

GTSU#13 GANTRY DRIVE
< DRIVE PANEL >

2021.08.10

DATE	BY	APPROVAL
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						TITLE				
						GTSU#13 GANTRY DRIVE				
						COVER SHEET				
						GANTRY DRIVE PANEL				
DR. BY		CHK. BY		ENG.		DWG.		NEXT	SH.	T001
DATE		DATE		DATE		NO.		SH.	NO.	
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DRAWING STANDARDS:

SYMBOLS:

REFERS TO NOTE GIVEN BELOW

▲ LOW POWER CONTACT

↻ ARROW INDICATES FUNCTION INCREASE (ALWAYS CLOCKWISE)

41 DANGER - THIS EQUIPMENT MAY BE AT LINE VOLTAGE EVEN WHEN NOT IN OPERATION. TO AVOID ELECTRIC SHOCK, DISCONNECT

51 CAUTION - NEVER REMOVE OR INSERT ANY MODULE OR CARD WHILE THE POWER IS ON.

91 REMOVE JUMPER IF ADDITIONAL INTERLOCK IS ADDED.

131 SEPARATELY MOUNTED, SUPPLIED BY OTHERS

141 SEPARATELY MOUNTED, SUPPLIED BY ROCKWELL AUTOMATION

321 MOTOR STABILIZING FIELD, S1 AND S2, IS NOT REQUIRED FOR NORMAL OPERATION. TAPE S1 AND S2 SEPARATELY AND DO NOT USE.

331 DRIVE MOTOR CONNECTIONS AS SHOWN ARE FOR INDICATED ROTATION FACING COMMUTATOR END. FOR OPPOSITE ROTATION, INTERCHANGE A1 AND A2 CONNECTIONS IN MOTOR CONDUIT BOX.

341 TACHOMETER LEADS MUST BE CONNECTED TO GIVE THE INDICATED POLARITY.

351 IF OPPOSITE ROTATION IS DESIRED, CHANGE POLARITY OF THE COSINE SIGNAL BY INTERCHANGING THE COSINE INPUT LEADS.

361 USE TWISTED TWO - CONDUCTOR CABLE. THIS CABLE MUST BE IN A SEPARATE SIGNAL CONDUIT. IT CANNOT BE RUN WITH OTHER CONDUCTORS OR CABLES. USE RELIANCE PART NUMBER 417900-76EAD OR EQUIVALENT. REFER TO FIELD INSTALLATION AND WIRING TABLE ON NEXT SHEET FOR WIRE SPECIFICATIONS.

381 SIGNAL WIRE CABLES WITH THIS NOTE NUMBER CAN BE IN THE SAME SEPARATE SIGNAL CONDUIT. THEY CANNOT BE RUN WITH NON-SIGNAL WIRES. REFER TO FIELD INSTALLATION AND WIRING TABLE ON NEXT SHEET FOR WIRE SPECIFICATIONS.

38-11 REFER TO NOTE 38. THE NUMBER FOLLOWING THE NOTE 38 IDENTIFIES THE CABLES THAT MAY BE GROUPED TOGETHER IN THE SAME SIGNAL CONDUIT. FOR EXAMPLE, CABLES REFERENCED WITH NOTE 38-1 CANNOT BE RUN IN THE SAME SIGNAL CONDUIT WITH NOTE 38-2 CABLES.

401 COAXIAL CABLES WITH THIS NOTE CAN BE IN THE SAME SEPARATE SIGNAL CONDUIT. THEY CANNOT BE RUN WITH OTHER CONDUCTORS OR CABLES. FOR RECOMMENDED CABLE TYPE, REFER TO PRODUCT'S NETWORK MANUAL.

CABLE TYPE (BELDEN P/N)	P/N (BELDEN P/N)	CONNECTOR (AMPHENOL P/N)	TERMINATOR 75 OHM RELIANCE P/N 707204-20A AMPHENOL P/N 46650-75
RG59	417900-148A (9259)	405504-74A (31-212-1005)	
RG11	417900-149A (8238)	612293-B (6775)	

411 DANGER - DO NOT OPEN DISCONNECT SWITCH WHILE THE MOTOR IS ENERGIZED.

471 RESOLVER WIRES: LOW LEVEL SIGNAL WIRING. MUST BE RUN IN SEPARATE SIGNAL CONDUIT OR TRAY.

BELDEN P/N	NO. OF TWISTED PAIRS	AWG #	RECOMMENDED MAXIMUM DIST. FOR EACH RESOLVER TYPE
a> X1	a> X2	a> X5	
b> 9730	c> 3	24	1000 FT. 1000 FT. 600 FT.

a> DISTANCES BEYOND THOSE RECOMMENDED MAY REQUIRE ADDITIONAL TUNING. USE RELIANCE CUSTOM PANEL 0-58801

b> MAY ONLY BE RUN IN CONDUIT, PER NEC

c> NOTE: CONNECT CABLE SHIELD TO GROUND AT CABINET ONLY

481 FIBER-OPTIC CABLES WITH THIS NOTE MAY BE RUN WITH ANY LEVEL 1 SIGNAL WIRING. IF NECESSARY THESE CABLES MAY BE RUN WITH ANY LEVEL WIRING. SEE INSTALLATION MANUAL FOR RESTRICTIONS.

521 REFER TO TRANSFORMER NAMEPLATE FOR CONNECTIONS OF PRIMARY LEADS.

531 DANGER - TRANSFORMER IS CONNECTED TO LINE VOLTAGE EVEN WHEN THE A-C DISCONNECT IS OPEN.

91 USER SUPPLIED PROTECTION MUST INCLUDE A DISCONNECTING DEVICE ON THE PRIMARY SIDE OF THE TRANSFORMER. PRIMARY AND SECONDARY WIRE PROTECTION FOR THE ISOLATION TRANSFORMER MUST BE PROVIDED PER NEC.

11 MOUNTED ON DOOR.

111 MOUNTED ON CABINET HOOD

1111 MOUNTED ON MILL HOUSE ROOF

11111 MOUNTED ON CABINET TRIM

111111 EXISTING EQUIPMENT

USE EXAMP. LOCATION CODES	DESCRIPTION
REM_NS	REMOTE MOUNTED - NOT SUPPLIED BY ROCKWELL AUTOMATION.
REM_S	REMOTE MOUNTED - SUPPLIED BY ROCKWELL AUTOMATION.
REM	REMOTE MOUNTED.
OS_2	MTD. ON OPERATORS STATION No. 2
PB_3	MTD. ON PUSHBUTTON STATION No. 3

GENERAL NOTES:

1. FOR FURTHER DRIVE INFORMATION ON INSTRUCTION MANUALS, SEE RESPECTIVE SCHEMATIC SECTIONS.

2. - BUILDING GROUND TO BE GROUNDED BY CUSTOMER.

- SYSTEM ZERO POTENTIAL NODE

- POWER EQUIPMENT GROUND

- PANEL (CHASSIS) GROUND

3. THE INTERNAL WIRING SELECTED MEETS OR EXCEEDS NEC, UL, AND CSA. INTERNAL POWER AND CONTROL WIRE HAS INSULATION RATED AT 105°C OR HIGHER.

4. × -INDICATES COMPONENTS SUPPLIED BY OTHERS.

5. INDICATES FIELD INSTALLED WIRES AS WELL AS THE WIRING LEVEL. WHEN ACCOMPANIED WITH THE DESIGNATION (FWC) THE WIRES/CABLE ARE PRE-SUPPLIED AT THE SOURCE CONNECTION BY ROCKWELL FOR CUSTOMER INSTALLATION AT SITE. (FWC) INDICATES FURNISHED WITH CABINET.

6. -INDICATES OUTGOING TERMINAL.

-INDICATES TERMINAL ON ELECTRONIC ASSEMBLY PRINTED CIRCUIT BOARD (IEA) ETC.

-INDICATES RELAY OR CONTACTOR WITH SUPPRESSOR.

7. COIL AND CONTACT CROSS REFERENCING - NUMBERS ADJACENT TO COIL AND UNDER CONTACT INDICATE SHEET AND LINE NUMBERS.

-INDICATES SHEET NO. 101.

-INDICATES LINE NO. 03.

NO - INDICATES NORMALLY OPEN CONTACTS

NC - INDICATES NORMALLY CLOSED CONTACTS

OFF-PAGE CROSS REFERENCING - NUMBERS ADJACENT TO SOURCE AND DESTINATION SYMBOLS INDICATE SHEET AND LINE NUMBERS.

-INDICATES LINE NO. 24.

-INDICATES SHEET NO. 1.

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8. WIRE # GENERATION

INDICATES WIRE NUMBER.

INDICATES SEQUENCE (1,2,, 3 . . . etc.).

INDICATES LINE NUMBER 24.

INDICATES SHEET NUMBER 11.

INTERNAL WIRE NUMBERS MAY BE "FIXED" WITH A LINE AND SEQUENCE, BUT MAY SCHEMATICALLY SHOW A PREFIX.

9. TYPICAL DUAL VOLTAGE MOTOR FIELD CONNECTIONS ARE SHOWN BELOW. CONSULT THE MOTOR MANUFACTURER'S INSTRUCTIONS FOR CORRECT CONNECTIONS.

10. DC MOTOR ROTATION - CONSULT THE MOTOR MANUFACTURER'S INSTRUCTIONS FOR CORRECT CONNECTIONS.

FOR CCW ROTATION FACING COMMUTATOR END:

A1 IS POSITIVE

F1 IS POSITIVE

FOR CW ROTATION FACING COMMUTATOR END:

A2 IS POSITIVE

F1 IS POSITIVE

FOR CCW ROTATION WITH SERIES FIELD:

FOR CW ROTATION WITH SERIES FIELD:

FOR CCW ROTATION WITHOUT SERIES FIELD:

FOR CW ROTATION WITHOUT SERIES FIELD:

11. AC MOTOR ROTATION - CONSULT THE MOTOR MANUFACTURER'S INSTRUCTIONS FOR CORRECT CONNECTIONS.

FOR CW ROTATION VIEWED FROM MOTOR SHAFT:

INVERTER OUTPUT U2 TO T1 (EUROPEAN MARKING U1)

V2 TO T2 (EUROPEAN MARKING V1)

W2 TO T3 (EUROPEAN MARKING W1)

FOR CCW ROTATION VIEWED FROM MOTOR SHAFT:

INVERTER OUTPUT U2 TO T1 (EUROPEAN MARKING U1)

V2 TO T3 (EUROPEAN MARKING W1)

W2 TO T2 (EUROPEAN MARKING V1)

NOTE: NOT ALL AC MOTOR SUPPLIERS COMPLY WITH THE ABOVE CONVENTIONS.

COMBINATION MOTOR CONTROLLER WITH MOTOR CIRCUIT PROTECTOR

DANGER: To maintain overcurrent, short circuit and ground fault protection, the manufacturer's instructions for selecting current elements and setting the instantaneous-trip circuit breaker must be followed.

AVERTISSEMENT: Pour assurer une protection continue contre les surintensités, les court-circuits et une mise à la terre accidentelle, il est essentiel de choisir les éléments thermiques et de régler le disjoncteur à déclenchement instantané selon la notice technique du fabricant.

Determine motor full load current and motor design type identifier from motor nameplate.

For Design B, C an D motors adjust motor circuit protector to operate at a current setting between ten (10) and thirteen (13) times the full load current. For Design E and N motors adjust motor circuit protector to operate at a current setting between thirteen (13) and seventeen (17) times the full load current.

NOTE: Motor circuit protector is set at minimum current setting when shipped from factory.

DANGER: Tripping of the instantaneous-trip circuit breaker is an indication that a fault current has been interrupted. Current carrying components of the magnetic motor controller should be examined and replaced if damaged, to provide continued protection against a risk of fire or electric shock. If burnout of the current element of an overload relay occurs, the complete overload relay must be replaced. (Refer to NEMA Standards Publication No. ICS 2-2 titled: "Maintenance of Motor Controllers After a Fault Condition" is also published as NEMA Standard Publication No. ICS 2, Part ICS 2-302)

AVERTISSEMENT: L'ouverture du disjoncteur à déclenchement instantané indique qu'un courant de défaut a été interrompu. Les composants conducteurs de la commande magnétique du moteur doivent être inspectés et remplacés s'ils ont subi des dommages, afin d'assurer une protection continue contre le risque d'incendie et de choc électrique. En cas de défaillance de l'élément thermique d'un relais de surcharge, celui-ci doit être remplacé dans sa totalité.

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FIELD INSTALLATION AND WIRING

CATEGORY	WIRING LEVEL	SUB-GROUP	SIGNAL DEFINITION	SIGNAL EXAMPLES	CABLE TYPE	MINIMUM SPACING IN INCHES BETWEEN LEVELS (STEEL CONDUIT/TRAY)						SPACING NOTES
						4S	4	3	3S	2	2S	
POWER (SEE NOTE 2-C FOR SPACING BELOW)	4	S	AC POWER (> 600VAC)	23KV 3 PHASE AC LINES	PER NEC AND LOCAL CODES	SEE NOTE: 7	SEE NOTE: 7	SEE NOTE: 7	SEE NOTE: 7	SEE NOTE: 7	1 2 5	
			AC POWER (TO 600VAC)	480V 3 PHASE AC LINES	PER NEC AND LOCAL CODES	SEE NOTE: 7	0	3/6	3/12	3/9		
			DC POWER	DC MOTOR ARMATURE	PER NEC AND LOCAL CODES							
			DC POWER	REGULATED DC MOTOR FIELD	PER NEC AND LOCAL CODES							
CONTROL (300V MAX OR 20 AMPS)	3		115VAC/VDC LOGIC	RELAY LOGIC, PLC I/O	PER NEC AND LOCAL CODES	SEE NOTE: 7	3/6	0	3/9	1/3		
			115VAC POWER	POWER SUPPLIES, INSTRUMENTS								
		S	24VAC/VDC LOGIC	PLC I/O	PER NEC AND LOCAL CODES							
MEDIUM LEVEL SIGNAL (PROCESS)	2		ANALOG SIGNALS DC SUPPLIES	REF/FEEDBACK SIGNAL, 5 TO 24VDC SUPPLIES	SHIELDED CABLE BELDEN 8770, 9418	SEE NOTE: 7	3/12	3/9	0	1/1	2 3 4 5 6	
			DIGITAL (LOW SPEED)	TTL								
		S	DIGITAL (HIGH SPEED)	RESOLVER, ENCODER/COUNTER I/O, PULSE TACH FEEDBACK	SHIELDED CABLE BELDEN 9730, 9773, 9892 (SEE USER MANUAL)							
		SHLD	ANALOG SIGNALS	REF/FEEDBACK SIGNALS	SHIELDED CABLE, TWISTED CONDUCTORS BELDEN 8760, 9729							
LOW LEVEL SIGNAL (COMM.)	1		SERIAL COMMUNICATION	RS232, 422 TO TERMINALS, PRINTERS	SHIELDED CABLE RS232-BELDEN 8770,8760 RS422-BELDEN 9729,9730	SEE NOTE: 7	3/9	1/3	1/1	0		
		S	PLC SERIAL COMMUNICATION (> 20K BAUD)	PLC REMOTE I/O, PLC DATA HIGHWAY	TWINAXIAL CABLE BELDEN 9463 R-A 1770-CD							
		C	PLC SERIAL COMMUNICATION (> 5MB)	CONTROL NET	RG-6 QUAD SHIELD, COAX CABLE; A-B 1786-RG6 BELDEN 3092A							
		D	CAN COMMUNICATION	DEVICE - NET DRIVE - DRIVE	R-A 1485C-P1-C							
		E	ETHERNET		DEPENDS ON INSTALLATION							
		F	PLC SERIAL COMMUNICATION (> 5MB)	CONTROL-NET	FIBER OPTIC							
					N/A	N/A	N/A	N/A	N/A			

EXAMPLE: SPACING RELATIONSHIP BETWEEN 480VAC INCOMING LEADS

a. 480VAC LEADS ARE LEVEL 4.

b. 24VDC LEADS ARE LEVEL 3.

c. FOR SEPARATE STEEL CONDUITS, THE CONDUITS ARE TO BE 3 INCHES APART.

d. IN A CABLE TRAY THE TWO GROUPS OF LEADS ARE TO BE 6 INCHES APART.

SHIELDED CABLES RECOMMENDATIONS:			
BELDEN 8770	18 AWG - 3	CONDUCTOR SHIELDED	
BELDEN 8760	18 AWG - 2	CONDUCTOR SHIELDED	
BELDEN 9418	18 AWG - 4	CONDUCTOR SHIELDED	
BELDEN 9728	24 AWG - 3	SHIELDED PAIRS (6 COND.)	
BELDEN 9729	24 AWG - 2	SHIELDED PAIRS (4 COND.)	
BELDEN 9730	24 AWG - 3	SHIELDED PAIRS (6 COND.)	
BELDEN 9892	22 AWG - 3	SHIELDED PAIRS (6 COND.)	
BELDEN 9773	18 AWG - 3	SHIELDED PAIRS (6 COND.)	
BELDEN 9463	75 OHM -	TWINAXIAL (2 COND.)	

FIELD WIRING INSIDE ROCKWELL ENCLOSURE:

- CONNECTIONS WILL BE ONLY TO TERMINALS PROVIDED.
- WIRE LENGTH FROM ENTRY POINT TO TERMINAL BOARD TO BE AS SHORT AS POSSIBLE.
- SIGNAL WIRE MUST NOT BE LACED OR RUN WITH NON-SIGNAL WIRE AFTER ENTRY INTO THE ENCLOSURE.
- INCOMING WIRE MUST NOT BE ROUTED IN WIRE CHANNELS OR THROUGH AREAS OF POWER AND CONTROL COMPONENTS AND WIRING.
- USE LASHING BARS WHEN PROVIDED FOR CUSTOMER CONVENIENCE.

FIELD INSTALLATION GROUNDING GUIDELINES

- FOR DRIVES INSTALLATION, REFER TO 'WIRING AND GROUNDING GUIDELINES', PUBLICATION DRIVES-IN001
- FOR PLC AND I/O INSTALLATION, REFER TO 'INDUSTRIAL AUTOMATION WIRING AND GROUNDING GUIDELINES', PUBLICATION 1770-4.1
- NEC ARTICLE 250, GROUNDING AND BONDING
- LOCAL CODE REQUIREMENTS

GENERAL NOTES:

- STEEL CONDUIT IS RECOMMENDED FOR LEVELS 1 AND 2. FOR AC MOTOR CABLES, SEE NOTE 5. ALL CONDUITS CONNECTED TO THE CABINETS SHOULD BE PROPERLY SEALED TO MINIMIZE AIR OR WATER ENTRY INTO THE CABINETS. IF ALUMINUM CONDUIT IS USED. A. IT REQUIRES THE SAME MINIMUM SPACING IS USED AS THAT SHOWN FOR CABLE TRAYS. OR B. INDIVIDUAL STEEL JACKETED (STEEL MESH) CABLES ARE TO BE USED IF THE CONDUIT SPACINGS NEED BE THE SAME AS STEEL CONDUIT.
- SPACING SHOWN BETWEEN LEVELS IS THE MINIMUM REQUIRED FOR PARALLEL RUNS ≤ 400 FEET. GREATER SPACINGS SHOULD BE USED WHERE POSSIBLE.
- SHIELDS FOR SHIELDED CABLES MUST BE CONNECTED AT ONE END ONLY. THE OTHER END SHOULD BE CUT BACK AND INSULATED. SHIELDS FOR CABLES FROM A CABINET TO AN EXTERNAL DEVICE MUST BE CONNECTED AT CABINET END. SHIELDS FOR CABLES FROM ONE CABINET TO ANOTHER MUST BE CONNECTED AT THE SOURCE END CABINET. SPLICING OF SHIELDED CABLES, IF ABSOLUTELY NECESSARY, SHOULD BE DONE SUCH THAT SHIELD(S) REMAIN CONTINUOUS AND INSULATED FROM GROUND.

- NO. 16 AWG WIRE IS THE MINIMUM RECOMMENDED SIZE FOR CONTROL (LEVEL 3). POWER WIRE IS SELECTED BY LOAD, USING 75 DEG C WIRE RATING (LEVELS 4 AND 4S).
- ARMORED CABLE WITH A PVC OUTER JACKET IS REQUIRED TO PROVIDE THE NECESSARY ELECTRICAL SHIELDING FOR AC MOTOR CABLES CONNECTED TO A PWM INVERTER.

RECOMMENDATIONS:	
METALLIC ARMOR:	
BEST PERFORMANCE:	SHIELDED BELDEN CABLE PER TABLE BELOW, OR CONTINUOUS CORRUGATED ALUMINUM
ACCEPTABLE PERFORMANCE:	INTERLOCKED ALUMINUM, OR INTERLOCKED STEEL
CONDUCTORS:	
BEST PERFORMANCE:	PHASE CONDUCTORS - 3 GROUND CONDUCTORS - 3
ACCEPTABLE PERFORMANCE:	PHASE CONDUCTORS - 3 GROUND CONDUCTORS - 1

THE CABLE CONNECTOR SELECTED MUST PROVIDE A GOOD ELECTRICAL CONNECTION BETWEEN THE ARMOR AND THE PE GROUND PLANE AT EACH END OF THE CABLE.

SHIELDED CABLE RECOMMENDATIONS:

BELDEN	29500	#16	AWG
BELDEN	29501	#14	AWG
BELDEN	29502	#12	AWG
BELDEN	29503	#10	AWG
BELDEN	29504	#8	AWG
BELDEN	29505	#6	AWG
BELDEN	29506	#4	AWG
BELDEN	29507	#2	AWG

DESCRIPTION - 4 CONDUCTOR TINNED COPPER, XLPE INSULATION, 600VRMS MAX, SPECIFICALLY DESIGNED FOR IGBT DRIVE APPLICATIONS. THE SHIELD SHOULD BE CONNECTED TO THE PE GROUND PLANE

- SEE A-B PUBLICATION AG2.2 FOR ADDITIONAL CONTROLNET COAX CABLE RECOMMENDATIONS.

SPACING NOTES:

- BOTH OUTGOING & RETURN CURRENT CARRYING CONDUCTORS ARE TO BE PULLED IN THE SAME CONDUIT OR LAYERED ADJACENT IN CABLE TRAY.
- ROUTE CABLES OF THE FOLLOWING LEVELS AS INDICATED:
A. LEVELS MUST BE RUN IN SEPARATE CONDUITS OR TRAYS.
B. INTERMIXING OF LEVELS IS NOT ALLOWED.
C. SPECIAL LEVELS 4S AND 3S MAY EXIST THAT REQUIRE SPECIFIC WIRES TO BE GROUPED FOR SPECIAL HANDLING.
D. LEVELS 1 AND 2 MAY HAVE THEIR RESPECTIVE CIRCUITS (WITHIN A GIVEN LEVEL) PULLED IN THE SAME CONDUIT OR LAYERED ADJACENT IN THE SAME CABLE TRAY.

NOTE: FOR LEVELS 3 AND 4, THE AMPACITY RATINGS OF CONDUCTORS IN A BUNDLE MAY NOT EXCEED THE DERATING GUIDELINES OF NEC 310.15(2), AND TABLE 310.15(B)(2)a

NOTE: THE RESPECTIVE CIRCUITS IN A GIVEN BUNDLE MAY EXPERIENCE SOME AMOUNT OF EMI COUPLING. SOME CIRCUIT APPLICATIONS MAY DICTATE SEPARATE SPACING.

- CONDUCTORS OF LEVELS 1 AND 2 MUST BE SHIELDED WHERE INDICATED PER THE RECOMMENDATIONS OR EQUIVALENT.
- IN CABLE TRAYS, STEEL SEPARATORS ARE ADVISABLE BETWEEN THE LEVELS.
- IF CONDUIT IS USED IT IS REQUIRED THAT IT BE CONTINUOUS AND COMPOSED OF MAGNETIC STEEL. (SEE GENERAL NOTE 1 ABOVE)
- FOR FURTHER INFORMATION ON SPACING OF PLC COMMUNICATION CABLES TO LEVEL 4, SEE R-A PLC INSTALLATION MANUAL.
- PER NEC ARTICLE 300-3(C)(2) , CONDUCTORS OF CIRCUITS RATED OVER 600V ARE NOT ALLOWED TO OCCUPY THE SAME CABLE, TRAY, OR CONDUIT. IT IS ACCEPTABLE FOR A TRAY TO HAVE A METAL BARRIER FOR SEPARATION.

COIL AND SOLENOID SUPPRESSION:

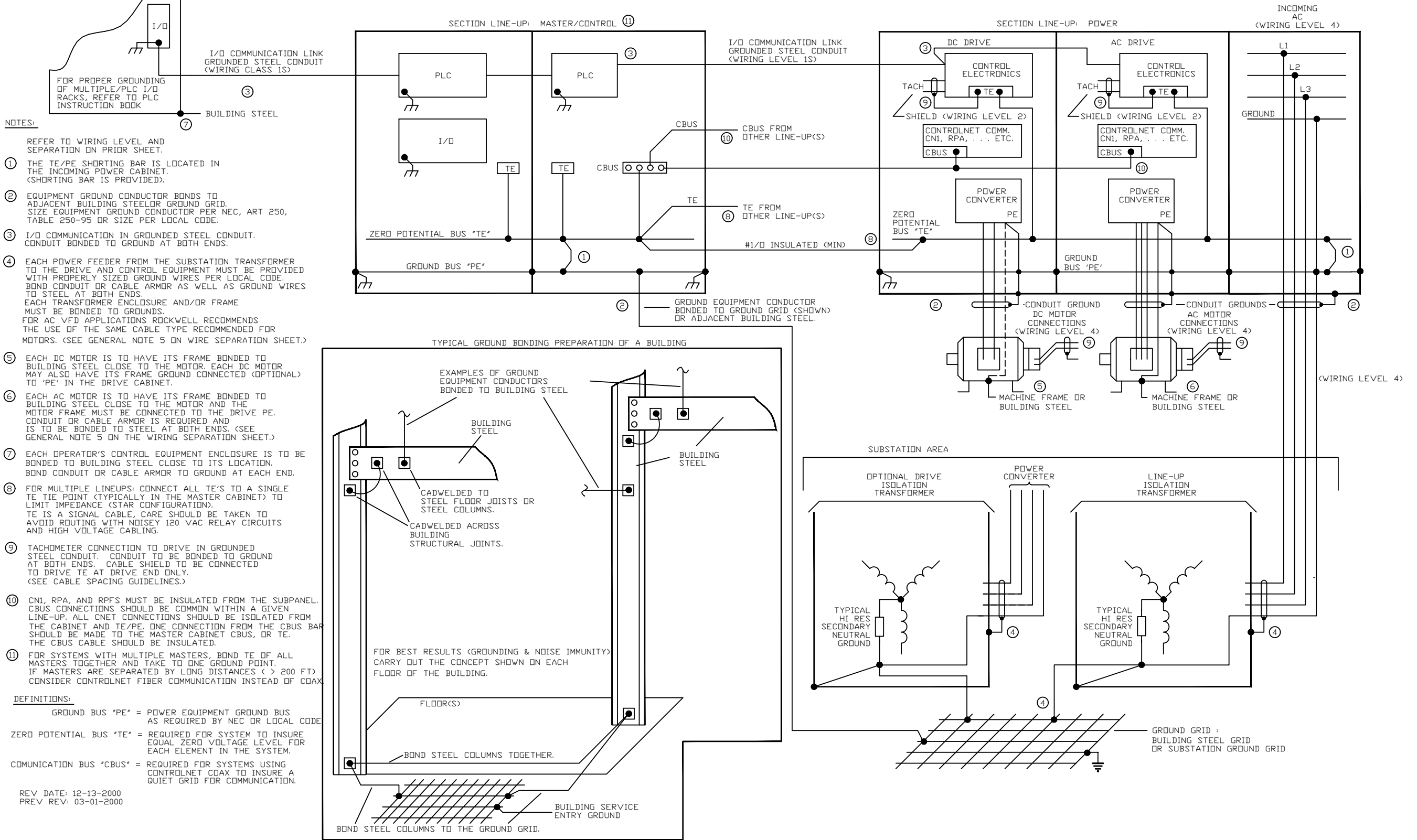
BEFORE UTILIZING THE CONTROL CIRCUIT POWER AVAILABLE FOR OPERATION OF CUSTOMER SUPPLIED DEVICES, THE COILS OR SOLENOIDS OF SUCH DEVICES MUST BE SUPPRESSED. THE EXTERNAL CONTROL CIRCUIT WIRING MUST BE RUN IN A SEPARATE CONDUIT THAT DOES NOT HAVE VARIABLE SIGNAL VOLTAGES OR POWER CIRCUIT VOLTAGES PRESENT. ELECTRICAL TRANSIENTS MAY CAUSE OCCASIONAL DRIVE MALFUNCTIONING.

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				DR. BY	CHK. BY	ENG.	DWG.		NEXT	SH.
				DATE	DATE	DATE	NO.	-	SH.	N002

RECOMMENDED TYPICAL DRIVE SYSTEM GROUNDING SCHEME

CAUTION: LOCAL CODES MAY OVERRIDE THESE RECOMMENDATIONS



NOTES:

- REFER TO WIRING LEVEL AND SEPARATION ON PRIOR SHEET.
- ① THE TE/PE SHORTING BAR IS LOCATED IN THE INCOMING POWER CABINET. (SHORTING BAR IS PROVIDED).
- ② EQUIPMENT GROUND CONDUCTOR BONDS TO ADJACENT BUILDING STEEL OR GROUND GRID. SIZE EQUIPMENT GROUND CONDUCTOR PER NEC, ART 250, TABLE 250-95 OR SIZE PER LOCAL CODE.
- ③ I/O COMMUNICATION IN GROUNDED STEEL CONDUIT. CONDUIT BONDED TO GROUND AT BOTH ENDS.
- ④ EACH POWER FEEDER FROM THE SUBSTATION TRANSFORMER TO THE DRIVE AND CONTROL EQUIPMENT MUST BE PROVIDED WITH PROPERLY SIZED GROUND WIRES PER LOCAL CODE. BOND CONDUIT OR CABLE ARMOR AS WELL AS GROUND WIRES TO STEEL AT BOTH ENDS. EACH TRANSFORMER ENCLOSURE AND/OR FRAME MUST BE BONDED TO GROUNDS. FOR AC VFD APPLICATIONS ROCKWELL RECOMMENDS THE USE OF THE SAME CABLE TYPE RECOMMENDED FOR MOTORS. (SEE GENERAL NOTE 5 ON WIRE SEPARATION SHEET.)
- ⑤ EACH DC MOTOR IS TO HAVE ITS FRAME BONDED TO BUILDING STEEL CLOSE TO THE MOTOR. EACH DC MOTOR MAY ALSO HAVE ITS FRAME GROUND CONNECTED (OPTIONAL) TO 'PE' IN THE DRIVE CABINET.
- ⑥ EACH AC MOTOR IS TO HAVE ITS FRAME BONDED TO BUILDING STEEL CLOSE TO THE MOTOR AND THE MOTOR FRAME MUST BE CONNECTED TO THE DRIVE PE. CONDUIT OR CABLE ARMOR IS REQUIRED AND IS TO BE BONDED TO STEEL AT BOTH ENDS. (SEE GENERAL NOTE 5 ON THE WIRING SEPARATION SHEET.)
- ⑦ EACH OPERATOR'S CONTROL EQUIPMENT ENCLOSURE IS TO BE BONDED TO BUILDING STEEL CLOSE TO ITS LOCATION. BOND CONDUIT OR CABLE ARMOR TO GROUND AT EACH END.
- ⑧ FOR MULTIPLE LINEUPS: CONNECT ALL TE'S TO A SINGLE TE TIE POINT (TYPICALLY IN THE MASTER CABINET) TO LIMIT IMPEDANCE (STAR CONFIGURATION). TE IS A SIGNAL CABLE, CARE SHOULD BE TAKEN TO AVOID ROUTING WITH NOISEY 120 VAC RELAY CIRCUITS AND HIGH VOLTAGE CABLING.
- ⑨ TACHOMETER CONNECTION TO DRIVE IN GROUNDED STEEL CONDUIT. CONDUIT TO BE BONDED TO GROUND AT BOTH ENDS. CABLE SHIELD TO BE CONNECTED TO DRIVE TE AT DRIVE END ONLY. (SEE CABLE SPACING GUIDELINES.)
- ⑩ CN1, RPA, AND RPF'S MUST BE INSULATED FROM THE SUBPANEL. CBUS CONNECTIONS SHOULD BE COMMON WITHIN A GIVEN LINE-UP. ALL CNET CONNECTIONS SHOULD BE ISOLATED FROM THE CABINET AND TE/PE. ONE CONNECTION FROM THE CBUS BAR SHOULD BE MADE TO THE MASTER CABINET CBUS, OR TE. THE CBUS CABLE SHOULD BE INSULATED.
- ⑪ FOR SYSTEMS WITH MULTIPLE MASTERS, BOND TE OF ALL MASTERS TOGETHER AND TAKE TO ONE GROUND POINT. IF MASTERS ARE SEPARATED BY LONG DISTANCES (> 200 FT) CONSIDER CONTROLNET FIBER COMMUNICATION INSTEAD OF COAX

DEFINITIONS:

GROUND BUS 'PE' = POWER EQUIPMENT GROUND BUS AS REQUIRED BY NEC OR LOCAL CODE

ZERO POTENTIAL BUS 'TE' = REQUIRED FOR SYSTEM TO INSURE EQUAL ZERO VOLTAGE LEVEL FOR EACH ELEMENT IN THE SYSTEM.

COMMUNICATION BUS 'CBUS' = REQUIRED FOR SYSTEMS USING CONTROLNET COAX TO INSURE A QUIET GRID FOR COMMUNICATION.

