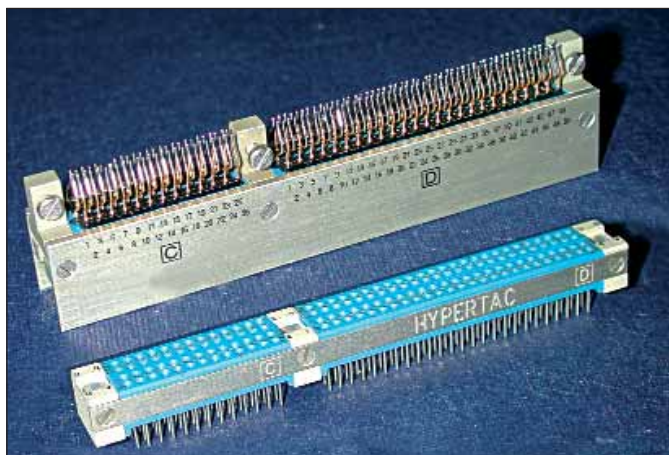




High Density Mixed Signal, Power and Coaxial Connectors

- Ruggedized metal shell PCB connector, with shrouded plug for pin protection
- Signal and HE 807 cavities for power and coaxial contacts
- Male plug : Straight - 90° - SMT termination
- Female receptacle : Straight - 90° termination
- Pitch:
 - On mating side
 - Receptacle and plug
1.905mm/0.075" between contacts and rows
 - On termination side:
 - Receptacle :
1.905 mm/0.075" between contacts and rows
2.54mm/0.10" between the two central rows
 - Plug :
0.9525 mm alternate 0.0375" between contacts
1.905 mm/0.075" between rows except the two central rows which is 2.54 mm/0.10"
- Up to 400 signal contacts
- Mixed layout for signal and special contacts (Coax, Power & FO)

Technical Characteristics

MATERIAL		CURRENT RATING	Signal Power	3 Amps 15 Amps
Insulator	Diallyl Phtalate UL94VO	INSULATION		>10 ⁴ MV
Frame	Aluminium Alloy	MECHANICAL ENDURANCE		5000 operations
Contacts	Copper Alloy	ENGAGEMENT/withdrawal forces		< 0.5N
Guides	Brass + Ni or Stainless steel	VOLTAGE RATING		200V
CONTACT PLATING	Ni + Au	PROOF VOLTAGE		800V
CONTACT RESISTANCE	Signal	CONTACT DIAMETER	Signal	0.50 mm
	Power		Power	2.00mm
T° RANGE	-55°C to +125°C	IMPEDANCE	Coaxial contact	50 V
SAFETY OF CONTACT FROM EXTRACTION	Statical 2mm/0.079" Dynamical 1.80mm/0.071"	SPECIAL CONTACTS	According to NFC 93569	

HYPERTAC & ESA - Ordering Information

HYPERTAC		MHD	152	22	30	121
ESA		3401-065 01B	152	44	30	121

SERIES

ARRANGEMENT

052

152

252

352

5HA

1HB

6XA

100

200

300

400

2XA

7XB

3HB

PART - POLARITY - PLATING

13

55

Male Plug Standard plating

22

44

Female Receptacle - Standard plating

17

57

Pretinned - Male Plug

26

46

Female Receptacle - Pretinned

TERMINATION STYLES

10

90° termination, PCB thickness 1.60

11

90° termination, PCB thickness 2.40

12

90° termination, PCB thickness 3.20

30

Straight termination, PCB thickness 2.40

31

Straight termination, PCB thickness 3.20

41

SMT*- PCB thickness 1.60

42

SMT* - PCB thickness 3.20

43

SMT* - PCB thickness 2.40

44

SMT* - uncentered PCB thickness 3.80

45

SMT* - uncentered PCB thickness 1.60

47

SMT* - uncentered PCB thickness 2.40

91**

Female / male saver

* Surface Mount Termination

PCB thicknes is in mm

** Consult us

GUIDE STYLES

110

130

112

131

121

133

122

134

124

190

125

191

126

196

APRIL 2005

Modules configuration

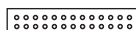
Single
Arrangements

Receptacle - Mating side views

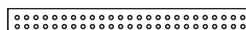
Mixed
Arrangements

052				3HB
100				7XB
152				2XA
200				6XA
252				1HB
300				5HA
352				
400				

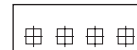
26 ways module



50 ways module



4 ways module (special contacts)



