M-Series:
High-Temperature Connectors
MMHT – Single-Row I/O Cable (Male)

MMHT interconnects are used in rigorous, high-temperature applications and have a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

NOTES

* 0.018 diameter
** Captivated hardware is factory-installed and non-removable

MATERIALS and FINISHES

Pin Contacts: Copper-based alloy strip
Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
Molded Insulators: High-temp thermoplastic
Embedment: High-temp epoxy
Hardware: Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35
Tolerances: Angles: ±5°
(Unless otherwise specified)
Wire lengths – insulated/stranded: ±1.00"; uninsulated/solid: ±0.021.00"

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

PERFORMANCE

Contact Rating: 3 amperes maximum
Operating Temperature: -55°C to 205°C
Test 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

ORDER FORM

Sample Part Number Format: MMHT-112-015-161-41WQ

MMHT-112-015-161-41WQ

High-Reliability Contact
MIL-DTL-83513
MMHT SINGLE-ROW MALE DRAWINGS

### Dimensions

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>B</th>
<th>C (MAX)</th>
<th>D</th>
<th>E (MAX)</th>
<th>HW</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>.655</td>
<td>.475</td>
<td>.260</td>
<td>.297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.705</td>
<td>.525</td>
<td>.310</td>
<td>.347</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.755</td>
<td>.575</td>
<td>.360</td>
<td>.397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.905</td>
<td>.725</td>
<td>.510</td>
<td>.547</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1.055</td>
<td>.875</td>
<td>.660</td>
<td>.697</td>
<td></td>
<td>#2-56 UNC THD (0.092 THRU)</td>
</tr>
<tr>
<td>15</td>
<td>1.205</td>
<td>1.025</td>
<td>.810</td>
<td>.847</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>1.505</td>
<td>1.325</td>
<td>1.110</td>
<td>1.147</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.705</td>
<td>1.525</td>
<td>1.310</td>
<td>1.347</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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

---

www.airborn.com
(512) 863-5585

MMHTM-DIM-1B
(CTM183)
MMHT – Single-Row I/O Cable (Female)

MMHT interconnects are used in rigorous, high-temperature applications and have a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

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

* 0.018 diameter

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

---

### ORDER FORM

Sample Part Number Format: MMHT-122-015-261-22WQ

<table>
<thead>
<tr>
<th>SERIES</th>
<th>CODE</th>
<th>ENTER CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.050” Rugged Metal I/O Connector (Female)</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ROWS</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 1-Row (4-25 contacts)</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BODY STYLE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – Receptacle, straight</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>BODY MATERIAL</th>
<th>SIZE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 – High-temp thermoplastic with electroless nickel shell</td>
<td>004 – 4 Contacts</td>
<td>-</td>
</tr>
<tr>
<td>5 – High-temp with stainless steel shell</td>
<td>009 – 9 Contacts</td>
<td>-</td>
</tr>
<tr>
<td>006 – 6 Contacts</td>
<td>012 – 12 Contacts</td>
<td>-</td>
</tr>
<tr>
<td>008 – 8 Contacts</td>
<td>015 – 15 Contacts</td>
<td>-</td>
</tr>
<tr>
<td>016 – 16 Contacts</td>
<td>021 – 21 Contacts</td>
<td>-</td>
</tr>
<tr>
<td>022 – 22 Contacts</td>
<td>025 – 25 Contacts</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PLATING</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 – 50 µ&quot; Au contacts</td>
<td>-</td>
</tr>
<tr>
<td>3 – 50 µ&quot; Au contacts; Au terminations</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTACT/TERMINATION TYPE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>2A – Socket, straight, 24 awg solder cup</td>
<td>-</td>
</tr>
<tr>
<td>21 – Socket, straight, 26 awg solder cup</td>
<td>-</td>
</tr>
<tr>
<td>2E – Socket, straight, 0.125” lead length*</td>
<td>-</td>
</tr>
<tr>
<td>23 – Socket, straight, 0.250” lead length*</td>
<td>-</td>
</tr>
<tr>
<td>24 – Socket, straight, 0.500” lead length*</td>
<td>-</td>
</tr>
<tr>
<td>26 – Socket, straight, crimped wire</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>HARDWARE</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 – No hardware</td>
<td>-</td>
</tr>
<tr>
<td>22 – Two jacknut assemblies</td>
<td>-</td>
</tr>
<tr>
<td>41 – Two turning jackscrews, allen head</td>
<td>-</td>
</tr>
<tr>
<td>45 – Two turning jackscrews, allen head, captivated**</td>
<td>-</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>WIRES</th>
<th>CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>00 – None</td>
<td>-</td>
</tr>
<tr>
<td>XX – See Wiring Codes</td>
<td>-</td>
</tr>
</tbody>
</table>

### NOTES

* 0.018 diameter

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

### MATERIALS and FINISHES

- **Socket Contact:** Brass per ASTM B121/B121M or ASTM B168/B16M or ASTM B453
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T6511 per SAE AMS-QQ-A-200/8
- **Shell Finishes:** Electroless nickel per SAE AMS-2402, Class 3, 500 µ” minimum or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-QQ-A-200/8
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Electroless nickel per SAE AMS-2402, Class 3, 500 µ” minimum or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-QQ-A-200/8**
- **Molded Insulators:** High-temp thermoplastic
- **Embedment:** High-temp epoxy
- **Hardware:** Corrosion-resistant steel per SAE AMS-2422/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35
- **Interfacial Seal Gaskets:** Fluorosilicone per SAE AMS-R-25988
- **Tolerances:** Angles: ±6°
- **Decimals:** ±0.010"; Fractions: ±1/64"
- **Wire lengths:** insulated/stranded: ±1.0"/±0.0" uninsulated/foil: ±0.025"/±0.0"

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

### PERFORMANCE

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** 0° to 250° C
- **Test Voltage:** 600V, RMS, 60Hz
- **Insulation Resistance:** 5,000 megohms minimum @ 500 VDC
- **Durations:** 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.
MMHT SINGLE-ROW FEMALE DRAWINGS

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT – Single-Row, Right Angle Board-Mount (Male)

MKHT interconnects are used in rugged, high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save space on the board.

**Pin Contacts:**
- Copper-based alloy strip
- Contact Finish:  Gold plate per ASTM B488, SAE AMS-2422
- Shell Finishes:  Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
- Molded Insulators:  High-temp thermoplastic
- Embedment:  High-temp epoxy
- Hardware:  Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35

**Tolerances:**
- Angles: ±5° (unless otherwise specified)
- Decimals: ±0.010"; Fractions: ±1/64"
- Wire lengths – insulated/stranded: +1",010/-0,010"
- uninsulated/solid: +0,021/-0,000"

**Contact Rating:** 3 amperes maximum

**CONTACT TERMINATION TYPE**
- 32 – Pin, right angle, 0,109’’ x 0,020’’ dia
- 33 – Pin, right angle, 0,140’’ x 0,020’’ dia
- 34 – Pin, right angle, 0,172’’ x 0,020’’ dia
- A2 – Pin, right angle, 0,109’’ x 0,020’’ dia with ground pin option
- A3 – Pin, right angle, 0,140’’ x 0,020’’ dia with ground pin option
- A4 – Pin, right angle, 0,172’’ x 0,020’’ dia with ground pin option

**ORDER FORM**

Sample Part Number Format: MKHT-152-015-325-220S

**NOTES**

AirBorn can manufacture special configurations to your exact specifications.

