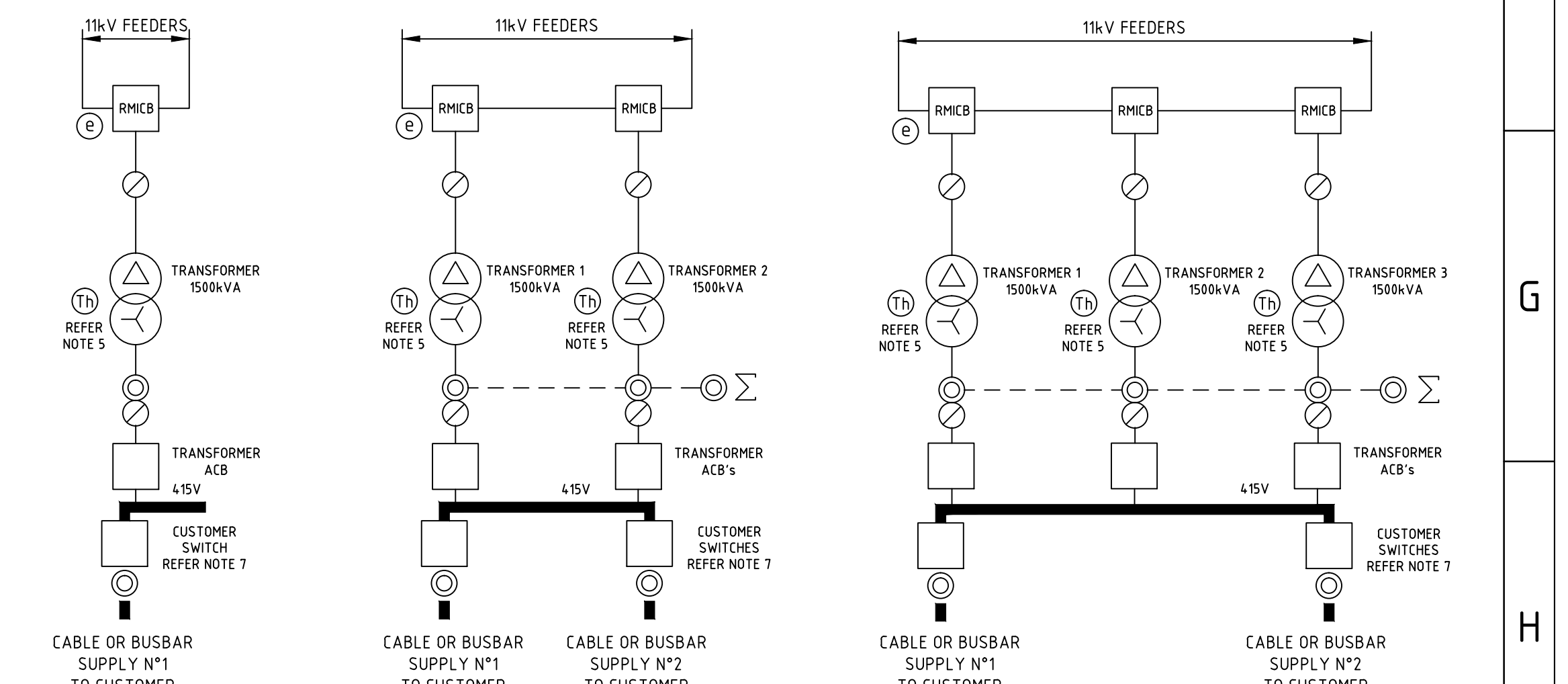


REFERENCE DRAWINGS	
RMICB SUBSTATIONS CABLING & CABLE SCHEDULE	A0-178231
RMICB SUBSTATIONS WALL MOUNTED TRANSFORMER PROTECTION PANEL DRILLING, WIRING & CABLING	B1-187815
CITY & SUBURBAN DISTRIBUTION SUBSTATIONS WALL MOUNTED CUSTOMER OVERCURRENT PROTECTION PANEL DRILLING, WIRING & CABLING	A1-118558
CITY & SUBURBAN DISTRIBUTION SUBSTATIONS WALL MOUNTED SUMMATED OVERCURRENT PROTECTION PANEL DRILLING, WIRING & CABLING	A1-118559
E TYPE LV BOARD WITH MERLIN GERIN MASTERPAC TP AIR CIRCUIT BREAKERS EXTERNAL CONNECTIONS	A2-178237
E TYPE LV BOARD SUMMATED MDI CONNECTIONS DIAGRAM	A1-178238

