







STANDARD HEADERS > AUTOMOTIVE SELECTION GUIDE

Standard headers for Molex sealed and unsealed connectors



Header Family	Dielectric Voltage	Current	Circuits max. per Pocket	No. of Pockets per Header	IP Protection	Terminal Type & Sizes	Operating Temperature	Pitch	PC Board Attachment	EMC Filtering Option	Orientation	Plating	Page
	1000V	21.0A	53	3	IP67 IP69	Tabs 2.80mm 1.50mm 0.64mm	105°C	2.54mm	Solder Tail, Press Fit	No	Right Angle	Tin, Gold	4
	1500V	25.0A	80	1	IP67 IP69	Tabs 2.80mm 0.64mm	125°C	2.54mm	Solder Tail, Press Fit	Yes	Vertical	Tin, Silver, Gold	6
	500V	15.0A	20	1	IP67 IP69	Tab 1.50mm	125°C	3.50mm	Solder Tail, Press Fit	No	Right Angle Vertical	Tin, Silver, Gold	8
	1500V	16.0A	20	1	IP67 IP69	Tab 1.50mm	125°C	3.50mm	Solder Tail	No	Right Angle Vertical	Tin, Gold	10
	500V	30.0A	10	4	-	Tabs 2.80mm 1.50mm 0.64mm	105°C	2.54mm	Solder Tail	No	Right Angle Vertical	Tin	12
	1500V	3.0A	24	1	-	Tab 0.50mm	105°C	2.00mm	Solder Tail, SMT	No	Right Angle Vertical	Tin	14



The Molex family of CMC Hybrid Connectors provides a sealed, high-density, modular and cost-effective connection system for heavy-duty, powertrain and body-electronics applications in the transportation industry

The CMC connector family from Molex is a sealed, high-density connection system developed for the transportation industry. It is designed to perform in high-conductivity applications and in harsh environments. CMC connection systems are used in power train applications including engine-control units (ECU's), compartment applications, gearboxes, electronic parking brakes and suspension controllers, together with body electronics applications in automotive and commercial vehicles.

Standard CMC hybrid connectors hold two different terminal sizes, CP 0.635 and CP 1.50mm. Power CMC hybrid connectors hold three different terminal sizes, CP 0.635, CP 1.50 and CP 2.80mm.

Features and Benefits

High-performing sealed-connection system using matte-seal technology for CP 0.635 and 1.50mm terminals and using single-wire seal technology for CP 2.80mm terminals

Performs in sealed applications where IP69K rating and 500mbar water-tightness are required

Hybrid-connection system using three different terminal sizes; CP 0.635, CP 1.50 and CP 2.80mm terminals

Supports low-, medium- and high- current applications from 2.5 up to 21.0A to perform in harsh-environments and high-conductivity applications

High-density system due to compact-connector design and fine-pitch size of 2.54mm

Requires reduced space on customers printed circuit board (PCB) or customers engine compartment

Modular-connector system with a wide variety of circuit sizes (22 to 53)

Cost effective system; uses same connector type for different harness size needs

System offers several color codings and mechanical polarization

Reduces cycle time during harness assembly due to easy visual installation and avoids mis-mating of the headers and connectors

Unused cavities can be void Terminal cavities 0.60, 1.50 and 2.80 a blind plug option is available to close cavities guaranteeing IP67K and IP69K sealing

Provides flexibility, increases efficiency and reduces cost

Wide range of standard headers and standardized cut-out header shapes

Standard headers provide competitive pricing and time saving solutions Provides major cost savings for custom designs Off the shelf designs available

CP female terminals, offered in tin or gold, work with a variety of wire sizes

Provide superb technical solutions for harsh environments

CMC Sealed Hybrid Headers

36638, 64334, 47732, 98997 Single Pocket

36638, 502225 Two Pockets

34763, 64333 Three Pockets



Applications

- **Automotive**
 - Automotive vehicles
 - Body electronics
 - Engine control unit
 - Gear box
 - Powertrain
 - Suspension controller
- **Transportation**
 - Electric doors
 - Junction/fuse box
 - Lighting control system
 - Motorcycles



Specifications

REFERENCE INFORMATION
Packaging: Trays in carton box
Mates With: Series 64319, 64320 and 64321 female connectors
Designed in: Millimeters

ELECTRICAL
Voltage: 500V max. Current:
0.64mm – 2.5A max.
1.50mm – 12.0A max.
2.80mm – 21.0A max.
Dielectric Withstanding Voltage:
1000V AC for 1 minute

Isolation Resistance:
100 Megohms min.