**MATERIALS and FINISHES**

- Pin Contacts:  Copper-based alloy strip
- Contact Finish:  Gold plate per ASTM B488, SAE AMS-2422
- Shell Finishes:  Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
- Molded Insulators:  High-temp thermoplastic
- Embedment:  High-temp epoxy
- Hardware:  Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35

**Tolerances:**
- Angles: ±5° (unless otherwise specified)
- Decimals: ±0.010"; Fractions: ±1/64"
- Wire lengths – insulated/stranded: +1",010/-0,010"
- uninsulated/solid: +0,021/-0,000"

**PERFORMANCE**

- Contact Rating: 3 amperes maximum
- Operating Temperature: -55°C to 205°C
- Test 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

**MKHT-152-015-325-220S**

High-Reliability Contact

MIL-DTL-83513

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT SINGLE-ROW MALE DRAWINGS

Right Angle
Narrow Footprint
Threaded Inserts
Interfacial Seal

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D (MAX)</th>
<th>E (MAX)</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>.655</td>
<td>.260</td>
<td>.475</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>.705</td>
<td>.310</td>
<td>.525</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.755</td>
<td>.360</td>
<td>.575</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.905</td>
<td>.510</td>
<td>.725</td>
<td>.110</td>
<td>.186</td>
<td>#2-56 UNC THREADED INSERT</td>
</tr>
<tr>
<td>12</td>
<td>1.055</td>
<td>.660</td>
<td>.875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.205</td>
<td>.810</td>
<td>1.025</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>1.505</td>
<td>1.110</td>
<td>1.325</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.705</td>
<td>1.310</td>
<td>1.525</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
Recommended PC Board Layouts – MKHT Male

Right Angle
Single Row
Standard Polarization
Sizes 4–9

PC BOARD LAYOUT COMPONENT SIDE

CONNECTOR MATING FACE

GROUND PIN OPTIONAL
Recommended PC Board Layouts – MKHT Male

- Right Angle
- Single Row
- Standard Polarization
- Sizes 12–25
MKHT – Single-Row, Right Angle Board-Mount (Female)

MKHT interconnects are used in rugged, high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save space on the board.

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

Sample Part Number Format: MKHT-162-015-435-220S

ORDER FORM

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ENTER CODE</th>
<th>SIZE</th>
<th>ENTER CODE</th>
<th>PLATING</th>
<th>ENTER CODE</th>
<th>HARDWARE</th>
<th>ENTER CODE</th>
<th>WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>MKHT</td>
<td>0.050&quot; Rugged Metal Right Angle PTH Connector (Female)</td>
<td>004 – 4 Contacts</td>
<td>3 – 50 µ&quot; Au contacts; Au terminations</td>
<td>00 – No hardware</td>
<td>0S – Standard body polarization</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ROWS</td>
<td>1 – 1-Row (4-25 contacts)</td>
<td>005 – 5 Contacts</td>
<td>22 – Two fixed jacknut assemblies</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY STYLE</td>
<td>6 – Receptacle, right angle, standard footprint with thread inserts and interfacial seal</td>
<td>006 – 6 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>2 – High-temp thermoplastic with electroless nickel shell</td>
<td>009 – 9 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>3 – High-temp thermoplastic with stainless steel shell</td>
<td>012 – 12 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>4 – High-temp thermoplastic with stainless steel shell</td>
<td>015 – 15 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>5 – High-temp thermoplastic with stainless steel shell</td>
<td>021 – 21 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BODY MATERIAL</td>
<td>6 – Receptacle, right angle, standard footprint with thread inserts and interfacial seal</td>
<td>025 – 25 Contacts</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>43 – Socket, right angle, 0.109&quot; x 0.020&quot; dia</td>
<td>0S – Standard body polarization</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>44 – Socket, right angle, 0.140&quot; x 0.020&quot; dia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>45 – Socket, right angle, 0.172&quot; x 0.020&quot; dia</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>B3 – Socket, right angle, 0.109&quot; x 0.020&quot; dia with ground pin option</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>B4 – Socket, right angle, 0.140&quot; x 0.020&quot; dia with ground pin option</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONTACT/TERMINATION TYPE</td>
<td>B5 – Socket, right angle, 0.172&quot; x 0.020&quot; dia with ground pin option</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

NOTES

MATERIALS and FINISHES

- Socket Contact: Brass per ASTM B121/B121M or ASTM B168/B168M or ASTM B453
- Contact Finish: Gold plate per ASTM B448, SAE AMS-2422
- Shells: Aluminum alloy 6061-T6 per SAE AMS-2200 or 6061-T6511 per SAE AMS-QQ-A-200/8
- Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or 303 stainless steel per ASTM A581/A581M or ASTM A562/A562M, passivated per SAE AMS-2760
- Molded Insulators: High-temp thermoplastic
- Embedment: High-temp epoxy
- Hardware: Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35
- Interfacial Seal Gaskets: Fluorosilicone per SAE AMS-R-25988
- Tolerances: Angles: ±5° (unless otherwise specified)
- Wire lengths – insulated/stranded: ±0.010", ±0.025"/±0.025"
- Wire lengths – uninsulated/solid: ±0.025"/±0.025"

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

PERFORMANCE

- Contact Rating: 3 amperes maximum
- Operating Temperature: -55°C to 205°C
- Test Voltage: 600V, RMS, 60Hz
- Insulation Resistance: 5,000 megohms minimum @ 500 VDC
- Durability: 500 connector mating cycles
- Contact Engaging Force: 0.0 ounces maximum/contact
- Contact Separating Force: 0.5 ounces minimum/contact
- Mating and Unmating Force: 10 ounces maximum/contact

MKHTF-PNB-1B

CTM186

www.airborn.com
(512) 863-5585
MKHT SINGLE-ROW FEMALE DRAWINGS

Right Angle
Narrow Footprint
Threaded Inserts
Interfacial Seal

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

<table>
<thead>
<tr>
<th>SIZE</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D (MAX)</th>
<th>E (MAX)</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>.655</td>
<td>.297</td>
<td>.475</td>
<td></td>
<td></td>
<td>#2-56 UNC Threaded Insert</td>
</tr>
<tr>
<td>5</td>
<td>.705</td>
<td>.347</td>
<td>.525</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>.755</td>
<td>.397</td>
<td>.575</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>.905</td>
<td>.547</td>
<td>.725</td>
<td>.142</td>
<td>.198</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>1.055</td>
<td>.697</td>
<td>.875</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>1.205</td>
<td>.847</td>
<td>1.025</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td>1.505</td>
<td>1.147</td>
<td>1.325</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td>1.705</td>
<td>1.347</td>
<td>1.525</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MKHTF-DIM-1
(CTM185)
Recommended PC Board Layouts – MKHT Female

- Right Angle
- Single Row
- Standard Polarization
- Sizes 4–9

PC BOARD LAYOUT
COMPONENT SIDE

CONNECTOR MATING FACE

GROUND PIN OPTIONAL

MKHTF-PCB-1B
(CTM187)
Recommended PC Board Layouts – MKHT Female

Right Angle
Single Row
Standard Polarization
Sizes 12–25

PC BOARD LAYOUT
COMPONENT SIDE

CONNECTOR MATING FACE

GROUND PIN OPTIONAL

MKHTF-PCB-2B
(CTM188)

www.airborn.com
(512) 863-5585
MMHT – I/O Cable (Male)

MMHT interconnects are used in high-temperature applications. These rugged cable connectors come with a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

AirBorn can manufacture special configurations to your exact specifications.

Please reference MMHT-008 for more detail.

ORDER FORM

Sample Part Number Format: MMHT-212-025-161-41WA

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ROWS</th>
<th>BODY STYLE</th>
<th>BODY MATERIAL</th>
<th>SIZE</th>
<th>PLATING</th>
<th>HARDWARE</th>
<th>WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.050” Rugged Metal I/O Connector (Male)</td>
<td>2 – 2-Row (9-37 contacts)</td>
<td>1 – Plug</td>
<td>2 – High-temp thermoplastic with electroless nickel shell</td>
<td>009 – 9 Contacts</td>
<td>1 – 50 µ” Au contacts</td>
<td>00 – No hardware</td>
<td></td>
</tr>
<tr>
<td>3 – 3-Row (51 &amp; 69 contacts)</td>
<td></td>
<td></td>
<td>4 – High-temp thermoplastic with hard black anodized shell</td>
<td>015 – 15 Contacts</td>
<td>3 – 50 µ” Au contacts; Au terminations (solder cup, pigtails)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4 – 4-Row (100 contacts)</td>
<td></td>
<td></td>
<td>5 – High-temp with stainless steel shell</td>
<td>021 – 21 Contacts</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

MMHT-205-161-41WA

High-Reliability Contact

MIL-DTL-83513

NOTES

* 0.018 diameter
** Captivated hardware is factory-installed and non-removable
*** Numbers in parentheses are to be used when ordering size 100
† Leads are soft copper, suitable for forming.

