

60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS

30 A
CIRCUITS
15 A
CIRCUITS
PLC
TYPE
XFMR
TYPE
ECS-5120-BB-AA-MM-TT

MAIN CIRCUIT BREAKER SETTINGS E104DISC

ETU350 LSI
3VA6110-6HN31-....
 $I_n = 1200A$

I_r/A	t_{td}/s	$I_{sd} = xI_r$	t_{sd}/s
75	3	3.5	0.08
80	2	8	0.15
85	1	10	0.22
90	0.75	14	0.3
95	0.5	17	0.4
100		10	

☐ ACT
☐ AL1
☐ AL2

SET: $I_r/A = 60 A$ $t_{td}/s = 8 s$ $I_{sd} = xI_r = 8$ $t_{sd}/s = 0.15 s$

APPLICATION NOTES:

1. TT IS THE TRANSFORMER TYPE
(TT = 00 NO TRANSFORMER)
(TT = 02 FOR NORTH AMERICA 480V)
(TT = 03 FOR NON-NA REGIONS 380/400/416/440V)
(TT = 04 FOR NON-NA REGIONS 380/416/440/480V)

2. MM IS THE PLC TYPE ACCORDING TO THE CHART BELOW.


	STANDARD	SAFETY	SAFETY+MOTION
1 MB	11	21	31
2 MB	12	22	32
3 MB	13	23	33
4 MB	14	24	34

3. AA IS THE NUMBER OF 15 A THERMOMAGNETIC TRIP BRANCH CIRCUITS.
4. BB IS THE NUMBER OF 30 A THERMOMAGNETIC TRIP BRANCH CIRCUITS.
5. THE FOLLOWING RULES FOR BRANCH CIRCUITS MUST BE OBSERVED:
(AA + BB <= 4)
6. EXAMPLE PART NUMBER: ECS-5120-04-00-23-02 (THIS ECS WOULD CONTAIN (4) 30 A BRANCH CIRCUIT BREAKERS, A 3 MB SAFETY PLC AND HAVE THE NA 480 V TRANSFORMER OPTION).
7. THIS PANEL IS FOR USE WITH WITH ETHERNET IO ONLY. THERE ARE NO PROVISIONS FOR DEVICENET IN THIS PANEL.

DRAWING PACKAGE REVISION LEVEL: B

LAST PART SELECTED WITH : GM_ePartsDB_202106

REFERENCE USED: ENG. MGR: NONE REQUIRED


	GM - STANDARD	GM ENGINEER: HARDWARE TEAM	DESIGN SOURCE:	DESIGN LEADER: GREG DOPPKE	PROGRAMS:	PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS	SYSTEM/TOOL NO:	RELEASE DATE: 2020-04-01	REVISION LETTER: B DATE: 2021-09-24	SECTION LETTER: A	SHEET NUMBER: 1 OF 3	
							DRAWING NUMBER: ECS-5120-BB-AA-MM-TT					
		THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.										
STATUS: RELEASED						PROJECT NAME: ECS-5120-BB-AA-MM-TT RevB(2021-09-24)			SAVE DATE: 2021-09-24		EPLAN VERSION: 2.7.3	

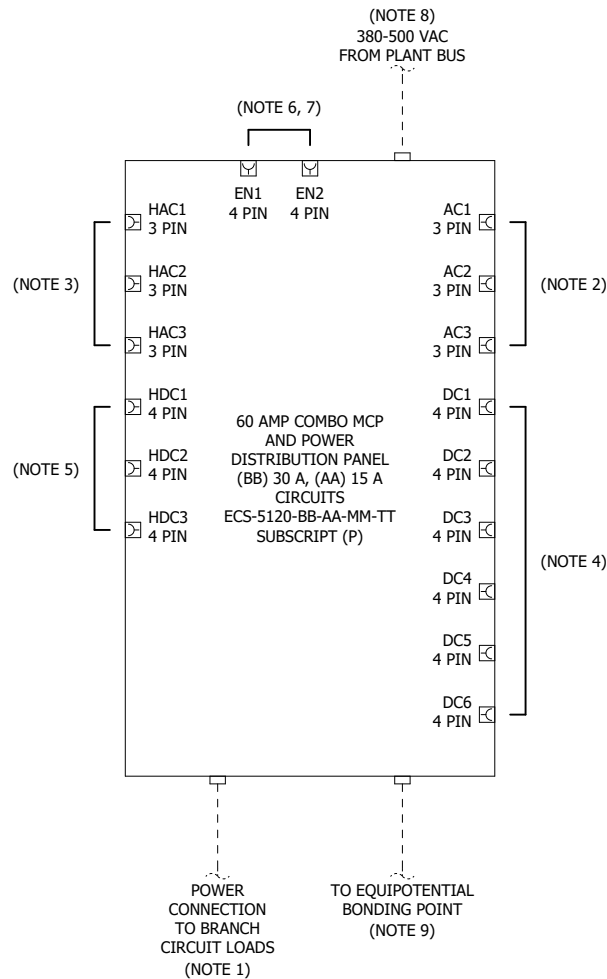
SECTION		REV	SHEET	DESCRIPTION
A	REFERENCE	B	1	TITLE AND REFERENCE SHEET
		B	2	TABLE OF CONTENTS
		B	3	REVISION SUMMARY SHEET
C	INTERCONNECT		1	INTERCONNECT
E	MAGNETICS		1	380 - 500 VAC POWER DISTRIBUTION
			2	380 - 500 VAC POWER DISTRIBUTION
			3	380 - 500 VAC POWER DISTRIBUTION
			4	120 VAC POWER ABOVE DISCONNECT
			5	120 VAC POWER BELOW DISCONNECT
			6	24 VDC POWER ABOVE DISCONNECT
			7	24 VDC POWER BELOW DISCONNECT
F	I/O		1	CHASSIS 1 I/O SLOTS 0 - 1
X	ENCLOSURE	B	1	ENCLOSURE LAYOUT - FRONT
		A	2	ENCLOSURE LAYOUT - SIDE
		B	3	ENCLOSURE LAYOUT - TOP AND INSIDE BOTTOM
		B	4	TAG DETAILS
		B	5	TAG DETAILS
			6	SUBPLATE DETAIL
		B	7	SUBPLATE LAYOUT
		B	8	SUBPLATE DETAIL VIEW
			9	SUBPLATE DETAIL VIEW
			10	RECEPTACLE PIN CHART
		A	11	ENCLOSURE FOOTPRINT
YA	BILL OF MATERIAL	B	1	BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)
		B	2	ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)
		B	3	ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)
		B	4	ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)
YB	VARIABLE BOM		1	BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (AA OPTION)
			2	ECS-5120-BB-AA-MM-TT-BOM (AA OPTION)
YC	VARIABLE BOM		1	BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (BB OPTION)
			2	ECS-5120-BB-AA-MM-TT-BOM (BB OPTION)
YD	VARIABLE BOM		1	BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (MM OPTION)
			2	ECS-5120-BB-AA-MM-TT-BOM (MM OPTION)
YE	VARIABLE BOM		1	BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (TT OPTION)
			2	ECS-5120-BB-AA-MM-TT-BOM (TT OPTION)
YZ	DEVICE LIST	B	1	DEVICE LIST
		B	2	DEVICE LIST
		B	3	DEVICE LIST

SECTION	REV	SHEET	DESCRIPTION
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REV	SHEET AFFECTED	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY
A	A1	- DRAWING PACKAGE REVISION LEVEL WAS REL. - LAST PART SELECTED WITH WAS GM_EPARTSDB_202003.	2021-01-12	C	DB
	A2	- UPDATED TABLE OF CONTENTS TO REVISION A.			
	A3	- SHEET DESCRIPTION WAS MASTER CHANGE SHEET. - UPDATED TO REVISION A.			
	X1	- AVT HOLE DIMENSION WAS 240 MM FROM TOP OF ENCLOSURE. - REPOSITIONED THE DOOR TAGS ON RIGHT CORNER OF DOOR TO MOVE AVT TAG.			
	X2	- UPDATED THE DISCONNECT HANDLE.			
	X5	- LUG TORQUE VALUES WERE SHOWN FOR ECS-5121.			
	X7	- UPDATED AVT HOLE LOCATION ON ENCLOSURE.			
	X8	- UPDATED AVT HOLE LOCATION ON ENCLOSURE.			
	X11	- UPDATED AVT HOLE LOCATION ON ENCLOSURE.			
B	A1	- UPDATED DRAWING PACKAGE TO REV B - UPDATED PART DATABASE TO GM_EPARTSDB_202106	2021-09-24	C	SK
	A2	- UPDATED DRAWING PACKAGE TO REV B			
	A3	- UPDATED DRAWING PACKAGE TO REV B			
	X1	- LABEL TEXT CHANGED FROM WARNING TO DANGER - ADDED HOT SURFACE WARNING LABELS			
	X3	- LABEL TEXT CHANGED FROM WARNING TO CAUTION			
	X4	- LABEL TEXT CHANGED FROM WARNING TO DANGER			
	X5	- UPDATED TORQUE VALUES FOR PE LUG LINE SIDE TERMINAL			
	X7	- PE LUG TERMINAL DIMENSIONS HAS BEEN CHANGED. WIDTH 20.5MM TO 18.5MM AND HEIGHT 75MM TO 71MM.			
	X8	- PE LUG TERMINAL DIMENSIONS HAS BEEN CHANGED. WIDTH 20.5MM TO 18.5MM AND HEIGHT 75MM TO 71MM.			

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
CP	CONTROL PROCESS CHANGE
M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE

	GM - STANDARD	GM ENGINEER:	DESIGN SOURCE:	DESIGN LEADER:	PROGRAMS:	PACKAGE DESCRIPTION:	60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS	SYSTEM/TOOL NO:	RELEASE DATE: 2020-04-01	REVISION LETTER: B DATE: 2021-09-24	SECTION LETTER: A	SHEET NUMBER: 3 OF 3
		HARDWARE TEAM		GREG DOPPKE			SHEET DESCRIPTION:					
<small>THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.</small>												
STATUS: RELEASED						PROJECT NAME: ECS-5120-BB-AA-MM-TT RevB(2021-09-24)			SAVE DATE: 2021-09-24		EPLAN VERSION: 2.7.3	



NOTES:

1. THIS ENCLOSURE SUPPORTS UP TO (4) 15 OR 30 A BRANCH CIRCUITS.
 2. USE ACx RECEPTACLES TO FEED 120 VAC TO PANELS AND DEVICES REQUIRING AC POWER.
 3. USE HACx RECEPTACLES TO FEED 120 VAC TO PANELS AND DEVICES REQUIRING "HOT" AC POWER.
 4. USE DC RECEPTACLES TO FEED 24 VDC TO PANELS AND DEVICES REQUIRING DC POWER.
 5. USE HDCx RECEPTACLES TO FEED 24 VDC TO PANELS AND DEVICES REQUIRING "HOT" DC POWER.
 6. USE EN1 AND EN2 RECEPTACLES FOR ETHERNET CONNECTIONS TO THE COMPACT LOGIX PLC.
- THE 5069 COMPACT LOGIX IS CAPABLE OF OPERATING EITHER IN LINEAR/DLR MODE (ONE IP ADDRESS, TWO PORTS) OR DUAL-IP MODE (UNIQUE IP ADDRESS FOR EACH PORT). TAKE CARE TO CONNECT THE APPLICATION ACCORDINGLY.
7. DO NOT CREATE A RING TOPOLOGY BY CONNECTING BOTH ENDS OF THE LINEAR NETWORK TO A SWITCH.
 8. USE ONLY WIRE SIZE AND STRAND CLASS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS. REMOVE INSULATION FROM WIRE AND TORQUE TERMINALS PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.
 9. EQUIPOTENTIAL BONDING CONNECTION REQUIRED. REFERENCE APPLICATION WD.
 10. COVERS ARE REQUIRED FOR UNUSED RECEPTACLES. THESE COVERS ARE NOT INCLUDED WITH THIS ENCLOSURE.



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

(BB) 30 A, (AA) 15 A CIRCUITS

SHEET DESCRIPTION: INTERCONNECT

SYSTEM/TOOL NO:

RELEASE DATE:

2020-04-01

REVISION LETTER:

DATE:

SECTION LETTER:

C

SHEET NUMBER:

1 OF 1

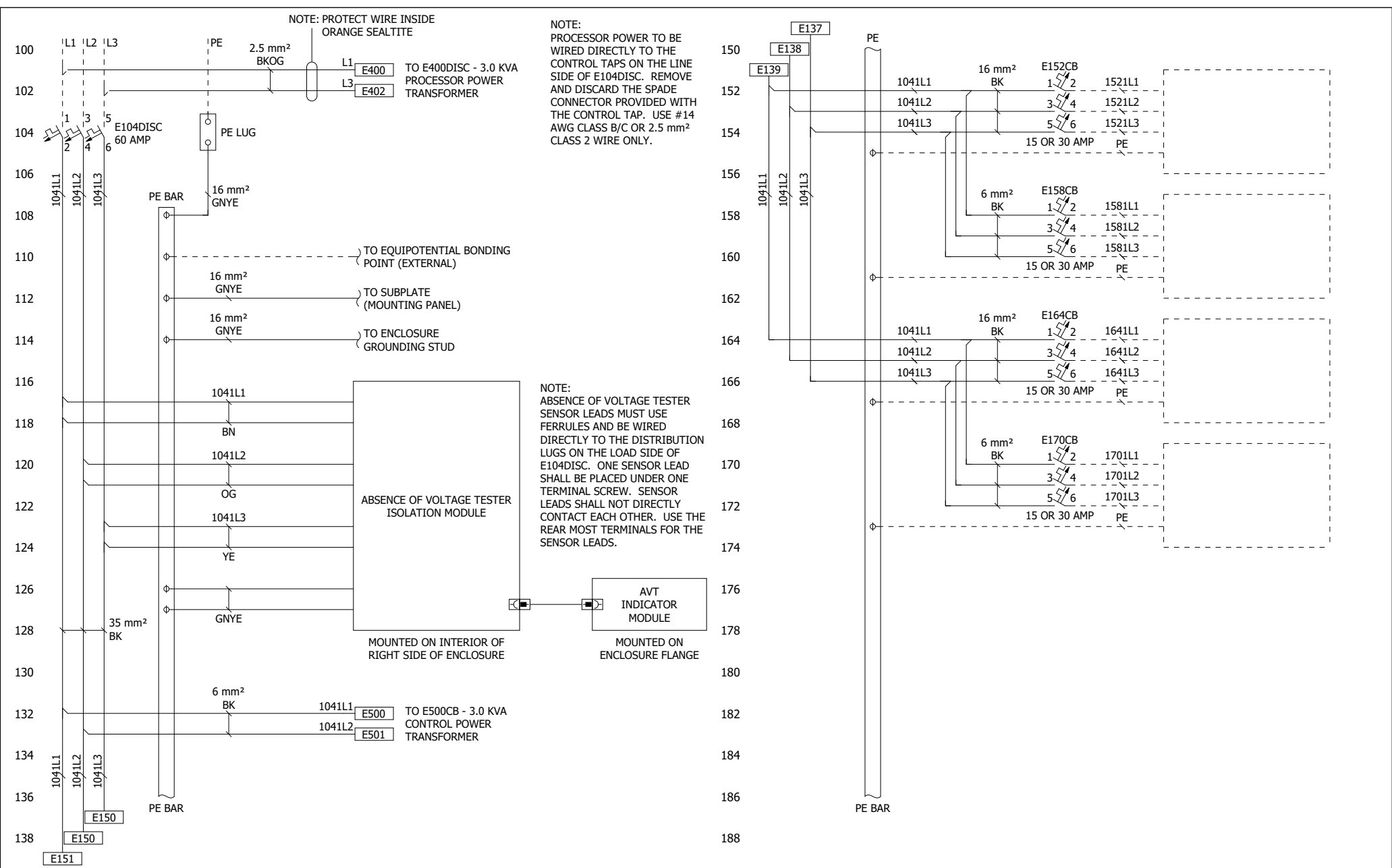
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STATUS: RELEASED

