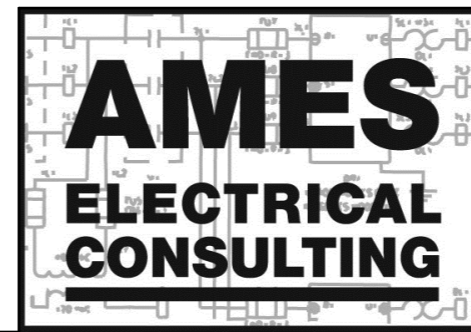


Ames Electrical Consulting, Inc.

711C Greenfield Road  
 Deerfield 01342  
 Phone 413.772.2286

Company / customer:	Mayhew Steel Products, Inc.		
Project description:	Stamtec 220 Feeder		
Job number:	MHS16		
Commission:	AS BUILT		
Project name:	MHS16 - Stamtec 220 Feeder		
Responsible for project:	Aaron Calcari		
Serial Number:			
Manufacturing date:			
Place of installation:	Mayhew Steel Products, Inc.		
Power supply:	480VAC, 60Hz		
Full Load Current:	4 Amps		
Short-Circuit Current Rating:	10kA rms sym.		
Input lead:	#10 AWG		
Control voltage:	24VDC		
Special customer regulations:	N/A		
Created on:	2/6/2020		
Edit date:	5/19/2021	by (short name): Aaron Calcari	Last EPLAN version used: 2.9.4
			Number of pages: 17



<b>Project description</b> Stamtec 220 Feeder						<b>Project number</b> MHS16	
<b>Customer</b> Mayhew Steel Products, Inc. 199 Industrial Blvd Turners Falls, MA 01376							
<b>Modification</b>	<b>Date</b>	<b>Name</b>	<b>Creation</b>	<b>Date</b>	<b>Name</b>		
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<b>Page number</b> 1 of 17						<b>Next page</b>	ii Title page / cover sheet

# TECHNICAL IMPLEMENTATION REGULATIONS

## WIRING REGULATIONS

(Symbols in accordance with NFPA Standards)

### WIRING COLORS

Main circuit AC	Black (BK)	Control circuit AC	Red (RD)	External voltage	Orange (OG)
Main circuit DC	Black (BK)	Control circuit DC	Blue (BU)	Interlock circuit	Orange (OG)
Neutral conductor	White (WH)	Grounded DC conductor	White-Blue Stripe (WHBU)	Measuring lines	Violet (VT)
Protective wire (Ground)	Green/Green-yellow (GNYE)				

### MINIMUM CROSS-SECTIONS

Main current	#16 AWG
Protective wire	#16 AWG
Control wiring	#18 AWG
PLC wiring	#20 AWG

### ALL INTERNAL WIRING

#22 - #16 AWG	UL 1015/1230/1032 MTW/TEW/AWM PVC conductor
#14 - #4/0 AWG	UL 1015/1230/1032 MTW/TEW/AWM PVC conductor

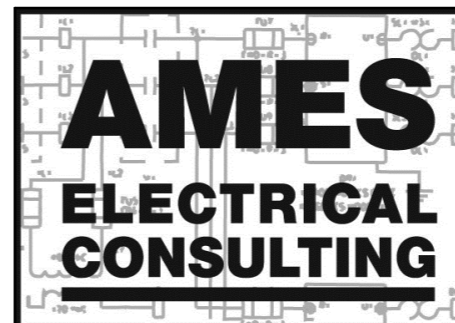
## MATERIAL REGULATIONS

### ENCLOSURES

Manufacturer	RITTAL
Enclosure material	Carbon Steel
Enclosure color	RAL 7035 - Light Gray
Degree of protection	NEMA 4 (IP67)

### TERMINALS

#26 - #18 AWG	Phoenix Contact PT 1.5 (500V, 17.5A rated)
#18 - #12 AWG	Phoenix Contact PT 2.5 (800V, 24A rated)
#12 - #10 AWG	Phoenix Contact PT 4 (800V, 32A rated)
#10 - #6 AWG	Phoenix Contact PT 10 (1000V, 57A rated)



<b>Project description</b> Stamtec 220 Feeder						<b>Project number</b> MHS16	
<b>Customer</b> Mayhew Steel Products, Inc. 199 Industrial Blvd Turners Falls, MA 01376							
<b>Modification</b>	<b>Date</b>	<b>Name</b>	<b>Creation</b>	<b>Date</b>	<b>Name</b>		
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<b>Previous page</b> i						<b>Next page</b> iii Title page / cover sheet	

# GENERAL SAFETY REGULATIONS



DANGER !

During equipment operation certain items are under dangerous voltage!  
Non-observance of safety instructions can result in death, serious injuries or material damage.

Only qualified personnel may carry out transport, installation, debug, and commissioning work.

The applicable standards as well as the national and / or company-specific accident prevention regulations are to be observed.

The following safety instructions are to be observed:

The build, installation, commissioning, troubleshooting as well as repair of this equipment may only be carried out by qualified personnel that is familiar with the corresponding operating instructions.

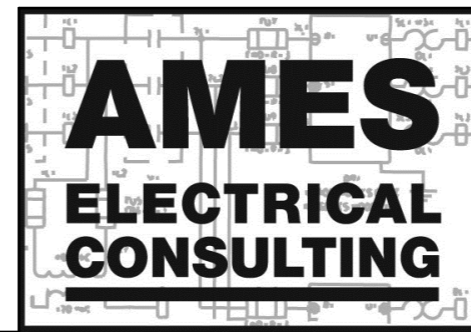
Mounting of the devices has to be effected in accordance with the valid standards, state and local regulations.  
Proper grounding and conductor dimensioning as well as proper short-circuit proofing have to be ensured.  
These measures serve to ensure the safety of the plant, equipment and of the operating personnel.

Before carrying out safety checks, maintenance work and repair measures ensure that all the power supplies are switched off, are secured against being switched on unintentionally and are marked correspondingly.

Only test devices that are in a technically perfect condition and are suitable for the respective measurement may be used to carry out measurements!

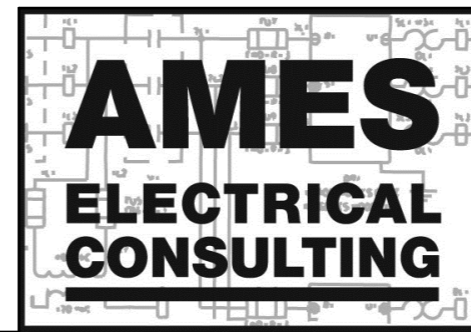
These safety instructions specified are to be followed strictly!  
It is mandatory that all hazard, warning and safety instructions be observed!

All doors and covers are to be kept closed during the plant operation.  
If cooling devices are installed in the equipment, ensure that these systems operate trouble-free.  
These include the regular cleaning of the fan filters if they exist.

