

Environmental Tests on Signal Lights

For Federal Signal

2645 Federal Signal Drive University Park, IL 60466

P.O. Number 1316658 - ON

Date Tested 10/17/2018 – 10/19/2018

Test Personnel Alex Dolecki Test Specification ISO 20653

Test Report By:

Alex Dolecki Test Technician

Requested By: Sean Moloney

Federal Signal

Approved By: Mark Gabalewicz

Environmental Team Leader Senior Mechanical Engineer

alexander Doleck

Elite Electronic Engineering Inc. 1516 CENTRE CIRCLE DOWNERS GROVE, IL 60515

TEL: 630 - 495 - 9770 FAX: 630 - 495 - 9785

www.elitetest.com



Table of Contents

1.	Report Revision History	(
2.	Report Revision History	2
3.	Test Specification	
4.	Modifications Made to DUT and/or Deviations to Specification During Testing	4
5.	Summary	
6.	Operation States	
6.1.	Unpowered	4
7.	Performance Monitoring	4
8.	Acceptance Criteria	4
9.	Test Method	4
10.	Certification	4
11.	Device Under Test (DUT)	5
12.	Test Sections	
12.1.	Dust IP6K	7
12.1.1.	Requirements:	7
12.1.2.	Test Procedure:	7
12.1.3.	2 000 P 100	
12.1.4.		
12.2.	Pressure Spray IPX9K	14
12.2.1.	Requirements:	
12.2.2.	Test Procedure:	14
12.2.3.	Description of Test Apparatus:	14
12.2.4.	Test Results:	14

This report shall not be reproduced, except in full, without the written approval of Elite Electronic Engineering Inc.



1. REPORT REVISION HISTORY

Revision	Date	Description
_	November 1, 2018	Initial release



2. Introduction

This document presents the results of a series of environmental (ENV) tests that were performed on 3 Signal Lights (hereinafter referred to as the Device Under Test (DUT)). The DUTs were identified as follows:

Part Number	Serial Number
Part ID: Model FB2PST	S/N 1
Part ID: Model 27XL	S/N 1
Part ID: Model LP3P	S/N 1

3. TEST SPECIFICATION

The tests were performed in accordance with ISO 20653.

Modifications Made to DUT and/or Deviations to Specification During Testing

No modifications were made to the DUTs during the testing. No deviations from the specification were made during the testing.

5. SUMMARY

The following ENV tests were performed and their results are shown below:

Test Description	Specification Section	Test Results	S/N	Date Tested
Dust IP6K	ISO 20653 IP6K	Compliant	1, 1, 1	10/17/2018
Pressure Spray IPX9K	ISO 20653 IPX9K	Compliant	1, 1, 1	10/19/2018

6. OPERATION STATES

The ENV tests were performed with the DUTs operating in one or more of the test modes described below.

6.1. Unpowered

The DUTs were unpowered for the duration of the tests.

7. Performance Monitoring

No monitoring was required during the tests.

8. ACCEPTANCE CRITERIA

- 1) The DUTs shall satisfactorily withstand exposure to dust without physical damage or dust intrusion.
- 2) The DUTs shall satisfactorily withstand exposure to a pressurized stream of water without physical damage or water intrusion.

9. TEST METHOD

The tests were performed using the referenced methods described in ISO 20653.

10. CERTIFICATION

Elite Electronic Engineering Incorporated certifies that the information contained in this report was obtained under conditions which meet or exceed those specified in the test specifications. The data presented in this test report pertains to the DUTs at the test date as operated and monitored if required. Any electrical or mechanical modification made to the DUTs subsequent to the specified test date will serve to invalidate the data and void this certification.