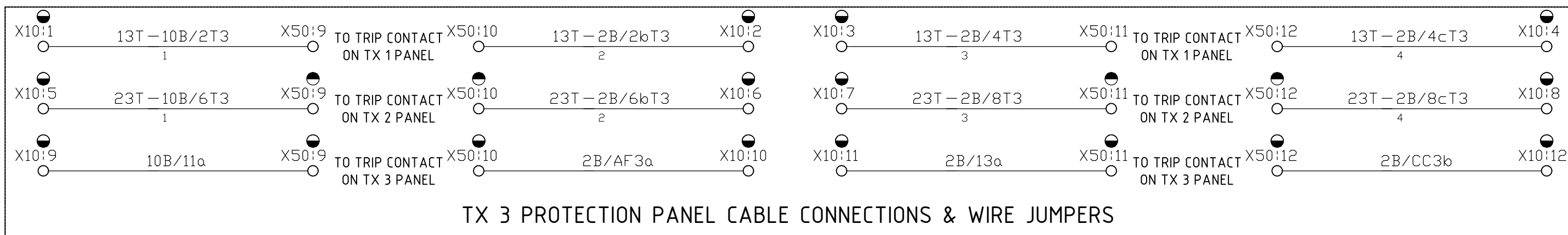
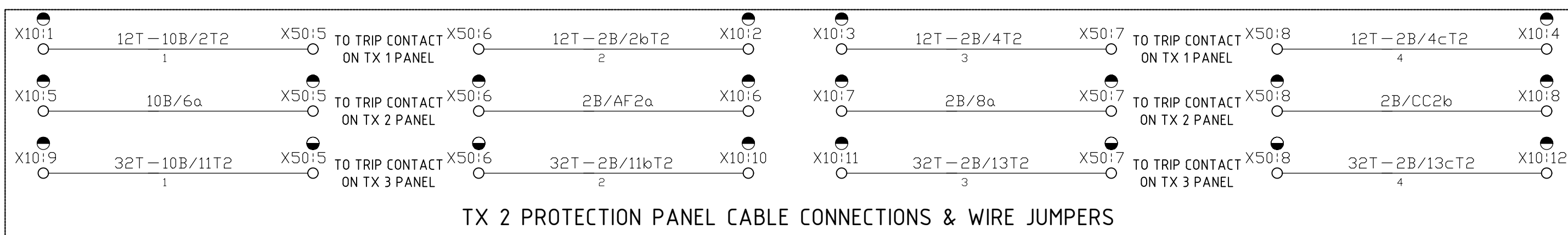
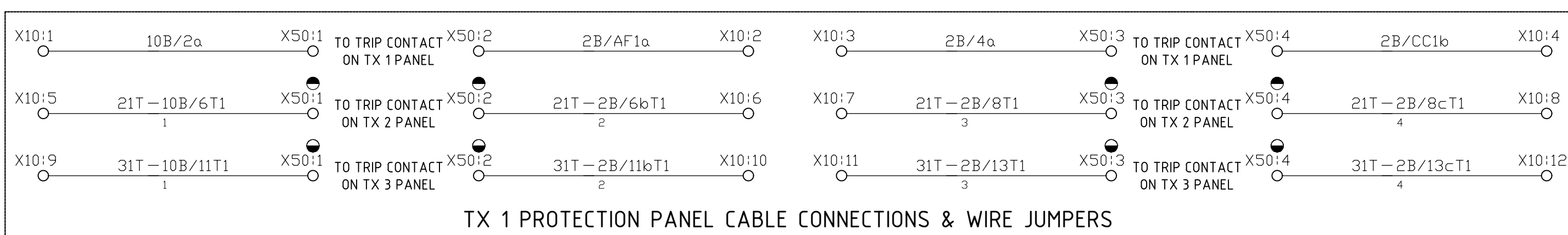


