DELPHI

CONNECTION SYSTEMS

Delphi 150, 280 & 630 Series GT Connection Systems

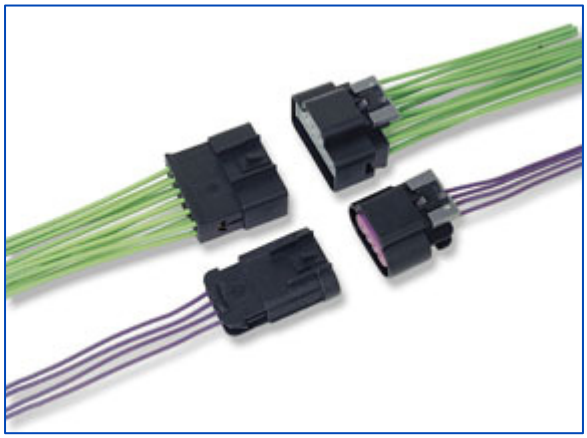
Delphi's GT terminal and connector system was developed with global customer input at every design phase and has a small package size suited to fit the shrinking space requirements of today's vehicles. The GT 150, 280 & 630 Series GT Connection Systems with silver interface platings pass the SAE® (Society of Automotive Engineers) J2030* Heavy-Duty Electrical Connector Standard.

The GT Connection System includes:

- Tangless terminals with stamped serrations
- Pump-handle primary locks with integrated Connector Position Assurance (CPA)
- Secondary lock capabilities including Terminal Position Assurance (TPA) and Primary Lock Reinforcement (PLR) with positive connector seal retention or a Slide Lock Cover (SLC) for unsealed systems
- Female terminals compatible with ISO or SAE blades

Benefits

- Pass SAE J2030* Heavy-Duty Electrical Connector Standard (with silver interface platings)
- Tangless terminals yield durability
- Low engage force improves reliability and ergonomics
- Pump-handle primary lock for lower engage force and easy disassembly
- Secondary lock and TPA and CPA capabilities for improved and more robust system design
- Seal retention and protection features help prevent loss or damage to the connector seal
- Electrical performance equal to less space-efficient terminations due to capability of more terminations per connection with increased design and application efficiency
- Mates to ISO, SAE blades for compatibility with existing systems and increased efficiency



GT 150, 280, and 630 Series

GT Mixed Series

GT 150 Female Sealed (3.5 mm Centerline)

*Silver plated BeCu is required.
SAE® is a trademark of SAE International.

Typical Applications

The GT Connection System is suitable for in-line, device, header or bulkhead vehicle applications. The number and orientation of cavities can be configured to a customer's specific application. In addition to providing customized designs, Delphi offers the following:

GT Lever Lock Series

- **GT 150 and 280 Series** available in both sealed and unsealed versions in cavity variations between 2-way and 16-way. GT 630 is available in two-way sealed and one-way to four-way unsealed.
- **GT Mixed Series** combining both 150 and 280 series terminals in the same connector. Typically, 280 series terminal cavities are located in the outside corners of the connector. This series is available as a 12-way and 16-way sealed and unsealed.
- **GT 150 Female Sealed** connectors available with 3.5 mm centerline spacing and various indexing capabilities. The 3.5 mm centerline spacing (vs. standard 4.5 mm) enables mating to existing devices like sensors.
- **GT Lever Lock Series** available in both sealed and unsealed versions, providing connector mating forces of less than 50 N for up to 40 terminations per connector.

