




	1	2	3	4	5	6	7	8
A								
B								
C	<p>Drawings name: Elevator controller principle diagram(220V:P02A, P03A;380V:P02B, P03B)</p>							
D	<p>Drawing number: _____</p>							
E	<p>Code: _____</p>							
F	<p>Version: _____ A01</p>							
	<p>Pages: _____ 33</p>							
								
Version: 0	Fiction:	Audit:	Approval:		Drawing number:	Drawings name:	The next page:	Page:
Date: 2021.11.09					Code:	Cover	B	A

		1	2	3	4	5	6	7	8		
A		<b>List</b>									
B		NO	Drawing number	Page	Drawings name	Version	NO	Drawing number	Page	Drawings name	Version
B		1		A	Cover	0					
B		2		B	List	0					
B		3		C	Revised record	0					
B		4		D	Electric code introduction	0					
B		5		E	Technical standard	0					
B		6		P01A	Interface board plugin unit diagram	0					
B		7		P01B	Main control board plugin unit diagram	0					
B		8		P01C	Terminal diagram	0					
B		9		P02A	220V main power circuit diagram	0					
C		10		P02B	380V main power circuit diagram	0					
C		11		P03A	220V Drive circuit diagram	0					
C		12		P03B	380V Drive circuit diagram	0					
C		13		P04	Control circuit diagram	0					
C		14		P05	Contacto & Brake power circuit	0					
C		15		P06	Monitor board circuit diagram	0					
C		16		P07	Main board circuit diagram	0					
D		17		P08	Maintenance loop diagram	0					
D		18		P09	Safety circuit diagram	0					
D		19		P10	Double door circuit diagram	0					
D		20		P11	MCTC-SCB-A3 diagram	0					
D		21		P11A	MCTC-SCB-D diagram	A01					
D		22		P12	Car top integrated interface board	0					
D		23		P13	Door machine/light curtain	0					
D		24		P13A	Car top control loop diagram(Hand sliding door)	0					
D		25		P14	Alarm bell/Arrival gong Car emergence light	0					
E		26		P15	Car fan/lighting circuit diagram	0					
E		27		P16	Car communication circuit diagram	0					
E		28		P17	Intercom	0					
E		29		P18	External call communication	0					
E		30		P19	PIT lighting/socket	0					
E		31		P20	Pit Interface board plugin unit diagram	0					
F		32		P21	Operation box	0					
F		33		P22	Paralle circuit	0					
		Version: 0		Fiction:	Audit:	Approval:	Drawing number:	Drawings name:	The next page:	Page:	
		Date: 2021.11.09					Code:	List	C	B	

1	2	3	4	5	6	7	8
A	<h3>Revised record</h3>						A
	Revised date	Drawing number	Page	The revision content and reason	Revised people	Version	
	2020-09-10		01-31	New filing		0	
B	2021-02-26		P01B	Add main control board plugin unit diagram		0	
	2021-02-26		P01C	Add terminal diagram		0	
	2021-02-26		P02A	Add 220V main power circuit diagram		0	
	2021-02-26		P03A	Add 220V Drive circuit diagram		0	
	2021-02-26		P04	Add signal toward		0	
	2021-02-26		P09	Update redescription 104/117		0	
	2021-02-26		P10	Delete the 130 of KCB		0	
	2021-02-26		P05	Brake contactor change		0	
	2021-11-09		P11A	Terminal bit number change		A01	
C							
D							
E							
F							

1	2	3	4	5	6	7	8					
A	Mark	Loca.	Meaning	Mark	Loca.	Meaning	Mark	Loca.	Meaning	Mark	Loca.	Meaning
	X1	CTR	Small terminal	PFC	CTR	Power factor correction device	LWX	CAR	Full load switch	OLT1	HTW	Door 1 open limit
B	QF	CTR	Air breaker	CIB	CAR	Car interface board	BZ	CAR	Sound-light alarm	OLT2	HTW	Door 2 open limit
	QFB1	CTR	Leakage of electricity protection for car light and fan	TCI	CAR	Car top insp.switch	LPT	CAR	Arrival gong	OS	HTW	Safety gear electric switch
TCIE				CAR	Car top insp. RUN button	ECB	CAR	Alarm	PES1	HTW	Pit emergency stop button	
C	QFB2	CTR	Leakage of electricity protection for hoistway light	TCIU	CAR	Car top insp.up button	ALB1	CAR	Alarm button 1	PES2	HTW	Pit emergency stop button
				TCID	CAR	Car top insp.down button	ALB2	CAR	Alarm button 2	PLI	HTW	Pit light
D	QFB3	CTR	Leakage of electricity protection for control system	SOS	CAR	Safety gear electric switch	ALB3	CAR	Alarm button 3	PUR	HTW	Pit socket
				SUP1	CAR	Alternate safety switch	FAN	CAR	Car fan	DBR	HTW	Brake resistance
E	CZ	CTR	Controller socket	FB1	CAR	Folding guardrail (Reserved)	CLI	CAR	Car light	IOT	HTW	Internet of things module
	CTRL	CTR	Control cabinet light	FB2	CAR	Folding guardrail (Reserved)	S2	CAR	Car top light switch	PIT	HTW	Pit insp.switch
F	TA	CTR	Big terminal	TES	CAR	Car top emergency stop button	TLS	CAR	Car top insp. lighting switch	PITB	HTW	Pit insp.RUN button
	OPB	CTR	Filter board	SUP3	CAR	Alternate safety switch	TUR	CAR	Car top socket	PITU	HTW	Pit insp.up button
G	LC	CTR	Reactor	GS	CAR	Door-lock electric switch	COB	CAR	Call outside board	PITD	HTW	Pit insp.down button
	MCB	CTR	Main control board	DZU	CAR	Up-level sensor	DCB	CAR	Close button	LBS	HTW	Hoistway light
H	KCB	CTR	Interface board	DZD	CAR	Down-level sensor	DDCB	CAR	Open delay button			
	PCB	CTR	Power supply board	FL1	CAR	Up Door-area sensor	NSB	CAR	Direct input			
I	WJX2T222M1	CTR	Driver board	FL2	CAR	Down Door-area sensor	ATS	CAR	Driver input			
	PG-E	CTR	PG card	DP1	CAR	Front door-machine overheat	ACB	CAR	Reversing input			
J	STO	CTR	STO card	DP2	CAR	Rear door-machine overheat	ISS	CAR	Independent running input			
	ARD	CTR	ARD disabling button	CTB	CAR	Car top control board	FIRS2	CAR	Firemen running input	MES-1	MR	Motor emg.stop button
K	BK-A	CTR	ARD enabling button	OLT1	CAR	Door 1 open limit	ECL	CAR	Car emergent light	MTS	MR	Motor overheat
	F	CTR	Fuse	OLT2	CAR	Door 2 open limit	WT2	CAR	Analog weighting switch	TA1	MR	Speed limiter reset coil
L	LIHS1	CTR	Shaft lighting button	CLT1	CAR	Door 1 close limit	LIHS2	HTW	Hoistway light switch 2	TA3	MR	Speed limiter activate coil
	BM1	CTR	Brake unit of left	CLT2	CAR	Door 2 close limit	PLS	HTW	Pit light switch	OS	MR	Tensioner electric switch
M	BM2	CTR	Brake unit of right	EDP1	CAR	Door 1 light curtain	ULS	HTW	Up deceleration switch			
	BY1	CTR	Brake contactor 1	EDP2	CAR	Door 2 light curtain	PTB	HTW	Pit interface board			
N	BY2	CTR	Brake contactor 2	DCB1	CAR	Door 1 close button	LIHS1	HTW	Hoistway lighting switch 1			
	TRF	CTR	Brake transformer	DCB2	CAR	Door 2 close button	LIHS2	HTW	Hoistway lighting switch 2			
O	MB	CTR	Monitoring board	DOB1	CAR	Door 1 open button	GTS	HTW	Tensioner electric switch			
	CIS	CTR	Cabinet insp.switch	DOB2	CAR	Door 2 open button	HCB	HTW	Floor show board			
P	RUN	CTR	Control cabinet insp.common button	DM	CAR	Door-machine motor	FLSD	HTW	Down ultimate switch			
	UP	CTR	Control cabinet insp.up button	EML1	CAR	Front door Electromagnetic lock (AC220V)	FLSU	HTW	Up ultimate switch	CAR	NULL	Car
Q	DOWN	CTR	Control cabinet insp.down button	EML2	CAR	Back door Electromagnetic lock (AC220V)	BFS	HTW	Buffer switch	CTR	NULL	Control cabinet
	SCB	CTR	Door open in advance board	RS	CAR	Electromagnetic lock relay	DLS	HTW	Down deceleration switch	MR	NULL	Motor
R	MES	CTR	Control cabinet emergent stop switch	LWO	CAR	Overload switch	DS	HTW	Hall door lock switch	HTW	NULL	Hoistway

Standard of villa elevator control cabinet electric principle diagram:

1.Power line naming rules:

The AC380V power which located on the preamp of the main air circuit breaker are named R, S, T.

The AC220V power which located on the preamp of the main air circuit breaker are named L, N.

The one of the 220V illumination power on the backward stage named 501,502.

The output side of 24V power supply connect to 301,302.

The safety circuit named 101、 102。

2.Named designation rule of wire number:

101-199 relevant circuit of DC24V;

201-299 relevant circuit of AC220V;

301-399 relevant circuit of DC24V;

501-599 relevant circuit of AC220V car illumination power;

801-810 Hoistway lighting circuit of AC220V;

3.Switch and contact rules:

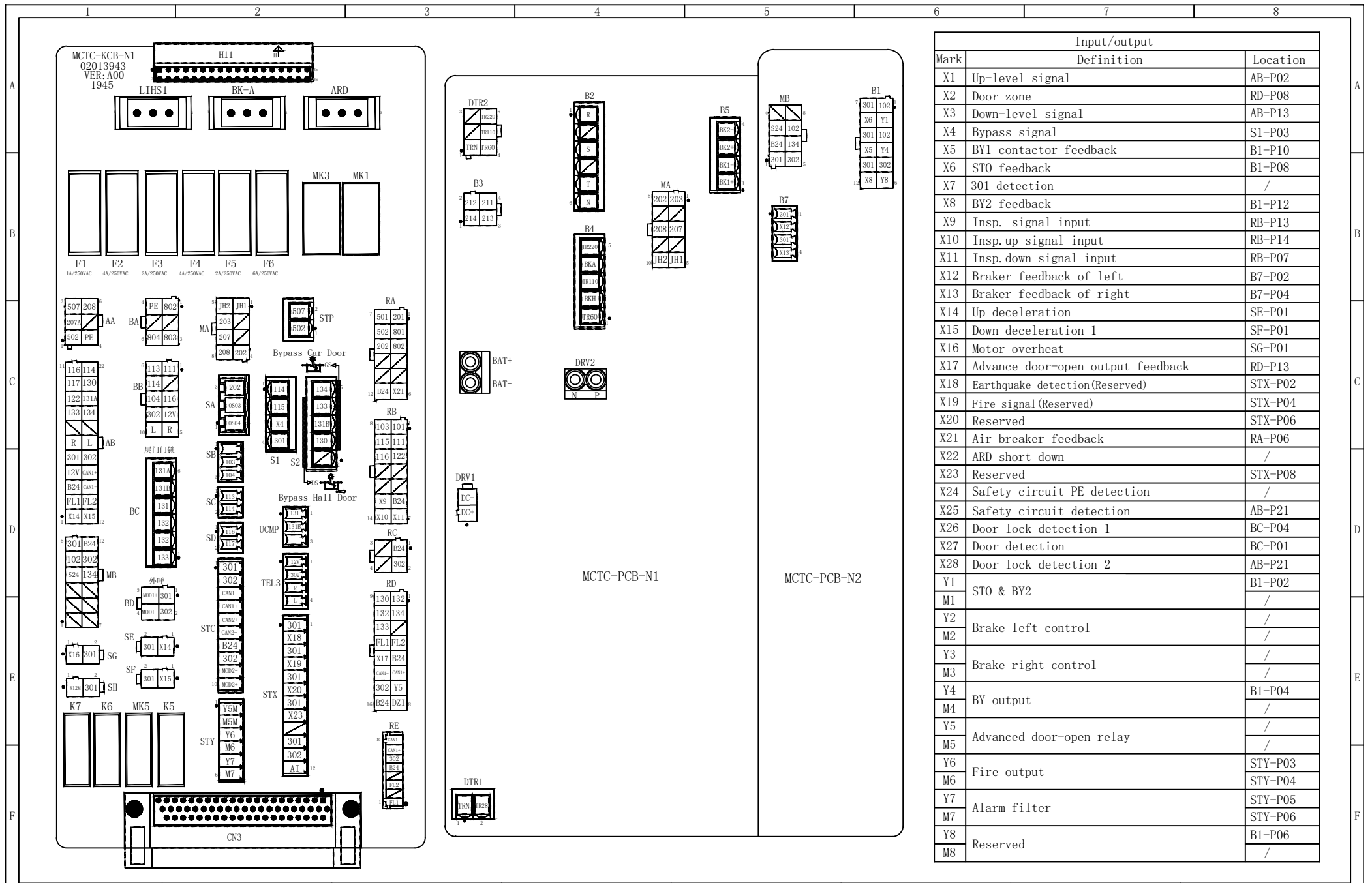
All the switch ,relays,and contactor are subject to the rule of UP-ON,Down-OFF,Left-ON and Right-OFF.

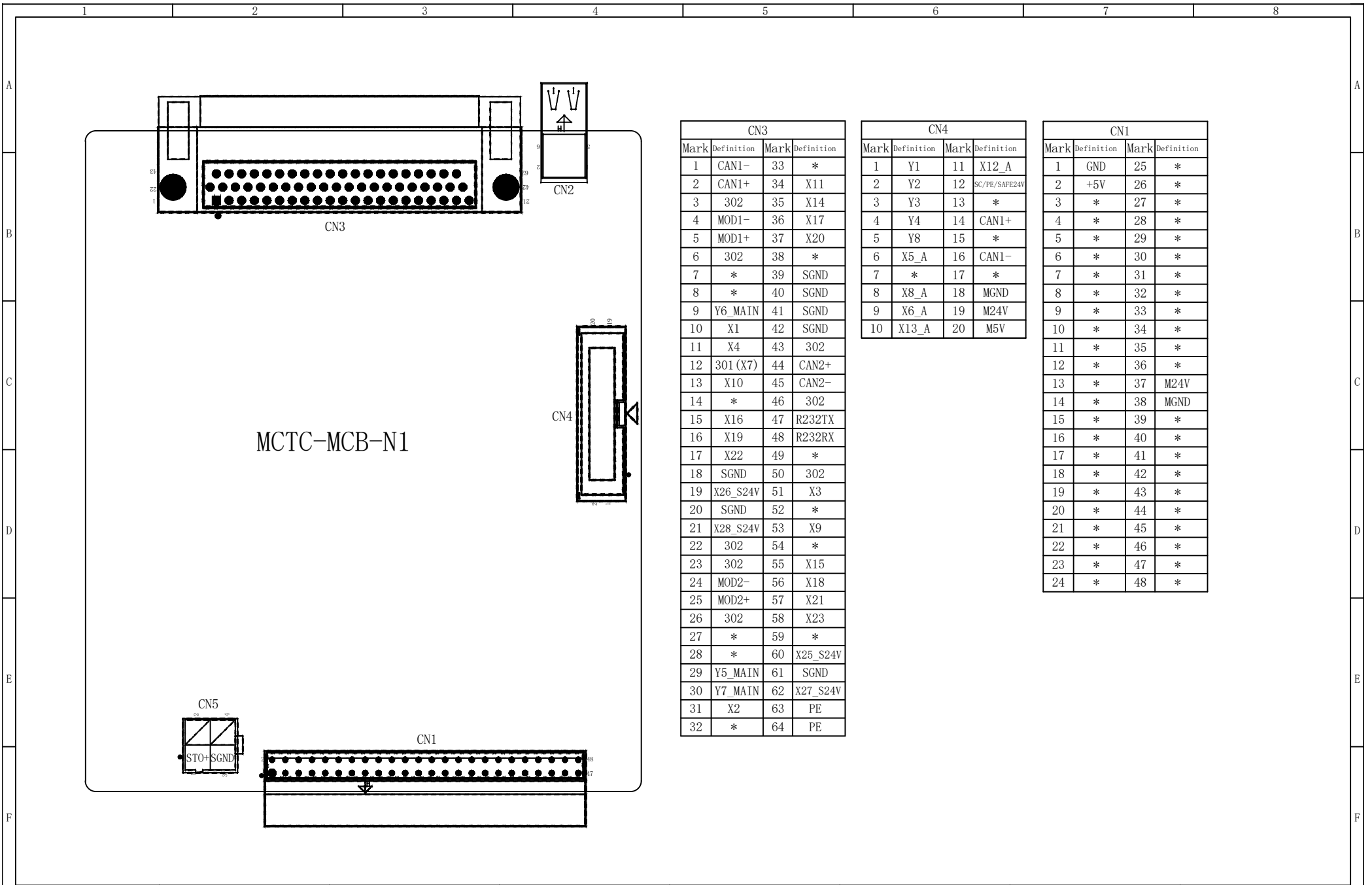
4.The schematic diagram applies to the modular villa elevator control cabinet of our company .

