CP-6.5 Wire-to-Board Connectors, 2, 4 and 6 circuits
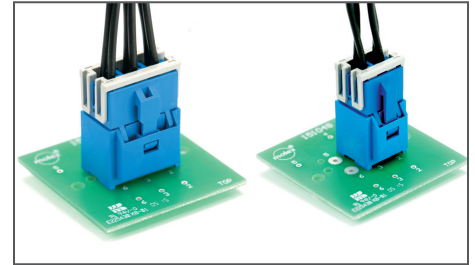## 6.50mm Pitch, Polarized with Key and Color-Coding
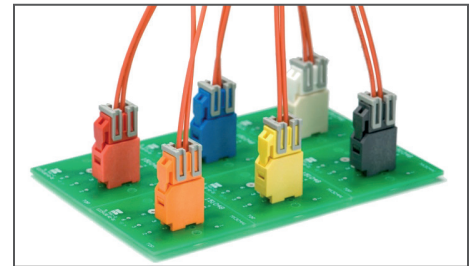
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Leveraging full keying and color-pairing features, foolproof CP-6.5 wire-to-board connectors enhance user-safety while speeding up consumer and industrial interconnect assembly applications

4- and 6-circuit extensions of the CP-6.5 Connector Family

Features and Benefits

Wide spectrum of housing colors	Allows quick identification of mating combination for assembly and repair
Polarization keys on housing rib	Eliminate mis-mating and consequent electrical shorting of application
Positive lock feature on housing	Produces an audible click when fully mated
Kinked soldertails	Provide added header-to-PCB retention during solder reflow
Absence of drain-holes in PCB headers	Ensure compatibility with conformal coating (potting)
Headers are 260°C wave-solder-process capable	Ideal for high-temperature assembly processing

2-circuit, 6.50mm Wire-to-Board Connectors, fully polarized with key and color-coding

Applications

Consumer / Home Appliances

- Washing machines
- Water heaters
- Air-conditioners

Industrial / Industrial Automation

- Industrial controls
- HVAC
- Copiers
- Vending machines
- Security systems

Copier Machines

Home Appliances

Water Heaters

Air Conditioning System

Vending Machines
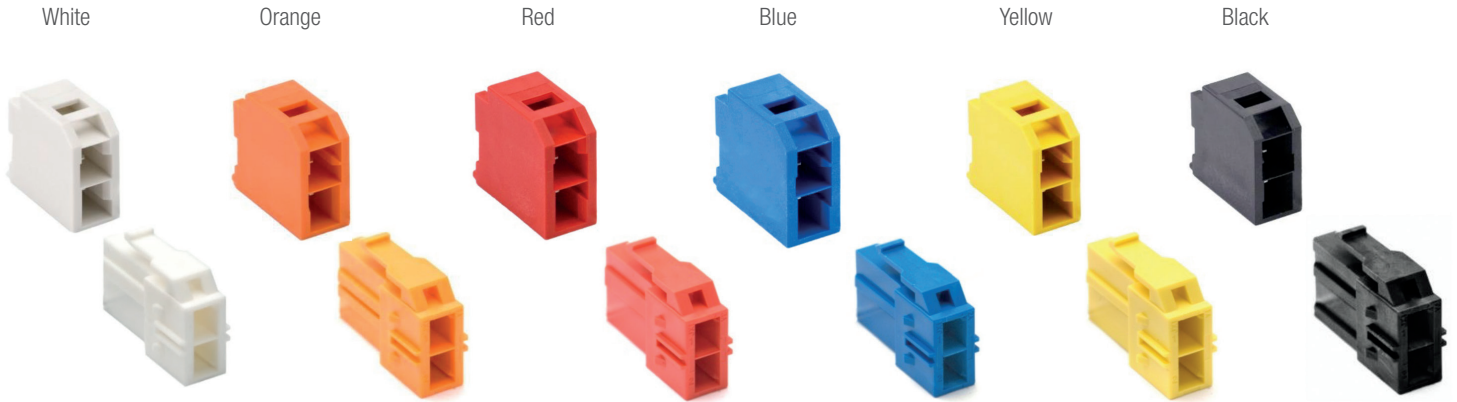
CP-6.5 Wire-to-Board Connectors, 2, 4 and 6 circuits
6.50mm Pitch, Polarized with Key and Color-Coding
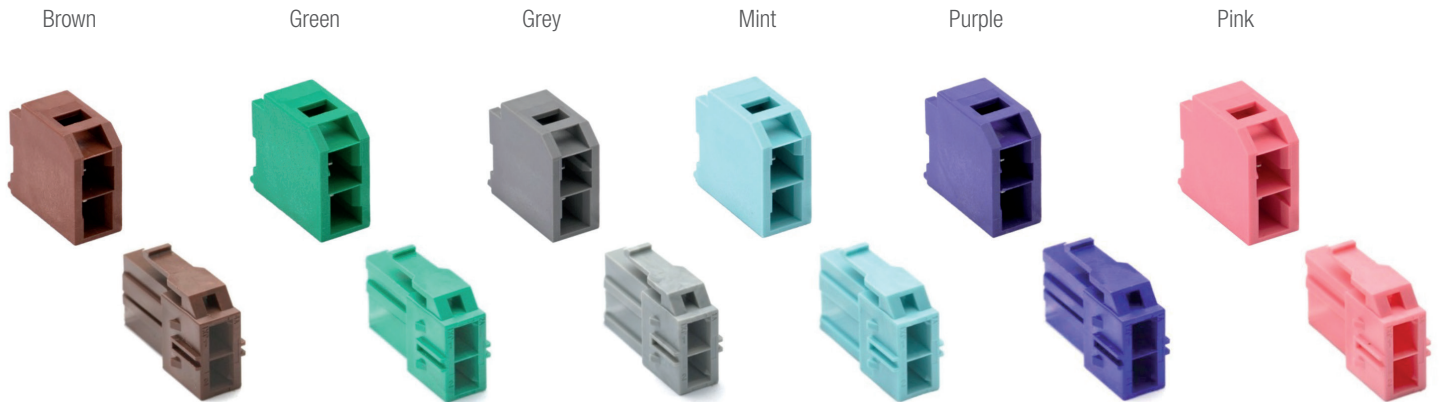
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Product Family

