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ABB

No.4528, Kangxin Highway,
Pudong New District, Shanghai,
201319, P. R. China

Customer	:	
	:	
Drawing number	:	3HAC076810-008
Drawing version	:	Rev 02

Manufacture	:	ABB Engineering (Shanghai) Ltd.
Type	:	Industrial robot controller
Type of installation	:	
Control cabinet	:	OmniCore E10
Mains voltage	:	100-230VAC, For IRB 1100; 220/230VAC, For other manipulators.
Supply	:	
Control voltage	:	
Year of construction	:	2021

Project start	:	
Project manager	:	
Last revision	:	
Designed by	:	
Designed date	:	10/18/2021
Number of pages	:	37
	:	

Rev 00 2021/01/29
New release

Rev 01 2021/08/08
Page 005: Add the block of X4
Page 4.a: Correct the destination name.
Page 6: Modify the definition of W011
Delete Page 10 & Page 10.a

Rev 02 2021/10/15
Page 4.a: Modify A2.X5 signal name
Delete Auto stop/General stop short-circuit connection
Change the Note of customer safety interface

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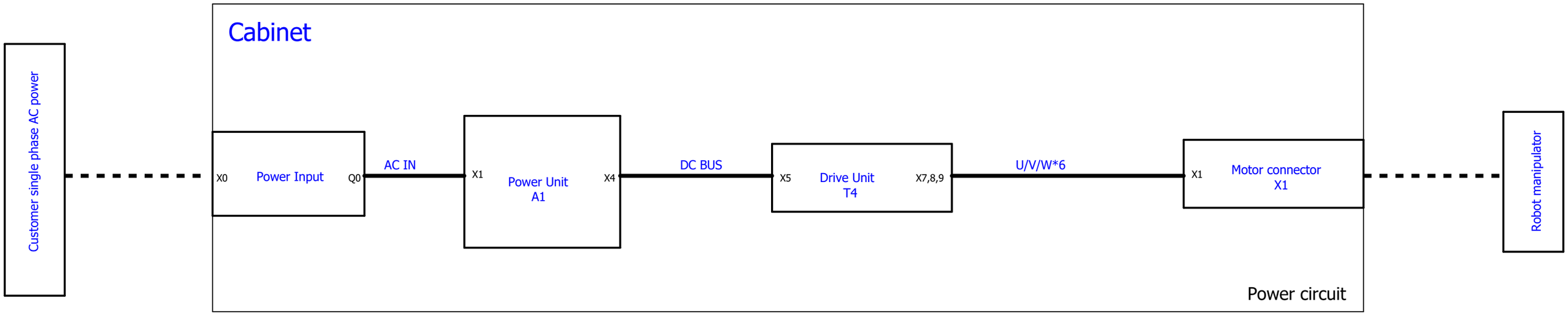
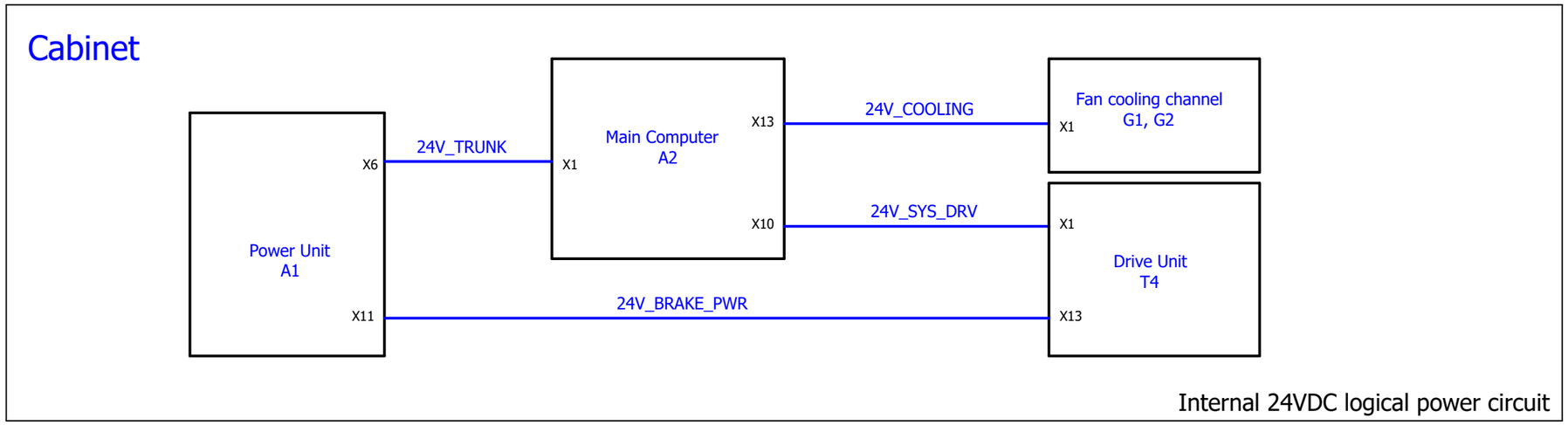
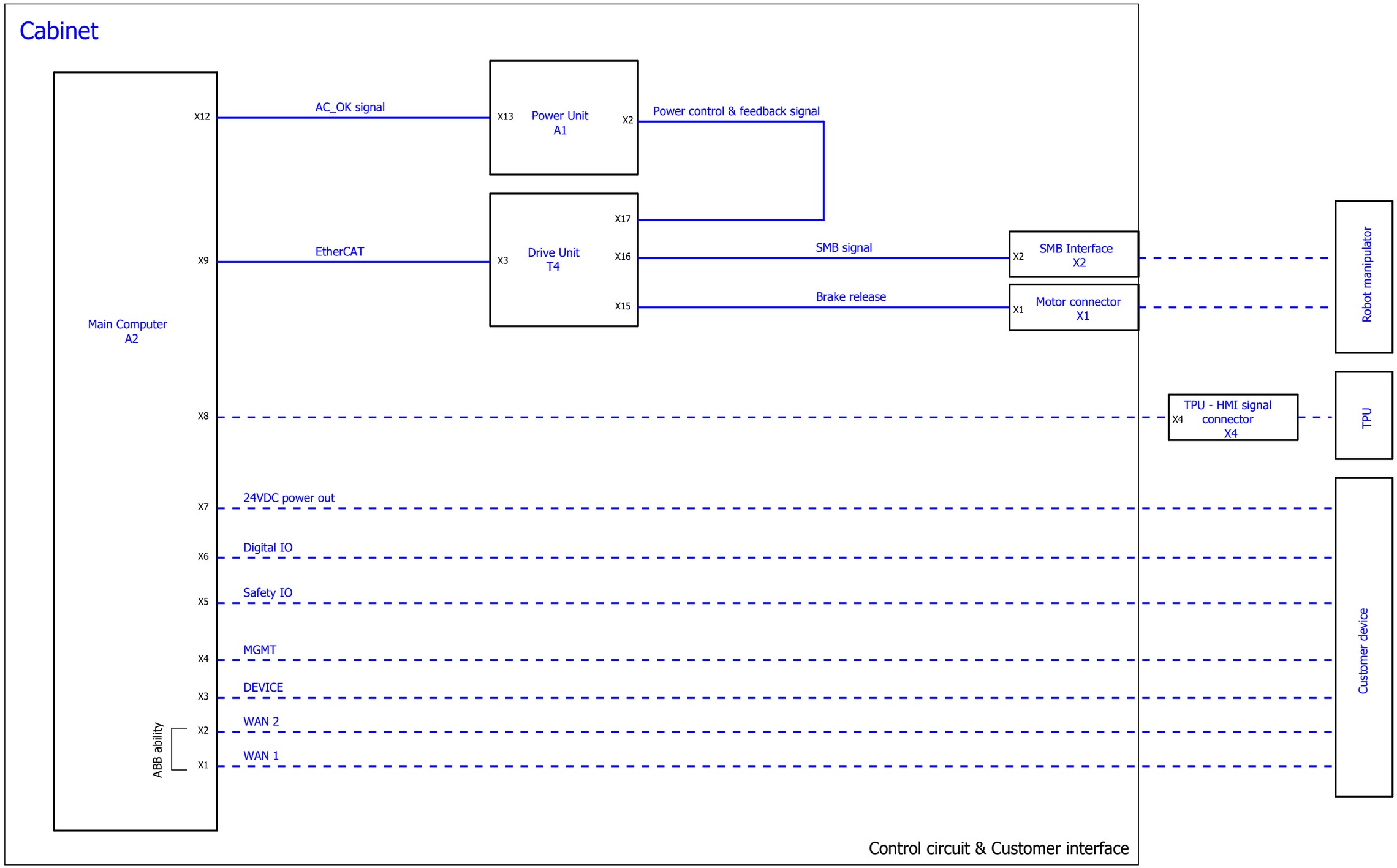




Latest revision: Rev 02 6/16/2021		ABB Lab/Office: RA/RDP	Block diagram	Status: Approved	High-level function: = Overview Mounting location: +
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China		Document no. 3HAC076810-008	Page: 005 Next: 005.a Total: 37



Latest revision: Rev 02 8/10/2021		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Lab/Office: RA/RDP	Block diagram	Status: Approved
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao				Document no. 3HAC076810-008

