

PROTOTYPE DESIGN COLLECTION

SERIES 2



Prototype Design Collection

Series 2



AHMAD NAJMIE RUSLI

**UNIVERSITI TEKNOLOGI MARA CAWANGAN JOHOR
KAMPUS PASIR GUDANG**

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FOREWORD

This digital book on Prototype Design Collection Series 2 (PDC Series 2) is published as a reference design for mechanical engineering students. The designs presented experience a few phases of analysis before fabrication of prototype. Each project summarises the project description, prototype, figures, and design parameter. The design products vary in tools or equipment for household, workshop, entrepreneur, etc. Suggested material and detail of prototype dimension are also mentioned in this book.

It is hoped that this book will assist the students to have more ideas on innovation design products in the future.

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CHAPTER 121

Design, Analysis, and Fabrication of An Automatic Wireless Door Lock

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PROJECT DESCRIPTION

This project aims to introduce an automatic wireless door lock that can be opened remotely, offering users enhanced convenience. The goal is to address the inconvenience of manual unlocking and gain a competitive edge by conducting research to improve the security of door locks. By identifying and addressing vulnerabilities, the project aims to create a robust and reliable automatic wireless door lock. Additionally, prioritizing user experience, the design process is focused on making the lock user-friendly, simplifying the process of locking and unlocking doors. The implementation of this innovation provides users with added convenience and flexibility, allowing for remote access and eliminating the need for physical keys. With its enhanced security and user-friendliness, the automatic wireless door lock aims to be a highly desirable option in the market, offering users the convenience and peace of mind they seek.

Keywords: *Automatic wireless door lock, Security, Convenience*

PROTOTYPE



DESIGN PARAMETER

The drawing shows an isometric view of an automatic wireless door lock assembly. It consists of a printed circuit board (PCB) with a battery pack, a microcontroller, and a motor assembly. The motor assembly is connected to a long metal bar with a cylindrical end. The drawing is framed by a grid with dimensions 6, 5, 4, 3, 2, 1 on the top and bottom, and A, B, C, D on the left and right sides.

PUSAT PENGAJIAN KEJURUTERAAN MEKANIKAL UITM CAWANGAN JOHOR, KAMPUS PASIR GUDANG				
Course Name	MEC300 - FINAL YEAR PROJECT 2 SESSION: OCTOBER 2022 - JANUARY 2023			
Group	J4EM1105L			
Approved	Checked	Drawn NU'MAN		
Drawing Title	ASSEMBLY PARTS			
Part Name	AUTOMATIC WIRELESS DOOR LOCK			
Part No.	-			
Rev.	Scale	Projection	Weight	Sheet
0				