



**THE DATASHEET OF  
86093968813755V1LF**



# DIN 41612 SIGNAL HEADERS & RECEPTACLES

2.54 mm Pitch

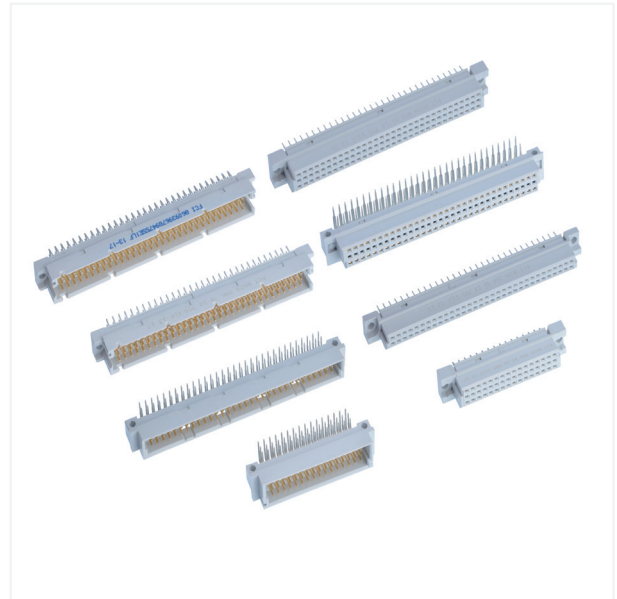
## OVERVIEW

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:  $-55^\circ\text{C}$  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.
		Press-fit	860934883947*5E3LF		
		B	Right Angle Header	1 row / 32 pos.	a only
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
					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.



BPLDINSIGNAL1215EA4

**Disclaimer**

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

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