High-level function: = Overview
Mounting location: +

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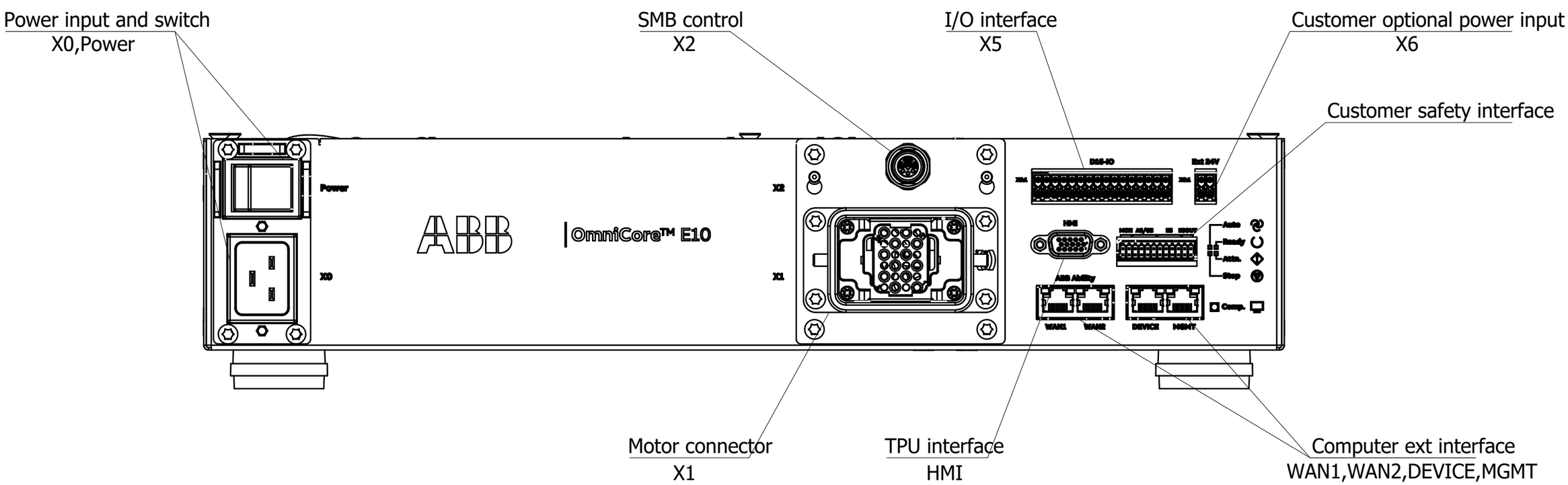
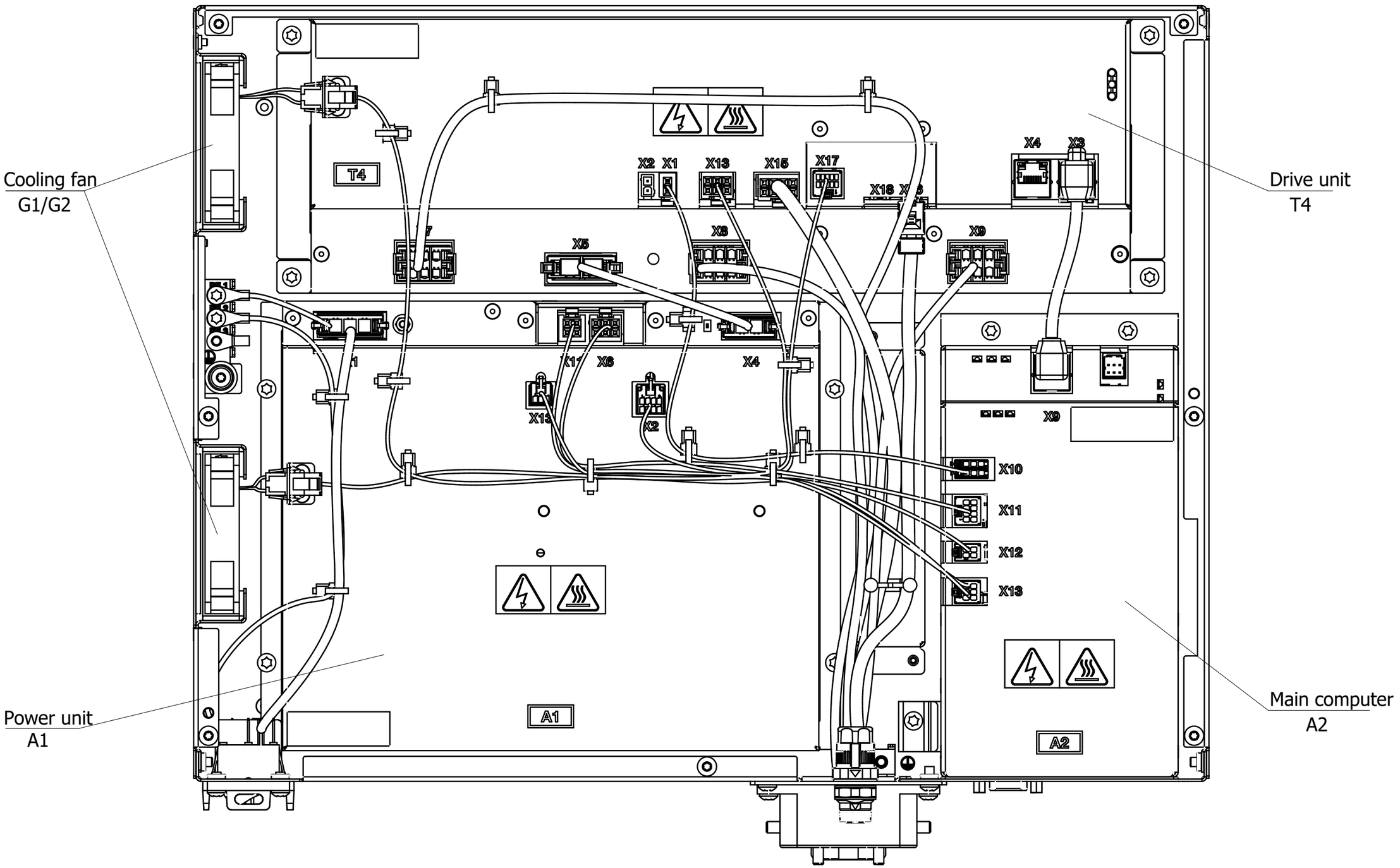
Total: 37



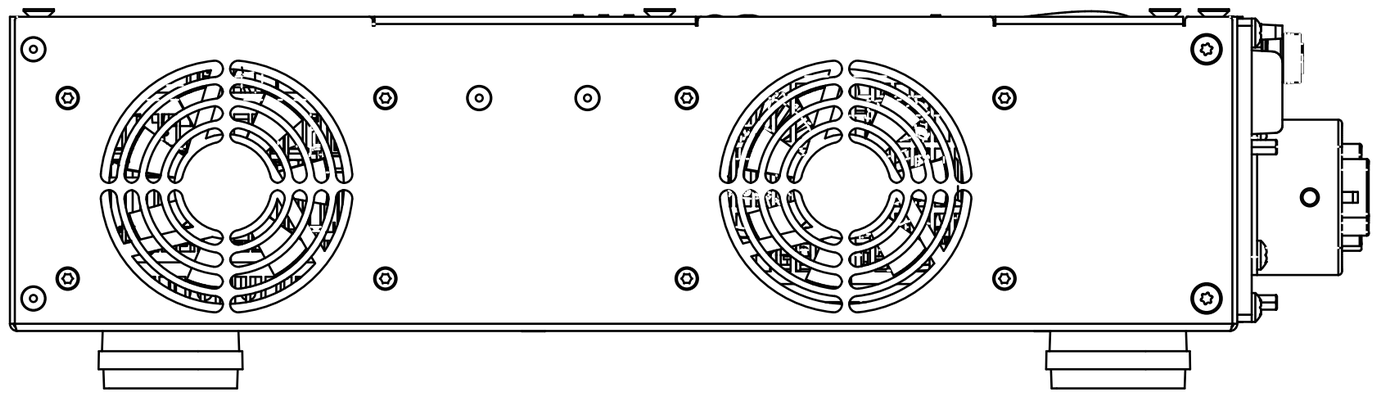
Front view

Latest revision: Rev 02, 6/16/2021		ABB Lab/Office: RA/RDP	Cabinet - U1	Status: Approved	High-level function: = Overview, Mounting location: +
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China		Document no. 3HAC076810-008	Page: 006, Next: 006.a, Total: 37

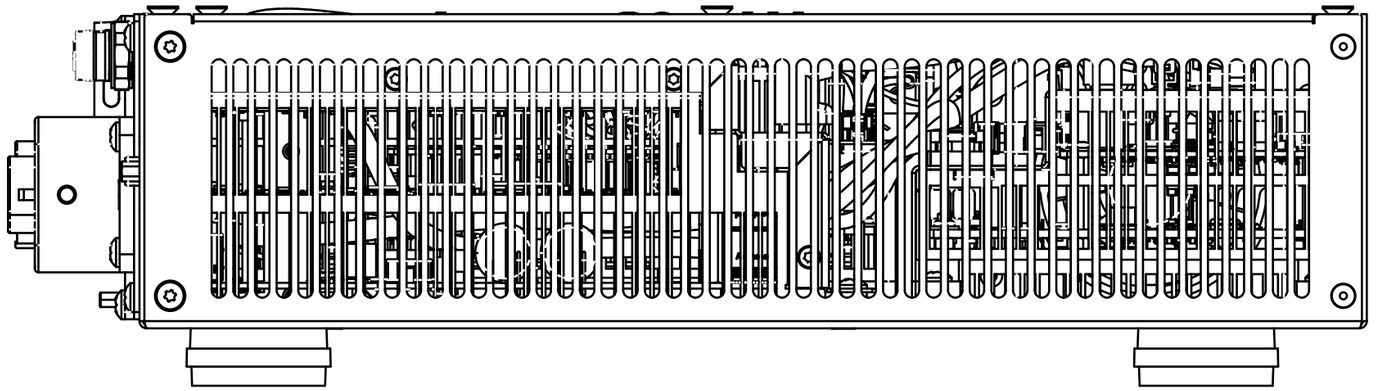


Top view

Latest revision: Rev 02, 6/16/2021		ABB	Lab/Office: RA/RDP	Status: Approved	High-level function: = Overview
		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Cabinet - U1	Mounting location: +	
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao			Document no. 3HAC076810-008	Page: 006.a Next: 006.b Total: 37

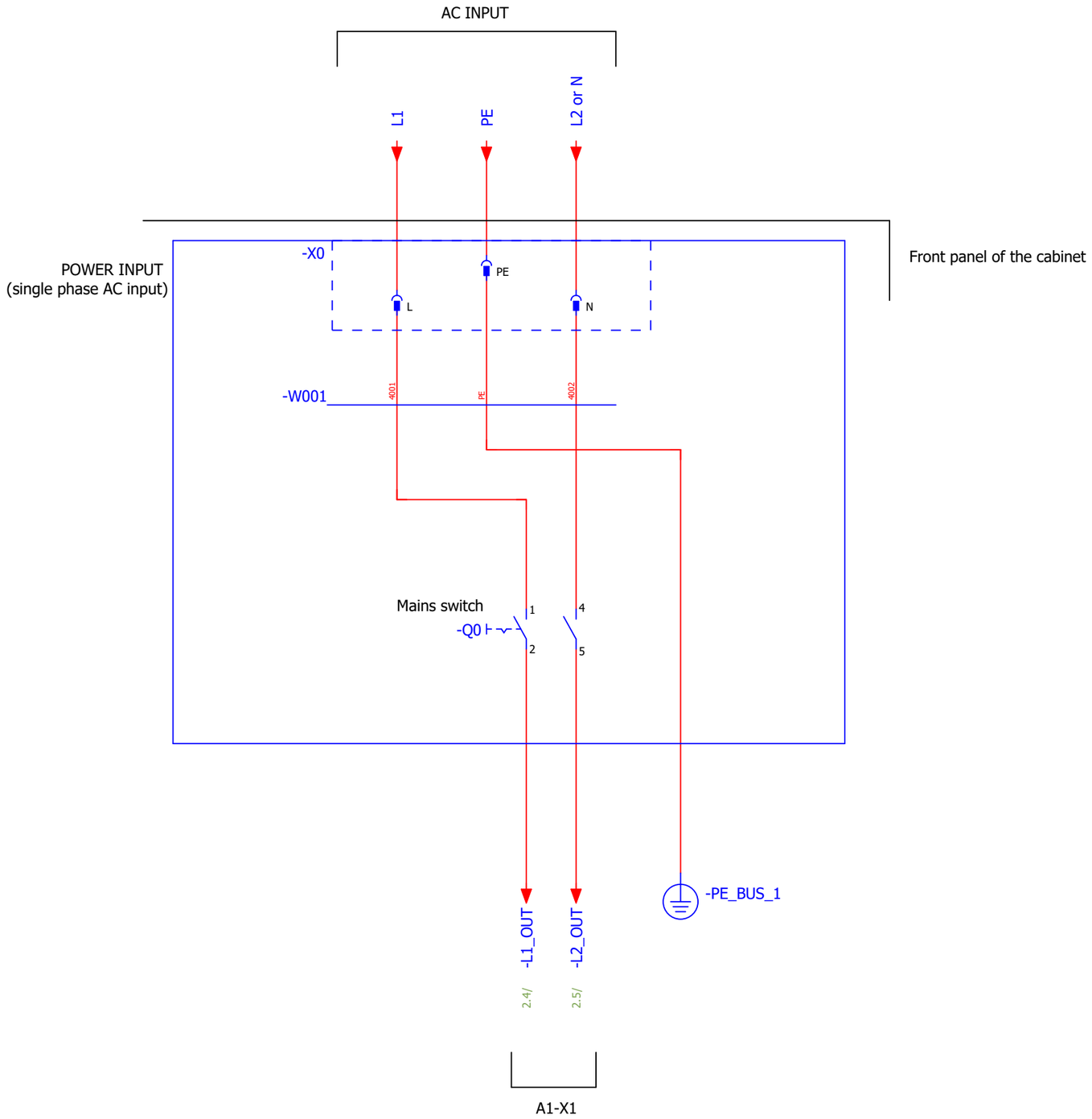


Left view



Right view

Latest revision: Rev 02 6/16/2021		ABB Lab/Office: RA/RDP	Cabinet - U1	Status: Approved	High-level function: = Overview Mounting location: +
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China		Document no. 3HAC076810-008	Page: 006.b Next: =SCH+U1/1 Total: 37



