Deutsch DTM Series
Deutsch DTM Series of transportation connectors feature a miniature contact with an enhanced design based on the world class, field-proven Deutsch DT Series. The DTM is the connector to be used in harsh environmental application where reliable signal circuits are critical to operating performance. Typical applications include on or around the engine, the transmission and under the hood.

Deutsch DT Series
An environmentally-sealed connector designed specifically for cable to cable applications on the engine or transmission, under the hood, on the chassis or in the cab. On signal level circuits in harsh environmental conditions, where even a small degradation in connection may be critical, the Deutsch DT Series general purpose connectors will provide the reliability and performance at the lowest cost.

Deutsch DTHD Series
Deutsch developed the DTHD Series for those applications requiring a complete, environmentally sealed, single power circuit termination. The plug features an integral coupling latch that provides tactile and audible feedback during coupling. The rugged thermoplastic receptacle is designed as an inline for cable to cable applications and is supplied with an integral Vee-Groove to accept mounting, clips, brackets and flanges.

Deutsch DTP Series
Deutsch’s DTP Series connectors are the answer to all of your most demanding power application requirements. DTP Series connectors offer the proven reliability and quality of Deutsch’s DT Series, combined with the added flexibility of using power contacts.

Features
- Integral Connector Latch
- Silicone Seals:
  - DTM: 22 - 16 wire
  - DTP: 20 - 14 wire
  - DTHD: 14 - 6 wire
- Crimp Contacts with Option of Gold or Nickel Finish, Solid or Stamped Construction
- Current rating all contacts @ 1250C no derating
  - DTM - 7.5 Amps
  - DT - 13 Amps
  - DTP - 25 Amps
  - DTHD - 25 to 100 Amps
- Fail-Safe Secondary Locks All (Except DTHD)
- Positive Contact Retention
- Hand Instillable/Removable Contacts
- Budget Minded

Benefits
- Tactile and Audible Assembly Feedback
- Field Proven Long Service Life
- Meets Most Harness Design Requirements
- Superior Environmental Seal
- Meets Most Signal Requirements
- Low Cost, High Reliability Terminals for Data & Signal Transmission
- Low Installation Costs

Table of Contents
Introduction 2, 3
Features & Benefits 3
Product Line Overview 4
Material Specifications 5
General Specifications 5
Ordering Information 6
Insert Arrangements 7, 8
Contacts & Application Data 9
Contact Retention System 10
Assembly Contact Insertion / Removal 11
Accessories 12
Removal Tools / Sealing Plugs 12
DT Mounting Clips 13
Back Shells 14, 15
Deutsch DT Series

Deutsch DT Series of transportation connectors feature a miniature contact with an enhanced design based on the world class, field-proven Deutsch “DT Series”.

The DTM is the connector to be used in harsh environmental applications where reliable signal circuits are critical to operating performance. Typical applications include on or around the engine, the transmission and under the hood. In fact, everywhere data signals or critical electronic circuits go, the field-proven Deutsch design of the DTM will provide reliable peak connector performance.

The low cost, size 20 contacts terminate AWG 16 to 22 gauge wire (0.5mm² to 1.5mm²). Closed entry socket (female) contacts featuring spring action fingers are protected by a stainless steel hood. This allows for positive axial alignment while mating and prevents probe damage during testing.

Thermoplastic housings offer a wide operating temperature range (-55°C to +125°C). Silicone rear wire and internal seals are used to allow the connector to withstand conditions, where even a small degradation in connection may be critical, where signal level circuits in harsh environmental conditions, designed specifically for cable to cable applications on the engine and fluids.

Deutsch DTM Series

Deutsch DTM Series of environmentally-sealed, connectors are designed specifically for cable to cable applications on the engine and fluids. Closed entry socket (female) contacts featuring spring action fingers are protected by a stainless steel hood. This allows for positive axial alignment while mating and prevents probe damage during testing.

