MHD/MDD/MDP CONNECTOR SERIES

PCB High Density Connectors
Smiths Connectors offers an extensive range of superior contact technologies suitable for standard and custom solutions. Hypertac® (HYPERboloid conTACT) is the original superior performing hyperboloid contact technology designed for use in all applications and in harsh and demanding environments where high reliability and safety are critical. The inherent electrical and mechanical characteristics of the Hypertac hyperboloid contact ensures unrivalled performance in terms of reliability, number of mating cycles, low contact force and minimal contact resistance. The shape of the contact sleeve is formed by hyperbolically arranged contact wires, which align themselves elastically as contact lines around the pin, providing a number of linear contact paths.

<table>
<thead>
<tr>
<th>FEATURE</th>
<th>BENEFIT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOW INSERTION/EXTRACTION FORCES</td>
<td>HIGH DENSITY INTERCONNECT SYSTEMS</td>
</tr>
<tr>
<td>The angle of the socket wires allows tight control of the pin insertion and extraction forces. The spring wires are smoothly deflected to make line contact with the pin.</td>
<td>Significant reductions in size and weight of sub-system designs. No additional hardware is required to overcome mating and un-mating forces.</td>
</tr>
<tr>
<td>LONG CONTACT LIFE</td>
<td>LOW COST OF OWNERSHIP</td>
</tr>
<tr>
<td>The smooth and light wiping action minimizes wear on the contact surfaces. Contacts perform up to 100,000 insertion/extraction cycles with minimal degradation in performance.</td>
<td>The Hypertac contact technology will surpass most product requirements, thus eliminating the burden and cost of having to replace the connector or the entire subsystem.</td>
</tr>
<tr>
<td>LOWER CONTACT RESISTANCE</td>
<td>LOW POWER CONSUMPTION</td>
</tr>
<tr>
<td>The design provides a far greater contact area and the wiping action of the wires insures a clean and polished contact surface. Our contact technology has about half the resistance of conventional contact designs.</td>
<td>The lower contact resistance of our technology results in a lower voltage drop across the connector reducing the power consumption and heat generation within the system.</td>
</tr>
<tr>
<td>HIGHER CURRENT RATINGSS</td>
<td>MAXIMUM CONTACT PERFORMANCE</td>
</tr>
<tr>
<td>The design parameters of the contact (e.g., the number, diameter and angle of the wires) may be modified for any requirement. The number of wires can be increased so the contact area is distributed over a larger surface. Thus, the high current carried by each wire because of its intimate line contact, can be multiplied many times.</td>
<td>The lower contact resistance of the Hypertac contact reduces heat build-up; therefore Hypertac contacts are able to handle far greater current in smaller contact assemblies without the detrimental effects of high temperature.</td>
</tr>
<tr>
<td>IMMUNITY TO SHOCK &amp; VIBRATION</td>
<td>RELIABILITY UNDER HARSH ENVIRONMENTS</td>
</tr>
<tr>
<td>The low mass and resultant low inertia of the wires enable them to follow the most abrupt or extreme excursions of the pin without loss of contact. The contact area extends 360° around the pin and is uniform over its entire length. The 3 dimensional symmetry of the Hypertac contact design guarantees electrical continuity in all circumstances.</td>
<td>Harsh environmental conditions require connectors that will sustain their electrical integrity even under the most demanding conditions such as shock and vibration. The Hypertac contact provides unmatched stability in demanding environments when failure is not an option.</td>
</tr>
</tbody>
</table>
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- Modules configuration ..................................................................................................................4
- Standard plugging stages ..............................................................................................................5
- Termination styles .........................................................................................................................6
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- Technical characteristics .............................................................................................................19
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MDP SERIES
- Technical characteristics ...............................................................................................................27
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## TECHNICAL CHARACTERISTICS