2-circuit housings in core and custom colors

Core color options

White	Orange	Red	Blue	Yellow	Black

Custom color options

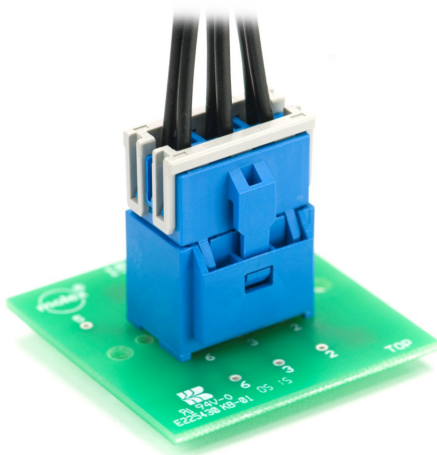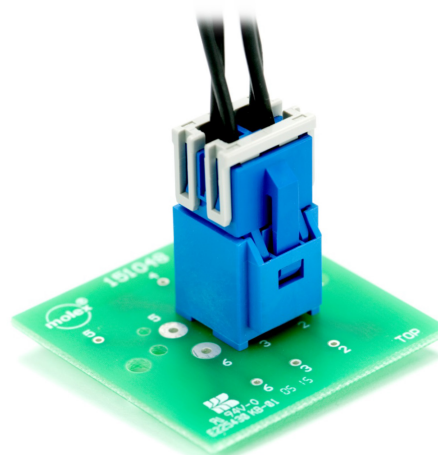| Brown	Green	Grey	Mint	Purple	Pink

Product Extensions

4- and 6-circuit CP-6.5 Wire-to-Board Solutions

Close-up view of a blue 6-circuit, CP-6.5 Wire-to-Board Assembly

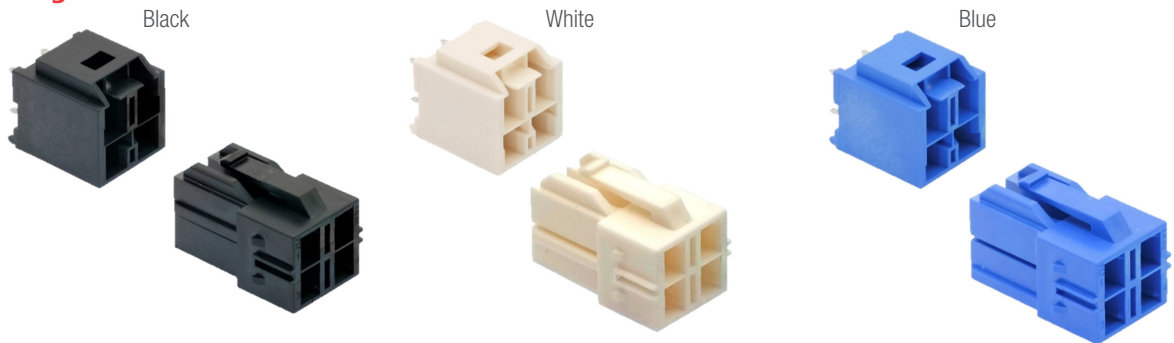Close-up view of a blue 4-circuit, CP-6.5 Wire-to-Board Assembly