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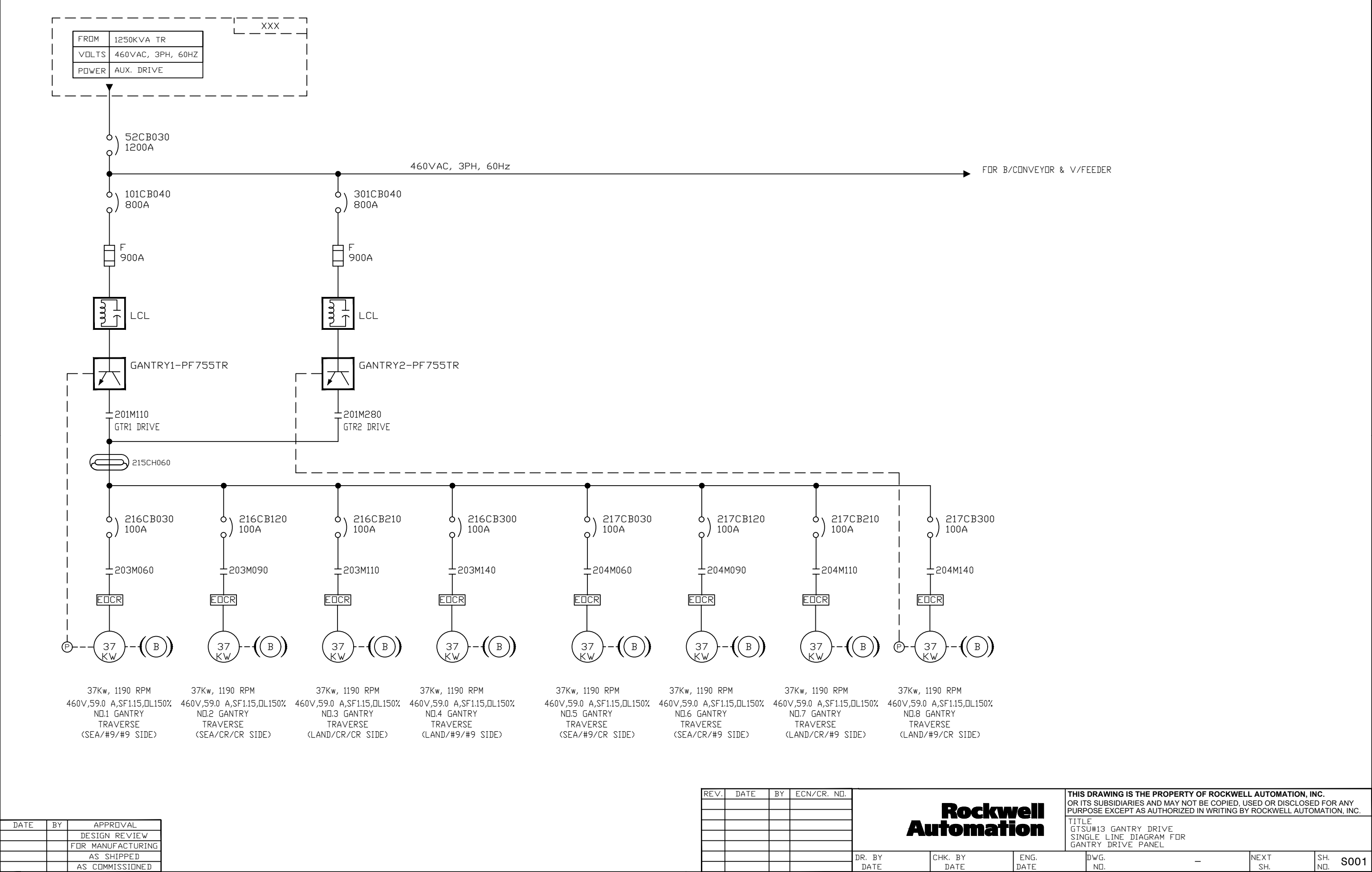
TITLE
GTSU#13 GANTRY DRIVE
NOTE SHEET FOR GENERAL GROUNDING
GANTRY DRIVE PANEL

N003

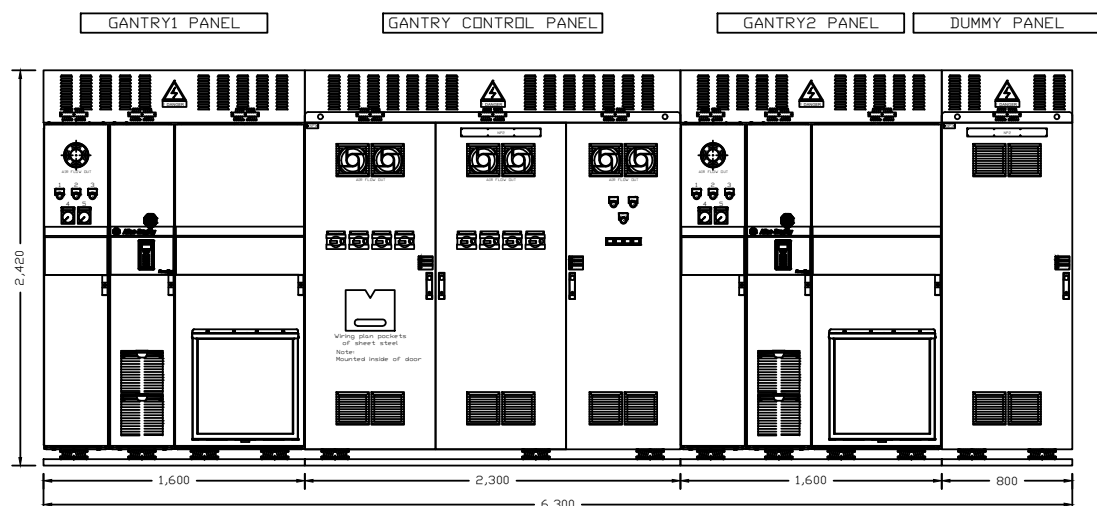
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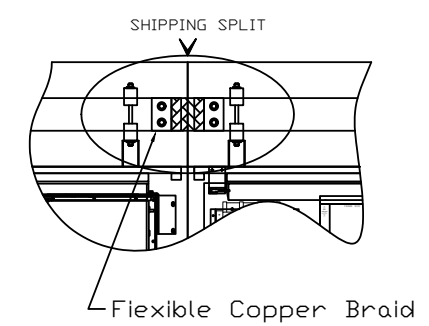
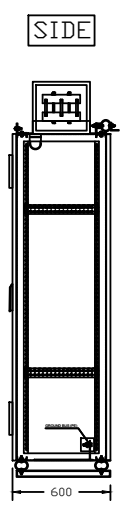
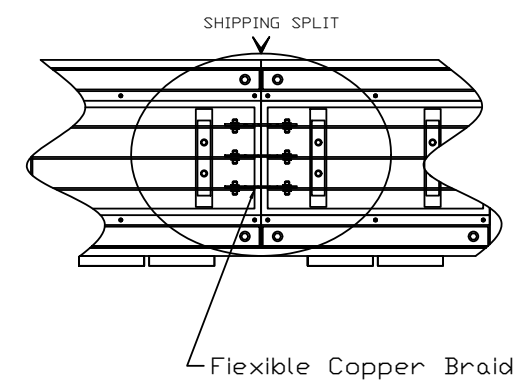
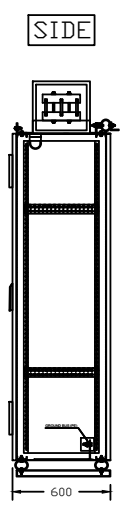
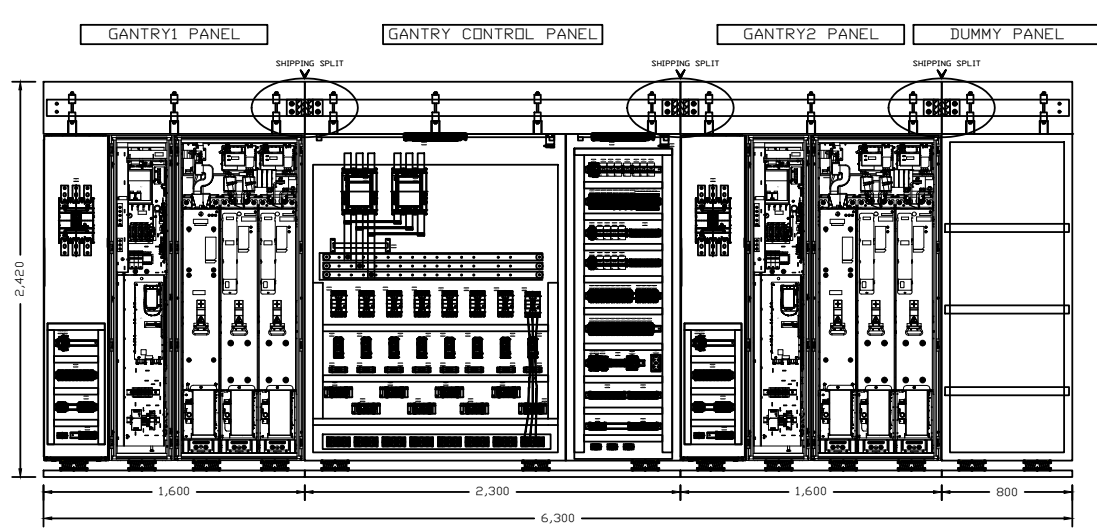
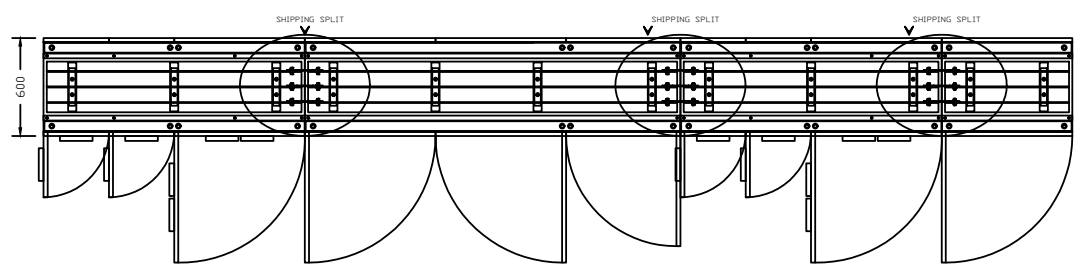
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	TITLE GTSU#13 GANTRY DRIVE NOTE SHEET FOR SYMBOL LIST GANTRY DRIVE PANEL			
DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO. —	NEXT SH. —
			SH. NO. N004	



* GTSU (B/C ROOM)



GANTRY PANEL
- GANTRY 1~8 (37KW*8)
- PF755TR 8FRAME



PANEL COLOR: RAL 7035

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO. L001

SLOTS PROVIDED FOR CONVECTION VENTILATION. (AS SHOWN)
FAN, FILTER AND UPPER SLOTS PROVIDED FOR POSITIVE
PRESSURE VENTILATION. NO SLOTS PROVIDED FOR
NON-VENTILATED (TYPE 12).

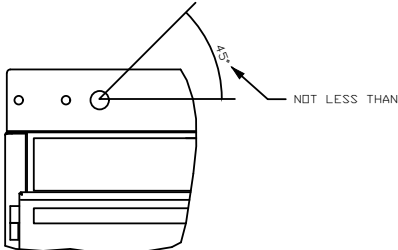
14.6 (.576) SQUARE (2) HOLES IN BOTTOM FRONT AND
9.5 (.375) DIAMETER (2) HOLES IN REMOVABLE REAR ANGLES
FOR CABINET TIE-DOWN.

THESE DIMENSIONS SUBJECT TO CHANGE UNLESS CERTIFIED.
APPROX. WEIGHT WITH CONTROL

ONE BAY	253.6 KG	558 LBS
TWO BAY	459.1 KG	1010 LBS
THREE BAY	664.5 KG	1462 LBS

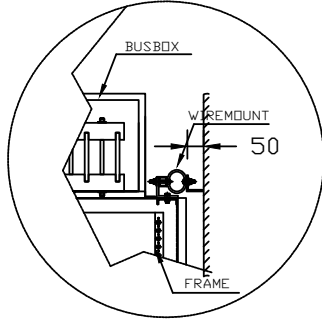


CAUTION - LIFTING INSTRUCTIONS
SLING IN A MANNER THAT WILL EQUALIZE THE LOAD AT
THE PICKUP POINTS. USE SPREADER BARS AS REQUIRED.
THE MINIMUM ANGLE OF THE SLING IS TO BE 45°.
DO NOT JOLT WHEN LIFTING.

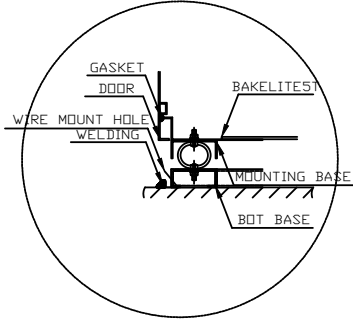


DETAIL OF REMOVABLE LIFTING ANGLES

DETAIL "A"



DETAIL "B"



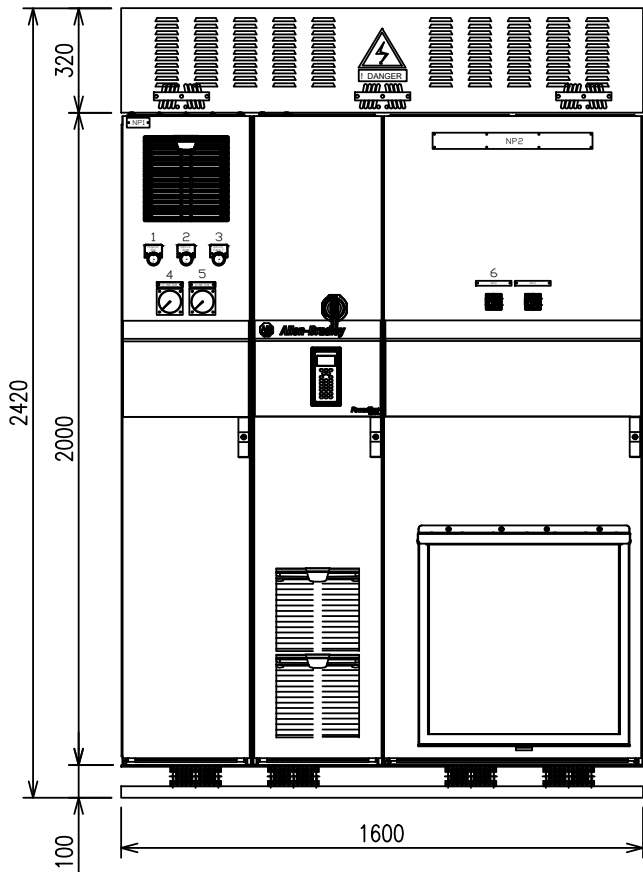
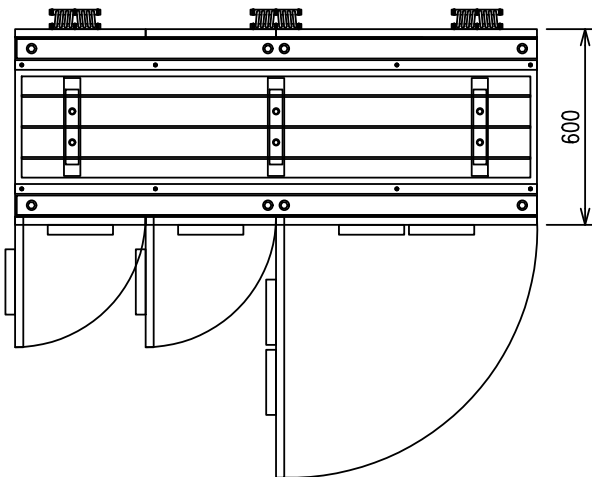
**Rockwell
Automation**

CUSTOMER:
PROJECT NO: GTSU #13R_DRIVE
S/O:-
B/M: GANTRY1 DRIVE PANEL
W/E:
PANEL COLOR: MUNSELL No. RAL7035
ENCLOSURE TYPE: 1600(W)*2420(H)*676(D)
OTHER : BODY - STEEL 2.3t. DOOR - 3.2t
DATE MFD.: 2021.10.11
PANEL WEIGHT: - Kg
BASE SETTING TYPE: WELDING

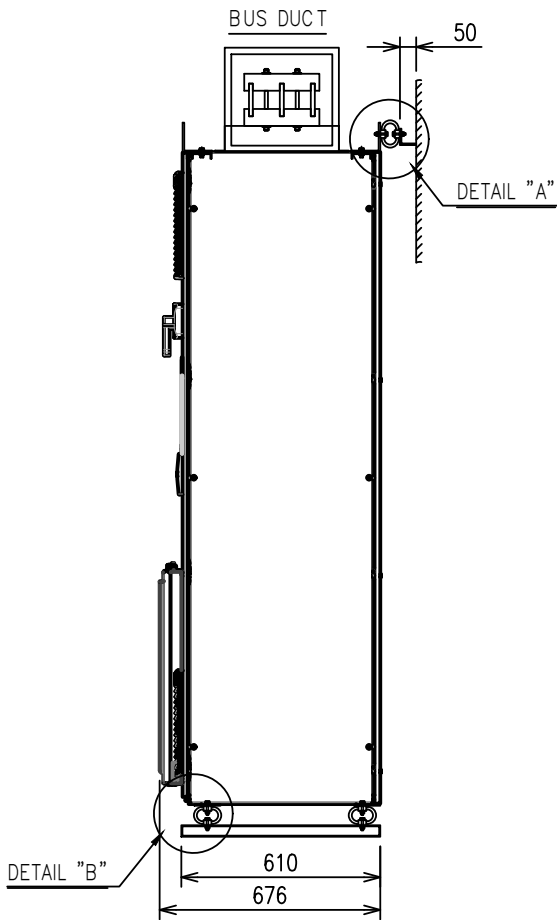
No	Name Plate	Size
NP1	GTR1	70×30
NP2	GANTRY1 DRIVE PANEL	490×50
NP3	--	120×15

No	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	POWER ON	800TC-PH46W	1	Allen-Bradley
2	DRIVE RUN	800TC-QH2R	1	Allen-Bradley
3	DRIVE FAULT	800TC-QH2A	1	Allen-Bradley
4	V-METER	WB-V2 (0~600V)	1	KyongBo
5	A-METER	WB-A2 (0~800A)	1	KyongBo
6	TEMP' CONTROLLER	TX4S-A4C	2	Autonics

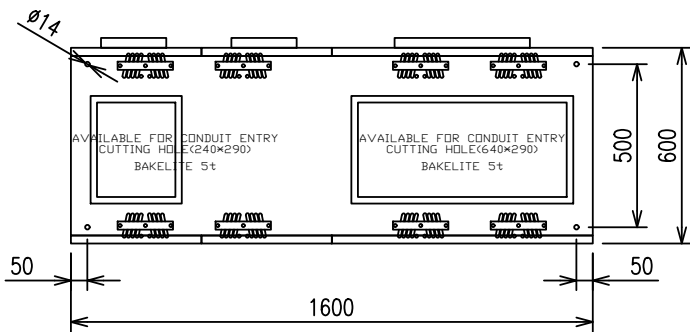
TOP VIEW



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

**Rockwell
Automation**

DR. BY
DATE

CHK. BY
DATE

ENG.
DATE

DWG.
NO.

—

NEXT
SH.

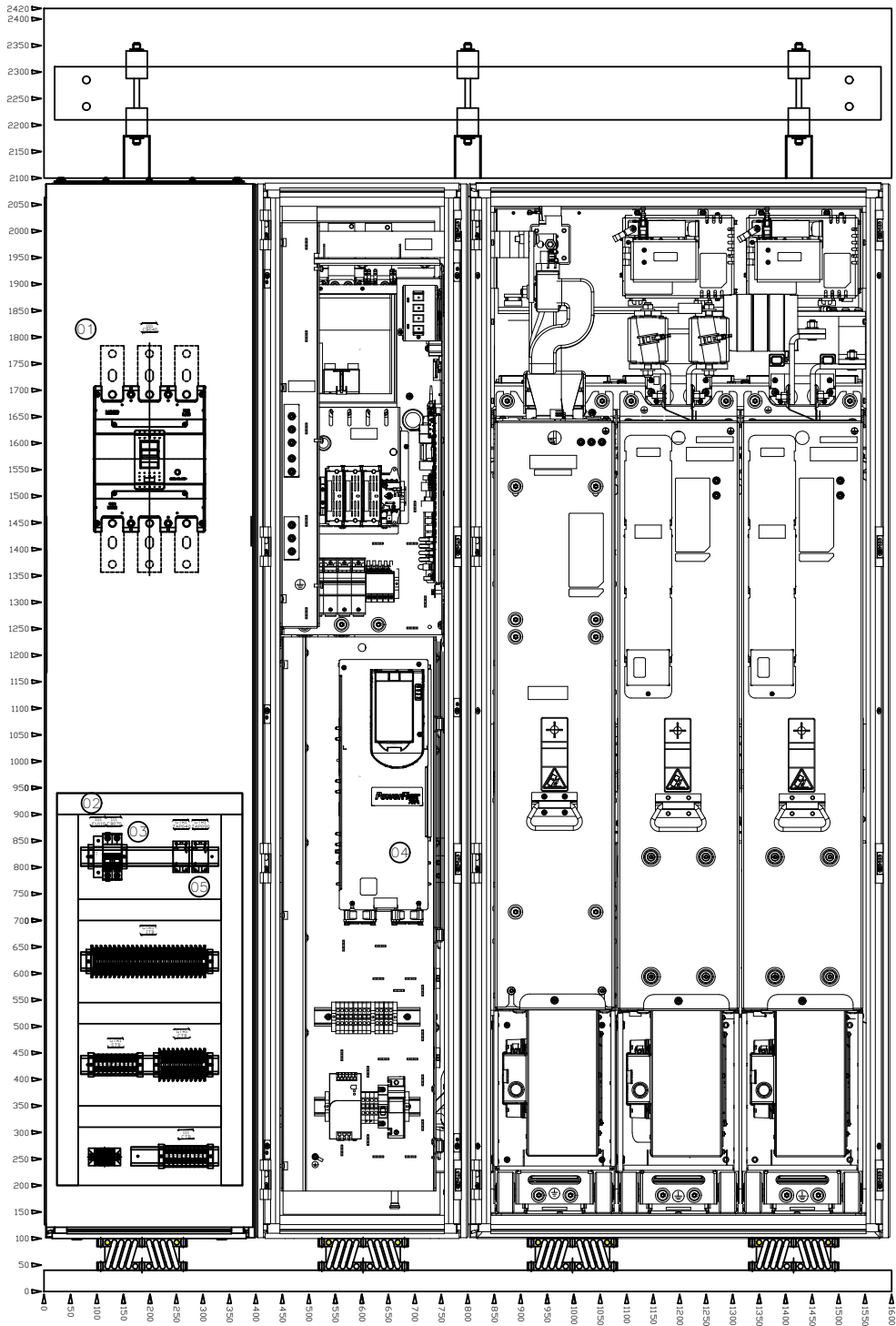
SH.
NO.

L011

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TITLE
GTSU#13 GANTRY DRIVE
DIMENSION DRAWING FOR
GANTRY1 DRIVE PANEL

GANTRY1 DRIVE PANEL



BILL OF MATERIAL

No	TAG	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	101CB040	GANTRY1 MAIN MCCB	ABS 803a 800A	1	LS ELECTRIC
2	101FU110	FUSE HOLDER (MAIN POWER)	1492-FB1M30, 1A	1	ALLEN-BRADLEY
3	111CB070	CONTROL CB	IC60N 2P 10A	1	SCHNEIDER
4	GTR1_EAO30	POWERFLEX 755TR DRIVE	20GEF3D740MNDNNNN-P15-P17-P51	1	ALLEN-BRADLEY
	POD		BASEPD-POD-AFE-F08S	1	
	LCL		20-750-ML1-C770D740	1	
	CONVERTER		20-750-MI1-C770D740	1	
	INVERTER		20-750-MI3-C770D740	1	
5	GTR1_TAP040, 090	C-NET TAP	1786-TPYR	2	ALLEN-BRADLEY

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.	Rockwell Automation				THIS DRAWING IS THE PROPERTY OF ROCKWELL AUTOMATION, INC. OR ITS SUBSIDIARIES AND MAY NOT BE COPIED, USED OR DISCLOSED FOR ANY PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC. TITLE GTSU#13 GANTRY DRIVE LAYOUT DRAWING FOR GANTRY1 DRIVE PANEL			
				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	L012

SLOTS PROVIDED FOR CONVECTION VENTILATION. (AS SHOWN)
FAN, FILTER AND UPPER SLOTS PROVIDED FOR POSITIVE
PRESSURE VENTILATION. NO SLOTS PROVIDED FOR
NON-VENTILATED (TYPE 12).

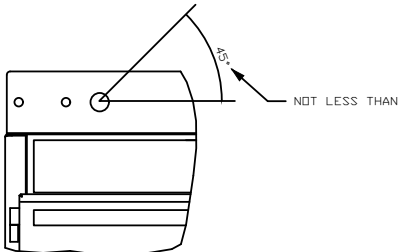
14.6 (.576) SQUARE (2) HOLES IN BOTTOM FRONT AND
9.5 (.375) DIAMETER (2) HOLES IN REMOVABLE REAR ANGLES
FOR CABINET TIE-DOWN.

THESE DIMENSIONS SUBJECT TO CHANGE UNLESS CERTIFIED.

APPROX. WEIGHT WITH CONTROL		
ONE BAY	253.6 KG	558 LBS
TWO BAY	459.1 KG	1010 LBS
THREE BAY	664.5 KG	1462 LBS

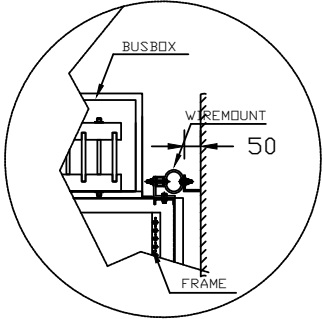


CAUTION - LIFTING INSTRUCTIONS
SLING IN A MANNER THAT WILL EQUALIZE THE LOAD AT
THE PICKUP POINTS. USE SPREADER BARS AS REQUIRED.
THE MINIMUM ANGLE OF THE SLING IS TO BE 45°. DO NOT JOLT WHEN LIFTING.

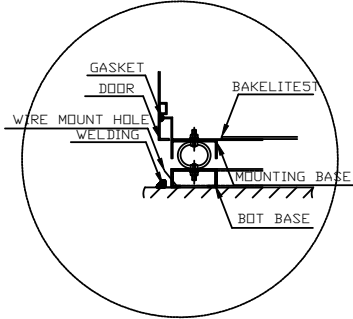


DETAIL OF REMOVABLE LIFTING ANGLES

DETAIL "A"



DETAIL "B"



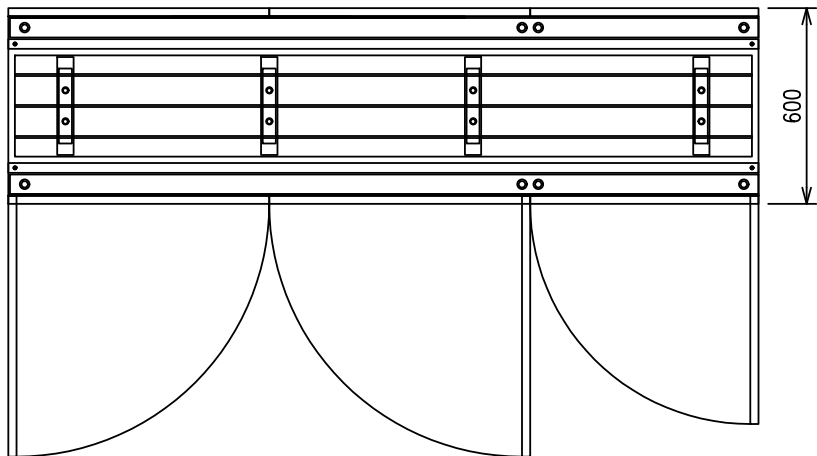
**Rockwell
Automation**

CUSTOMER:
PROJECT NO: GTSU #13R_DRIVE
S/O:-
B/M: GANTRY CONTROL PANEL
W/E:
PANEL COLOR: MUNSELL No. RAL7035
ENCLOSURE TYPE: 2300(W)*2420(H)*600(D)
OTHER : BODY - STEEL 2.3t . DOOR - 3.2t
DATE MFD.: 2021.10.11
PANEL WEIGHT: - Kg
BASE SETTING TYPE: WELDING

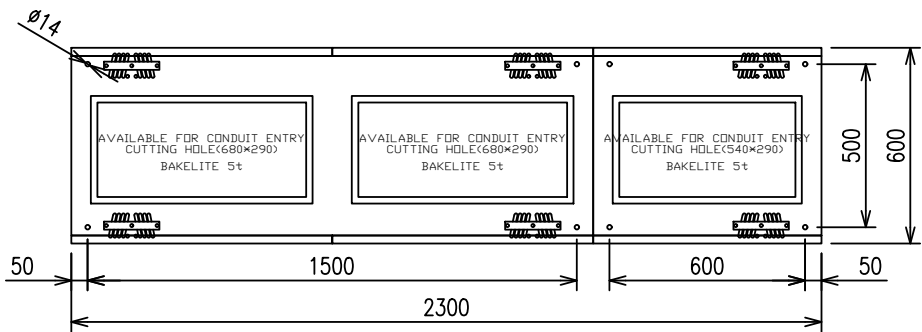
No	Name Plate	Size
NP1	GCP	70×30
NP2	GANTRY CONTROL PANEL	490×50

No	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	COOLING FAN	UF-15P23BTH	6	FULLTECH
2	EDCR METER	DSP-VIP-RM	8	SAMWHA DSP
3	DRIVE LAMP	800TC-PH26W	2	ALLEN-BRADLEY
4	DRIVE SELECT	800TC-J17A	1	ALLEN-BRADLEY
5	SQ' LAMP	KH-5040L	4	KOIND

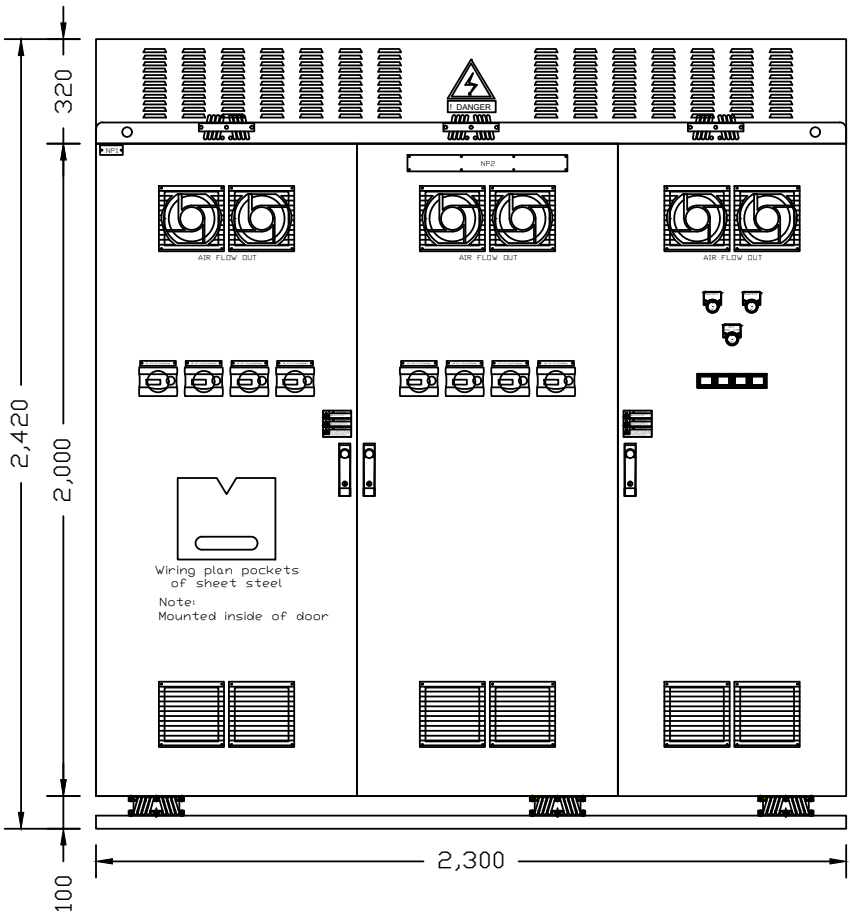
TOP VIEW



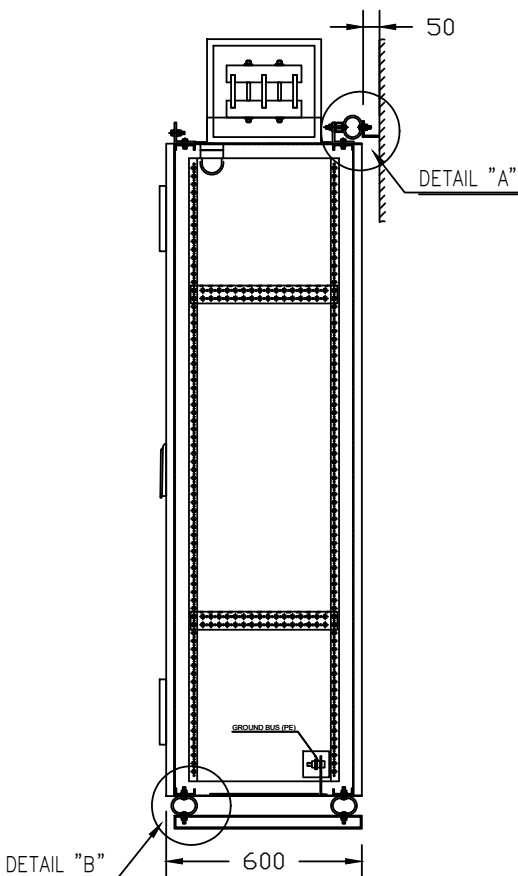
INNER BOTTOM VIEW



FRONT VIEW



SIDE VIEW



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

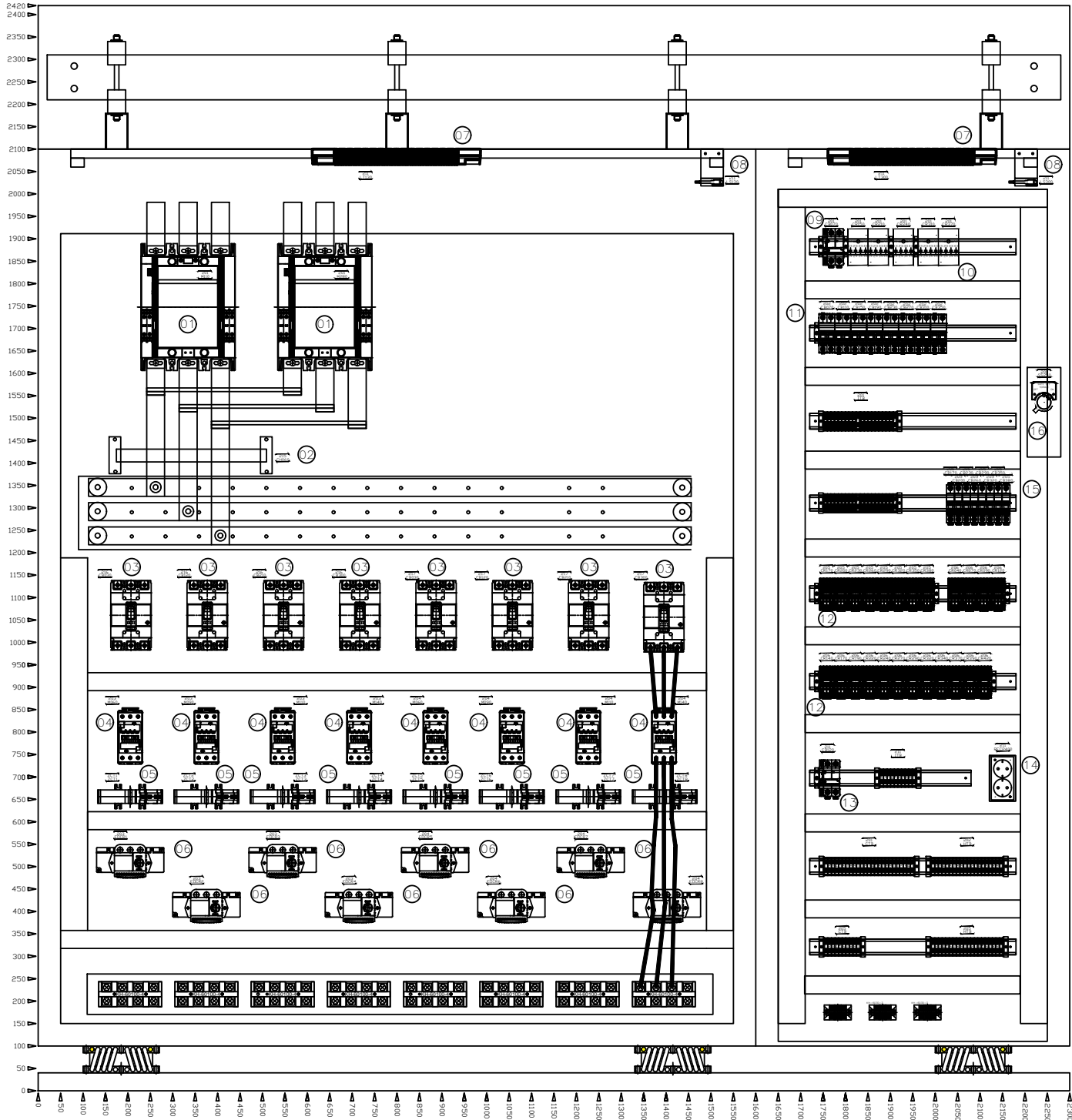
REV.	DATE	BY	ECN/CR. NO.

