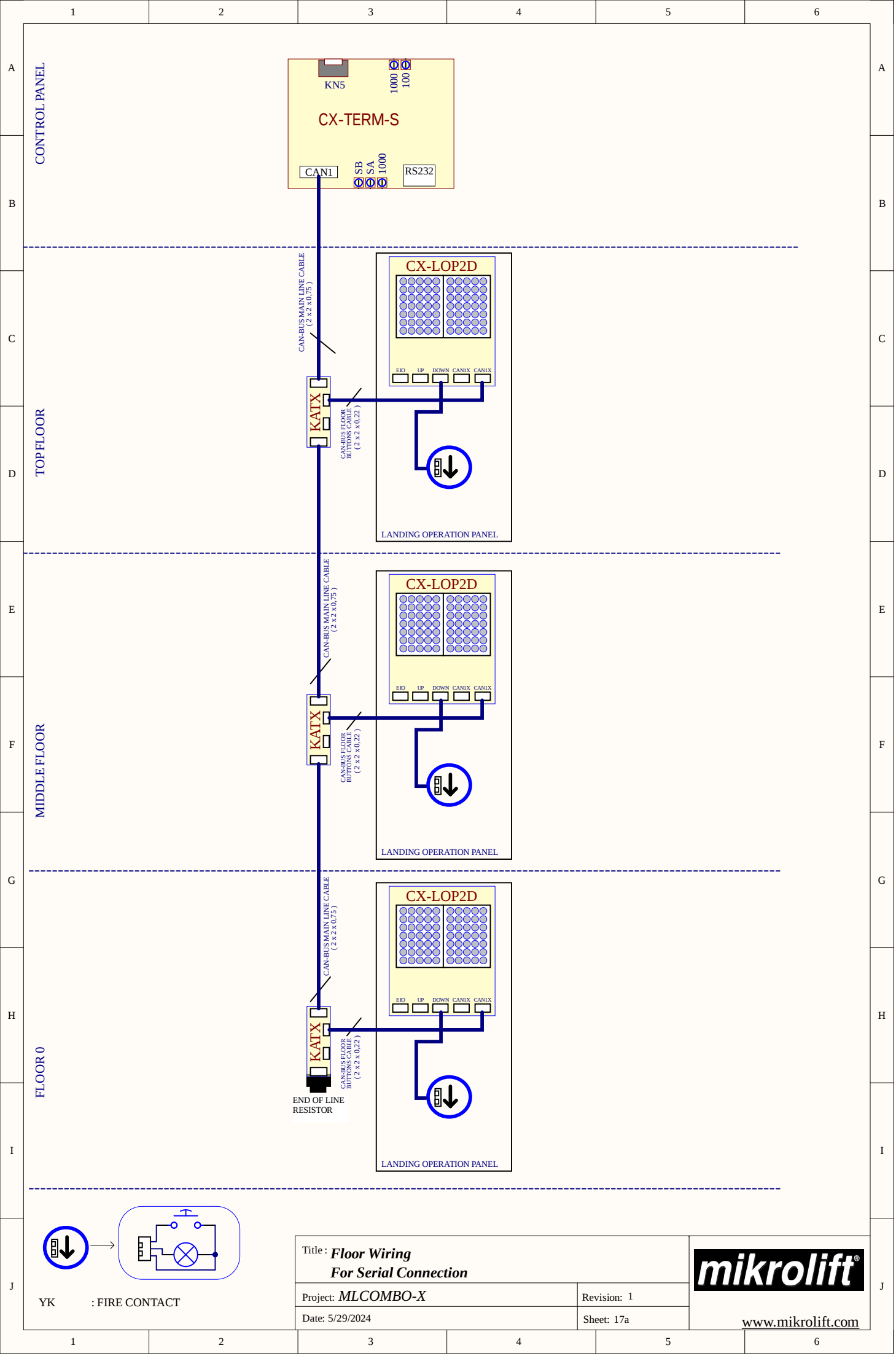
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