### MATERIALS & PLATINGS

<table>
<thead>
<tr>
<th>Material</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Insulator</td>
<td>Diallyl Phthalate UL94vo</td>
</tr>
<tr>
<td>Frame</td>
<td>Aluminium Alloy</td>
</tr>
<tr>
<td>Contact</td>
<td>Copper Alloy</td>
</tr>
<tr>
<td>Guide</td>
<td>Brass + Ni or Stainless steel</td>
</tr>
<tr>
<td>Contact plating</td>
<td>Ni + Au</td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-55°C to +125°C</td>
</tr>
<tr>
<td>Safety of contact from extraction</td>
<td>Stational 2 mm / 0.079&quot;</td>
</tr>
<tr>
<td></td>
<td>Dynamical 1.80 mm / 0.071&quot;</td>
</tr>
<tr>
<td>Mating cycles</td>
<td>5000</td>
</tr>
<tr>
<td>Withdrawal forces</td>
<td>≤ 0.5 N</td>
</tr>
<tr>
<td>Special contacts</td>
<td>According to NFC 93569</td>
</tr>
</tbody>
</table>

### ELECTRICAL

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact resistance</td>
<td>Signal ≤ 12 mΩ</td>
</tr>
<tr>
<td></td>
<td>Power ≤ 2 mΩ</td>
</tr>
<tr>
<td>Current rating</td>
<td>Signal 3 A</td>
</tr>
<tr>
<td></td>
<td>Power 15 A</td>
</tr>
<tr>
<td>Insulation</td>
<td>&gt;10⁴ MΩ</td>
</tr>
<tr>
<td>Voltage rating</td>
<td>200 V</td>
</tr>
<tr>
<td>Proof voltage</td>
<td>800 V</td>
</tr>
<tr>
<td>Contact diameter</td>
<td>Signal 0.50 mm</td>
</tr>
<tr>
<td></td>
<td>Power 2.00 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>Coaxial 50 Ω</td>
</tr>
</tbody>
</table>

Dimension are in mm
HOW TO ORDER

1  SERIES

2  ARRANGEMENT

3  PART - POLARITY - PLATING

4  TERMINATION STYLES

5  GUIDE STYLES

* Surface Mount Termination
** Consult us - PCB thickness is in mm
MODULS CONFIGURATION

SINGLE ARRANGEMENTS

<table>
<thead>
<tr>
<th>Module</th>
<th>Receptacle - Mating Side Views</th>
<th>Mixed Arrangements</th>
</tr>
</thead>
<tbody>
<tr>
<td>052</td>
<td><img src="image" alt="Image of 052 receptacle" /></td>
<td>3HB</td>
</tr>
<tr>
<td>100</td>
<td><img src="image" alt="Image of 100 receptacle" /></td>
<td>7XB</td>
</tr>
<tr>
<td>152</td>
<td><img src="image" alt="Image of 152 receptacle" /></td>
<td>2XA</td>
</tr>
<tr>
<td>200</td>
<td><img src="image" alt="Image of 200 receptacle" /></td>
<td>6XA</td>
</tr>
<tr>
<td>252</td>
<td><img src="image" alt="Image of 252 receptacle" /></td>
<td>1HB</td>
</tr>
<tr>
<td>300</td>
<td><img src="image" alt="Image of 300 receptacle" /></td>
<td>5HA</td>
</tr>
<tr>
<td>352</td>
<td><img src="image" alt="Image of 352 receptacle" /></td>
<td></td>
</tr>
<tr>
<td>400</td>
<td><img src="image" alt="Image of 400 receptacle" /></td>
<td></td>
</tr>
</tbody>
</table>

26 ways module

50 ways module

4 ways module (special contacts)

Space which can receive:
- 2x50 ways module
- 2x26 ways module
- 1x4 ways module
- 2x4 ways module

Space which can receive:
- 2x26 ways module
- 1x4 ways module
Max displacement allowed while plugging in the receptacle: 0.15 mm in all plugged in connector ways.
TERMINATION STYLES