5.Test scope of drawing:

Synchronous control cabinet.

Version: 0	Fiction:	Audit:	Approval:	Drawing number:	Drawings name:	The next page:	Page:
Date: 2021.11.09				Code:	Technical standard	P01	E



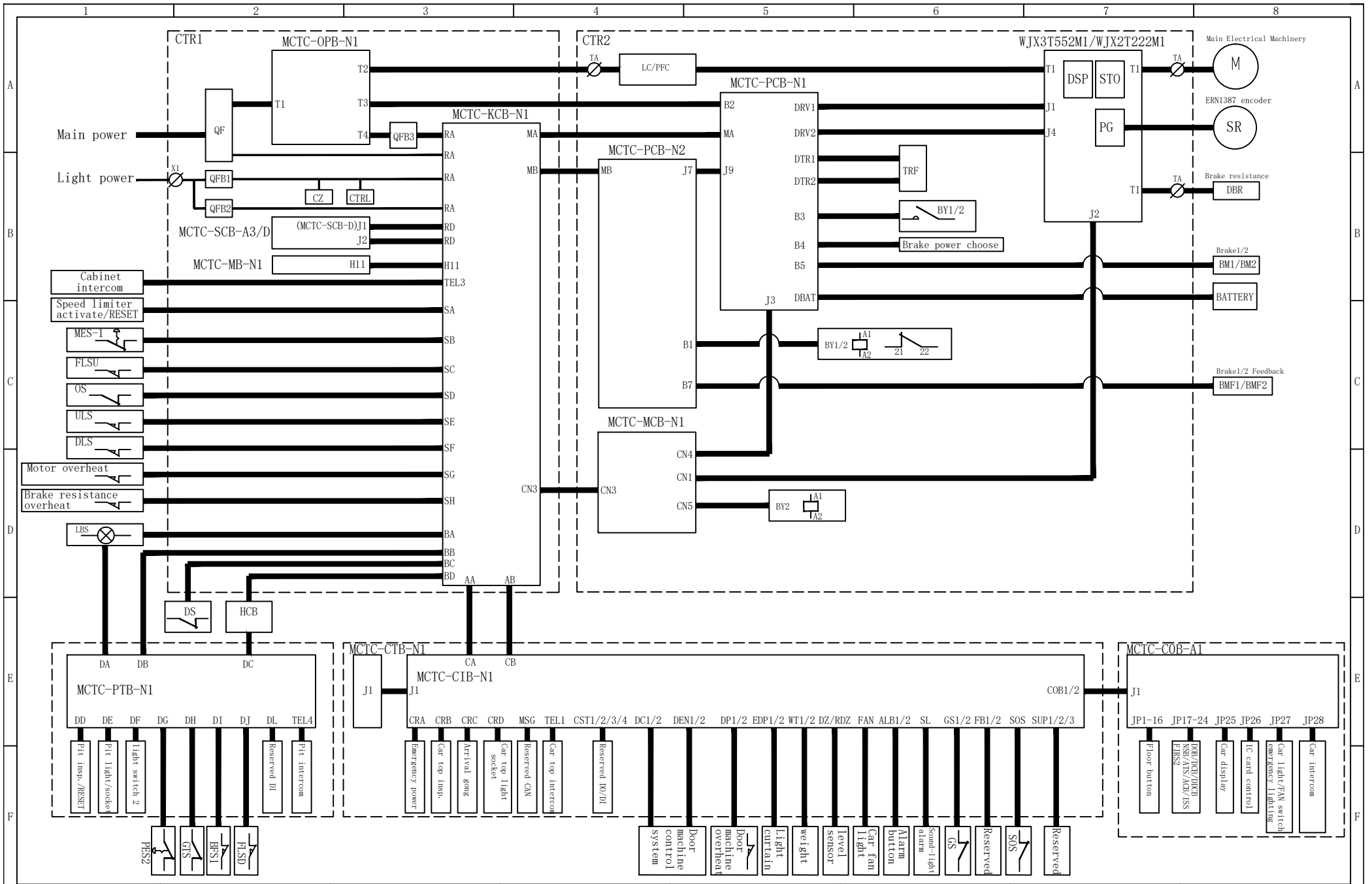


MCTC-MCB-N1

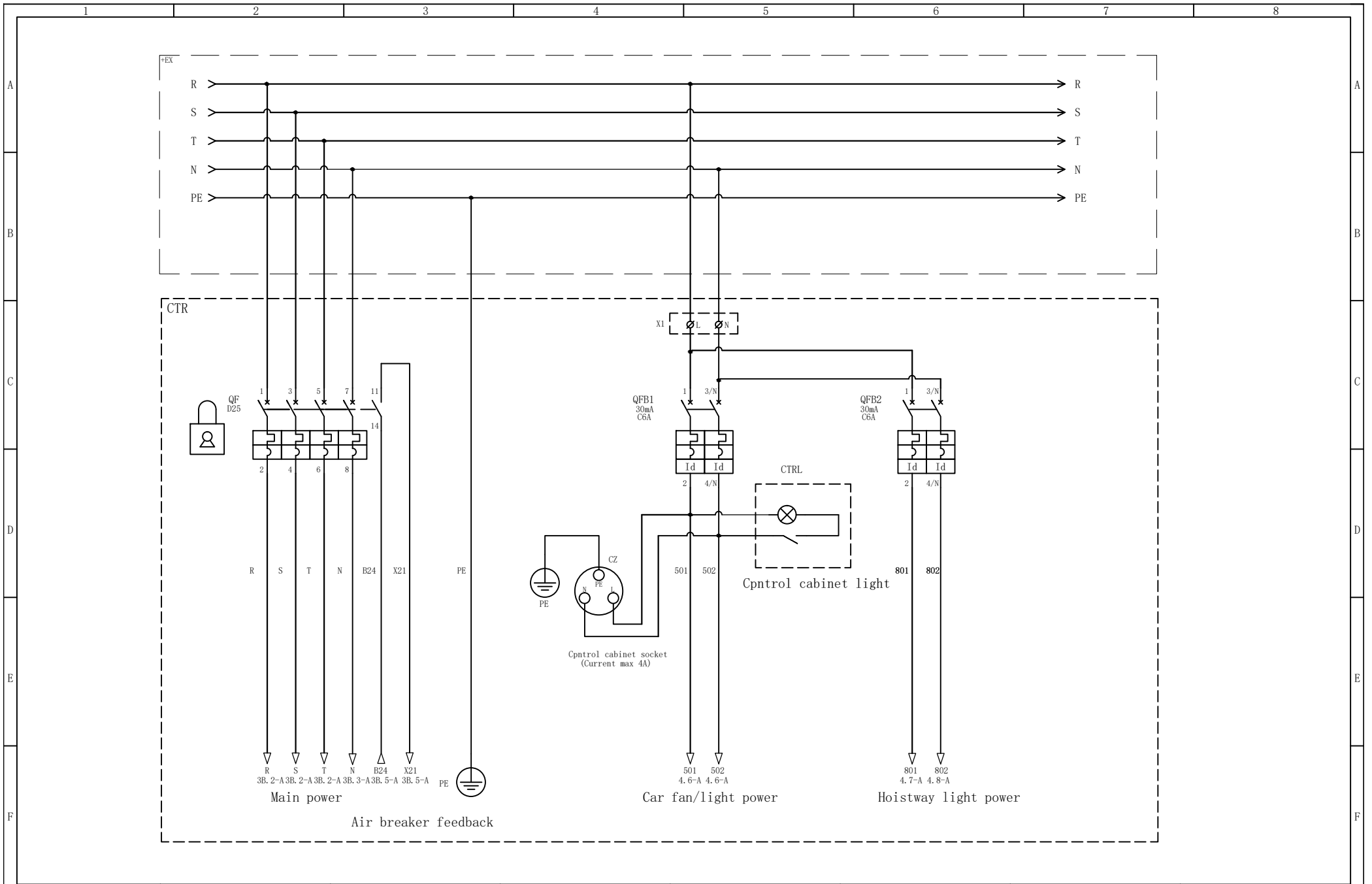
CN3			
Mark	Definition	Mark	Definition
1	CAN1-	33	*
2	CAN1+	34	X11
3	302	35	X14
4	MOD1-	36	X17
5	MOD1+	37	X20
6	302	38	*
7	*	39	SGND
8	*	40	SGND
9	Y6_MAIN	41	SGND
10	X1	42	SGND
11	X4	43	302
12	301 (X7)	44	CAN2+
13	X10	45	CAN2-
14	*	46	302
15	X16	47	R232TX
16	X19	48	R232RX
17	X22	49	*
18	SGND	50	302
19	X26_S24V	51	X3
20	SGND	52	*
21	X28_S24V	53	X9
22	302	54	*
23	302	55	X15
24	MOD2-	56	X18
25	MOD2+	57	X21
26	302	58	X23
27	*	59	*
28	*	60	X25_S24V
29	Y5_MAIN	61	SGND
30	Y7_MAIN	62	X27_S24V
31	X2	63	PE
32	*	64	PE

CN4			
Mark	Definition	Mark	Definition
1	Y1	11	X12_A
2	Y2	12	SC/PE/SAFE24V
3	Y3	13	*
4	Y4	14	CAN1+
5	Y8	15	*
6	X5_A	16	CAN1-
7	*	17	*
8	X8_A	18	MGND
9	X6_A	19	M24V
10	X13_A	20	M5V

CN1			
Mark	Definition	Mark	Definition
1	GND	25	*
2	+5V	26	*
3	*	27	*
4	*	28	*
5	*	29	*
6	*	30	*
7	*	31	*
8	*	32	*
9	*	33	*
10	*	34	*
11	*	35	*
12	*	36	*
13	*	37	M24V
14	*	38	MGND
15	*	39	*
16	*	40	*
17	*	41	*
18	*	42	*
19	*	43	*
20	*	44	*
21	*	45	*
22	*	46	*
23	*	47	*
24	*	48	*







Version: 0  
Date: 2021.11.09

Fiction:

Audit:

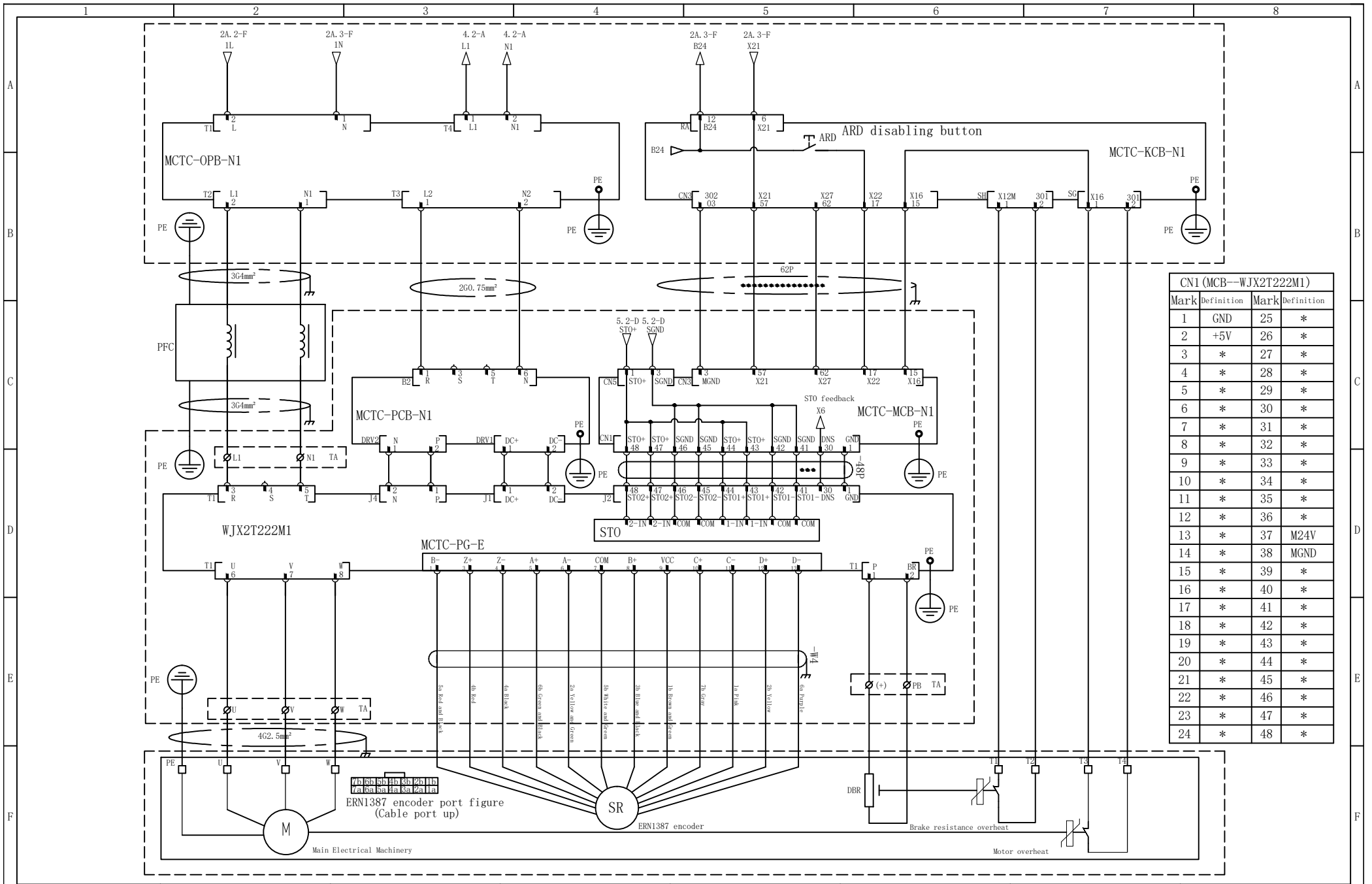
Approval:

