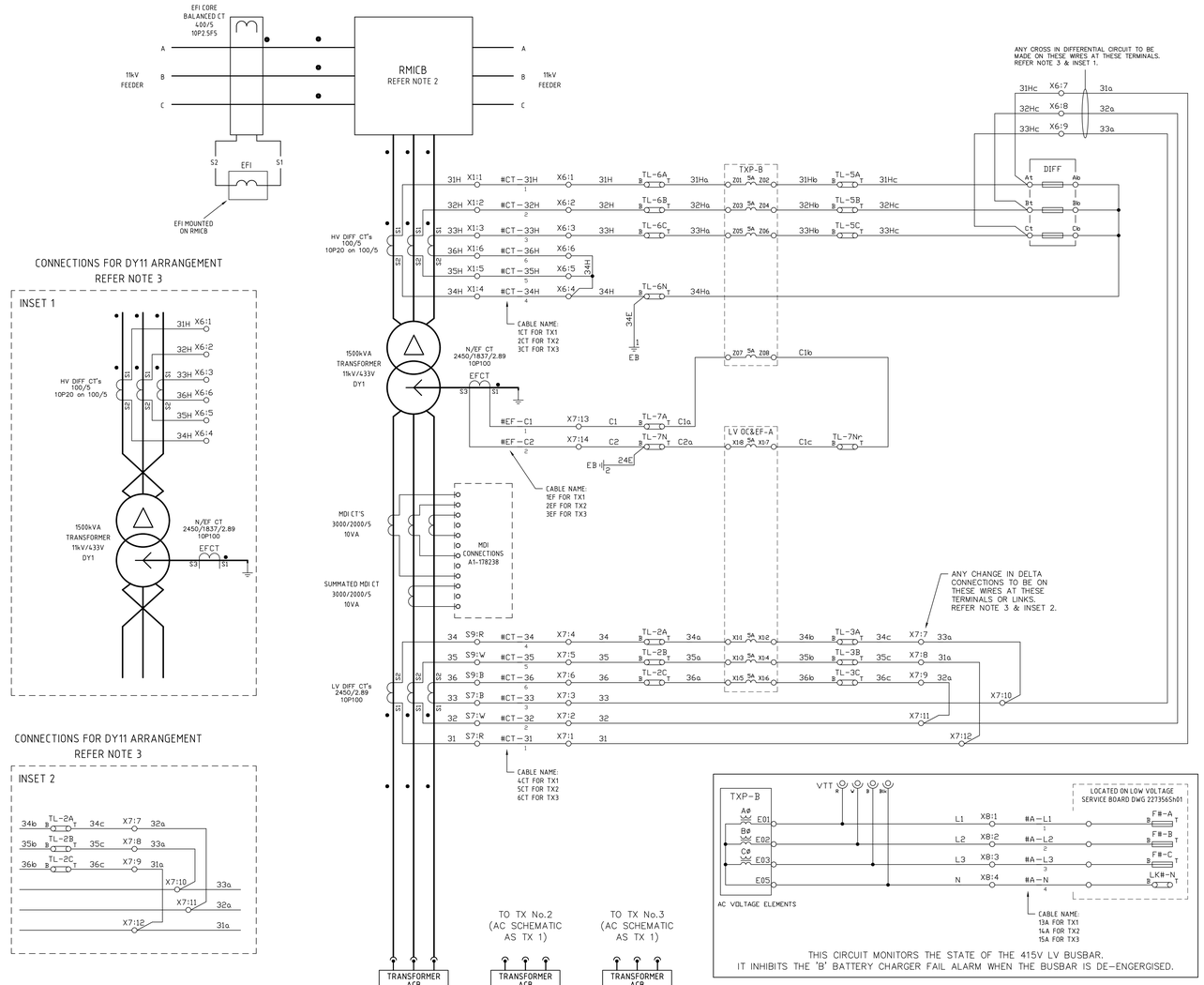

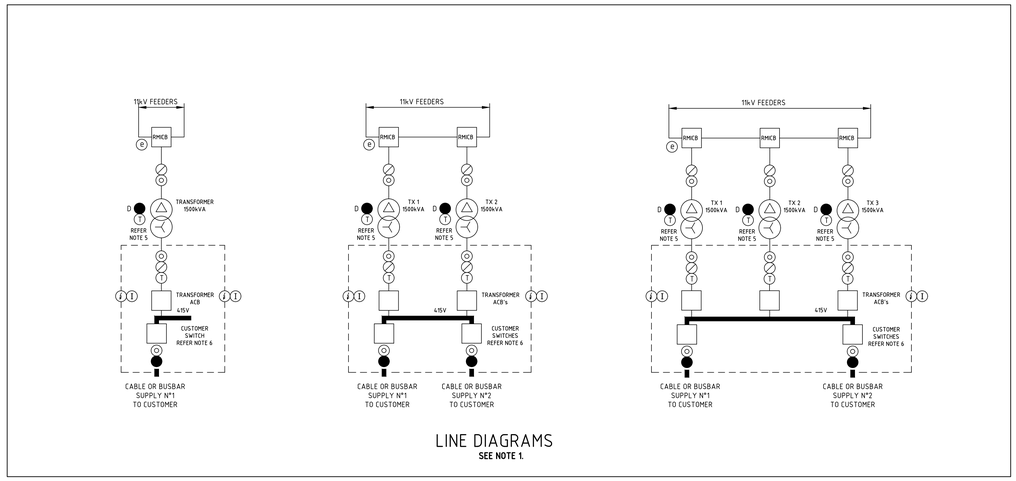

LINE DIAGRAMS

SEE NOTE 1.

NOTES:

1. THIS DRAWING SHOWS THE AC PROTECTION SCHEMATIC WHICH ARE TO BE USED IN CONJUNCTION WITH RMICB CHAMBER TYPE SUBSTATIONS AND SHOULD BE READ IN CONJUNCTION WITH NETWORKS STANDARDS AND THE SUBSTATION DESIGN INFORMATION PACKAGE. SEE DRAWING 178227 FOR ACCEPTABLE COMBINATIONS OF "E TYPE LV BOARD" ARRANGEMENTS.

2. FOR AN UPPER LEVEL SUBSTATION THE RMICB IS LOCATED IN A CONTROL POINT WHICH IS REMOTE FROM THE SUBSTATION. FOR AN UPPER LEVEL SUBSTATION REFER TO THE CABLING DIAGRAM (227355Sh01) FOR FURTHER INFORMATION ON CONNECTING THE RMICB TRIP COIL.

3. THE AC SCHEMATIC SHOWS THE STANDARD AUSGRID DY1 TRANSFORMER CONNECTED IN A DY1 ARRANGEMENT. FOR A DY1 TRANSFORMER CONNECTED IN A DY11 ARRANGEMENT, USE INSETS 1 & 2.

4. THE 'B' END OF A LINK OR FUSE SHOWN THUS (B⊂⊃T) INDICATES BOTTOM CONNECTION.

5. WHEN A DRY TYPE TRANSFORMER IS USED, THE THERMAL RELAY (Th) AND 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. THIS AC SCHEMATIC SHOWS TRANSFORMER No.1, CUSTOMER SUPPLY 1, CUSTOMER SUPPLY 2 AND THEIR ASSOCIATED PROTECTION PANELS. TRANSFORMERS No.2 AND 3 ARE IDENTICALLY WIRED AS TRANSFORMER No.1. DIFFERENCES EXIST WITH CABLE