AirBorn introduces a Micro-D, multi-gigabit, high-speed connector designed to meet the performance requirements of MIL-DTL-83513, where applicable. This rugged connector system is designed to handle LVDS serial bus signals like Ethernet, serial rapid IO, etc. This versatile product has a range from one to ten high-speed modules and up to fifty signal contacts making it ideal for most high-reliability applications.
**Captivated hardware is factory-installed and non-removable.**

* Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.

** Captivated hardware is factory-installed and non-removable.

*** Refer to “Hardware Keying Options” on page 15.

---

**SIGNAL INTEGRITY PERFORMANCE (Connectors Only)**

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Diff. Impedance, filtered to 70 ps (20-80%)</td>
</tr>
<tr>
<td>2</td>
<td>Diff. Insertion Loss</td>
</tr>
<tr>
<td>3</td>
<td>Diff. Return Loss</td>
</tr>
<tr>
<td>4</td>
<td>Intra-Pair</td>
</tr>
</tbody>
</table>

- 100 ohm +/- 10
- 4.0 GHz @ -3 dB
- 1.8 GHz @ -20 dB
- 15 ps

---

**MATERIALS and FINISHES**

- **Socket Contact**: Brass
- **Pin Contacts**: BeCu alloy strip
- **Contact Finish**: Gold plate, 50 µ" minimum
- **Shells**: Aluminum alloy 6061-T6
- **Shell Finishes**: Frey Eng. Co. compound CF3003-80 & L-II-49
- **Contact Finish**: Gold plate, 50 µ" minimum
- **Pin Contacts**: BeCu alloy strip
- **Embedment**: Glass-filled liquid crystal polymer (LCP)
- **Molded Insulators**: Glass-filled liquid crystal polymer (LCP)
- **Interfacial Seal Gaskets**: Fluorosilicone
- **EMI Gaskets**: Corrosion-resistant steel

**NOTE**: AirBorn can manufacture special configurations to your exact specifications.

---

**PERFORMANCE**

- **Contact Rating**: 3 amperes maximum
- **Operating Temperature**: -55°C to 125°C
- **Maximum Working Voltage**: 600V, RMS, 60Hz
- **Insulation Resistance**: 5,000 megohms minimum @ 500 VDC
- **Durability**: 500 connector mating cycles
- **Contact Engaging Force**: 3.0 ounces maximum/contact
- **Contact Separating Force**: 0.5 ounces minimum/contact
- **Mating and Unmating Force**: 10 ounces maximum/contact

---

**Sample Part Number Format: MMHS-02L4-11D-018-5000**

- **MMHS**
- **HIGH-SPEED MODULES**
  - 01 – 1 Module
  - 02 – 2 Modules
  - 03 – 3 Modules
  - 04 – 4 Modules
  - 05 – 5 Modules (max. sig. 40)
  - 06 – 6 Modules (max. sig. 30)
  - 07 – 7 Modules (max. sig. 30)
  - 08 – 8 Modules (max. sig. 20)
  - 09 – 9 Modules (max. sig. 10)
  - 0A – 10 Modules (no signals)
- **BODY STYLE**
  - 1 – Plug
- **WIRE TYPE & GAUGE, QUADRAX**
  - X – See Wire Codes on page 14
- **WIRE LENGTH**
  - XXX – Wire length in inches (minimum 3")
- **HARDWARE**
  - JXX – Keying jackscrews***
  - NXX – Keying jacknuts***
  - RXX – Keying pins***
  - LXX – Keying jacknuts***
  - **BODY PLATING (LCP INSULATORS)**
    - 1 – Electroless nickel-plated aluminum shell
    - 2 – Electroless nickel-plated aluminum shell
    - 3 – Electrodeposited cadmium-plated aluminum shell
    - 4 – Gold-plated aluminum shell
  - **CONTACT CUSTOMER SERVICE**
  - CALL 512-863-5585
  - www.airborn.com

---

**NOTES**

- **Option not RoHS-compliant.**
- * Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
- ** Captivated hardware is factory-installed and non-removable.
- *** Refer to “Hardware Keying Options” on page 15.