Space which can receive:

2x50 ways module

or

2x26 ways module

1x4 ways module

or

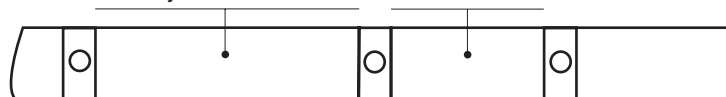
2x4 ways module

Space which can receive:

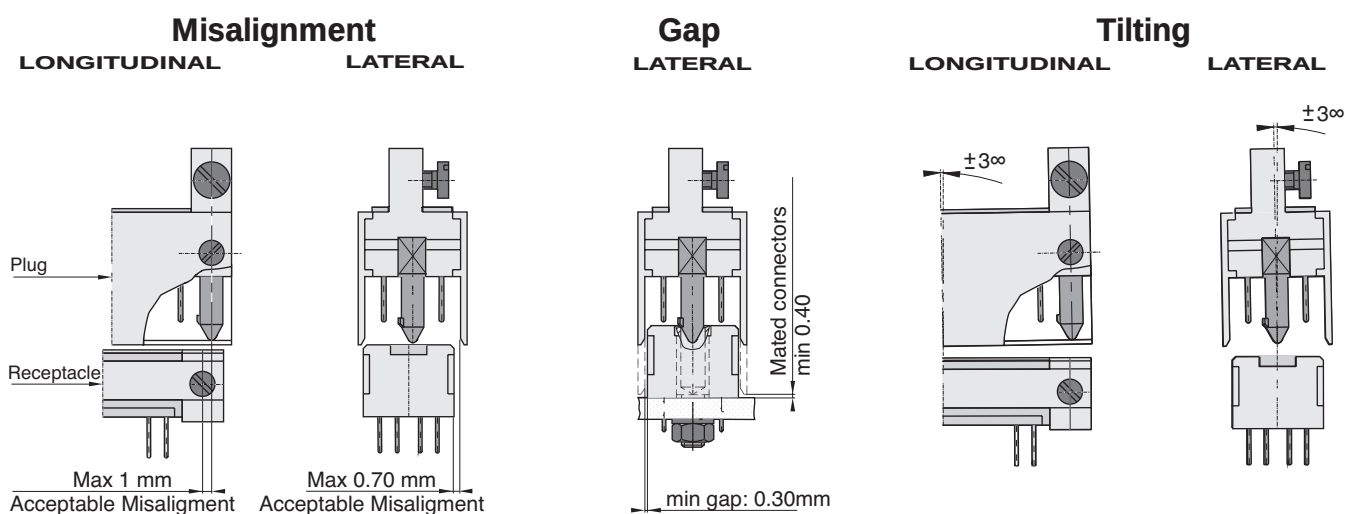
2x26 ways module

or

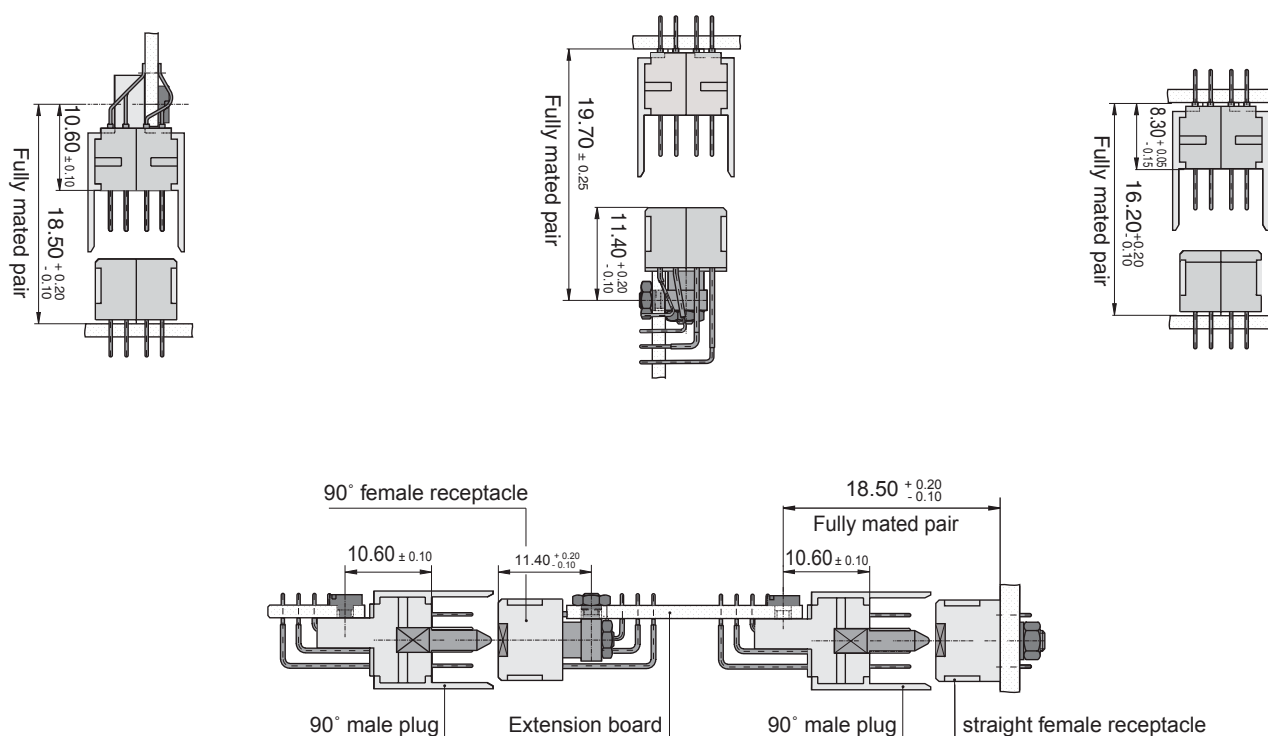
1x4 ways module



Standard plugging stages



Mounting examples



Displacement

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

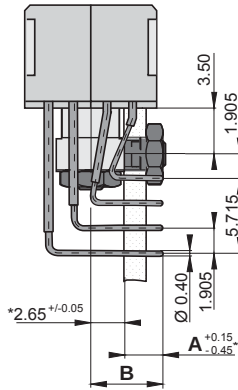
Termination styles

Receptacle

THROUGH BOARD SOLDER - 90°

REF : 10
PCB : 1.44 - 1.76
 $A = 3.25^{+0.15}_{-0.45}$
B = 6 Max

REF : 11
PCB : 1.98 - 2.42
 $A = 3.85^{+0.15}_{-0.45}$
B = 6.60 Max

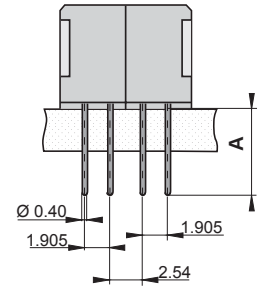