Thermoplastic housings offer a wide operating temperature range (-55°C to +125°C). Silicone rear wire and internal peripheral interface seals allow the DTM to withstand moisture and fluids.

Deutsch DT Series

Deutsch DT Series of environmentally-sealed connectors are designed specifically for cable to cable applications on the engine and fluids, under the hood, on the chassis or in the cab. Where signal level circuits in harsh environmental conditions, where even a small degradation in connection may be critical, the Deutsch DT Series general purpose connectors will provide the reliability and performance at the lowest cost.

Thermoplastic (-55°C to +125°C) rated housings and silicone seals are used to allow the connector to withstand conditions of extreme temperature and moisture. The connector may be employed with either solid-copper crimp type contacts for critical circuits or budget-minded stamped and formed contacts. In either selection, the spring action is designed in the socket and shrouded by a stainless steel sheath that provides closed entry for positive axial alignment during mating, and eliminates probe damage from occurring. Contact insertion and withdrawal require no special tools and are retained in locked position by dielectric fingers, molded as an integral part of the housing. Secondary locks are assembled at the mating interfaces. If by chance the secondary locks are not properly seated during assembly, they will be pressed into locked position during the mating of the connector.

Deutsch DTP Series

Building on both the DT and DTM design strengths, the DTP connector line was developed to fill the need for higher amperage, multi-pin, inexpensive connectors. The series meets the same specifications as the DTM and DT but offers the designer the ability to use multiple 12 gauge contacts, each with a 25 amp continuous capacity, within a single shell.

Based on the DTM overall design, it offers the protected interfacial seal located within the receptacle shell. Standard multi-seal grommet is used in both the plug and receptacle. Currently available in two and four pin configurations.

Deutsch DT Bussed Series

These standard “DT” receptacle shells feature internal pin type contact bus bar arrangements that allow common connections from 3 to 12 size 16 contacts. Buss bars are available in standard nickel or gold to match common Deutsch Industrial contacts.

Other features include the use of standard “DT” plugs to mate with these environmental receptacles. Plugs with any Deutsch modification are intermateable.

Deutsch DTHD Series

Deutsch developed the DTHD Series for those applications requiring a complete, environmentally sealed, single power circuit termination. DTHD plugs and receptacles can be permanently assembled with thermoplastic end caps that prevent removal of the silicone wire seal grommets. Designed for diesel engine, electronic fuel injectors, automatic transmissions, ABS brakes and other applications that involve fuel and oil exposure. These end caps provide the additional reliability required for critical wiring circuits.

Deutsch DTP Series Technical Manual

MATERIAL SPECIFICATIONS

Plug/Receptacle
Shell: Thermoplastic
Wedge: Thermoplastic
Grommet: Silicone Rubber
Contacts
Pin: Copper Alloy
Socket: Copper Alloy
Finish: Nickel (optional - gold) Plated
Sealing Plugs
Thermoplastic: (All sizes)

GENERAL SPECIFICATIONS

Dielectric Withstanding Voltage
Current leakage less than 2 milliams at 1500 VAC
Insulation Resistance:
1000 megohms minimum at 25°C.

Current Rating (Contact current rating @ 125°C (continuous))
Size 20: 7.5 amps
Size 16: 13 amps
Size 12: 25 amps
Size 8: 60 amps
Size 4: 100 amps

Submersion:
Properly wired and mated connection will withstand immersion under three feet of water without loss of electronic qualities or leakage.

Fluid Resistance:
Connectors show no damage when exposed to most fluids used in industrial applications.

Vibration:
No locking or un locking and exhibits no mechanical or physical damage after sinusoidal vibration levels of 20 Gs at 1 to 2000 Hz in each of the three mutually perpendicular planes. No electrical discontinuities longer than 1 microsecond.

Temperature:
Operate at temperatures from -55°C to +125°C. Continuous at rated current.

Contact Retention:
Contacts withstand a minimum load of:
20 lbs (89N) for size 20
25 lbs (111N) for size 16
30 lbs (133N) for size 12
35 lbs (156N) for size 8
35 lbs (156N) for size 4

Dielectric Strength:
No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.