MATERIALS and FINISHES

Pin Contacts: Copper-based alloy strip
Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
Shells: Aluminum alloy 6001-T6 per SAE AMS-QQ-A-250/11
or 6061-T6511 per SAE AMS-QQ-A-200/8
Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ” minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A562/A562M, passivated per SAE AMS-2700
Molded Insulators: High-temp thermoplastic
Embedment: High-temp epoxy
Hardware: Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35
Tolerances: Angles: ±5°
( unless otherwise specified)
±0.02”/-0.0”

WIRE – Insulated/stranded: 1.0/0.0“
uninsulated/solid: 0.027/0.0”

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

PERFORMANCE

Contact Rating: 3 amperes maximum
Operating Temperature: -55° C to 205° C
Test 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
MMHT MALE DRAWINGS

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

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>E (MAX)</th>
<th>H</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.334</td>
<td>.390</td>
<td>.565</td>
<td></td>
<td>.270</td>
<td>.298 #2-56 UNC THD (Ø.092 THRU)</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.484</td>
<td>.540</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.634</td>
<td>.690</td>
<td>.865</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.734</td>
<td>.790</td>
<td>.965</td>
<td></td>
<td>.310</td>
<td>.341 #4-40 UNC THD (Ø.147 THRU)</td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.884</td>
<td>.940</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.034</td>
<td>1.090</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>.984</td>
<td>1.040</td>
<td>1.215</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.384</td>
<td>1.432</td>
<td>1.800</td>
<td>.360</td>
<td>.384</td>
<td></td>
</tr>
</tbody>
</table>

Straight Multi-Row Cable-to-Cable
**MMHT – I/O Cable (Female)**

MMHT interconnects are used in high-temperature applications. These rugged cable connectors come with a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

**NOTES**
- * 0.018 diameter
- ** Captivated hardware is factory-installed and non-removable
- *** Numbers in parentheses are to be used when ordering size 100
- † Leads are soft copper, suitable for forming.

**MATERIALS and FINISHES**

- **Socket Contact:** Brass per ASTM B121/B121M or ASTM B16/B16M or ASTM B453
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T651 per SAE AMS-QQ-A-200/8
- **Shell Finishes:** Electroless nickel per SAE AMS-2420, Class 3, 500 µin minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A562/A562M, passivated per SAE AMS-2700
- **Molded Insulators:** High-temp thermoplastic
- **Embodiment:** High-temp epoxy
- **Hardware:** Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A867, SAE AMS-QQ-P-35
- **Interfacial Seal Gaskets:** Fluoroelastomer per SAE AMS-R-25988

**Dimensions**

<table>
<thead>
<tr>
<th>Size</th>
<th>Rows</th>
<th>A (Max)</th>
<th>B</th>
<th>C</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>1</td>
<td>.755</td>
<td>.500</td>
<td>.540</td>
<td>.715</td>
</tr>
<tr>
<td>10</td>
<td>2</td>
<td>1.075</td>
<td>.700</td>
<td>.690</td>
<td>.865</td>
</tr>
<tr>
<td>20</td>
<td>3</td>
<td>1.175</td>
<td>.800</td>
<td>.790</td>
<td>.865</td>
</tr>
<tr>
<td>30</td>
<td>4</td>
<td>1.325</td>
<td>.950</td>
<td>1.115</td>
<td></td>
</tr>
<tr>
<td>53</td>
<td>3</td>
<td>1.425</td>
<td>1.050</td>
<td>1.040</td>
<td>1.215</td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.598</td>
<td>1.432</td>
<td>1.800</td>
</tr>
</tbody>
</table>

**Performance**

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -55°C to 205°C
- **Test 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

**Sample Part Number Format:**

MMHT-222-025-2A3-2200

**ORDER FORM**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>ROWS</th>
<th>BODY STYLE</th>
<th>BODY MATERIAL</th>
<th>SIZE</th>
<th>PLATING</th>
<th>HARDWARE</th>
<th>WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.050&quot; Rugged Metal I/O Connector (Female)</td>
<td>2 – 2-Row (9-37 contacts)</td>
<td>2 – Receptacle</td>
<td>2 – High-temp thermoplastic with electroless nickel shell</td>
<td>009 – 9 Contacts</td>
<td>1 – 50 µ Au contacts (crimp wire)</td>
<td>00 – None</td>
<td>00 – None</td>
</tr>
</tbody>
</table>

**High-Reliability Contact**

MIL-DTL-83513

**Contact Customer Service**

CALL 512-863-5585 x6464

www.airborn.com

(512) 863-5585
MMHT FEMALE DRAWINGS

Straight
Multi-Row
Cable-to-Cable

### Dimensions

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>E (MAX)</th>
<th>H</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.400</td>
<td>.390</td>
<td>.565</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.550</td>
<td>.540</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.700</td>
<td>.690</td>
<td>.865</td>
<td></td>
<td>.270</td>
<td>#2-56 UNC THD (Ø.092 THRU)</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.800</td>
<td>.790</td>
<td>.965</td>
<td></td>
<td>.298</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.950</td>
<td>.940</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.100</td>
<td>1.090</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>1.050</td>
<td>1.040</td>
<td>1.215</td>
<td>.310</td>
<td>.341</td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.508</td>
<td>1.432</td>
<td>1.800</td>
<td>.360</td>
<td>.384</td>
<td>#4-40 UNC THD (Ø.147 THRU)</td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MKHT – Right Angle Board-Mount (Male)

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

MATERIALS and FINISHES

Pin Contacts: Copper-based alloy strip
Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
Molded Insulators: High-temp thermoplastic
Embedment: High-temp epoxy

PERFORMANCE

Contact Rating: 3 amperes maximum
Operating Temperature: -55°C to 205°C
Test 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

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

Sample Part Number Format: MKHT-252-031-323-220S

Order Form

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT MALE DRAWINGS

DIMENSIONS

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.334</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td>.420</td>
<td>.420</td>
<td>.775</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.484</td>
<td>.715</td>
<td>.120</td>
<td>.298</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.634</td>
<td>.865</td>
<td>.120</td>
<td>.298</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.734</td>
<td>.965</td>
<td>.120</td>
<td>.298</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.884</td>
<td>1.115</td>
<td>.150</td>
<td>.341</td>
<td>.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.034</td>
<td>1.265</td>
<td>.150</td>
<td>.341</td>
<td>.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>.984</td>
<td>1.215</td>
<td>.150</td>
<td>.341</td>
<td>.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td>1.725</td>
<td>1.284</td>
<td>1.515</td>
<td>.150</td>
<td>.341</td>
<td>.300</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.384</td>
<td>1.800</td>
<td>.200</td>
<td>.384</td>
<td>.400</td>
<td></td>
<td></td>
<td></td>
<td>#4-40 UNC THD</td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MKHT – Right Angle Board-Mount with Blind Clearance Cut (Male)

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

MATERIALS and FINISHES

- Pin Contacts: Copper-based alloy strip
- Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
- Shells: Electroless nickel per SAE AMS-2420, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
- Molded Insulators: High-temp thermoplastic
- Embedment: High-temp epoxy
- Hardware: Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35

Tolerances: Angles: ±45° (unless otherwise specified)
- Wire lengths – insulated/stranded: +1.0/0.0", uninsulated/solid: ±0.021/0.0"
Right Angle
Blind Clearance Cut
Narrow Footprint
Threaded Inserts

### Dimensions

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.334</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.775</td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.484</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
<td>.298</td>
<td></td>
<td></td>
<td></td>
<td>.925</td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.634</td>
<td>.865</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.067</td>
<td>.420</td>
<td>.420</td>
<td>1.075</td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.734</td>
<td>.965</td>
<td>.120</td>
<td></td>
<td></td>
<td></td>
<td>.183</td>
<td></td>
<td></td>
<td>1.175</td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.884</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.080</td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.034</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.180</td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>.984</td>
<td>1.215</td>
<td>.150</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.087</td>
<td>.300</td>
<td>.650</td>
<td>#4-40 UNC THD</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td>1.725</td>
<td>1.284</td>
<td>1.515</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.755</td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.384</td>
<td>1.800</td>
<td>.200</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.137</td>
<td>.400</td>
<td>1.000</td>
<td>#4-40 UNC INSERT</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MKHT – Right Angle Board-Mount with Thru Clearance Cut (Male)

