



Available in single- or ganged multiple-bay configurations, the PAP and Mylar-version Stac64™ connectors support unsealed transportation applications with shorter lead-times and optimum design flexibility without the need for costly custom tooling

Used in automotive comfort, infotainment, body electronics and safety systems, the extended family of Stac64 stackable, unsealed connectors now includes 8,12,16, 20-circuit signal headers as well as 10 and 14-circuit hybrid headers in standard Mylar versions for standard or selective wave soldering. These are available in all 3 USCAR polarization options.

The series 34691 right-angle headers in 8,12,16 and 20 circuit sizes feature a plastic Pin-Alignment-Plate (PAP) which supports high IR-reflow process temperatures of up to 260°C and selective wave soldering. Ganged solutions (series 34997) are available in 2, 3 and 4-bay configurations.

Stac64 connectors can also mate to existing wire-harness connectors designed to USCAR industry footprints.

The Stac64 connector system is validated to USCAR-2 for unsealed applications and meets most stringent specifications from the 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 and modular 2.54mm pitch PCB headers | Eliminate costly custom tooling, engineering and validation time needed for multi-bay connector configurations |
| Selection of 0.64, 1.50 and 2.80mm terminals | Provide design flexibility; allow circuit size additions for 1 to 4-bay configurations supporting low-level signal requirements and high power requirements of up to 30 Amperes |
| Validated to USCAR Class 2 requirements for unsealed connector applications and meets most stringent specifications from global automotive OEMs | Meets industry-standard footprints suitable for automotive applications |
| Connector housings all molded to standard USCAR color codes | Support visual polarization as well as assembly of connector systems |
| Pre-assembled Terminal Position Assurance (TPA) housings shipped as single assembly | Significantly reduces applied labor and costs needed to seat terminals in connectors during transit and handling |
| 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 |
| High-temperature thermoplastic housings | Withstand Infra red (IR) and selective wave lead-free solder processing temperatures according to Molex ES-40000-5013 specifications |
| Right-angle headers with hard plastic Pin-Alignment-Plate (PAP) | Support high IR-reflow temperatures of up to 260°C and selective wave soldering |

Stac64™ Connector System Unsealed Headers and Receptacles

This Release:

- 34691-6XXX** PAP version Right-Angler Header (Tray)
- 34691-9XXX** PAP version Right-Angler Header (Tube)
- 34997** PAP version Ganged Header

Previous Releases: Headers

- 34690** Vertical
- 34691** Right Angle
- 34695** 10-circuit, Hybrid Vertical
- 34696** 10-circuit, Hybrid Right Angle
- 34772** 14-circuit, Hybrid Vertical
- 34773** 14-circuit, Hybrid Right-Angle

Ganged Headers

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

Receptacles

- 34729** 8-, 12-, 16-, 20 Circuits
- 31372** 10-circuit Hybrid
- 34969** 14-circuit Hybrid

Female Terminals

- 34803** CTX64
- 33012** MX150



Stac64™ Connectors showing Ganged Right Angle Headers and a mating Receptacle in 20-circuit configurations

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 following terminals:

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

Electrical

Voltage (max.): 500V DC

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

Isolation Resistance:

20 Megohms min.

Mechanical / Electrical

Mating Force: < 75N

Unmating Force: < 60N

Connector Retention (Primary latch):

110N min.

Contact Retention to Housing:

2.80mm – 90N min. with TPA;

60N without TPA

1.50mm – 85N min. with TPA;

45N without TPA

0.64mm – 75N min. with TPA;

30N without 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.

