



**Modular, stackable Stac64™ connection system offers single- and multi-bay header solutions to maximize design flexibility in unsealed Transportation applications and greatly reduces time-to-market by eliminating custom tooling**

The Stac64™ family of stackable, unsealed headers and connectors has been extended to include a 14-circuit hybrid receptacle connector and mating 14-circuit vertical and right-angle headers to meet growing in-vehicle terminal requirements for devices and modules. Using the Stac64 system, customers can quickly produce ganged, single- and multi-bay header assemblies to meet a large range of signal and power needs without the need for custom tooling.

The 14-circuit hybrid female receptacle uses 10 x CTX 064 plus 4 x 2.80mm terminals and, together with the headers, is available in all 3 USCAR polarization options (black, brown and grey colour codings).

The Stac64 connection system, validated to USCAR-2 for unsealed applications, also meets the most stringent specifications from main automotive OEMs across the globe, including PSA, Ford, Nissan, Toyota and VW. A worldwide DVPR with test details can be requested from Molex. For additional information visit: <http://www.molex.com/link/stac64.html>

**Features and Benefits**

Stackable, modular system of readily available 2.54mm pitch PCB headers	Supports single- and multi-pocket applications for greater design flexibility Reduces cost; no tooling necessary to produce custom multi-bay headers
0.64, 1.50 and 2.80mm terminal system in vertical and right-angle configurations and multiple circuit sizes	Supports both low-level signal requirements and power needs up to 30.0A Provides design flexibility
Validated to USCAR-2 Class II for unsealed connector applications and meets most stringent specifications from global automotive OEMs	Industry-standard footprint validated for automotive applications
Headers and receptacle housings molded in standard USCAR color schemes	Color coding offers visual polarization and avoids mis-mating during system assembly
Housings feature pre-assembled Terminal Position Assurance (TPA) retention features and are shipped as single assembly	Greatly reduces the possibility of seating TPA's during transit and handling Provides applied labor and cost savings
PCB alignment post feature	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

**Stac64™ Connection System Unsealed Headers and Receptacles**

**This Release:**

- 34969** 14-Circuit Hybrid Receptacle Connector
- 34773** 14-Circuit Hybrid Right-Angle Header
- 34772** 14-Circuit Hybrid Vertical Header

**Previously Released: Headers**

- 34690** Vertical
- 34695** Hybrid Vertical
- 34691** Right-Angle
- 34696** Hybrid Right-Angle

**Ganged Headers**

- 34707** Vertical
- 34708** Right-Angle

**Receptacle Connectors**

- 34729** 8-, 12-, 16-, 20-Circuit
- 31372** 10-Circuit Hybrid

**Female Terminals**

- 34803** CTX64
- 33012** MX150



Stac64™ Connection System. 20 circuit right-angle ganged headers and mating receptacle shown





## Applications

### Unsealed applications in:

Automotive vehicles

In-car entertainment

Interior lighting and navigation

Instrument panel clusters

Power seat modules

Door zone modules

Commercial vehicles

Interior electronic modules

Body electronic modules



Interior lighting



In-car entertainment

## Stac64™ Connection System Unsealed Headers and Receptacles



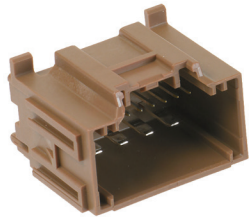
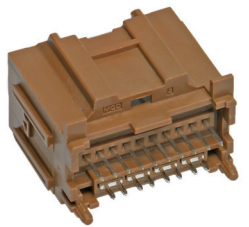
Power seat modules



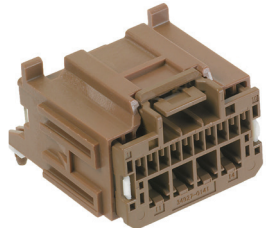
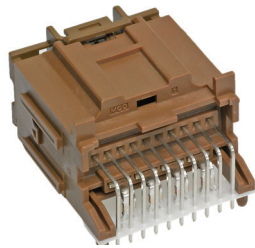
Navigation systems