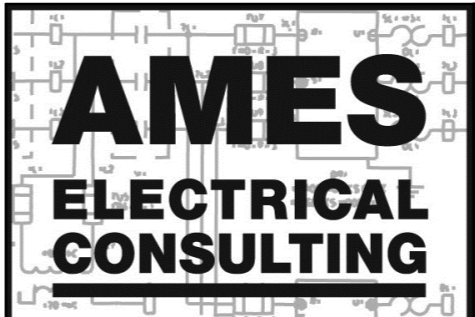
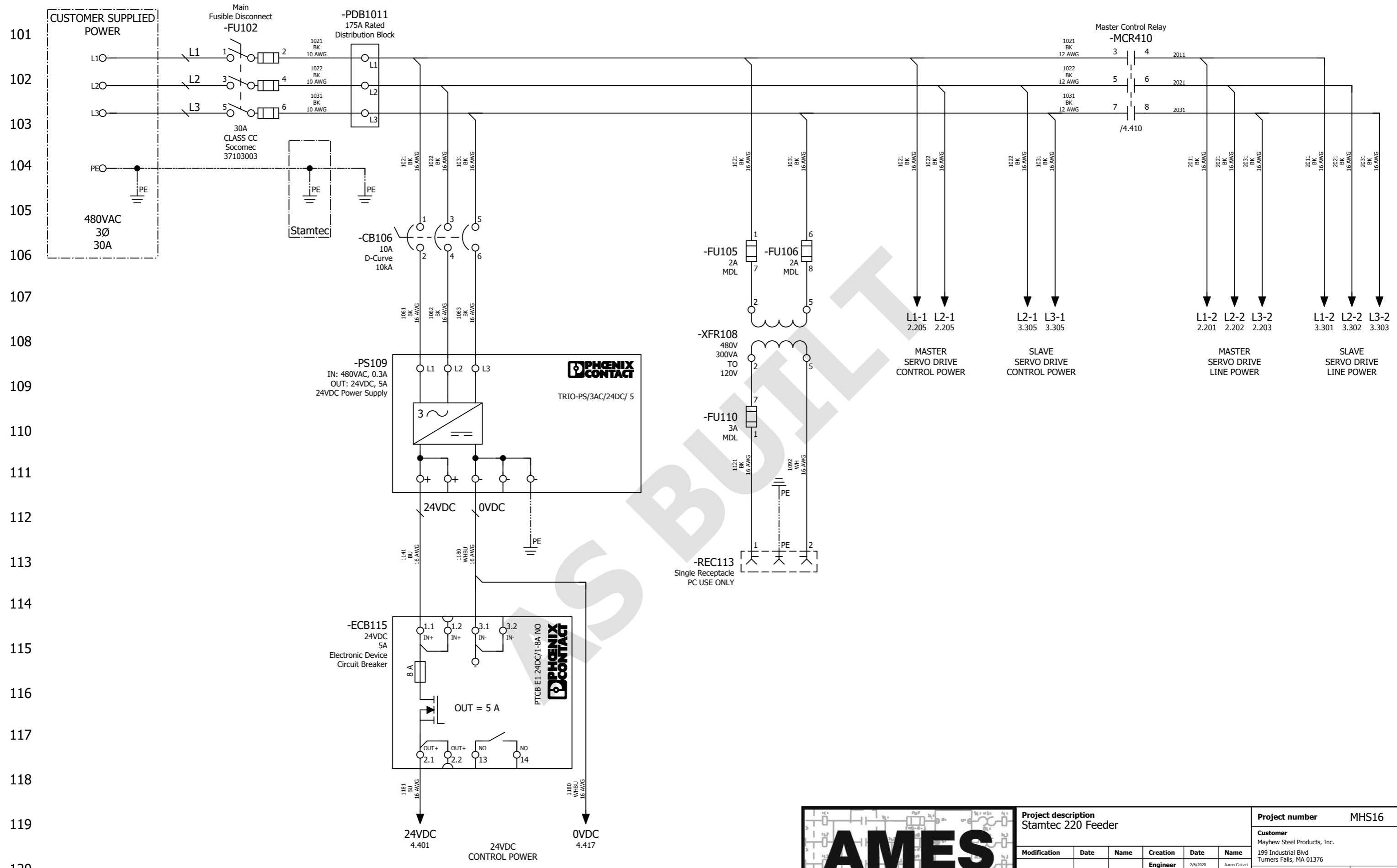


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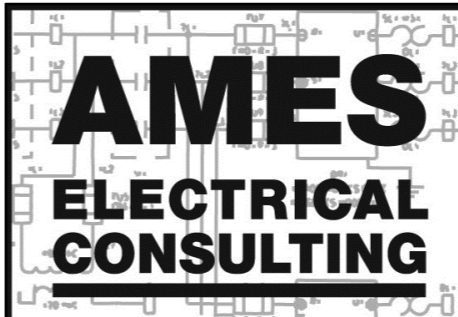
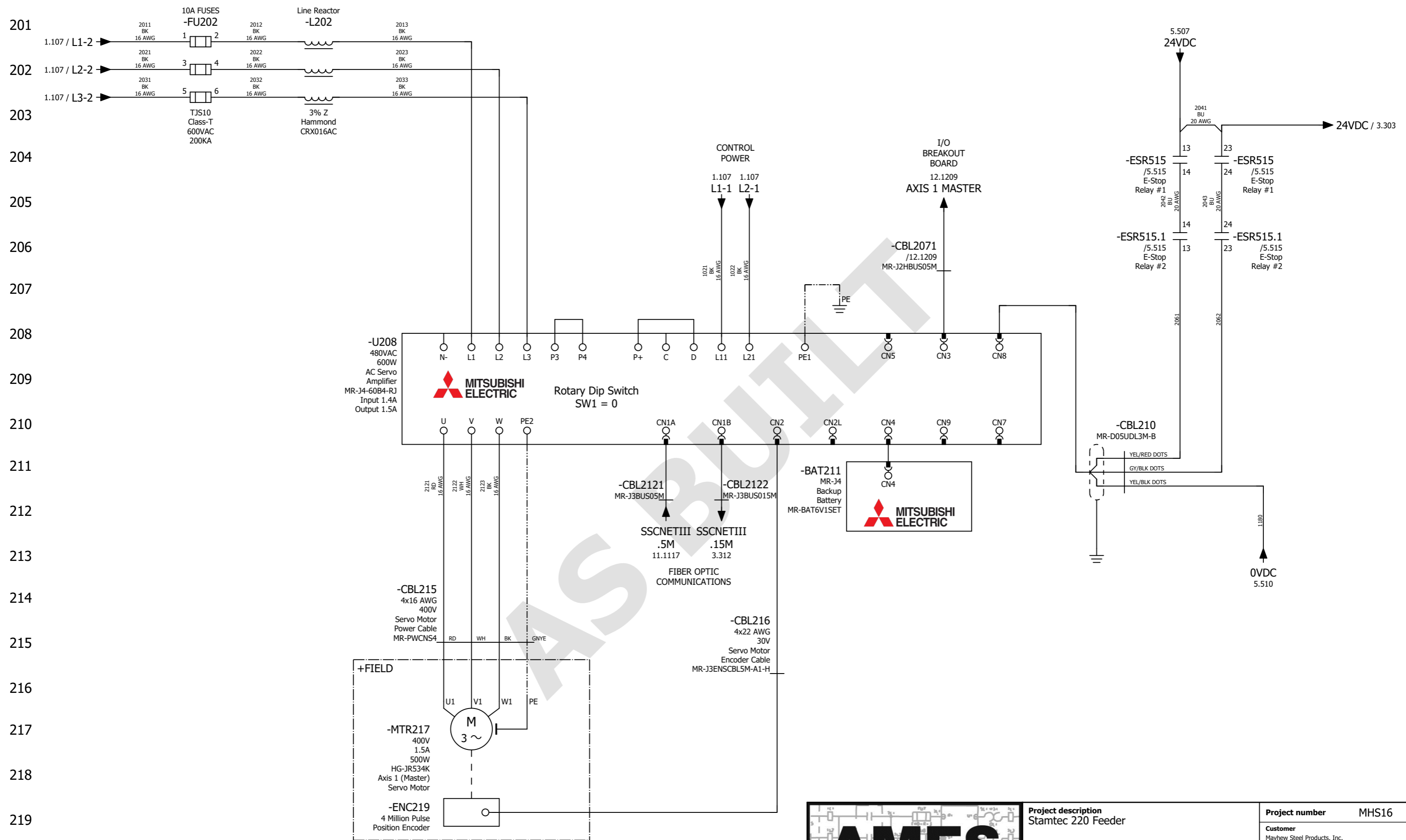
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	ii	Technical Safety Regulations	2/20/2020	Kyle Dargis
	iii	General Safety Regulations	2/20/2020	Kyle Dargis
	iv	Table of contents	5/19/2021	Kyle Dargis
+A1	Main enclosure			
	1	Main Power Feed & Distribution 3Ø 480VAC	5/19/2021	Aaron Calcari
	2	Axis 1 (Master) Servo Amplifier & Motor	5/19/2021	Aaron Calcari
	3	Axis 2 (Slave) Servo Amplifier & Motor	5/19/2021	Aaron Calcari
	4	Control Power Distribution 24VDC	5/19/2021	Aaron Calcari
	5	Safety Monitoring Relay	5/19/2021	Aaron Calcari
	6	HMI & I/E Switch	3/23/2020	Kyle Dargis
	7	CPU Power & Base Unit Digital Inputs	5/19/2021	Aaron Calcari
	8	Base Unit Digital Inputs (Continued)	3/3/2020	Kyle Dargis
	9	Base Unit Digital Outputs	5/19/2021	Aaron Calcari
	10	Base Unit Digital Outputs (Continued)	5/19/2021	Aaron Calcari
	11	Base Unit Analog I/O, Ethernet & Fiber Optic Communications	5/19/2021	Aaron Calcari
	12	Breakout Terminal Blocks	5/19/2021	Aaron Calcari
	30	Main Enclosure & Panel Layout	2/17/2020	Kyle Dargis