NAMING AND WIRE JUMPERING. THIS WILL BE INSTALLED ON SITE RELEVANT TO THE ACTUAL SUBSTATION CONFIGURATION. THAT IS, HOW MANY TRANSFORMERS ARE INSTALLED, LOW VOLTAGE BUSBAR CONFIGURATION AND CUSTOMER SUPPLY CONNECTIONS.

LINK No.	LINK FUNCTION
TL-2 ~	OVERCURRENT & EARTH FAULT RELAY CT TEST LINKS
TL-3 ~	OVERCURRENT & EARTH FAULT RELAY DELTA TEST LINKS
TL-5 ~	TRANSFORMER & ARC FLASH RELAY TEST LINKS
TL-6 ~	TRANSFORMER PROTECTION HV CT TEST LINKS
TL-7 ~	EARTH FAULT CT TEST LINKS
AC TEST LINK FUNCTION TABLE FOR TRANSFORMER PROTECTION PANELS	

TAGNAME	MFG	CATNO	DESC	REF_DWG
C-OC	SIEMENS	7SR4504-2HB20-1AA0	OVERCURRENT & EARTH FAULT RELAY	-
Th	-	-	THERMAL RELAY (SEE NOTE 5.)	-
DIFF	-	K3M	DIFFERENTIAL FUSE RELAY	113243
EB	-	-	EARTH BAR	-
-	-	-	-	-
LV OC&EF-A	SIEMENS	7SR4504-2HB20-1AA0	OVERCURRENT & EARTH FAULT RELAY	-
TXP-B	SCHWEITZER	SEL-751A	TRANSFORMER PROTECTION RELAY	222614
TL	EUGAQUIP	MOULDED TYPE M5	BATTERY/TEST LINK	507111
VTT	MULTI CONNECT (RS COMPONENTS)	SLB4-G	INSULATED TEST PANEL SOCKETS 1 x RED 23 3020 22 (404-244) 1 x WHITE 23 3020 29 (404-250) 1 x BLUE 23 3020 23 (404-216) 1 x BLACK 23 3020 21 (404-200)	231226
X6, X7	UTILUX	3820	RAIL MOUNTED TERMINAL	118542
6 X8	PHOENIX	UT 10 OG 3046281	FEED-THROUGH TERMINAL BLOCK	-
LEGEND				

