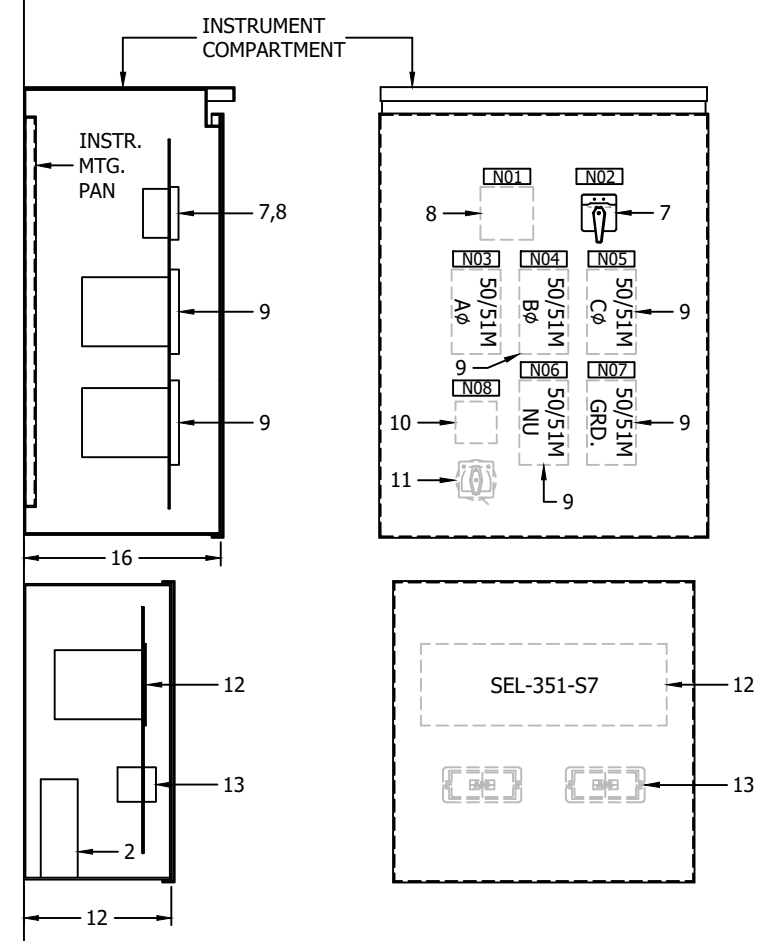


FRONT VIEW

NOTES:

- 1) ALL DIMENSIONS IN INCHES, UNLESS OTHERWISE NOTED.
- 2) NEMA-3R BOLTED CONSTRUCTION OF #10 & #12 GA. SHEET STEEL.
- 3) UNIT FINISH: MUNSELL GREEN.
- 4) KIRK KEY INTERLOCKS ARE NOT PROVIDED, PER CUSTOMERS REQUEST. SWITCH HANDLE CAN BE PADLOCKED IN THE OPEN OR CLOSED POSITION.
- 5) MINIMUM CLEARANCE - 6.0" BETWEEN LIVE PARTS (PHASE TO PHASE) & 6.0" TO GROUND OR NON-CURRENT CARRYING PARTS.
- 6) **120VAC HEATER SOURCE BY OTHERS.**
- 7) UNIT TO OPERATE @ 5KV.
- 8) ALL BUS TO BE INSULATED.

