

Industry: Materials Handling /// Home Automation

Products Used: FX PLCs

# New openings for Mitsubishi PLCs

When PARCAR were designing their unique solution to parking problems, the safety, reliability and robustness of the control system was paramount. They needed a unique product and the one they chose was the Mitsubishi FX0.



PARCAR is a personalised underground car park that can be operated from a control box inside the house or a coded hand held remote control. It has a fail-safe mechanism, automatic fire extinguisher, panic button and self-stop device. A touch sensitive pressure operated safety edge around the roof stops the unit if it encounters a foreign object in its path and raises the cradle again to avoid anything or anyone being trapped.

Light beams around the perimeter of the cradle check the positioning of the car. Any nonalignment or movement detected is fed back to the FX0, which freezes the action. Should anyone be trapped inside, a panic button overrides all functions and raises the unit while sounding an alarm.

The FX0's timer functions are used to control an interior light that turns off 15 seconds after the unit descends and also fans that run when required to ventilate the area.

By monitoring the time taken to raise the lift, the FX0 can tell whether the PARCAR is working correctly. If not, it freezes in the up position and signals that a service engineer is required. Similarly, it shows a service requirement after 1500 operations and freezes the unit after 2000 ensuring safe usage.

The Mitsubishi FX0 PLC was designed for just this type of application. It was selected in this case for its low cost and small size, enabling the control unit to be as small as possible. This also allowed the size of many other components to be reduced, helping to keep the overall cost of the equipment down.

Other major benefits were the ease of programming and the easy to use monitoring features. Expandability of the control system also allows for future changes in the design of the PARCAR that can be delivered in a variety of solutions.

*Application story first released March 1998 by Mitsubishi Electric UK*