PHYSICAL
Header Housings:
PBT Glass-filled
Contacts: Copper Alloy, Lead free
Operating Temperature:
-40 to +105°C

MECHANICAL
Durability: 20 mating cycles

Interfaces	32 Circuits	36 Circuits	48 Circuits	53 Circuits
0.64mm [pcs]	24	30	40	40
1.50mm [pcs]	8	6	8	8
2.80mm [pcs]	-	-	-	5
Configuration				

Ordering Information

Series - XXXX

see molex.com

Header	32 Circuits	36 Circuits or 48 Circuits	36 Circuits or 48 Circuits	53 Circuits
0.64mm [pcs]	24	30 / 40	30 / 40	40
1.50mm [pcs]	8	6 / 8	6 / 8	8
2.80mm [pcs]	-	-	-	5
Color Codings	Blk, Brn	Blk / Blk	Blk, Brn / Blk, Brn	Blk
Configuration				
Attachment to housing	Adhesive	Adhesive	Screw Mount	Adhesive
Terminal Type	Solder Pin	Solder Pin	Solder Pin	Solder Pin
Terminal Plating	Tin	Tin	Tin or Gold / Tin	Tin
Series No.	64334	47732 / 500762	36638	98997

Header	72 Circuits (36+36) or 96 Circuits (48+48)	80 Circuits (48+32)	112 Circuits (32+48+32)	154 Circuits (48+53+53)
0.64mm [pcs]	60 / 80	64	88	120
1.50mm [pcs]	12 / 16	16	24	24
2.80mm [pcs]	-	-	-	10
Color Codings	Blk+Brn / Blk+Brn	Blk (32) + Brn (48)	Gry (32)+Brn (48)+Blk (32)	Gry (48)+Brn (53)+Blk (53)
Configuration				
Attachment to housing	Screw Mount	Adhesive	Adhesive	Adhesive
Terminal Type	Solder Pin	Solder Pin	Solder Pin	Compliant Pin (EON)
Terminal Plating	Tin	Tin	Tin	Tin
Series No.	36638	502225	64333	34763



Molex has developed a fully-sealed, high-performance MX123 connection system that offers the smallest packaging size in the industry, designed for transportation power-train applications that accommodate low-level signal and high-current load requirements

The MX123 is a fully sealed, high-performance connection system that has been optimized for transportation power-train applications in the most challenging under-hood environments. MX123 connection systems are currently used in on-engine automotive applications, off-road construction and industrial equipment. The MX123 system maintains low and stable contact resistance under severe temperatures and vibrations.

The header pins are protected from scooping by a center wall that extends longer than the terminal length. This innovative connection system is based on two terminal systems, 064- and 280-size terminals, to provide optimal electrical performance. The 064-size terminal system has increased normal force and selective precious plating required to maintain performance characteristics in the most demanding environments.

The MX123 vertical headers mate with the MX123 lever receptacles. The headers have been designed to provide customer flexibility by offering two mounting-style options, three PCB electrical strategies and multiple-plating options. The headers are designed to be vertically mounted from the top or bottom of a casting. They are available for through-hole solder processing, compliant-pin, or wire-bonding technologies with precious plating (Gold or Silver).

Features and Benefits

Header and receptacle housings with 6 unique mechanical polarization options and unique color coding	Offers the ability to use multiple connectors on one module without the risk of cross-mating incorrect harness connectors
Wire dress for lever receptacles available in 0 and 180° orientation	Allows for wire-routing design flexibility
Anti-scooping features	Friendly to “blind-mate” conditions
Optional header terminal filtering	Eliminates cross talk between adjacent circuits
PCB tail customization available with solder-tail or compliant-pin technology	Allows for PCB design flexibility
Header placement flexibility	Allows top or bottom header loading to streamline module manufacturing process's
Precious plating	Enables stable contact resistance under extreme temperature and vibration conditions
Receptacle connector available with pin deletes (knock out patterns)	Allow for harness customization

MX123™ 2.54mm Sealed Headers

31386 56-Circuit Vertical Headers

31387 66-, 73- and 80-Circuit Vertical Headers



Applications

- **Automotive**
 - Automotive vehicles
 - Body electronics
 - Engine control unit
 - Gear box
 - Powertrain
 - Suspension controller
- **Transportation**
 - Electric doors
 - Junction/fuse box
 - Lighting control system
 - Motorcycles



Specifications

REFERENCE INFORMATION

Packaging: Tray
Designed In: Millimeters

ELECTRICAL

Voltage (max.): 500V
Current (max.):
2.80mm — 25.0A
0.64mm — 11.0A
Contact Resistance:
2.80mm — 5 milliohms max.
0.64mm — 20 milliohms max.
Dielectric Withstanding Voltage:
1500V AC
Isolation Resistance:
20 Megohms min.

MECHANICAL / ELECTRICAL / SEALING

Mating Force: Less than 75N
Unmating Force: Less than 75N
Connector Retention
(Primary Latch): 110N min.
Polarization Feature Effectiveness:
220N min.
Durability - 10 Cycles:
2.80mm - 5 milliohms max.
0.64mm - 20 milliohms max.
Mechanical Shock and Vibration
Sequence (GMW3191, Electrical):
2.80mm - 5 milliohms max.
0.64mm - 20 milliohms max.
Sealing Class: IP67K and IP69K

MX123™ 2.54mm Sealed Headers

PHYSICAL

Housing: 30% Glass Filled PBT
Contact: Copper (Cu) Alloy
Terminal Plating:
Contact Area:
2.80mm — Tin (Sn)
0.64mm — Gold (Au) or Silver (Ag)
Underplating:
2.80mm — Nickel (Ni)
0.64mm — Nickel (Ni)
Operating Temperature:
-40 to +125 °C

MX123 Headers Mounted on a Under-Hood Engine Control Module:

- A: 80-Circuit Header (Series 31387)
- B and C: 73-Circuit Header (Series 31387)
- D: 56-Circuit Header (Series 31386)



