Blackbox Test

The “Blackbox test” verification is focused on testing “[functionalities and performance](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx)”, and at the highest level verify that the “[conventions](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx)” are met, as well as sub requirements of such.

This document is defined as such:

1.- Testing conventions.

2.- Testing and verifying functionalities and performance.

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| --- | --- |
| Test Case ID | TC001 |
| SW | Version: V1.0 |
| Test Case Summary | Verify that power voltage supply is from 9 to 12 Volts DC. |
| Related Requirement | [SRS-Power input -001](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx) |
| Status | Pass |
| Remarks | This is a “Conventions” test case. |
| Created By | Jesus Ramirez |
| Date of Creation | 11/10/19 |
| Executed By | Algemiro Gil |
| Date of Execution | 11/10/19 |
| Test Environment | * Manual Test. |

|  |  |
| --- | --- |
| Test Case ID | TC002 |
| SW | Version: V1.0 |
| Test Case Summary | Verify that the frequency work load is set in the f = 100 Hz to f = 1 KHz, range. |
| Related Requirement | [SRS-Work load frequency range-002](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx) |
| Status | Pass |
| Remarks | This is a “Conventions” test case. |
| Created By | Jesus Ramirez |
| Date of Creation | 11/10/19 |
| Executed By | Algemiro Gil |
| Date of Execution | 11/10/19 |
| Test Environment | * Manual Test. |

|  |  |
| --- | --- |
| Test Case ID | TC003 |
| SW | Version: V1.0 |
| Test Case Summary | Verify that PWM duty cycle shall be defined after working frequency, from 0 – 100 range. |
| Related Requirement | [SRS-PWM Duty Cycle-003](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx) |
| Status | Pass |
| Remarks | This is a “Conventions” test case. |
| Created By | Jesus Ramirez |
| Date of Creation | 11/10/19 |
| Executed By | Algemiro Gil |
| Date of Execution | 11/10/19 |
| Test Environment | * Manual Test. |

|  |  |
| --- | --- |
| Test Case ID | TC004 |
| SW | Version: V1.0 |
| Test Case Summary | Verify that the set point is defined within the range 0 to 3240 RPM. |
| Related Requirement | [SRS-Set point (Speed)-004](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx) |
| Status | Pass |
| Remarks | This is a “Conventions” test case. |
| Created By | Jesus Ramirez |
| Date of Creation | 11/10/19 |
| Executed By | Algemiro Gil |
| Date of Execution | 11/10/19 |
| Test Environment | * Manual Test. |

|  |  |
| --- | --- |
| Test Case ID | TC005 |
| SW | Version: V1.0 |
| Test Case Summary | Verify that the LCD shall display the motor speed, set point and duty cycle percentage. |
| Related Requirement | [SRS-Display behaviour-005](file:///C:\Users\jesus\Documents\GitHub\Proyecto_Integrador\ESTRUCTURA%20DEL%20PROYECTO\1)%20Requirements\3.%20SWRA_20190621.docx) |
| Status | Pass |
| Remarks | This is a “Conventions” test case. |
| Created By | Jesus Ramirez |
| Date of Creation | 11/10/19 |
| Executed By | Algemiro Gil |
| Date of Execution | 11/10/19 |
| Test Environment | * Manual Test. |