

Hongda America Corp

Client	HDA														
Project description	300USG Emulsifying tank control box														
Project NO.	24-1120-01-HA														
<p>Manufacturer (Company)</p> <table style="width: 100%; border: none;"> <tr> <td style="width: 20%;">Project name</td> <td style="width: 40%;">300USG Emulsifying tank control box</td> <td style="width: 40%;">Drive power 460VAC, 3-phase, 60Hz</td> </tr> <tr> <td>Type</td> <td></td> <td>Control Power 24Vdc</td> </tr> <tr> <td>Mounted places</td> <td></td> <td></td> </tr> <tr> <td>Project leader</td> <td></td> <td></td> </tr> </table>				Project name	300USG Emulsifying tank control box	Drive power 460VAC, 3-phase, 60Hz	Type		Control Power 24Vdc	Mounted places			Project leader		
Project name	300USG Emulsifying tank control box	Drive power 460VAC, 3-phase, 60Hz													
Type		Control Power 24Vdc													
Mounted places															
Project leader															
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			Devise		Title page/cover page	Hongda America Corp	DWG No.	A3	Version		= A
			Charting								+
			Proofread		300USG Emulsifying tank control box		Project NO.	24-1120-01-HA	Edition/Amend		Pagination 1
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设计说明:

- 1, 本设计针对300加仑三搅拌夹套搅拌罐。乳化电机顶部安装, 双重独立搅拌; 搅拌电机采用变频调速方式, 通过面板按钮启动/停止; 电机直接带动乳化盘旋转。使用变频调速模式, 通过面板按钮启动/停止; 以下文件描述了“搅拌罐”;
- 2, 图中未特别标明的部件作为搅拌罐控制箱的主要设备。标注有“UDS”字样部件为外部控制设备;
- 3, 电源驱动电压460-480Vac 60Hz, 三相供电。控制回路控制电压24Vdc, 由控制箱内开关电源提供。具有良好的保护接地系统;
- 4, 搅拌罐供电电源不小于40KW, 电流不小于100A。三相供电, 具有良好的保护接地系统。
- 5, 使用乳化分散盘和独立双搅拌。

主搅拌电机参数: 7.5HP (5.5KW) / 9.07A / 1750RPM / 460VAC 60Hz three-phase;

辅搅拌电机参数: 3HP (2.2KW) / 3.81A / 1750RPM / 460VAC 60Hz three-phase;

乳化电机参数: 20HP (15KW) / 25.3A / 1780RPM / 460VAC 60Hz three-phase;