Ordering Information

Header	56 Circuits	66 Circuits	73 Circuits	80 Circuits
Order No.	31386-xxxx	31387-xxxx	31387-xxxx	31387-xxxx
0.64mm	56	64	72	80
2.80mm	-	2	1	-
Codings	Key G, H	Key A, C	Key A, B, C	Key G, H
Color	Blue, Gray	Black, Blue	Black, Gray, Blue	Blue, Gray
Mates With Part	34576	34822	34566	34566
Configuration				



Submersible MX150 single- and dual-row headers offer superior sealing and electrical performance to simplify direct wire-to-board connections in high-temperature, under-hood and on-chassis transportation environments

The MX150 sealed headers are being developed to meet the demand for rugged, environmentally sealed, connector systems for use in high-temperature automotive and other transportation applications. Molex's sealing interface has been optimized to meet IP67K and IP69K sealing requirements. Designed for under-hood and on-chassis vehicle environments, the MX150 sealed headers complement the widely used and industry-recognized MX150 female receptacle connectors.

MX150 sealed headers are designed to be attached with adhesives to an aluminum casting or molded plastic module housing to offer increased sealing capability for the most demanding environments. Today Molex offers a complete line of wire-to-wire connection systems in single- and dual-row configurations. For wire-to-board applications, customers have been required to tool the USCAR-specified interface directly into the device for which they are responsible. MX150 headers will simplify customer device tooling by incorporating the interface geometry directly into the sealed headers. Customers will no longer need to maintain the stringent USCAR dimensional requirements in tooling to meet USCAR footprint requirements.

Features and Benefits

High-temperature thermoplastic housing	Withstands wave soldering processing plus tin/lead IR-reflow soldering Withstands class 3 (-40 to +125°C) operating environments
Solder-tail and compliant-pin electrical interfaces	Provide module design flexibility Compliant-pin headers can be utilized for lead-free, infrared (IR) reflow applications
Header retention design	Protects adhesive joints during connector mating and unmating
Sealing geometry	Incorporates a spray shield necessary to meet IP67K and IP69K sealing performance requirements
Board alignment and retention features	Simplify header PCB placement and retain header to PCB during soldering operation(s)

MX150™ Sealed Headers

Preliminary Single Row, Right Angle, Compliant Pin

Preliminary Single Row, Right Angle, Solder Tail

Preliminary Dual Row, Right Angle, Compliant Pin

Preliminary Dual Row, Right Angle, Solder Tail

Preliminary Single Row, Vertical, Compliant Pin

Preliminary Single Row, Vertical, Solder Tail

Preliminary Dual Row, Vertical, Compliant Pin

Preliminary Dual Row, Vertical, Solder Tail



MX150™ Vertical Headers



MX150™ Right-Angle Headers

Applications

- **Automotive Vehicles**
- **Commercial Vehicles**
- **Recreational Vehicles**
- **Industrial Vehicles and Equipment**
- **Construction Equipment**
- **Marine Equipment**
- **Industrial Customers**
 - Control Modules
 - Radios
 - Pumps
 - Sensors



Specifications

REFERENCE INFORMATION

3,50mm Pitch
Mates With:
Series 33471 and 33472 female connectors
Designed in: Millimeters

ELECTRICAL

Maximum Steady State Current Rating 1,50mm: 15.0A
Dielectric Withstanding Voltage: 500V DC
Isolation Resistance: 20 Megohms min.

MECHANICAL

Durability: 10 mating cycles
Header Blade Retention Force: 50N

PHYSICAL

Header Housings: high temp plastic resin
Contact: Copper Alloy
Solder ability: Wave or Reflow compatible
Operating Temperature: -40 to +125°C



Ordering Information

Please contact Molex for further information!

Header	2 Circuits	3 Circuits	4 Circuits	5 Circuits	6 Circuits
1.50mm [row x pcs]	1 x 2	1 x 3	1 x 4	1 x 5	1 x 6
Color Codings	Pol A, B, C, D				
Configuration					

Header	4 Circuits	6 Circuits	8 Circuits	12 Circuits	16 Circuits	20 Circuits
1.50mm [row x pcs]	2 x 2	2 x 3	2 x 4	2 x 6	2 x 8	2 x 10
Color Codings	Pol A, B, C, D	Pol A, B, C, D	Pol A, B, C, D	Pol A, B, C, D	Pol A, B, C, D	Pol A, B, C, D
Configuration						