---

**AirBorn**

---

**MMHS – Cable I/O (Male)**

MMHS cable connectors are used in cable applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

**MATERIALS and FINISHES**

- **Socket Contact**: Brass
- **Pin Contacts**: BeCu alloy strip
- **Contact Finish**: Gold plate, 50 µ" minimum
- **Shells**: Aluminum alloy 6061-T6
- **Shell Finishes**: Frey Eng. Co. compound CF3003-80 & L-II-49
- **Contact Finish**: Gold plate, 50 µ" minimum
- **Pin Contacts**: BeCu alloy strip
- **Embedment**: Glass-filled liquid crystal polymer (LCP)
- **Molded Insulators**: Glass-filled liquid crystal polymer (LCP)
- **Interfacial Seal Gaskets**: Fluorosilicone
- **EMI Gaskets**: Corrosion-resistant steel

**NOTE**: AirBorn can manufacture special configurations to your exact specifications.
**MMHS – Cable I/O (Female)**

MMHS cable connectors are used in cable applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

---

### Notes

1. All high-speed receptacles have fluoropolymer interfacial seals.
2. Option not RoHS-compliant.
3. Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
4. Captivated hardware is factory-installed and non-removable.
5. Refer to “Hardware Keying Options” on page 15.

---

### Materials and Finishes

- **Socket Contact:** Brass, BeCu alloy strip
- **Contact Finish:** Gold plate, 50 µm minimum
- **Sheets:** Aluminum alloy 6061-T6, Electroless nickel, electrodeposited cadmium, or gold-plated
- **Molded Insulators:** Glass-filled liquid crystal polymer (LCP)
- **Embedment:** Frey Eng. Co. compound CF3003-80 & L-II-49
- **Hardware:** Corrosion-resistant steel
- **Interfacial Seal Gaskets:** Fluorosilicone, EMI Gaskets:
- **Contact Separating Force:** 0.5 ounces minimum/contact
- **Mating and Unmating Force:** 10 ounces maximum/contact
- **Contact Engaging Force:** 6 ounces maximum/contact
- **Maximum Working Voltage:** 600V, RMS, 60Hz
- **Maximum Temperature:** -65°C to 125°C
- **Maximum Current:** 3 amperes maximum
- **Contact Rating:** 3 amperes maximum
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Duty Cycle:** 500 connector mating cycles

---

### Performance

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -65°C to 125°C
- **Maximum Working Voltage:** 600V, RMS, 60Hz
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Duty Cycle:** 500 connector mating cycles
- **Contact Engaging Force:** 6 ounces maximum/contact
- **Contact Separating Force:** 0.5 ounces minimum/contact
- **Mating and Unmating Force:** 10 ounces maximum/contact

---

### Dimensions

**Sample Part Number Format:** MMHS-01R1-410-006-1810

1. **MMHS**
2. **High-Speed Modules**
3. **Wire Type & Gauge, Quadrax**
4. **Wire Length**
5. **Body Style**
6. **Wire Type & Gauge, Signals**
7. **Body Plating (LCP Insulators)**
     - 1 – Electroless nickel-plated aluminum shell
     - 2 – Electroless nickel-plated aluminum shell
     - 3 – Electrodeposited cadmium-plated aluminum shell
     - 4 – Gold-plated aluminum shell
     - 5 – Gold-plated aluminum shell

---

### Signal Integrity Performance (Connectors Only)

<table>
<thead>
<tr>
<th></th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Diff. Impedance, filtered to 70 ps (20-80%)</td>
<td>100 ohm +/- 10</td>
</tr>
<tr>
<td>2 Diff. Insertion Loss</td>
<td>4.0 GHz @ -3 dB</td>
</tr>
<tr>
<td>3 Diff. Return Loss</td>
<td>1.8 GHz @ -20 dB</td>
</tr>
<tr>
<td>4 Intra-Pair</td>
<td>15 ps</td>
</tr>
</tbody>
</table>

---

### Contact Information

- **Website:** www.airborn.com
- **Phone:** (512) 863-5585
- **Email:** customer.service@airborn.com
- **Address:** 10813 Corporate Blvd., San Antonio, TX 78216
MJHS – Jumper Cable

MJHS rugged metal cable assemblies are used in jumper applications where both signal and quadrax modules are desired. These connectors come with a variety of wiring and hardware options and all cable connectors are available in custom lengths.

