

# NEW PRODUCT BRIEF



## Bourns® Model SM91806AL Automotive Grade Signal Transformer

### INTRODUCTION

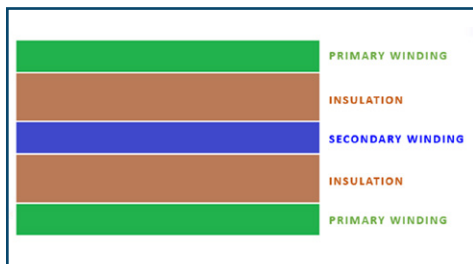
Introducing Bourns® Model SM91806AL AEC-Q200 compliant, Automotive Grade BMS (Battery Management System) Signal Transformer for next generation high voltage applications. This single-channel basic insulation transformer has a planar structure known to deliver cost efficiency and reliability advantages over conventional wirewound transformer designs due to its multilayer PCB isolation and full automation.

### MARKET SEGMENT OVERVIEW

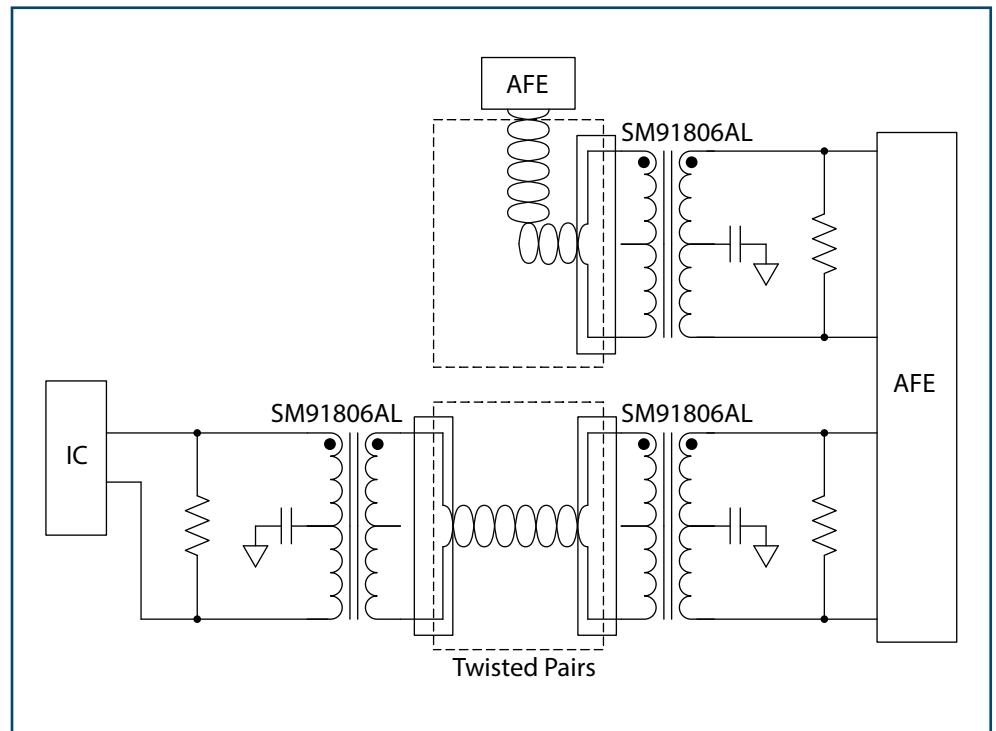
BMS signal transformers meet the need for reliable, safe communication for battery information collection and management systems in a growing group of EV and other high voltage energy storage applications.

The Model SM91806AL's high isolation, cost-effectiveness and network compatibility, along with a system working voltage rated up to 1000 VDC is in demand.

### BASIC CONSTRUCTION



### CIRCUIT DIAGRAM



### FEATURES

- Working voltage: up to 1000 VDC
- Hi-Pot: 4300 VDC or 3000 VAC
- Basic insulation compliant with IEC 60664-1/61558-1/62368-1
- Clearance distance 8.2 mm minimum, pollution degree 2, material group CTI I
- Creepage distance 8.2 mm minimum, overvoltage category II
- Partial discharge level up to 1200 V per IEC 60664
- Operating temperature range: -40 to +125 °C
- AEC-Q200 Compliant, Automotive Grade
- RoHS compliant\* and halogen free\*\*

### BENEFITS

- Planar technology helps increase design flexibility and robustness
- Highly reliable and cost-effective with full automation for automotive applications
- Small package size