Drawing number:  
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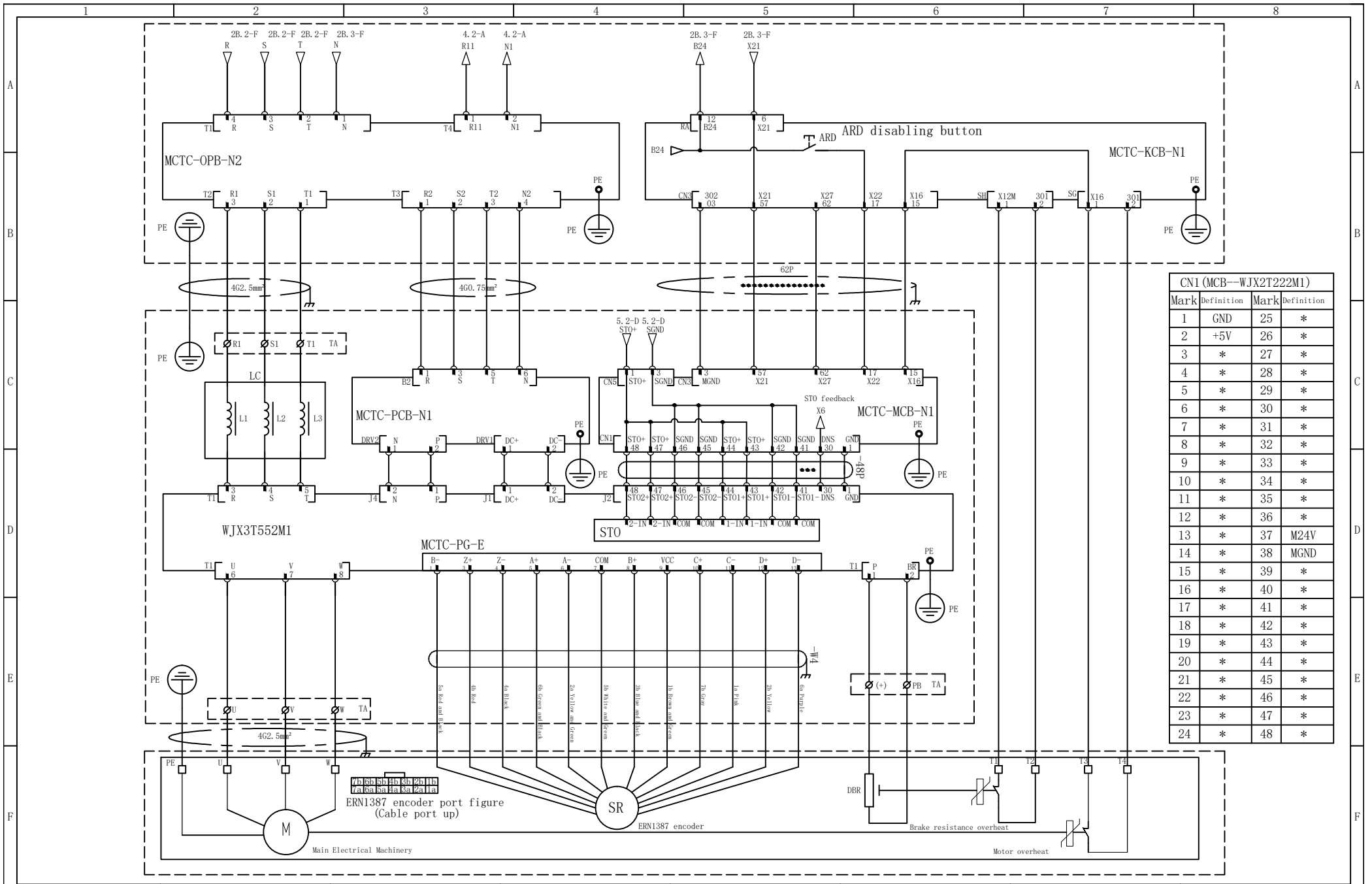
Drawings name:  
380V main power circuit diagram

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P03A

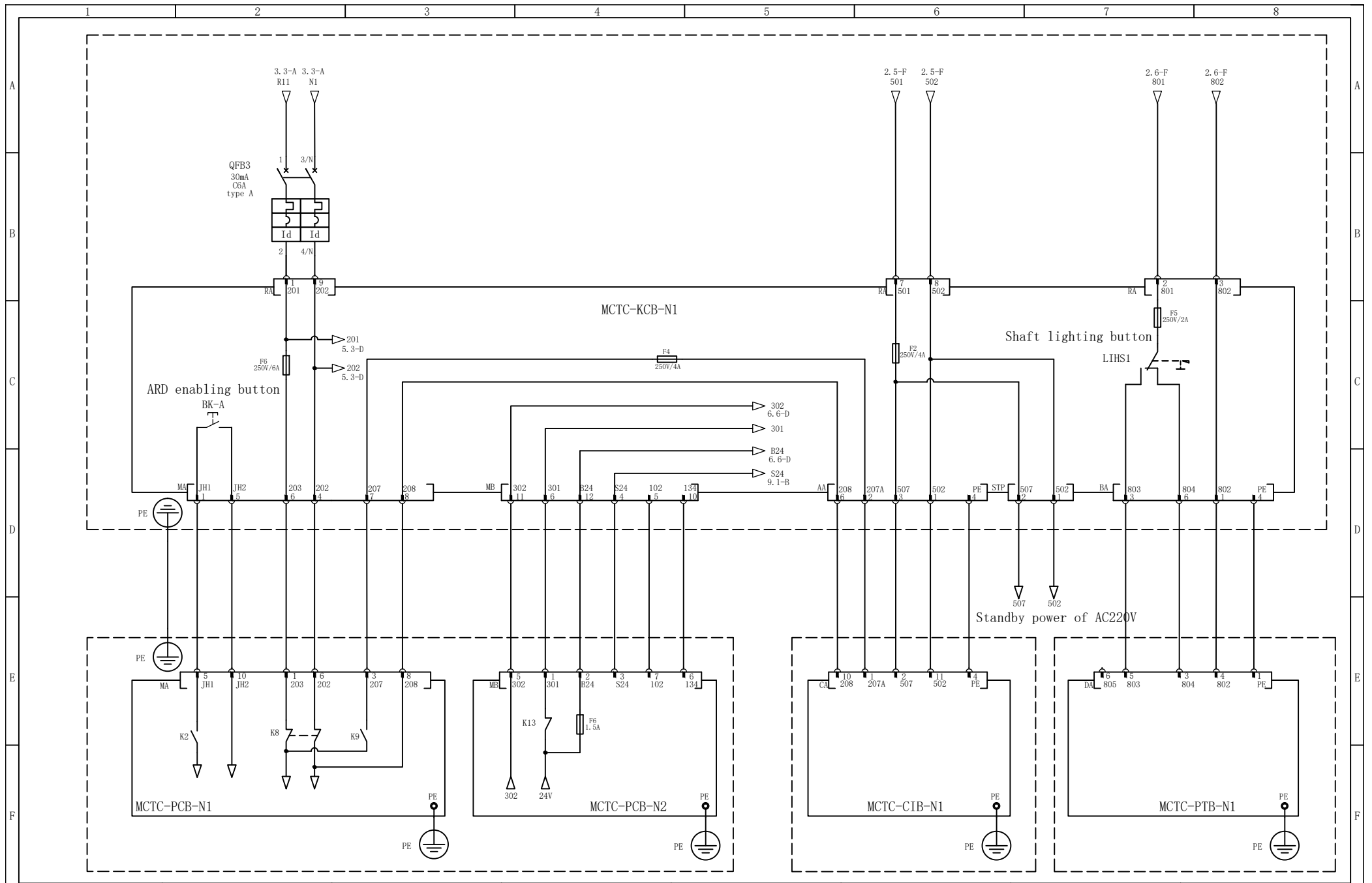
Page:  
P02B



CN1 (MCB--WJX2T222M1)			
Mark	Definition	Mark	Definition
1	GND	25	*
2	+5V	26	*
3	*	27	*
4	*	28	*
5	*	29	*
6	*	30	*
7	*	31	*
8	*	32	*
9	*	33	*
10	*	34	*
11	*	35	*
12	*	36	*
13	*	37	M24V
14	*	38	MGND
15	*	39	*
16	*	40	*
17	*	41	*
18	*	42	*
19	*	43	*
20	*	44	*
21	*	45	*
22	*	46	*
23	*	47	*
24	*	48	*



CN1 (MCB--WJX2T222M1)			
Mark	Definition	Mark	Definition
1	GND	25	*
2	+5V	26	*
3	*	27	*
4	*	28	*
5	*	29	*
6	*	30	*
7	*	31	*
8	*	32	*
9	*	33	*
10	*	34	*
11	*	35	*
12	*	36	*
13	*	37	M24V
14	*	38	MGND
15	*	39	*
16	*	40	*
17	*	41	*
18	*	42	*
19	*	43	*
20	*	44	*
21	*	45	*
22	*	46	*
23	*	47	*
24	*	48	*



Version: 0  
Date: 2021.11.09

Fiction:  
Audit:

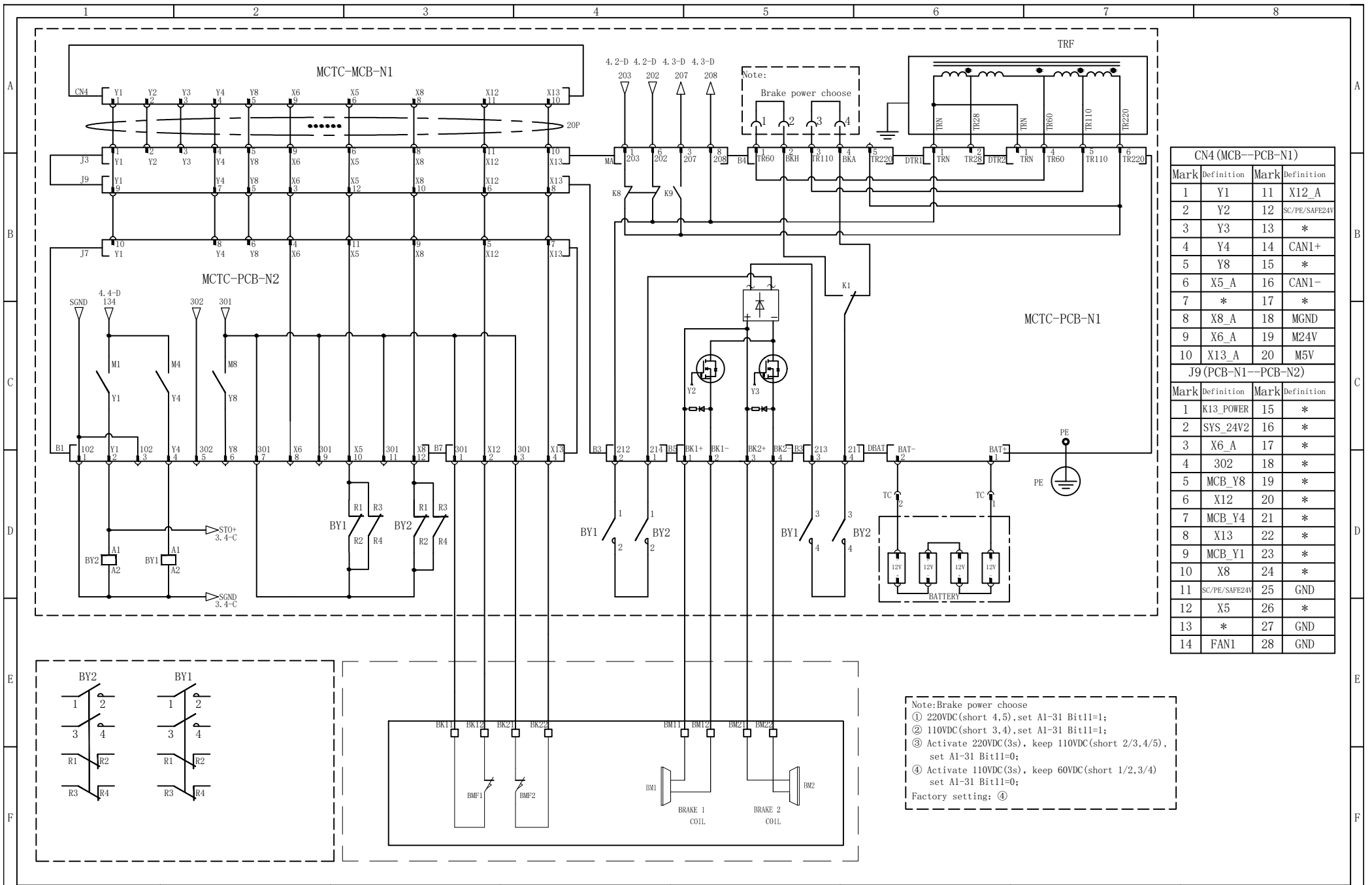
Approval:

Drawing number:  
Code:

Drawings name:  
Control power circuit diagram

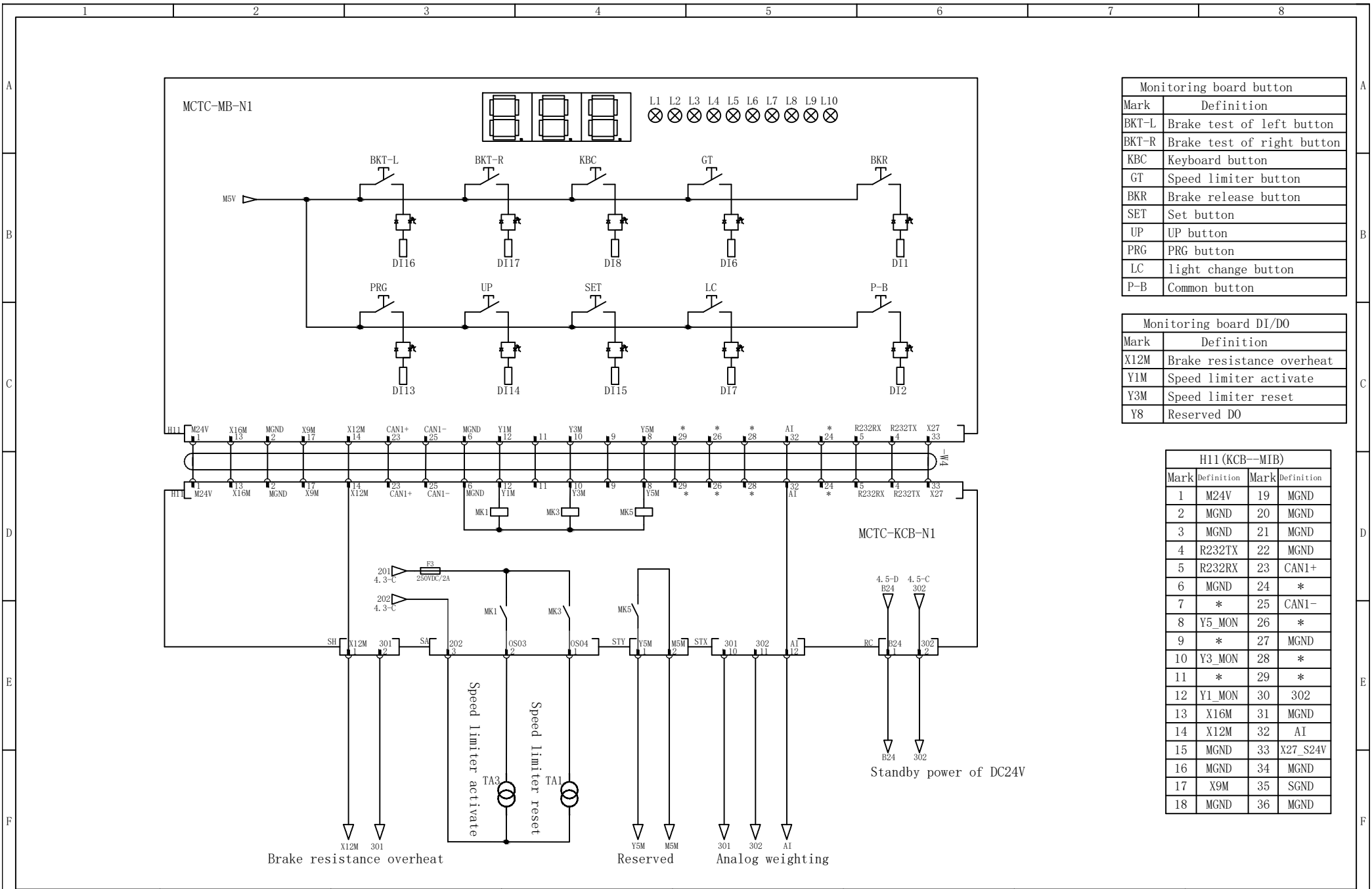
The next page:  
P05

Page:  
P04



CN4 (MCB--PCB-N1)			
Mark	Definition	Mark	Definition
1	Y1	11	X12_A
2	Y2	12	SC/PE/SAFE24V
3	Y3	13	*
4	Y4	14	CAN1+
5	Y8	15	*
6	X5 A	16	CAN1-
7	*	17	*
8	X8_A	18	MGND
9	X6_A	19	M24V
10	X13 A	20	M5V
J9 (PCB-N1--PCB-N2)			
Mark	Definition	Mark	Definition
1	K13_POWER	15	*
2	SYS_24V2	16	*
3	X6_A	17	*
4	302	18	*
5	MCB_Y8	19	*
6	X12	20	*
7	MCB_Y4	21	*
8	X13	22	*
9	MCB_Y1	23	*
10	X8	24	*
11	SC/PE/SAFE24V	25	GND
12	X5	26	*
13	*	27	GND
14	FAN1	28	GND

