

Static Load SLSC Module



Product Data Sheet
B&A Document 110063_A

Part No.200063
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STATIC LOAD SLSC MODULE SPECIFICATIONS



INTRODUCTION

This document contains technical specifications for the Static Load SLSC Module (B&A Part No. 200063). Specifications are shown at 25 °C temperature, unless otherwise noted. The main features of the module are listed below:

- Single channel
- 25 A, 80 V with max combined power of 50 W
- Configurable load through series/parallel resistors
- Voltage load sense input
- Configurable grounding
- Internal housekeeping / Health monitoring
- User controlled Flight interface power on/off
- Remote channel enable/disable
- Safe to connect to Flight hardware, FMEA approved
- LabVIEW drivers



INTERFACES

Front Load In Connector	15 Pin Receptacle (Female) D-sub
Number of Channels	1 (CH0)
Backplane Connector	SLSC XJ1
Grounding Configuration	See Page 4



SAFETY

The following items must be considered for safety:

- Using the Static Load Card in a manner not described within this document may impair the protection the STATIC LOAD Card provides.
- The SLSC-12001 chassis and the SLSC cards **do not support** hot plug-in. The entire chassis must be powered down when a module is installed.
- Sense lines **do not support** reverse polarity.
- Always follow ESD procedures for handling.
- If cleaning is required, wipe with dry and clean towel.
- Installation of the STATIC LOAD SLSC card must be performed in accordance with B&A “STATIC LOAD SLSC Module User Manual” (Document No. 140027).



SPECIFICATIONS²

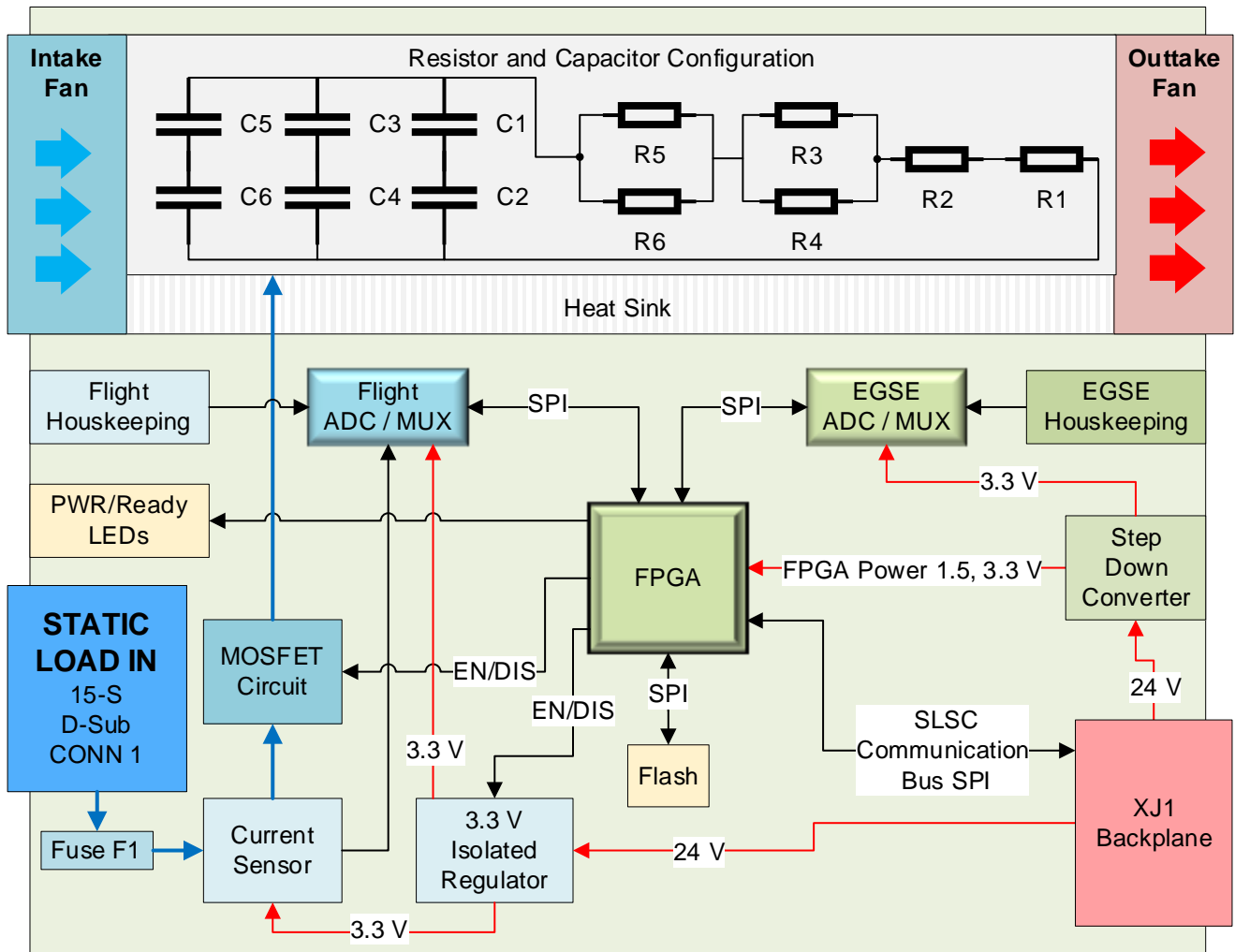
Maximum Load Voltage	80.0 V
Maximum Load Current	25.0 A
Maximum Load Power	50.0 W
Single Fan Rated Speed	15000 ± 15% R.P.M
Fan Air Flow ¹	0.122 (m ³ / min) Nom 0.101 (m ³ / min) Min
Fan Acoustical Noise ¹	31.0 dB Nom 35.0 dB Max
Fan Operation Voltage ¹	4.0 – 5.5 VDC
Cooling System	See Page 2