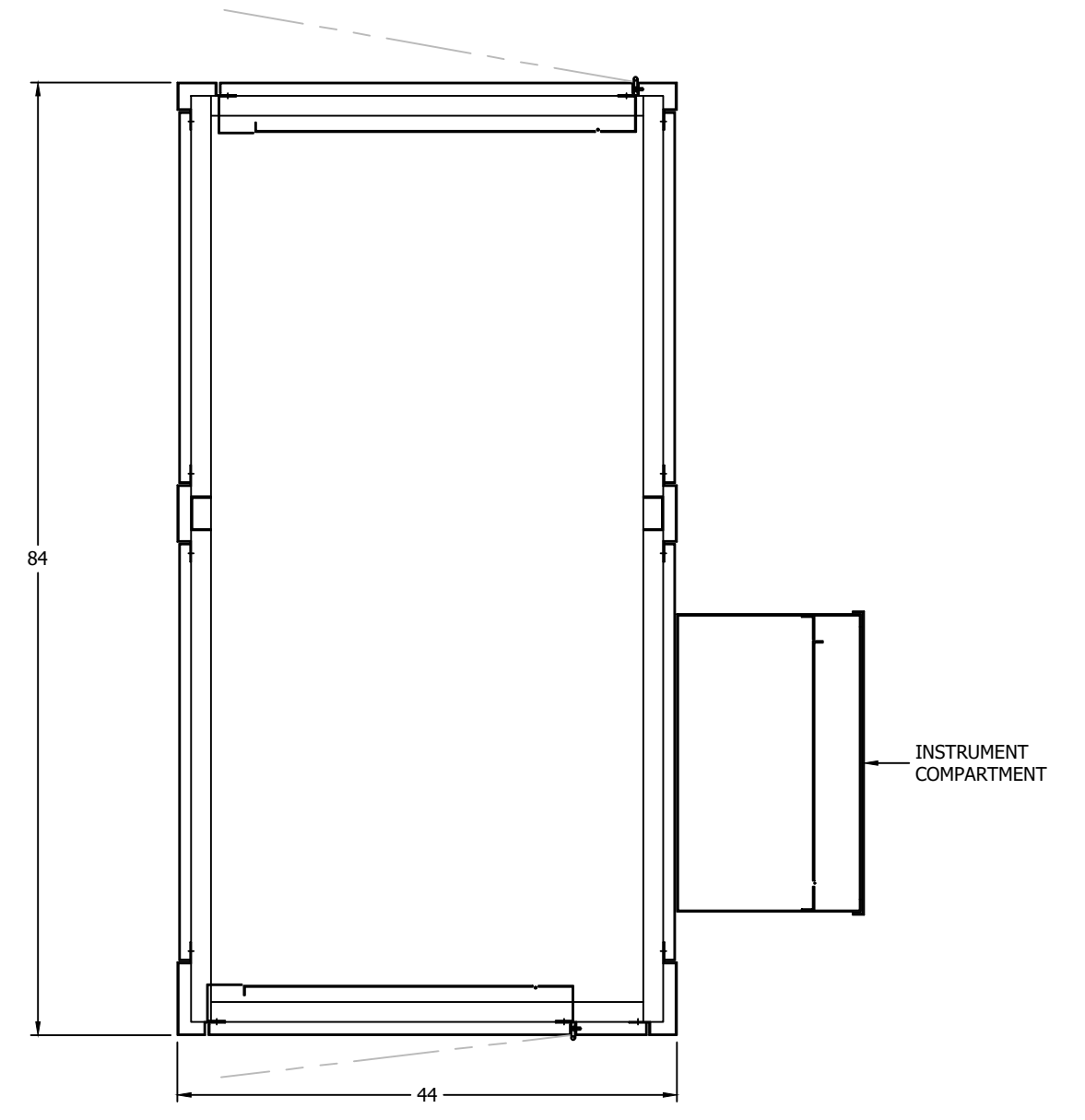


SWITCH RATING:

13.8KV - NOMINAL
 15KV - MAXIMUM
 36KV - 60Hz WITHSTAND
 95KV - BASIC IMPULSE LEVEL
 1200A - CONTINUOUS LOAD
 40KA - FAULT CLOSE
 61KA - MOMENTARY

BREAKER RATING:

15KV - MAXIMUM
 95KV - BASIC IMPULSE LEVEL
 1200A - CONTINUOUS LOAD
 31.5KA - INTERRUPTING CURRENT



PLAN VIEW

REV.	DATE	BY	CHANGES MADE
4			
3	04-01-24	JMA	ADDED UPS TO BOX BELOW INSTRUMENT COMPARTMENT
2	03-28-24	JMA	ADDED BOX BELOW THE INSTRUMENT COMPARTMENT & ITEMS 11,12,13 TO DRAWING
1	05-14-12	PRS	REMOVED CONDUIT OPENING IN PLAN VIEW, ADDED LIFTING PROVISION DETAIL, ADDED ITEM 10 TO INSTRUMENT COMPARTMENT

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 235 SWEET SPRING ROAD
 GLENMOOR, PA 19343

PROJECT/END-USER:
 (STOCK)

SCALE: N.T.S.
 DATE: 05-08-12
 DRAWN BY: PRS
 STD. DWG.:

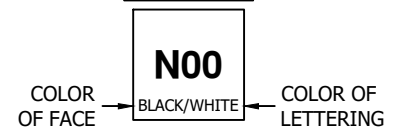
CUST. P.O.: 0999R0
 SHOP No.: 120167-01
 DWG. No.: 14422-FV1
 REV.: 03

JOB DESCRIPTION:
 NEMA-3R 15KV 1200A METAL ENCLOSED UNFUSED SWITCH & FIXED MOUNT BREAKER
"A"

