Printed Circuit Board Connectors

Printed Circuit Board Overview

Printed circuit board or PCB connectors are heavy duty environmentally sealed connectors designed for wire-to-circuit board connections. TE Connectivity Industrial & Commercial Transportation’s connectors are built to maintain the integrity and continuity of data and power signals in harsh environments. Developed and designed for heavy duty electronically equipped vehicles, TE’s printed circuit board connector bodies will withstand dust, dirt, moisture, and vibration.

Available in a variety of styles from several different connector families, TE’s printed circuit board connectors cover a range of pin counts from 2 to 76 and wire gauges from 10 to 22. Many of the connectors are available in straight, 90°, or solder pot options.

PRINTED CIRCUIT BOARD CONNECTOR OPTIONS

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<th>Mating Connector Wire Size</th>
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</tr>
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<td>DRC Series</td>
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<td>14-22 AWG</td>
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<td>DT Series</td>
<td>2, 3, 4, 6, 8, 12</td>
<td>14-20 AWG</td>
</tr>
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<td>DTM Series</td>
<td>8, 12, 48 (flangeless)</td>
<td>16-22 AWG</td>
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<td>10-14 AWG</td>
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<td>HD10 Series</td>
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<td>21, 39, 62, 92</td>
<td>6.0-.20 mm²</td>
</tr>
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<td>32</td>
<td>14-22 AWG</td>
</tr>
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<td>Superseal 1.0</td>
<td>26, 34, 60</td>
<td>1.25-.50 mm²</td>
</tr>
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<td>EEC Enclosure and Flange Receptacle</td>
<td>12, 24, 36, 48 (DT series headers)</td>
<td>14-20 AWG</td>
</tr>
<tr>
<td></td>
<td>12, 24 (DTM series headers)</td>
<td>16-22 AWG</td>
</tr>
</tbody>
</table>

Notes: DT series has flangeless options. Some arrangements of the DT and DTM series are available with A, B, C, and D keying options.

Note

See individual product line sections for part numbering system.
AMPSEAL CONNECTORS 90° OR STRAIGHT

**Materials**
Cover: Glass filled PBT  
Wire Seal: Silicone rubber  
Contacts: Tin or gold plated brass

**Mating Plugs**
8 Position: 776286-*  
14 Position: 776273-*  
23 Position: 770680-*  
35 Position: 776164-*

<table>
<thead>
<tr>
<th>Positions</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>1.3 mm</td>
</tr>
<tr>
<td>14</td>
<td>1.3 mm</td>
</tr>
<tr>
<td>23</td>
<td>1.3 mm</td>
</tr>
<tr>
<td>35</td>
<td>1.3 mm</td>
</tr>
</tbody>
</table>

**CIRCULAR DIN CONNECTORS STRAIGHT**

**Materials**
Housing: Glass filled PBT & PA  
Flange Seal: Silicone rubber  
Contacts: CuZn, tin plated  
CuZn, gold plated

**Mating Plugs**
2 Position: 1-967325-3, 1-968968-3 (secondary locking)  
3 Position: 1-967325-2, 1-968968-2 (secondary locking)  
4 Position: 1-967325-1, 1-968968-1 (secondary locking)

<table>
<thead>
<tr>
<th>Positions</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>2.5 mm</td>
</tr>
<tr>
<td>3</td>
<td>2.5 mm</td>
</tr>
<tr>
<td>4</td>
<td>2.5 mm</td>
</tr>
</tbody>
</table>

**Note**
See pages 11-20 for comprehensive AMPSEAL product information.

**Note**
See pages 35-44 for comprehensive Circular DIN product information.
Printed Circuit Board Connectors

**DRC10 SERIES STRAIGHT**

**Materials**
- Housing: Glass filled PA and PPS
- Grommet: Silicone rubber
- Receptacle Threaded Insert: Stainless steel/brass
- Contacts: Molded-in copper alloy, tin plated solder pot standard (gold optional - see modifications)