## Additional Product Features

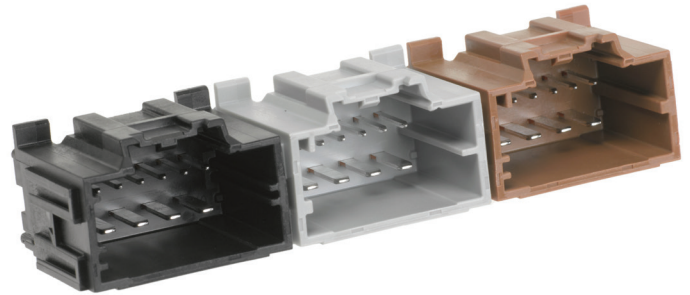
### New 14-Circuit Hybrid Connection System



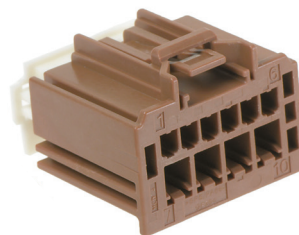
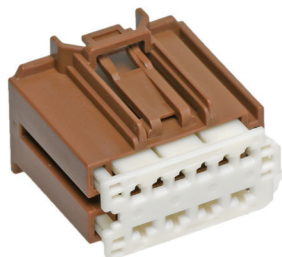
Series 34772, 14-circuit hybrid vertical header



Series 34773, 14-circuit hybrid right-angle header



Available USCAR polarization options: black, grey, brown (10-circuit shown)



Series 34969, 14-circuit hybrid female receptacle



## Specifications

### REFERENCE INFORMATION

#### Packaging:

Female Receptacles – Bulk pack  
Male Vertical/Right-Angle  
Headers – Tray or tube  
Terminals – Reel

#### Mates With:

Series 34729 and 31372  
female connectors mate to  
Series 34690, 34691, 34695,  
34696 male unsealed  
headers  
Series 34969 female  
connectors mate to Series 34773  
(R/A) and 34772 (vertical)  
unsealed headers

#### Use With Terminals:

0.64mm female – Molex CTX64  
series 34803  
1.50mm female – Molex Series  
33012  
2.80mm female - Tyco and Yazaki

Designed in: Millimeters

Isolation Resistance: 20 Megohms min.

### ELECTRICAL

Voltage (max.): 500V

Current (max.):

2.80mm – 30.0A

1.50mm – 20.0A

0.64mm – 6.0A

Current is dependent  
on connector size, ambient  
temperature, blade size  
and related factors.

Contact Resistance:

2.80mm – 5 milliohms max.

1.50mm – 10 milliohms max.

0.64mm – 20 milliohms max.

Dielectric Withstanding Voltage:

500V DC

### PHYSICAL

#### Harness Housings:

10-Circuit: SPS/PA66 GF 30%  
8-, 12-, 14-, 16-, 20-Circuit: PBT  
GF 30%

#### TPA's:

10-Circuit: PBT GF 15%  
8-, 12-, 14-, 16-, 20-Circuit: PBT  
GF 30%

Header Housings: 30% glass filled SPS

#### Contact:

2.80mm blades – C19400 Copper  
(Cu) Alloy

1.50mm blades – C19400 Copper  
(Cu) Alloy

0.64mm pins – C26000 Copper  
(Cu) Alloy

#### Plating:

0.64mm signal pins and 1.50mm  
blades:

Overplating – Tin (Sn)

Underplating – Nickel (Ni)

1.50mm receptacle terminals:

Overplating – Tin (Sn)

Underplating – Nickel (Ni)

2.80mm blades:

Overplating – Tin (Sn)

Underplating – Nickel (Ni)

#### Operating Temperature:

-40 to +105°C

## Stac64™ Connection System Unsealed Headers and Receptacles

### MECHANICAL / ELECTRICAL

Mating Force: < 75N

Unmating Force: < 60N

Connector Retention (Primary latch):  
110N min.