**Rockwell
Automation**

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.	L013
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TITLE
GTSU#13 GANTRY DRIVE
DIMENSION DRAWING FOR
GANTRY CONTROL PANEL

GANTRY CONTROL PANEL



BILL OF MATERIAL

No	TAG	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	201M110, 280	AC CONTACTOR	100-E580ED11	2	ALLEN-BRADLEY
2	215CH060	COMMON MODE CORE	20-750-EMCCM1-F8	1	ALLEN-BRADLEY
3	216CB030, 120 216CB210, 300 217CB030, 120 217CB210, 300	MCCB with AX	ABS103c 100A	8	LS ELECTRIC
4	203M060, 090 203M110, 140 204M060, 090 204M110, 140	AC M CONTACTOR	100-E80KD00	8	ALLEN-BRADLEY
5	ZCT1~8	ZERO PHASE CT	ZCT-80	8	SCHNEIDER
6	203EOCR1~4 204EOCR5~8	ELECTRONIC OVER CURRENT RELAY CABLE	EOCR-iFMZ-WRAUWZ EOCR-PDM, CABLE-RJ45-003	8 8	SCHNEIDER
7	211LT160, 300	CABINET LIGHT	KCL-L330A	2	KACON
8	211LS160, 300	MICRO S/W	KH-9015	2	KOINO
9	201CB070	CB with AX	IC60N 2P 30A	1	SCHNEIDER
10	201CR150~370	700-CF IEC CONTROL RELAY	700-CF400KL (100-FA40)	5(1)	ALLEN-BRADLEY
11	202CB070~350	CB	IC60N 2P 3A	8	SCHNEIDER
12	205CR170~380 206CR040~420	MINIATURE RELAY, 4PDT	700-HC24A2	24	ALLEN-BRADLEY
13	211CB120	CB with AX	IC60N 2P 10A	1	SCHNEIDER
14	211RECEP400	RECEPTACLE	220VAC 2P	1	LOCAL
15	205CB170~380	CB	IC60N 1P 2A	8	SCHNEIDER
16	201SS250	SELECTOR SWITCH	800TC-H17A	1	ALLEN-BRADLEY

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	L014

SLOTS PROVIDED FOR CONVECTION VENTILATION. (AS SHOWN)
FAN, FILTER AND UPPER SLOTS PROVIDED FOR POSITIVE
PRESSURE VENTILATION. NO SLOTS PROVIDED FOR
NON-VENTILATED (TYPE 12).

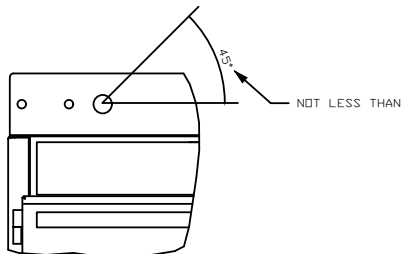
14.6 (.576) SQUARE (2) HOLES IN BOTTOM FRONT AND
9.5 (.375) DIAMETER (2) HOLES IN REMOVABLE REAR ANGLES
FOR CABINET TIE-DOWN.

THESE DIMENSIONS SUBJECT TO CHANGE UNLESS CERTIFIED.
APPROX. WEIGHT WITH CONTROL

ONE BAY	253.6 KG	558 LBS
TWO BAY	459.1 KG	1010 LBS
THREE BAY	664.5 KG	1462 LBS

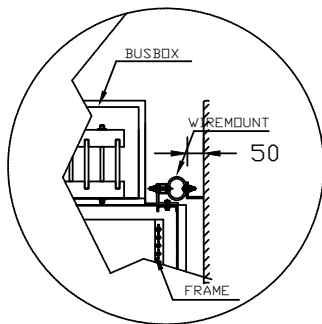


CAUTION - LIFTING INSTRUCTIONS
SLING IN A MANNER THAT WILL EQUALIZE THE LOAD AT
THE PICKUP POINTS. USE SPREADER BARS AS REQUIRED.
THE MINIMUM ANGLE OF THE SLING IS TO BE 45°. DO NOT JOLT WHEN LIFTING.

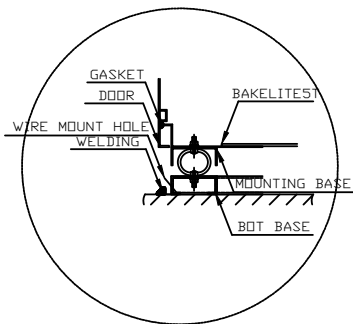


DETAIL OF REMOVABLE LIFTING ANGLES

DETAIL "A"



DETAIL "B"



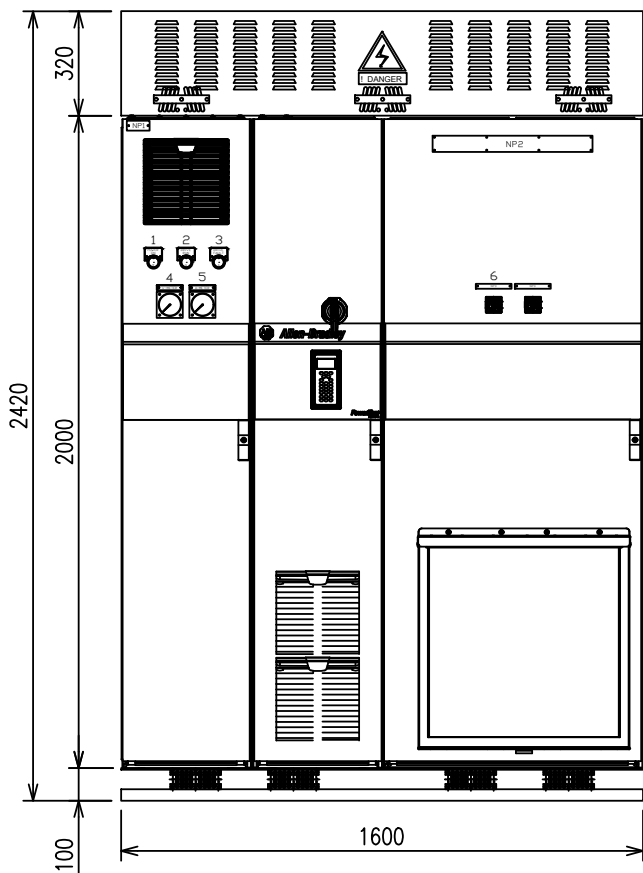
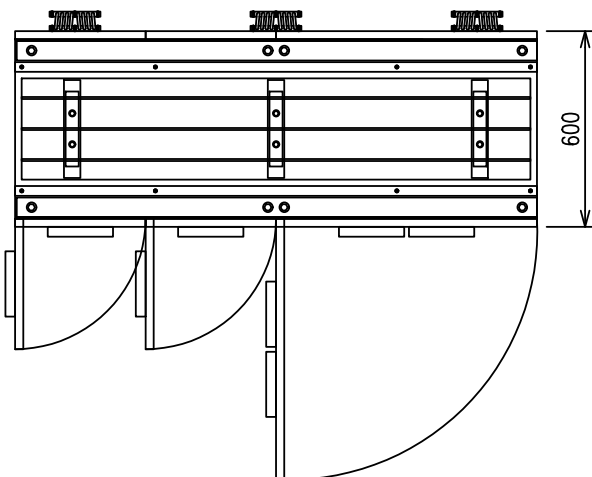
**Rockwell
Automation**

CUSTOMER:
PROJECT NO: GTSU #13R_DRIVE
S/O:-
B/M: GANTRY2 DRIVE PANEL
W/E:
PANEL COLOR: MUNSELL No. RAL7035
ENCLOSURE TYPE: 1600(W)*2420(H)*676(D)
OTHER : BODY - STEEL 2.3t. DOOR - 3.2t
DATE MFD.: 2021.10.11
PANEL WEIGHT: - Kg
BASE SETTING TYPE: WELDING

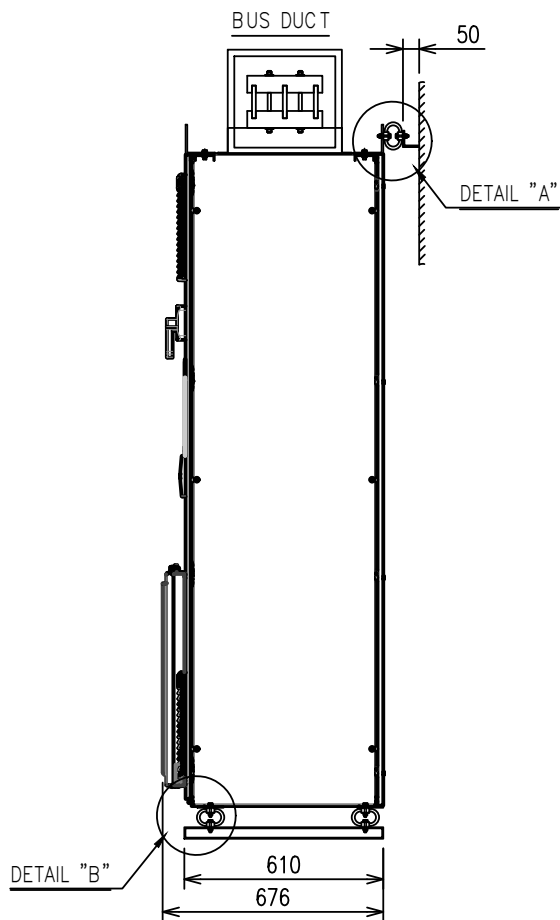
No	Name Plate	Size
NP1	GTR2	70×30
NP2	GANTRY2 DRIVE PANEL	490×50
NP3	--	120×15

No	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	POWER ON	800TC-PH46W	1	Allen-Bradley
2	DRIVE RUN	800TC-QH2R	1	Allen-Bradley
3	DRIVE FAULT	800TC-QH2A	1	Allen-Bradley
4	V-METER	WB-V2 (0~600V)	1	KyongBo
5	A-METER	WB-A2 (0~800A)	1	KyongBo
6	TEMP' CONTROLLER	TX4S-A4C	2	Autonics

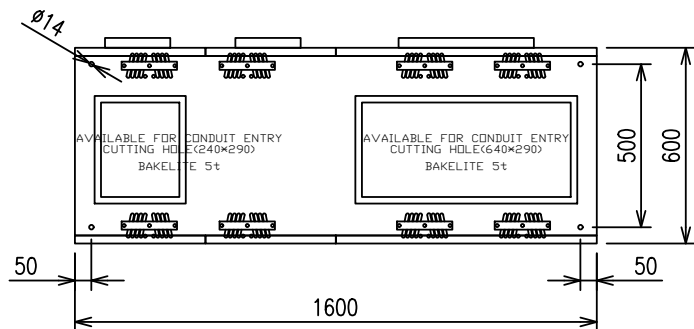
TOP VIEW



FRONT VIEW



SIDE VIEW



BOTTOM VIEW

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

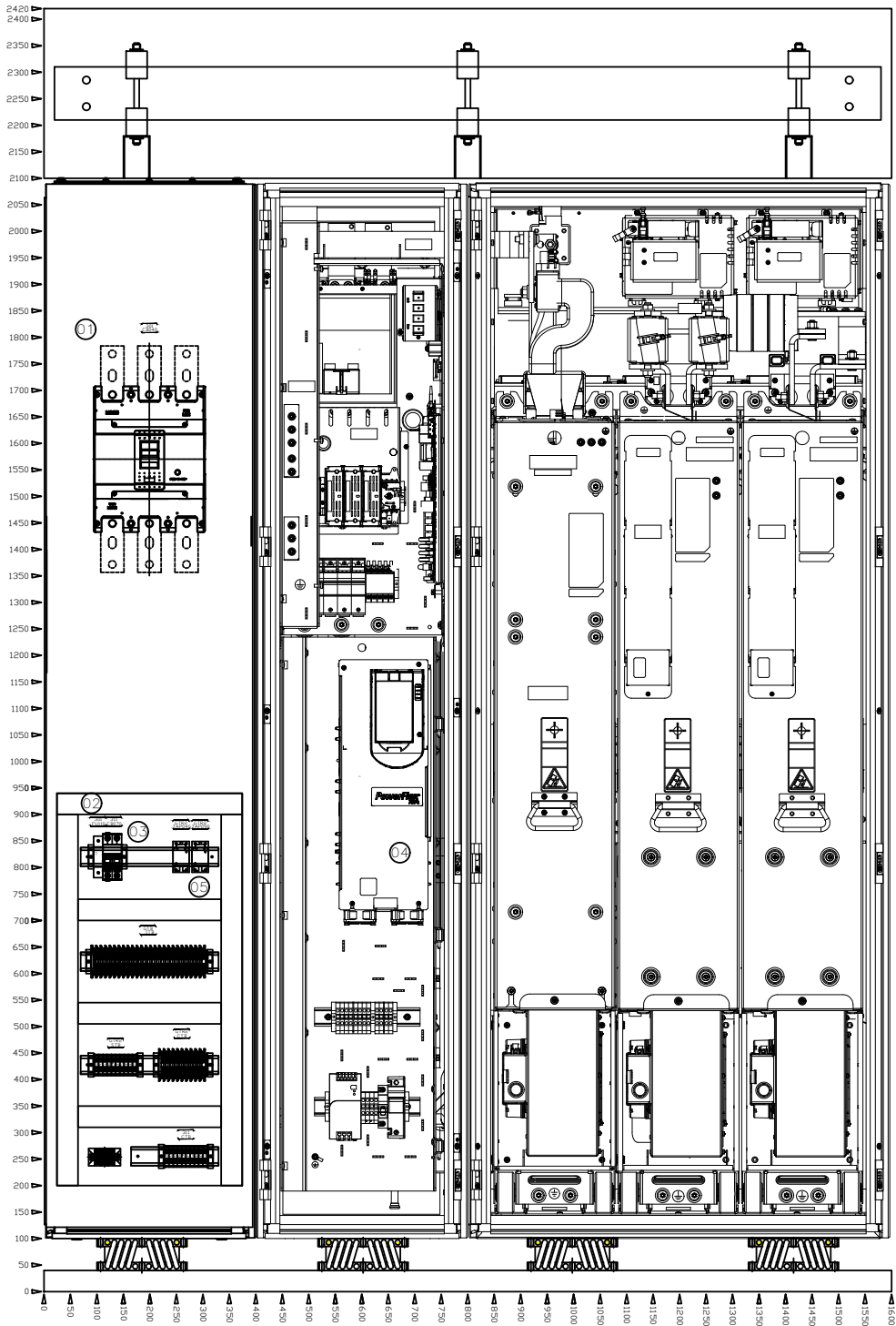
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TITLE
GTSU#13 GANTRY DRIVE
DIMENSION DRAWING FOR
GANTRY2 DRIVE PANEL

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.
					L015

GANTRY2 DRIVE PANEL



BILL OF MATERIAL

No	TAG	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	301CB040	GANTRY2 MAIN MCCB	ABS 803a 800A	1	LS ELECTRIC
2	301FU110	FUSE HOLDER (MAIN POWER)	1492-FB1M30, 1A	1	ALLEN-BRADLEY
3	311CB070	CONTROL CB	IC60N 2P 10A	1	SCHNEIDER
4	GTR2_EAO30	POWERFLEX 755TR DRIVE	20GEF3D740MNDNNNN-P15-P17-P51	1	ALLEN-BRADLEY
	POD		BASEPD-POD-AFE-F08S	1	
	LCL		20-750-ML1-C770D740	1	
	CONVERTER		20-750-MI1-C770D740	1	
5	GTR2_TAP040, 090	C-NET TAP	20-750-MI3-C770D740	1	ALLEN-BRADLEY
			1786-TPYR	2	

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.	Rockwell Automation				THIS DRAWING IS THE PROPERTY OF ROCKWELL AUTOMATION, INC. OR ITS SUBSIDIARIES AND MAY NOT BE COPIED, USED OR DISCLOSED FOR ANY PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.			
				DR. BY DATE				TITLE GTSU#13 GANTRY DRIVE LAYOUT DRAWING FOR GANTRY2 DRIVE PANEL			
				CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	L016	

SLOTS PROVIDED FOR CONVECTION VENTILATION. (AS SHOWN)
FAN, FILTER AND UPPER SLOTS PROVIDED FOR POSITIVE
PRESSURE VENTILATION. NO SLOTS PROVIDED FOR
NON-VENTILATED (TYPE 12).

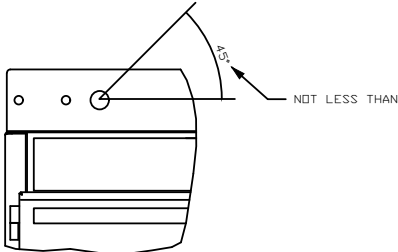
14.6 (.576) SQUARE (2) HOLES IN BOTTOM FRONT AND
9.5 (.375) DIAMETER (2) HOLES IN REMOVABLE REAR ANGLES
FOR CABINET TIE-DOWN.

THESE DIMENSIONS SUBJECT TO CHANGE UNLESS CERTIFIED.
APPROX. WEIGHT WITH CONTROL

ONE BAY	253.6 KG	558 LBS
TWO BAY	459.1 KG	1010 LBS
THREE BAY	664.5 KG	1462 LBS

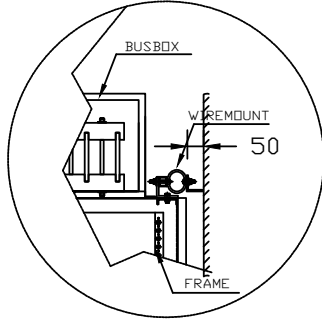


CAUTION - LIFTING INSTRUCTIONS
SLING IN A MANNER THAT WILL EQUALIZE THE LOAD AT
THE PICKUP POINTS. USE SPREADER BARS AS REQUIRED.
THE MINIMUM ANGLE OF THE SLING IS TO BE 45°.
DO NOT JOLT WHEN LIFTING.

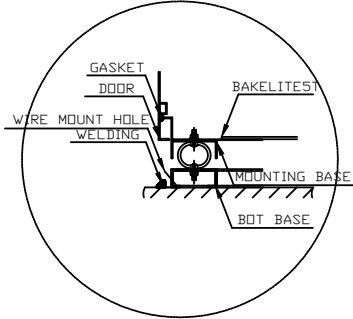


DETAIL OF REMOVABLE LIFTING ANGLES

DETAIL "A"



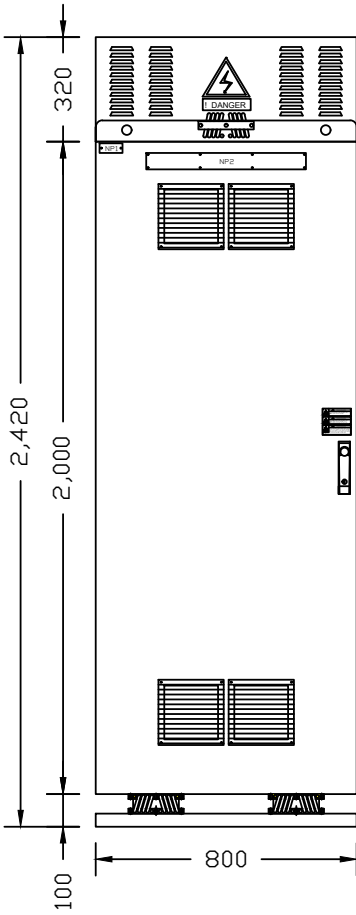
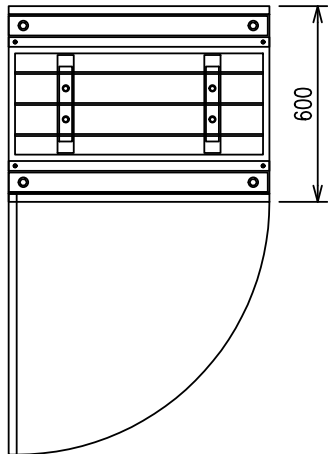
DETAIL "B"



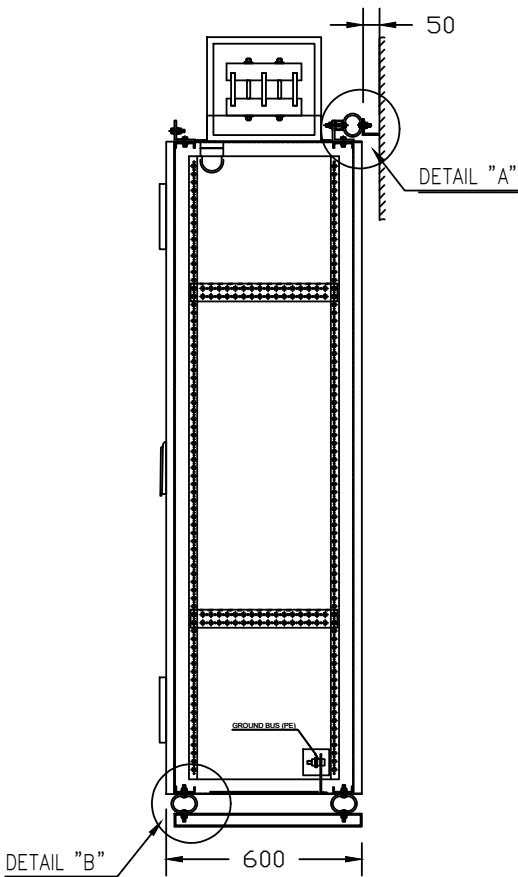
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NP2	-	-

No	DESCRIPTION	CAT. No.	Q'ty	MFG.
1	-	-	-	-

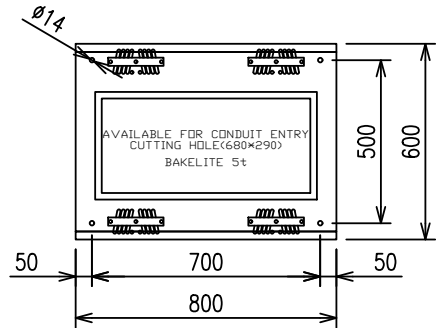
TOP VIEW



FRONT VIEW



SIDE VIEW



INNER BOTTOM VIEW

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

DR. BY
DATE

CHK. BY
DATE

ENG.
DATE

DWG.
NO.

-

NEXT
SH.

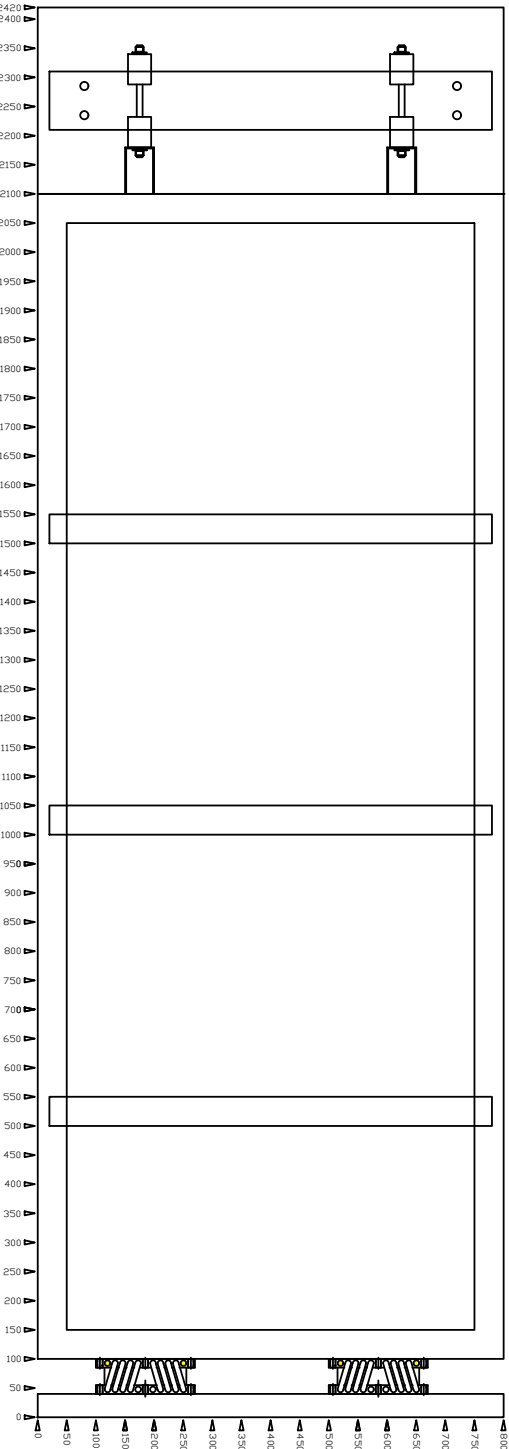
SH.
NO.

L017

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TITLE
GTSU#13 GANTRY DRIVE
DIMENSION DRAWING FOR
GANTRY DUMMY PANEL

GANTRY DUMMY PANEL

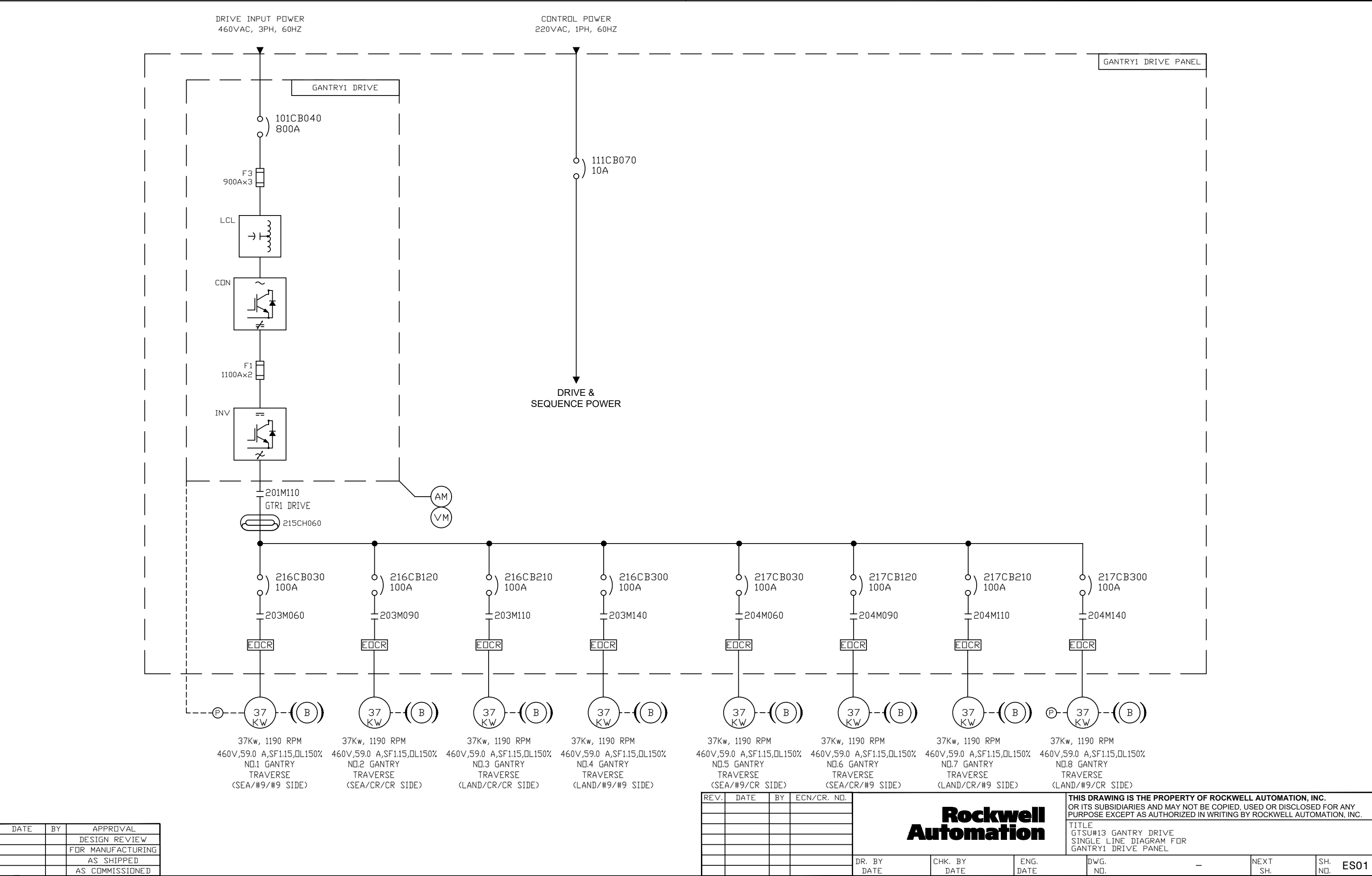


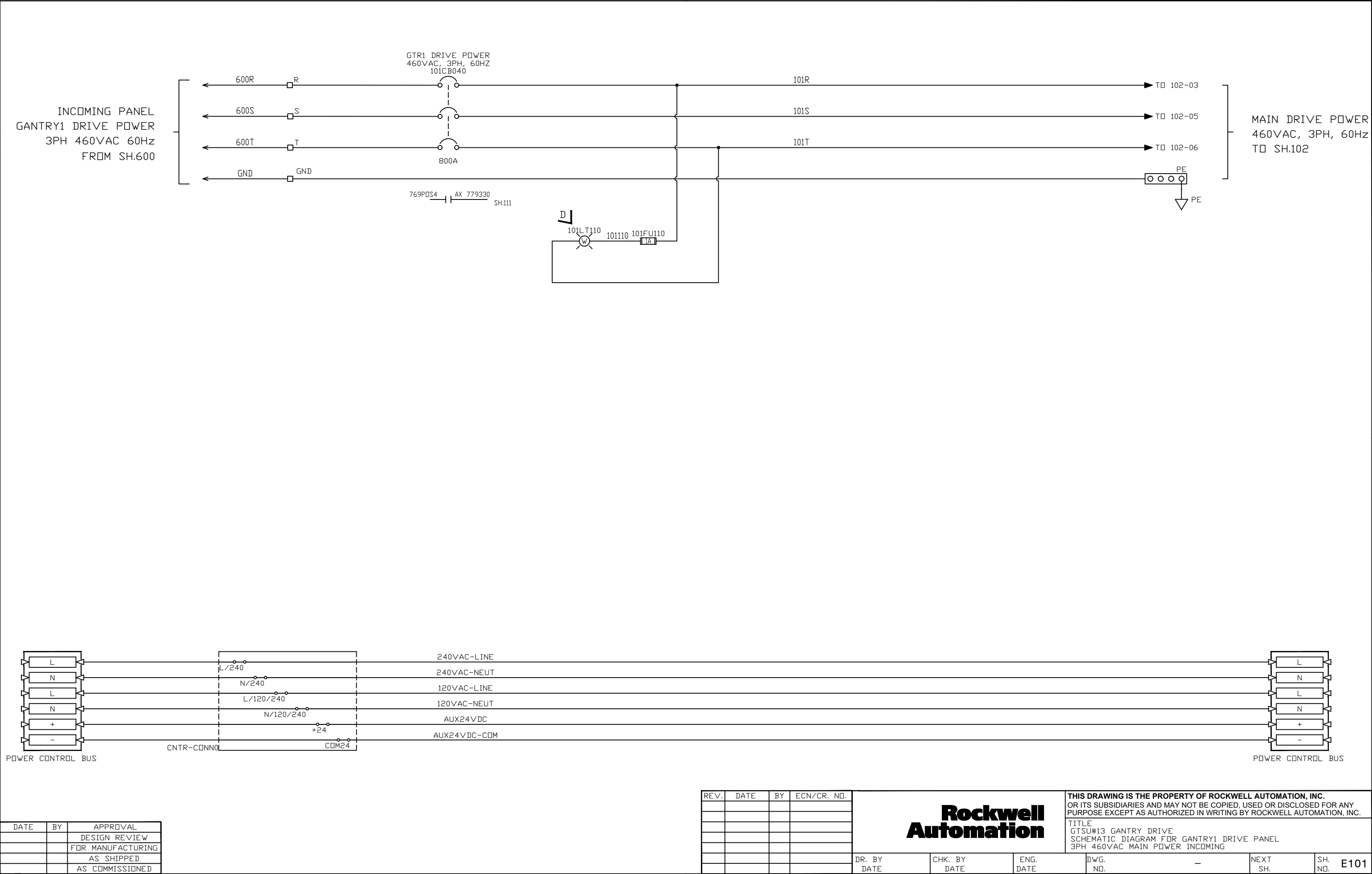
BILL OF MATERIAL

No	TAG	DESCRIPTION	CAT. No.	Q'ty	MFG.
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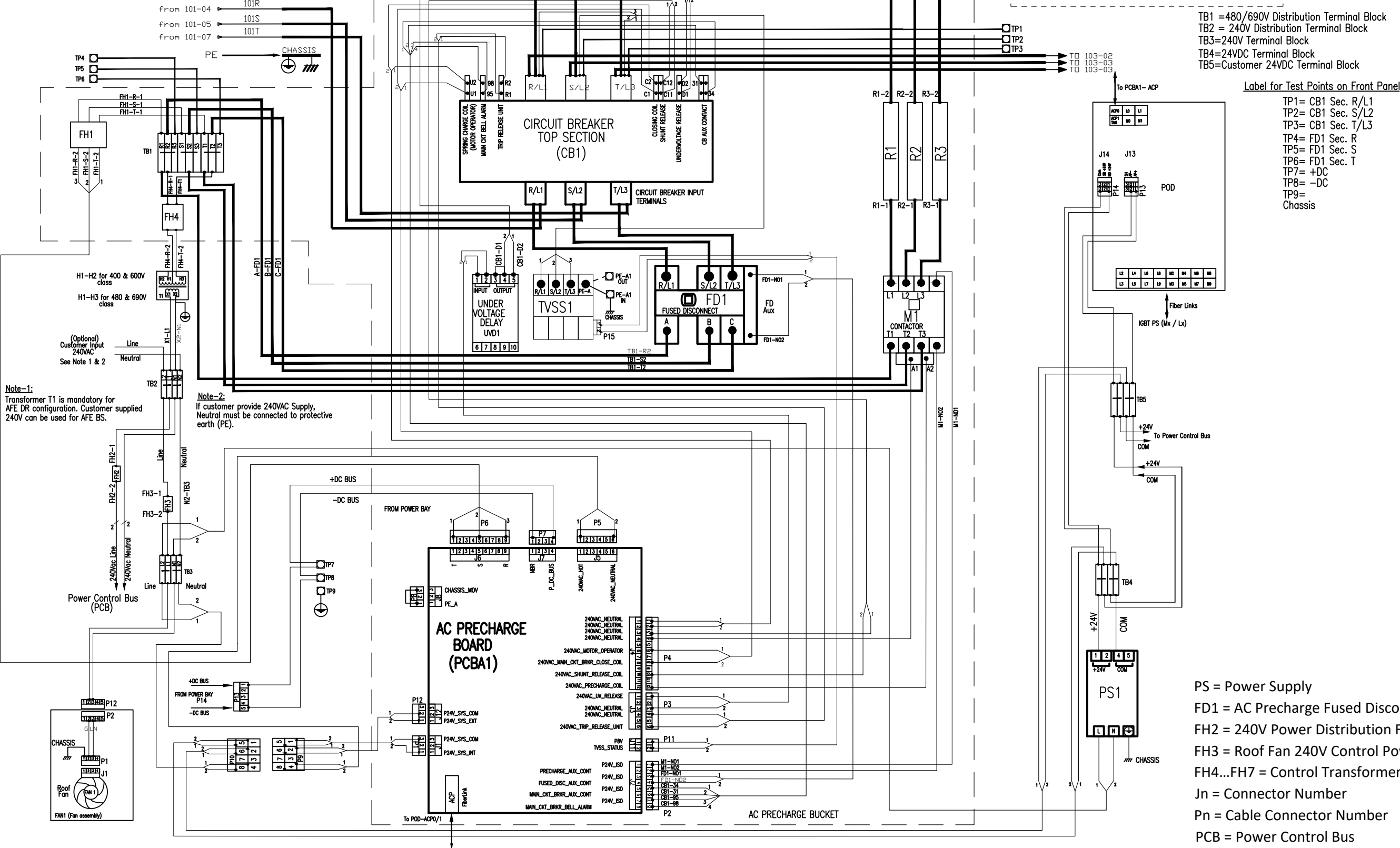
DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

REV.	DATE	BY	ECN/CR. NO.	Rockwell Automation				THIS DRAWING IS THE PROPERTY OF ROCKWELL AUTOMATION, INC. OR ITS SUBSIDIARIES AND MAY NOT BE COPIED, USED OR DISCLOSED FOR ANY PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.			
								TITLE GTSU#13 GANTRY DRIVE LAYOUT DRAWING FOR GANTRY DUMMY PANEL			
								DWG. NO.		NEXT SH.	SH. NO.
									-		L018
				DR. BY DATE	CHK. BY DATE	ENG. DATE					





PF755TR, IB, SCHEMATIC, FR8



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

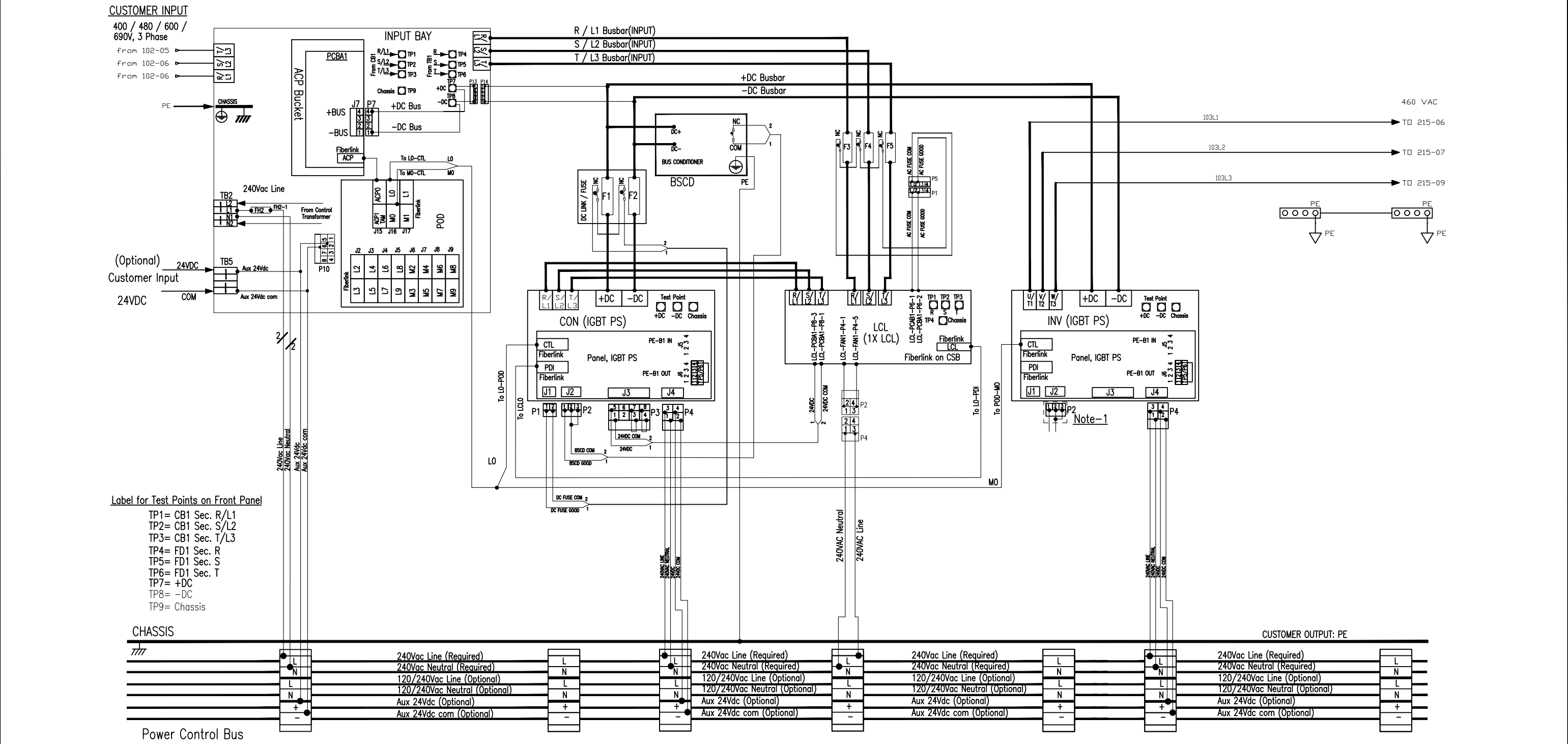
REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO. E102
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY1 DRIVE PANEL
BUL 755TR Lx IGBT, Lc LCL POWER CONVERTERS



Label for Test Points on Front Panel

- TP1= CB1 Sec. R/L1
- TP2= CB1 Sec. S/L2
- TP3= CB1 Sec. T/L3
- TP4= FD1 Sec. R
- TP5= FD1 Sec. S
- TP6= FD1 Sec. T
- TP7= +DC
- TP8= -DC
- TP9= Chassis

Note-1:

If Exit Wire Bay is present, connector P2 of Exit Wire Bay must be connected to J2 of IGBT-PS M0.