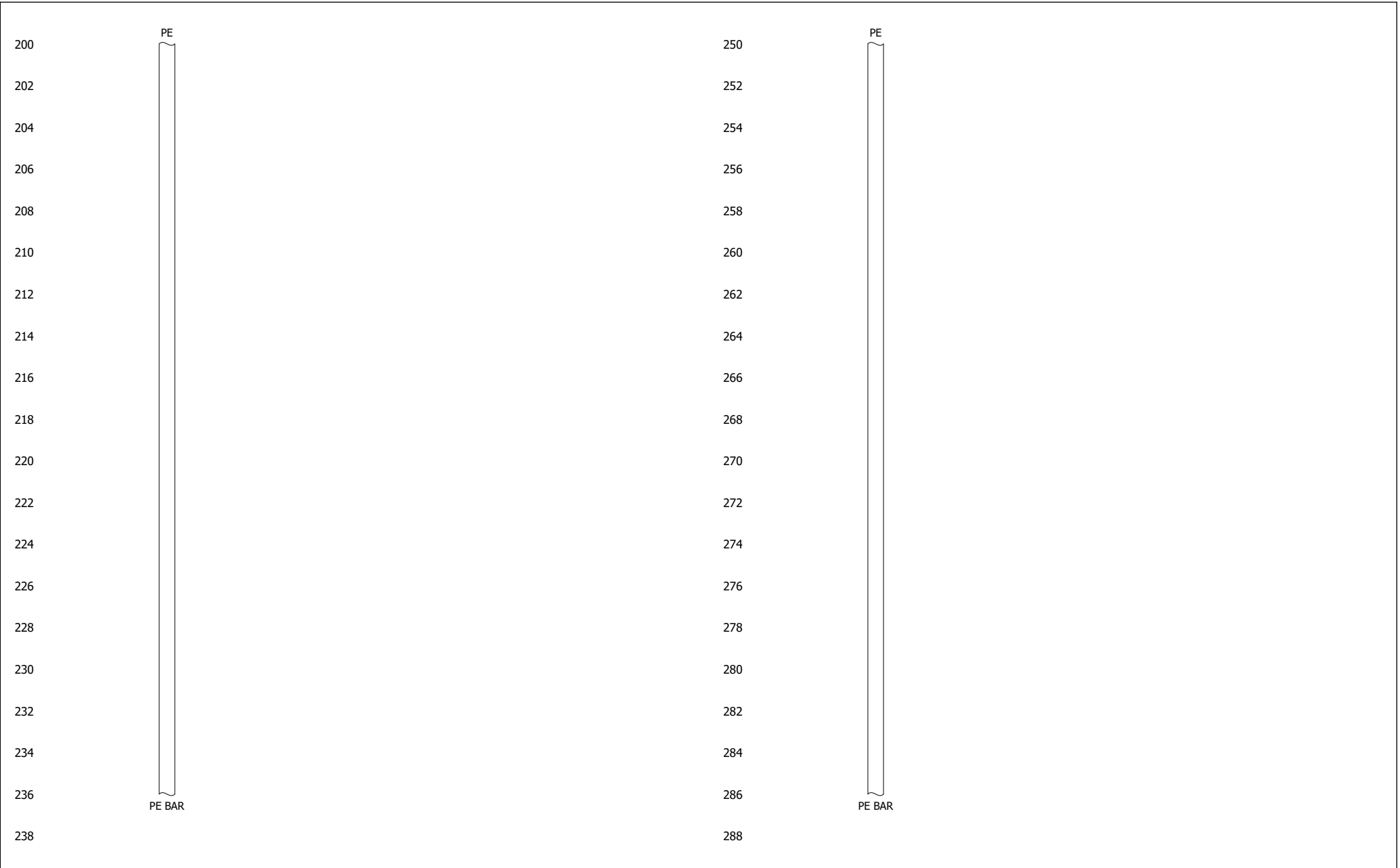
PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)


SAVE DATE: 2020-04-01

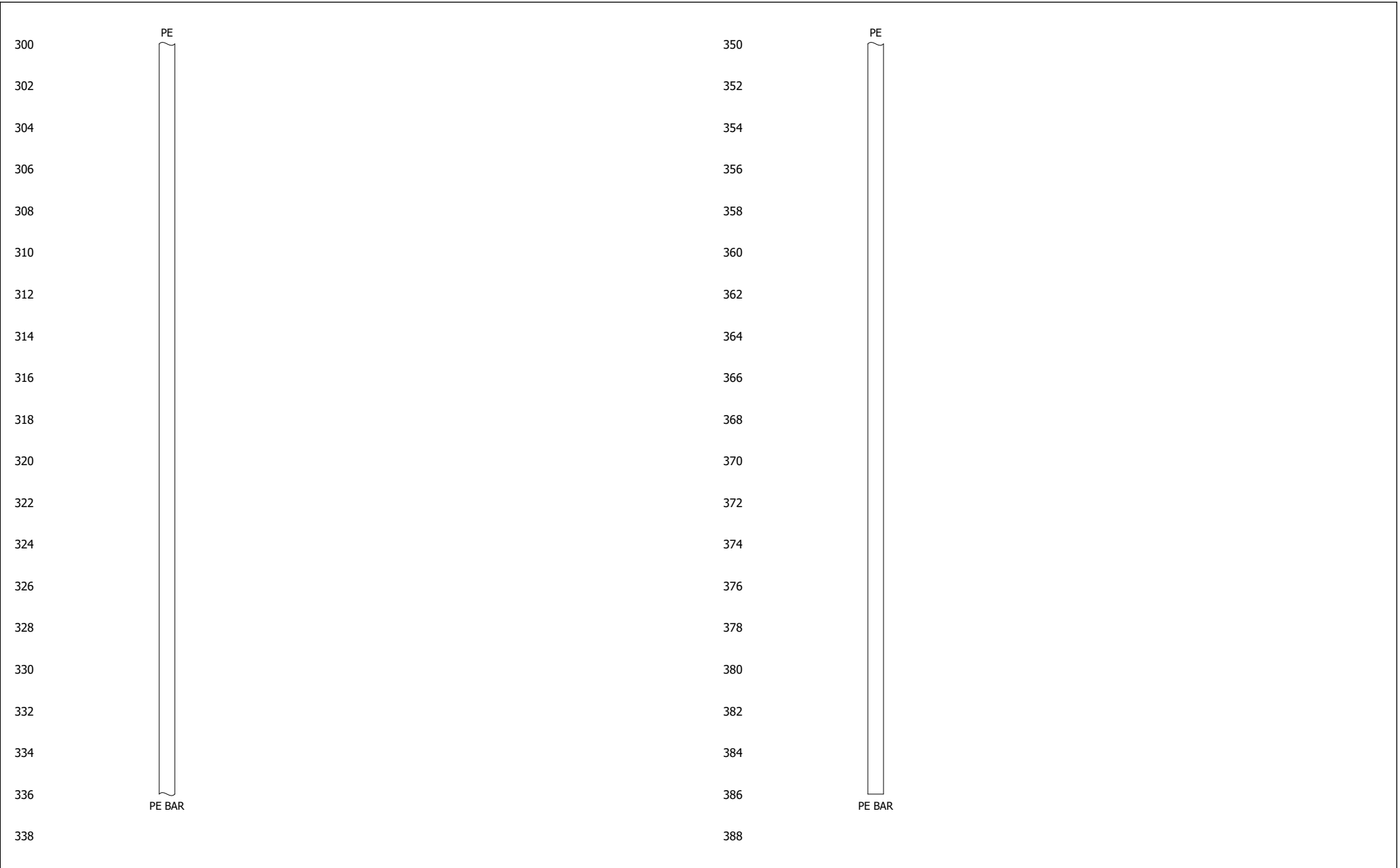
EPLAN VERSION: 2.7.3




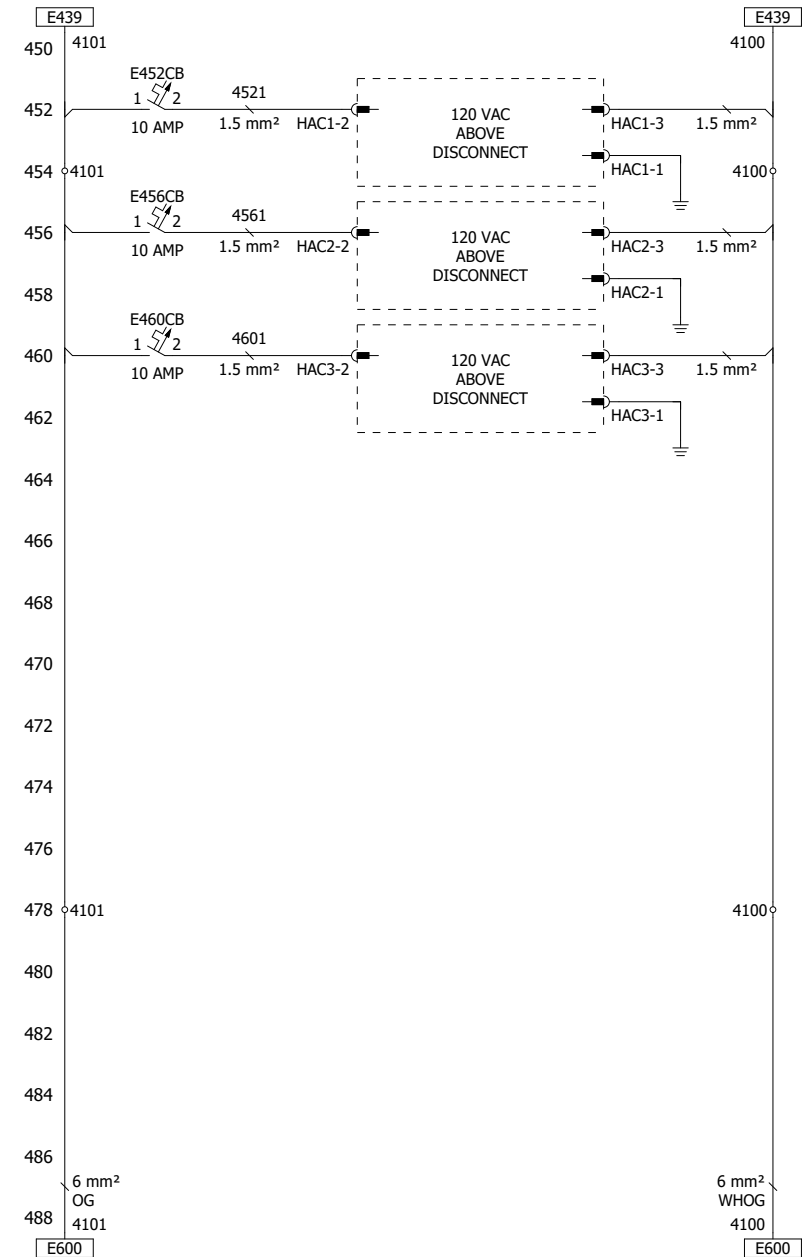
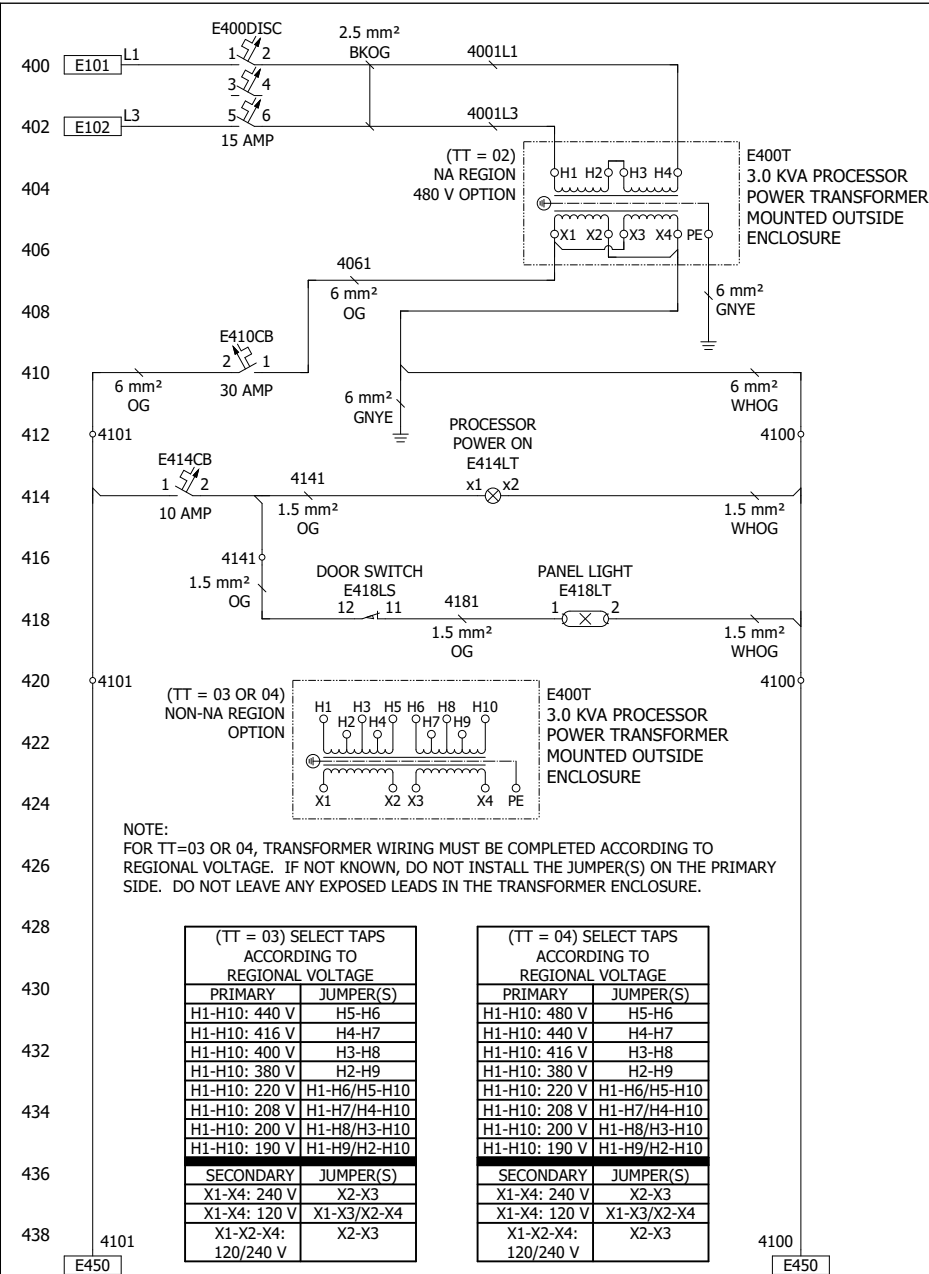
	GM - STANDARD	GM ENGINEER: HARDWARE TEAM	DESIGN SOURCE:	DESIGN LEADER: GREG DOPPKE	PROGRAMS:	PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS	SYSTEM/TOOL NO:	RELEASE DATE: 2020-04-01	REVISION LETTER:	SECTION LETTER: E	SHEET NUMBER: 1 OF 7		
						SHEET DESCRIPTION: 380 - 500 VAC POWER DISTRIBUTION	DRAWING NUMBER: ECS-5120-BB-AA-MM-TT	DATE:					
THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.						STATUS: RELEASED			PROJECT NAME: ECS-5120-BB-AA-MM-TT RevB(2021-09-24)			SAVE DATE: 2021-09-15	EPLAN VERSION: 2.7.3




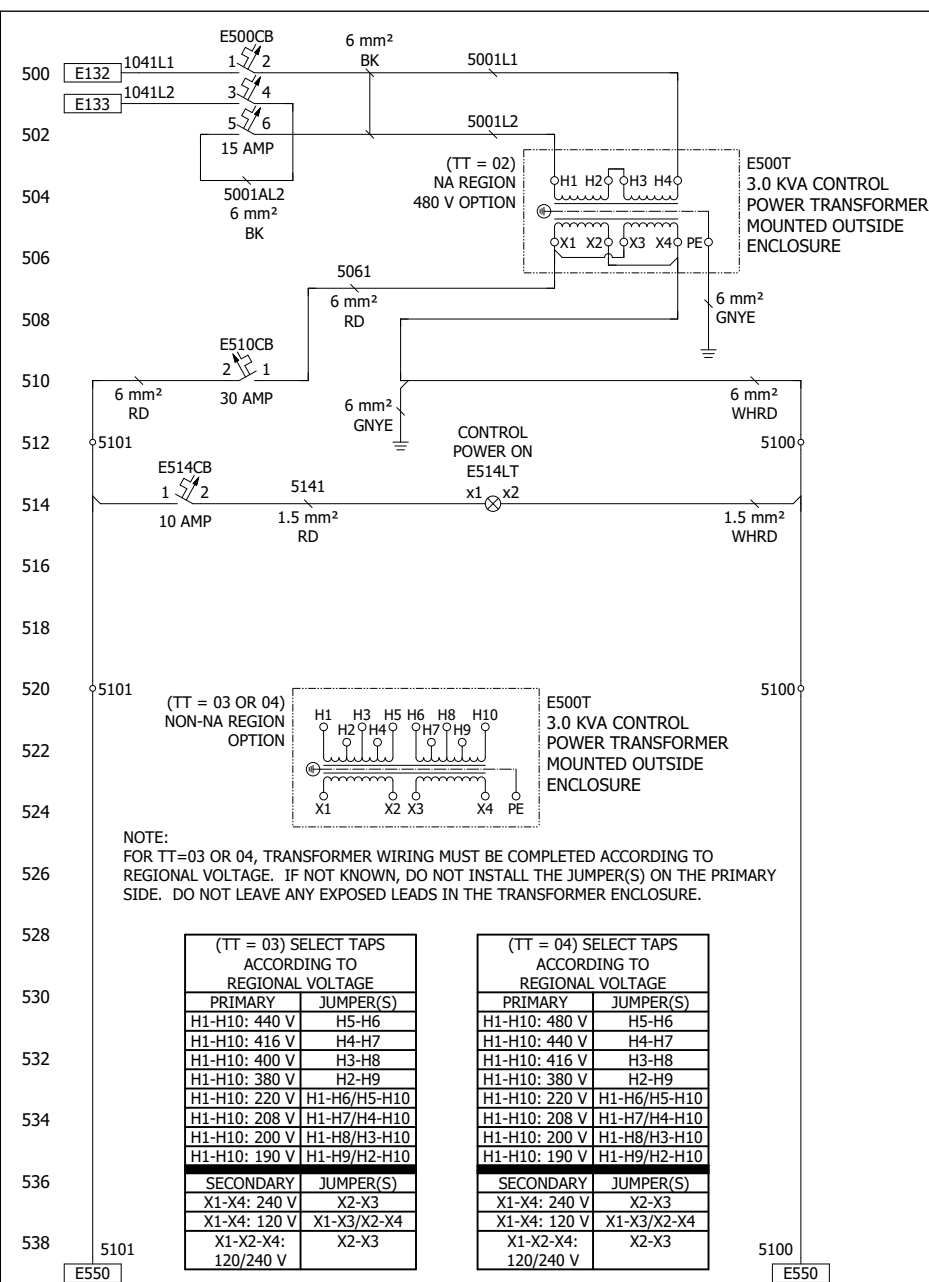
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		HARDWARE TEAM		GREG DOPPKE		SHEET DESCRIPTION:	380 - 500 VAC POWER DISTRIBUTION	DRAWING NUMBER:	ECS-5120-BB-AA-MM-TT				DATE:	E
THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.						STATUS: RELEASED			PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)				SAVE DATE: 2020-02-25	