**Mating Plugs**
- 24 Pin: DRC16-24S*
- 40 Pin: DRC16-40S

**Modifications**
- A004: Tin plated PCB pins
- AG02: Some terminals are gold plated

**DRC10-24P**
- 24 size 16

**DRC10-40P**
- 40 size 16

**DRC13 SERIES 90°**

**Materials**
- Housing: Glass filled PA and PPS
- Receptacle Threaded Insert: Stainless steel/brass
- Contacts: Molded-in copper alloy, tin plated PCB pins standard (gold optional - see modifications)
- Mounting Seal: Silicone rubber

**Mating Plugs**
- 24 Pin: DRC16-24S*
- 40 Pin: DRC18-40S*
- 70 Pin: DRC16-70S*

**Modifications**
- C023: 5mm² threaded insert mounting holes
- G002: Only outside terminal rows are gold plated
- N012: One piece connector design

**DRC13-24P**
- 24 size 16

**DRC13-40P**
- 40 size 16

**DRC13-70P**
- 70 size 16

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**TE connectivity**

**INDUSTRIAL & COMMERCIAL TRANSPORTATION // TERMINALS AND CONNECTORS**
Printed Circuit Board Connectors

DRC20/22 SERIES STRAIGHT

**Materials**
Housing: Glass filled PA and PPS
Grommet: Silicone rubber
Receptacle Threaded Insert: Stainless steel/brass
Contacts: Molded-in copper alloy, gold plated mating side, tin plated PCB side (size 12 contacts are tin plated on mating and PCB sides)
Mounting Seal: Silicone rubber

**Mating Plugs**
50 Pin: DRC26-50S**
60 Pin: DRC26-60S**
76 Pin: (2) DRC26-38S**

![DRC20-60P* 60 size 20](image1)

DRC20-60P* 60 size 20

![DRC20-76P**** 68 size 20, 8 size 12](image2)

DRC20-76P**** 68 size 20, 8 size 12

![DRC2*-50P* 50 size 20](image3)

DRC2*-50P* 50 size 20

DRC20 SERIES 90°

**Materials**
Housing: Glass filled PA and PPS
Grommet: Silicone rubber
Receptacle Threaded Insert: Stainless steel/brass
Contacts: Molded-in copper alloy, gold plated PCB pins standard (tin optional)
Mounting Seal: Silicone rubber

**Mating Plugs**
24 Pin: DRC26-24S*
40 Pin: DRC26-40S*
64 Pin: DRC26-24S*, DRC26-40S*

![DRC2*-24** 24 size 20](image4)

DRC2*-24** 24 size 20

![DRC2*-64** 64 size 20](image5)

DRC2*-64** 64 size 20

![DRC2*-40** 40 size 20](image6)

DRC2*-40** 40 size 20

**Modifications**
N010: Custom mount
N012: One piece connector design

Note
## Printed Circuit Board Connectors

### DT13/15 SERIES 90° OR STRAIGHT

**Materials**
- Housing: Glass filled PA
- Contacts: Molded-in copper alloy, nickel plated mating side, tin plated PCB side (gold plating optional - contact your representative)
- Mounting Seal: Silicone rubber

**Mating Plugs**
- 2 Pin: DT06-2S
- 3 Pin: DT06-3S
- 4 Pin: DT06-4S
- 6 Pin: DT06-6S
- 8 Pin: DT06-08S*
- 12 Pin: DT06-12S*

**Modifications**
- B016: Extended shell and additional keys
- G003: Gold plated pins

### DTF13 SERIES FLANGELESS 90°

**Materials**
- Housing: Glass filled PA
- Contacts: Molded-in copper alloy, tin plated PCB side (gold plating optional - contact your representative)

**Mating Plugs**
- 2 Pin: DT06-2S
- 3 Pin: DT06-3S
- 4 Pin: DT06-4S
- 6 Pin: DT06-6S
- 8 Pin: DT06-08S*
- 12 Pin: DT06-12S*

**Modifications**
- G003: Gold plated pins

**Note**
Camcar thread forming screws are recommended. See drawing.
Printed Circuit Board Connectors

**DTF15 SERIES FLANGELESS STRAIGHT**

**Materials**
Housing: Glass filled PA  
Contacts: Molded-in copper alloy, tin plated PCB side (gold plating optional - contact your representative)

**Mating Plugs**
12 Pin: DTO6-12S*

**Modifications**
G003: Gold plated pins

DTF15-12P*  
12 size 16  
A, B, C, D

**helpful hint**
By fixing the connectors to the board prior to soldering, pressure can be greatly reduced at the solder joint.