Durability:
No electrical or mechanical defects after 100 cycles of engagement and disengagement.

CONTACT RESISTANCE

<table>
<thead>
<tr>
<th>CONTACT</th>
<th>RESISTANCE (mV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>7.5</td>
</tr>
<tr>
<td>18</td>
<td>7.5</td>
</tr>
<tr>
<td>16</td>
<td>13</td>
</tr>
<tr>
<td>14</td>
<td>19</td>
</tr>
<tr>
<td>12</td>
<td>25</td>
</tr>
<tr>
<td>8</td>
<td>60</td>
</tr>
<tr>
<td>10</td>
<td>60</td>
</tr>
<tr>
<td>4</td>
<td>100</td>
</tr>
<tr>
<td>6</td>
<td>130</td>
</tr>
<tr>
<td>5</td>
<td>90</td>
</tr>
</tbody>
</table>

WIRE SEALING RANGE

<table>
<thead>
<tr>
<th>WIRE GAUGE</th>
<th>RECOMMENDED WIRE INSULATION O.D.</th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG (mm²)</td>
<td>N-SEAL</td>
</tr>
<tr>
<td>20-26-35</td>
<td>.053-.120 (1.35-3.55)</td>
</tr>
<tr>
<td>18-20-22</td>
<td>.088-.145 (2.24-3.68)</td>
</tr>
<tr>
<td>16-18-20</td>
<td>.124-.170 (3.40-4.32)</td>
</tr>
<tr>
<td>14-16-18</td>
<td>.190-.240 (4.38-6.30)</td>
</tr>
<tr>
<td>12-14-16</td>
<td>.280-.292 (7.17-7.42)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WIRE GAUGE</th>
<th>E-SEAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-26-35</td>
<td>.053-.120 (1.35-3.55)</td>
</tr>
<tr>
<td>18-20-22</td>
<td>.088-.145 (2.24-3.68)</td>
</tr>
<tr>
<td>16-18-20</td>
<td>.124-.170 (3.40-4.32)</td>
</tr>
<tr>
<td>14-16-18</td>
<td>.190-.240 (4.38-6.30)</td>
</tr>
<tr>
<td>12-14-16</td>
<td>.280-.292 (7.17-7.42)</td>
</tr>
</tbody>
</table>

E-SEAL: No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.

N-SEAL: No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.

WIRE GAUGE | RECOMMENDED WIRE INSULATION O.D. |
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>AWG (mm²)</td>
<td>N-SEAL</td>
</tr>
<tr>
<td>20-26-35</td>
<td>.053-.120 (1.35-3.55)</td>
</tr>
<tr>
<td>18-20-22</td>
<td>.088-.145 (2.24-3.68)</td>
</tr>
<tr>
<td>16-18-20</td>
<td>.124-.170 (3.40-4.32)</td>
</tr>
<tr>
<td>14-16-18</td>
<td>.190-.240 (4.38-6.30)</td>
</tr>
<tr>
<td>12-14-16</td>
<td>.280-.292 (7.17-7.42)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WIRE GAUGE</th>
<th>E-SEAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>20-26-35</td>
<td>.053-.120 (1.35-3.55)</td>
</tr>
<tr>
<td>18-20-22</td>
<td>.088-.145 (2.24-3.68)</td>
</tr>
<tr>
<td>16-18-20</td>
<td>.124-.170 (3.40-4.32)</td>
</tr>
<tr>
<td>14-16-18</td>
<td>.190-.240 (4.38-6.30)</td>
</tr>
<tr>
<td>12-14-16</td>
<td>.280-.292 (7.17-7.42)</td>
</tr>
</tbody>
</table>

E-SEAL: No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.