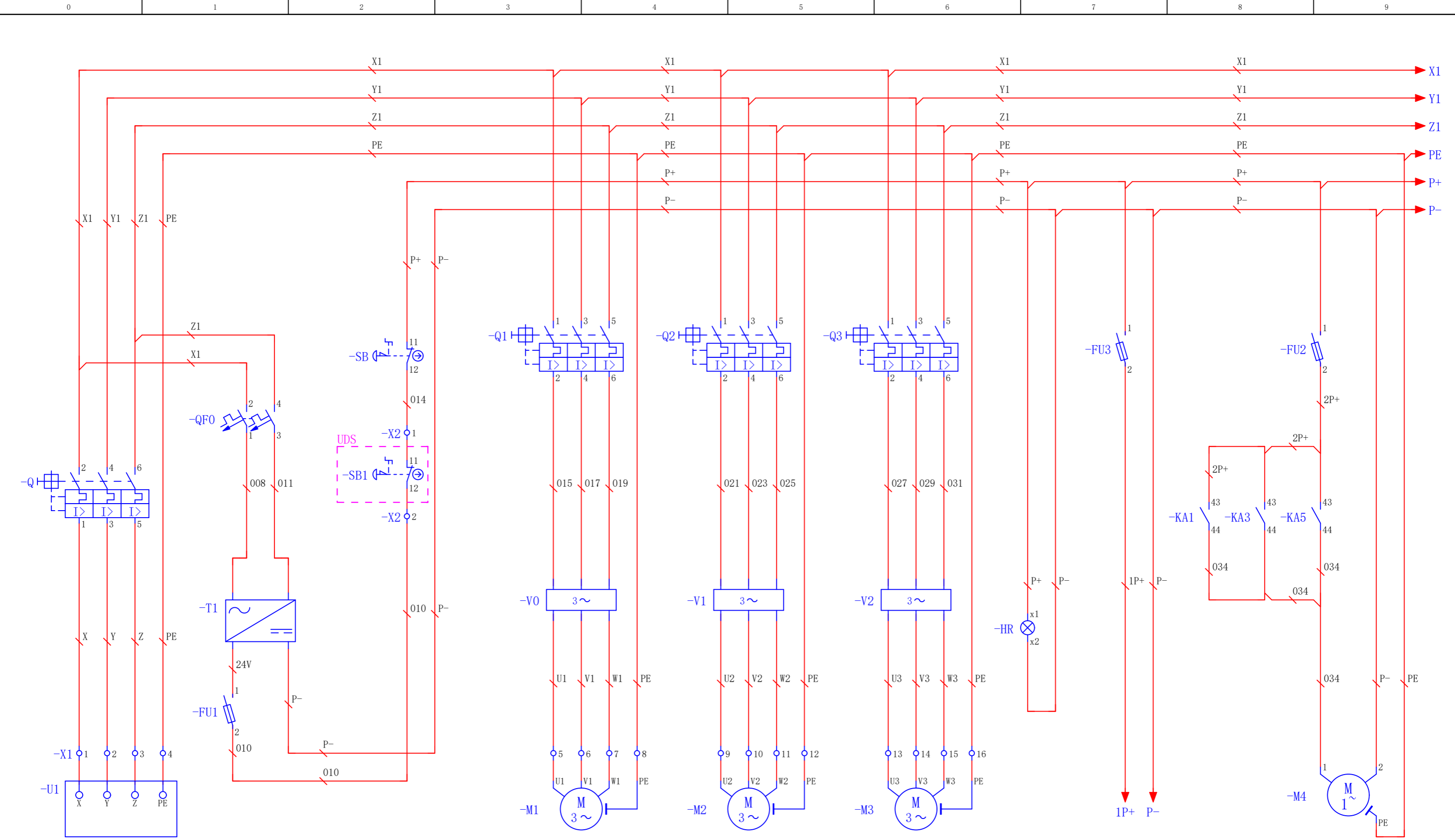
- 6, 搅拌罐内部介质温度由安装在搅拌罐底部的温度传感器采集。采集信号通过安装在控制箱的无纸记录仪显示。
记录仪通过设定提供温度上限和下限报警功能。备用输出一个开关输出信号;

7, 控制箱交流控制回路导线使用红色18AWG (0.75mm²) 线径。直流控制回路导线使用蓝色18AWG (0.75mm²) 线径;

8, 主电源开关(Q)前端接用户电源, 导体线径不小于4AWG (25mm²) 线径, 乳化电机采用黑色6AWG (16mm²) 线径, 主搅拌电机采用黑色10AWG (6mm²) 线径;

9, 控制箱内导线接线全部使用接线鼻子压接后与电气元件连接, 裸线鼻子使用热缩管绝缘处理。

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Power supply

Control Power

Emergency stop

Emulsion machine
15KW (20HP)

Main mixer motor
5.5KW (7.5HP)

Secondary mixer motor
2.2KW (3HP)

