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DIN 41612 SIGNAL HEADERS & RECEPTACLES

2.54 mm Pitch

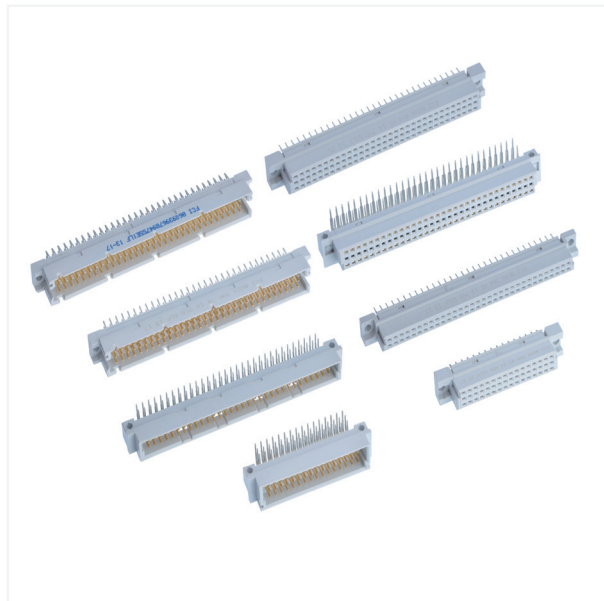
OVERVIEW

FCI offers a broad and a complete range of interconnection systems conforming to DIN 41612 and IEC 603-2 specifications. DIN 41612 connector systems are the most popular backplane interconnect systems due to the widespread standard adoption, easy availability, cost-effectiveness and durability.

The product design for Board-to-Board and I/O solutions involve two popular mating combination; Standard Mount and Reverse Mount.

These connectors are available in up to three rows and 96 positions with Solder, Press-fit and Pin-in Paste terminations. FCI offers three standard performance class options as follows: DIN class I (500 operations); DIN class II (400 operations); DIN class III (50 operations).

Primary market segments include Industrial, Telecom and Data.



FEATURES

- 2.54mm pitch
- Modular system
- Selective loading pattern for contacts
- FMLB/LMEB contacts
- Wide range of accessories (board-locks, latches, shrouds, hoods, keys)
- Rear plug up variants in press-fit applications

BENEFITS

- Adequate spacing for routing PCB traces
- Standardized and cost-effective solutions
- Improve creepage distance, allow custom loading
- Critical grounding option
- Enhances the connector suitability and flexibility
- Extended mating applications via shrouds on the rear side of the PCB



TECHNICAL INFORMATION

MATERIALS

- Insulator: Polyester Thermoplastic
- Housings can withstand exposure to lead free wave soldering temperature of 260°C to 265°C when used along with high temperature adhesive or protective metallic device for right angle connectors.
- Contact: Copper Alloy (Male & female contact)
- Plating: Lead-free version
- Male & Female contacts (DIN 41612 compliant)
 - Active contact areas selectively plated
 - Gold over Nickel or GXT™ over Nickel on mating surface
 - Tin over Nickel on solder termination

ELECTRICAL PERFORMANCE

- Current Rating at 20°C: 1.5A
- Maximum Current: 2A
- Contact Resistance: $\leq 20\text{m}\Omega$
- Insulation Resistance: $\geq 10^6\text{M}\Omega$
- Test Voltage (rms): 1000V
- Creepage and Clearance Distance: $\geq 1.2\text{mm}$
- Wiping/Plug-in Direction: $\geq 1.8\text{mm}$

MECHANICAL PERFORMANCE

- Mating Insertion Force per Contact: $\leq 0.94\text{N}$
- Mating Extraction Force per Contact: $\geq 0.15\text{N}$
- Contact Retention in Insulator: $\geq 20\text{N}$
- Vibration: $\leq 1\mu\text{s}$
 $\leq 40\text{m}\Omega$
- Shock: $\leq 1\mu\text{s}$
 $\leq 40\text{m}\Omega$