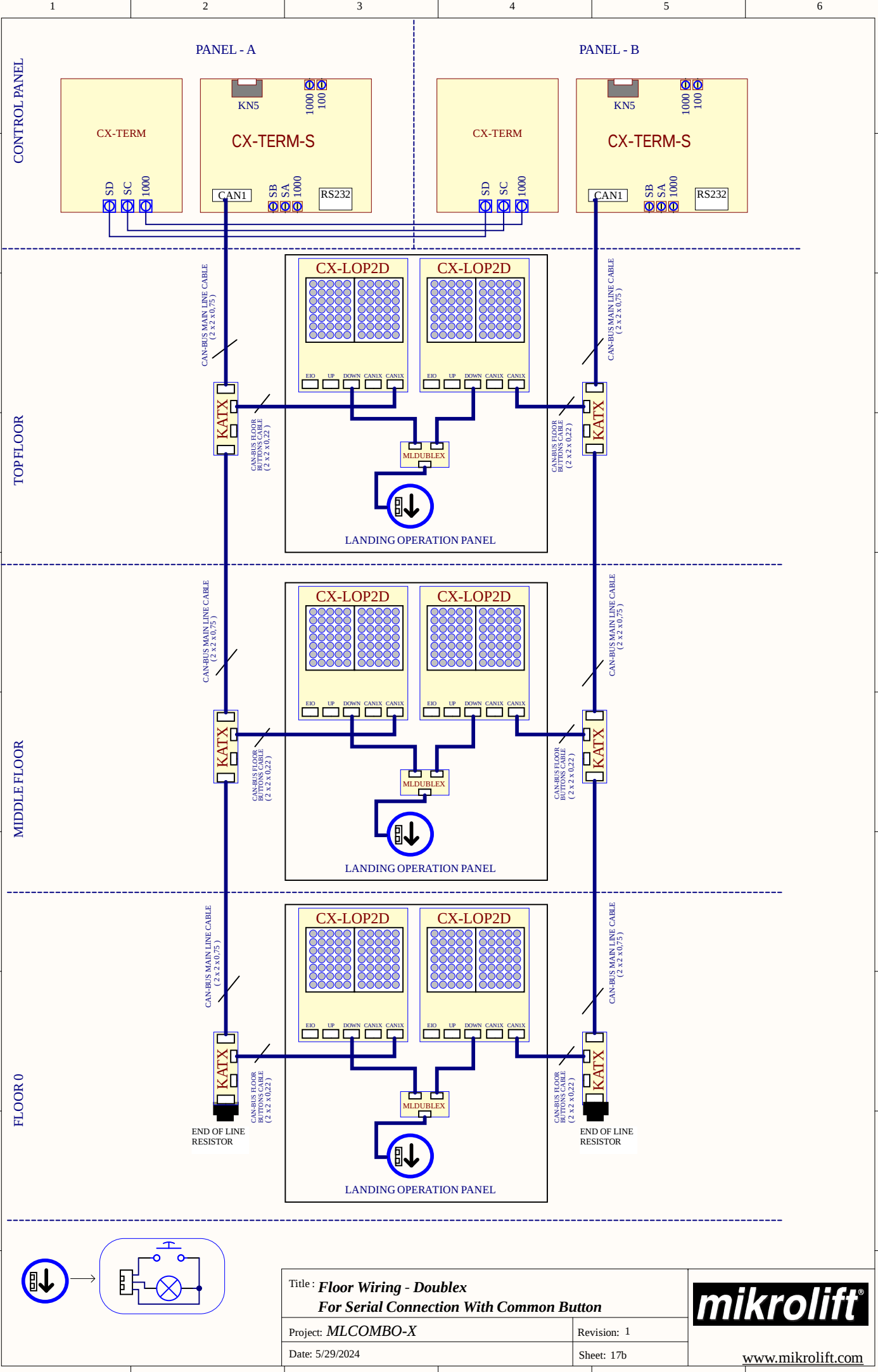
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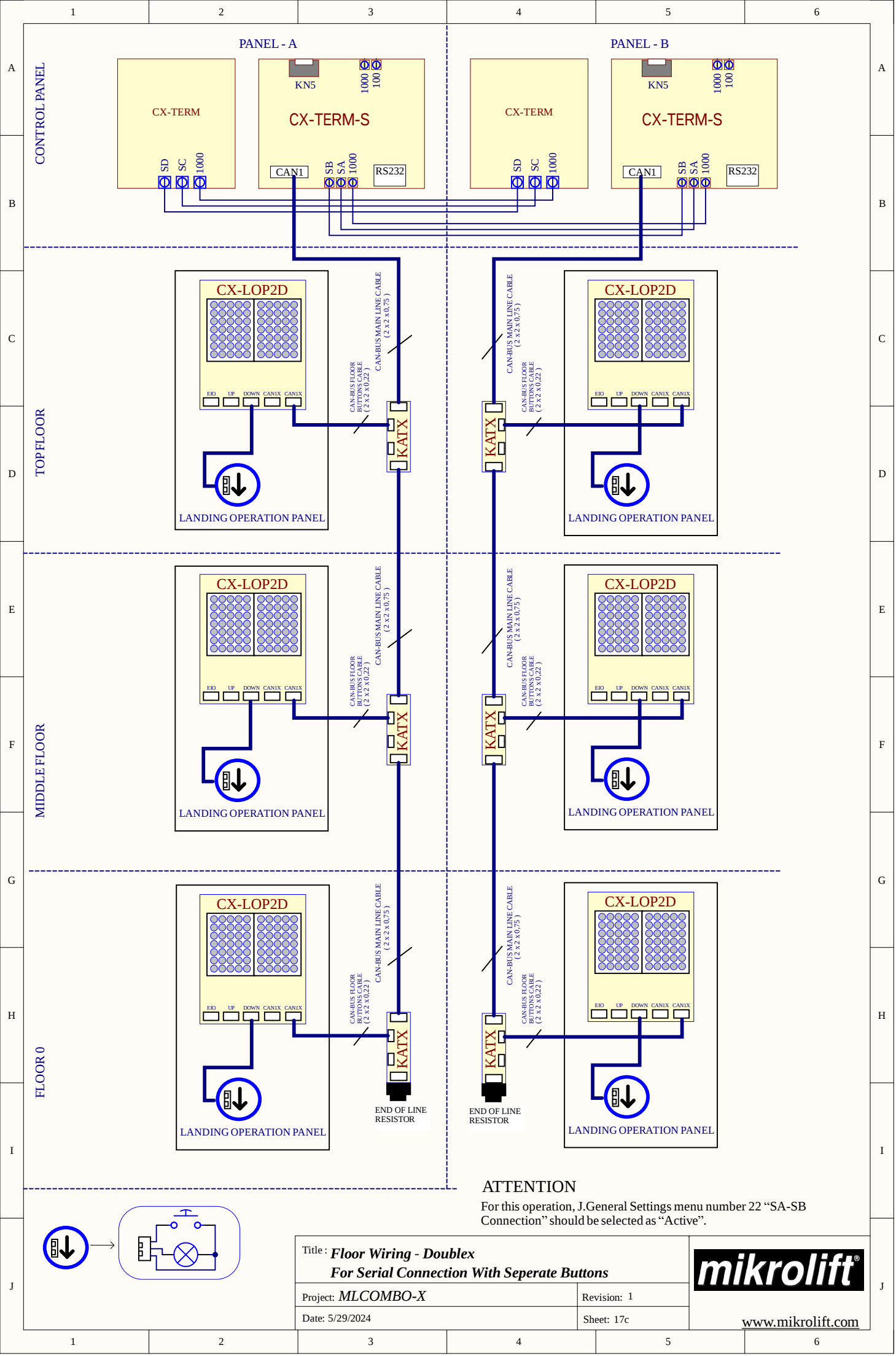