RECEPTACLE

THROUGH BOARD SOLDER - 90°

Ref: 10
PCB: 1.44 - 1.76
A = 3.25 max
B = 6 max

Ref: 11
PCB: 1.98 - 2.42
A = 3.85 max
B = 6.60 max

THROUGH BOARD SOLDER - STRAIGHT

Ref: 30
PCB: 2.16 - 2.64
A = 3.50 min
4.00 max

Ref: 31
PCB: 2.88 - 5.50
A = 6.10 min
6.60 max

PLUG

THROUGH BOARD SOLDER - 90°

Ref: 10
PCB: 1.44 - 1.76
A = 5.95 max

Ref: 12
PCB: 2.88 - 3.52
A = 7.60 max

THROUGH BOARD SOLDER - STRAIGHT

Ref: 30
PCB: 2.16 - 2.64
A = 3.50 min
4.00 max

Ref: 31
PCB: 2.88 - 3.52
A = 4.60 min
5.10 max

SURFACE MOUNT (CENTERED PCB)

Ref: 41
PCB: 1.44 - 1.76
A = 5.20 max

Ref: 42
PCB: 2.88 - 3.52
A = 4.40 max

Ref: 43
PCB: 2.16 - 2.64
A = 4.80 max

SURFACE MOUNT (UNCENTERED PCB)

Ref: 44
PCB: 3.60 - 4.00
A = 4.40 max

Ref: 45
PCB: 1.44 - 1.76
A = 7 max

Ref: 47
PCB: 2.16 - 2.64
A = 7 max
CONNECTOR DIMENSIONS

PLUG

52 CONTACTS

RECEPTACLE

100 CONTACTS

5HA

1HB

* Theoretical dimensions
The termination side contact configurations are specified on board preparation details.
CONNECTOR DIMENSIONS

152 CONTACTS

PLUG

CBL screw

M2 x 5

Ø 0.50

89.10 max

12 max

RECEPTACLE

View mating side

6XA

PLUG

CBL screw

M2 x 5

Ø 0.50

89.10 max

12 max

RECEPTACLE

View mating side

* Theoretical dimensions
The termination side contact configurations are specified on board preparation details.
CONNECTOR DIMENSIONS

200 CONTACTS

PLUG

RECEPTACLE

2X4

PLUG

RECEPTACLE

* Theoretical dimensions
The termination side contact configurations are specified on board preparation details.
CONNECTOR DIMENSIONS

252 CONTACTS

PLUG

* Theoretical dimensions

The termination side contact configurations are specified on board preparation details.
CONNECTOR DIMENSIONS

300 CONTACTS

PLUG

RECEPTACLE

3HB

PLUG

RECEPTACLE

* Theoretical dimensions
The termination side contact configurations are specified on board preparation details.
CONNECTOR DIMENSIONS

352 CONTACTS

400 CONTACTS

* Theoretical dimensions
The termination side contact configurations are specified on board preparation details.
GUIDING DEVICES

**RECEPTACLE**

**MHD 00- ___ 121**
Polarised female guide vertical mounting (Length: 5.50)

**MHD 00- ___ Z122**
Polarised female guide vertical mounting (Length: 7)

**MHD 00- ___ Z124 / Z134**
Polarised female guide transverse mounting P/N 124: A=6; 134: A=6.60

**MHD 00- ___ Z126**
Unpolarised female guide vertical mounting

**MHD 00- ___ Z130**
All polarity female guide vertical mounting (Length: 5.50)

**MHD 00- ___ Z131**
All polarity female guide vertical mounting (Length: 7)

**MHD 00- ___ Z133**
All polarity female guide transverse mounting

**MHD 00- ___ Z190**
Ground female guide vertical mounting

**PLUG**

**MHD 00- ___ 110**
Polarised male guide transverse mounting

**MHD 00- ___ Z111**
Polarised male guide vertical mounting

**MHD 00- ___ Z125**
Unpolarised male guide transverse mounting

**MHD 00- ___ Z191**
Ground male contact transverse mounting

* Theoretical dimensions
52 CONTACT BOARD PREPARATION DETAILS (1)

