

Delphi Block-sealed Terminal Systems (BTS)

► Description

Delphi's 1.5 and 2.8 mm Block-sealed Terminal Systems (BTS) are complete, high-performance connection systems including terminal, seal, and connector. BTS brings to the market a creative layered-seal concept for connectors, utilizing two independent sealing layers in a patented process that offers advantages over traditional single-piece block-sealed tool technology. This innovative layered-seal technology allows the connector to engage/disengage up to four times and still retain sealing performance.

The BTS tangless terminal is an innovative clean body, two-piece design (base part with steel sleeve). It provides higher electrical performance, including higher levels of temperature and vibration resistance. The terminal allows a broader range of cable sizes over competitive offerings.



BTS 150 two-piece terminal design



BTS 280 two-piece terminal design

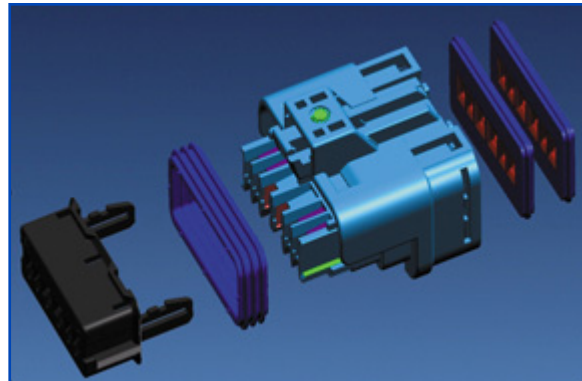
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► Benefits

- Two-piece terminal design (base part with steel sleeve) allows an optimized design for electrical and mechanical requirements
- Dual locks provide greater integrity with more robust electrical performance
 - Double-sided tangless primary lock
 - Secondary lock shoulders
- Clean body design is possible for layered- and block-sealed system
- Layered- and block-sealed design configurations allow small centerline spacing and help improve packaging capability
- Single-wire seal versions for BTS 280 enable mixed-block seal and single-wire seal and help improve packaging capability
- Layered-seal design offers two independent sealing layers for low insertion force and high sealing class performance
 - Terminal can be engaged/disengaged four times through the seal and still retain sealing performance
- Superior performance in demanding application environments due to excellent temperature and vibration resistance
- Broad range of cable sizes for enhanced application flexibility



BTS connectors



BTS six-way design configuration featuring Delphi layered-seal technology

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- High strength copper alloy base material helps improve connectivity, performance, and robustness

▶ Typical Applications

Delphi's BTS are designed for automotive and commercial vehicle applications. Main applications are for devices and systems in sealed and unsealed engine and passenger compartments, including:

- Sensor device connections
- Common rail
- In-line connections
- Window lifts
- Fuel tanks
- Control units

Application Guidelines	BTS 150	BTS 280
Mechanical Characteristics		
Mating force	< 4 N	< 6 N
Unmating force	< 2 N	< 2 N
Centerline spacing	< 3.3 mm	5 mm (with 2.5 mm ²)
Blade width	1.5 x 0.8 mm	2.8 x 0.8 mm
Suitable with go, no-go systems		
Product Performance		
Current range	25 A max.	42 A max.

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.

Temperature range	-40° to 135° C (tin plating) 155° (gold plating)	-40° to 135° C (tin plating) 155° (gold plating)
Resistance	<4 mΩ @ 20 mV	<4 mΩ @ 20 mV
Voltage drop	<4 mV/A	<4 mV/A
Cable range	0.35 to 2.5 mm ² max.	0.35 to 6.0 mm ² max.
Vibration performance	40 g max.	40 g max.

▶ Performance Advantages

The high strength copper alloy base material makes the BTS suitable with high temperature and vibration environments for vehicle applications especially in the engine compartment.