

MUSBR Rugged USB

Product Specification S6056C Rev 1.1

Amphenol

Now you're connected!

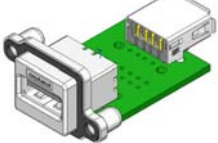
About Amphenol Commercial Products

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.

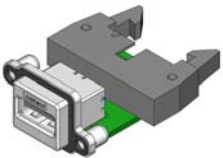
Related Products

MUSB/MUSBR OPTIONS:

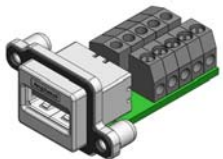
With matching USB



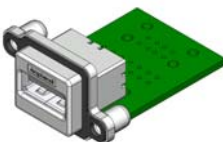
With Cable Header



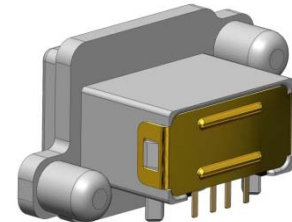
With Terminal Block



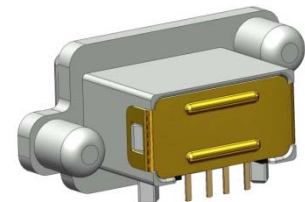
With PCB for wiring



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



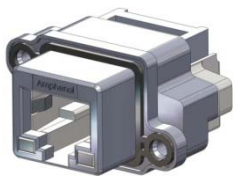
9 POSITION CONNECTOR SHOWN

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

Now you're connected!

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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