Power LED

Recorder
power supply

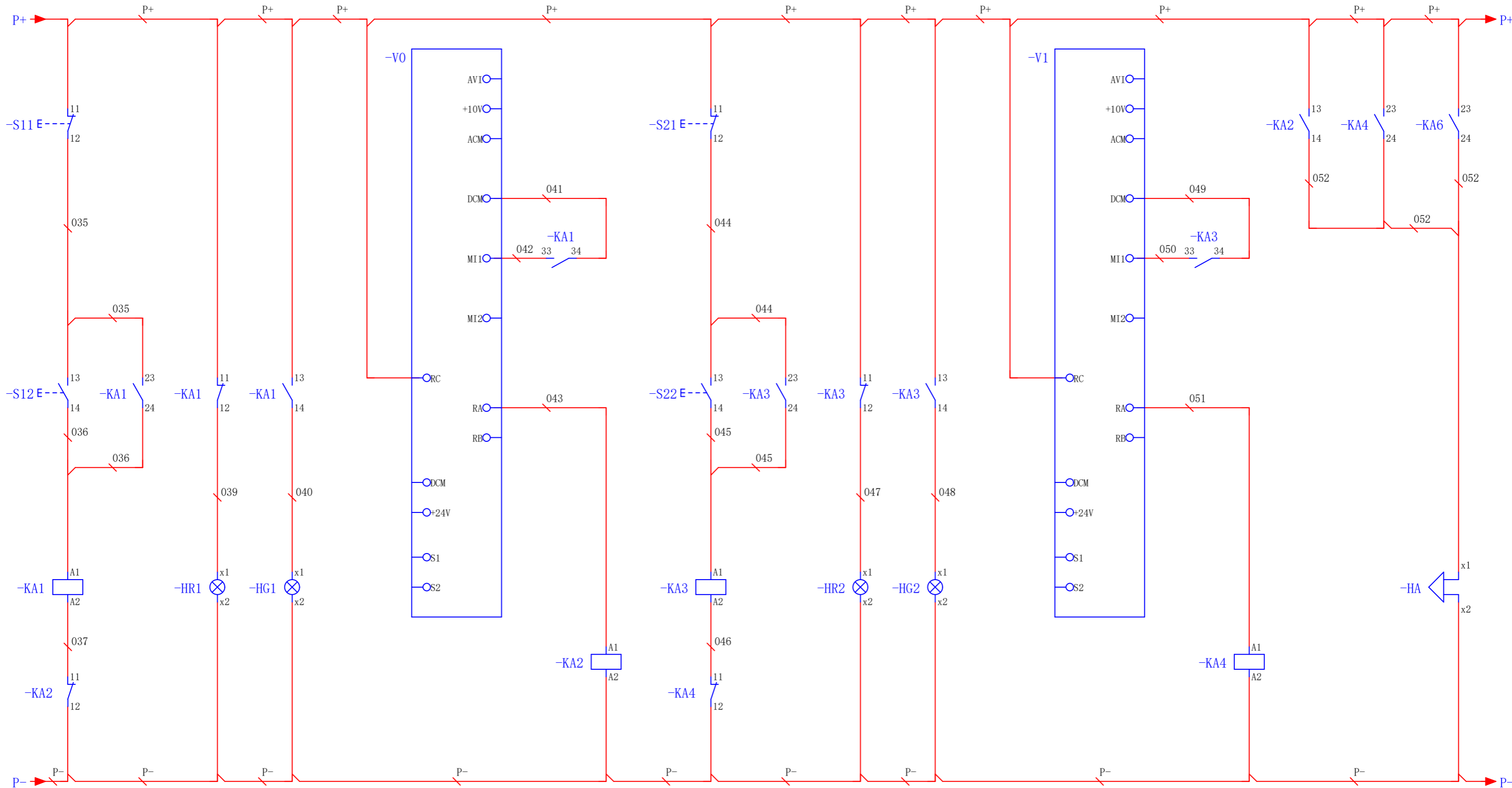
Control box
Cooling fan

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Schematic diagram of the main loop
300USG Emulsifying tank control box

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 23 - 24 /3.1
 33 - 34 /3.3
 43 - 44 /2.8

