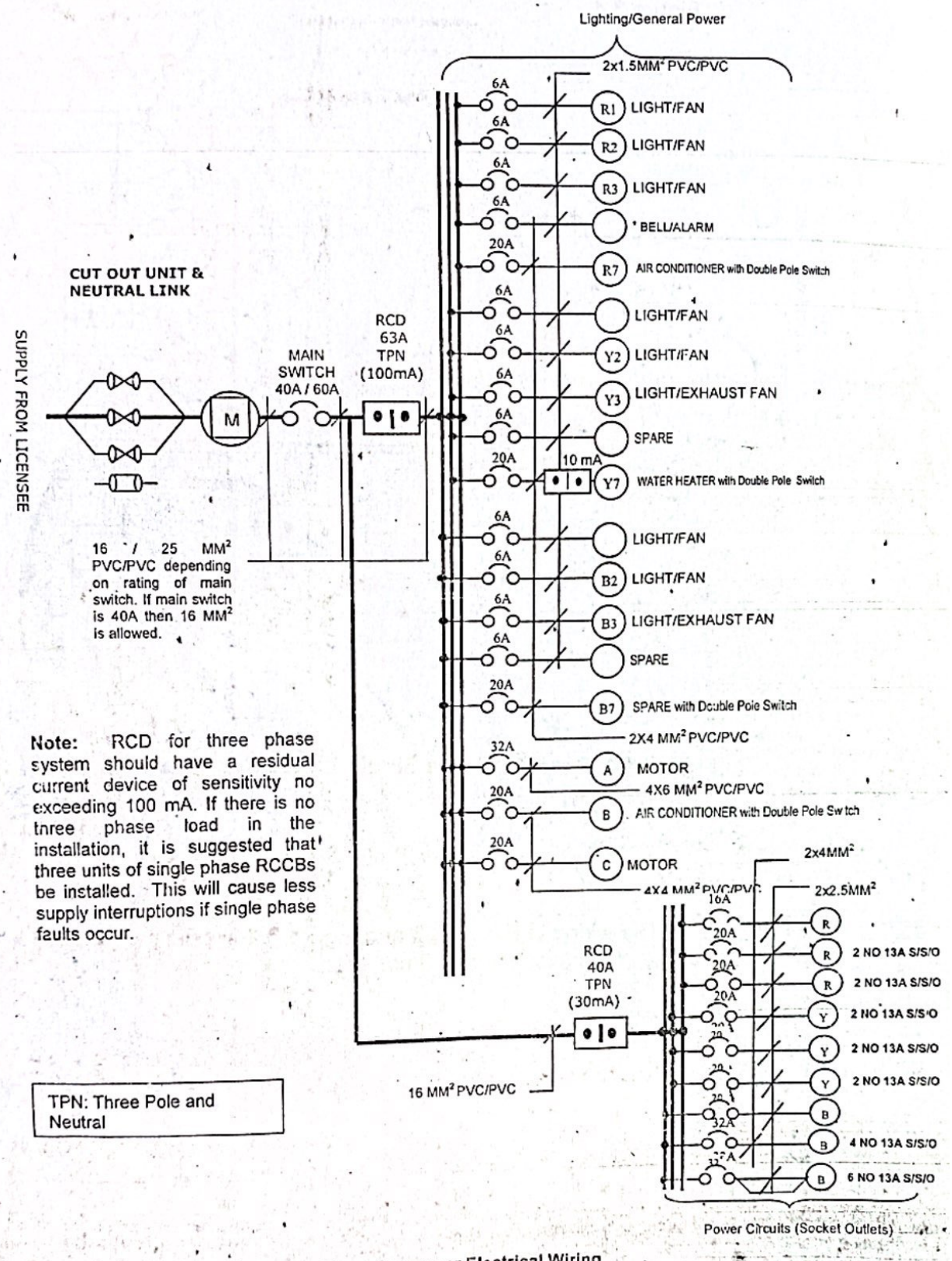
Example 1 of a three phase consumer electrical wiring is as shown in Figure 3.5



Note: RCD for three phase system should have a residual current device of sensitivity no exceeding 100 mA. If there is no three phase load in the installation, it is suggested that three units of single phase RCCBs be installed. This will cause less supply interruptions if single phase faults occur.

TPN: Three Pole and Neutral

Figure 3.5: Example 1 of a Three Phase Consumer Electrical Wiring

Example 2 of a three phase consumer electrical wiring is as shown in Figure 3.6.

