Overview
This Product Specification defines the general use and performance parameters for Amphenol’s MDBR series of Rugged D-sub connectors.

Availability: 9 position standard density pin and socket connectors, 15 and 26 position high density pin and socket connectors available. Termination options include vertical PCB tails and solder cups suitable for up to 20 AWG for the 9 position connectors or 22 AWG for the 15 or 26 position.

Usage
The connector system is designed to provide a standard D-sub interface for enclosures exposed to harsh environments. Protection is provided for IP68 applications per IEC 60529 specification. Protection is provided in the mated or unmated condition. A sturdy die cast shell provides excellent strength and durability in the most demanding applications while a high temperature resistant plastic housing captures high quality gold plated screw machined copper alloy contacts.

Applications
Intended for use in applications such as:
- Outdoor equipment
- Portable devices
- Automation equipment
- Industrial and agricultural equipment

Connector Electrical Characteristics
Maximum current: 5A per contact for Std density, 3A per contact for higher density.
Temperature rise: Meets the UL requirement of 30° C ΔT
Maximum voltage: 200V DC or 125V AC per contact
Contact resistance: 20 mΩ max
Insulation Resistance: 5 GΩ at 200V DC for 60 seconds
DWV: 1500V minimum DC for 60 seconds
Connector Mechanical Characteristics
9, 15 or 26 position D-sub interface
Durability: 500 mating cycles

Material Requirements
MDBR connectors are RoHS compliant.
Unless otherwise specified, the materials for each component shall be:

- Contacts
  - Base material – Copper alloy
  - Plating
    - Goldplating over 50 µ” (1.27 µm) min Nickel as defined on product drawings.
- Housings: Black color, glass-reinforced, lead-free solder reflow process compatible thermoplastic, UL94V-0 rated
- Shell: Die cast Zinc alloy
  - Plating – 50 µ” (1.27 µm) min Nickel
- Gasket: Silicone rubber

Operating temperature -40° to +105° C
Storage temperature -40° to +105° C

Process Characteristics
Connectors are RoHS compliant and can resist lead free wave soldering processes.

Available Documents
Drawing Numbers:
- P-MDBR-A26PE-860 MDBR Rugged D-Sub Connector, 26 Size High Density Pin, Vert PCB Tail, Boardlock
- P-MDBR-A26PE-XXX MDBR Rugged D-Sub Connector, 26 Size High Density Pin, Vert PCB Tail
- P-MDBR-A26PM-XXX MDBR Rugged D-Sub Connector, 26 Size High Density Pin, Solder Cup Tails
- P-MDBR-E09PE-860 MDBR Rugged D-Sub Connector, 9 Size Pin, Vert PCB Tail, Boardlock
- P-MDBR-E09PE-XXX MDBR Rugged D-Sub Connector, 9 Size Pin, Vert PCB Tail
- P-MDBR-E09PM-XXX MDBR Rugged D-Sub Connector, 9 Size Pin, Solder Cup Tails
- P-MDBR-E09SE-860 MDBR Rugged D-Sub Connector, 9 Size Skt, Vert PCB Tail, Boardlock
- P-MDBR-E09SE-XXX MDBR Rugged D-Sub Connector, 9 Size Skt, Vert PCB Tail
- P-MDBR-E15PM-AN1 MDBR Rugged D-Sub Connector, 15 Size High Dens Pin, Solder Cup Tails, Boardlock
- P-MDBR-E15PM-XXX MDBR Rugged D-Sub Connector, 15 Size High Dens Pin, Solder Cup Tails
- P-MDBR-E15SE-AN1 MDBR Rugged D-Sub Connector, 15 Size High Dens Pin, Solder Cup Tails
- P-MDBR-E15SE-XXX MDBR Rugged D-Sub Connector, 15 Size High Dens Skt, Solder Cup Tails
- P-MDBR-E15SM-XXX MDBR Rugged D-Sub Connector, 15 Size High Dens Skt, Solder Cup Tails

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
MRJ
- MRJ-5480-01 SHOWN VERTICAL, PCB TAIL, 8 POSITION RJ45
- MRJ-5380-01 SHOWN RIGHT ANGLE, PCB TAIL, 8 POSITION RJ45

MUSB
- MUSB-C111-30 SHOWN SERIES A, RIGHT ANGLE, STACKED

MRJ
- MRJ-5480-01 SHOWN VERTICAL, PCB TAIL, 8 POSITION RJ45
- MRJ-5380-01 SHOWN RIGHT ANGLE, PCB TAIL, 8 POSITION RJ45

MUSB
- MUSB-C111-30 SHOWN SERIES A, RIGHT ANGLE, STACKED
### Product Numbering System

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<td>Shell Size &amp; Number of Contacts</td>
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<td>E15 – E Size Shell, 15 Contacts, Size 22, High Density</td>
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<td>Options and Unique Special Code</td>
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<tr>
<td>0 – Standard Part</td>
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<tr>
<td>1-9 – Identifies Unique Special Features</td>
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**Notes:**

1) The MDBR series with 26 contacts is currently available in the pin contact version only.

2) Consult with Amphenol for additional terminations, contact tail lengths, mounting styles or other special requirements.