

MUSBR Series Rugged USB Type C Connectors

RUGGED USB TYPE C CONNECTOR FOR HARSH ENVIRONMENT APPLICATION, GENERATION 2

Amphenol's MUSBR series USB Type C Connectors serve many markets and applications across the globe including Automotive, Communications, Consumer, Data, Industrial and Medical.

MUSBR series is a line of Generation 2 ruggedized USB Type C connectors with die cast housings and IP67 sealing, designed for Harsh Environment applications. MUSBR series USB Type C Connectors provide reliable performance in extreme conditions for the most demanding applications, and mate with standard USB Type C plugs.

- IP67 environmental sealing protects against water and dust
- Die cast metal housings protect against mechanical damage
- Compact design saves panel space
- Operating temperature range from -40°C to $+105^{\circ}\text{C}$ for extreme conditions
- RoHS compliant to meet environmental standards

FEATURES

- Internal and external seals made with flexible silicone rubber
- Die cast metal housings
- Improved thermal cycling performance
- Non-polarized Type C connector interface
- Right angle and vertical configurations available
- Low profile shell design available
- RoHS compliant



TARGET MARKETS



BENEFITS

- Excellent sealing to IP67 and higher protection over wide temperature range
- Protects equipment from water and dust incursion
- Mechanically rugged and stable to protect against shock, vibration and impact
- Prevents distortion
- Suitable for outdoor application with wide operating temperature range
- Allows mating plug to be inserted in either orientation to ease mating
- Eliminates potential damage due to accidental mismatching
- Suitable for a wide variety of application requirements
- Compact design saves panel space
- Meets environmental, health and safety requirements

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TECHNICAL INFORMATION

MATERIAL

- External Shell: Die Cast Zinc, Nickel Plated
- Insulator Housing: High Temperature Resistant Engineering Thermoplastic, Glass Reinforced, UL94V-0, Black
- Panel Gasket: Conductive Silicone Rubber, Black

MECHANICAL PERFORMANCE

- IP67
- UL: File E145615, Level DUXR2

ELECTRICAL PERFORMANCE

- Current Rating: Collective 5A Max. For Pins A4, A9, B4 & B9 plus 1.25A Max. For pin B5 with return path shared through pins A1, A12, B1&B12. Additional positions 0.25A Max each.

SPECIFICATION

- Amphenol Product Specification: USB Type C

ENVIRONMENTAL

- Temperature Life w/o Load: Per EIA-364-17, 105°C, 1000 Hours
- Thermal Shock: Per EIA-364-32, -40°C to +125°C, 5 Cycles
- Humidity: Per EIA 364-31, 10 Cycles, 240 Hrs, 25°C to 65°C 90-95%RH, with -10°C Cold Shock
- Mixed Flowing Gas: Per EIA 364-65 Class IIA (Cl2, NO2, H2S & SO2), 14 Day Exposure
- Salt Spray: Per EIA 364-26, 250 Hours, 5% Salt, 35°C
- Solvent Resistance: Isopropyl Alcohol & 5% Sodium Hydroxide Solution, 24 Hrs Each
- Solderability: Per EIA-364-52, 95% Coverage after Category 2 Steam Aging

APPROVALS AND CERTIFICATIONS

- RoHS

PART NUMBERS

| Description | Type | Part Numbers |
|-------------------------------|---------------------|---------------|
| MUSBR Series Rugged USB Gen 2 | Type C, Right angle | MUSBR-M1C1-30 |
| MUSBR Series Rugged USB Gen 2 | Type C, Vertical | MUSBR-M5C1-M0 |

PACKAGING

- Box

TARGET MARKETS/APPLICATIONS



Car Navigation Systems
Display Cluster
Electric Vehicle



AC/DC pluggable power supplies
Base Station
Datacom
Optical Transport
Routers
Switches
Telecom



Home Entertainment Equipment
Refrigerator



Data Center
External Portable Storage
High Density Ethernet switching
Router and Server
Storage System



Chemical Detection System
Industrial Control Equipment
Energy Meter
Gaming Machine
Lighting
Measuring Equipment
Parking Meter
POS Machine
Renewable Energy
Robotics
Smart Meter
Vending Machines



Analyzers
Medical Diagnostics
Ultrasound Equipment