3.4 MOUNTING DISTRIBUTION BOX

3.4.1 Problem Statement

During the training period, I was assigned to design a mounting distribution box and to do some modifications to it. Modification was to enlarge the terminal holes up to 6mm maintaining the existing length of the terminal.

3.4.2 Design Methodology

A solid works model was designed (Refer to Figures 3.16,3.17,3.18) considering the scale of the existing product in the department as shown in Figure 3.15.

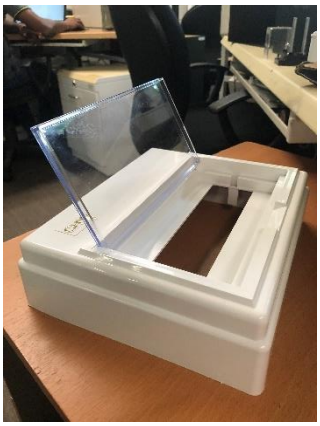

Figure 3.15 Existing Distribution box at the department

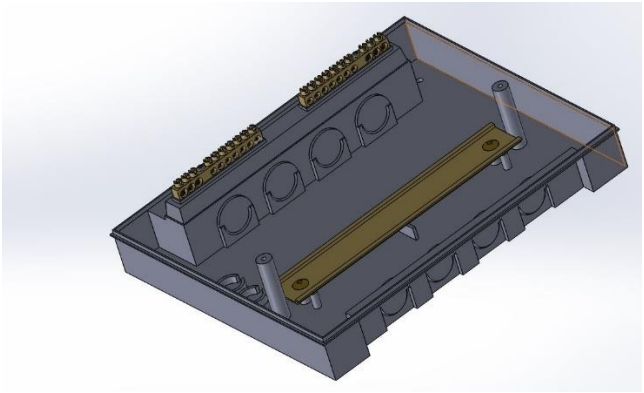

Figure 3.16 Base of the distribution box

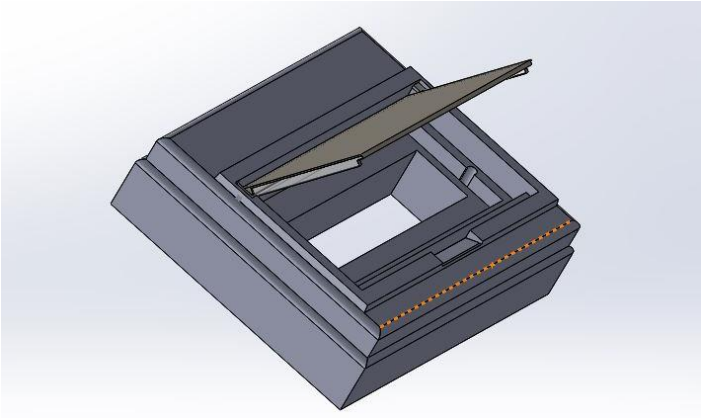

Figure 3.17 Covering of the distribution box

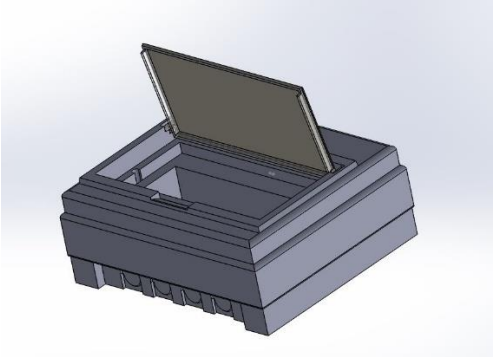

Figure 3.18 Complete model of the distribution box

Modifications had to be done to model of Singapore distribution box (See Figure 3.19) comparing the Sri Lankan distribution box (See Figure 3.20) and the differences have been listed in Table 3.1.

Figure 3.19 Singapore distribution box

Figure 3.20 Sri Lankan Distribution Boxes

Table3.1: Differences of Singapore and Sri Lankan Distribution Boxes

Singapore Distribution Box	Sri Lankan Distribution Box
The terminal has mounted to the bar using a screw nut vertically going through the terminal.	The terminal is mounted from the bottom of the terminal.
There are two different diameters for holes	All the diameters are the same
The terminal bar is already a part of the distribution box.	The terminal bar is mounted separately from the box.
No. of terminals is 10	No. of terminal holes is 9

3.4.3 Results

Terminal holes couldn't be enlarged up to 6mm as the horizontal length was not long enough to have large holes. Therefore, the needed requirements could not be achieved while maintaining the existing length.