**NOTES:**

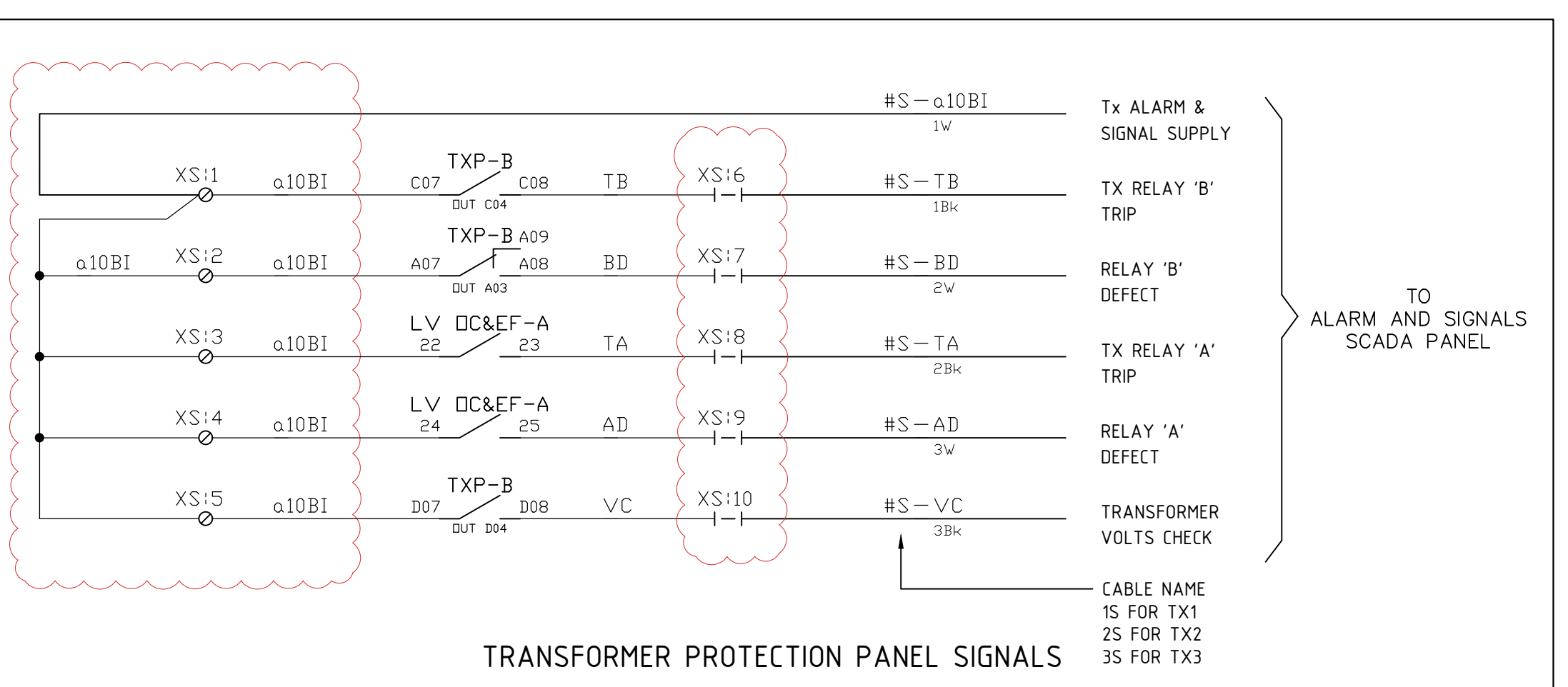
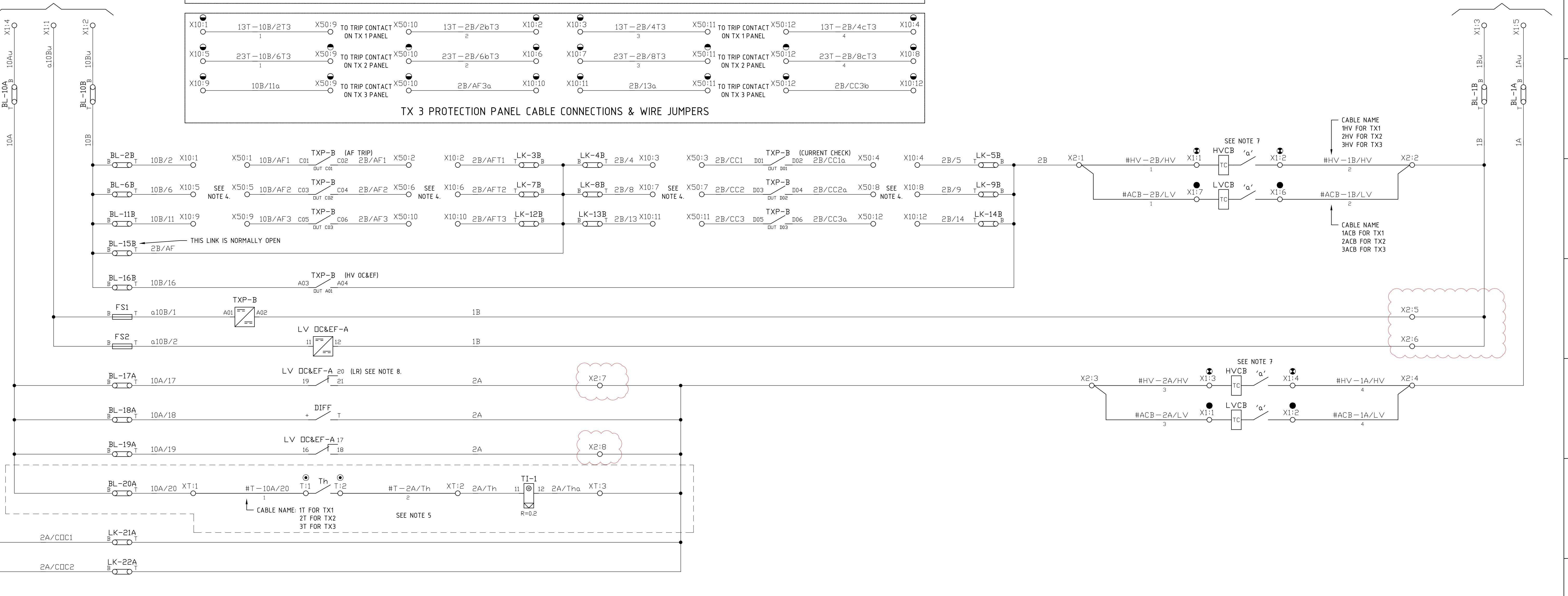
1. THE 'B' END OF A FUSE OR LINK THUS ( ) INDICATES THE BOTTOM CONNECTION.
2. THIS DRAWING SHOWS THE PROTECTION SCHEMATICS WHICH ARE TO BE USED IN CONJUNCTION WITH RMICB CHAMBER TYPE SUBSTATIONS & SHOULD BE READ IN CONJUNCTION WITH NETWORK STANDARDS & THE SUBSTATION DESIGN INFORMATION PACKAGE.
3. TERMINAL SYMBOLS REPRESENT LOCATION OF TERMINALS.  
 TRANSFORMER 1 PROTECTION PANEL  
 TRANSFORMER CONNECTION BOX (DRY TYPE)  
 TRANSFORMER 1kV RMICB  
 TRANSFORMER 4.5V AIR CIRCUIT BREAKER  
 TRANSFORMER 2 PROTECTION PANEL  
 TRANSFORMER 3 PROTECTION PANEL
4. SHOWN IS A STANDARD TRANSFORMER PROTECTION PANEL WITH OPTICAL ARC FLASH DETECTION. EACH TRANSFORMER PROTECTION PANEL INTEGRATES WITH THE OTHER. EACH PROTECTION PANEL IS TO BE CONFIGURED ON SITE, BY WIRE JUMPING/CABLING BETWEEN TERMINAL RAILS X10 & X50 TO PROTECT ITS RELEVANT TRANSFORMER AND THE 4.5V BUSBAR. ONLY WIRE JUMPING AND CABLING, FOR THE NUMBER OF TRANSFORMERS ACTUALLY IN THE DISTRIBUTION SUBSTATION, IS REQUIRED.
