



RotaConnect® Board-to-Board Product Presentation

Basics Portfolio

Amphenol
FCi

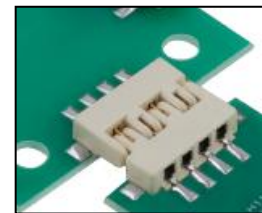
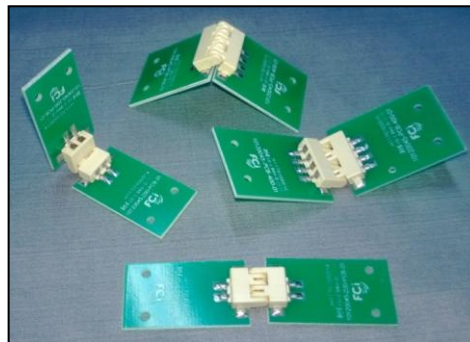
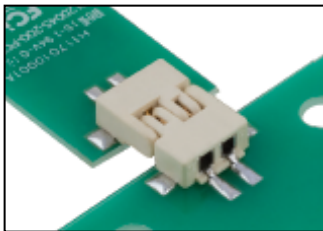
Agenda

- Value Proposition
- Product Overview
- Product Specifications
- Features & Benefits
- Part Numbers
- Applications
- Marcomm Collaterals

Rotaconnect[®] Board-To-Board

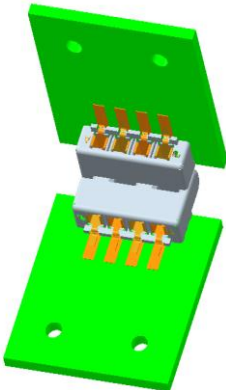
Value Proposition

- The unique RotaConnect[®] Board-To-Board solution is a rotatable Board-to- Board SMT connector that can be used to support perpendicular, coplanar and angled connections, in multiple mating and un- mating directions for all needs.
- Thanks to the hermaphroditic “mates to itself” design the RotaConnect[®] BtB solution enables mating at any angle between +90° and -60°, the connectors can be placed anywhere on the PCB and a single part number which will comprise both male and female contacts.
- The RotaConnect[®] BtB solution includes 2 and 4 positions with hold-down and locating peg options with a latching feature (connector with locating pegs only have latching feature) to accept the latch from the Wire to Board RotaConnect[®].
- The high temperature grade housing material is reflow solder compatible.

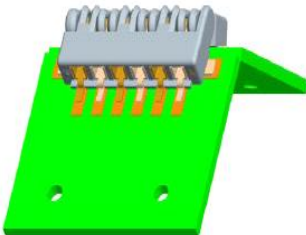
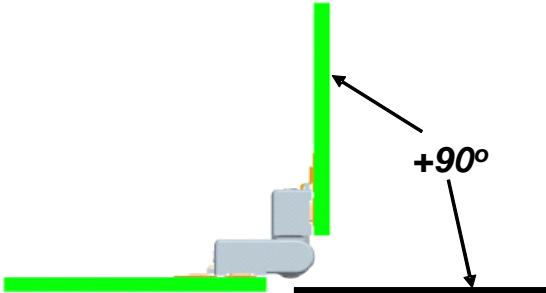


Rotaconnect[®] Board-To-Board

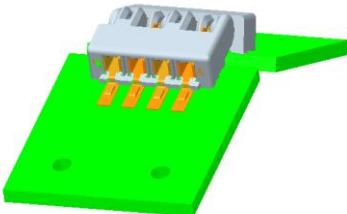
Product Overview



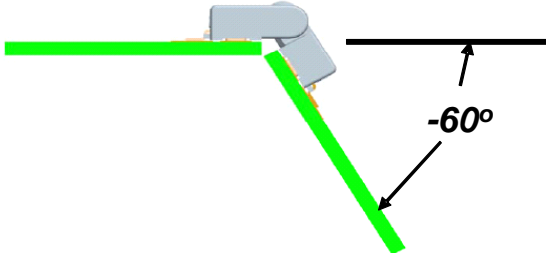
Rotate angle +90°



Rotate angle -60°
(PCB T=1.57mm)



Rotate angle -60°
(PCB T=1.57mm)



Rotaconnect® Board-To-Board

Product Specifications

Product Facts

- Hermaphroditic: mates to itself (1 Part number)
- Contact System: dual beam spring contact
- Positions: 2 and 4 pos currently available
- Pitch: 3.00mm
- Mating angle: all in between +90° and -60°
- RoHS compliance

Performance Characteristics

- Durability: max 20 mating cycles
- Current Rating: up to 5A
- Operating Temperature: -40°C up to +125°C