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

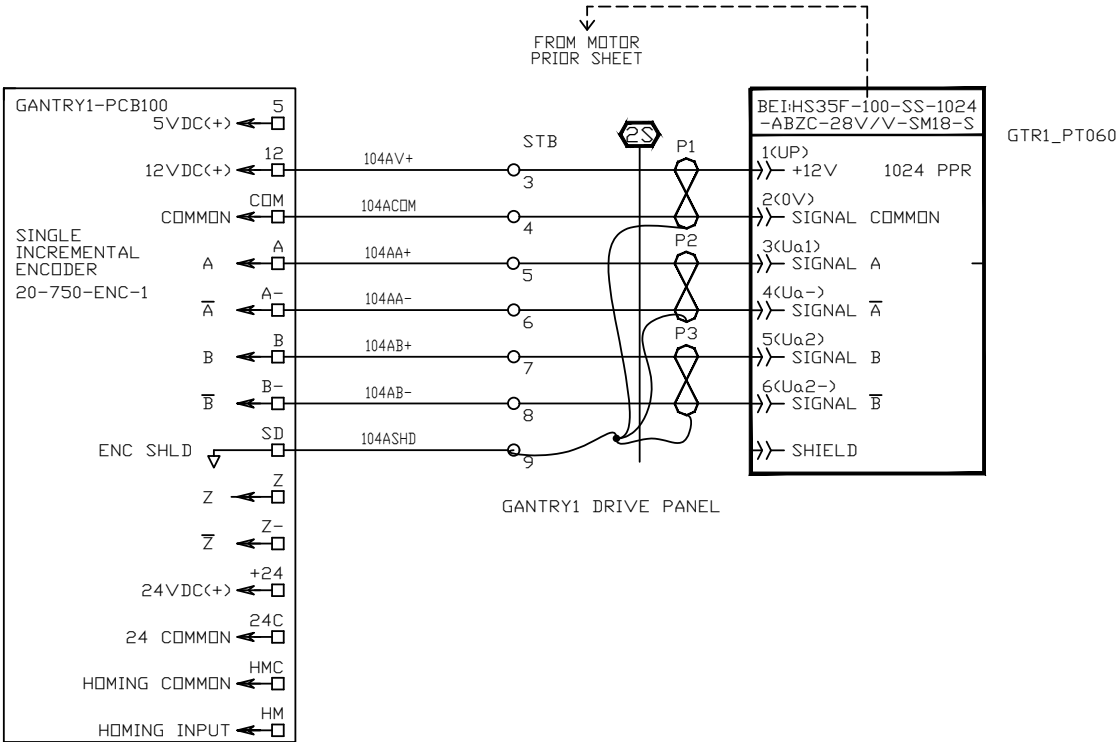
REV.	DATE	BY	ECN/CR. NO.



DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.
					E103

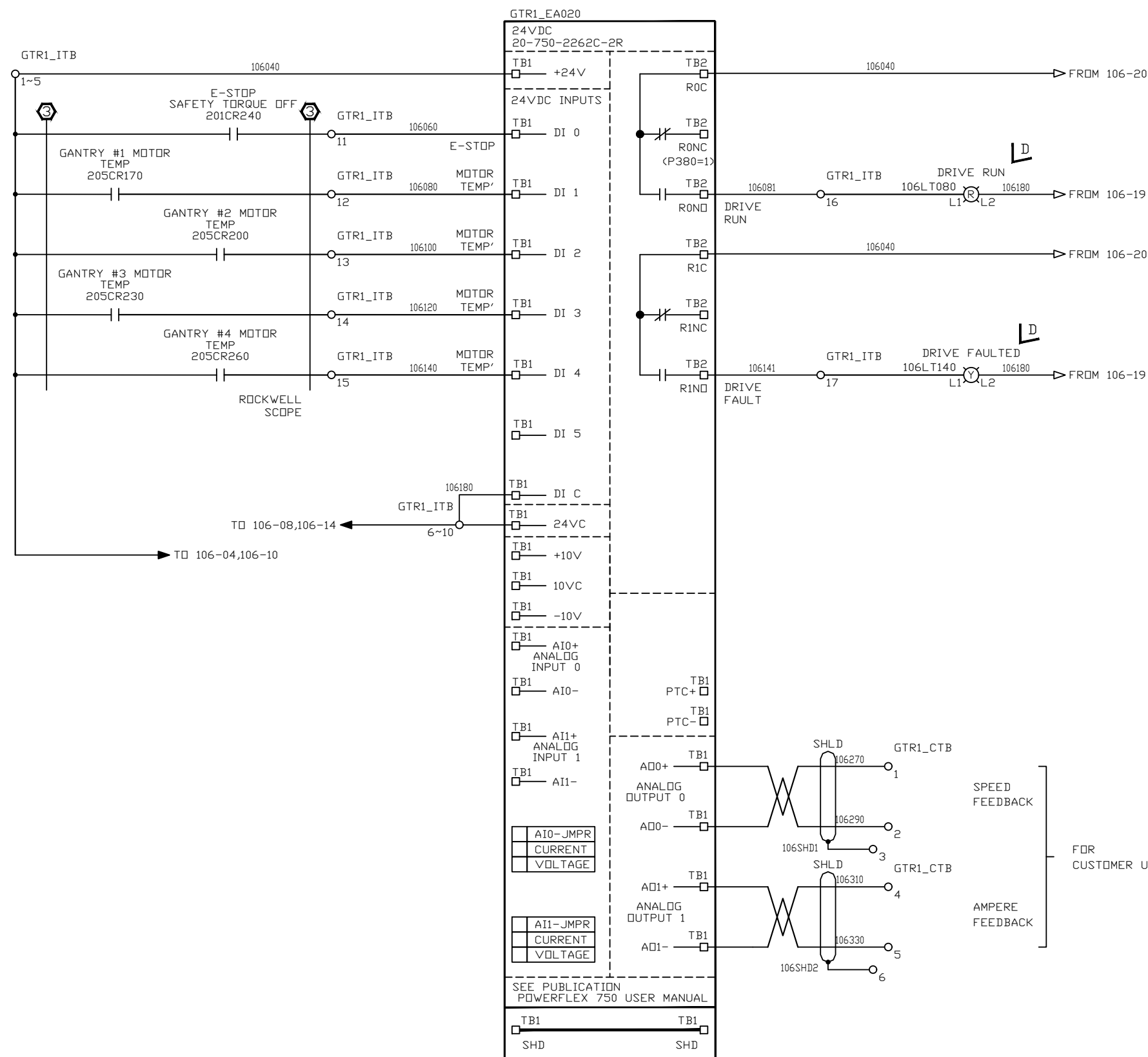
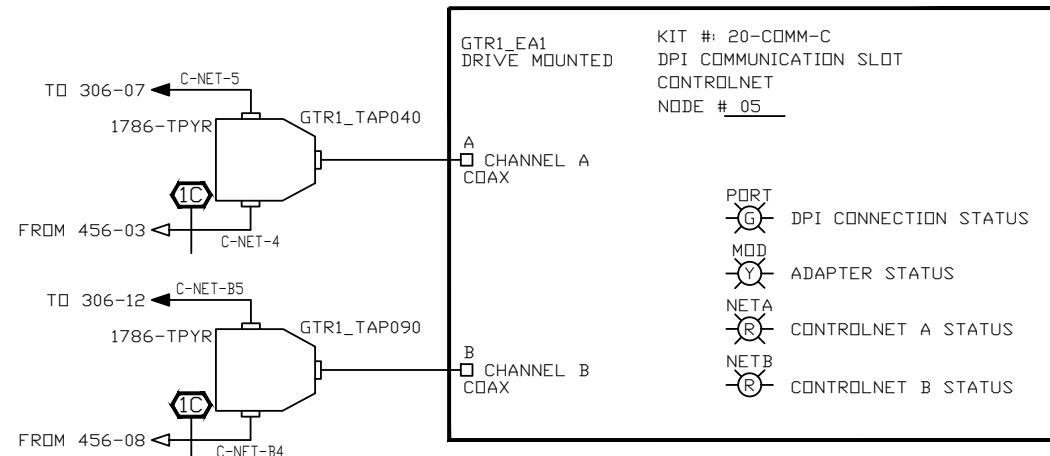
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY1 DRIVE PANEL
BUL 755TR Lx IGBT, 1c LCL POWER CONVERTERS



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		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	E104



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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		AS COMMISSIONED

[illegible]

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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY1 DRIVE PANEL
POWERFLEX 755TR PDD I/O INTERFACE

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	-	NEXT SH.	SH. NO.	E10
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DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

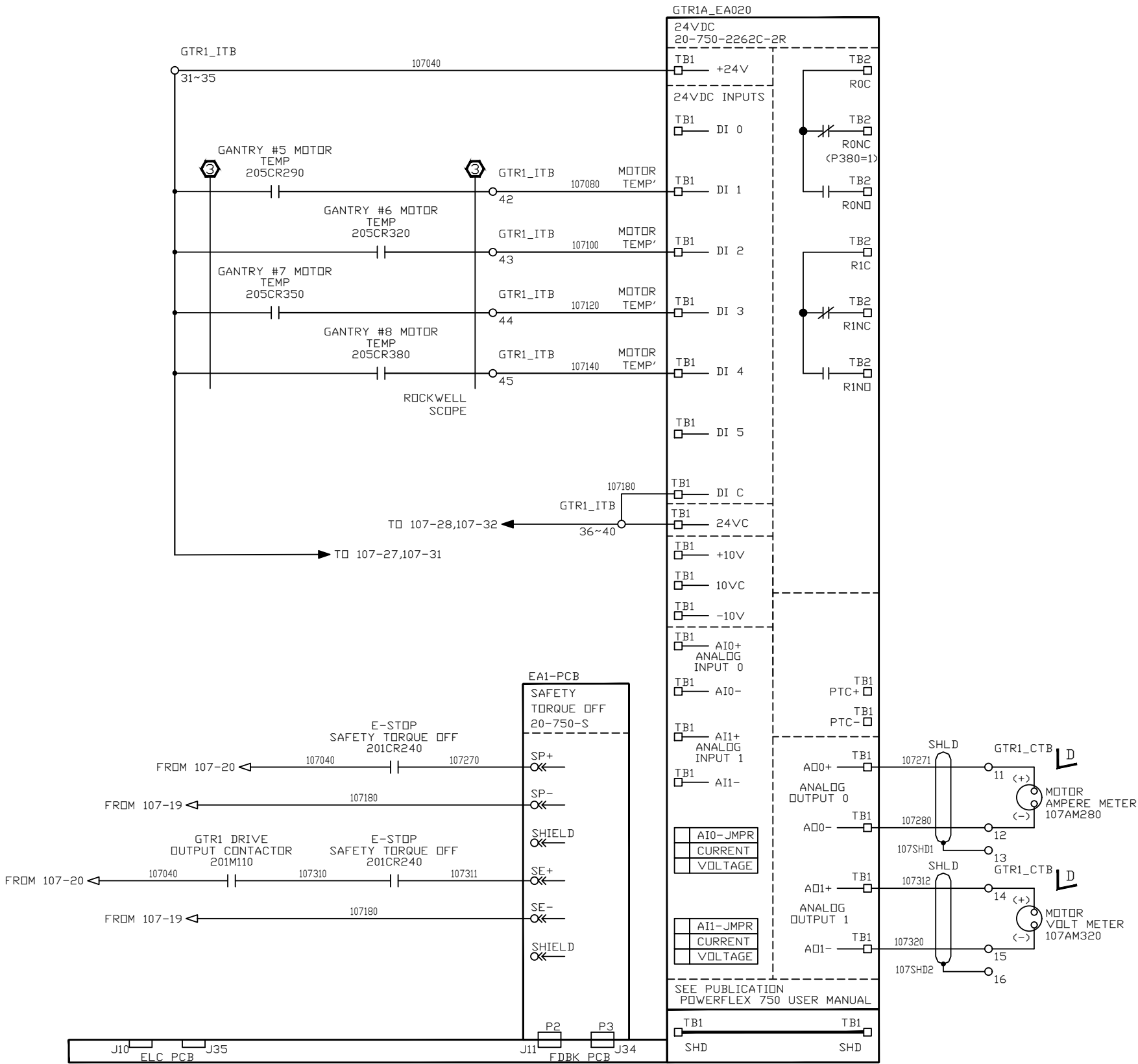
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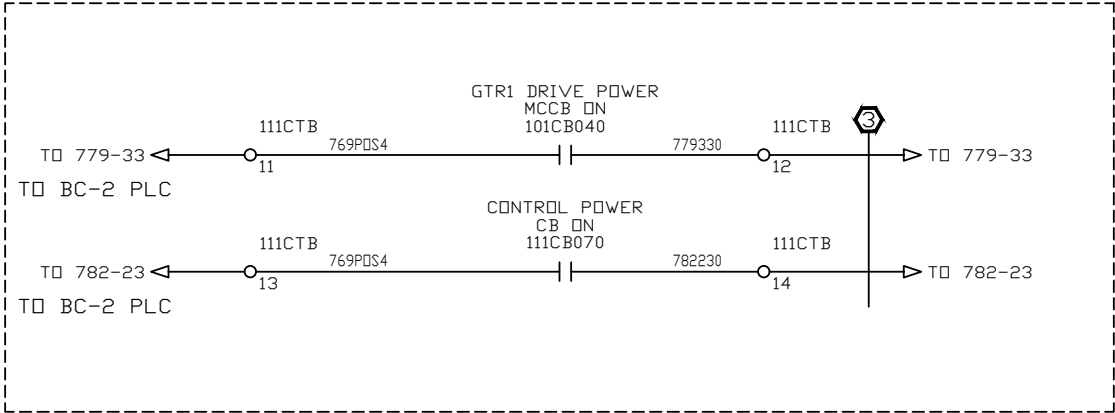
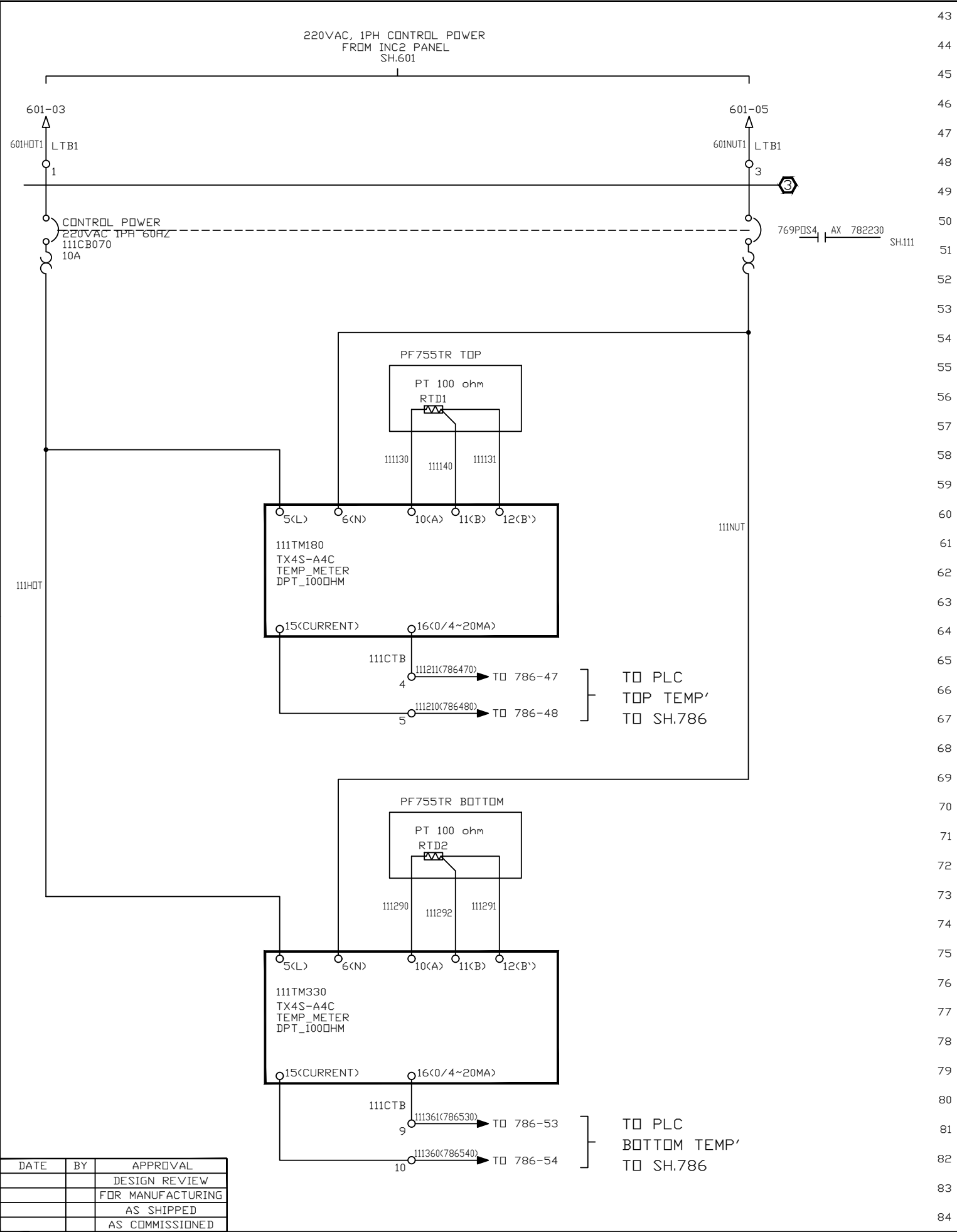
**Rockwell
Automation**

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.
			—		E107

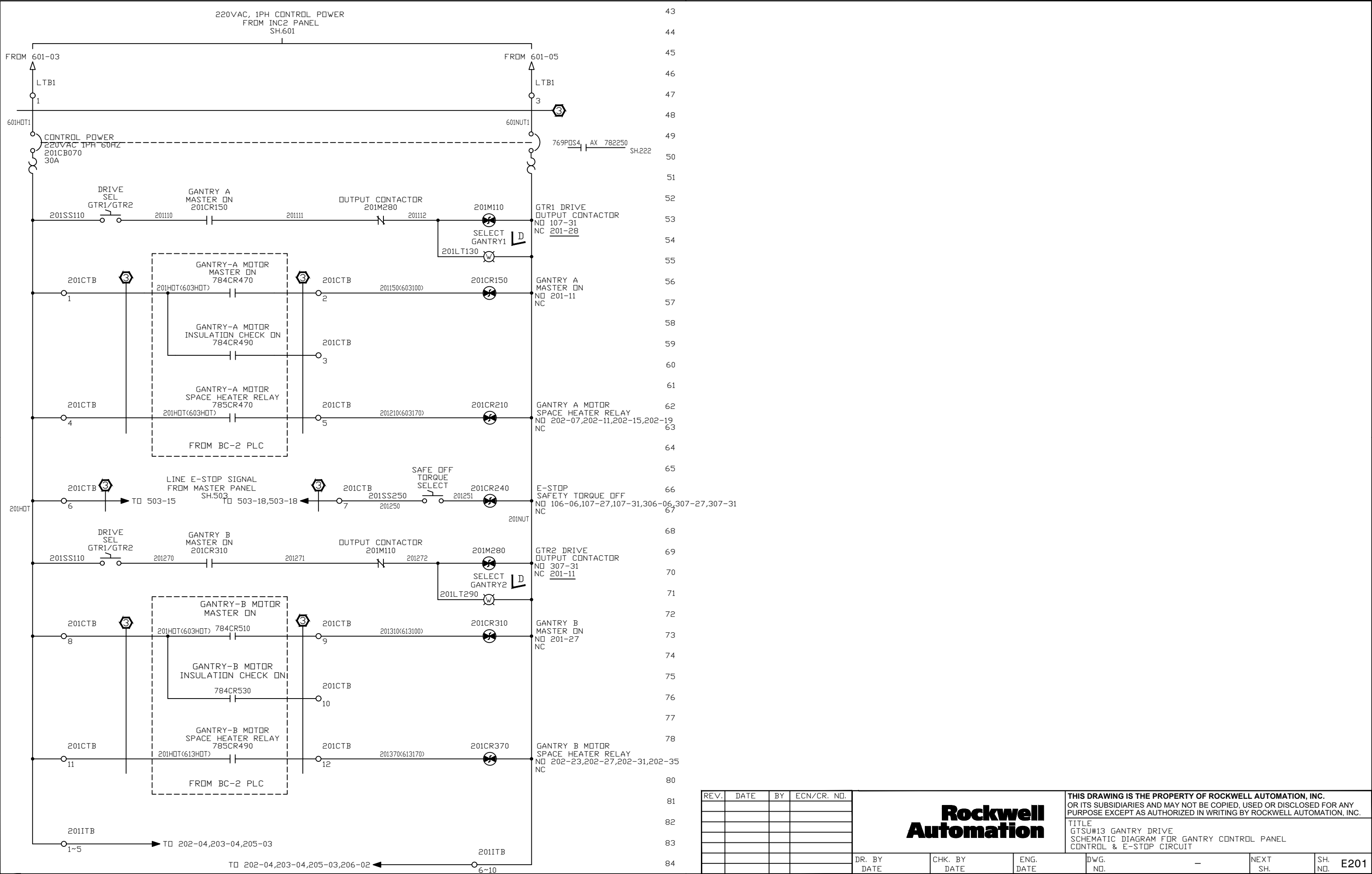
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY1 DRIVE PANEL
POWERFLEX 755TR PDD I/O INTERFACE



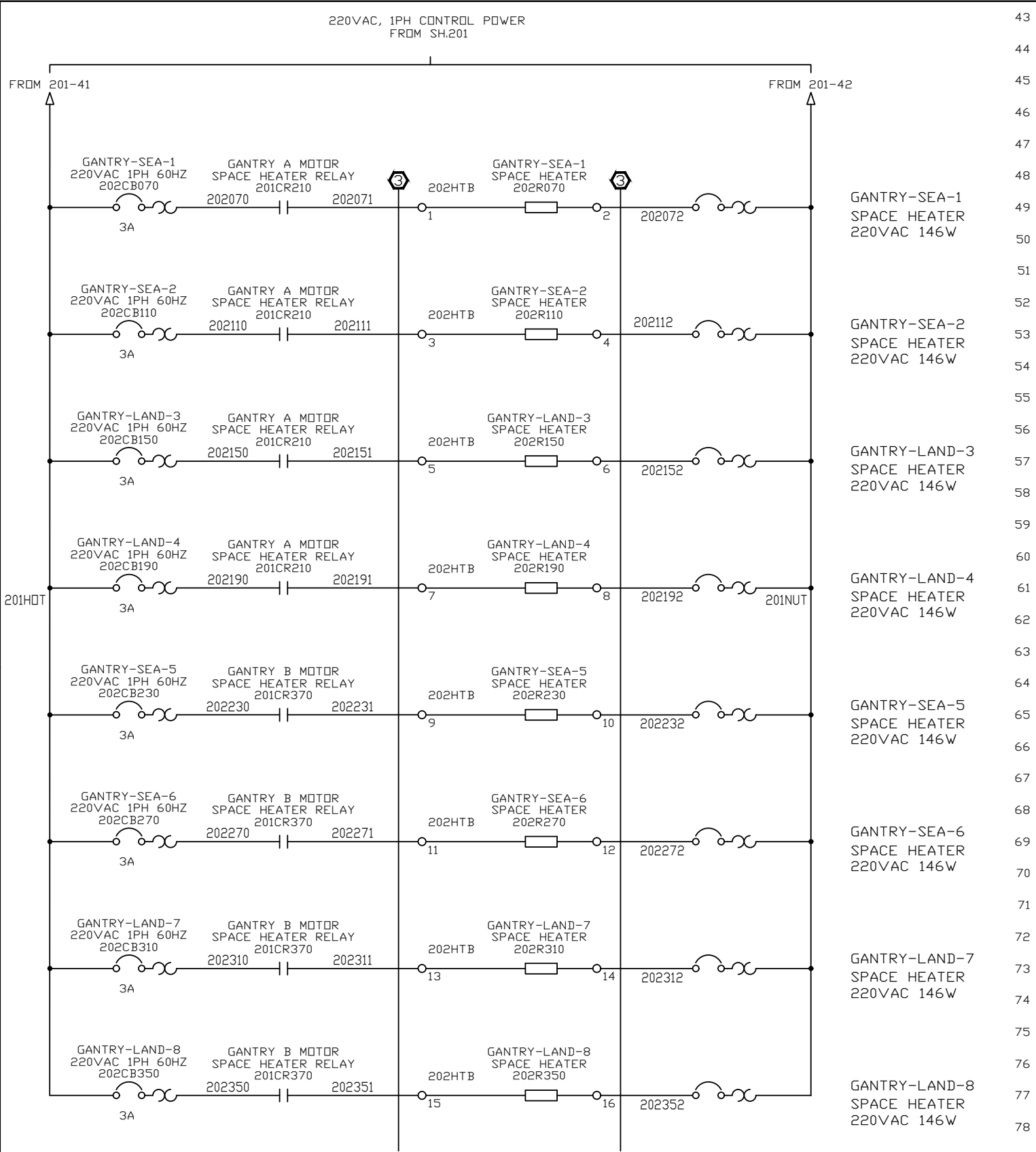


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						TITLE			
						GTSU#13 GANTRY DRIVE			
						SCHEMATIC DIAGRAM FOR GANTRY1 DRIVE PANEL			
						CONTROL CIRCUIT			
DR. BY DATE		CHK. BY DATE		ENG. DATE		DWG. NO.	—		NEXT SH.
									SH. NO. E111