Latest revision: Rev 02 6/16/2021		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Lab/Office: RA/RDP	POWER INPUT	Status: Approved
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao				Document no. 3HAC076810-008

High-level function: = SCH
Mounting location: + U1

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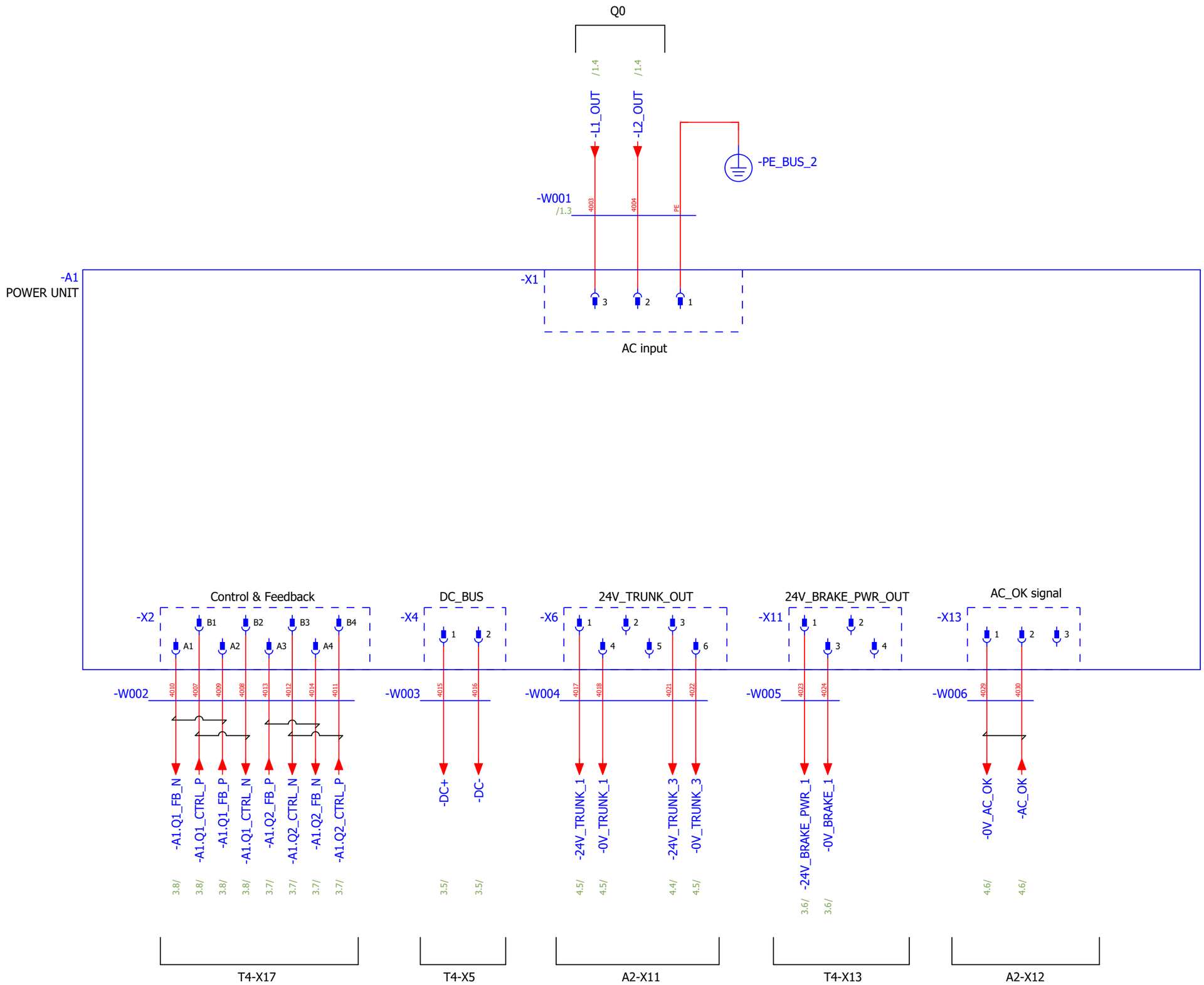
Next: 2
Total: 37



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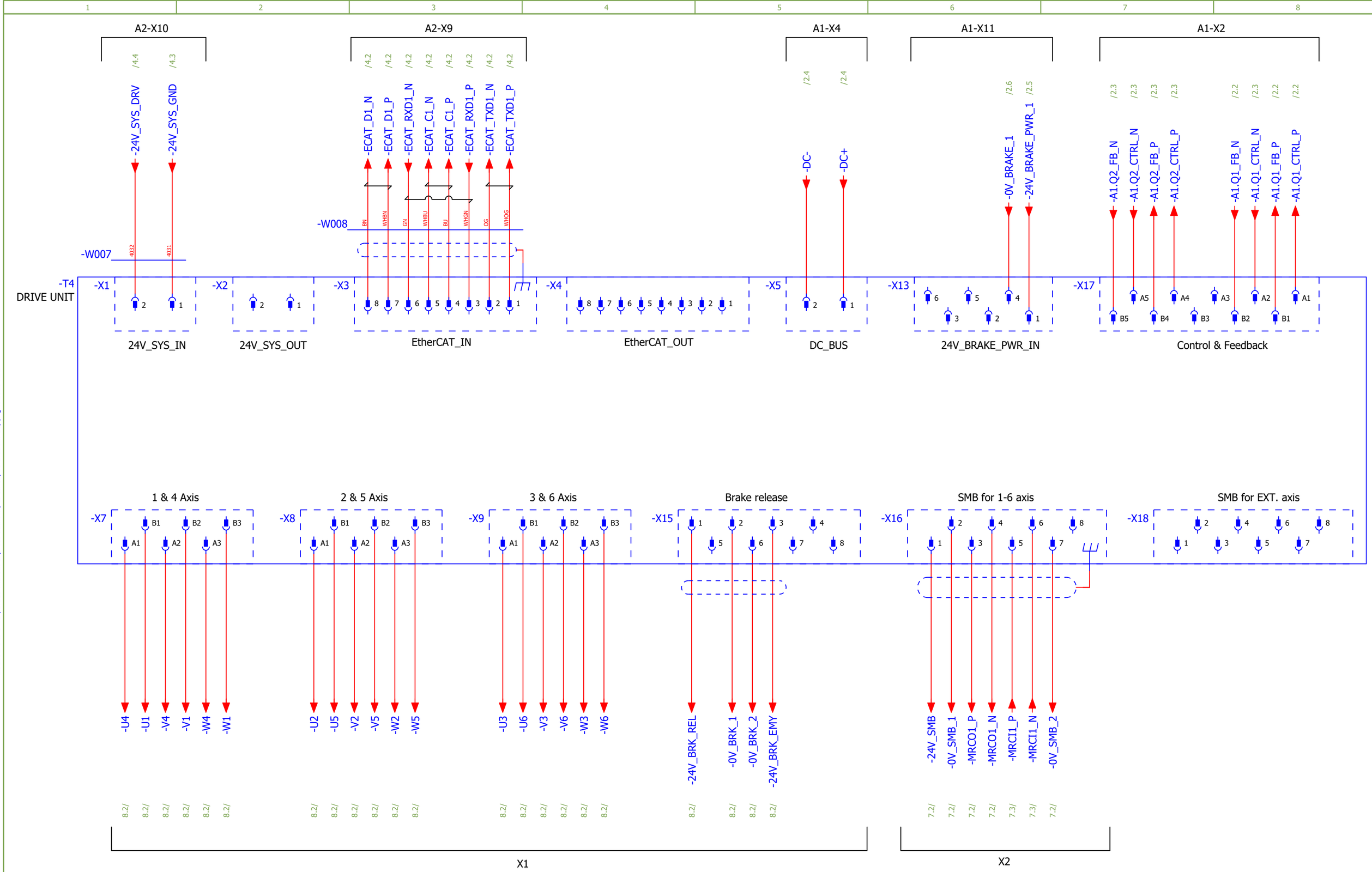
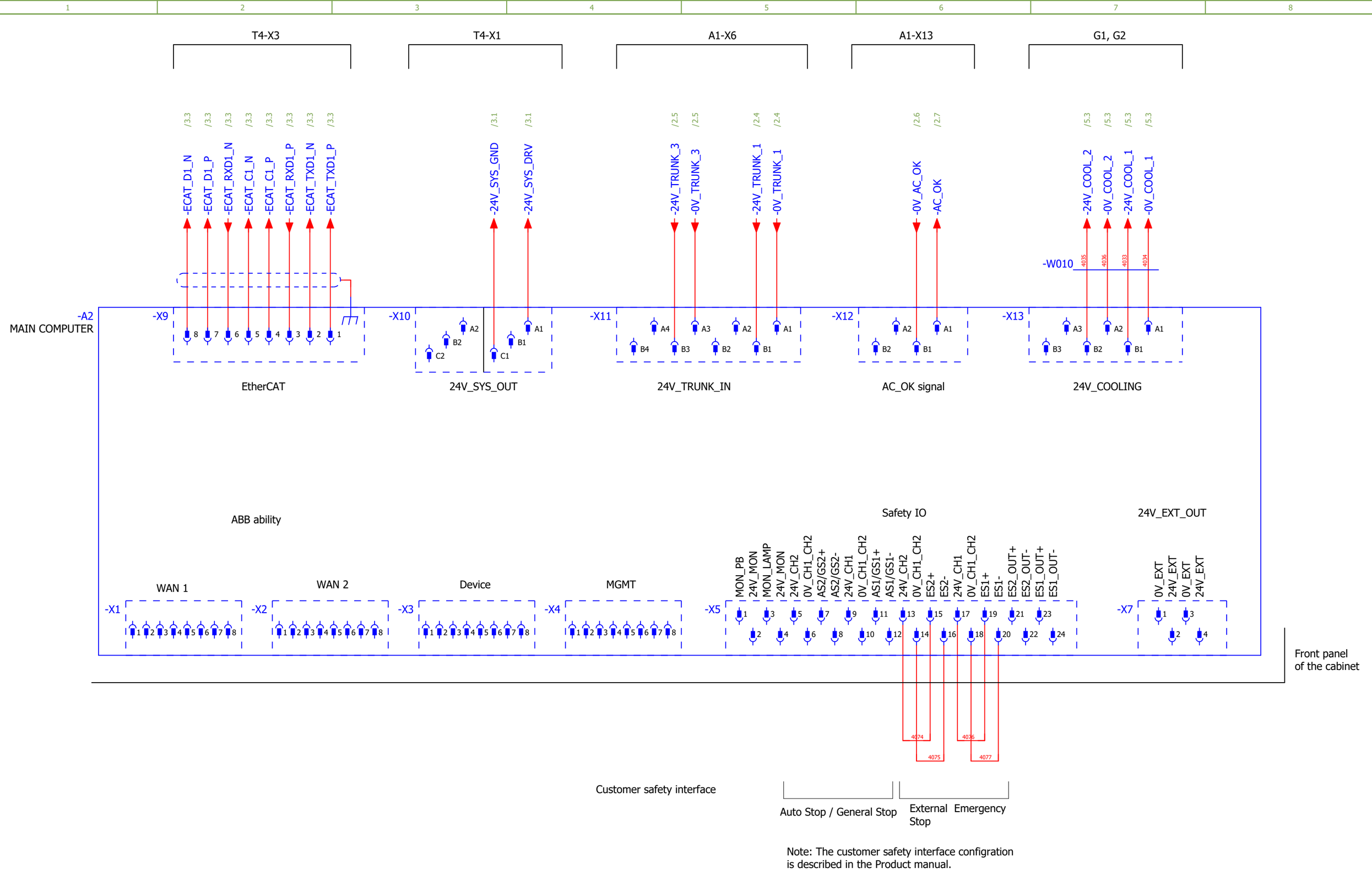
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	POWER UNIT- A1		Document no. 3HAC076810-008	Page: 2 Next: 3 Total: 37