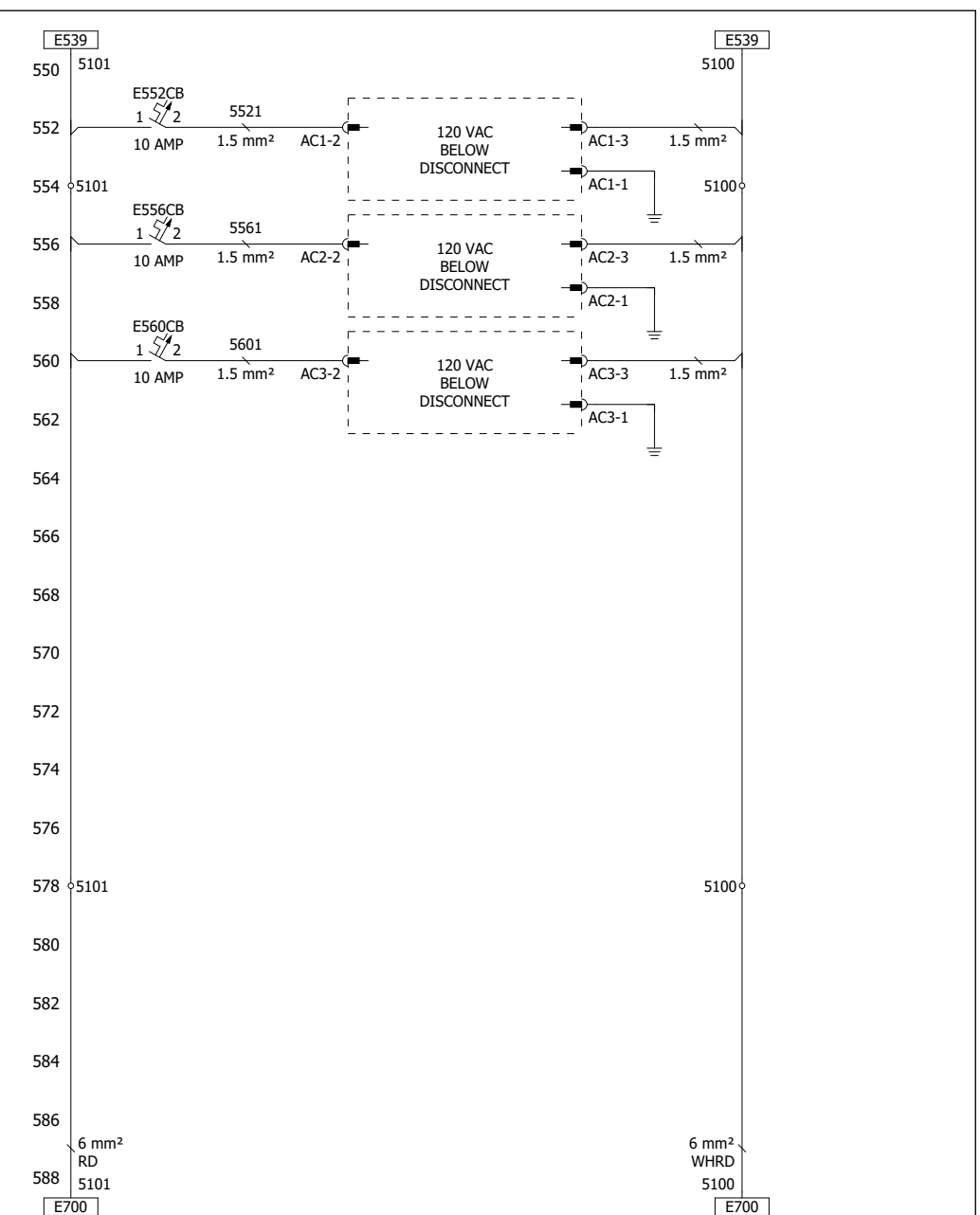
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		HARDWARE TEAM		GREG DOPPKE		SHEET DESCRIPTION:	(BB) 30 A, (AA) 15 A CIRCUITS	DRAWING NUMBER:	2020-04-01				DATE:
		THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.					DESCRIPTION:	380 - 500 VAC POWER DISTRIBUTION	ECS-5120-BB-AA-MM-TT				E
STATUS: RELEASED						PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)				SAVE DATE: 2020-02-25		EPLAN VERSION: 2.7.3	



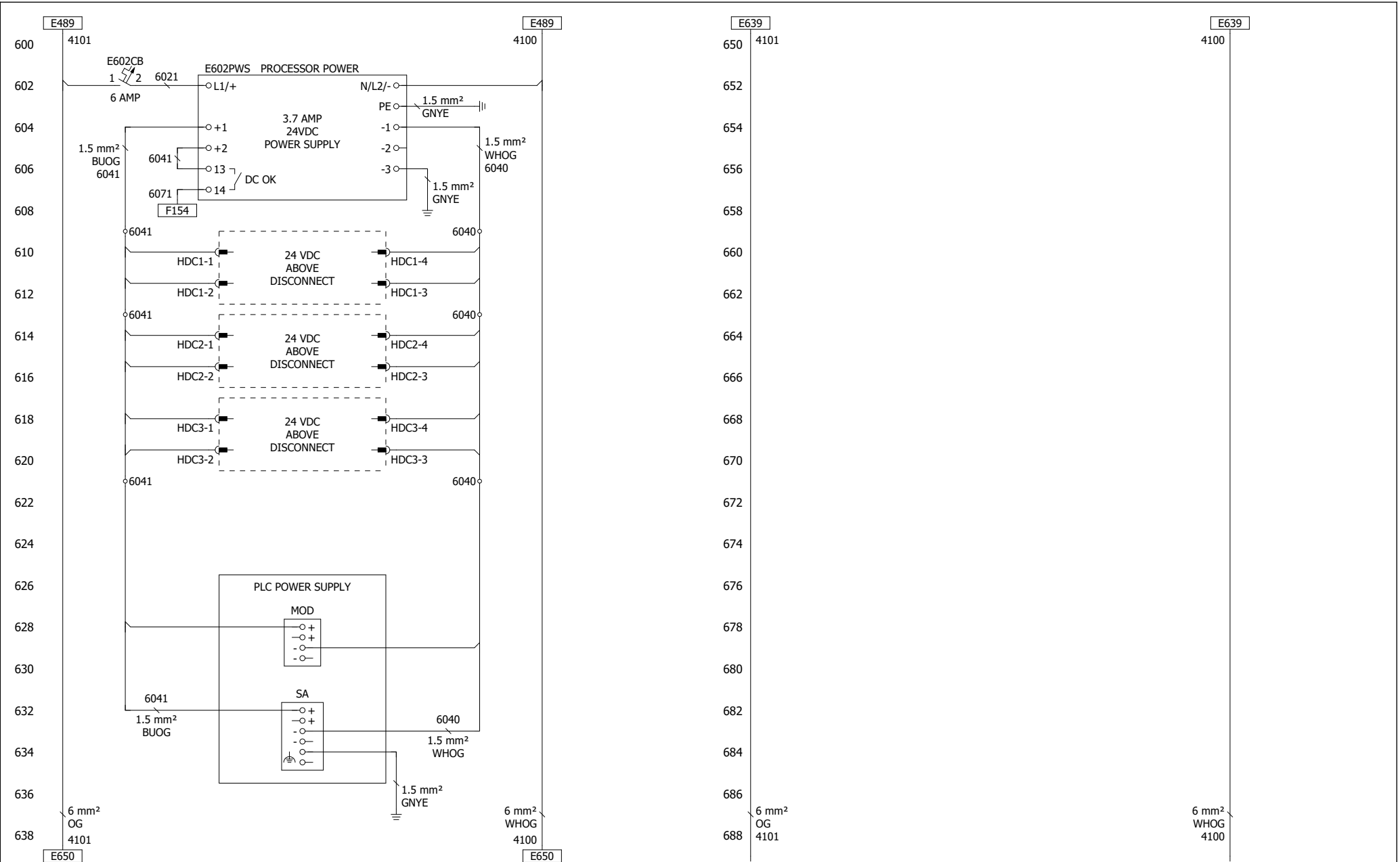
	GM - STANDARD	GM ENGINEER:	DESIGN SOURCE:	DESIGN LEADER:	PROGRAMS:	PACKAGE DESCRIPTION:	SYSTEM/TOOL NO:	RELEASE DATE:	REVISION LETTER:	SECTION LETTER:	SHEET NUMBER:
		HARDWARE TEAM		GREG DOPPKKE		60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS		2020-04-01		E	4 OF 7
		THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.					SHEET DESCRIPTION:	DRAWING NUMBER:	DATE:		
						120 VAC POWER ABOVE DISCONNECT	ECS-5120-BB-AA-MM-TT				



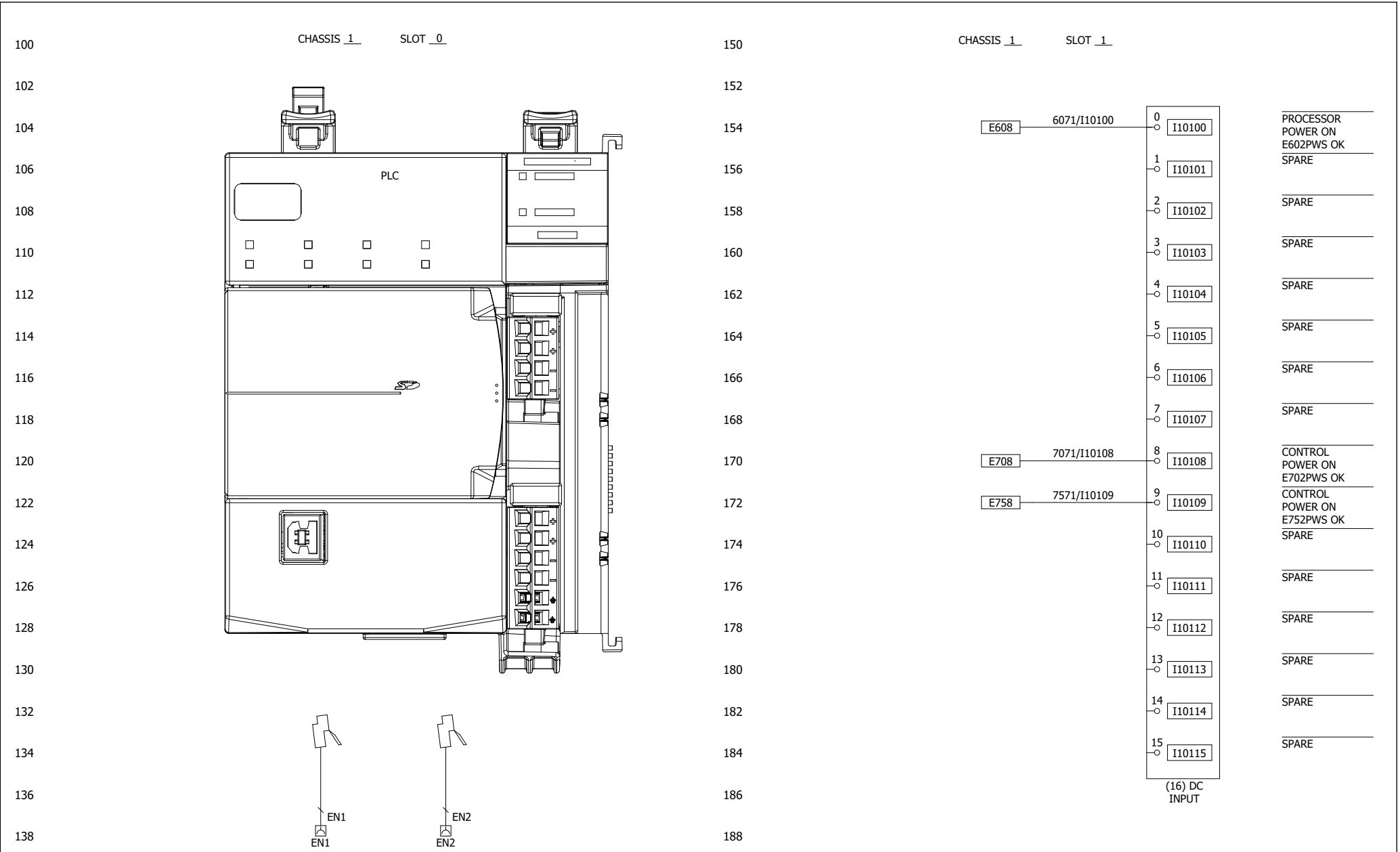
(TT = 03) SELECT TAPS ACCORDING TO REGIONAL VOLTAGE		(TT = 04) SELECT TAPS ACCORDING TO REGIONAL VOLTAGE	
PRIMARY	JUMPER(S)	PRIMARY	JUMPER(S)
H1-H10: 440 V	H5-H6	H1-H10: 480 V	H5-H6
H1-H10: 416 V	H4-H7	H1-H10: 440 V	H4-H7
H1-H10: 400 V	H3-H8	H1-H10: 416 V	H3-H8
H1-H10: 380 V	H2-H9	H1-H10: 380 V	H2-H9
H1-H10: 220 V	H1-H6/H5-H10	H1-H10: 220 V	H1-H6/H5-H10
H1-H10: 208 V	H1-H7/H4-H10	H1-H10: 208 V	H1-H7/H4-H10
H1-H10: 200 V	H1-H8/H3-H10	H1-H10: 200 V	H1-H8/H3-H10
H1-H10: 190 V	H1-H9/H2-H10	H1-H10: 190 V	H1-H9/H2-H10
SECONDARY	JUMPER(S)	SECONDARY	JUMPER(S)
X1-X4: 240 V	X2-X3	X1-X4: 240 V	X2-X3
X1-X4: 120 V	X1-X3/X2-X4	X1-X4: 120 V	X1-X3/X2-X4
X1-X2-X4: 120/240 V	X2-X3	X1-X2-X4: 120/240 V	X2-X3

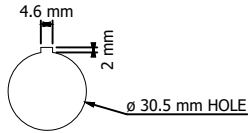


(TT = 03) SELECT TAPS ACCORDING TO REGIONAL VOLTAGE		(TT = 04) SELECT TAPS ACCORDING TO REGIONAL VOLTAGE	
PRIMARY	JUMPER(S)	PRIMARY	JUMPER(S)
H1-H10: 440 V	H5-H6	H1-H10: 480 V	H5-H6
H1-H10: 416 V	H4-H7	H1-H10: 440 V	H4-H7
H1-H10: 400 V	H3-H8	H1-H10: 416 V	H3-H8
H1-H10: 380 V	H2-H9	H1-H10: 380 V	H2-H9
H1-H10: 220 V	H1-H6/H5-H10	H1-H10: 220 V	H1-H6/H5-H10
H1-H10: 208 V	H1-H7/H4-H10	H1-H10: 208 V	H1-H7/H4-H10
H1-H10: 200 V	H1-H8/H3-H10	H1-H10: 200 V	H1-H8/H3-H10
H1-H10: 190 V	H1-H9/H2-H10	H1-H10: 190 V	H1-H9/H2-H10
SECONDARY	JUMPER(S)	SECONDARY	JUMPER(S)
X1-X4: 240 V	X2-X3	X1-X4: 240 V	X2-X3
X1-X4: 120 V	X1-X3/X2-X4	X1-X4: 120 V	X1-X3/X2-X4
X1-X2-X4: 120/240 V	X2-X3	X1-X2-X4: 120/240 V	X2-X3

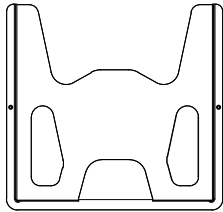


	GM - STANDARD	GM ENGINEER: HARDWARE TEAM	DESIGN SOURCE:	DESIGN LEADER: GREG DOPPKE	PROGRAMS:	PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL	SYSTEM/TOOL NO:	RELEASE DATE: 2020-04-01	REVISION LETTER:	SECTION LETTER:	SHEET NUMBER:
						SHEET DESCRIPTION: 24 VDC POWER ABOVE DISCONNECT	DRAWING NUMBER: ECS-5120-BB-AA-MM-TT	DATE:	E	6	OF 7





DETAIL "A"
ABSENCE OF VOLTAGE TESTER
INDICATOR MODULE MOUNTING HOLE



PRINT POCKET INSIDE DOOR
(SUPPLIED WITH ENCLOSURE)