### APPLICATIONS

This BMS signal transformer is suitable for BMS systems in the following market segments:

- Industrial Energy Storage Systems
- Electric Vehicles
- Electric Watercraft
- Railway and Traffic Systems

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

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

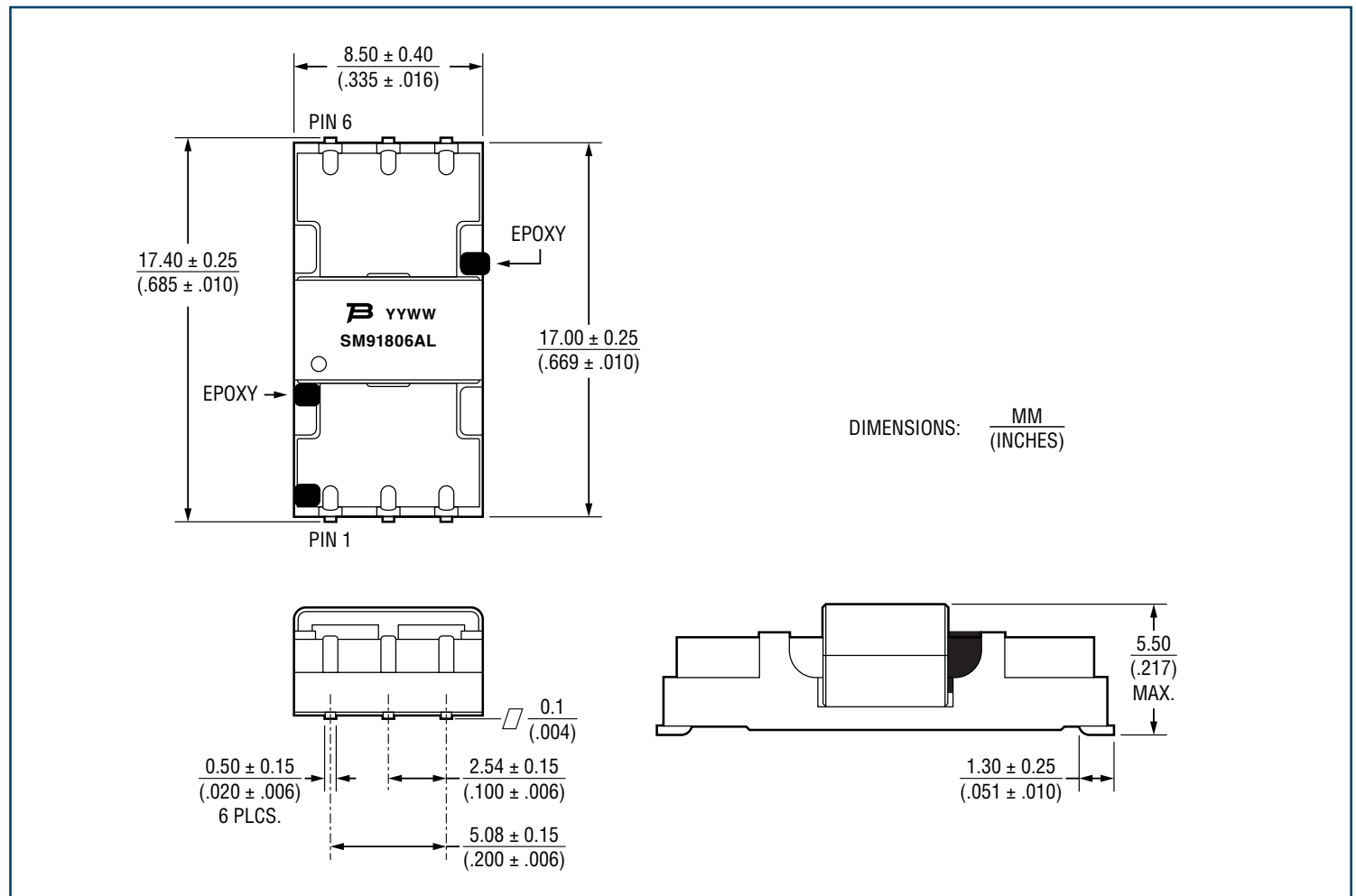


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### PRODUCT CHARACTERISTICS

Series	Photo	Operating Temp. (°C)	Working Voltage	L (100 kHz / 0.1 V)	Insulation Type	Clearance Distance/ Creepage Distance
SM91806AL		-40 to +125	1000VDC	150 ~ 450 µH	Basic Insulation	>8.2 mm

### PRODUCT DIMENSIONS



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