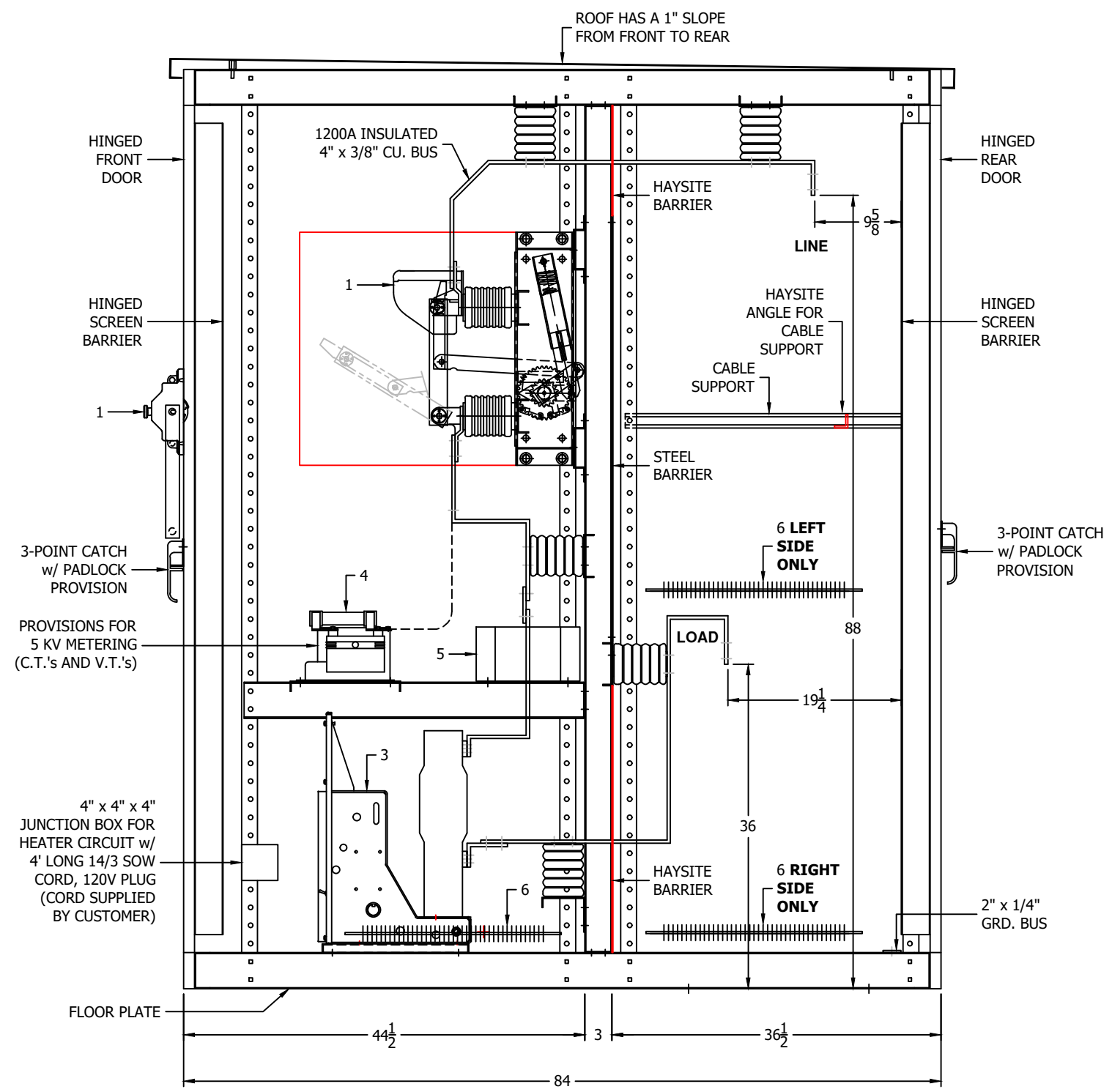
#	NAMEPLATE DATA	#
N01 <small>BLACK/WHITE (2) RQD.</small>	MULTI METER	N02 <small>BLACK/WHITE</small>
N03 <small>BLACK/WHITE (2) RQD.</small>	50/51M A PHASE OVERCURRENT RELAY	N04 <small>BLACK/WHITE</small>
N05 <small>BLACK/WHITE (2) RQD.</small>	50/51M C PHASE OVERCURRENT RELAY	N06 <small>BLACK/WHITE</small>
N07 <small>BLACK/WHITE (2) RQD.</small>	50/51M GROUND OVERCURRENT RELAY	N08 <small>BLACK/WHITE</small>
	BREAKER CONTROL SWITCH	
	50/51M B PHASE OVERCURRENT RELAY	
	50/51M NEUTRAL OVERCURRENT RELAY	
	C120 HIGH VOLTAGE MONITOR	

****COLOR LEGEND****

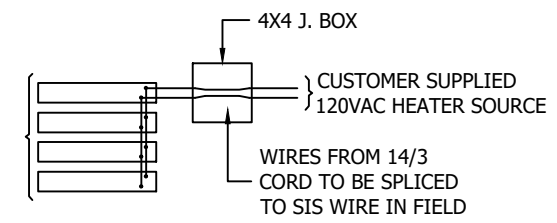
EXAMPLE



ALL NAMEPLATES 1" x 3" PHENOLIC SCREW-ON w/ 2 1/2" HOLE CENTERS UNLESS OTHERWISE NOTED.