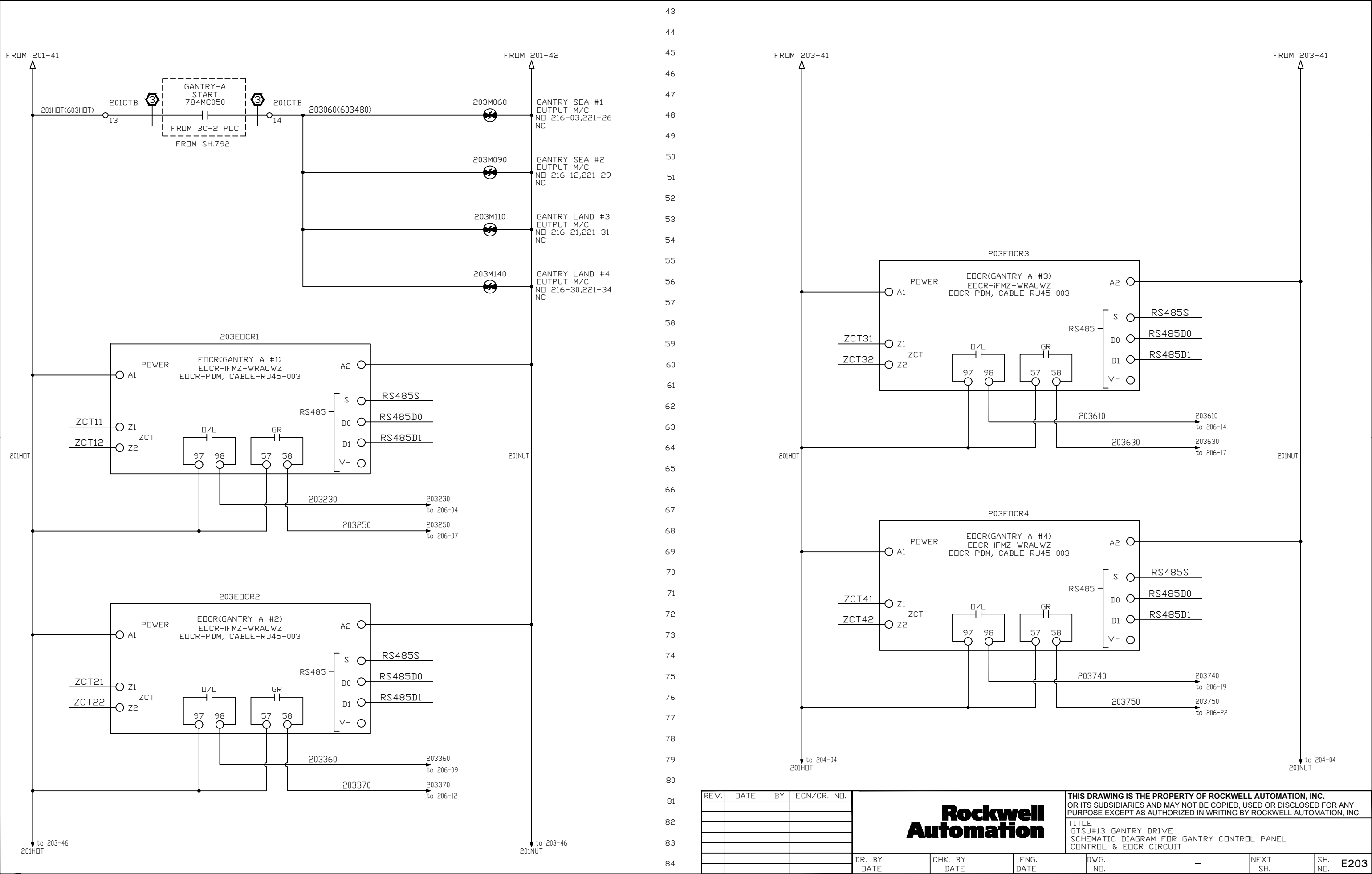
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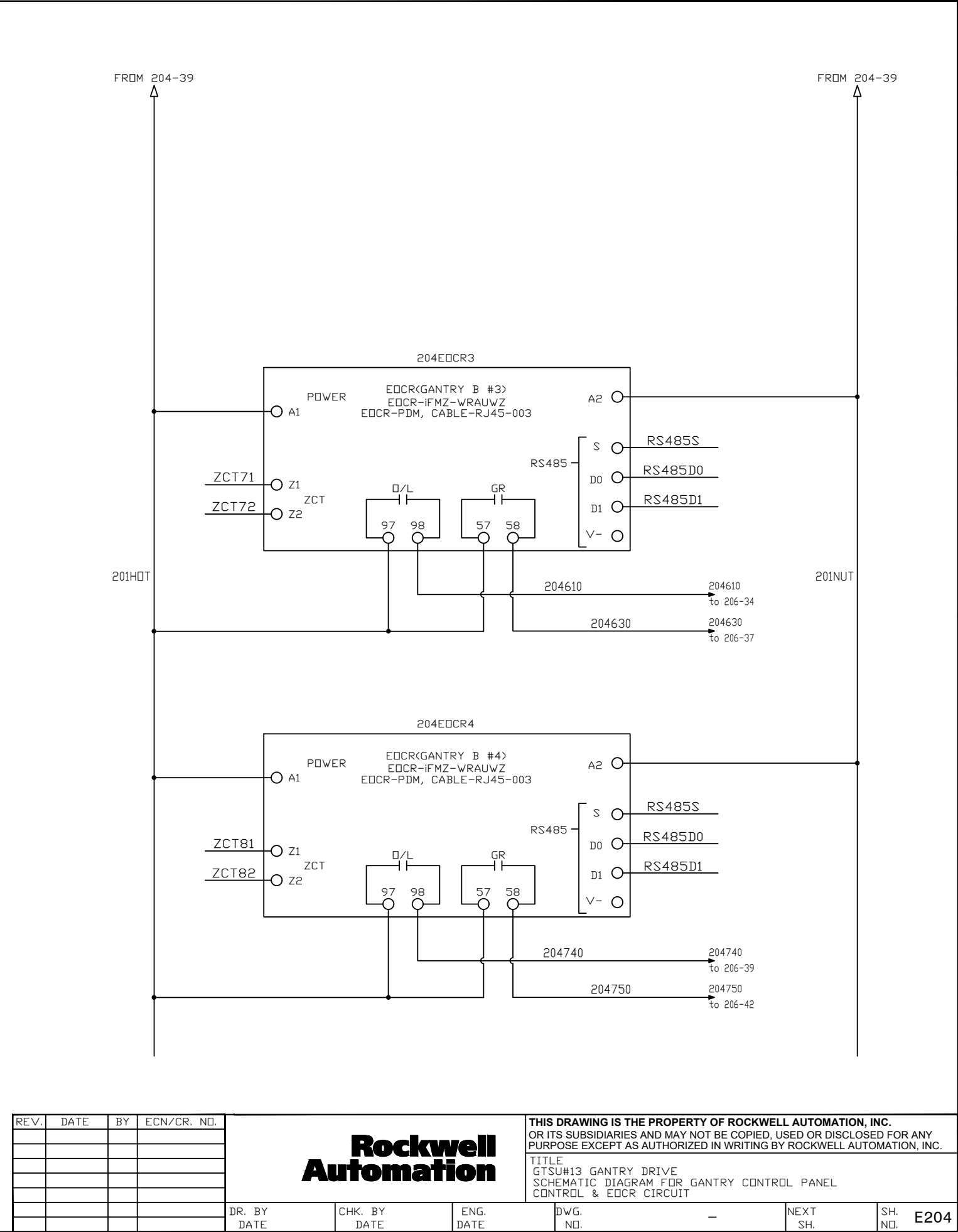
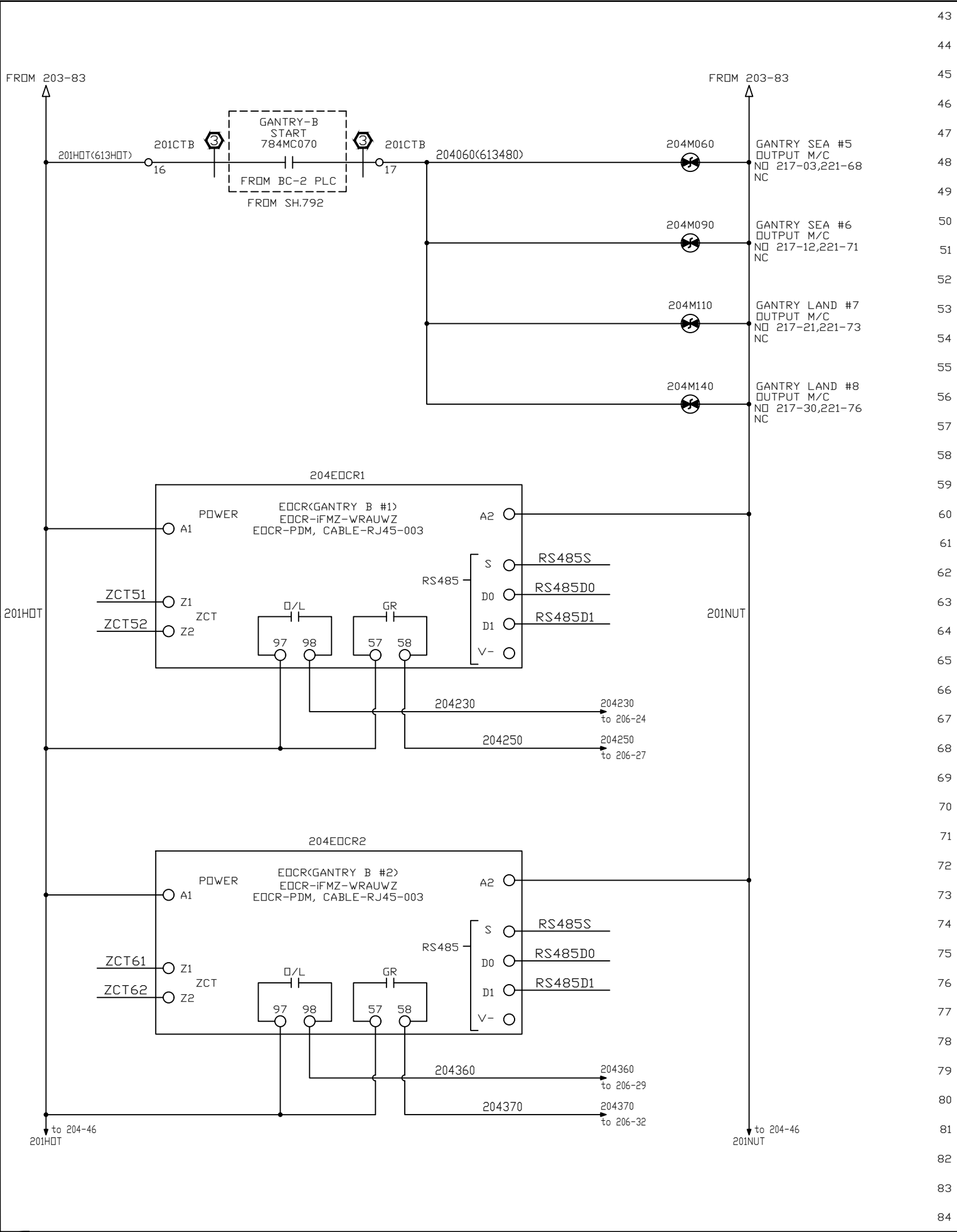
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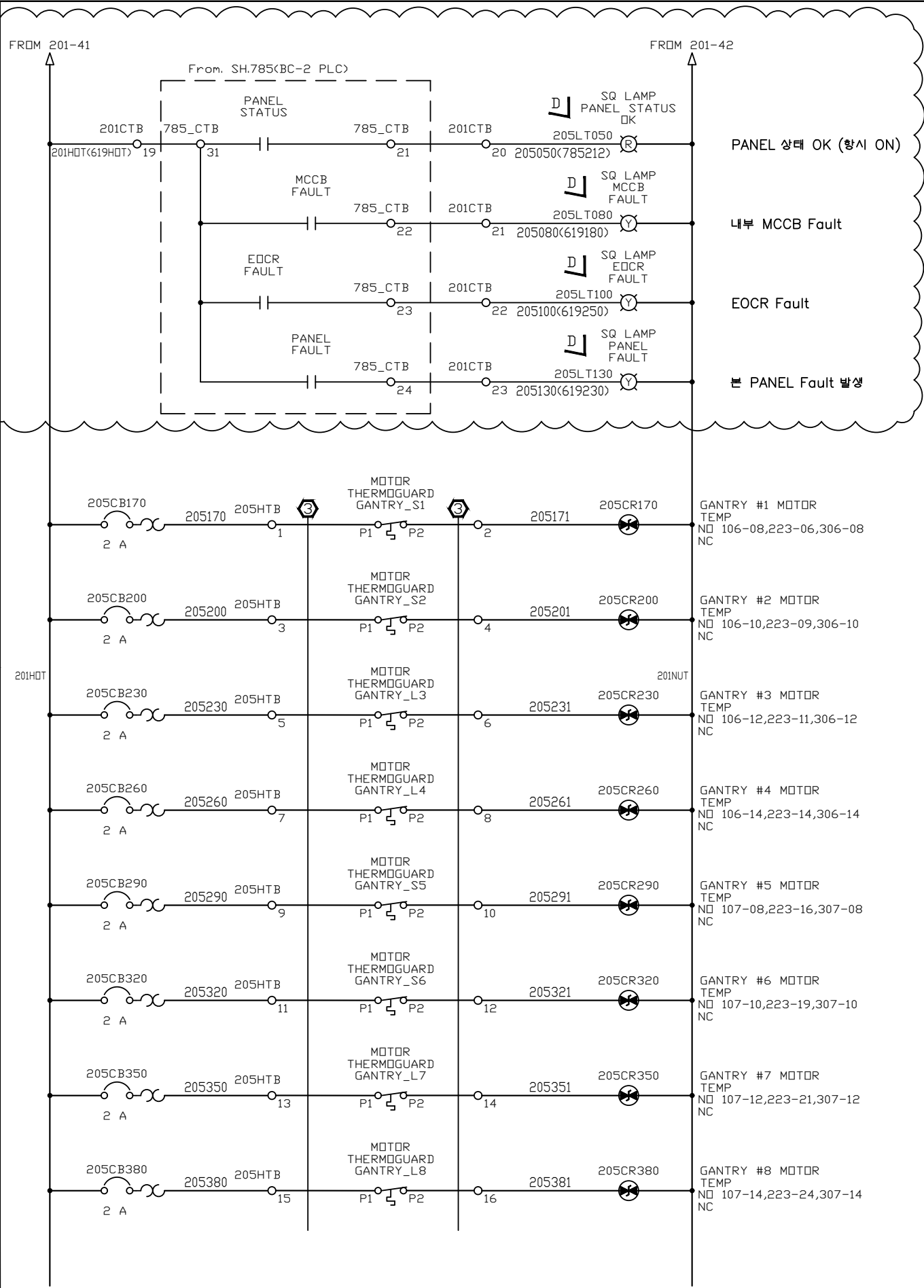


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								TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL SPACE HEATER CONTROL CIRCUIT			
DR. BY DATE		CHK. BY DATE		ENG. DATE		DWG. NO.		NEXT SH.		SH. NO. E202	



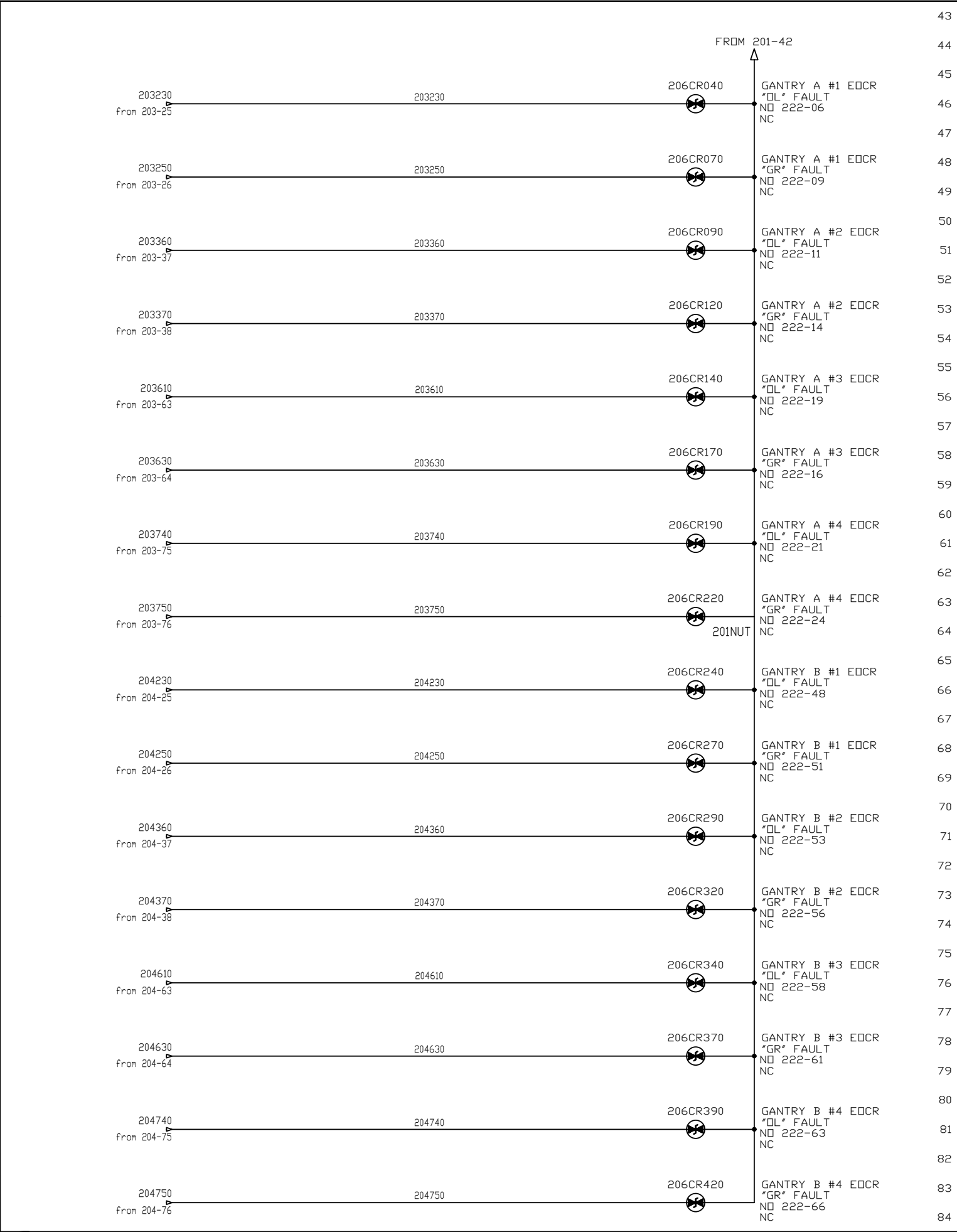




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			TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL CONTROL & MOTOR TH CIRCUIT			
DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.	E205

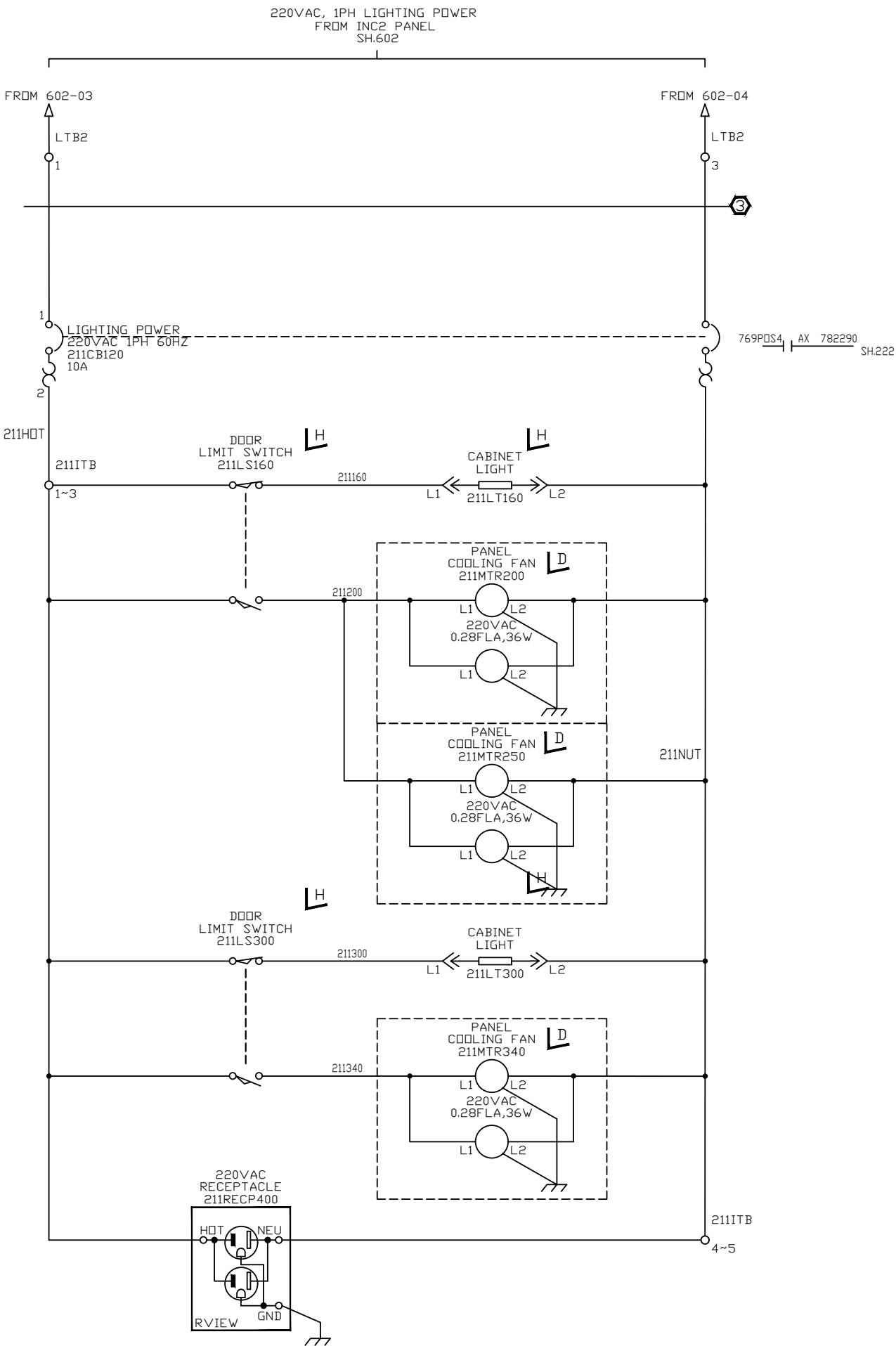
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								TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL CONTROL & EDCR CIRCUIT			
DR. BY DATE		CHK. BY DATE		ENG. DATE		DWG. NO.		NEXT SH.		SH. NO.	
						—				E206	

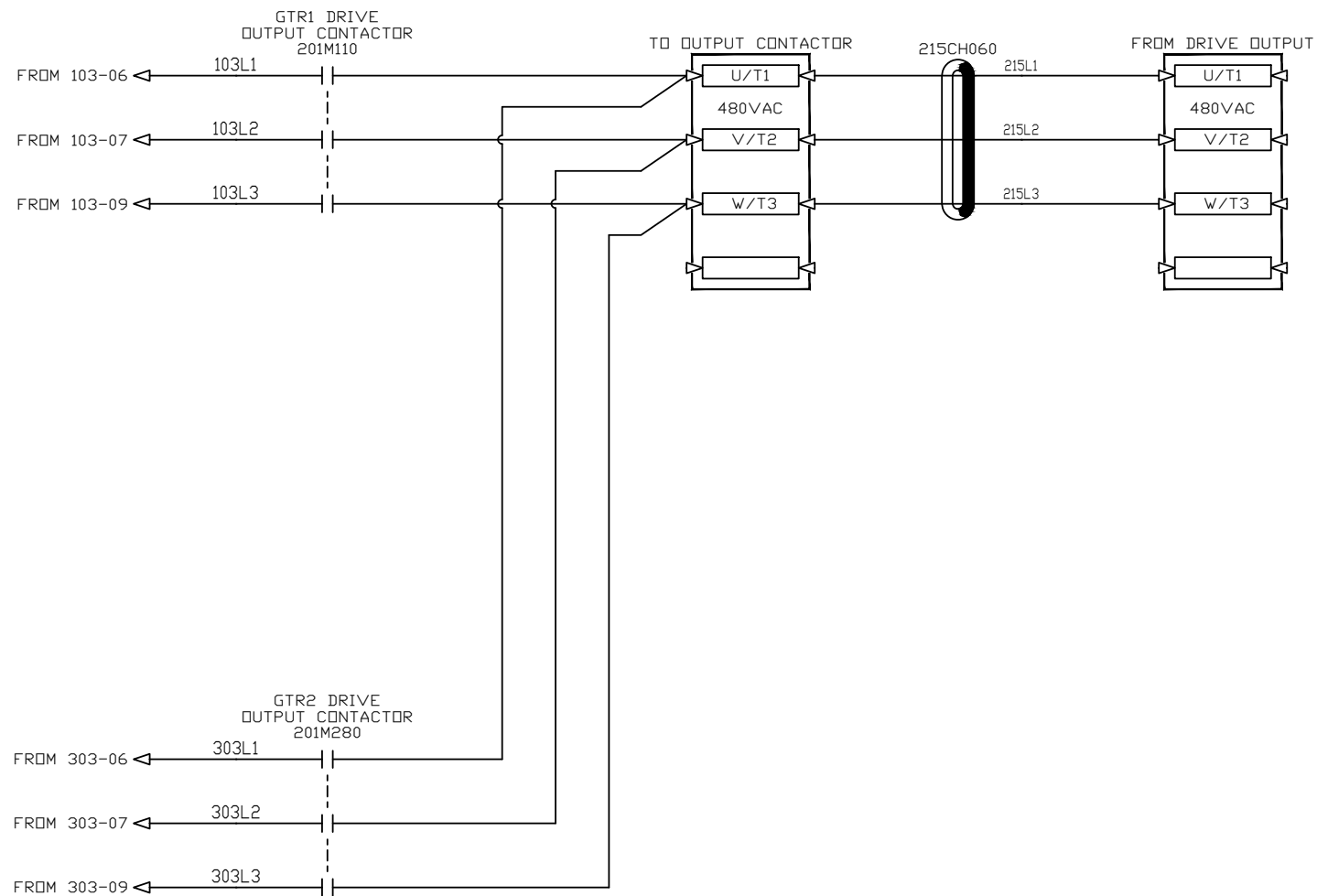
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REV.	DATE	BY	ECN/CR. NO.

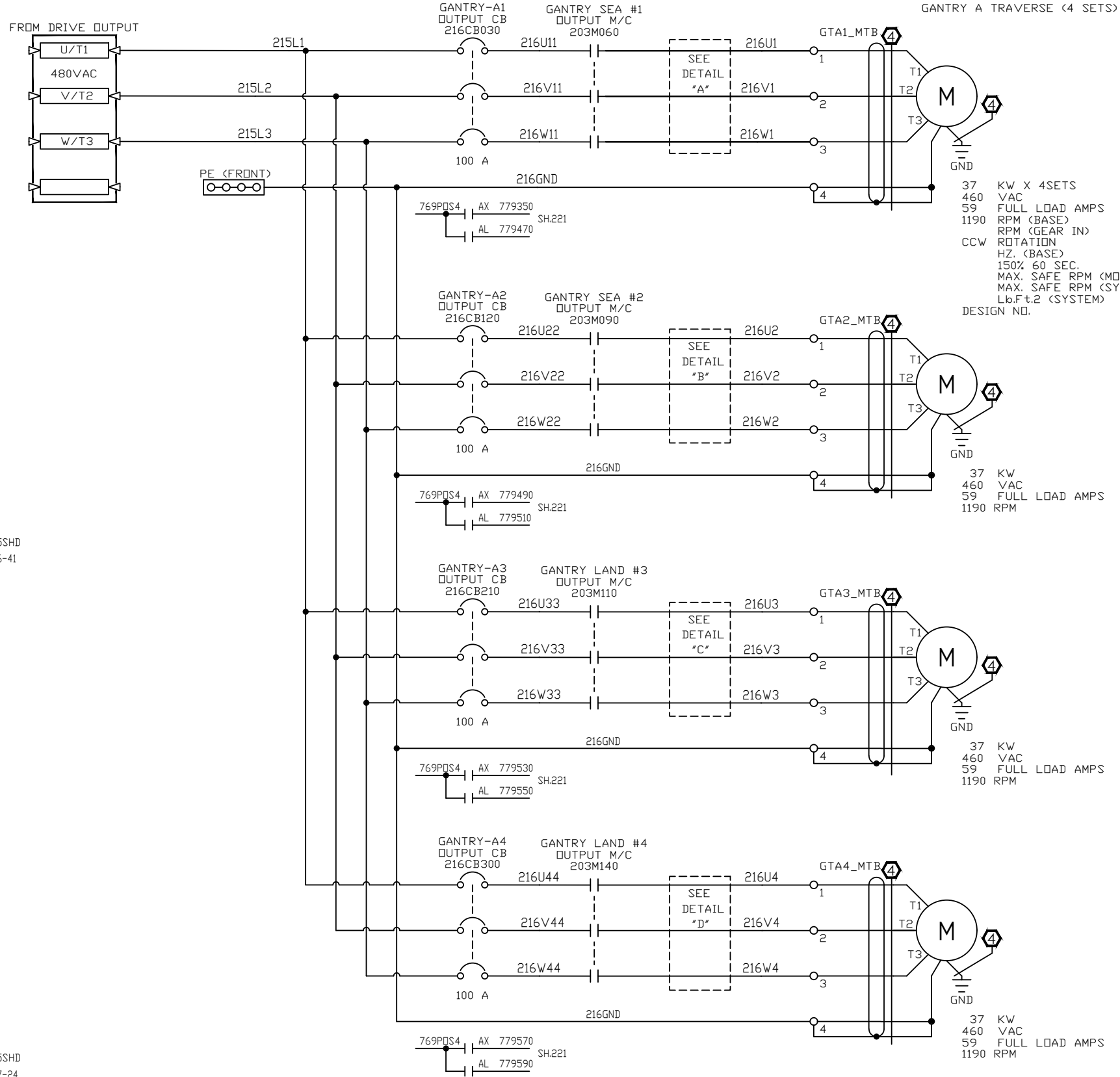
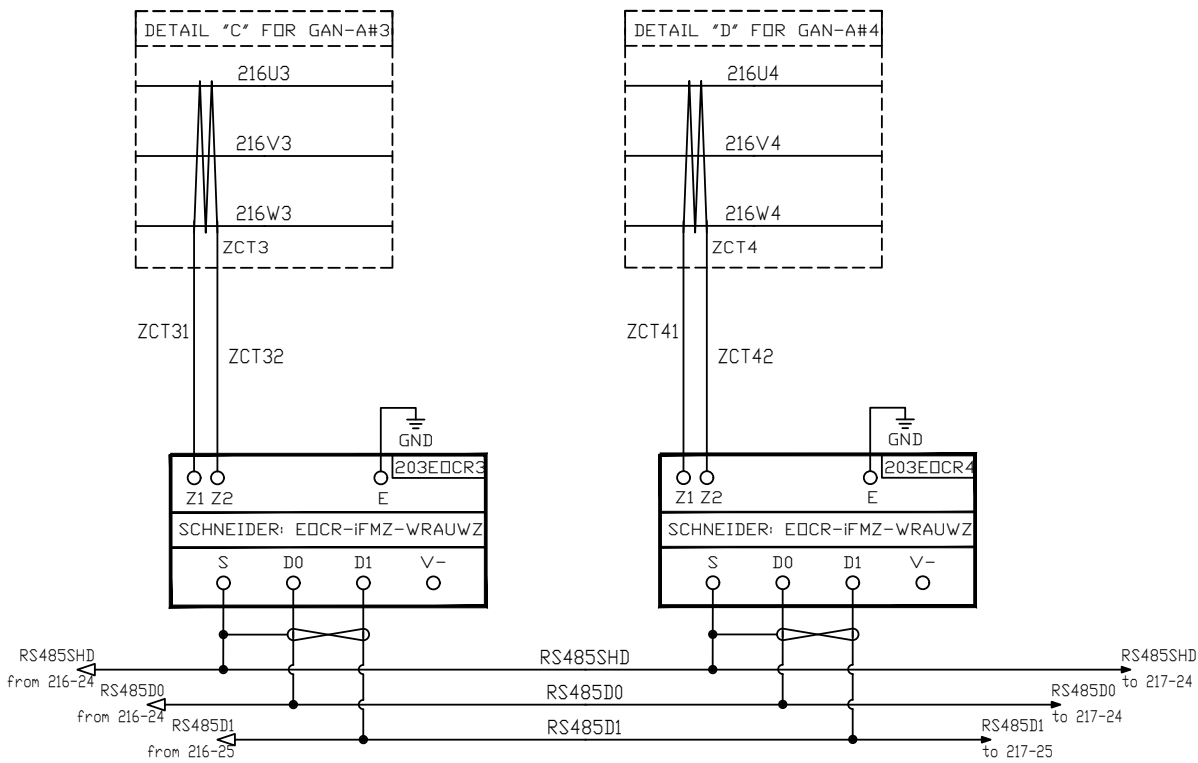
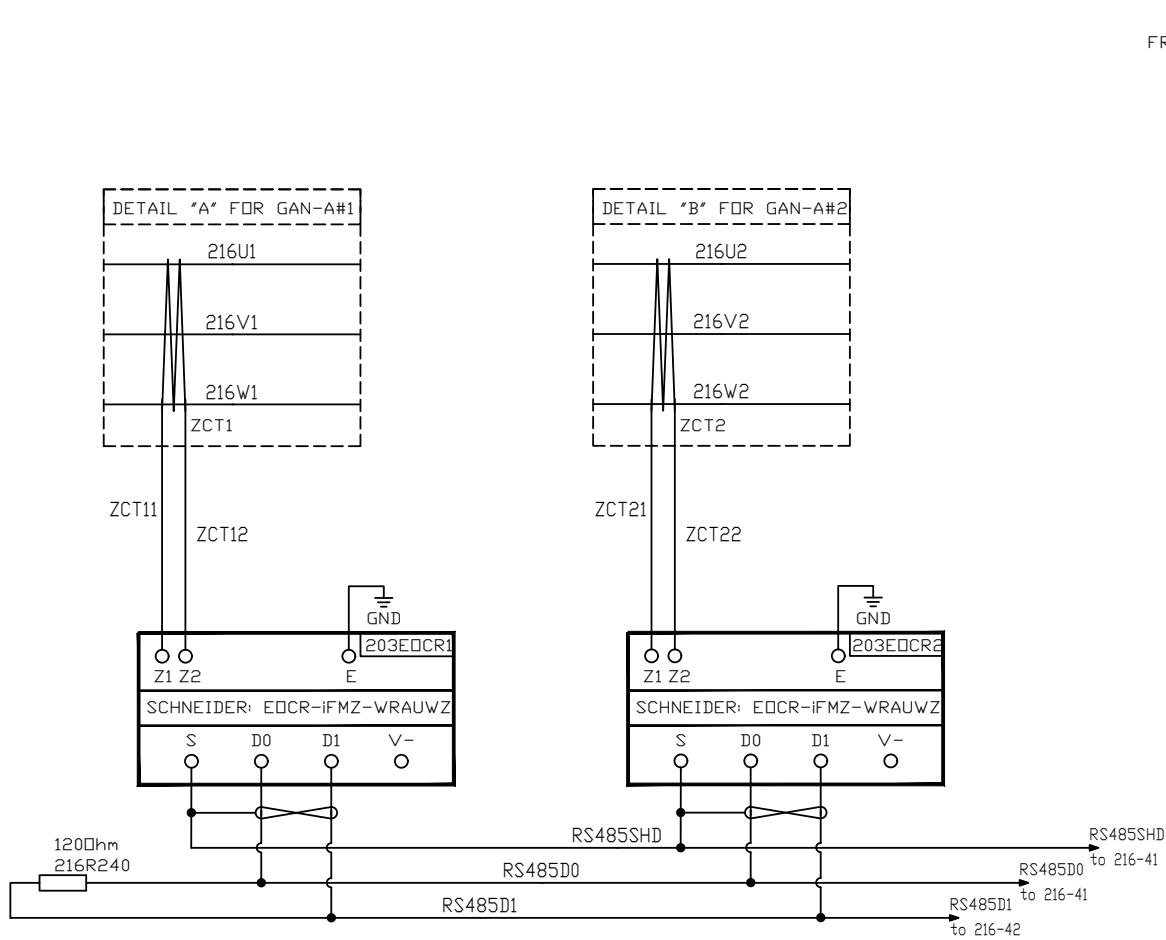
Rockwell Automation	
DR. BY DATE	CHK. BY DATE

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TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL 220VAC LIGHTING & FAN POWER			
DWG. NO.	—	NEXT SH.	SH. NO. E211



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		AS COMMISSIONED

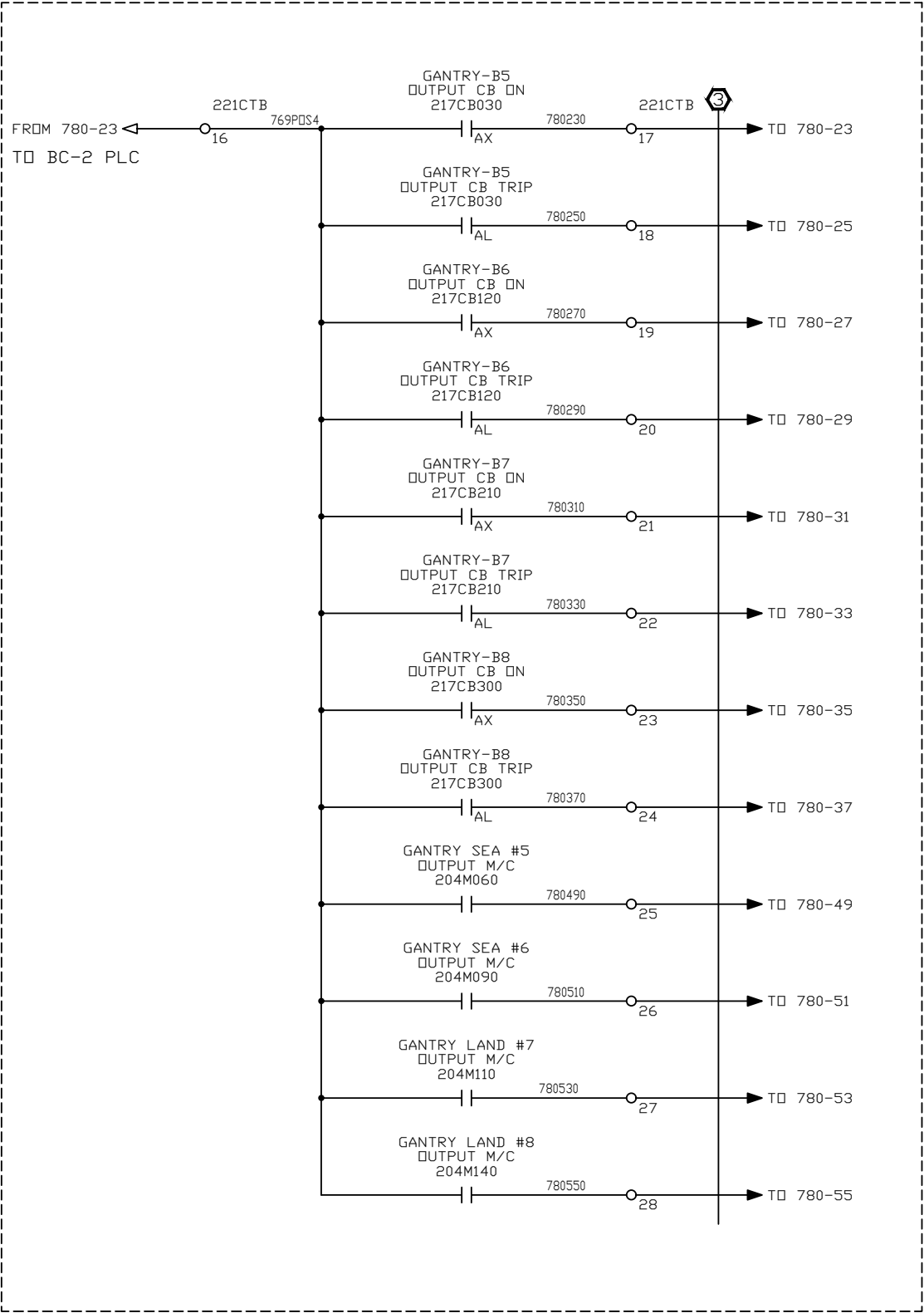
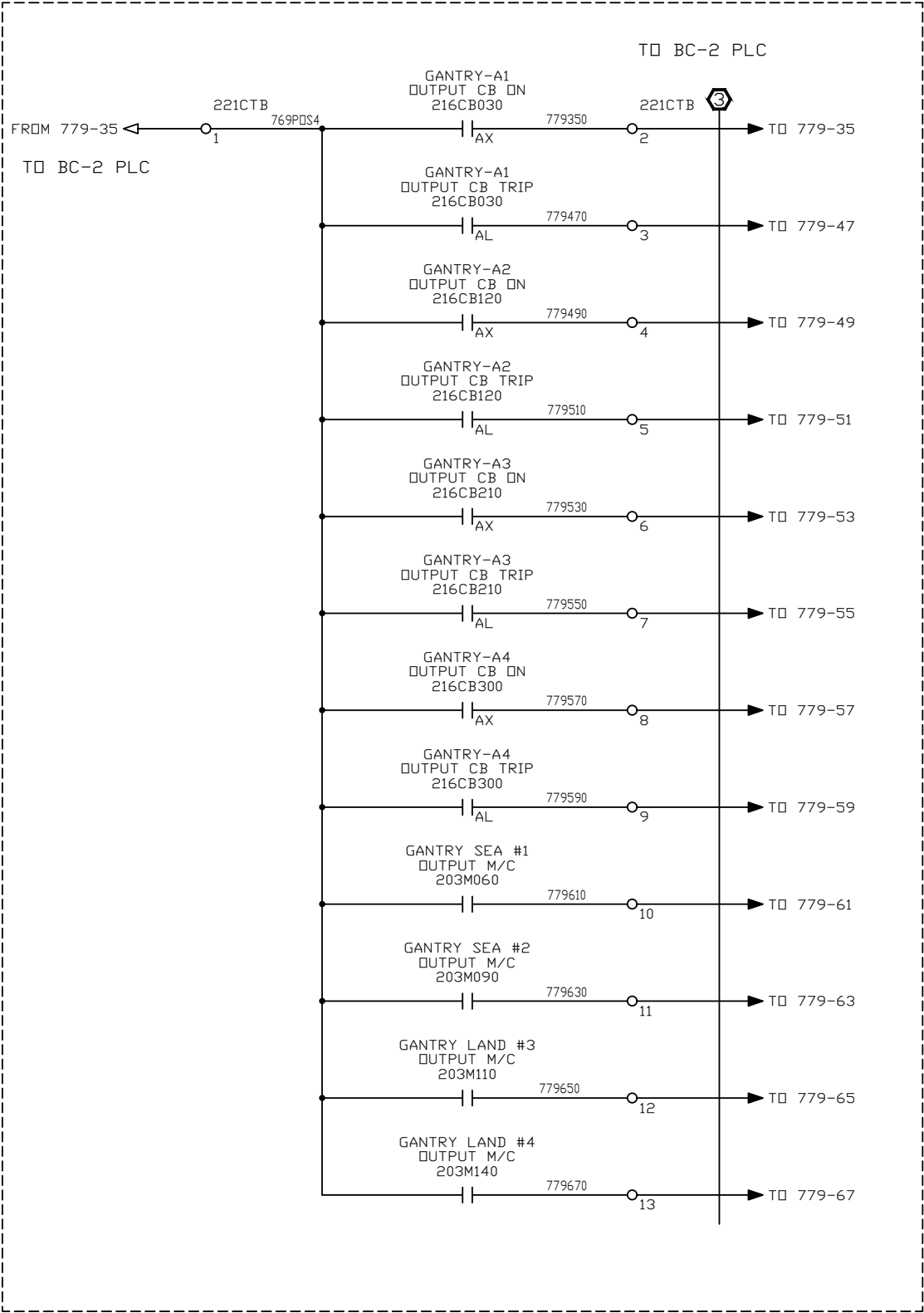
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							TITLE			
							GTSU#13 GANTRY DRIVE			
							SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL			
							POWER INTERFACE			
				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO. E215



