

Project Name: Electric Blender

Project ID: **PO2\_EBL**

Version: **1.4**

Project Status: **Released**

CYRS

Document

**Document History**

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| --- | --- | --- | --- |
| Version | Author | Date | Change description |
| 1.0 | Mohamed Adel Anis | 22/01/2020 | Initial Creation of CYRS   * Creating two sections in document [Overall Description & Project Description] * **Overall Description section** contains general information about the project. * **Project Description section** contains detailed information about the system requirement. |
| 1.1 | Mohamed Adel Anis | 04/02/2020 | Updating the document according to the review of version 1.0   * **Re-arranging** the position of Document   history table and documents info. |
| 1.1 | Fatima Gomaa | 04/02/2020 | Updating the document according to the review of version 1.0   * **Abstracting** requirements from the level of SW to be in System level prospective. * **Adding** Reference table at the end of the documents. |
| 1.2 | Ahmed Geneidi | 07/02/2020 | **Reviewed** the document and gave my feedback that there should be two sections for each one to sate the change every one did and the document was edited.  **Changing** its status to be **released.** |
| 1.3 | Mohamed Adel Anis | 09/02/2020 | Updating the document upon the review of version 1.2   * **Modify** requirements (2&3) version. * **Adding**extra requirement (4) * **Modify** the document history according the review on version 1.2 |
| 1.4 | Mohamed Adel Anis | 21/02/2020 | **Updating** the document upon the CYRS review sheet points:   * **Modify** requirement 3 * **Adding** requirements 5, 6 & 7 |

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# Introduction

# Purpose

This is Customer requirement specification document (CYRS) for the KENOVO – Electric Blender project.

The purpose of CYRS is to describe the requirements of the client in more technical terms.

CYRS contains:

* Overall description of the customer requirements of the product.
* Functional analysis of the system requirements.

# Document Structure

This document is organized as follows:

* Section 1: Introduction to identify the document.
* Section2: Overall description about the system and information about it.
* Section 3: Requirements of the customer listed in more technical details.

# GeneralDescription

# Project Description

The goal of this project is to create an Electric blender that customer can change its rotating speed to three different levels of speed using only one button. The operating voltage should be monitored to detect any failure in the system.

# Block Diagram

Red: Input Devices
Blue: Intermediate devices 
Green: Output Device

Figure 1 -System Block Diagram

# System Requirements

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_001-1.0 Imp#SW

{

The blender is operated with three main speeds.

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_002-1.1 Imp#SW&HW

{

The blender should have push button to control the blender status and speed in which the sequence of the blender states is as following:

Turned OFF 🡪 Speed 1 🡪 Speed 2 🡪 Speed 3 🡪Turned OFF

The push button should be sensitive enough that a click on it will switch it to the next status without adelay or escaping a status.

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_003-1.2 Imp#SW

{

The system should monitor and detect any changes in the input voltage level of the electric blender’s electricity source.

If the voltage dropped lower than the min threshold value, the system will stop entirely, indicating a problem in the system.

The min threshold value: 7 volts

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_004-1.0 Imp#HW

{

The system shall communicate with the motor using Motor driver to control its speed and status.

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_005-1.0 Imp#SW

{

The system should monitor and detect any changes in the input voltage level of the electric blender’s electricity source.

If the voltage increased more than the max threshold value, the system will stop entirely, indicating a problem in the system.

The max threshold value: 10 volts

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_006-1.0 Imp#HW

{

For the system to be able to monitor the input voltage to the motordriver, the system needs a level shifter to level down the high input voltage from the voltage source to the micro-controller to protect the micro-controller from a fatal damage.

}

Req\_ PO2\_EBL\_Electric\_Blender\_CYRS\_007-1.0 Imp#SW

{

The system should consider different types of inputs to the push button as following:

* If the user pressed the push button fast multiple times, the system should consider every press as speed transition (example: 2 fast presses on the button will operate the blender at speed 2).
* If the user pressed the push button long press, the system should stayat same speed (example:longpress on the button while it is at speed 1, the blender will change its speed to 2 and remains at this speed while this long press).

}

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| --- | --- | --- |
| Document | Version | Author |
| CRS | 1.0 | KENOVO |
|  |  |  |

# Reference Table