* Unbuild-up of tolerances

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 = 6.10 min
6.60 Max

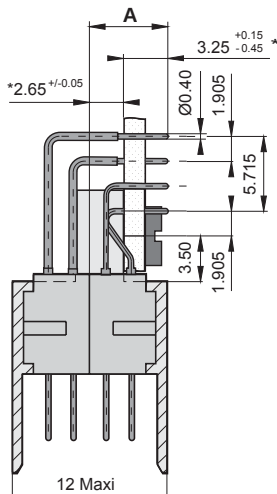


Plug

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

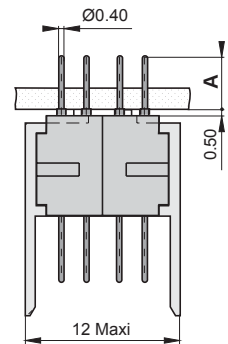


* Unbuild-up of tolerances

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

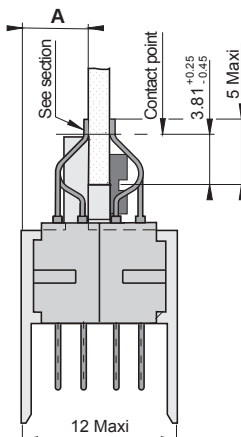


SURFACE MOUNT (CENTERED PCB)

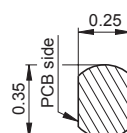
REF : 41
PCB : 1.44 - 1.76
A = 5.20 Max

REF : 42
PCB : 2.88 - 3.52
A = 4.40 Max

REF : 43
PCB : 2.16 - 2.64
A = 4.80 Max



Outlet section

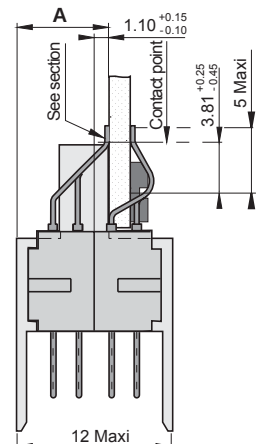


SURFACE MOUNT (UNCENTERED PCB)