Latest revision: Rev 02, 6/16/2021		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Lab/Office: RA/RDP	Status: Approved	High-level function: = SCH Mounting location: + U1
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	DRIVE UNIT- T4		Document no. 3HAC076810-008	Page: 3 Next: 4 Total: 37



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Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	MAIN COMPUTER - A2		Document no. 3HAC076810-008	Page: 4 Next: 4.a Total: 37

Front panel of the cabinet

-A2
MAIN COMPUTER

Digital IO

-X6

DI8		32	
DI9	31		
DI7		30	
DI10	29		
DI6		28	
DI11	27		
DI5		26	
DI12	25		
DI4		24	
DI13	23		
DI3		22	
DI14	21		
DI2		20	
DI15	19		
DI1		18	
DI16	17		
GND_DI		16	
GND_DI	15		
GND_DO		14	
0V_IO_EXT	13		
DO1		12	
DO5	11		
DO2		10	
DO6	9		
DO3		8	
DO7	7		
DO4		6	
DO8	5		
GND_DO		4	
0V_IO_EXT	3		
PWR_DO		2	
24V_IO_EXT	1		

Customer interface

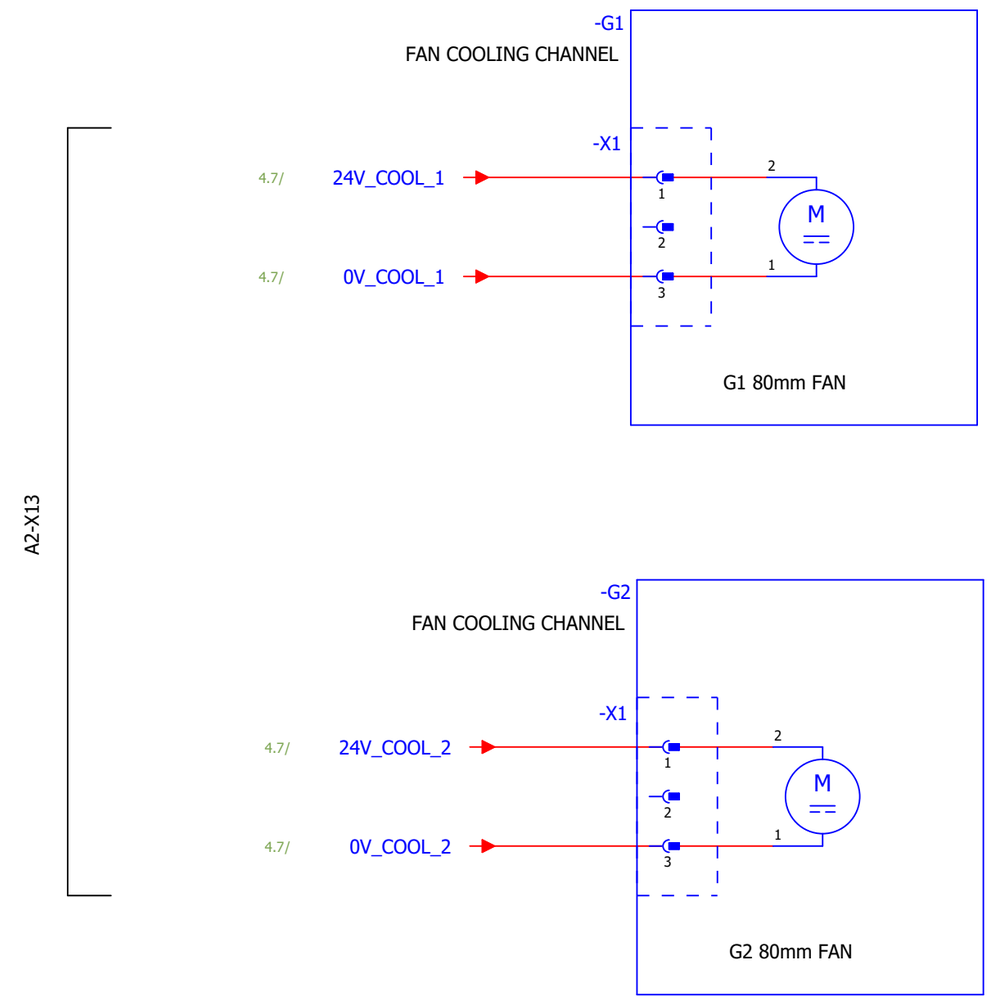
TPU interface

-X8

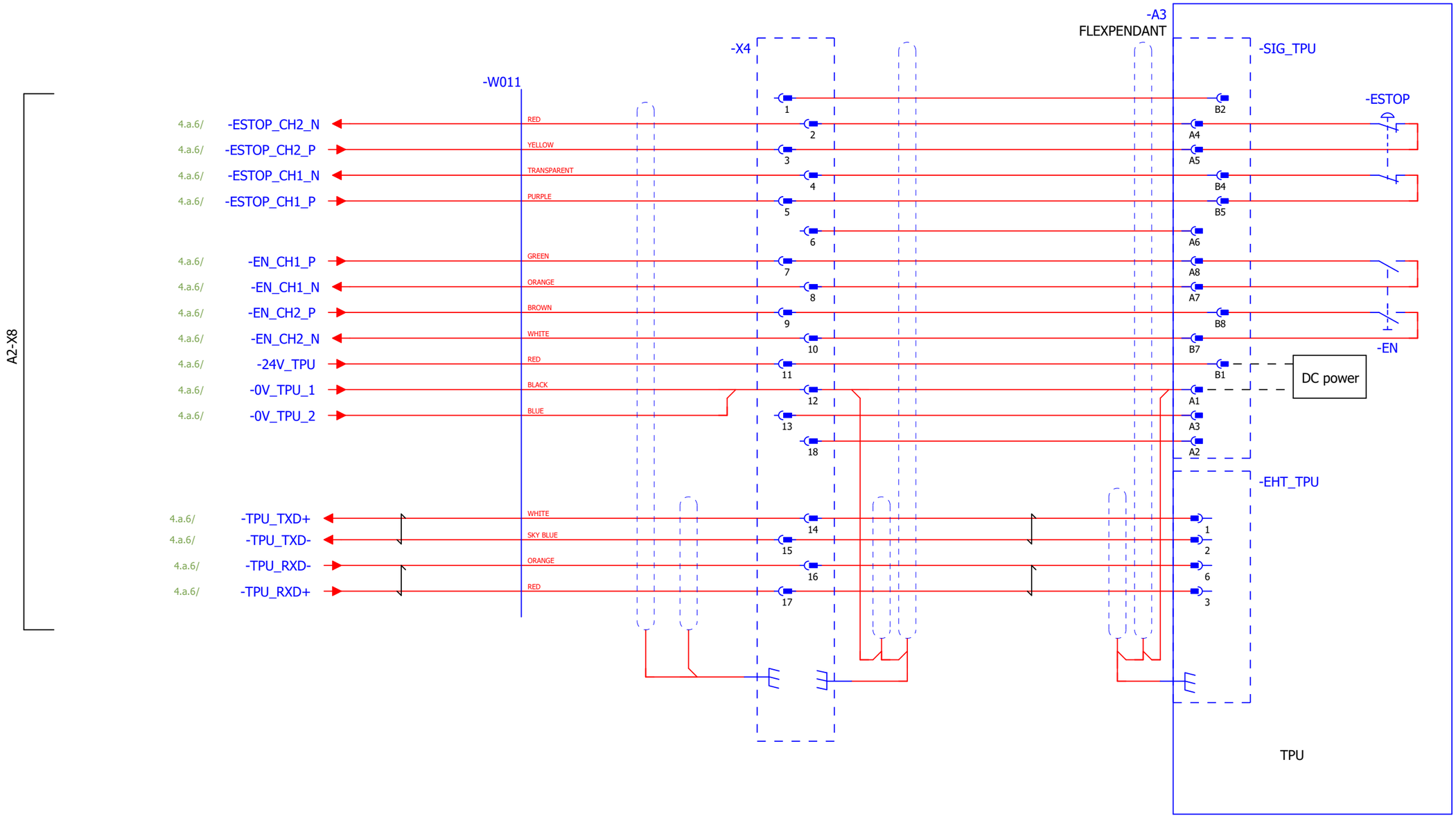
HMI_TXM	1		
HMI_ESTOP_CH2_N	6		-ESTOP_CH2_N /6.2
ENABLE_CH1_N	11		-EN_CH1_N /6.2
HMI_TXP	2		
HMI_ESTOP_CH2_P	7		-ESTOP_CH2_P /6.2
ENABLE_CH1_P	12		-EN_CH1_P /6.2
HMI_24V	3		-24V_TPU /6.2
HMI_0V	8		-0V_TPU_1 /6.2
HMI_0V	13		-0V_TPU_2 /6.2
HMI_RXM	4		
ENABLE_CH2_N	9		-EN_CH2_N /6.2
HMI_ESTOP_CH1_N	14		-ESTOP_CH1_N /6.2
HMI_RXP	5		
ENABLE_CH2_P	10		-EN_CH2_P /6.2
HMI_ESTOP_CH1_P	15		-ESTOP_CH1_P /6.2
			-TPU_TXD- /6.2
			-TPU_TXD+ /6.2
			-TPU_RXD- /6.2
			-TPU_RXD+ /6.2

X4

Latest revision: Rev 02 8/10/2021		ABB Lab/Office: RA/RDP	Status: Approved
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	MAIN COMPUTER - A2
			Document no. 3HAC076810-008
			High-level function: = SCH Mounting location: + U1
			Page: 4.a Next: 5 Total: 37



Latest revision: Rev 02, 6/16/2021		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Lab/Office: RA/RDP	FAN COOLING CHANNEL - G1,2	Status: Approved; High-level function: = SCH; Mounting location: + U1
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao				Document no. 3HAC076810-008; Page: 5; Next: 6; Total: 37



Latest revision:
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8/2/2021

Prepared by, date: Albert-shijian.wang

Approved by, date: Yang X. Gao

ABB Engineering (Shanghai) Ltd.
No.4528, Kangxin Highway,
Pudong New District, Shanghai,
201319, P. R. China