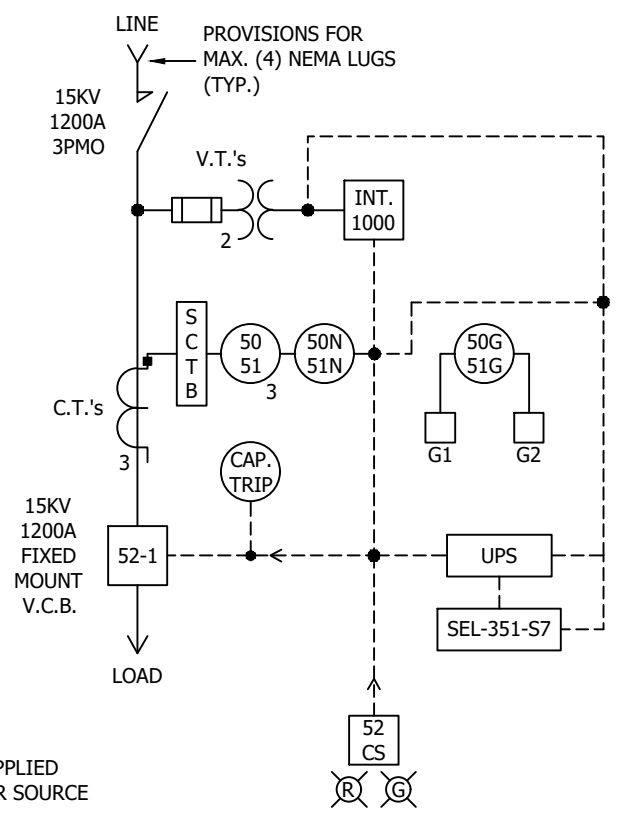


RIGHT SIDE SECTION VIEW



HEATER DETAIL

BILL OF MATERIAL (PER UNIT)			
NO.	MFG.	QTY.	DESCRIPTION
1	POWER-CON	1	15KV 1200A 3P MANUALLY OPERATED SWITCH w/ FRONT OPERATING HANDLE & INSULATING BARRIER KIT CAT. #541-029-A1-B1
2	-	1	UPS
3	ABB	1	ADVAC 15KV 1200A 750MVA FIXED MOUNT BREAKER CAT. #AF3H11110000U0
4	G.E.	2	VOLTAGE TRANSFORMERS
5	ITI	3	CURRENT TRANSFORMERS
6	-	4	HEATERS
7	ELECTRO SWITCH	1	BREAKER CONTROL SWITCH w/ GREEN & RED L.E.D. LIGHTS
8	CROMPTON	1	INTEGRA 1000 MULTIMETER
9	BASSLER	5	BE1-50/51M RELAYS
10	TREY K ELECT.	1	C120 HIGH VOLTAGE MONITOR
11	ELECTRO SWITCH	1	86-1
12	SEL	1	SEL-351-S7 RELAY
13	ABB	2	TEST SWITCH



SINGLE LINE

REV.	DATE	BY	CHANGES MADE
4	04-04-24	JMA	ADDED SEL-351-S7 TO SINGLE LINE
3	04-01-24	JMA	REVISED SINGLE LINE & BILL OF MATERIAL ITEM 2
2	03-28-24	JMA	REVISED SINGLE LINE & BILL OF MATERIAL ITEMS 11,12,13
1	05-14-12	PRS	ADDED ITEM 10, CHANGED BREAKER RATING FROM 500MVA TO 750MVA, CHANGED ITEMS 4 & 5 TO SUPPLIED BY CUSTOMER, MOVED HEATER JUNCT. BOX TO FRONT CORNER, MOVED HEATER ON LEFT REAR SIDE UP, ADDED PROVISIONS FOR 5/15KV METERING

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GLENMOOR, PA 19343

PROJECT/END-USER:
(STOCK)

SCALE:
N.T.S.

DATE:
05-08-12

STD. DWG.:

CUST. P.O.:0999R0

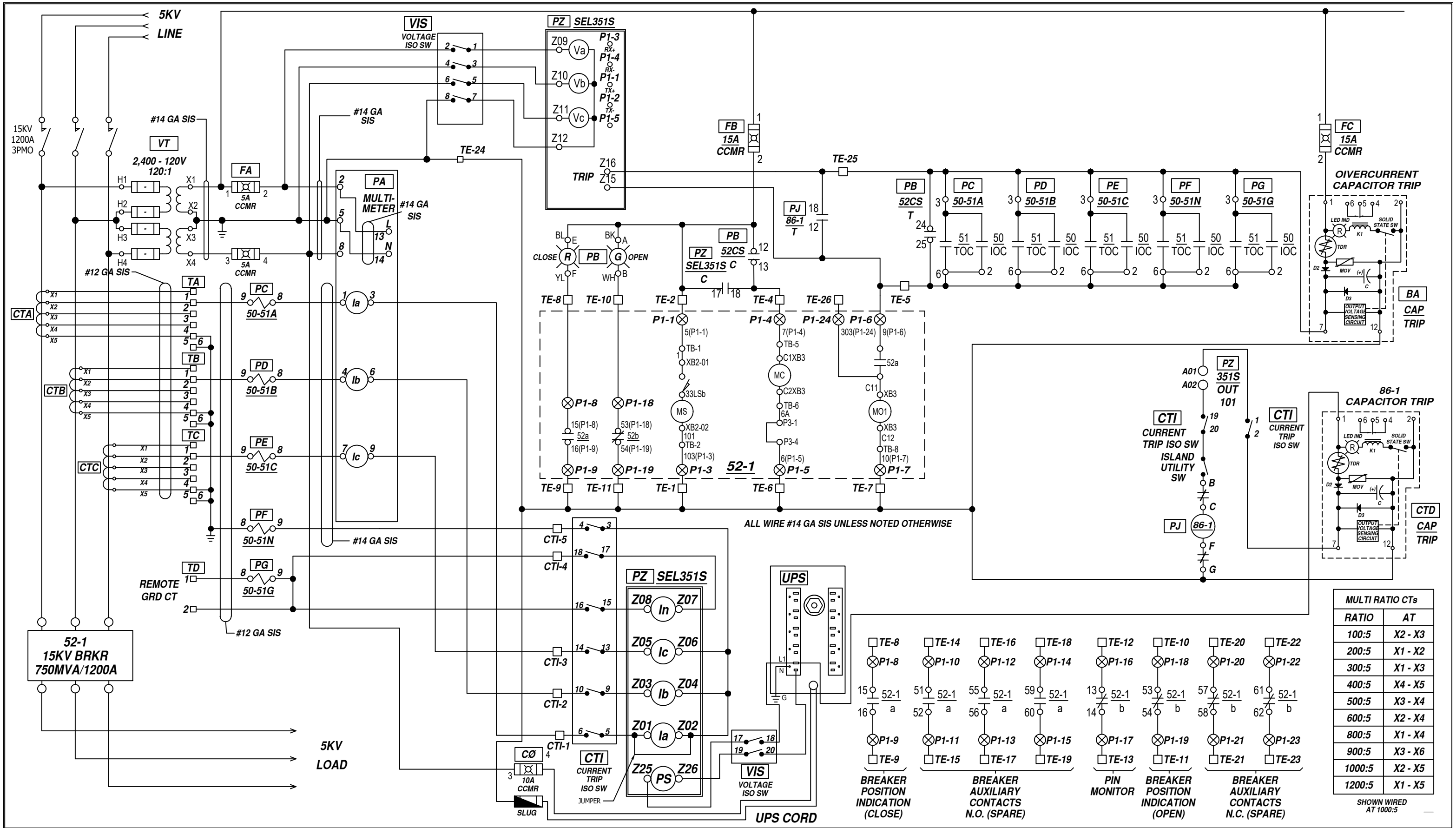
DRAWN BY:
PRS

DWG. No.:14422-SV1

JOB DESCRIPTION:
NEMA-3R 15KV 1200A METAL ENCLOSED UNFUSED SWITCH & FIXED MOUNT BREAKER

REV.:**04**

"A"



REV.	DATE	BY	CHANGES MADE
4	-	-	-
3	-	-	-
2	4/1/24	XCR	UPDATE ADDED 351S 86 UPS SW'S
1	07/24/12	SDH	SHOWED NEW ADVAC MODEL 04

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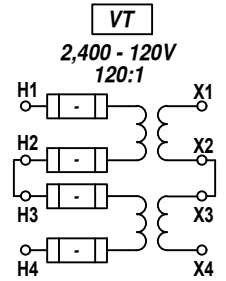
PROJECT/END-USER:
(STOCK)

SCALE: N.T.S.
DATE: MAY 23, 2012
DRAWN BY: SDH

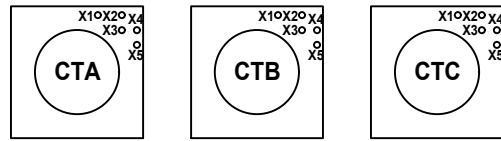
CUST. P.O.: 0999RO
SHOP No.: 120167-001
DWG. No.: 14422-3LS1
REV.: 02

JOB DESCRIPTION:
THREE LINE & SCHEMATIC DIAGRAM NEMA 3R 5KV UNFUSED SWITCH & FIXED MOUNTED, ELECTRICALLY OPERATED BREAKER 15KV BUS "A"

VT's WIRED #14 GA SHIELDED SIS



CT's WIRED #12 GA SHIELDED SIS



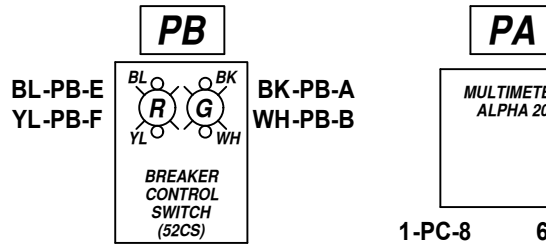
- H1-MLNB-APH
- H2-VT-H3
- H3-VT-H2
- H4-MLNB-CPH
- X1-FA-1
- X2-VT-X3
- X3-VT-X2
- GRD
- X4-FA-3

- | | | |
|---------|---------|---------|
| X1-TA-1 | X1-TB-1 | X1-TC-1 |
| X2-TA-2 | X2-TB-2 | X2-TC-2 |
| X3-TA-3 | X3-TB-3 | X3-TC-3 |
| X4-TA-4 | X4-TB-4 | X4-TC-4 |
| X5-TA-5 | X5-TB-5 | X5-TC-5 |

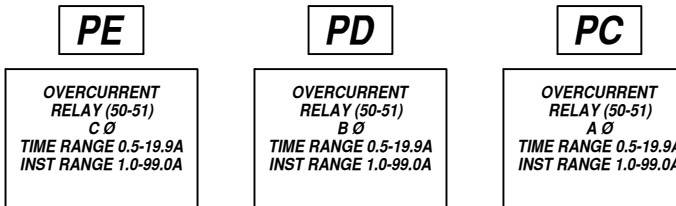
VT & CT COMPARTMENT (MIDDLE)

NUMBERS IN PARENTHESIS
REFERENCE ABB DRAWING

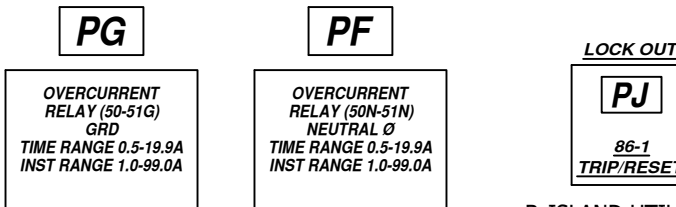
BREAKER COMPARTMENT (BOTTOM)