Physical

Harness Housings:

10-Circuit:

30% Glass-filled SPS/PA66

8-, 12-, 14-, 16-, 20-Circuit:

30% Glass-filled PBT

TPA's:

10-Circuit: 15% Glass-filled PBT

8-, 12-, 14-, 16-, 20-Circuit:

30% Glass-filled PBT

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

Reference Product

Specifications for:

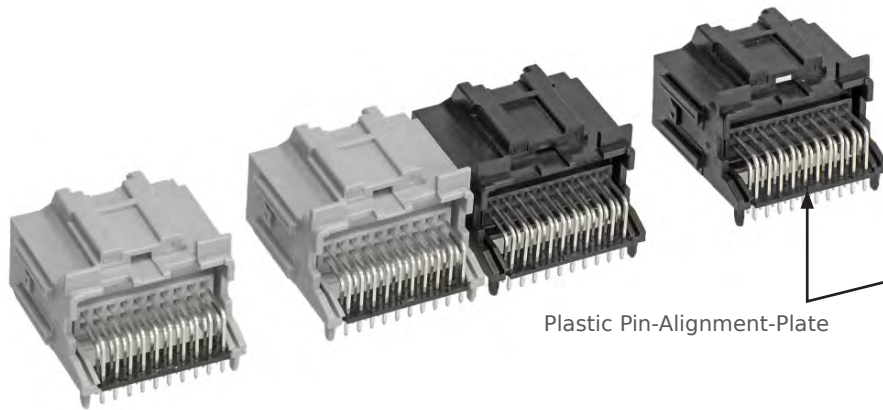
Signal: PS-34729-100

Power: PS-31372-100

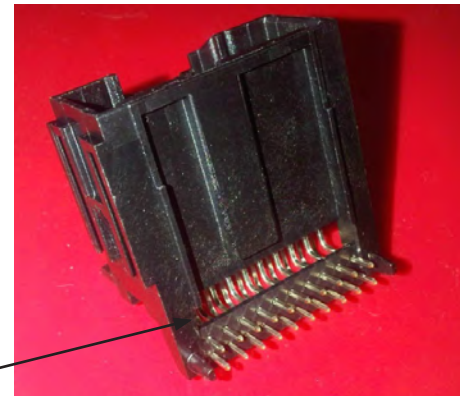
Power (14-circuit): PS-34969-100

Product Features

New 8,12,16,20 circuit right-angle headers with plastic Pin-Alignment-Plate (PAP)



Plastic Pin-Alignment-Plate



Underside view of header showing Pin-Alignment-Plate

These PAP version headers can work as a standalone (single-bay) solution or a ganged array of up a maximum of 4 bays (by stacking all 4 connectors together laterally)

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



Navigation Systems



Power Seat Modules



Infotainment Systems

Ordering Information

Headers

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

* Multiple color and polarization options are available on molex.com; search Molex website with series number for complete list of order numbers required

Ordering Information

PAP Headers

| Order No. | Circuit Size | Polarization | Orientation | Packaging | Pin-Alignment Feature | Header Type | Soldering Process | Mates with Receptacle | | | |
|----------------------------|--------------|--------------|-------------|-----------|-----------------------|-------------|--|----------------------------|--|--|----------------------------|
| 34691-6080 | 8 | A – Black | Right Angle | Tray | Plastic PAP | Signal | IR-reflow and selective wave soldering | 34729-008* | | | |
| 34691-6081 | | B – Grey | | | | | | | | | |
| 34691-6082 | | C – Brown | | | | | | | | | |
| 34691-6120 | 12 | A – Black | | | | | | | | | |
| 34691-6121 | | B – Grey | | | | | | | | | |
| 34691-6122 | | C – Brown | | | | | | | | | |
| 34691-6160 | 16 | A – Black | | | | | | | | | |
| 34691-6161 | | B – Grey | | | | | | | | | |
| 34691-6162 | | C – Brown | | | | | | | | | |
| 34691-6200 | 20 | A – Black | | | | | | | | | |
| 34691-6201 | | B – Grey | | | | | | | | | |
| 34691-6202 | | C – Brown | | | | | | | | | |
| 34691-6200 | | D – Green | | | | | | | | | |
| 34691-9680 | 8 | A – Black | | Tube | | | | | | | 34729-016* |
| 34691-9681 | | B – Grey | | | | | | | | | |
| 34691-9682 | | C – Brown | | | | | | | | | |
| 34691-9623 | 12 | A – Black | | | | | | | | | |
| 34691-9624 | | B – Grey | | | | | | | | | |
| 34691-9625 | | C – Brown | | | | | | | | | |
| 34691-9660 | 16 | A – Black | | | | | | | | | |
| 34691-9661 | | B – Grey | | | | | | | | | |
| 34691-9662 | | C – Brown | | | | | | | | | |
| 34691-9246 | 20 | A – Black | | | | | | | | | |
| 34691-9256 | | B – Grey | | | | | | | | | |
| 34691-9266 | | C – Brown | | | | | | | | | |
| 34691-9276 | | D – Green | | | | | | | | | |