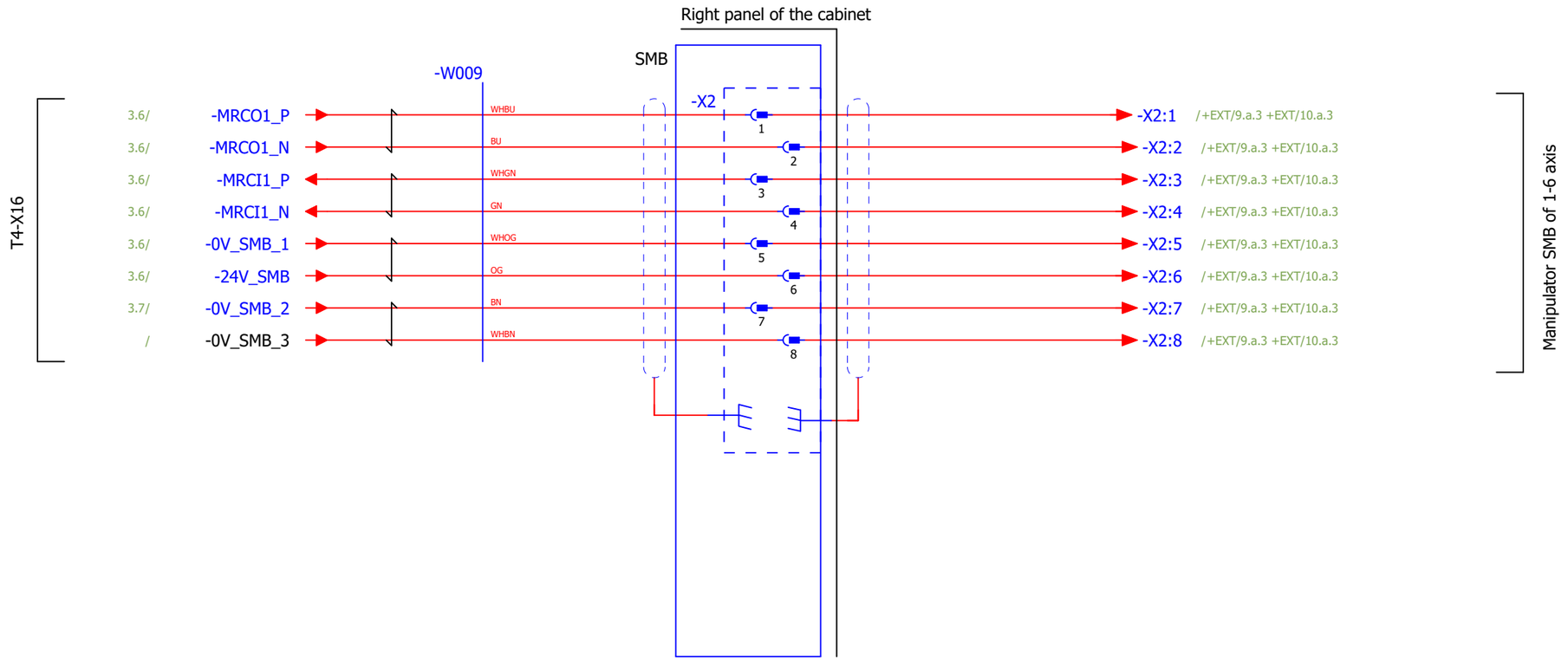
Lab/Office: RA/RDP

TPU - HMI SIGNAL CONNECTORS - X4

Status: Approved

High-level function: = SCH
Mounting location: + U1

Document no. 3HAC076810-008



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6/16/2021

Prepared by, date: Albert-shijian.wang

Approved by, date: Yang X. Gao

ABB Engineering (Shanghai) Ltd.
No.4528, Kangxin Highway,
Pudong New District, Shanghai,
201319, P. R. China

Lab/Office: RA/RDP

SMB - MANIPULATOR SIGNAL CONNECTORS - X2

Status: Approved

High-level function: = SCH
Mounting location: + U1

Document no. 3HAC076810-008

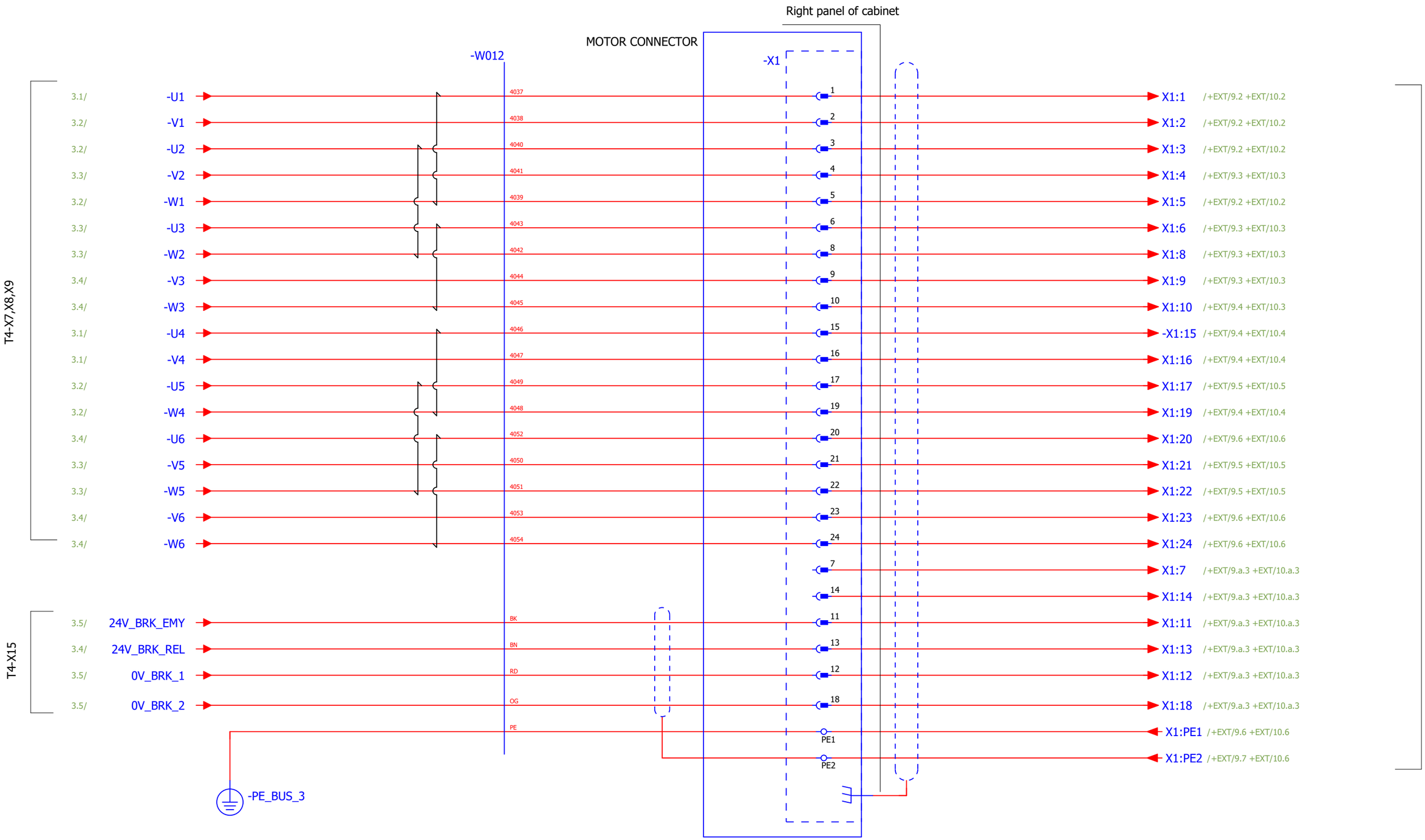

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ABB Engineering (Shanghai) Ltd.
No.4528, Kangxin Highway,
Pudong New District, Shanghai,
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Lab/Office: RA/RDP

MOTOR CONNECTOR - X1

Status: Approved

High-level function: = SCH
Mounting location: + U1

Document no. 3HAC076810-008

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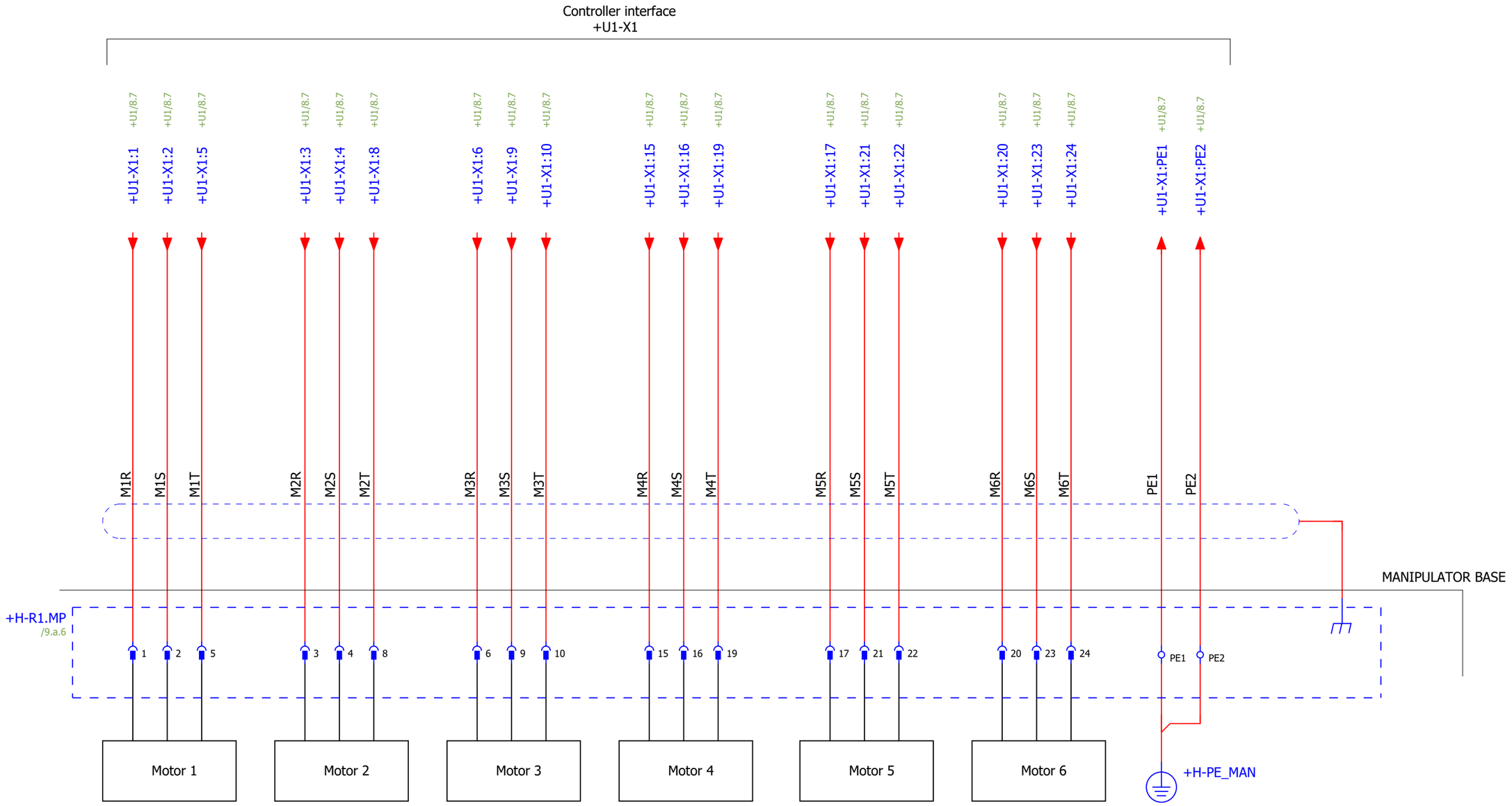
Next: +EXT/9
Total: 37

IRB 1100, IRB 1300 cabinet



Latest revision: Rev 02 6/16/2021		ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China	Lab/Office: RA/RDP	SERVO DRIVE SYSTEM IRB 1100, IRB 1300	Status: Approved
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao				Document no. 3HAC076810-008