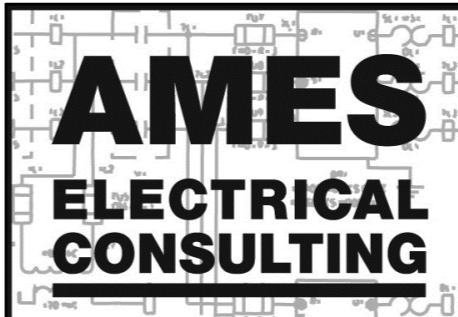
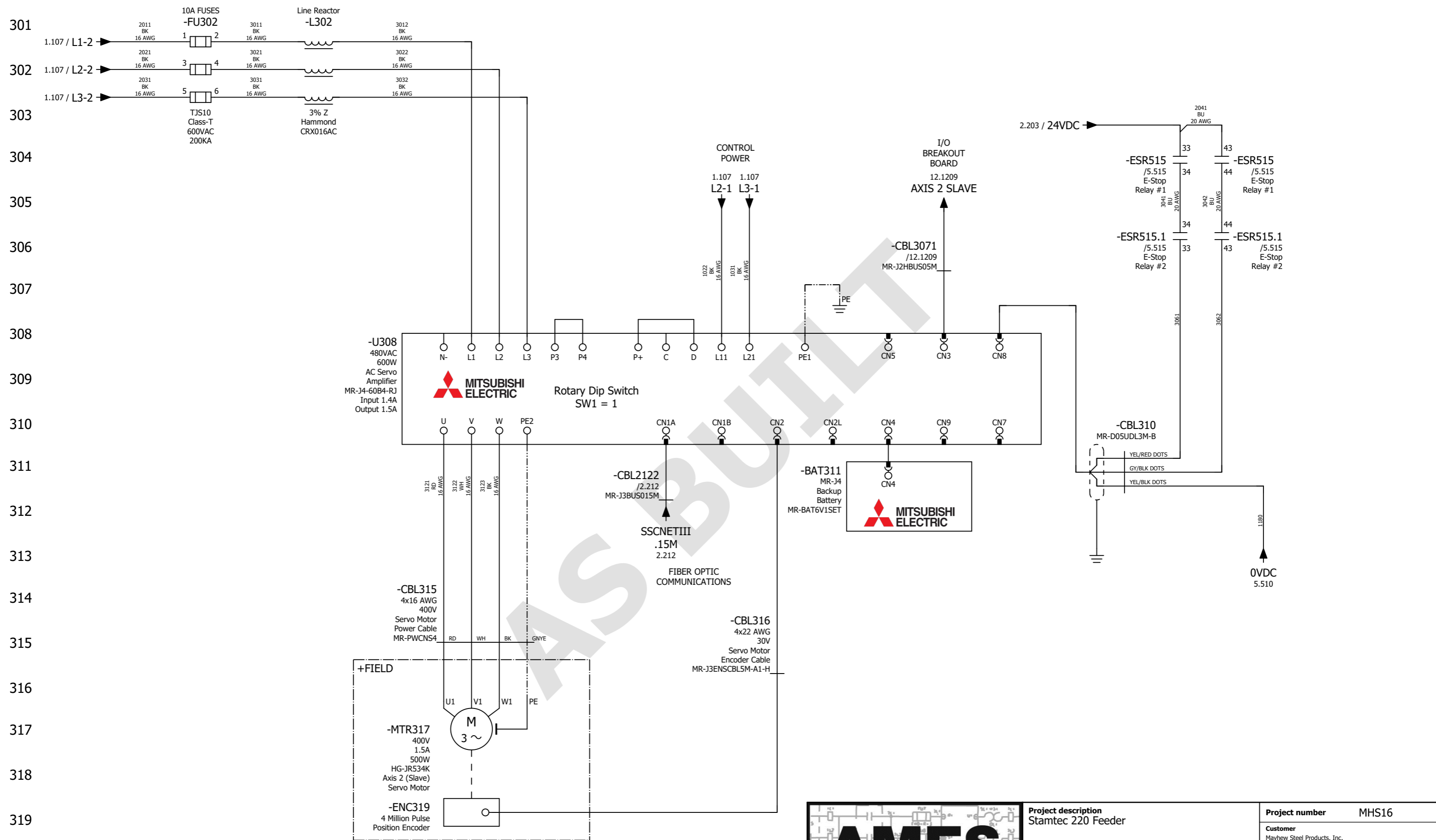
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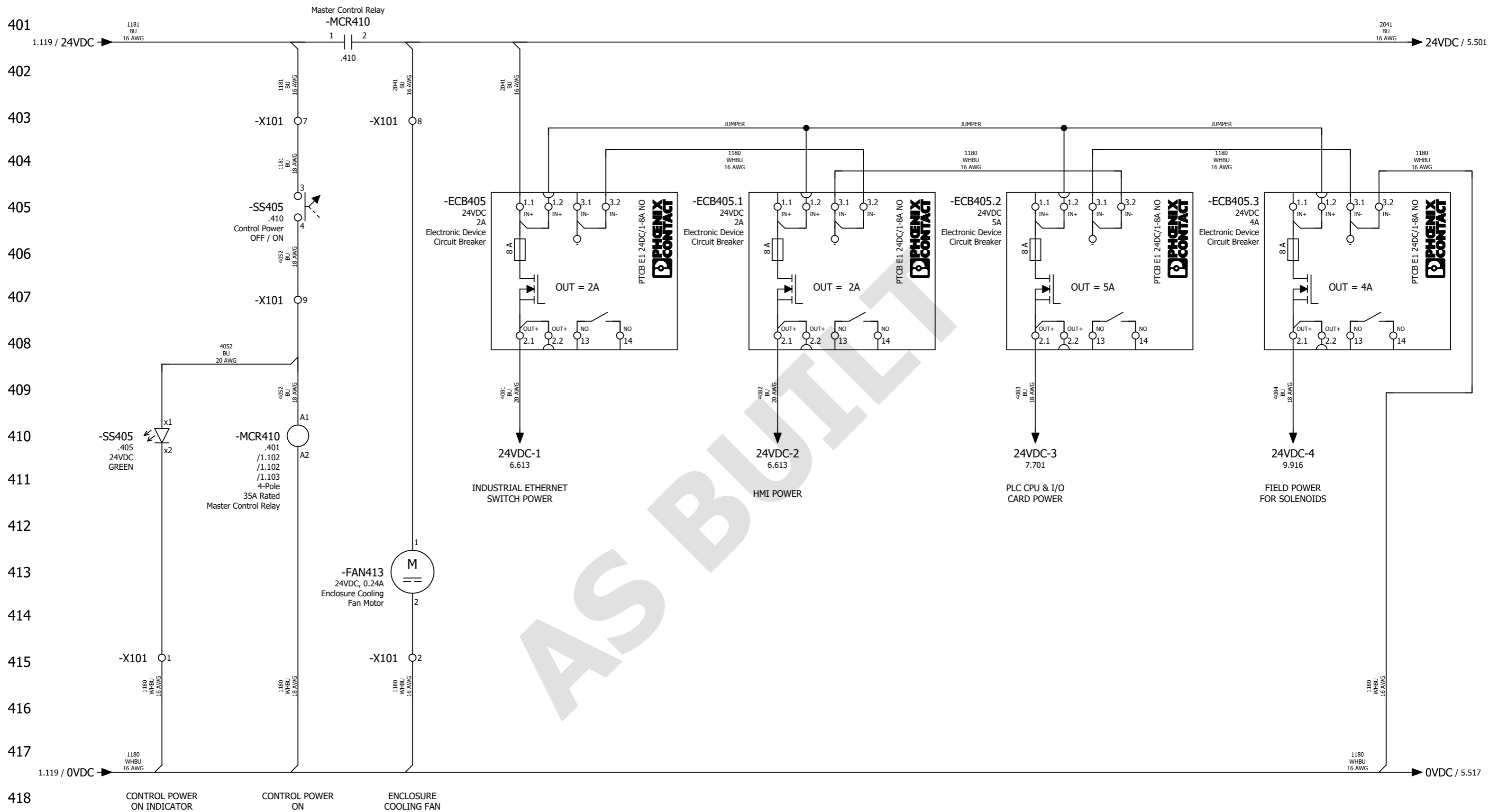
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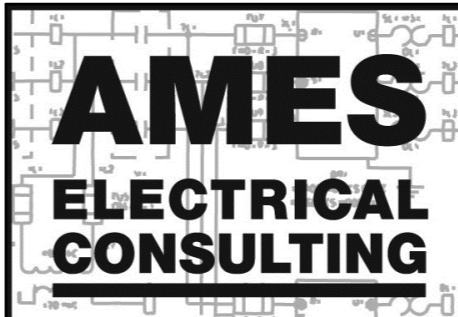
