

Electrical Schematic



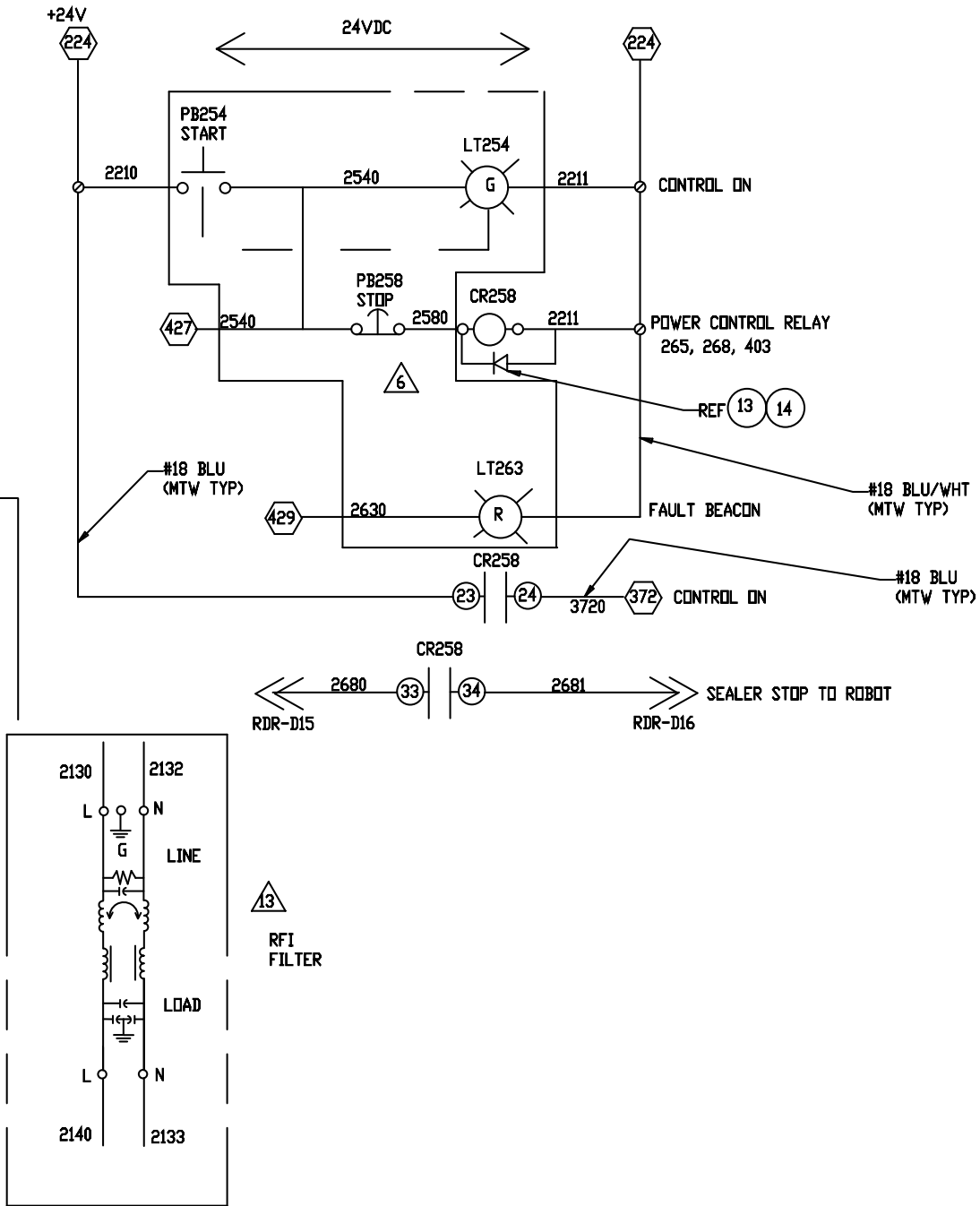
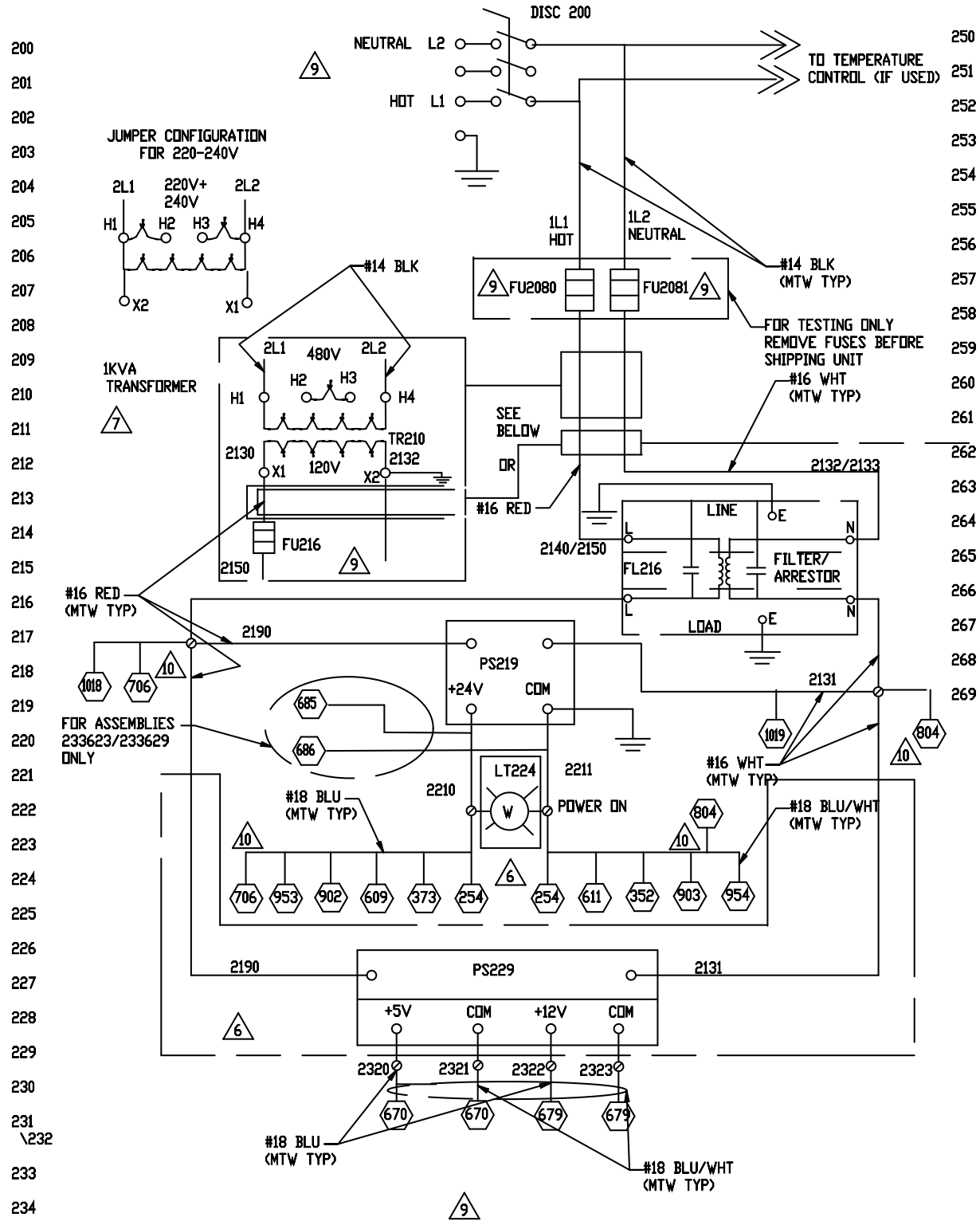
PrecisionFlo™ XL

309364 rev.L



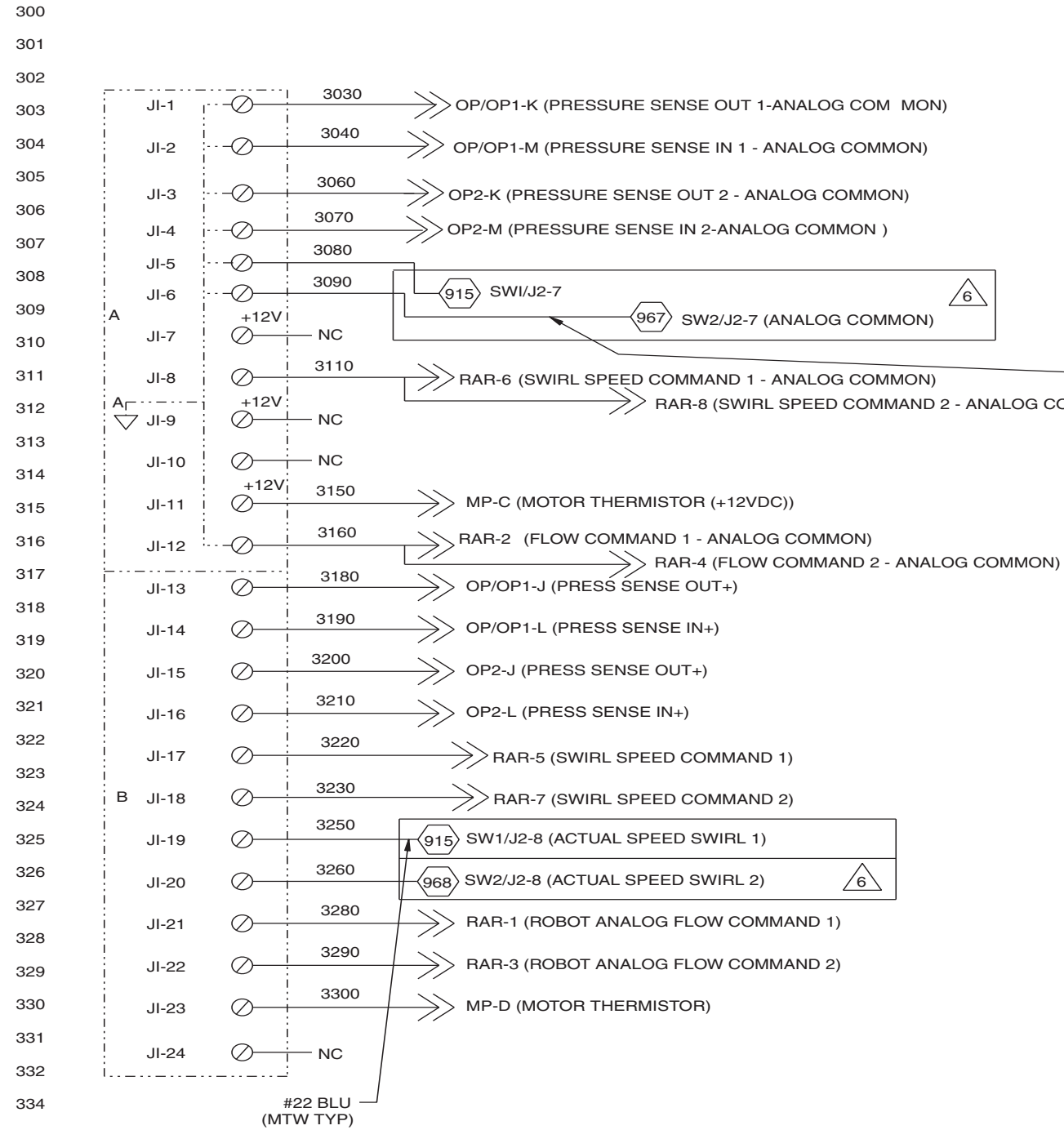
PROVEN QUALITY. LEADING TECHNOLOGY.

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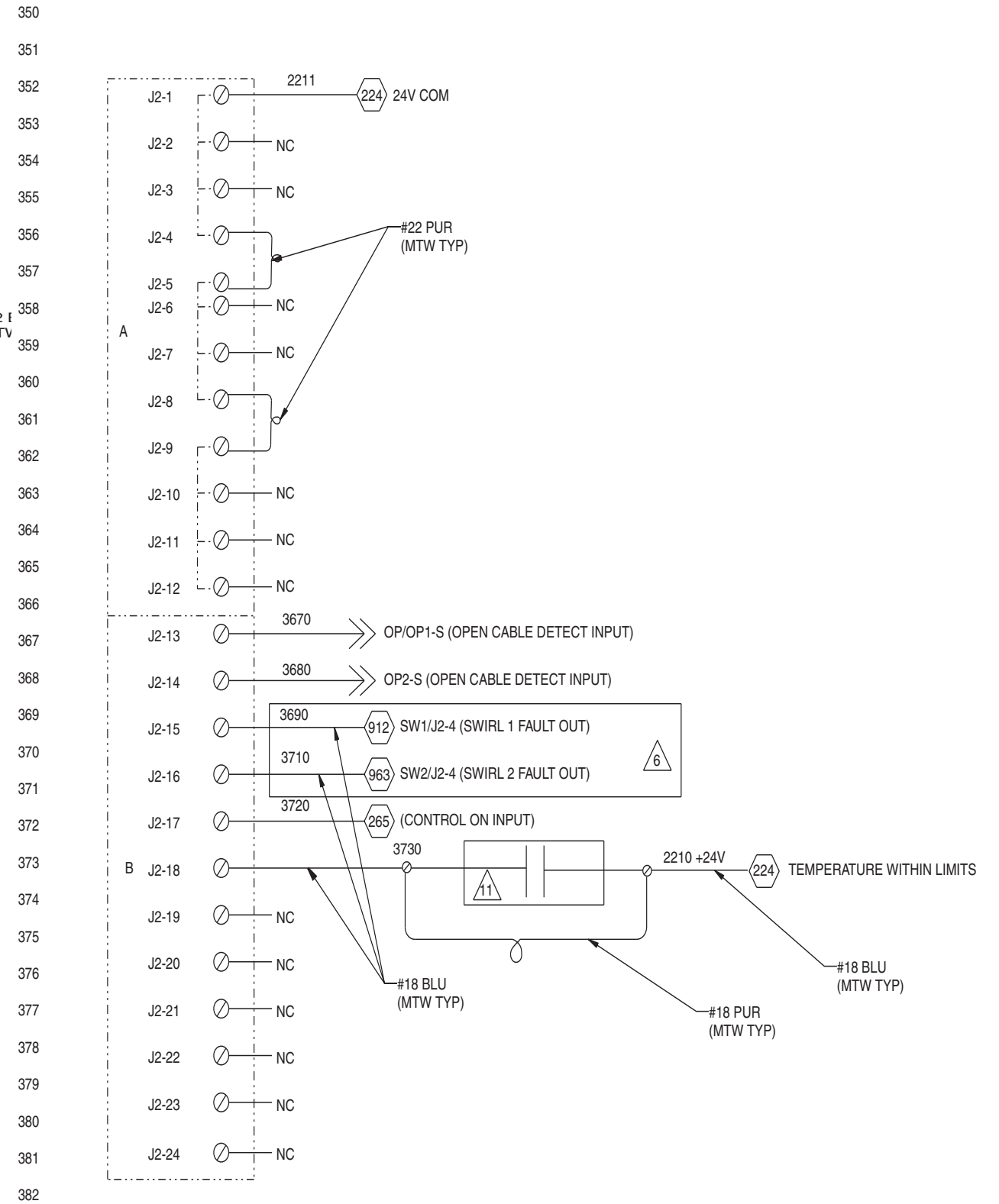