MX150™ Sealed Headers



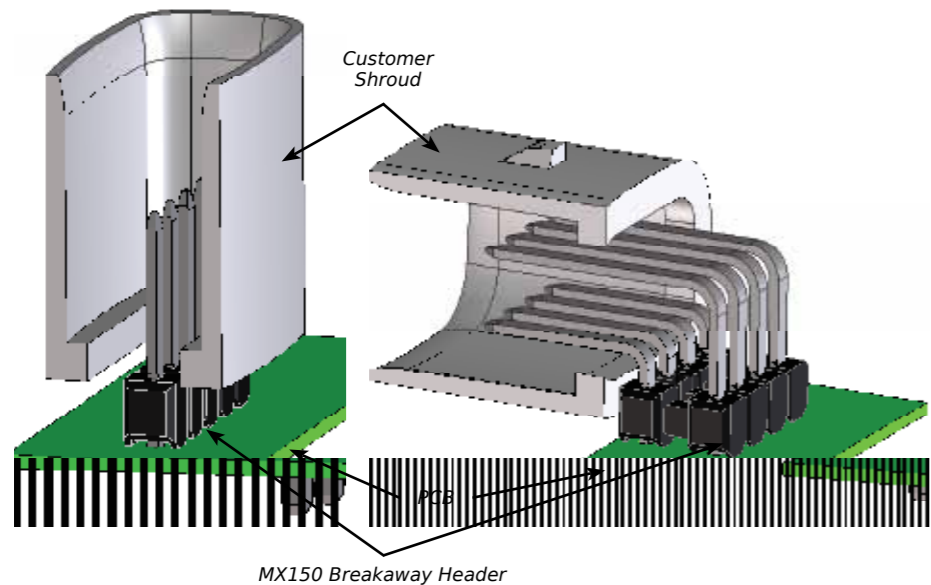
Flexible design permits customers to standardize PCB layouts and reduce inventory carrying costs

MX150, unshrouded headers are designed to mate with Molex MX150 connectors and are compatible with USCAR standard connectors. The unshrouded headers allow customers to standardize printed circuit board (PCB) designs by incorporating the shroud into an external shell, permitting rapid-design revisions while reducing work in process.

The unique breakaway design allows the customer to meet the increasing demands for design flexibility. These low-profile vertical headers are available in both single and dual-row configurations. A wide range of circuit sizes, plating options and pin lengths are available. The MX150 unshrouded breakaway headers are appropriate for both power and signal applications with current ratings up to 16 amperes per circuit.

Features and Benefits

High-temperature thermoplastic housing	Assures lead-free processing compatibility
Unshrouded design	Offers flexibility in customer application
Designed to be compatible with Molex MX150 connectors	Accommodates wire-to-board applications
Compatible with USCAR 1.50mm blade specifications	Industry compatible format
Unique breakaway design	Provides ability to break between rows and circuits
20-Circuit master sticks	Provide distributor-friendly, value-added opportunities



MX150™ 3.50mm Pitch Header

75757 Vertical Unshrouded Breakaway

75900 Right Angle Unshrouded Breakaway



Applications

- **Outdoor applications**
 - Telecommunications devices
 - Lighting
 - Audio
- **Automotive related markets**
 - Automotive suppliers
 - Trucking industry
 - Specialty vehicle manufactures
 - Automotive aftermarket and specialty equipment manufacturers
- **Recreational Markets**
 - Outdoor power equipment
 - Recreational vehicles
 - Snowmobiles
 - Motorcycles
 - ATV's
- **Indoor sealed applications**
 - Appliances
 - Restaurant equipment makers
 - Utility equipment manufacturers



Specifications

REFERENCE INFORMATION

Packaging: Tubes
 UL File No.: Pending
 CSA File No.: Pending
 Mates With:
 Single-Row (Series 33471)
 Dual-Row (Series 33472)
 Designed In: Millimeters

ELECTRICAL

Voltage: ≤500V DC
 Current: 16.0A
 Contact Resistance:
 20 milliohms max.
 Dielectric Withstanding Voltage:
 1500V
 Insulation Resistance:
 20 Megohms min.

MECHANICAL

Contact Retention to Housing: 6.8N
 Mating Force: 6.5N per contact max.
 Unmating Force: 5N per contact max.
 Durability:
 Tin (Sn) — 25 cycles
 Gold (Au) — 50 cycles

PHYSICAL

Housing: LCP
 Contact: Copper (Cu) Alloy
 Plating:
 Contact Area —
 Tin (Sn) or Gold (Au)
 Solder Tail Area —
 Tin (Sn) 1.5µm or 2,5µm
 Underplating — Nickel (NI)

MX150™ 3.50mm Pitch Header

PCB Thickness:
 1.57mm, 2.36mm or
 3.18mm
 Orientation: Vertical or Right Angle
 Operating Temperature:
 -40 to +125°C
 Flammability: UL 94V-0

Ordering Information

7 5 7 5 7 - X X X X [see molex.com](http://see.molex.com)

Header	2 Circuits	3 Circuits	4 Circuits		5 Circuits	6 Circuits		8 Circuits	12 Circuits	16 Circuits	20 Circuits
Orientation	Single-Row	Single-Row	Single-Row	Dual-Row	Single-Row	Single-Row	Dual-Row	Dual-Row	Dual-Row	Dual-Row	Dual-Row
1.50mm [row x pcs]	1 x 2	1 x 3	1 x 4	2 x 2	1 x 5	1 x 6	2 x 3	2 x 4	2 x 6	2 x 8	2 x 10
Dimension "C" x "F" [mm]	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77	3.05 x 11.20 4.75 x 11.20 3.05 x 16.09 3.05 x 27.77

7 5 9 0 0 - X X X X [see molex.com](http://see.molex.com)