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

MATERIALS and FINISHES

Pin Contacts: Copper-based alloy strip
Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
Molded Insulators: High-temp thermoplastic
Embedment: High-temp epoxy
Hardware: Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35

Tolerances:

Angles: 45° (unless otherwise specified)
Decimal: ±0.010"; Fractions: ±1/64" Wire lengths – insulated/stranded: +1.00"/0.00" uninsulated/sold: +0.027"/0.00"

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

CONTACT/TERMINATION TYPE

32 – Pin, right angle, 0.109" 33 – Pin, right angle, 0.140" 34 – Pin, right angle, 0.172" x 0.020" dia

ORDER FORM

Sample Part Number Format: MKHT-2R2-031-335-220S

MKHT
SERIES
0.050” Rugged Metal PC Board-Mount Connector (Male)
ROWS
2 – 2-Row (9-37 contacts) 3 – 3-Row (51 & 69 contacts)
BODY STYLE
R – Plug, right angle (thru clearance cut), narrow footprint with threaded insert
BODY MATERIAL
2 – High-temp thermoplastic with electroless nickel shell 4 – High-temp thermoplastic with hard black anodized shell 5 – High-temp with stainless steel shell
SIZE
PLATING
3 – 50 µ" Au contacts; Au terminations
WIRING
00 – No hardware 22 – Two fixed jacknut assemblies

MKHTM-PNB-4H
(CTM032)
MKHT (THRU CLEARANCE CUT) MALE DRAWINGS

Right Angle
Thru Clearance Cut
Narrow Footprint
Threaded Inserts

**DIMENSIONS**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.334</td>
<td>.185</td>
<td>.565</td>
<td>.020</td>
<td>.298</td>
<td>.183</td>
<td>.067</td>
<td>.420</td>
<td>.420</td>
<td>.775</td>
<td>.925</td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.484</td>
<td></td>
<td>.715</td>
<td></td>
<td>.865</td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.634</td>
<td></td>
<td>.965</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.734</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.884</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.034</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>.984</td>
<td>.228</td>
<td>1.215</td>
<td>.150</td>
<td>.341</td>
<td>.087</td>
<td>.300</td>
<td>.430</td>
<td></td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td>1.725</td>
<td>1.284</td>
<td></td>
<td>1.515</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
Recommended PC Board Layouts – MKHT Male

Right Angle
Narrow Footprint
Standard Polarization
Sizes 9–31
Recommended PC Board Layouts – MKHT Male

Right Angle
Narrow Footprint
Standard Polarization
Sizes 37–69
MKHT – Right Angle Board-Mount (Female)

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

**MATERIALS and FINISHES**

- **Socket Contact:** Brass per ASTM B121/B121M or ASTM B16/B16M or ASTM B453
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T6511 per SAE AMS-QQ-A-200/8
- **Shell Finishes:** Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A562/A562M, passivated per SAE AMS-2700
- **Molded Insulators:** High-temp thermoplastic
- **Embedment:** High-temp epoxy
- **Interfacial Seal Gaskets:** Fluorosilicone per SAE AMS-R-25988
- **Hardware:** Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35
- **Contact/termination Type:** Au terminations
- **Performance:**
  - **Contact Rating:** 3 amperes maximum
  - **Operating Temperature:** -55°C to 205°C
  - **Test 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**

* Number in parentheses to be used when ordering size 100

AirBorn can manufacture special configurations to your exact specifications.
### MKHT FEMALE DRAWINGS

**Right Angle**

**Narrow Footprint**

**Threaded Inserts**

**Interfacial Seal**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.400</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td>.298</td>
<td>.250</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.550</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.700</td>
<td>.865</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.800</td>
<td>.965</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.950</td>
<td>1.115</td>
<td>.120</td>
<td>.450</td>
<td>.520</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.100</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>1.050</td>
<td>1.215</td>
<td>.150</td>
<td>.341</td>
<td>.300</td>
<td>.430</td>
<td>.650</td>
<td>1.220</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td>1.725</td>
<td>1.350</td>
<td>1.515</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>100</td>
<td>4</td>
<td>2.160</td>
<td>1.508</td>
<td>1.800</td>
<td>.200</td>
<td>.384</td>
<td>.400</td>
<td>.590</td>
<td>1.000</td>
<td>1.810</td>
<td>#4-40 UNC THD</td>
</tr>
</tbody>
</table>

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT – Right Angle Board-Mount with Blind Clearance Cut (Female)

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

ORDER FORM

Sample Part Number Format: MKHT-2V2-031-445-220S

MATERIALS and FINISHES

Pin Contacts: Copper-based alloy strip
Contact Finish:
  - Gold plate per ASTM B488, SAE AMS-2422
Shell Finishes:
  - Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
Molded Insulators: High-temp thermoplastic
Embedment: High-temp epoxy
Hardware:
  - Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS- QQ-P-35

Tolerances:
  - Angles: ±5° (unless otherwise specified)
  - Decimals: ±0.010"; Fractions: ±1/64"
  - Wire lengths – insulated/stranded: +1.000"/−0.020"
  - uninsulated/solid: +0.020"/−0.000"

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

CONTACT/TERMINATION TYPE

43 – Socket, right angle, 0.109" x 0.020" dia
44 – Socket, right angle, 0.140" x 0.020" dia
45 – Socket, right angle, 0.172" x 0.020" dia

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT (BLIND CLEARANCE CUT) FEMALE DRAWINGS

Contact Customer Service
Call 512-863-5585
x6464

Right Angle
Blind Clearance Cut
Narrow Footprint
Threaded Inserts

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

MKHTF-DIM-3
(CTM175)

www.airborn.com
(512) 863-5585

29
**MKHT – Right Angle Board-Mount with Thru Clearance Cut (Female)**

MKHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

### MATERIALS and FINISHES

**Pin Contacts:** Copper-based alloy strip  
**Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422  
**Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T6511 per SAE AMS-QQ-A-200/8  
**Shell Finishes:** Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700  
**Molded Insulators:** High-temp thermoplastic  
**Embedment:** High-temp epoxy  
**Hardware:** Corrosion-resistant steel per ASTM A582/A582M, passivated per SAE AMS-QQ-P-35 (unless otherwise specified)  
**Tolerances:** Angles: ±45°  
Decimal: ±0.010"; Fractions: ±1/64"  
Wire lengths – insulated/stranded: +1.0/0.0"  
uninsulated/solid: +0.027/0.0"  

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

### CONTACT/TERMINATION TYPE

- 43 – Socket, right angle, 0.100" x 0.020" dia  
- 44 – Socket, right angle, 0.140" x 0.020" dia  
- 45 – Socket, right angle, 0.172" x 0.020" dia

### PERFORMANCE

- **Contact Rating:** 3 amperes maximum  
- **Operating Temperature:** -55°C to 205°C  
- **Test 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

**MKHT-2S2-031-445-220S**

High-Reliability Contact  
MIL-DTL-83513

Please consult the AirBorn website for the latest revision of this document prior to beginning any design work.
MKHT (THRU CLEARANCE CUT) FEMALE DRAWINGS

Right Angle
Thru Clearance Cut
Narrow Footprint
Threaded Inserts

DIMENSIONS

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A (MAX)</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.755</td>
<td>.400</td>
<td></td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.775</td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.925</td>
<td>.550</td>
<td>.715</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td>.420</td>
<td>.925</td>
<td>.1075</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.075</td>
<td>.700</td>
<td>.865</td>
<td>.120</td>
<td>.298</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td>.1175</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.175</td>
<td>.800</td>
<td>.965</td>
<td>.120</td>
<td>.298</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td>.1080</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.325</td>
<td>.950</td>
<td>1.115</td>
<td>.195</td>
<td>.087</td>
<td>.300</td>
<td>.430</td>
<td>.650</td>
<td>1.220</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.475</td>
<td>1.100</td>
<td>1.265</td>
<td>.150</td>
<td>.341</td>
<td>.087</td>
<td>.300</td>
<td>.430</td>
<td>.755</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.425</td>
<td>1.050</td>
<td>.294</td>
<td>.1215</td>
<td>.341</td>
<td>.087</td>
<td>.300</td>
<td>.430</td>
<td>.650</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
<tr>
<td>69</td>
<td></td>
<td>1.725</td>
<td>1.350</td>
<td></td>
<td>.150</td>
<td>.415</td>
<td>.087</td>
<td>.300</td>
<td>.430</td>
<td>.755</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
Recommended PC Board Layouts – MKHT Female