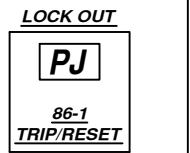
- | | | | |
|---------|---------|---------|-----------|
| A-PB-BK | 12-TE-2 | 1-PC-8 | 6-CTI-10 |
| PB-12 | PB-A | 2-FA-2 | 7-PE-8 |
| B-PB-WH | 13-TE-4 | PA-13** | 8-FA-4 |
| TE-10 | 24-PE-3 | 3-CTI-6 | 9-CTI-14 |
| E-PB-BL | 25-PE-6 | 4-PD-8 | 13-PA-2** |
| F-PB-YL | TE-5 | 5-TE-24 | 14-PA-5** |
| TE-8 | | PA-14** | |



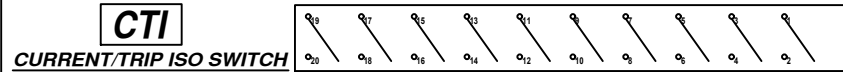
- | | | | | | |
|--------|----------|--------|----------|--------|----------|
| 2-PD-6 | 6-PE-2 | 2-PD-6 | 6-PD-2 | 2-PD-2 | 6-PC-2 |
| PE-6 | PB-25 | PC-2 | PE-2 | PC-6 | PF-2 |
| 3-PD-3 | 7-PD-7 | 3-PE-3 | 7-PC-7 | 3-PD-3 | 7-GRD |
| PB-24 | PG-7 | PC-3 | PE-7 | PF-3 | PD-7 |
| | 8-PA-7 | | 8-PA-4 | | 8-PA-1 |
| | 9-TC-2 * | | 9-TB-2 * | | 9-TA-2 * |



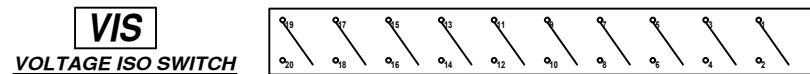
- | | | | | | |
|--------|------------|--------|----------|--|--|
| 2-PF-6 | 6-PG-2 | 2-PC-6 | 6-PF-2 | | |
| PG-6 | 7-PE-7 | PF-6 | 7-PG-7 | | |
| 3-PF-3 | PF-7 | 3-PC-3 | 8-TC-5 * | | |
| | 8-TD-1 * | PG-3 | 9-CTI-4 | | |
| | 9-CTI-18 * | 6-PG-2 | | | |



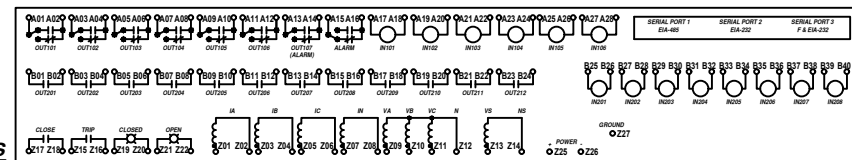
- B-ISLAND UTILITY SW
- G-TE-24
- 12-PZ-Z15
- 18-PZ-Z16



- | | | | | |
|----------|---------|-----------|----------|---------------|
| 1-PZ-A01 | 2-CTD-2 | 7- | 8-CTI-4 | 18-PG-9 |
| 3-PZ-Z06 | 4-PF-9 | 9-PZ-Z03 | CTI-12 | CTI-16 |
| 5-PZ-Z01 | SCTB-5 | 11- | 10-PA-6 | 20I-ISLAND SW |
| | 6-PA-3 | 13-PZ-Z05 | CTI-2 | |
| | CTI-1 | 15-PZ-Z08 | 12-CTI-8 | |
| | | 17-PZ-Z07 | 14-PA-9 | |
| | | 19-PZ-A02 | 16-TD-2 | |
| | | | CTI-18 | |



- | | | |
|-----------|-----------|------|
| 1-PZ-Z09 | 2-VA | FA-2 |
| 3-PZ-Z10 | 4-VB | GRD |
| 5-PZ-Z11 | 6-VC | FA-4 |
| 7-PZ-Z12 | 8-VN | |
| 9- | 10- | |
| 11- | 12- | |
| 13- | 14- | |
| 15- | 16- | |
| 17-PZ-Z15 | 18-UPS-L1 | |
| 19-PZ-Z16 | 20-UPS-N | |



- | | | | | | |
|------------|-----------|------------|------------|-----------|------------|
| A01-CTI-17 | Z15-TE-5 | Z01-CTI-5 | Z05-CTI-13 | Z09-VIS-1 | Z25-VIS-17 |
| A02-CTI-19 | PJ-12 | Z02-PZ-Z04 | Z06-PZ-Z04 | Z10-VIS-3 | Z26-VIS-19 |
| | Z16-TE-25 | Z03-CTI-9 | PZ-Z04 | Z11-VIS-5 | |
| | PJ-18 | Z04-PZ-Z02 | Z07-CTI-17 | Z12-VIS-7 | |
| | | Z08-CTI-13 | | | |
- #12 GA. SIS

