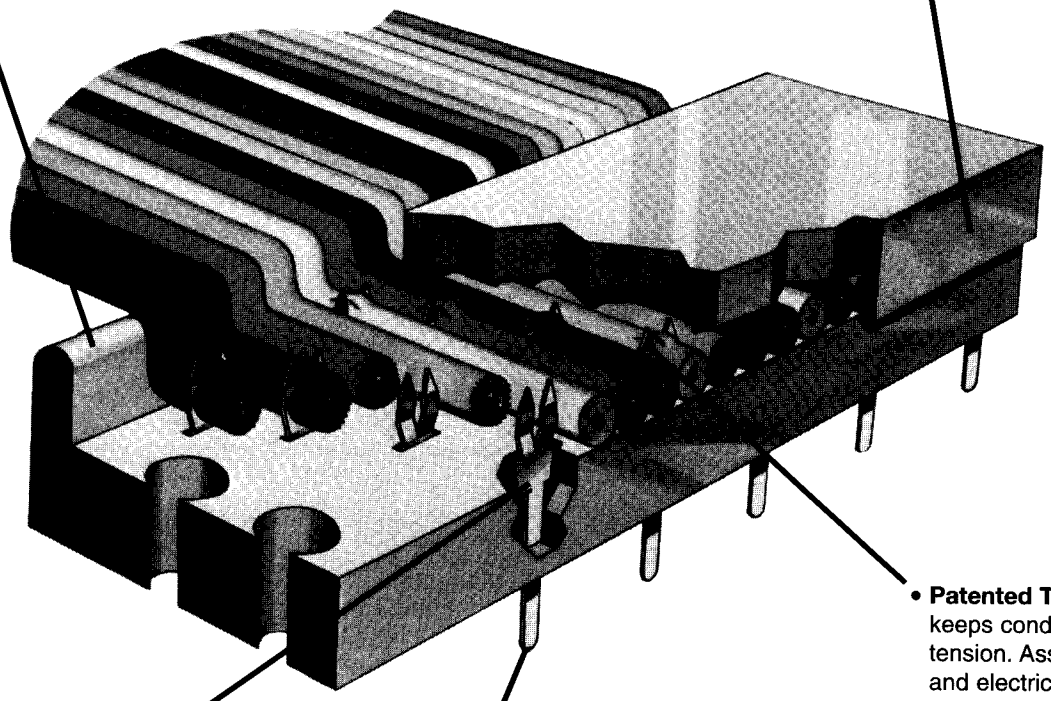
PCB Connectors

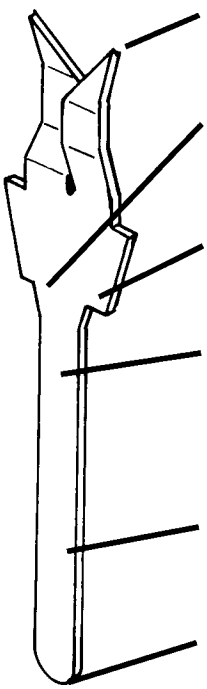
The PCB connector is used when a permanent connection of flat cable to the PC board is required. The cable is terminated to the PCB connector making a reliable gas-tight connection with CW's patented Torq-Tite™ contacts. The connector's pins are then soldered to the board.

CW's PCB connectors are approved by the U.S. Defense Department and are qualified to Mil-DTL-83503/23.



- **Built-in strain relief** is available to protect contacts if cable is pulled.
- **Available with or without protective cover lip** for cable end or daisy chain applications.
- **Patented Torq-Tite™ contact** keeps conductor under constant tension. Assures a mechanically and electrically sound, gas-tight connection.
- **No "bare shoulders".** No exposure of unnecessary sections of the contact and possible shorting at the PC board interface.
- **Sturdy, yet flexible solder posts,** able to withstand bending and straightening.

Contact



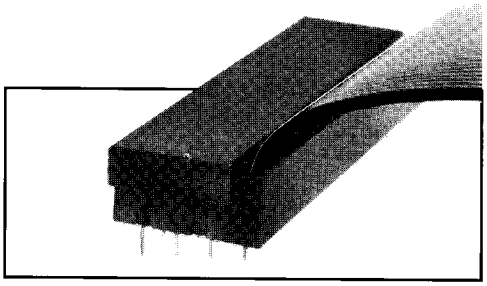
- **Sharp points** allow contact to pierce tough insulation materials
- **Contact tines are firmly connected** to the body of the contact
- **No "bare shoulders"** on the contact at the PC board interface.
- Spring temper, phosphor bronze material **resists breakage during bending or straightening operations**
- **One tail length** can be used with 1/8 in. or 1/16 in. PC boards
- **Rounded tip provides lead-in** to mate with PC board holes