**DTM13/15 SERIES 90° OR STRAIGHT**

**Materials**
Housing: Glass filled PA  
Contacts: Molded-in copper alloy, tin plated PCB side (gold plating optional - contact your representative)  
Mounting Seal: Silicone rubber

**Mating Plugs**
12 Pin: DTM06-12S*

DTM1*-12P*  
12 size 20  
A, B, C, D

**Note**
See pages 109-132 for comprehensive DT Family product information.
Printed Circuit Board Connectors

**DTMF15 SERIES STRAIGHT**

**Materials**
Housing: Glass filled PA  
Contacts: Molded-in copper alloy, tin plated (gold plating optional - contact your representative)

**Mating Plugs**
12 Pin: (4) DTM06-12S*

**Modifications**
B026: Alternate keying position

**DTMF15-48P**
(4) 12 size 20

**DTP10/13/15 SERIES 90° OR STRAIGHT**

**Materials**
Housing: Glass filled PA  
Contacts: Molded-in copper alloy, tin plated  
Mounting Seal: Silicone rubber

**Mating Plugs**
4 Pin: (4) DTP06-4S

**Modifications**
B026: Alternate keying position

**DTP13**

**H10 SERIES STRAIGHT**

**Materials**
Housing: Glass filled PA  
Contacts: Molded-in copper alloy, nickel plated  
Mounting Seal: Standard o-rings may be used

**Mating Plugs**
6 Pin: HD16-6-96S  
9 Pin: HD16-9-96S

**Modifications**
N005: Straight reduced diameter pins supplied as standard

**HD10-6-96P-N005**
6 size 16  
**HD10-9-96P-N005**
9 size 16
**Printed Circuit Board Connectors**

**LEAVYSEAL CONNECTORS 90° OR STRAIGHT**

**Materials**
- Housing: Glass filled PBT
- Contacts: CuSn, silver plated

**Mating Plugs**
- 21 Pin: 1-1534127-1, 1-2208688-1 (V0 rated material)
- 39 Pin: 5-1718321-3, 5-2208684-3 (V0 rated material)
- 62 Pin: 1-1418883-1 (A key), 2-1418883-1 (B key)
- 92 Pin: 1-703998-1 (NW 26 wire exit), 3-1703998-1 (NW 29 wire exit)

**Mating Plugs**
- 21 Pin: 1-1534127-1, 1-2208688-1 (V0 rated material)
- 39 Pin: 5-1718321-3, 5-2208684-3 (V0 rated material)
- 62 Pin: 1-1418883-1 (A key), 2-1418883-1 (B key)
- 92 Pin: 1-703998-1 (NW 26 wire exit), 3-1703998-1 (NW 29 wire exit)

- **21 Positions**
  - 21 size 2.8

- **39 Positions**
  - 39 size 2.8

- **62 Positions**
  - 56 size 1.5
  - 6 size 2.8

- **92 Positions**
  - 92 size 1.5

**STRIKE13/15 SERIES 90° OR STRAIGHT**

**Materials**
- Housing: Glass filled PBT
- Contacts: Molded-in copper alloy, tin plated (gold plating optional-contact your representative)