VOLTAGE	FLA				REQUIRED FUSES	
	W/O HEAT	W/ HEAT	W/TEMP H/C	TEMP H/ONLY	FU2080 FU2081	FU216
110-120	8	-	-	-	116505 (LPJ-8SP)	NONE
220-240	4.2	18.8	25.1	18.8	116506 (LPJ-5SP)	116505 (LPJ-8SP)
400-480	2.1	9.5	12.6	9.5	116620 (LPJ-3SP)	116505 (LPJ-8SP)

SYSTEM I/O BOARD CONNECTIONS (SIO)
(ANALOG INPUTS)

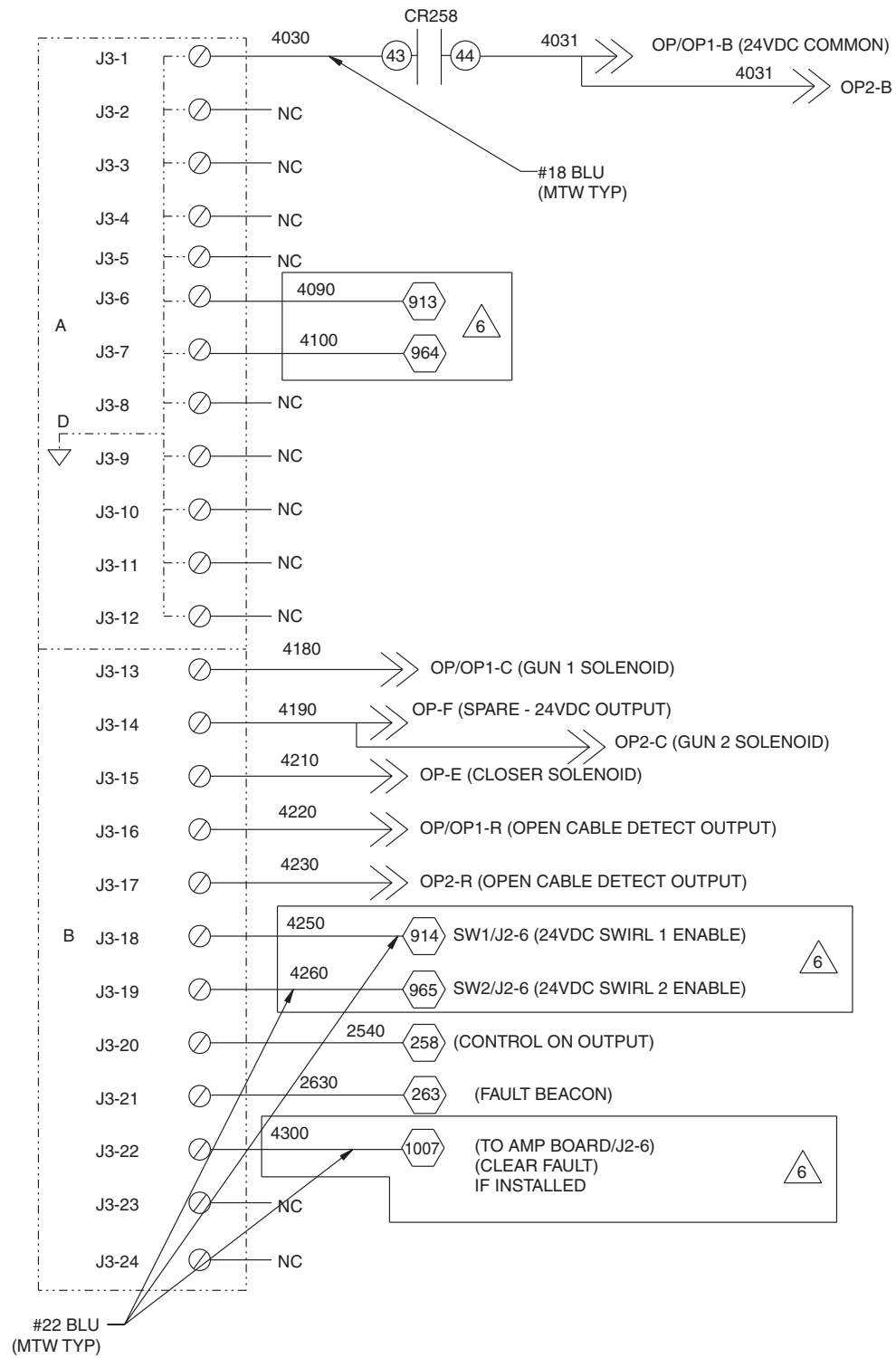


SYSTEM I/O BOARD CONNECTIONS (SIO)
(24V DIGITAL INPUTS)



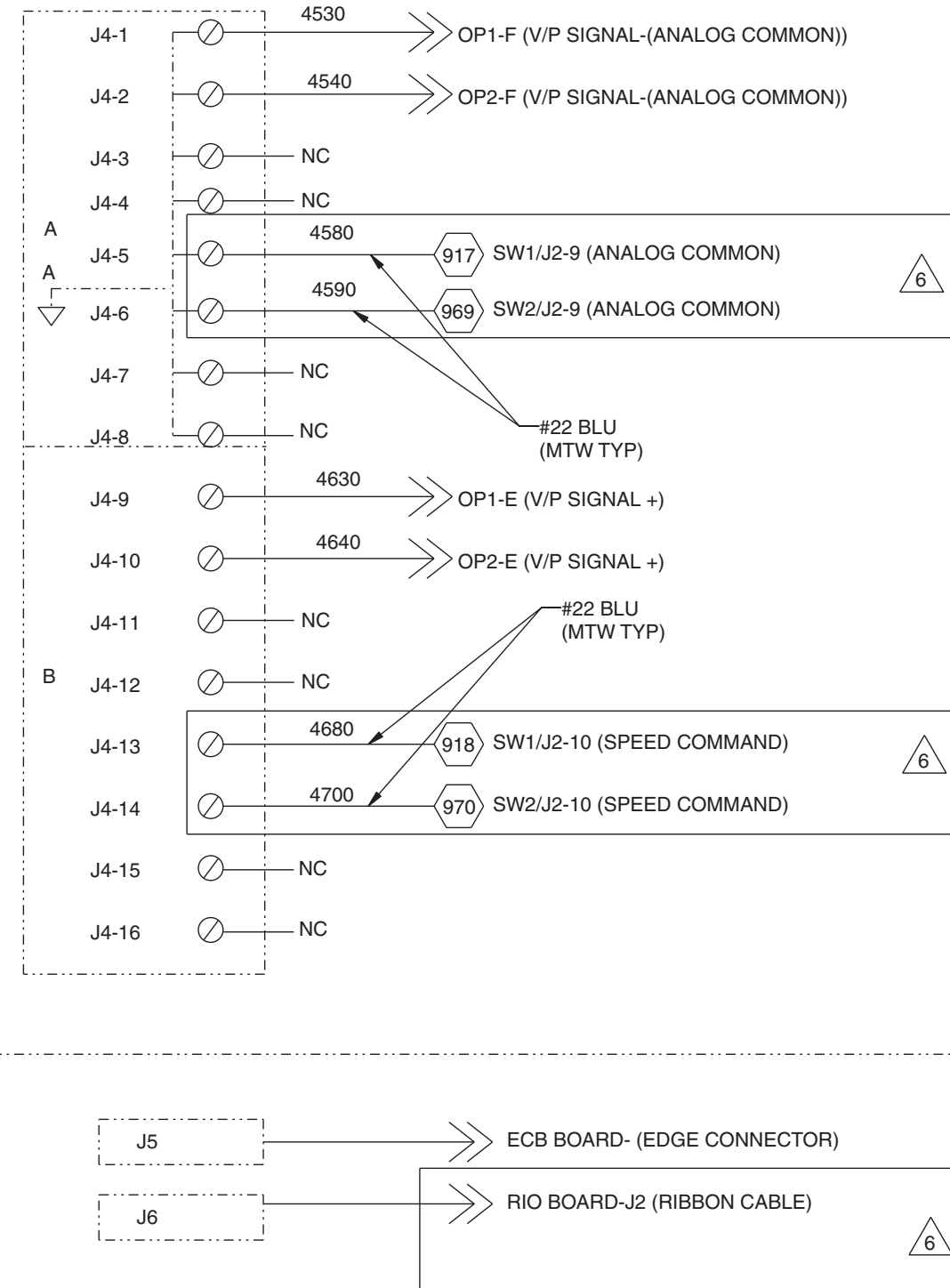
SYSTEM I/O BOARD CONNECTIONS (SIO)
(24V DIGITAL OUTPUTS)

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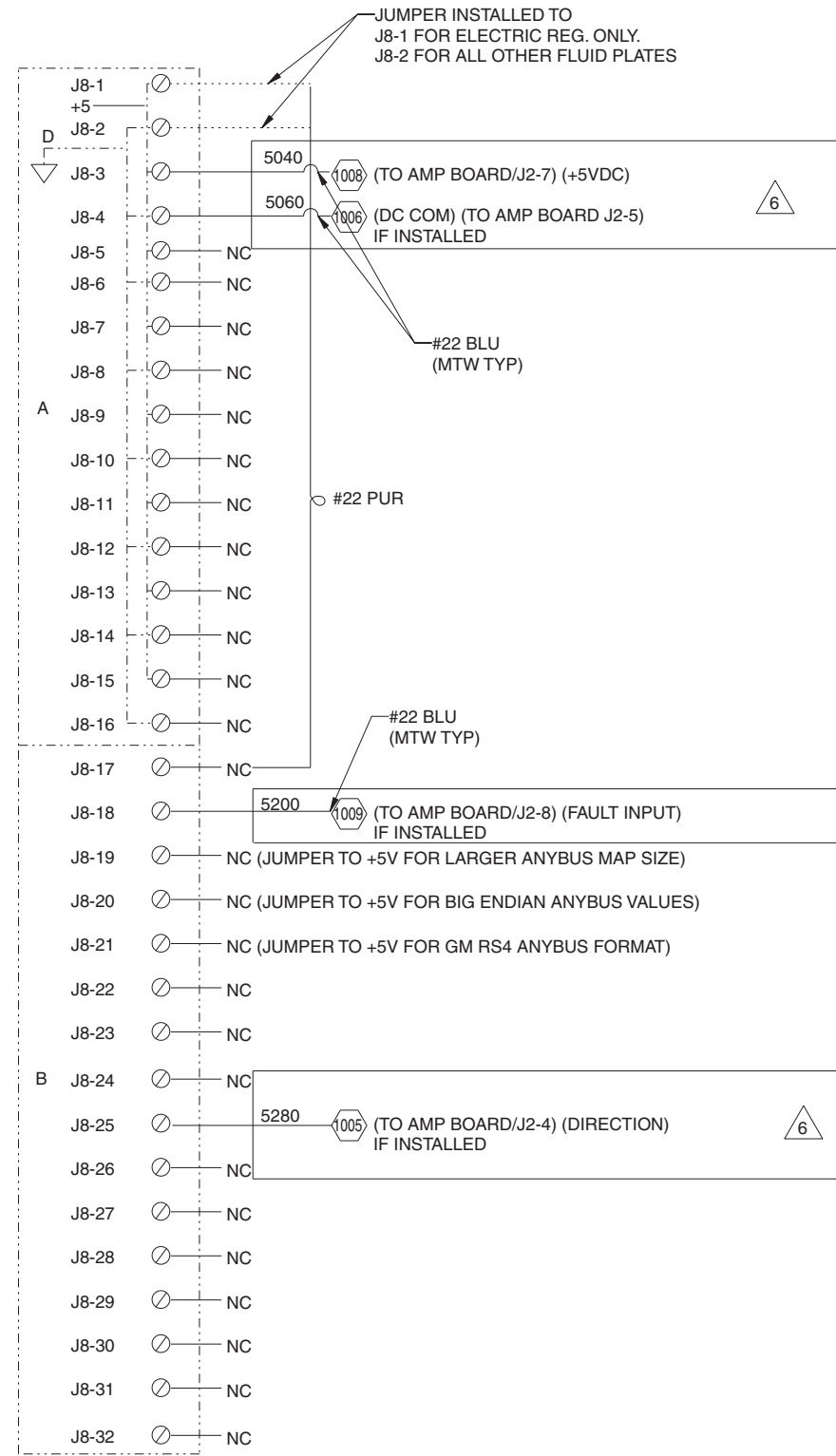
SYSTEM I/O BOARD CONNECTIONS (SIO)
(ANALOG OUTPUTS)

