

MRJ Rugged RJ45 Connector

Product Specification S6043C Rev 1.2

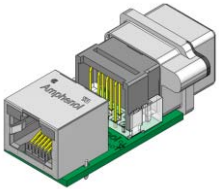
Amphenol

Now you're connected!

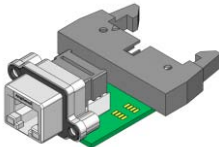
About Amphenol Commercial Products

Amphenol's commercial connector products are used in a variety of end user applications including networking, telecom, server & computer, storage & HDD, consumer electronics and entertainment, professional audio & Industrial & Military/Aerospace.

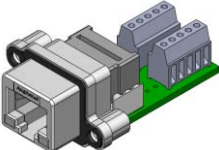
With matching RJ45



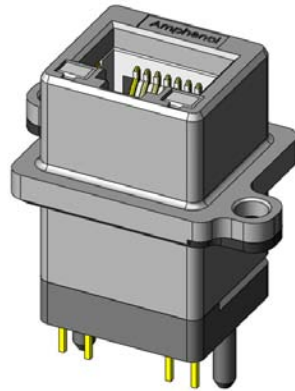
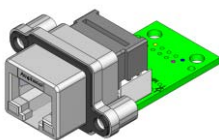
With Cable Header



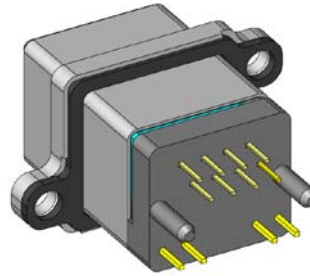
With Terminal Block



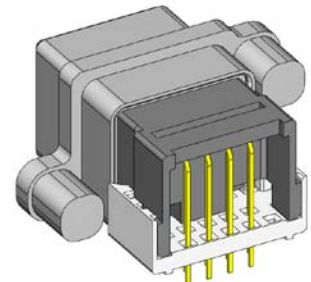
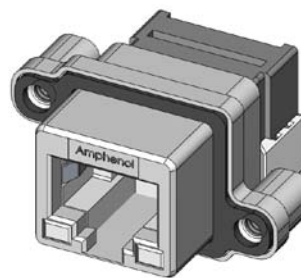
With PCB for wiring



MRJ-5480-01 SHOWN
VERTICAL, PCB TAIL,
8 POSITION RJ45



MRJ-5380-01 SHOWN
RIGHT ANGLE, PCB
TAIL, 8 POSITION RJ45



Overview

This Product Specification defines the general use and performance parameters for Amphenol's MRJ series of connector.

Availability: Right angle PCB tail termination with 8 or 10 positions, LED options, EMI ferrite filtering and PCB options (with matching RJ connector, cable header, terminal block or for hand wiring). Vertical PCB tail termination with 8 positions and LED options. Both termination styles have dust covers for enhanced mating area protection. A clear rubber boot for use with standard plugs is also available.

Usage

The connector system is designed to provide a standard RJ45 interface, ideal for harsh environments where Ethernet/IP protocol is used. Protection is provided for IP67 applications per IEC 60529 specification. Data rates conform to 10BaseT or 100BaseT Ethernet.

Applications

Intended for use in applications such as:

- Medical equipment
- ATM machines
- Lottery terminals & slot machines
- GPS positioning equipment
- Military vehicles, radios, computers
- Test equipment
- Mobile communication systems
- Traffic control & monitoring systems

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Related Products

MDB



9 POSITION CONNECTOR SHOWN

MUSB



MUSB-B151-34
SERIES MINI-B, RIGHT
ANGLE SHOWN



MUSB-C111-30
SERIES A, RIGHT ANGLE,
STACKED SHOWN

Connector Electrical Characteristics

Current rating: 1.5A per contact
 Contact resistance: 30 mΩ max
 Insulation Resistance: 500 MΩ min
 Dielectric Withstand Voltage: 1000/1500 V AC @ sea level
 LED forward DC current: 25mA max
 LED forward Voltage: 2.5 Volts max. @ 20mA
 Minimum Impedance (Ferrite): 38 Ohms at 25 MHz

Connector Mechanical Characteristics

Thermal Shock: 25 cycles @ -40° to +70° C
 Physical Shock: Per EIA364-27, Condition H (11ms 30G)
 Humidity: Per EIC512-6 / EIA364-11A
 Vibration: Per EIA364-28, Condition 5A
 Salt spray: Per EIA364-26, 250 Hrs
 Mating cycles: 2500

Assembly Process Characteristics

Recommended Torque for Panel Mount Screws: 0.45 to 0.65 Nm (4.00 – 5.75 in-lbs).
 Hand or wave solder: 150°C for 180 seconds (Pre-heat) and 265°C for 8 seconds max (Solder tails).
 Solder tails suitable for PCB thickness of 1.57 to 3.18 mm (.062" to 0.125")

Material Requirements

MRJ connectors are RoHS compliant.