REF : 44
PCB : 3.60 - 4.00
A = 4.40 Max

REF : 45
PCB : 1.44 - 1.76
A = 7 Max

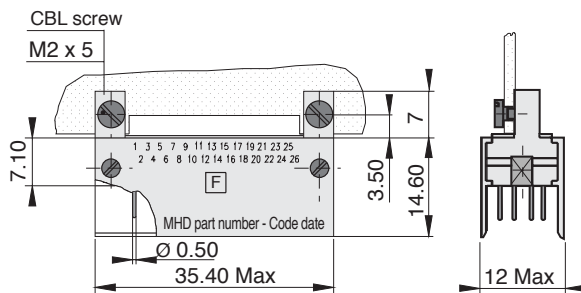
REF : 47
PCB : 2.16 - 2.64
A = 7 Max



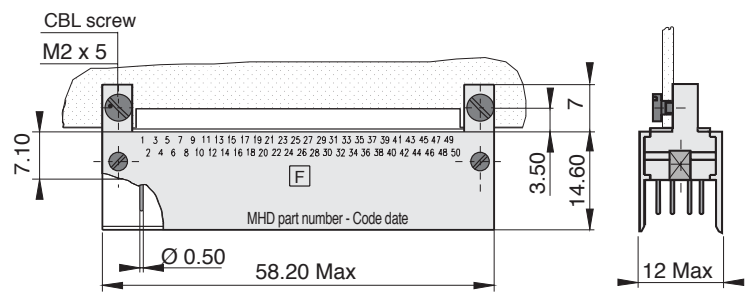
Dimensions are in mm

Connector dimensions

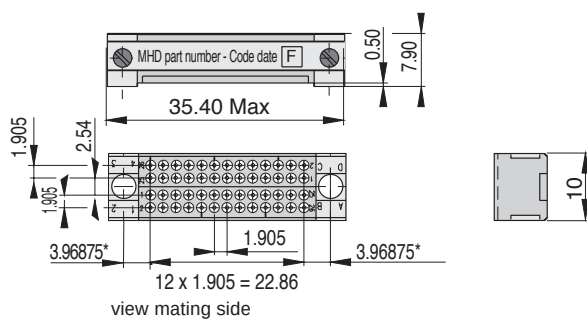
52 contacts Plug