DOOR BONDING INSTRUCTIONS

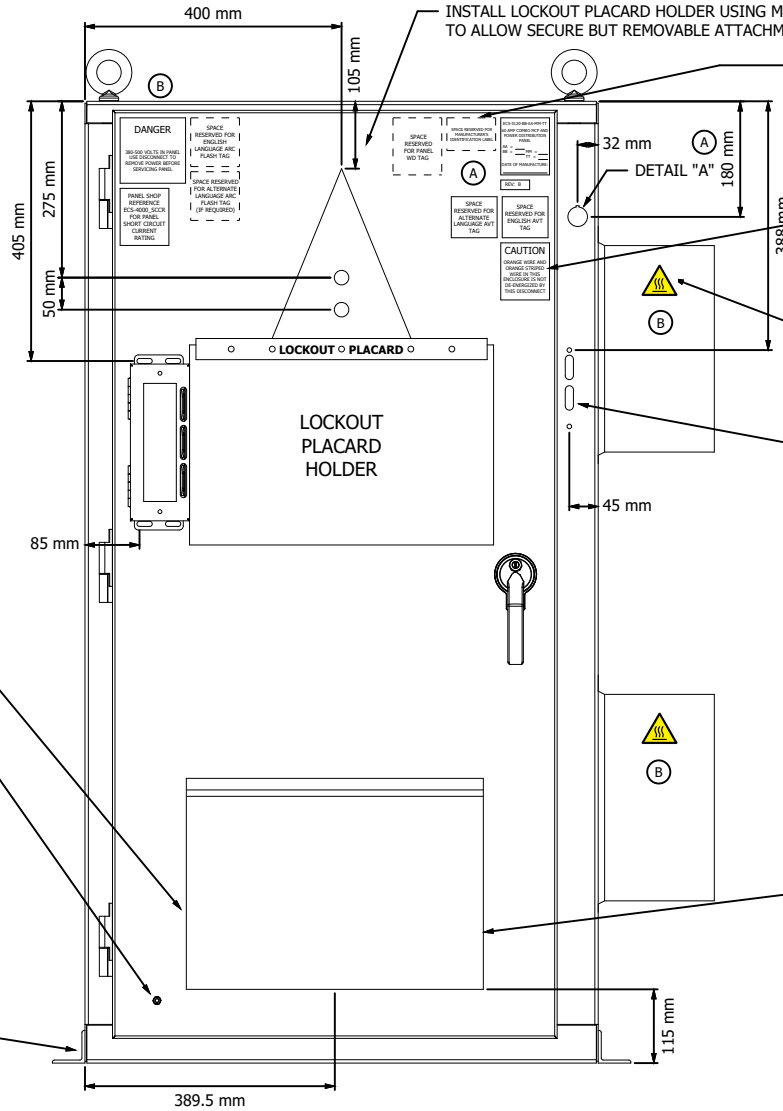
SUPPLY GROUNDING STUD ON
INTERIOR OF DOOR AND INSIDE
ENCLOSURE.

PROVIDE 16 mm² COPPER BRAID
BONDING CONDUCTOR BETWEEN
THE DOOR AND ENCLOSURE
GROUNDING STUDS. USE
NON-INSULATED CRIMP RING LUG
ON EACH BRAID END.

(SUPPLIED WITH ENCLOSURE)

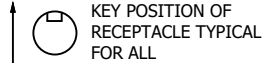
50 mm x 50 mm CONTINUOUS ANGLE
IRON WITH 16 mm HOLES FOR LAGGING
ENCLOSURE TO FLOOR (2 PLACES)

(SUPPLIED WITH ENCLOSURE)



ENCLOSURE - 1500 mm H X 800 mm W X 400 mm D

TOP OF ENCLOSURE (SIDE MOUNTED)
OR
FRONT OF ENCLOSURE (TOP/BOTTOM MOUNTED)



INSTALL LOCKOUT PLACARD HOLDER USING M5 SCREW. PROVIDE WASHERS AND LOCKNUT TO ALLOW SECURE BUT REMOVABLE ATTACHMENT OF THE PLACARD HOLDER.

ITEM PROVIDED BY
PANEL MANUFACTURER
TAG SIZE:
76 mm W x 51 mm H

INSTALL ENGLISH LANGUAGE ABSENCE OF VOLTAGE TESTER
LABEL AS SHOWN. STORE THE OTHER LANGUAGE LABELS IN THE
INTERIOR PRINT POCKET.

MARK "LOAD" FOR TESTER LOCATION ON ALL LABELS USING A
PERMANENT INK MARKER.

PURCHASED ITEM (2 PLACES)
REFERENCE BOM
TAG SIZE:
50 mm W x 50 mm H

ACTUATOR REQUIREMENTS

MUST BE READILY ACCESSIBLE WITH
DOORS IN THE OPEN OR CLOSED POSITION

MUST BE LOCKABLE IN THE OFF POSITION
ONLY

MUST BE IN CONTROL OF THE DISCONNECT AT
ALL TIMES, INDEPENDENT OF THE POSITION OF
THE ASSOCIATED DOOR.

MUST BE INTERLOCKED WITH THE DOOR SO
THAT THE DOOR CAN ONLY BE OPEN WHEN THE
MAIN BREAKER IS OFF AND SO THE MAIN
BREAKER CAN ONLY BE SWITCHED ON WHEN
THE DOOR IS CLOSED.

MUST BE ABLE TO OVERRIDE DOOR
INTERLOCKING WITH A SCREWDRIVER.

PRINT POCKET MOUNTED OUTSIDE DOOR.
(NOT SUPPLIED WITH ENCLOSURE)

NOTES:

- ENCLOSURE TO BE CONSTRUCTED TO CURRENT GCCB-1 AND GCCH-1 STANDARDS.
- INCLUDE A COPY OF THIS DRAWING PACKAGE INSIDE THE ENCLOSURE.
- PROVIDE A TAG WITH RECEPTACLE NAME ON THE INSIDE AND OUTSIDE OF THE ENCLOSURE FOR EACH RECEPTACLE.
- ALL TAGS TO BE WHITE WITH BLACK LETTERING UNLESS NOTED OTHERWISE.

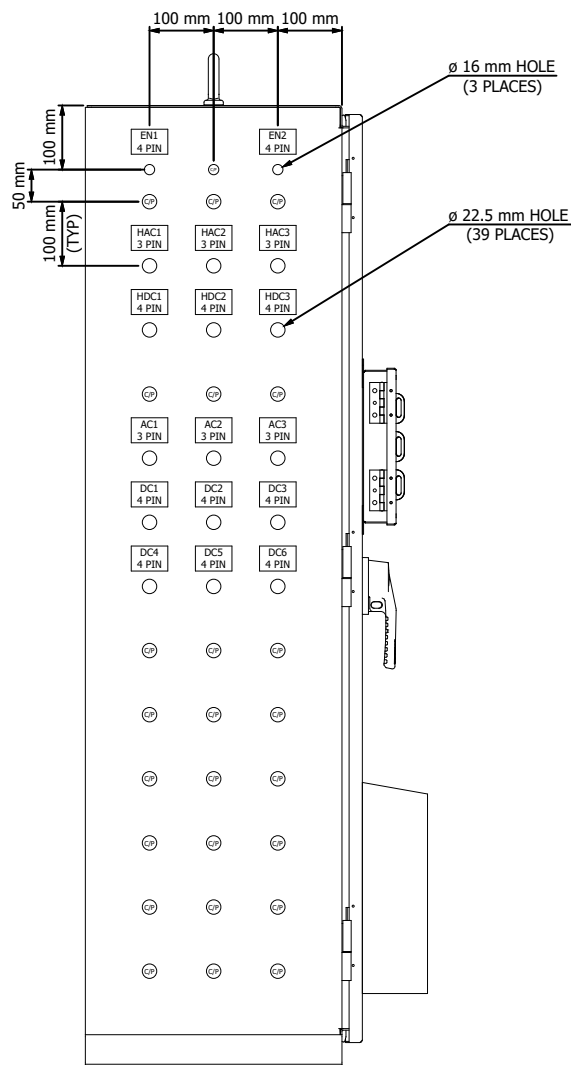
GM - STANDARD	GM ENGINEER: HARDWARE TEAM	DESIGN SOURCE:	DESIGN LEADER: GREG DOPPKE	PROGRAMS:	PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL SHEET DESCRIPTION: (BB) 30 A, (AA) 15 A CIRCUITS ENCLOSURE LAYOUT - FRONT	SYSTEM/TOOL NO: DRAWING NUMBER: ECS-5120-BB-AA-MM-TT	RELEASE DATE: 2020-04-01	REVISION LETTER: B DATE: 2021-09-24	SECTION LETTER: X	SHEET NUMBER: 1 OF 11
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STATUS: RELEASED

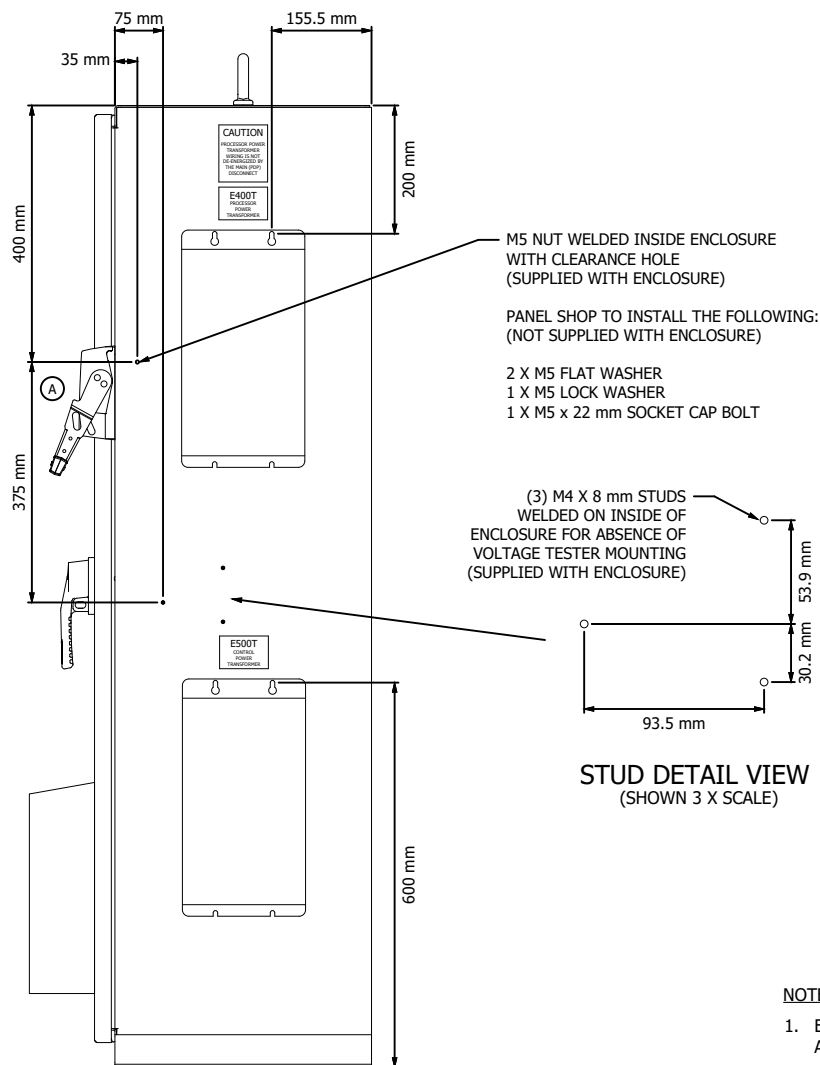
PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3



LEFT SIDE VIEW



STUD DETAIL VIEW
(SHOWN 3 X SCALE)

TAG SIZE:
76 mm W x 89 mm H
BLACK TEXT ON
YELLOW BACKGROUND

CAUTION

PROCESSOR POWER
TRANSFORMER
WIRING IS NOT
DE-ENERGIZED BY
THE MAIN (PDP)
DISCONNECT

TAG SIZE:
76 mm W x 51 mm H

E400T

PROCESSOR
POWER
TRANSFORMER

TAG SIZE:
76 mm W x 51 mm H

E500T

CONTROL
POWER
TRANSFORMER

NOTES:

- ENCLOSURE TO BE CONSTRUCTED TO CURRENT GCCB-1 AND GCCH-1 STANDARDS.
- INCLUDE A COPY OF THIS DRAWING PACKAGE INSIDE THE ENCLOSURE.
- PROVIDE A TAG WITH RECEPTACLE NAME ON THE INSIDE AND OUTSIDE OF THE ENCLOSURE FOR EACH RECEPTACLE.
- ALL TAGS TO BE WHITE WITH BLACK LETTERING UNLESS NOTED OTHERWISE.

TOP OF ENCLOSURE (SIDE MOUNTED)
OR
FRONT OF ENCLOSURE (TOP/BOTTOM MOUNTED)

KEY POSITION OF
RECEPTACLE TYPICAL
FOR ALL



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

SHEET DESCRIPTION: (BB) 30 A, (AA) 15 A CIRCUITS

ENCLOSURE LAYOUT - SIDE

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER: A
DATE:
2021-01-12

SECTION
LETTER: X

SHEET
NUMBER:
2 OF 11

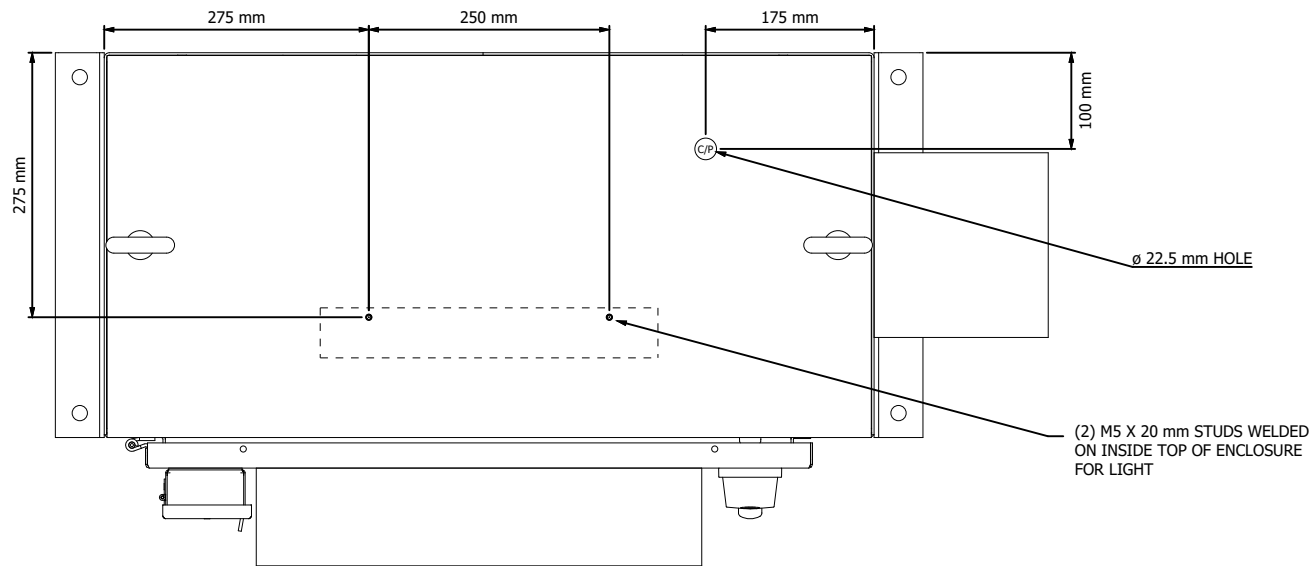
PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-01-12

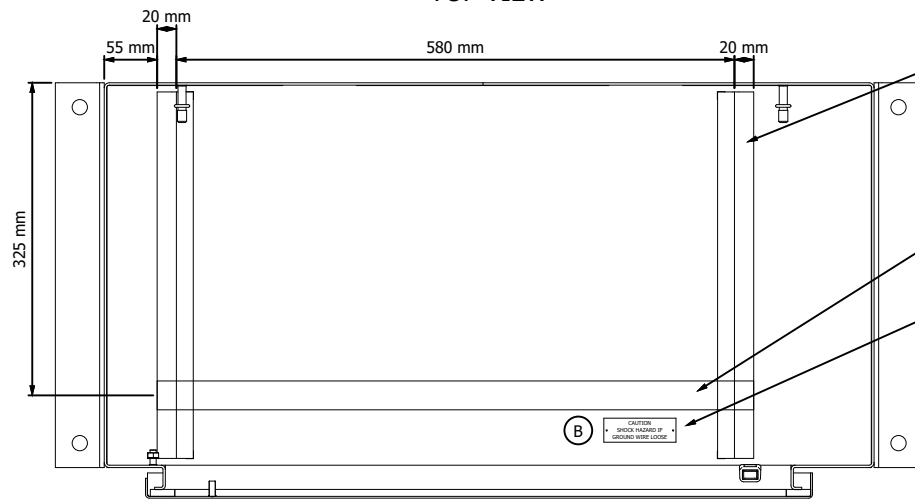
EPLAN VERSION: 2.7.3

STATUS: RELEASED

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TOP VIEW



INSIDE BOTTOM OF ENCLOSURE

TOP OF ENCLOSURE (SIDE MOUNTED)
OR
FRONT OF ENCLOSURE (TOP/BOTTOM MOUNTED)



KEY POSITION OF
RECEPTACLE TYPICAL
FOR ALL

Z-BRACKET WELDED TO BOTTOM OF
ENCLOSURE
20 mm W x 30 mm H
(2 PLACES)

COPPER BUSBAR AND TERMINALS
USED FOR GROUNDING

(B)

CAUTION
SHOCK HAZARD IF
GROUND WIRE LOOSE

TAG SIZE:
75 mm W x 25 mm H
BLACK TEXT ON
YELLOW BACKGROUND

NOTES:

- ENCLOSURE TO BE CONSTRUCTED TO CURRENT GCCB-1 AND GCCH-1 STANDARDS.
- INCLUDE A COPY OF THIS DRAWING PACKAGE INSIDE THE ENCLOSURE.
- PROVIDE A TAG WITH RECEPTACLE NAME ON THE INSIDE AND OUTSIDE OF THE ENCLOSURE FOR EACH RECEPTACLE.
- ALL TAGS TO BE WHITE WITH BLACK LETTERING UNLESS NOTED OTHERWISE.



