**PO2EBL\_ELECTRIC BLENDER**

**SRS DOCUMENT**

**Version 1.9**

**Proposed**

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| **Date** | **Version** | **Document Status** | **Author** |
| 02/12/2020 | 1.9 | Proposed | Mohamed Ibrahem |

**Document Status**

1. Document History

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| --- | --- | --- | --- |
| **Version** | **Date** | **Author** | **Change** |
| 1.1 | 01/24/2020 | Kariman mohamed | Initial Draft, specifying Introduction, system overview and document outline. |
| 1.2 | 01/24/2020 | Kariman mohamed | Edit description of Functional Requirements. |
| 1.3 | 02/04/2020 | Kariman mohamed | Update the SRS document version and edit description of Functional Requirements. |
| 1.4 | 02/06/2020 | Kariman mohamed | Update the SRS requirements according to change in CYRS to remove safety monitor requirement with id REQ\_PO2EBL\_SRS\_03\_V1.3 |
| 1.5 | 02/07/2020 | Kariman mohamed | Update the SRS requirements according to changes in CYRS and according to the SRS review. |
| 1.6 | 02/08/2020 | Kariman mohamed | Update the SRS version and add requirement id to deleted safety monitor requirement. |
| 1.7 | 02/08/2020 | Kariman mohamed | Update the SRS version and edit date format. |
| 1.8 | 02/10/2020 | Kariman mohamed | Update the SRS version, add requirements and edit id of all requirements. |
| 1.9 | 02/12/2020 | Mohamed Ibrahem | Update the date format ,Update document status table in page 2 ,Update date format and ,Update the reference table ,add table of figures ,add 2 requirements  REQ\_PO2EBL\_SRS\_018\_V1.0  REQ\_PO2EBL\_SRS\_019\_V1.0 |

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# 1 Introduction

This section introduces the software requirements specification (SRS) for the KENOVO Electric Blender.

## **1.1 Specification Definition**

This specification documents the software-level requirements for the Electric Blender.

## **1.2 Specification Objectives**

The objectives of this specification are to:

* Provide a software overview of the Electric Blender.
* To formally specify its associated:
* Software requirements.
* Data requirements.
* Quality requirements.
* Constraints.

# 2 System Overview:

## **2.1 Definition:**

The Electric Blender System is an appliance created by KENOVO. The electric blender system has 3 speeds that can be configured by the user with high safety to avoid system failure caused by unexpected voltage peaks.

## **2.2 Objective:**

The objective of the Electric Blender System is to provide the user with a high quality home appliance with high-speed configurability as well as safety monitoring.

## **2.3** **Block** **Diagram**

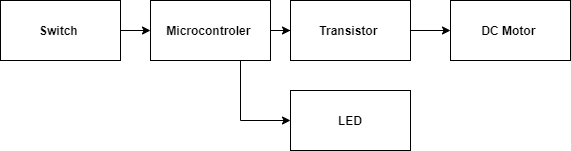


Figure 1 Block Diagram

**3 Software Requirements:**

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_01\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman Mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set first press flag when the switch is first pressed. | | |
| **Inputs** | Switch state | **Outputs** | First press flag |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_02\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set second press flag when the switch is second pressed. | | |
| **Inputs** | Switch state | **Outputs** | second press flag |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_03\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set third press flag when the switch is third pressed. | | |
| **Inputs** | Switch state | **Outputs** | third press flag |
| **Test scope** | ITD/VTD | | |

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| **REQ\_ID** | REQ\_PO2EBL\_SRS\_04\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set fourth press flag when the switch is fourth pressed. | | |
| **Inputs** | Switch state | **Outputs** | fourth press flag |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_05\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set fifth press flag when the switch is fifth pressed. | | |
| **Inputs** | Switch state | **Outputs** | fifth press flag |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_06\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set low speed flag if first press flag is true. | | |
| **Inputs** | First press flag | **Outputs** | Set low speed flag |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_07\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set medium speed flag if second press flag is true. | | |
| **Inputs** | Second press flag | **Outputs** | Set medium speed flag |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_08\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set high speed flag if third press flag is true. | | |
| **Inputs** | Third press flag | **Outputs** | Set high speed flag |
| **Test scope** | ITDV/VTD | | |

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| **REQ\_ID** | REQ\_PO2EBL\_SRS\_09\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall set stop flag if fourth press flag is true. | | |
| **Inputs** | Fourth press flag | **Outputs** | Stop flag |
| **Test scope** | ITD/VTD | | |

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| **REQ\_ID** | REQ\_PO2EBL\_SRS\_10\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_02\_V1.6 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall repeat the sequence if fifth press flag is true. | | |
| **Inputs** | Fifth press flag | **Outputs** | Set low speed flag |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_11\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_01\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall active low speed mode by generating pulse width modulation with duty cycle 30% if the low speed flag is true. | | |
| **Inputs** | Low speed flag | **Outputs** | Low speed mode |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_12\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_01\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall active medium speed mode by generating pulse width modulation with duty cycle 60% if medium speed flag is true. | | |
| **Inputs** | Medium speed flag | **Outputs** | Medium speed mode |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_13\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_01\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall active high speed mode by generating pulse width modulation with duty cycle 90% if high speed flag is true. | | |
| **Inputs** | High speed flag | **Outputs** | High speed mode |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_14\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_03\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall turn on the led with low intensity mode if low speed flag is true. | | |
| **Inputs** | Low speed flag | **Outputs** | Low intensity mode |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_15\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_03\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall turn on the led with medium intensity mode if medium speed flag is true. | | |
| **Inputs** | Medium speed flag | **Outputs** | Medium intensity mode |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_16\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_03\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall turn on the led with high intensity mode if high speed flag is true. | | |
| **Inputs** | High speed flag | **Outputs** | High intensity mode |
| **Test scope** | ITD/VTD | | |

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| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_17\_V1.8 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_03\_V1.3 | | |
| **Author** | Kariman mohamed | **Date** | 02/10/2020 |
| **Description** | SW shall turn the led off if stop flag is true. | | |
| **Inputs** | Stop flag | **Outputs** | Led off mode |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_018\_V1.0 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_04\_V1.0 | | |
| **Author** | Mohamed Ibrahem | **Date** | 02/12/2020 |
| **Description** | SW shall Enable the transistor if first press flag is true. | | |
| **Inputs** | First press flag | **Outputs** | Enable transistor |
| **Test scope** | ITD/VTD | | |

|  |  |  |  |
| --- | --- | --- | --- |
| **REQ\_ID** | REQ\_PO2EBL\_SRS\_019\_V1.0 | | |
| **Covers** | REQ\_PO2EBL\_CYRS\_04\_V1.0 | | |
| **Author** | Mohamed Ibrahem | **Date** | 02/12/2020 |
| **Description** | SW shall disable the transistor if stop flag is true. | | |
| **Inputs** | Stop flag | **Outputs** | Disable transistor |
| **Test scope** | ITD/VTD | | |

# 4 Reference table:

|  |  |  |  |
| --- | --- | --- | --- |
| **ID** | **Version** | **Status** | **Document** |
| 1 | 2.3 | Released | CYRS |
| 2 | 1.9 | Proposed | HSI |