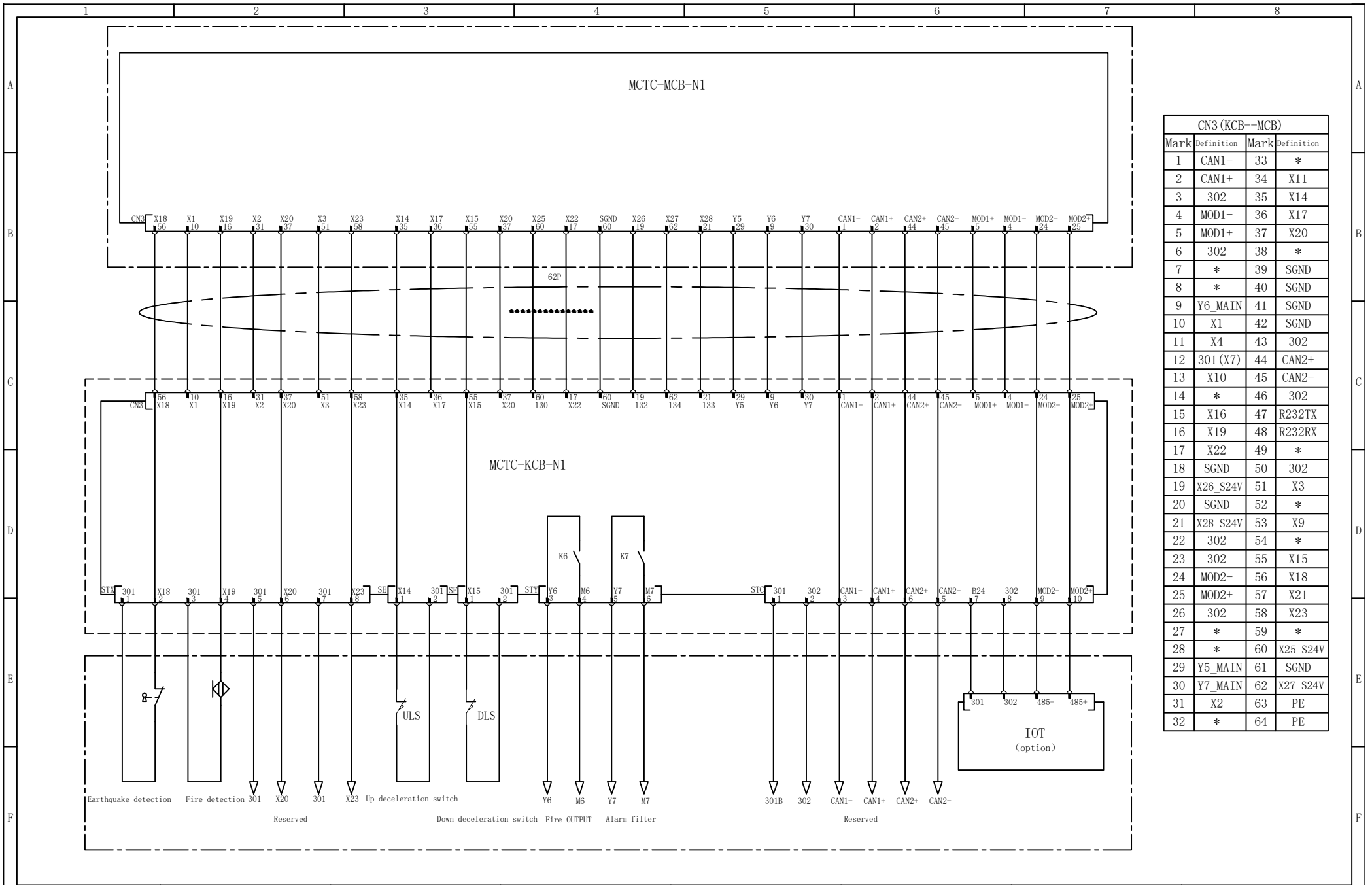
Note: Brake power choose  
 ① 220VDC (short 4,5), set A1-31 Bit11=1;  
 ② 110VDC (short 3,4), set A1-31 Bit11=1;  
 ③ Activate 220VDC (3s), keep 110VDC (short 2/3,4/5), set A1-31 Bit11=0;  
 ④ Activate 110VDC (3s), keep 60VDC (short 1/2,3/4) set A1-31 Bit11=0;  
 Factory setting: ④



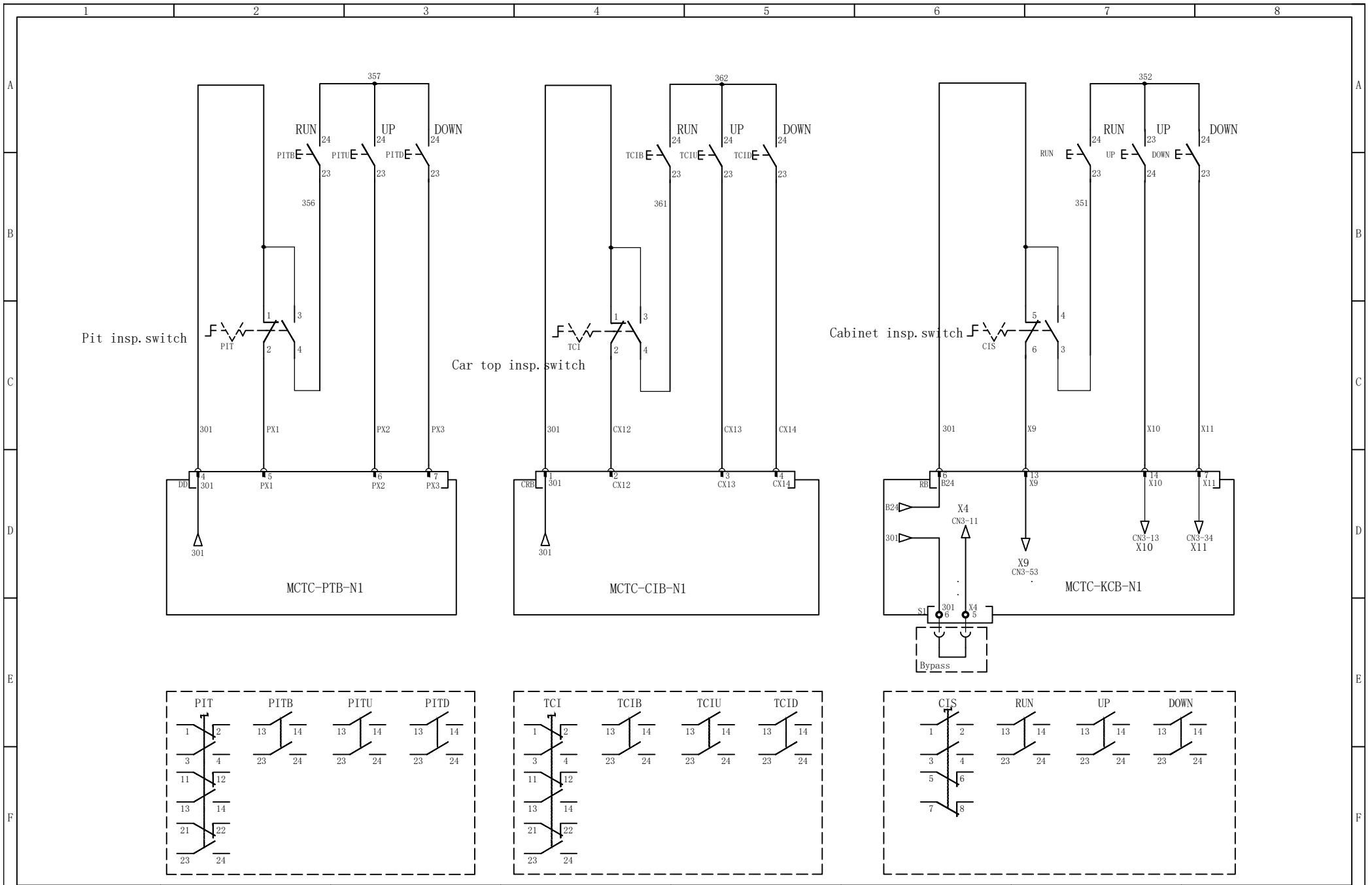
Monitoring board button	
Mark	Definition
BKT-L	Brake test of left button
BKT-R	Brake test of right button
KBC	Keyboard button
GT	Speed limiter button
BKR	Brake release button
SET	Set button
UP	UP button
PRG	PRG button
LC	light change button
P-B	Common button

Monitoring board DI/DO	
Mark	Definition
X12M	Brake resistance overhear
Y1M	Speed limiter activate
Y3M	Speed limiter reset
Y8	Reserved DO

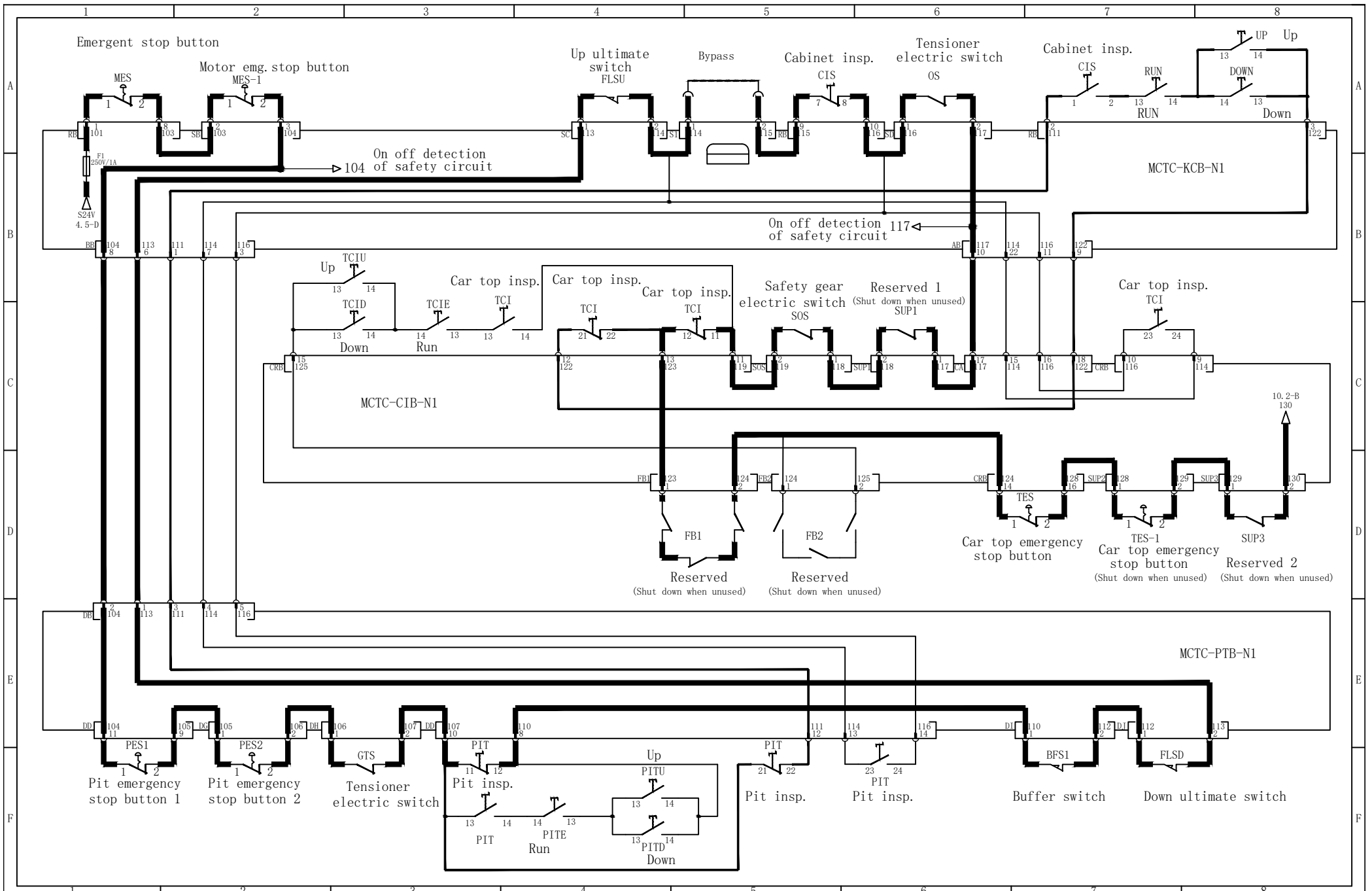
H11 (KCB--MIB)			
Mark	Definition	Mark	Definition
1	M24V	19	MGND
2	MGND	20	MGND
3	MGND	21	MGND
4	R232TX	22	MGND
5	R232RX	23	CAN1+
6	MGND	24	*
7	*	25	CAN1-
8	Y5_MON	26	*
9	*	27	MGND
10	Y3_MON	28	*
11	*	29	*
12	Y1_MON	30	302
13	X16M	31	MGND
14	X12M	32	AI
15	MGND	33	X27_S24V
16	MGND	34	MGND
17	X9M	35	SGND
18	MGND	36	MGND