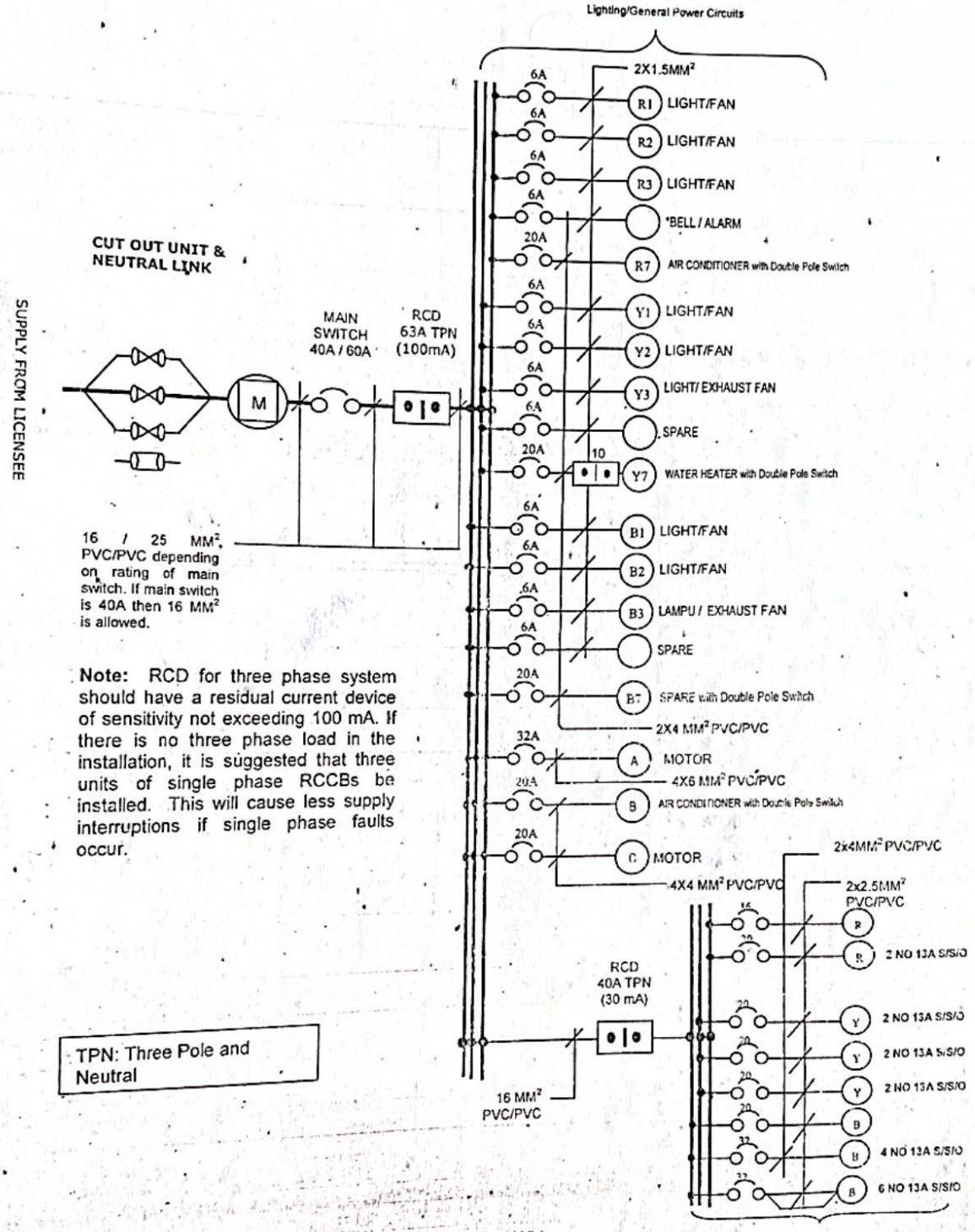
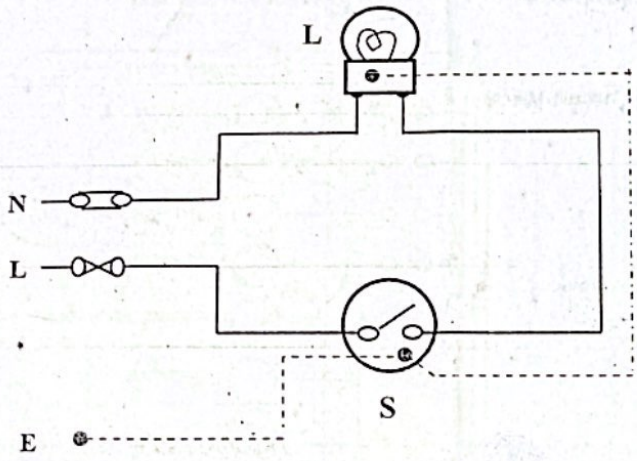
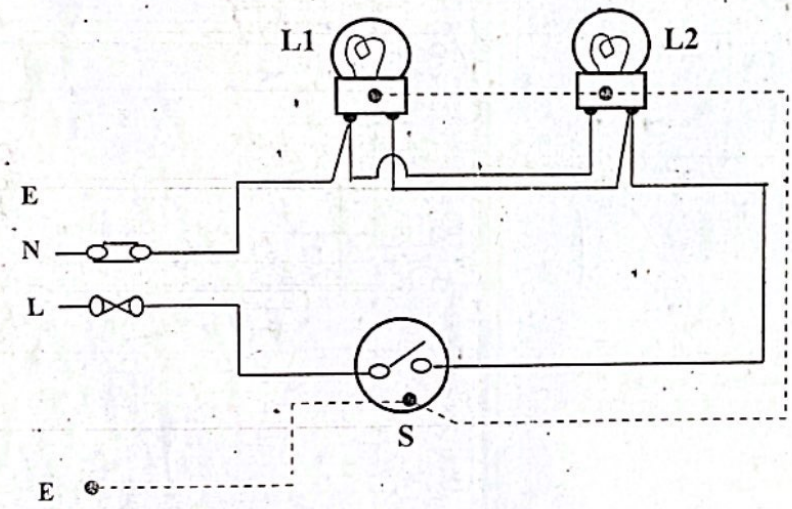