High-level function: = SCH
Mounting location: + EXT

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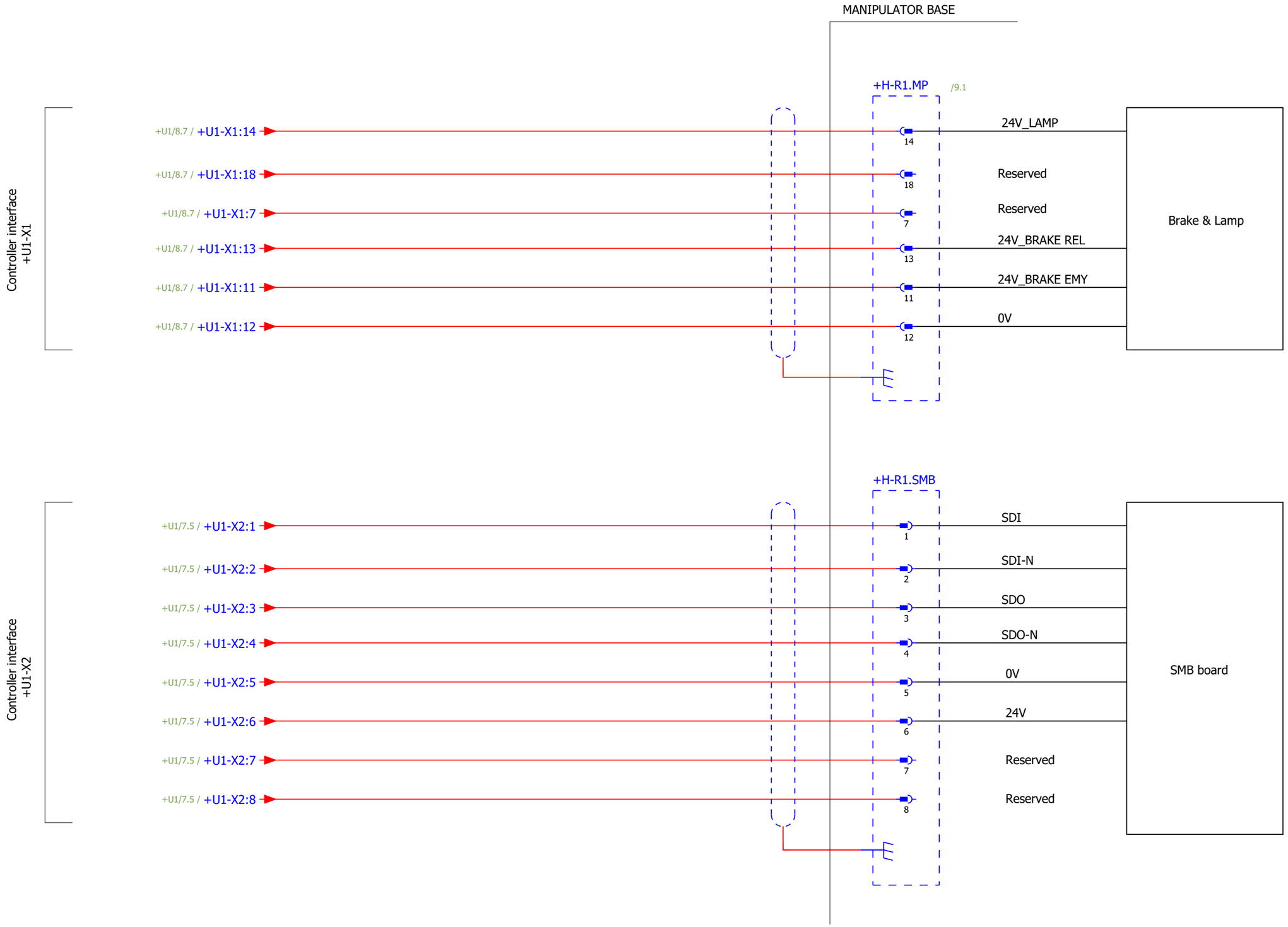

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ABB Engineering (Shanghai) Ltd.
No.4528, Kangxin Highway,
Pudong New District, Shanghai,
201319, P. R. China

Lab/Office:
RA/RDP

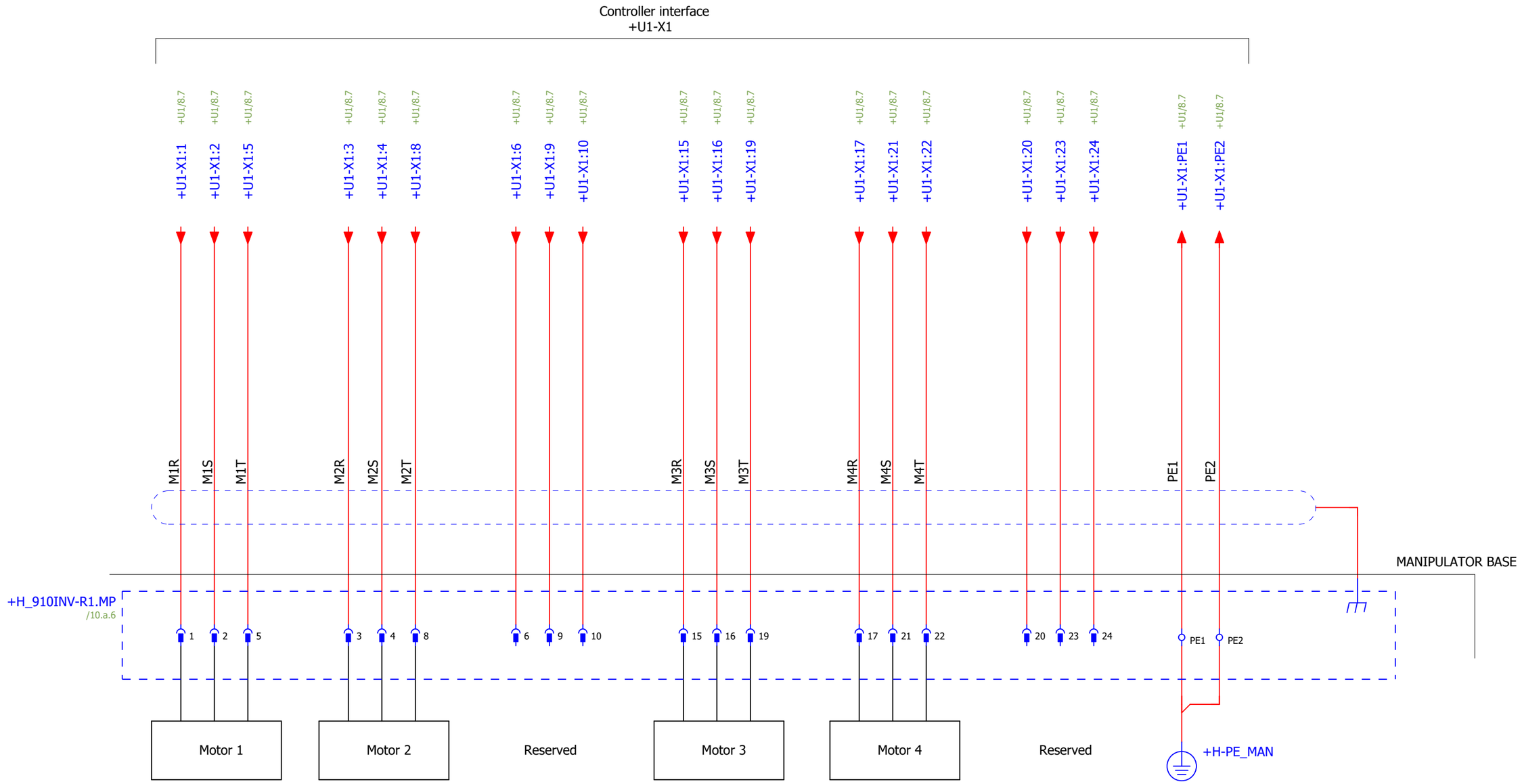
CONTROL CABLE IRB 1100, IRB1300

Status:
Approved

High-level function: = SCH
Mounting location: + EXT

Document no.
3HAC076810-008

IRB 910INV cabinet



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Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao				Document no. 3HAC076810-008

High-level function: = SCH
Mounting location: + EXT

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Next: 10.a
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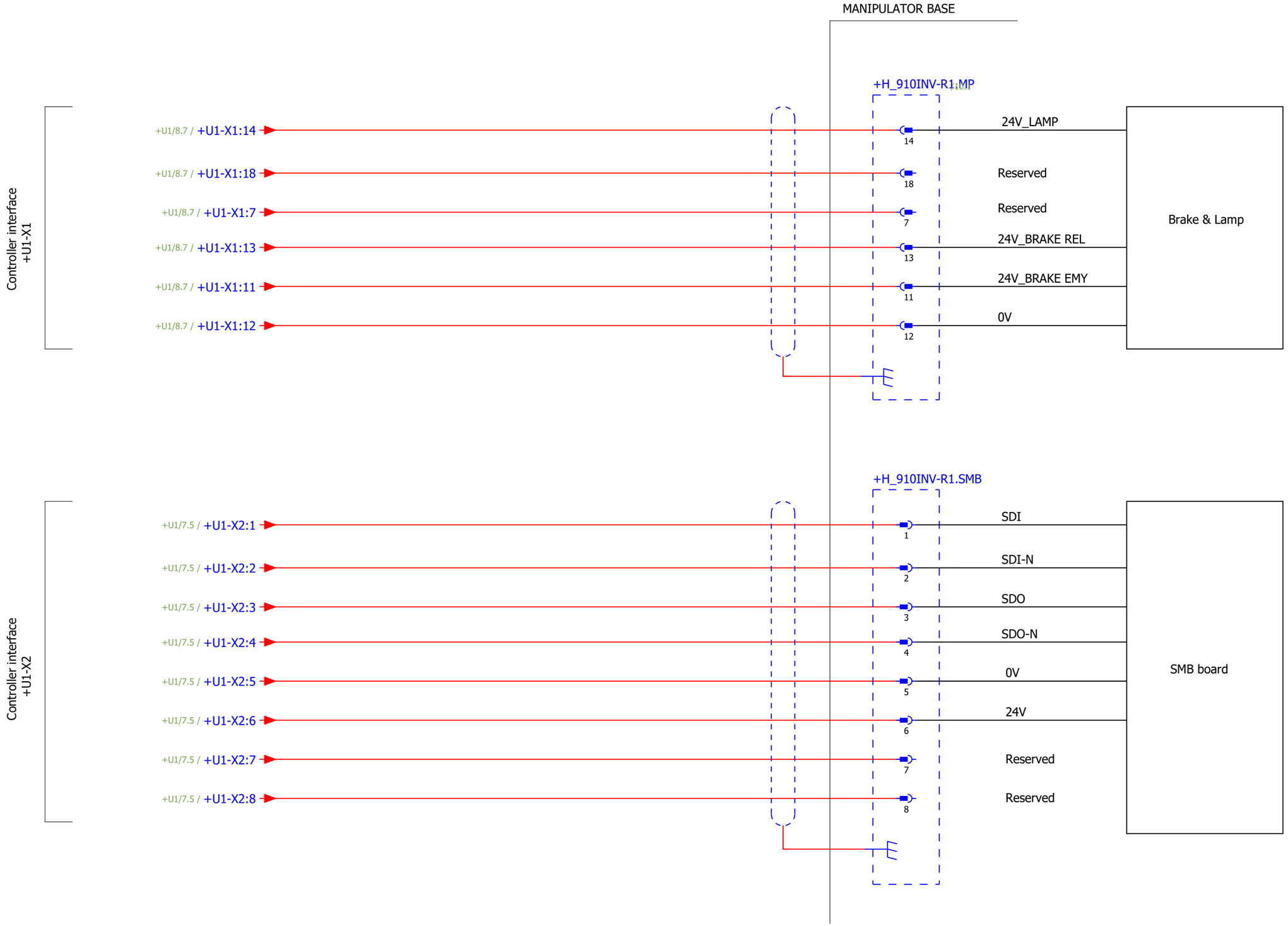

Latest revision: Rev 02 6/16/2021		ABB Lab/Office: RA/RDP	CONTROL CABLE IRB 910INV	Status: Approved	High-level function: = SCH Mounting location: + EXT
Prepared by, date: Albert-shijian.wang	Approved by, date: Yang X. Gao	ABB Engineering (Shanghai) Ltd. No.4528, Kangxin Highway, Pudong New District, Shanghai, 201319, P. R. China		Document no. 3HAC076810-008	Page: 10.a Next: =Report1+/007 Total: 37

