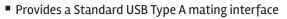# IP67 All–Plastic Latching USB Type A

IP67–RATED RUGGEDIZED USB 2.0/3.0 TYPE A LATCHING CONNECTORS & CABLES MRU SERIES

Amphenol's MRU series of USB 2.0 & 3.0 Type A Connectors and Cables provide IP67 protection in a circular form factor for Cable–to–Panel applications.

These connectors have all–plastic construction with Bayonet Coupling and Jam–Nut mounted panel receptacles and are designed to provide solutions for a variety of environments and applications, including Industrial, Telecommunications, Datacom, Medical, Energy, Transportation, etc.

TARGET MARKETS

- Provides a Standard USB Type A mating interface
- IP67 protection for enclosures per IEC 60529
- RoHS–compliant
- UL94V–0 high–temperature resistant housing
- Operating temperature range from –20°C to +80°C
- Available as factory–made overmolded cable assemblies and adapters
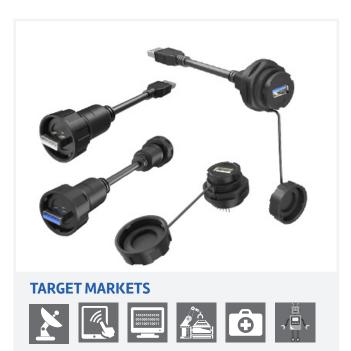- Receptacles have integrated sealing cap

FEATURES	BENEFITS
Standard USB Type A mating interface	Receptacle can be mated to standard IP20 USB plug
UL94V–0 rated high–temperature housing and inserts	Operating temperature range of –20°C to +80°C
Overmolded cable, adapter or pcb tail terminations	Suitable for many user–defined configurations
Plastic Bayonet Coupling ring on plug	Secure latching to ensure IP67 performance
RoHS–compliant	Meets environmental and safety standards
USB 2.0 and USB 3.0 performance options	Meets variety of data rate requirements
All-plastic construction	Economical for cost sensitive applications

TECHNICAL INFORMATION

MATERIAL

▪ Housing: Thermoplastic PBT, UL94V–0

▪ Nut: Thermoplastic PBT, UL94V–0

▪ USB Housing: Thermoplastic PBT, UL94V–0

▪ Gaskets & Seals: Silicone rubber

▪ Over–Molding: PVC

▪ USB Shield: Steel Alloy, Nickel plated

▪ USB Contact: Copper Alloy plated with Gold over Nickel

▪ Cable USB2.0: AWM 2025, 80°C 30V VW–1

▪ Cable USB3.0: AWM 20276, 80°C 30V VW–1

ELECTRICAL PERFORMANCE

▪ Current rating:

  ▪ USB 2.0: 0.5A per Charging Contact

  　　　　　0.25A per Data Contact

  ▪ USB 3.0: 0.9A per Charging Contact

  　　　　　0.25A per Data Contact

▪ Voltage rating 5VDC

▪ Contact Resistance: 30mΩMax

▪ Dielectric Withstanding Voltage (DWV):

  ▪ USB 2.0: 500VAC/1 minute @ sea level

  ▪ USB 3.0: 100VAC/1 minute @ sea level

▪ Insulation Resistance:

  ▪ USB 2.0: 500MΩ min.

  ▪ USB 3.0: 100MΩ min.

▪ Data Rate:
  ▪ USB 2.0: 480Mb/s

  ▪ USB 3.0: 5Gb/s

MECHANICAL PERFORMANCE

▪ Durability: 500 Mating cycles

▪ Wire Gauge:

  ▪ 24AWG (Charging Contacts)

  ▪ 28AWG (Data Contacts)