Figure 3.6: Example 2 of a Three Phase Consumer Electrical Wiring

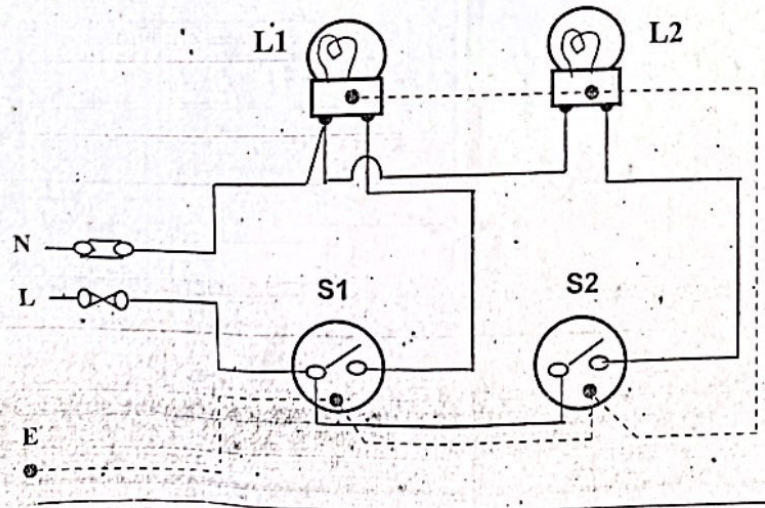
3.4 Examples of Lighting Circuits Schematic Wiring



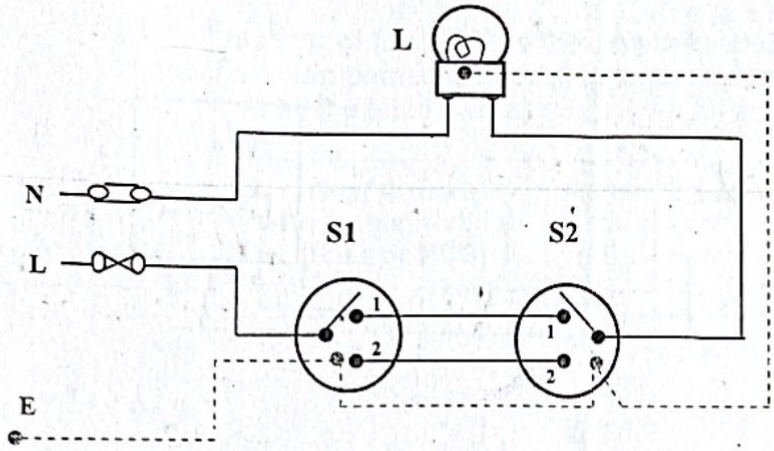
1 Single light point controlled by a one way switch



