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

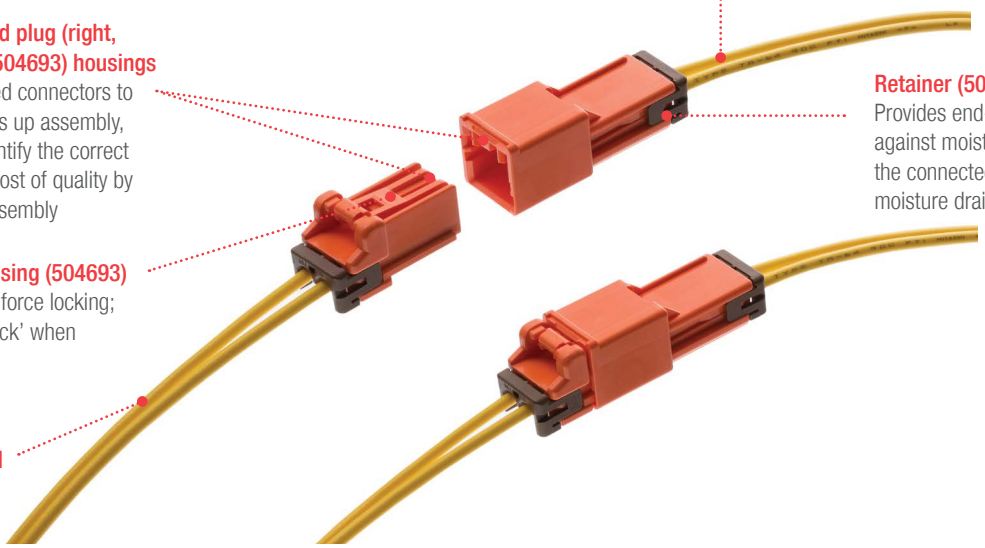
Fully polarized and color-coded plug (right, 504694) and receptacle (left, 504693) housings
Allows multiple same-circuit-sized connectors to be used in an application. Speeds up assembly, as the colors make it easy to identify the correct mating connector. Reduces the cost of quality by preventing mis-mating 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 ingression into the connected assembly and moisture drainage



DUAL-ROW CONFIGURATION

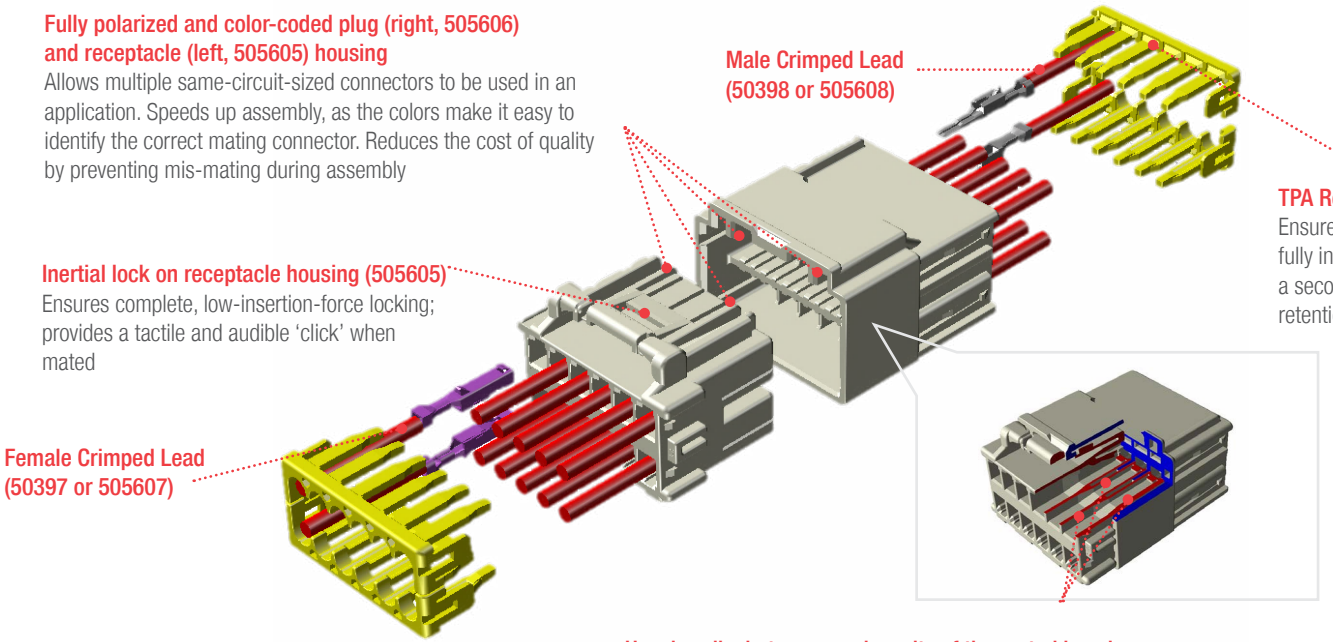
Fully polarized and color-coded plug (right, 505606) and receptacle (left, 505605) housing
Allows multiple same-circuit-sized connectors to be used in an application. Speeds up assembly, as the colors make it easy to identify the correct mating connector. Reduces the cost of quality by preventing mis-mating 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

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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 0.9microm 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

www.molex.com/link/cp33.html

Order No. 987651-6581 Rev. 2 APS/0k/GF/2018.11