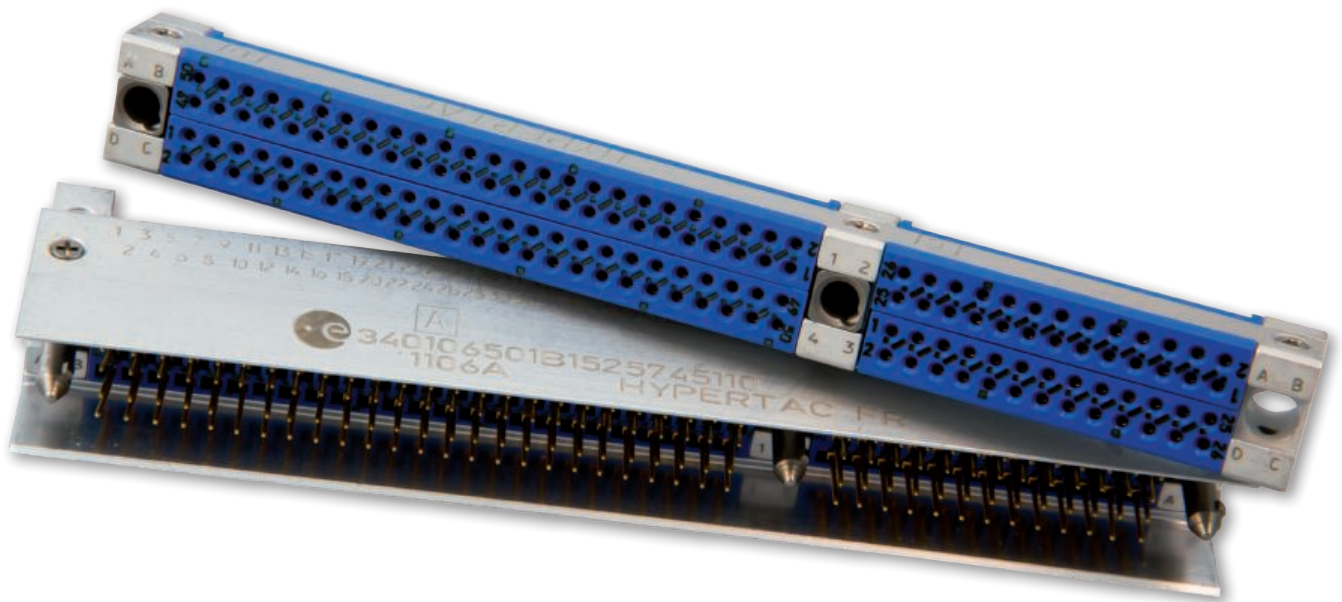


MHD / MDD / MDP

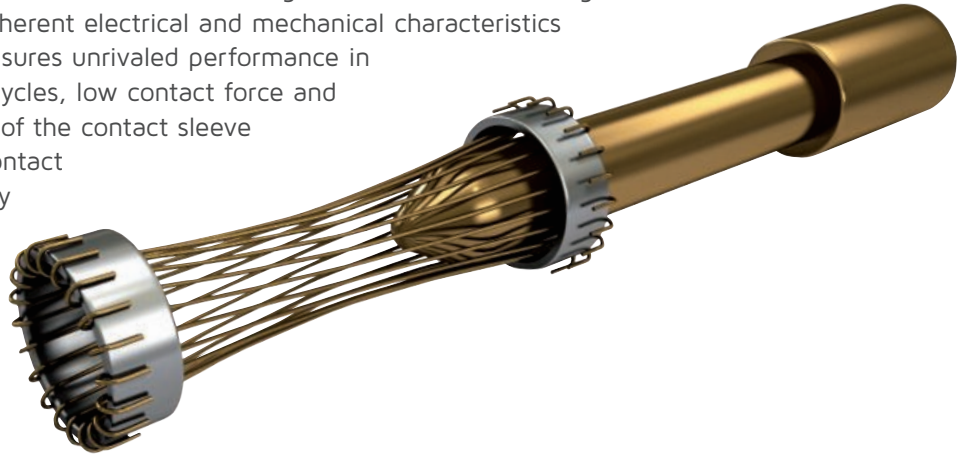
Connectors Series

PCB High Density Connectors



Hypertac® Hyperboloid Technology

Smiths Interconnect 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 unrivaled 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.



Features

Benefits

Low insertion/extraction forces

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.

High density interconnect systems

Significant reductions in size and weight of sub-system designs. No additional hardware is required to overcome mating and unmating forces.

Long contact life

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.

Low cost of ownership

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.

Lower contact resistance

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.

Low power consumption

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.

Higher current ratings

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.

Maximum contact performance

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.

Immunity to shock & vibration

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.

Reliability under harsh environments

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.

Content

MHD Series

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MDP Series

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Technical Characteristics

Materials & Platings

| | |
|-----------------|---------------------------------------|
| Insulator | Diallyl Phtalate UL94V0 |
| Frame | Aluminium Alloy |
| Contact | Copper Alloy |
| Guide | Brass + Ni plating or Stainless Steel |
| Contact plating | Ni + Au |

Environmental

| | |
|-----------------------------------|--|
| Temperature range | -55° C to 125° C |
| Safety of contact from extraction | Statical 2 mm / 0.079 in. Dynamical 1.80 mm / 0.071 in. |
| Mating cycles | 5000 |
| Withdrawal forces | ≤ 0.5 N |
| Special contacts | According to NFC 93569 |

Electrical

| | |
|--------------------|----------------|
| Contact resistance | Signal ≤ 12 mΩ |
| | Power ≤ 2 mΩ |
| Current rating | Signal 3 A |
| | Power 15 A |
| Insulation | >104 MΩ |
| Voltage rating | 200 V |
| Proof voltage | 800 V |
| Contact diameter | Signal 0.50 mm |
| | Power 2.00 mm |
| Impedance | Coaxial 50 Ω |

How To Order



| | | | | | |
|---------------|--------------|---|---|---|---|
| Code ESA | 3401-065 01B | | | | |
| Code Hypertac | M H D | | | | |
| | 1 | 2 | 3 | 4 | 5 |

| | | | | | | | |
|---------------------------|-------------------|---|-----------------------------------|-------------------|--|---|-----|
| 1 Series | | | | | | | |
| 2 Arrangement | € 052 | € 152 | € 252 | € 352 | 5HA | 1HB | 6XA |
| | € 100 | € 200 | € 300 | € 400 | 2XA | 7XB | 3HB |
| 3 Part - Polarity Plating | 13 | € 55 | Male Plug Standard plating | 22 | € 44 | Female Receptacle Standard plating | |
| | 17 | € 57 | Male Plug Pretinned | 26 | € 46 | Female Receptacle Pretinned | |
| | 03 | 50 | Plug without contact ¹ | 04 | 40 | Receptacle without contact ¹ | |
| 4 Termination Styles | € 10 | 90° termination, PCB thickness 1.60 | | € 11 ² | 90° termination, PCB thickness 2.40 | | |
| | € 12 ³ | 90° termination, PCB thickness 3.20 | | € 30 | Straight termination, PCB thickness 2.40 | | |
| | € 31 | Straight termination, PCB thickness 3.20 | | 41 | SMT ⁴ -PCB thickness 1.60 | | |
| | 42 | SMT ⁴ -PCB thickness 3.20 | | € 43 | SMT ⁴ -PCB thickness 2.40 | | |
| | 44 | SMT ⁴ -Uncentered PCB thickness 3.80 | | € 45 | SMT ⁴ - Uncentered PCB thickness 1.60 | | |
| | € 47 | SMT ⁴ -Uncentered PCB thickness 2.40 | | € 91 | Female / male saver ⁵ | | |
| 5 Guide Styles | € 110 | Male polarised, transverse mount, standard plug | | € 111 | Male polarised, vertical mount | | |
| | € 121 | Female polarised, vertical mount | | € 122 | Female polarised, vertical mount | | |
| | € 124 | Female polarised, transverse mount | | 125 | Male unpolarised, transverse mount | | |
| | 126 | Female unpolarised, vertical mount | | 130 | Female polarised, vertical mount | | |
| | 131 | Female polarised, vertical mount | | 133 | Female all polarised, transverse mount | | |
| | € 134 | Female polarised, transverse mount | | 190 | Female power or mass contact, vertical mount | | |
| | 191 | Male power or mass contact, transverse mount | | € 201 | ¼ turn, free connector | | |

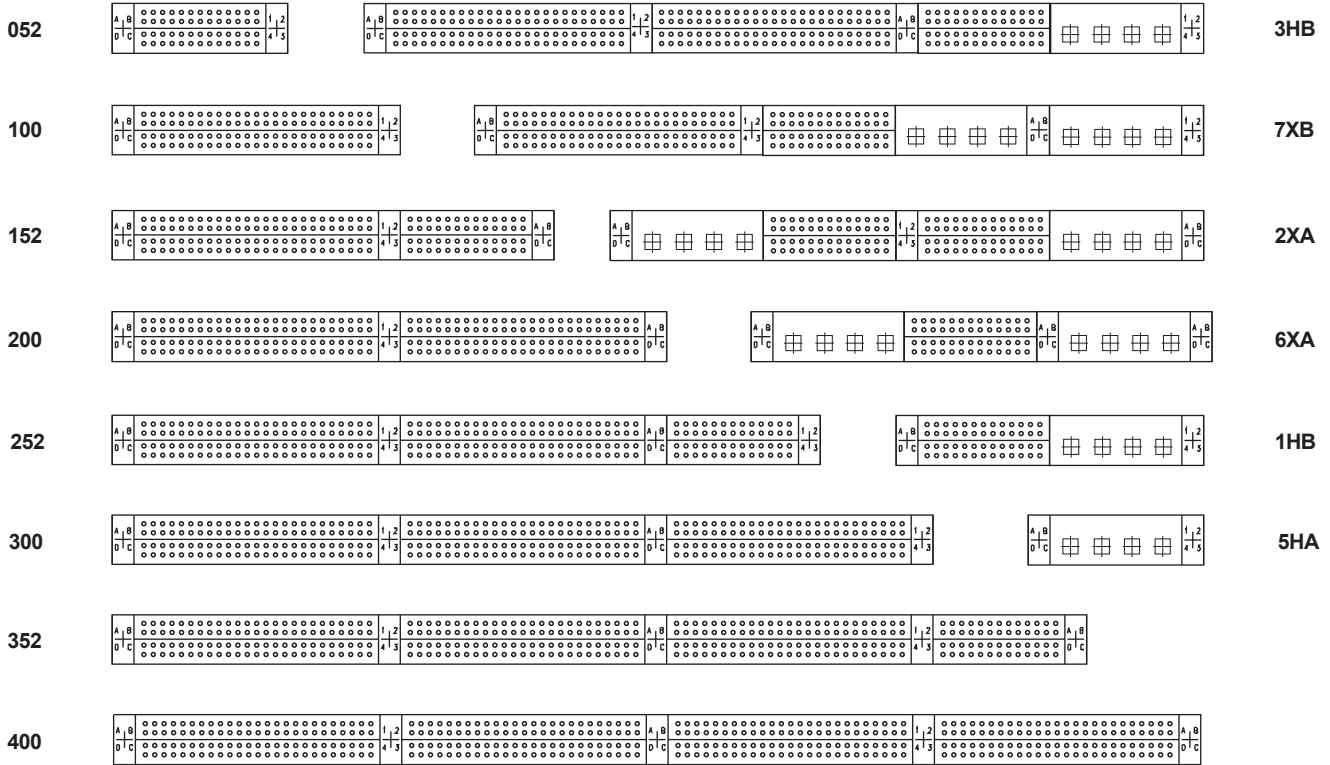
- 1) Applicable only for the 5HA arrangement
- 2) Available for receptacle connector
- 3) Available for plug connector
- 4) Surface mount termination
- 5) Consult us – PCB thickness is in mm

Modules Configuration

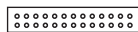
Single Arrangements

Receptacle Mating Side Views

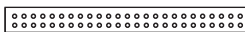
Mixed Arrangements



26 ways module



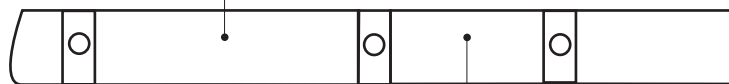
50 ways module



4 ways module (special contacts)

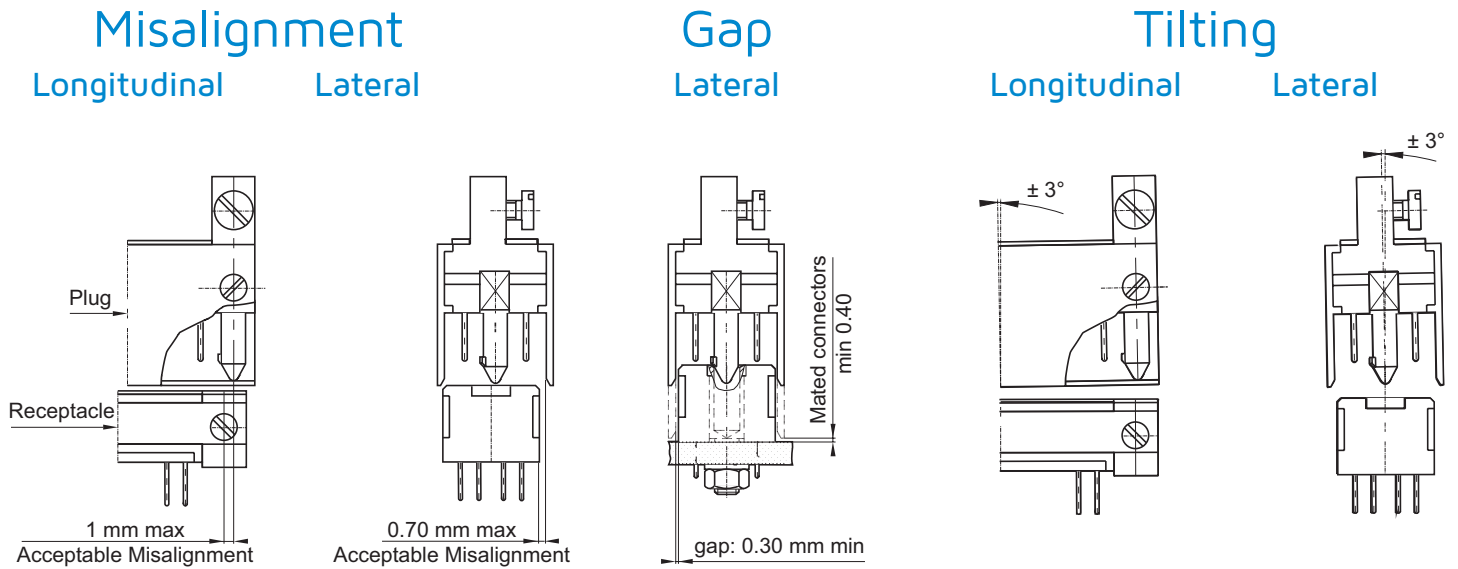


Space which can receive:
 2x50 ways module
 or
 2x26 ways module
 1x4 ways module
 or
 2x4 ways module

