

CP-3.3 Wire-to-Wire Connector System

molex®

Leveraging full keying and color-pairing features, foolproof CP-3.3 wire-to-wire connectors enhance user-safety while preventing mismating in consumer electronics, white goods, industrial and medical applications

Features and Benefits

SINGLE-ROW CONFIGURATION

Fully polarized and color-coded plug (right, 504694) and receptacle (left, 504693) housings

Allows multiple same-circuit-sized connectors to be used in an application. Speeds up assembly, as the colors make it easy to identify the correct mating connector. Reduces the cost of quality by preventing mis-mating during assembly

Inertial lock on receptacle housing (504693)

Ensures complete, low-insertion-force locking; provides a tactile and audible 'click' when mated

Female Crimped Lead (50397 or 505607)

Male Crimped Lead (50398 or 505608)

Retainer (504695)

Provides end-to-end protection against moisture ingress into the connected assembly and moisture drainage

DUAL-ROW CONFIGURATION

Fully polarized and color-coded plug (right, 505606) and receptacle (left, 505605) housing

Allows multiple same-circuit-sized connectors to be used in an application. Speeds up assembly, as the colors make it easy to identify the correct mating connector. Reduces the cost of quality by preventing mis-mating during assembly

Inertial lock on receptacle housing (505605)

Ensures complete, low-insertion-force locking; provides a tactile and audible 'click' when mated

Female Crimped Lead (50397 or 505607)

Male Crimped Lead (50398 or 505608)

TPA Retainer (504695)

Ensures terminals are fully inserted and offers a secondary terminal retention feature

Housing ribs between each cavity of the mated housings

Increase creepage and clearance distances to help prevent arcing in presence of moisture or the other contaminants

Applications

Home Appliance

Air Conditioner
Refrigerator
Microwave Oven
Washing Machine
Water Heater
Vending Machines

Consumer Electronics

Fitness
Home Entertainment
Home Office
Home Security

Medical

Autoclaves



Home Appliance (White Goods)



Water heater



Vending machine

CP-3.3 Wire-to-Wire Connector System



Specifications (Single-row Configuration)

ELECTRICAL

Voltage (max.): 500V

Current (max.):

Refer to Derating Current table below

Contact Resistance (max.): 20 milliohms

Dielectric Withstanding Voltage: AC1000V / minute

Insulation Resistance (min.): 1000 Megaohm

PHYSICAL

Housing: PBT UL94-V0

Retainer: PBT UL94-V0

Contact: Copper Alloy

Plating:

Contact Area — Tin 0.9micron min.

Solder Tail Area — Tin 0.9micron min.

Operating Temperature: -40 to 105°C

REFERENCE INFORMATION

Packaging

Reel (Terminal)

Bag (Housing and Retainer)

Mates With: 504693 with 504694

Use With: 504695 (Retainer)

50397/50398 Terminals (22-28 AWG)

505607/505608 Terminals (18-22 AWG)

Designed In: Millimeters

RoHS: Yes

Halogen Free: No

Glow Wire Compliant: No

MECHANICAL

Contact Insertion Force (max.): 9.8N

Contact Retention to Housing (min.): 19.6N

Mating Force (max.): 20.5N (6 circuits)

Unmating Force (min.): 3.6N. (6 circuits)

Durability: 30 cycles

AWG	2 circuits	4 circuits	6 circuits
	Current (A)		
18 (with 505607/505608)	7.5	6.5	6.0
20 (with 505607/505608)	6.5	5.5	5.5
22 (with 505607/505608)	5.5	5.0	4.5
22 (with 50397/50398)	5.0	4.5	4.0
24 (with 50397/50398)	4.0	3.5	3.5
26 (with 50397/50398)	3.5	3.0	3.0
28 (with 50397/50398)	3.0	2.5	2.5

(1) Values are for REFERENCE only. (2) Data is for all circuits powered.

Specifications (Dual-row Configuration)

MECHANICAL

Contact Insertion Force (max.): 9.8N

Contact Retention to Housing (min.): 19.6N

Mating Force (max.): 37.7N (12 circuits)

Unmating Force (min.): 7.1N (12 circuits)

Durability: 30 cycles

Operating Temperature: -40 to 105°C

ELECTRICAL

Voltage (max.): 500V

Current (max.):

Refer to Derating Current table below

Contact Resistance (max.): 20 milliohms

Dielectric Withstanding Voltage: AC1000V / minute

Insulation Resistance (min.): 1000 Megaohm

REFERENCE INFORMATION

Packaging

Reel (Terminal)

Bag (Housing and Retainer)

Mates With: 505605 with 505606

Use With: 504695 (Retainer)

50397/50398 Terminals (22-28 AWG)

505607/505608 Terminals (18-22 AWG)

Designed In: Millimeters

RoHS: Yes

Halogen Free: No

Glow Wire Compliant: No

PHYSICAL

Housing: PBT UL94-V0

Retainer: PBT UL94-V0

Contact: Copper Alloy

Plating: Contact Area — Tin 0.9micron min.

Solder Tail Area — Tin 0.9micron min.

AWG	4 circuits	8 circuits	12 circuits
	Current (A)		
18 (with 505607/505608)	7.0	6.0	6.0
20 (with 505607/505608)	6.5	5.5	5.0
22 (with 505607/505608)	5.0	4.5	4.0
22 (with 50397/50398)	4.5	3.5	3.5
24 (with 50397/50398)	3.5	3.0	3.0
26 (with 50397/50398)	3.5	2.5	2.5
28 (with 50397/50398)	2.5	2.0	2.0

(1) Values are for REFERENCE only. (2) Data is for all circuits powered.

Ordering Information

Series No.	Component	Wire Size / Number of rows	Circuits		Housing Colors
50397	Crimp Terminal for Receptacle	AWG 22-28	-		-
50398	Crimp Terminal for Plug		-		-
505607	Crimp Terminal for Receptacle	AWG 18-22	-		-
505608	Crimp Terminal for Plug		-		-
504693	Receptacle Housing	Single-row	2, 3, 4, 6	2	Natural, Black, Red, Yellow, Blue, Pink, Green, Orange, Purple
504694	Plug Housing			3	Natural, Black, Red, Yellow, Blue
				4	Natural, Black, Red, Yellow, Blue
				6	Natural, Black, Red, Yellow, Blue
505605	Receptacle Housing	Dual-row	4, 6, 8, 10, 12		Natural, Black, Red, Yellow
505606	Plug Housing				
504695	Retainer	Single and Dual-row	2, 3, 4, 5, 6		Brown

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