Header	2 Circuits	3 Circuits	4 Circuits		6 Circuits		8 Circuits		10 Circuits	12 Circuits	16 Circuits	20 Circuits
Orientation	Single-Row	Single-Row	Single-Row	Dual-Row	Single-Row	Dual-Row	Single-Row	Dual-Row	Single-Row	Dual-Row	Dual-Row	Dual-Row
1.50mm [row x pcs]	1 x 2	1 x 3	1 x 4	2 x 2	1 x 6	2 x 3	1 x 8	2 x 4	1 x 10	2 x 6	2 x 8	2 x 10
Dimension "C" x "F" [mm]	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.55 4.75 x 12.15	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.55 4.75 x 12.15	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.55 4.75 x 12.15	3.05 x 12.15 4.75 x 12.15 3.05 x 15.85	3.05 x 12.55 4.75 x 12.15	3.05 x 12.55 4.75 x 12.15	3.05 x 12.55 4.75 x 12.15



Stackable connection system provides single and multi-pocket PCB solutions, offering a diverse range of circuit sizes and greatly reducing time-to-market by completely eliminating custom tooling; new female connectors feature the only finger-actuated design in the industry

To address the growing electronic device requirements within today's vehicles, Molex has developed a modular 0.64, 1.50 and 2.80mm (.025, .059 and .110") terminal header system. The Stac64 connection system allows OEM and device manufacturers greater design flexibility to support both low-level signal requirements as well as power applications upwards of 30.0A. The Stac64 system allows automotive manufacturers to use header assemblies as stand-alone components, to gang multiple headers together to support a large range of signal and power needs for devices and modules.

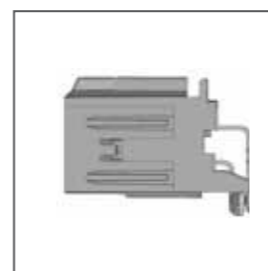
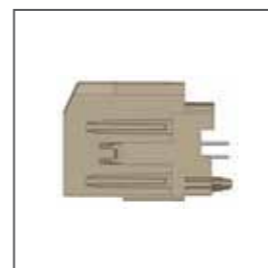
This Stac64 is a standard product system based on USCAR-2 Class II mechanical and electrical performance characteristics for unsealed connector applications. The connectors mate to existing wire-harness connectors designed to the USCAR/EWCAP industry footprints.

Features and Benefits

Stackable connection system of readily available PCB headers	Reduced time-to-market: engineering and validation times reduced significantly
	No tooling necessary to produce custom multi-bay headers
The header and female receptacle housings are molded in standard USCAR color schemes	The color coding offers visual polarization and aids in connection system assembly
Pre-assembled TPA to receptacle housing shipped as single assembly	Applied labor and cost savings
Modular-housing design with standard dovetail features molded into the housings	Allows headers to be ganged together in large assemblies to meet growing terminal quantity requirements
PCB alignment posts	Ensure all terminals are properly aligned into PCB through-holes during assembly
	Retain header to PCB during assembly and solder processing
PCB stand-offs molded into housings	Provide additional trace-routing real estate under the headers
Female receptacle TPA retention features	Greatly reduce the possibility of seating TPA's during transit and handling.

Stac64™

- 34690 Vertical Single-Bay
- 34691 Right Angle Single-Bay
- 34695 Vertical Single-Bay Hybrid
- 34696 Right Angle Single-Bay Hybrid
- 34707 Vertical Ganged Multi-Bay
- 34708 Right Angle Ganged Multi-Bay



Applications

- **Automotive Vehicles**
 - Radios / DVD Entertainment
 - Interior Lighting and Navigation
 - Instrument Panel Clusters
 - Power Seat Modules
 - Door Zone Modules
- **Non-Automotive Transportation**
 - Interior Electronic Modules
 - Body Electronic Modules



Specifications

REFERENCE INFORMATION

Packaging: Tray or Tube
 Mates With:
 Series 34729 and 31372 female connectors
 Designed in: Millimeters

ELECTRICAL

Voltage: 500V max.
 Current:
 0.64mm – 10.0A max.
 1.50mm – 20.0A max.
 2.80mm – 30.0A max.

Dielectric Withstanding Voltage:
 500V DC
 Isolation Resistance:
 20 Megohms min.

MECHANICAL

Durability :
 10 milliohms max. —
 10 mating cycles
 Header Pin Retention Force:
 0.64mm - 15N min.
 1.50mm - 70N min.
 2.80mm - 70N min.

Stac64™

PHYSICAL

Header Housings: Glass filled SPS
 Contact: Copper Alloy
 Plating:
 Overplating — Tin
 Underplating — Nickel
 Operating Temperature:
 -40 to +105°C

Ordering Information

Single-Bay

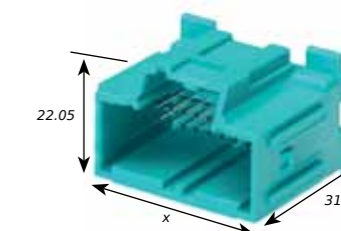
3 4 6 9 X - X X X X

Circuit Size
 08 = 8 Circuits
 10 = 10 Circuits
 12 = 12 Circuits
 16 = 16 Circuits
 20 = 20 Circuits

Orientation
 Signal:
 0 = Vertical
 1 = Right Angle
 Hybrid:
 5 = Vertical
 6 = Right Angle

Packaging
 0 = Tray
 9 = Tube

Polarization Color
 0 = A - Black
 1 = B - Grey
 2 = C - Brown
 3 = D - Green (20 Circuits only)