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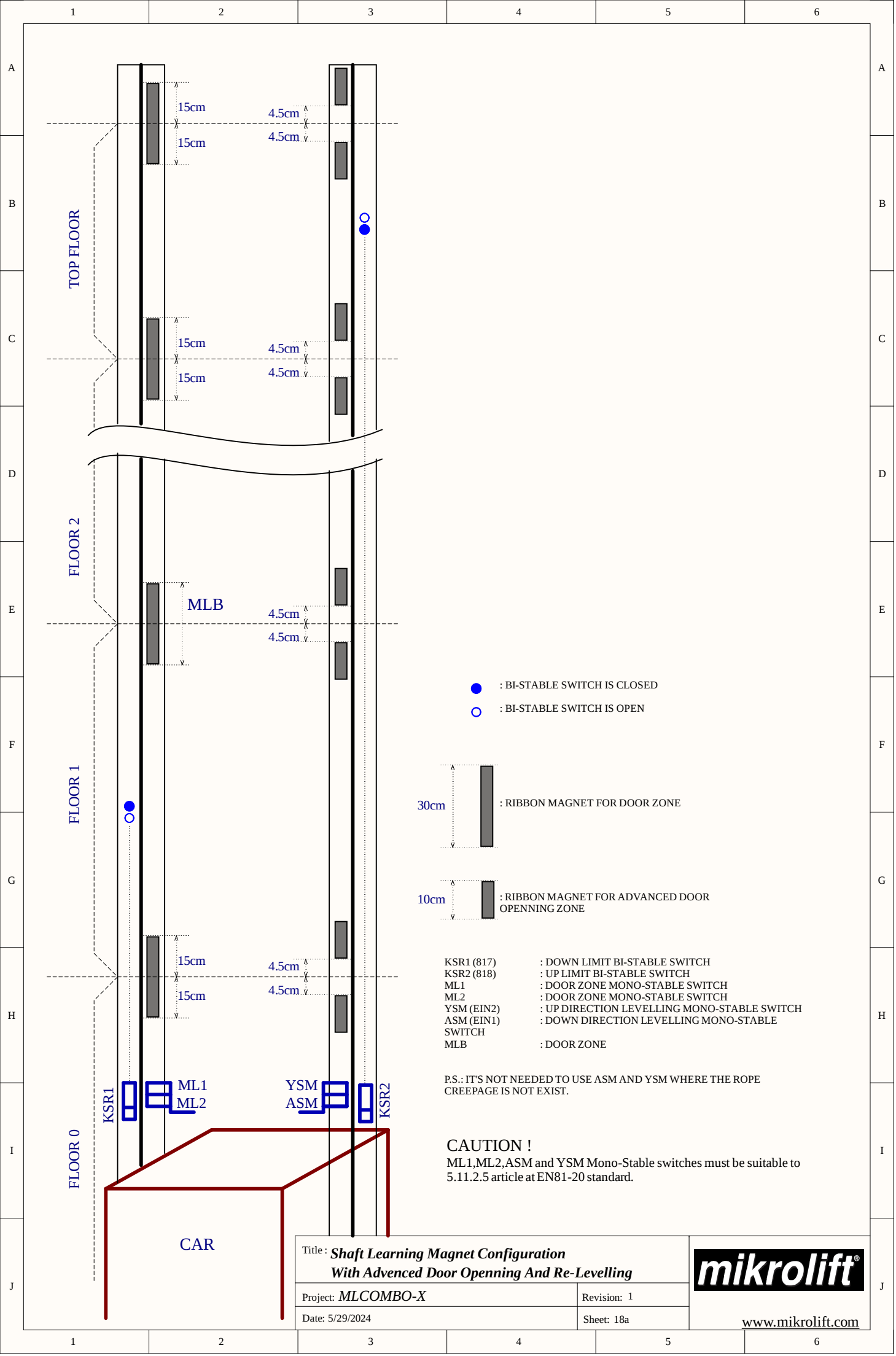