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<b>Project description</b> Stamtec 220 Feeder						<b>Project number</b> MHS16	
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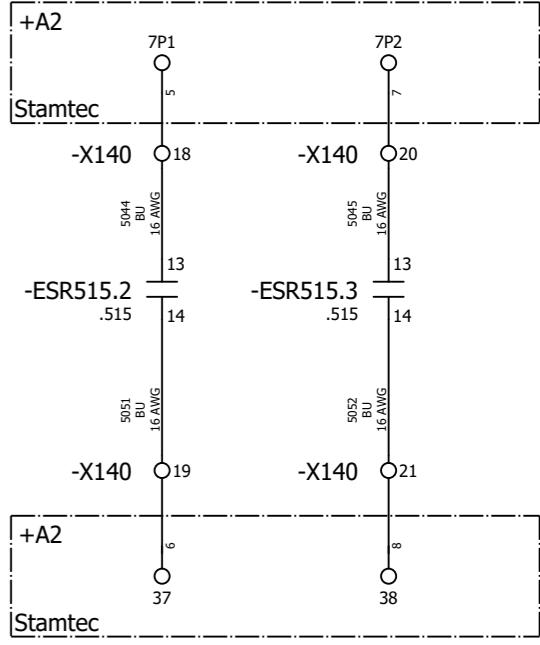
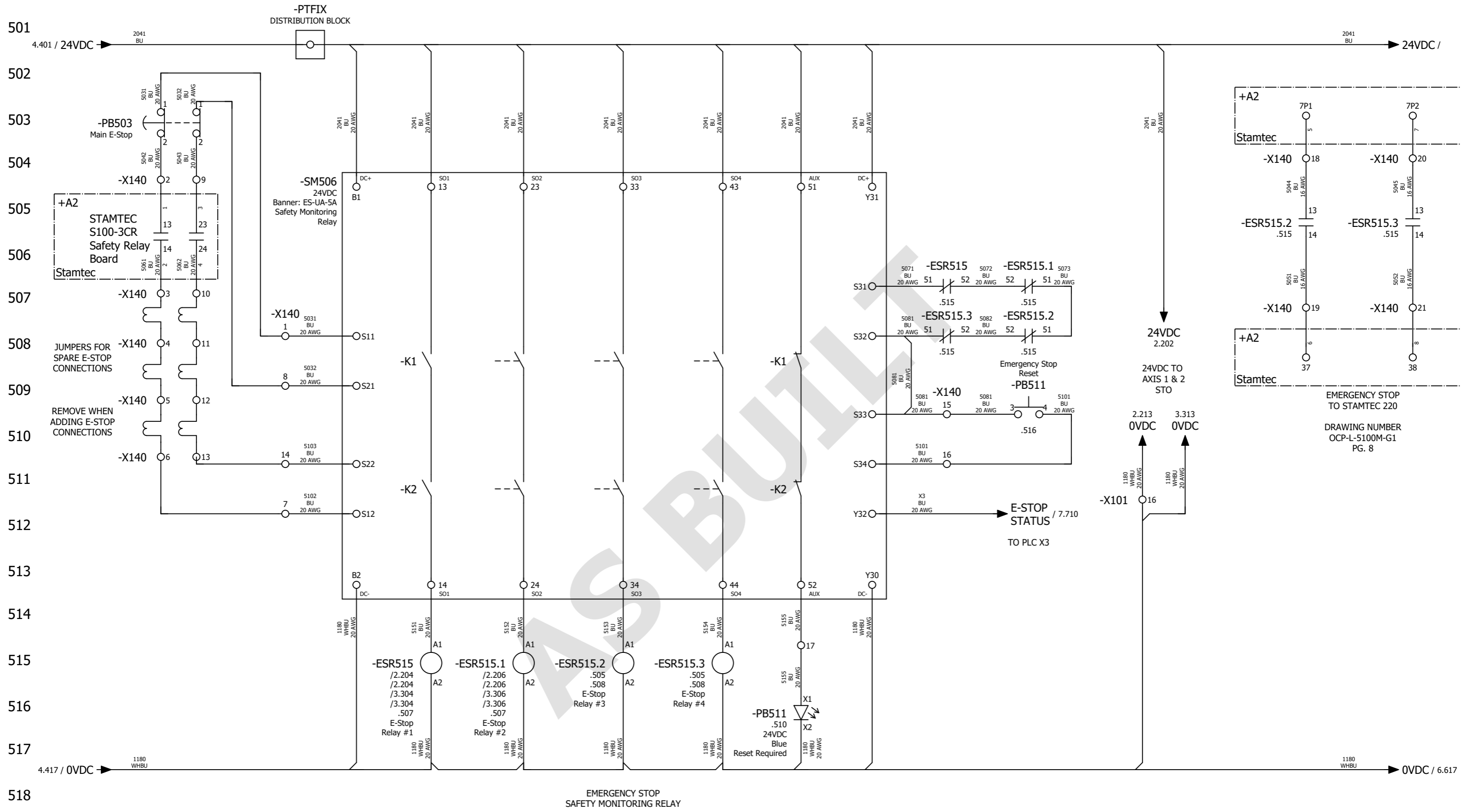