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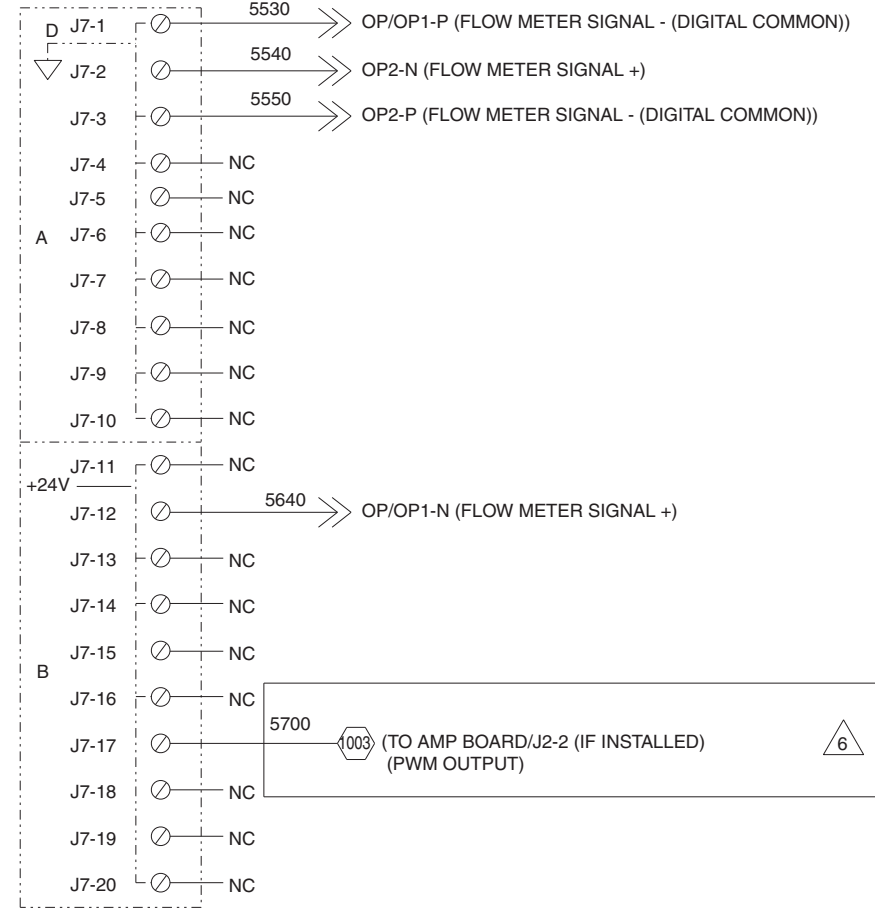
SYSTEM I/O BOARD CONNECTIONS (SIO)

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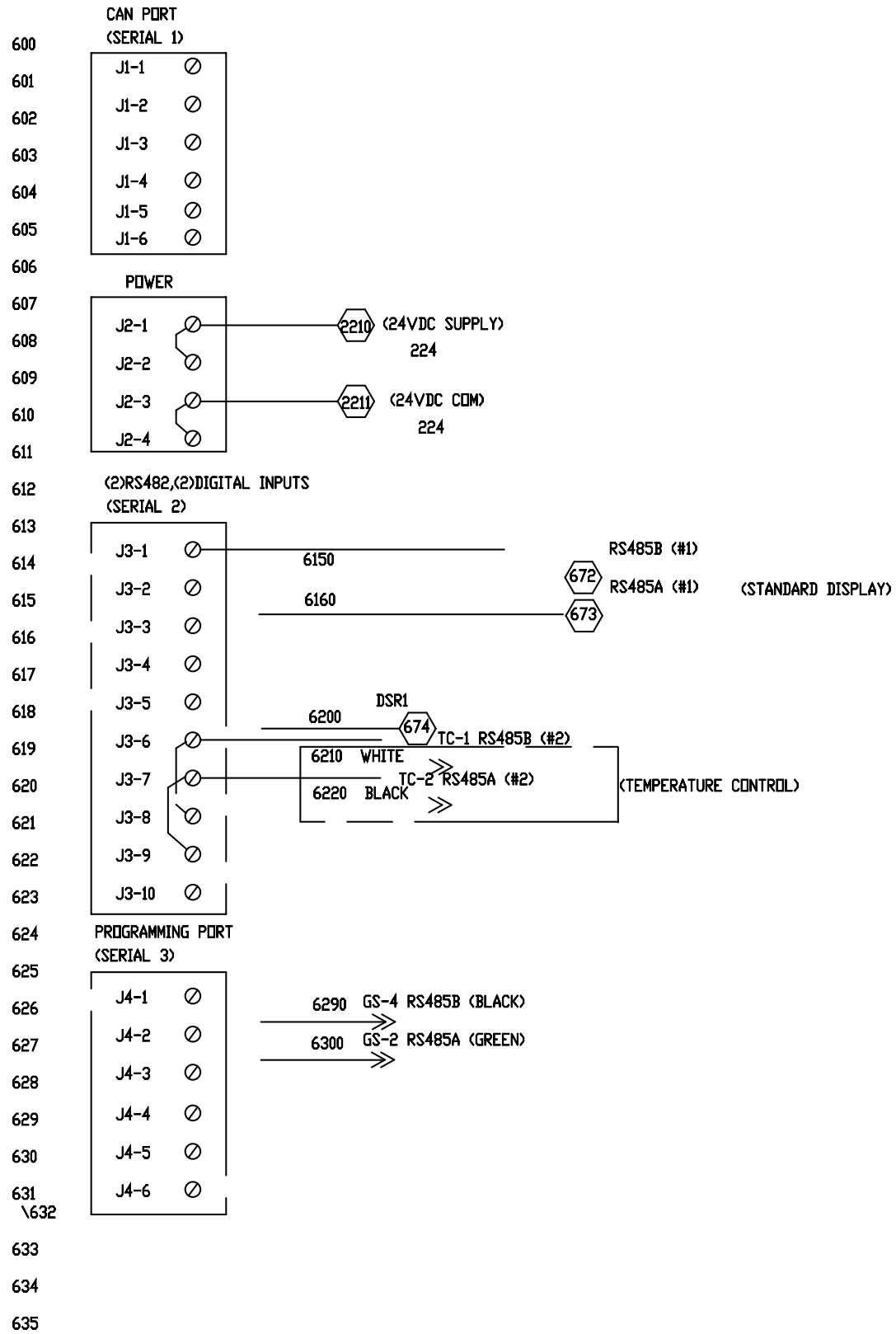


SYSTEM I/O BOARD CONNECTIONS (SIO)

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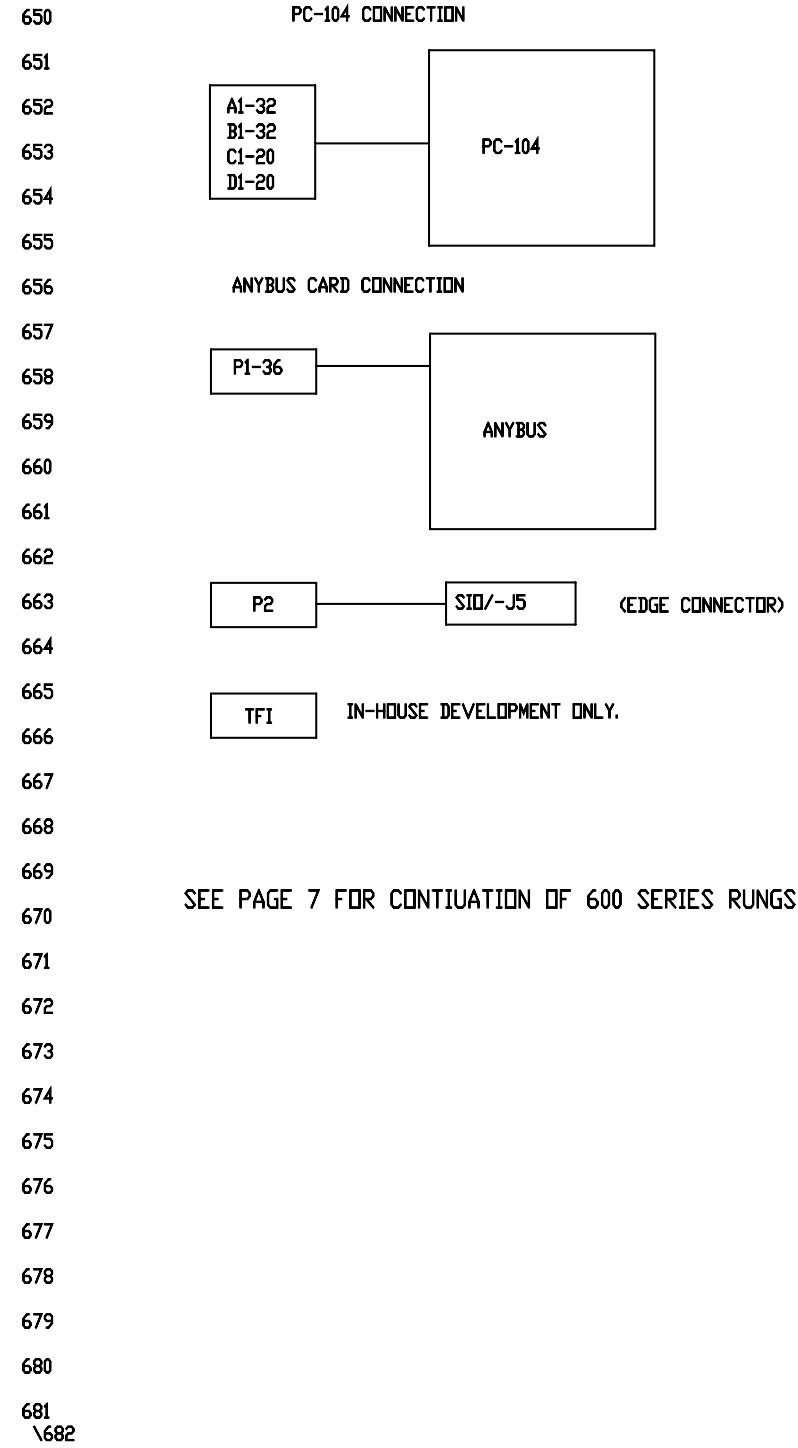


EXPANDED CONTROL BOARD (ECB) CONNECTIONS



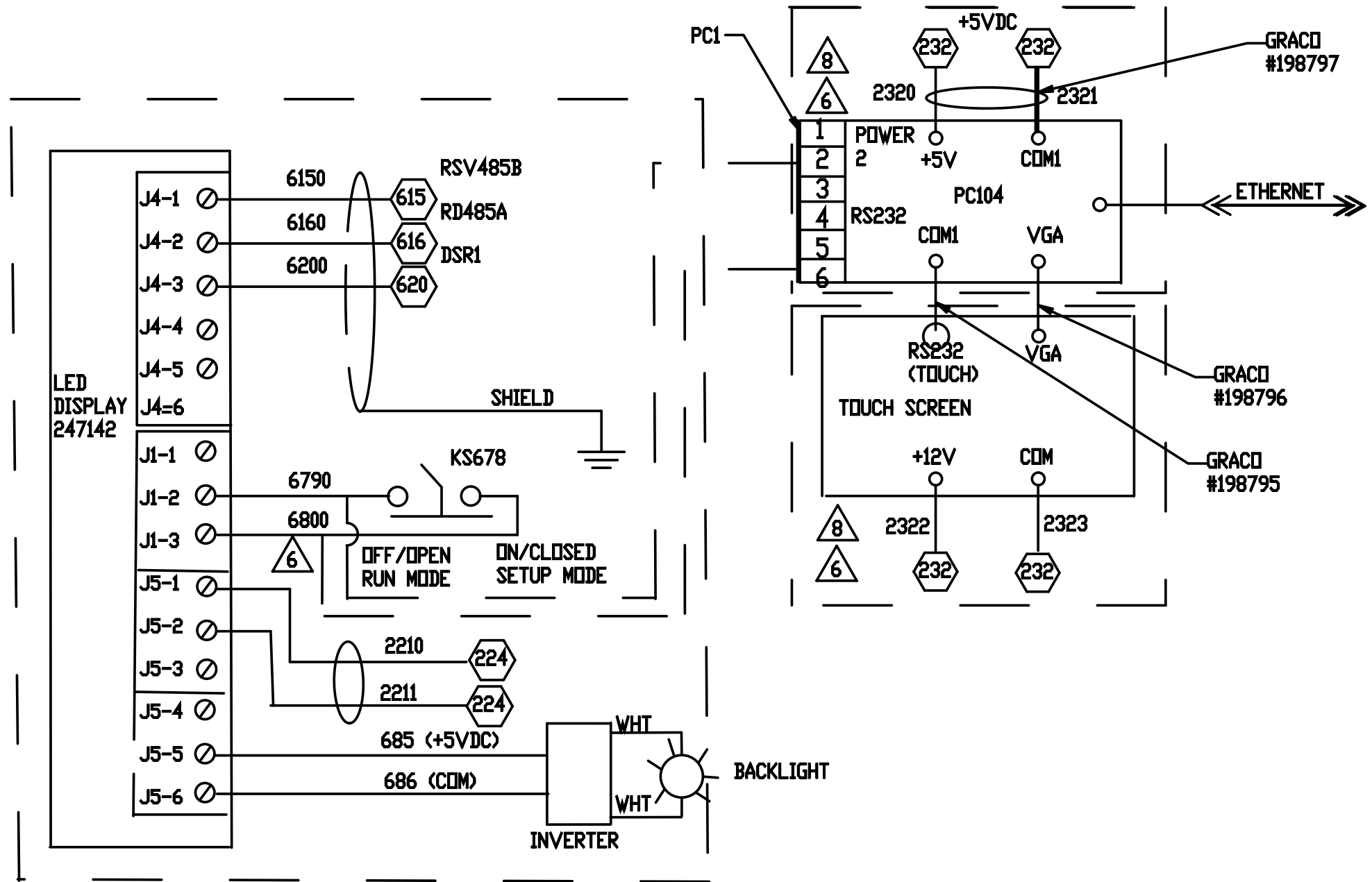
EXPANDED CONTROL BOARD (ECB) CONNECTIONS