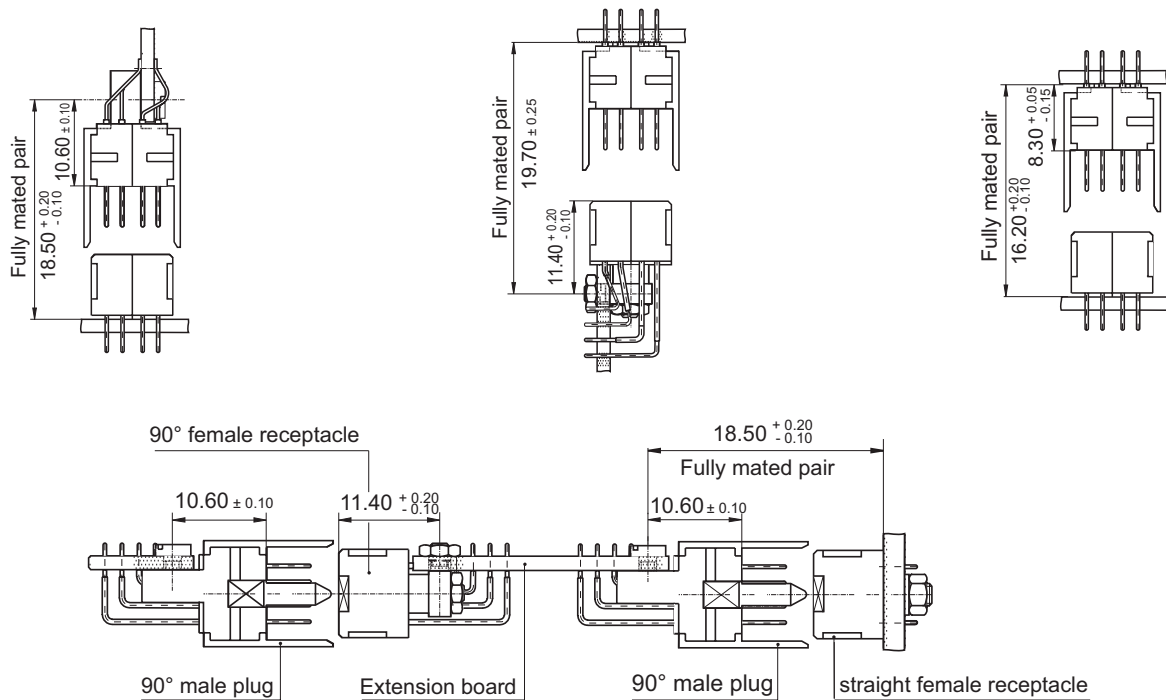


Space which can receive:
 2x26 ways module
 or
 1x4 ways module

Standard Plugging Stages



Mounting Examples



Displacement

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

Termination Styles

Receptacle

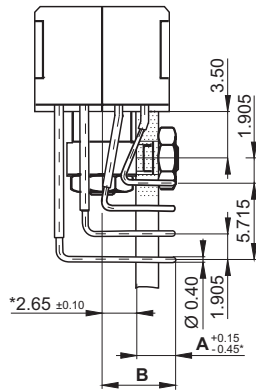
Through board solder - 90°

Ref: 10
PCB: 1.44 - 1.76

A= 3.25 \pm 0.15 / -0.45
B= 6 max

Ref: 11
PCB: 1.98 - 2.42

A= 3.85 \pm 0.15 / -0.45
B= 6.60 max

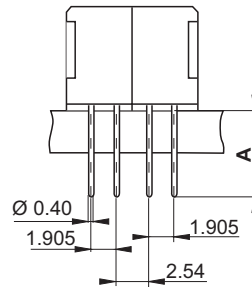


Through board solder - Straight

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

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

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

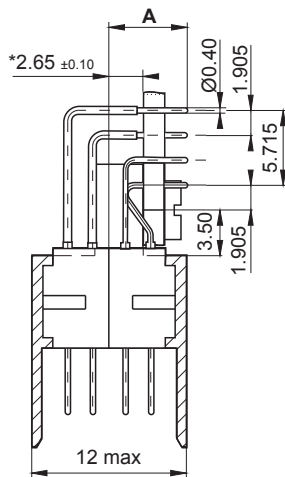


Plug

Through board solder - 90°

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

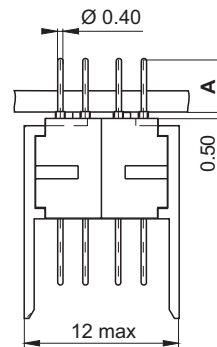
Ref: 12
PCB: 2.88 - 3.52
A= 7.60 max



Through board solder - Straight

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

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

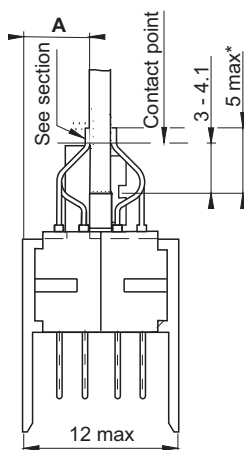


Surface mount (centered PCB)

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



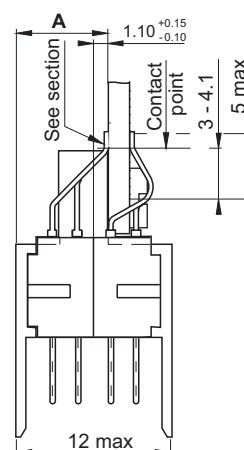
*5.50 for ref: 43

Surface mount (uncentered PCB)

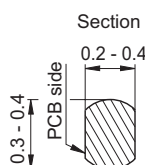
Ref: 44
PCB: 3.60 - 4.00
A= 4.40 max

Ref: 45
PCB: 1.44 - 2.40
A= 7 max

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



Section of termination
Mandatory only for
termination 43, 45 & 47
(ESCC 3401-065)

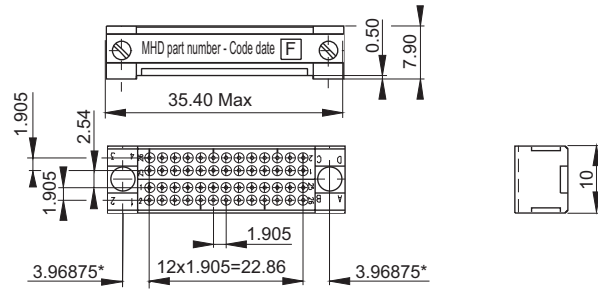
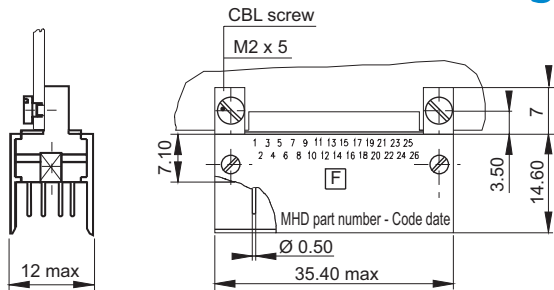


Connector Dimensions

Plug

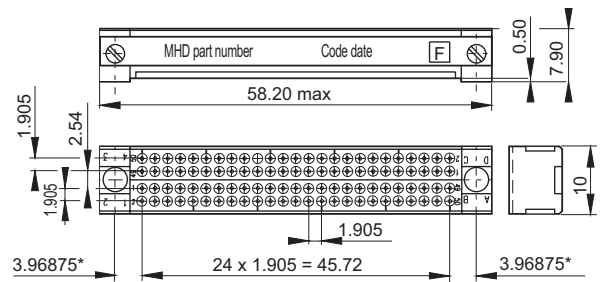
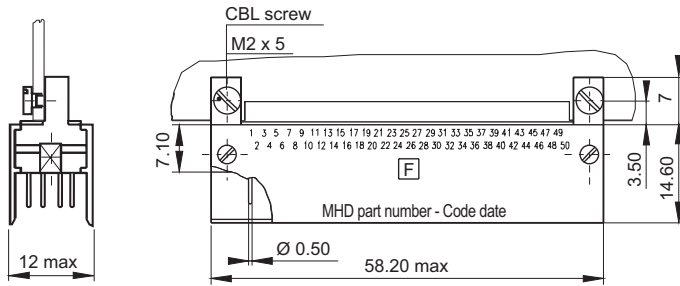
Receptacle

52 contacts



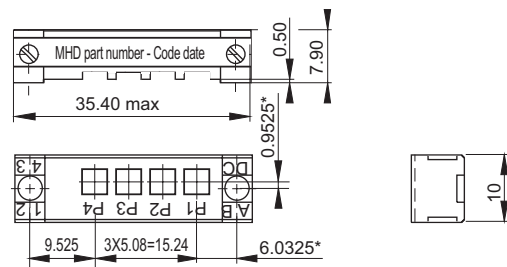
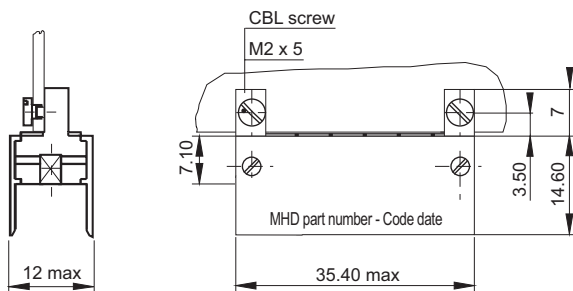
View mating side

100 contacts



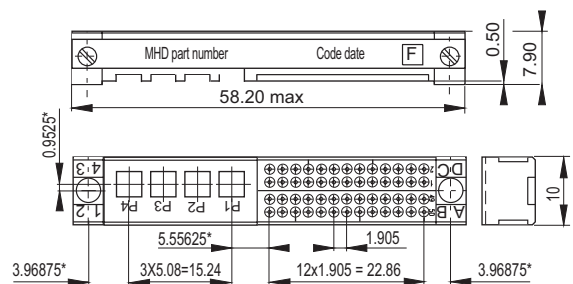
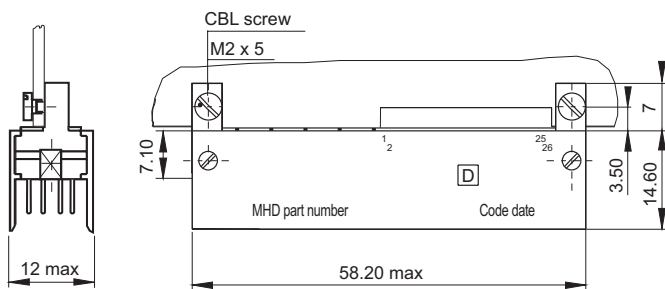
View mating side

5HA



View mating side

1HB

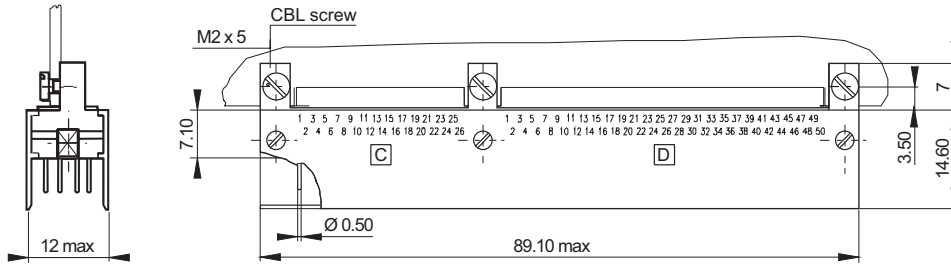


View mating side

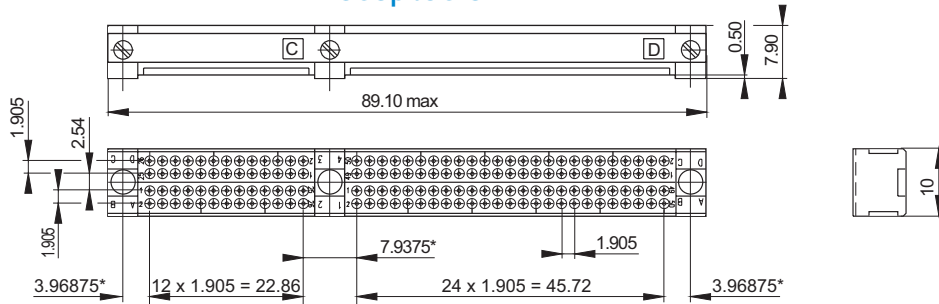
* Theoretical dimensions.