Note:

- (1) Specifications presented for single fan
- (2) For further specification details, please contact support@baengineering.com



FUNCTIONAL BLOCK DIAGRAM

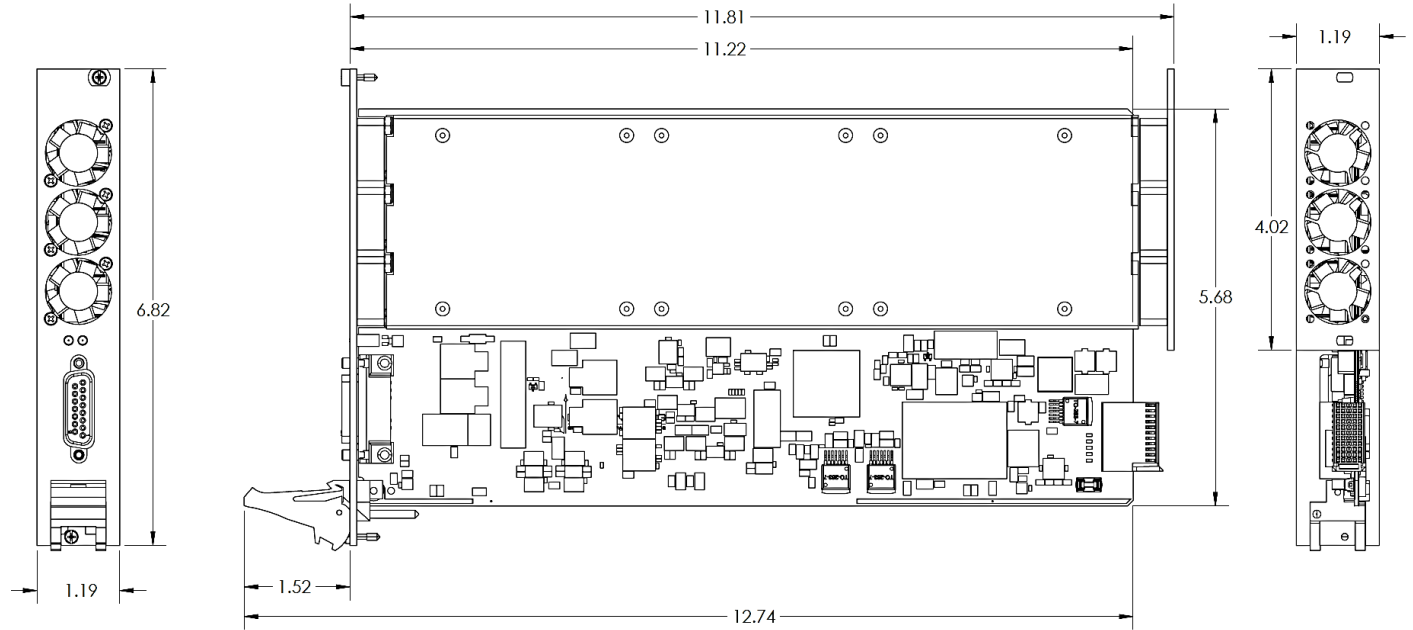


Item	Function/Application
XJ1	Main power source of SLSC module and communication line
CONN 1	Static Load Input with Sense
Intake Fans	3 x 5.0 V DC square tube axial fans
Outtake Fans	3 x 5.0 V DC square tube axial fans
LEDs	Power-on and Ready status



