

# MRJR Rugged RJ45 Connector

Product Specification S6055C Rev 1.0

Amphenol

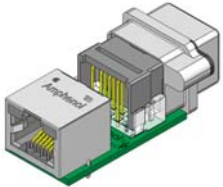
*Now you're connected!*

## About Amphenol Commercial Products

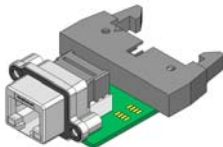
Amphenol's commercial connector products are used in a variety of end user applications including networking, telecom, server & computer, storage & HDD, consumer electronics and entertainment, professional audio & Industrial & Military/Aerospace.

## MRJ/MRJR Options:

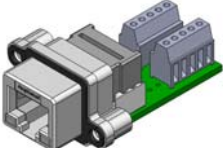
### With matching RJ45



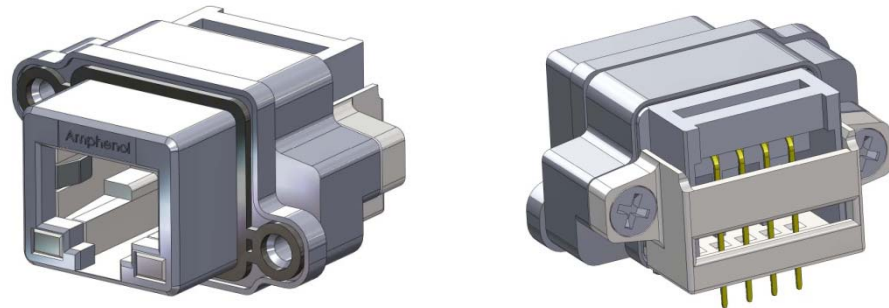
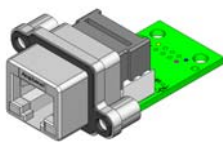
### With Cable Header



### With Terminal Block



### With PCB for wiring



MRJR-5381-01 SHOWN  
RIGHT ANGLE, PCB  
TAIL, 8 POSITION RJ45

## Overview

This Product Specification defines the general use and performance parameters for Amphenol's MRJR 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. 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. 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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## About Amphenol Commercial Products

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## 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-5380-011	MRJR Receptacle, Right Angle, 8 position, Special Gasket and Seal Features
P-MRJR-5381-012	MRJR Receptacle, Right Angle, 8 position, LED, #2-56 Threaded Holes for PCB Mounting
P-MRJR-53XX-X1	MRJR Receptacle, Right Angle, 8 or 10 position, LED, Tail Length and Thread Options
P-MRJR-5E80-031	MRJR Receptacle with 2 MUSB Type A Receptacles, Solder Cup Terminals

Contact Factory, authorized Amphenol representative or website [www.amphenolcanada.com](http://www.amphenolcanada.com) for additional configurations

QTR9300463

Qualification Test Report

# Now you're connected!

## Product Numbering System

<b>MRJR</b>	Connector series designation – Rugged RJ	<b>MRJR</b>	-	<b>5</b>	<b>3</b>	<b>8</b>	<b>0</b>	-	<b>0</b>	<b>1</b>	
	<b>Version</b>										
	3 - Receptacle, RJ11 (proposed)										
	5 - Receptacle, RJ45										
	6 - Receptacle, RJ45, with EMI filter										
	7 - Receptacle, RJ45, with Transient Voltage Protection (proposed) note 1										
	<b>Termination</b>										
	3 - PCB tail, right angle										
	5 - PCB tail, right angle, on PCB with right angle cable header										
	7 - PCB tail, right angle, on PCB with RJ45 right angle termination										
	8 - PCB tail, right angle, on PCB with RJ45 vertical termination										
	9 - PCB tail, right angle, on PCB with terminal block										
	A - PCB tail, right angle, on PCB for hand wiring (termination code 5 board)										
	B - PCB tail, right angle, on PCB with vertical cable header										
	C - PCB tail, right angle, on PCB for hand wiring (termination code 7 board)										
	<b>Number of contacts (note 3)</b>										
	8 - 8 contacts										
	A - 10 contacts										
	<b>LED options</b>										
	0 - No LEDs										
	1 - Green left, Yellow right										
	4 - Yellow left, Green right										
	5 - Green left, green right										
	<b>Options (Tail Length &amp; Thread)</b>										
	0 - Tail 2.54mm (.100"), standard, through hole or #4-40 threaded lugs										
	B - Tail 3.81mm (.150"), through hole or #4-40 threaded lugs										
	M - Tail 2.54mm (.100"), M3 threaded lugs										
	P - Tail 3.81mm (.150"), M3 threaded lugs										
	<b>Other Features</b>										
	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										
	N - 1 port, vertical connector, threaded lug mounting, no alignment insert, contact & led length = 4mm (.157")										
	<b>Unique Special Code</b>										
	No Digit - Part defined by previous 10 digits										
	1 to 9 - Unique special feature. Note 4										

### Notes

- 1) Transient voltage protection is only possible with the connector supplied on a PCB.
- 2) Dust covers supplied bulk packed with the connectors.
- 3) 10 contact option is currently available for right angle PCB tail connectors only.
- 4) Many unique features are readily available to suit customer requirements. Consult with Amphenol Canada for details.

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