11 - 12 /3.0
 13 - 14 /3.8

11 - 12 /3.5
 13 - 14 /3.6
 23 - 24 /3.5
 33 - 34 /3.7
 43 - 44 /2.8

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 23 - 24 /3.9

Emulsifying machine
Start/Stop

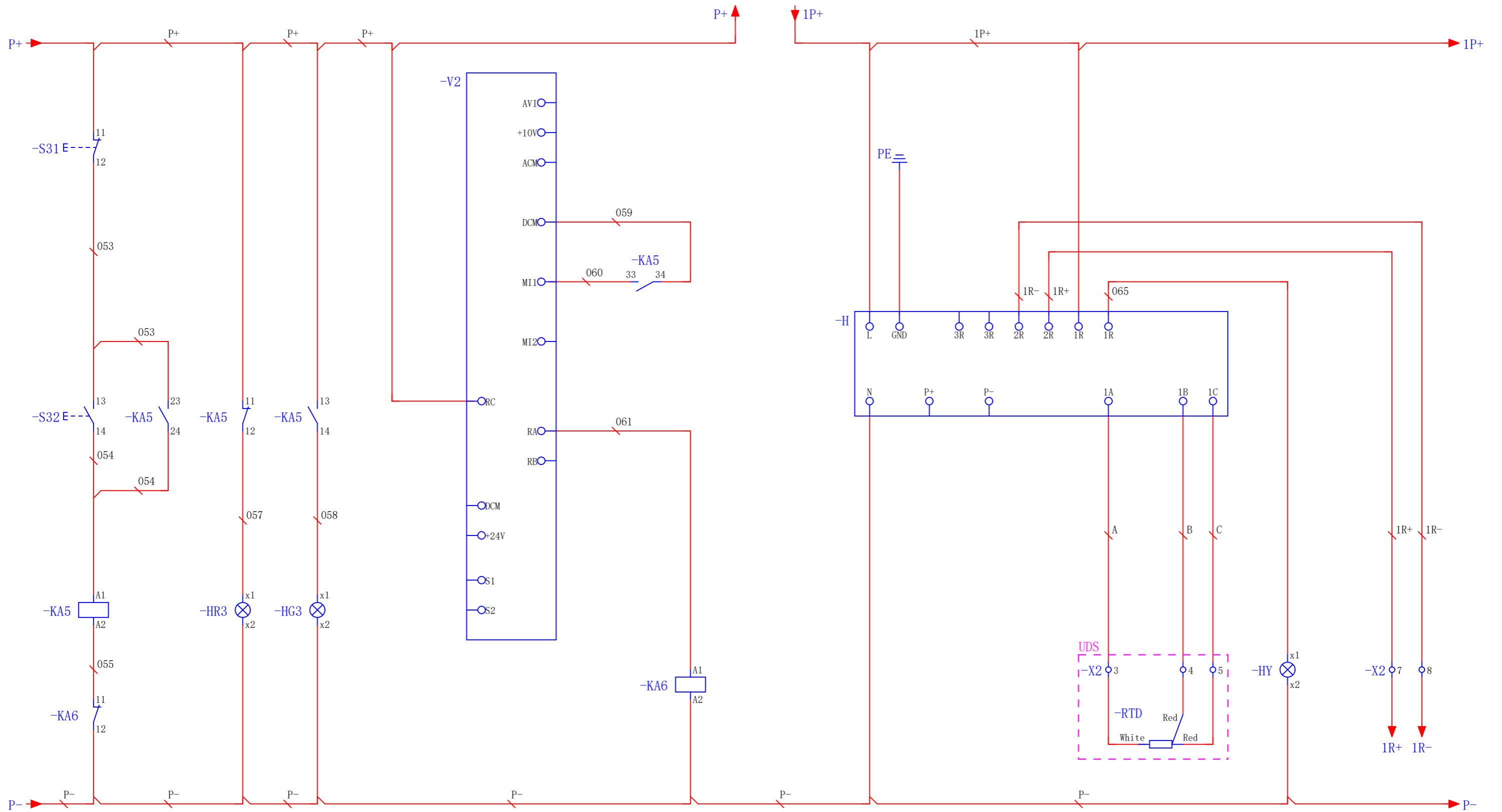
Emulsifying machine
Run/Stop indication

Main agitator
Start/Stop

Main agitator
Run/Stop indication

Fault Alarm

			Devise	Emulsifying machine and agitator control schematic			DWG No.		A3	Version	= C
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Secondary agitator
Start/Stop