APPROVALS AND CERTIFICATIONS

▪ RoHS–compliant per EU directive 2011/65/EU and amendments

PACKAGING

▪ Box

ENVIRONMENTAL

▪ Ingress Protection: IP67 Per IEC 60529 in mated condition

▪ Operating Temperature Range: –20°C to +80°C

▪ RoHS compliant per EU directive 2011/65/EU and amendments

TARGET MARKETS/APPLICATIONS

Datacom Telecom

HMIs

Server Storage

Energy Industrial

Medical

Robotics

PART NUMBERS

Find part number details using the search box on www.amphenol–cs.com
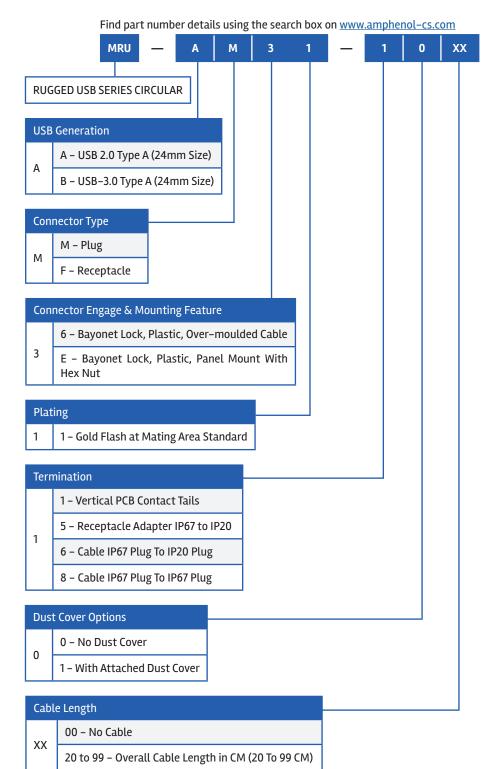
Description	Part Numbers
Cable Assy, USB 2.0 Type A, IP67 Bayonet Plug to IP20 Plug, 1m	MRU–AM61–60A0
Cable Assy, USB 3.0 Type A, IP67 Bayonet Plug to IP20 Plug, 1m	MRU–BM61–60A0
Receptacle, USB 2.0 Type A, IP67 Bayonet, Jam Nut Mount to IP20 Receptacle, with Dust Cover	MRU–AFE1–5100
Receptacle, USB 3.0 Type A, IP67 Bayonet, Jam Nut Mount to IP20 Receptacle, with Dust Cover	MRU–BFE1–5100
Cable Assy, USB 2.0 Type A, IP67 Bayonet Plug to IP67 Bayonet Plug, 1m	MRU–AM61–80A0
Cable Assy, USB 3.0 Type A, IP67 Bayonet Plug to IP67 Bayonet Plug, 1m	MRU–BM61–80A0
Cable Assy, USB 2.0 Type A, IP67 Bayonet Receptacle, Jam Nut Mount to IP20 Plug, 1m	MRU–AFE1–61A0
Cable Assy, USB 3.0 Type A, IP67 Bayonet Receptacle, Jam Nut Mount to IP20 Plug, 1m	MRU–BFE1–61A0
Receptacle, USB 2.0 Type A, IP67 Bayonet, Jam Nut Mount, PCB solder tails	MRU–AFE1–1100

* Other cable lengths and configurations available – Consult Amphenol Sales

▶ IP67 All-Plastic Latching USB Type A

PART NUMBER SELECTOR

Find part number details using the search box on www.amphenol-cs.com

| MRU | — | A | M | 3 | 1 | — | 1 | 0 | XX |

RUGGED USB SERIES CIRCULAR

USB Generation

| A | A – USB 2.0 Type A (24mm Size) |
| | B – USB-3.0 Type A (24mm Size) |

Connector Type

| M | M – Plug |
| | F – Receptacle |

Connector Engage & Mounting Feature

| 3 | 6 – Bayonet Lock, Plastic, Over-moulded Cable |
| | E – Bayonet Lock, Plastic, Panel Mount With Hex Nut |

Plating

| 1 | 1 – Gold Flash at Mating Area Standard |

Termination

1	1 – Vertical PCB Contact Tails
	5 – Receptacle Adapter IP67 to IP20
	6 – Cable IP67 Plug To IP20 Plug
	8 – Cable IP67 Plug To IP67 Plug

Dust Cover Options

| 0 | 0 – No Dust Cover |
| | 1 – With Attached Dust Cover |

Cable Length

| XX | 00 – No Cable |
| | 20 to 99 – Overall Cable Length in CM (20 To 99 CM) |

Cable Length

FIRST X		SECOND X	
CODE	METERS	CODE	METERS
A	1.0	0	0
		1	0.1
B	2.0	2	0.2
		3	0.3
C	3.0	4	0.4
		5	0.5
D	4.0	6	0.6
		7	0.7
E	5.0	8	0.8
		9	0.9

Example:

A0 = 1.0m

B7 = 2.7m

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