

Topic Skills Practice Cover Sheet

Unit Name:	NAT10809004 – Select protection devices and systems for low voltage circuits and apparatus.
Topic Title:	Protection against indirect contact

Skill Practice Number:	4.2
Skill Practice Name:	ADS Protection Arrangements

Student Name:	
Student ID:	
College/Campus:	
Group:	

Results	
Planning:	
Carryout:	
Completion:	
Overall Results:	
Comments:	

Topic Skills Practice 4.2

NAT10809004 – Select protection devices and systems for low voltage circuits and apparatus.

KE-10809004 LV protection devices and systems principles

Topic: 4. Protection against indirect contact

Skills Practice 4.2: ADS Protection Arrangements

Task:

To draw a single phase switchboard wiring configurations incorporating RCD protection.

Objectives:

At the completion of this skills practice, you should be able to:

- Draw in the necessary connections for the protection of circuits by automatic disconnection of the supply.
- Draw the necessary connections for RCD protection of circuits using RCDs.

1. Planning the Skills Practice

1.1 Identify ADS Wiring Arrangements

1.1.1 Research the Wiring Rules and the following reference material to determine the requirements and arrangements for the provision of fault protection by automatic disconnection of the supply (ADS).

The following reference material will include some useful information:

- Energy Space content page 4.2
- Pethebridge, K. and Neeson, I., Electrical Wiring Practice. McGraw-Hill, Seventh Edition, Volume 2 (Chapter 1.3)
- Hampson, J., Electrotechnology Practice, Pearson Education, Third Edition, 2014 (Section 10.3)

1.1.2 Once you feel you have sufficient knowledge of the subject matter, obtain the following materials to assist you with carrying out this skills practice:

- AS/NZS 3000 Wiring Rules (current edition)
- Pens/pencils

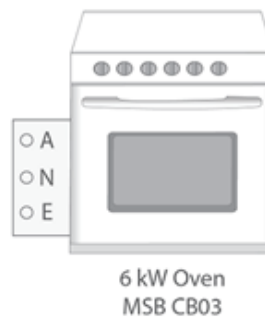
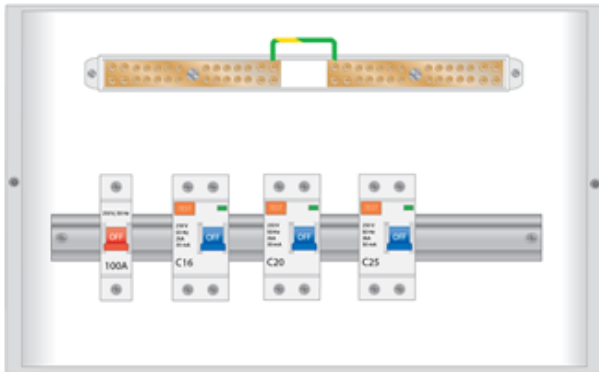
Topic Skills Practice 4.2

2. Carrying Out the Skills Practice

2.1 Draw Switchboard Wiring Arrangements

2.1.1 On the diagram below, draw in all necessary conductors and terminations for the connection and protection of two lighting circuits, two socket outlets circuit, and a 6 kW stove circuit. Show all conductors associated with each circuit.

Main Switchboard (MSB)



	 Feedback	Have your teacher/trainer check your installation is correct	Teacher/Trainer Initials and Date 	
--	---------------------	--	--	--

Topic Skills Practice 4.2


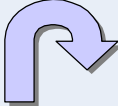
3. Completing the Skills Practice

3.1 Skills Practice Review Questions

3.1.1 When you have successfully completed the activities in Section 2, answer the following review questions.

1. What is the minimum number of RCDs required to protect two lighting circuits and two power circuits?

2. What is an RCBO, and what are the benefits of using RCBOs?

	 Feedback	Have your teacher/trainer check your answers are correct	Teacher/Trainer Initials and Date	