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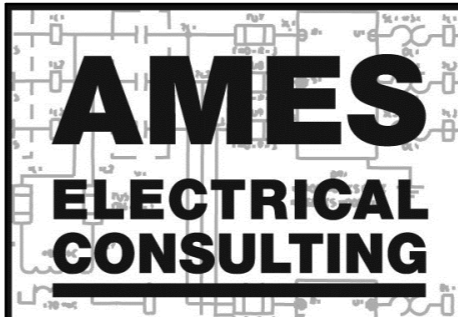
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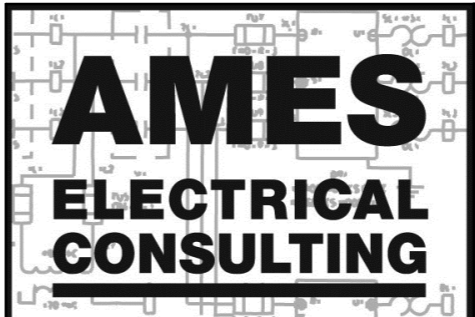
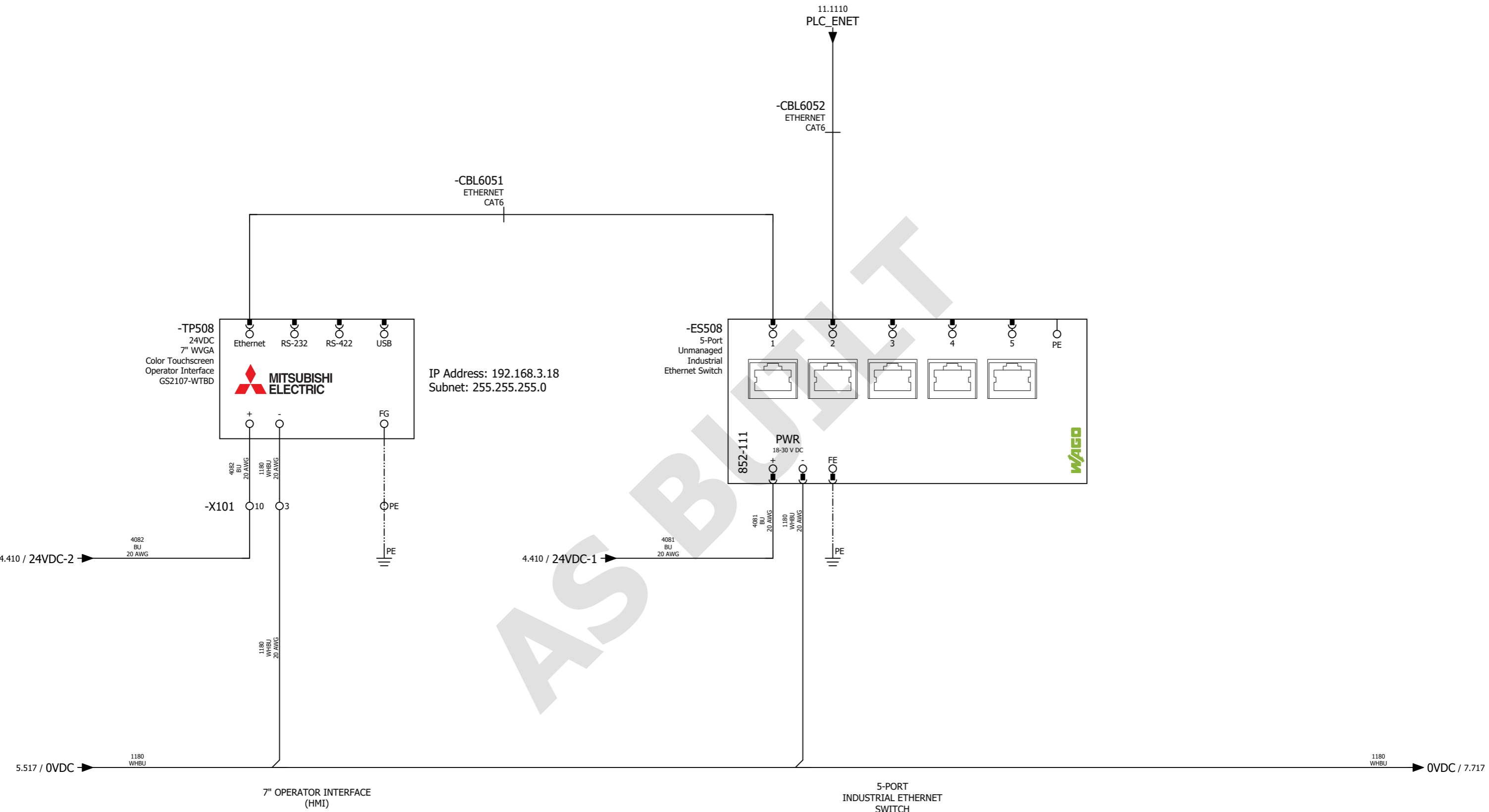
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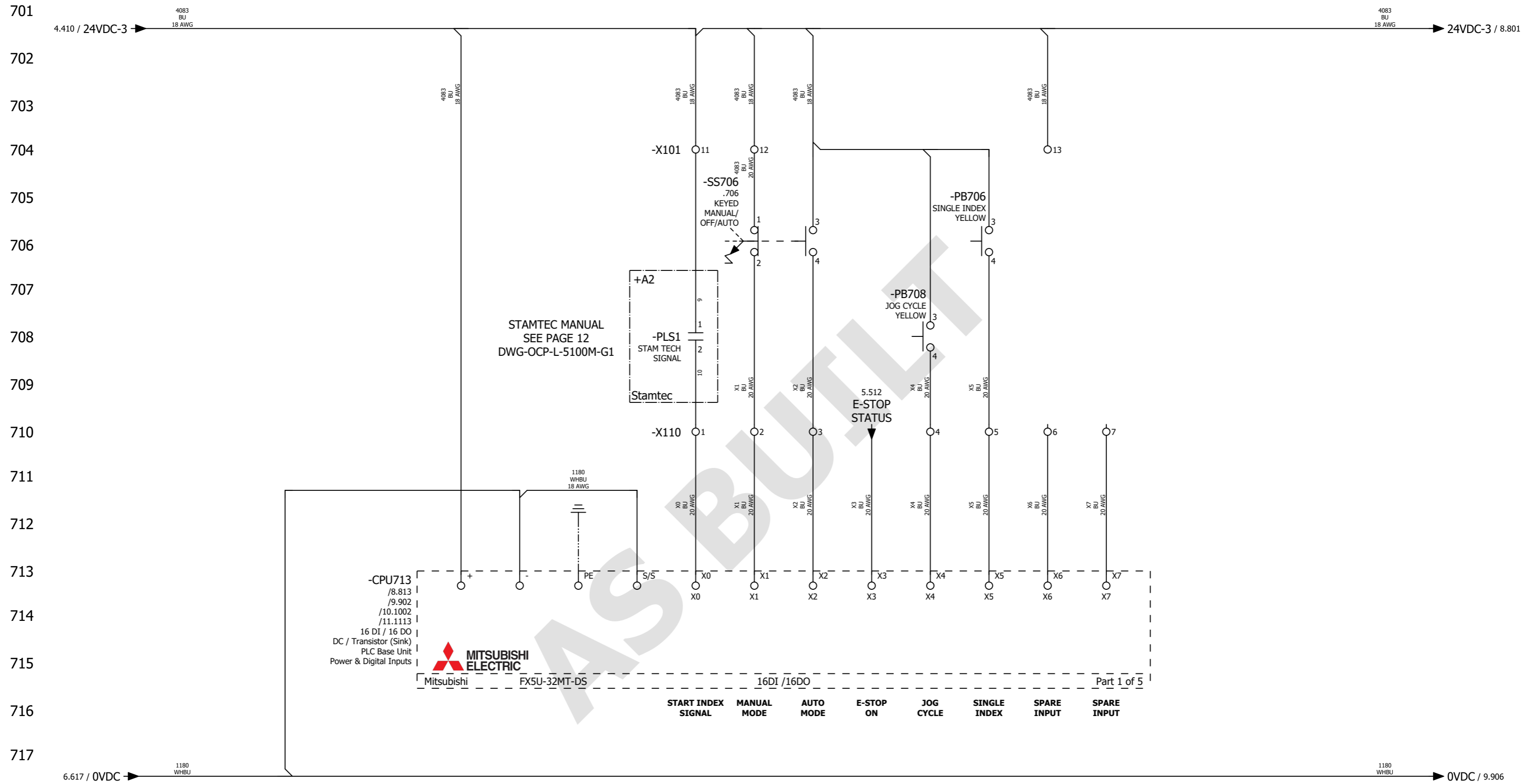
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Safety Monitoring Relay					
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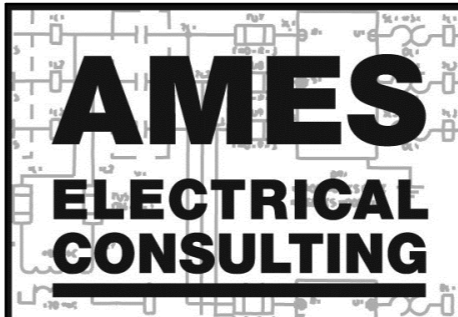
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						<b>Electrical engineering schematic</b>	