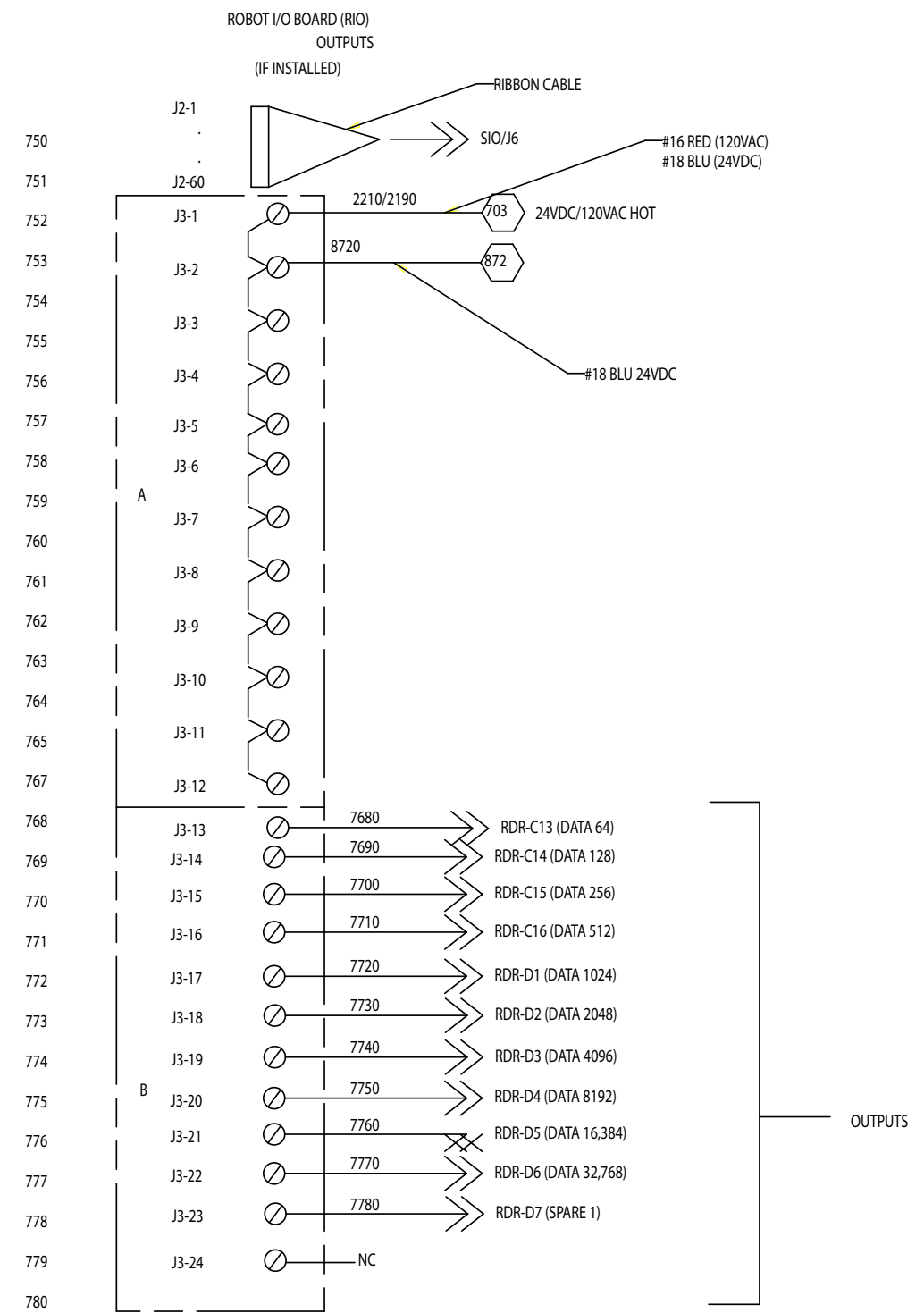
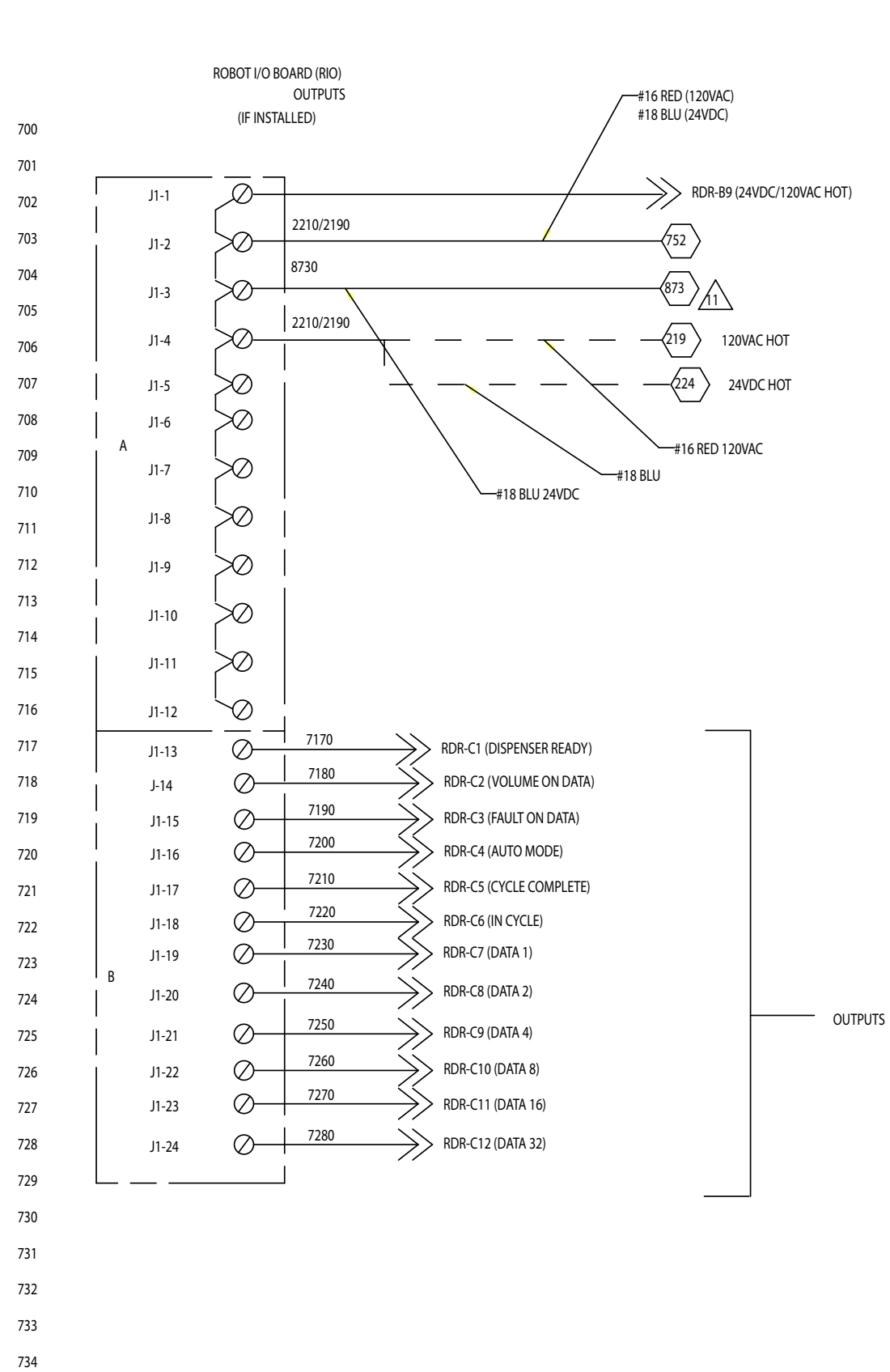
PC-104 BOARD/ANYBUS

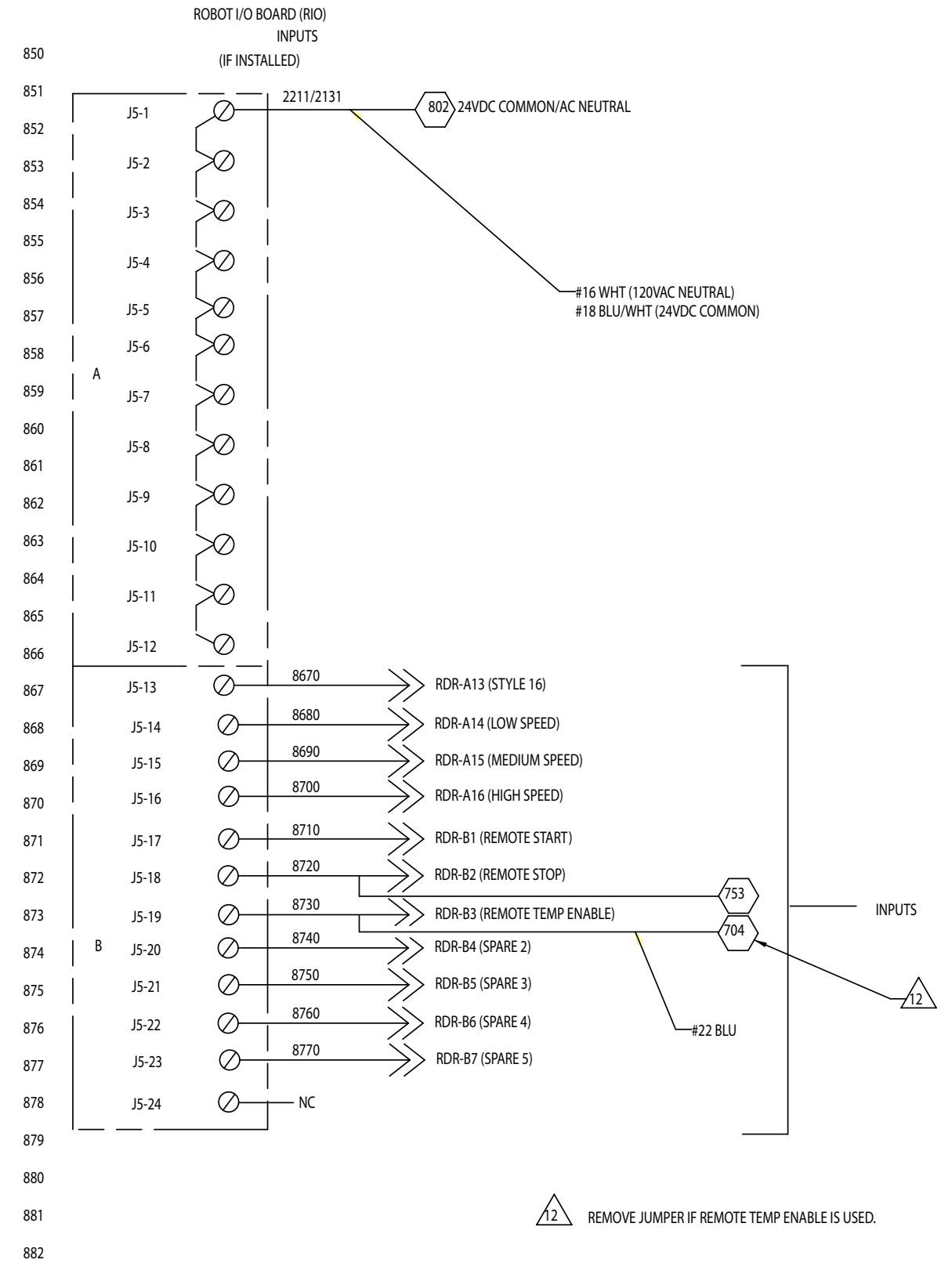
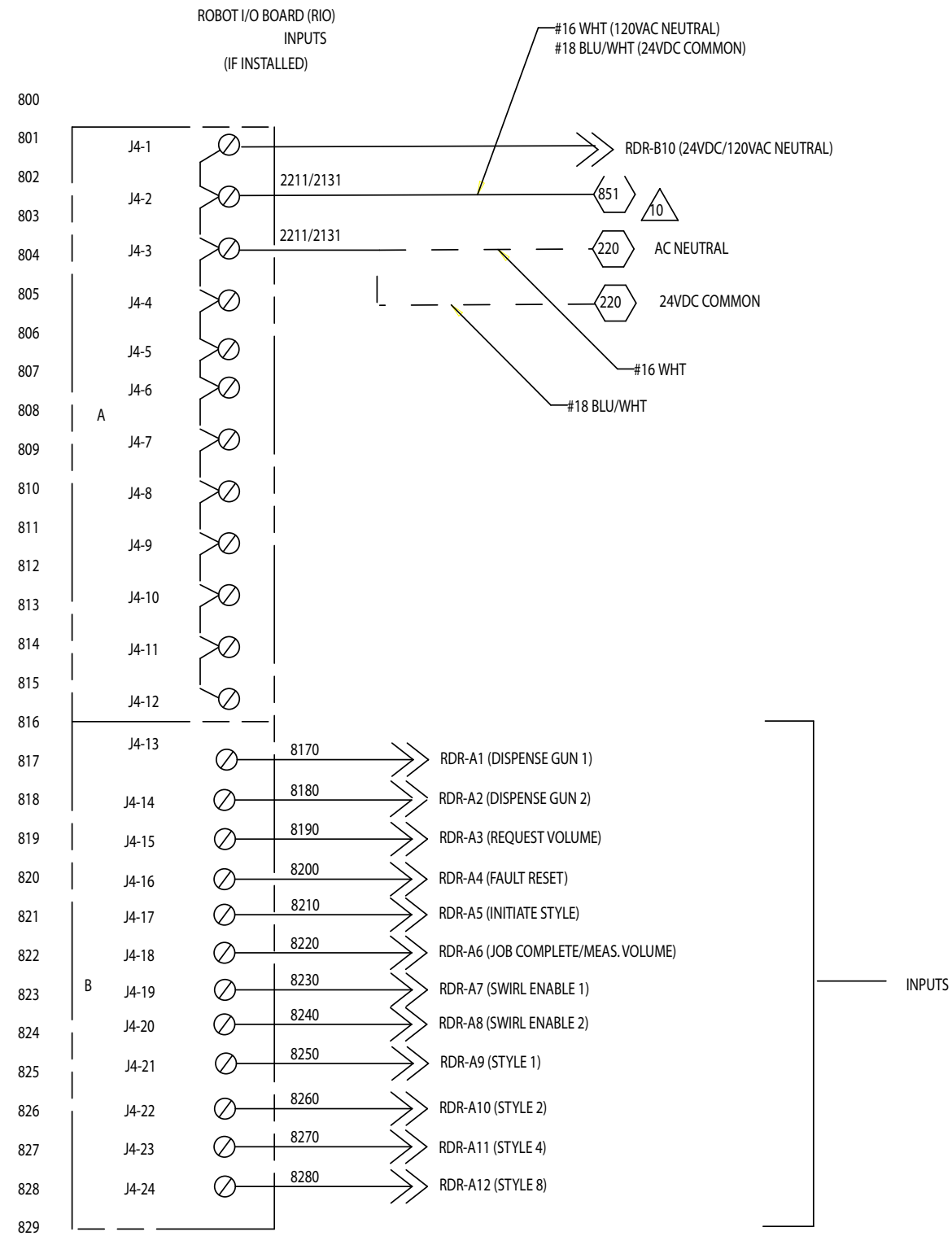