N-SEAL: No cracking, chipping or leaking after 20 test cycles from -55°C to +125°C.
PART NUMBERING SYSTEM (DTM)

DTM 06 - 2 S * - ****

Series Prefix
04 = Receptacle
06 = Plug
Number of Contacts

Special Modifications
Polarizing Position (if Applicable)
08 + 12 Only
Contact Type
P = Pin Receptacle Only
S = Socket Plug Only

PART NUMBERING SYSTEM (DT & DT Bussed)

DT 06 - 2 S * - ****

Series Prefix
04 = Receptacle
06 = Plug
Number of Contacts

Special Modifications
Polarizing Position (If Applicable)
Contact Type
P = Pin Receptacle Only
S = Socket Plug Only

PART NUMBERING SYSTEM (DTP)

DTP 06 - 2 S * - ****

Series Prefix
04 = Receptacle
06 = Plug
Number of Contacts

Special Modifications
Polarizing Position (If Applicable)
Contact Type
P = Pin Receptacle Only
S = Socket Plug Only

PART NUMBERING SYSTEM (DTHD)

DTHD 06 - 1 - 4 S - ****

Series Prefix
04 = Receptacle
06 = Plug
Single Terminal
Contact Size
4 = Size 4
8 = Size 8
12 = Size 12

Contact Style
P = Pin Receptacle Only
S = Socket Plug Only

DTM Series Size 20 Contacts

2 size 20
3 size 20
4 size 20
6 size 20
8 size 20
12 size 20

DT & DT BUSSED Series Size 16 Contacts

2 size 16
3 size 16
4 size 16
6 size 16
8 size 16
12 size 16

DTP Series Size 12 Contacts

2 size 12
4 size 12

DTHD Series Size 4, 8 & 12

1 size 4
1 size 8
1 size 12
ALL PART NUMBERS ARE FOR “BLACK”

MAX CURRENT RATINGs

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>NICKEL BUSS P/N</th>
<th>GOLD BUSS P/N</th>
<th>MATING PLUG P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>4 PIN = 26 AMPS</td>
<td>DT04-4P-EP13</td>
<td>DT04-4P-EP12</td>
<td>DT06-45-***</td>
</tr>
<tr>
<td>6 PIN = 39 AMPS</td>
<td>DT04-6P-EP13</td>
<td>DT04-6P-EP12</td>
<td>DT06-65-***</td>
</tr>
<tr>
<td>8 PIN = 52 AMPS</td>
<td>DT04-8P-BP01</td>
<td>DT04-8P-BP06</td>
<td>DT06-08SB-****</td>
</tr>
<tr>
<td>5 PIN = 26 AMPS</td>
<td>DT04-8P-BP028</td>
<td>DT04-8P-BP02</td>
<td>DT06-08SB-****</td>
</tr>
<tr>
<td>4 PIN = 26 AMPS</td>
<td>DT04-8P-BP026</td>
<td>DT04-8P-BP027</td>
<td>DT06-35-***</td>
</tr>
<tr>
<td>3 PIN = 13 AMPS</td>
<td>DT04-3P-***</td>
<td>DT06-65-***</td>
<td></td>
</tr>
<tr>
<td>12 PIN = 76 AMPS</td>
<td>DT04-12P-BP021</td>
<td>DT04-12P-BP016</td>
<td>DT06-12SB-****</td>
</tr>
<tr>
<td>6 PIN = 39 AMPS</td>
<td>DT04-12P-BP026</td>
<td>DT04-12P-BP027</td>
<td>DT06-12SB-****</td>
</tr>
<tr>
<td>3 PIN = 13 AMPS</td>
<td>DT04-12P-BP030</td>
<td>DT06-12SB-****</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT FACTORY FOR AVAILABILITY AND ALTERNATE KEYING

** For proper dies and stamped & formed crimp dimensions - See Envelope 0425-208-0000 12 Size Consult factory for alternate finishes

0425-208-0000 12 Size
0425-207-0000 20 Size
0425-059-0000 16 Size
0425-039-0000 16 Size
0425-041-0000 12 Size

** For proper dies and stamped & formed crimp dimensions - See Envelope Print 0425-205-0000. Consult factory for alternate finishes.
Assembly Contact Insertion (DTM, DT, DTP)

1. Grasp crimped contact approximately 1.0” (25.4mm) behind the contact barrel.
2. Hold connector with rear grommet facing you.
3. Push contact straight into connector grommet until a click is felt. A slight tug will confirm that it is properly locked in place.