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<b>Project description</b> Stamtec 220 Feeder						<b>Project number</b> MHS16	
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24VDC-3 / 9.917

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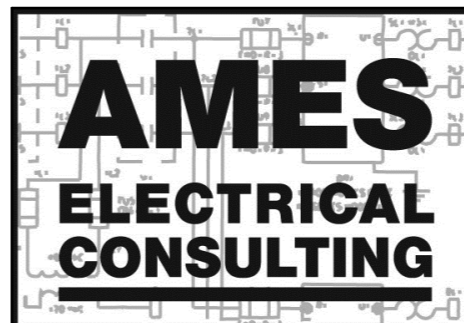
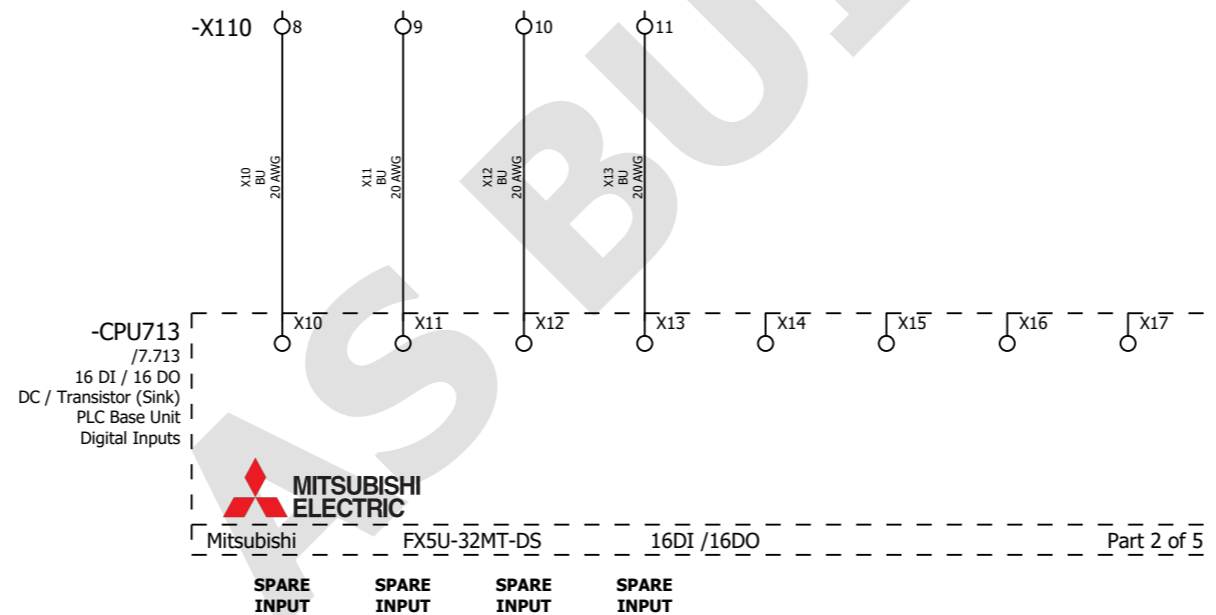
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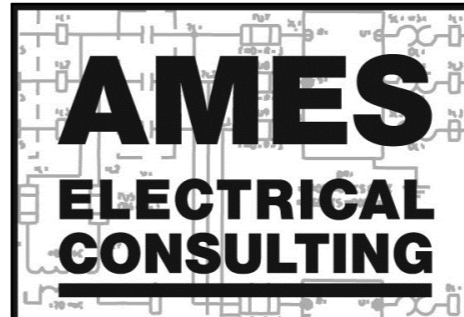
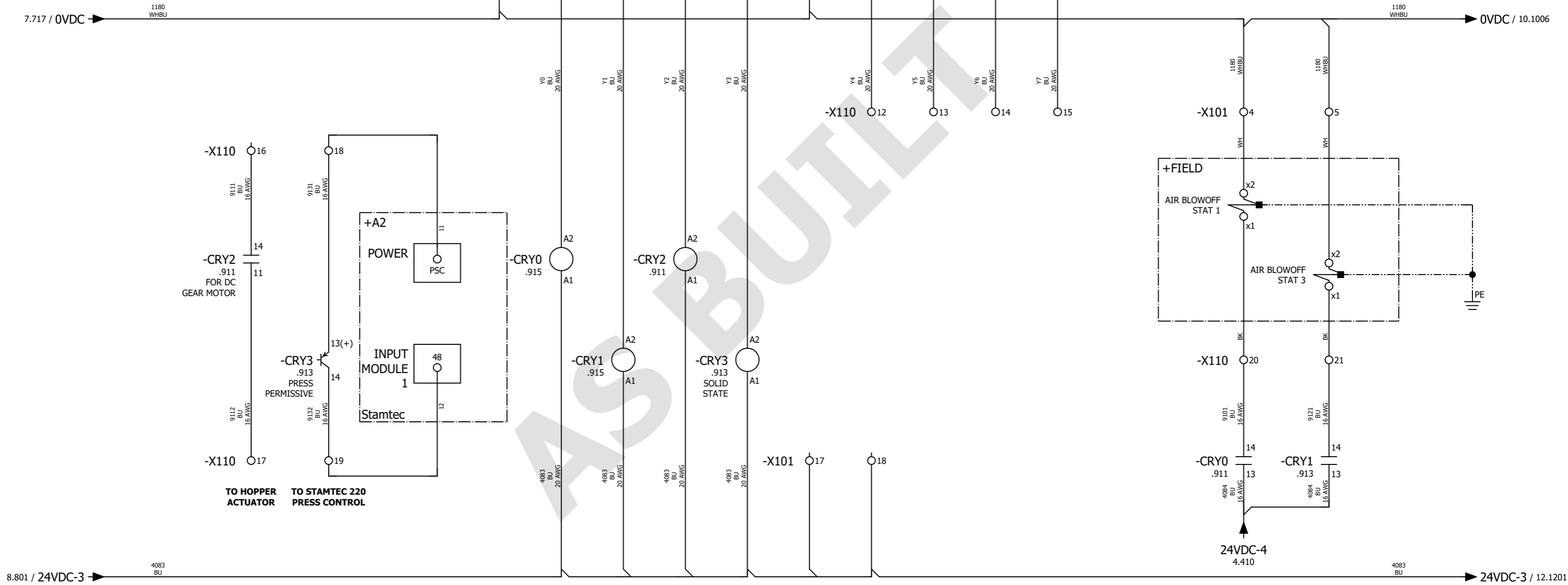
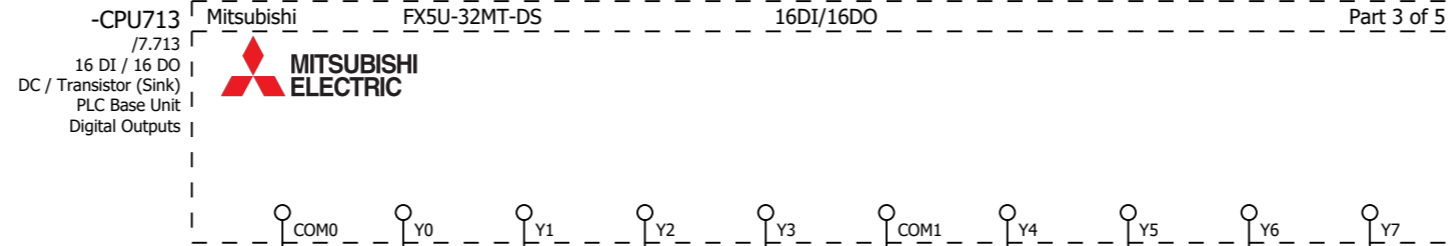
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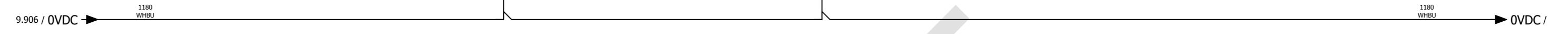
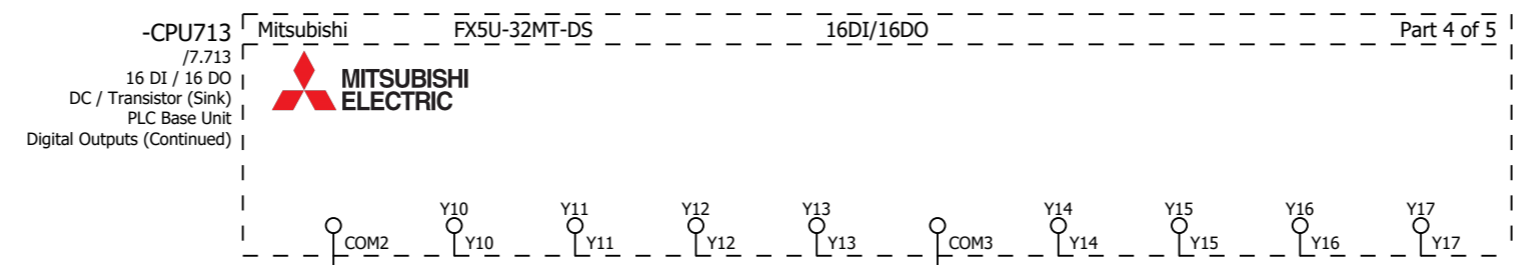
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STATION 1 AIR BLOWOFF    STATION 2 AIR BLOWOFF    START HOPPER ACTUATOR    PRESS PERMISSIVE    SPARE OUTPUT    SPARE OUTPUT    SPARE OUTPUT    SPARE OUTPUT

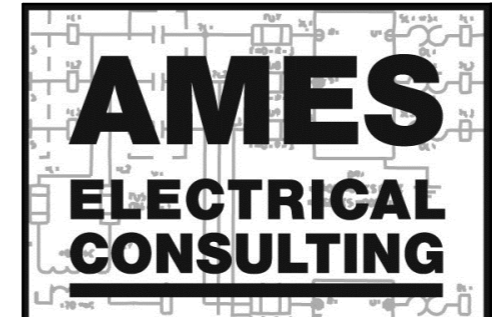
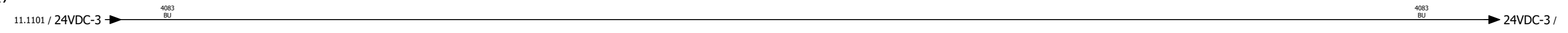