Parts list

Device tag	Quantity	Designation	Type number	Supplier	Part number	Page
	0					11;11.a
=SCH+U1-A1	0					2
=SCH+U1-A1-X1	1	PCB mounted header, 3-pole	1-1747277-3	TE	1-1747277-3	2
=SCH+U1-A1-X1	1	Receptacle housing, 3-pole	1-1747276-3	TE	3HAC066036-001	2
=SCH+U1-A1-X1	3	Contact-crimp socket	1747415-2 / 1747498-2	TE	3HAC066050-002	2
=SCH+U1-A1-X2	1	PCB mounted header, 8-pole	1318125-1	TE	1318125-1	2
=SCH+U1-A1-X2	1	Receptacle housing, 8-pole	1-1318119-4	TE	3HAC064717-001	2
=SCH+U1-A1-X2	8	Contact-crimp socket	1318105-1 / 1318107-1	TE	3HAC072744-001	2
=SCH+U1-A1-X4	1	PCB mounted header, 2-pole	1-1747277-2	TE	1-1747277-2	2
=SCH+U1-A1-X4	1	Receptacle housing, 2-pole	1-1747276-2	TE	3HAC078357-001	2
=SCH+U1-A1-X4	2	Contact-crimp socket	1747418-2 / 1747499-2	TE	3HAC078361-001	2
=SCH+U1-A1-X6	1	PCB mounted header, 6-pole	39-28-8060 / 10127820-0622LF	Molex / Amphenol	39-28-8060 / 10127820-0622LF	2
=SCH+U1-A1-X6	1	Receptacle housing, 6-pole	39-01-2065 / 10127815-06LF	Molex / Amphenol	3HAC026336-004	2
=SCH+U1-A1-X6	4	Contact-crimp socket	39-00-0213 / 10134170-2220LF	Molex / Amphenol	3HAC026345-002	2
=SCH+U1-A1-X11	1	PCB mounted header, 4-pole	39-28-1043 / 10127820-0422LF	Molex / Amphenol	39-28-1043 / 10127820-0422LF	2
=SCH+U1-A1-X11	1	4 pins connector on cable (female)	39-01-3048 / 10127815-04LF	Molex / Amphenol	3HAC026336-003	2
=SCH+U1-A1-X11	2	Contact-crimp socket	39-00-0213 / 10134170-2220LF	Molex / Amphenol	3HAC026345-002	2
=SCH+U1-A1-X13	1	PCB mounted header, 3-pole	1318123-1	TE	1318123-1	2
=SCH+U1-A1-X13	1	Receptacle housing, 3-pole	1-1318120-3	TE	3HAC064721-001	2
=SCH+U1-A1-X13	2	Contact-crimp socket	1318105-1 / 1318107-1	TE	3HAC072744-001	2
=SCH+U1-A2	0					4;4.a
=SCH+U1-A2-X1	1	RJ45 jack, 2-port	2301996-5	TE	2301996-5	4
=SCH+U1-A2-X2	1	RJ45 jack, 2-port	2301996-5	TE	2301996-5	4
=SCH+U1-A2-X3	1	RJ45 jack, 2-port	2301996-5	TE	2301996-5	4
=SCH+U1-A2-X4	1	RJ45 jack, 2-port	2301996-5	TE	2301996-5	4
=SCH+U1-A2-X5	1	PCB mounted header, 24-pole	1844824	Phoenix	1844824	4
=SCH+U1-A2-X5	1	Receptacle plug, 24-pole	1844675	Phoenix	1844675	4
=SCH+U1-A2-X6	1	PCB mounted header, 32-pole	1874399	Phoenix	1874399	4.a
=SCH+U1-A2-X6	1	Receptacle plug 32-pole	1790247	Phoenix	1790247	4.a
=SCH+U1-A2-X7	1	PCB mounted header, 4-pole	1873934	Phoenix	1873934	4
=SCH+U1-A2-X7	1	Receptacle plug, 4-pole	1790108	Phoenix	1790108	4
=SCH+U1-A2-X8	1	PCB mounted D-SUB, 15-pole	2311763-3	TE	2311763-3	4.a
=SCH+U1-A2-X8	1	D-SUB plug insert, 15-pole	748364-1	TE	3HAC077668-001	4.a
=SCH+U1-A2-X8	15	Contact-crimp pin	1658670-3	TE	1658670-3	4.a
=SCH+U1-A2-X8	1	D-SUB plug housing, 15-pole	1478762-9	TE	1478762-9	4.a
=SCH+U1-A2-X9	1	RJ45 Jack, 8-pole	2301995-3	TE	2301995-3	4
=SCH+U1-A2-X9	1	RJ45 PLUG	GY-TC6E6D-0.99	JHGY	3HAC072708-001	4
=SCH+U1-A2-X10	1	PCB mounted header, 6-pole	1-1827581-2	TE	1-1827581-2	4
=SCH+U1-A2-X10	1	Recptacle housing, 3-pole	1-1827579-1	TE	3HAC066223-001	4
=SCH+U1-A2-X10	2	Contact-crimp socket	1827572-2 / 1827589-2	TE	3HAC066229-004	4
=SCH+U1-A2-X11	1	PCB mounted header, 8-pole	1-1827875-4	TE	1-1827875-4	4
=SCH+U1-A2-X11	1	Receptacle housing, 8-pole	1-1827864-4	TE	3HAC078363-001	4
=SCH+U1-A2-X11	4	Contact-crimp socket	1827572-2 / 1827589-2	TE	3HAC066229-004	4
=SCH+U1-A2-X12	1	PCB mounted header, 4-pole	1-1827875-2	TE	1-1827875-2	4
=SCH+U1-A2-X12	1	4 pins connector on cable (female)	1-1827864-2	TE	3HAC068819-001	4
=SCH+U1-A2-X12	2	Contact-crimp socket	1827572-2 / 1827589-2	TE	3HAC066229-004	4
=SCH+U1-A2-X13	1	PCB mounted header, 6-pole	1-1827875-3	TE	1-1827875-3	4
=SCH+U1-A2-X13	1	Receptacle housing, 6-pole	1-1827864-3	TE	3HAC078365-001	4
=SCH+U1-A2-X13	4	Contact-crimp socket	1827572-2 / 1827589-2	TE	3HAC066229-004	4
=SCH+U1-A3	1	Flexpendant (10m)	DSQC3060	ABB	3HAC065726-001	6
=SCH+U1-A3-EHT_TPU	0					6
=SCH+U1-A3-SIG_TPU	0					6
=SCH+U1-G1	0					5
=SCH+U1-G1-X1	1	Panel mounted housing, 3-pole	43640-0300	Molex	3HAC029110-002	5
=SCH+U1-G1-X1	0					5
=SCH+U1-G1-X1	2	Contact-crimp pin	43031-0002	Molex	3HAC029115-002	5

Parts list

Device tag	Quantity	Designation	Type number	Supplier	Part number	Page
=SCH+U1-G1-X1	1	Receptacle housing, 3-pole	43645-0300	Molex	3HAC032086-002	5
=SCH+U1-G1-X1	2	Contact-crimp socket	43030-0002	Molex	3HAC6962-3	5
=SCH+U1-G2	0					5
=SCH+U1-G2-X1	1	Panel mounted housing, 3-pole	43640-0300	Molex	3HAC029110-002	5
=SCH+U1-G2-X1	2	Contact-crimp pin	43031-0002	Molex	3HAC029115-002	5
=SCH+U1-G2-X1	1	Receptacle housing, 3-pole	43645-0300	Molex	3HAC032086-002	5
=SCH+U1-G2-X1	2	Contact-crimp socket	43030-0002	Molex	3HAC6962-3	5
=SCH+U1-G2-X1	0					5
=SCH+U1-PE_BUS_1	1	Cable lug, OT-M4	9ADA227-14		9ADA227-14	1
=SCH+U1-PE_BUS_2	1	Cable lug, OT-M4	9ADA227-14		9ADA227-14	2
=SCH+U1-PE_BUS_3	2	Cable lug, OT-M4	9ADA227-14		9ADA227-14	8
=SCH+U1-Q0	0					1
=SCH+U1-T4	0					3
=SCH+U1-T4-X1	1	PCB mounted header, 2-pole	39-28-1023 / 10127820-0222LF	Molex / Amphenol	39-28-1023 / 10127820-0222LF	3
=SCH+U1-T4-X1	1	Receptacle housing, 2-pole	39-01-3028 / 10127815-02LF	Molex / Amphenol	3HAC026336-002	3
=SCH+U1-T4-X1	2	Contact-crimp socket	39-00-0213 / 10134170-2220LF	Molex / Amphenol	3HAC026345-002	3
=SCH+U1-T4-X2	1	PCB mounted header, 2-pole	39-28-1023 / 10127820-0222LF	Molex / Amphenol	39-28-1023 / 10127820-0222LF	3
=SCH+U1-T4-X3	1	RJ45 Jack, 8-pole	2301995-3	TE	2301995-3	3
=SCH+U1-T4-X3	1	RJ45 PLUG	GY-TC6E6D-0.99	JHGY	3HAC072708-001	3
=SCH+U1-T4-X4	1	RJ45 Jack, 8-pole	2301995-3	TE	2301995-3	3
=SCH+U1-T4-X5	1	PCB mounted header, 2-pole	1-353080-2	TE	1-353080-2	3
=SCH+U1-T4-X5	1	Receptacle housing, 2-pole	1-179958-2	TE	3HAC075390-001	3
=SCH+U1-T4-X5	2	Contact-crimp socket	179955-2	TE	3HAC078360-001	3
=SCH+U1-T4-X7	1	PCB mounted header, 6-pole	1-178140-2	TE	3HAC14136-5836	3
=SCH+U1-T4-X7	1	Receptacle housing, 6-pole	1-178129-6	TE	3HAC066126-001	3
=SCH+U1-T4-X7	6	Contact-crimp socket	1-353715-2 / 1-353717-2	TE	3HAC066180-005	3
=SCH+U1-T4-X8	1	PCB mounted header, 6-pole	2-178140-2	TE	3HAC14136-5908	3
=SCH+U1-T4-X8	1	Receptacle housing, 6-pole	2-178129-6	TE	3HAC066126-002	3
=SCH+U1-T4-X8	6	Contact-crimp socket	1-353715-2 / 1-353717-2	TE	3HAC066180-005	3
=SCH+U1-T4-X9	1	PCB mounted header, 6-pole	3-178140-2	TE	3HAC14136-5909	3
=SCH+U1-T4-X9	1	Receptacle housing, 6-pole	3-178129-6	TE	3HAC066126-003	3
=SCH+U1-T4-X9	6	Contact-crimp socket	1-353715-2 / 1-353717-2	TE	3HAC066180-005	3
=SCH+U1-T4-X13	1				39-29-6068 / 10127820-0622LF	3
=SCH+U1-T4-X13	1	Receptacle housing, 6-pole	39-01-2065 / 10127815-06LF	Molex / Amphenol	3HAC026336-004	3
=SCH+U1-T4-X13	2	Contact-crimp socket	39-00-0213 / 10134170-2220LF	Molex / Amphenol	3HAC026345-002	3
=SCH+U1-T4-X15	1	PCB mounted header, 8-pole	39-29-6088 / 10127820-0822LF	Molex / Amphenol	39-29-6088 / 10127820-0822LF	3
=SCH+U1-T4-X15	1	Receptacle housing, 8-pole	39-01-2085 / 10127815-08LF	Molex / Amphenol	3HAC026336-005	3
=SCH+U1-T4-X15	4	Contact-crimp socket	39-00-0213 / 10134170-2220LF	Molex / Amphenol	3HAC026345-002	3
=SCH+U1-T4-X16	1	PCB mounted MINI-IO jack, 8-pole	2294415-2	TE	3HAC14136-6196	3
=SCH+U1-T4-X16	1	MINI I/O connector on cable (male)	1-2201855-2	TE	3HAC064796-001	3
=SCH+U1-T4-X17	1	PCB mounted header, 10-pole	1-2040516-5	TE	1-2040516-5	3
=SCH+U1-T4-X17	1	Receptacle housing, 10-pole	1-1827862-5	TE	3HAC075518-001	3
=SCH+U1-T4-X17	8	Contact-crimp socket	1827572-2 / 1827589-2	TE	3HAC066229-004	3
=SCH+U1-T4-X18	1	PCB mounted MINI-IO jack, 8-pole	2294415-2	TE	3HAC14136-6196	3
=SCH+U1-T4-X18	1	MINI I/O connector on cable (male)	1-2201855-2	TE	3HAC064796-001	3
=SCH+U1-X0	0					1
=SCH+U1-X1	1	Female insert, 24-pole	09160243101	Harting	3HAC2622-2	8
=SCH+U1-X2	1	M12 Y-code socket connector 8-pole	61131120536	Harting	3HAC078304-001	7
=SCH+U1-X4	1	M23 socket connector 19-pole	AKA558N00820390000	TE	3HAC070681-001	6
=SCH+U1-X4	12	Contact-crimp socket	60.011.11	TE	3HAC069935-001	6
=SCH+U1-X4	2	Contact-crimp socket	60.070.11	TE	3HAC066076-002	6
=SCH+U1-X4	1	M23 Plug connector 19-pole	ASA559N00820100000	TE	3HAC070682-001	6
=SCH+U1-X4	16	Contact-crimp pin	61.083.11	TE	3HAC070015-001	6
=SCH+U1-X4	2	Contact-crimp pin	61.072.11	TE	3HAC070683-001	6
=SCH+H-PE_MAN	0					9...11
=SCH+H-R1.MP	0					9;9.a