Right Angle
Narrow Footprint
Standard Polarization
Sizes 9–37

MKHTF-PCB-3D
(CTM043)
Recommended PC Board Layouts – MKHT Female

Right Angle
Narrow Footprint
Standard Polarization
Sizes 51–100

PC BOARD LAYOUT
COMPONENT SIDE

CONNECTOR MATING FACE

MKHTF-PCB-4D
(CTM044)

www.airborn.com
(512) 863-5585

33
MQHT – Low-Profile I/O Cable (Male)

MQHT interconnects are used in high-temperature applications. These low-profile connectors come with a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

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

Please reference MQHTM-001-2 for more detail.

MQHT-212-031-161-41WS

ORDER FORM
Sample Part Number Format: MQHT-212-031-161-41WS

<table>
<thead>
<tr>
<th>CODE</th>
<th>SERIES</th>
<th>ROWS</th>
<th>BODY STYLE</th>
<th>BODY MATERIAL</th>
<th>SIZE</th>
<th>PLATING</th>
<th>HARDWARE</th>
<th>WIRING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series 0.050” Low-Profile Metal I/O Connector (Male)</td>
<td>2 – 2-Row (9-37 contacts)</td>
<td>1 – Plug</td>
<td>2 – High-temp thermoplastic with electroless nickel shell</td>
<td>009 – 9 Contacts</td>
<td>1 – 50 µ” Au contacts</td>
<td>00 – No hardware</td>
<td>00 – None</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3 – 3-Row (51 contacts)</td>
<td></td>
<td>4 – High-temp thermoplastic with hard black anodized shell</td>
<td>015 – 15 Contacts</td>
<td>3 – 50 µ” Au contacts; Au terminations (solder cup, pigtail)</td>
<td>22 – Two fixed jacknut assemblies</td>
<td>XX – See Wiring Codes</td>
<td></td>
</tr>
</tbody>
</table>

NOTES

* 0.018 diameter
** Captivated hardware is factory-installed and non-removable
† Leads are soft copper, suitable for forming.

MQHTM-PNB-1E (CTMHT010)

www.airborn.com
(512) 863-5585

34
PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MQHT – Low-Profile I/O Cable (Female)

MQHT interconnects are used in high-temperature applications. These low-profile connectors come with a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

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

Sample Part Number Format: MQHT-222-031-2A3-2200

ORDER FORM

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

NOTES
* 0.018 diameter
** Captivated hardware is factory-installed and non-removable
† Leads are soft copper, suitable for forming.

MATERIALS and FINISHES

Socket Contact: Brass per ASTM B121/B121M or ASTM B168/B168M or ASTM B453
Contact Finish: Gold plate per ASTM B488, SAE AMS-A2422
Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 50 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A562/A562M, passivated per SAE AMS-2700
Molded Insulators: Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A867, SAE AMS-QQ-P-35
Interfacial Seal Gaskets: Fluorosilicone per SAE AMS-R-25988
Tolerances: Angles: ±5° (unless otherwise specified)

Performance

Contact Rating: 3 amperes maximum
Operating Temperature: -55°C to 205°C
Test 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

AirBorn can manufacture special configurations to your exact specifications.
MQHT FEMALE DRAWINGS

Straight
Low Profile
Cable-to-Cable

**DIMENSIONS**

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>H</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.778</td>
<td>.378</td>
<td>.398</td>
<td>.565</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.928</td>
<td>.528</td>
<td>.548</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.078</td>
<td>.678</td>
<td>.698</td>
<td>.865</td>
<td>.173</td>
<td>.208</td>
<td>#2-56 UNC THD (0.092 THRU)</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.178</td>
<td>.778</td>
<td>.798</td>
<td>.965</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.328</td>
<td>.928</td>
<td>.948</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.478</td>
<td>1.078</td>
<td>1.098</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>1.028</td>
<td>1.048</td>
<td>1.215</td>
<td>.220</td>
<td>.250</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MSHT – Low-Profile, Right Angle Board-Mount (Male)

MSHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.
MSHT MALE DRAWINGS

Right Angle
Narrow Footprint
Threaded Inserts

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.778</td>
<td>.292</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td>.420</td>
<td>.420</td>
<td>.775</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.928</td>
<td>.442</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.925</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.078</td>
<td>.592</td>
<td>.865</td>
<td></td>
<td>.208</td>
<td>.250</td>
<td>.420</td>
<td>.420</td>
<td>1.075</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.178</td>
<td>.692</td>
<td>.965</td>
<td>.120</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.175</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.328</td>
<td>.842</td>
<td>1.115</td>
<td></td>
<td>.208</td>
<td>.250</td>
<td>.450</td>
<td>.520</td>
<td>1.080</td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.478</td>
<td>.992</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.180</td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>.942</td>
<td>1.215</td>
<td>.150</td>
<td>.250</td>
<td>.300</td>
<td>.425</td>
<td>.650</td>
<td>1.220</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
MSHT – Right Angle, Board-Mount with Blind Clearance Cut (Male)

MSHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

**MATERIALS and FINISHES**

- **Pin Contacts:** Copper-based alloy strip
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T651 per SAE AMS-QQ-A-200/8
- **Shell Finishes:** Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A581/A581M or ASTM A582/A582M, passivated per SAE AMS-2700
- **Molded Insulators:** High-temp thermoplastic
- **Embedment:** High-temp epoxy
- **Hardware:** Corrosion-resistant steel per ASTM A582/A582M, passivated per SAE AMS-QQ-P-35

**Tolerances:**
- Angles: ±5° (unless otherwise specified)
- Decimals: ±0.010"; Fractions: ±1/64"
- Wire lengths – insulated/stranded: +1.00"/-0.00"
- uninsulated/solid: +0.027"/-0.00"

**Performance**

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -55°C to 205°C
- **Test 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

**NOTE:** AirBorn can manufacture special configurations to your exact specifications.
**MSHT (BLIND CLEARANCE CUT) MALE DRAWINGS**

```
<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W (MAX)</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.758</td>
<td>.292</td>
<td>.134</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td>.199</td>
<td>.250</td>
<td>.420</td>
<td>.925</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>15</td>
<td>2</td>
<td>.928</td>
<td>.422</td>
<td></td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td>.420</td>
<td>.925</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>21</td>
<td>2</td>
<td>1.078</td>
<td>.592</td>
<td></td>
<td>.865</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td>.420</td>
<td>1.075</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>25</td>
<td>2</td>
<td>1.178</td>
<td>.692</td>
<td>.965</td>
<td>.120</td>
<td>.208</td>
<td>.199</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td></td>
<td></td>
<td>.420</td>
<td>1.175</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>31</td>
<td>2</td>
<td>1.328</td>
<td>.842</td>
<td></td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td>.420</td>
<td>1.080</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>37</td>
<td>2</td>
<td>1.478</td>
<td>.992</td>
<td></td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td>.420</td>
<td>1.180</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>.942</td>
<td>.177</td>
<td>1.215</td>
<td>.150</td>
<td>.250</td>
<td>.087</td>
<td>.300</td>
<td>.425</td>
<td>.650</td>
<td>.1220</td>
<td>.425</td>
<td>1.220</td>
<td></td>
</tr>
</tbody>
</table>
```

