## THIRD SCHEDULE

(regulation 11)

## CALCULATION OF MAXIMUM CURRENT DEMAND FOR DOMESTIC INSTALLATION

This Schedule gives the determination of the maximum current demand for an installation and includes the current demand to be assumed for commonly used equipment

The current demand of a final circuit is determined by summating the current demands of all points of utilisation and equipment in the circuit and, where apprpriate, making an allowance for diversity. Typical current demands to be used for this summation are given in Table A.

The maximum current demand of a circuit supplying a number of final circuits may be assessed by using the allowances for diversity given in Table B which are applied to the total current demands of the individual final circuits obtained as outlined above. In Table B tha allowances are expressed as percentages of the rated full load current of the current-using equipment.

TABLE A

Current demand to be assumed for points of utilisation and current-using equipment

| | *Point of utilisation or current-using equipment* | *Current demand to be assumed* |
|---|---|---|
| | Socket outlets other than 2A socket outlets | Rated current |
| | Lighting outlet* | Current equivalent to the connected load, with a minimum of 100W per lamp holder |
| | Electric clock, electric shaver supply unit, shaver socket outlet, bell transformer, and current-using equipment of a rating not greater than 5 VA | May be neglected |
| | Household cooking appliance | The first 10A of the rated current plus 30% of the remainder of the rated current<br>plus 5A if a socket outlet is incorporated in the control unit |
| | All other stationary equipment | Malaysian Standard rated current, or normal current |

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* Note - Final circuits for discharge lighting are arranged so as to be capable of carrying the total steady current, viz. that of the lamp(s) and any associated gear and also their harmonic currents. Where more exact information is not available, the demand in volt-amperes is taken as the rated lamp watts multiplied by not less than 1.8. This multiplier is based upon the assumption that the circuit is corrected to a power factor of not less than 0.85 lagging, and takes into account control gear losses and harmonic currents.

TABLE B

**Allowances for Diversity**

| *Purpose of final circuit fed from conductors or switchgear to which diversity applies* | *Individual household installation, including individual dwellings of a block* |
|---|---|
| 1. Lighting | 66% of total current demand |
| 2. Power | 100% of the total current demand up to 10 amperes + 50% of any current demand in excess of 10 Amperes |
| 3. Cooking appliances | 10 Amperes + 30% f.1 of connected cooking appliances in excess of 10 Amperes + 5 Amperes if socket outlet incorporated in unit |
| 4. Water-heaters (instantaneous type) | 100% f.1 of largest appliance + 100% f.1 of 2nd largest appliance + 25% f.1 of remaining appliances |
| 5. Water-heaters (thermostatically controlled) | No diversity allowable |
| 6. Standard arrangements of final circuits using socket outlets | 100% of current demand of largest circuit + 40% of current demand of every other circuit |
| 7. Socket outlets other than those included in 6 above and stationary equipment other than those listed above | 100% of current demand of largest point of utilisation + 40% of current demand of every other point of utilisation. |

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* For the purpose of this Table, an instantaneous water-heater is deemed to be a water-heater of any loading which heats water only while the tap is turned on and therefore uses electricity intermittently.

# It is important to ensure that the distribution boards are of sufficient rating to take the total load connected to them without the application of any diversity.

Made the 19th January 1994.