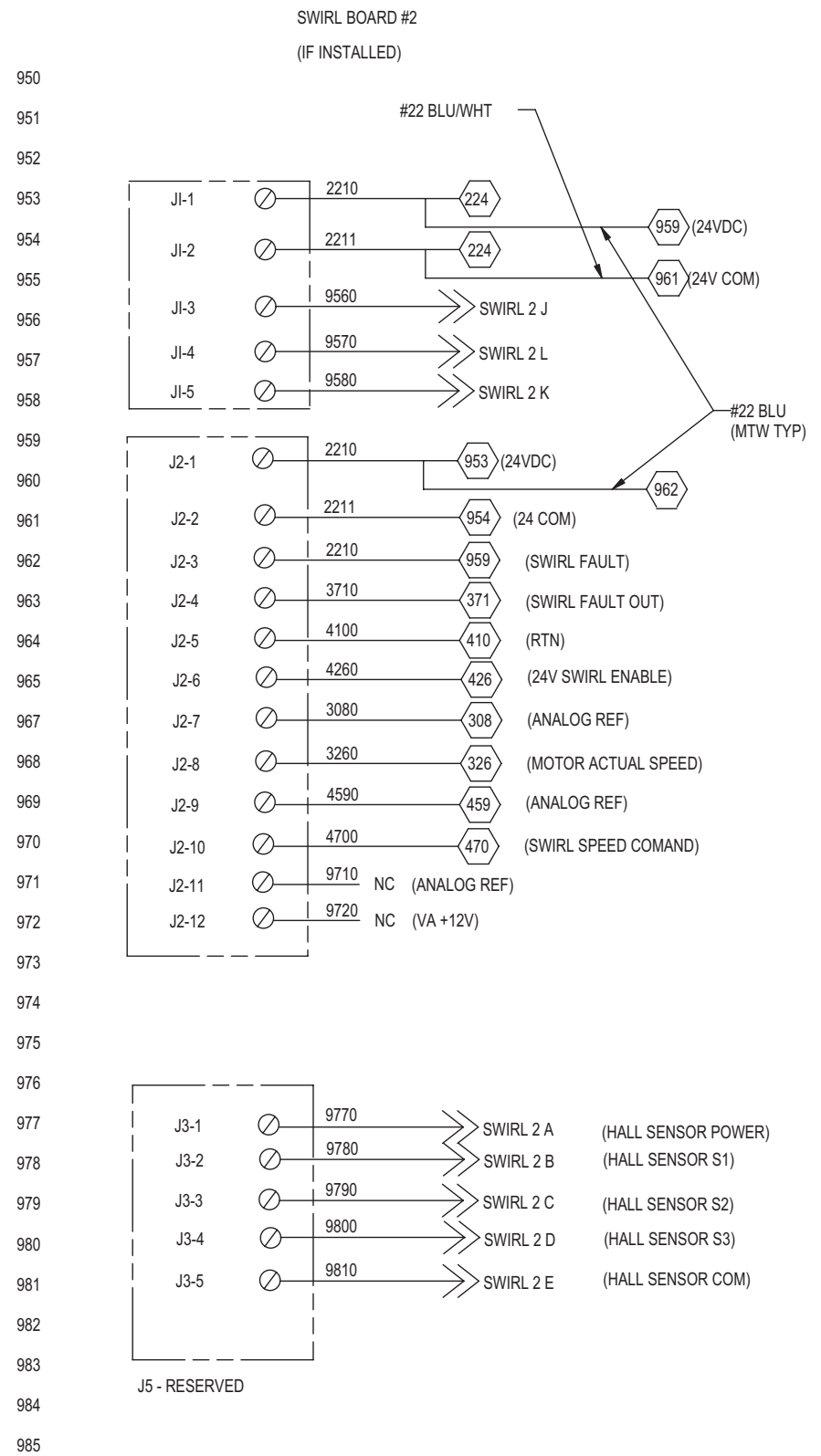
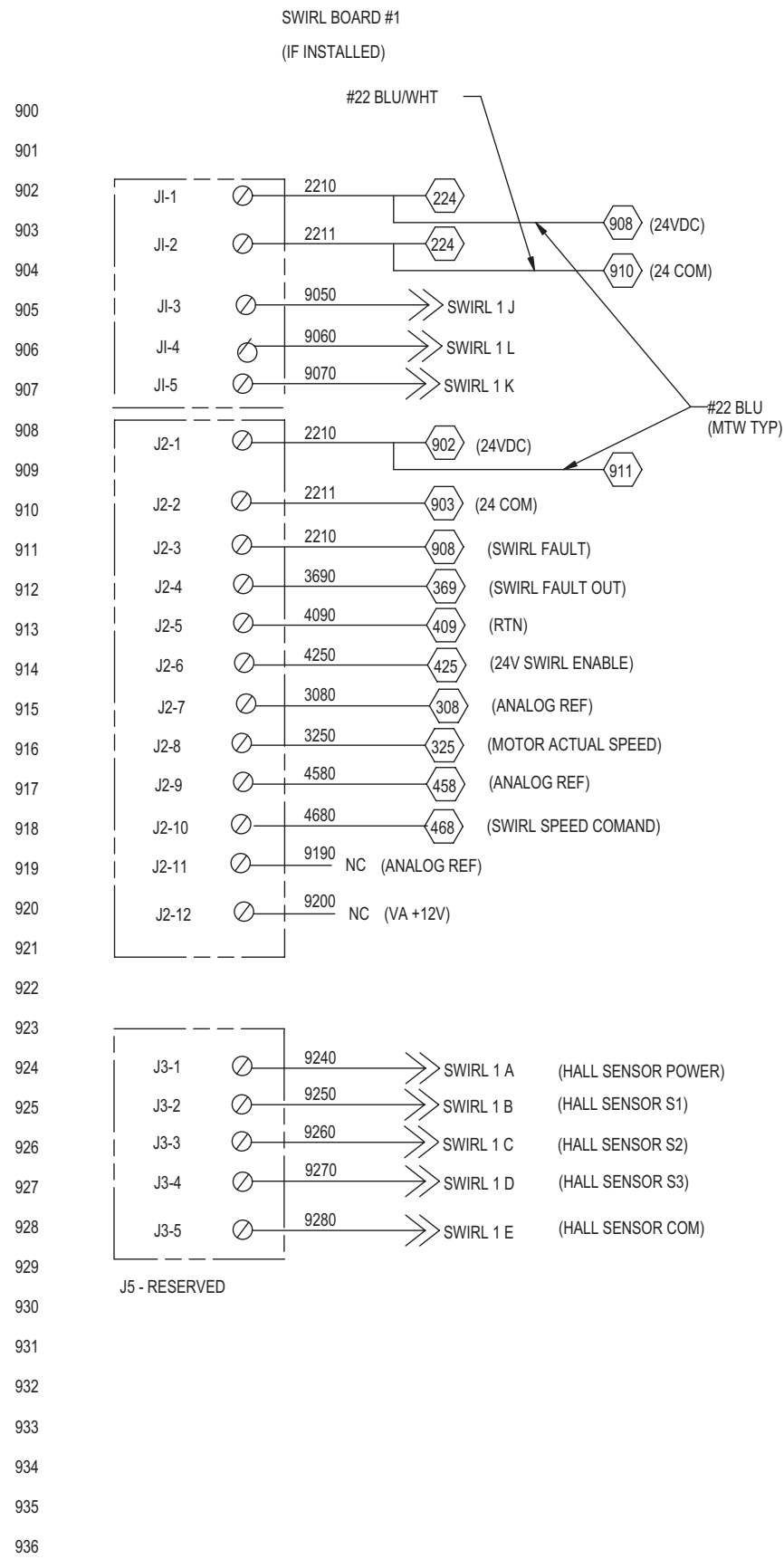
CONTINUATION OF 600 SERIES RUNGS

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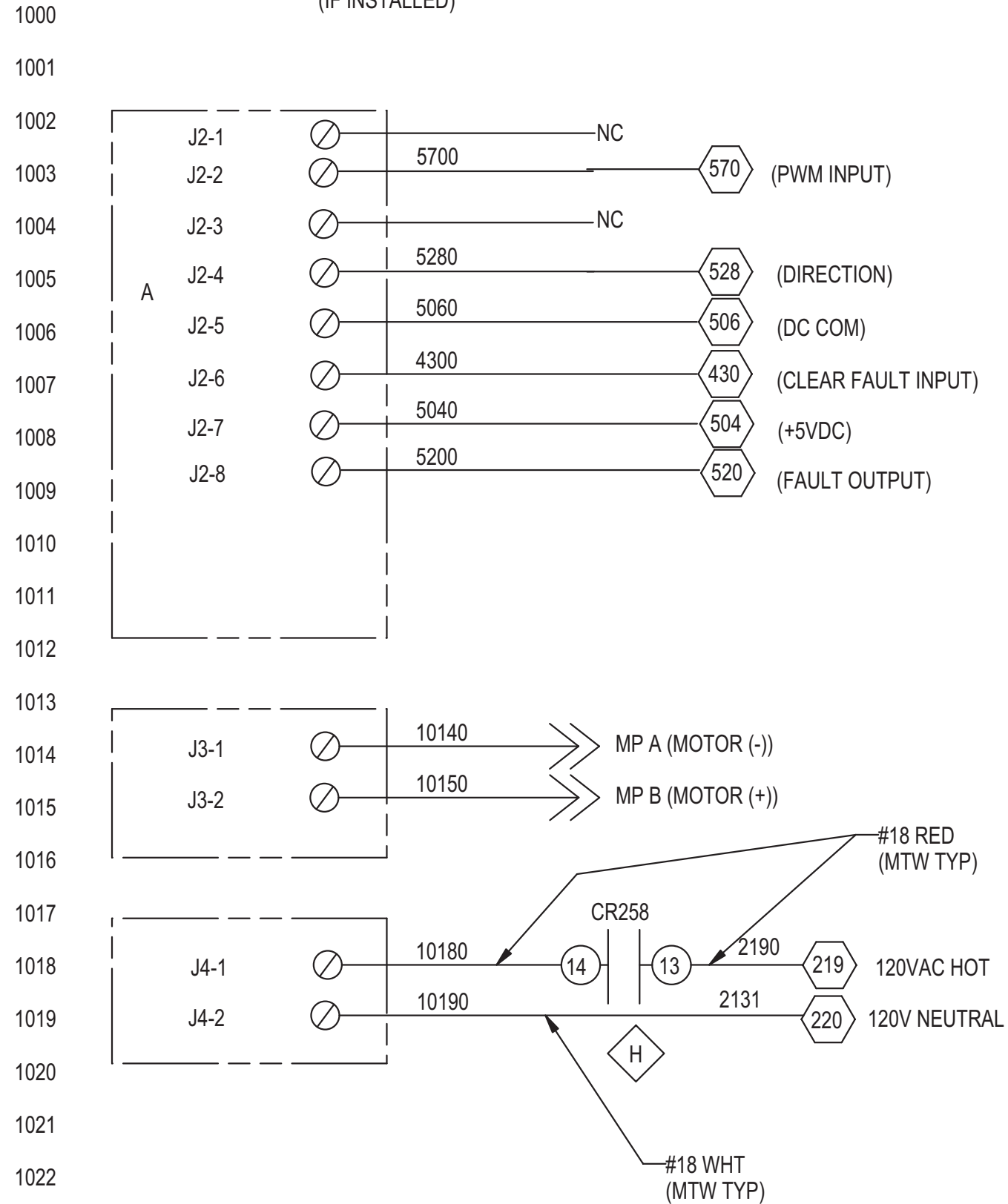