* Captivated hardware is factory-installed and non-removable

1. All high-speed receptacles have fluoropolymer interfacial seals.

** Refer to “Hardware Keying Options” on page 15.

Sample Part Number Format: MJHS-04R1-33D-022-5N41

SIGNAL CONTACTS
L0 – Left-side key – No signal contacts
L1 – Left-side key – 10 signal contacts
L2 – Left-side key – 20 signal contacts
L3 – Left-side key – 30 signal contacts
L4 – Left-side key – 40 signal contacts
L5 – Left-side key – 50 signal contacts
R0 – Right-side key – No signal contacts
R1 – Right-side key – 10 signal contacts
R2 – Right-side key – 20 signal contacts
R3 – Right-side key – 30 signal contacts
R4 – Right-side key – 40 signal contacts
R5 – Right-side key – 50 signal contacts

NOTES
1. All high-speed receptacles have fluoropolymer interfacial seals.

** Captivated hardware is factory-installed and non-removable.

*** Refer to “Hardware Keying Options” on page 15.

MATERIALS and FINISHES
Socket Contact: Brass
Pin Contacts: BeCu alloy strip
Contact Finish: Gold plate, 50 µ" minimum
Shells: Aluminum alloy 6061-T6
Shell Finishes: Electroless nickel, electrodeposited cadmium, or gold-plated
Molded Insulators: Glass-filled liquid crystal polymer (LCP)
Embedment: Frey Eng. Co. compound CF3003-80 & Li-I-49
Hardware: Corrosion-resistant steel
Interfacial Seal Gaskets: Fluorosilicone
EMI Gaskets: Corrosion-resistant steel

PERFORMANCE
Contact Rating: 3 amperes maximum
Operating Temperature: -55°C to 125°C
Maximum Working Voltage: 600V, RMS, 60kHz
Insulation Resistance: 5,000 megohms minimum @ 500 VDC
Durability: 500 connector mating cycles
Contact Engaging Force: 6.0 ounces maximum/contact
Contact Separating Force: 0.5 ounces minimum/contact
Mating and Unmating Force: 10 ounces maximum/contact

www.airborn.com
(512) 863-5585

MJHS-PBN-1D
MKHS – Right Angle Surface Board-Mount (Male)

MKHS are rugged metal connectors used in applications where a right angle orientation and a surface board-mount termination style are desired.

Sample Part Number Format: MKHS-06L3-100-175-3J45

NOTES
- Option not RoHS-compliant.
- Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
- Captivated hardware is factory-installed and non-removable.
- Refer to Hardware Keying Options on page 15.

MATERIALS and FINISHES
- Socket Contact: Brass
- Pin Contacts: BeCu alloy strip
- Contact Finish: Gold plate, 50 µ" minimum
- Shells: Aluminum alloy 6061-T6
- Shell Finishes: Electroless nickel, electrodeposited cadmium, or gold-plated
- Molded Insulators: Glass-filled liquid crystal polymer (LCP)
- Embedment: Frey Eng. Co. compound CF3003-80 & L-II-49
- Hardware: Corrosion-resistant steel
- Interfacial Seal Gaskets: Fluorosilicone
- EMI Gaskets: Corrosion-resistant steel

NOTE: AirBorn can manufacture special configurations to your exact specifications.

PERFORMANCE
- Contact Rating: 3 amperes maximum
- Operating Temperature: 65° C to 125° C
- Maximum Working Voltage: 600V, RMS, 60Hz
- Insulation Resistance: 5,000 megohms minimum @ 500 VDC
- Durability: 500 connector mating cycles
- Contact Engaging Force: 6.0 ounces maximum/contact
- Contact Separating Force: 0.5 ounces minimum/contact
- Mating and Unmating Force: 10 ounces maximum/contact

www.airborn.com
(512) 863-5585
MKHS – Right Angle Surface Board-Mount (Female)

MKHS are rugged metal connectors used in applications where a right angle orientation and a surface board-mount termination style are desired.

