

Delphi J1939 Terminating Resistor

Today's commercial vehicles monitor many functions critical for the efficient operation of the vehicle. As government regulations increase, the communication requirements of each vehicle will also grow. The Controller Area Network (CAN) provides the critical communication for the on/off road commercial vehicle market. The SAE (Society of Automotive Engineers) J1939 specification defines electrical system requirements, including a J1939 terminating resistor. This terminating resistor is required to be placed at both ends of the main communication backbone.

The Delphi J1939 Terminating Resistor is an insert molded resistor end cap which mates to a sealed Delphi GT connection. The resistor blades and mating terminal are gold plated to provide a reliable contact interface. This product provides a cost effective in-harness option for the CAN system.

▶ Benefits

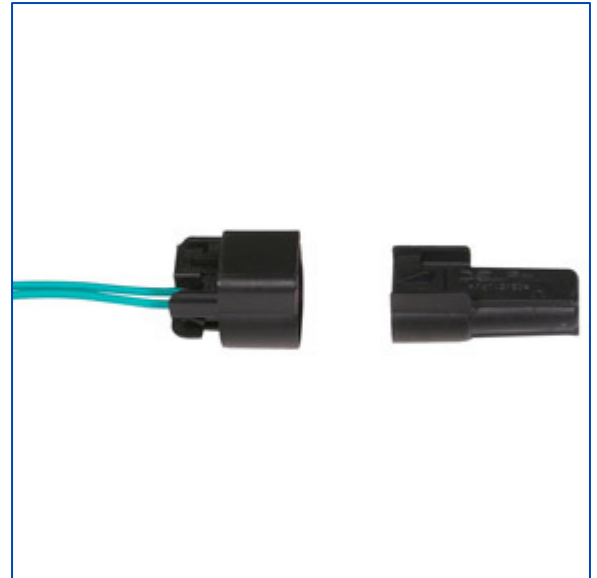
- Cost-effective and space-efficient design
- Complies with SAE J1939 standards
- Gold plated terminal contact interface for high reliability
- Sealed connection system for environmental protection
- Mating connector provides connector seal protection/retention, and terminal position assurance (TPA)
- Robust for use in high-vibration and rugged environments
- Easy to install/easily replaced in service

▶ Typical Applications

The cost-effective Delphi J1939 Terminating Resistor is ideally suited for use with CAN bus systems designed to help meet the increased loads on electrical/electronic architecture systems in commercial vehicles, including off-highway agricultural and construction equipment.

▶ The Delphi Advantage

Delphi is a full service supplier and offers an extensive portfolio of electrical/electronic products. As a connection systems expert, Delphi is positioned to provide complete integrated systems. Delphi designs, manufactures, assembles, validates, and delivers electrical/electronics that meet or exceed stringent customer and/or industry standard specifications and requirements.



Delphi J1939 Overmolded Package



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▶ **Part Information**

Part Number	Description
15429045	Assembly connector 2M GT 150 sensor (includes terminating resistor sub-assembly)
13510085	2-way 150 GT sealed (mating harness connector)
15355128	TPA (terminal position assurance)
12191152	Cable seal—white (1.20 mm - 1.90 mm diameter) tape
12191226	Cable seal—white (1.20 mm - 1.90 mm diameter) loose
12191153	Cable seal—blue (1.86 mm - 2.40 mm diameter) tape
12191227	Cable seal—blue (1.86 mm - 2.40 mm diameter) loose
15326426	Terminal female gold plated (0.5 mm ² - 0.35 mm ²)
15326427	Terminal female gold plated (1.0 mm ² - 0.8 mm ²)

The Delphi SAE J1939 Terminating Resistor is currently available in ten (10) resistor values. Review product print 13534897 for more information.

▶ **Validation Information**

Specification	Required Test	Acceptance Criteria	Test Result
SAE/USCAR 5.4.2	Connector-Connector Mating Force	≤75N	Passed
SAE/USCAR 5.4.2	Connector-Connector Unmating Force (Primary Lock Fully Engaged)	≥110N	Passed
SAE/USCAR 5.4.2	Connector-Connector Unmating Force (Primary Lock Disabled)	≤75N	Passed
SAE/USCAR 5.4.4	Polarization Feature Effectiveness	Mismating force >220N	Passed
SAE/USCAR 20	Field Correlated Life Test (FCLT)	Dry circuit resistance is the limit of the resistance value ± 1%	Passed
SAE/USCAR 5.6.1	Thermal Shock—Dry Circuit	Total connection resistance is the limit of the resistance value ± 1%	Passed
SAE/USCAR 5.6.1	Thermal Shock—Voltage Drop	Voltage drop/total connection resistance is the limit of the resistance value ± 1%	Passed