Header	8 Circuits	12 Circuits	16 Circuits	20 Circuits	10 Circuits
Type	Signal	Signal	Signal	Signal	Hybrid
Order No.	3469*-*08*	3469*-*12*	3469*-*16*	3469*-*20*	3469*-*10*
0.64mm [row x pcs]	2 x 4	2 x 6	2 x 8	2 x 10	-
1.50mm [row x pcs]	-	-	-	-	1 x 6
2.80mm [row x pcs]	-	-	-	-	1 x 4
Color Codings	Pol A, B, C	Pol A, B, C	Pol A, B, C	Pol A, B, C, D	Pol A, B
X = Length	18.80mm	23.88mm	28.96mm	34.04mm	34.04mm
Configuration					

Ganged Multi-Bay

3 4 7 0 X - X 0 X X

Orientation
 7 = Vertical
 8 = Right Angle

Bay's
 2 = 2-Bay
 3 = 3-Bay
 4 = 4-Bay

see molex.com

Order No.	Number of Bays	Orientation	Assembly Features
3470*-*2***	2	Vertical	Housing and Pins Assembly
		Right Angle	Housing, Pins and Mylar Assembly
3470*-*3***	3	Vertical	Housing and Pins Assembly
		Right Angle	Housing, Pins and Mylar Assembly
3470*-*4***	4	Vertical	Housing and Pins Assembly
		Right Angle	Housing, Pins and Mylar Assembly





Achieve 50% space savings over traditional USCAR 0.64mm connectors with Molex's unsealed miniature Mini50™ connection system, with smaller terminals to fit more low-current electrical circuits in interior, unsealed, transportation-vehicle environments

The Mini50 unsealed, wire-to-board connection system offers customers reduced package sizes compared to conventional 0.64mm connection systems, with applied cost savings and enhanced reliability .

Mini50 SMT headers are being developed to allow customers to maximize valuable PCB area by removing pass-through features on the circuit board. Module and PCB designers will be able to locate surface mount components beneath the Mini50 headers on the opposite side of the printed circuit board. The headers will be designed to mate to the existing, industry-recognized Mini50 receptacles.

Features and Benefits

Reduced package sizes	Approximately 50% smaller than USCAR 0.64mm unsealed interfaces
Orientation features are molded into the header	Either vertical or right-angle orientations are possible, providing wire- routing and module-design flexibility
Board alignment and retention features	Retain the header to the PCB during the soldering process Simplify header PCB placement and retain header to PCB during soldering operation(s) Protect adhesive joints during connector mating and unmating
High-temperature thermoplastic housings	Withstand infrared (IR) and wave lead- free solder processing per ES-40000-5013 Molex specification, maximum temperature +260°C
Female terminal wire grips for wires 0.35mm ² and smaller	Wire-size reduction; weight, space and cost savings versus 0.64mm interfaces
Three polarization options	Three discrete mechanical, visual and colored polarizations

Mini50™ Unsealed Headers

34792 Single-Row, Vertical Headers

34793 Single-Row, Right-Angle Headers

Preliminary Dual-Row, Vertical Headers

Preliminary Dual-Row, Right-Angle Headers

Preliminary Surface Mount Technology (SMT)



Applications

- **Automotive and Transportation**
 - Headliners
 - Clusters / Navigation
 - Radios
 - Cameras / Sensors
 - HVAC
 - Switches
 - Lighting
 - Mirrors
 - Steering Wheel Column



Specifications

REFERENCE INFORMATION

Pitch - Mating Interface 2.00mm
Packaging: Tray or tube
Mates with:

- Single-row receptacles Series: 34791
 - Dual-row receptacles Series: Preliminary
- Designed in: Millimeters

ELECTRICAL

Voltage (max.): 500V
Current (max.): 3.0A
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 1500V AC min.
Isolation Resistance: 100 Megohms min.

MECHANICAL

Durability: 20 milliohms max.
Tin (Sn) Plating – 10Cycles
Pin Retention: 15N min.

PHYSICAL

High Temperature Thermoplastic
Contact: C260 Brass
Plating:
Contact Area — Tin (Sn)
Underplating — Nickel (Ni)
Operating Temperature: -40 to +105°C

Ordering Information

Single-Row

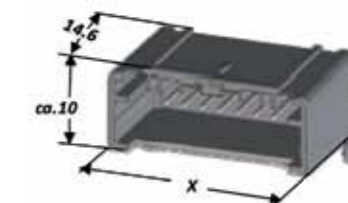
3 4 7 9 X - X X X X

Orientation
2 = Vertical
3 = Right Angle

Packaging
0 = Tray
9 = Tube

Polarization Color
0 = A - Black
1 = B - Grey
2 = C - Brown
3 = D - Green (4ckt. only)

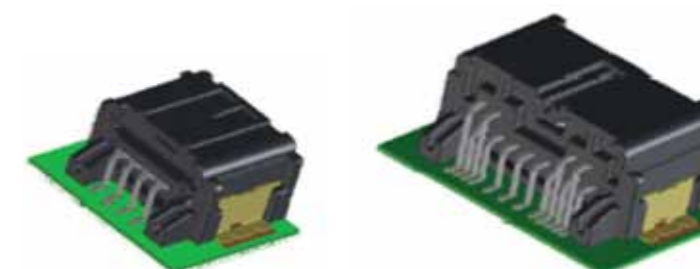
Circuit Size
04 = 4 Circuits
08 = 8 Circuits