The termination side contact configurations are specified on board preparation details

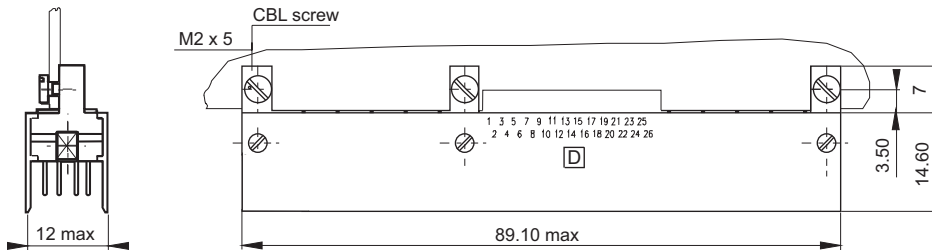
152 Contacts Plug



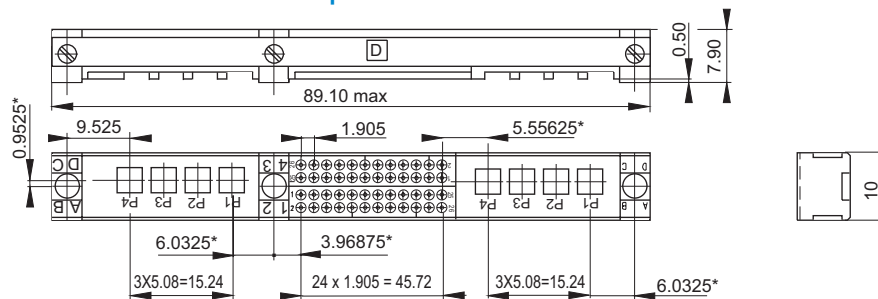
Receptacle



6XA Plug



Receptacle

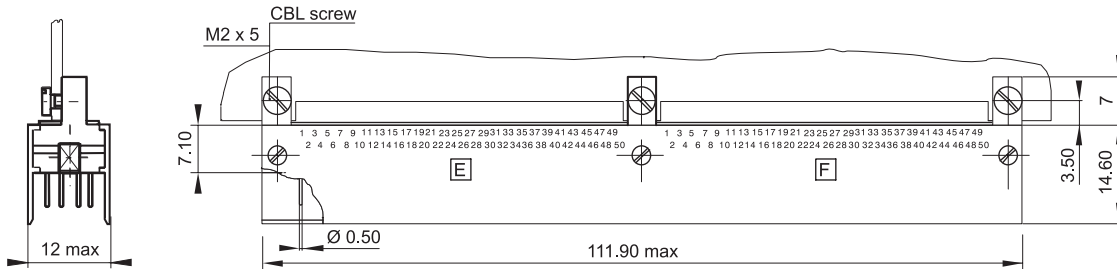


View mating side

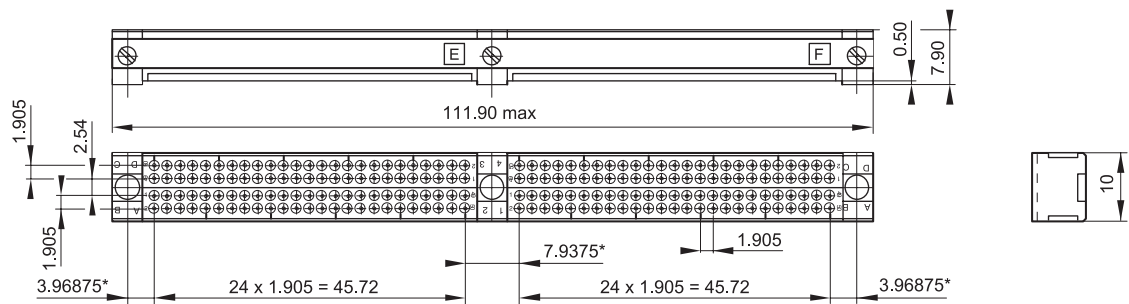
* Theoretical dimensions.

The termination side contact configurations are specified on board preparation details

200 Contacts Plug

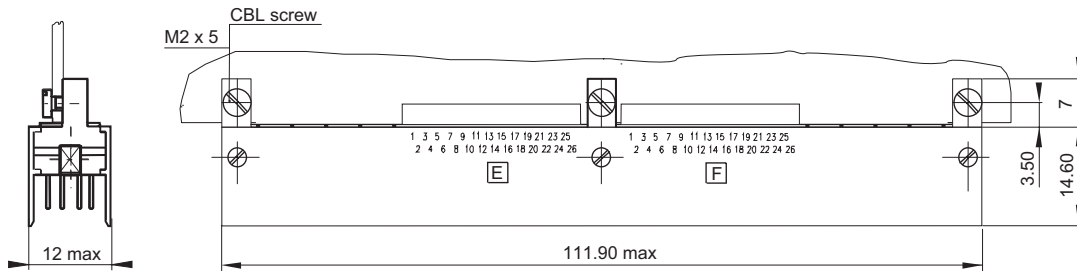


Receptacle

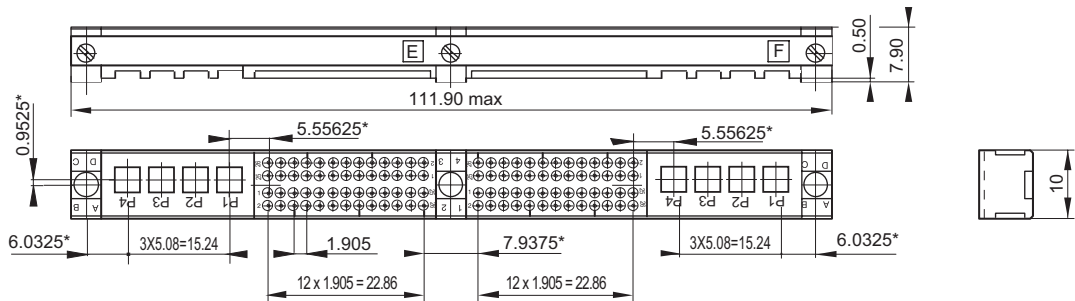


View mating side

2XA Plug



Receptacle



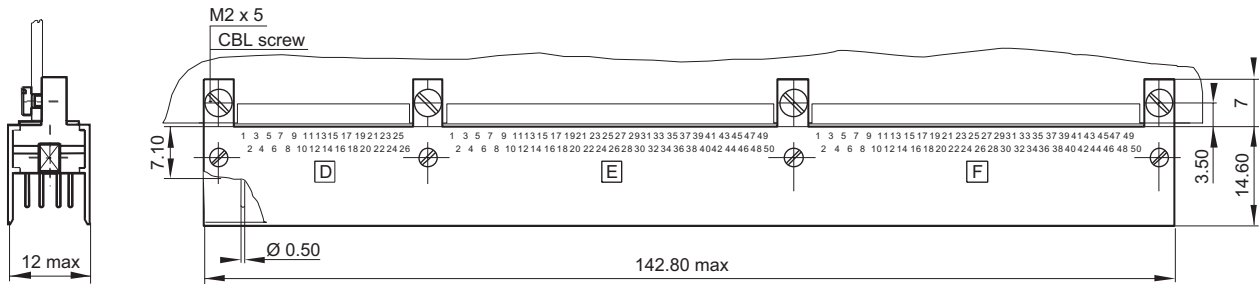
View mating side

* Theoretical dimensions.

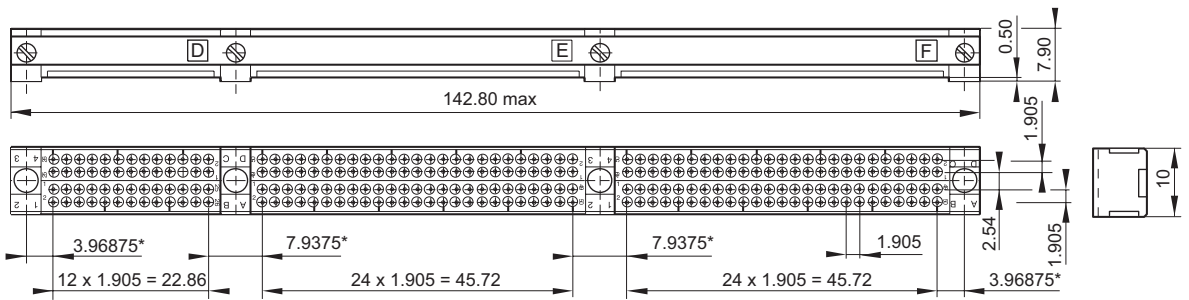
The termination side contact configurations are specified on board preparation details

252 Contacts

Plug



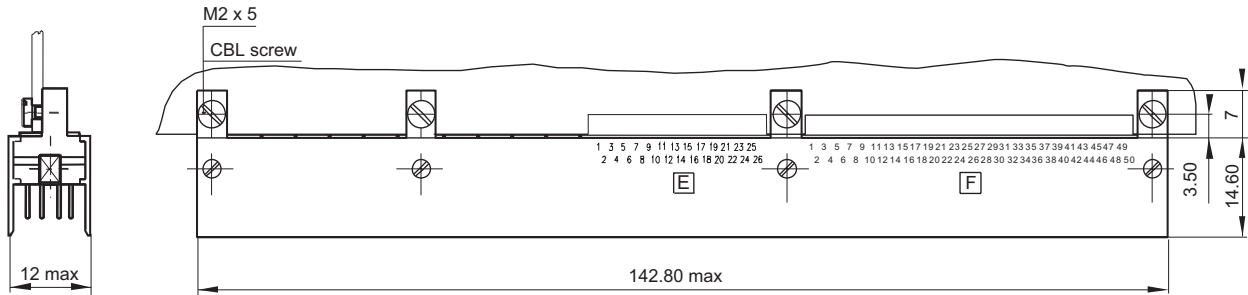
Receptacle



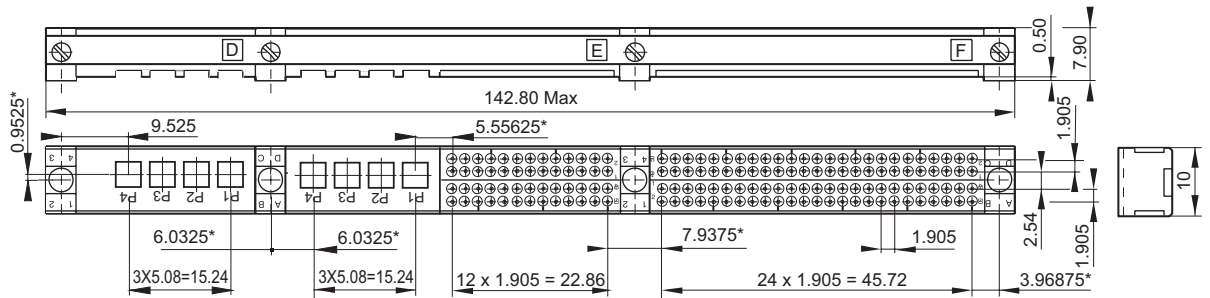
View mating side

7XB

Plug



Receptacle

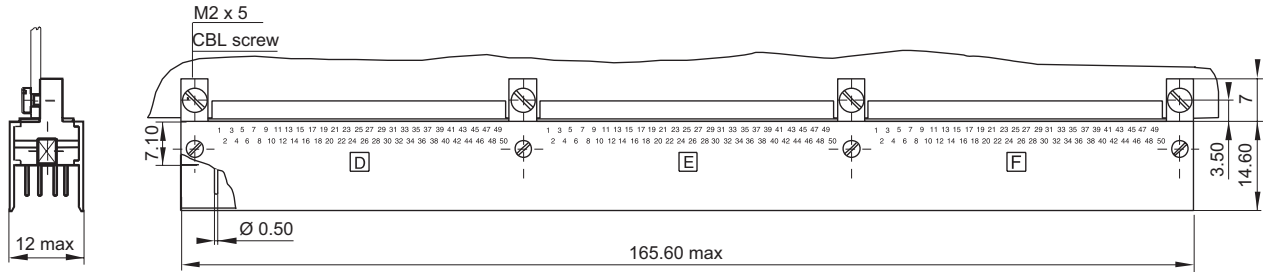


View mating side

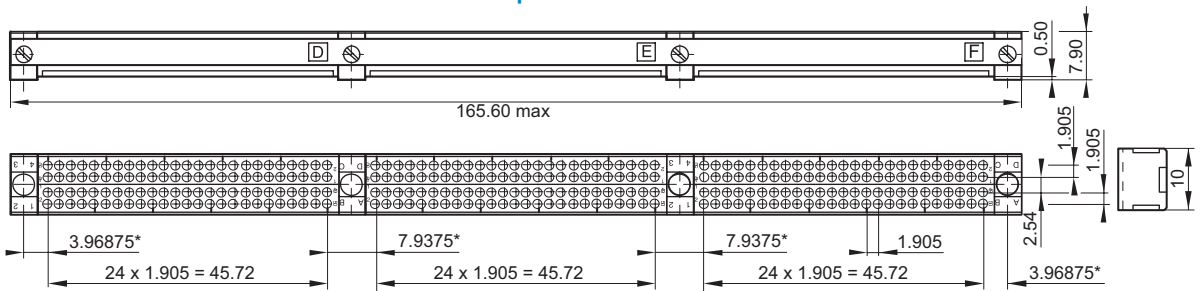
* Theoretical dimensions.