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

SHEET DESCRIPTION: (BB) 30 A, (AA) 15 A CIRCUITS

ENCLOSURE LAYOUT - TOP AND INSIDE BOTTOM

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER:
B
DATE:
2021-09-24

SECTION
LETTER:
X

SHEET
NUMBER:
3 OF 11

DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

STATUS: RELEASED

THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.

DANGER

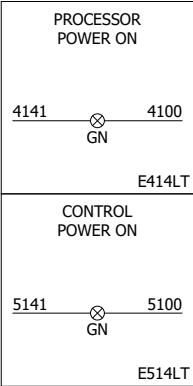
380-500 VOLTS IN PANEL
USE DISCONNECT TO
REMOVE POWER BEFORE
SERVICING PANEL

TAG SIZE:
102 mm W x 102 mm H
WHITE TEXT ON
RED BACKGROUND

(B)

PANEL SHOP
REFERENCE
ECS-4000_SCCR
FOR PANEL
SHORT CIRCUIT
CURRENT
RATING

TAG SIZE:
76 mm W x 89 mm H



TAG SIZE:
76 mm W x 89 mm H

PANEL SHOP TO PROVIDE
INFORMATION FOR ALL BLANK
FIELDS BASED ON ACTUAL
PANEL CONSTRUCTION.

ECS-5120-BB-AA-MM-TT
60 AMP COMBO MCP AND
POWER DISTRIBUTION
PANEL

AA = _____
BB = _____ MM = _____
TT = _____

DATE OF MANUFACTURE:

TAG SIZE:

45 mm W x 15 mm H


REV: B

TAG SIZE:
76 mm W x 89 mm H
BLACK TEXT ON
YELLOW BACKGROUND

CAUTION

ORANGE WIRE AND
ORANGE STRIPED
WIRE IN THIS
ENCLOSURE IS NOT
DE-ENERGIZED BY
THIS DISCONNECT

- NOTES:
1. ALL TAGS TO BE WHITE WITH BLACK LETTERING UNLESS NOTED OTHERWISE.
 2. WIRE NUMBERS AND PUSHBUTTON COLOR SHOWN ON TAGS FOR WIRING PURPOSES ONLY. DO NOT MARK WIRE NUMBERS OR PB COLOR ON TAGS.

	GM - STANDARD	GM ENGINEER:	DESIGN SOURCE:	DESIGN LEADER:	PROGRAMS:	PACKAGE DESCRIPTION:	SYSTEM/TOOL NO:	RELEASE DATE:	REVISION LETTER:	SECTION LETTER:	SHEET NUMBER:	
		HARDWARE TEAM		GREG DOPPKE		60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS		2020-04-01	B	X	4 OF 11	
						SHEET DESCRIPTION:	DRAWING NUMBER:	DATE:				
							ECS-5120-BB-AA-MM-TT	2021-09-24				
			THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO USE SUCH MATERIAL FOR ANY PURPOSE OTHER THAN THE FURNISHING OF SERVICES AND SUPPLIES.									
STATUS: RELEASED					PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)				SAVE DATE: 2021-09-24		EPLAN VERSION: 2.7.3	

(A)

TAG SIZE:
102 mm W x 178 mm H

LUG TORQUE VALUES (UL) - ECS-5120			
TERMINAL	WIRE STRANDING CLASS	WIRE SIZE (AWG)	TORQUE (LB-IN)
E104DISC LINE SIDE	CLASS B/C	#10 - 4 #3 - 3/0	105 140
15 OR 30 A BRANCH LOAD SIDE	CLASS B	#10 - 4	40 - 53
(B) PE LUG LINE SIDE	NOT SPECIFIED	#10 - 0	53
PE BAR SMALL TERMINAL	NOT SPECIFIED	#16 - 6	35
NOTE: TORQUE VALUES PROVIDED ARE FOR LUGS INCLUDED IN THE STANDARD PDP DESIGN AND WITH THE WIRE STRANDING AND SIZES SHOWN ONLY. IF ALTERNATE LUGS ARE USED, THEN WIRE STRANDING AND SIZE AND TERMINAL TORQUE MUST BE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.			

(A)

TAG SIZE:
102 mm W x 178 mm H

LUG TORQUE VALUES (IEC) - ECS-5120			
TERMINAL	WIRE STRANDING CLASS	WIRE SIZE (mm²)	TORQUE (N-m)
E104DISC LINE SIDE	CLASS 2	6 - 25 35 - 120	6 10
15 OR 30 A BRANCH LOAD SIDE	CLASS 2	10 - 50	4.5 - 6
(B) PE LUG LINE SIDE	NOT SPECIFIED	6 - 50	6
PE BAR SMALL TERMINAL	NOT SPECIFIED	1.5 - 16	4
NOTE: TORQUE VALUES PROVIDED ARE FOR LUGS INCLUDED IN THE STANDARD PDP DESIGN AND WITH THE WIRE STRANDING AND SIZES SHOWN ONLY. IF ALTERNATE LUGS ARE USED, THEN WIRE STRANDING AND SIZE AND TERMINAL TORQUE MUST BE ACCORDING TO THE MANUFACTURER'S INSTRUCTIONS.			

- NOTES:**
1. ALL TAGS TO BE WHITE WITH BLACK LETTERING UNLESS NOTED OTHERWISE.
 2. INSTALL TORQUE VALUE LABELS ON THE INSIDE OF THE ENCLOSURE DOOR ON THE UPPER RIGHT SIDE.



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

SHEET DESCRIPTION: (BB) 30 A, (AA) 15 A CIRCUITS

TAG DETAILS

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER:
B

DATE:
2021-09-24

SECTION LETTER:

X

SHEET NUMBER:

5 OF 11

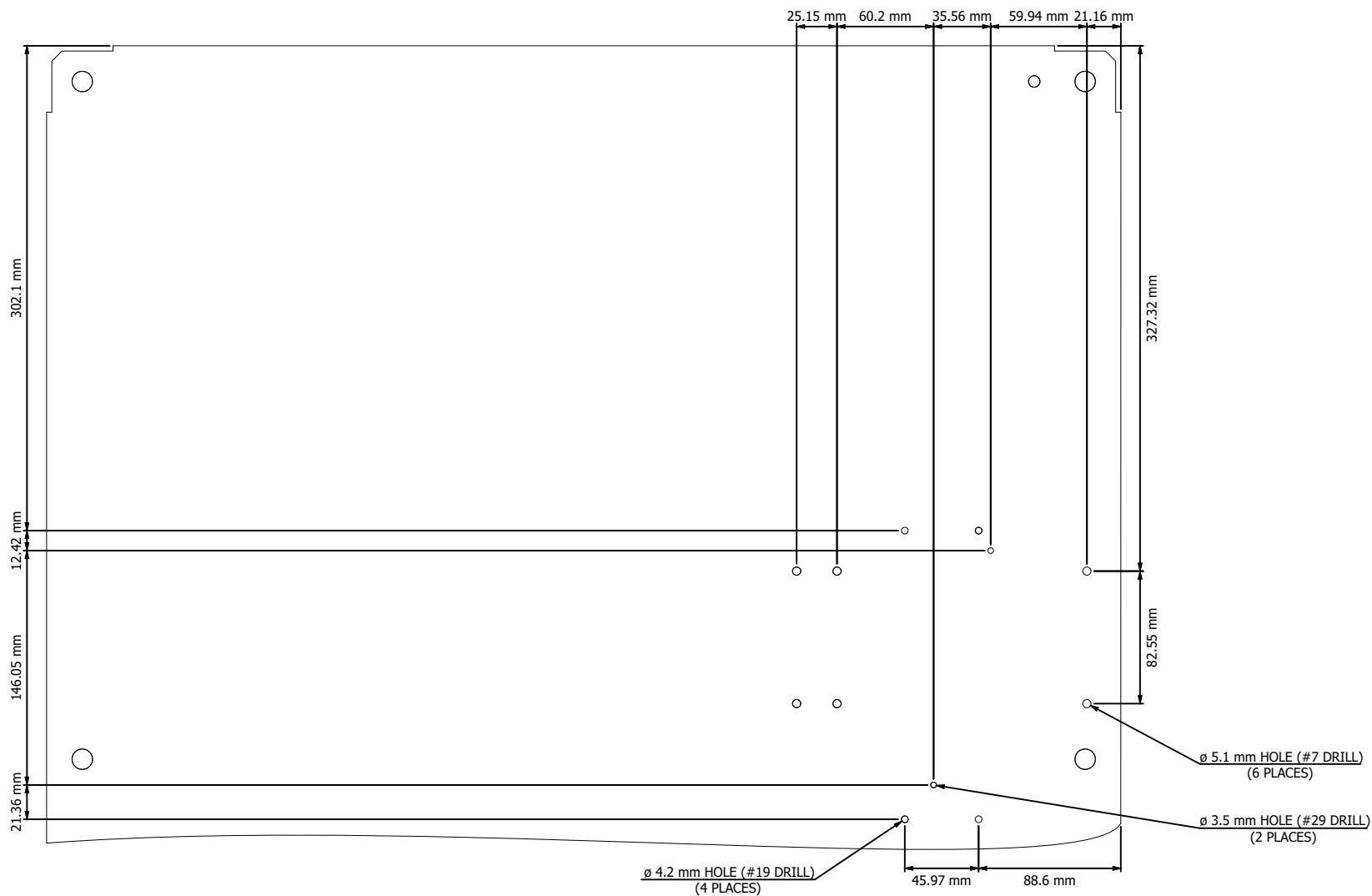
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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3



NOTE:
 DIMENSIONS SHOWN ARE VALID FOR ENCLOSURE SPECIFIED ON BOM. IF AN ALTERNATIVE ENCLOSURE IS USED, THEN THE DIMENSIONS MAY VARY. THE BREAKER AND OPERATING MECHANISM MUST BE LOCATED PER THE MANUFACTURER'S REQUIREMENTS.

CIRCUIT BREAKER AND DISCONNECT MECHANISM MOUNTING DETAIL

NOTE:
 PANEL SHOP TO TAP HOLES IN SUBPLATE - DO NOT FASTEN COMPONENTS WITH NUTS BEHIND THE SUBPLATE.

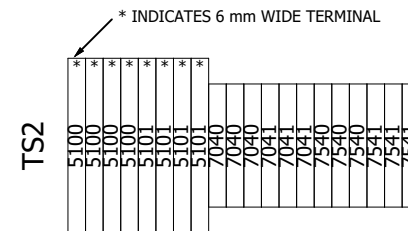
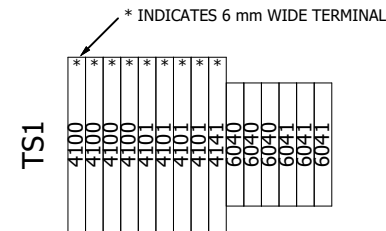
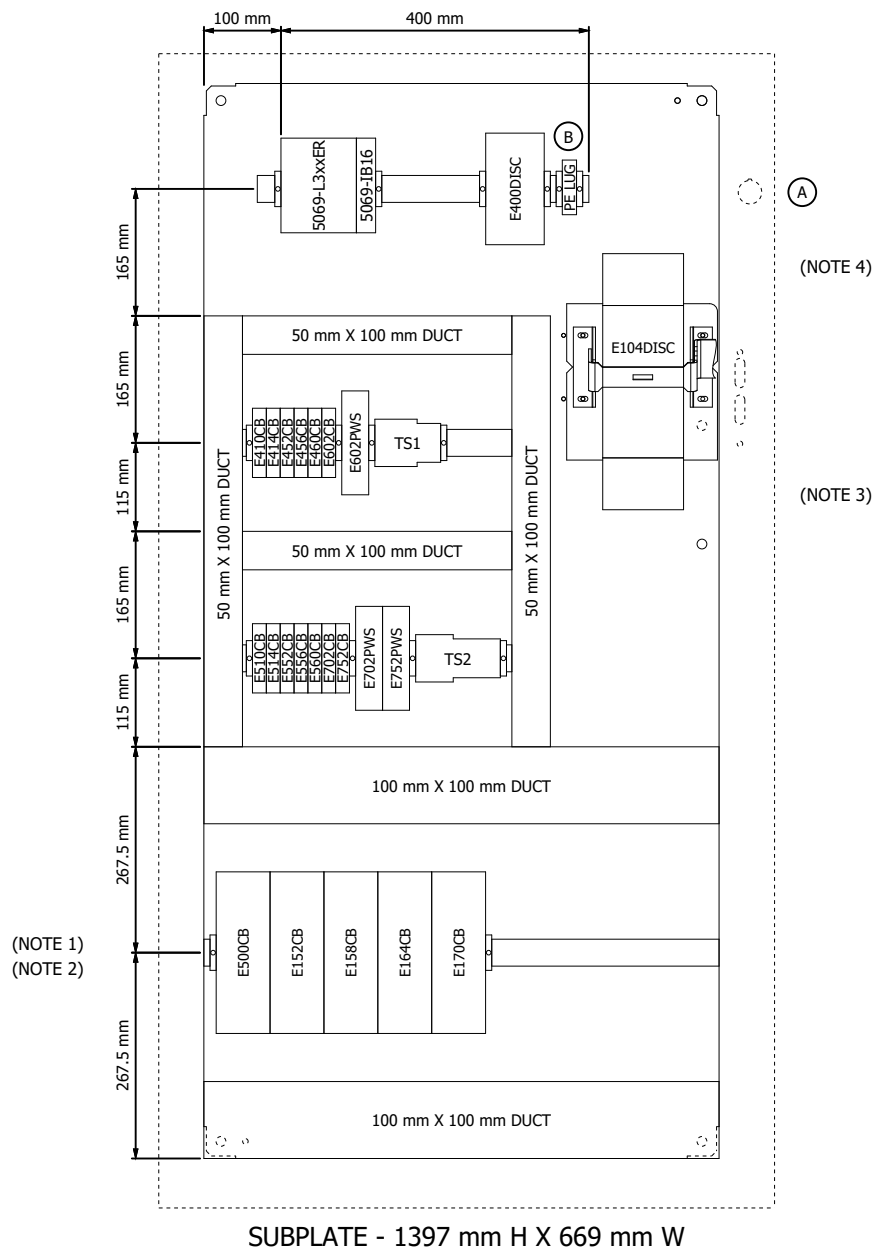
GM - STANDARD	GM ENGINEER: HARDWARE TEAM	DESIGN SOURCE:	DESIGN LEADER: GREG DOPPKE	PROGRAMS:	PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL (BB) 30 A, (AA) 15 A CIRCUITS	SYSTEM/TOOL NO:	RELEASE DATE: 2020-04-01	REVISION LETTER:	SECTION LETTER:	SHEET NUMBER:
					SHEET DESCRIPTION: SUBPLATE DETAIL	DRAWING NUMBER: ECS-5120-BB-AA-MM-TT	DATE:	DATE:	SECTION LETTER:	SHEET NUMBER:

STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2020-01-17

EPLAN VERSION: 2.7.3



NOTES:

1. INSTALL BRANCH BREAKERS FROM SMALLEST TO LARGEST SIZE. 15 OR 30 A BRANCHES START AT E152CB.
2. INSTALL TAGS FOR ALL BREAKERS REGARDLESS OF WHETHER OR NOT THE BREAKER IS PRESENT.
3. ABSENCE OF VOLTAGE TESTER SENSOR LEADS MUST USE FERRULES AND BE WIRED DIRECTLY TO THE DISTRIBUTION LUGS ON THE LOAD SIDE OF E104DISC. ONE SENSOR LEAD SHALL BE PLACED UNDER ONE TERMINAL SCREW. SENSOR LEADS SHALL NOT DIRECTLY CONTACT EACH OTHER. USE THE REAR MOST TERMINALS FOR THE SENSOR LEADS.
4. PROCESSOR POWER TO BE WIRED DIRECTLY TO THE CONTROL TAPS ON THE LINE SIDE OF E104DISC. REMOVE AND DISCARD THE SPADE CONNECTOR PROVIDED WITH THE CONTROL TAP. USE #14 AWG CLASS B/C OR 2.5 mm² CLASS 2 WIRE ONLY.



