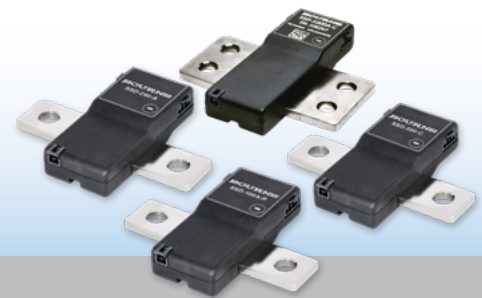


Riedon™ SSD Series Digital Current Sensors by Bourns

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

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

TYPICAL APPLICATIONS

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

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)

R = RS-485, MODBUS (Industrial version)

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

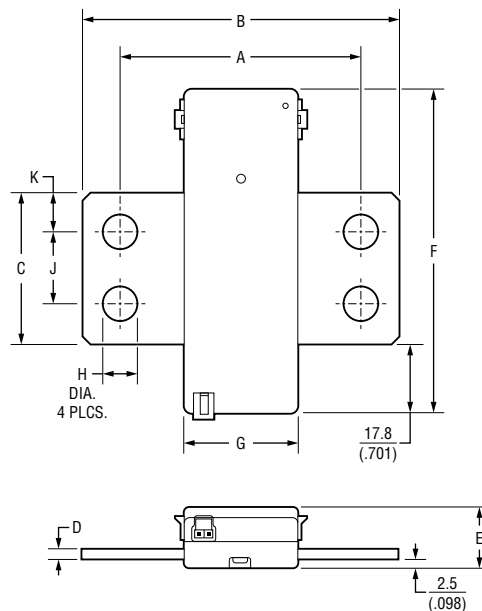
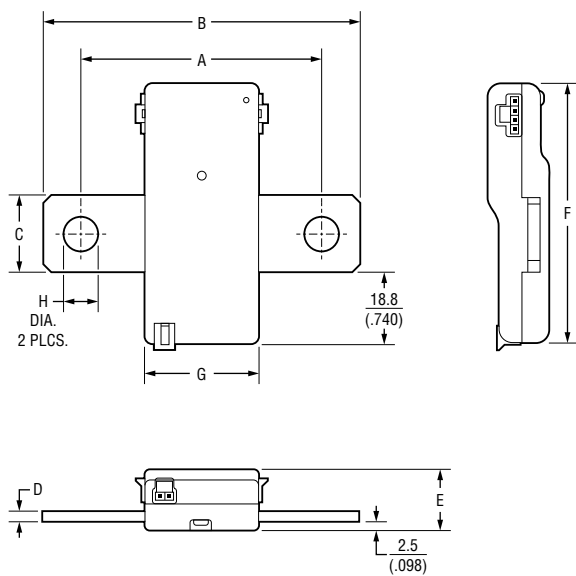
*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Riedon™ SSD Series Digital Current Sensors by Bourns

NEW PRODUCT BRIEF



PRODUCT DIMENSIONS



Product Dimensions

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

| Model | SSD-100A | SSD-250A | SSD-500A | SSD-1000A |
|-------|---|----------|----------|--|
| G | $\frac{30.8 \pm 0.5}{(1.213 \pm .020)}$ | | | |
| H | $\frac{8.7 \pm 0.5}{(.343 \pm .020)}$ | | | |
| J | — | — | — | $\frac{19 \pm 0.3}{(.748 \pm .012)}$ |
| K | — | — | — | $\frac{10.5 \pm 0.3}{(.413 \pm .012)}$ |

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

COPYRIGHT© 2025 • BOURNS, INC. • 10/25 • e/SC2504

"Bourns" is a registered trademark of Bourns, Inc. in the United States and other countries. In April 2023, BE Services Company, Inc., a subsidiary of Bourns, Inc., purchased certain assets of Riedon, Inc., including its logo and trademarks and the right to continue to manufacture former Riedon™ products. The "Riedon Logo" is a registered trademark of BE Services Company, Inc. in the United States. "Riedon" is a trademark of BE Services Company, Inc.