Secondary agitator
Run/Stop indication

TEMP

TEMP alarm Standby output
indication

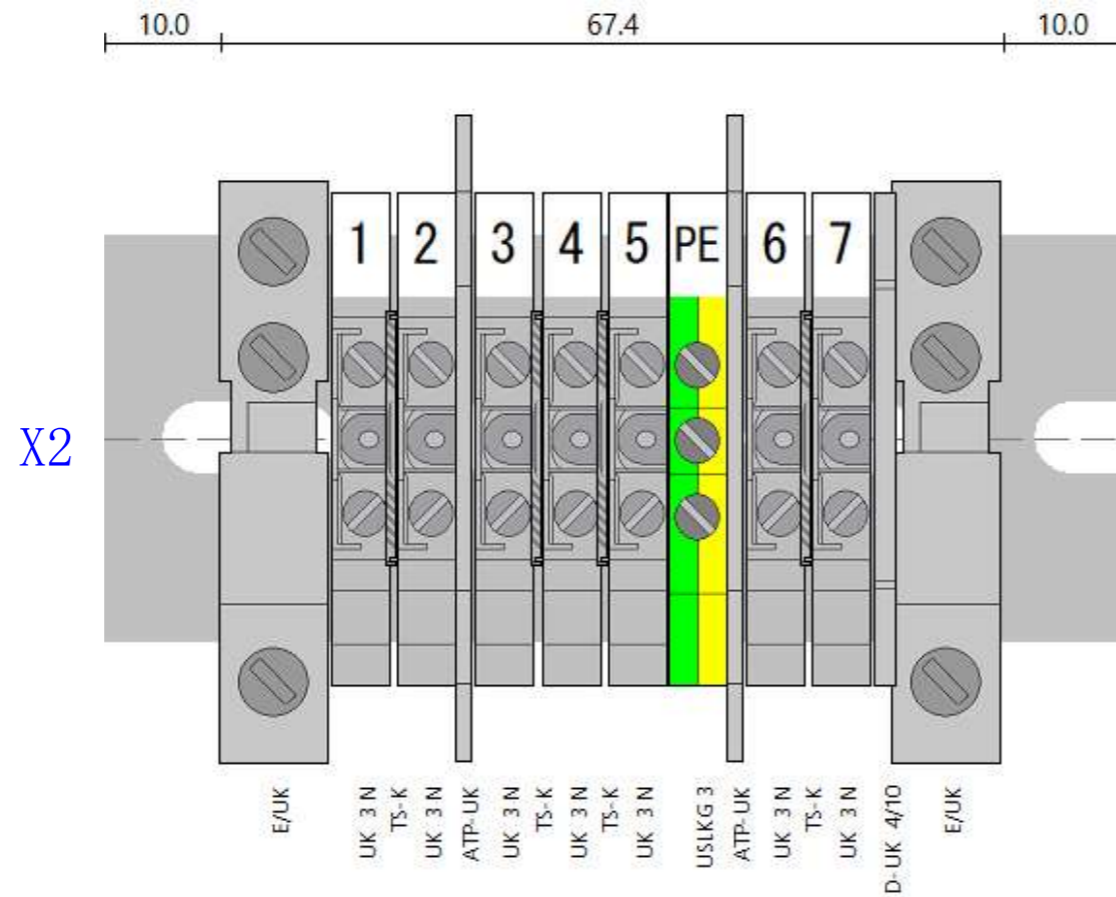
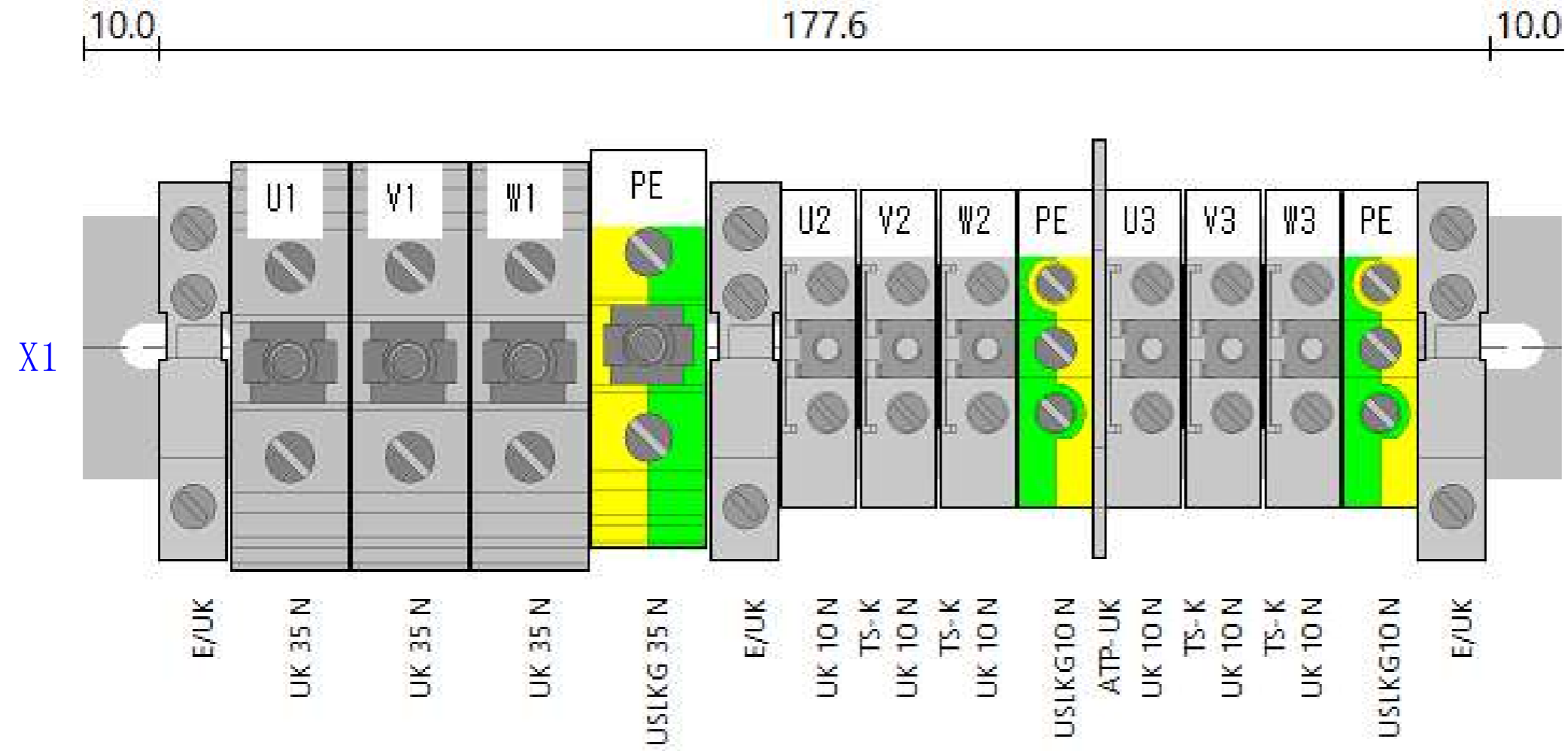
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Stirring and recorder schematic diagram