AMPLIFIER BOARD

(IF INSTALLED)



OP/OP1/OP2 CONNECTION TABLES (CONNECTIONS AT TOP PLATE OF CONTROL
(IF INSTALLED))

OP CONNECTOR			
OP	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A	24 VDC		2210
B	24 VDC COMMON (THRU PCR)	THRU PCR TO SIO J3-1	4031
C	GUN 1 SOLENOID	SIO J3-13	4180
D	CHASSIS GND & SHIELD CONNECTION	CHASSIS GND	GND
E	CLOSER SOLENOID	SIO J3-15	4210
F	GUN 2 SOLENOID (RECIRC)	SIO J3-14	4190
G	-	GND	GND
H	-	GND	GND
J	PRESS SENSE OUT (+)	SIO J1-13	3180
K	PRESS SENSE OUT (-) (ANALOG COMMON)	SIO J1-2	3040
L	PRESS SENSE IN (+)	SIO J1-14	3190
M	PRESS SENSE IN (-) (ANALOG COMMON)	SIO J1-2	3040
N	FLOW METER SIGNAL (+)	SIO J7-12	5640
P	FLOW METER SIGNAL (-) (DIGITAL COMMON)	SIO J7-1	5530
R	OPEN CABLE DETECT OUTPUT	SIO J3-16	4220
S	OPEN CABLE DETECT INPUT	SIO J2-13	3670

WIRE PAIRS: C/D, E/F, J/K, L/M, N/P

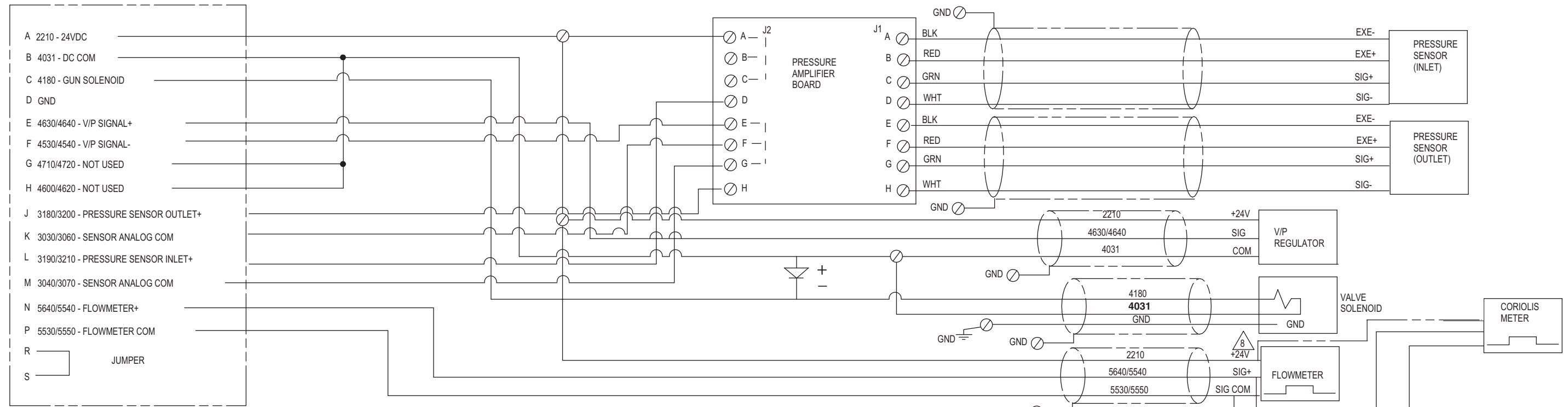
OP 1 CONNECTOR			
OP1	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A	24 VDC		2210
B	24 VDC COMMON (THRU PCR)	THRU PCR TO SIO J3-1	4031
C	GUN 1 SOLENOID	SIO J3-13	4180
D	CHASSIS GND & SHIELD CONNECTION	CHASSIS GND	GND
E	V/P SIGNAL (+)	SIO J4-9	4630
F	V/P SIGNAL (-) (ANALOG COMMON)	SIO J4-1	4530
G	-	GND	GND
H	-	GND	GND
J	PRESS SENSE OUT (+)	SIO J1-13	3180
K	PRESS SENSE OUT (-) (ANALOG COMMON)	SIO J1-1	3030
L	PRESS SENSE IN (+)	SIO J1-14	3190
M	PRESS SENSE IN (-) (ANALOG COMMON)	SIO J1-2	3040
N	FLOW METER SIGNAL (+)	SIO J7-12	5640
P	FLOW METER SIGNAL (-) (DIGITAL COMMON)	SIO J7-1	5530
R	OPEN CABLE DETECT OUTPUT	SIO J3-16	4220
S	OPEN CABLE DETECT INPUT	SIO J2-13	3670

WIRE PAIRS: E/F, J/K, L/M, N/P

OP 2 CONNECTOR			
OP2	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A	24 VDC		2210
B	24 VDC COMMON (THRU PCR)	THRU PCR TO SIO J3-1	4031
C	GUN 1 SOLENOID	SIO J3-14	4190
D	CHASSIS GND & SHIELD CONNECTION	CHASSIS GND	GND
E	V/P SIGNAL (+)	SIO J4-10	4640
F	V/P SIGNAL (-) (ANALOG COMMON)	SIO J4-2	4540
G	-	GND	GND
H	-	GND	GND
J	PRESS SENSE OUT (+)	SIO J1-15	3200
K	PRESS SENSE OUT (-) (ANALOG COMMON)	SIO J1-4	3060
L	PRESS SENSE IN (+)	SIO J1-16	3210
M	PRESS SENSE IN (-) (ANALOG COMMON)	SIO J1-4	3070
N	FLOW METER SIGNAL (+)	SIO J7-2	5540
P	FLOW METER SIGNAL (-) (DIGITAL COMMON)	SIO J7-3	5550
R	OPEN CABLE DETECT OUTPUT	SIO J3-17	4230
S	OPEN CABLE DETECT INPUT	SIO J2-14	3680

WIRE PAIRS: E/F, J/K, L/M, N/P

PNEUMATIC FLUID PLATE ELECTRICAL CONNECTIONS (OP1)

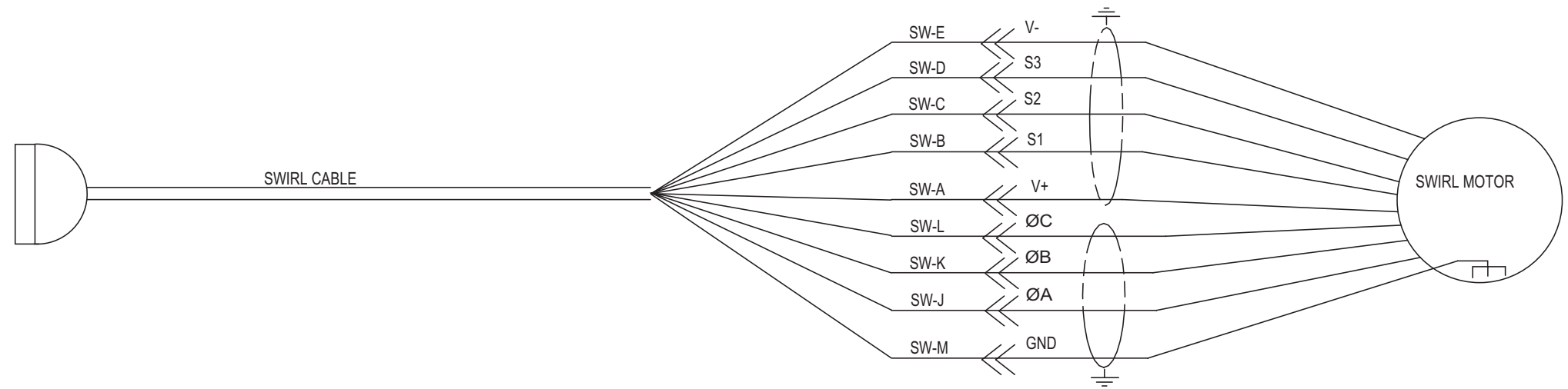


OP CONNECTOR
AT J-BOX
OF FLUID PLATE

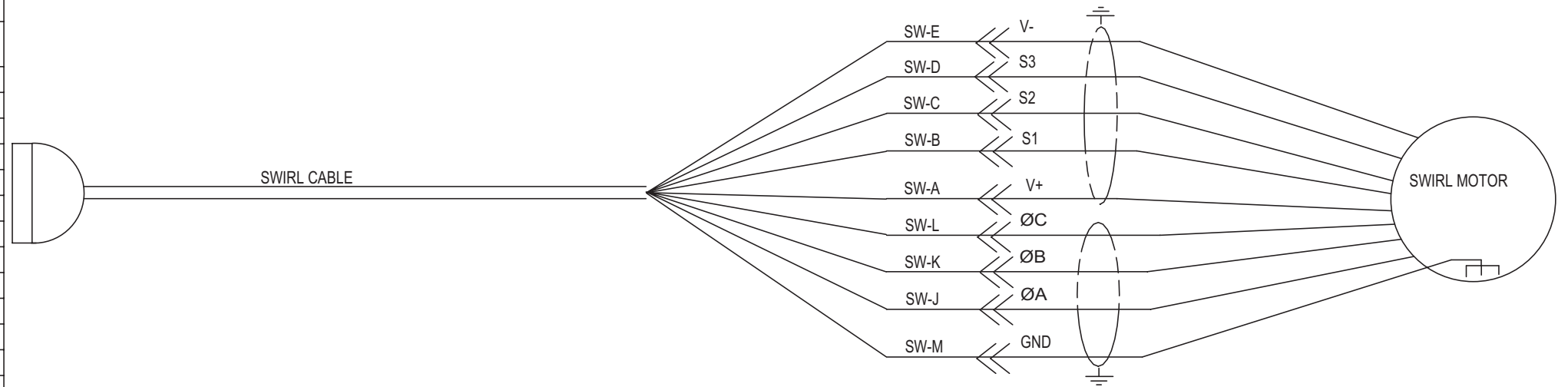
NOTES:
8 G3000 SRZ40 METERS ONLY

SWIRL CONNECTION TABLES (CONNECTIONS AT TOP PLATE OF CONTROL)
(IF INSTALLED)

SWIRL 1 CONNECTOR			
SW1	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A	HALL SENSOR POWER	SWIRL 1 J3-1	9240
B	HALL SENSOR S1	SWIRL 1 J3-2	9250
C	HALL SENSOR S2	SWIRL 1 J3-3	9260
D	HALL SENSOR S3	SWIRL 1 J3-4	9270
E	HALL SENSOR COMMON	SWIRL 1 J3-5	9280
F	-	-	-
G	-	-	-
H	-	-	-
J	MOTOR PHASE A	SWIRL 1 J1-3	9050
K	MOTOR PHASE B	SWIRL 1 J1-5	9070
L	MOTOR PHASE C	SWIRL 1 J1-4	9060
M	CHASSIS GND	CHASSIS GND	GND
WIRE PAIRS: J/L/K AND A/B/C/D/E.			



SWIRL 2 CONNECTOR			
SW2	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A	HALL SENSOR POWER	SWIRL 2 J3-1	9770
B	HALL SENSOR S1	SWIRL 2 J3-2	9780
C	HALL SENSOR S2	SWIRL 2 J3-3	9790
D	HALL SENSOR S3	SWIRL 2 J3-4	9800
E	HALL SENSOR COMMON	SWIRL 2 J3-5	9810
F	-	-	-
G	-	-	-
H	-	-	-
J	MOTOR PHASE A	SWIRL 2 J1-3	9560
K	MOTOR PHASE B	SWIRL 2 J1-5	9580
L	MOTOR PHASE C	SWIRL 2 J1-4	9570
M	CHASSIS GND	CHASSIS GND	GND
WIRE PAIRS: J/L/K AND A/B/C/D/E.			



