

# MRJR Rugged RJ45 Connector

Product Specification S6055C Rev 1.0

Amphenol

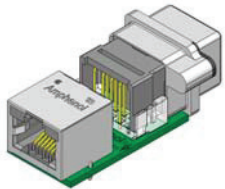
*Now you're connected!*

## About Amphenol Commercial Products

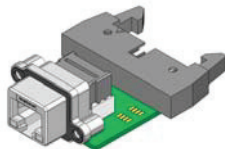
Amphenol's commercial connector products are used in a variety of end user applications including networking, telecom, server & computer, storage & HDD, consumer electronics and entertainment, professional audio & Industrial & Military/Aerospace.

## MRJ/MRJR Options:

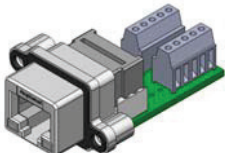
### With matching RJ45



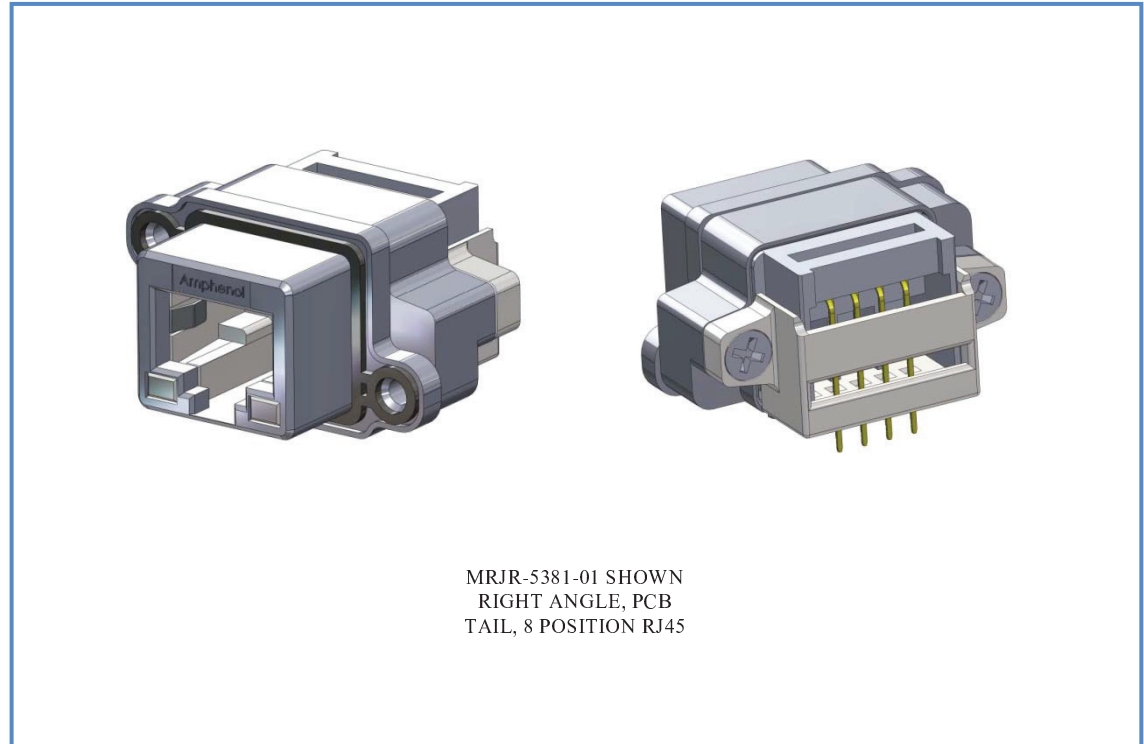
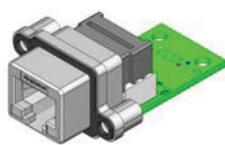
### With Cable Header



### 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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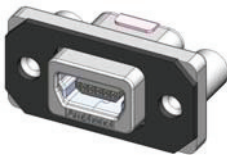
#### Related Products

##### 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.