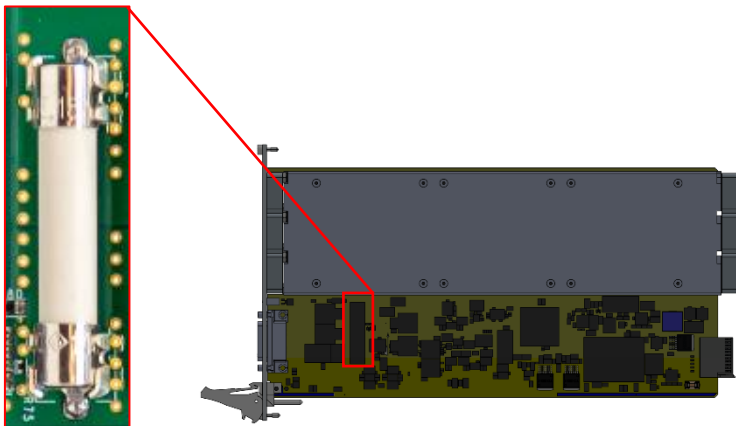
PHYSICAL DIMENSIONS

- Dimensions presented in inches



OVER CURRENT PROTECTION (OCP)

The over current protection (OCP) feature is controlled via a single 1/4" Diameter x 1-1/4" Length fuse installed on the board (one fuse for channel 0). The table below provides suggested fuse part numbers for different current values. By default, a single 031025.MXP fuse is installed on the module which supports up to 25 A of current.



Current	Suggested Part Number
1A	0314001.MXP
10A	0314010.MXP
20A	0314020.MXP
25A	0314025.MXP



CONFIGURABLE GROUNDING

The module allows customizable grounding schemes by shorting the on-board resistors. Capacitors are used for implementation of RC filters. Resistor and capacitor values can be configured based on users' requirements upon order. Online customization tool available on B&A website. Four different types of grounding are provided for two channels:

- **Chassis Ground (CHASSIS_GND)**
- **GSE Ground (GSE_GND)**
- **ISO Ground (ISO_GND)**
- **Fan Ground (Fan_GND)**

Channel 0 ISO Grounding Customization by configuring R ₁ , R ₂ , and R ₃ values.	Preinstalled Default Values												
	<table border="1"> <tr> <td>R₁</td> <td>2.2 MΩ</td> </tr> <tr> <td>R₂</td> <td>2.2 MΩ</td> </tr> <tr> <td>R₃</td> <td>2.2 MΩ</td> </tr> <tr> <td>C₁</td> <td>0.1 μF</td> </tr> <tr> <td>C₂</td> <td>0.1 μF</td> </tr> <tr> <td>C₃</td> <td>0.1 μF</td> </tr> </table>	R ₁	2.2 MΩ	R ₂	2.2 MΩ	R ₃	2.2 MΩ	C ₁	0.1 μF	C ₂	0.1 μF	C ₃	0.1 μF
R ₁	2.2 MΩ												
R ₂	2.2 MΩ												
R ₃	2.2 MΩ												
C ₁	0.1 μF												
C ₂	0.1 μF												
C ₃	0.1 μF												

Fan Grounding Customization by configuring R ₄ values.	Preinstalled Default Values				
	<table border="1"> <tr> <td>R₄</td> <td>2.2 MΩ</td> </tr> <tr> <td>C₄</td> <td>0.1 μF</td> </tr> </table>	R ₄	2.2 MΩ	C ₄	0.1 μF
R ₄	2.2 MΩ				
C ₄	0.1 μF				

Table 1. STATIC LOAD SLSC Module Load In Connector Pinout

CONN 1	
1	CH0_INPUT
2	CH0_INPUT
3	CH0_INPUT
4	CH0_INPUT_Sense
5	CH0_INPUT_Sense_RTN
6	CH0_INPUT_RTN
7	CH0_INPUT_RTN
8	CH0_INPUT_RTN
9	CH0_INPUT
10	CH0_INPUT
11	CH0_INPUT
12	NC
13	CH0_INPUT_RTN
14	CH0_INPUT_RTN
15	CH0_INPUT_RTN