**REFERENCES**

1. **Captivated hardware is factory-installed and non-removable.**
2. Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
3. * Refer to Hardware Keying Options on page 15.
4. **Z** Refer to Hardware Keying Options on page 15.

**NOTES**

1. All high-speed receptacles have fluoropolymer interfacial seals.
2. Option not RoHS-compliant.
3. Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
4. Captivated hardware is factory-installed and non-removable.
5. Refer to Hardware Keying Options on page 15.

**MATERIALS and FINISHES**

- **Brass**
- **BeCu alloy strip**
- **Gold plate, 50 µm minimum**
- **Aluminum alloy 6061-T6**
- **Electroless nickel, electrodeposited cadmium, or gold-plated**
- **Glass-filled liquid crystal polymer (LCP)**
- **Frey Eng. Co. compound CF3003-80 & L-II-49**
- **Fluorosilicone**
- **Corrosion-resistant steel**

**PERFORMANCE**

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -65° C to 125° C
- **Maximum Working Voltage:** 600V RMS, 60Hz
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Durability:** 500 connector mating cycles
- **Contact Engaging Force:** 0.5 ounces maximum/contact
- **Contact Separating Force:** 0.1 ounces maximum/contact
- **Mating and Unmating Force:** 10 ounces maximum/contact

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MLHS – Vertical Surface Board-Mount w/Fixed Hardware (Male)

MLHS are rugged metal connectors used in applications where a vertical orientation and a surface board-mount termination style are desired. These connectors have fixed hardware.

### SIGNAL INTEGRITY PERFORMANCE (Connectors Only)

- **1.** Diff. Impedance, filtered to 70 ps (20-80%): 100 ohm +/- 10
- **2.** Diff. Insertion Loss: 4.0 GHz @ -3 dB
- **3.** Diff. Return Loss: 1.8 GHz @ -20 dB
- **4.** Intra-Pair: 15 ps

### MATERIALS and FINISHES

- **Socket Contact:** Brass
- **Pin Contacts:** BeCu alloy strip
- **Contact Finish:** Gold plate, 50 μm minimum
- **Shells:** Aluminum alloy 6061-T6
- **Shell Finishes:** Electroless nickel, electroplated cadmium, or gold-plated
- **Molded Insulators:** Glass-filled liquid crystal polymer (LCP)
- **Embedment:** Frey Eng. Co. compound CF303-80 & L-II-49
- **Hardware:** Corrosion-resistant steel
- **Interfacial Seal Gaskets:** Fluorosilicone
- **EMI Gaskets:** Corrosion-resistant steel

**NOTE:** AirBorn can manufacture special configurations to your exact specifications.

### PERFORMANCE

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -65°C to 125°C
- **Maximum Working Voltage:** 600V RMS, 60Hz
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Durability:** 500 connector mating cycles
- **Contact Engaging Force:** 6.0 ounces maximum/contact
- **Contact Separating Force:** 0.5 ounces minimum/contact
- **Mating and Unmating Force:** 10 ounces maximum/contact

### NOTES

- **Option not RoHS-compliant.**
- **Captivated hardware is factory-installed and non-removable.**
- **Refer to Hardware Keying Options on page 15.**
MLHS – Vertical Surface Board-Mount w/Fixed Hardware (Female)

MLHS are rugged metal connectors used in applications where a vertical orientation and a surface board-mount termination style are desired. These connectors have captivated fixed hardware.

**NOTES**
- Option not RoHS-compliant.
- All high-speed receptacles have fluoropolymer interfacial seals.
- Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
- Captivated hardware is factory-installed and non-removable.
- Refer to Hardware Keying Options on page 15.