The termination side contact configurations are specified on board preparation details

300 Contacts Plug

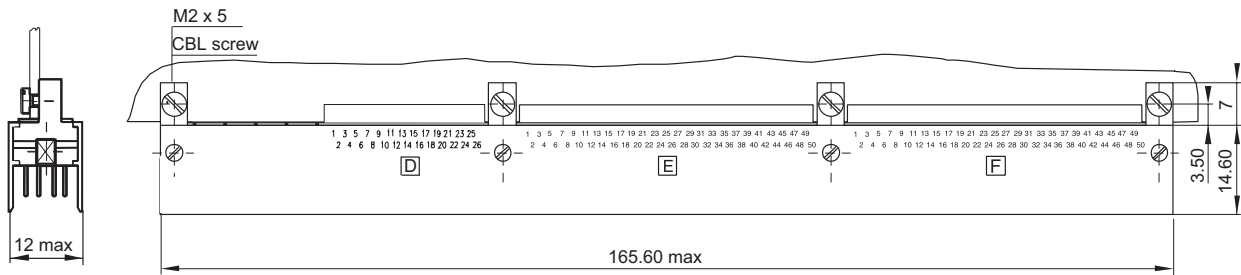


Receptacle

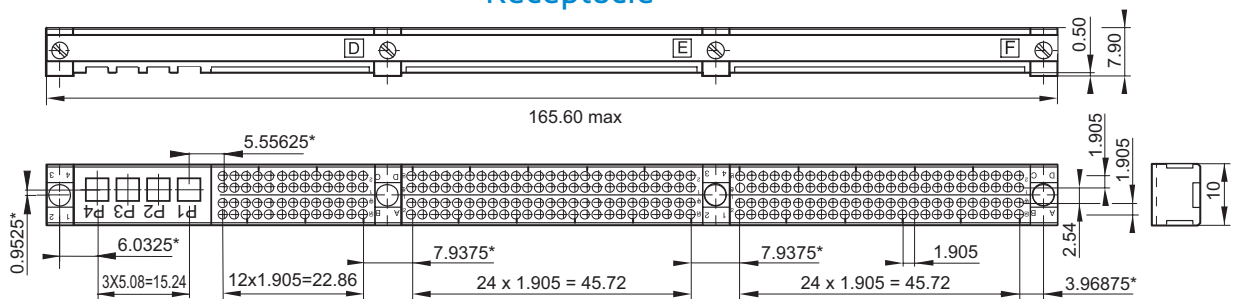


View mating side

3HB Plug



Receptacle



View mating side

* Theoretical dimensions.

The termination side contact configurations are specified on board preparation details

352 Contacts

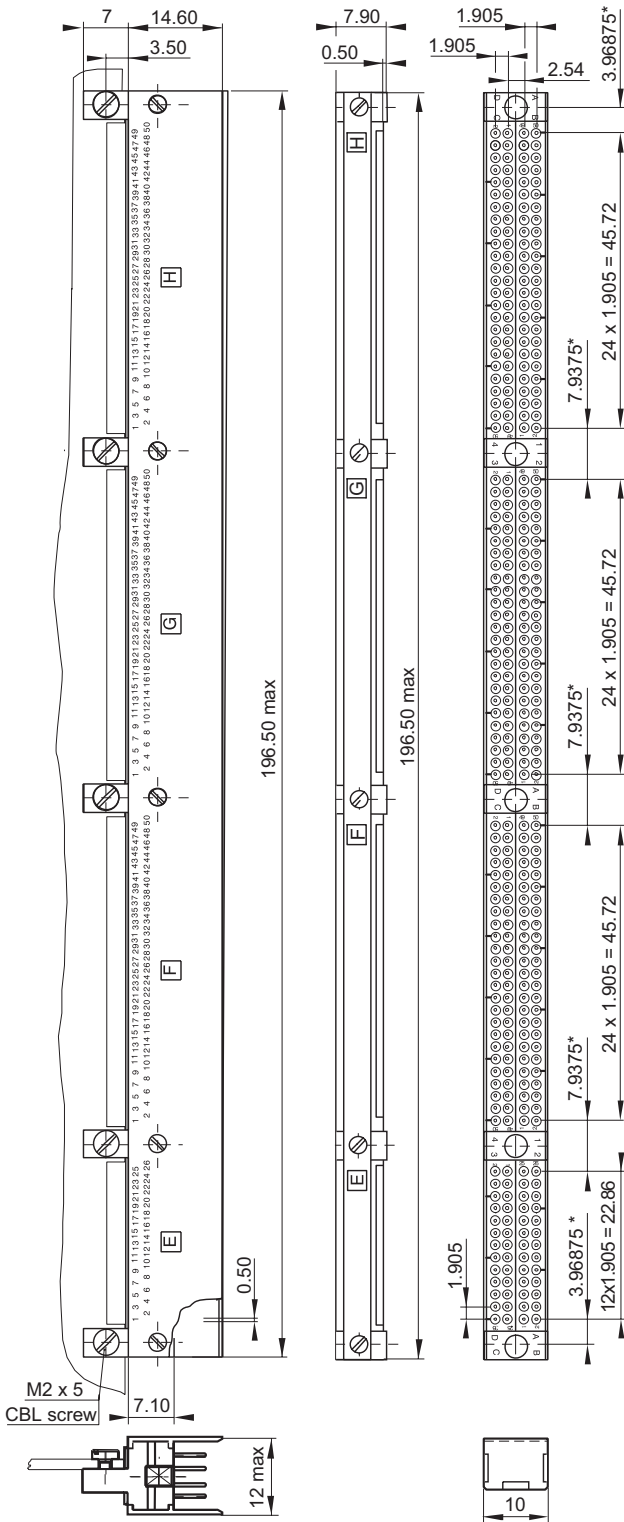
400 Contacts

Plug

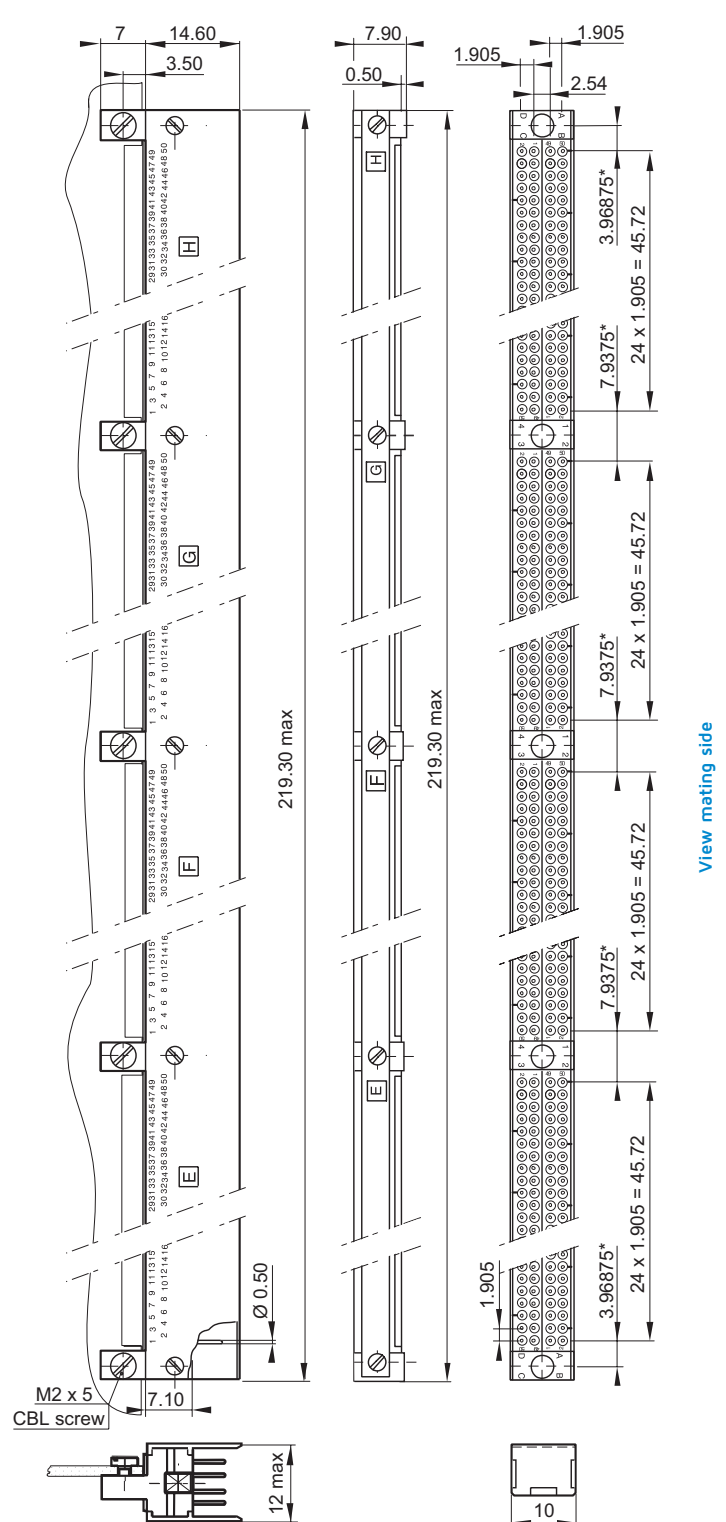
Receptacle

Plug

Receptacle



View mating side



View mating side

* Theoretical dimensions

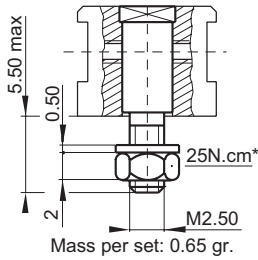
The termination side contact configurations are specified on board preparation details.

Guiding Devices

Receptacle

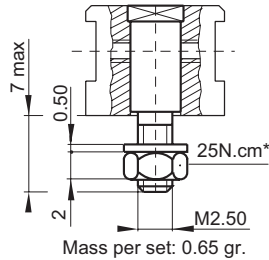
MHD 00- __ 121

Polarised female guide vertical mounting (Length: 5.50)



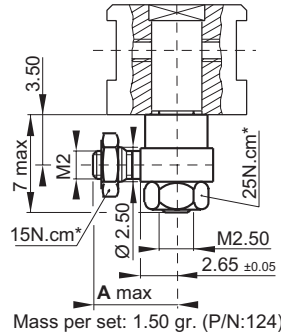
MHD 00- __ Z122

Polarised female guide vertical mounting (Length: 7)



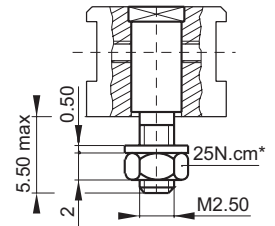
MHD 00- Z124 / Z134

Polarised female guide transverse mounting P/N 124: A=6; 134: A=6.60



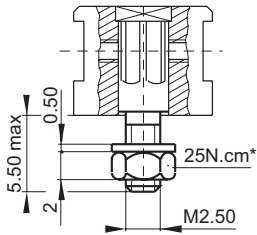
MHD 00- __ Z126

Unpolarised female guide vertical mounting



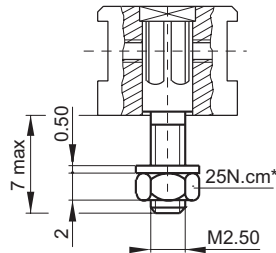
MHD 00- __ Z130

All polarity female guide vertical mounting (Length: 5.50)



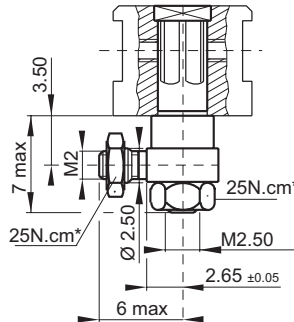
MHD 00- __ Z131

All polarity female guide vertical mounting (Length: 7)



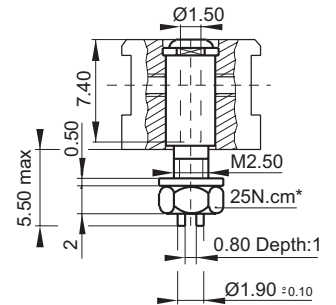
MHD 00- __ Z133

All polarity female guide transverse mounting



MHD 00- __ Z190

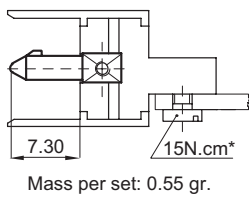
Ground female guide vertical mounting



Plug

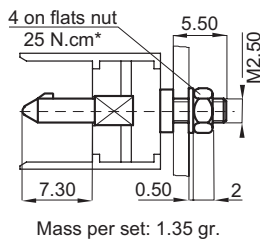
MHD 00- __ 110

Polarised male guide transverse mounting



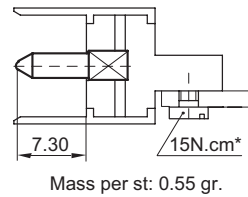
MHD 00- __ Z111

Polarised male guide vertical mounting



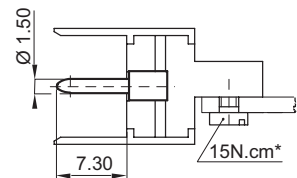
MHD 00- __ Z125

Unpolarised male guide transverse mounting



MHD 00- __ Z191

Ground male contact transverse mounting



* Theoretical dimensions.