Application Guidelines

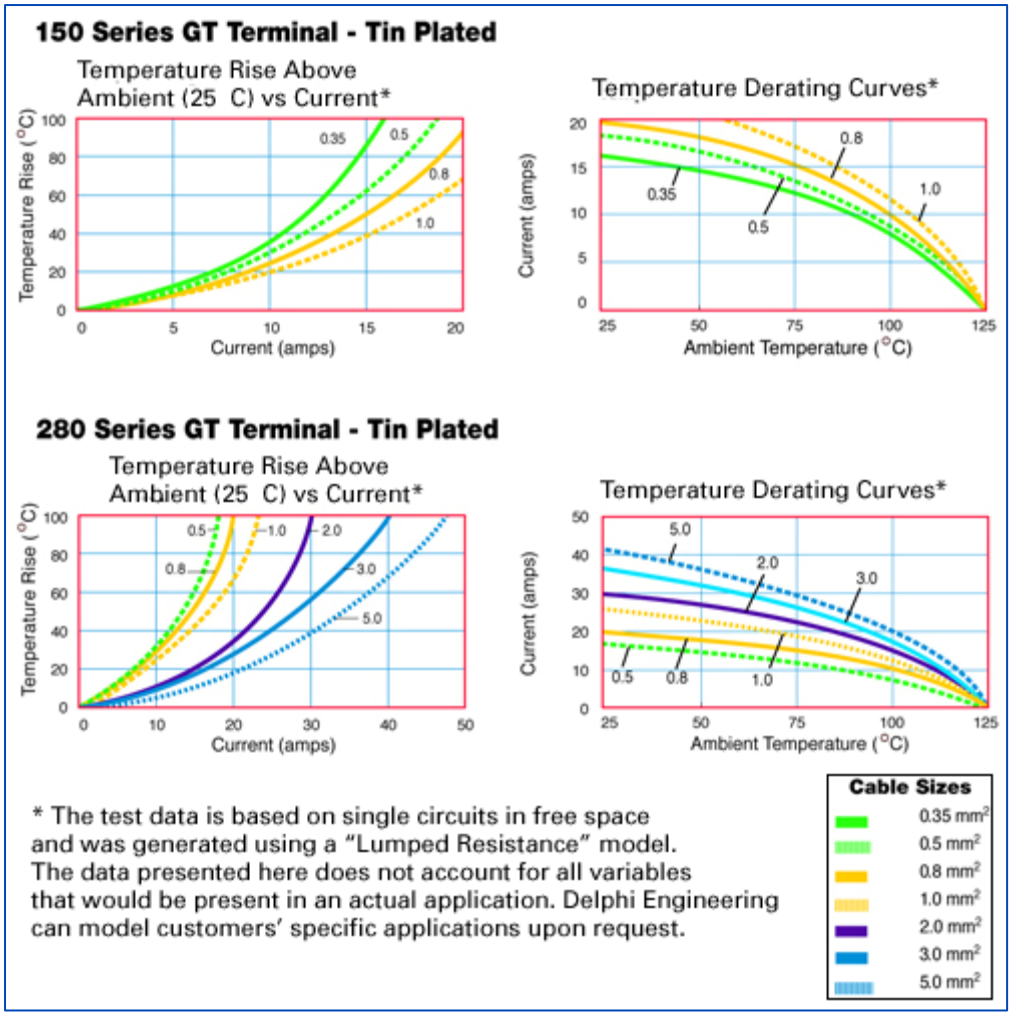
	150 Series	280 Series	630 Series
Cable range	0.35 – 1.0 mm2	0.35 – 5.0 mm2	2.0 – 5.0 mm2
Current range	0 – 15 A	0 – 25 A	0 – 34 A
Temperature range	-40°C to 125°C	-40°C to 125°C	-40°C to 125°C
Resistance	<10mΩ @ 20 mV	<10mΩ @ 20 mV	<0.62mΩ @ 37 mV
Voltage drop	<10.0 mV/A	<4.0 mV/A	<1.5 mV/A
Centerline spacing – unsealed	4.0 mm	5.5 mm	9.0 mm
Centerline spacing – sealed	4.5 mm	6.5 mm	10.0 mm
Blade width	1.5 mm	2.8 mm	6.3 mm
Terminal-to-terminal engage forces:			
Mates to 0.64 mm blade	Avg. 3N tin-plated	Avg. 6N tin-plated	
Mates to 0.82 mm blade			Avg. 18N silver-to-tin, and 12N silver-to-silver

Terminals can be gold plated upon request. The general application guidelines above are for reference only and may not account for all the variables that would be present in an actual application. For additional detailed product performance information, contact Delphi.

Performance Advantages

Delphi's patented high center rib connector seals exceed sealing requirements (e.g. USCAR) for harsh vehicle environments. The seals also reduce connector-to-connector mating force. The GT Connection System's terminal-to-terminal mating force is the lowest in its class. When combined with the high enter rib seal, it results in the ergonomic benchmark for connections. The GT Connection System satisfies ISO and USCAR electrical, mechanical, and environmental performance criteria as well as specific customer requirements.

Temperature Rise Above Ambient and Temperature Derating Curves



The graphs above show the temperature rise above ambient vs. current and the temperature derating curves for the 150 and 280 Series GT terminals using multiple cable sizes.