Parts list

Device tag	Quantity	Designation	Type number	Supplier	Part number	Page
=SCH+H-R1.SMB	0					9.a
=SCH+H_910INV-R1.MP	0					10;10.a
=SCH+H_910INV-R1.SMB	0					10.a
=SCH+H_360-R1.H1	0					11.a
=SCH+H_360-R1.MP(1-3)	0					11
=SCH+H_360-R1.MP(4-6)	0					11;11.a
=SCH+H_360-R2.SMB	0					11.a

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Part list

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Cable diagram -W001 / / Harness AC input with SW

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
PE	GN/YE UL1015	14		A1-X1	1			PE_BUS_2				PE		1
4004	BK UL1015, Twisted_2	14		A1-X1	2			Q0	5			L2_OUT		
4003	BK UL1015, Twisted_2	14		A1-X1	3			Q0	2			L1_OUT		
PE	GN/YE UL1015	14		X0	PE			PE_BUS_1				PE		
4001	BK UL1015, Twisted_1	14		X0	L			Q0	1			L1		
4002	BK UL1015, Twisted_1	14		X0	N			Q0	4			L2 or N		

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Mounting location: +

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Cable diagram -W002 / / Harness Safety control & feedback

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4010				A1-X2	A1			T4-X17	B2			A1.Q1_FB_N		2
4009				A1-X2	A2			T4-X17	B1			A1.Q1_FB_P		
4013				A1-X2	A3			T4-X17	B4			A1.Q2_FB_P		
4014				A1-X2	A4			T4-X17	B5			A1.Q2_FB_N		
4007				A1-X2	B1			T4-X17	A1			A1.Q1_CTRL_P		
4008				A1-X2	B2			T4-X17	A2			A1.Q1_CTRL_N		
4012				A1-X2	B3			T4-X17	A5			A1.Q2_CTRL_N		
4011				A1-X2	B4			T4-X17	A4			A1.Q2_CTRL_P		

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Cable diagram -W003 / / Harness DC BUS

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4015	BK, UL1015	16		A1-X4	1			T4-X5	1			DC+		2
4016	BK, UL1015	16		A1-X4	2			T4-X5	2			DC-		

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Cable diagram -W004 / / Harness 24V_Trunk

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4017	BU, UL1569	18		A1-X6	1			A2-X11	B1			24V_Trunk		2
4021	BU, UL1569	18		A1-X6	3			A2-X11	B3			24V_Trunk		
4018	BU, UL1569	18		A1-X6	4			A2-X11	A1			0V_Trunk		
4022	BU, UL1569	18		A1-X6	6			A2-X11	A3			0V_Trunk		

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Cable diagram -W005 / / Harness 24V_Brake

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4023	BU, UL1569	22		A1-X11	1			T4-X13	1			24V_BRAKE_PWR_1		2
4024	BU, UL1569	22		A1-X11	3			T4-X13	4			0V_BRAKE_1		

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Cable diagram -W006 / / Harness AC_OK signal

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4029	BU, UL1569	22		A1-X13	1			A2-X12	B1			0V_AC_OK		2
4030	BU, UL1569	22		A1-X13	2			A2-X12	A1			AC_OK		

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Cable diagram -W007 / / Harness 24V_SYS

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4032	BU, UL1569	22		A2-X10	A1			T4-X1	2			24V_SYS_DRV		3
4031	BU, UL1569	22		A2-X10	C1			T4-X1	1			24V_SYS_GND		

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Cable diagram -W008 / / Harness EtherCAT

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
Shield				A2-X9-SHELL				T4-X3-SHELL						3
WHOG	3HAC025999-001, Twisted_1	26		A2-X9	1			T4-X3	1			TXD+		
OG	3HAC025999-001, Twisted_1	26		A2-X9	2			T4-X3	2			TXD-		
WHGN	3HAC025999-001, Twisted_2	26		A2-X9	3			T4-X3	3			RXD+		
BU	3HAC025999-001, Twisted_3	26		A2-X9	4			T4-X3	4			Reserved_C_P		
WHBU	3HAC025999-001, Twisted_3	26		A2-X9	5			T4-X3	5			Reserved_C_N		
GN	3HAC025999-001, Twisted_2	26		A2-X9	6			T4-X3	6			RXD-		
WHBN	3HAC025999-001, Twisted_4	26		A2-X9	7			T4-X3	7			Reserved_D_P		
BN	3HAC025999-001, Twisted_4	26		A2-X9	8			T4-X3	8			Reserved_D_N		

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Cable diagram -W009 / / Harness SMB signal

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
Shield				T4-X16-SHELL				X2-SHELL						7
OG	3HAC078304-001, 4-pairs	26		T4-X16	1			X2	6			24V		
WHOG	3HAC078304-001, 4-pairs	26		T4-X16	2			X2	5			0V		
WHBU	3HAC078304-001, 4-pairs	26		T4-X16	3			X2	1			MRCO+		
BU	3HAC078304-001, 4-pairs	26		T4-X16	4			X2	2			MRCO-		
WHGN	3HAC078304-001, 4-pairs	26		T4-X16	5			X2	3			MRCI+		
GN	3HAC078304-001, 4-pairs	26		T4-X16	6			X2	4			MRCI-		
BN	3HAC078304-001, 4-pairs	26		T4-X16	7			X2	7			0V		

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Cable diagram =SCH+U1-W009

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Mounting location: +

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Cable diagram -W010 / / Harness 24V_COOLING

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
4034	BU, UL1569	22		A2-X13	A1			G1-X1	3			0V_Cooling		4
4036	BU, UL1569	22		A2-X13	A2			G2-X1	3			0V_Cooling		
4033	BU, UL1569	22		A2-X13	B1			G1-X1	1			24V_Cooling		
4035	BU, UL1569	22		A2-X13	B2			G2-X1	1			24V_Cooling		

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Cable diagram =SCH+U1-W010

Status: Approved

High-level function: = Report2
Mounting location: +

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Cable diagram -W011 / / Harness HMI adapter cable

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
Shield_ETH				A2-X8-SHELL				X4-SHELL						6
Shield_TPU				A2-X8-SHELL				X4-SHELL						
SKY BLUE	3HAC070973-001, hybird cable	24		A2-X8	1			X4	15			TXD-		
WHITE	3HAC070973-001, hybird cable	24		A2-X8	2			X4	14			TXD+		
RED	3HAC070973-001, hybird cable	22		A2-X8	3			X4	11			24V_TPU		
ORANGE	3HAC070973-001, hybird cable	24		A2-X8	4			X4	16			RXD-		
RED	3HAC070973-001, hybird cable	24		A2-X8	5			X4	17			RXD+		
RED	3HAC070973-001, hybird cable	24		A2-X8	6			X4	2			ESTOP_CH2_N		
YELLOW	3HAC070973-001, hybird cable	24		A2-X8	7			X4	3			ESTOP_CH2_P		
BLACK	3HAC070973-001, hybird cable	22		A2-X8	8			X4	12			0V_TPU		
WHITE	3HAC070973-001, hybird cable	24		A2-X8	9			X4	10			ENABLE_CH2_N		
BROWN	3HAC070973-001, hybird cable	24		A2-X8	10			X4	9			ENABLE_CH2_P		
ORANGE	3HAC070973-001, hybird cable	24		A2-X8	11			X4	8			ENABLE_CH1_N		
GREEN	3HAC070973-001, hybird cable	24		A2-X8	12			X4	7			ENABLE_CH1_P		
BLUE	3HAC070973-001, hybird cable	24		A2-X8	13			X4	12			0V_TPU		
TRANSPARENT	3HAC070973-001, hybird cable	24		A2-X8	14			X4	4			ESTOP_CH1_N		
PURPLE	3HAC070973-001, hybird cable	24		A2-X8	15			X4	5			ESTOP_CH1_P		

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Prepared by, date:

Approved by, date: Yang X. Gao

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Cable diagram -W012 / / Harness Motors power LV 6-axis

				Connection point A				Connection point B						
Wire no.	Specification	Size (AWG)	Lgth. (mm)	Item descrption	: term	Type	Ref.	Item descrption	: term	Type	Ref.	Remark	Rev	Page
PE	GNYE, UL1015	14		PE_BUS_3				X1	PE1			PE		8
4046	BK, UL1015	16		T4-X7	A1			X1	15			U4		
4047	BK, UL1015	16		T4-X7	A2			X1	16			V4		
4048	BK, UL1015	16		T4-X7	A3			X1	19			W4		
4037	BK, UL1015	16		T4-X7	B1			X1	1			U1		
4038	BK, UL1015	16		T4-X7	B2			X1	2			V1		
4039	BK, UL1015	16		T4-X7	B3			X1	5			W1		
4040	BK, UL1015	16		T4-X8	A1			X1	3			U2		
4041	BK, UL1015	16		T4-X8	A2			X1	4			V2		
4042	BK, UL1015	16		T4-X8	A3			X1	8			W2		
4049	BK, UL1015	16		T4-X8	B1			X1	17			U5		
4050	BK, UL1015	16		T4-X8	B2			X1	21			V5		
4051	BK, UL1015	16		T4-X8	B3			X1	22			W5		
4043	BK, UL1015	16		T4-X9	A1			X1	6			U3		
4044	BK, UL1015	16		T4-X9	A2			X1	9			V3		
4045	BK, UL1015	16		T4-X9	A3			X1	10			W3		
4052	BK, UL1015	16		T4-X9	B1			X1	20			U6		
4053	BK, UL1015	16		T4-X9	B2			X1	23			V6		
4054	BK, UL1015	16		T4-X9	B3			X1	24			W6		
BN	3HAC046147-012, 6 Core	18		T4-X15	1			X1	13			24V_Brake_release		
RD	3HAC046147-012, 6 Core	18		T4-X15	2			X1	12			0V_Brake		
BK	3HAC046147-012, 6 Core	18		T4-X15	3			X1	11			24V_Brake_EMY		
OG	3HAC046147-012, 6 Core	18		T4-X15	6			X1	18			0V_Brake		
Shield_Brake				W012	Shield_Brake			X1	PE2					

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