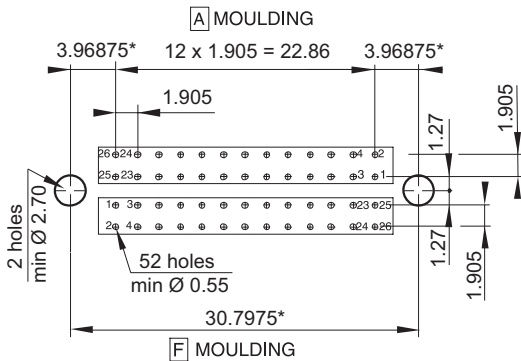
Contact Board Preparation Details

52 Contact Board Preparation Details ⁽¹⁾

Receptacle

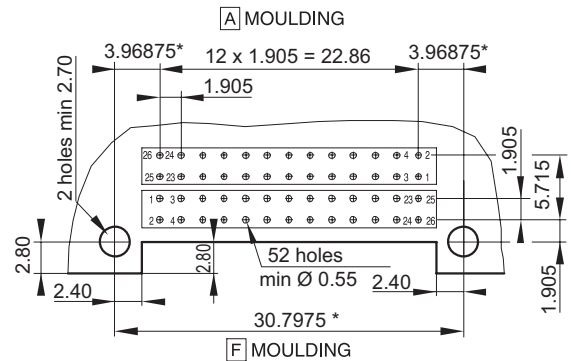
Straight Termination

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



90° Termination

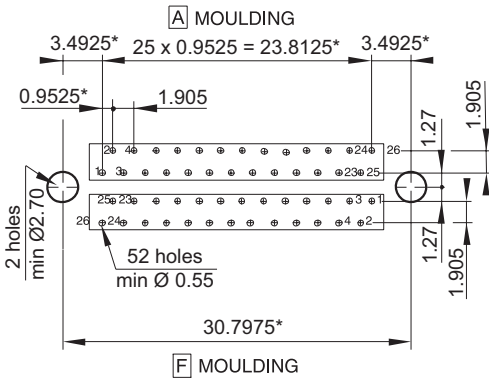
Guides: 124, 133, 134



Plug

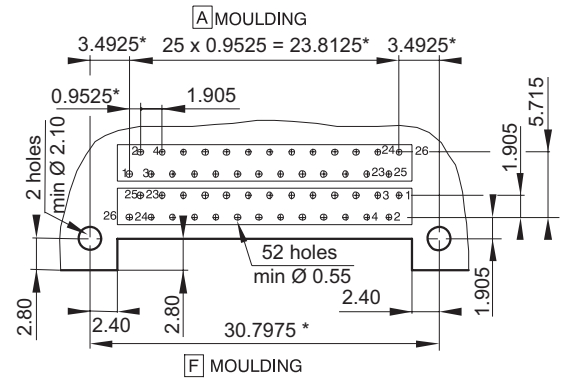
Straight Termination

Guides: 111



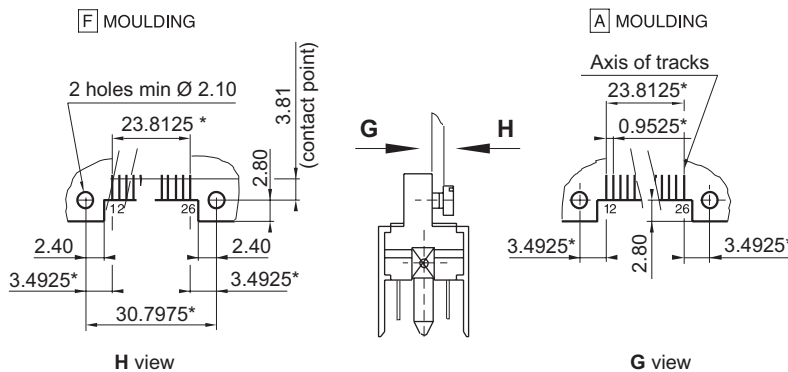
90° Termination

Guides: 110, 125, 191



Surface mount termination

Guides: 110, 125, 191



Note

1) See important note on 1HB preparation board details (page 18).

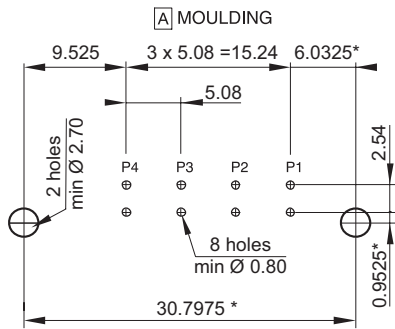
* Theoretical dimensions.

5HA Contact Board Preparation Details⁽¹⁾

Receptacle

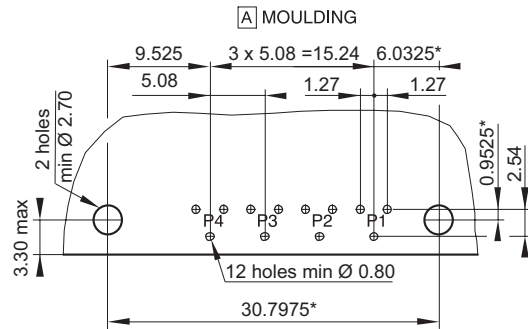
Straight Termination

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



90° Termination

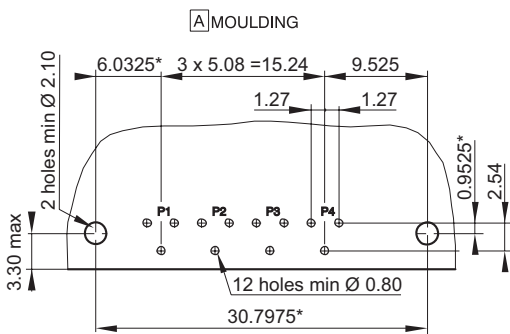
Guides: 124, 133, 134



Plug

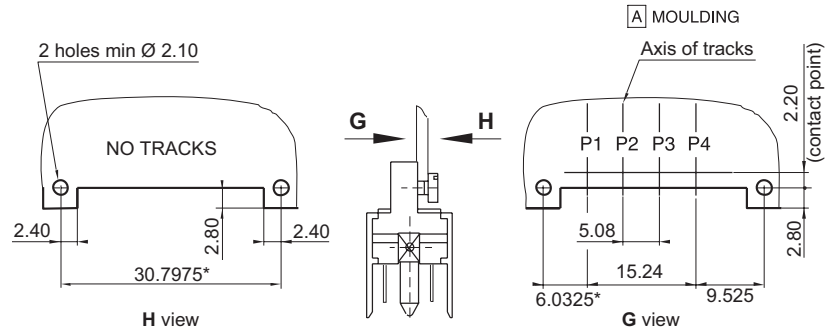
90° Termination

Guides: 110, 125, 191



Surface mount termination

Guides: 110, 125, 191



Note

1) See important note on 1HB preparation board details (page 18).

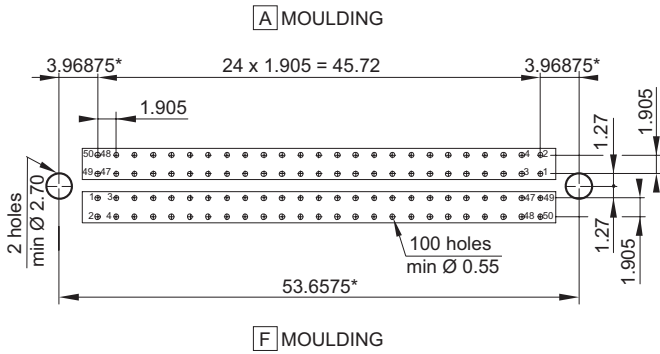
* Theoretical dimensions.

100 Contact Board Preparation Details⁽¹⁾

Receptacle

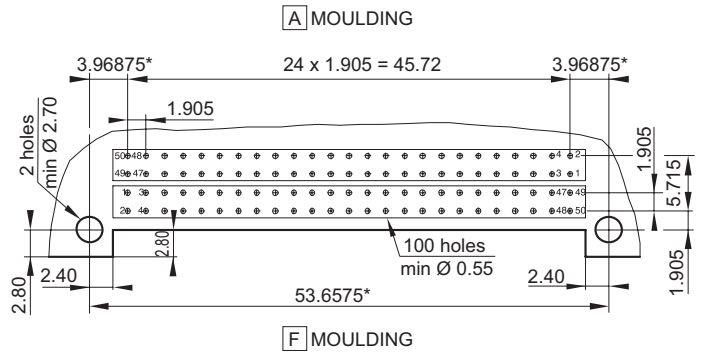
Straight termination

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



90° Termination

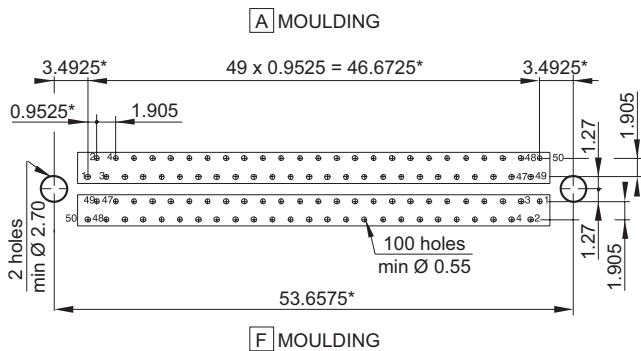
Guides: 124, 133, 134



Plug

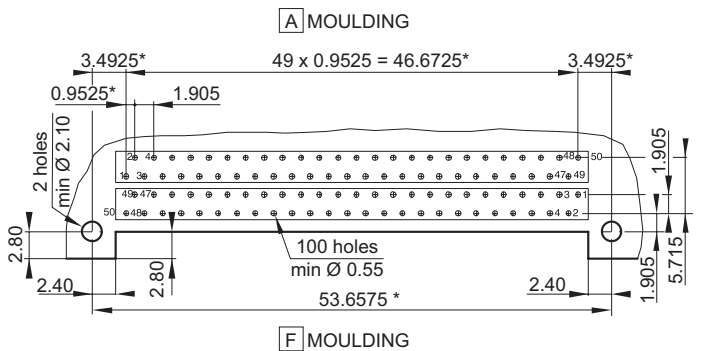
Straight termination

Guides: 111



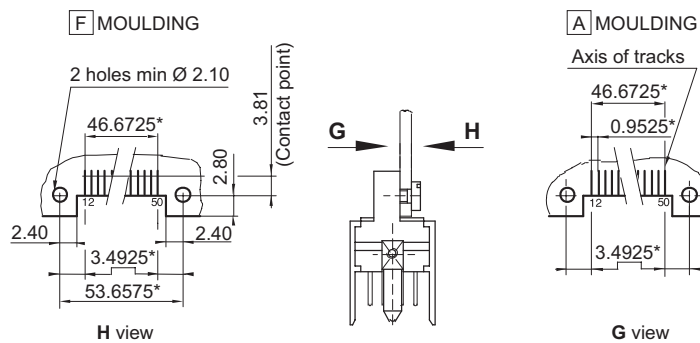
90° Termination

Guides: 110, 125, 191



Surface mount termination

Guides: 110, 125, 191



Note

1) See important note on 1HB preparation board details (page 18).

* Theoretical dimensions.

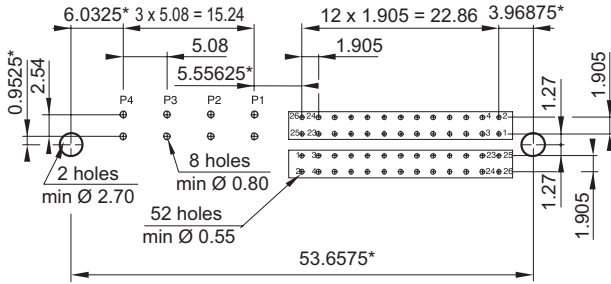
1HB Contact Board Preparation Details⁽¹⁾

Receptacle

Straight termination

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

A MOULDING

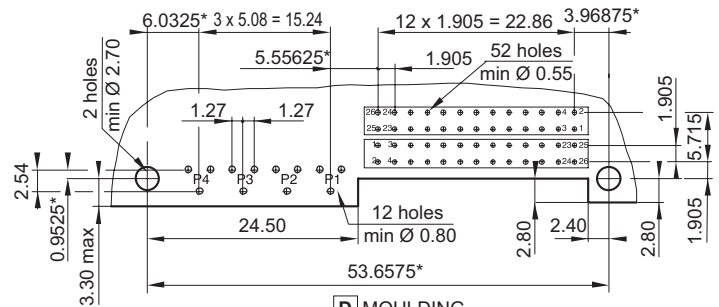


D MOULDING

90° Termination

Guides: 124, 133, 134

A MOULDING

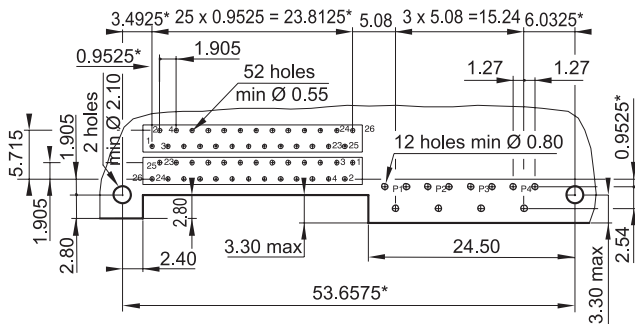


Plug

90° Termination

Guides: 110, 125, 191

A MOULDING

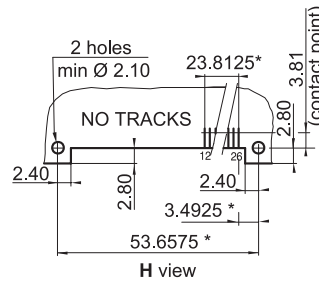


D MOULDING

Surface mount termination

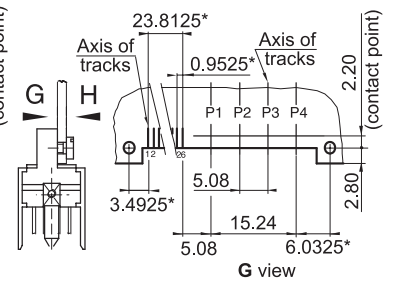
Guides: 110, 125, 191

D MOULDING



H view

A MOULDING



G view

Note

1) See important note on 1HB preparation board details (page 18).

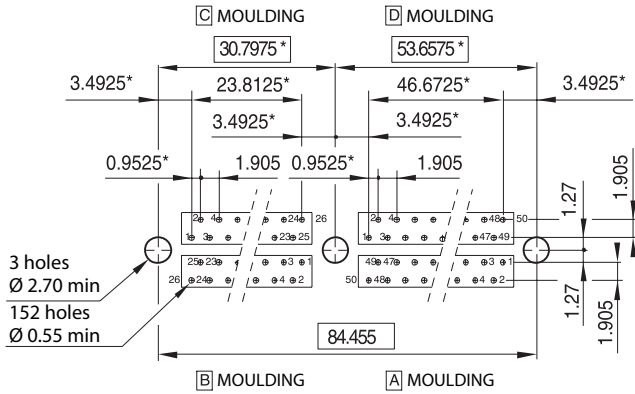
* Theoretical dimensions.