Header	4 Circuits	8 Circuits	12 Circuits	24 Circuits
Type	Single-Row	Single-Row	Dual-Row	Dual-Row
Order No.	3479*-*04*	3479*-*08*	3482*-*012*	please contact MOLEX
0.64mm [row x pcs]	1 x 4	1 x 8	2 x 6	2 x 12
Color Codings	Pol A, B, C, D	Pol A, B, C	Pol A, B, C	Pol A, B, C, D
X = Length	14,60	22,60	22,60	34,60
Configuration				

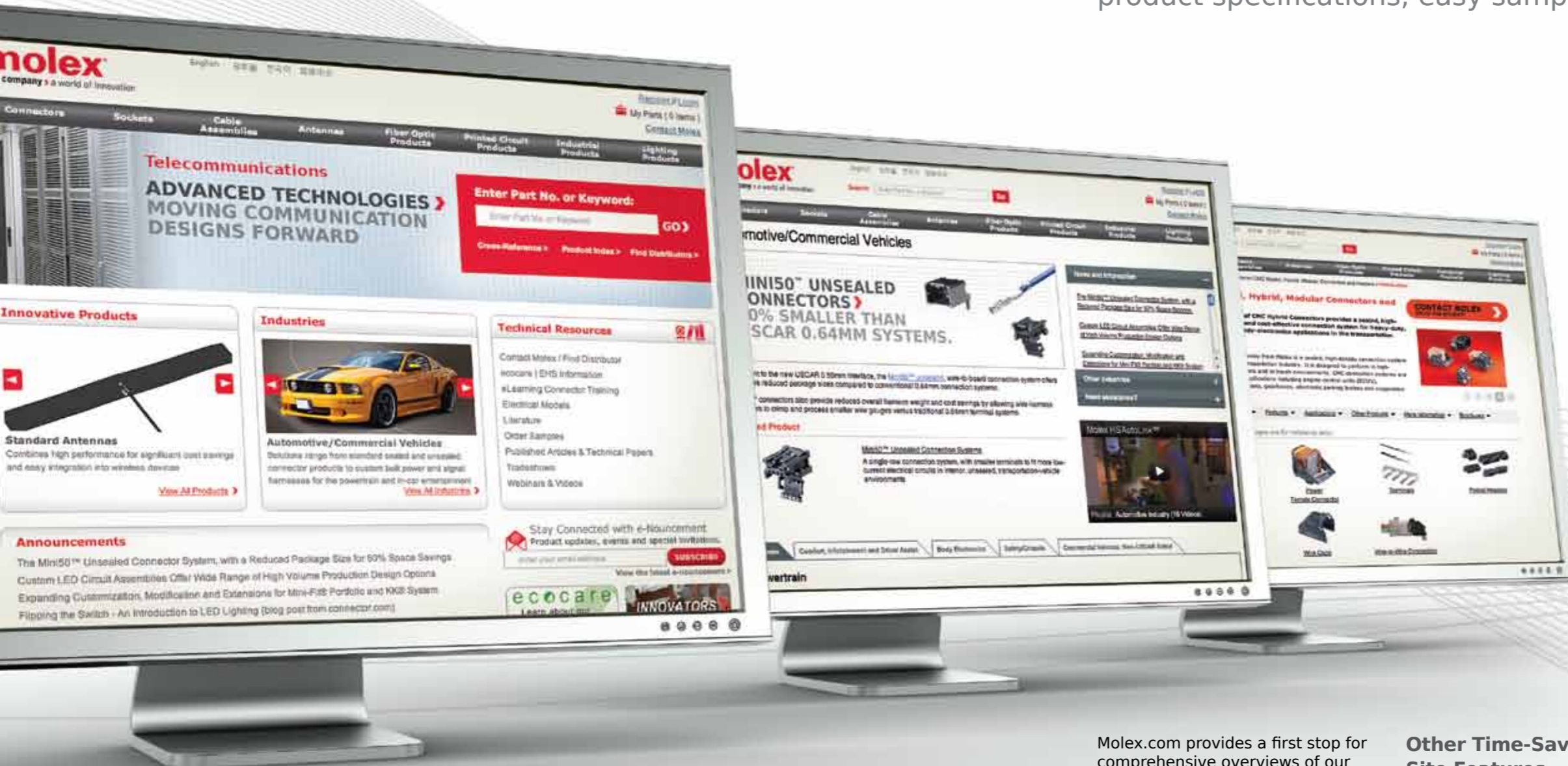
Mini50™ Surface Mount Technology (SMT)

Please contact Molex for further information!



FIND THE LATEST INNOVATIONS AND INFORMATION AT **MOLEX.COM**

For the most in-depth and up-to-date information on all our products, visit Molex.com. It's designed to help you get more done in less time with advanced search capabilities, 3D models, product specifications, easy sample ordering and more.



Molex.com provides a first stop for comprehensive overviews of our industrial products. Some of the tools you'll find are:

Capabilities Videos

Short online videos highlight key industry products, as well as our unique cross-functional design and manufacturing capabilities.

Featured Products

To find out about new products that can take your design to the next level, look no further than this convenient product spotlight.

