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.

MRJ/MRJR Options:

With matching RJ45
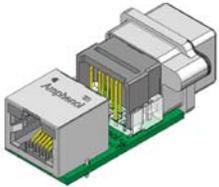
With Cable Header
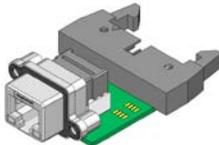
With Terminal Block
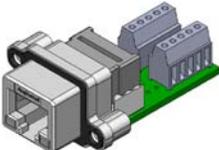
With PCB for wiring
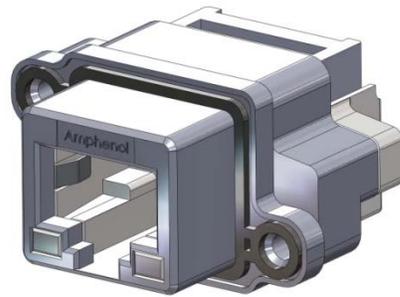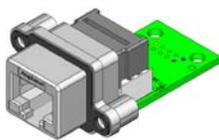
MRJR-5381-01 SHOWN
RIGHT ANGLE, PCB
TAIL, 8 POSITION RJ45
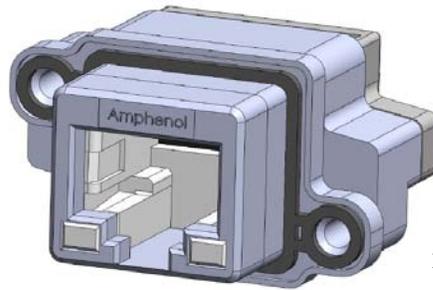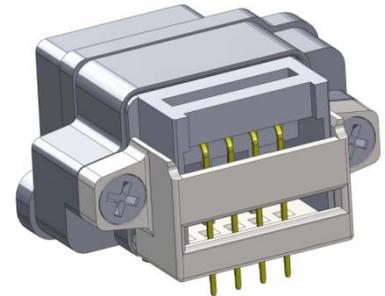
MRJR-3461-01 SHOWN
RIGHT ANGLE, PCB
TAIL, 8 POSITION RJ45
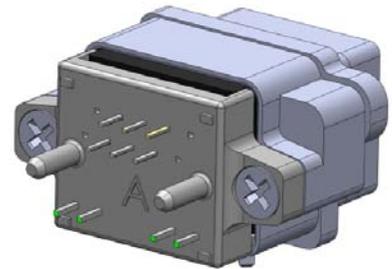
Overview

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

Availability: Right angle and vertical PCB tail termination with 4, 6, 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 4, 6, 8 or 10 positions and LED options. Dust covers are available 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 IP68 applications per IEC 60529 specification. Epoxy free design protects from leakage under extreme temperature changes. 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

Related Products

MDBR

9 POSITION CONNECTOR SHOWN

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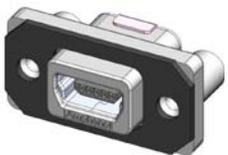
MUSB-B151-34
SERIES MINI-B, RIGHT ANGLE SHOWN

STACKED TYPE A
OVER TYPE A

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
MRJR 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-MRJR-33XX-X1   MRJR Receptacle, Right Angle, 4 or 6 position, LED, Tail Length and Thread Options
P-MRJR-34XX-XF   MRJR Receptacle, Vertical, 4 or 6 position, LED, Tail Length and Thread Options
P-MRJR-53XX-X1   MRJR Receptacle, Right Angle, 8 or 10 position, LED, Tail Length and Thread Options
P-MRJR-54XX-XF   MRJR Receptacle, Vertical, 8 or 10 position, LED, Tail Length and Thread Options

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

QTR9300463   Qualification Test Report

Amphenol

Now you're connected!

Product Numbering System

MRJR - X | X X X - X | X | X

MRJR	Rugged RJ Series, Generation 2

Modular Jack Type
3 – RJ11, 6 Position[1]	
4 – RJ11, 6 Position with EMI Ferrite Filtering[2]	
5 – RJ45, 8 or 10 Position [3]	
6 – RJ45, 8 or 10 Position with EMI Ferrite Filtering[2]	
7 – RJ45, 8 or 10 Position with Transient Voltage Supression[4]	
8 – RJ45, 8 Position with Cat5e Performance Level[4]	

Termination Style
3 – Right Angle
4 – Vertical
5 – Right Angle on PCB with Right Angle Cable Header[5]
7 – Right Angle on PCB with Right Angle RJ45 Modular Jack[6]
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 with 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
4 - 4 contacts
6 - 6 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 Thread
B – 3.81mm (.150") Tail Length, #4-40 UNC Thread
M – 2.54mm (.100") Tail Length, M3 x 0.5 Thread
P – 3.81mm (.150") Tail Length, M3 x 0.5 Thread

Other Options[10]
1 - 1 port (vertical has through hole mounting, right angle has threaded lug)
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

Notes
1) Term RJ11 refers to jack for 6P2C, 6P4C or 6P6C (RJ11, RJ12, RJ13, RJ14, RJ18 or RJ25).
2) Ferrite option currently available for right angle connectors only.
3) Term RJ45 refers to non-keyed jack for 8P8C or 10P10C (RJ31, RJ38, RJ48C, RJ49, RJ50, RJ61).
4) Transient voltage suppression and Cat5e performance level for connectors on a PCB only. Consult with Amphenol for availability.

5) Termination style 5 suitable for both RJ11 and RJ45 jacks. Consult with Amphenol regarding applications where a smaller 14 pin cable header would be preferred.
6) Termination style 7 currently available for RJ11 (6P4C & 6P6C) and RJ45 (8P8C) only.
7) Termination style 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 RJ11 (6P4C & 6P6C) without LED's and RJ45 (8P8C) without LED's only.
10) Consult with Amphenol for additional termination styles, solder cup contacts, LED colours, contact tail lengths, mounting styles, non-conductive gaskets or other requirements of interest. See catalogue Accessories pages for dust cover and plug boot options.

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