152 Contact Board Preparation Details⁽¹⁾

Plug

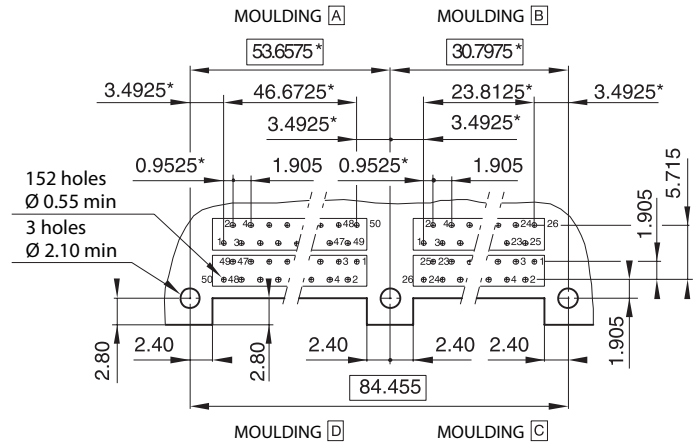
Straight termination

Guides: 112



90° Termination

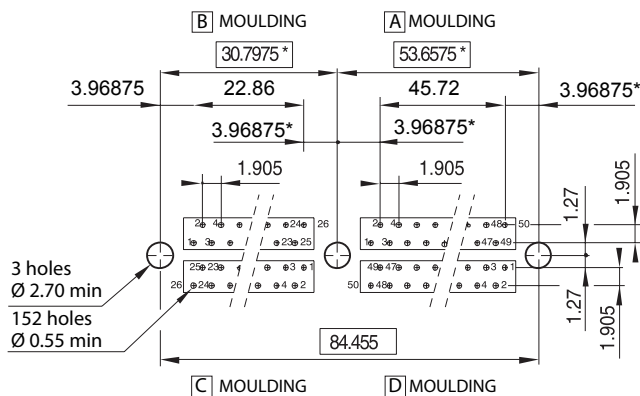
Guides: 110, 125, 191



Receptacles

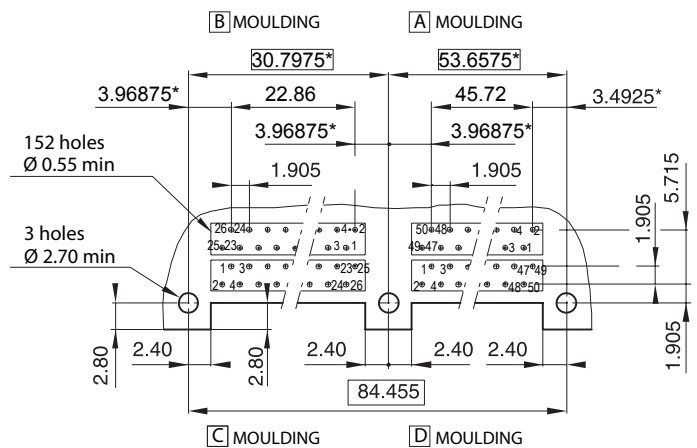
Straight termination

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



90° Termination

Guides: 124, 133, 134

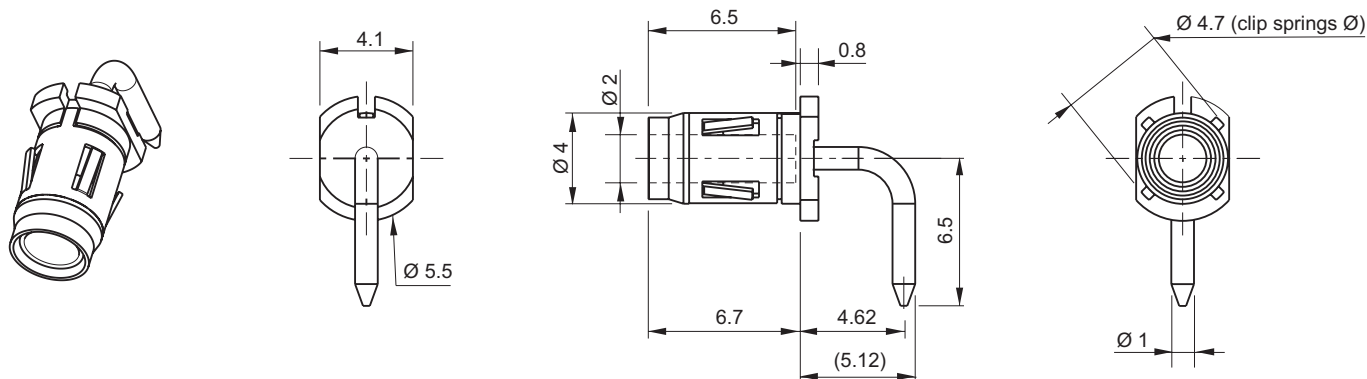


Important note

- 1) 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.

Power & High Frequency Contacts (NFC 93569)

Example of Contact Overview (020 084 2- 10 RG1)



Power Contacts

| Male | P/N |
|---------------------------|-------------------|
| 90° termination | 020 085 1- 10R OG |
| Straight termination | 020 087 1- 30R OG |
| Solder bucket termination | 020 091 1- 40R OG |

| Female | P/N |
|---------------------------|-------------------|
| 90° termination | 020 084 2- 10R G1 |
| Straight termination | 020 056 2- 30R G1 |
| Solder bucket termination | 020 060 2- 40R G1 |

High Frequency Contacts

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

Extraction Tools

P/N: SD- 030 00 CX 003

Technical Characteristics

Materials & Platings

| | |
|-----------------|---------------------------------------|
| Insulator | Diallyl Phtalate UL94V0 |
| Frame | Aluminium Alloy |
| Contact | Copper Alloy |
| Guide | Brass + Ni plating or Stainless Steel |
| Contact plating | Ni + Au |

Environmental

| | |
|-----------------------------------|--|
| Temperature range | - 55° C to +125° C |
| Safety of contact from extraction | Statical 2 mm / 0.079 in. Dynamical 1.80 mm / 0.071 in. |
| Mating cycles | 5000 |
| Withdrawal forces | ≤ 0.5 N |
| Special contacts | According to NFC 93569 |

Electrical

| | |
|--------------------|----------------|
| Contact resistance | Signal ≤ 12 mΩ |
| Current rating | Signal 3 A |
| Insulation | >104 MΩ |
| Voltage rating | 200 V |
| Proof voltage | 800 V |
| Contact diameter | Signal 0.50 mm |

How To Order



MDD



1

2

3

4

5

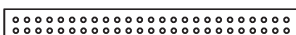
| | |
|---------------------------|--|
| 1 Series | |
| 2 Arrangement | 1 0 0 2 0 0 |
| 3 Part - Polarity Plating | 1 5 Male plug - MIL plating 2 4 Female receptacle - MIL plating |
| | 1 9 Male plug - MIL tinned plating 2 8 Female receptacle - MIL tinned plating |
| 4 Termination Styles | 1 0 90° termination, PCB thickness 1.60 1 1 90° termination, PCB thickness 2.40 |
| | 3 0 Straight termination, PCB thickness 2.40 3 1 Straight termination, PCB thickness 3.20 |
| | 4 4 SMT* - Uncentered PCB thickness 3.80 9 6 Straight termination, PCB thickness 4.50 |
| 5 Guide Styles | 1 1 0 Male polarized, transverse mount, standard plug 1 1 1 Male polarized, vertical mount |
| | 1 2 1 Female polarized, vertical mount 1 2 2 Female polarized, vertical mount |
| | 1 2 4 Female polarized, transverse mount 1 2 5 Male unpolarised, transverse mount |
| | 1 2 6 Female unpolarised, vertical mount 1 3 0 Female all polarized, vertical mount |
| | 1 3 1 Female all polarized, vertical mount 1 3 3 Female all polarized, transverse mount |
| | 1 3 4 Female polarized, transverse mount 1 9 0 Female power or mass contact, vertical mount |
| | 1 9 1 Male power or mass contact, transverse mount 2 0 1 ¼ turn, free connector |

* Surface Mount Termination
PCB thickness is in mm

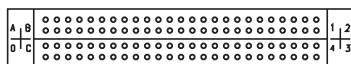
Modules Configuration

Receptacle - Mating Side Views Single arrangements

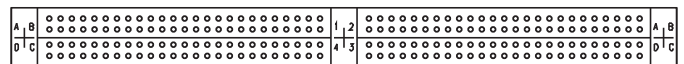
50 ways module



100 ways module



200 ways module

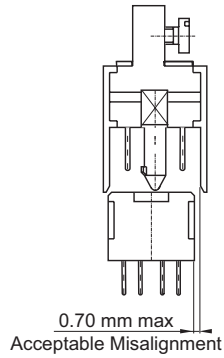
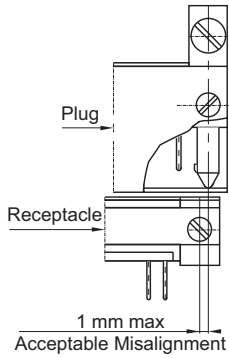


Standard Plugging Stages

Misalignment

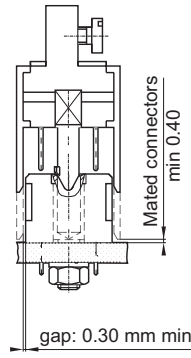
Longitudinal

Lateral



Gap

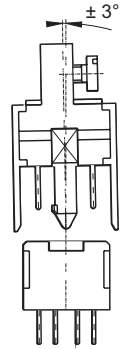
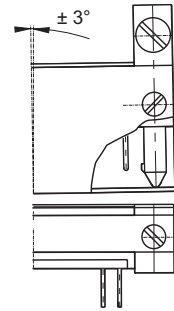
Lateral



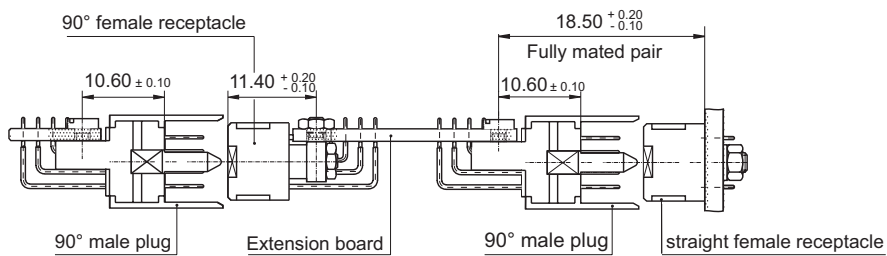
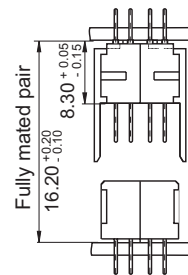
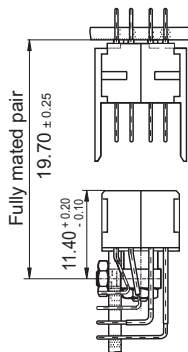
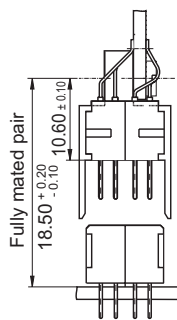
Tilting

Longitudinal

Lateral



Mounting Examples



Displacement

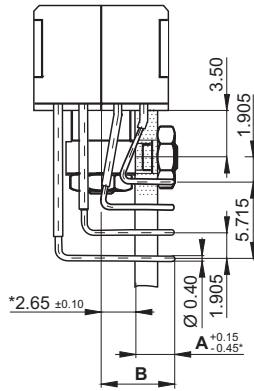
Max displacement allowed while plugging in the receptacle: 0.15 mm in all plugged in connector ways.

Termination Styles

Receptacle

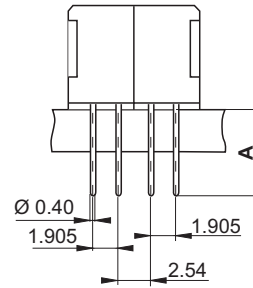
Through board solder - 90°

Ref: 10
PCB: 1.44 - 1.76
A= 3.25 $\begin{smallmatrix} +0.15 \\ -0.45 \end{smallmatrix}$
B= 6 max



Ref: 11
PCB: 1.98 - 2.42
A= 3.85 $\begin{smallmatrix} +0.15 \\ -0.45 \end{smallmatrix}$
B= 6.60 max

Through board solder - Straight



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

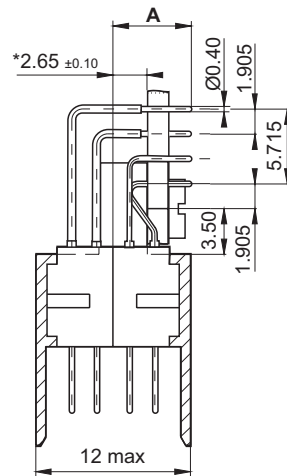
Ref: 31
PCB: 2.88 - 5.50
A= 6.10 min
6.60 max

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

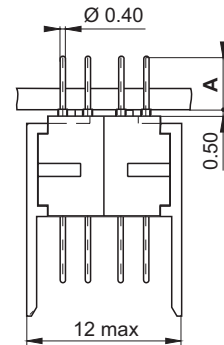
Plug

Through board solder - 90°

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



Through board solder - Straight

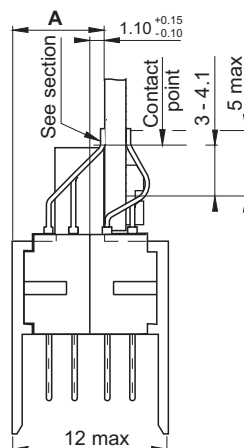


Ref: 30
PCB: 2.16 - 2.64
A= 3.50 min
4.00 max

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

Surface Mount (uncentered PCB)