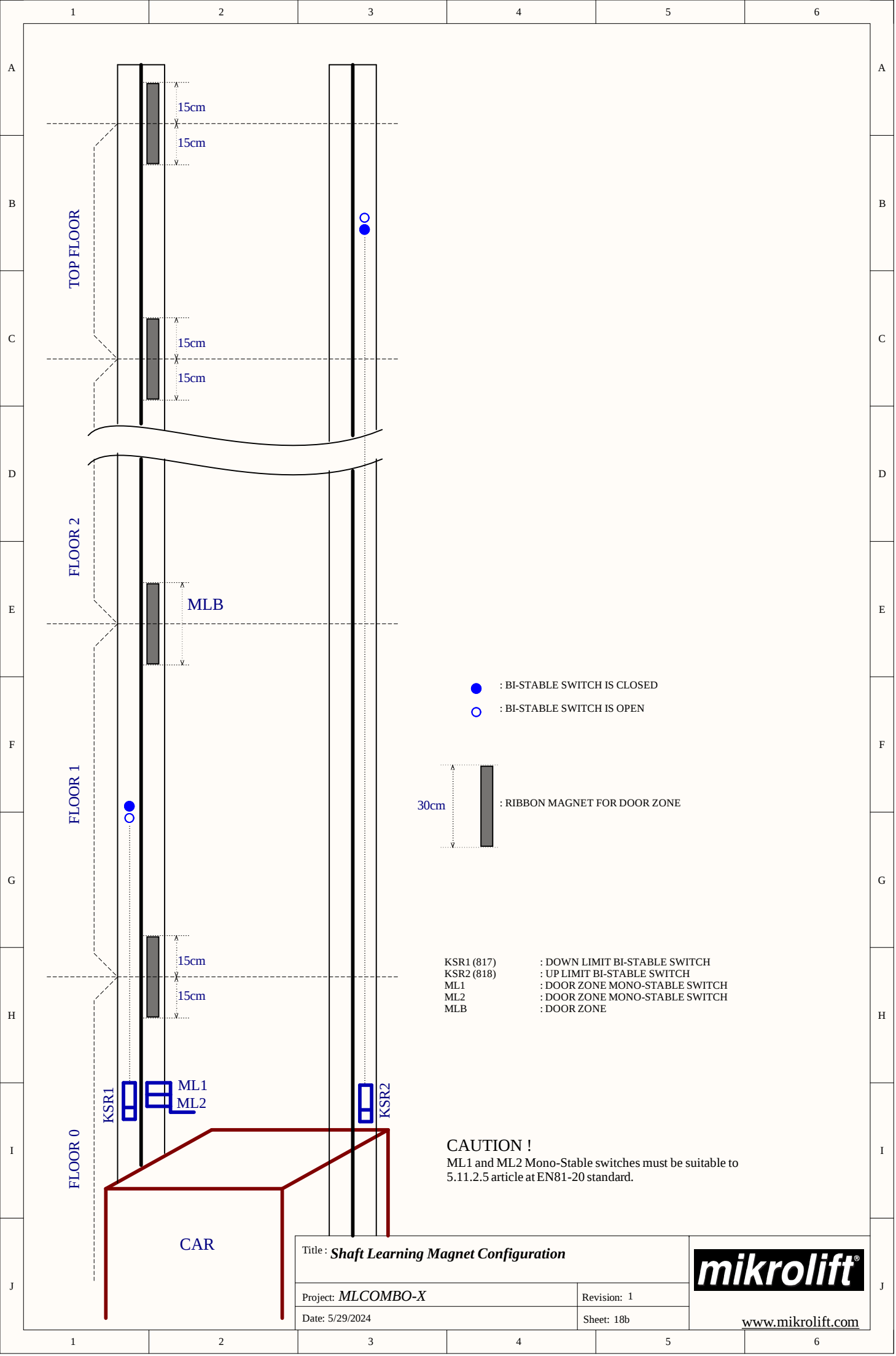


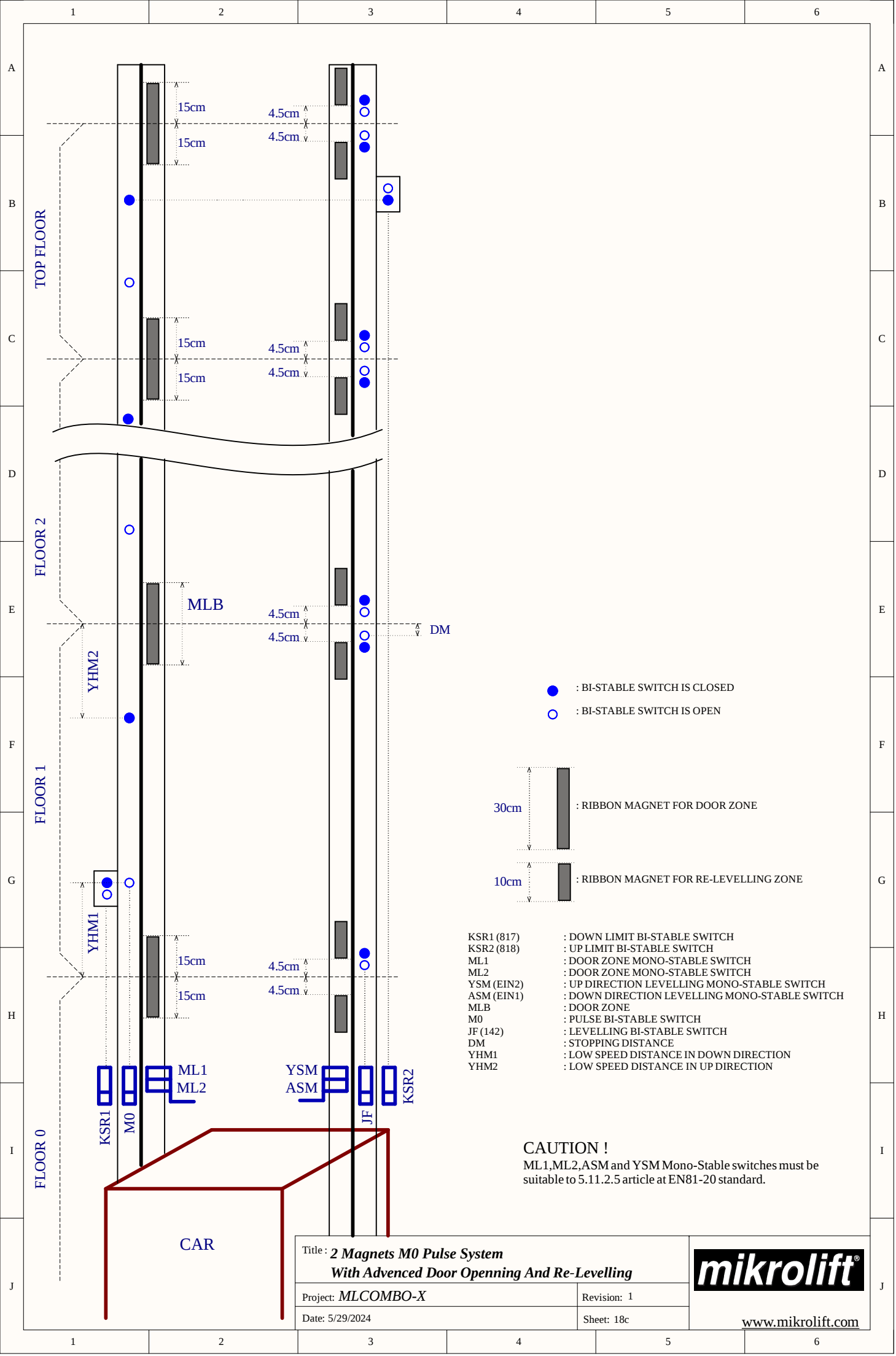












1000-P:1x-CR:10B >>

ML1-P:3-CR:1B >>

ML2-P:3-CR:1B >>

MLKTA

+12V

1000

ML1

ML2

L-

L+

+12V

+12V

12V 1W (MAX)