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

(BB) 30 A, (AA) 15 A CIRCUITS

SHEET DESCRIPTION: SUBPLATE LAYOUT

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER:
B

DATE:
2021-09-24

SECTION
LETTER:
X

SHEET
NUMBER:
7 OF 11

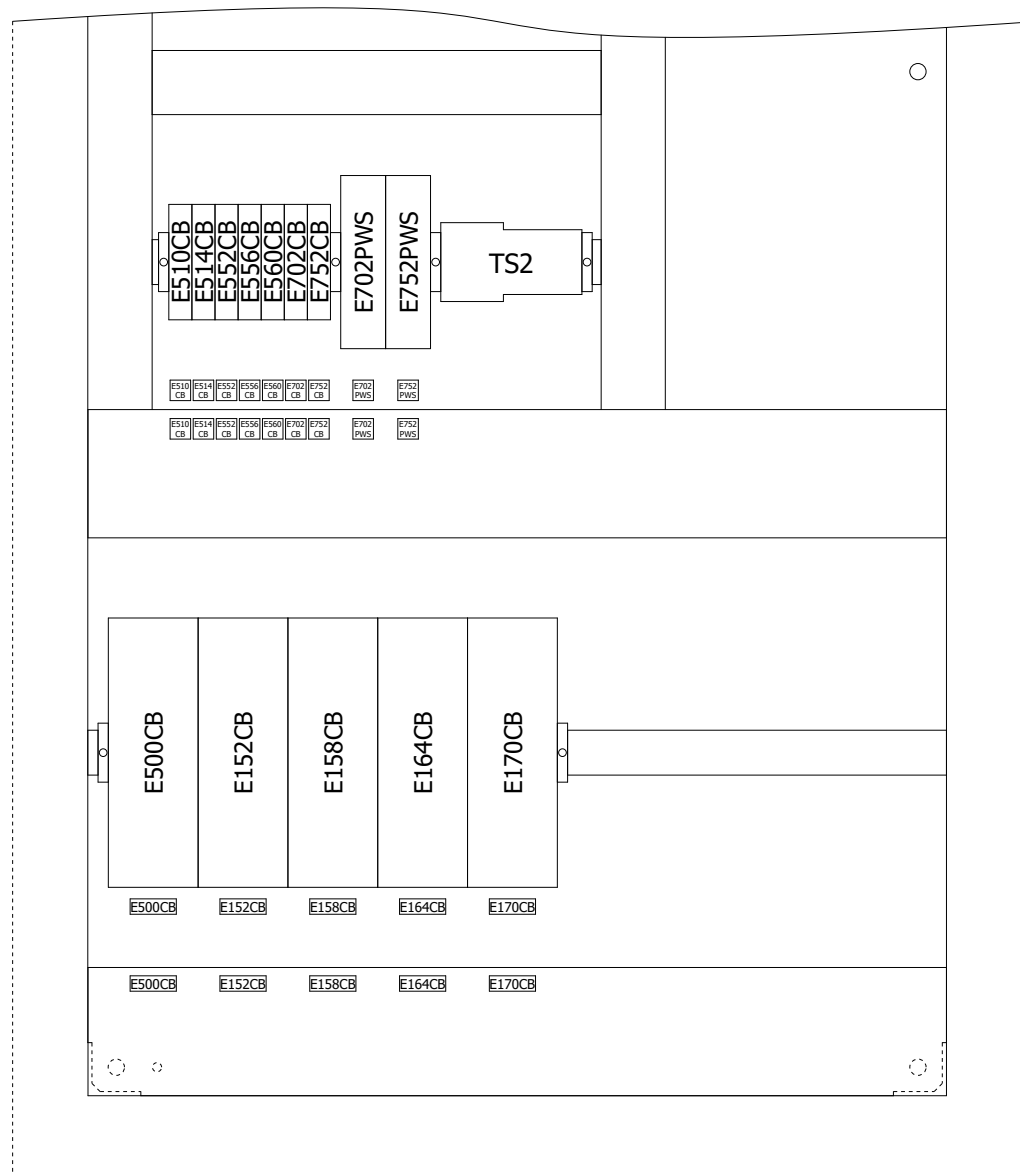
DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

STATUS: RELEASED



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

(BB) 30 A, (AA) 15 A CIRCUITS

SHEET DESCRIPTION: SUBPLATE DETAIL VIEW

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER:

DATE:

SECTION
LETTER:

X

SHEET
NUMBER:

9 OF 11

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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2020-02-28

EPLAN VERSION: 2.7.3

MINI CONNECTOR
FEMALE - FACE VIEW

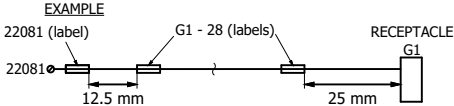
PIN	FUNCTION	COLOR
1	GROUND	GNYE
2	POWER	BK
3	NEUTRAL	WH

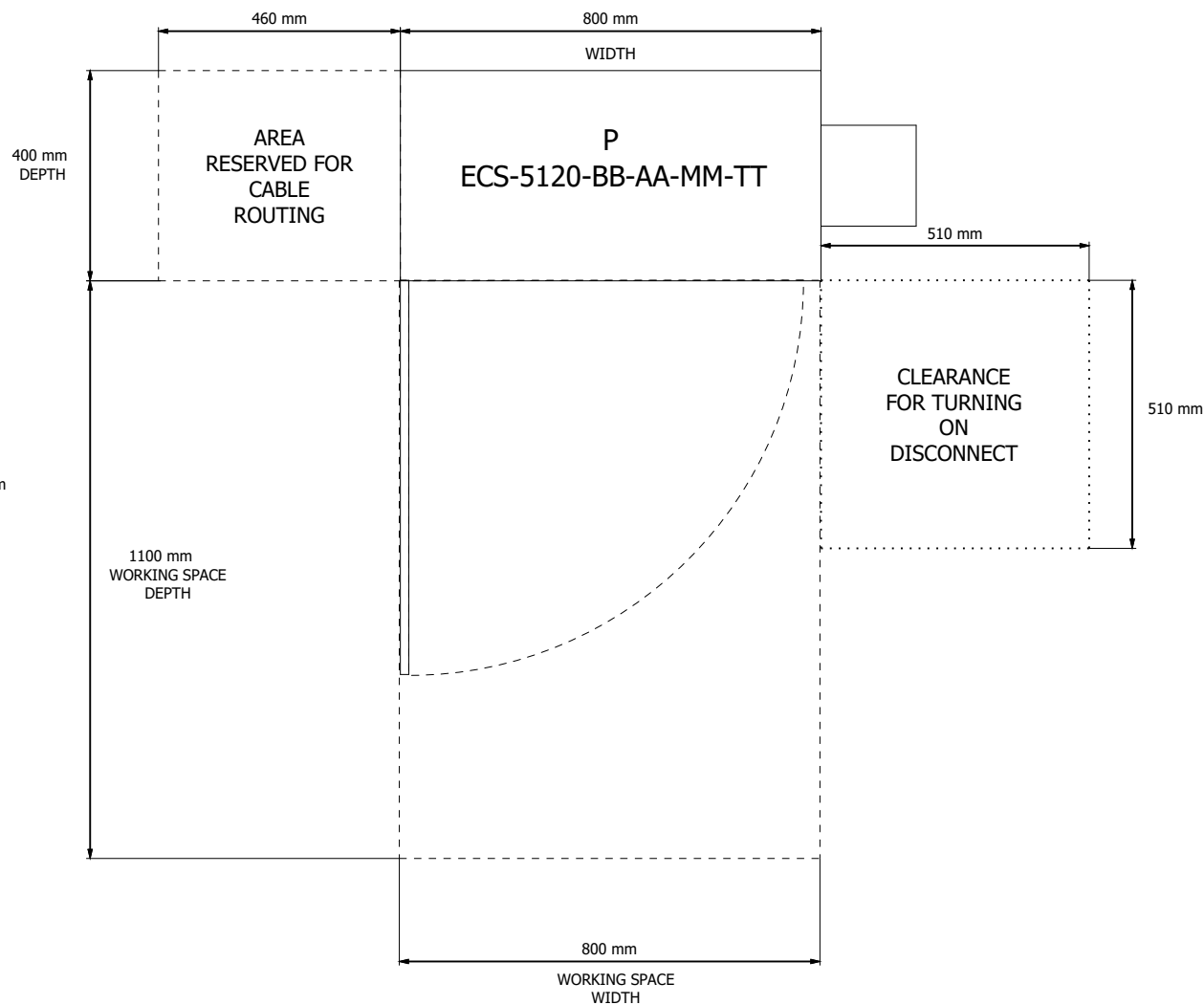
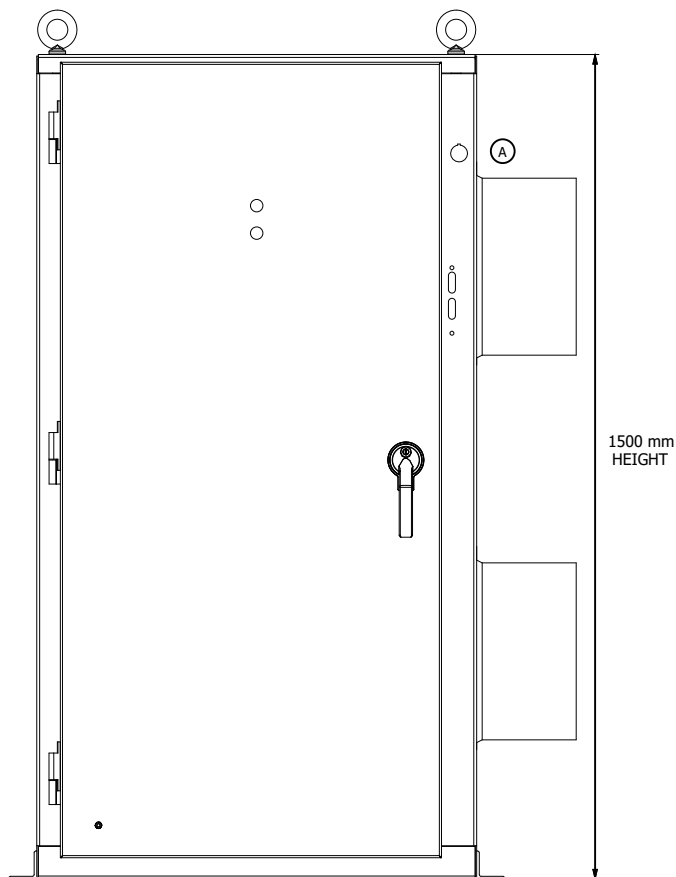
NOTE:
ALL UNUSED RECEPTACLE WIRES SHOULD HAVE ENDS PROTECTED WITH TAPE TO PREVENT UNINTENTIONAL SHORTING.

ALL WIRES ARE TO BE BLUE (BU) UNLESS OTHERWISE SPECIFIED (MINI AND MICRO RECEPTACLE WIRE COLORS TO BE IN COMPLIANCE WITH THE ASSOCIATED IEC OR ANSI STANDARD).

WIRE COLOR	ABBREV
BLACK	BK
BROWN	BN
RED	RD
ORANGE	OG
YELLOW	YE
GREEN	GN
BLUE	BU
VIOLET	VT
GRAY	GY
WHITE	WH
PINK	PK
GOLD	GD
TURQUOISE	TQ
SILVER	SR
GREEN WITH YELLOW TRACER	GNYE
BLACK WITH ORANGE TRACER	BKOG
BLUE WITH ORANGE TRACER	BUOG
WHITE WITH RED TRACER	WHRD
WHITE WITH ORANGE TRACER	WHOG
WHITE WITH BLUE TRACER	WHBU

THE RECEPTACLE WIRES SHALL HAVE THE RECEPTACLE NUMBER AND PIN NUMBER LABELED ON BOTH ENDS.





GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL

(BB) 30 A, (AA) 15 A CIRCUITS

SHEET DESCRIPTION: ENCLOSURE FOOTPRINT

SYSTEM/TOOL NO:

RELEASE DATE:
2020-04-01

REVISION
LETTER:
A

DATE:
2021-01-12

SECTION
LETTER:

X

SHEET
NUMBER:

11 OF 11

STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-01-12

EPLAN VERSION: 2.7.3

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REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY
A	12701	ADDED ITEM.	2021-01-12	C	DB
	19001	PART NUMBER CHANGED FROM ERWPAB3004M010 TO ER1PAB3004M010.			
	75600	PART NUMBER CHANGED FROM 3SB3921-0AA TO 3SU1900-0FA11-0AA0.			
B	11080	PART NUMBER CHANGED FROM 5SH3540 TO 8US1923-1AA01.	2021-09-24	C	SK
	75813	ADDED ITEM.			
	80000	ADDED ITEM.			
	80042	ADDED ITEM.			
	12726	REMOVED ITEM. QTY WAS 1.			

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
CP	CONTROL PROCESS CHANGE
M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

B1 - PURCHASE ITEM OR EQUIVALENT ITEM (GM APPROVAL NOT REQUIRED)
B2 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -INTERCHANGEABLE COMPONENT
B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
B4 - PURCHASE ITEM (NO SUBSTITUTION)

NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	11080	2	BUSBAR SYSTEM, ACCESSORIES BUSBAR CENTER-TO-CENTER SPACING 60 mm N/PE BUSBAR HOLDER FOR BUSBARS 12X 5 (10)-30X 5 (10) AND 6X 6 mm, FREE-STANDING INSTALLATION OR ATTACHMENT TO 8US1923-2AA01	SIEMENS	8US1923-1AA01	B3-N		
	11103	1	OPERATING UNIT WITH ROD VARIABLE DEPTH FLANGE MOUNTED OPERATOR KIT, 3 POLE: CONSISTING OF: HANDLE STEEL CHROME PLATED NEMA 4/4X BLACK=OFF, BLACK=ON SWITCHING MECHANISM MOUNTING DEPTH 8" TO 16" ACCESSORY FOR: 3VA5 250 3VA6 250, W/ ADAPTER PLATE	SIEMENS	3VA9278-ODK84	B3		
	11106	1	BREAKER 3VA FRONT MOUNTED ROTARY OPERATOR FMRO FOR 3VA51 GRAY STANDARD WITHOUT ILLUMINATION KIT WITHOUT DOOR INTERLOCK WITHOUT DOOR OPENING FUNCTION WITH HANDLE NEMA 1	SIEMENS	3VA9137-0EK11	B3		
	11110	2	SIEMENS LOW VOLTAGE 3VA CIRCUIT BREAKER ACCESSORY. 3-PIECE STEEL BODY 1-CONDUCTOR BOX TERMINAL - WIRE SIZE: 14 - 3/0 AWG. FOR (125A 3VA5) FRAME UL CIRCUIT BREAKERS.	SIEMENS	3VA9133-0JA11	B3		
	11120	2	TERMINAL COVER 3 POLE; 1 PC. WITH PROBE HOLES FOR VOLTAGE TESTING ACCESSORY FOR: 3VA4/5 125 -	SIEMENS	3VA9131-0WD31	B3		
	11126	1	TERMINAL COVER EXTENDED 3 POLE; 1 PC. WITH PROBE HOLES FOR VOLTAGE TESTING ACCESSORY FOR: 3VA6 150/250 3VA5 250 PLUG-IN/DRAW-OUT BASE 3VA6 150/250	SIEMENS	3VA9271-0WF31	B3		
	11133	1	BOX TERMINAL W. CONTROL WIRE VOLTAGE TAP-OFF 3 UNITS ACCESSORY FOR: 3VA6 150/250	SIEMENS	3VA9143-0JH12	B3		
	11144	1	WIRE CONNECTOR FOR 6 CABLES; 3 PCS.; INCL. TERMINAL COVER EXTENDED WITH PROBE HOLES FOR VOLTAGE TEST; ACCESSORY FOR: 3VA6 150/250 PLUG-IN/DRAW-OUT BASE 3VA6 150/250	SIEMENS	3VA9243-0JF68	B3		
	11222	3	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 6 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS	5SJ4106-7HG40	B2		
	11225	8	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS	5SJ4110-7HG40	B2		
	11230	2	MINIATURE CIRCUIT-BREAKER 240 V 14 KA, 1-POLE, C, 30 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS	5SJ4130-7HG40	B2		
	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS	3RV2948-1LA00	B3-N		
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS	3RV2742-5BD10	B3		
	11281	1	CIRCUIT BREAKER 3VA6 UL FRAME 150 BREAKING CAPACITY CLASS H 65KA @ 480V 3-POLE, LINE PROTECTION ETU350, LSI, IN=100A OVERLOAD PROTECTION IR=40A...100A SHORT-CIRCUIT PROTECTION ISD=1.5...10 X IR, II=12 X IN WITHOUT CONNECTION	SIEMENS	3VA6110-6HN31-0AA0	B3		
	11349	1	CIRCUIT BREAKER 3VA5 UL FRAME 125 BREAKING CAPACITY CLASS H 65KA @ 480V 3-POLE, LINE PROTECTION TM210, FTFM, IN=15A OVERLOAD PROTECTION IR=15A FIXED SHORT-CIRCUIT PROTECTION II=15 X IN WITHOUT CONNECTION	SIEMENS	3VA5195-6ED31-0AA0	B3		
	11415	26	TERMINAL, BUSBAR ADAPTER, 60 mm FAST BUS BUSBAR ADAPTER SYSTEM, FOR 5 mm BUSBAR THICKNESS 1,5-16 mm²	SIEMENS	8US1921-2AA00	B3-N		
	11417	1	TERMINAL, BUSBAR ADAPTER, 60 mm FAST BUS BUSBAR ADAPTER SYSTEM, FOR 5 mm BUSBAR THICKNESS 16-70 mm²	SIEMENS	8US1921-2AD00	B3-N		
	12504	2	INDICATOR LIGHT, 22 mm, ROUND, METAL, SHINY, GREEN, SMOOTH LENS	SIEMENS	3SU1051-6AA40-0AA0	B3		
	12630	2	HOLDER FOR 3 MODULES, METAL	SIEMENS	3SU1550-0AA10-0AA0	B3		
	12654	2	LED MODULE WITH INTEGRATED LED, 24-240V AC/DC, GREEN, SPRING-TYPE TERMINAL, FOR FRONT PLATE MOUNTING	SIEMENS	3SU1401-1BH40-3AA0	B3		
	12700	18	BLOCK, TERMINAL, SPRING CLAMP, 600 V, ZDU 2.5-2/3AN, 20 A UL, 26 - 12 AWG, 0.5 - 2.5 mm², FINGER SAFE, 3 POLE SINGLE CIRCUIT, 5 mm, BEIGE	WEIDMULLER	1706010000	B2-N		
	12701	2	BLOCK, TERMINAL, END BARRIER FOR ZDU 2.5-2/3AN 1706010000, BEIGE	WEIDMULLER	1706110000	B2-N		
	12706	0 A/R	BLOCK, TERMINAL, JUMPERS, 2 POLE, ZQV 4/2, TOP MOUNT, 6 mm, FOR ZDU 4-2/4AN 1806980000 AND ZDU 4-2/3AN 1770360000	WEIDMULLER	1608950000	B2-N		