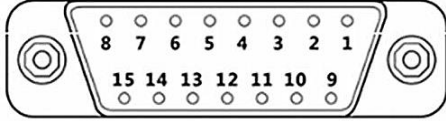
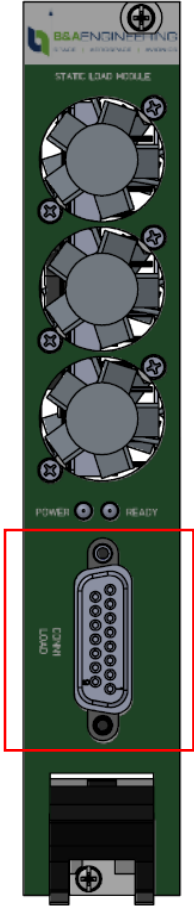
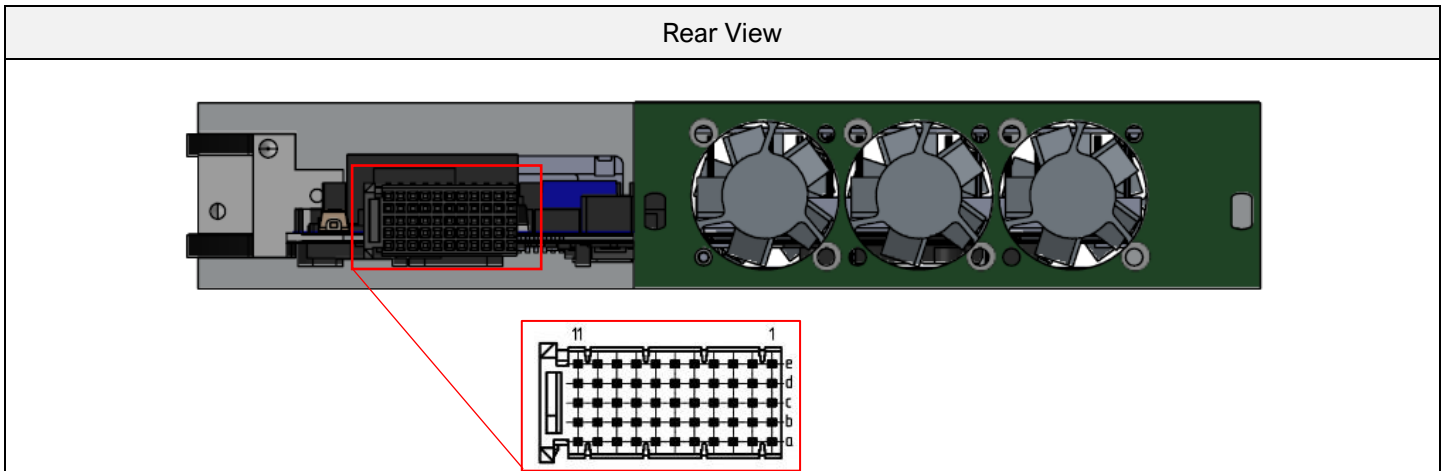
Pin Layout	
	
Front Panel View	
	

Table 2. Backplane 55P XJ1 Connector Pinout



Note: “ f ” refers to the shield of the connector (located on top surface of connector)

6	5	4	3	2	1	
GSE_GND	GSE_GND	GSE_GND	GSE_GND	GSE_GND	GSE_GND	f
N/C	N/C	N/C	N/C	N/C	N/C	e
N/C	N/C	N/C	N/C	N/C	N/C	d
N/C	N/C	N/C	N/C	N/C	N/C	c
N/C	N/C	N/C	N/C	N/C	N/C	b
N/C	N/C	N/C	N/C	N/C	N/C	a

11	10	9	8	7	
GSE_GND	GSE_GND	GSE_GND	GSE_GND	GSE_GND	f
24.0 V	N/C	GSE_GND	SLSC_SpiMosi	GSE_GND	e
SLSC Rdy/Rst#	GSE_GND	SLSC_Trig_To_Mod	GSE_GND	N/C	d
3.3V	SLSC_SpiMiso	GSE_GND	SLSC_SpiCLK	GSE_GND	c
SLSC ID SS#	GSE_GND	SLSC_Tri_From_Mod	GSE_GND	N/C	b
24.0 V	SLSC_ED_SS#	GSE_GND	SLSC_InitIn#	GSE_GND	a