CP-6.5 Wire-to-Board Connectors, 2, 4 and 6 circuits
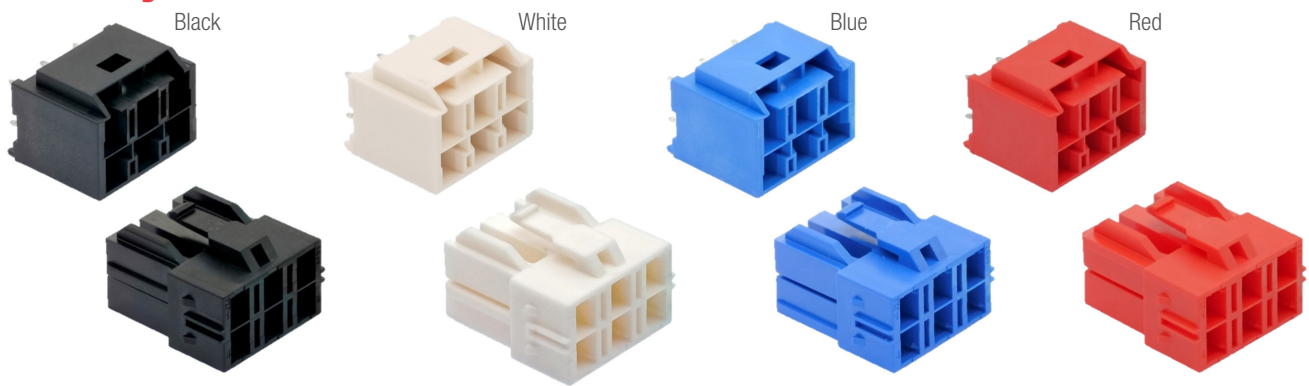## 6.50mm Pitch, Polarized with Key and Color-Coding

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Product Family

4-Circuit Housings

Black

White

Blue

6-Circuit Housings
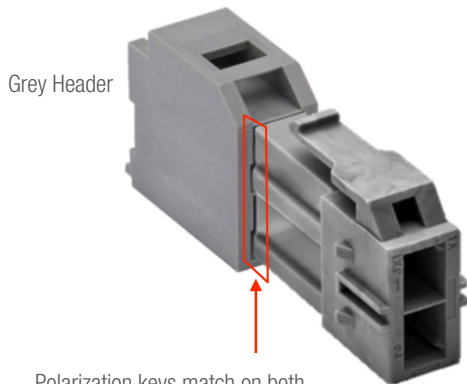
Black

White

Blue

Red

Color Coding and Fully Polarized Keying Features

Left picture shows a matching and mating combination comprising receptacle and PCB header with the same color and complementing keying features
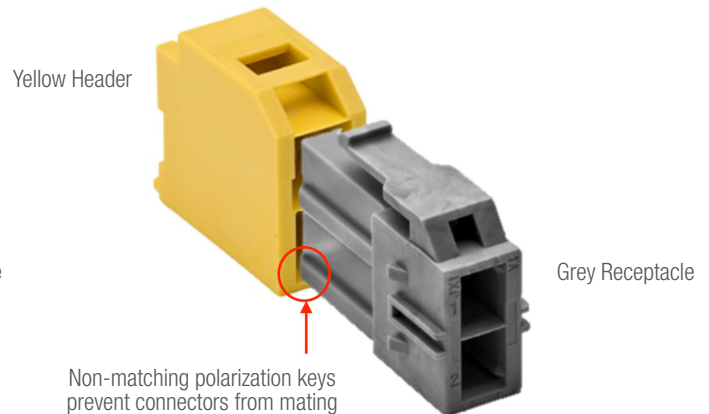
Right picture shows a mis-match of header and receptacle – both their colors and keying features do not match

Match ✓

Grey Header

Grey Receptacle

Polarization keys match on both connectors enabling mating

Like-color connectors mate

Mis-match ✗

Yellow Header

Grey Receptacle

Non-matching polarization keys prevent connectors from mating

Connectors with different colors cannot mate

Specifications

Reference Information
Packaging: Refer to table
Designed In: Millimeter
RoHS: Yes
Halogen Free: No
Glow-wire Compliant: No

Electrical
Voltage (max.): 600V AC
Current (max.): 2 to 10A
Low Level Contact Resistance (max.): 10 milliohms
Dielectric Withstanding Voltage: 1500V AC
Insulation Resistance (min.): 1,000 megohm

Mechanical
Insertion Force or Lock Strength (max.): 49.0N
Receptacle Crimp Pull-out Force: 14.7 to 127.4 N
Terminal Retention Force (max.): 39.2N
Durability (max.): 30 cycles

Physical
Housing:
   Polyamide (PA), glass-filled, UL94V-0 (151048)
   PBTB (151049)
Contact: Copper Alloy
Plating:
   Contact Area — Tin
   Soldertail Area – 1.27micron Matt Tin over
     1.27micron Nickel underplate
   Operating Temperature: -40 to +105°C

Ordering Information

Series No.	Component
151048	Vertical PCB Headers
151049	Receptacle Housings
50597	Receptacle Terminals, AWG 16 to 22, diameter 3.30 to 2.00mm
50598	Receptacle Terminals, AWG 20 to 26, diameter 2.35 to 1.25mm
51143	Retainer

www.molex.com/link/cp65.html