Other Time-Saving Site Features

Monthly E-ouncements

Electronic newsletter keeps you up-to-date on our latest innovations

Favorite Products Feature

Lets you select and save up to 200 products as you browse

Electrical Testing Models and Data

Available on an array of products in our "Signal Integrity" section

New Videos, Webinars, Articles and More

Available right from our home page

Detailed Application Pages

Instant Access to Product Specs

FINDING PRODUCT INFORMATION AT MOLEX.COM

By Product Feature

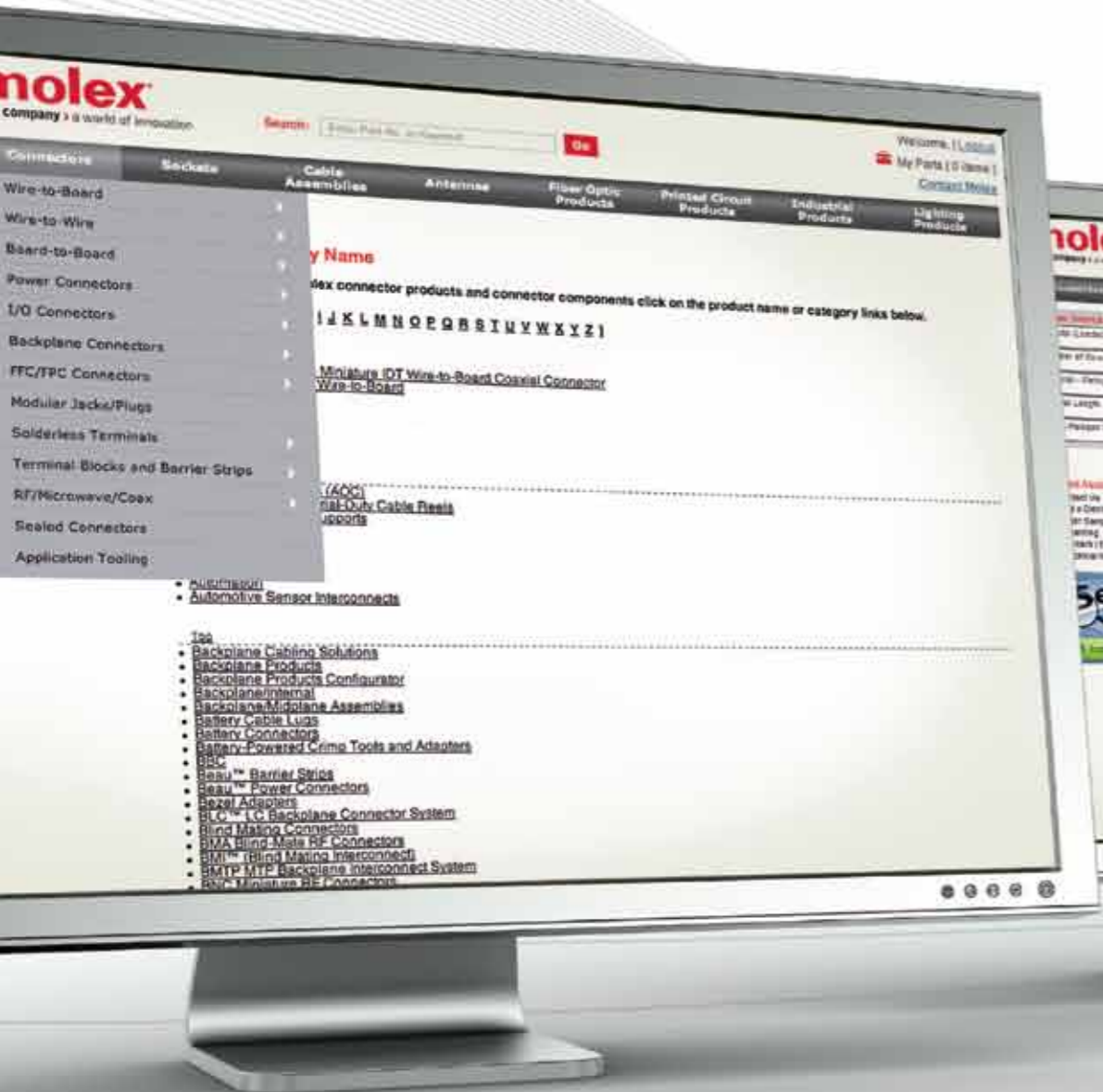
Searching by multiple product features such as pitch, mated height, PCB thickness, wire size and current saves time by focusing only on the connectors that have the features you need.

By Industry

You can search by industry such as Automotive, Networking or Industrial. For more detailed search - once you select the application profile - you can select a specific product category.

By Product Name

This keyword search allows you to link to the commercially used name for a connector family or category, such as MX150™ or CMC.



By Part Number

Enter an entire or partial Molex part number to get the search results. Or search by competitor part number to find the Molex equivalent.

Ganged Multi-Bay

3 4 7 0 X - X 0 X X

Orientation
7 = Vertical
8 = Right Angle

Bay's
2 = 2-Bay
3 = 3-Bay
4 = 4-Bay

see molex.com

Configuration Code
Build-a-Part-Number
(allows for creation of unique engineering numbers if an order number doesn't already exist)

Get customized insights at: molex.com/industry/automotive.html

molex[®]
one company › a world of innovation