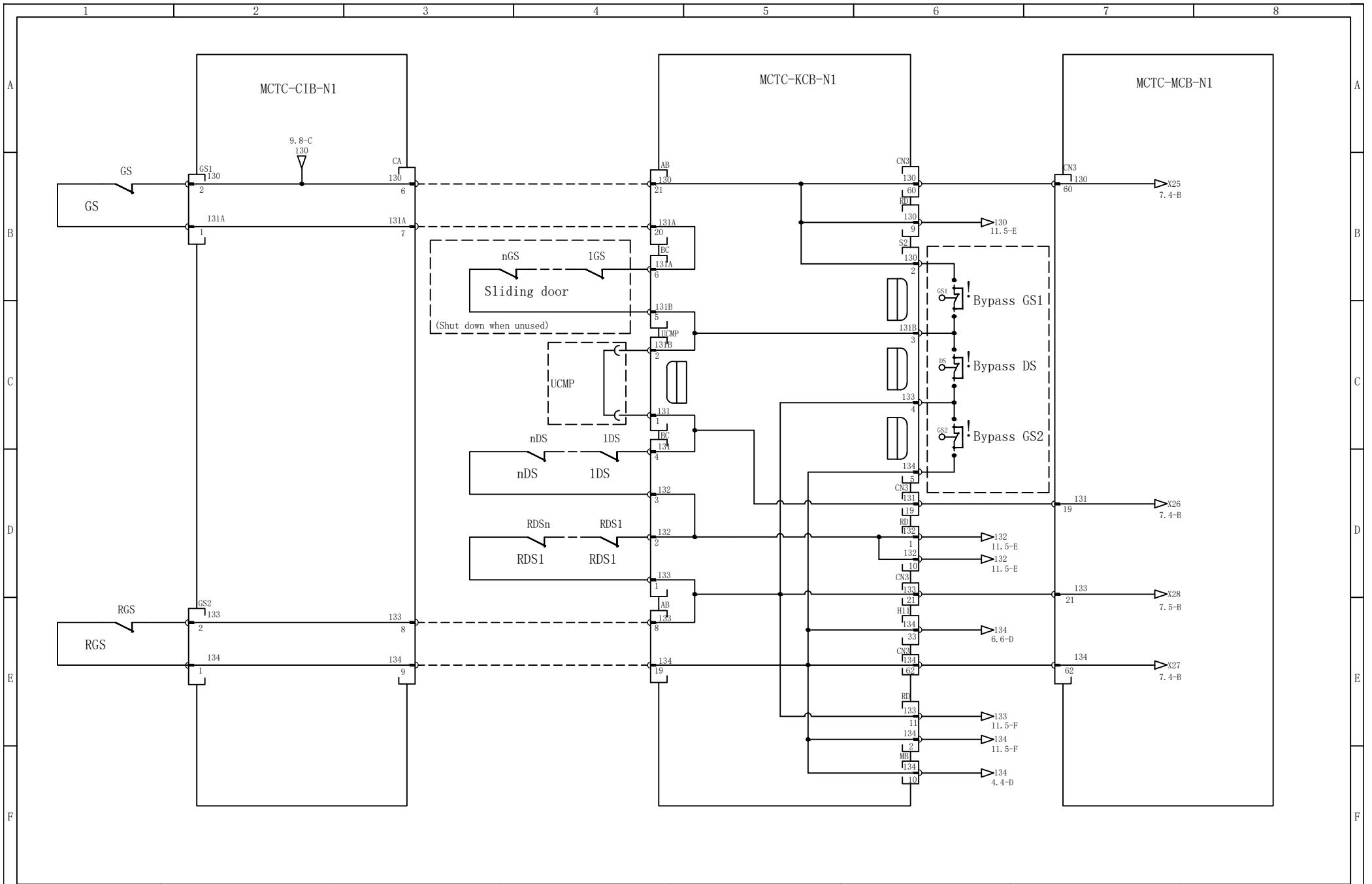
CN3 (KCB--MCB)			
Mark	Definition	Mark	Definition
1	CAN1-	33	*
2	CAN1+	34	X11
3	302	35	X14
4	MOD1-	36	X17
5	MOD1+	37	X20
6	302	38	*
7	*	39	SGND
8	*	40	SGND
9	Y6_MAIN	41	SGND
10	X1	42	SGND
11	X4	43	302
12	301 (X7)	44	CAN2+
13	X10	45	CAN2-
14	*	46	302
15	X16	47	R232TX
16	X19	48	R232RX
17	X22	49	*
18	SGND	50	302
19	X26_S24V	51	X3
20	SGND	52	*
21	X28_S24V	53	X9
22	302	54	*
23	302	55	X15
24	MOD2-	56	X18
25	MOD2+	57	X21
26	302	58	X23
27	*	59	*
28	*	60	X25_S24V
29	Y5_MAIN	61	SGND
30	Y7_MAIN	62	X27_S24V
31	X2	63	PE
32	*	64	PE







Version: 0	Fiction:	Audit:	Approval:	Drawing number:	Drawings name:	The next page:	Page:
Date: 2021. 11. 09				Code:	Safety circuit diagram	P10	P09



Version: 0  
Date: 2021.11.09

Fiction:

Audit:

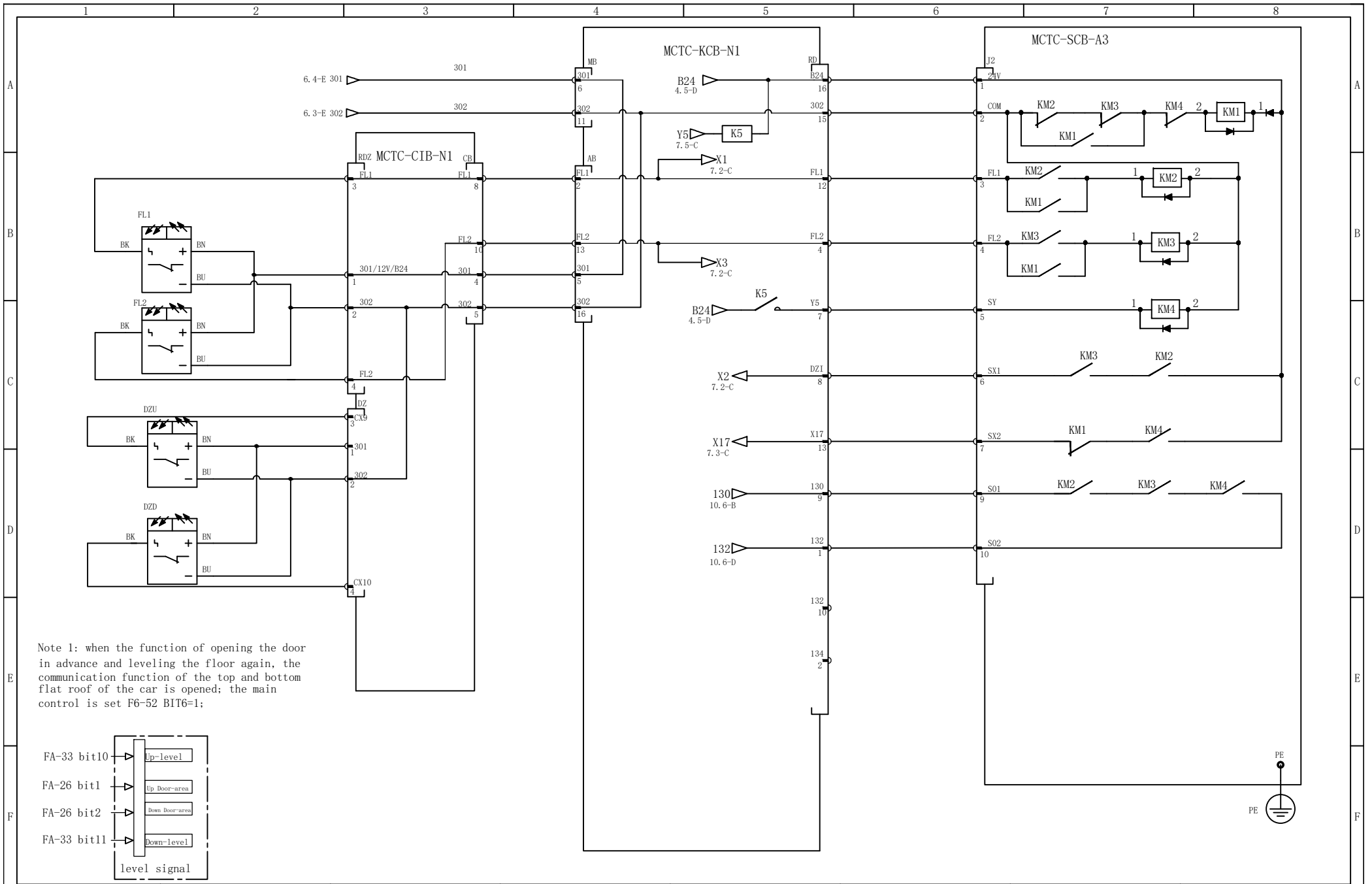
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Drawing number:  
Code:

Drawings name:  
Double door circuit diagram

The next page:  
P11

Page:  
P10



Version: 0  
Date: 2021.11.09

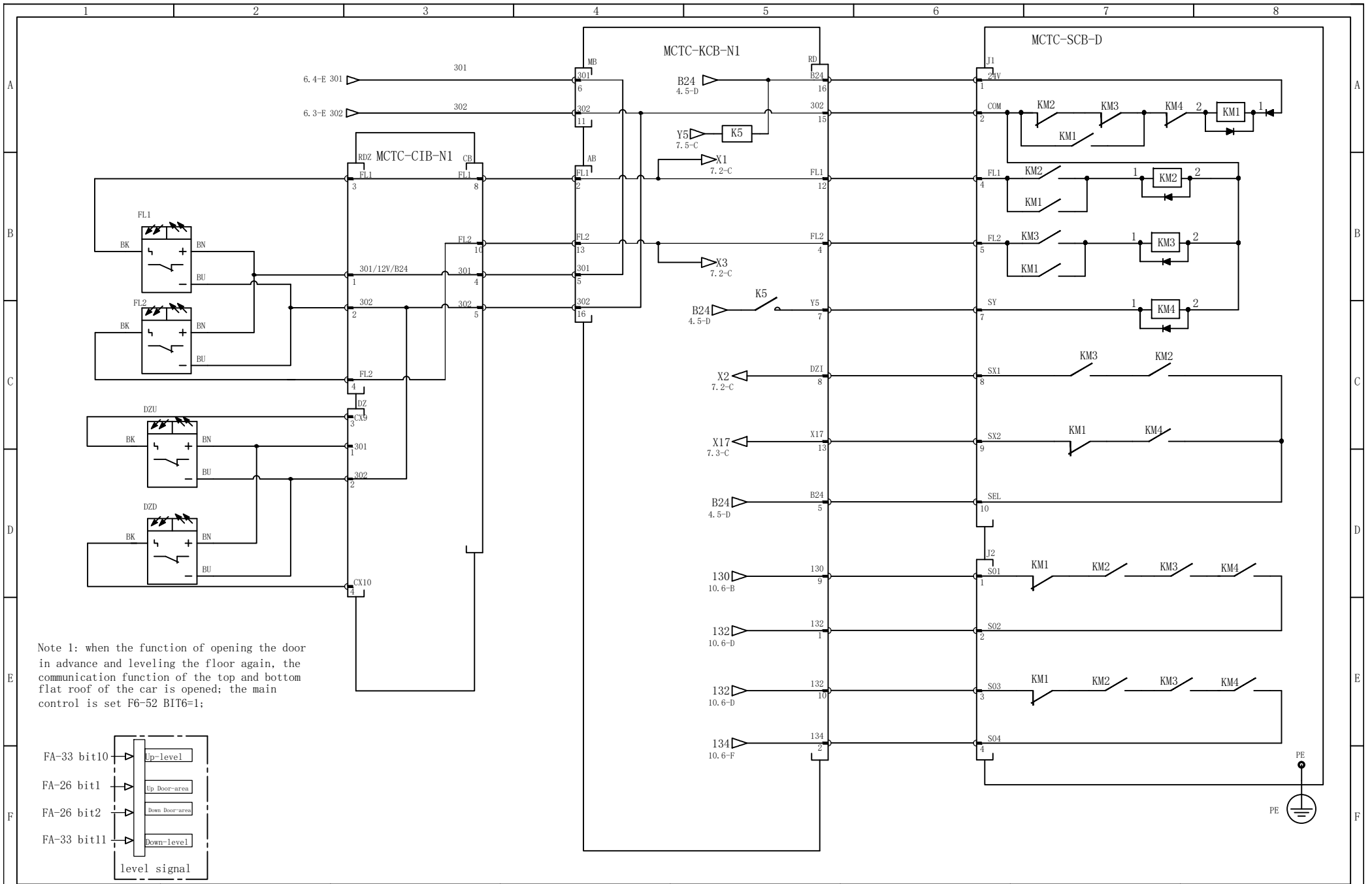
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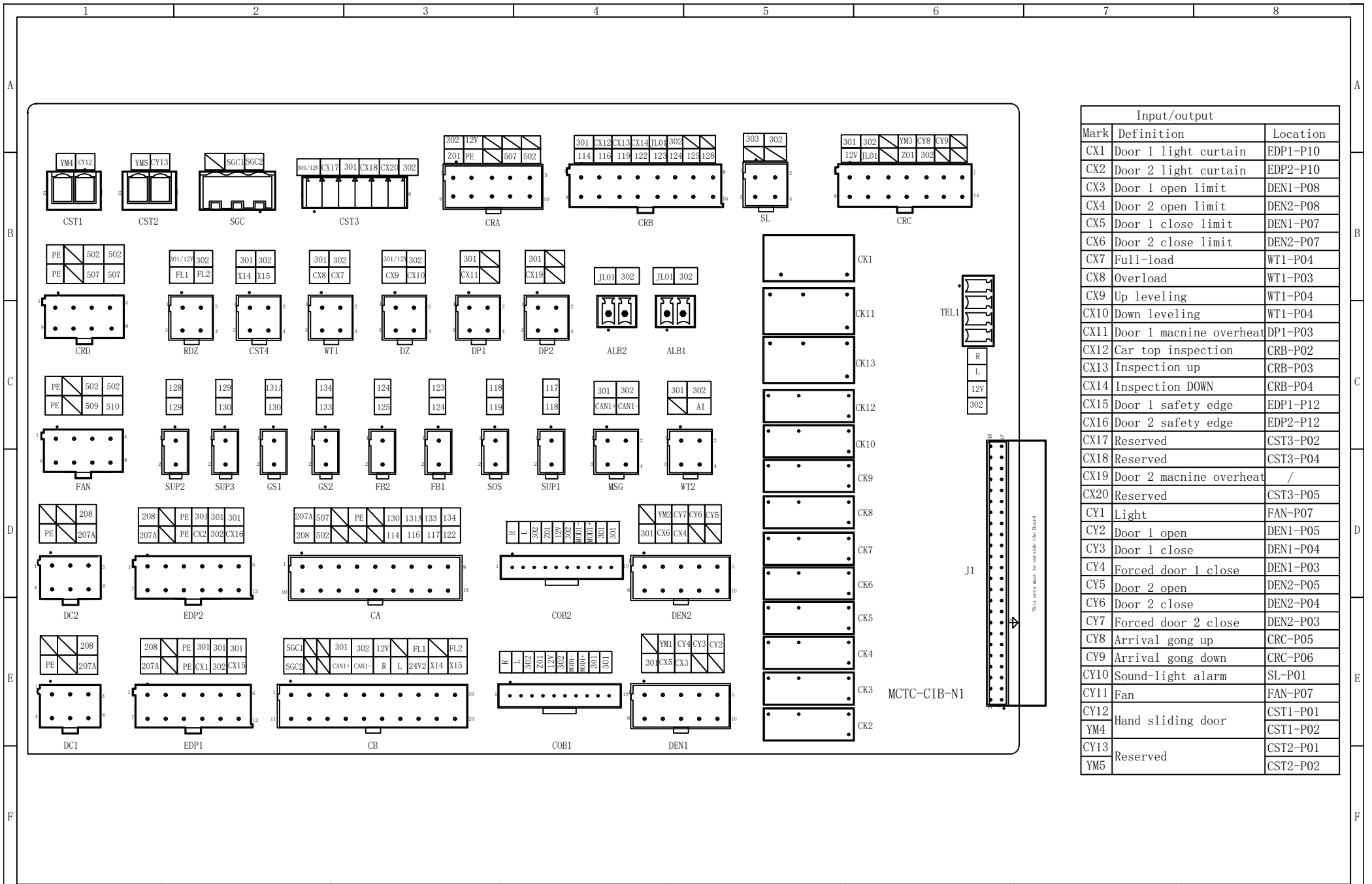
Drawings name:  
MCTC-SCB-A3 diagram