- ### NOTES
- THIS DRAWING SHOWS THE PROTECTION SCHEMATICS 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.
  - 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 DRAWING (178321) FOR FURTHER INFORMATION ON CONNECTING THE RMICB TRIP COIL.
  - 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.
  - A DOT ON A LINK (●) INDICATES BOTTOM TERMINAL.
  - WHEN A DRY TYPE TRANSFORMER IS USED, THE THERMAL RELAY (Tn) 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.
  - THE SATURATING INTERPOSING CT'S ARE LOCATED IN THE TRANSFORMER PROTECTION PANEL. THE RATIOS INDICATED ON THIS DRAWING SHOULD BE CONNECTED BUT MAY BE ADJUST BY AUSGRID BEFORE SUBSTATION COMMISSIONING.
  - 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 THE CASE OF AN AIR CIRCUIT BREAKER CONTROLLED CUSTOMER SUPPLY, A PROTECTION INITIATION WILL TRIP THAT AIR CIRCUIT BREAKER ONLY. IN THE CASE OF A DISCONNECTOR CONTROLLED OR LINKED BUSBAR CUSTOMER SUPPLY, A PROTECTION INITIATION WILL TRIP ALL THE TRANSFORMER LV AIR CIRCUIT BREAKERS.



### LEGEND

SYMBOL	DESCRIPTION	TYPE
DIFF	DIFFERENTIAL RELAY	K3M
T <sub>x</sub> OC	TRANSFORMER OVERCURRENT RELAY	CDG 33
TI-Th	THERMAL TRIP INDICATOR	T13
EFI	EARTH FAULT INDICATOR	EF13
SOC	SUMMATED OVERCURRENT RELAY	CDG 33
COCC	CUSTOMER OVERCURRENT RELAY	CDG 33
RMICB	11kV RING MAIN ISOLATOR CIRCUIT BREAKER	
TRANSFORMER ACB	415V TRANSFORMER AIR CIRCUIT BREAKER	
CUSTOMER SWITCH	415V AIR CIRCUIT BREAKER, DISCONNECTOR OR LINK (REFER NOTE 7)	
Th	THERMAL RELAY ON DRY TYPE TRANSFORMER (REFER NOTE 5)	
TC	TRIP COIL	
a	AUXILIARY SWITCH (Open when CB Open)	
b	AUXILIARY SWITCH (Closed when CB Open)	

**REVISIONS**

NO.	DESCRIPTION	DATE
1	ISSUED FOR TENDER	20/09/07
2	DESIGN CHANGES	20/09/07
3	DESIGN CHANGES	20/09/07
4	DESIGN CHANGES	20/09/07
5	DESIGN CHANGES	20/09/07
6	DESIGN CHANGES	20/09/07
7	DESIGN CHANGES	20/09/07
8	DESIGN CHANGES	20/09/07
9	DESIGN CHANGES	20/09/07
10	DESIGN CHANGES	20/09/07
11	DESIGN CHANGES	20/09/07
12	DESIGN CHANGES	20/09/07
13	DESIGN CHANGES	20/09/07
14	DESIGN CHANGES	20/09/07
15	DESIGN CHANGES	20/09/07
16	DESIGN CHANGES	20/09/07

**REFERENCES**

- 1. NETWORK STANDARD
- 2. NETWORK STANDARD
- 3. NETWORK STANDARD
- 4. NETWORK STANDARD
- 5. NETWORK STANDARD
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- 12. NETWORK STANDARD
- 13. NETWORK STANDARD
- 14. NETWORK STANDARD
- 15. NETWORK STANDARD
- 16. NETWORK STANDARD

**Ausgrid**

DESIGN SERVICES  
24 CAMPBELL ST SYDNEY NSW 2000

SCALE: AS SHOWN

DESIGNED: -

DRAWN: PWJ

CHECKED: PIE

APPROVED: PBH

DATE: 10/09/07

PROJECT No: -

PROJECT NUMBER: 208/6/9/4

RMICB SUBSTATIONS WITH E TYPE LV BOARD AC AND DC SCHEMATICS

DRAWING No: 178232

SHEET: -

AMD: 3

SIZE: A0