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

B1 - PURCHASE ITEM OR EQUIVALENT ITEM (GM APPROVAL NOT REQUIRED)
B2 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -INTERCHANGEABLE COMPONENT
B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
B4 - PURCHASE ITEM (NO SUBSTITUTION)

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	12707	0 A/R	BLOCK, TERMINAL, MARKING TAG, WS 12/6, 12 X 6 mm, FOR ZDU 4-2/4AN 1806980000 AND ZDU 4-2/3AN 1770360000	WEIDMULLER	1609900000	B2-N		
	12712	14	BLOCK, TERMINAL, END ANCHORS - DIN RAIL, EW 35, BEIGE	WEIDMULLER	0383560000	B2-N		
	12718	17	BLOCK, TERMINAL, SPRING CLAMP, 600 V, ZDU 4-2/3AN, 33 A UL, 26- 10 AWG, 0.5 - 6 mm², FINGER SAFE, 3 POLE SINGLE CIRCUIT, 6 mm, BEIGE	WEIDMULLER	1770360000	B2-N		
	12719	2	BLOCK, TERMINAL, END BARRIER FOR ZDU 4-2/3AN, 1770360000, BEIGE	WEIDMULLER	1770400000	B2-N		
	15743	6	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX	1R3000A20M030	B2		
	15763	9	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX	1R4000A39M030	B2		
	15875	0 A/R	3/8 INCH - NPT GASKET SEAL FOR MINI RECEPTACLE	WOODHEAD - MOLEX	00-5090	B1-N		
	15876	0 A/R	LOCKING NUT FOR MINI RECEPTACLE	WOODHEAD - MOLEX	30-1100	B1-N		
	19001	2	RECEPTACLE, ETHERNET, 4 PIN, MICRO, FEMALE INT THREAD REC, PG9, TO RJ45, 2 PAIR, CAT5E, 24 AWG, UNSHIELDED, STRANDED, HIGH-FLEX, TPE 1M (3.28 FT)	WOODHEAD - MOLEX	ER1PAB3004M010	B2		
	75108	0 A/R	DUCT,50 mm W X 100 mm H, WITH COVER	TEHALIT	DNG100050	B1-N		
	75110	0 A/R	DUCT,100mm W X 100mm H, WITH COVER	TEHALIT	DNG100100	B1-N		
	75120	0 A/R	STANDARD MOUNTING RAIL 35X27X15,1.5mm THICK, 2 METERS LONG	PHOENIX	0806602	B1-N		
	75278	1	UNIVERSAL LIGHT, LED, 50-60 HZ, 5 W, 100 - 240 VAC	STEGO	02542.3-11	B1		
	75285	1	DOOR POSITION SWITCH, ENCLOSED IN MOLDED-PLASTIC HOUSING 31mm SNAP-ACTION CONTACTS 1NO+1NC, TEFLON PLUNGER	SIEMENS	3SE5232-0HC05	B2		
	75600	25	HOLE PLUG, 22.5mm DIAMETER	SIEMENS	3SU1900-0FA11-0AA0	B1-N		
	75601	1	HOLE PLUG, 16mm DIAMETER	SIEMENS	3SB2908-3AA	B1-N		
	75709	1	KEYLOCK BOX, 9.5" X 3" X1.5"	SAGINAW BAS	SCE-KLB 018115	B2-N		
	75805	0 A/R	TAGS, PANEL, STICK ON OR LAMICOID, MINIMUM FONT SIZE - 5mm (20PT)	CUSTOM	GENERIC TAG - PANEL	M-N		
	75813	2	LABEL, WARNING, PICTOGRAM FOR HOT SURFACE, 50 mm H X 50 mm W	BRADY	Y5062718	B1-N		
	75815	1	SAFETY, HOLDER, PLACARD, FOR 11" X 17" GRAPHIC AND 11" X 8.5" LOCKOUT LIST SHEETS, GMT RED, SCREEN PRINT "LOCKOUT PLACARD", (1) 11" X 17" HORIZONTAL PRINT POCKET SAVERS AND (2) 8.5" X 11" PRINT POCKET SAVERS, HARDWARE INCLUDED (LANDSCAPE)	WECO OR EQUIVALENT	GMT-1218LO-LP	B1-N		
	80000	1	BLOCK, TERMINAL, WPE 50N, PE, 50mm², GREEN-YELLOW	WEIDMULLER	1846040000			
	80010	1	I/O, CHASSIS MOUNTED TERMINAL, 5069 CONTROLLER, REMOVABLE TERMINAL BLOCK, SPRING CLAMP, INCLUDES 5069-RTB6-SPRING AND 5069-RTB4-SPRING	ROCKWELL	5069-RTB64-SPRING	B4		
	80011	1	I/O, CHASSIS MOUNTED TERMINAL, 5069 I/O, REMOVABLE TERMINAL BLOCK, SPRING CLAMP	ROCKWELL	5069-RTB18-SPRING	B4		
	80015	1	PLC, 5069 I/O, MODULE, INPUT - 10-30 VDC -16 POINT NO DIAGNOSTIC	ROCKWELL	5069-IB16	B4		
	80030	3	POWER SUPPLY, SITOP, PSU6200, INPUT: 120/230 VAC, OUTPUT: 24 VDC / 3.7 A, NEC CLASS 2	SIEMENS	6EP3333-7LB00-0AX0	B3		
	80040	1	VERISAFE ABSENCE OF VOLTAGE TESTER, 8' (2.4 m) SYSTEM CABLE, 10' (3.1 m) SENSOR LEADS	PANDUIT	VS-AVT-C08-L10	B3		
	80041	0 A/R	FERRULE, NON-INSULATED, #14 AWG, 12 mm LENGTH, FOR AVT SENSOR LEAD	PANDUIT	F80-12-M	B2		

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (BASE BOM)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

B1 - PURCHASE ITEM OR EQUIVALENT ITEM (GM APPROVAL NOT REQUIRED)
B2 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -INTERCHANGEABLE COMPONENT
B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
B4 - PURCHASE ITEM (NO SUBSTITUTION)

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	80042	1	LITHIUM BATTERY, 3.6 V, SIZE AA	TADIRAN XENO ENERGY SAFT	TL-5903 XLP-060F LS14500	REF		
	80098	1	ENCLOSURE BUILT TO LATEST GCCB-1 AND GCCH-1 SPECIFICATIONS, 1500 mm H X 800 mm W X 400 mm D, RAL 7035 GRAY, 50 mm MOUNTING ANGLES, SUBPLATE, 1397 mm H X 669 mm W, 12 GAUGE MIN, GALVANIZED	HOFFMANN OR EQUIVALENT	X2727	B2-N		
	80100	1	PRINT POCKET, EXTERNAL MOUNT, RAL7035 GREY, 329 mm H x 464 mm W x 101 mm D WITH HINGED COVER	HOFFMANN OR EQUIVALENT	K9187	B2-N		
	81430	0 A/R	COPPER RAIL, TIN PLATED, 30x5x2400	CUSTOM	30X5X2400	B1-N		

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
CP	CONTROL PROCESS CHANGE
M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL
(BB) 30 A, (AA) 15 A CIRCUITS
SHEET DESCRIPTION: BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (AA OPTION)

SYSTEM/TOOL NO:

DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

RELEASE DATE:
2020-04-01

REVISION
LETTER:

DATE:

SECTION
LETTER:

SHEET
NUMBER:

YB 1 OF 2

THIS MATERIAL IS THE PROPERTY OF GENERAL MOTORS CORPORATION. NO RIGHTS ARE GRANTED TO
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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (AA OPTION)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

NOTE: '-N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

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B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
B4 - PURCHASE ITEM (NO SUBSTITUTION)

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS	3RV2948-1LA00	B3-N		MULTIPLY QUANTITIES BY AA
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS	3RV2742-5BD10	B3		MULTIPLY QUANTITIES BY AA

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
CP	CONTROL PROCESS CHANGE
M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL
(BB) 30 A, (AA) 15 A CIRCUITS
SHEET DESCRIPTION: BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (BB OPTION)

SYSTEM/TOOL NO:

DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

RELEASE DATE:
2020-04-01

REVISION
LETTER:

DATE:

SECTION
LETTER:

SHEET
NUMBER:

YC 1 OF 2

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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (BB OPTION)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

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BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS	3RV2948-1LA00	B3-N		MULTIPLY QUANTITIES BY BB
	11254	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 30 A N-RELEASE 390 A SCREW TERMINAL	SIEMENS	3RV2742-5ED10	B3		MULTIPLY QUANTITIES BY BB

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
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M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL
(BB) 30 A, (AA) 15 A CIRCUITS
SHEET DESCRIPTION: BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (MM OPTION)

SYSTEM/TOOL NO:

DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

RELEASE DATE:
2020-04-01

REVISION
LETTER:

DATE:

SECTION
LETTER:

SHEET
NUMBER:

YD 1 OF 2

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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (MM OPTION)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

B1 - PURCHASE ITEM OR EQUIVALENT ITEM (GM APPROVAL NOT REQUIRED)
B2 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -INTERCHANGEABLE COMPONENT
B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
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NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	14501	1	PLC, COMPACT LOGIX PROCESSOR, L310ER, 1MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 24 NODES	ROCKWELL	5069-L310ER	B4		PURCHASE 1 MB STANDARD CONTROLLER FOR MM=11
	14502	1	PLC, COMPACT LOGIX PROCESSOR, L320ER, 2MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 40 NODES	ROCKWELL	5069-L320ER	B4		PURCHASE 2 MB STANDARD CONTROLLER FOR MM=12
	14503	1	PLC, COMPACT LOGIX PROCESSOR, L330ER, 3MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 60 NODES	ROCKWELL	5069-L330ER	B4		PURCHASE 3 MB STANDARD CONTROLLER FOR MM=13
	14504	1	PLC, COMPACT LOGIX PROCESSOR, L340ER, 4MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 90 NODES	ROCKWELL	5069-L340ER	B4		PURCHASE 4 MB STANDARD CONTROLLER FOR MM=14
	14511	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L310ERS2, 1MB MEMORY, 0.5MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 24 NODES	ROCKWELL	5069-L310ERS2	B4		PURCHASE 1 MB SAFETY CONTROLLER FOR MM=21
	14512	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L320ERS2, 2MB MEMORY, 1MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 40 NODES	ROCKWELL	5069-L320ERS2	B4		PURCHASE 2 MB SAFETY CONTROLLER FOR MM=22
	14513	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L330ERS2, 3MB MEMORY, 1.5MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 60 NODES	ROCKWELL	5069-L330ERS2	B4		PURCHASE 3 MB SAFETY CONTROLLER FOR MM=23
	14514	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L340ERS2, 4MB MEMORY, 2MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 90 NODES	ROCKWELL	5069-L340ERS2	B4		PURCHASE 4 MB SAFETY CONTROLLER FOR MM=24
	14521	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L310ERMS2, 1MB MEMORY, 0.5MB SAFETY MEMORY, DUAL PORT ETHERNET, 4-AXIS CIP MOTION, 24 NODES	ROCKWELL	5069-L310ERMS2	B4		PURCHASE 1 MB SAFETY CONTROLLER WITH MOTION FOR MM=31
	14522	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L320ERMS2, 2MB MEMORY, 1MB SAFETY MEMORY, DUAL PORT ETHERNET, 8-AXIS CIP MOTION, 40 NODES	ROCKWELL	5069-L320ERMS2	B4		PURCHASE 2 MB SAFETY CONTROLLER WITH MOTION FOR MM=32
	14523	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L330ERMS2, 3MB MEMORY, 1.5MB SAFETY MEMORY, DUAL PORT ETHERNET, 16-AXIS CIP MOTION, 60 NODES	ROCKWELL	5069-L330ERMS2	B4		PURCHASE 3 MB SAFETY CONTROLLER WITH MOTION FOR MM=33
	14524	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L340ERMS2, 4MB MEMORY, 2MB SAFETY MEMORY, DUAL PORT ETHERNET, 20-AXIS CIP MOTION, 90 NODES	ROCKWELL	5069-L340ERMS2	B4		PURCHASE 4 MB SAFETY CONTROLLER WITH MOTION FOR MM=34

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

REV	ITEM NUMBER	CHANGE DESCRIPTION	DATE	CHANGE CODE	CHANGED BY

CHANGE CODE	
PR	PRODUCT CHANGE
R	PLANT REQUEST
MP	MECHANICAL PROCESS CHANGE
CP	CONTROL PROCESS CHANGE
M	MECHANICAL DESIGN CHANGE
C	CONTROL DESIGN CHANGE
F	FLOOR AND BUILD CHANGE



GM - STANDARD

GM ENGINEER:
HARDWARE
TEAM

DESIGN SOURCE:

DESIGN LEADER:
GREG
DOPPKE

PROGRAMS:

PACKAGE DESCRIPTION: 60 AMP COMBO MCP AND POWER DISTRIBUTION PANEL
SHEET DESCRIPTION: (BB) 30 A, (AA) 15 A CIRCUITS
BOM CHANGE SHEET: ECS-5120-BB-AA-MM-TT-BOM (TT OPTION)

SYSTEM/TOOL NO:

DRAWING NUMBER:
ECS-5120-BB-AA-MM-TT

RELEASE DATE:
2020-04-01

REVISION
LETTER:

DATE:

SECTION
LETTER:

SHEET
NUMBER:

YE 1 OF 2

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STATUS: RELEASED

PROJECT NAME: ECS-5120-BB-AA-MM-TT_RevB(2021-09-24)

SAVE DATE: 2021-09-24

EPLAN VERSION: 2.7.3

BOM NAME:
ECS-5120-BB-AA-MM-TT-BOM (TT OPTION)

SOURCE
LEGEND

F - FURNISHED BY GM
M - CONSTRUCTION SOURCE MAKE ITEM
REF - PURCHASED BY OTHERS (NO SUBSTITUTION)

B1 - PURCHASE ITEM OR EQUIVALENT ITEM (GM APPROVAL NOT REQUIRED)
B2 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -INTERCHANGEABLE COMPONENT
B3 - PURCHASE ITEM (SUBSTITUTION REQUIRES GM APPROVAL) -NOT AN INTERCHANGEABLE COMPONENT
B4 - PURCHASE ITEM (NO SUBSTITUTION)

NOTE: 'N' SUFFIX ON SOURCE CODE DENOTES AN ITEM THAT IS NOT REQUIRED TO BE STOCKED AS SPARE BY THE PLANT.