PCB Connector Features

- 10, 20, 26, 34, 40, 50, 60, pin versions
- Tin-lead plating, standard; gold plating also available
- Available with or without strain relief lip
- Available with or without cover lip for cable end or daisy chain application
- Rugged, lightweight UL 94V-0 thermoplastic construction
- Accepts 28-30 AWG stranded or solid conductors

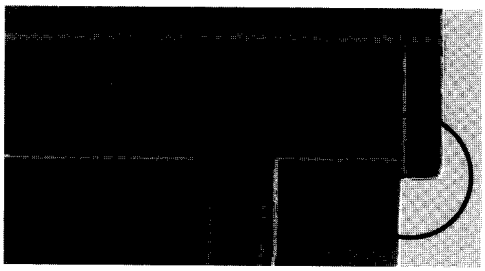
Strain Relief

A molded-in strain relief is an optional feature on CW PCB connectors. (Specify CWR-140 or CWR-143 series). This lip, upon installation of the cover, creates a strain relief bend in the cable, inhibiting the transfer of any tension on the cable to the contact lines.



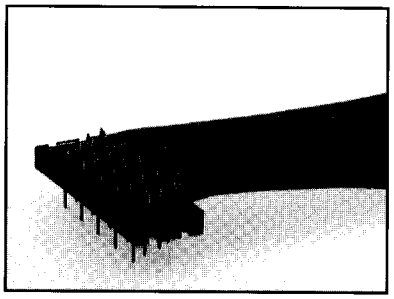
Cover Lip

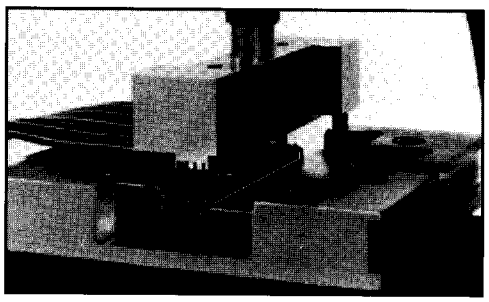
For additional protection on cable end terminations, the CW PCB connector is available with a cover lip to insulate the ends of the cable's conductors. This eliminates possible "shorts" and allows you to position connectors more closely on your PC board. (Specify CWR-140 or CWR-141 series).



Assembly

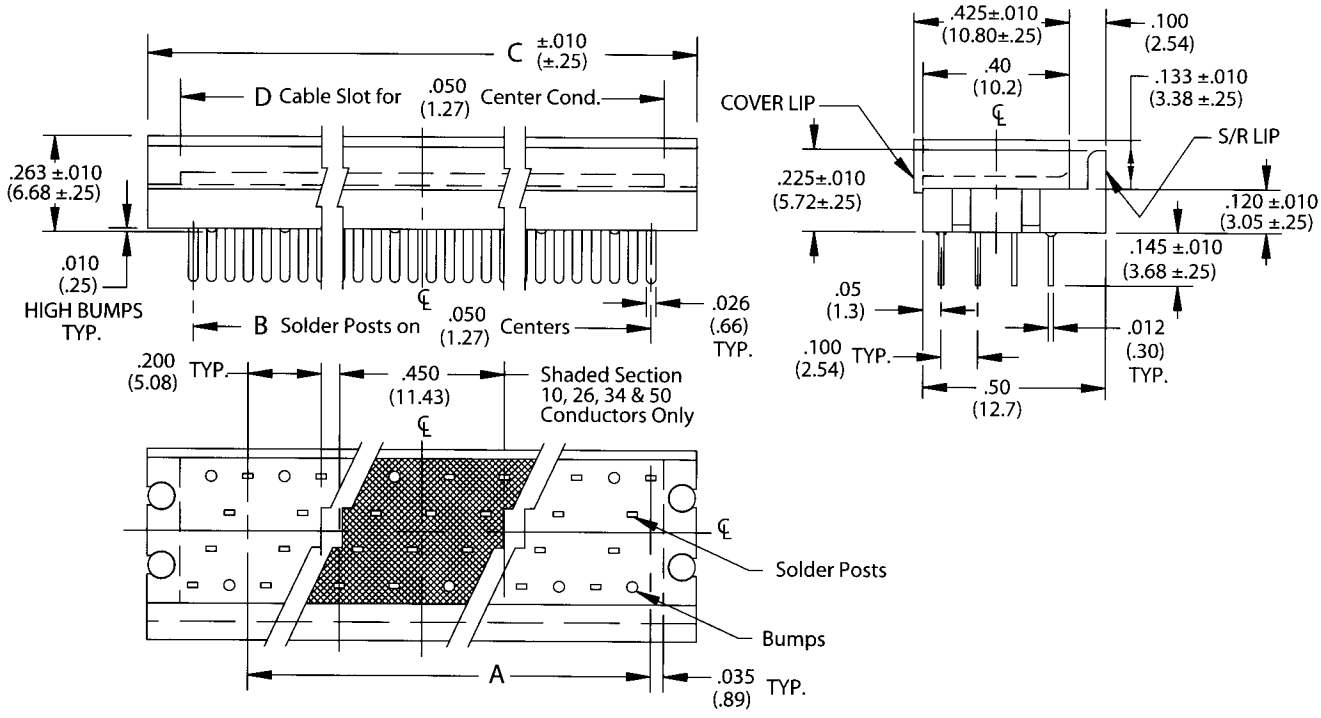
To terminate CW PCB connectors to flat cable, use CT301 86/81 assembly press. The cable is applied directly to the IDC contacts in the connector base and then the cover is assembled.