**Sample Part Number Format:** MLHS-03R2-400-B77-3620

**MATERIALS and FINISHES**
- **Socket Contact:** Brass
- **Pin Contacts:** BeCu alloy strip
- **Contact Finish:** Gold plate, 50 µ“ minimum
- **Shells:** Aluminum alloy 6061-T6
- **Shell Finishes:** Electroless nickel, electrodeposited cadmium, or Gold-plated
- **Molded Insulators:** Glass-filled liquid crystal polymer (LCP)
- **Embedment:** Frey Eng. Co. compound CF3003-60 & L-I-49
- **Hardware:** Corrosion-resistant steel
- **Interfacial Seal Gaskets:** Fluorosilicone
- **EMI Gaskets:** Corrosion-resistant steel

**PERFORMANCE**
- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -65° C to 125° C
- **Maximum Working Voltage:** 600V, RMS, 60Hz
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Durability:** 500 connector mating cycles
- **Contact Engaging Force:** 6.0 ounces maximum/contact
- **Contact Separating Force:** 0.5 ounces maximum/contact
- **Mating and Unmating Force:** 10 ounces maximum/contact

**DIMENSIONS**

<table>
<thead>
<tr>
<th>Module</th>
<th>SIG 10</th>
<th>SIG 20</th>
<th>SIG 30</th>
<th>SIG 40</th>
<th>SIG 50</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>0.200</td>
<td>0.321</td>
<td>0.571</td>
<td>0.821</td>
<td>1.071</td>
</tr>
<tr>
<td>B</td>
<td>0.028</td>
<td>0.028</td>
<td>0.025</td>
<td>0.025</td>
<td>0.025</td>
</tr>
</tbody>
</table>

**SIGNAL INTEGRITY PERFORMANCE (Connectors Only)**

<table>
<thead>
<tr>
<th>Test</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diff. Impedance, filtered to 70 ps (20-80%)</td>
<td>100 ohm +/- 10</td>
</tr>
<tr>
<td>Diff. Insertion Loss</td>
<td>4.0 GHz @ -3 dB</td>
</tr>
<tr>
<td>Diff. Return Loss</td>
<td>1.8 GHz @ -20 dB</td>
</tr>
<tr>
<td>Intra-Pair</td>
<td>15 ps</td>
</tr>
</tbody>
</table>
MLHS – Vertical Surface Board-Mount w/Turning Hardware (Male)

MLHS are rugged metal connectors used in applications where a vertical orientation and a surface board-mount termination style are desired. These connectors have captivated turning hardware.

Please consult the Airborn website for the latest revision of this document prior to beginning any design work.

Sample Part Number Format: MLHS-05R2-300-775-2810


Body Style
300 – Plug

High-Speed Modules
01 – 1 Module
02 – 2 Modules
03 – 3 Modules
04 – 4 Modules
05 – 5 Modules (max. sig. 40)
06 – 6 Modules (max. sig. 30)
07 – 7 Modules (max. sig. 20)
08 – 8 Modules (max. sig. 10)
09 – 9 Modules (max. sig. 10)
0A – 10 Modules (no signals)

Termination Plating
5 – 50 µ" Gold contact, Sn/Pb alloy termination
7 – 50 µ" Gold contact, SAC305-plated termination

Contact Termination
37 – Pin: vertical SMT, staggered leads;
57 – Pin: vertical SMT, staggered leads;
Signals: high-speed, single-sided leads;
77 – Pin: vertical SMT, single-sided leads;
Signals: high-speed, staggered leads
A7 – Pin: vertical SMT, single-sided leads

Material and Finishes
Socket Contact: BeCu alloy strip
Pin Contacts: Brass
Contact Finish: Gold plate, 50 µ" minimum
Sheets: Aluminum alloy 6061-T6
Shell Finishes: Electroless nickel, electroplated cadmium, or gold-plated
Molded Insulators: Glass-filled liquid crystal polymer (LCP)
Embedment: Frey Eng. Co. compound CF3003-B6 & L-11-49
Hardware: Screw, Captivated, JXX - Keying Jackscrews, Captivated
EMI Gaskets: Fluorosilicone
Shell Finishes: Electroless nickel, electrodeposited cadmium, or gold-plated