**STRAIGHT TERMINATION**
Guides: 121, 122, 126, 130, 131, 190

**RECEPTACLE**

**90° TERMINATION**
Guides: 124, 133, 134

**SURFACE MOUNT TERMINATION**
Guides: 110, 125, 191

* Theoretical dimensions

(1) Important note: See important note on 1HB preparation board details (page 17).
5HA CONTACT BOARD PREPARATION DETAILS (1)

STRAIGHT TERMINATION
Guides: 121, 122, 126, 130, 131, 190

RECEPTACLE
Guides: 124, 133, 134

90° TERMINATION
Guides: 110, 125, 191

PLUG

SURFACE MOUNT TERMINATION
Guides: 110, 125, 191

(1) Important note: See important note on 1HB preparation board details (page 17).

* Theoretical dimensions
100 CONTACT BOARD PREPARATION DETAILS

**STRAIGHT TERMINATION**
Guides: 121, 122, 126, 130, 131, 190

**RECEPTACLE**

**90° TERMINATION**
Guides: 124, 133, 134

**PLUG**

**SURFACE MOUNT TERMINATION**
Guides: 110, 125, 191

* Theoretical dimensions

(1) Important note: See important note on 1HB preparation board details (page 17).
1HB CONTACT BOARD PREPARATION DETAILS

STRAIGHT TERMINATION
Guides: 121, 122, 126, 130, 131, 190

RECEPACLE

90° TERMINATION
Guides: 124, 133, 134

S
URFACE
MOUNT
TERMINATION
Guides: 110, 125, 191

(1) Important note: Drilling layouts shown concern the following full configurations: 052, 5HA, 100, 1HB, 200. Other arrangements, shown on “MODULES CONFIGURATION” page, require a specific drilling layout to ensure the correct mounting of the chosen connector, that you must obtain from our technical department. However, the drilling layouts shown above should help you to achieve the desired configuration. For that, you may have to mix those drilling layouts to obtain the right configuration.

* Theoretical dimensions
POWER & HIGH FREQUENCY CONTACTS (NFC 93569)

EXAMPLE OF CONTACT OVERVIEW (020 084 2. 10 R--)

POWER CONTACTS

<table>
<thead>
<tr>
<th>Male</th>
<th>P/N</th>
<th>Female</th>
<th>P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>90° termination</td>
<td>020 085 1-10R OG</td>
<td>90° termination</td>
<td>020 084 2-10R G1</td>
</tr>
<tr>
<td>Straight termination</td>
<td>020 087 1-30R OG</td>
<td>Straight termination</td>
<td>020 056 2-30R G1</td>
</tr>
<tr>
<td>Solder bucket termination</td>
<td>020 091 1-40R OG</td>
<td>Solder bucket termination</td>
<td>020 060 2-40R G1</td>
</tr>
</tbody>
</table>

HIGH FREQUENCY CONTACTS

<table>
<thead>
<tr>
<th></th>
<th>Male P/N</th>
<th>Female P/N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vertical mounting, suitable for flexible cable Ø 1.9 max.</td>
<td>KMX 3-M 081</td>
<td>KMX 3-F 081</td>
</tr>
<tr>
<td>Ref. KX 21 A (Rg 178 B/U or RG 196).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transverse mounting, suitable for flexible cable Ø 1.9 max.</td>
<td>KMX 3-M 092</td>
<td>KMX 3-F 092</td>
</tr>
<tr>
<td>Ref. KX 21 A (Rg 178 B/U or RG 196).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable with mother board, thickness 3.2 mm max.</td>
<td>KMX 3-M 101</td>
<td>KMX 3-F 101</td>
</tr>
<tr>
<td>Vertical mounting, suitable for flexible cable Ø 2.5 max.</td>
<td>KMX 3-M 112</td>
<td>KMX 3-F 112</td>
</tr>
<tr>
<td>Ref. KX 22 A (RG 316).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transverse mounting, suitable for flexible cable Ø 2.5 max.</td>
<td>KMX 3-M 131</td>
<td>KMX 3-F 131</td>
</tr>
<tr>
<td>Ref. KX 22 A (RG 316).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable with mother board, thickness 3.2 mm max.</td>
<td>KMX 3-M 142</td>
<td>KMX 3-F 142</td>
</tr>
<tr>
<td>Vertical mounting, suitable to semi-rigid cable Ø 2.2 max.</td>
<td>KMX 3-M 041</td>
<td>KMX 3-F 041</td>
</tr>
<tr>
<td>Ref. Ks 1 A (RG 405 - UT 85).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transverse mounting, suitable to semi-rigid cable Ø 2.2 max.</td>
<td>KMX 3-M 032</td>
<td>KMX 3-F 032</td>
</tr>
<tr>
<td>Ref. Ks 1 A (RG 405 - UT 85).</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Usable with mother board, thickness 3.2 mm max.</td>
<td>KMX 3-M 172</td>
<td>KMX 3-F 172</td>
</tr>
<tr>
<td>Straight termination tail for direct mounting on to PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>90° termination tail for direct mounting on to PCB</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SMT termination</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