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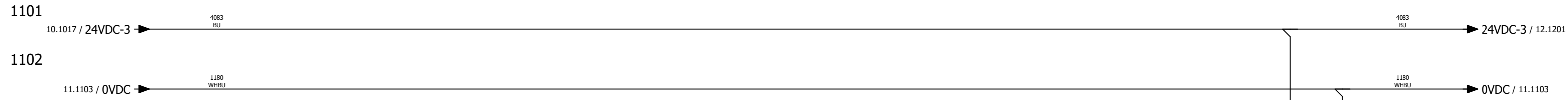
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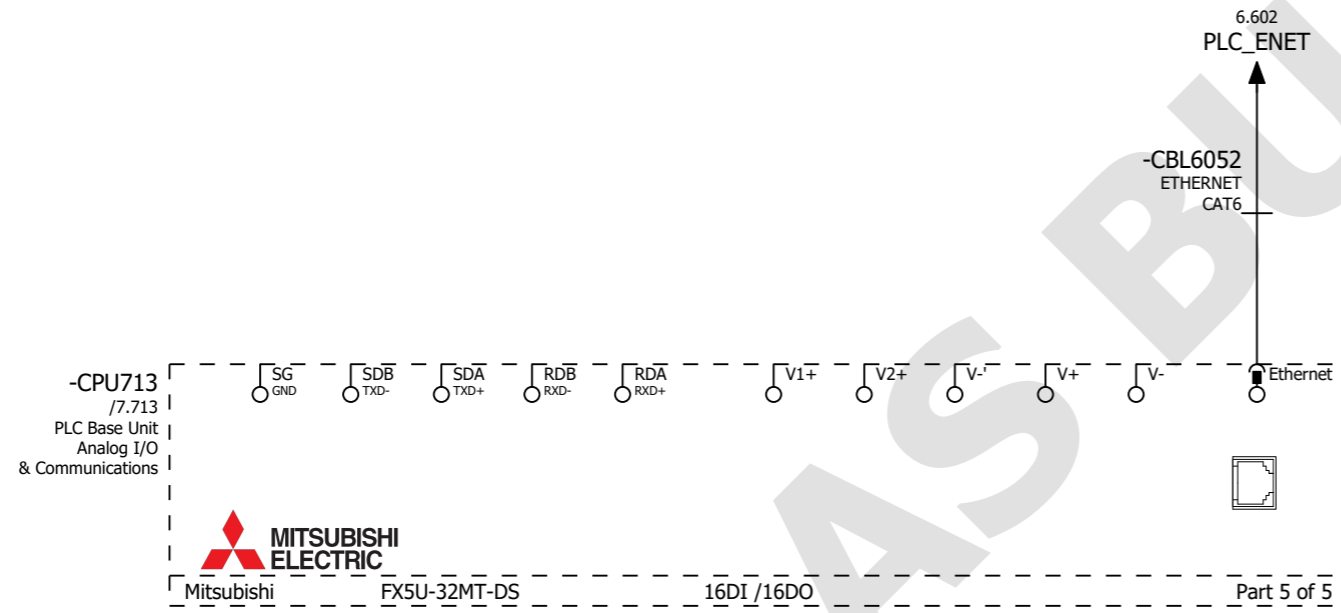
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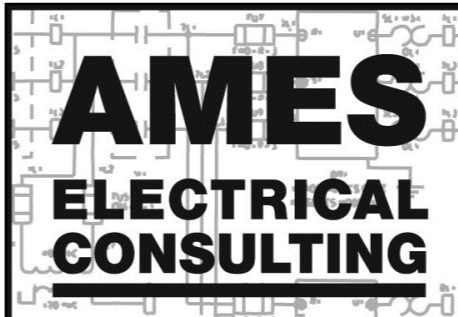
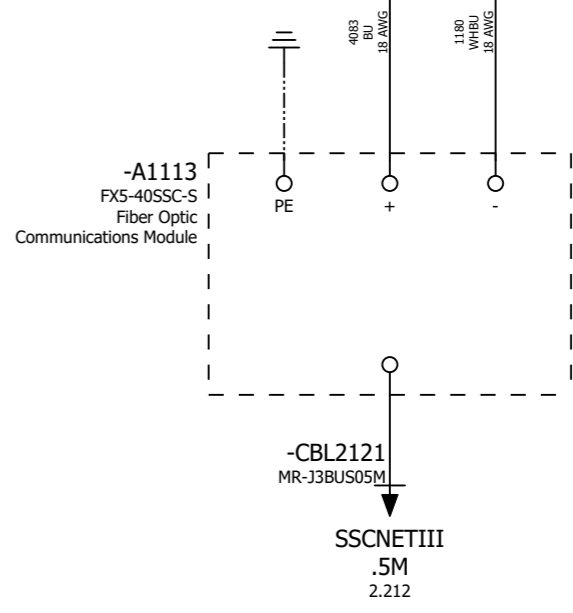
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<b>Base Unit Digital Outputs (Continued)</b>						<b>Electrical engineering schematic</b>	