Contact Retention to Housing:

2.80mm – 90N min. w/TPA; 60N  
w/o TPA

1.50mm – 85N min. w/TPA; 45N  
w/o TPA

0.64mm – 75N min. w/TPA; 30N  
w/o TPA

Contact Insertion Force Into

Housing: 30N max.

Connector Audible Feedback: 7dB  
over ambient

Polarization Feature Effectiveness:

20-Circuit: 90N min.

All other circuit sizes: 150N

Durability: 10 milliohms max. – 10 cycles

TPA Insertion Force: 60N max.

TPA Extraction Force: 60N max.

**Product Specifications: Signal - PS-34729-100; Power: PS-31372-100; Power 14-circuit: PS-34772-100**



## Ordering Information

### Headers

**34690** Vertical  
**34695, 34772** Hybrid Vertical  
**34691** Right-Angle  
**34696, 34773**  
 Hybrid Right-Angle

### Headers

*Order No.	Circuit Size	Orientation	Packaging	Header Type	Pin Alignment Plate Material	Solder Process	Mates with Receptacle		
34690-008*	8	Vertical	Tray	Signal	Mylar	Wave Solder	34729-008*		
34690-908*			Tube						
34690-012*	12		Tray						
34690-912*			Tube						
34690-016*	16		Tray				Power	34729-016*	
34690-916*			Tube						
34690-020*	20		Tray	Signal				34729-020*	
34690-920*			Tube						
34695-010*	10		Tray	Power				31372-1*00	
34695-910*			Tube						
34772-014x	14		Tray				34969-014x		
34691-008*	8		Right Angle	Tray			Signal	Mylar	Wave Solder
34691-908*		Tube							
34691-012*	12	Tray		Power	34729-012*				
34691-912*		Tube							
34691-016*	16	Tray			Signal	34729-016*			
34691-916*		Tube							
34691-020*	20	Tray			Power	34729-020*			
34691-920*		Tube							
34696-010*	10	Tray		Power	31372-1*00				
34696-910*		Tube							
34773-014x	14	Tray			34969-014x				

### Ganged Headers

*Order No.	Orientation	Number of Bays	Assembly Features
34707-2***	Vertical	2	Housing and Pin Assembly
34707-3***		3	
34707-4***		4	
34708-2***	Right-Angle	2	Housing, Pins and Mylar Assembly
34708-3***		3	
34708-4***		4	

### Ganged Headers

**34707** Vertical  
**34708** Right-Angle

\*Multiple color and polarization options available; search Molex website on series number to select complete order numbers required. For custom configurations please contact your customer service representative.

### Receptacles

*Order No.	Circuit Size	Connector Type	Terminal loading		
			0.64mm	1.50mm	2.80mm
34729-008*	8	Signal	8	-	-
34729-012*	12		12		
34729-016*	16		16		
34729-020*	20		20		
31372-1*00	10	Power	-	6	4
34969-014x	14		10	-	

\*Multiple color and polarization options available; search Molex website on series number to select complete order numbers required.

### Polarization Options

A= Black

B= Grey

C= Brown

D= Green (20 Circuit only)

### Female Terminals

**34803** CTX64

**33012** MX150

### Female Terminals

Order No.	Terminal Size (mm)	Terminal Type	Source	Gender	Plating	Wire Size (AWG)	Use With: Circuits (Molex series)
34803-0211	0.64	CTX64	Molex	Female	Tin (Sn)	22	8, 12, 16, 20 (34729)
34803-0212						20	
33012-2001	1.5	MX150	Molex			14 or 16	10, 14 (31372, 34969)
33012-2002						18 or 20	
33012-2003						22	
1326030-4	2.8	-	Tyco			10 or 12	
1326030-3						14 or 16	
1326030-2						18 or 20	
1326030-1						22	
7116-4112-02	2.8	-	Yazaki			14	
7116-4111-02				16 or 18			
7116-4110-02				20 or 22			