EXTRACTION TOOLS

P/N: SD-03000CX003
## TECHNICAL CHARACTERISTICS

<table>
<thead>
<tr>
<th>MATERIALS &amp; PLATINGS</th>
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</thead>
<tbody>
<tr>
<td>Insulator</td>
</tr>
<tr>
<td>Frame</td>
</tr>
<tr>
<td>Contact</td>
</tr>
<tr>
<td>Guide</td>
</tr>
<tr>
<td>Contact plating</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ENVIRONMENTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
</tr>
<tr>
<td>Safety of contact from extraction</td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Mating cycles</td>
</tr>
<tr>
<td>Withdrawal forces</td>
</tr>
<tr>
<td>Special contacts</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ELECTRICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact resistance</td>
</tr>
<tr>
<td>Current rating</td>
</tr>
<tr>
<td>Insulation</td>
</tr>
<tr>
<td>Voltage rating</td>
</tr>
<tr>
<td>Proof voltage</td>
</tr>
<tr>
<td>Contact diameter</td>
</tr>
<tr>
<td>Impedance</td>
</tr>
</tbody>
</table>

Dimension are in mm
# HOW TO ORDER

## SERIES

## ARRANGEMENT

| 100 | 200 |

## PART - POLARITY - PLATING

| 15 | Male Plug - MIL plating |
| 19 | Male Plug - MIL tinned plating |
| 24 | Female Receptacle - MIL plating |
| 28 | Female Receptacle - MIL tinned plating |

## TERMINATION STYLES

| 10 | 90° termination, PCB thickness 1.60 |
| 11 | 90° termination, PCB thickness 2.40 |
| 30 | Straight termination, PCB thickness 2.40 |
| 31 | Straight termination, PCB thickness 3.20 |
| 44 | SMT* - uncentered PCB thickness 3.80 |
| 96 | Straight termination, PCB thickness 4.50 |

## GUIDE STYLES

| 110 | MALE POLARISED, TRANSVERSE MOUNT, STANDARD PLUG |
| 121 | FEMALE POLARISED, VERTICAL MOUNT |
| 124 | FEMALE POLARISED, TRANSVERSE MOUNT |
| 126 | FEMALE UNPOLARISED, VERTICAL MOUNT |
| 131 | FEMALE ALL POLARISED, VERTICAL MOUNT |
| 134 | FEMALE POLARISED, TRANSVERSE MOUNT |
| 191 | MALE POWER OR MASS CONTACT, TRANSVERSE MOUNT |
| 111 | MALE POLARISED, VERTICAL MOUNT |
| 122 | FEMALE POLARISED, VERTICAL MOUNT |
| 125 | MALE UNPOLARISED, TRANSVERSE MOUNT |
| 130 | FEMALE ALL POLARISED, VERTICAL MOUNT |
| 133 | FEMALE ALL POLARISED, TRANSVERSE MOUNT |
| 190 | FEMALE POWER OR MASS CONTACT, VERTICAL MOUNT |
| 201 | ½ TURN, FREE CONNECTOR |

* *Surface Mount Termination
PCB thickness is in mm*
RECEPTACLE - MATING SIDE VIEWS