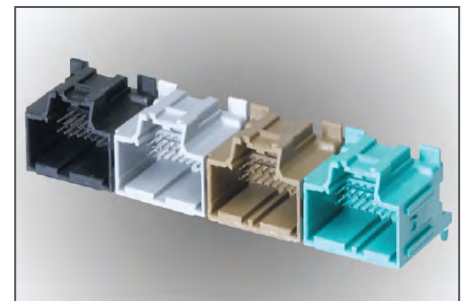
Note: For Single-Bay PAP Headers – sales is requested to focus on promoting to customers using Reflow Soldering Processes and Selective Wave Soldering

Important: For stacked combinations, a mixture of headers using Mylar for pin-alignment and plastic PAP versions is NOT allowed. Stacked header assemblies must use either ALL Mylar or ALL plastic PAP versions,

For Hybrid headers, no PAP versions are available at the moment. There is an option though: a 10-circuit Hybrid Right Angle header without Mylar can be stacked with a PAP version header.

Ganged Headers (Mylar Version)

| *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 | |



20-circuit, 4-bay Stac64™ ganged headers in black, grey, brown and green polarization options

Ganged Headers (PAP Version)

| *Order No. | Orientation | Number of Bays | Assembly Features |
|----------------------------|-------------|----------------|----------------------------------|
| 34997-2*** | Right-Angle | 2 | Housing, Pins and Mylar Assembly |
| 34997-3*** | | 3 | |
| 34997-4*** | | 4 | |



20-circuit, 2-bay Stac64™ ganged headers in black and grey polarization options

* Multiple color and polarization options are available on molex.com; search Molex website with series number for complete list of order numbers required

For custom configurations, please contact your customer service representative

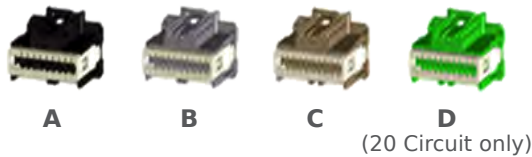
Ordering Information

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 |
| 34969-014* | 14 | | 10 | - | |

* Multiple color and polarization options available; search Molex website with series number to select complete list of order numbers required

Polarization Options



Legend for Polarization Options:

A= Black
 B= Grey
 C= Brown
 D = Green (20 Circuit only)

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 | 1.50 | MX150 | Molex | | | 14 or 16 | 10, 14 (31372, 34969) |
| 33012-2002 | | | | | | 18 or 20 | |
| 33012-2003 | | | | | | 22 | |
| 1326030-4 | 2.80 | - | Tyco | | | 10 or 12 | |
| 1326030-3 | | | | | | 14 or 16 | |
| 1326030-2 | | | | | | 18 or 20 | |
| 1326030-1 | | | | | | 22 | |
| 7116-4112-02 | | | Yazaki | | | 14 | |
| 7116-4111-02 | | | | 16 or 18 | | | |
| 7116-4110-02 | | | | 20 or 22 | | | |

For further information on the complete Stac64™ Connector System, please refer to the following Molex literature: Order No. 987654-9041 and 987650-4561

www.molex.com/link/stac64.html