Right Angle
Blind Clearance Cut
Narrow Footprint
Threaded Inserts

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

MSHTM-DIM-2G (CTM039)

www.airborn.com
(512) 863-5585

41
Recommended PC Board Layouts – MSHT Male

- Right Angle
- Narrow Footprint
- Standard Polarization

<table>
<thead>
<tr>
<th>CONNECTOR MATING FACE</th>
<th>PC BOARD LAYOUT COMPONENT SIDE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9 POSITION</td>
<td>![Diagram of 9 Position Layout]</td>
</tr>
<tr>
<td>15 POSITION</td>
<td>![Diagram of 15 Position Layout]</td>
</tr>
<tr>
<td>21 POSITION</td>
<td>![Diagram of 21 Position Layout]</td>
</tr>
<tr>
<td>25 POSITION</td>
<td>![Diagram of 25 Position Layout]</td>
</tr>
<tr>
<td>31 POSITION</td>
<td>![Diagram of 31 Position Layout]</td>
</tr>
<tr>
<td>37 POSITION</td>
<td>![Diagram of 37 Position Layout]</td>
</tr>
<tr>
<td>51 POSITION</td>
<td>![Diagram of 51 Position Layout]</td>
</tr>
</tbody>
</table>
MSHT – Low-Profile, Right Angle Board-Mount (Female)

MSHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

Sample Part Number Format: MSHT-262-037-433-220S

**ORDER FORM**

<table>
<thead>
<tr>
<th>SERIES</th>
<th>CODE</th>
<th>ROWS</th>
<th>BODY STYLE</th>
<th>BODY MATERIAL</th>
<th>SIZE</th>
<th>PLATING</th>
<th>POLARIZATION</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSHT</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>SERIES</td>
<td>CODE</td>
<td>ROWS</td>
<td>BODY STYLE</td>
<td>BODY MATERIAL</td>
<td>SIZE</td>
<td>PLATING</td>
<td>POLARIZATION</td>
<td>HARDWARE</td>
</tr>
<tr>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

**NOTES**

AirBorn can manufacture special configurations to your exact specifications.

**MSHT-262-037-433-220S**

High-Reliability Contact

MIL-DTL-83513

**MATERIALS and FINISHES**

<table>
<thead>
<tr>
<th>Material Type</th>
<th>Material Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Socket Contact</td>
<td>Brass per ASTM B121/B121M or ASTM B16/B16M or ASTM B453</td>
</tr>
<tr>
<td>Contact Finish</td>
<td>Gold plate per ASTM 848, SAE AMS-2422</td>
</tr>
<tr>
<td>Shell Finishes</td>
<td>Electroless nickel per SAE AMS-2042, Class 3, 500 µ&quot; minimum or black anodized per MIL-A-8625, Type III Class 2, or 403 stainless steel per ASTM A581/A581M or ASTM A562/A562M, passivated per SAE AMS-2700</td>
</tr>
<tr>
<td>Molded Insulators</td>
<td>High-temp thermoplastic</td>
</tr>
<tr>
<td>Embedment</td>
<td>High-temp epoxy</td>
</tr>
<tr>
<td>Hardware</td>
<td>Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35</td>
</tr>
<tr>
<td>Interfacial Seal Gaskets</td>
<td>Fluorosilicone per SAE AMS-R-25988</td>
</tr>
<tr>
<td>Tolerances</td>
<td>Angles: 45° (unless otherwise specified)</td>
</tr>
<tr>
<td>Wire lengths</td>
<td>Insulated/stranded: +1.0&quot;/-0.0&quot;</td>
</tr>
</tbody>
</table>

**PERFORMANCE**

Contact Rating: 3 amperes maximum
Operating Temperature: -55°C to 205°C
Test 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
Right Angle
Blind Clearance Cut
Narrow Footprint
Threaded Inserts

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>(MAX)</th>
<th>B</th>
<th>(MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W (MAX)</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.758</td>
<td>.378</td>
<td>.218</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td>.420</td>
<td>.775</td>
<td>.925</td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.928</td>
<td>.528</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.420</td>
<td>.420</td>
<td>.925</td>
<td></td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.078</td>
<td>.678</td>
<td>.865</td>
<td>.208</td>
<td>.180</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td>.420</td>
<td></td>
<td>.1.075</td>
<td>.1.175</td>
<td></td>
<td></td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.178</td>
<td>.778</td>
<td>.965</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.450</td>
<td>.520</td>
<td>.1.080</td>
<td>.1.180</td>
<td>#2-56 UNC THD</td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.328</td>
<td>.928</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.478</td>
<td>1.078</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>1.028</td>
<td>.260</td>
<td>1.215</td>
<td>.150</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.087</td>
<td>.300</td>
<td>.425</td>
<td>.650</td>
<td>1.220</td>
<td></td>
</tr>
</tbody>
</table>

**PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.**
MSHT – Low-Profile, Right Angle Board-Mount with Blind Clearance Cut (Female)

MSHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.

ORDER FORM
Sample Part Number Format: MSHT-2V3-037-435-220S

- SERIES
  0.050” Low-Profile Metal PC Board-Mount Connector (Female)

- ROWS
  2 – 2-Row (9-37 contacts)
  3 – 3-Row (51 contacts)

- BODY STYLE
  V – Receptacle, right angle (blind clearance cut), narrow footprint with threaded inserts

- BODY MATERIAL
  2 – High-temp thermoplastic with electroless nickel shell
  4 – High-temp thermoplastic with hard black anodized shell

- SIZE
  009 – 9 Contacts
  015 – 15 Contacts
  021 – 21 Contacts
  025 – 25 Contacts
  031 – 31 Contacts
  037 – 37 Contacts
  051 – 51 Contacts

- PLATING
  3 – 50 µ” Au contacts; Au terminations

- WIRING
  0S – Standard body polarization

- CONTACT/TERMINATION TYPE
  43 – Socket, right angle, 0.100” x 0.020” dia
  44 – Socket, right angle, 0.140” x 0.020” dia
  45 – Socket, right angle, 0.172” x 0.020” dia

- HARDWARE
  00 – No hardware
  22 – Two fixed jacknut assemblies

- MATERIALS and FINISHES
  Socket Contact: Brass per ASTM B121/B121M or ASTM B166/B16M or ASTM B453
  Contact Finish: Gold plate per ASTM B488, SAE AMS-2422
  Shell Finishes: Electroless nickel per SAE AMS-2402, Class 3, 500 µ” minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A551/A551M or ASTM A562/A562M, passivated per SAE AMS-2700
  Molded Insulators: High-temp thermoplastic
  Embedment: High-temp epoxy
  Hardware: Corrosion-resistant steel per ASTM A562/A562M, passivated per ASTM A967, SAE AMS-QQ-P-35
  Interfacial Seal Gaskets: Fluorosilicone per SAE AMS-R-25988
  Tolerances: Angles: ±5°
  Decimals: ±0.010”; Fractions: ±1/64”
  Wire lengths – insulated/stranded: +1.0”/-0.0”
  uninsulated/solid: +0.02”/-0.0”

- PERFORMANCE
  Contact Rating: 3 amperes maximum
  Operating Temperature: 0°C to 205°F
  Test 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: 10 ounces maximum/contact
  Mating and Unmating Force: 10 ounces maximum/contact

MATERIALS and FINISHES

- INTERFACIAL SEAL GASKETS: Fluorosilicone per SAE AMS-R-25988
- HARDWARE: Corrosion-resistant steel per ASTM A562/A562M, passivated per SAE AMS-2700
- MOLDED INSULATORS: High-temp thermoplastic
- EMBEDMENT: High-temp epoxy
- SHELL FINISHES: Electroless nickel per SAE AMS-2402, Class 3, 500 µ” minimum or black anodized per MIL-A-8625, Type III Class 2, or 303 stainless steel per ASTM A551/A551M or ASTM A562/A562M, passivated per SAE AMS-2700
- CONTACTS: Brass per ASTM B121/B121M or ASTM B166/B16M or ASTM B453
- CONTACT RATING: 3 amperes maximum
- 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: 10 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.
RIGHT ANGLE  
BLIND CLEARANCE CUT  
NARROW FOOTPRINT  
THREADED INSERTS

