

MUSBR Rugged USB

Product Specification S6056C Rev 1.1

Amphenol

Now you're connected!

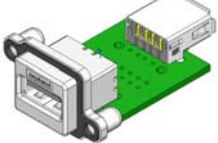
About Amphenol Commercial Products

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.

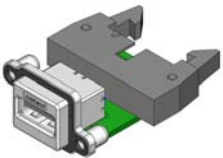
Related Products

MUSB/MUSBR OPTIONS:

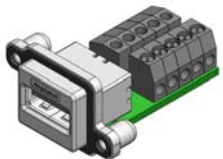
With matching USB



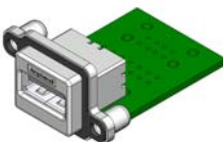
With Cable Header



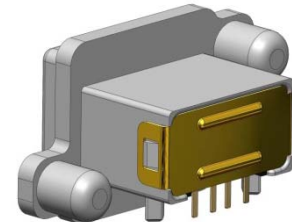
With Terminal Block



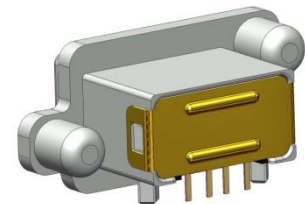
With PCB for wiring



MUSBR-A111-30
SERIES A, RIGHT ANGLE
STANDARD PROFILE



MUSBR-A111-40
SERIES A, RIGHT ANGLE
LOW PROFILE



Overview

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

Availability: Series A right angle connectors are available now. Vertical PCB mount connectors will be available Q3, 2012. Mini-B and series Mini-AB with right angle and vertical PCB tails are coming soon. Right angle connectors mounted on a PCB with matching USB, cable headers or terminal blocks are available for all series. Dust covers for enhanced mating area protection are also available.

Usage

These connectors meet Military shock & vibration levels and IP68 per IEC 60529 in mated and unmated conditions. The connector system is designed to provide a standard USB interface for enclosures exposed to harsh environments. Connectors mate with any standard USB 2.0 plug. Achieves data rates up to 480 Mb/s (USB 2.0).

Applications

Intended for use in applications such as:

- Medical equipment
- Microwave transmitters
- GPS, positioning equipment
- Military vehicles, radios, computers
- Test equipment
- Mobile entertainment systems
- Traffic control & monitoring systems

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Related Products

MDBR



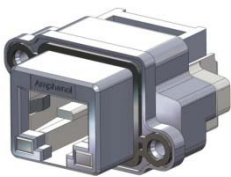
9 POSITION CONNECTOR SHOWN

MUSBK



MUSB-K152-30
SERIES MICRO-AB
RIGHT ANGLE, PCB TAIL

MRJR



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

Connector Electrical Characteristics

Parameter	Series A & B	Series Mini-B & Mini-AB
Current rating:	1.5A per contact	1.0A per contact
Contact resistance:	30 mΩ max	50 mΩ max
Insulation resistance:	1000 MΩ min	100 MΩ min
DWV:	500V AC @ sea level	100V AC @ sea level

Connector Mechanical Characteristics

Thermal Shock: 5 cycles @ -40° to +125° C
 Physical Shock: Per EIA364-27 Condition H (11ms 30G)
 Humidity: Per EIA364-31 Condition C, method III
 Vibration: Per EIA364-28 per Condition V, Letter A
 Salt spray: Per EIA364-26, 250 Hrs

Process Characteristics

Recommended soldering process: Hand or wave soldering peaked at 260°C for 8 seconds max.
 Recommended Torque for #4-40 or M3 Panel Mount Screws: 0.45 to 0.65 Nm (4 – 5.75 in-lbs).
 Recommended Torque for #2-56 or M2.5 Panel Mount Screws: 0.23 to 0.34 Nm (2 - 3 in-lbs).
 Solder tails suitable for PCB thickness of 1.52mm (.062")
 Mating Cycles: 1500 (Series A & B)
 5000 (Series Mini-B & Mini-AB)

Material Requirements

MUSBR connectors are RoHS compliant.

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

- Contacts: Phosphor Bronze with 30μ" (0.76μm) min Gold over 50μ" (1.27μm) min Nickel
- Housing: Engineering thermoplastic, UL94V-0 rated, Black. White for series B.
- Shell: Die cast Zinc alloy, Nickel plating

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

Available Documents

Drawing Numbers:

P-MUSBR-A111-XX
 P-MUSBR-A511-XX

MUSBR rugged Series A, Right Angle PCB Tail, Thread, Shell & Dust Cover Options
 MUSBR rugged Series A, Right Angle, Vertical PCB Mount

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

Quality Test Reports

QTR9300491 Qualification Test Report

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Product Numbering System

	MUSBR	-	A	1	1	1	-	3	0	
MUSBR	Connector series designation - Rugged USB									
	Style									
	A - Receptacle series A, single									
	Termination									
	1 - Right angle PCB tail									
	2 - Right angle PCB tail, on PCB with right angle cable header, note 1									
	3 - Right angle PCB tail, on PCB with matching USB termination, note 2									
	4 - Right angle PCB tail, on PCB with terminal block(s), note 3									
	5 - Vertical PCB tail									
	8 - Right angle PCB tail, on PCB with vertical cable header, note 4									
	A - Right angle PCB tail, on PCB for hand wiring									
	E - Right angle PCB, on PCB, with vertical USB termination, note 4									
	Number of Contacts									
	1 - Standard 4 per port									
	Colour									
	1 - Black - Standard									
	Options									
	0 - No rear shield; shell with Unified National thread, note 5 & 6									
	3 - With rear shield; shell with Unified National thread, note 5 & 6									
	4 - Low profile; with rear shield ;shell with Unified National thread, note 5&6									
	M - With rear shield; shell with Metric thread, note 5 & 7									
	N - No rear shield, shell with Metric thread, notes 5 & 7									
	R - Low profile; with rear shield; shell with Metric thread, note 5 & 7									
	Dust Cover Options									
	0 - Standard (no dust cover)									
	1 - With grey color dust cover (supplied bulk packed)									
	4 - Standard (no dust cover), note 8									
	5 - With black color dust cover (supplied bulk packed)									
	Unique Special Code									
	No Digit – Standard part defined by previous 10 digits									
	1 to 9 - Unique special feature. Note 9									

Notes

- Design of right angle cable header varies depending upon the style. Refer to drawing for details.
- Matching USB is the same USB series as the rugged connector
- Design of terminal blocks varies depending upon the style. Refer to drawing for details.
- Vertical headers & vertical matching USB's may not be readily available for all connector styles.
- Rear shield required for styles A, C & D with right angle PCB tails. Rear shield optional for styles B & E with right angle PCB tails. No rear shield for any vertical PCB tail.
- Use #4-40 UNC for styles A, C & D and #2-56 UNC for styles B & E
- Metric thread - use M3 for styles A, C, & D and M2.5 for styles B & E
- Dust cover option code 4 is identical to code 0 and may be used for styles B & E only.
- Many unique features are readily available to suit customer requirements. Consult with Amphenol Canada for details.

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