

# **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°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



#### 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 mismating
- 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	Туре	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



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