Specifications

- Product Spec. : GS-12-1079

Materials

- Plating: GXT
- Housing: High Temperature Thermoplastic (UL94V0)
- color: natural

Rotaconnect® Board-To-Board

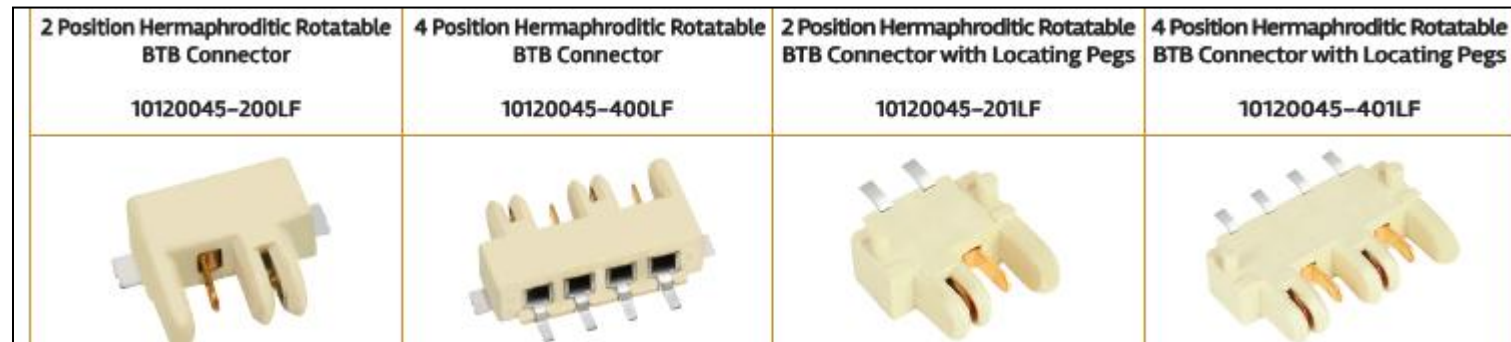
Feature & Benefits

Features	Benefits
Hermaphroditic “mates to itself” design and Mates under any angle +90° and -60°	Flexible Design for all needs
Reliable dual beam contact	Connection reliability
Self-guided features	Prevent mis-mating and assure correct counterpart positioning
Hold own option	Better retention on to the PCB
Locating pegs	Easy positioning even in manual assembly condition
Passive latch	Better for housing retention
RoHS compliance	Meet environmental, health and safety requirements

Rotaconnect® Board-To-Board

Part Numbers

Connector PN	Description	No of Contacts	Contact Type
10120045-200LF	2 Pos Hermaphroditic Rotatable Board to Board Connector	2	1 Male, 1 Female
10120045-201LF	2 Pos Hermaphroditic Rotatable Board to Board Connector with Locating Pegs	2	1 Male, 1 Female
10120045-400LF	4Pos Hermaphroditic Rotatable Board to Board Connector	4	2 Male, 2 Female
10120045-401LF	4 Pos Hermaphroditic Rotatable Board to Board Connector with Locating Pegs	4	2 Male, 2 Female



Rotaconnect® Board-To-Board

Applications

- Lighting (Luminaires, signages, displays, etc)
- Control Boards
- Sensors
- Rigid LED Strips
- Automotive Electronics




Rotaconnect® Board-To-Board

Marcomm Collaterals

- Available on FCI
 - Technical Data Sheet

- Product Specifications

BOARD/WIRE-TO-BOARD CONNECTORS



ROTACONNECT® ROTATABLE BOARD-TO-BOARD CONNECTOR

OVERVIEW

FCI extends the RotaConnect® Board-to-Board (B7B) range with a rugged version. The locating pegs aid simple placement. This eliminates the hold-down and hence will help customer save the space between connectors on the PCB.


The RotaConnect® B7B range is a unique rotatable Board-to-Board (B7B) connector that can be used to support perpendicular, coplanar and angled connections, in multiple mating and unmating directions.

The hermaphroditic "mates to itself" design enables mating at any angle between +90° and -90°, enabling the connectors to be placed anywhere on the PCB. This design allows the use of a single part number which will comprise both male and female contacts.

The high temperature grade housing material is reflow solder compatible. Tape and reel packaging permits vacuum pick and place application.

With this extension, FCI's RotaConnect® B7B range offers 2 and 4 positions with hold-down and locating peg options.