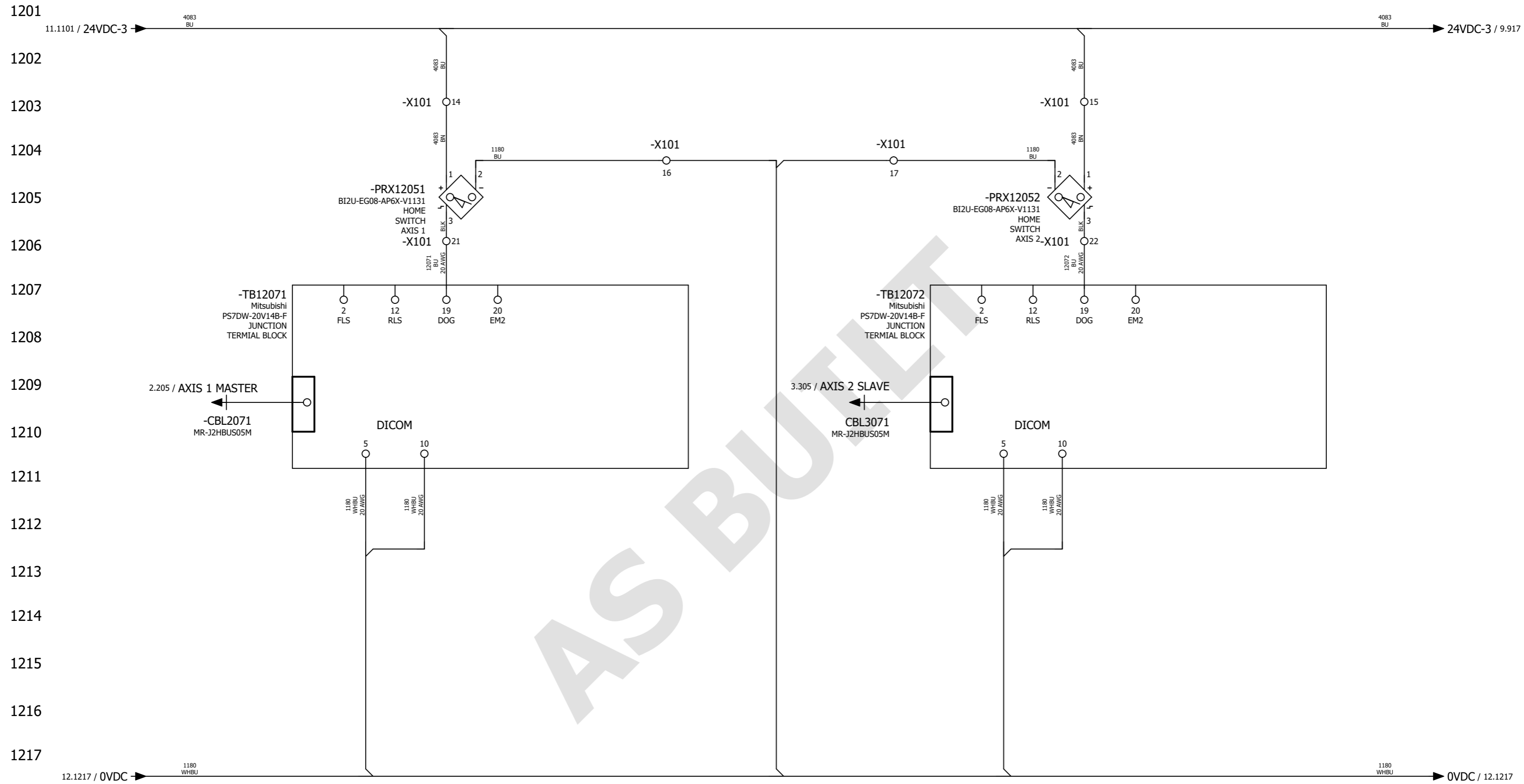
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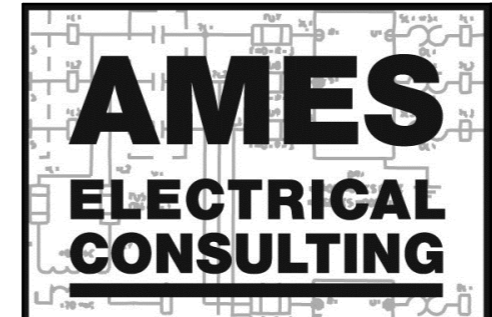
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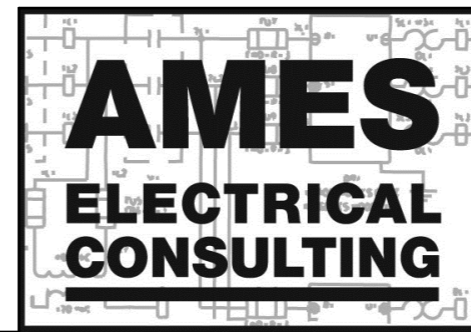
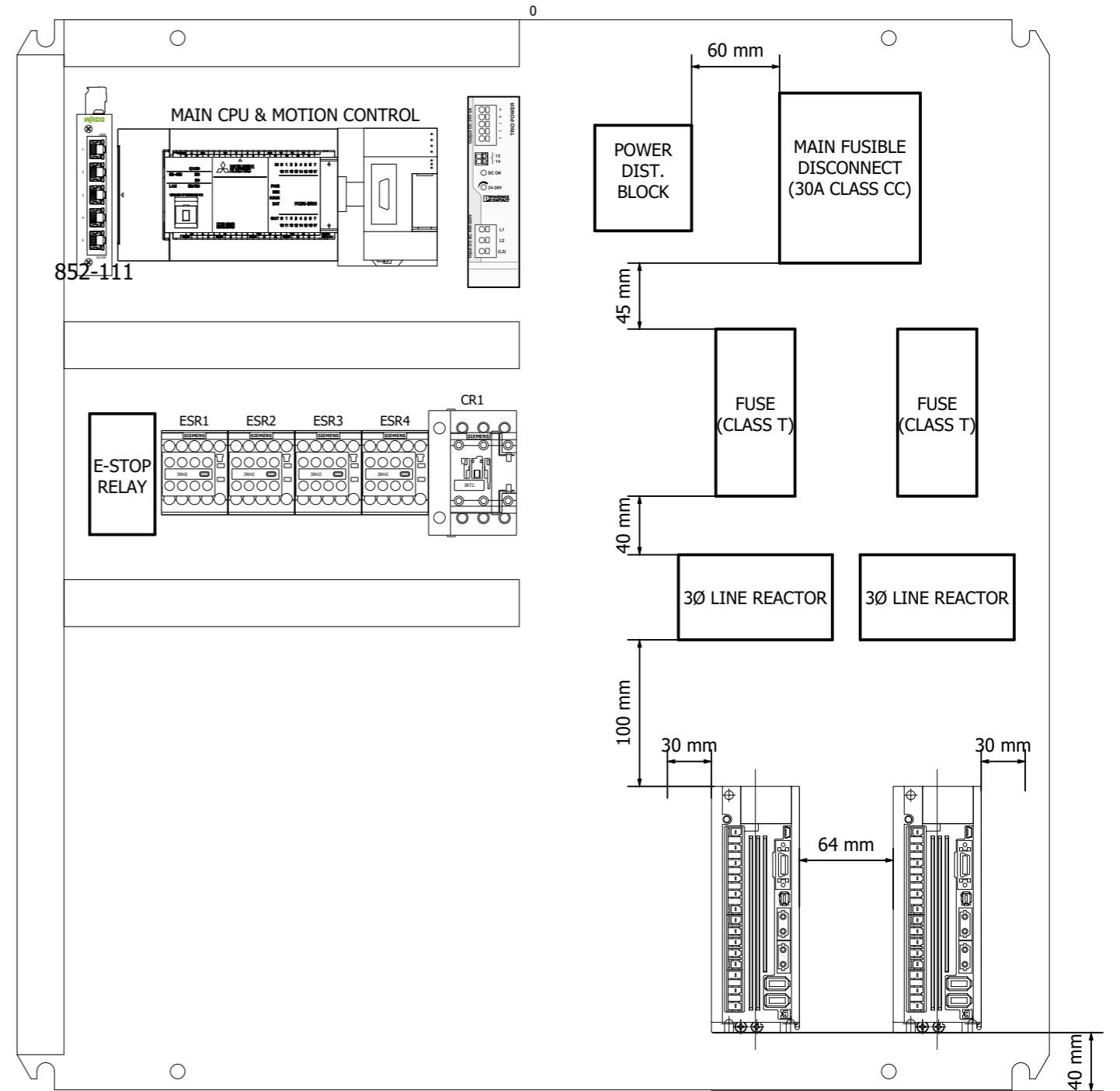
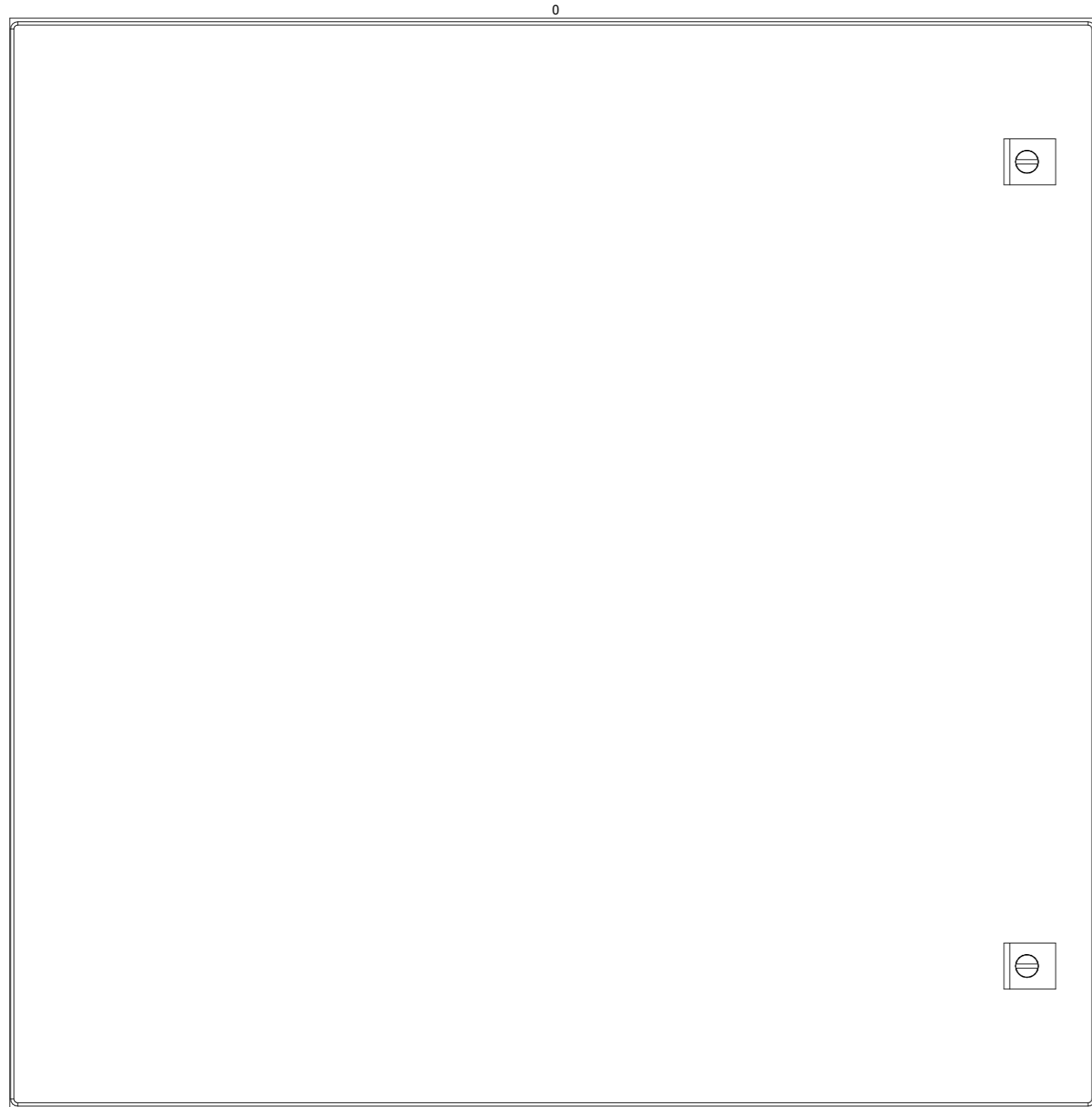
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30x30 ENCLOSURE  
SUB-PANEL



<b>Project description</b> Stamtec 220 Feeder						<b>Project number</b> MHS16	
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