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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

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Stac64™ Connector System Unsealed Headers and Receptacles

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.

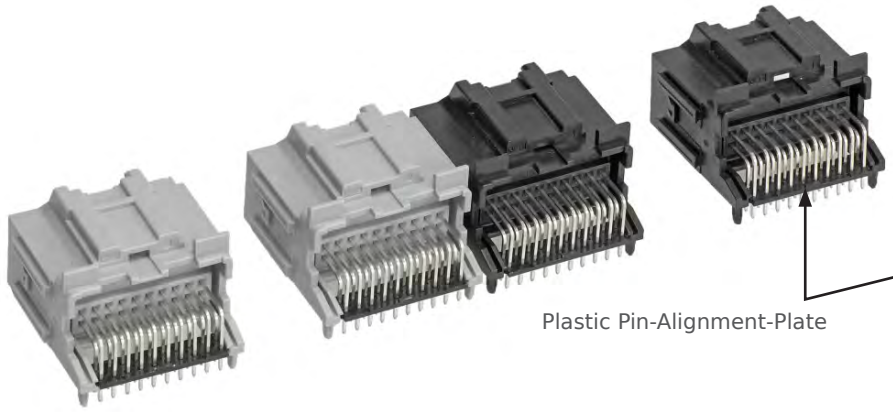
Physical
Harness Housings:
  10-Circuit:
    30% Glass-filled SPS/PA66
  8-, 12-, 14-, 16-, 20-Circuit:
    30% Glass-filled PBT
TPA's:
  10-Circuit: 15% Glass-filled PBT
  8-, 12-, 14-, 16-, 20-Circuit:
    30% Glass-filled PBT
Header Housings:
  30% Glass-filled SPS
Contact:
  2.80mm blades – C19400 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

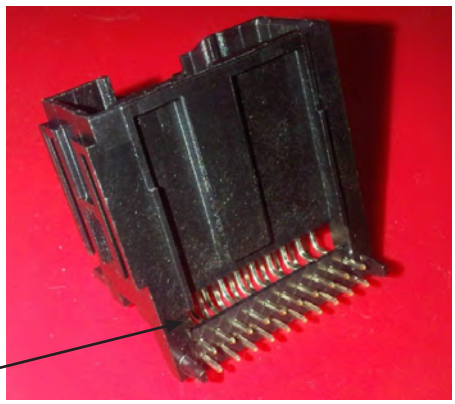
Stac64™ Connector System Unsealed Headers and Receptacles

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

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Stac64™ Connector System Unsealed Headers and Receptacles

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				34969-014*
34691-008*	8	Right Angle	No	Tray	Signal			34729-008*
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

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Stac64™ Connector System Unsealed Headers and Receptacles

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						34729-012*
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						34729-020*
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 Hybird 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)

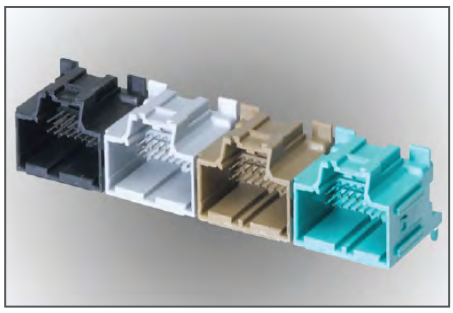
*Order No.	Orientation	Number of Bays	Assembly Features
34707-2***	Vertical	2	Housing and Pin Assembly
34707-3***		3	
34707-4***		4	
34708-2***	Right-Angle	2	Housing, Pins and Mylar Assembly
34708-3***		3	
34708-4***		4	

Ganged Headers (PAP Version)

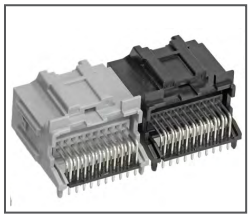
*Order No.	Orientation	Number of Bays	Assembly Features
34997-2***	Right-Angle	2	Housing, Pins and Mylar Assembly
34997-3***		3	
34997-4***		4	

* 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



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



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

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Stac64™ Connector System Unsealed Headers and Receptacles

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



A B C D
(20 Circuit only)

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				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

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