DATE	BY	APPROVAL
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		AS SHIPPED
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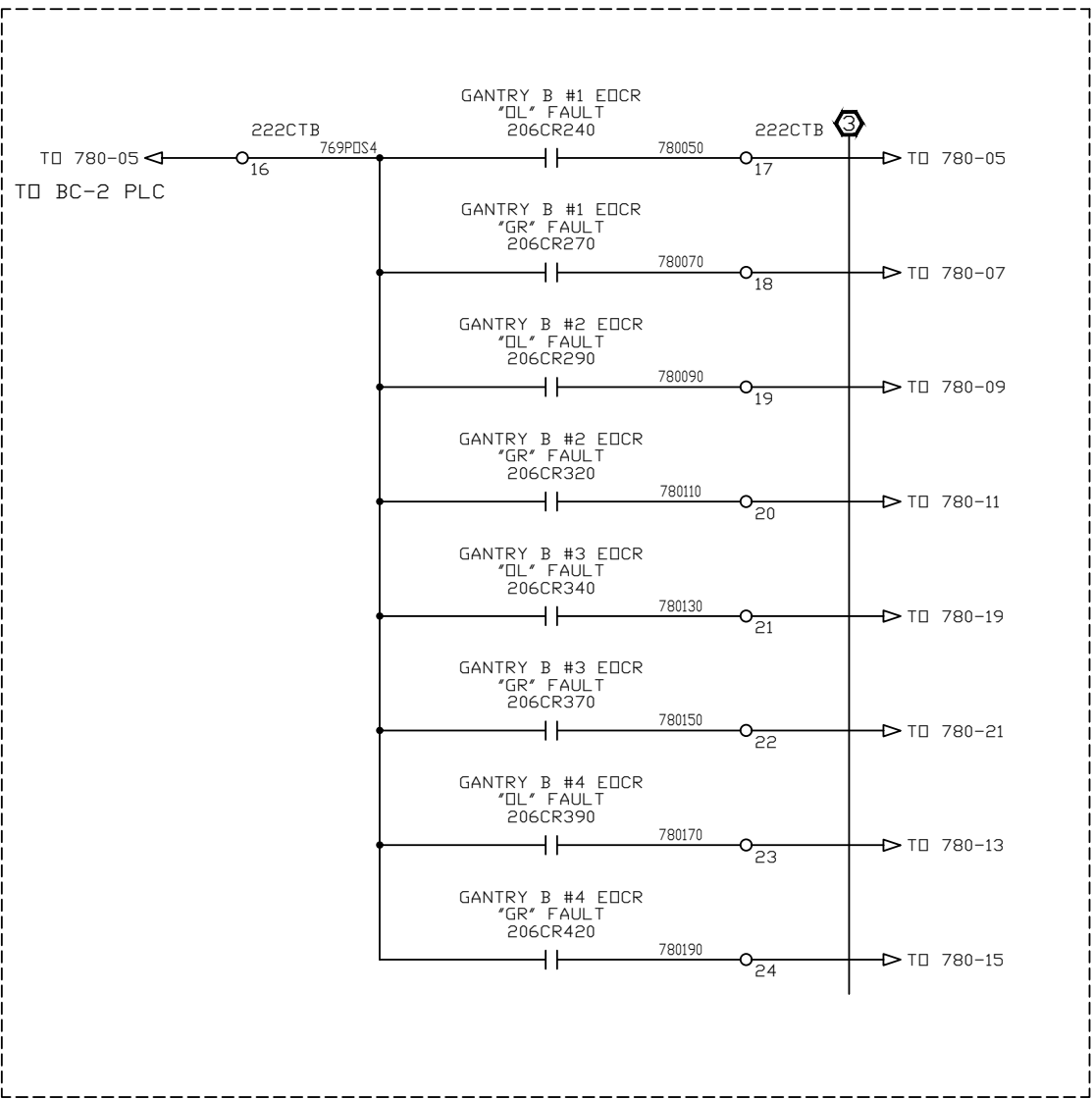
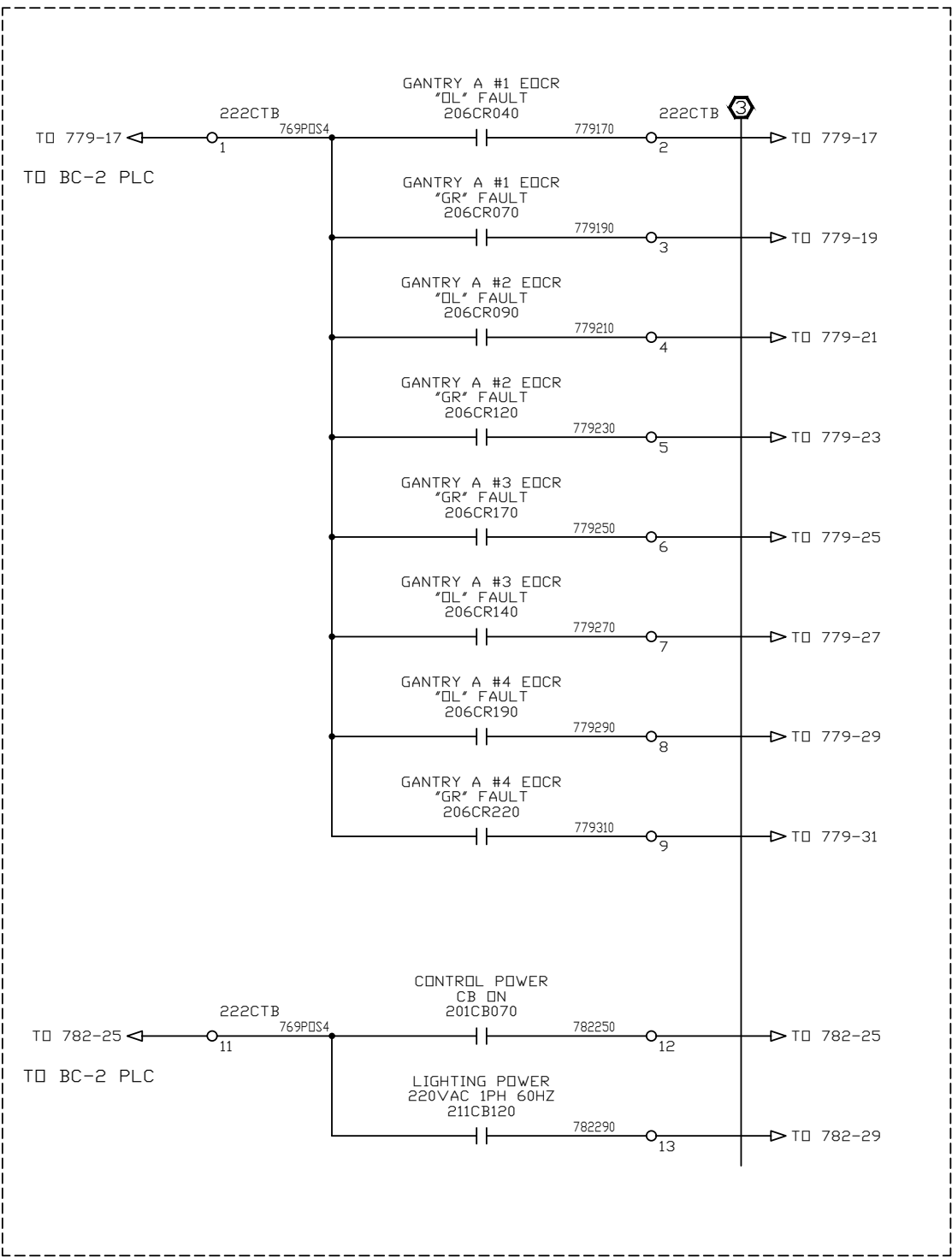
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			TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL POWER INTERFACE			
DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.	E216



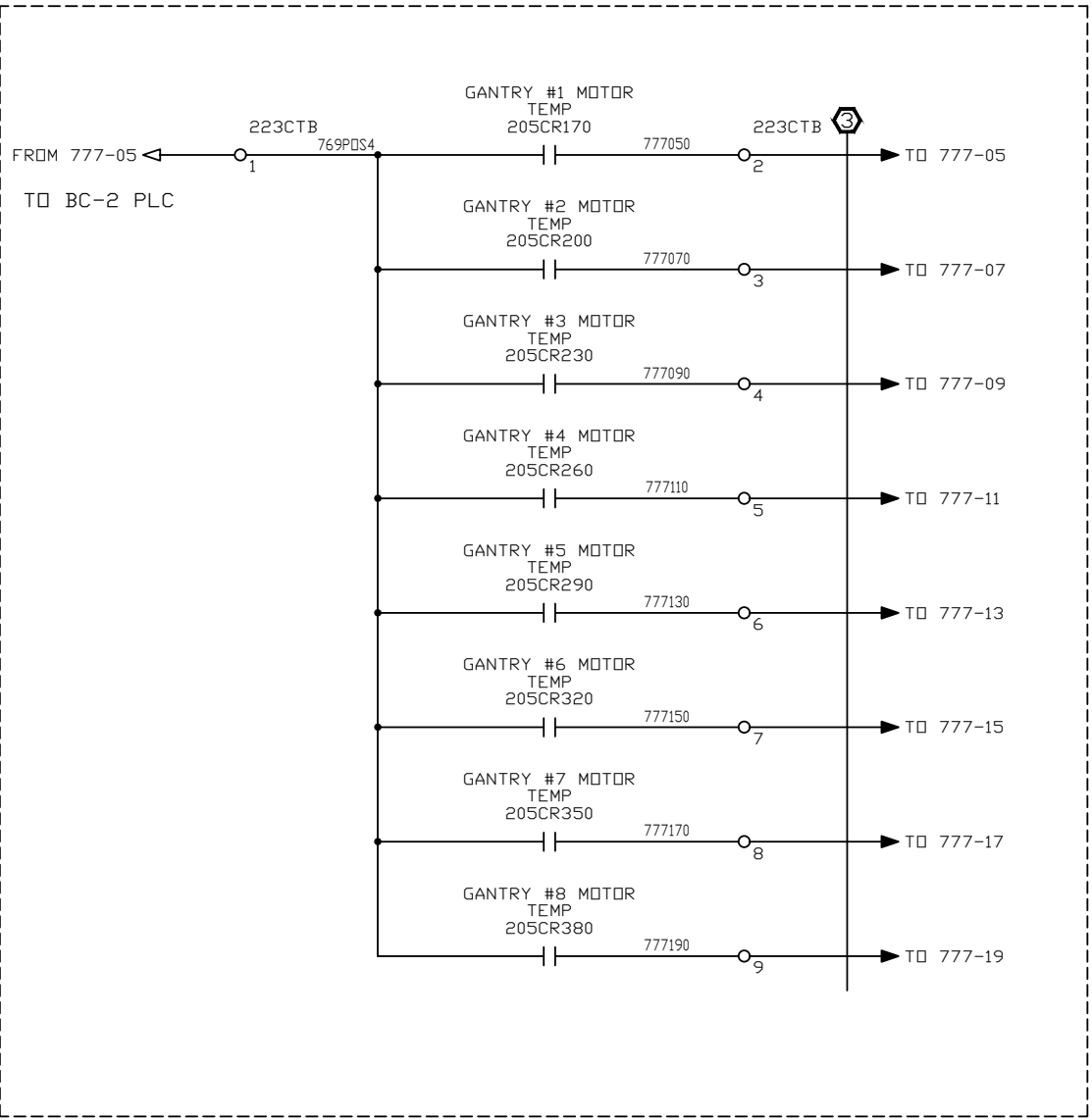
DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
		AS COMMISSIONED

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				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	E221



DATE	BY	APPROVAL
		DESIGN REVIEW
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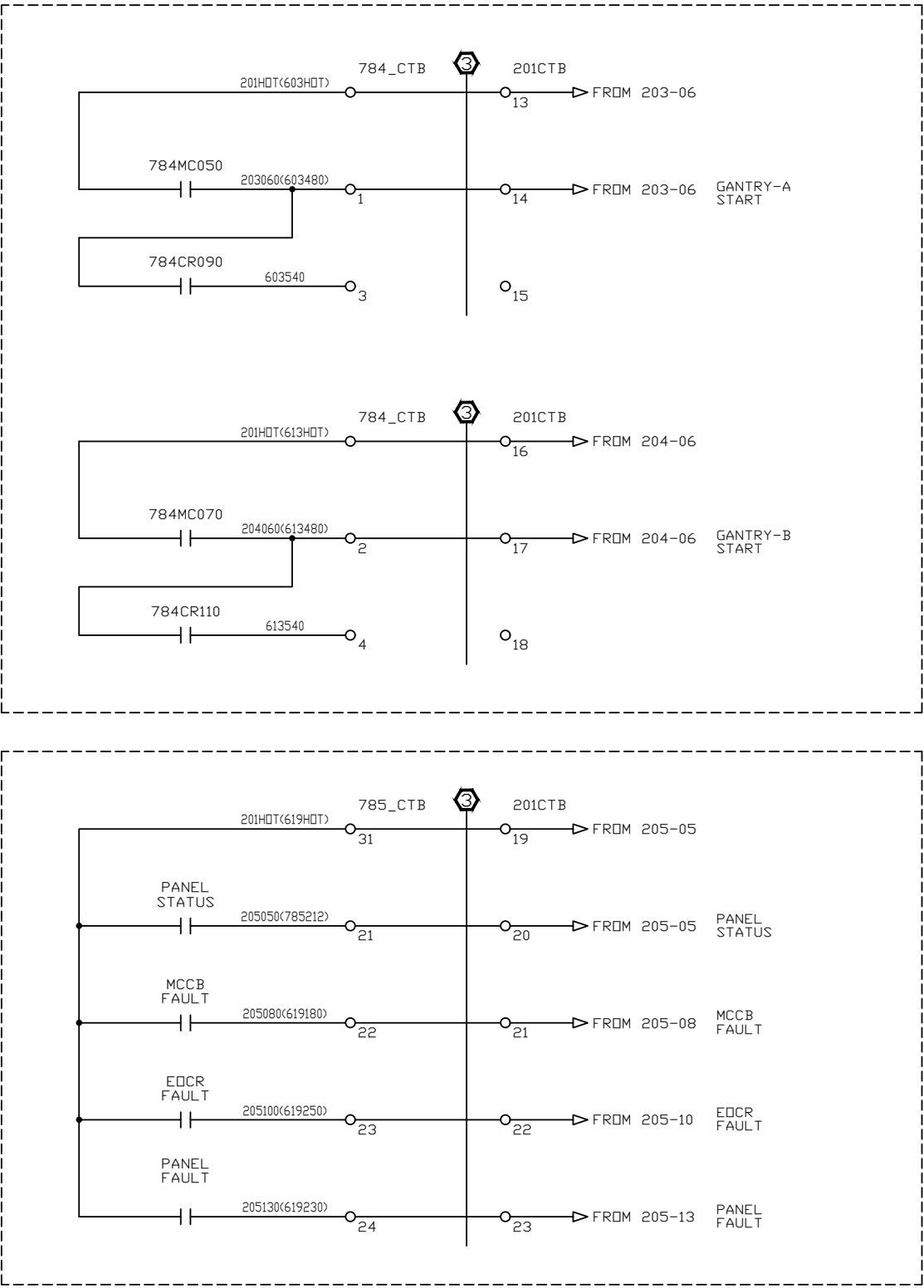
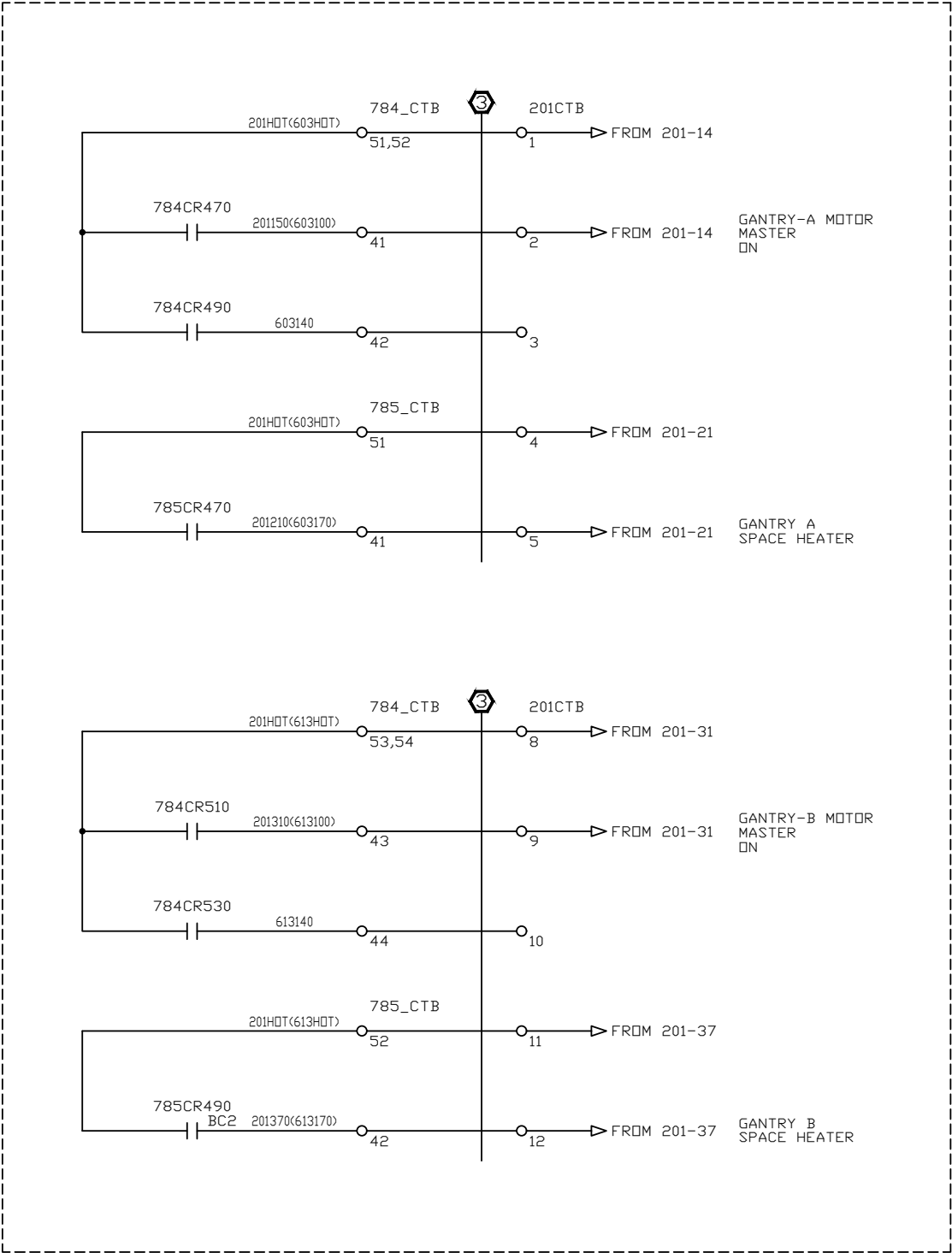
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				DR. BY	CHK. BY	ENG.	DWG.			NEXT	SH.
				DATE	DATE	DATE	NO.	—		SH.	NO.
											E222



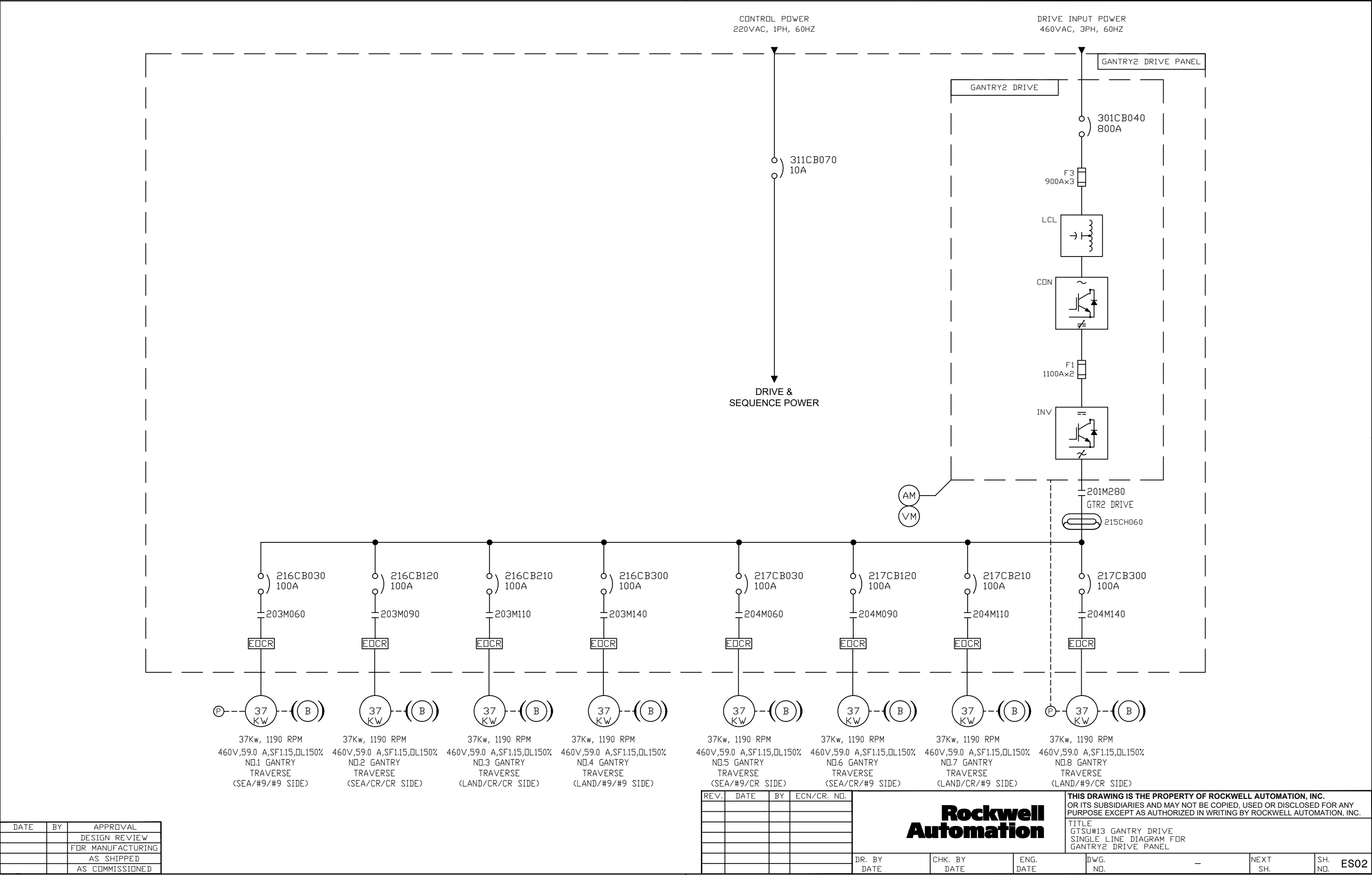
DATE	BY	APPROVAL
		DESIGN REVIEW
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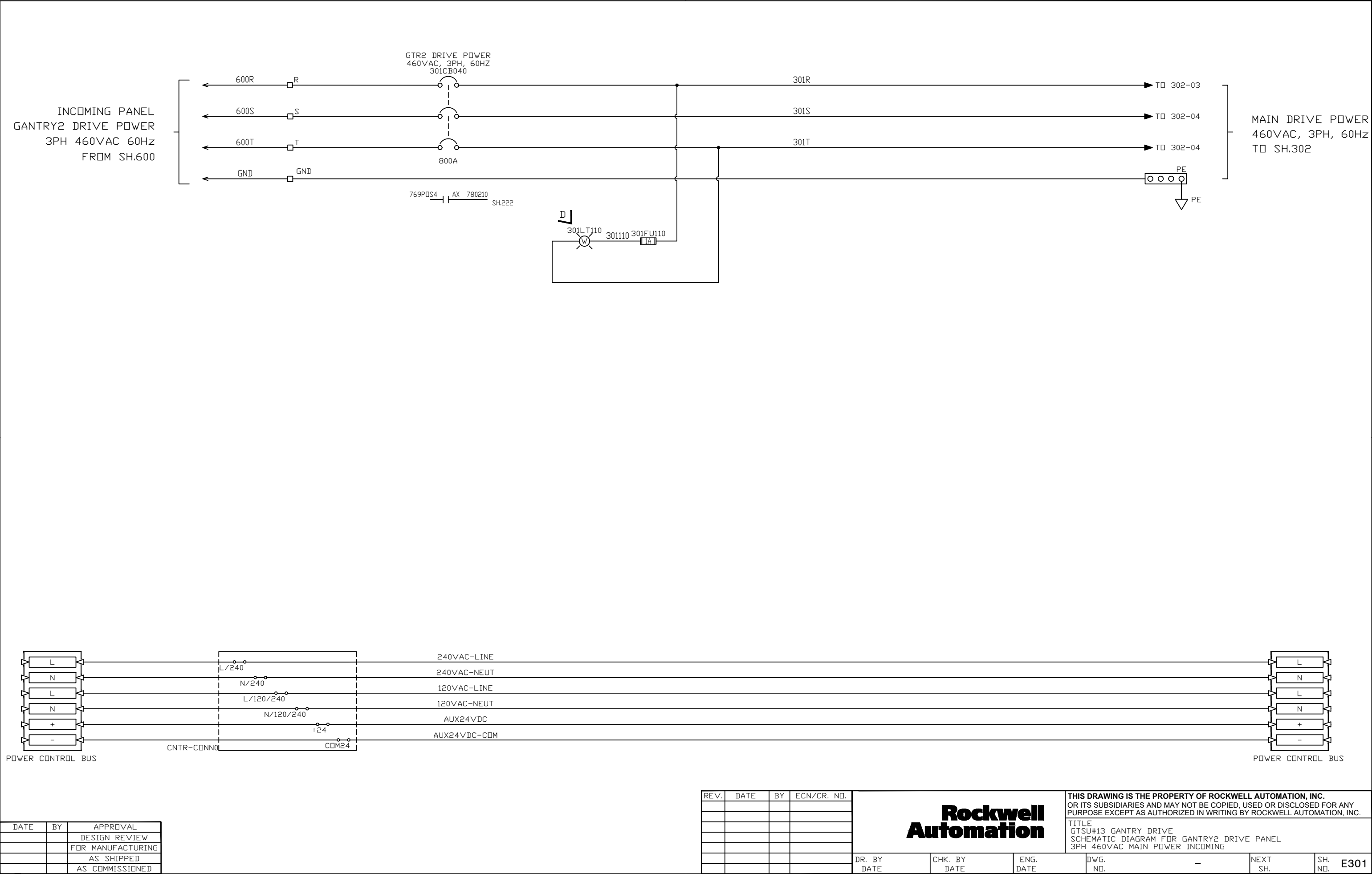
REV.	DATE	BY	ECN/CR. NO.	Rockwell Automation				THIS DRAWING IS THE PROPERTY OF ROCKWELL AUTOMATION, INC. OR ITS SUBSIDIARIES AND MAY NOT BE COPIED, USED OR DISCLOSED FOR ANY PURPOSE EXCEPT AS AUTHORIZED IN WRITING BY ROCKWELL AUTOMATION, INC.			
								TITLE			
								GTSU#13 GANTRY DRIVE			
								SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL			
								PLC INTERFACE_MOTOR TH SIGNAL			
				DR. BY	CHK. BY	ENG.	DWG.	NEXT	SH.	E223	
				DATE	DATE	DATE	NO.	SH.			

DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
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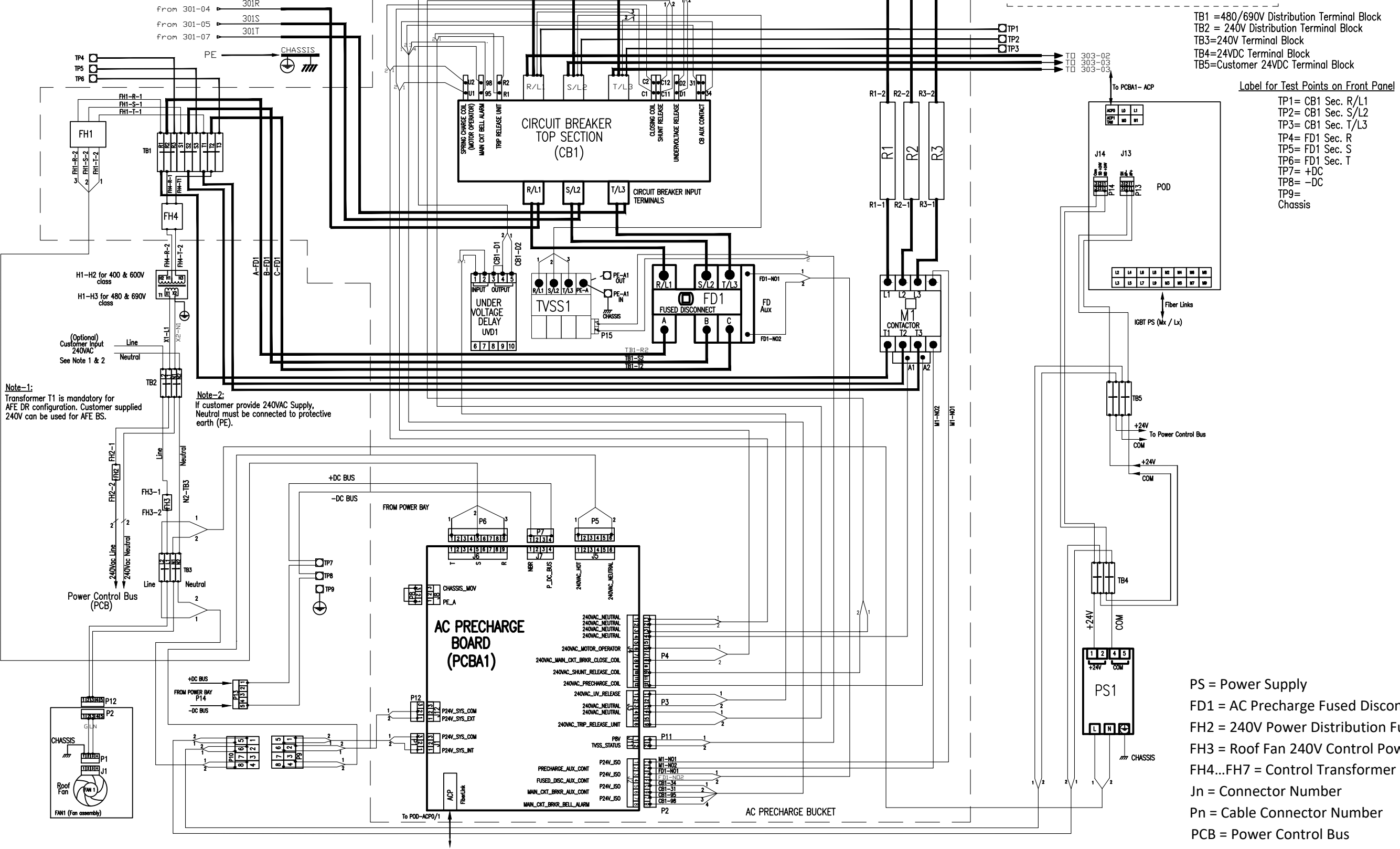


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								TITLE			
								GTSU#13 GANTRY DRIVE			
								SCHEMATIC DIAGRAM FOR GANTRY CONTROL PANEL			
								PLC INTERFACE_From PLC			
				DR. BY	CHK. BY	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	E226





PF755TR, IB, SCHEMATIC, FR8



DATE	BY	APPROVAL
		DESIGN REVIEW
		FOR MANUFACTURING
		AS SHIPPED
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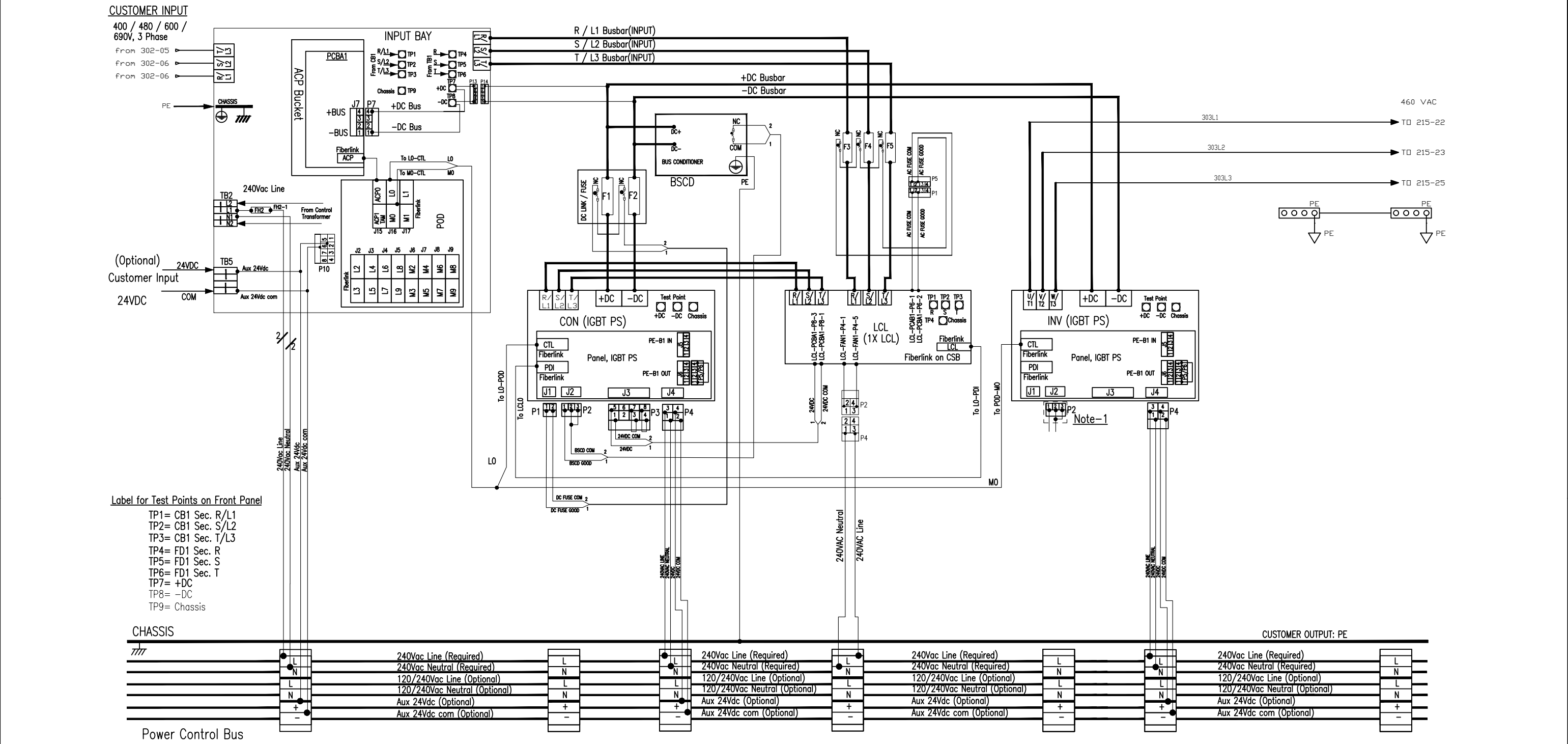
REV.	DATE	BY	ECN/CR. NO.