4. Once all contacts are in place, insert orange wedge: receptacles - with half holes aligning with contacts. Plugs - with contacts aligning behind full holes. The orange wedge will snap into place.

NOTE: The receptacle is shown - use the same procedure for plug.

Contact Removal

1. Remove orange wedge using needlenose pliers to pull wedge straight out.
2. To remove the contacts, gently pull wire backwards, while at the same time releasing the locking finger by moving it away from the contact with a screwdriver.
3. Hold the rear seal in place, as removing the contact will displace the seal.

Contact Insertion System (DTM/DT/DTP)

Contact Insertion Procedure

Contact Retention System (DTHD)

Required Removal Tool (See page 12)
To meet the application requirements where wires are to be protected, the DT Series may be supplied with boot adaptors. These will accept shaped boots / sleeves or shrink tubing. Parts for standard or thin wall wire are available.

**Shrink Boot Adaptor Modification Numbers**

<table>
<thead>
<tr>
<th>Number of Ways</th>
<th>Part Number - Plugs</th>
<th>Part Number - Receptacles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>DT06-2S</td>
<td>DT04-2P</td>
</tr>
<tr>
<td>3</td>
<td>DT06-3S</td>
<td>DT04-3P</td>
</tr>
<tr>
<td>4</td>
<td>DT06-4S</td>
<td>DT04-4P</td>
</tr>
<tr>
<td>6</td>
<td>DT06-6S</td>
<td>DT06-6P</td>
</tr>
<tr>
<td>8</td>
<td>DT06-8S</td>
<td>DT04-8PA</td>
</tr>
<tr>
<td>12</td>
<td>DT06-12S</td>
<td>DT04-12PA</td>
</tr>
</tbody>
</table>

**DTHD Removal Tools**

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Size</th>
<th>Wire Range AWG</th>
<th>Extra Thin Wall Wire Range AWG</th>
<th>Contact Size</th>
<th>Sealing Plug</th>
</tr>
</thead>
<tbody>
<tr>
<td>114010</td>
<td>12</td>
<td>12-14</td>
<td>0411-337-1205</td>
<td>12</td>
<td>12-14</td>
</tr>
<tr>
<td>114008</td>
<td>8</td>
<td>8-10</td>
<td>0411-353-0805</td>
<td>8</td>
<td>8-10</td>
</tr>
<tr>
<td>114009</td>
<td>4</td>
<td>6</td>
<td>114009</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

**Sealing Plugs**

Wire Sealing Range: Standard - 2.24mm - 3.68mm wire insulation diameter  Thin wall - 1.35mm - 3.05mm wire insulation diameter

**DT Mounting Clips**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Used On</th>
<th>Material</th>
<th>Hole O.D. in. (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1027-003-1200</td>
<td>DTM (all)</td>
<td>Stainless Steel</td>
<td>.433 (11.0)</td>
</tr>
<tr>
<td>1027-005-1200</td>
<td>DTM (all)</td>
<td>Stainless Steel</td>
<td>.512 (13.0)</td>
</tr>
<tr>
<td>1027-004-1200</td>
<td>DTM (all)</td>
<td>Stainless Steel w/Zinc Plating</td>
<td>.512 (13.0)</td>
</tr>
<tr>
<td>1027-001-0800</td>
<td>DT 8 cavity only</td>
<td>Stainless Steel</td>
<td>.433 (11.0)</td>
</tr>
<tr>
<td>1027-014-0800</td>
<td>DT 8 cavity only</td>
<td>Stainless Steel w/Zinc Plating</td>
<td>.323 (8.2)</td>
</tr>
</tbody>
</table>