AT FLOOR LEVEL LIGHT

Baglanti Ismi
Connection Name

xxxx-P:xx-CR:xxx >>

Sayfa Numarası
Page Number

Sutun Satır Koordinatı
Column Row Coordinate

Title : **MLKTA (car is on exact floor level card)**
inside panel connection

Project: **MLCOMBO-X**

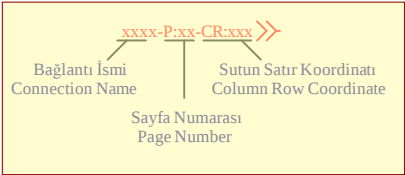
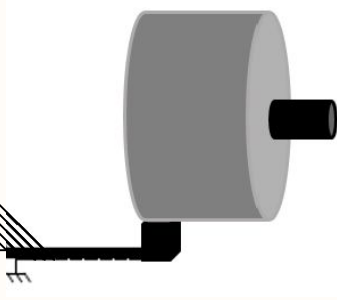
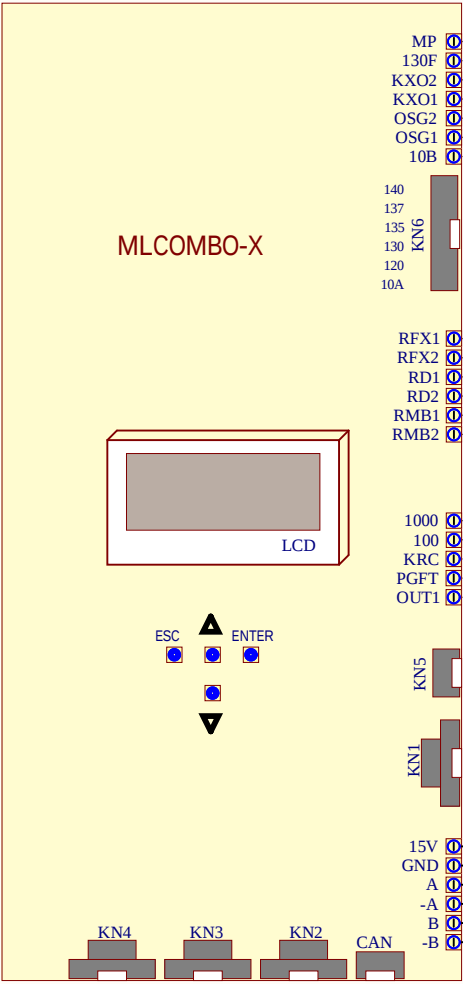
Revision: 1

Date: 5/29/2024

Sheet: 19

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Title : **Incremental Encoder Connections**