The next page:  
P11A

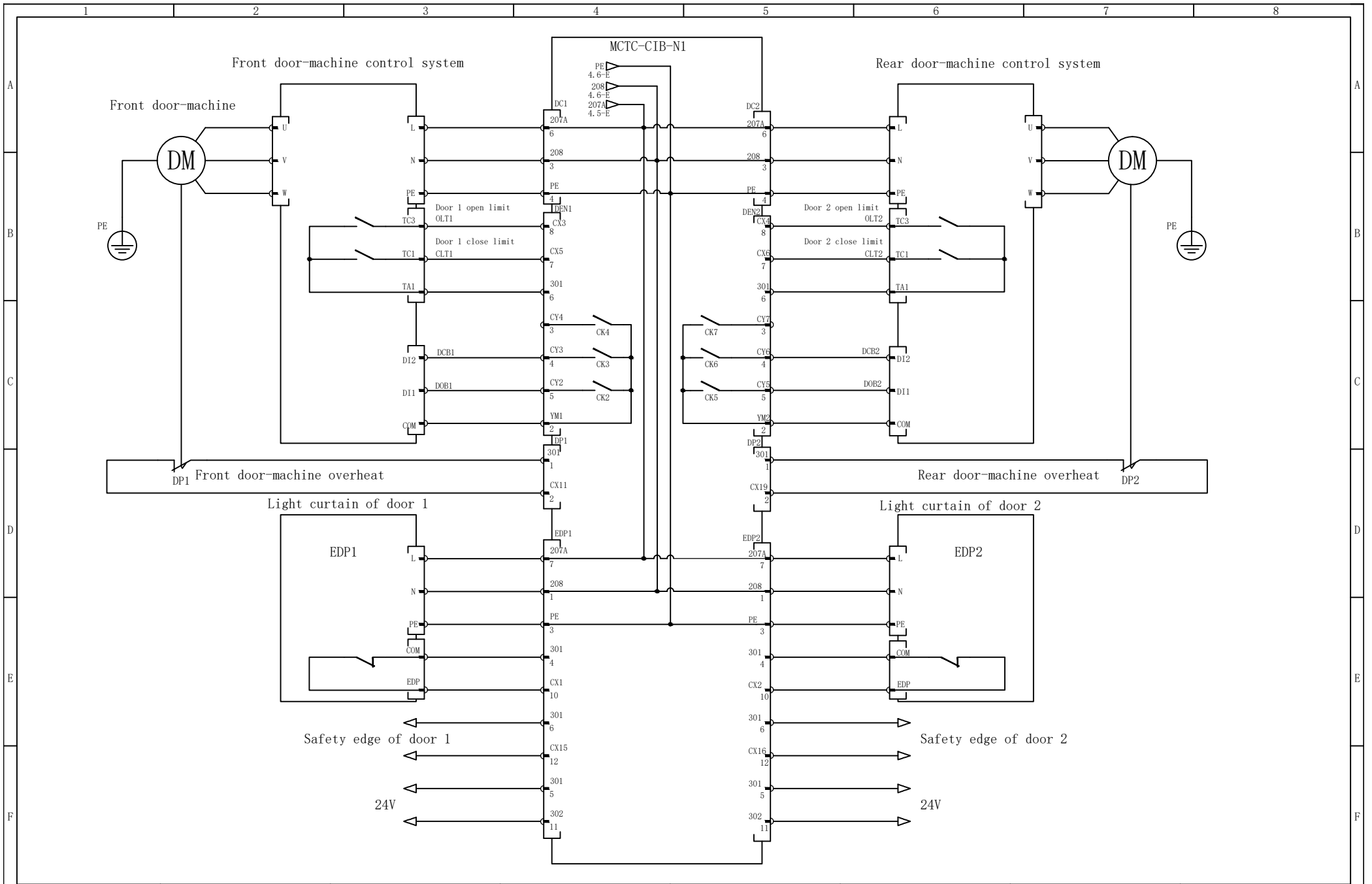
Page:  
P11



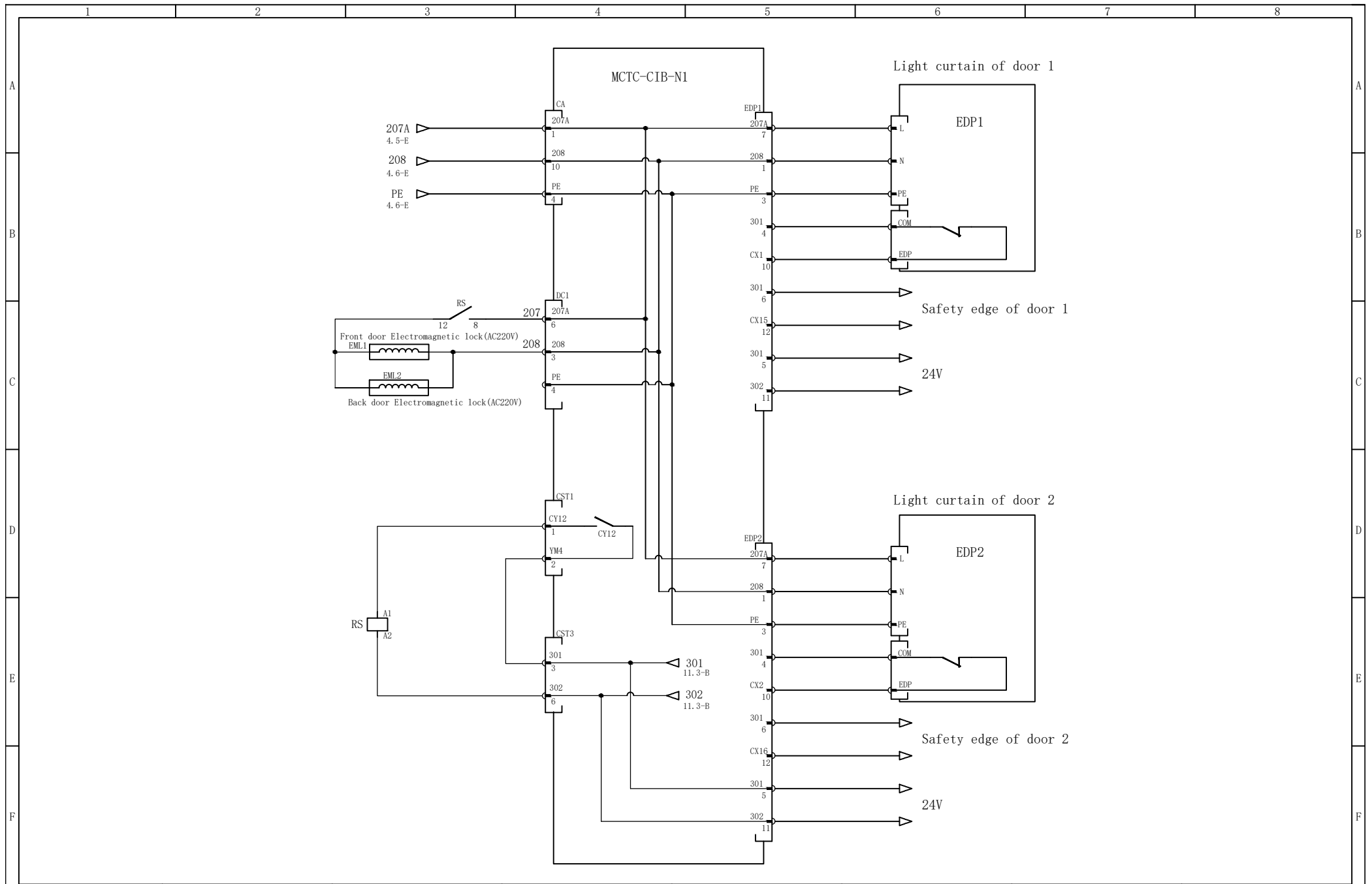
Version: A01	Fiction:	Audit:	Approval:	Drawing number:	Drawings name:	The next page:	Page:
Date: 2021.11.09				Code:	MCTC-SCB-D diagram	P12	P11A

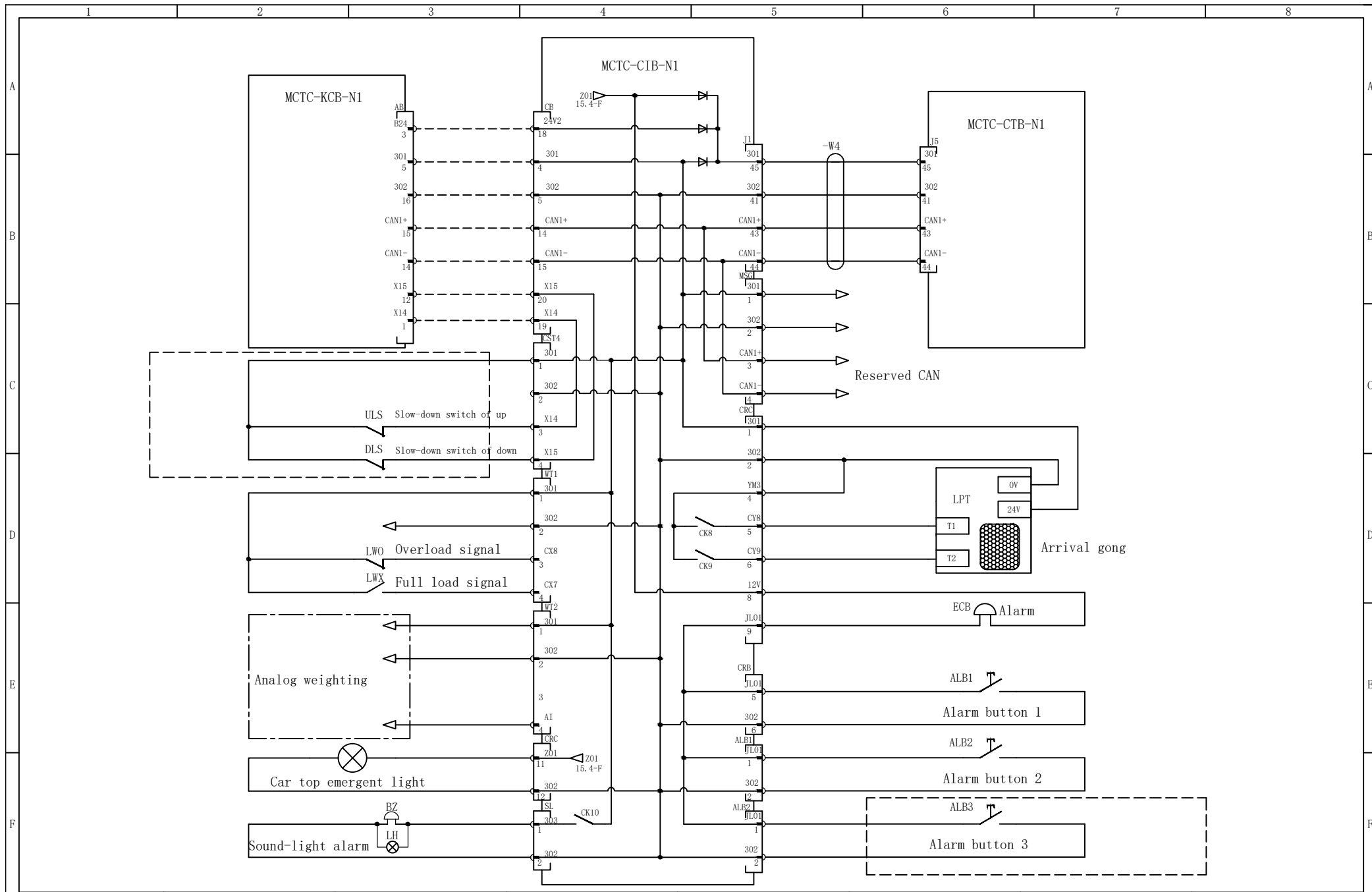


Input/output		
Mark	Definition	Location
CX1	Door 1 light curtain	EDP1-P10
CX2	Door 2 light curtain	EDP2-P10
CX3	Door 1 open limit	DEN1-P08
CX4	Door 2 open limit	DEN2-P08
CX5	Door 1 close limit	DEN1-P07
CX6	Door 2 close limit	DEN2-P07
CX7	Full-load	WT1-P04
CX8	Overload	WT1-P03
CX9	Up leveling	WT1-P04
CX10	Down leveling	WT1-P04
CX11	Door 1 machine overheat	DP1-P03
CX12	Car top inspection	CRB-P02
CX13	Inspection up	CRB-P03
CX14	Inspection DOWN	CRB-P04
CX15	Door 1 safety edge	EDP1-P12
CX16	Door 2 safety edge	EDP2-P12
CX17	Reserved	CST3-P02
CX18	Reserved	CST3-P04
CX19	Door 2 machine overheat	/
CX20	Reserved	CST3-P05
CY1	Light	FAN-P07
CY2	Door 1 open	DEN1-P05
CY3	Door 1 close	DEN1-P04
CY4	Forced door 1 close	DEN1-P03
CY5	Door 2 open	DEN2-P05
CY6	Door 2 close	DEN2-P04
CY7	Forced door 2 close	DEN2-P03
CY8	Arrival gong up	CRC-P05
CY9	Arrival gong down	CRC-P06
CY10	Sound-light alarm	SL-P01
CY11	Fan	FAN-P07
CY12	Hand sliding door	CST1-P01
YM4		CST1-P02
CY13	Reserved	CST2-P01
YM5		CST2-P02



Version: 0	Fiction:	Audit:	Approval:	Drawing number:	Drawings name:	The next page:	Page:
Date: 2021.11.09				Code:	Door machine/light curtain	P13A	P13





Version: 0  
Date: 2021.11.09

Fiction:  
Audit:

Approval:

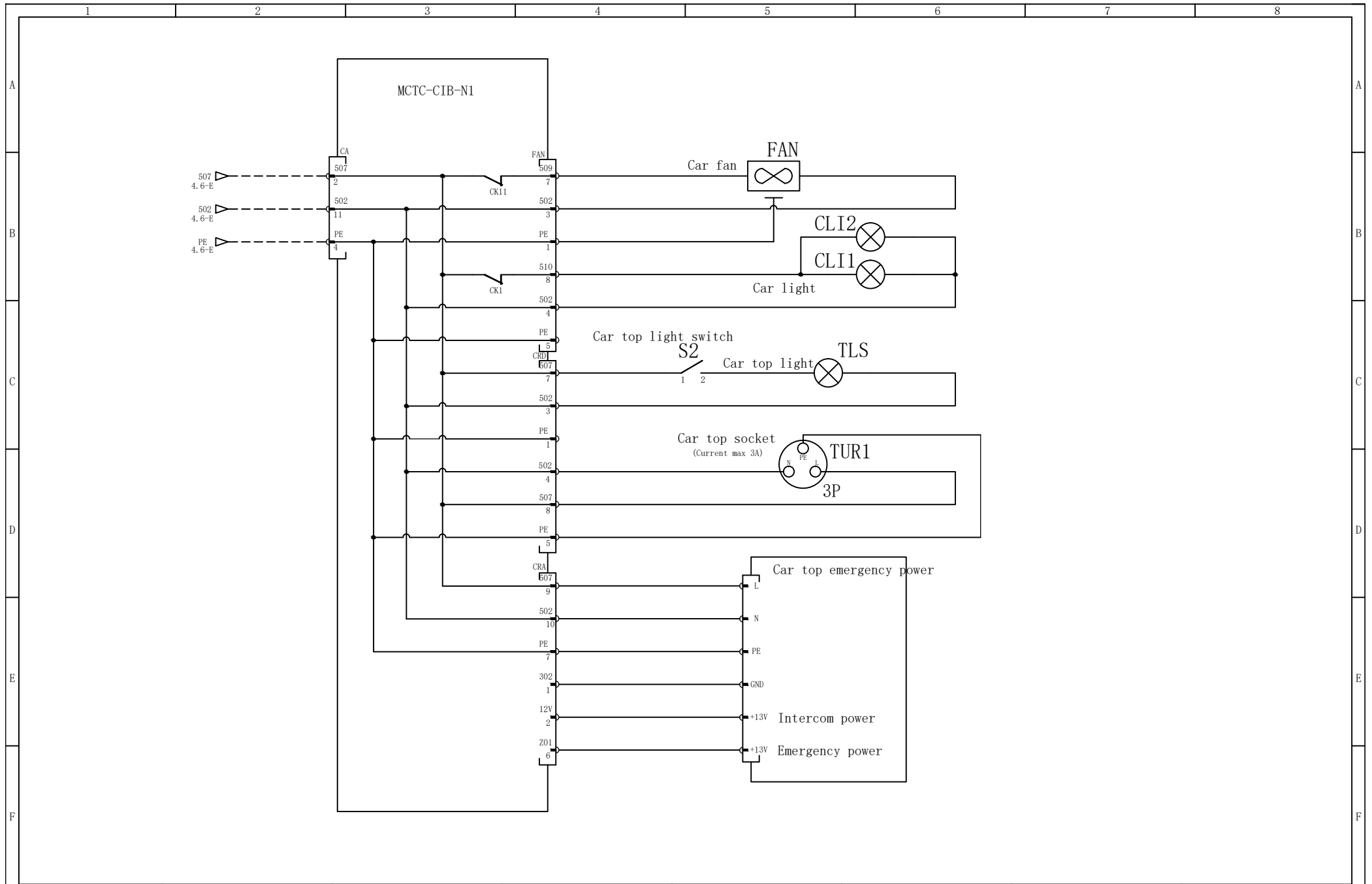
Drawing number:  
Code:

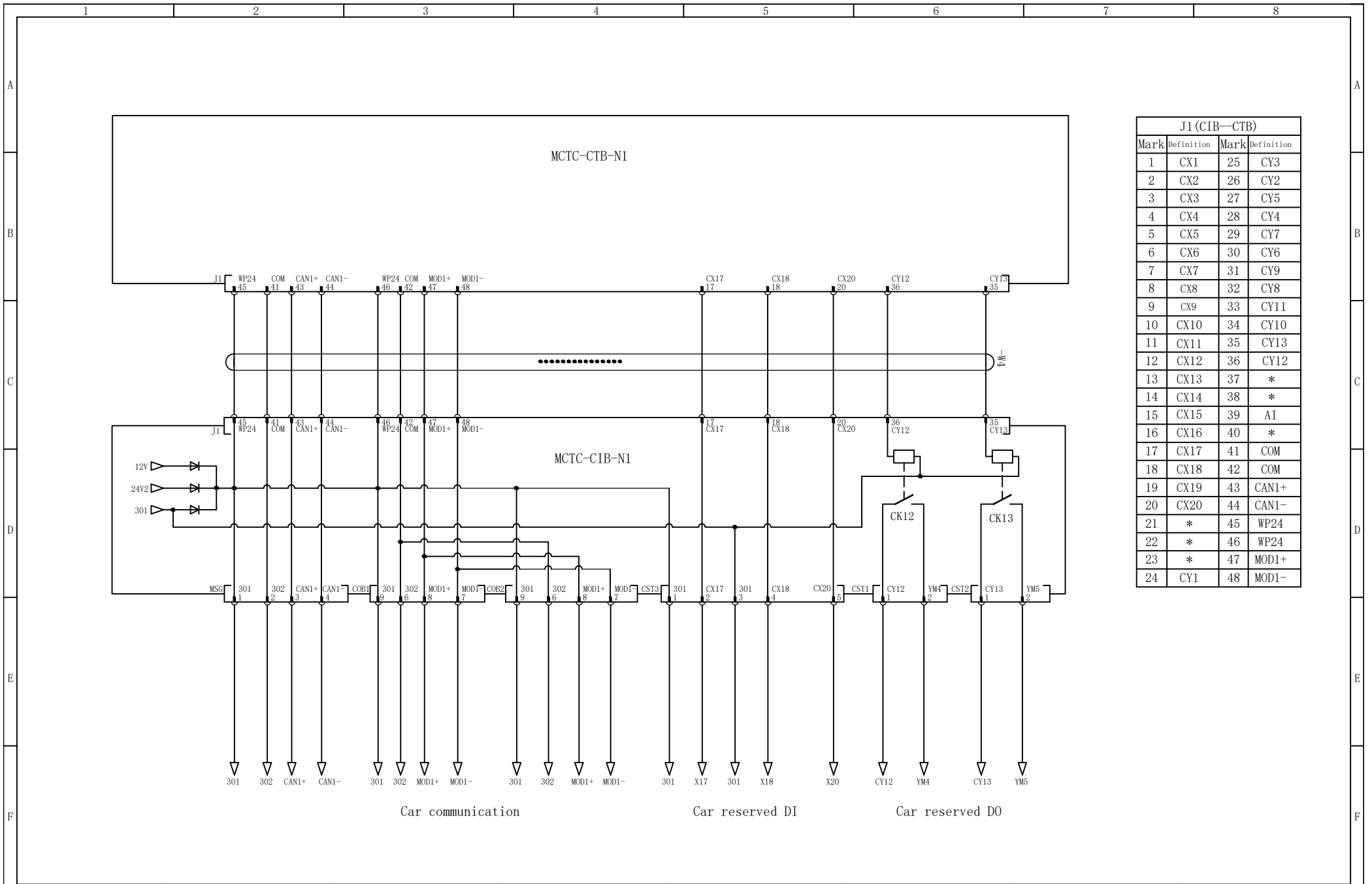
Drawings name:  
Alarm bell/Arrival gong  
Car emergence light

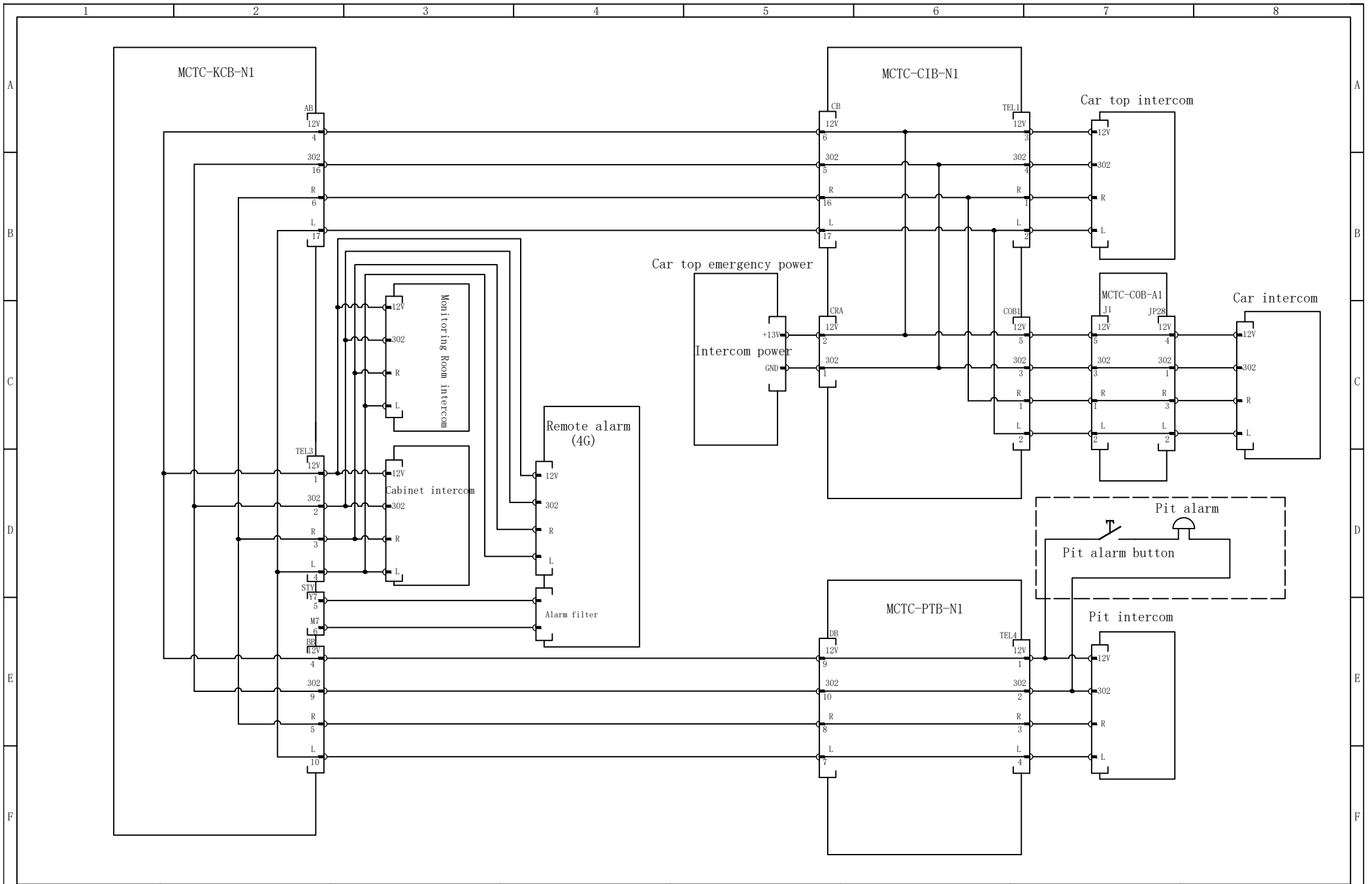
The next page:  
P15

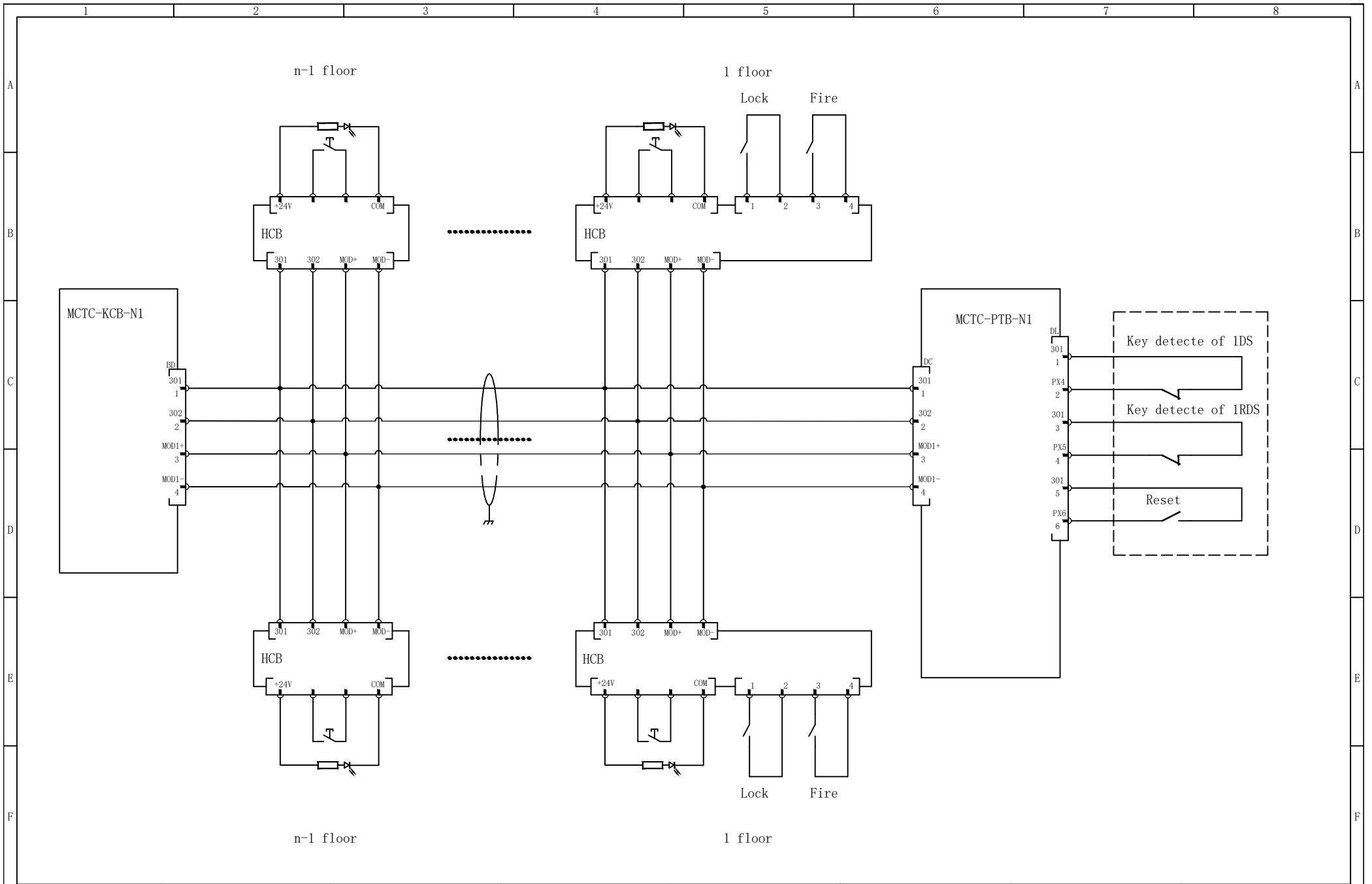
Page:  
P14











Version: 0  
Date: 2021.11.09

Fiction:

Audit:

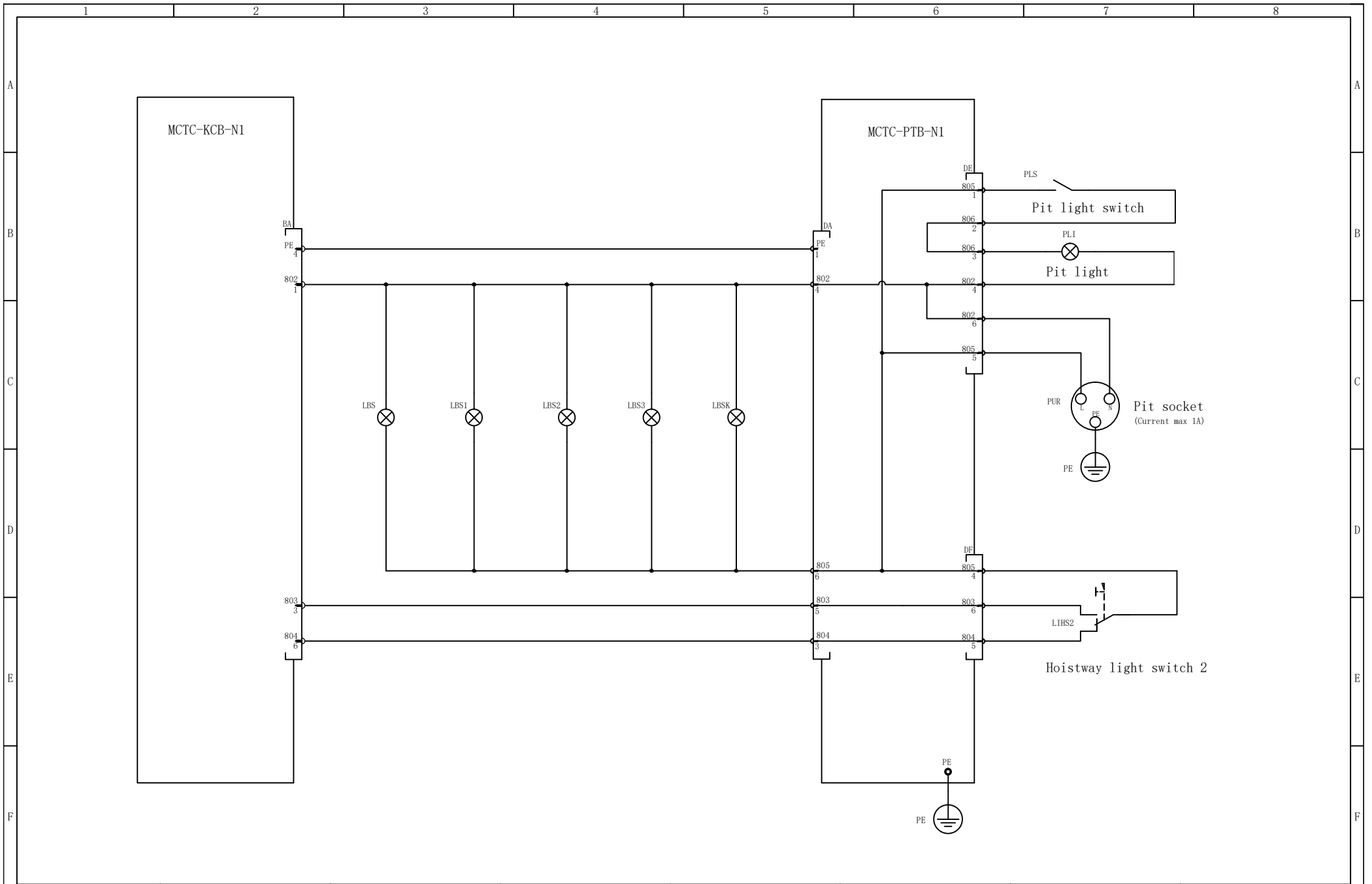
Approval:

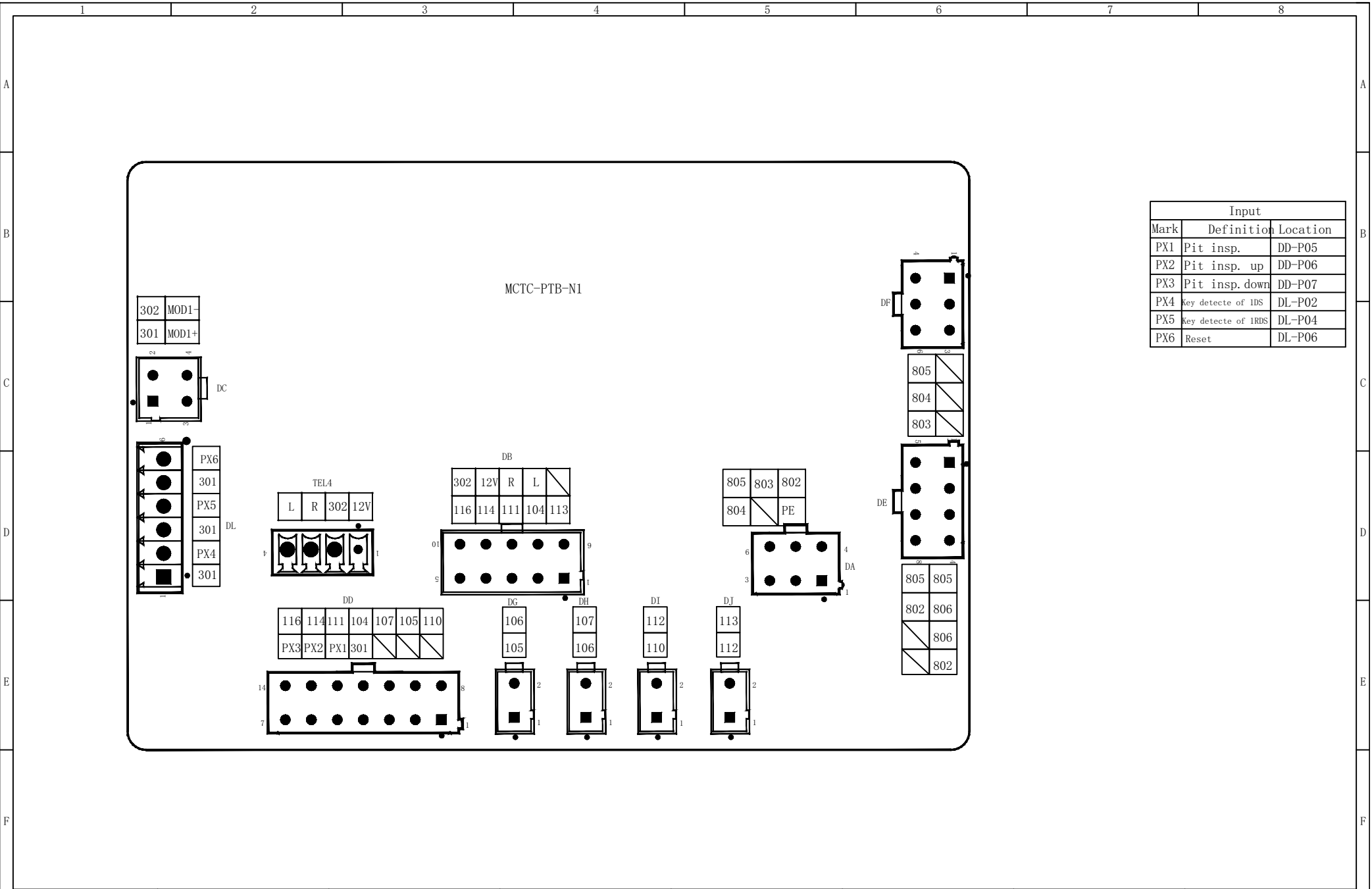
Drawing number:  
Code:

Drawings name:  
External call communication

The next page:  
P19

Page:  
P18





Input		
Mark	Definition	Location
PX1	Pit insp.	DD-P05
PX2	Pit insp. up	DD-P06
PX3	Pit insp. down	DD-P07
PX4	Key detecte of 1DS	DL-P02
PX5	Key detecte of 1RDS	DL-P04
PX6	Reset	DL-P06

Version: 0  
Date: 2021.11.09

Fiction:

Audit:

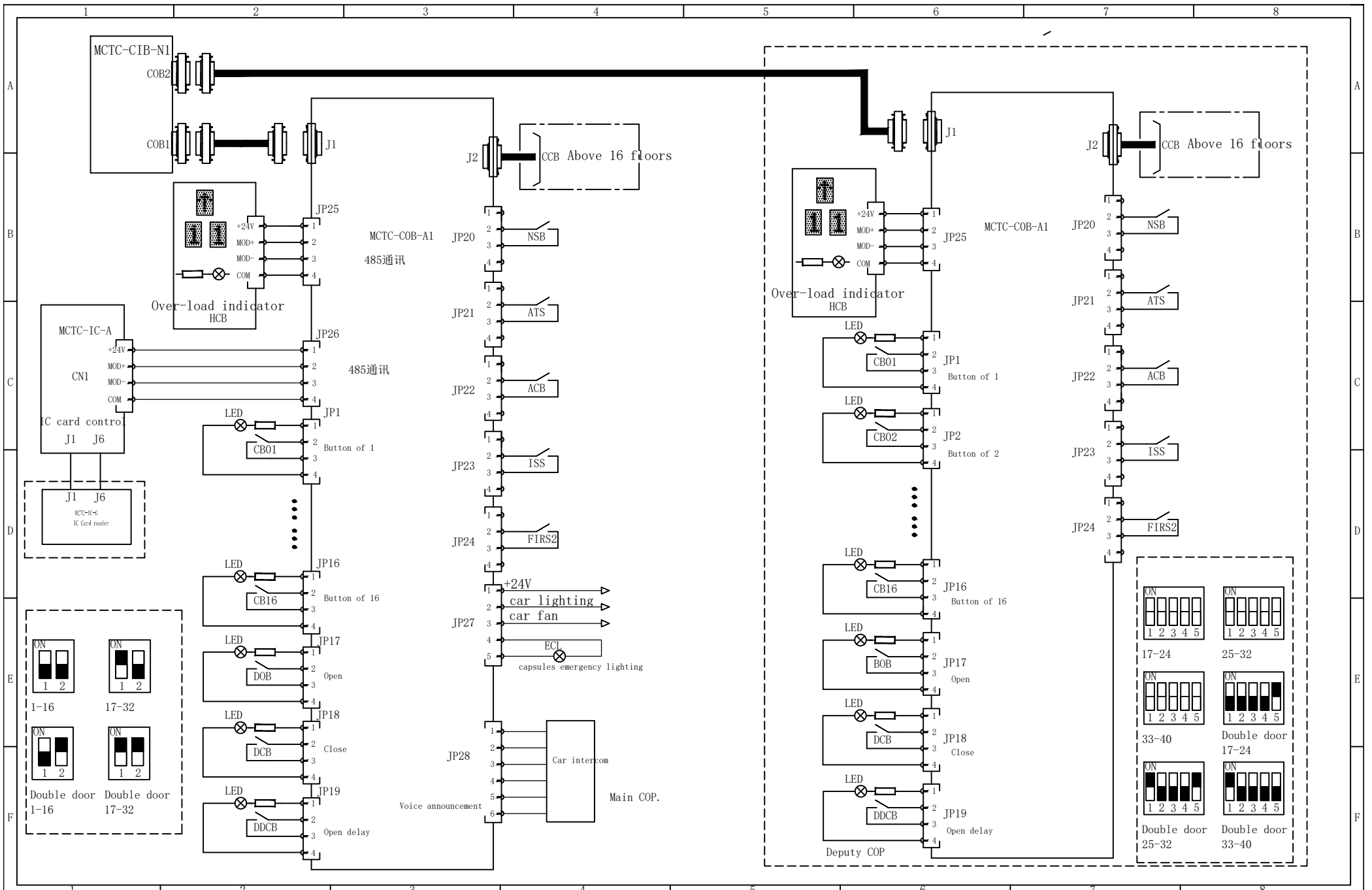
Approval:

Drawing number:  
Code:

Drawings name:  
Pit Interface board  
plugin unit diagram

The next page:  
P21

Page:  
P20



Version: 0  
Date: 2021. 11. 09

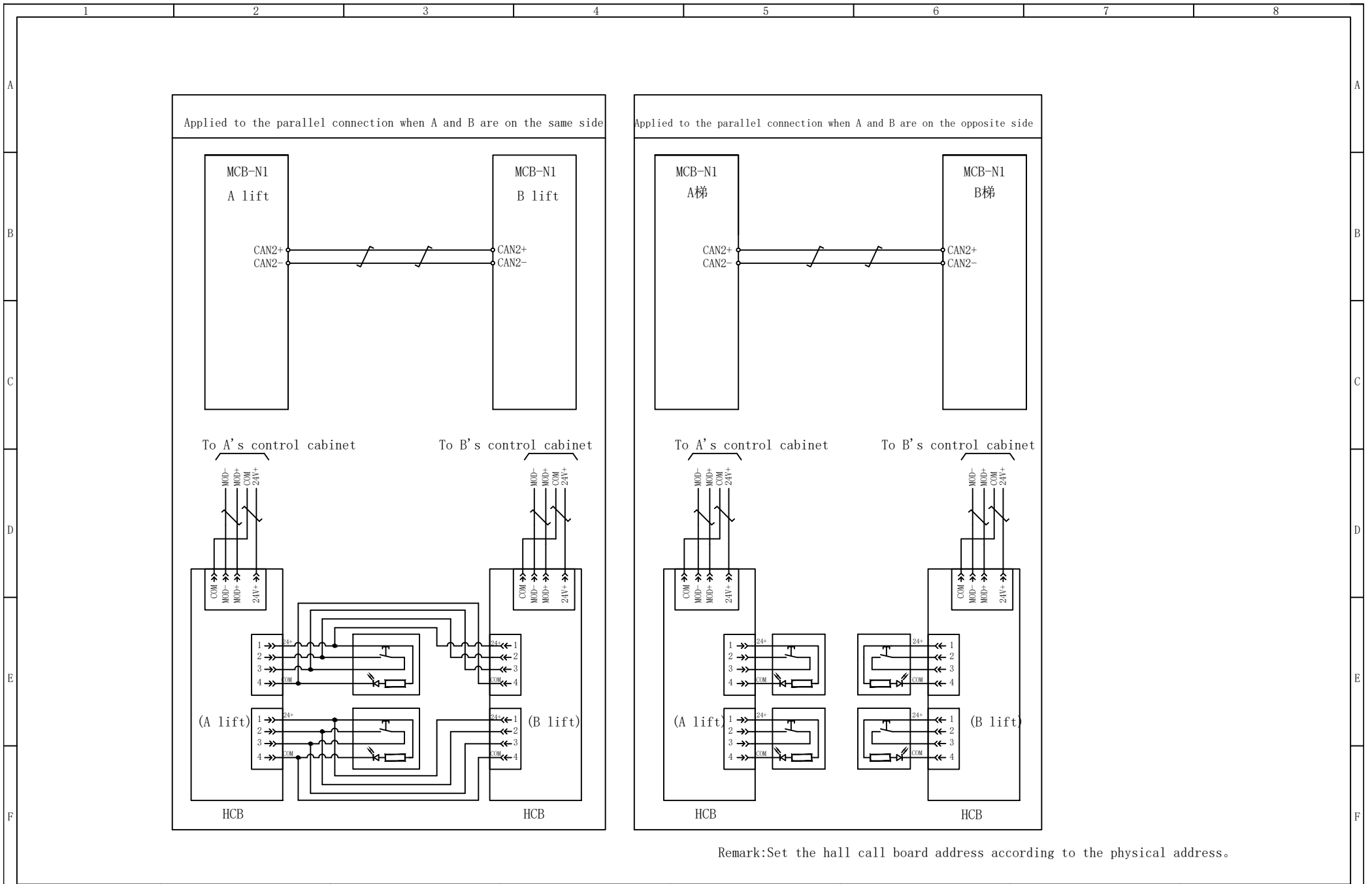
Fiction:      Audit:      Approval:

Drawing number:  
Code:

Drawings name:  
Operation box

The next page:  
P22

Page:  
P21



Remark: Set the hall call board address according to the physical address.