SINGLE ARRANGEMENTS

100

200

50 ways module

...........................................
STANDARD PLUGGING STAGES

MISALIGNMENT
- LONGITUDINAL
- LATERAL

GAP
- LATERAL

TILTING
- LONGITUDINAL
- LATERAL

DISPLACEMENT
Max displacement allowed while plugging in the receptacle: 0.15 mm in all plugged in connector ways.
TERMINATION STYLES

RECEPTACLE

THROUGH BOARD SOLDER - 90°

Ref: 10
PCB: 1.44 - 1.76
A = 3.25 ± 0.45
B = 6 max

Ref: 11
PCB: 1.98 - 2.42
A = 3.85 ± 0.45
B = 6.60 max

THROUGH BOARD SOLDER - STRAIGHT

Ref: 30
PCB: 2.16 - 2.64
A = 3.50 min
4.00 max

Ref: 31
PCB: 2.88 - 5.50
A = 6.10 min
6.60 max

Ref: 96
PCB: 3.42 - 4.18
A = 4.70 min
5.10 max

PLUG

THROUGH BOARD SOLDER - 90°

Ref: 10
PCB: 1.44 - 1.76
A = 5.95 max

THROUGH BOARD SOLDER - STRAIGHT

Ref: 30
PCB: 2.16 - 2.64
A = 3.50 min
4.00 max

Ref: 31
PCB: 2.88 - 3.52
A = 4.60 min
5.10 max

SURFACE MOUNT (UNCENTERED PCB)

Ref: 44
PCB: 3.60 - 4.00
A = 4.40 max
**CONNECTOR DIMENSIONS**

### 100 CONTACTS

**PLUG**

![Image of 100 contact plug]

**RECEPTACLE**

![Image of 100 contact receptacle]

### 200 CONTACTS

**PLUG**

![Image of 200 contact plug]

**RECEPTACLE**

![Image of 200 contact receptacle]

*Theoretical dimensions*
GUIDING DEVICES

RECEPTACLE

**MHD 00- __ 121**
Polarised female guide vertical mounting (Length: 5.50)

**MHD 00- __ Z122**
Polarised female guide vertical mounting (Length: 7)

**MHD 00- __ Z124 / Z134**
Polarised female guide transverse mounting P/N 124: A=6; 134: A=6.60

**MHD 00- __ Z126**
Unpolarised female guide vertical mounting

**MHD 00- __ Z130**
All polarity female guide vertical mounting (Length: 5.50)

**MHD 00- __ Z131**
All polarity female guide vertical mounting (Length: 7)

**MHD 00- __ Z133**
All polarity female guide transverse mounting

**MHD 00- __ Z190**
Ground female guide vertical mounting

**PLUG**

**MHD 00- __ 110**
Polarised male guide transverse mounting

**MHD 00- __ Z111**
Polarised male guide vertical mounting

**MHD 00- __ Z125**
Unpolarised male guide transverse mounting

**MHD 00- __ Z191**
Ground male contact transverse mounting
100 CONTACT BOARD PREPARATION DETAILS (1)

STRAIGHT TERMINATION
Guides: 121, 122, 126, 130, 131, 190

90° TERMINATION
Guides: 124, 133, 134

RECEPTACLE

PLUG

SURFACE MOUNT TERMINATION
Guides: 110, 125, 191

(1) Important note: See important note on 1HB preparation board details (page 17).

* Theoretical dimensions
## TECHNICAL CHARACTERISTICS

### MATERIALS & PLATINGS

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<th>Component</th>
<th>Material</th>
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<td>Dialyl Phthalate UL94vo</td>
</tr>
<tr>
<td>Frame</td>
<td>Aluminium Alloy</td>
</tr>
<tr>
<td>Contact</td>
<td>Copper Alloy</td>
</tr>
<tr>
<td>Guide</td>
<td>Brass + Ni or Stainless steel</td>
</tr>
<tr>
<td>Contact plating</td>
<td>Ni + Au</td>
</tr>
</tbody>
</table>

