BOURNS® BMS Transformers
for Automotive and Industrial Applications
**OVERVIEW**

**INTRODUCTION**
Bourns offers a full line of BMS transformers that deliver the advanced circuit isolation and EMI suppression capabilities needed for safe and efficient operation in e-mobility and industrial Battery Management Systems (BMS). Designed to work with most major BMS IC chipsets, Bourns® BMS transformers are optimal solutions for Electric Vehicles (EVs) and Energy Storage Systems (ESS) where multiple large battery packs are connected in series.

In particular, Bourns’ portfolio of BMS AEC-Q200 compliant signal transformers provides the features necessary to monitor essential safety factors such as temperature, state-of-charge and device health. These surface-mount, single- or dual-channel transformers are designed with high 1000 V or 1600 V working voltages, inductance values in the 150 µH to 600 µH range with an operating temperature up to +150 °C. To increase their electrical isolation protection against overvoltage transients, Bourns uses fully insulated wire that has passed the hi-pot test (dielectric strength) in its AEC-Q200 compliant BMS transformers. In addition, these signal transformers support the widely used and higher data rate serial daisy chain/isoSPI™ communication interfaces.

**ISOLATION TRANSFORMERS FOR BMS-SPI INTERFACE**

BOURNS® BMS TRANSFORMER ADVANTAGES

- Supports serial daisy chain/isoSPI™ interfaces
- Holds reference designs with:
  - Analog Devices Model LTC6804-1/6811
  - NXP Model MC33771/33772
  - Texas Instruments Model BQ79606
- Operating temperature up to +150 °C
- AEC-Q200 compliant
- RoHS compliant*

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<table>
<thead>
<tr>
<th>Bourns Model Number</th>
<th>Designed to Work with</th>
<th>Channels</th>
<th>OCL</th>
<th>Dimensions</th>
<th>Insulation Type</th>
<th>Working Voltage</th>
<th>Hi-pot isolation</th>
<th>Center Tap</th>
<th>Choke</th>
<th>Auto Termination</th>
<th>AEC-Q200 Compliant</th>
<th>UL Recognition</th>
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<td>Linear 6820/6813/6815 NXP MC33664/33771 TI BQ79616</td>
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<td>150 ~ 450</td>
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<td>4300 VDC</td>
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**Product is not automotive grade
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