NEW




FEATURES

- Hermaphroditic "mates to itself" design
- Mates under any angle +90° and -90°
- Header contact contains a coiled hole, the center of the hole is the intended rotation point
- Reliable dual beam contact
- Receptacle contact will guide itself into the center of the hole
- Pins are protected by housing
- Hold-down option
- Locating peg option

BENEFITS

- Eliminates the need for both a header and receptacle for Board-to-Board applications
- Angled connection is not an issue, as connectors can be placed anywhere on the PCB
- Connection Reliability
- Self-guided features prevent mis-mating and assure correct counterpart positioning
- Prevents pin damage during connector mating
- Better retention onto the PCB
- Simplify positioning even in manual assembly conditions

NUMBER GS-12-1079	TYPE PRODUCT SPECIFICATION		
TITLE RotaConnect™		PAGE 1 of 9	REVISION B
		AUTHORED BY Mathew Jacob	DATE 08 Nov 2013
CLASSIFICATION UNRESTRICTED			

1.0 Objective
This specification defines the performance, test, quality and reliability requirements of the Rotatable Board to Board connector (RotaConnect™).

2.0 Scope
This specification is applicable to the termination characteristics of the RotaConnect™ family of products which provides perpendicular, co-planar, or angled interconnect solutions. The hermaphroditic board-to-board connector, which mates to itself, can also be placed anywhere on the PCB, further expanding design options.
Featuring a 3mm pitch, these high powered board to board connectors are available in positions ranging from 2 up to 14 (in increments of two).
Applications include control boards, sensors, actuators, rigid LED strips and automotive electronics.

3.0 Ratings

- 3.1 Operating Voltage Rating = 125V AC
- 3.2 Operating Current Rating = 5 Amperes/contact (6 -7 Amperes Maximum)
- 3.3 Operating Temperature Range = -40°C to 125 °C

4.0 Applicable Documents

- 4.1 FCI Engineering drawings: 10120045-200C, 10120045-400C
- 4.2 EIA 354: Electrical Connector/Socket Test Procedures Including Environmental Classifications.
- 4.3 GS-20-0379: Application Specification.
- 4.4 EL-2013-06-023A: Qualification Test Report

5.0 Requirements

5.1 Qualification
Connectors furnished under this specification shall be capable of meeting the qualification test requirements specified herein.

5.2 Materials
Plug/Receptacle Terminal & Bracket: Copper alloy
Housing: High temperature thermoplastic

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Form 9-0781 • Revision C 090409

Rotaconnect® Board-To-Board

Marcomm Collaterals

- Available on FCI
 - Application Specifications

FORM# GS-20-0379	TYPE Application Specification	FCi	
Title RotaConnect™		PAGE 1 of 4	REVISION A
		AUTHORIZED BY Mathew Jacob	DATE 24 July 2013
CLASSIFICATION: UNRESTRICTED			

1.0 OBJECTIVE
This specification provides information and requirements regarding customer application of Rotatable Board to Board connector (RotaConnect™). This specification are intended to provide general guidance for application process development. It is recognized that no single application process will work under all customer scenarios and that customers will develop their own application processes to meet their needs. However, if these application processes differ greatly from the one recommended, FCI cannot guarantee results.

2.0 SCOPE
This specification provides information and requirements regarding customer application of RotaConnect™ for use on modular printed circuit board-to-board Surface Mount Technology applications.

3.0 GENERAL
This document is meant to be an application guide. If there is a conflict between the product drawings and specifications, the drawings take precedence.
A Rotatable board to board SMT connector can be used to support perpendicular, coplanar and angled connections, in multiple mating/un-mating directions.
The hermaphroditic 'mates to itself' design enables mating at any angle between +90° and -50° which enables connector to be placed anywhere on the PCB.
Featuring a 3mm pitch, these board to board connectors are available in positions ranging from 2 up to 14 (in increments of two).
This design allows the uses of a single part number which will compromise both male and female contacts. The high temperature grade housing material is reflow soldering compatible. The tape and reel packaging permits automatic pick and place applications.

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Form E-3727 Rev. A. 130403

- Part Numbers & Drawings

Narrow By [Expand](#) Start > RotaConnect™ >

- Mating half-
- Number of Positions-

[Search Again](#)

Results 1 - 4 of 4.

Part Number	Image	Status	Product Name
10120045-200LF		ACTIVE	2 position hermaphroditic rotatable board-to-board connector
10120045-201LF		ACTIVE	2 position hermaphroditic rotatable board-to-board connector with peg
10120045-400LF		ACTIVE	4 position hermaphroditic rotatable board-to-board connector
10120045-401LF		ACTIVE	4 position hermaphroditic rotatable board-to-board connector with peg

RoHS Compliant

LF Suffix: All part numbers ending in LF are EU RoHS Compliant

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THANK YOU

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