Engineering Dimensions

Dimensions



CONNECTOR DIMENSIONS				
No. Of Contacts	A	B	C	D
10	——	.450 (11.43)	.700 (17.78)	.520 (13.21)
20	.800 (20.32)	.950 (24.13)	1.200 (30.48)	1.020 (25.91)
26	1.100 (27.94)	1.250 (31.75)	1.500 (38.10)	1.320 (33.53)
34	1.500 (38.10)	1.650 (41.91)	1.900 (48.26)	1.720 (43.69)
40	1.800 (45.72)	1.950 (49.53)	2.200 (55.88)	2.020 (51.31)
50	2.300 (58.42)	2.450 (62.23)	2.700 (68.58)	2.520 (64.01)
60	2.800 (71.12)	2.950 (74.93)	3.200 (81.28)	3.020 (76.71)

Part No.	S/R LIP	COVER LIP
CWR-140	YES	YES
CWR-141	NO	YES
CWR-142	NO	NO
CWR-143	YES	NO

Specifications and Ordering Information

Specifications

- Contacts: phosphor bronze standard
- Contact Plating: 100µ in. tin-lead, standard; 10µ in. gold over 50µ in. nickel, optional; 30µ in. gold over 50µ in. nickel, optional; 50µ in. gold over 50µ in. nickel, optional; 200µ in. tin-lead, optional
- Insulator Material: UL 94V-0 flame - retardant thermoplastic
- Color: blue
- Operating temperature: -55ºC to +125ºC
- 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
- Cover pull-off force, without strain relief, 15 lb min. (force along contacts' primary axes)

How to Order PCB Connectors

CWR-XXX-XX-00XX

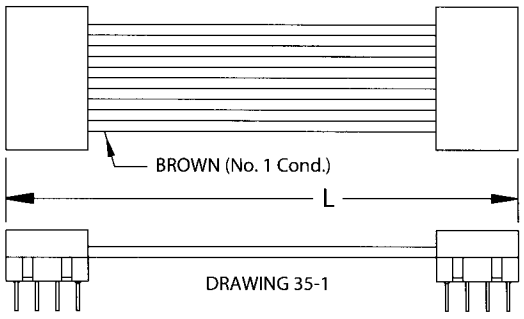
Type of Connector
142 = A PCB connector without strain relief for daisy chain termination (standard)
140 = A PCB connector with strain relief and cover lip for cable end terminations
141 = A PCB connector without strain relief and with cover lip for cable end terminations
143 = A PCB connector with strain relief for daisy chain termination

Number of contacts
(10, 20, 26, 34, 40, 50 or 60)

Plating
0003= 100µ in. tin-lead (standard)
0000= 10µ in. gold over 50µ in. nickel
0001= 30µ in. gold over 50µ in. nickel
0047= 50µ in. gold over 50µ in. nickel
0042= 100µ in. tin-lead
Mil-DTL-83503/23 approved
(CWR-142-10 through 50 only)

How to Order PCB Cable Assemblies

Cable assemblies with two PCB Connectors, CWR-142-XX-0003, on a prescribed length of color-coded cable are available with the connectors oriented per drawing 35-1. (#1 contacts oriented to brown conductor.) For other lengths, orientations, numbers or combinations of connectors, contact the factory or your local value-added distributor.



DRAWING 35-1

CA-XX-990X

Number of conductors
(10, 20, 26, 30, 40, 50, or 60)

Final assembly length "L"
1=3"±1/8"
2=6"±1/8"
3=12"±1/4"
4=24"±1/4"
5=48"±1/4"