

Bourns® Model SSA-2 Shunt Sensor Analog Series



BOURNS®

Introduction

BOURNS® MODEL SSA-2 PRODUCT DESCRIPTION

The SSA-2 Shunt Sensor - Analog smart shunt is a small, light model with a resilient connector for enhanced performance. This connector enables higher operating temperatures of up to +115 °C, making it ideal for harsh environments that demand reliability and stability. Additionally, the SSA2 offers a user-friendly connector location for easy installation. This design includes high vibration resistance, making it an excellent choice for a highly stressed environment.

The robustness of SSA2 smart shunt modules makes them suitable for use in high-power (100 A to 1000 A) implementations. Key examples include electric vehicle (EV) and Hybrid Electric Vehicle (HEV) traction inverters, AC/DC converters, uninterruptible power supplies, renewable energy generation sites, and smart grid infrastructure.

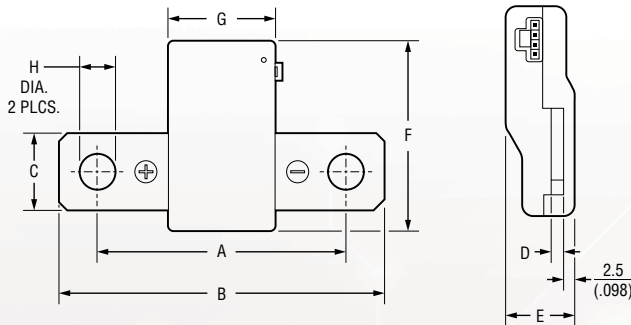
A - 40 °C to +115 °C (ambient) operational temperature range allows these devices to be used in harsher environments than other current sensing products.

The SSA-2 series is RoHS compliant in accordance with Electrical and Electronic Equipment Directive, 2011/65/EU (commonly called "RoHS2") and amendment of Annex II on March 31, 2015, 2015/863.

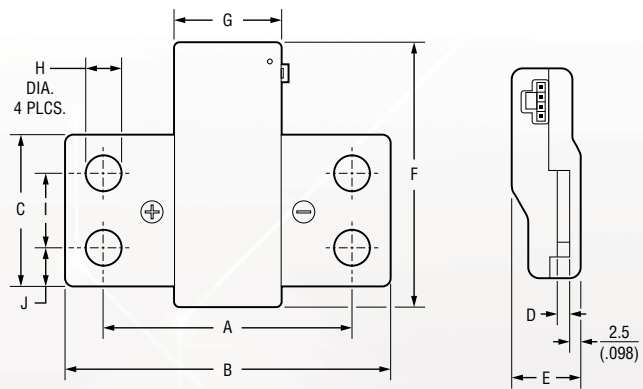
This model is produced and assembled utilizing state-of-the-art production equipment along with lean principles to provide our customers with a high-performance product at a competitive price.

PRODUCT DIMENSIONS

SSA-2-100A to SSA-2-500A



SSA-2-1000A



Product Dimensions

Model	SSA-2-100A	SSA-2-250A	SSA-2-500A	SSA-2-1000A
A	63.5 ± 0.5 ($2.50 \pm .020$)			
B	84 ± 0.5 ($3.307 \pm .020$)			
C	20 ± 0.5 ($.787 \pm .020$)			40 ± 0.5 ($1.575 \pm .020$)
D	3 ± 0.5 ($.118 \pm .020$)		4 ± 0.5 ($.157 \pm .020$)	
E	16.4 ± 0.5 ($.646 \pm .020$)		17.4 ± 0.5 ($.685 \pm .020$)	
F	48.7 ± 0.5 ($1.917 \pm .020$)			68.7 ± 0.5 ($2.705 \pm .020$)

Model	SSA-2-100A	SSA-2-250A	SSA-2-500A	SSA-2-1000A
G	28 ± 0.5 ($1.102 \pm .020$)			
H	8.7 ± 0.5 ($.343 \pm .020$)			
I	—	—	—	19 ± 0.5 ($.748 \pm .020$)
J	—	—	—	10.5 ± 0.5 ($.413 \pm .020$)
Mass (g)	67	69	84	145

DIMENSIONS: $\frac{\text{MM}}{\text{(INCHES)}}$

Product Portfolio

WHAT IS A SHUNT SENSOR - ANALOG?

The New Bourns® Model SSA-2 Shunt Sensor - Analog Series consists of a high-quality device with immunity to stray magnetic fields with a unipolar power supply requirement that can be used in a wide variety of battery related current sensing applications.

The Model SSD Series Digital Shunt Sensor is a current sensing solution with both considerably lower insertion resistance than passive shunt sensors and greater accuracy and operational stability than Hall Effect sensors.







SSD FEATURES AND BENEFITS

- 100 A to 1000 A.
- AC or DC Circuits.
- 500 VDC Reinforced Isolation.
- Amplified Differential Output, $\pm 2.5V$ peak.
- $\pm 0.2\%$ Tolerance.
- Immunity to stray magnetic fields.

APPLICATIONS

- CANbus
- RS-485
- Battery systems
- Renewable energy
- Motor drives
- EV charging stations

PRODUCT CHARACTERISTICS

Series	Photo	Package Size	Response Time	Normal Current (A)	Linearity	Initial Accuracy	Bandwidth	Output	Operating Temperature	Storage Temperature	Polarization	Supply Voltage	RoHS Compliant
SSA-2-100A		110 mm	1.6 μs	± 100	$\pm 0.1\%$	$\pm 0.2\%$	300 kHz	Analog	-40 °C to +115 °C	-55 °C to +125 °C	Bidirectional	3 V	Yes
SSA-2-250A		110 mm	1.6 μs	± 250	$\pm 0.1\%$	$\pm 0.2\%$	300 kHz	Analog	-40 °C to +115 °C	-55 °C to +125 °C	Bidirectional	3 V	Yes
SSA-2-500A		110 mm	1.6 μs	± 500	$\pm 0.1\%$	$\pm 0.2\%$	300 kHz	Analog	-40 °C to +115 °C	-55 °C to +125 °C	Bidirectional	5.5 V	Yes
SSA-2-1000A		110 mm	1.6 μs	± 1000	$\pm 0.1\%$	$\pm 0.2\%$	300 kHz	Analog	-40 °C to +115 °C	-55 °C to +125 °C	Bidirectional	5.5 V	Yes

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Specifications subject to change without notice. Actual performance in specific customer applications may differ due to the influence of other variables. Customers should verify actual device performance in their specific applications.

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