5. WHEN A DRY TYPE TRANSFORMER IS USED, BL-20A, THE THERMAL RELAY (Th) & A TRIP INDICATOR ARE TO BE CONNECTED. THE THERMAL RELAY IS LOCATED & SUPPLIED ON THE TRANSFORMER BY THE TRANSFORMER MANUFACTURER. THE TRIP INDICATOR IS LOCATED ON THE TRANSFORMER PROTECTION PANEL & IS SUPPLIED BY AUSGRID.
6. FOR A CUSTOMER CABLE SUPPLY, THE CUSTOMER SWITCH CAN BE AN AIR CIRCUIT BREAKER OR A DISCONNECTOR. FOR A CUSTOMER BUSBAR SUPPLY, THE CUSTOMER SWITCH CAN BE AN AIR CIRCUIT BREAKER, A DISCONNECTOR OR A LINK. IN ALL OF THESE INSTALLATIONS, AN OVERCURRENT CT IS INSTALLED AS SHOWN ON THE AC SCHEMATIC. IN ALL CASES A CUSTOMER PROTECTION TRIP INITIATION WILL TRIP ALL THE TRANSFORMER HV RMICB's & LV AIR CIRCUIT BREAKERS.
7. FOR UPPER LEVEL SUBSTATION THE RMICB IS LOCATED IN A CONTROL POINT WHICH IS REMOTE FROM THE SUBSTATION. FOR UPPER LEVEL SUBSTATION REFER TO THE CABLING DIAGRAM (DWG 227355Sh01) FOR FURTHER INFORMATION CONNECTING THE RMICB TRIP COIL.
8. LOAD RELIEF IS DEFINED BY THE EQUIPMENT RATING.