**Mating Plugs**
- 32 Pin: SRK06-MD*-32A-001

**Modifications**
- G003: Gold plated pins

**Mating Plugs**
- 32 Pin: SRK06-MD*-32A-001

- **SRK1*-MD*-32A-001-****
  - 4 Size 16
  - 28 Size 20

**Note**
- See pages 63-78 for comprehensive LEAVYSEAL product information.

**Note**
- See pages 161-168 for comprehensive STRIKE series product information.
Printed Circuit Board Connectors

SUPERSEAL 1.0 MM CONNECTORS 90° OR STRAIGHT

**Materials**
Housing: Thermoplastic
Contacts: Gold over Ni - mating pins, tin-lead over Ni - soldering pins

**Mating Plugs**
26 Pin: 3-1437290-7
34 Pin: 4-1437290-0
60 Pin: (1) 3-1437290-7 (26P), (1) 4-1437290-0 (34P)

<table>
<thead>
<tr>
<th>Positions</th>
<th>Size</th>
<th>Connections</th>
</tr>
</thead>
<tbody>
<tr>
<td>26</td>
<td>1.0 mm</td>
<td>26</td>
</tr>
<tr>
<td>34</td>
<td>1.0 mm</td>
<td>34</td>
</tr>
<tr>
<td>60</td>
<td>1.0 mm</td>
<td>60</td>
</tr>
</tbody>
</table>

**Printed Circuit Board Enclosures and Headers**
Compact circuit board enclosures that accept snap-in headers are available. The enclosure features a through hole mounting flange on each side, as well as optional venting. Designed with space to accommodate one or more DT or DTM series interfaces, the headers feature 90° pins. A radial flange seal provides environmental sealing to the enclosure. The headers mate with the DT and DTM standard plugs.

**DT SERIES ENCLOSURE WITH HEADER DIMENSIONS**

<table>
<thead>
<tr>
<th>Overall Length A</th>
<th>Overall Height B</th>
<th>Overall Width C</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.93 (201.30)</td>
<td>2.15 (54.63)</td>
<td>6.30 (160.00)</td>
</tr>
</tbody>
</table>

Dimensions are for reference only

**Note**
See pages 79-84 for comprehensive Superseal 1.0 product information.
Printed Circuit Board Connectors

DT SERIES HEADER CONNECTOR

Materials
Contacts: Molded-in tin (gold plating optional - contact your representative)

Mating Plugs
12 Pin: DT06-12S*
24 Pin: (2) DT06-12S*
36 Pin: (3) DT06-12S*

Modifications
GR02: DT Series snap-in header with gold plated pins
R015: DT Series snap-in header

DT13-12PA-****
12 size 16
A

DT13-24PAB-****
(2) 12 size 16
A, B

DT13-36PABC-****
(3) 12 size 16
A, B, C

DT13-48PABCD-****
(4) 12 size 16
A, B, C, D

Note
Keying position of receptacle must match keying position of mating plug(s).

DT SERIES PCB ENCLOSURE

Materials
Housing: Thermoplastic

Board Size
5" x 6.50"

Venting
A: With vent hole
B: Without vent hole

EEC-5X650*
Printed Circuit Board Connectors

DTM SERIES ENCLOSURE WITH HEADER DIMENSIONS

![Diagram of DTM Series Enclosure with Header]

<table>
<thead>
<tr>
<th>DTM Series Enclosure with Header</th>
<th>Overall Length A</th>
<th>Overall Height B</th>
<th>Overall Width C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>5.24 (133.03)</td>
<td>1.42 (36.00)</td>
<td>4.68 (118.80)</td>
</tr>
</tbody>
</table>

Dimensions are for reference only

DTM SERIES HEADER CONNECTOR

**Materials**
Contacts: Molded-in nickel mating side, tin plated PCB side

**Mating Plugs**
12 Pin: DTM06-12S*
24 Pin: (2) DTM06-12S*

**Modifications**
GR01: DTM Series snap-in header with gold plated pins

![Images of DTM13-12P*, DTM13-12PA-12PB*, and DTM13-12PC-12PD* Connectors]

DTM13-12P*---****
12 size 20 A, B, C, D

DTM13-12PA-12PB-****
(2) 12 size 20 A, B

DTM13-12PC-12PD-****
(2) 12 size 20 C, D
Printed Circuit Board Connectors

DTM SERIES PCB ENCLOSURE

Materials
Housing: Thermoplastic

Board Size
3.25” x 4”

Venting
A: With vent hole
B: Without vent hole

Modifications
E016: Molded in clear Ultem® material

EEC-325X4* EEC-325X4*-E016