

MDBR Series Rugged D-Subminiature Connectors

RUGGED D-SUB CONNECTORS FOR HARSH ENVIRONMENT APPLICATION, GENERATION 2

Amphenol's MDBR series D-Sub Connectors serve many markets and applications across the globe including Automotive, Communications, Industrial, Medical and Military.

MDBR series is a line of Generation 2 ruggedized D-Sub connectors with die cast housings and IP67 sealing, designed for Harsh Environment applications. MDBR provides a standard D-Sub interface. Protection is provided for the ingress of water when immersed to a 1.0m depth for a period of 30 minutes and the ingress of dust less than 75 microns under 2 kPa vacuum pressure.

- IP67 environmental sealing protects against water and dust
- Die cast metal housings protect against mechanical damage
- 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
- Mates with existing standard connectors
- Similar in size compared to standard equivalents
- Machined contacts plated with 30u" gold
- Wide variety of mounting and termination options
- 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
- Suitable for a wide variety of mating connectors which are readily available
- Able to replace existing standard parts with little to no changes
- Extremely durable for demanding applications
- Replace virtually any existing standard connector using standard footprints and mounting hardware
- Meets environmental, health and safety requirements

TECHNICAL INFORMATION

MATERIAL

- External Shell: Die Cast Zinc, Nickel Plated
- Insulator Housing: High Temperature Resistant Nylon, Glass Reinforced, UL940V–0, Black
- Contacts: Machined Phosphor Bronze or Brass Alloy Plated with 0.76µm (30u”) min Gold over 1.27µm (50u”) min Nickel
- Gaskets & O–rings: Silicone Rubber, Black or Red
- Jack Sockets: Stainless Steel
- Dust Covers: Silicone Rubber, Grey, with Nickel Plated Brass Bushing
- Threaded Inserts: Nickel Plated Steel

ELECTRICAL PERFORMANCE

- Current Rating: Standard Density – 5A max., High Density – 3A max.
- Contact Resistance: 20mΩ max.
- Insulation Resistance: 5000mΩ min.
- Dielectric Withstanding Voltage: Standard Density–1500V DC, High Density–1200V DC

MECHANICAL PERFORMANCE

- Water & Dust Protection Level: Code IP67 per IEC 60529
- Operating Temperature: –40°C to +105°C
- Contact Insertion Force: Standard Density – 5.0N (18ozf) max, 3.3N (12ozf) max Average Initial, High Density – 5.0N (18ozf) max, 2.6N (9.5ozf) max Average Initial
- Durability: Per EIA 364–09, 500 Mating Cycles
- Vibration: Per EIA 364–28 Condition V, Letter D, 4.5 Hrs, No Discontinuity > 1µs
- Shock: Per EIA 364–27 Test Condition A (11ms, 50g, 1/2 Sine), No Discontinuity > 1µs

SPECIFICATION

- Amphenol Product Specification: MIL–DTL–24308

APPROVALS AND CERTIFICATIONS

- RoHS

ENVIRONMENTAL

- Temperature Life w/o Load: Per EIA–364–17, 105°C, 1000 Hours
- Thermal Shock: Per EIA–364–32, –55°C to +105°C, 25 Cycles
- Humidity: Per EIA–364–31, 10 Cycles, 240 Hrs, 25°C to 65°C, 90–95%RH, with –10°C Cold Shock
- Thermal Cycling: Per EIA–364–110, 500 Cycles, 15°C to 85°C
- Mixed Flowing Gas: Per EIA 364–65 Class IIA (Cl₂, No₂, H₂S & SO₂), 14 Day Exposure
- Isopropyl Alcohol & 5% Sodium Hydroxide Solution, 24 Hrs Each
- Solderability: Per EIA–364–52, 95% Coverage after Category 2 Steam Aging

PACKAGING

- Tray

TARGET MARKETS/APPLICATIONS



Transportation



Datacom
Telecom



Energy
Industrial
Rail



Medical



Military

PART NUMBER SELECTOR