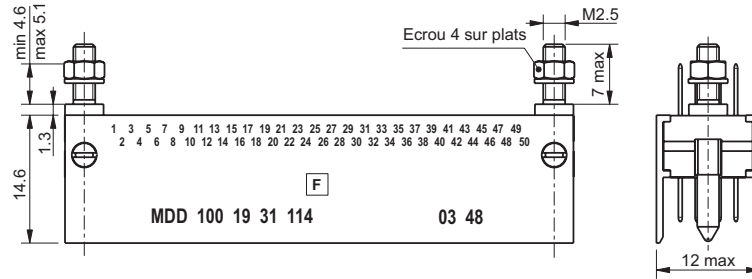
Ref: 44
PCB: 3.60 - 4.00
A= 4.40 max



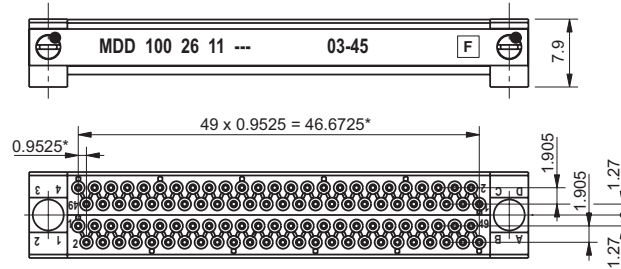
Connector Dimensions

100 Contacts

Plug

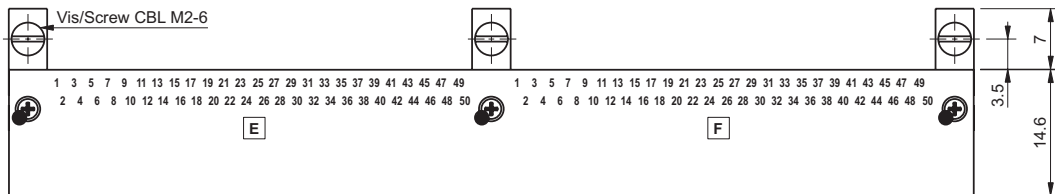


Receptacle

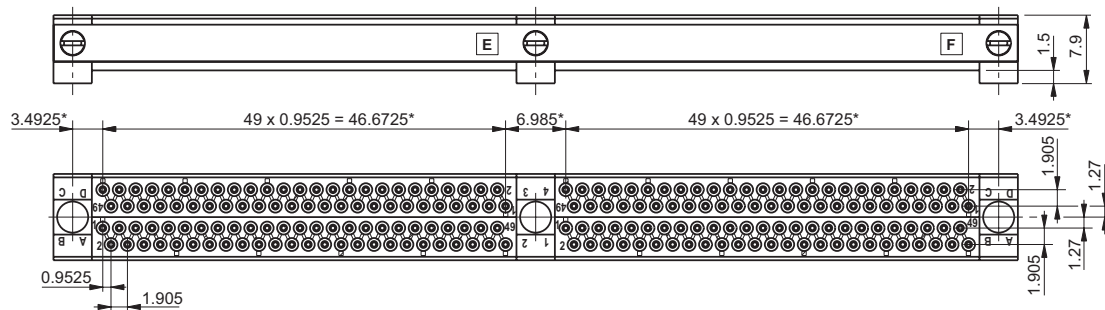


200 Contacts

Plug



Receptacle



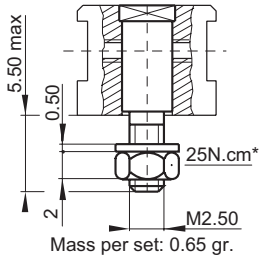
* Theoretical dimensions.

Guiding Devices

Receptacle

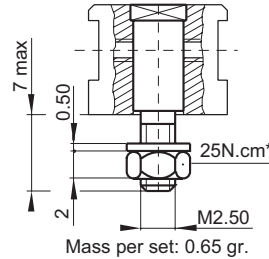
MHD 00- __ 121

Polarised female guide vertical mounting (Length: 5.50)



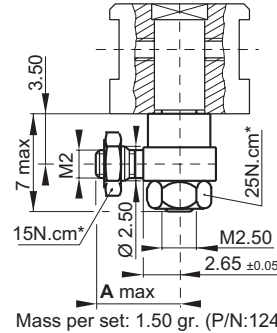
MHD 00- __ Z122

Polarised female guide vertical mounting (Length: 7)



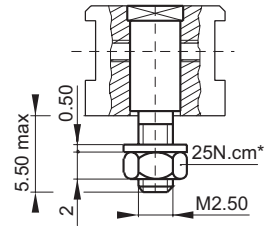
MHD 00- __ z124 / Z134

Polarised female guide transverse mounting P/N 124: A=6; 134: A=6.60



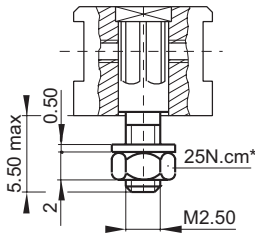
MHD 00- __ Z126

Unpolarised female guide vertical mounting



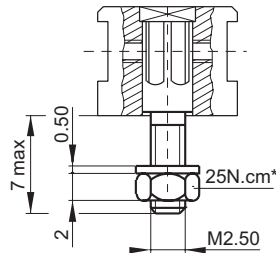
MHD 00- __ Z130

All polarity female guide vertical mounting (Length: 5.50)



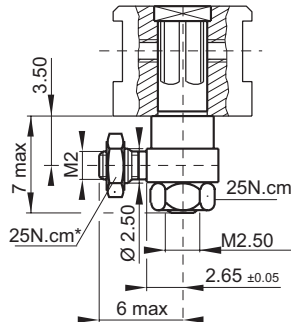
MHD 00- __ Z131

All polarity female guide vertical mounting (Length: 7)



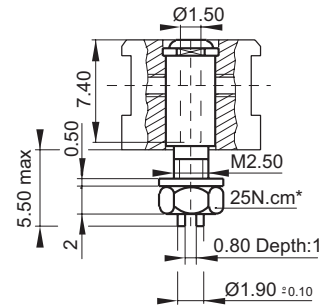
MHD 00- __ Z133

All polarity female guide transverse mounting



MHD 00- __ Z190

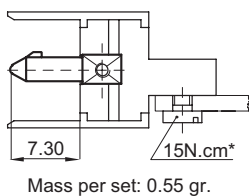
Ground female guide vertical mounting



Plug

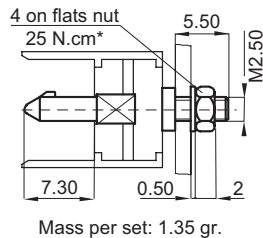
MHD 00- __ 110

Polarised male guide transverse mounting



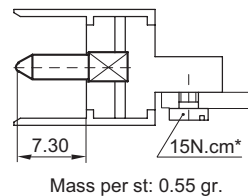
MHD 00- __ Z111

Polarised male guide vertical mounting



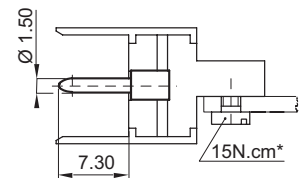
MHD 00- __ Z125

Unpolarised male guide transverse mounting



MHD 00- __ Z191

Ground male contact transverse mounting



* Theoretical dimensions.

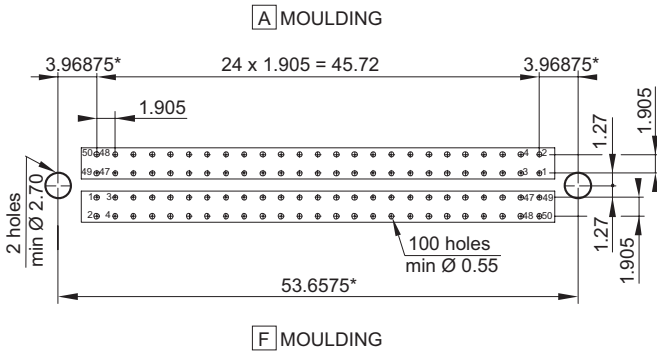
Contact Board Preparation Details

100 Contact Board Preparation Details⁽¹⁾

Receptacle

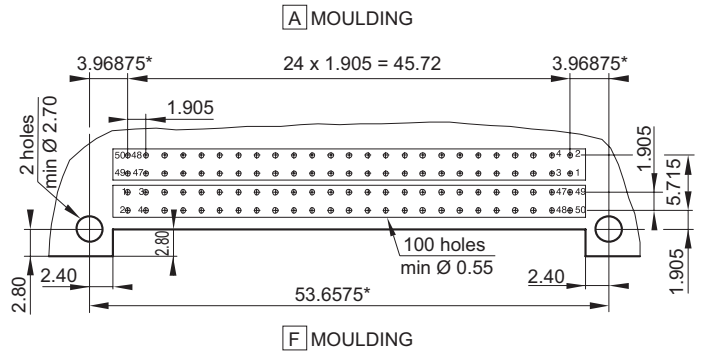
Straight termination

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



90° Termination

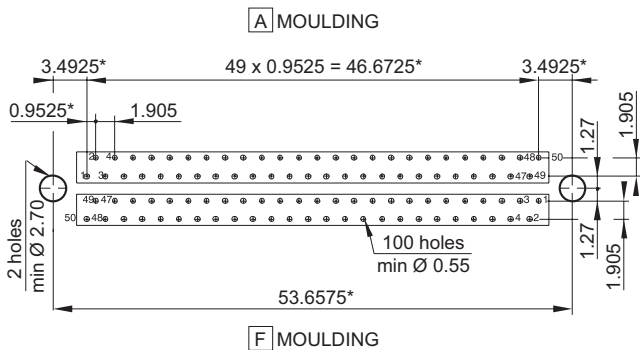
Guides: 124, 133, 134



Plug

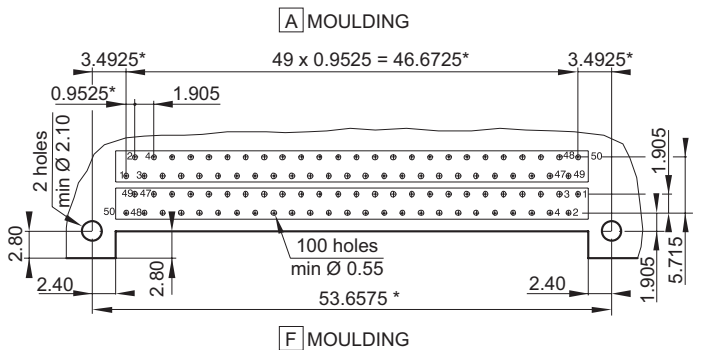
Straight termination

Guides: 111



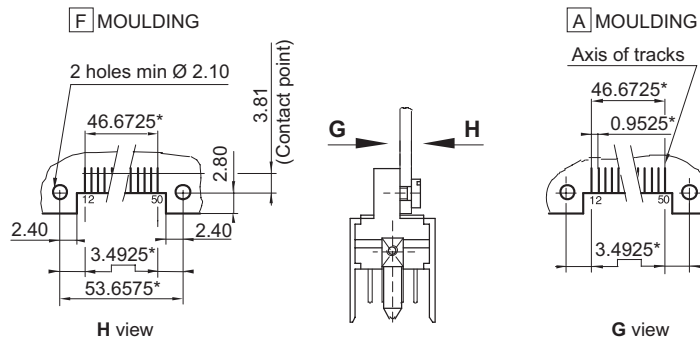
90° Termination

Guides: 110, 125, 191



Surface mount termination

Guides: 110, 125, 191



Note

1) See important note on 1HB preparation board details (page 18).

* Theoretical dimensions.

Technical Characteristics

Materials & Platings

| | |
|-----------------|---------------------------------------|
| Insulator | LCP Thermoplastic |
| Contact | Copper Alloy |
| Guide | Brass + Ni plating or Stainless Steel |
| Contact plating | Ni + Au |

Environmental

| | |
|-----------------------------------|--|
| Temperature range | - 55° C to +125° C |
| Safety of contact from extraction | Statical 2 mm / 0.079 in. Dynamical 1.80 mm / 0.071 in. |
| Mating cycles | 5000 |
| Withdrawal forces | ≤ 0.5 N |
| Special contacts | According to NFC 93569 |

Electrical

| | |
|--------------------|----------------|
| Contact resistance | Signal ≤ 12 mΩ |
| Current rating | Signal 3 A |
| Insulation | >104 MΩ |
| Voltage rating | 200 V |
| Proof voltage | 800 V |
| Contact diameter | Signal 0.50 mm |

How To Order



MDP

1



2



3



4



5

| | | | | | | | | | |
|---------------------------|--|-------|--|-------|--|-------|--|-------|--|
| 1 Series | | | | | | | | | |
| 2 Arrangement | 2 0 0 | | | | | | | | |
| 3 Part - Polarity Plating | <table border="0"> <tr> <td>1 9</td> <td>Male plug - MIL tinned plating</td> <td>2 8</td> <td>Female receptacle - MIL tinned plating</td> </tr> </table> | 1 9 | Male plug - MIL tinned plating | 2 8 | Female receptacle - MIL tinned plating | | | | |
| 1 9 | Male plug - MIL tinned plating | 2 8 | Female receptacle - MIL tinned plating | | | | | | |
| 4 Termination Styles | <table border="0"> <tr> <td>1 0</td> <td>90° termination, PCB thickness 1.60</td> <td>4 4</td> <td>SMT* - Uncentered PCB thickness 3.80</td> </tr> <tr> <td>3 1</td> <td>Straight termination, PCB thickness 3.20</td> <td>9 6</td> <td>Straight termination, PCB thickness 4.50</td> </tr> </table> | 1 0 | 90° termination, PCB thickness 1.60 | 4 4 | SMT* - Uncentered PCB thickness 3.80 | 3 1 | Straight termination, PCB thickness 3.20 | 9 6 | Straight termination, PCB thickness 4.50 |
| 1 0 | 90° termination, PCB thickness 1.60 | 4 4 | SMT* - Uncentered PCB thickness 3.80 | | | | | | |
| 3 1 | Straight termination, PCB thickness 3.20 | 9 6 | Straight termination, PCB thickness 4.50 | | | | | | |
| 5 Guide Styles | <table border="0"> <tr> <td>1 1 4</td> <td>Male unpolarised, vertical mount</td> <td>1 2 2</td> <td>Female polarised, vertical mount</td> </tr> <tr> <td>1 2 5</td> <td>Male unpolarised, transverse mount</td> <td>1 3 4</td> <td>Female polarised, transverse mount</td> </tr> </table> | 1 1 4 | Male unpolarised, vertical mount | 1 2 2 | Female polarised, vertical mount | 1 2 5 | Male unpolarised, transverse mount | 1 3 4 | Female polarised, transverse mount |
| 1 1 4 | Male unpolarised, vertical mount | 1 2 2 | Female polarised, vertical mount | | | | | | |
| 1 2 5 | Male unpolarised, transverse mount | 1 3 4 | Female polarised, transverse mount | | | | | | |

