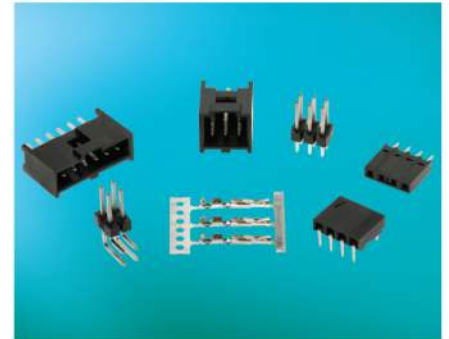


The third generation C-Grid III™ 2.54mm (.100") pitch header and receptacle interconnection system offers complete design flexibility and modular components that provide the widest range of electronic packaging alternatives. C-Grid III™ is a highly versatile 2.54mm interconnection system offering unique design features.

C-Grid III™ has been developed to meet the latest industry requirements. Two different wire termination techniques, crimp and insulation displacement, are combined in a complete interconnection system which is based on north/south contact orientation.

## 2.54mm (.100") Pitch C-Grid III™ Modular Interconnect System



Molex's C-Grid III™ provides complete design flexibility to meet your application needs

### FEATURES AND BENEFITS

- 2.54mm (.100") pitch, mates with 0.64mm (0.025") square pins
- Wire-to-Board, Board-to-Board Modular Interconnection System
- Single and Dual Row options available
- North/South orientation allows ease of mating
- Halogen-Free and Glow Wire Compliant versions available
- Intermateable with Molex's QF-50 product family

#### Header

- Easy breakaway feature to produce smaller sizes for design flexibility and quick turnaround
- Shrouded header comes with polarization and friction lock feature
- Contact and plating orientation according to DIN 41651
- Gold flash and two-sided gold plating on contact available for a more cost effective solution
- High pin retention force
- High mechanical stability after soldering

#### Receptacle

- Stackable end-to-end
- Contact and plating orientation according to DIN 41651
- Meets HE-13/14 specification

#### Crimp Housing

- Polarization and friction lock options available

### SPECIFICATIONS

#### Electrical

Voltage: 350V max.  
 Current: 3A max.  
 Contact resistance: 20 milliohms max.  
 Insulation Resistance:  
 Headers and shrouded headers 5,000 Megohms min.  
 PCB connectors, crimp housings and modules 1,000 Megohms min.

#### Mechanical

Contact Retention to Housing:  
 Header 20N (2.0kgf) min.  
 Receptacle and Crimp Terminal 15N (1.5kgf) min.  
 Crimp Housing:  
 Series 90147, 90148, 90151 15N (1.5kgf) min.  
 Series 90152 8.8N (0.88kgf) min.

#### Physical

Refer to Product Information table on the reverse side

#### Reference Information

Product Specification: PS-99020-0001  
 UL File No: E29179 (excluding series 90121, 90122, 90136, 91814)  
 CSA File No: LR19980 (for series 90059, 90147, 90148, 90160)

### APPLICATIONS

#### Computer/Peripherals

- Desktop PCs
- Office Equipment
- Servers
- Monitors

#### Medical

- Laboratory Devices
- Medical Equipment

#### Consumer

- White and Brown Goods
- Home Entertainment Systems
- Vending Machines

#### Telecom/Datacom

- Exchange Stations
- Base Stations
- Control Rooms

#### Industrial

- Industrial Equipment
- Measurement Equipment

#### Transportation

- Safety System
- Engine Trains
- Infotainment
- Body Electronics

**PRODUCT INFORMATION**

Headers			
90120	90121	90131	90122
Single Row		Dual Row	
Vertical	Right Angle	Vertical	Right Angle
01 - 20		02 - 40	
Housing: 15% Glass Filled Polyester, Pins: Brass			

Series  
Options  
Type  
Circuits  
Material

Board-to-Board System										
Receptacle	Series	Options	Type	Circuits	Material	Overall Height	Overall Mated Height			
	90147	Single Row	Vertical	02 - 32	Housing: 15% Glass Filled Polyester Pins: Phosphor Bronze	8.50mm (.335")	11.00mm (.433")	11.00mm (.433")	-	-
	90148	Single Row	Right Angle	02 - 32		3.30mm (.130")	3.30mm (.130")	3.30mm (.130")	-	-
	90151	Dual Row	Vertical	04 - 50		8.50mm (.335")	-	-	11.00mm (.433")	11.00mm (.433")
	90152	Dual Row	Right Angle	04 - 50		5.84mm (.230")	-	-	5.84mm (.230")	5.84mm (.230")

Wire-to-Board System										
Terminal	Series	To Use With	Type	Wire Gauge	Material	Reeling	Packaging	Contact Retention to Housing		Normal Force
	90119	Crimp Housing	Reel/Loose	22 - 28 AWG	Phosphor Bronze	Left Hand Feed	Reel/Bag	15N (1.5kgf)		1N (0.1kgf)
Housing	Series	Options	Feature	Circuits	Material	Overall Height	Overall Mated Height			
	90123	Single Row	With or Without Polarizing Button	02 - 32	Polyphenylene Oxide (PPO)	2.54mm (.100")	2.54mm (.100")	2.54mm (.100")	-	-
	90143	Dual Row		04 - 50		5.08mm (.200")	-	-	5.08mm (.200")	5.08mm (.200")

Shrouded Headers										
90136		90130		91814 (High Temp Version of 90130)						
Single Row		Dual Row		Dual Row						
Vertical	Right Angle	Vertical	Right Angle	Vertical	Right Angle	Vertical	Right Angle	Vertical	Right Angle	
01 - 20		02 - 40		02 - 40						
Housing: 15% Glass Filled Polyester, Pins: Brass										

Series  
Options  
Type  
Circuits  
Material

Wire-to-Board System										
Housing	Series	Options	Circuits	Material	Overall Height	Overall Mated Height				
	90156	Single Row	02 - 32	Polyphenylene Oxide (PPO)	3.81/5.35mm (.150/.211")	19.00mm (0.748")	5.35mm (.211")	-	-	-
	90142	Dual Row	06 - 50		6.20/7.72mm (.244/.304")	-	-	19.00mm (0.748")	9.75mm (.384")	19.00mm (0.748")

Others											
Micro Shunt	Series	Height	Material	Voltage	Current Rating	Contact Resistance	Insulation Resistance	Mating Force	Unmating Force	Durability	Packaging
	90059	4.95mm (.195") max.	Housing: 30% Glass Filled Polyester Pins: Phosphor Bronze	350V	3.0A (Gold) 1.5A (Tin)	12 miliohms max. (Gold) 15 miliohms max. (Tin)	2000 Megohms max.	7N max.	0.3N (Gold) 0.5N (Tin) min.	50 Cycle (Gold) 20 Cycle (Tin)	Strip/Bag
Housing	Series	Options	Circuits	Material	Feature	Overall Height	Design Config.	Use With	Use With	Packaging	
	90160	Dual Row	06 - 50	Polyphenylene Oxide (PPO)	Polarized Friction Side Lock Locking Ear	6.20/7.72mm (.244/.304")	Wire-to-Wire	90119 crimp terminal	QF50 90663 shrouded header with 90635 receptacle	Bag	