Signal Integrity Performance (Connectors Only)

1. Diff. Impedance, filtered to 70 ps (20-80%)
2. Diff. Insertion Loss
3. Diff. Return Loss
4. Intra-Pair

Performance
Contact Rating: 3 amperes maximum
Operating Temperature: -65° C to 125° C
Maximum Working Voltage: 600V, RMS, 60Hz
Insulation Resistance: 5,000 megohms minimum @ 500 VDC
Durability: 500 connector mating cycles
Contact Engaging Force: 6.0 ounces maximum/contact
Contact Separating Force: 0.5 ounces minimum/contact
Mating and Unmating Force: 10 ounces maximum/contact

Please consult the Airborn website for the latest revision of this document prior to beginning any design work.
MLHS – Vertical Surface Board-Mount w/Turning Hardware (Female)

MLHS are rugged metal connectors used in applications where a vertical orientation and a surface board-mount termination style are desired. These connectors have turning hardware.

**NOTES**

- Option not RoHS-compliant.
- All high-speed receptacles have fluoropolymer interfacial seals.
- Left or right polarization is determined by looking at the male interface with the LONG SIDE downward. The key is the angled side of the interface.
- Captivated hardware is factory-installed and non-removable.
- Refer to Hardware Keying Options on page 15.

**MATERIALS and FINISHES**

- Socket Contact: Brass
- Pin Contacts: BeCu alloy strip
- Contact Finish: Gold plate, 50 µm minimum
- Shells: Aluminum alloy 6061-T6
- Shell Finishes: Electroless nickel, electrodeposited cadmium, or gold-plated
- Molded Insulators: Glass-filled liquid crystal polymer (LCP)
- Embodiment: Frey Eng. Co. compound CF3003-80 & L-II-49
- Hardware: Corrosion-resistant steel
- Interfacial Seal Gaskets: Fluorosilicone
- EMI Gaskets: Corrosion-resistant steel

**PERFORMANCE**

- Contact Rating: 3 amperes maximum
- Operating Temperature: -65°C to 125°C
- Maximum Working Voltage: 600V, RMS, 60Hz
- Insulation Resistance: 5,000 megohms minimum @ 500 VDC
- Durability: 500 connector mating cycles
- Contact Engaging Force: 10 ounces maximum/contact
- Contact Separating Force: 0.5 ounces minimum/contact
- Mating and Unmating Force: 10 ounces maximum/contact

**DIMENSIONS**

Sample Part Number Format: MLHS-03L3-800-477-2J21

**SIGNAL INTEGRITY PERFORMANCE** (Connectors Only)

| 1 | Diff. Impedance, filtered to 70 ps (20-80%) | 100 ohm +/- 2% |
| 2 | Diff. Insertion Loss | 4.0 GHz @ -3 dB |
| 3 | Diff. Return Loss | 1.8 GHz @ -20 dB |
| 4 | Intra-Pair | 15 ps |

**CALL 512-863-5585 x6400**

www.airborn.com

(512) 863-5585

MLHSTF-PNB-1D
QUADRAX CABLE CONSTRUCTION

Conductors: Silver-plated copper alloy
Insulation: FEP
Cable: Planetary twist with filler in core
Binder: PTFE tape
Inner Shield: Aluminized mylar facing out
Outer Shield: Braided silver-plated copper (95% min. coverage)
Marker Tape: Polyimide tape
Jacket: Translucent FEP
Differential Pairs: Pair 1 - blue (position M1), orange (position M3)
Pair 2 - green (position M2), red (position M4)
Temperature: -55°C to +125°C
Differential Impedance: 100 Ω ±10 Ω; 110 Ω ±6 Ω
Delay Skew within Pair: 4.0 ps/ft max.