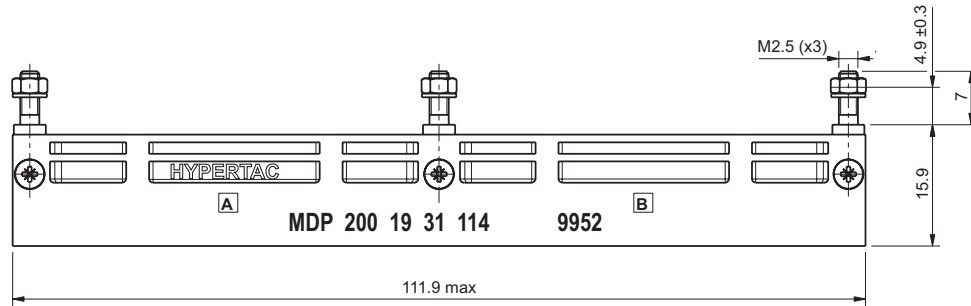
* Surface Mount Termination

PCB thickness is in mm

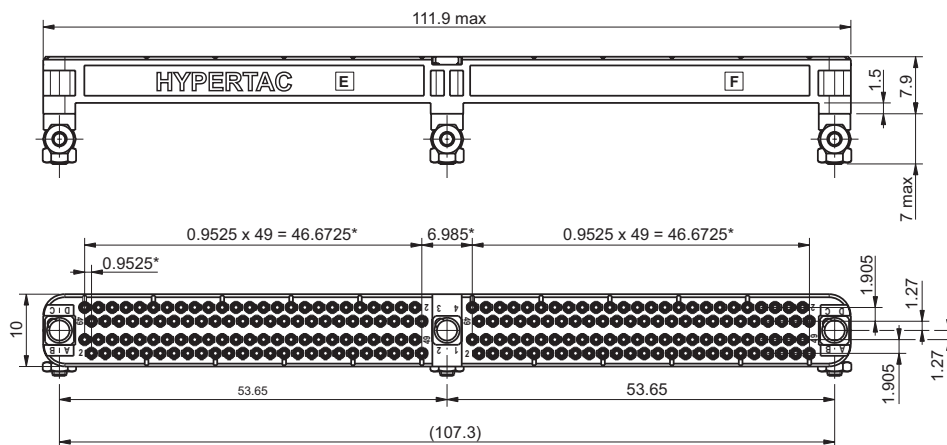
Connector Dimensions

200 Contacts

Plug



Receptacle



* Theoretical dimensions.

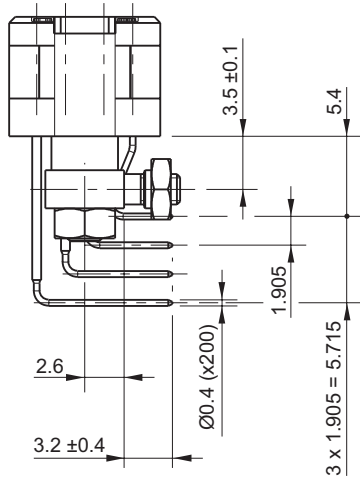
Guide and Termination Styles

Receptacle

Through board solder - 90°

Guide: 134

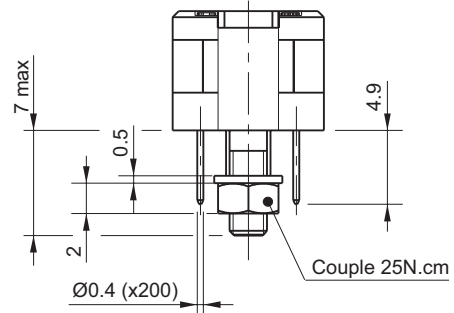
Ref: 10
PCB: 1.44 - 1.76



Through board solder - Straight

Guide: 122

Ref: 96
PCB: 3.42 - 4.18

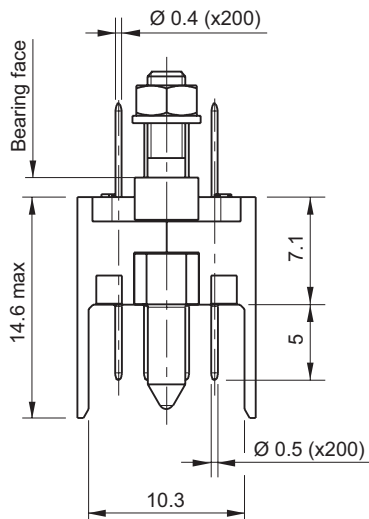


Plug

Through board solder - Straight

Guide: 114

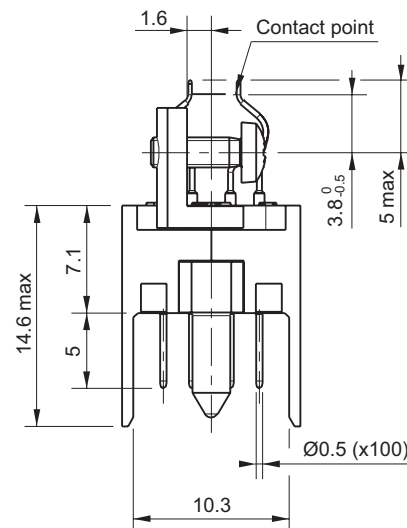
Ref: 31
PCB: 2.88 - 3.52



Surface mount (uncentered PCB)

Guide: 125

Ref: 44
PCB: 3.60 - 4.00



Note: for other guide styles requested, please contact technical support.

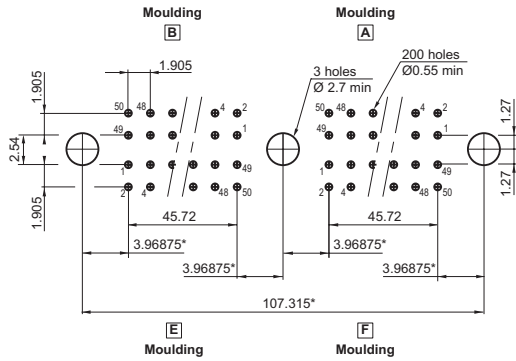
Contact Board Preparation Details

200 Contact Board Preparation Details

Receptacle

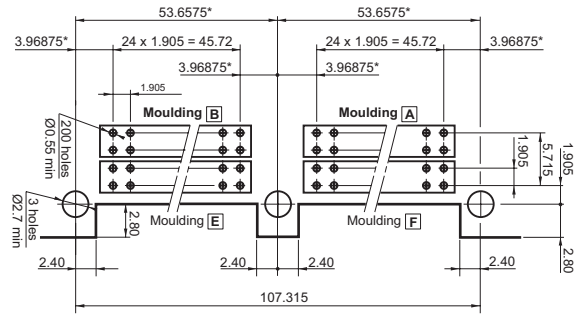
Straight termination

Guide: 122



90° Termination

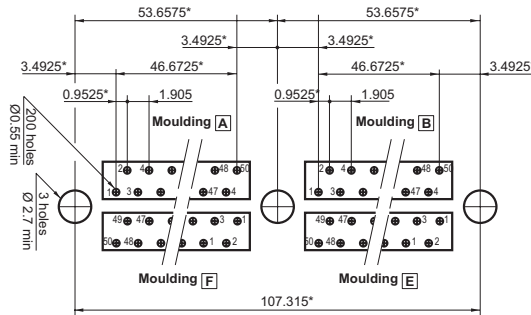
Guide: 134



Plug

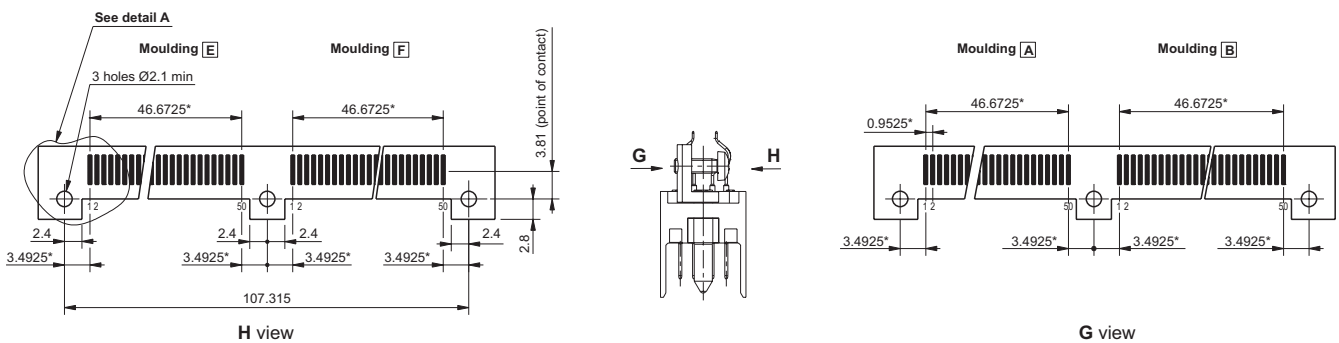
Straight termination

Guide: 114



Surface mount termination

Guide: 125



* Theoretical dimensions.

Disclaimer

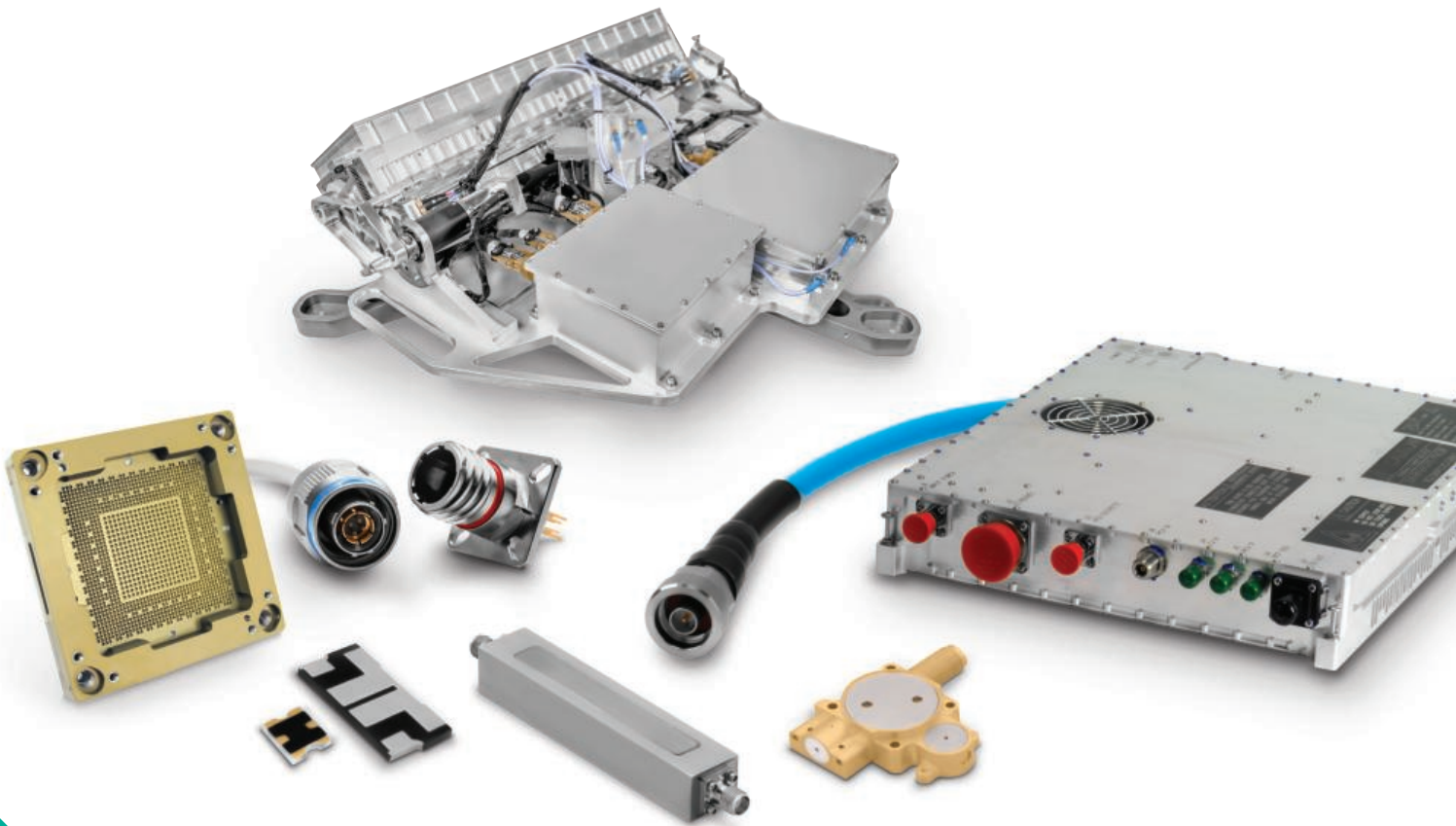
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