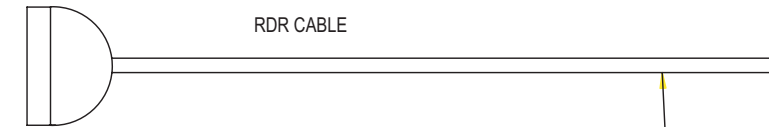
ROBOT DIGITAL/ANALOG CONNECTION TABLES (CONNECTIONS AT TOP PLATE OF CONTROL)
(IF INSTALLED)

RDR CONNECTOR			
RDR	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
A1	DISPENSE GUN 1	RIO J4-13	8170
A2	DISPENSE GUN 2	RIO J4-14	8180
A3	REQUEST VOLUME	RIO J4-15	8190
A4	FAULT RESET	RIO J4-16	8200
A5	INITIATE STYLE	RIO J4-17	8210
A6	JOB COMPLETE/MEASURE VOLUME	RIO J4-18	8220
A7	SWIRL ENABLE 1	RIO J4-19	8230
A8	SWIRL ENABLE 2	RIO J4-20	8240
A9	STYLE 1	RIO J4-21	8250
A10	STYLE 2	RIO J4-22	8260
A11	STYLE 4	RIO J4-23	8270
A12	STYLE 8	RIO J4-24	8280
A13	STYLE 16	RIO J5-13	8670
A14	LOW SPEED	RIO J5-14	8680
A15	MEDIUM SPEED	RIO J5-15	8690
A16	HIGH SPEED	RIO J5-16	8700
B1	REMOTE START	RIO J5-17	8710
B2	REMOTE STOP	RIO J5-18	8720
B3	REMOTE TEMP START	RIO J5-19	8730
B4	SPARE 2	RIO J5-20	8740
B5	SPARE 3	RIO J5-21	8750
B6	SPARE 4	RIO J5-22	8760
B7	SPARE 5	RIO J5-23	8770
B8	-	-	-
B9	24VDC/120VAC HOT	RIO J1-1	2210
B10	24 V COMMON/120VAC HEUTRAL	RIO J4-1	2211
B11	SPARE	-	
B12	SPARE	-	
B13	SPARE	-	
B14	SPARE	-	
B15	SPARE	-	
B16	SPARE	-	



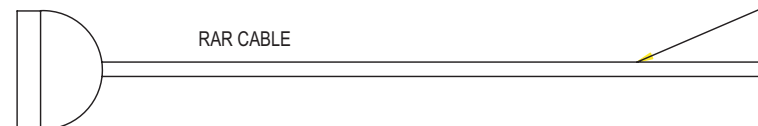
△ B9 AND B10 SUPPLIED BY PFLOXL CONTROL

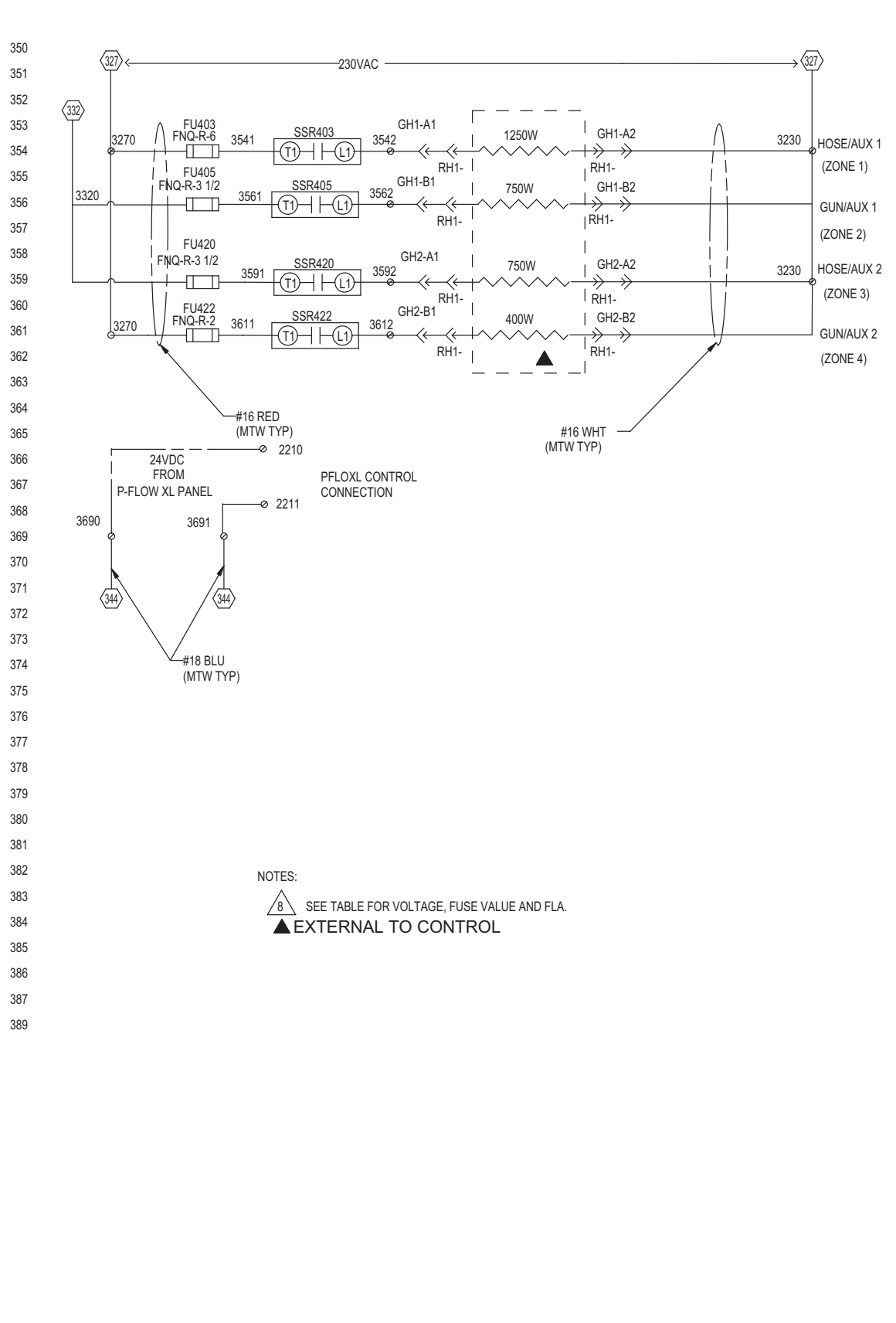
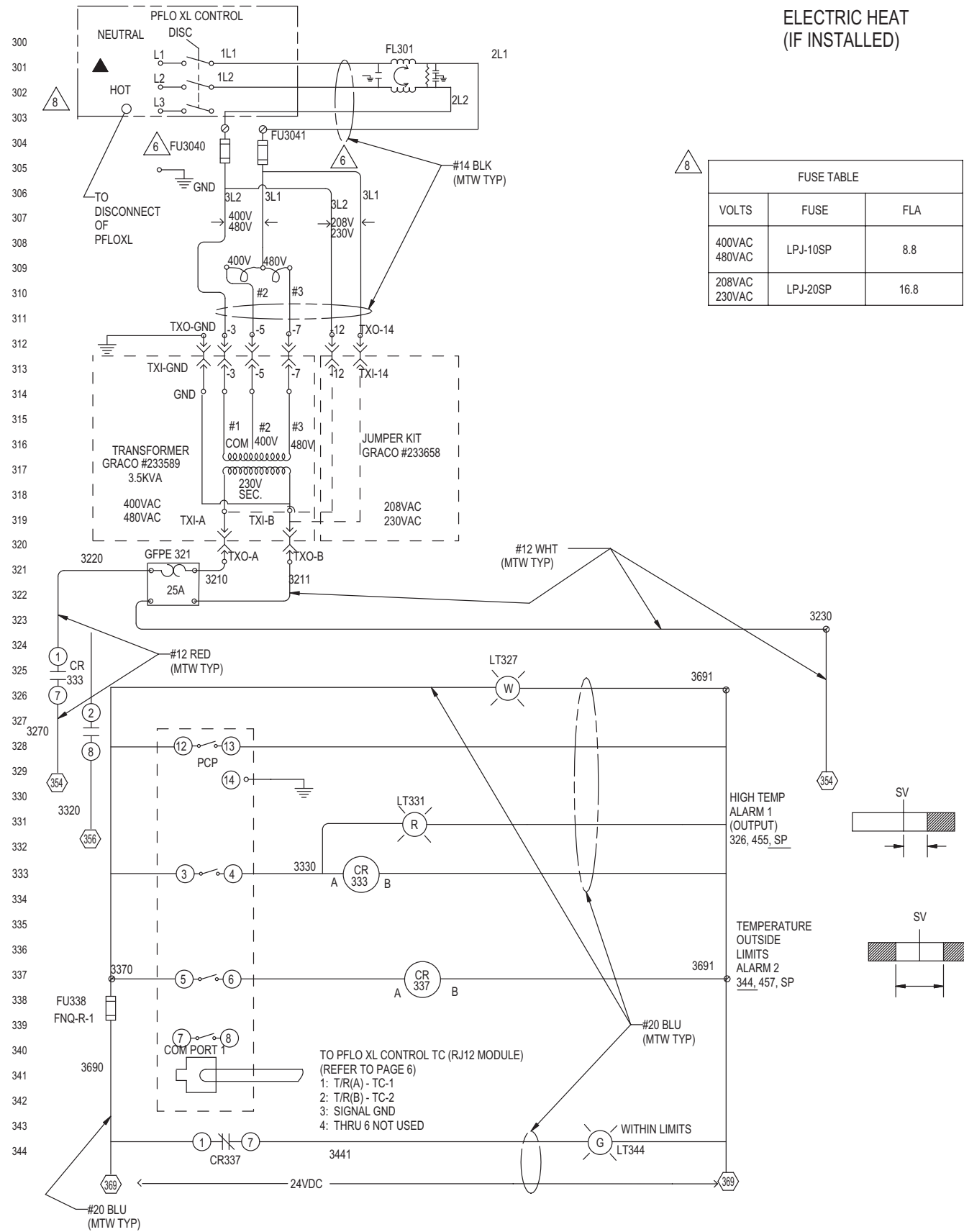
RDR CONNECTOR (CONT)			
RDR	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
C1	DISPENSER READY	RIO J1-13	7170
C2	VOLUME ON DATA	RIO J1-14	7180
C3	FAULT ON DATA	RIO J1-15	7190
C4	AUTO MODE	RIO J1-16	7200
C5	CYCLE COMPLETE	RIO J1-17	7210
C6	IN CYCLE	RIO J1-18	7220
C7	DATA 1	RIO J1-19	7230
C8	DATA 2	RIO J1-20	7240
C9	DATA 4	RIO J1-21	7250
C10	DATA 8	RIO J1-22	7260
C11	DATA 16	RIO J1-23	7270
C12	DATA 32	RIO J1-24	7280
C13	DATA 64	RIO J3-13	7680
C14	DATA 128	RIO J3-14	7690
C15	DATA 256	RIO J3-15	7700
C16	DATA 512	RIO J3-16	7710
D1	DATA 1024	RIO J3-17	7720
D2	DATA 2048	RIO J3-18	7730
D3	DATA 4096	RIO J3-19	7740
D4	DATA 8192	RIO J3-20	7750
D5	DATA 16,384	RIO J3-21	7760
D6	DATA 32,768	RIO J3-22	7770
D7	Flow Mode	RIO J3-23	7780
D8	-	-	
D9	-	-	
D10	-	-	
D11	SPARE	-	
D12	SPARE	-	
D13	SPARE	-	
D14	SPARE	-	
D15	PCR	-	2680
D16	PCR	-	2681



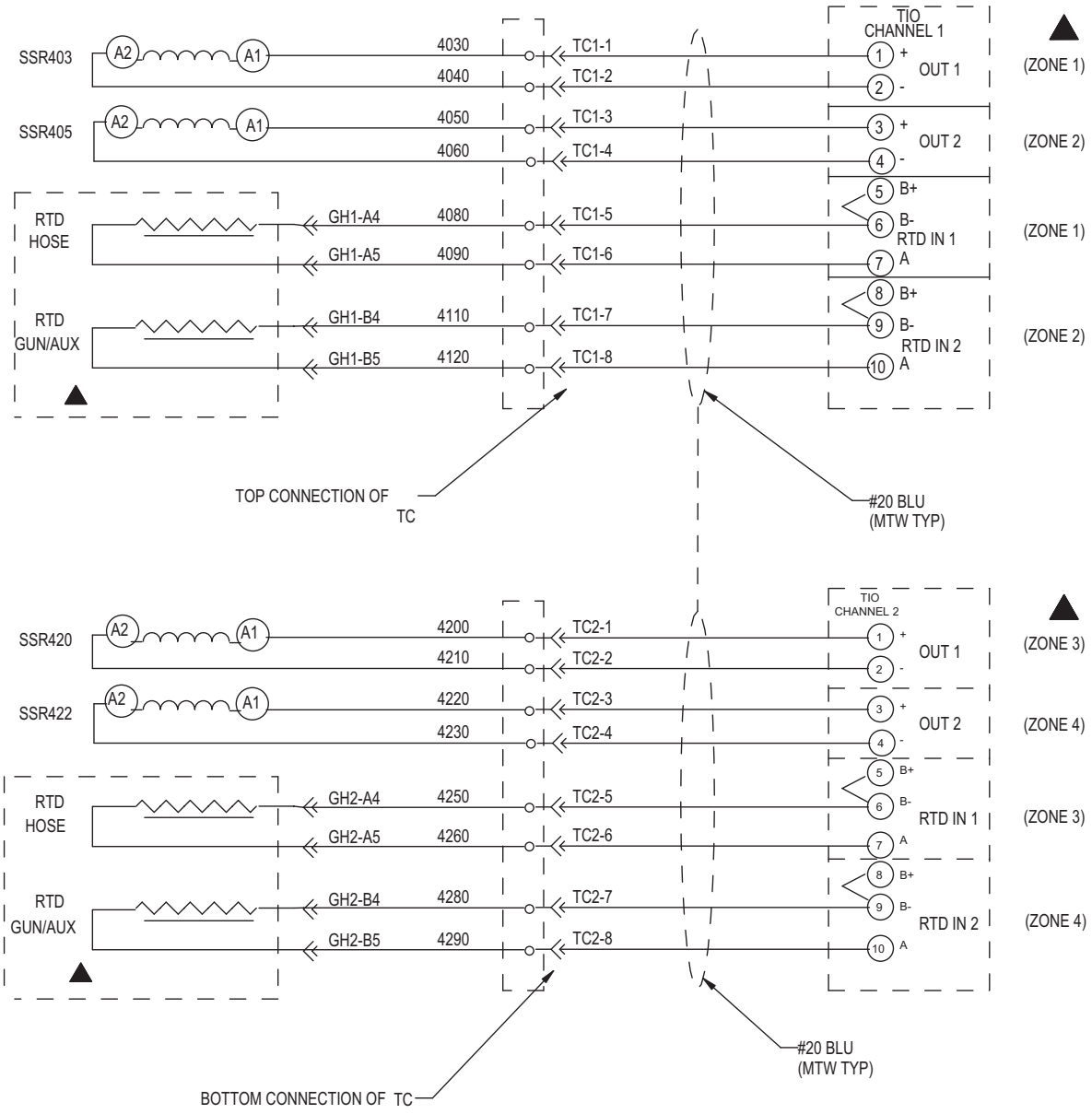
CONNECTIONS TO ROBOT CONTROL REFERENCE MANUAL #309374 (PFLOXL) FOR DETAILS

RAR CONNECTOR			
RAR	SIGNAL DESCRIPTION	CONNECTION	WIRE I.D.
1	ROBOT ANALOG FLOW COMMAND 1	SIO J1-21	3280
2	ANALOG COMMON	SIO J1-12	3160
3	ROBOT ANALOG FLOW COMMAND 2	SIO J1-22	3290
4	ANALOG COMMON	SIO J1-12	3160
5	SWIRL SPEED COMMAND 1	SIO J1-17	3220
6	ANALOG COMMON	SIO J1-8	3110
7	SWIRL SPEED COMMAND 2	SIO J1-18	3230
8	ANALOG COMMON	SIO J1-8	3110
9	-	-	-
10	-	-	-
GND	GND		GND