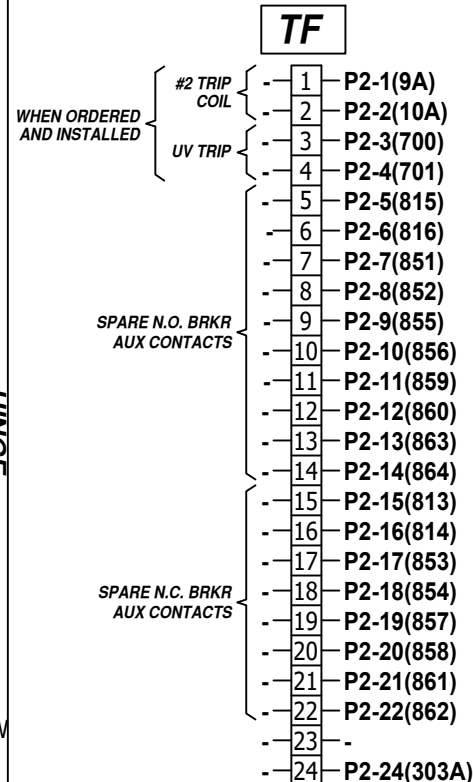
ASTERISK INDICATES #12 GA SIS WIRE
DOUBLE ASTERISK INDICATES #16 GA SIS WIRE

**WIRED FOR 15KV VT's
REAR VIEW DOOR**

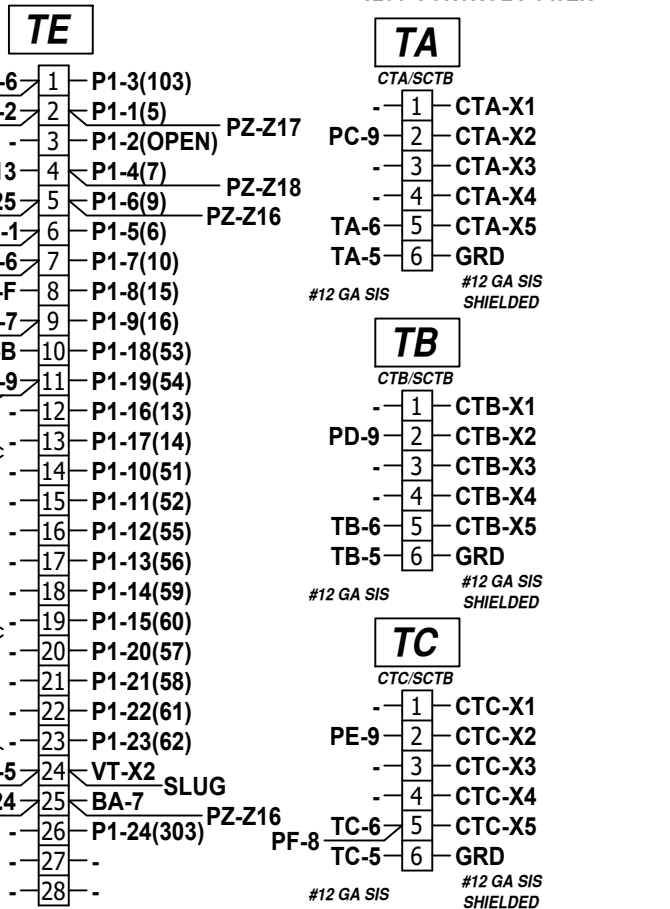
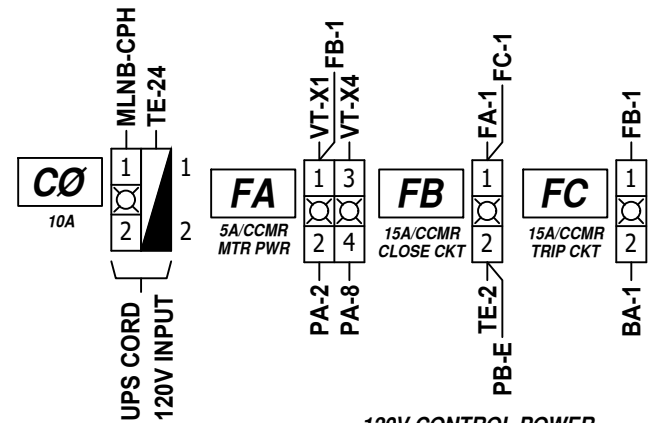
SHORTING BLOCK

- | | | |
|--------|---|------|
| CTI-6 | 1 | PA-3 |
| CTI-10 | 2 | PA-6 |
| CTI-14 | 3 | PA-9 |
| CTI-18 | 4 | TD-2 |
| CTI-4 | 5 | PF-9 |
| | 6 | |

FRONT VIEW LEFT SIDE PAN



HINGE



- | | | |
|------|---|------|
| PC-7 | 1 | TA-6 |
| | 2 | TB-6 |
| | 3 | TC-6 |
| | 4 | |
| | 5 | |
| | 6 | |

FRONT VIEW BACK PAN

#12 GA SIS
RING LUGS FOR CT's
TO SHORTING BLOCKS

4	-	-	-
3	-	-	-
2	-	-	-
1	-	-	-
REV.	DATE	BY	CHANGES MADE

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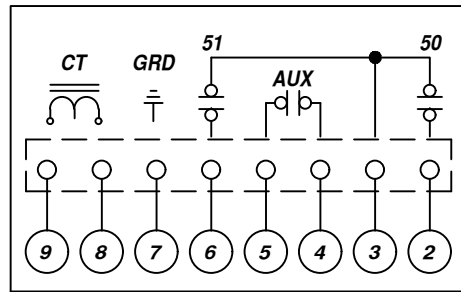
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235 SWEET SPRING ROAD
GLENMOOR, PA 19343

PROJECT/END-USER:
(STOCK)

SCALE: N.T.S.
DATE: MAY 23, 2012
DRAWN BY: SDH

CUST. P.O.: 0999RO
SHOP No.: 120167-001
DWG. No.: 14422-C1
REV.: 01

JOB DESCRIPTION:
**CONNECTION DIAGRAM
NEMA 3R 5KV UNFUSED SWITCH
& FIXED MOUNTED, ELECTRICALLY
OPERATED BREAKER 5KV BUS
"A"**