SEE DC SUPPLY AND CABLE LOOPING SCHEMATIC DWG 227350Sh04



TAGNAME	MFG	CATNO	DESC	REF_DWG
BL_LK	EUGADUIP	MOULDED TYPE M6	BATTERY/TEST LINK	3884.1
DIFF	-	K3M	DIFFERENTIAL FUSE RELAY	1324.3
EB	-	EARTH BAR	EARTH BAR	-
FS1, FS2	ALSTOM	RS20P Black	Black FUSE - 2 STUD BACK CONNECTED	-
LV OC&EF-A	SCHNEIDER ELECT	MICOM P115	OVERCURRENT & EARTH FAULT RELAY	22508.2
TXP-B	SCHWEITZER	SEL-751A	TRANSFORMER PROTECTION RELAY	2226.4
TI-1	RMS	3A32K37	TRIP INDICATOR TI-3 (0.2 ohm)	12339.9
Th	-	-	THERMAL RELAY IF INSTALLED (SUPPLIED WITH TX)	-
HVCB	-	-	11kV RMI CIRCUIT BREAKER	-
LVCB	-	-	4.5V TRANSFORMER AIR CIRCUIT BREAKER	-
TC	-	-	TRIP COIL	-
'a'	-	-	AUXILIARY SWITCH (Open when CB Open)	-
X1, X2, X10	UTILUX	3820	RAIL MOUNTED TERMINAL	1185.7
X50, XT, T	UTILUX	3820	RAIL MOUNTED TERMINAL	1185.7
XS	WEIDMULLER	SAK 2.5	RAIL MOUNTED TERMINAL CAT No 27966	-
XS	WEIDMULLER	SAKR	RAIL MOUNTED ISOLATING TERM CAT No 41226	-

SEE DC SUPPLY AND CABLE LOOPING SCHEMATIC DWG 227350Sh04



LINK No.	LINK FUNCTION
BL-2B	TRANSFORMER 1 ARC FLASH DC BATTERY LINK
BL-6B	TRANSFORMER 2 ARC FLASH DC BATTERY LINK
BL-11B	TRANSFORMER 3 ARC FLASH DC BATTERY LINK
BL-15B	ARC FLASH BYPASS DC BATTERY LINK - NORMALLY OPEN
BL-16B	TX HV OVERCURRENT DC BATTERY LINK
BL-17A	TX LOAD RELIEF DC BATTERY LINK
BL-18A	TX DIFFERENTIAL DC BATTERY LINK
BL-19A	TX OVERCURRENT & EARTH FAULT DC BATTERY LINK
BL-20A	TX THERMAL DC BATTERY LINK - (SEE NOTE 5)
LK-3B	TRANSFORMER 1 ARC FLASH TRIP LINK
LK-4B	TRANSFORMER 1 CURRENT CHECK LINK
LK-5B	TRANSFORMER 1 CURRENT CHECK TRIP LINK
LK-7B	TRANSFORMER 2 ARC FLASH TRIP LINK
LK-8B	TRANSFORMER 2 CURRENT CHECK LINK
LK-9B	TRANSFORMER 2 CURRENT CHECK TRIP LINK
LK-12B	TRANSFORMER 3 ARC FLASH TRIP LINK
LK-13B	TRANSFORMER 3 CURRENT CHECK LINK
LK-14B	TRANSFORMER 3 CURRENT CHECK TRIP LINK
LK-21A	CUSTOMER OC No.1 TRIP LINK
LK-22A	CUSTOMER OC No.2 TRIP LINK
FS1	48V 'a10B' PROTECTION RELAY FUSE
FS2	48V 'a10B' PROTECTION RELAY FUSE
BL-10A	30V 'A' '+VE BATTERY LINK
BL-1A	30V 'A' '-VE BATTERY LINK
BL-10B	30V (TAP) 'B' '+VE BATTERY LINK
BL-1B	'B' '-VE BATTERY LINK

