

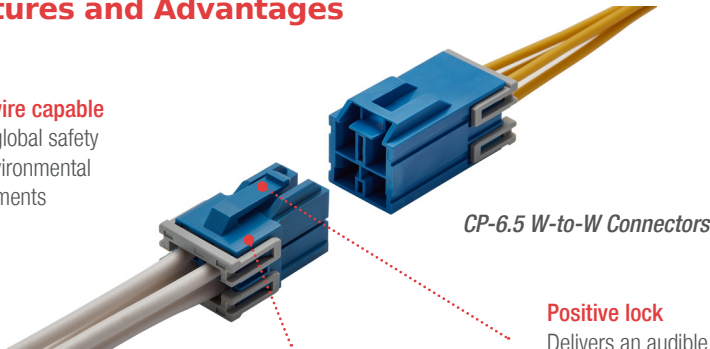
# CP-6.5 Wire-to-Board and Wire-to-Wire Connector System



Leveraging full keying and color-pairing features, foolproof CP-6.5 W-to-B and W-to-W connectors and harnesses enhance user-safety while speeding up consumer and industrial interconnect assembly applications

## Features and Advantages

**Glow wire capable**  
Meets global safety and environmental requirements

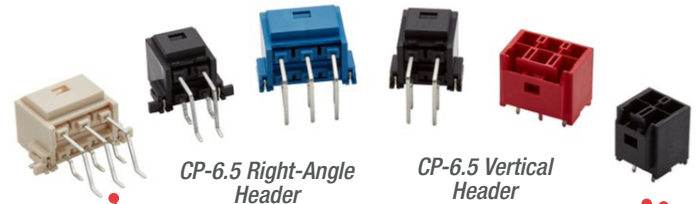
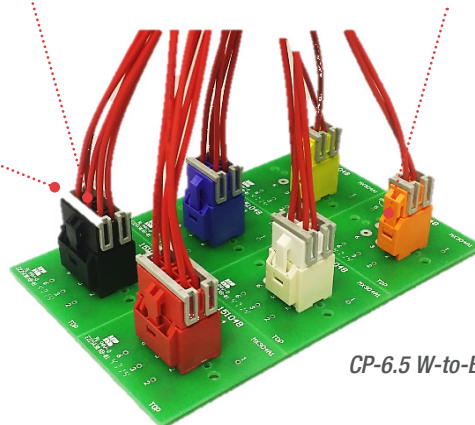


**Raised housing block on the adjacent sides**  
Prevents snagging of wires under the latch during harness manufacturing and storage

**Positive lock**  
Delivers an audible mating click, latch protection, and secure terminal and mating retention

**Polarization keys on housing ribs**  
Prevent mis-mating, which can cause electrical shorting

**260°C wave or reflow soldering capable headers**  
Delivers high-temperature assembly processing



**Pegs on housing**  
Provide robust PCB retention during soldering

**Kinked solder tails**  
Offer added header-to-PCB retention during solder reflow

**Wide spectrum of housing colors**  
Allows quick identification of mating combinations for assembly and repair purposes

**Absence of drain holes in PCB headers**  
Ensures compatibility with conformal coating (potting)

**2, 4 and 6 circuits in vertical and right-angle orientation with SMT and TH mounting styles**  
Offer design flexibility

## Markets and Applications

### Consumer / Home Appliances

- Refrigerators
- Washing machines
- Water heaters
- Air-conditioners

### Industrial / Industrial Automation

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



Home Appliances



Vending Machines



Water Heaters



Air Conditioning System



Copier Machines

# CP-6.5 Wire-to-Board and Wire-to-Wire Connector System



## Specifications

### REFERENCE INFORMATION

Packaging  
 Terminal: Reel/Bag  
 Header: Tube/Reel/Tray  
 Housing and Retainer: Bag  
 Designed In: millimeters  
 RoHS: Yes  
 Halogen Free: Not low halogen  
 Glow-wire Compliant:  
 Wire-to-Board – Yes  
 Wire-to-Wire – Yes

### ELECTRICAL

Voltage (max.): 600V AC  
 Wire-to-Board (Vertical): 2.0A to 10.0A  
 Wire-to-Board (Right-Angle): 5.6A to 11.8A  
 Wire-to-Wire: 5.0A to 12.5A  
 Low-level Contact Resistance (max.): 10 milliohms  
 Dielectric Withstanding Voltage: 1,500V AC  
 Insulation Resistance (min.): 1,000 Megohms

### MECHANICAL

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

### PHYSICAL

Plug Housing: Nylon, UL 94V-0 (at all instances), G/W  
 Receptacle Housing: PBTB or PA66, UL 94V-0, G/W  
 Header Housing (Vertical): PA, UL 94V-0, G/W  
 Header Housing (Right-Angle): Nylon, UL 94V-0, G/W  
 Retainer: PBTP, UL 94V-0  
 Terminal: Copper Alloy Tin-Plated  
 Header Plating:  
 Contact: Tin-Plated  
 Solder tail: Tin-Plated over Nickel Underplate  
 Operating Temperature: -40 to +105 °C