Project: **MLCOMBO-X**

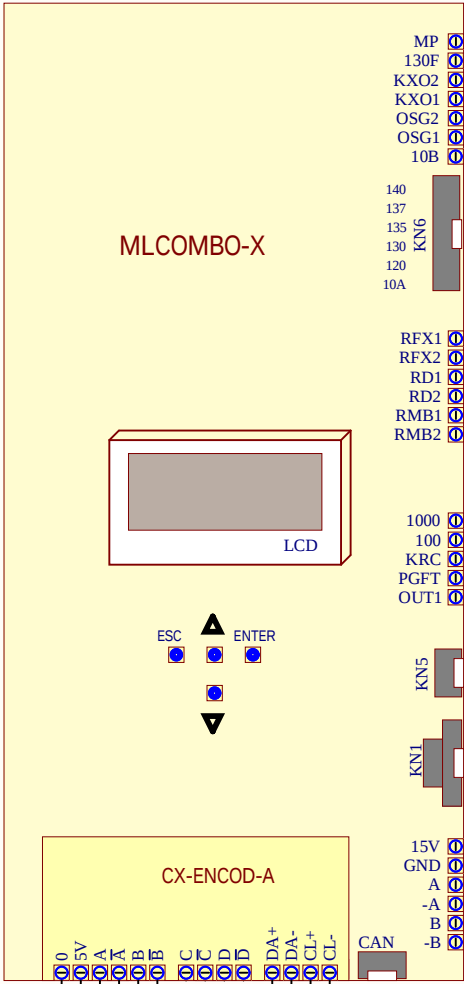
Date: 5/29/2024

Revision: 1

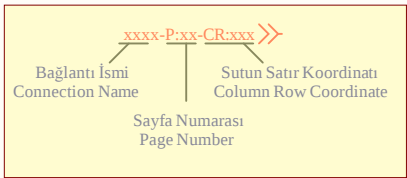
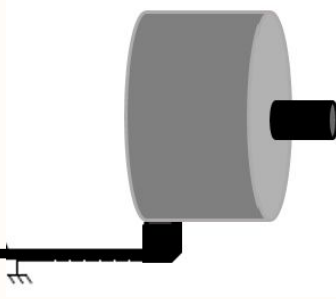
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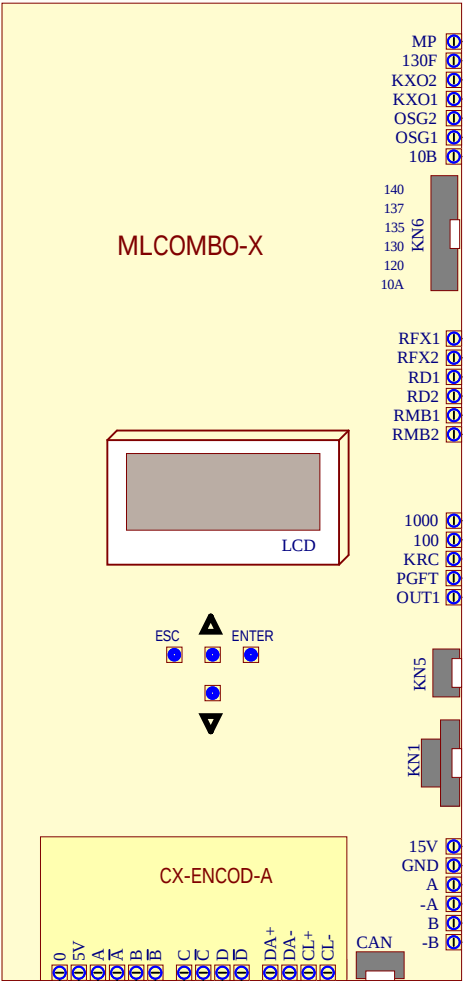
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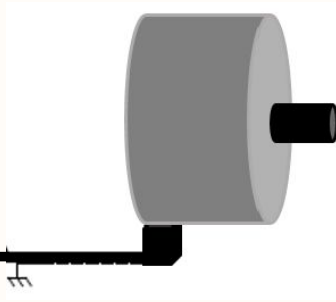


X Not Connected!





Not Connected!

