



PRODUCT EXTENSION RELEASE

FIXED RESISTORS



Bourns Fixed Resistor Product Line Adds New AEC-Q200 Compliant High Power Current Sense Resistors to Product Portfolio

Model CSM2F Series

Riverside, California – FEBRUARY 4, 2021 – Bourns is pleased to announce the addition of nine new models to the existing AEC-Q200 Compliant Model CSM2F High Power Current Sense Resistor Series. The CSM2F product extension includes a new 8536 Metric size and two new terminal surface treatments.

The Model CSM2F Series now comes in four different footprint sizes: 6918, 8518, 7036, and the new 8536 Metric. Available resistance values are from as low as 25 microohms up to 200 microohms, with permanent power ratings of up to 50 watts, continuous current up to 1414 amps and high pulse power handling capabilities. The Model CSM2F Series metal alloy current sensing element provides thermal EMF as low as 0.25 $\mu\text{V/K}$ and a low TCR of 50 PPM/ $^{\circ}\text{C}$ in the 20 $^{\circ}\text{C}$ to 60 $^{\circ}\text{C}$ temperature range.

The Model CSM2F Series current sense resistors are manufactured using electron beam (E-Beam) welded resistive and copper alloy. The CSM2F Series was first introduced in 2018 with “pre-plated” copper terminal finishing (tin-plated before the E-Beam welding process). The top and bottom surface of the copper terminals are plated while the side terminals and the resistive element remains non-plated due to the stamping process. Pre-plated models are identified by the “1” suffix in the part number.

[CSM2F-6918-1](#)

[CSM2F-7036-1](#)

[CSM2F-8518-1](#)

[CSM2F-8536-1](#)

Bourns is introducing two new styles of surface finishing. The new “fully-plated” models go through the tin-plating process after material stamping to create a protective layer for additional benefits. This process enhances the performance of these models with better long-term stability and lower resistance drift after load life test. Fully-plated models are identified by the “2” suffix in the part number.

[CSM2F-6918-2](#)

[CSM2F-7036-2](#)

[CSM2F-8518-2](#)

[CSM2F-8536-2](#)

The new “bare-copper” models do not have tin-plating which results in better TCR performance. The copper terminals are supplemented with a protective layer for extended shelf life. Bare-copper models are identified by the “0” suffix in the part number.

[CSM2F-6918-0](#)

[CSM2F-7036-0](#)

[CSM2F-8518-0](#)

[CSM2F-8536-0](#)

Current sense resistors are growing in popularity due to their high measurement accuracy and relatively low cost compared to other technologies. These resistors detect and convert current to an easily measured voltage which is proportional to the current through the device.

These new models complement Bourns’ existing circuit conditioning components, such as power inductors and rectifier diodes.

For additional details on Bourns® AEC-Q Compliant Resistors, visit the Bourns website at <https://www.bourns.com/products/resistors/fixed-resistors-aec-q200-compliant-resistors>.

Should you have any questions or need additional information, please contact [Customer Service/Inside Sales](#).

Features

- E-Beam welded metal strip
- Passivated bare copper, plated top and bottom surface or full plated terminals
- AEC-Q200 compliant
- Up to 50 W permanent power
- Excellent long-term stability
- Up to 50 W permanent power
- Low resistance, low TCR
- Low thermal EMF
- Max. fastening torque 10 Nm
- Bulk or tray packaging
- RoHS compliant*

Applications

- Battery management systems
- Current sensing in bus bars
- Current sensing in welding equipment
- Voltage division
- Power modules
- Frequency converters
- Industrial