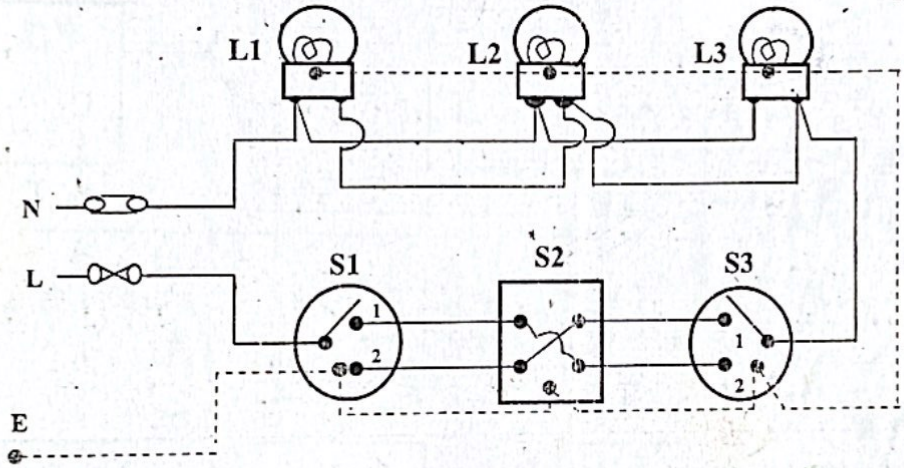
2 Two light points controlled by a one way switch



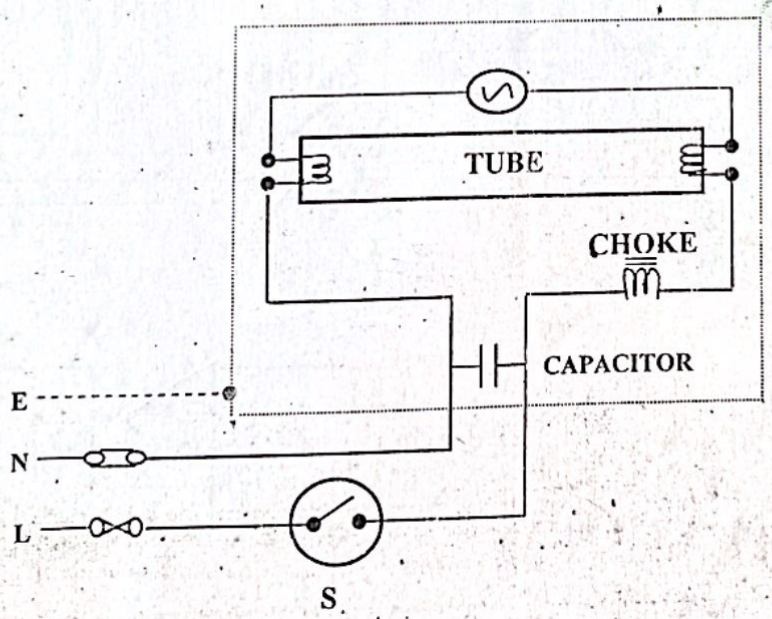
3 Two light points controlled separately by two one way switches



4 Single light point controlled by a two way switch



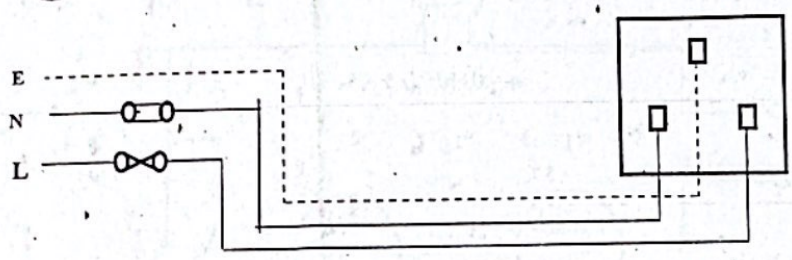
5 Three light points controlled by two way switches and intermediate switch