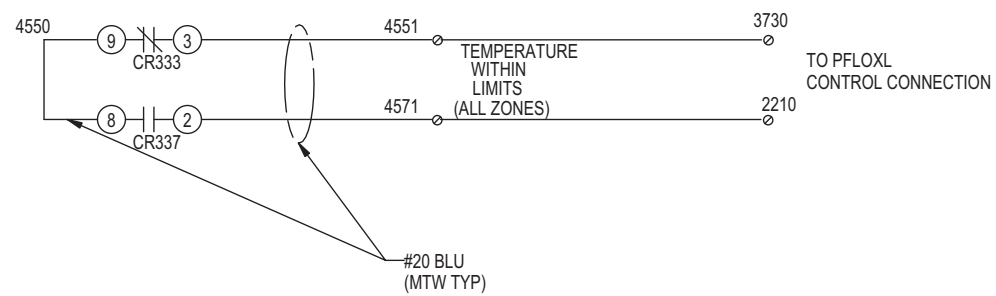
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▲ EXTERNAL TO CONTROL

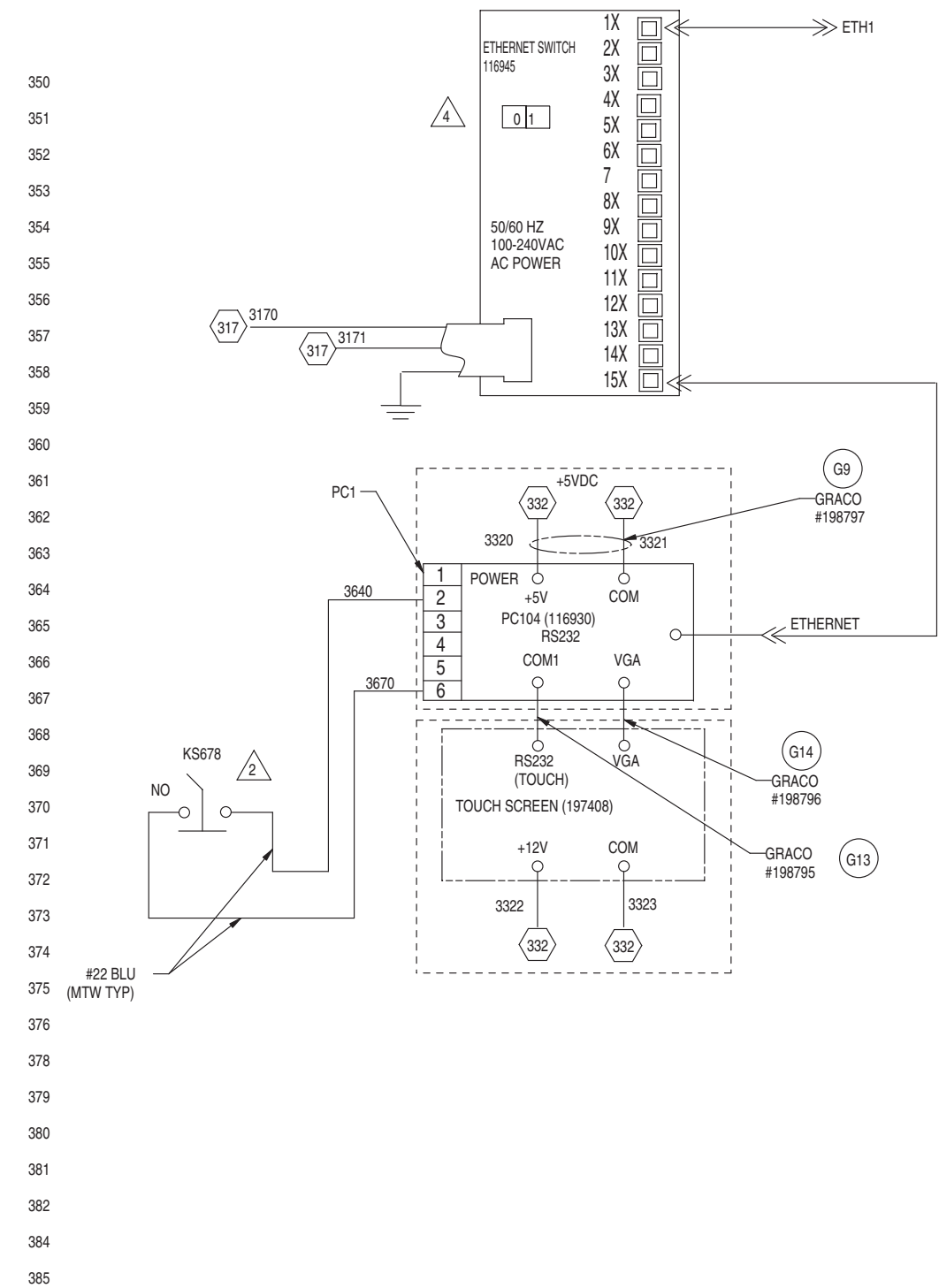
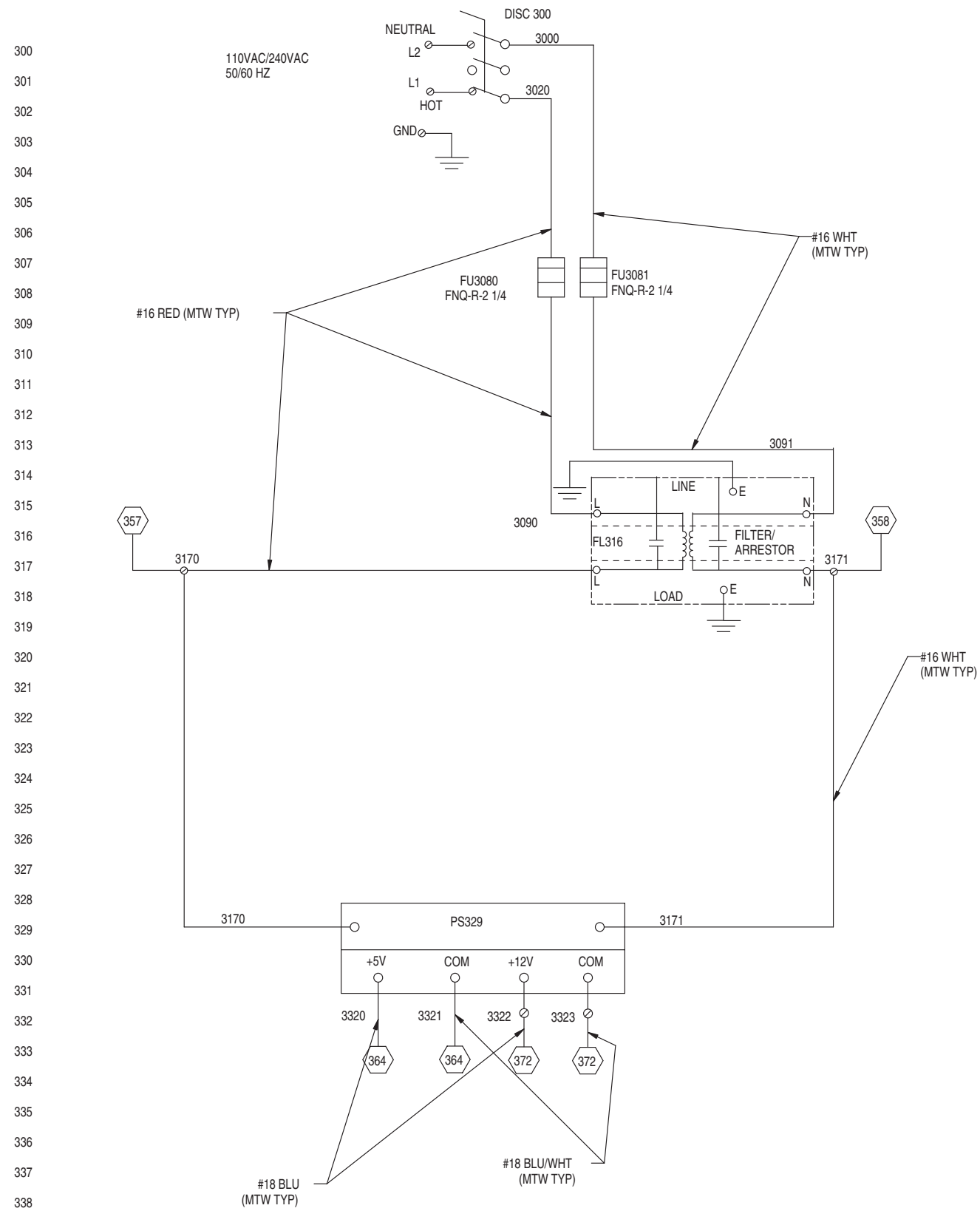
ELECTRIC HEAT (CONT)
(IF USED)

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- ▲ TYPICAL HEATER CONNECTION
- ZONE 1 - INLET HOSE TO FLUID PLATE
 - ZONE 2 - FLUID PLATE HEATER
 - ZONE 3 - OUTLET HOSE TO VALVE
 - ZONE 4 - ELECTRIC HEATED VALVE

Remote Control Assembly Schematic



Graco Standard Warranty

Graco warrants all equipment referenced in this document which is manufactured by Graco and bearing its name to be free from defects in material and workmanship on the date of sale to the original purchaser for use. With the exception of any special, extended, or limited warranty published by Graco, Graco will, for a period of twelve months from the date of sale, repair or replace any part of the equipment determined by Graco to be defective. This warranty applies only when the equipment is installed, operated and maintained in accordance with Graco's written recommendations.

This warranty does not cover, and Graco shall not be liable for general wear and tear, or any malfunction, damage or wear caused by faulty installation, misapplication, abrasion, corrosion, inadequate or improper maintenance, negligence, accident, tampering, or substitution of non-Graco component parts. Nor shall Graco be liable for malfunction, damage or wear caused by the incompatibility of Graco equipment with structures, accessories, equipment or materials not supplied by Graco, or the improper design, manufacture, installation, operation or maintenance of structures, accessories, equipment or materials not supplied by Graco.

This warranty is conditioned upon the prepaid return of the equipment claimed to be defective to an authorized Graco distributor for verification of the claimed defect. If the claimed defect is verified, Graco will repair or replace free of charge any defective parts. The equipment will be returned to the original purchaser transportation prepaid. If inspection of the equipment does not disclose any defect in material or workmanship, repairs will be made at a reasonable charge, which charges may include the costs of parts, labor, and transportation.

THIS WARRANTY IS EXCLUSIVE, AND IS IN LIEU OF ANY OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO WARRANTY OF MERCHANTABILITY OR WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE.

Graco's sole obligation and buyer's sole remedy for any breach of warranty shall be as set forth above. The buyer agrees that no other remedy (including, but not limited to, incidental or consequential damages for lost profits, lost sales, injury to person or property, or any other incidental or consequential loss) shall be available. Any action for breach of warranty must be brought within two (2) years of the date of sale.

GRACO MAKES NO WARRANTY, AND DISCLAIMS ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, IN CONNECTION WITH ACCESSORIES, EQUIPMENT, MATERIALS OR COMPONENTS SOLD BUT NOT MANUFACTURED BY GRACO. These items sold, but not manufactured by Graco (such as electric motors, switches, hose, etc.), are subject to the warranty, if any, of their manufacturer. Graco will provide purchaser with reasonable assistance in making any claim for breach of these warranties.

In no event will Graco be liable for indirect, incidental, special or consequential damages resulting from Graco supplying equipment hereunder, or the furnishing, performance, or use of any products or other goods sold hereto, whether due to a breach of contract, breach of warranty, the negligence of Graco, or otherwise.

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Graco Information

TO PLACE AN ORDER, contact your Graco distributor, or call this number to identify the distributor closest to you:

1-800-328-0211 Toll Free

612-623-6921

612-378-3505 Fax

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MM 309364

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Printed in USA Revised 12/2005