DIP Connectors

The CW Dual-In-Line Plug (DIP) connector is used for rapid, permanent connection of ribbon cable to a PC board or to a standard DIP socket when connect/disconnect capabilities are required. The cover is factory preassembled to the connector base to simplify assembly to cable and has ridges for cable alignment. CW DIP connectors are Mil-DTL-83503/6 approved.

• **Beveled corner** on cover and base at pin #1 provides orientation and contact identification.

• **No alignment tools required.**
   Cable fits snugly between base’s cover-support posts, and is guided into position by ridges molded into inner surface of cover.

• **Sturdy terminal posts** are strong, yet flexible enough to withstand occasional bending and straightening without fatigue.

• **No special cable preparation required.**
   Factory preassembled cover minimizes assembly time. Cable is inserted and terminated in one simple step.

• **No “bare shoulders”**. No exposure of unnecessary sections of the contact and possible shorting at the PC board interface.
DIP Connectors

Contact Terms
- **Patented offset tines** produce Torq-Tite™ termination for added reliability.
- **Double barbs** bite into plastic, retaining contact firmly in insulator.
- Spring-temper phosphor bronze contact material resists breakage during bending or straightening operations.
- Two tail lengths are available for use with standard or low profile DIP sockets. .012 in. x .021 in. contact cross-section provides proper mating with a variety of DIP sockets.

DIP Connector Features
- Mil-DTL-83503/6 approved
- One-piece construction.
- 14, 16, 24, and 40 pin versions.
- Patented Torq-Tite™ contacts, ensure reliable gas-tight terminations.
- Gold-plated phosphor bronze contacts, standard tin-lead plated contacts optional.
- Accepts 28-30 AWG stranded or solid conductors.
- Simple assembly – bench press or low cost hand tool is all that’s needed for terminating cable and connectors.
- All pin numbers clearly marked and legible before and after assembly. Numbering is arranged to meet MIL-DTL-83503 specifications for standard IC DIP numbering.
- Optional strain relief clips are easily installed. Allows top center, vertical cable routing to reduce possibility of damage to contact pins during removal of DIP from socket.
- Two contact tail lengths available — .175 in. standard or optional 130 in. length for mating with low profile Dip Sockets.

Strain Relief
Optional metal strain relief straps are available. Connection is isolated from mechanical strain by the bend in the cable, as it is folded over the top of the assembled connector. The Strain Relief Strap is placed over the cable and snaps into a recess on the connector. A centralized top cable exit is created in the finished cable assembly.

Contact Identification
Every contact position is numbered, per Mil-DTL-83503, for easy identification. In addition, a beveled corner at pin #1 enhances orientation of the connector to the mating DIP Socket, even in blind installations.

Assembly
The CT200 DIP Hand Tool is designed to terminate out 14 and 16 pin DIP Connectors. It is easy to use, lightweight and compact, making it an ideal tool for field replacement work or low volume assembly applications. DIP connectors can also be assembled to cable using CW’s CT301 76/84 Bench Press.
### DIP Connectors

#### Dimensions
14/16 Pin DIP Connector

<table>
<thead>
<tr>
<th>CONTACT DIMENSIONS</th>
<th>NO. OF CONTACTS</th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>14</td>
<td>.60</td>
<td>.754</td>
<td>.81</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>.70</td>
<td>.854</td>
<td>.91</td>
<td></td>
</tr>
</tbody>
</table>

#### 24 Pin DIP Connector

#### 40 Pin DIP Connector
Specifications and Ordering Information

Specifications

- Contacts: phosphor bronze standard.
- Contact Plating: 10µ in. gold over 50µ in. nickel, standard; 30µ in. gold over 50µ in. nickel, optional; 50µ in. gold over 50µ in. nickel, optional; 100µ in. tin-lead optional
- Insulator Material: UL 94V-0 flame retardant glass filled thermoplastic
- Strain Relief Strap Material: tin-plated steel
- Color: blue

Operating temperature: -55°C to +125°C
Current Rating: 1A (maximum) per contact
Dielectric Withstand Voltage: Greater than 500 Vdc at sea level
Insulation Resistance: Greater than 5 x 10^9 ohms
Mates with .050 in. centered round conductor flat cable and standard DIP socket with .100 in. x .300 in. or .100 in. x .600 in. contact spacing
Cover pull off force, with strain relief 20 lb minimum (force along contacts’ primary axes)

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How to Order DIP Connectors

CWR-XXX-XX-XXXX
Type of Connector
Standard tail length .175” = 130
Optional tail length .130” = 134
Number of Contacts
(14, 16, 24 or 40)

EXAMPLE: CWR-130-16-0002 is part number for a 16-pin DIP connector with .175 in. tails and 50µ in. gold over 50µ in. nickel contacts

How to Order DIP Cable Assemblies

Cable assemblies with two DIP connectors (CWR-130-XX-0000) on a prescribed length of color-coded cable are available with connectors oriented per drawing 31-1. (#1 contacts oriented to brown conductor.)
For other lengths, orientations, numbers or combinations of connectors, contact the factory or your local value-added distributor.

CA-XX-910X
Number of Conductors
(14, 16, 24 or 40)

How to Order Strain Relief Straps for DIP Connectors

CWN-SR-XX
Connector Size
(14, 16, 24 or 40)

EXAMPLE: Strain Relief Strap part number for 24-pin DIP Connector is CWN-SR-24