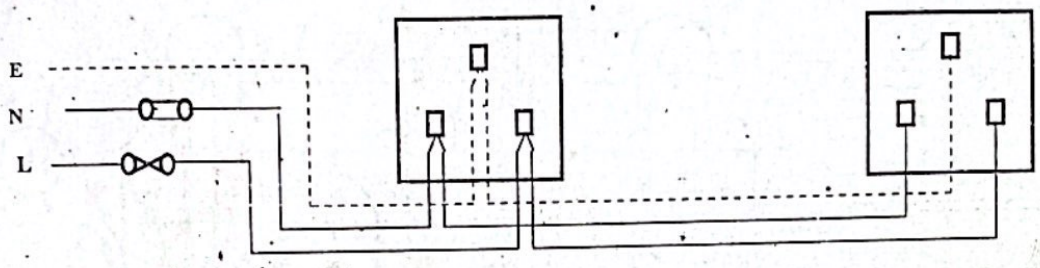
6 Single fluorescent light point controlled by a one way switch

3.5 Examples of Socket Outlet Schematic Wiring

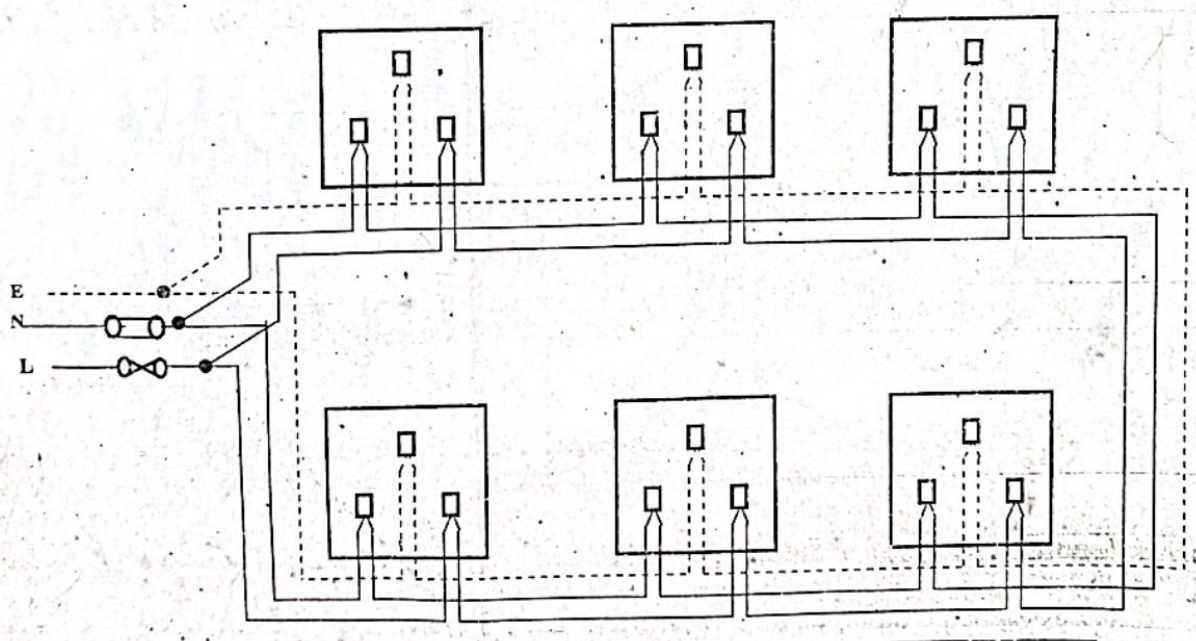
(7) Socket Outlet – Single Socket



(8) Socket Outlets – Radial Connection



(9) Socket Outlets – Ring Circuit Connection



3.6 Final Circuit For 13A Socket Outlets

The total number of final circuits needed, the size of the conductors used and the maximum permitted floor area to be served can be determined by being guided by the table below.

Circuit Type	Over Current Protection Rating (Fuse or MCB) (Ampere)	Minimum Size of Copper Conductor in PVC or Rubber Insulaltion (mm^2)	Maximum Floor Area (m^2)
Ring	30 or 32	2.5	100
Radial	30 or 32	4.0	50
Radial	20	2.5	20

IEE REGULATIONS FOR RING MAIN CCTS.

- The cct shall be installed using 2.5mm² Cable.
- The protective device shall be of 30 Amperes
- The Maximum no. of s/o to be connected in a ring in domestic is 15 and industrial is 10.
- The no. of spur s/o shall not exceed the no. of s/o connected in a ring.
- Each s/o forming a ring shall only supply the spur (or 2 no. as per other books).
- The cables shall run uncut and if cut shall be connected electrically and mechanically linking all the respective terminals and back to the same point of origin in the cct.

Requirements of cable Joints

- Must be electrically and mechanically sound.
- Must be accessible for inspection
- for Underground cables use a splicing kit to avoid ingress of Moisture.