## Ordering Information

### HEADERS

Product Type	Packaging	Circuit	Colors	Ordering Number	Color Code Table	
					Standard	Custom
Vertical Header	Tray	2	12	<a href="#">15104812xx</a>	00-Orange 01-Blue 03-Yellow 06-Black 09-Red 11-Natural	02-Gray 04-Purple 05-Pink 07-Green 08-Brown 10-Mint
		4	4	<a href="#">15104814xx</a>		
		6	4	<a href="#">15104816xx</a>		
	Tube	2	12	<a href="#">15104822xx</a>		
Right-Angle Through-Hole Header	Tube	2	4	<a href="#">2035551x12</a>	2 Circuit 0-Red 1-Blue 2-Black 3-Natural	4 and 6 Circuit 0-Blue 1-Black 2-Natural
		4	3	<a href="#">2035551x14</a>		
		6	3	<a href="#">2035551x16</a>		
	Reel	2	4	<a href="#">2035551x22</a>		
		4	3	<a href="#">2035551x24</a>		
		6	3	<a href="#">2035551x26</a>		
Right-Angle SMT Header	Tube (Underdevelopment)	2	4	<a href="#">2035552x12</a>	2 Circuit 0-Red 1-Blue 2-Black 3-Natural	4 and 6 Circuit 0-Blue 1-Black 2-Natural
		4	3	<a href="#">2035552x14</a>		
		6	3	<a href="#">2035552x16</a>		
	Reel	2	4	<a href="#">2035552x22</a>		
		4	3	<a href="#">2035552x24</a>		
		6	3	<a href="#">2035552x26</a>		

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## Ordering Information

### HOUSING

Product Type	Resin	Circuit	Colors	Ordering Number	Color Code Table	
					2 Circuit	4 and 6 Circuit
Receptacle Housing	PBTP	2	12	<a href="#">15104922xx</a>	00-Orange 01-Blue 02-Gray* 03-Yellow 04-Purple* 05-Pink* 06-Black 07-Green* 08-Brown* 09-Red 10-Mint* 11-Natural *Custom colors	01-Blue 06-Black 09-Red 11-Natural
		4	3	<a href="#">15104924xx</a>		
		6	4	<a href="#">15104926xx</a>		
	PA66 G/W	2	12	<a href="#">15120722xx</a>		
		4	4	<a href="#">15120724xx</a>		
		6	4	<a href="#">15120726xx</a>		
Plug Housing	PA66 G/W	2	12	<a href="#">20343822xx</a>		
		4	4	<a href="#">20343824xx</a>		
		6	4	<a href="#">20343826xx</a>		

### TERMINAL

Connector Type	Product Type	Ordering No.		Barrel Size
		Chain	Loose	
Wire-to-Board	Female Terminal	<a href="#">505978000</a>	<a href="#">505978100</a>	Large (16 to 22 AWG)
		<a href="#">505988000</a>	<a href="#">505988100</a>	Medium (20 to 26 AWG)
Wire-to-Wire	Female Terminal	<a href="#">505978010</a>	<a href="#">505978110</a>	Large (16 to 20 AWG)
		<a href="#">505988010</a>	<a href="#">505988110</a>	Medium (22 to 24 AWG)
	Male Terminal	<a href="#">2050338000</a>	-	Large (16 to 20 AWG)
		<a href="#">2050328000</a>	-	Medium (22 to 24 AWG)

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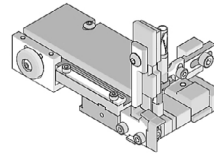
## Application Tooling



Extractor



Hand Crimping Tool



T2 Termination Tooling



Applicator

Crimp Terminal (Part Number 50597-8000)		Crimp Terminal (Part Number 50598-8000)	
Global			
Part No.	Type	Part No.	Type
63819-7600	Hand crimp tool for Wire-to-Wire and Wire-to-Board Terminals	-	-
63901-2300	FineAdjust applicator for 3.96mm pitch Wire-to-Wire and Wire-to-Board crimp terminal	63901-9900	FineAdjust applicator for 3.96mm pitch crimp terminal, 24 AWG
63901-2200	Fine adjust applicator for 3.96mm pitch Wire-to-Wire and Wire-to-Board crimp terminal	63901-9800	FineAdjust applicator for 3.96mm pitch crimp terminal, 20 to 26 AWG
63911-2200	T2 terminator for 3.96mm pitch Wire-to-Wire and Wire-to-Board crimp terminal	63911-9900	T2 terminator for 3.96mm pitch crimp terminal, 24 AWG
63819-7500	Hand crimp tool for Wire-to-Wire and Wire-to-Board terminals	63823-5300	Hand crimp tool for Wire-to-Wire and Wire-to-Board terminals
63819-7700	Hand crimp tool for Wire-to-Wire and Wire-to-Board terminals	63823-5400	Hand crimp tool for Wire-to-Wire and Wire-to-Board terminals
63813-2700	Extraction tool	63813-2700	Extraction tool
63911-2300	T2 terminator for 3.96mm pitch Wire-to-Wire and Wire-to-Board crimp terminal	63911-9800	T2 terminator for 3.96mm pitch crimp terminal, 20 to 26 AWG

[www.molex.com/link/cp65.html](http://www.molex.com/link/cp65.html)

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