Rockwell Automation

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO. E302
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY2 DRIVE PANEL
BUL 755TR Lx IGBT, Lc LCL POWER CONVERTERS



CUSTOMER INPUT
400 / 480 / 600 /
690V, 3 Phase
From 302-05
From 302-06
From 302-06

(Optional)
Customer Input
24VDC
COM

Label for Test Points on Front Panel
TP1= CB1 Sec. R/L1
TP2= CB1 Sec. S/L2
TP3= CB1 Sec. T/L3
TP4= FD1 Sec. R
TP5= FD1 Sec. S
TP6= FD1 Sec. T
TP7= +DC
TP8= -DC
TP9= Chassis

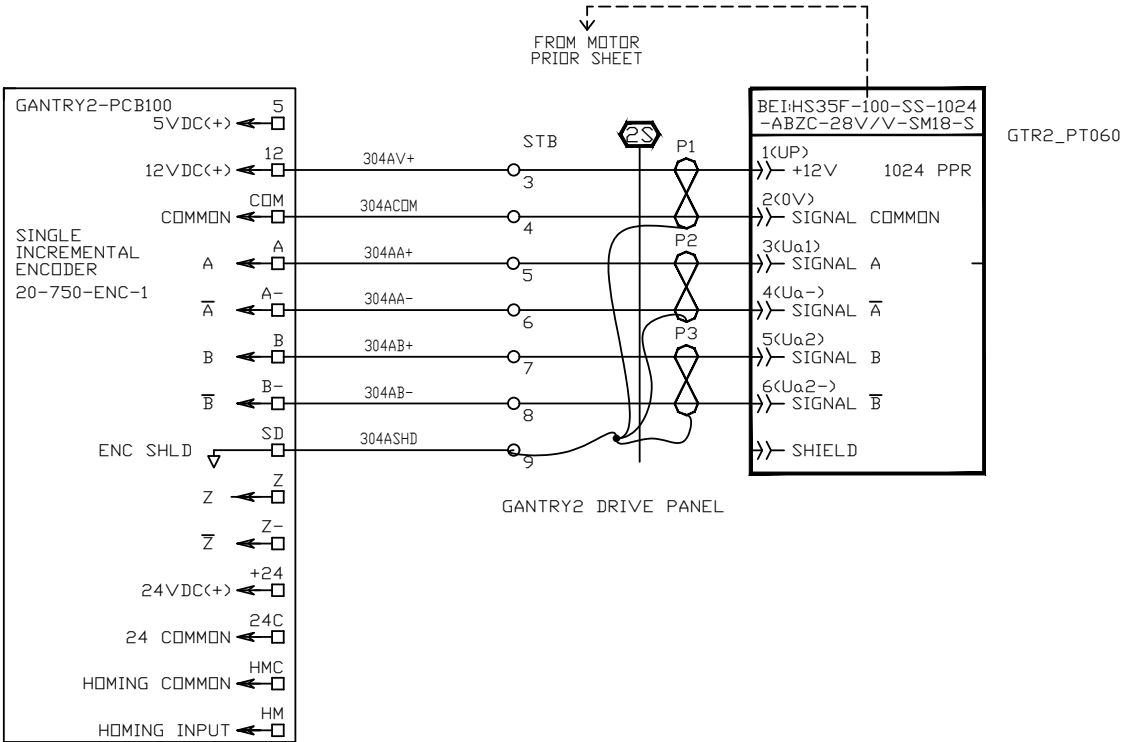
CHASSIS

Power Control Bus		CUSTOMER OUTPUT: PE	
L	240Vac Line (Required)	L	240Vac Line (Required)
N	240Vac Neutral (Required)	N	240Vac Neutral (Required)
L	120/240Vac Line (Optional)	L	120/240Vac Line (Optional)
N	120/240Vac Neutral (Optional)	N	120/240Vac Neutral (Optional)
+	Aux 24Vdc (Optional)	+	Aux 24Vdc (Optional)
-	Aux 24Vdc com (Optional)	-	Aux 24Vdc com (Optional)

Fn = Fuse Number
CSB = Current Sense Board
BSCD = Bus Conditioner
ACPC = AC Precharge
MVFB = Motor Voltage Feedback

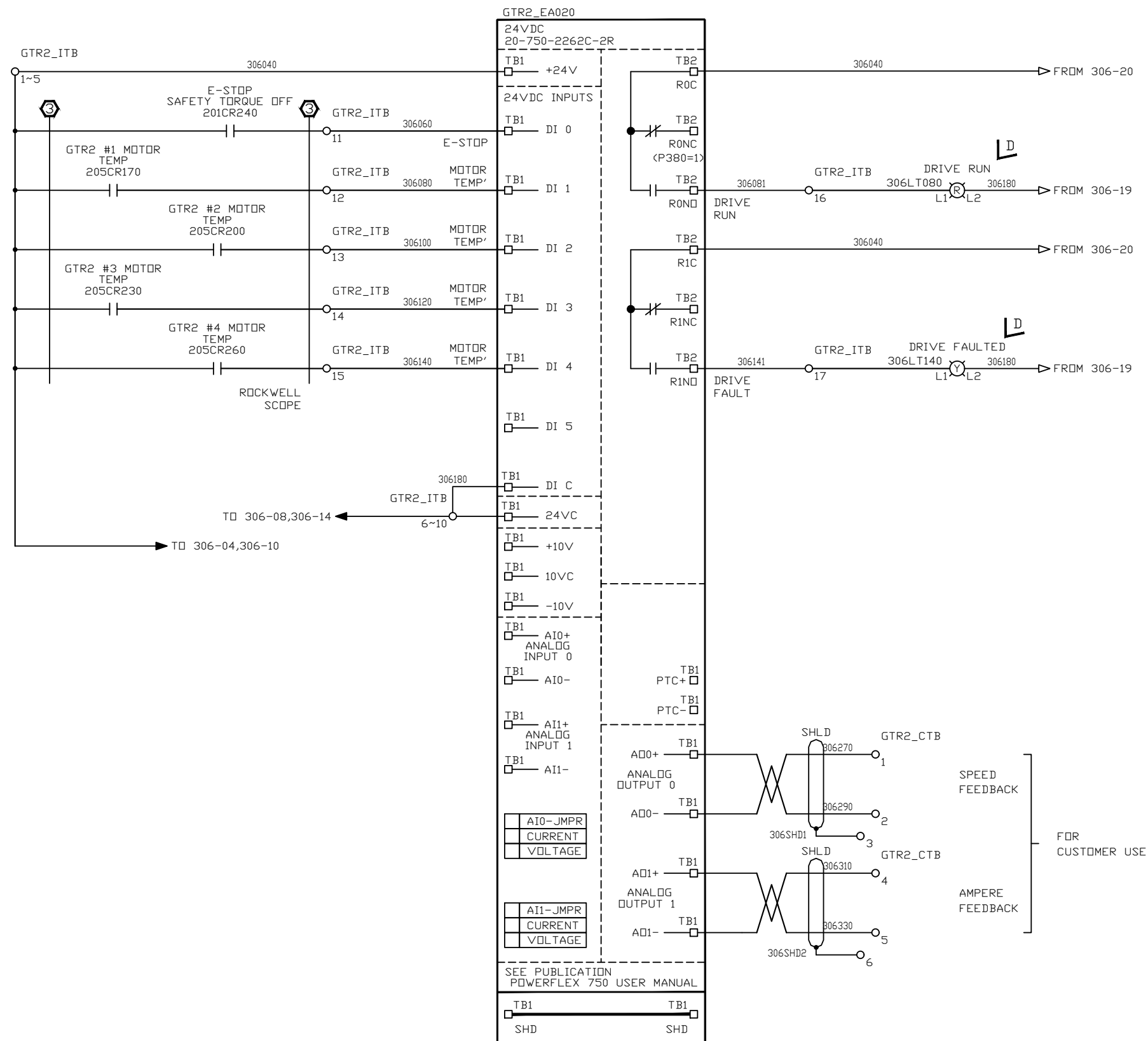
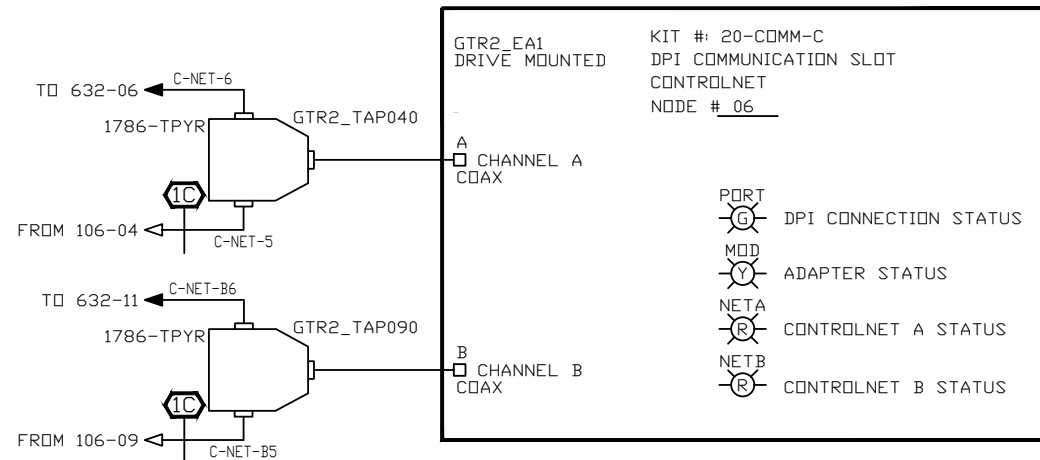
Note-1:
If Exit Wire Bay is present, connector P2 of Exit Wire Bay
must be connected to J2 of IGBT-PS M0.

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												TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY2 DRIVE PANEL BUL 755TR Lx IGBT, Lc LCL POWER CONVERTERS																	
												DR. BY DATE			CHK. BY DATE			ENG. DATE			DWG. NO. —			NEXT SH.			SH. NO. E303		



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				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	E304



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TITLE GTSUH13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR GANTRY2 DRIVE PANEL POWERFLEX 755TR PDD I/O INTERFACE			
DWG. NO.	—	NEXT SH.	SH. E306

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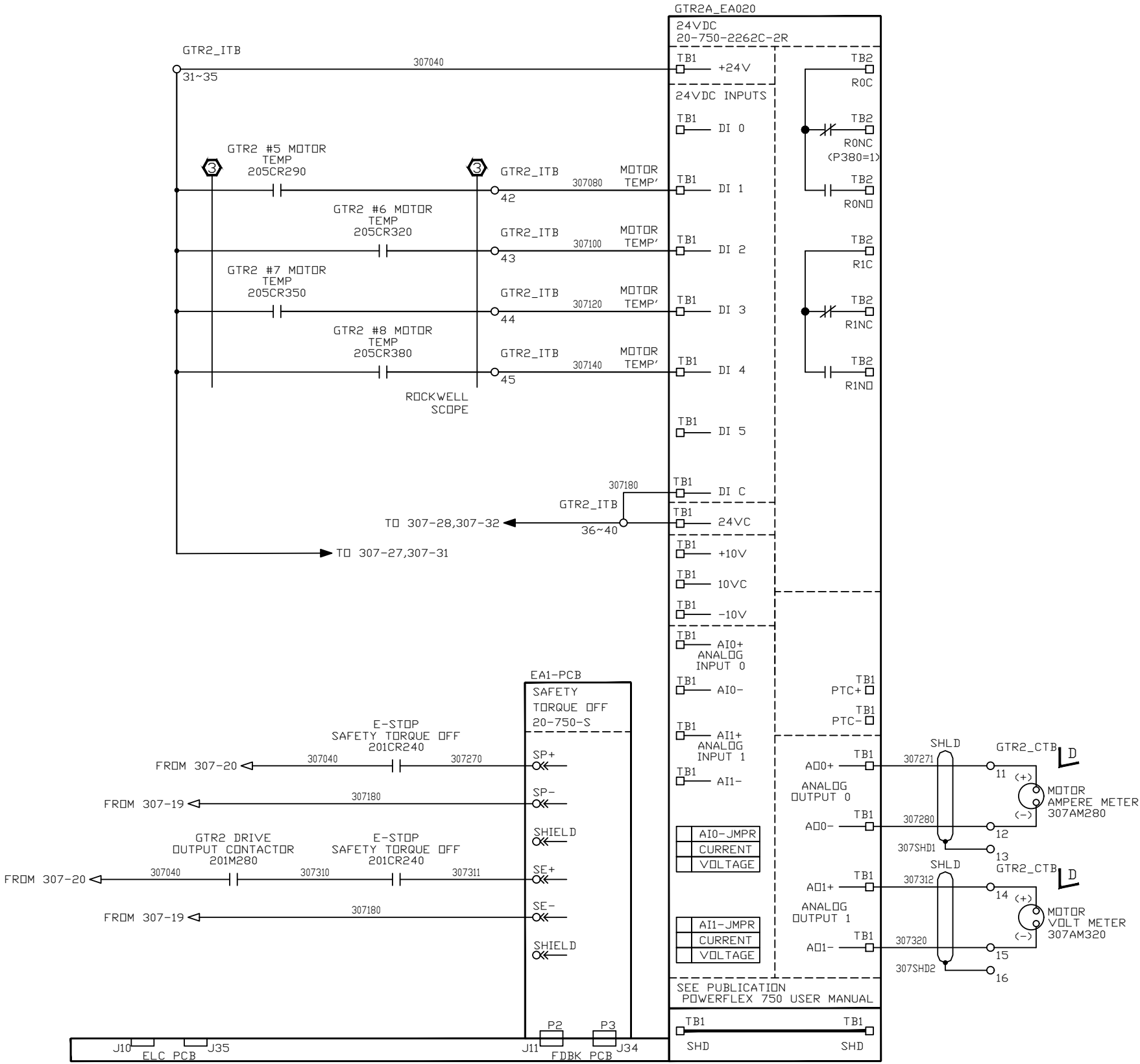
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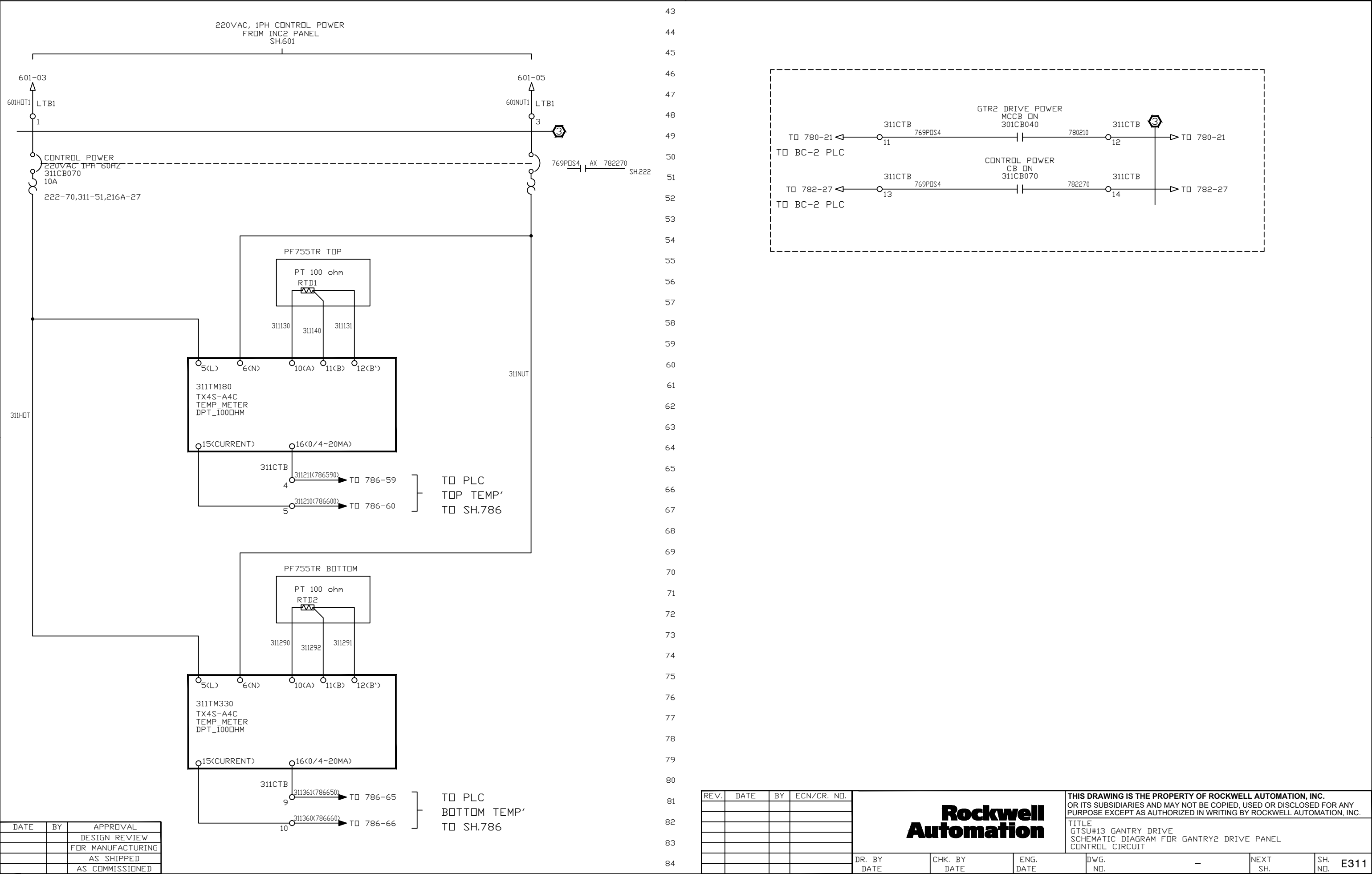
**Rockwell
Automation**

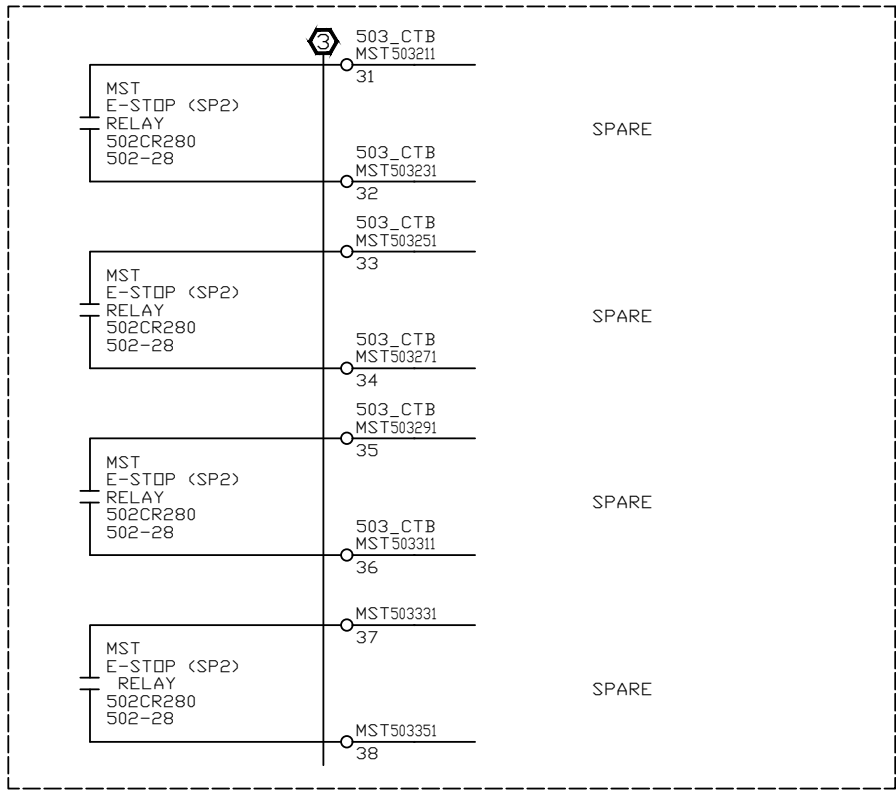
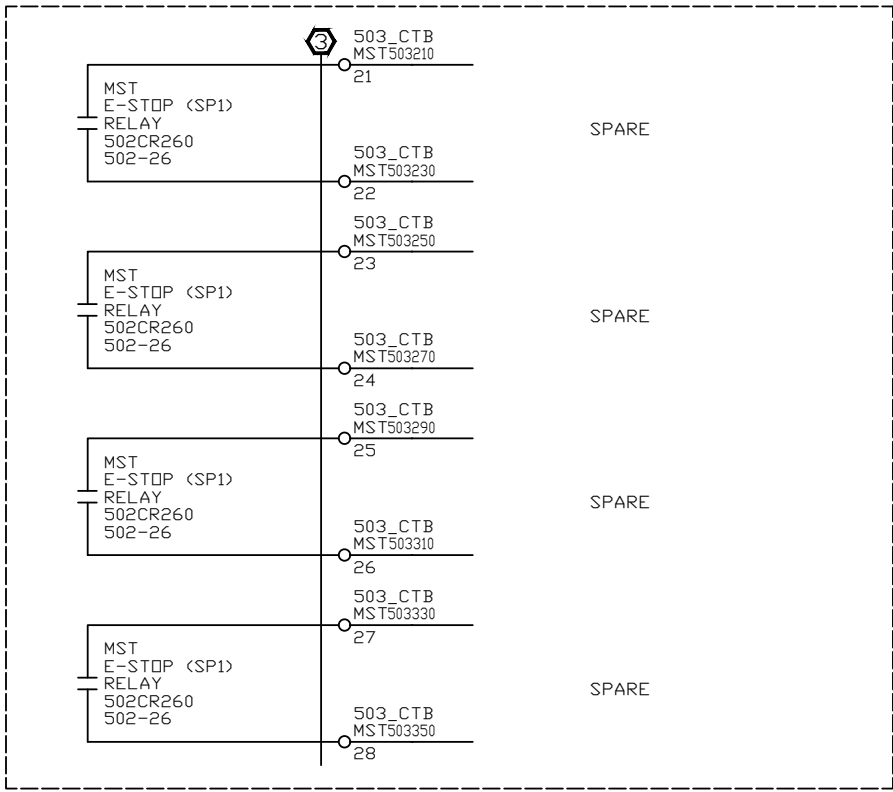
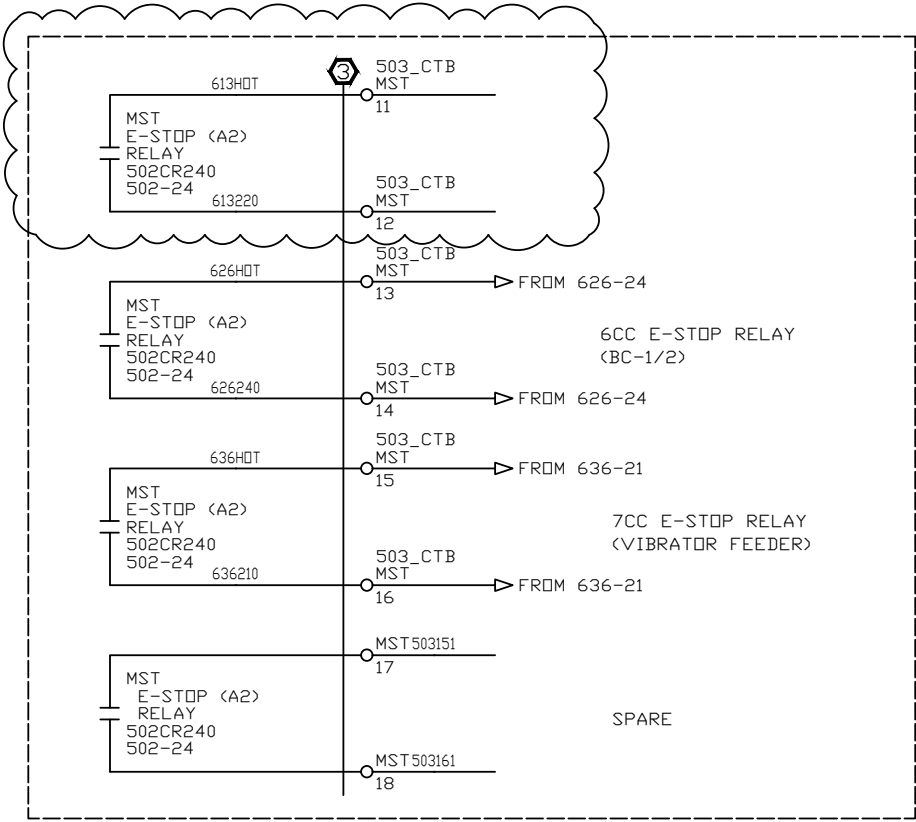
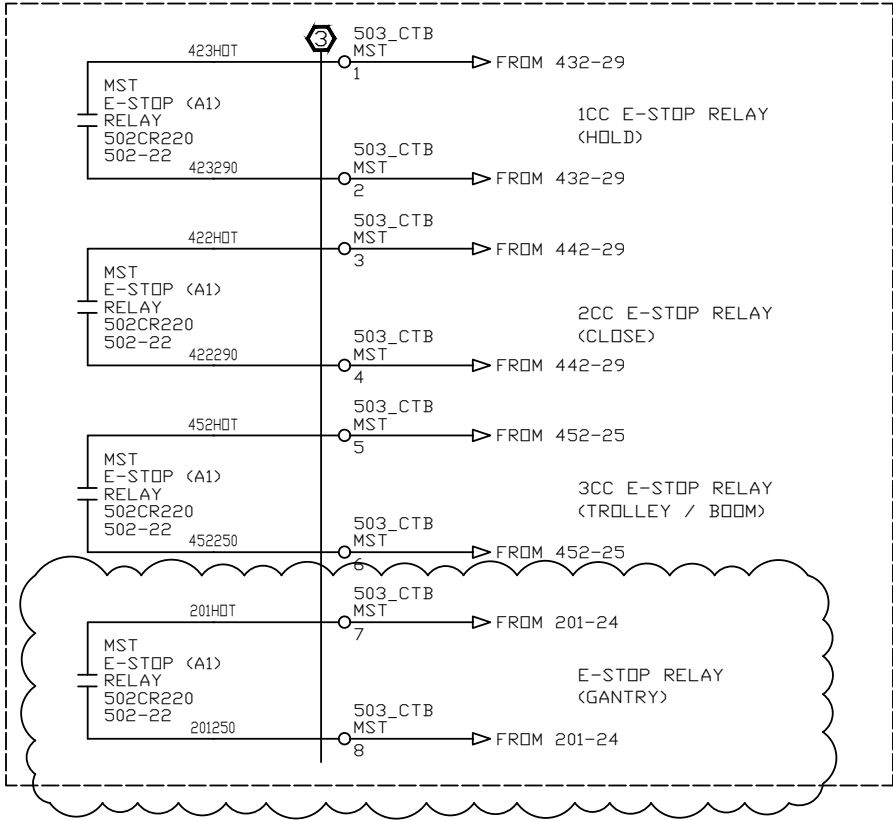
DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.	E307
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR GANTRY2 DRIVE PANEL
POWERFLEX 755TR PDD I/O INTERFACE







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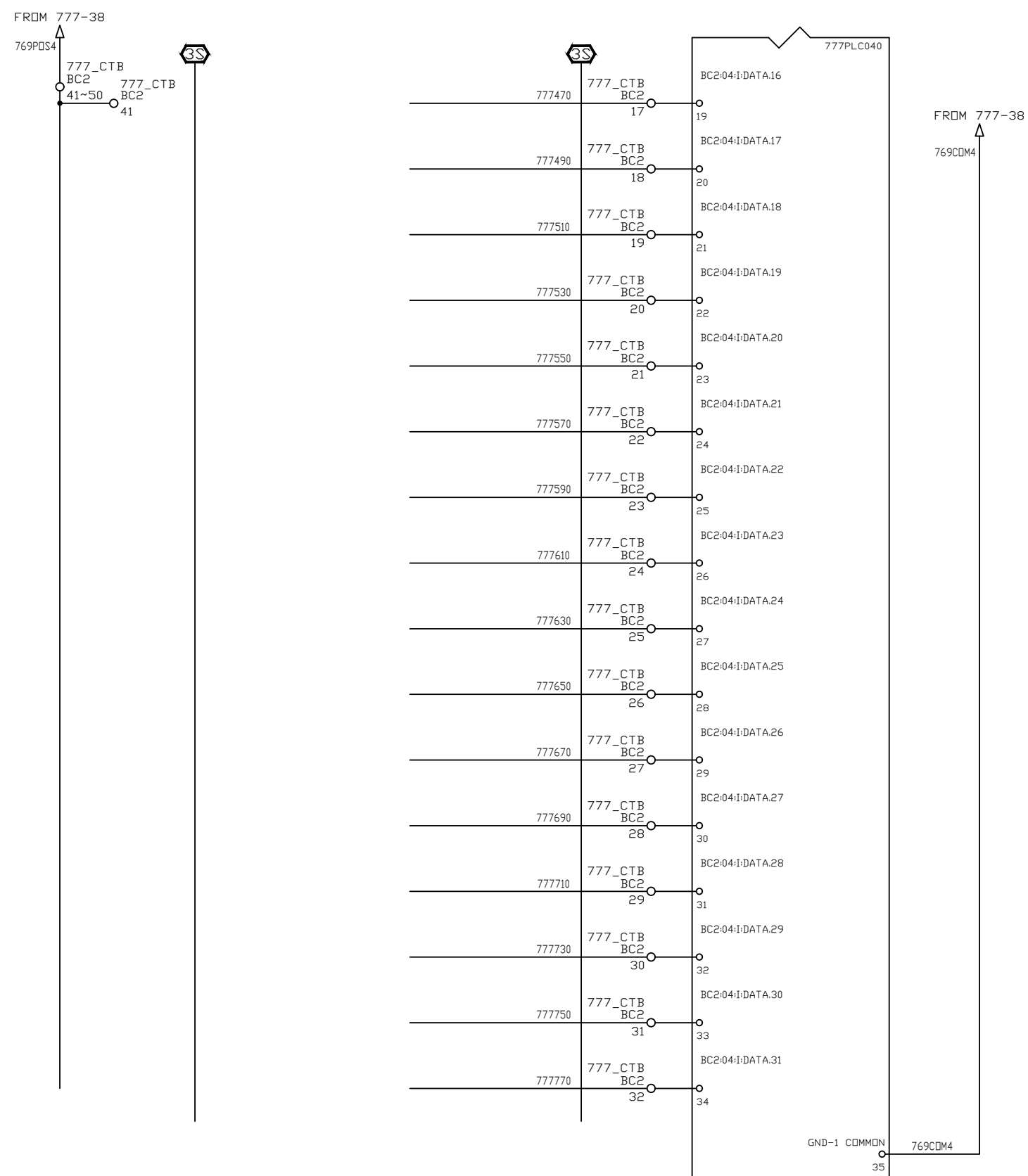
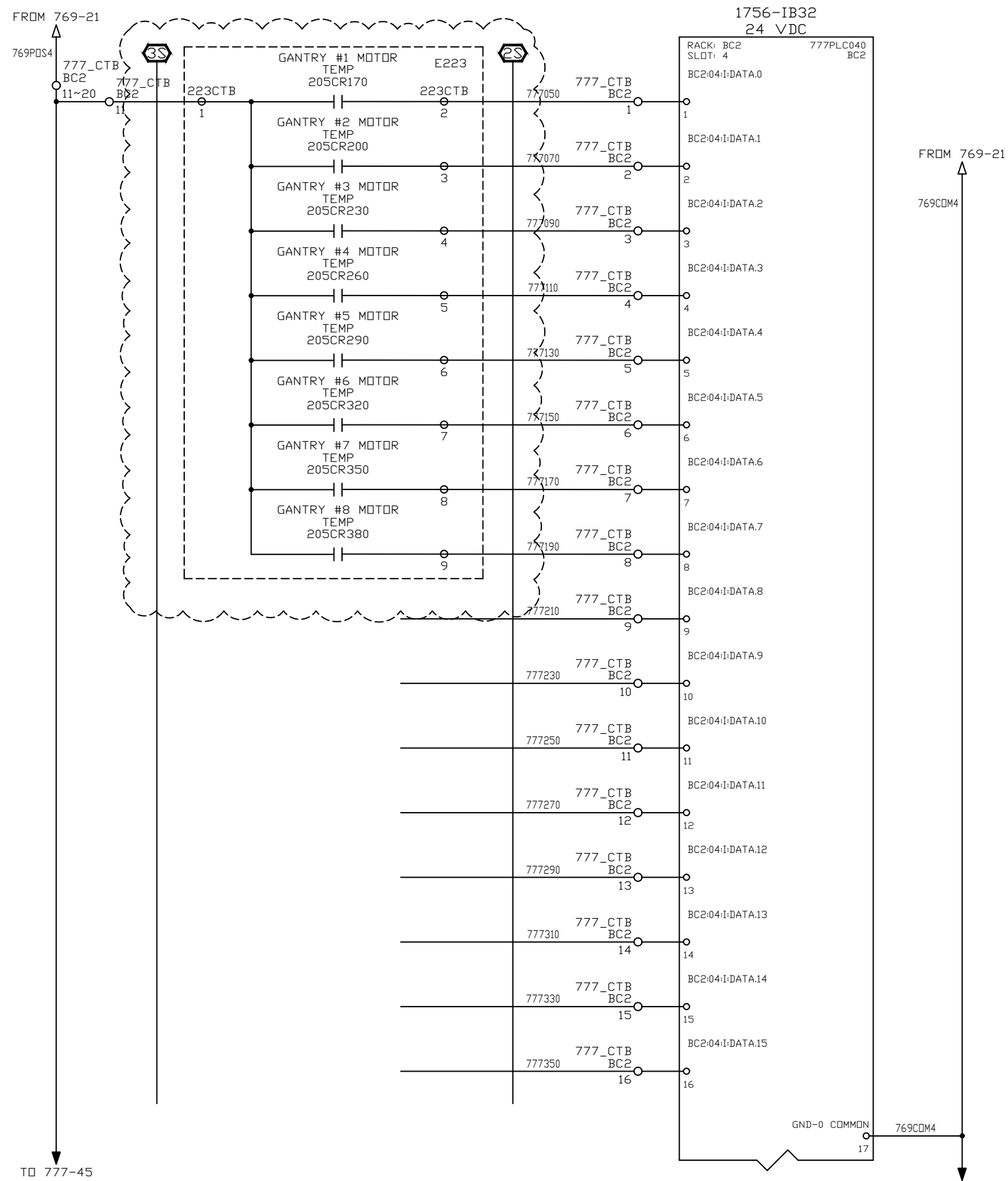
**Rockwell
Automation**

DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO.