TITLE	DWG No.
RMICB SUBSTATIONS WITH E TYPE LV BOARD AC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION	227350Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER DC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION	227350Sh02
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT DC SCHEMATIC	227350Sh03
RMICB SUBSTATIONS WITH E TYPE LV BOARD DC SUPPLY CABLE LOOPING AND SCADA SCHEMATIC	227350Sh04
RMICB SUBSTATIONS WITH E TYPE LV BOARD WITH OPTICAL ARC FLASH DETECTION FIBRE LOOPING AND GENERAL MOUNTING DETAILS	227350Sh05
RMICB SUBSTATIONS WITH E TYPE LV BOARD TX WALL MOUNTED PROT N PANEL WITH OPTICAL AFD STYLE 1 LAYOUT AND LABEL DETAILS DIAGRAM	227351Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 1 WIRING DIAGRAM	227351Sh02
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 1 CABLE CONNECTION DIAGRAM	227351Sh03
RMICB SUBSTATIONS WITH E TYPE LV BOARD TX WALL MOUNTED PROT N PANEL WITH OPTICAL AFD STYLE 2 LAYOUT AND LABEL DETAILS DIAGRAM	227352Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 2 WIRING DIAGRAM	227352Sh02
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 2 CABLE CONNECTION DIAGRAM	227352Sh03
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT WALL MOUNTED PROT N PANEL LAYOUT AND LABEL DETAILS DIAGRAM	227353Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT WIRING DIAGRAM	227353Sh02
RMICB SUBSTATIONS WITH E TYPE LV BOARD OPTICAL ARC FLASH DETECTION INDICATION PANEL SCHEMATIC DRILLING AND WIRING DIAGRAM	227354Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLING DIAGRAM	227355Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLE SCHEDULE	227355Sh02
RMICB SUBSTATIONS WITH E TYPE LV BOARD SUBURBAN TYPE SUBSTATION WITH 1500KVA TRANSFORMERS SERVICE BOARD GEN. ARRANGEMENT AND WIRING	227356Sh01
E TYPE LV BOARD MERLIN GERIN MASTERPAC TP AIR CIRCUIT BREAKERS EXTERNAL CONNECTIONS FOR AFD DIST. SUBSTATIONS	227357Sh01
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION SCADA PANEL WIRING AND CABLING DETAILS	227358Sh01
E TYPE LV BOARD ACCEPTABLE COMBINATIONS	17822.7
EPOXY RESIN ENCASED PROTECTION CURRENT TRANSFORMER OUTLINE AND DETAILS	125190

**CAD DRAWING**  
DO NOT MANUALLY AMEND  
**REVISIONS**  
1. BEE REVISIONS CLOUDS IN RED WHEN COLOUR PRINTED. ADDED TERMINAL NAMES XS15 TO B, AMENDED TERMINAL NAMES WAS XS1 & 2, NOW XS2 & 10. AMENDED TERMINAL XS15 TO B & AMENDED WIRE LOOPING.  
18-10-2017  
L.MARTINUZZI  
L.MARTINUZZI  
L.MARTINUZZI  
APPROVED



SCALE	AS SHOWN
DESIGNED	-
DRAWN	L.MARTINUZZI
CHECKED	B.HAINES
APPROVED	A.TURNER
DATE	31/05/2012
TRIM REF	-
PROJECT NUMBER	SM 6717-1-2

RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER DC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION	
DRAWING No	227350
SHEET	2
AMD	1
SIZE	B1