



XRC™ (Extra Rugged Circular) Sealed Plugs and Receptacles

XRC™ sealed, plastic-circular connectors meet the demanding requirements of the non-automotive transportation market

Never before has Molex offered such an economical, rugged, sealed, circular connector. The XRC 14- and 31-circuit (18- and 24-shell size), circular connectors are ideal for heavy-duty applications such as trucks, buses and agricultural markets. For maximum design flexibility, the XRC plugs and receptacles are available in standard and reverse gender. The connectors can be used for in-line or panel-mount applications.

A backshell is available for use with the 24-shell size products. The backshells easily snap onto the XRC housing after terminal assembly for increased strain relief. Unique notches on the collar of the

connector line up with corresponding features in the backshell for maximum grip. In addition, the notches ensure the backshell stays in place while turning the connector, so the backshell is not spinning freely around the connector.

Designed to meet IP67 standards, XRC plugs and receptacles protect against the ingress of dust, water and other contaminants to maintain the integrity of the mated pair. Plugs feature a quick-disconnect bayonet latch to provide quick and easy connections with reduced installation and service time while ensuring accurate mating depth. For additional information visit www.molex.com/link/xrc.html.

Features and Benefits

- Wire seals are imprinted instead of embossed or engraved (24-shell size, 31-circuit connectors only) making them easier to see and identify each circuit for faster installation and field servicing
- Backshells have unique notches on the collar and easily snap onto the XRC housing (for 24/31 connectors only) for increased strain relief
- Environmentally sealed to IP67 standard and protects against the ingress of dust, water and other contaminants to maintain the integrity of the mated pair
- Standard and reverse terminal genders allow for custom polarization
- Bayonet-style latch provides quick and easy connections for reduced installation and service time as well as ensures proper depth when mated
- Seal retainer collar is compatible with backshell and overmolding applications
- Tactile and audible mating feedback facilitates reliable mating
- Visual markings on outer shell allow for visual alignment to facilitate easier mating
- Simple crimp-and-poke technology does not require terminal alignment when installing crimped wires

84505, 84510
24-Shell Plugs
84501, 84507
18-Shell Plugs
84506, 84511
24-Shell Receptacles
84508, 84502
18-Shell Receptacles
84537
Backshell for 24-Shell
84590
Terminals



Top: 24/31 Assembly Bottom: 18/14 Assembly

SPECIFICATIONS

Reference Information

Packaging: Tray

Mates With:

- 31-Circuit: 84510 mates with 84511
- 31-Circuit: 84505 mates with 84506
- 14-Circuit: 84501 mates with 84508
- 14-Circuit: 84507 mates with 84502

Use With:

- 84590 crimp terminals
- 84509-0002 circuit plugs (optional)
- 31-Circuit: 84506-0012 panel mount hex nut for 24 shell receptacles (optional)
- 31-Circuit: 84537-0003 backshell (optional, for parts with collar only)
- 14-Circuit: 84502-0004 panel mount hex nut for 18 shell receptacles (optional)

Designed In: Inches

Electrical

Current:

18 AWG — 10.0A max.

16 and 14 AWG — 13.0A max.

Contact Resistance: 30 milliohms max.

Dielectric Withstanding Voltage: 1600V AC

Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Retention to Housing: 53.4N (12 lbs.)

Durability: 100 cycles

Physical

Housing: Glass-filled PBT

Seals: Silicone rubber, rust red

Contact: Copper (Cu) alloy

Female Terminal Hood: Stainless Steel

Plating:

Contact Area — Overall Nickel (Ni)

Underplating — Copper (Cu)

Operating Temperature: -40 to +125°C



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84505, 84510

24-Shell Plugs

84501, 84507

18-Shell Plugs

84506, 84511

24-Shell Receptacles

84508, 84502

18-Shell Receptacles

84537

Backshell for 24-Shell

84590

Terminals



- Agriculture
 - Equipment
 - Combines
 - Tractors
- Construction Equipment
 - Fork lifts
 - Loaders
 - Cranes
 - Dump trucks
 - Concrete trucks



- Marine
 - Boats and propulsion systems
- Recreational Vehicles
- Transportation
 - Tractor trailers
 - Buses
 - Fire Trucks

ORDERING INFORMATION

Plug and Receptacle Housings

Order No.		Shell Size	No. of Circuits	Terminal Insert Configuration		Wire Range (AWG)	Seal Retainer	
Plugs	Receptacles			Pin Insert	Socket Insert		With Collar	Without Collar
84505-0001	84511-0004	24	31	X	-	14 to 18	-	X
84510-0004	84506-0001			-	X		-	X
84505-0003	84511-0005			X	-		X	-
84510-0005	84506-0003			-	X		X	-
84501-0001	84502-0008	18	14	X	-		X	-
84507-0012	84508-0001			-	X		X	-

Terminals

Order No.	Terminal Size	Wire Range (AWG)	Gender	Insulation Outside Diameter Callout
Nickel Plated				
84590-0024	16	14 to 18	Socket	2.41 to 3.81mm (.095 to .150")
84590-0021			Pin	2.41 to 3.81mm (.095 to .150")
84590-0023			Socket	1.91 to 3.81mm (.075 to .150")
84590-0022			Pin	1.91 to 3.81mm (.075 to .150")
84590-0025		16 to 18	Socket	1.40 to 2.16mm (.055 to .085")
84590-0020			Pin	1.40 to 2.16mm (.055 to .085")

Accessories

Order No.	Description	Use With
84509-0002	Circuit Plug	Plug Housings: 18-Shell (Series 84501, 84507); 24-Shell (Series 84505, 84510) and Receptacle Housings: 18-Shell (Series 84502, 84508); 24-Shell: (Series 84506, 84511)
84506-0012	Panel Mount Hex Nut – 24-Shell Size	24-Shell Receptacle Housings (Series 84506 and 84511)
84502-0004	Panel Mount Hex Nut – 18-Shell Size	18-Shell Receptacle Housings (Series 84502 and 84508)
84537-0003	Backshell (straight, long) – 24-Shell Size	24-Shell Plug Housings (Series 84505, 84510) and Receptacle Housings (Series 84506, 84511)

www.molex.com/link.xrc.html