300USG Emulsifying tank control box

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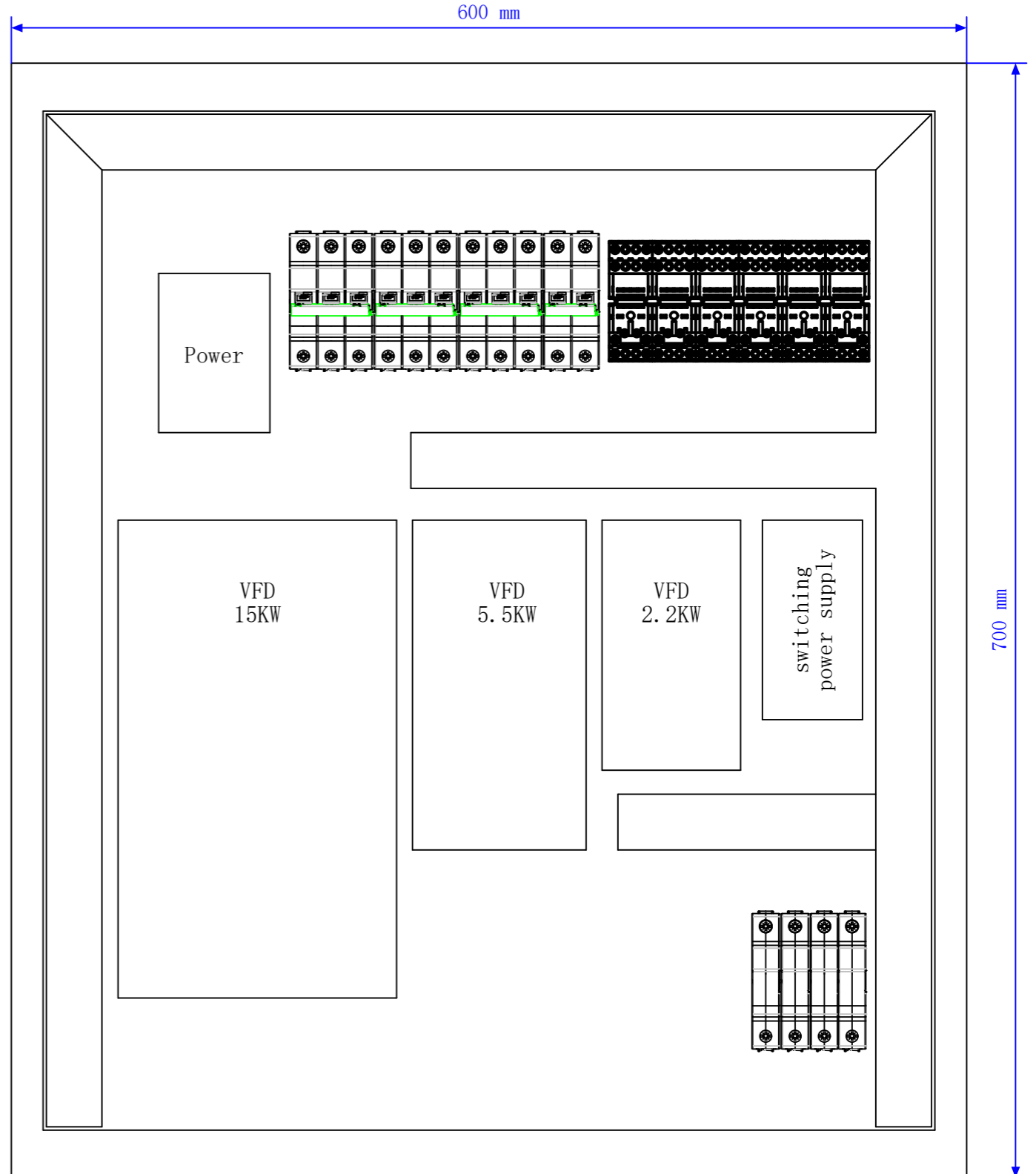
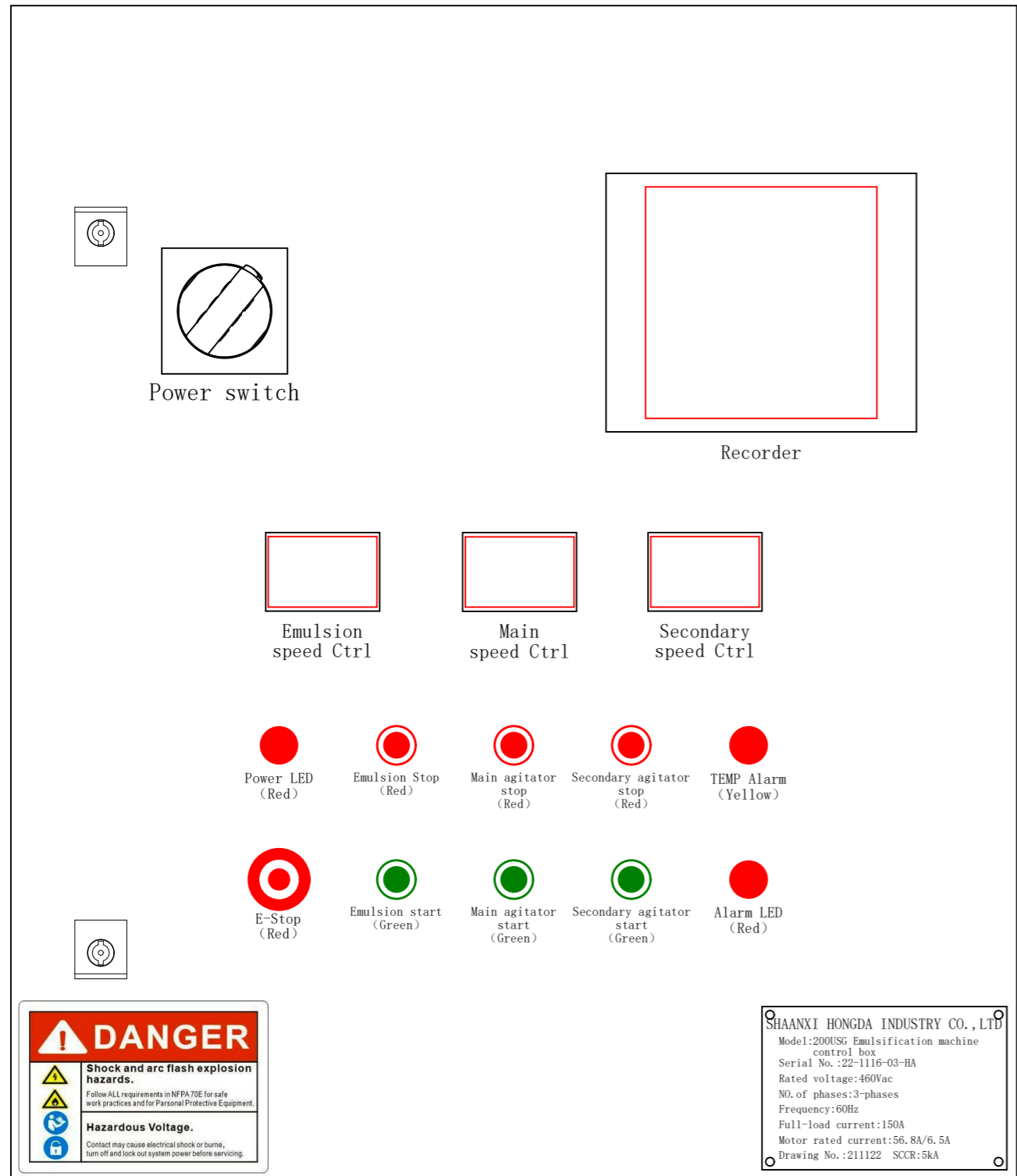
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注：端子排布严格按照图纸示意分配。

Note: The layout of the terminal is strictly distributed according to the drawing.