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>F</th>
<th>H</th>
<th>J</th>
<th>K</th>
<th>W</th>
<th>X (MAX)</th>
<th>Y (MAX)</th>
<th>Z</th>
<th>HARDWARE</th>
<th>MOUNTING HOLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.758</td>
<td>.378</td>
<td>.218</td>
<td>.565</td>
<td>.020</td>
<td></td>
<td>.208</td>
<td>.180</td>
<td>.067</td>
<td>.250</td>
<td>.420</td>
<td></td>
<td>#2-56 UNC THD</td>
<td>#2-56 UNC THREADED INSERT</td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.928</td>
<td>.528</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.715</td>
<td></td>
<td>.020</td>
<td></td>
<td>.420</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.078</td>
<td>.678</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>.865</td>
<td></td>
<td>.067</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.178</td>
<td>.778</td>
<td></td>
<td></td>
<td>.120</td>
<td></td>
<td>.180</td>
<td></td>
<td>.067</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.328</td>
<td>.928</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.115</td>
<td></td>
<td>.067</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.478</td>
<td>1.078</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.265</td>
<td></td>
<td>.067</td>
<td>.250</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>1.028</td>
<td></td>
<td></td>
<td>.260</td>
<td></td>
<td>1.215</td>
<td>.150</td>
<td>.087</td>
<td>.300</td>
<td>.425</td>
<td>.650</td>
<td>1.220</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
Recommended PC Board Layouts – MSHT Female

Right Angle
Narrow Footprint
Standard Polarization

CONNECTOR MATING FACE

PC BOARD LAYOUT COMPONENT SIDE

MSHTF-PCB-1D
(CTMHT013)

www.airborn.com
(512) 863-5585
MTHT – Low-Profile I/O Cable with Radius Ear (Male)

MTHT interconnects are used in high-temperature applications. These low-profile connectors come with a variety of termination, hardware and wiring options. Custom lengths are available on wire termination products.

**ORDER FORM**

**Sample Part Number Format: MTHT-212-021-161-43WQ**

**NOTES**

* 0.018 diameter

**MATERIALS and FINISHES**

- **Pin Contacts:** Copper-based alloy strip
- **Contact Finish:** Gold plate per ASTM B488, SAE AMS-2422
- **Shells:** Aluminum alloy 6061-T6 per SAE AMS-QQ-A-250/11 or 6061-T6511 per SAE AMS-QQ-A-200/8
- **Shell Finishes:** Electroless nickel per SAE AMS-2402, Class 3, 500 µ" minimum
- **Molded Insulators:** High-temp thermoplastic
- **Embedment:** High-temp epoxy
- **Hardware:** Corrosion-resistant steel per ASTM A582/A582M, passivated per ASTM A967, SAE AMS-QQ-P-35
- **Tolerances:** 0.018 diameter

*Decimals: ±0.010”; Fractions: ±1/64”
Wire lengths – insulated/stranded: +1/0”/-0/0”
Insulated/stranded: ±0.02”/±0.0”

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

**PERFORMANCE**

- **Contact Rating:** 3 amperes maximum
- **Operating Temperature:** -55°C to 205°C
- **Test 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

**Sample Part Number Format: MTHT-212-021-161-43WQ**

**MTHTM-PNB-1D**

(CTMHT024)

**www.airborn.com**

(512) 863-5585
MTHT MALE DRAWINGS

CONTACT CUSTOMER SERVICE
CALL 512-863-5585
x6464

www.airborn.com
(512) 863-5585

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.

MTHTM-DIM-1D
(CTMHT023)
MTHT – Low-Profile, Right Angle Board-Mount with Radius Ear (Female)

MTHT interconnects are used in high-temperature applications where a right angle, plated thru-hole termination is desired for mounting. The narrow footprint on this connector helps save board space.
Right Angle
Board-Mount
Narrow Footprint

<table>
<thead>
<tr>
<th>SIZE</th>
<th>ROWS</th>
<th>A</th>
<th>B (MAX)</th>
<th>C</th>
<th>D</th>
<th>E (MAX)</th>
<th>H</th>
<th>HARDWARE</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>2</td>
<td>.778</td>
<td>.292</td>
<td>.398</td>
<td>.565</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td></td>
<td>.928</td>
<td>.442</td>
<td>.548</td>
<td>.715</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>21</td>
<td></td>
<td>1.078</td>
<td>.592</td>
<td>.698</td>
<td>.865</td>
<td>.173</td>
<td>.208</td>
<td>#2-56 UNC THD</td>
</tr>
<tr>
<td>25</td>
<td></td>
<td>1.178</td>
<td>.692</td>
<td>.798</td>
<td>.965</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>31</td>
<td></td>
<td>1.328</td>
<td>.842</td>
<td>.948</td>
<td>1.115</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>37</td>
<td></td>
<td>1.478</td>
<td>.992</td>
<td>1.098</td>
<td>1.265</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>51</td>
<td>3</td>
<td>1.428</td>
<td>.942</td>
<td>1.048</td>
<td>1.215</td>
<td>.220</td>
<td>.250</td>
<td></td>
</tr>
</tbody>
</table>

PLEASE CONSULT THE AIRBORN WEBSITE FOR THE LATEST REVISION OF THIS DOCUMENT PRIOR TO BEGINNING ANY DESIGN WORK.
Recommended PC Board Layouts – MTHT Female

Low-Profile, Right Angle
Standard Polarization
Sizes 9–25
Low-Profile, Right Angle
Standard Polarization
Sizes 31–51

MTHTF-PCB-2D
(CTMHT026)

www.airborn.com
(512) 863-5585

53
### WIRE CODES

#### M-Series

**NEMA HP3-EXEBB (Formerly M16878/4-24 TFE 7 strand)**

<table>
<thead>
<tr>
<th></th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-STD-681*</td>
<td>WA</td>
<td>WB</td>
<td>WC</td>
<td>UD</td>
<td>UE</td>
<td>WD</td>
<td>UD</td>
<td>UG</td>
<td>UH</td>
<td>UJ</td>
<td>UK</td>
<td>UL</td>
<td>UM</td>
<td>UN</td>
<td>UP</td>
<td>UQ</td>
</tr>
<tr>
<td>WHITE</td>
<td>WE</td>
<td>WF</td>
<td>WG</td>
<td>GD</td>
<td>VE</td>
<td>WH</td>
<td>VG</td>
<td>VH</td>
<td>VJ</td>
<td>VK</td>
<td>VL</td>
<td>VM</td>
<td>VN</td>
<td>VP</td>
<td>VQ</td>
<td>VR</td>
</tr>
<tr>
<td>YELLOW</td>
<td>WJ</td>
<td>WK</td>
<td>WL</td>
<td>WM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NEMA HP3-EXDBB (Formerly M16878/4-26 TFE 7 strand)**

<table>
<thead>
<tr>
<th></th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-STD-681*</td>
<td>WN</td>
<td>WP</td>
<td>WQ</td>
<td>YD</td>
<td>YE</td>
<td>WR</td>
<td>YG</td>
<td>YH</td>
<td>YJ</td>
<td>YK</td>
<td>YL</td>
<td>YM</td>
<td>YN</td>
<td>YP</td>
<td>YQ</td>
<td>YR</td>
</tr>
<tr>
<td>WHITE</td>
<td>WS</td>
<td>WT</td>
<td>WU</td>
<td>ZD</td>
<td>ZE</td>
<td>WV</td>
<td>ZG</td>
<td>ZH</td>
<td>ZJ</td>
<td>ZK</td>
<td>ZL</td>
<td>ZM</td>
<td>ZN</td>
<td>ZP</td>
<td>ZQ</td>
<td>ZR</td>
</tr>
<tr>
<td>YELLOW</td>
<td>WW</td>
<td>WX</td>
<td>WY</td>
<td>WZ</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**NEMA HP3-EXBCB (Formerly M16878/4-28 TFE 7 strand)**