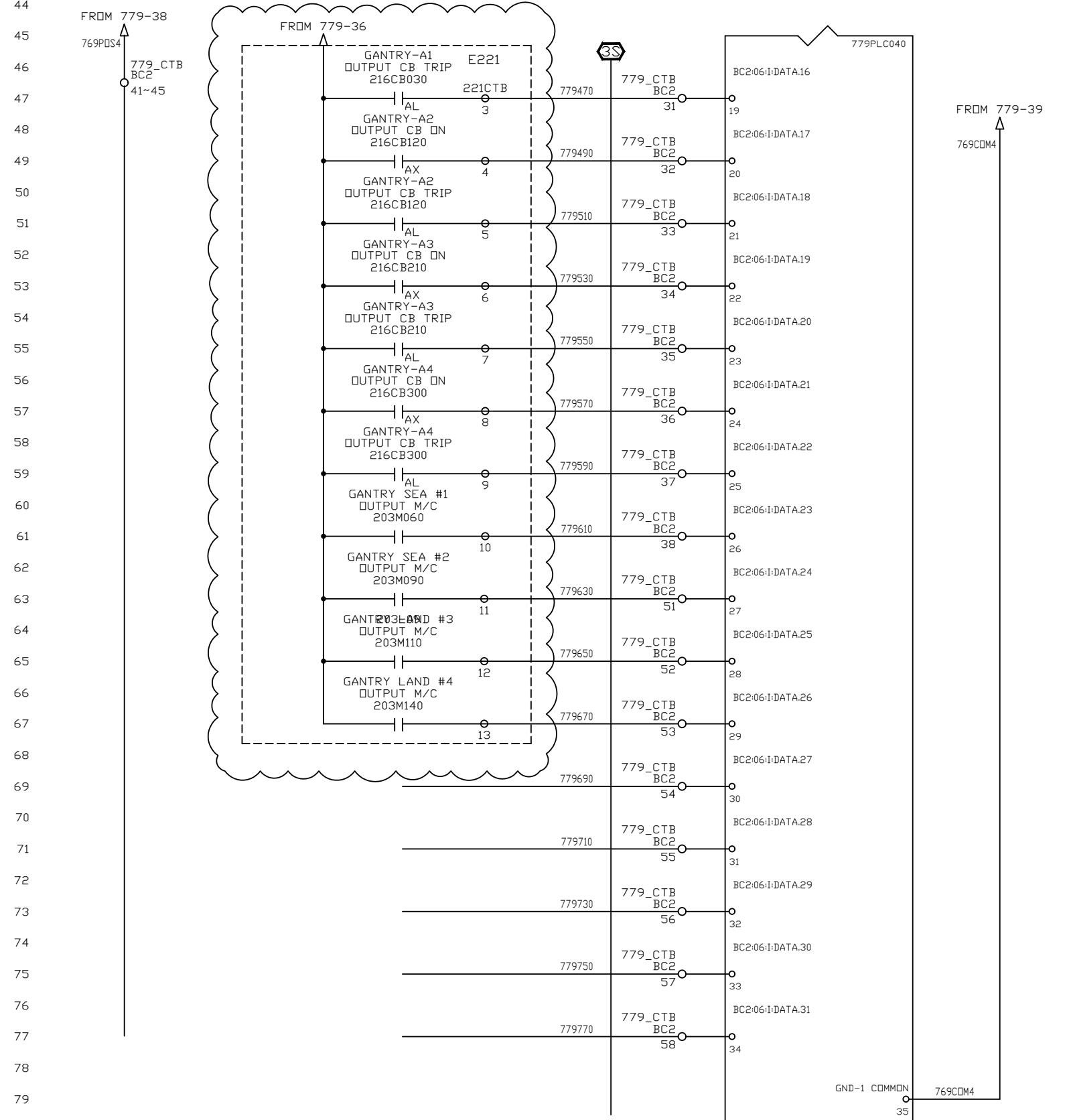
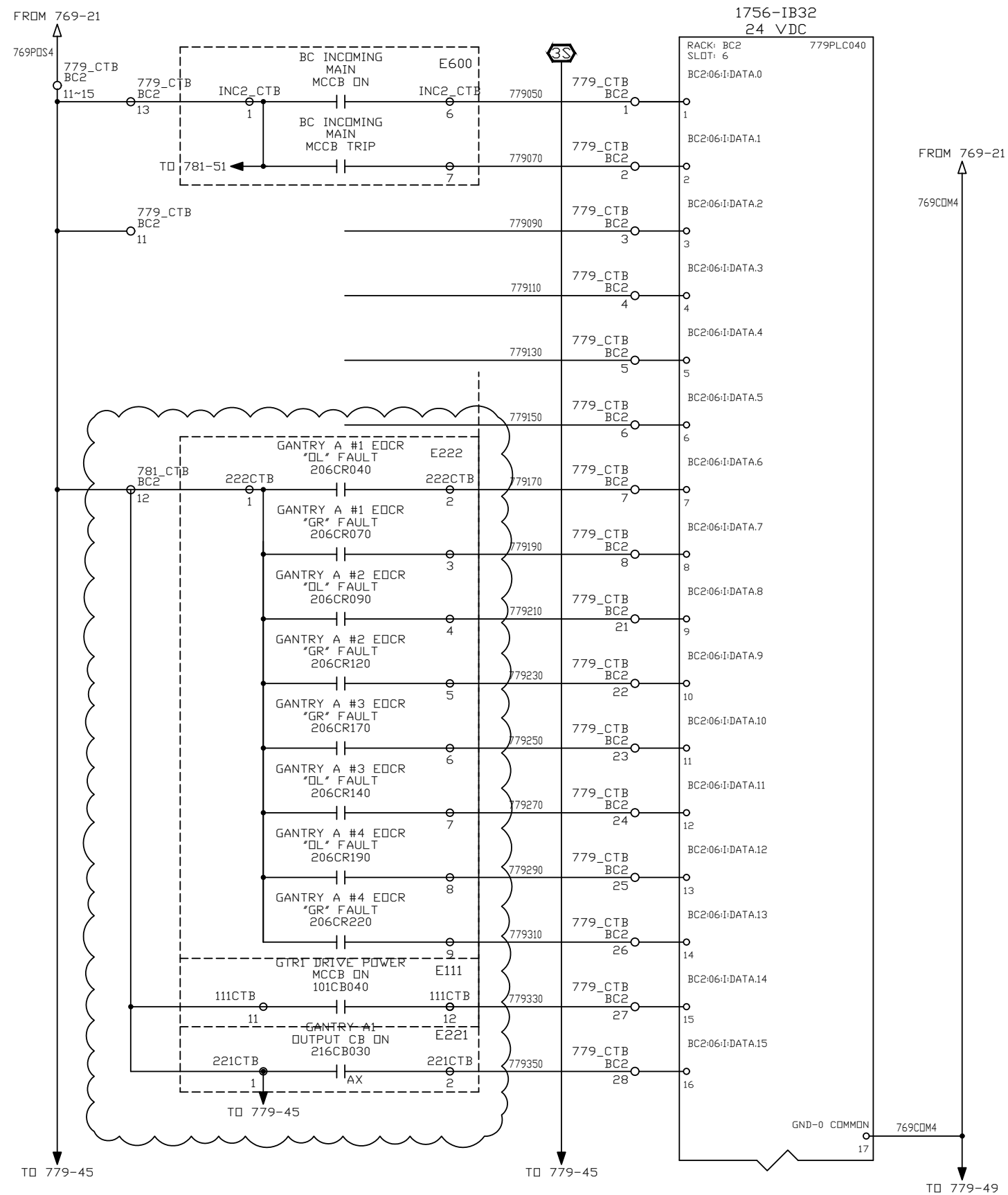
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TITLE
GTSU#13 GANTRY DRIVE
SCHEMATIC DIAGRAM FOR MASTER PLC PANEL
E-STOP CIRCUIT

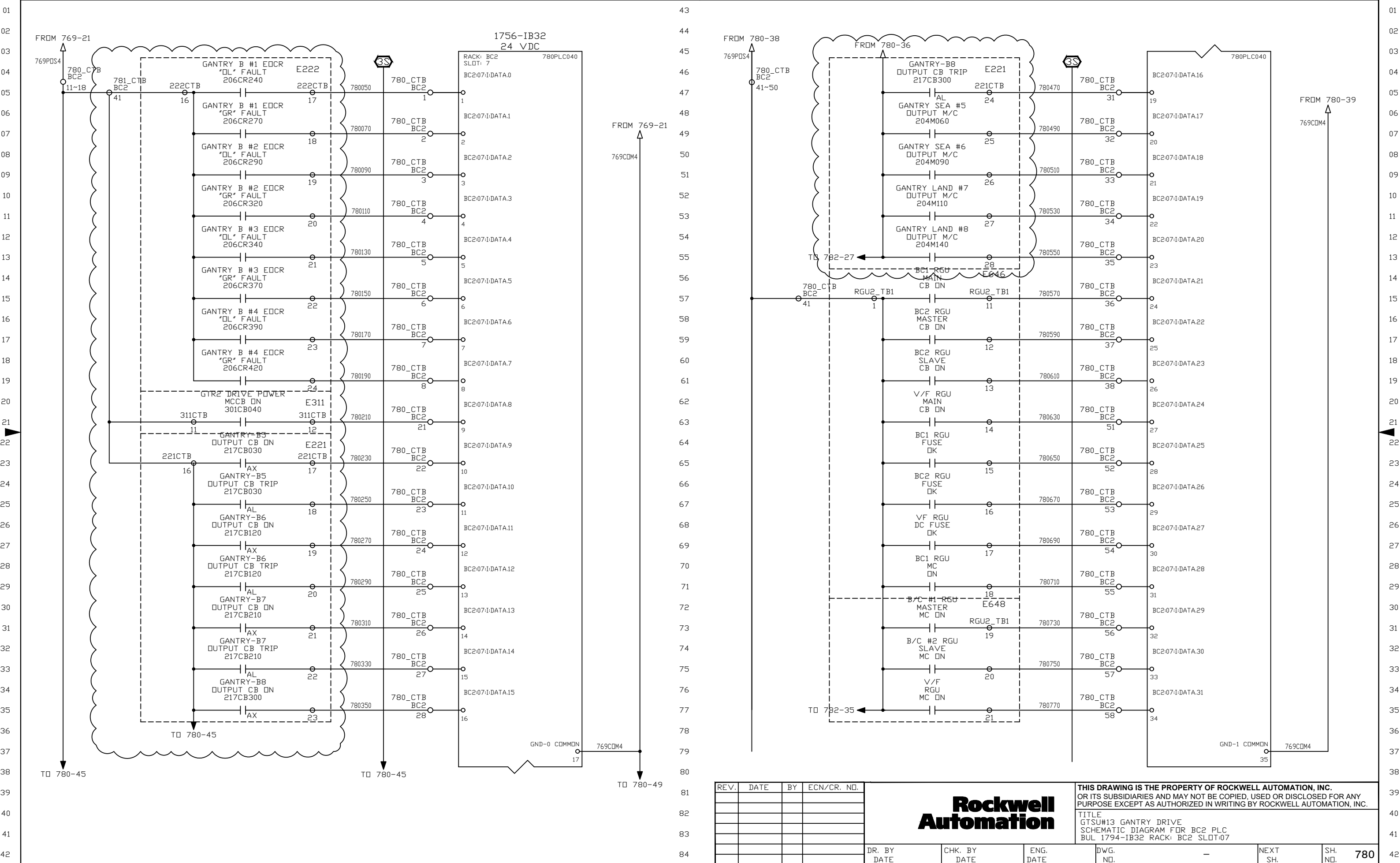
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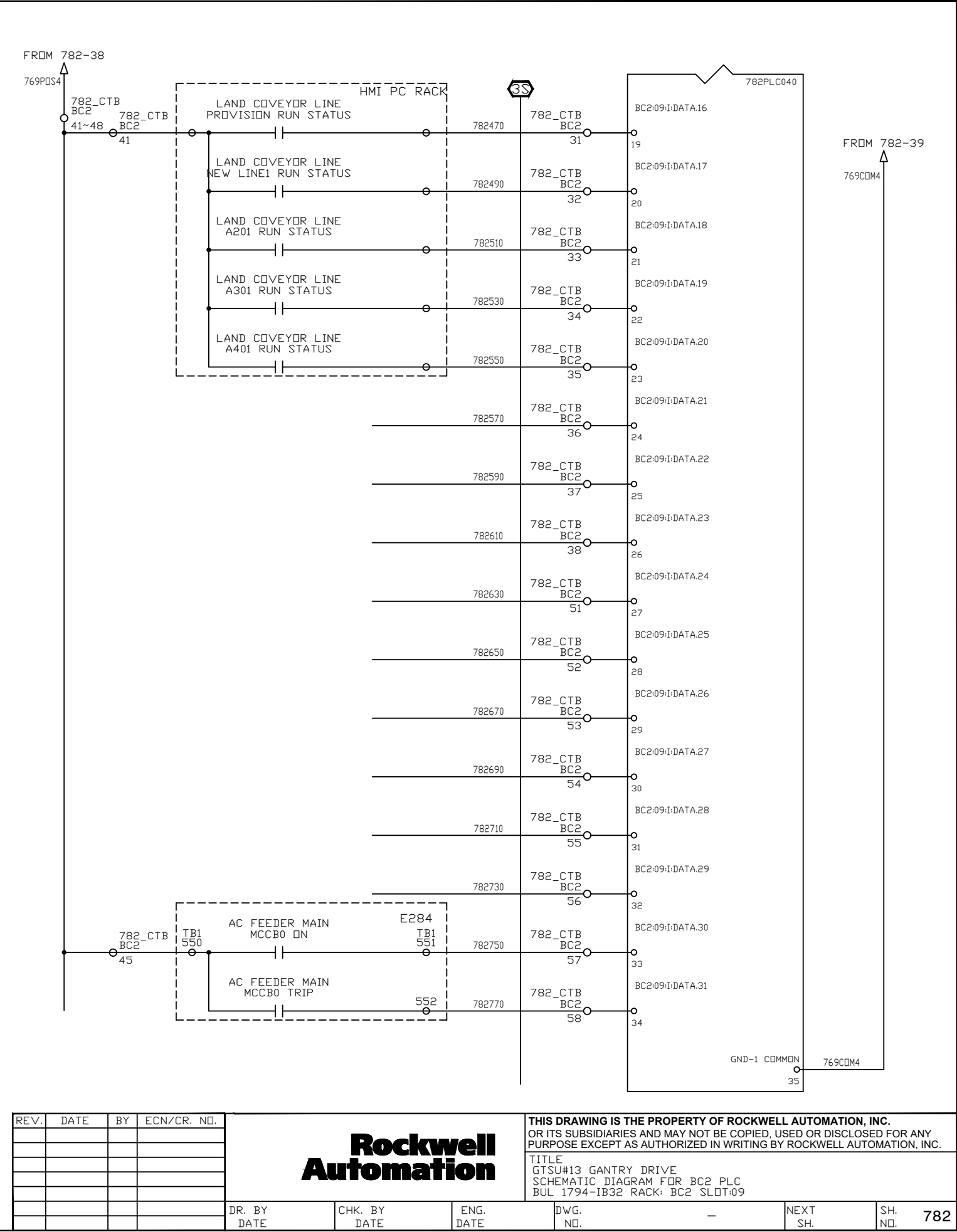
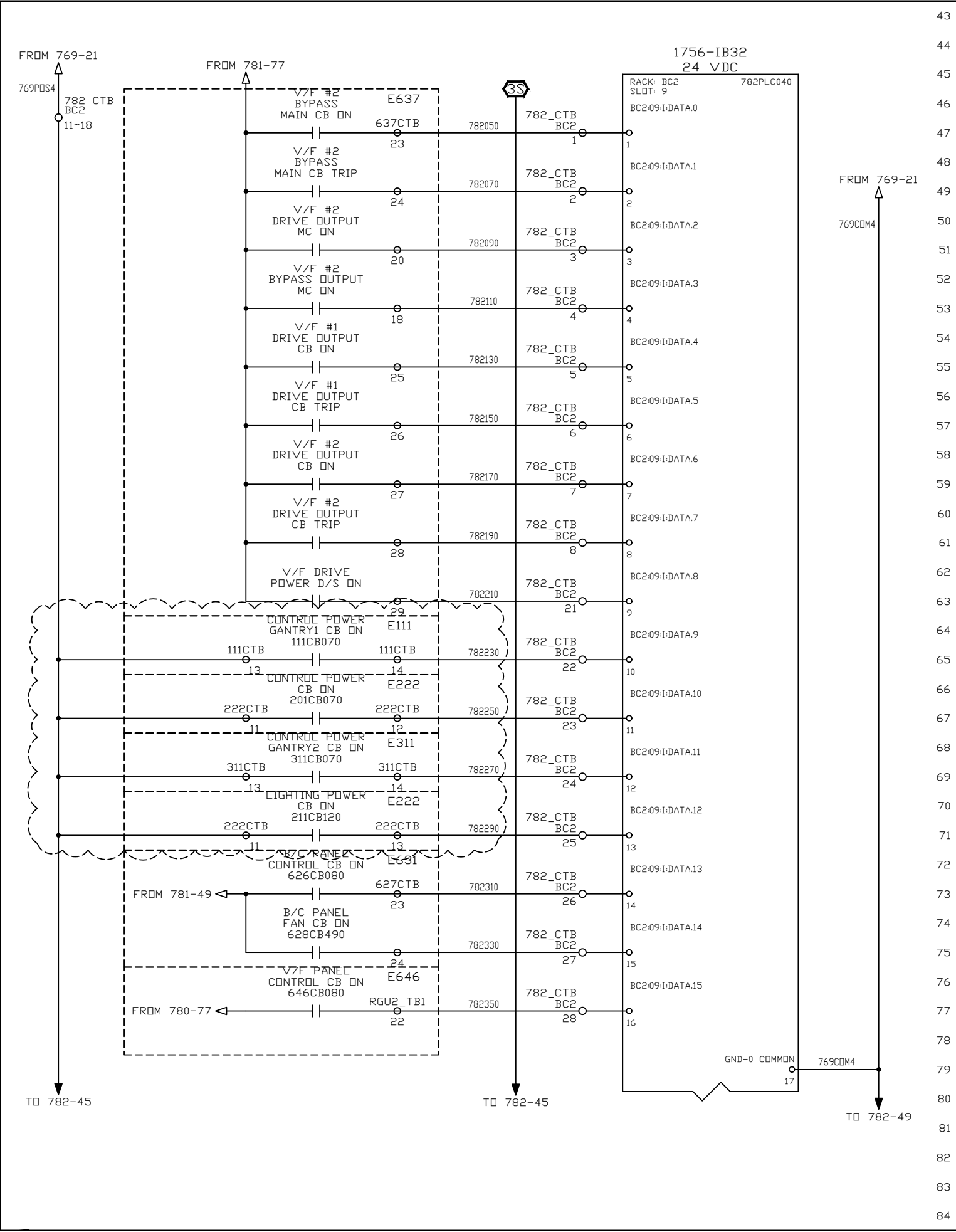


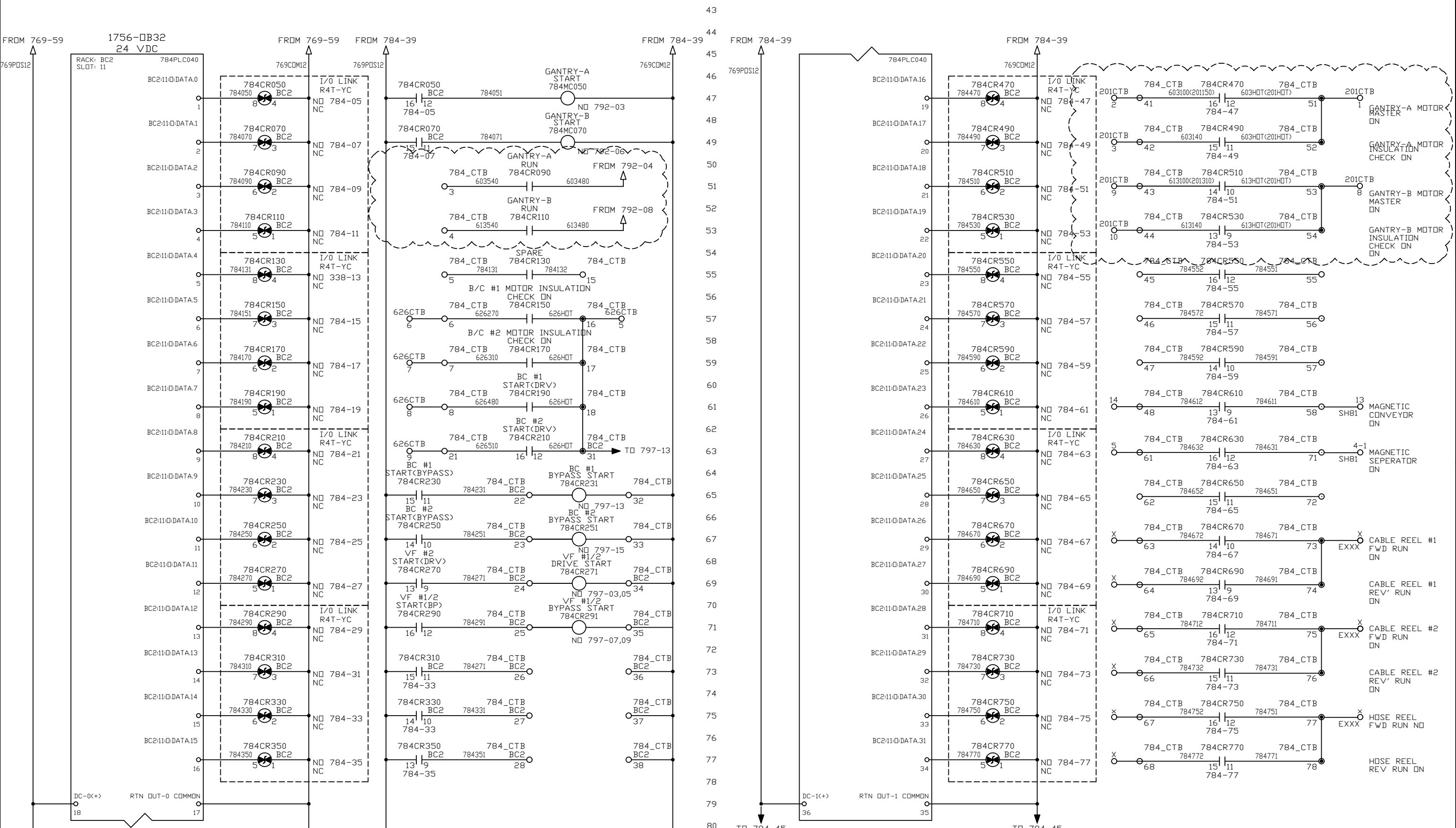
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							TITLE			
							GTSU#13 GANTRY DRIVE			
							SCHEMATIC DIAGRAM FOR BC2 PLC			
							BUL 1794-1B32 RACK1 BC2 SLOT04			
				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO. 777



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							TITLE				
							GTSU#13 GANTRY DRIVE				
							SCHEMATIC DIAGRAM FOR BC2 PLC				
							BUL 1794-1B32 RACK: BC2 SLOT:06				
				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	—	NEXT SH.	SH. NO.	779



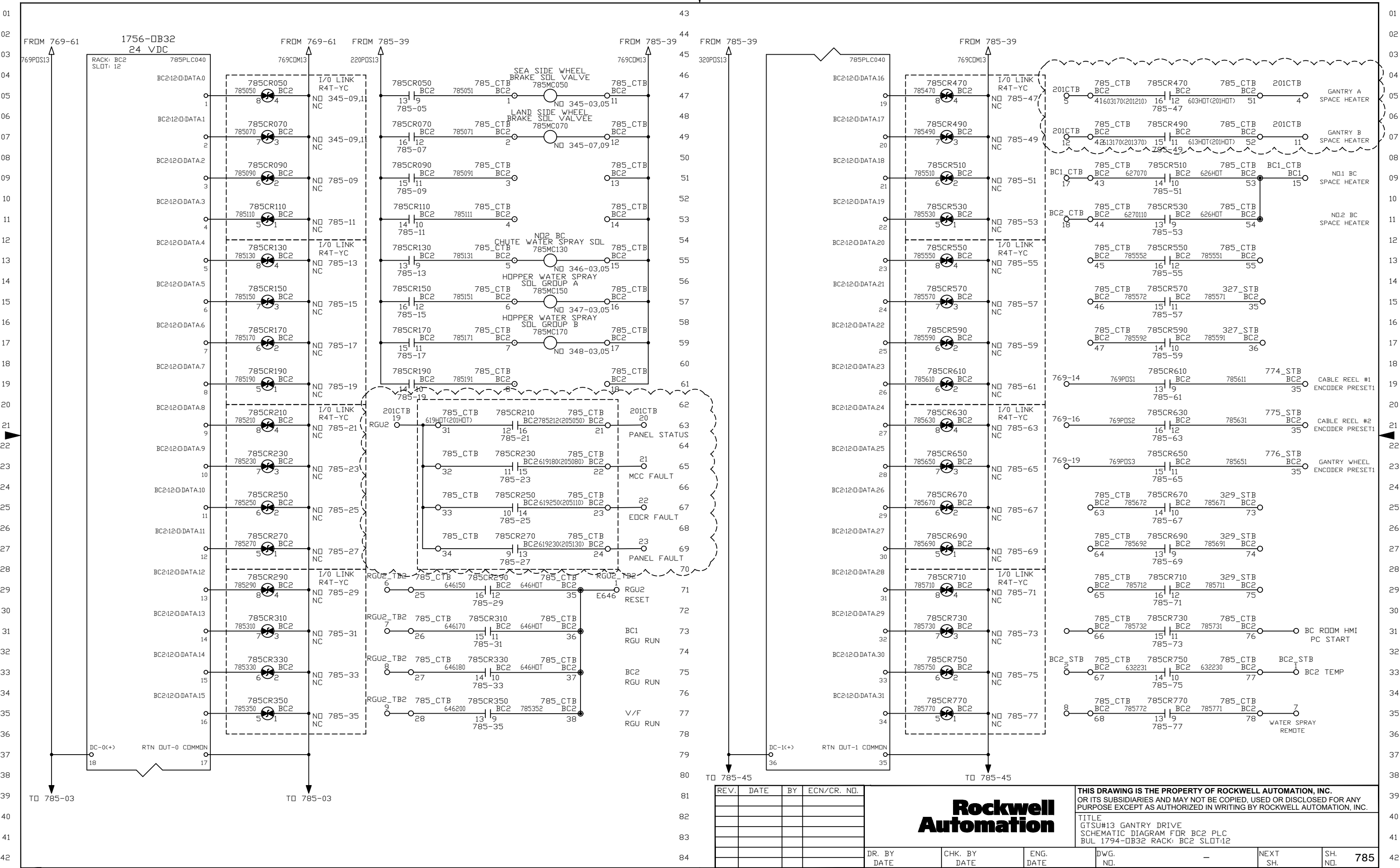


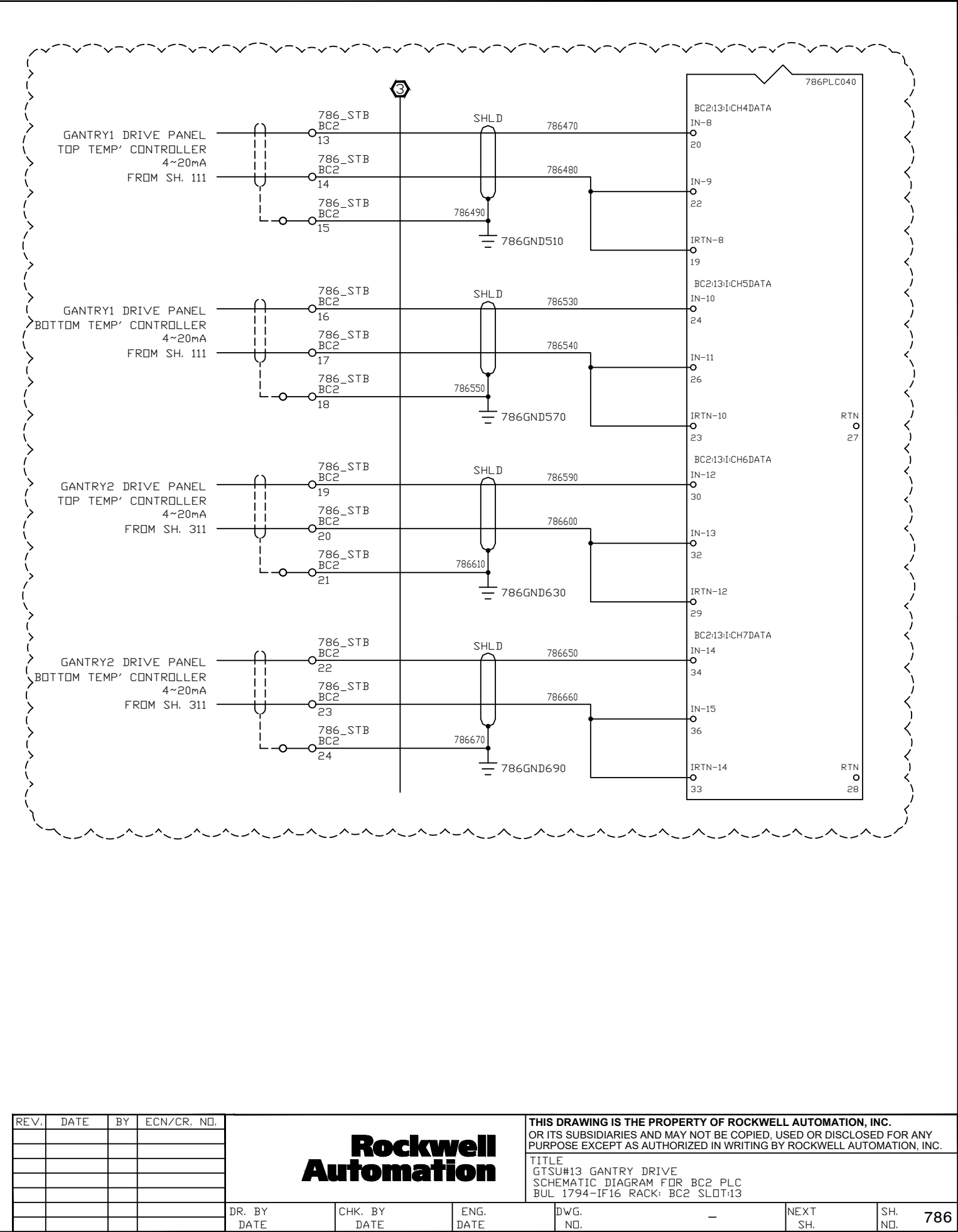
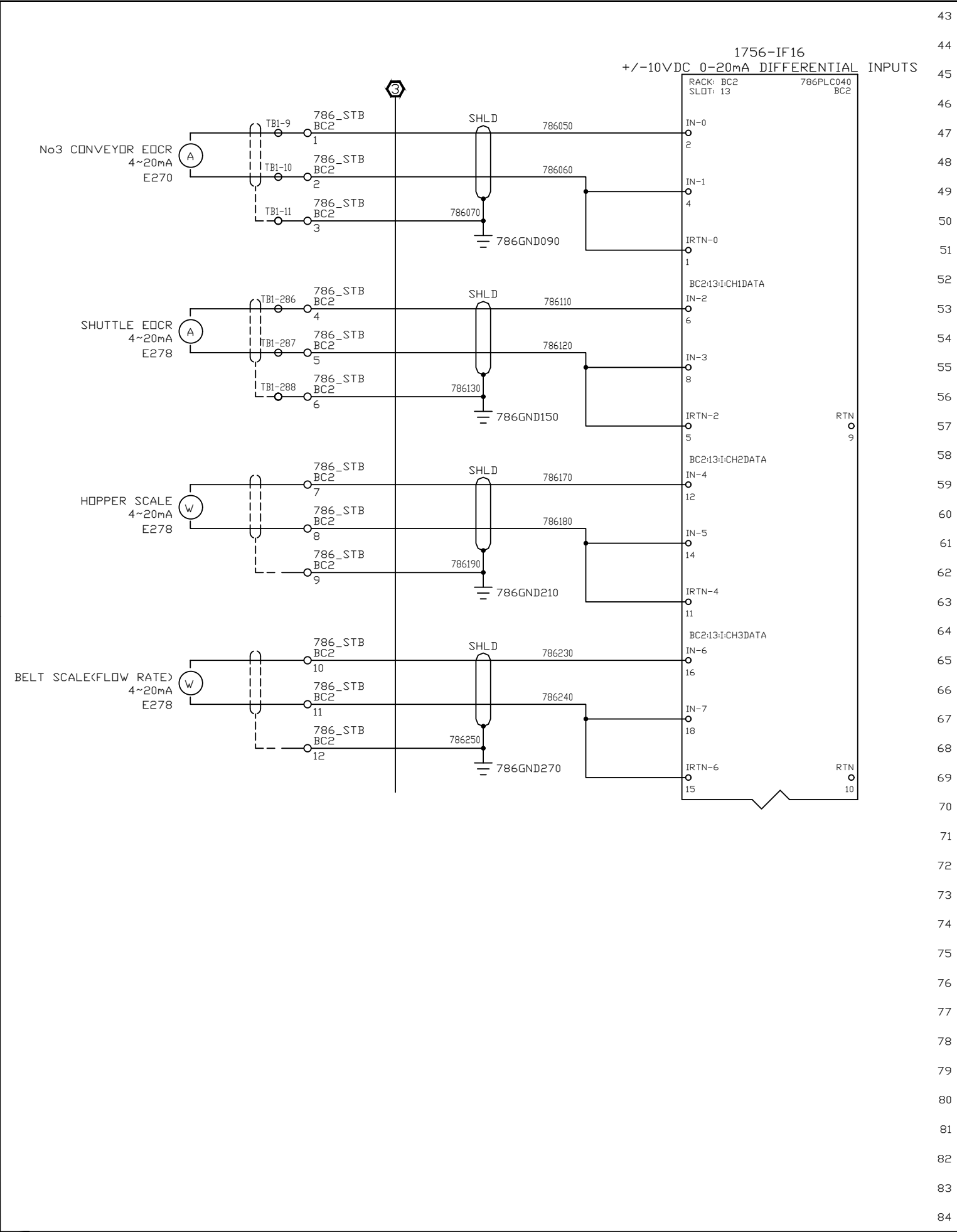


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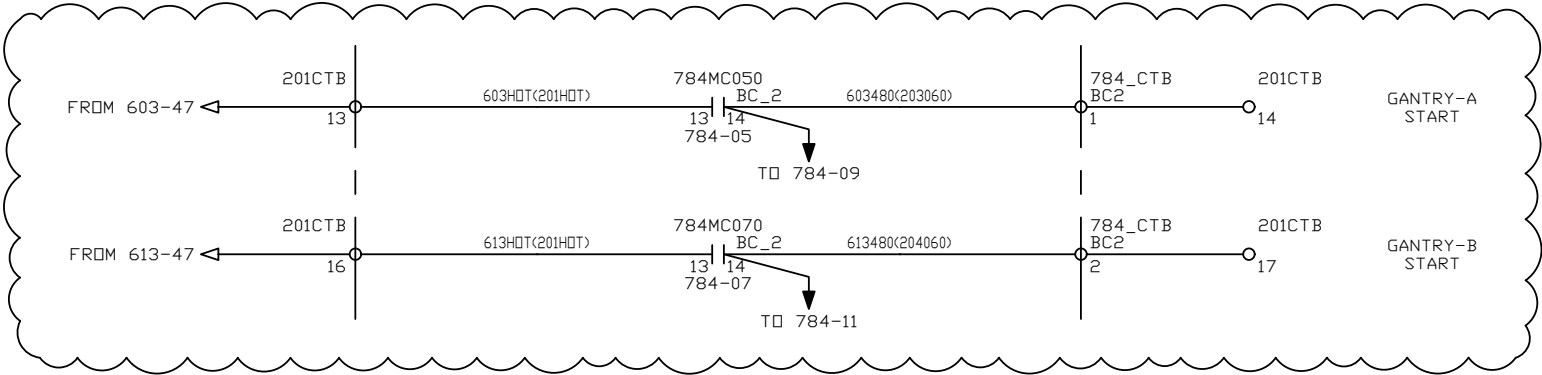
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DATE	DATE	DATE

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TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR BC2 PLC BUL 1794-DB32 RACK1 BC2 SLOT11			
DWG. NO.	—	NEXT SH.	SH. NO. 784





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						TITLE GTSU#13 GANTRY DRIVE SCHEMATIC DIAGRAM FOR BC2 PLC BUL 1794-IF16 RACK: BC2 SLOT:13			
				DR. BY DATE	CHK. BY DATE	ENG. DATE	DWG. NO.	NEXT SH.	SH. NO. 786



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							TITLE			
							GTSU#13 GANTRY DRIVE			
							SCHEMATIC DIAGRAM FOR MASTER PLC PANEL			
							GANTRY START RELAY			
							DR. BY	CHK. BY	ENG.	
				DATE	DATE	DATE	DWG. NO.	—	NEXT SH.	SH. NO. E792