Unless otherwise specified, the materials for each component shall be:

- Contacts: Phosphor Bronze with 1.27μm (50μ") min Gold over 1.27μm (50μ") min Nickel
- Housing: High temperature thermoplastic, UL94V-0 rated, Black
- Front Housing: Clear Polycarbonate (customer process cleaners must be compatible)
- Shell: Die cast Zinc alloy, Nickel plating
- Gasket: Silicone rubber
- LED: Epoxy lens, Tin plating on steel tail

Temperature rise: Meets the requirement of 30° C ΔT
 Operating temperature -40° to +105° C

Available Documents

Drawing Numbers:

P-MRJ-53XX-X1	MRJ Receptacle, Right Angle, 8 or 10 position
P-MRJ-548X-X1	MRJ Receptacle, Vertical, 8 position
P-MRJ-55XX-X1	MRJ Receptacle, Right Angle on PCB with Right Angle Cable Header
P-MRJ-578X-X1	MRJ Receptacle, Right Angle on PCB with RJ connector
P-MRJ-59XX-X1	MRJ Receptacle, Right Angle on PCB with Terminal Blocks
P-MRJ-63XX-X1	MRJ Receptacle, Right Angle, EMI filtered
P-MRJ-758X-X1	MRJ Receptacle, Right Angle on PCB with Transient Voltage Protection and Cable Header

Contact Factory, authorized Amphenol representative or website www.amphenolcanada.com for additional configurations

QTR9300376

Quality Test Report

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Now you're connected!

Product Numbering System



MRJ Rugged RJ Series, Generation 1

Modular Jack Type
3 - RJ11, 6 Position ^{1,2}
5 - RJ45, 8 or 10 Position ^{3,4}
6 - RJ45, 8 or 10 Position with EMI Ferrite Filtering ⁵
7 - RJ45, 8 or 10 Position with Transient Voltage Suppression ⁶

Termination Style
1 - Vertical, supplied with dust cover
3 - Right Angle
4 - Vertical
5 - Right Angle on PCB with Right Angle Cable Header
7 - Right Angle on PCB with Right Angle RJ45 Modular Jack ⁷
8 - Right Angle on PCB with Vertical RJ45 Modular Jack ⁷
9 - Right Angle on PCB with Terminal Blocks
A - Right Angle on PCB with Holes for Wiring (Style 5 PCB) ⁸
B - Right Angle on PCB with Vertical Cable Header ⁹
C - Right Angle on PCB with Holes for Wiring (Style 7 PCB) ⁸
D - Right Angle on PCB with Vertical Cable Header ⁹

Number of Contacts
8 - 8 contacts
A - 10 contacts

LED options
0 - No LEDs
1 - Green left, Yellow right
4 - Yellow left, Green right
5 - Green left, green right
A - Bi-colour Green/Yellow Left & Right

Tail Length & Thread Options
0 - 2.54mm [.100"] Tail Length, #4-40 UNC
B - 3.81mm [.150"] Tail Length, #4-40 UNC
M - 2.54mm [.100"] Tail Length, M3 x 0.5 Thread
P - 3.81mm [.150"] Tail Length, M3 x 0.5 Thread

Other Features
1 - 1 port (vertical has through hole mounting, right angle has threaded lug)
B - 1 port, vertical connector, through hole mounting, gasket on front shell flange
F - 1 port, vertical connector, threaded lug mounting

Unique Special Code
No Digit - Part defined by previous 10 digits
1 to 9 - Unique special feature. Note 4

- Notes**
- 1) Term RJ11 refers to jack for 6P2C, 6P4C or 6P6C (RJ11, RJ12, RJ13, RJ14, RJ18 or RJ25)
 - 2) RJ11 jacks currently available in MRJR series only. See MRJR catalog pages.
 - 3) Term RJ45 refers to non-keyed jack for 8P8C or 10P10C (RJ31, RJ38, RJ48C, RJ49, RJ50, RJ61).
 - 4) 10 position jack currently available for right angle connectors only.
 - 5) Ferrite option currently available for right angle connectors only.
 - 6) Transient voltage suppression for connectors on a PCB only. Consult with Amphenol for availability.
 - 7) Termination styles 7 & 8 currently available for RJ45 (8P8C) only.
 - 8) Termination style A uses the PCB from termination style 5. Termination style C uses the pcb from termination style 7.
 - 9) Termination styles B & D currently available for RJ45 (8P8C) without LED's only.

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