<table>
<thead>
<tr>
<th></th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>MIL-STD-681*</td>
<td>XA</td>
<td>XB</td>
<td>XC</td>
<td>1D</td>
<td>1E</td>
<td>XD</td>
<td>1G</td>
<td>1H</td>
<td>1J</td>
<td>1K</td>
<td>1L</td>
<td>1M</td>
<td>1N</td>
<td>1P</td>
<td>1Q</td>
<td>1R</td>
</tr>
<tr>
<td>WHITE</td>
<td>XE</td>
<td>XF</td>
<td>XG</td>
<td>2D</td>
<td>2E</td>
<td>XH</td>
<td>2G</td>
<td>2H</td>
<td>2J</td>
<td>2K</td>
<td>2L</td>
<td>2M</td>
<td>2N</td>
<td>2P</td>
<td>2Q</td>
<td>2R</td>
</tr>
<tr>
<td>YELLOW</td>
<td>XJ</td>
<td>XK</td>
<td>XL</td>
<td>WX</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**TWISTED PAIR per NEMA WC27500-XXRC2U00 (SAE AS22759/11)**

<table>
<thead>
<tr>
<th></th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>24 AWG</td>
<td>AA</td>
<td>AB</td>
<td>AC</td>
<td>AD</td>
<td>AE</td>
<td>AF</td>
<td>AG</td>
<td>AH</td>
<td>AJ</td>
<td>AK</td>
<td>AL</td>
<td>AM</td>
<td>AN</td>
<td>AP</td>
<td>AQ</td>
<td>AR</td>
</tr>
<tr>
<td>26 AWG</td>
<td>BA</td>
<td>BB</td>
<td>BC</td>
<td>BD</td>
<td>BE</td>
<td>BF</td>
<td>BG</td>
<td>BH</td>
<td>BJ</td>
<td>BK</td>
<td>BL</td>
<td>BM</td>
<td>BN</td>
<td>BP</td>
<td>BQ</td>
<td>BR</td>
</tr>
</tbody>
</table>

**TWISTED PAIR per NEMA WC27500-XXSC2U00 (SAE AS22759/33)**

<table>
<thead>
<tr>
<th></th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>26 AWG</td>
<td>KA</td>
<td>KB</td>
<td>KC</td>
<td>KD</td>
<td>KE</td>
<td>KF</td>
<td>KG</td>
<td>KH</td>
<td>KJ</td>
<td>KK</td>
<td>KL</td>
<td>KM</td>
<td>KN</td>
<td>KP</td>
<td>KQ</td>
<td>KR</td>
</tr>
</tbody>
</table>

For twisted pair wire connect charts, see page MA-9
Twisted pair wire not available on MA, MC or Hybrid connectors

### NOTES

* Connectors with more than 100 contacts will repeat color coding after 100 colors

** Wire colors per M83513 are ten solid colors, repeating

*** Per M83513, corrosion has been experienced on connectors that are pre-wired with 22759/33 and stored in sealed environments.

Disclosure: Option is not RoHS-compliant
### WIRE CODES

**SAE AS22759/11-24**

<table>
<thead>
<tr>
<th>Width</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>M83513**</td>
<td>5A</td>
<td>5B</td>
<td>5C</td>
<td>5D</td>
<td>5E</td>
<td>5F</td>
<td>5G</td>
<td>5H</td>
<td>5J</td>
<td>5K</td>
<td>5L</td>
<td>5M</td>
<td>5N</td>
<td>5P</td>
<td>5Q</td>
<td>5R</td>
</tr>
<tr>
<td>MIL-STD-681*</td>
<td>CA</td>
<td>CB</td>
<td>CC</td>
<td>CD</td>
<td>CE</td>
<td>CF</td>
<td>CG</td>
<td>CH</td>
<td>CJ</td>
<td>CK</td>
<td>CL</td>
<td>CM</td>
<td>CN</td>
<td>CP</td>
<td>CQ</td>
<td>CR</td>
</tr>
<tr>
<td>WHITE</td>
<td>DA</td>
<td>DB</td>
<td>DC</td>
<td>DD</td>
<td>DE</td>
<td>DF</td>
<td>DG</td>
<td>DH</td>
<td>DJ</td>
<td>DK</td>
<td>DL</td>
<td>DM</td>
<td>DN</td>
<td>DP</td>
<td>DQ</td>
<td>DR</td>
</tr>
</tbody>
</table>

**SAE AS22759/11-26**

<table>
<thead>
<tr>
<th>Width</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>M83513**</td>
<td>6A</td>
<td>6B</td>
<td>V1</td>
<td>6D</td>
<td>6E</td>
<td>V2</td>
<td>6G</td>
<td>6H</td>
<td>6J</td>
<td>6K</td>
<td>6L</td>
<td>Y6</td>
<td>6N</td>
<td>6P</td>
<td>6Q</td>
<td>6R</td>
</tr>
<tr>
<td>MIL-STD-681*</td>
<td>X3</td>
<td>X4</td>
<td>W3</td>
<td>ED</td>
<td>EE</td>
<td>W4</td>
<td>EG</td>
<td>EH</td>
<td>EJ</td>
<td>EK</td>
<td>EL</td>
<td>EM</td>
<td>EN</td>
<td>EP</td>
<td>EQ</td>
<td>ER</td>
</tr>
<tr>
<td>WHITE</td>
<td>X1</td>
<td>X2</td>
<td>W1</td>
<td>FD</td>
<td>FE</td>
<td>W2</td>
<td>FG</td>
<td>FH</td>
<td>FJ</td>
<td>FK</td>
<td>FL</td>
<td>Y5</td>
<td>FN</td>
<td>FP</td>
<td>FQ</td>
<td>FR</td>
</tr>
</tbody>
</table>

**SAE AS22759/33-24***

<table>
<thead>
<tr>
<th>Width</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>M83513**</td>
<td>LA</td>
<td>LB</td>
<td>LC</td>
<td>LD</td>
<td>LE</td>
<td>LF</td>
<td>LG</td>
<td>LH</td>
<td>LJ</td>
<td>LK</td>
<td>LL</td>
<td>LM</td>
<td>LN</td>
<td>LP</td>
<td>LQ</td>
<td>LR</td>
</tr>
<tr>
<td>WHITE</td>
<td>MA</td>
<td>MB</td>
<td>MC</td>
<td>MD</td>
<td>ME</td>
<td>MF</td>
<td>MG</td>
<td>MH</td>
<td>MJ</td>
<td>MK</td>
<td>ML</td>
<td>MM</td>
<td>MN</td>
<td>MP</td>
<td>MQ</td>
<td>MR</td>
</tr>
</tbody>
</table>

**SAE AS22759/33-26***

<table>
<thead>
<tr>
<th>Width</th>
<th>6&quot;</th>
<th>12&quot;</th>
<th>18&quot;</th>
<th>24&quot;</th>
<th>30&quot;</th>
<th>36&quot;</th>
<th>42&quot;</th>
<th>48&quot;</th>
<th>54&quot;</th>
<th>60&quot;</th>
<th>66&quot;</th>
<th>72&quot;</th>
<th>84&quot;</th>
<th>96&quot;</th>
<th>108&quot;</th>
<th>120&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td>M83513**</td>
<td>NA</td>
<td>NB</td>
<td>Y3</td>
<td>ND</td>
<td>NE</td>
<td>Y4</td>
<td>NG</td>
<td>NH</td>
<td>NJ</td>
<td>NK</td>
<td>NL</td>
<td>Y8</td>
<td>NN</td>
<td>NP</td>
<td>NQ</td>
<td>NR</td>
</tr>
<tr>
<td>WHITE</td>
<td>PA</td>
<td>PB</td>
<td>Y1</td>
<td>PD</td>
<td>PE</td>
<td>Y2</td>
<td>PG</td>
<td>PH</td>
<td>PJ</td>
<td>PK</td>
<td>PL</td>
<td>Y7</td>
<td>PN</td>
<td>PP</td>
<td>PQ</td>
<td>PR</td>
</tr>
</tbody>
</table>

### NOTES

* Connectors with more than 100 contacts will repeat color coding after 100 colors
** Wire colors per M83513 are ten solid colors, repeating
*** Per M83513, corrosion has been experienced on connectors that are pre-wired with 22759/33 and stored in sealed environments.
更多信息可参考AirBorn的官方网站：www.airborn.com
(512) 863-5585

MHT-WIR-2B
(CTMA004)