### ENVIRONMENTAL

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Temperature range</td>
<td>-55°C to +125°C</td>
</tr>
<tr>
<td>Safety of contact from extraction</td>
<td>Statical 2 mm / 0.079&quot;</td>
</tr>
<tr>
<td></td>
<td>Dynamical 1.80 mm / 0.071&quot;</td>
</tr>
<tr>
<td>Mating cycle</td>
<td>5000</td>
</tr>
<tr>
<td>Withdrawal forces</td>
<td>≤ 0.5 N</td>
</tr>
<tr>
<td>Special contacts</td>
<td>According to NFC 93569</td>
</tr>
</tbody>
</table>

### ELECTRICAL

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Contact resistance</td>
<td>Signal ≤ 12 mΩ</td>
</tr>
<tr>
<td>Current rating</td>
<td>Signal 3 A</td>
</tr>
<tr>
<td>Insulation</td>
<td>&gt;10⁴ MΩ</td>
</tr>
<tr>
<td>Voltage rating</td>
<td>200 V</td>
</tr>
<tr>
<td>Proof voltage</td>
<td>800 V</td>
</tr>
<tr>
<td>Contact diameter</td>
<td>Signal 0.50 mm</td>
</tr>
<tr>
<td>Impedance</td>
<td>Coaxial 50 Ω</td>
</tr>
</tbody>
</table>

Dimension are in mm
# HOW TO ORDER

<table>
<thead>
<tr>
<th>1</th>
<th>SERIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>ARRANGEMENT</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>3</td>
<td>PART - POLARITY - PLATING</td>
</tr>
<tr>
<td>1</td>
<td>Male Plug - MIL tinned plating</td>
</tr>
<tr>
<td>9</td>
<td>Female Receptacle - MIL tinned plating</td>
</tr>
<tr>
<td>4</td>
<td>TERMINATION STYLES</td>
</tr>
<tr>
<td>0</td>
<td>90° termination, PCB thickness 1.60</td>
</tr>
<tr>
<td>4</td>
<td>SMT* - uncentered PCB thickness 3.80</td>
</tr>
<tr>
<td>3</td>
<td>Straight termination, PCB thickness 3.20</td>
</tr>
<tr>
<td>1</td>
<td>Straight termination, PCB thickness 4.50</td>
</tr>
<tr>
<td>5</td>
<td>GUIDE STYLES</td>
</tr>
<tr>
<td>1</td>
<td>MALE UNPOLARISED, VERTICAL MOUNT</td>
</tr>
<tr>
<td>4</td>
<td>MALE UNPOLARISED, TRANSVERSE MOUNT</td>
</tr>
<tr>
<td>2</td>
<td>FEMALE POLARISED, VERTICAL MOUNT</td>
</tr>
<tr>
<td>2</td>
<td>FEMALE POLARISED, TRANSVERSE MOUNT</td>
</tr>
</tbody>
</table>

* Surface Mount Termination

PCB thickness is in mm
CONNECTOR DIMENSIONS

200 CONTACTS

PLUG

RECEPTACLE

* Theoretical dimensions
GUIDE AND TERMINATION STYLES

RECEPTACLE

THROUGH BOARD SOLDER - 90°
Guide: 134
Ref: 10
PCB: 1.44 - 1.76

THROUGH BOARD SOLDER - STRAIGHT
Guide: 122
Ref: 96
PCB: 3.42 - 4.18

PLUG

THROUGH BOARD SOLDER - STRAIGHT
Guide: 114
Ref: 44
PCB: 3.60 - 4.00

SURFACE MOUNT (UNCENTERED PCB)
Guide: 125
Ref: 81
PCB: 2.88 - 3.52

Note: for other guide styles requested, please contact technical support.
200 CONTACT BOARD PREPARATION DETAILS

STRaight TERMINATION
Guide: 122

RECEPTACLE

90° TERMINATION
Guide: 184

PLUG

STRAIGHT TERMINATION
Guide: 114

SURFACE MOUNT TERMINATION
Guide: 125

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