BOURNS®

Riedon™ SSD Series Digital Current Sensors by Bourns

NEW PRODUCT BRIEF

INTRODUCTION

The Riedon™ SSD Series Digital Current Sensors by Bourns gives designers a highly integrated, high precision, compact and cost-effective current measurement solution. This advanced System-in-Package (SIP) device delivers calibrated and temperature compensated digital output that is ideal for current sensing in a wide variety of battery related applications. With considerably lower insertion resistance than passive current sensors, this series also offers greater accuracy and operational stability than typical Hall Effect sensors.

FEATURES

- 16-bit +150 °C Microcontroller
- 24-bit isolated current sensor with CANbus or RS-485/MODBUS interface
- ECC Flash Memory with Autocorrect Single Bit Errors
- Internal & External CRC Data Error Detection
- Advanced Non-Linear Temperature Compensation
- Optional Internal 120 Ohm Termination Resistor
- SSD-1000A AEC-Q200 complaint components Assembly option

TYPICAL APPLICATIONS

- Battery systems
- Renewable energy
- Motor drives
- EV charging stations

BENEFITS

- Compact Package; Big Performance
- High Accuracy Solution with Digital Output
- Enhanced Operational Stability
- 100 A, 250 A, 500 A and 1000 A Nominal Current
- 1500 VDC Galvanic Isolation
- ±0.1 % Tolerance
- Available with CANbus or RS-485 Output

HOW TO ORDER

SSD - 1000A - x - T

Model

Nominal Current
- 100A = 100 A
- 250A = 250 A
- 500A = 500 A
- 1000A = 1000 A

Interface
- C= CANbus (Industrial version)
- CA = CANbus (Assembled using AEC-Q compliant components (optional for Model SSD-1000A only)
- R = RS-485, MODBUS (Industrial version)
- RA = RS-485, MODBUS (Assembled using AEC-Q compliant components) (optional for Model SSD-1000A only)

Option
- Blank = Standard
- -T = Internal 120 Ohm Termination Resistor

SSD SERIES WITH CANbus INTERFACE

Series	Photo	Package Size	Technology	Nominal Current (A)	Current Resistance (Microohms)	Initial Accuracy	Bandwidth	ADC Resolution	Operating Temperature	Storage Temperature	Speed	Supply Voltage
SSD-100A-C		110 mm	CANbus	± 100	300	± 0.1 %	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	5.0 V, 55 mA Typical
SSD-250A-C		110 mm	CANbus	± 250	120	± 0.1 %	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	5.0 V, 55 mA Typical
SSD-500A-C		110 mm	CANbus	± 500	60	± 0.1 %	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	24 V, 15 mA Typical
SSD-1000A-C		110 mm	CANbus	± 1000	30	± 0.1 %	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	24 V, 15 mA Typical

SSD SERIES WITH RS-485/MODBUS INTERFACE

Series	Photo	Package Size	Technology	Nominal Current (A)	Current Resistance (Microohms)	Initial Accuracy	Bandwidth	ADC Resolution	Operating Temperature	Storage Temperature	Speed	Supply Voltage
SSD-100A-R		110 mm	RS-485	± 100	300	± 0.1 % + 5 mA	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	5.0 V, 55 mA Typical
SSD-250A-R		110 mm	RS-485	± 250	120	± 0.1 % + 5 mA	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	5.0 V, 55 mA Typical
SSD-500A-R		110 mm	RS-485	± 500	60	± 0.1 % + 5 mA	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	24 V, 15 mA Typical
SSD-1000A-R		110 mm	RS-485	± 1000	30	± 0.1 % + 5 mA	5 kHz	24 bits	-40 °C to +115 °C	-55 °C to +125 °C	Up to 1100 RPS	24 V, 15 mA Typical

For full characteristics, see data sheets

**RoHS Directive 2015/863, Mar 31, 2015 and Annex.*

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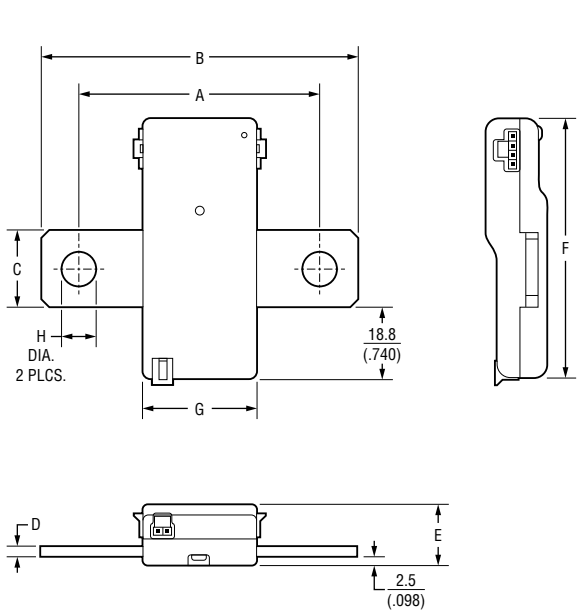
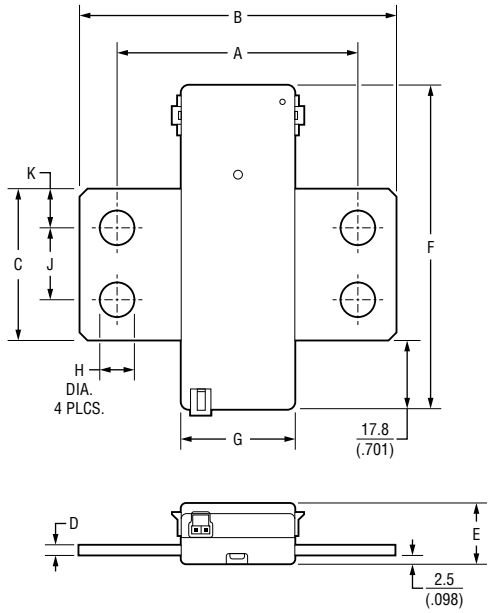
PRODUCT DIMENSIONS





Product Dimensions

Model	SSD-100A	SSD-250A	SSD-500A	SSD-1000A
A	63.5 ± 0.5 (2.50 ± .020)			
B	84 ± 0.5 (3.307 ± .020)			
C	20 ± 0.5 (.787 ± .020)			40 ± 0.5 (1.575 ± .020)
D	3 ± 0.5 (.118 ± .020)		4 ± 0.5 (.157 ± .020)	
E	16.4 ± 0.5 (.646 ± .020)		17.4 ± 0.5 (.685 ± .020)	
F	68.8 ± 0.5 (2.709 ± .020)			85.8 ± 0.5 (3.378 ± .020)

Model	SSD-100A	SSD-250A	SSD-500A	SSD-1000A
G	30.8 ± 0.5 (1.213 ± .020)			
H	8.7 ± 0.5 (.343 ± .020)			
J	—	—	—	19 ± 0.3 (.748 ± .012)
K	—	—	—	10.5 ± 0.3 (.413 ± .012)

DIMENSIONS: MM (INCHES)