SPECIFICATIONS

- DIN 41612
- IEC 603-2

ENVIRONMENTAL

- Temperature Range: -55°C to $+125^\circ\text{C}$
- Damp Heat
 - Steady state 56 days: Class 1
 - Steady state 21 days: Class 2
 - Not applicable: Class 3

APPROVALS AND CERTIFICATIONS

- UL/CSA in progress

PACKAGING

- Tray
- Tube
- Carton

TARGET MARKET/ APPLICATIONS

- Industrial
 - Medical
 - Lighting
 - Process Control
 - Transportation
 - Instrumentation
 - Vehicle electronics
 - Energy transmission/distribution control
- Telecom
 - Switching/Routing
 - Enterprise
 - Transmission
 - Access – wired/wireless
- Data
 - Servers
 - Personal Computing
 - Peripheral devices
- Consumer
 - Home entertainment
 - White goods
 - Phones

PART NUMBERS

Style	Connector	Configuration	Rows Loaded	Termination	Part number	
C	Right Angle Header	2 row / 64 pos.	a & c	Solder-to-board	860946471137*5ELF	
				Press-fit	860946471947*5E1LF	
		3 row / 96 pos.	a, b, c	Solder-to-board	860939671137*5ELF	
				Press-fit	860939671947*5E1LF	
	Straight Receptacle	2 row / 64 pos.	a & c	Solder-to-board	860946481147*5V1LF	
				Press-fit	860946481947*5E3LF	
		3 row / 96 pos.	a, b, c	Solder-to-board	860939681147*5V1LF	
				Press-fit	860939681947*5E3LF	
C/2	Right Angle Header	2 row / 32 pos.	a & c	Solder-to-board	860943273137*5ELF	
		3 row / 48 pos.	a, b, c		860934873137*5ELF	
	Straight Receptacle	2 row / 32 pos.	a & c	Solder-to-board	860943283147*5V1LF	
		3 row / 48 pos.	a, b, c		860934883147*5V1LF	
					Press-fit	860934883947*5E3LF
					Press-fit	860934883947*5E3LF
B	Right Angle Header	1 row / 32 pos.	a only	Solder-to-board	860913251137*5ELF	
		2 row / 64 pos.	a & b		860926451137*5ELF	
	Straight Receptacle	1 row / 32 pos.	a only		860913261147*5V1LF	
		2 row / 64 pos.	a & b		860926461147*5V1LF	
B/2	Right Angle Header	2 row / 32 pos.	a & b	Solder-to-board	860923253137*5ELF	
	Straight Receptacle				860923263147*5E1LF	
R	Straight Header	2 row / 64 pos.	a & c	Solder-to-board	860946478147*5ELF	
				Press-fit	860946478947*5E1LF	
		3 row / 96 pos.	a, b, c	Solder-to-board	860939678147*5ELF	
				Press-fit	860939678947*5E1LF	
	Right Angle Receptacle	2 row / 64 pos.	a & c	Solder-to-board	860946488137*5V1LF	
				Press-fit	860946488947*5E3LF	
		3 row / 96 pos.	a, b, c	Solder-to-board	860939688137*5V1LF	
				Press-fit	860939688947*5E3LF	
R/2	Straight Header	2 row / 32 pos.	a & c	Solder-to-board	860943276147*5ELF	
		3 row / 48 pos.	a, b, c	Solder-to-board	860934876147*5ELF	
				Press-fit	860934876947*5E1LF	
	Right Angle Receptacle	2 row / 32 pos.	a & c	Solder-to-board	860943286137*5E1LF	
		3 row / 48 pos.	a, b, c		860934886137*5E1LF	
Q	Straight Header	2 row / 64 pos.	a & b	Solder-to-board	860926458147*5ELF	

Notes

Asterisk (*) in part number denotes Performance class: PN Code 6,5,4 for Class 1, 2 & 3 respectively. Custom loading and other options available on request.

Disclaimer

Please note that the above information is subject to change without notice.