QUADRAX WIRE CODES

<table>
<thead>
<tr>
<th>Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>100 Ω 24 AWG</td>
</tr>
<tr>
<td>2</td>
<td>100 Ω 26 AWG</td>
</tr>
<tr>
<td>3</td>
<td>100 Ω 28 AWG</td>
</tr>
<tr>
<td>4</td>
<td>100 Ω 30 AWG</td>
</tr>
<tr>
<td>5</td>
<td>110 Ω 24 AWG</td>
</tr>
<tr>
<td>6</td>
<td>110 Ω 26 AWG</td>
</tr>
<tr>
<td>7</td>
<td>110 Ω 28 AWG</td>
</tr>
<tr>
<td>8</td>
<td>110 Ω 30 AWG</td>
</tr>
</tbody>
</table>

NOTES

1. Additional high-speed cable types are available as standard options (i.e., drain wire, TwinAx, shielded pairs, shielded pair quad, twisted pair quad, etc.). Contact AirBorn for construction specifications of alternate cable.
2. Additional wire types are available as standard options (i.e., twisted pair, shielded, braid, etc.).
## SIGNAL WIRE CODES

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>SAE AS22759/11-24</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>B</td>
<td>SAE AS22759/11-24</td>
<td>Non-repeating colors per MIL-STD-681</td>
</tr>
<tr>
<td>C</td>
<td>SAE AS22759/11-24</td>
<td>White</td>
</tr>
<tr>
<td>D</td>
<td>SAE AS22759/11-26</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>E</td>
<td>SAE AS22759/11-26</td>
<td>Non-repeating colors per MIL-STD-681</td>
</tr>
<tr>
<td>F</td>
<td>SAE AS22759/11-26</td>
<td>White</td>
</tr>
<tr>
<td>G</td>
<td>SAE AS22759/11-28</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>H</td>
<td>SAE AS22759/11-28</td>
<td>White</td>
</tr>
<tr>
<td>J</td>
<td>SAE AS22759/33-24*</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>K</td>
<td>SAE AS22759/33-24*</td>
<td>White</td>
</tr>
<tr>
<td>L</td>
<td>SAE AS22759/33-26*</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>M</td>
<td>SAE AS22759/33-26*</td>
<td>White</td>
</tr>
<tr>
<td>N</td>
<td>SAE AS22759/33-28*</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>P</td>
<td>SAE AS22759/33-28*</td>
<td>White</td>
</tr>
<tr>
<td>Q</td>
<td>SAE AS22759/33-30*</td>
<td>Ten repeating colors per M83513</td>
</tr>
<tr>
<td>R</td>
<td>SAE AS2275933-30*</td>
<td>White</td>
</tr>
<tr>
<td>S</td>
<td>NEMA HP3-EXBEB</td>
<td>24 AWG non-repeating colors per MIL-STD-681</td>
</tr>
<tr>
<td>T</td>
<td>NEMA HP3-EXBEB</td>
<td>24 AWG white</td>
</tr>
<tr>
<td>U</td>
<td>NEMA HP3-EXBDB</td>
<td>26 AWG non-repeating colors per MIL-STD-681</td>
</tr>
<tr>
<td>V</td>
<td>NEMA HP3-EXBDB</td>
<td>26 AWG white</td>
</tr>
<tr>
<td>W</td>
<td>NEMA HP3-EXBCB</td>
<td>28 AWG non-repeating colors per MIL-STD-681</td>
</tr>
<tr>
<td>X</td>
<td>NEMA HP3-EXBCB</td>
<td>28 AWG white</td>
</tr>
<tr>
<td>Y</td>
<td>NEMA HP3-EXBBB</td>
<td>30 AWG non-repeating colors per M83513</td>
</tr>
<tr>
<td>Z</td>
<td>NEMA HP3-EXBBB</td>
<td>30 AWG white</td>
</tr>
</tbody>
</table>

* Corrosion has been experienced on connectors that are pre-wired with M22759/33 and stored in sealed environments. Exercise caution in packaging and storing when using this wire.

* Option is not RoHS-compliant
Select the appropriate two-digit number above and include as the last two digits of the hardware code in the part number. (Keying is factory-installed and non-removable.)

Example: MMHS-03L2-12D-197-2J11
MKHS-03R2-200-275-2N11