

**STUDIES ON POWER UTILIZATION OF ELECTRICAL
SUPPLY DESIGN IN FACULTY OF ARCHITECTURE,
PLANNING AND SURVEYING, UiTM PUNCAK ALAM**

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ABSTRACT

Electrical supply design in a building has a few considerations to make. First was load, second was the circuit breaker used and third was the cable used. Total Connected Load (TCL) was calculated by taking data at each distribution box. The data collected at the drawing for each room in a building. Second was circuit breaker. Circuit breaker has few types used which were RCCB, MCB, MCCB and ACB. Miniature Circuit Breaker (MCB) was used for circuit from intake to load, Residual Current Circuit Breaker (RCCB) was used for single phase current from 3phase current, Moulded Case Circuit Breaker (MCCB) is commonly and widely used for current less than 800A. For Air Circuit Breaker (ACB), it was used only when the current is above 800A. Third, from calculation of Total Connected Load (TCL) it determines the size and type of cable need to use. To avoid the cable failure, cable size and type must support the supply intake to the load. Cable that been used are armoured and non-armoured. Armoured used for high voltage cable and underground cable. Usually used for supply from Main Switch Board (MSB) to a building Sub Switch Board (SSB). The type cable used for armoured was XLPE. Non-armoured cable was used for low voltage cable. Type that been used was copper. There is one more cable used that is for earth leakage protection which was cpc/ earth leakage cable. Sizing cable used were $2.5mm^2$, $16mm^2$, $50mm^2$, $150mm^2$, $300mm^2$, $400mm^2$.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

UiTM Puncak Alam is one of UiTM campus. Due to increasing number of student, UiTM make a new campus for “Kompleks Alam Bina Dan Seni Reka” in Puncak Alam. It is for Faculty of Architecture, Planning and Surveying (FSPU) and Faculty of Art and Design (FSSR).



Figure 1.1: Project Design [1]