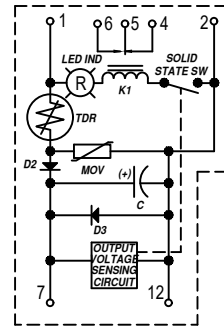


DEV. 50-51(A/B/C/N/G)

BASLER-SINGLE Ø OC RELAY
 TIME-0.5/15.9 INST-1.0/99.0
 50-51 CAT.#BE1-50/51M (X5)
 (REAR VIEW)

		CONTACT DEVELOP			
HANDLE POSITION		12	16	28	24
SPRING RETURN TO POS #2		A	C	E	G
		B	D	F	H
1	TRIP			X	X
3	CLOSE	X	X		
TERMINAL BLOCK DECK		DECK 1		DECK 2	

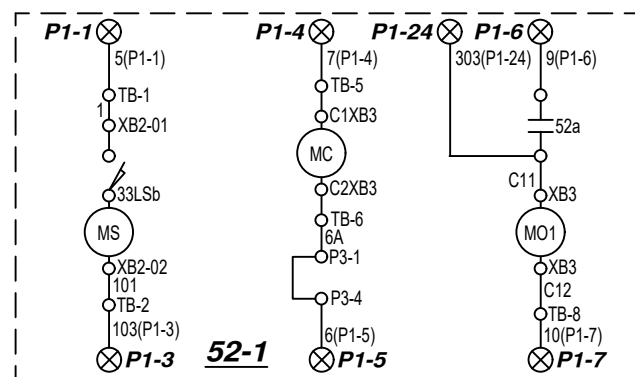
DEV. 52CS(PB)
 ELECTRO SWITCH SERIES 24
 52CS - BRKR CTRL SWITCH w/RED & GREEN
 INDICATING LAMPS 120VAC CAT. #74PF202LB



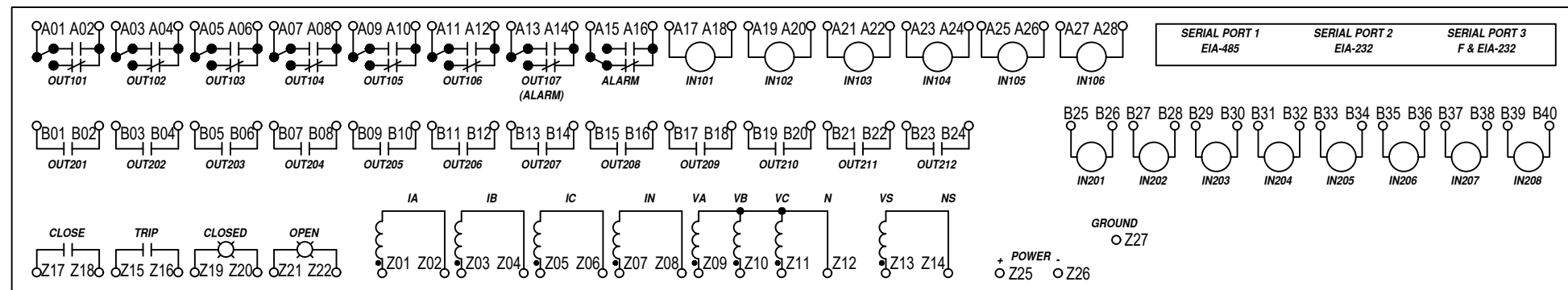
DEV. CAPTRIP(BA)
 PP&B CAT. #ABB-PP-CAP-120V
 (POINT TWELVE IS COMMON)

		CONTACT DEVELOPMENT							
HANDLE POSITION		B	C	OP	F	G			
SPRING RETURN TO POS #2		11	12	15	14	21	22	25	24
MOMENTARY		13	18	17	16	23	28	27	26
1	TRIP	X	X	X	X	X	X	X	X
2	RESET	X	X	X	X	X	X	X	X
STAGE		1				2			

DEV. PJ(86)
 ELECTRO SWITCH TYPE 24 LOCKOUT
 RELAY SWITCH CAT. #7803D (125VDC)



DEV. 52-1
 ABB - 15KV, 1200A, 750VMA BREAKER ADVAC
 120VAC CHARGE, CLOSE & TRIP
 CAT.#AF4H11110000U0



DEV. PZ(351S)
 SEL DISTRIBUTION
 & TRANSMISSION RELAY
 CAT. #0351S65C3E542X1
 (48/125VDC OR 120VAC POWER)

REV.	DATE	BY	CHANGES MADE
4	-	-	-
3	4/1/24	JCR	UPDATED TO "A" ADDED 351S/ 86/
2	07/24/13	SDH	REVERSED NUMBERING ON OVER CURRENT RELAY
1	07/31/12	SDH	ADDED NOTE TO CAP TRIP

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PROJECT/END-USER:
 (STOCK)

SCALE: N.T.S.
 DATE: MAY 23, 2012
 DRAWN BY: SDH

CUST. P.O.: 0999RO
 SHOP No.: 120167-001
 DWG. No.: 14422-DI
 REV.: 03

JOB DESCRIPTION:
DEVICE INTERNAL DIAGRAM "A"