				Wiring terminal layout diagram		Hongda America Corp		DWG No. A3		Version		= C	
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Devise				Panel layout diagram		DWG No.		A3	Version		= C
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Summary of components

Serial NO.	UDI	Component name	Specification/Model	Brand	QTY	Unit	Comment
1	Q	MCB	OT100F3	ABB	1	PCS	带柜门操作机构
2	Q1	MCB	S203-D50	ABB	1	PCS	
3	Q2	MCB	S203-D20	ABB	1	PCS	
4	Q3	MCB	S203-D10	ABB	1	PCS	
5	QF0	MCB	S202-C4	ABB	1	PCS	
6	S11, S21, S31	Push button indicator (Red)	CP1-11R-10	ABB	3	PCS	
7	S12, S22, S32	Push button indicator (Green)	CP1-11G-10	ABB	3	PCS	
8	HR	Pilot lamp (Red)	CL2-502R	ABB	1	PCS	
9	HY	Pilot lamp (Yellow)	CL2-503Y	ABB	1	PCS	
10	SB	Stop button	CE3T-10R-11 + CA1-8053	ABB	1	PCS	
11	HA	Audible and visual alarm	CB1-610R	ABB	1	PCS	
12	FU1	Fuse holder	E91/32 4A 10*38mm	ABB	1	PCS	
13	FU1	Fuse holder	E91/32 2A 10*38mm	ABB	2	PCS	
14	V0	VFD	VFD32AMS43ANSAA	DELTA	1	PCS	
15	V1	VFD	VFD13AMS43ANSAA	DELTA	1	PCS	
16	V2	VFD	VFD5A5MS43ANSAA	DELTA	1	PCS	
17		Extension cord	EG2010C 2m	DELTA	3	PCS	
18	T1	Switching power supply	WDR-240-24	Mean Well	1	PCS	
19	KA1, KA3, KA5	Intermediate relay	RXM4AB2BD+RXZE2M114	Schneider	3	PCS	
20	KA2, KA4, KA6	Intermediate relay	RXM2AB2BD+RXZE2M114	Schneider	3	PCS	
21	H	Recorder	OHR-H701	HRGS	1	PCS	
22	X	Terminal		Phoenix	1	PCS	
23	M4	Fan filter	FK6621.024+FK6621.300	Leipole	1	PCS	
24	RTD (UDS)	Temperature sensor	Pt100	Made in China	1	PCS	
25		Control box	AX600 (W)*700 (H)*300 (D) mm	Made in China	1	PCS	
26							
27							
28							

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部件汇总表

序号	设备标识符	设备名称	规格/型号	品牌	数量	单位	备注
1	Q	隔离开关	OT100F3	ABB	1	套	带柜门操作机构
2	Q1	微型断路器	S203-D50	ABB	1	个	
3	Q2	微型断路器	S203-D20	ABB	1	个	
4	Q3	微型断路器	S203-D10	ABB	1	个	
5	QF0	微型断路器	S202-C4	ABB	1	个	
6	S11, S21, S31	按钮指示灯(红色)	CP1-11R-10	ABB	3	个	
7	S12, S22, S32	按钮指示灯(绿色)	CP1-11G-10	ABB	3	个	
8	HR	指示灯(红色)	CL2-502R	ABB	1	个	
9	HY	指示灯(黄色)	CL2-503Y	ABB	1	个	
10	SB	急停按钮	CE3T-10R-11 + CA1-8053	ABB	1	套	
11	HA	声光报警器	CB1-610R	ABB	1	个	
12	FU1	熔断器	E91/32 4A 10*38mm	ABB	1	个	
13	FU1	熔断器	E91/32 2A 10*38mm	ABB	2	个	
14	V0	变频器	VFD32AMS43ANSAA	DELTA	1	台	
15	V1	变频器	VFD13AMS43ANSAA	DELTA	1	台	
16	V2	变频器	VFD5A5MS43ANSAA	DELTA	1	台	
17		面板延长线	EG2010C 2m	DELTA	3	根	
18	T1	开关电源	WDR-240-24	Mean Well	1	台	
19	KA1, KA3, KA5	中间继电器	RXM4AB2BD+RXZE2M114	Schneider	3	套	
20	KA2, KA4, KA6	中间继电器	RXM2AB2BD+RXZE2M114	Schneider	3	套	
21	H	无纸记录仪	OHR-H701	HRGS	1	台	
22	X	接线端子		Phoenix	1	项	
23	M4	散热风扇	FK6621.024+FK6621.300	Leipole	1	套	
24	RTD(UDS)	温度传感器	Pt100	Made in China	1	个	
25		控制箱	AX600(W)*700(H)*300(D)mm	Made in China	1	台	
26							
27							
28							

0				部件汇总表				Hongda America Corp				DWG No. A3		Version		= D	
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