BOM REV	ITEM NUMBER	QUANTITY	PART DESCRIPTION	MANUFACTURER	PART NUMBER	SOURCE	GCCL REFERENCE	COMMENTS
	16542	2	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-240 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS	1D1N003	B2		TT=02. THIS IS THE NORTH AMERICA OPTION (480 VAC)
	16552	2	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 440-416-400-380-220-208-200-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS	1H1N003CE	B2		TT=03. THIS IS THE NON-NORTH AMERICA OPTION (440/416/400/380 VAC)
	16562	2	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-440-416-380-240-220-208-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS	1X1N003CE	B2		TT=04. THIS IS THE NON-NORTH AMERICA OPTION (480/440/416/380 VAC)

DEVICE LIST

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
E104DISC	11103	1	OPERATING UNIT WITH ROD VARIABLE DEPTH FLANGE MOUNTED OPERATOR KIT, 3 POLE: CONSISTING OF: HANDLE STEEL CHROME PLATED NEMA 4/4X BLACK=OFF, BLACK=ON SWITCHING MECHANISM MOUNTING DEPTH 8" TO 16" ACCESSORY FOR: 3VA5 250 3VA6 250, W/ ADAPTER PLATE	SIEMENS 3VA9278-0DK84
	11126	1	TERMINAL COVER EXTENDED 3 POLE; 1 PC. WITH PROBE HOLES FOR VOLTAGE TESTING ACCESSORY FOR: 3VA6 150/250 3VA5 250 PLUG-IN/DRAW-OUT BASE 3VA6 150/250	SIEMENS 3VA9271-0WF31
	11133	1	BOX TERMINAL W. CONTROL WIRE VOLTAGE TAP-OFF 3 UNITS ACCESSORY FOR: 3VA6 150/250	SIEMENS 3VA9143-0JH12
	11144	1	WIRE CONNECTOR FOR 6 CABLES; 3 PCS.; INCL. TERMINAL COVER EXTENDED WITH PROBE HOLES FOR VOLTAGE TEST; ACCESSORY FOR: 3VA6 150/250 PLUG-IN/DRAW-OUT BASE 3VA6 150/250	SIEMENS 3VA9243-0JF68
	11281	1	CIRCUIT BREAKER 3VA6 UL FRAME 150 BREAKING CAPACITY CLASS H 65KA @ 480V 3-POLE, LINE PROTECTION ETU350, LSI, IN=100A OVERLOAD PROTECTION IR=40A...100A SHORT-CIRCUIT PROTECTION ISD=1.5...10 X IR, II=12 X IN WITHOUT CONNECTION	SIEMENS 3VA6110-6HN31-0AA0
E114AVT ABSENCE OF VOLTAGE TESTER	80040	1	VERISAFE ABSENCE OF VOLTAGE TESTER, 8' (2.4 m) SYSTEM CABLE, 10' (3.1 m) SENSOR LEADS	PANDUIT VS-AVT-C08-L10
	80041	0 A/R	FERRULE, NON-INSULATED, #14 AWG, 12 mm LENGTH, FOR AVT SENSOR LEAD	PANDUIT F80-12-M
	80042	1	LITHIUM BATTERY, 3.6 V, SIZE AA	TADIRAN TL-5903 XENO ENERGY XLP-060F
E152CB	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS 3RV2948-1LA00
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS 3RV2742-5BD10
	11254	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 30 A N-RELEASE 390 A SCREW TERMINAL	SIEMENS 3RV2742-5ED10
E158CB	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS 3RV2948-1LA00
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS 3RV2742-5BD10
	11254	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 30 A N-RELEASE 390 A SCREW TERMINAL	SIEMENS 3RV2742-5ED10
E164CB	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS 3RV2948-1LA00
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS 3RV2742-5BD10
	11254	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 30 A N-RELEASE 390 A SCREW TERMINAL	SIEMENS 3RV2742-5ED10
E170CB	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS 3RV2948-1LA00
	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS 3RV2742-5BD10

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
	11254	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 30 A N-RELEASE 390 A SCREW TERMINAL	SIEMENS 3RV2742-5ED10
E400DISC	11349	1	CIRCUIT BREAKER 3VA5 UL FRAME 125 BREAKING CAPACITY CLASS H 65KA @ 480V 3-POLE, LINE PROTECTION TM210, FTFM, IN=15A OVERLOAD PROTECTION IR=15A FIXED SHORT-CIRCUIT PROTECTION II=15 X IN WITHOUT CONNECTION	SIEMENS 3VA5195-6ED31-0AA0
	11110	2	SIEMENS LOW VOLTAGE 3VA CIRCUIT BREAKER ACCESSORY. 3-PIECE STEEL BODY 1-CONDUCTOR BOX TERMINAL - WIRE SIZE: 14 - 3/0 AWG. FOR (125A 3VA5) FRAME UL CIRCUIT BREAKERS.	SIEMENS 3VA9133-0JA11
	11106	1	BREAKER 3VA FRONT MOUNTED ROTARY OPERATOR FMRO FOR 3VA51 GRAY STANDARD WITHOUT ILLUMINATION KIT WITHOUT DOOR INTERLOCK WITHOUT DOOR OPENING FUNCTION WITH HANDLE NEMA 1	SIEMENS 3VA9137-0EK11
	11120	2	TERMINAL COVER 3 POLE; 1 PC. WITH PROBE HOLES FOR VOLTAGE TESTING ACCESSORY FOR: 3VA4/5 125 - -	SIEMENS 3VA9131-0WD31
E400A PROCESSOR POWER TRANSFORMER MOUNTED OUTSIDE ENCLOSURE	16542	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-240 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1D1N003
	16552	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 440-416-400-380-220-208-200-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1H1N003CE
	16562	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-440-416-380-240-220-208-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1X1N003CE
E410CB	11230	1	MINIATURE CIRCUIT-BREAKER 240 V 14 KA, 1-POLE, C, 30 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4130-7HG40
E414CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E414LT PROCESSOR POWER ON	12504	1	INDICATOR LIGHT, 22 mm, ROUND, METAL, SHINY, GREEN, SMOOTH LENS	SIEMENS 3SU1051-6AA40-0AA0
	12630	1	HOLDER FOR 3 MODULES, METAL	SIEMENS 3SU1550-0AA10-0AA0
	12654	1	LED MODULE WITH INTEGRATED LED, 24-240V AC/DC, GREEN, SPRING-TYPE TERMINAL, FOR FRONT PLATE MOUNTING	SIEMENS 3SU1401-1BH40-3AA0
E418LS DOOR SWITCH	75285	1	DOOR POSITION SWITCH, ENCLOSED IN MOLDED-PLASTIC HOUSING 31mm SNAP-ACTION CONTACTS 1NO+1NC, TEFLON PLUNGER	SIEMENS 3SE5232-0HC05
E418LT PANEL LIGHT	75278	1	UNIVERSAL LIGHT, LED, 50-60 HZ, 5 W, 100 - 240 VAC	STEGO 02542.3-11
E452CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E456CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E460CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E500CB	11251	1	CIRCUIT BREAKER SIZE S3 FOR SYSTEM PROTECTION WITH APPROVAL CIRCUIT BREAKER UL 489, CSA C22.2 NO.5-02 A-RELEASE 15 A N-RELEASE 225 A SCREW TERMINAL	SIEMENS 3RV2742-5BD10
	11249	2	TERMINAL COVER FOR BOX TERMINALS FOR CIRCUIT BREAKER 3RV2742 IN SIZE S3	SIEMENS 3RV2948-1LA00
E500A CONTROL POWER TRANSFORMER MOUNTED OUTSIDE ENCLOSURE	16542	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-240 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1D1N003

DEVICE LIST

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
E5007 CONTROL POWER TRANSFORMER MOUNTED OUTSIDE ENCLOSURE	16552	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 440-416-400-380-220-208-200-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1H1N003CE
	16562	1	TRANSFORMER, CONTROL, 3 KVA, PRIMARY 480-440-416-380-240-220-208-190 V, SECONDARY 240-120 V, 1 PHASE, 50/60 HZ, IP54, 115 °C RISE, 40 °C AMBIENT	SIEMENS 1X1N003CE
E510CB	11230	1	MINIATURE CIRCUIT-BREAKER 240 V 14 KA, 1-POLE, C, 30 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4130-7HG40
E514CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E514LT CONTROL POWER ON	12504	1	INDICATOR LIGHT, 22 mm, ROUND, METAL, SHINY, GREEN, SMOOTH LENS	SIEMENS 3SU1051-6AA40-0AA0
	12630	1	HOLDER FOR 3 MODULES, METAL	SIEMENS 3SU1550-0AA10-0AA0
	12654	1	LED MODULE WITH INTEGRATED LED, 24-240V AC/DC, GREEN, SPRING-TYPE TERMINAL, FOR FRONT PLATE MOUNTING	SIEMENS 3SU1401-1BH40-3AA0
E552CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E556CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E560CB	11225	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 10 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4110-7HG40
E602CB	11222	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 6 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4106-7HG40
E602PWS POWER SUPPLY	80030	1	POWER SUPPLY, SITOP, PSU6200, INPUT: 120/230 VAC, OUTPUT: 24 VDC / 3.7 A, NEC CLASS 2	SIEMENS 6EP3333-7LB00-0AX0
E702CB	11222	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 6 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4106-7HG40
E702PWS POWER SUPPLY	80030	1	POWER SUPPLY, SITOP, PSU6200, INPUT: 120/230 VAC, OUTPUT: 24 VDC / 3.7 A, NEC CLASS 2	SIEMENS 6EP3333-7LB00-0AX0
E752CB	11222	1	CIRCUIT BREAKER, MINIATURE, 240 V, 14 KA, 1-POLE, C, 6 A, D=70 mm TO UL 489, SAME POLARITY	SIEMENS 5SJ4106-7HG40
E752PWS POWER SUPPLY	80030	1	POWER SUPPLY, SITOP, PSU6200, INPUT: 120/230 VAC, OUTPUT: 24 VDC / 3.7 A, NEC CLASS 2	SIEMENS 6EP3333-7LB00-0AX0
PDP	75813	2	LABEL, WARNING, PICTOGRAM FOR HOT SURFACE, 50 mm H X 50 mm W	BRADY Y5062718
	75805	0 A/R	TAGS, PANEL, STICK ON OR LAMICOID, MINIMUM FONT SIZE - 5mm (20PT)	CUSTOM GENERIC TAG - PANEL
	80098	1	ENCLOSURE BUILT TO LATEST GCCB-1 AND GCCH-1 SPECIFICATIONS, 1500 mm H X 800 mm W X 400 mm D, RAL 7035 GRAY, 50 mm MOUNTING ANGLES, SUBPLATE, 1397 mm H X 669 mm W, 12 GAUGE MIN, GALVANIZED	HOFFMANN OR EQUIVALENT X2727
	75600	25	HOLE PLUG, 22.5mm DIAMETER	SIEMENS 3SU1900-0FA11-0AA0
	75601	1	HOLE PLUG, 16mm DIAMETER	SIEMENS 3SB2908-3AA
	75709	1	KEYLOCK BOX, 9.5" X 3" X 1.5"	SAGINAW SCE-KLB BAS 018115
	12712	14	BLOCK, TERMINAL, END ANCHORS - DIN RAIL, EW 35, BEIGE	WEIDMULLER 0383560000

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
	75815	1	SAFETY, HOLDER, PLACARD, FOR 11" X 17" GRAPHIC AND 11" X 8.5" LOCKOUT LIST SHEETS, GMT RED, SCREEN PRINT "LOCKOUT PLACARD", (1) 11" X 17" HORIZONTAL PRINT POCKET SAVERS AND (2) 8.5" X 11" PRINT POCKET SAVERS, HARDWARE INCLUDED (LANDSCAPE)	WECO OR EQUIVALENT GMT-1218LO-LP
	80100	1	PRINT POCKET, EXTERNAL MOUNT, RAL7035 GREY, 329 mm H x 464 mm W x 101 mm D WITH HINGED COVER	HOFFMANN OR EQUIVALENT K9187
	75120	0 A/R	STANDARD MOUNTING RAIL 35X27X15,1.5mm THICK, 2 METERS LONG	PHOENIX 0806602
	75110	0 A/R	DUCT,100mm W X 100mm H, WITH COVER	TEHALIT DNG100100
	75108	0 A/R	DUCT,50 mm W X 100 mm H, WITH COVER	TEHALIT DNG100050
	15875	0 A/R	3/8 INCH - NPT GASKET SEAL FOR MINI RECEPTACLE	WOODHEAD - MOLEX 00-5090
1 PE BAR	15876	0 A/R	LOCKING NUT FOR MINI RECEPTACLE	WOODHEAD - MOLEX 30-1100
	11080	2	BUSBAR SYSTEM, ACCESSORIES BUSBAR CENTER-TO-CENTER SPACING 60 mm N/PE BUSBAR HOLDER FOR BUSBARS 12X 5 (10)-30X 5 (10) AND 6X 6 mm, FREE-STANDING INSTALLATION OR ATTACHMENT TO 8US1923-2AA01	SIEMENS 8US1923-1AA01
	81430	0 A/R	COPPER RAIL, TIN PLATED, 30x5x2400	CUSTOM 30X5X2400
	11415	26	TERMINAL, BUSBAR ADAPTER, 60 mm FAST BUS BUSBAR ADAPTER SYSTEM, FOR 5 mm BUSBAR THICKNESS 1,5-16 mm²	SIEMENS 8US1921-2AA00
2 PE LUG PLC1.0 PLC	11417	1	TERMINAL, BUSBAR ADAPTER, 60 mm FAST BUS BUSBAR ADAPTER SYSTEM, FOR 5 mm BUSBAR THICKNESS 16-70 mm²	SIEMENS 8US1921-2AD00
	80000	1	BLOCK, TERMINAL, WPE 50N, PE, 50mm², GREEN-YELLOW	WEIDMULLER 1846040000
	14501	1	PLC, COMPACT LOGIX PROCESSOR, L310ER, 1MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 24 NODES	ROCKWELL 5069-L310ER
	14502	1	PLC, COMPACT LOGIX PROCESSOR, L320ER, 2MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 40 NODES	ROCKWELL 5069-L320ER
	14503	1	PLC, COMPACT LOGIX PROCESSOR, L330ER, 3MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 60 NODES	ROCKWELL 5069-L330ER
	14504	1	PLC, COMPACT LOGIX PROCESSOR, L340ER, 4MB MEMORY, DUAL PORT ETHERNET, NO MOTION, 90 NODES	ROCKWELL 5069-L340ER
	14511	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L310ERS2, 1MB MEMORY, 0.5MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 24 NODES	ROCKWELL 5069-L310ERS2
	14512	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L320ERS2, 2MB MEMORY, 1MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 40 NODES	ROCKWELL 5069-L320ERS2
	14513	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L330ERS2, 3MB MEMORY, 1.5MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 60 NODES	ROCKWELL 5069-L330ERS2
	14514	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L340ERS2, 4MB MEMORY, 2MB SAFETY MEMORY, DUAL PORT ETHERNET, NO MOTION, 90 NODES	ROCKWELL 5069-L340ERS2
	14521	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L310ERMS2, 1MB MEMORY, 0.5MB SAFETY MEMORY, DUAL PORT ETHERNET, 4-AXIS CIP MOTION, 24 NODES	ROCKWELL 5069-L310ERMS2

DEVICE LIST

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
PLC1.0 PLC	14522	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L320ERMS2, 2MB MEMORY, 1MB SAFETY MEMORY, DUAL PORT ETHERNET, 8-AXIS CIP MOTION, 40 NODES	ROCKWELL 5069-L320ERMS2
	14523	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L330ERMS2, 3MB MEMORY, 1.5MB SAFETY MEMORY, DUAL PORT ETHERNET, 16-AXIS CIP MOTION, 60 NODES	ROCKWELL 5069-L330ERMS2
	14524	1	PLC, COMPACT GUARDLOGIX SIL 2 SAFETY PROCESSOR, L340ERMS2, 4MB MEMORY, 2MB SAFETY MEMORY, DUAL PORT ETHERNET, 20-AXIS CIP MOTION, 90 NODES	ROCKWELL 5069-L340ERMS2
	80010	1	I/O, CHASSIS MOUNTED TERMINAL, 5069 CONTROLLER, REMOVABLE TERMINAL BLOCK, SPRING CLAMP, INCLUDES 5069-RTB6-SPRING AND 5069-RTB4-SPRING	ROCKWELL 5069-RTB64-SPRING
PLC1.1 (16) DC INPUT	80015	1	PLC, 5069 I/O, MODULE, INPUT - 10-30 VDC -16 POINT NO DIAGNOSTIC	ROCKWELL 5069-IB16
	80011	1	I/O, CHASSIS MOUNTED TERMINAL, 5069 I/O, REMOVABLE TERMINAL BLOCK, SPRING CLAMP	ROCKWELL 5069-RTB18-SPRING
AC1	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
AC2	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
AC3	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
DC1	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
DC2	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
DC3	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
DC4	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
DC5	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
DC6	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
EN1	19001	1	RECEPTACLE, ETHERNET, 4 PIN, MICRO, FEMALE INT THREAD REC, PG9, TO RJ45, 2 PAIR, CAT5E, 24 AWG, UNSHIELDED, STRANDED, HIGH-FLEX, TPE 1M (3.28 FT)	WOODHEAD - MOLEX ER1PAB3004M010
EN2	19001	1	RECEPTACLE, ETHERNET, 4 PIN, MICRO, FEMALE INT THREAD REC, PG9, TO RJ45, 2 PAIR, CAT5E, 24 AWG, UNSHIELDED, STRANDED, HIGH-FLEX, TPE 1M (3.28 FT)	WOODHEAD - MOLEX ER1PAB3004M010
HAC1	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
HAC2	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
HAC3	15743	1	CORD, RECEPTACLE, MINI 3 PIN, FEMALE-INTERNAL THREADS, 3 METER (9.84 FT) PIGTAIL - 1/2 INCH NPT, AC C.C., 16 AWG, 600V, 13A	WOODHEAD - MOLEX 1R3000A20M030
HDC1	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030
HDC2	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030

DEVICE TAG	ITEM NUMBER	QTY	DESCRIPTION	MANUFACTURER PART NUMBER
HDC3	15763	1	CORD, RECEPTACLE, MINI 4 PIN DC, FEMALE, INTERNAL THREAD, 3 METER (9.84 FT) PIGTAIL, 1/2 INCH -14 NPT, 16 AWG, 10A, 600V	WOODHEAD - MOLEX 1R4000A39M030