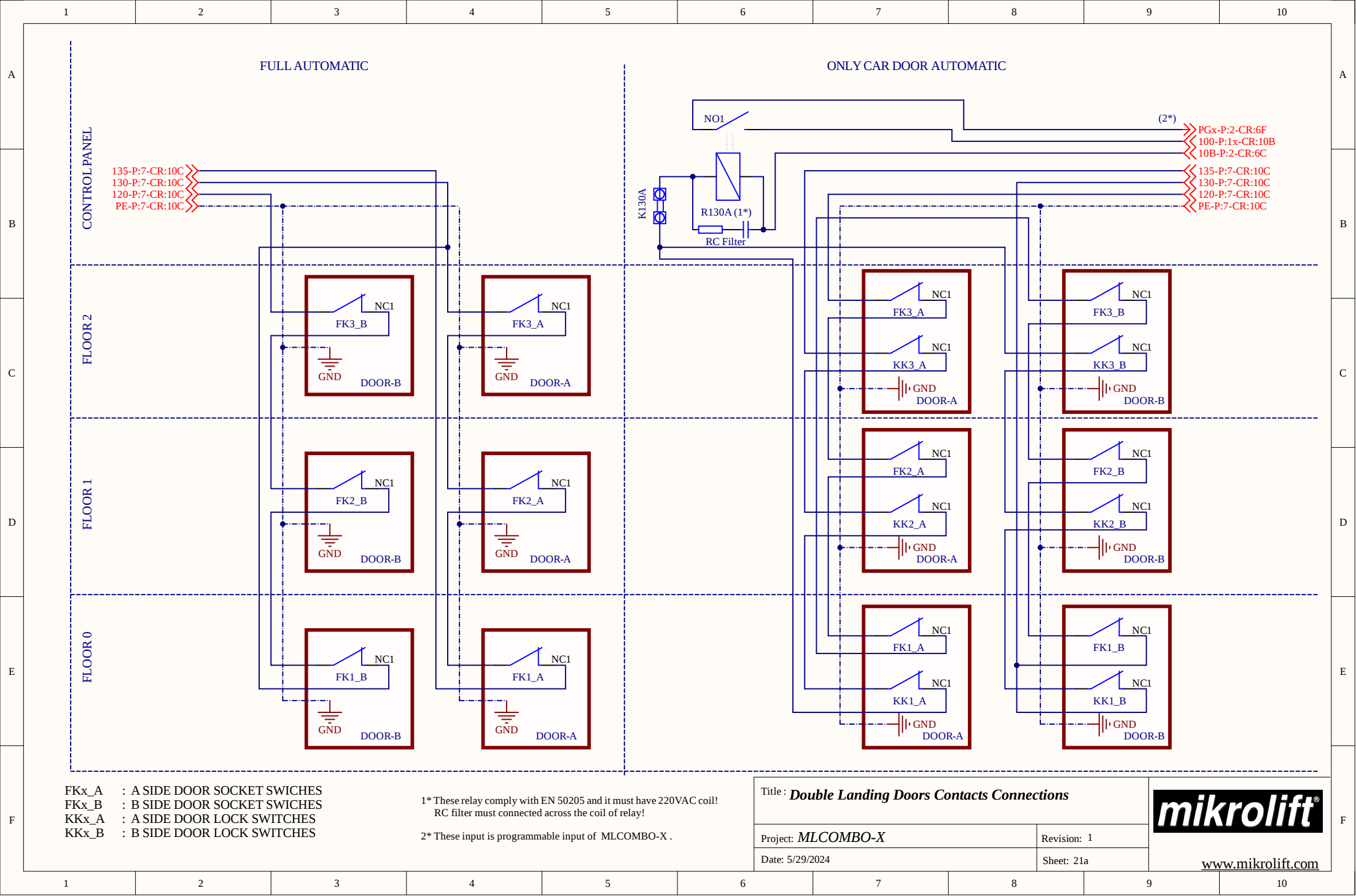


xxxx-P:xx-CR:xxx >>

Baglantı İsmi
Connection Name

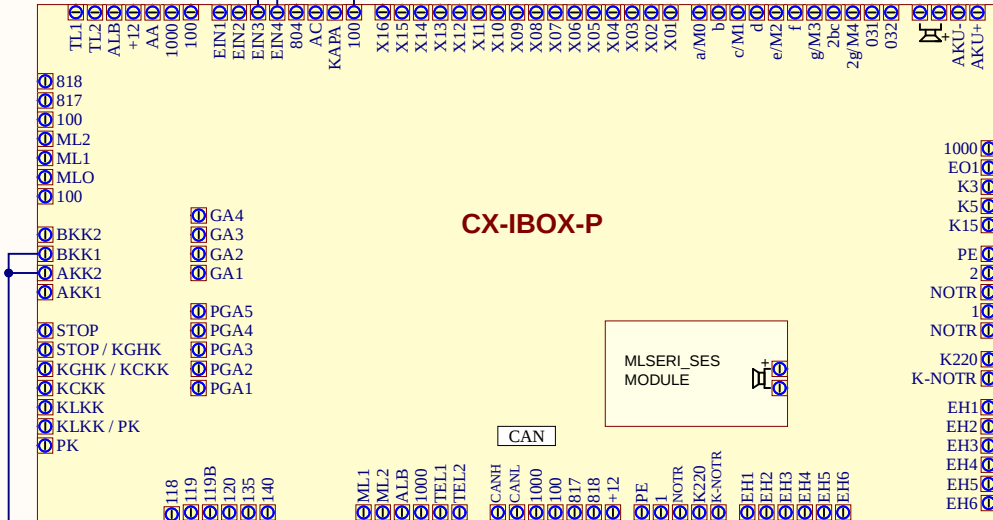
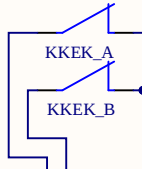
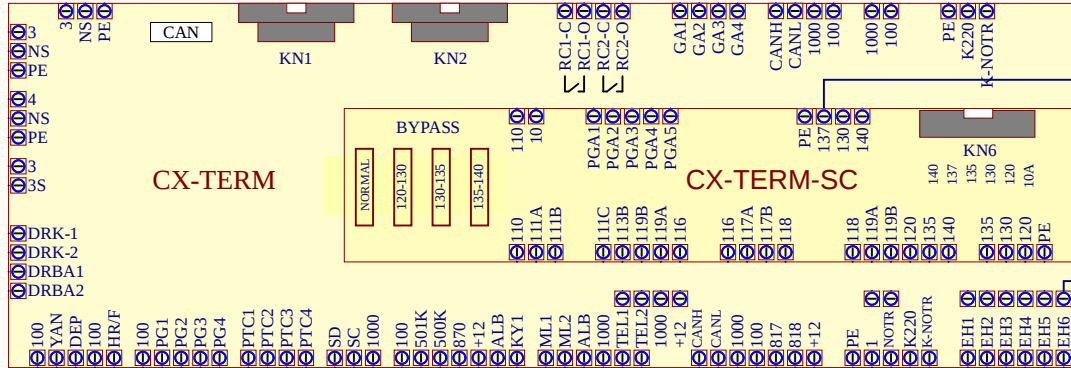
Sayfa Numarası
Page Number

Sutun Satır Koordinatı
Column Row Coordinate



CONTROL PANEL

TOP OF THE CAR



KKEK_A : CAR DOOR A EXTRA CONTACT
KKEK_B : CAR DOOR B EXTRA CONTACT

Title : **Double Car Doors Contacts Connections**
(For Parallel)

Project: **MLCOMBO-X**

Date: 5/29/2024

Revision: 1

Sheet: 21b

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