Supporting global trends towards reducing package size in automotive sensor applications, Molex advances its customization and development capabilities to help automakers achieve greater competitive advantage

The trend toward ‘smart’ (or ‘intelligent’) cars continues to build momentum as more electronic content, sensor technology products and wireless systems are added for enhanced performance, safety, comfort, convenience and communication. Increased regulations for road vehicles and car safety augment and accelerate the use of Dedicated Short-Range Communications (DSRC) for vehicle-to-vehicle and vehicle-to-road infrastructure communication, metering, collision avoidance warning, emergency vehicle messaging warning, electronic parking and toll payment. These developments give impetus to a fast-expanding global sensor market, which presents huge opportunities for more sensor interconnect design-ins.

In the automotive interconnect segment of the industry, trends show continued reduction in the overall size of automotive sensors; increasing preference of Tin (Sn) plating for cost reasons and the predominance of compliant-pin PCB mounting given the advantages of this solderless technology.

Riding on these trends, Molex is developing smaller 0.5mm-type mating terminals for sensor interconnects that reduce the overall size of sensor packages with 0.64mm Compliant-pin PCB terminals. Molex is ready to configure and develop products according to customer specifications that help lower overall applied costs. Examples include a tire pressure monitoring system, a crash or airbag sensor, or an application that includes a Squib cable assembly for fail-safe operations in automotive safety-restraint systems.

From proposal to design through development to full manufacturing production, Molex gives customers optimum flexibility and the price-performance benefits for their strategic application investments. With a global interconnect R&D and manufacturing footprint fully integrated with quality, reliability and testing centers and expert engineering resources, Molex has the capability to help customers achieve greater product differentiation and enjoy strong competitive advantage in the global automotive market place.

For more information visit our website at http://www.molex.com/link/autosensorhousing.html

FEATURES AND BENEFITS

- Reduced-size sensor interconnects with 0.5mm mating terminals and 0.64mm Eye-of-Needle-type (EON) PCB termination offer cost-savings, lower cost of operations and enhanced reliability
- Provides Wireless Dedicated Short-Range Communications (DSRC) sensor interconnect development by helping to achieve custom requirements for EMI, shielding, thermal-pad attachment, composite resins and other specialized features
- Comprehensive design, development, stamping, molding, plating, bushing, laser-marking, sealing and packaging capabilities available to help design-in a wide range of sensor-interconnect solutions, with off-the-shelf or custom mating connectors if needed
- Fully integrated assembly-and-inspection machines with ability to incorporate pre-mold or insert-molding on the same line for added flexibility and operating efficiency
- Design Verification Plan and Report (DVPR) and Failure Analysis (FA) reporting to meet customer specifications, USCAR2, GMW 3191, EIA-364 or other required standards
APPLICATIONS

- Automotive and transportation
  - Powertrain
  - Pressure sensors
  - Temperature sensors
  - Knock sensors
  - Mass Airflow sensor
- Safety
  - Airbag crash sensors
  - Radar sensors
  - Tire Pressure Monitoring Systems (TPMS)
  - Rollover sensor
- Driver Assistance Systems / Convenience
  - Parking sensors

ORDERING INFORMATION

<table>
<thead>
<tr>
<th>Molding Plastic Housing Options</th>
<th>Stamped Pins or Lead-frame</th>
<th>Plating Options</th>
<th>Standard Inspection and Process Options</th>
<th>Component-Assembly Processes (Optional)</th>
<th>Additional Processes (Optional)</th>
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<tr>
<td>Conventional or Insert Molding; PBT, PA66, PET, PPA, LCP and others; with or without Glass-filled</td>
<td>C5100, C2600 or others</td>
<td>Gold, Silver, Tin; Selective or Immersion, Other requirements</td>
<td>High-Potential; Open-Short; True Pin Positioning; Marking and others</td>
<td>Bushing; Gasket; Encapsulant; Coil Winding; Ferrite; Breather Vent and others</td>
<td>Dispensing Sealant; Laser Marking for 2D Matrix Code; Screw Mounting; Ultrasonic Welding and others</td>
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Automotive Sensor Interconnects

- Radar Sensors
- Tire Pressure Monitoring Systems (TPMS)
- Airbag Crash Sensors
- Airbag Sensor
- Parking Sensors
- Airflow Sensors
- Tire Pressure Monitoring System
- Rollover Sensor
- Crash Sensors

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