LINK No.	LINK FUNCTION
TL-1 ~	CUSTOMER OVERCURRENT & EARTH FAULT No.1 CT TEST LINKS
TL-1 ~	CUSTOMER OVERCURRENT & EARTH FAULT No.2 CT TEST LINKS
AC TEST LINK FUNCTION TABLE FOR CUSTOMER OVERCURRENT & EARTH FAULT PANELS	

TITLE	DWG No.
RMICB SUBSTATIONS WITH E TYPE LV BOARD AC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION	227350-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER DC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION	227350-2
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT DC SCHEMATIC	227350-3
RMICB SUBSTATIONS WITH E TYPE LV BOARD DC SUPPLY CABLE LOOPING AND SCADA SCHEMATIC	227350-4
RMICB SUBSTATIONS WITH E TYPE LV BOARD WITH OPTICAL ARC FLASH DETECTION FIBRE LOOPING AND GENERAL MOUNTING DETAILS	227350-5
RMICB SUBSTATIONS WITH E TYPE LV BOARD TX WALL MOUNTED PROTN PANEL WITH OPTICAL AFD STYLE 1 LAYOUT AND LABEL DETAILS DIAGRAM	227351-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 1 WIRING DIAGRAM	227351-2
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 1 CABLE CONNECTION DIAGRAM	227351-3
RMICB SUBSTATIONS WITH E TYPE LV BOARD TX WALL MOUNTED PROTN PANEL WITH OPTICAL AFD STYLE 2 LAYOUT AND LABEL DETAILS DIAGRAM	227352-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 2 WIRING DIAGRAM	227352-2
RMICB SUBSTATIONS WITH E TYPE LV BOARD TRANSFORMER PROTECTION PANEL STYLE 2 CABLE CONNECTION DIAGRAM	227352-3
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT WALL MOUNTED PROTN PANEL LAYOUT AND LABEL DETAILS DIAGRAM	227353-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD CUSTOMER OVERCURRENT WIRING DIAGRAM	227353-2
RMICB SUBSTATIONS WITH E TYPE LV BOARD OPTICAL ARC FLASH DETECTION INDICATION PANEL SCHEMATIC DRILLING AND WIRING DIAGRAM	227354-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLING DIAGRAM	227355-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION CABLE SCHEDULE	227355-2
RMICB SUBSTATIONS WITH E TYPE LV BOARD SUBURBAN TYPE SUBSTATION WITH 1500kVA TRANSFORMERS SERVICE BOARD GEN. ARRANGEMENT AND WIRING	227356-1
E TYPE LV BOARD MERLIN GERIN MASTERPAC TP AIR CIRCUIT BREAKERS EXTERNAL CONNECTIONS FOR AFD DIST. SUBSTATIONS	227357-1
RMICB SUBSTATIONS WITH E TYPE LV BOARD AND OPTICAL ARC FLASH DETECTION SCADA PANEL WIRING AND CABLING DETAILS	227358-1
E TYPE LV BOARD ACCEPTABLE COMBINATIONS	178227-1
EPOXY RESIN ENCASED PROTECTION CURRENT TRANSFORMER OUTLINE AND DETAILS	125190-1
REFERENCE DRAWINGS	

A M E N D M E N T S

AMD	DATE	DESCRIPTION	DRAWN BY	DESIGNED BY	CHECKED BY	APPROVED BY
4	12/06/2024	AC & DC LINKS NOW 5mm TYPE.	L.M.	L.M.	M.B.	M.B.
5	19/09/2024	REPLACED SCHNEIDER P115 WITH SIEMENS 7SR4504 IN LEGEND & SCHEMATIC CONNECTIONS.	L.M.	L.M.	M.B.	M.B.
6	10/09/2025	DRAWING BORDER UPDATED. UTILUX H2238 ORANGE RAIL MOUNTED TERMINALS REPLACED BY PHOENIX 'UT 10 OG 3046281' FEED-THROUGH TERMINAL BLOCK. LEGENDS TABLE UPDATED.	H.O.	H.O.	M.B.	M.B.

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ISSUED FOR CONSTRUCTION ISSUE

SCALE	NTS
DESIGNED	-
DRAWN	L.MARTINUZZI
CHECKED	B.HAINES
APPROVED	A.TURNER
DATE	31/05/2012
TRIM REF	-
PROJECT NUMBER	SM-06717

RMICB SUBSTATIONS WITH E TYPE LV BOARD AC SCHEMATIC WITH OPTICAL ARC FLASH DETECTION

DRAWING No 227350 | SHEET 1 | AMD 6 | SIZE A0

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