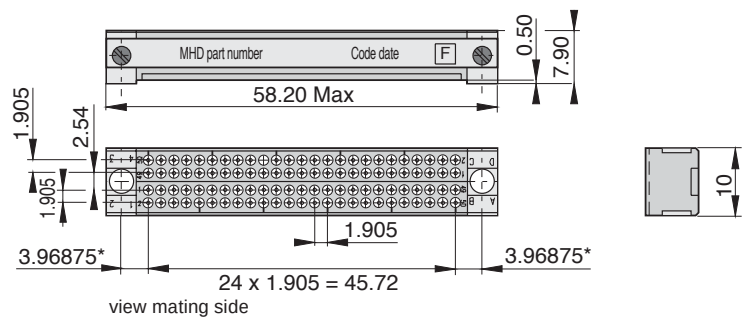
100 contacts Plug



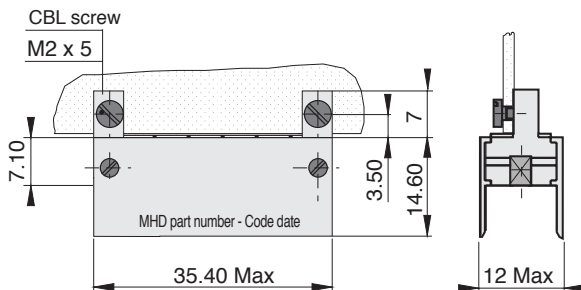
52 contacts Receptacle



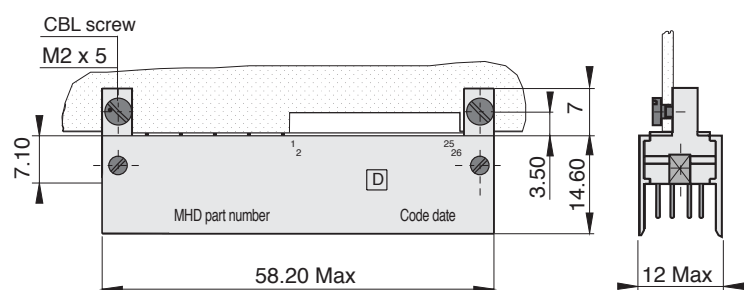
100 contacts Receptacle



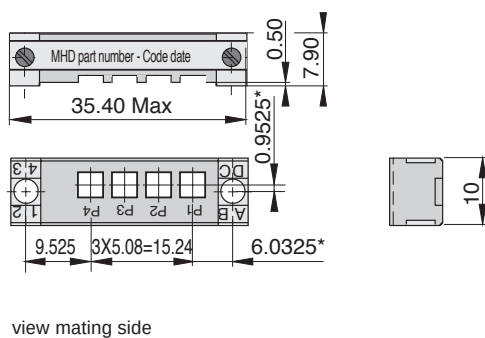
5HA Plug



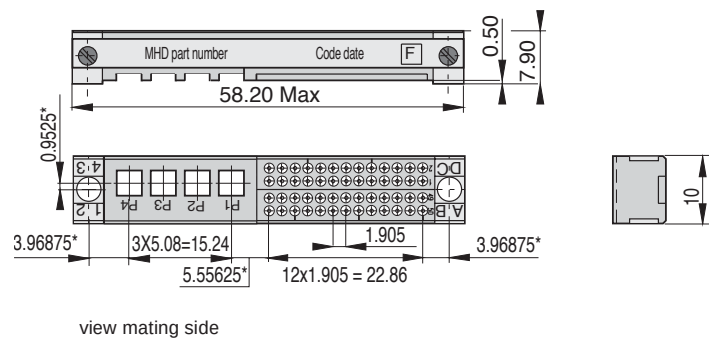
1HB Plug



5HA Receptacle



1HB Receptacle

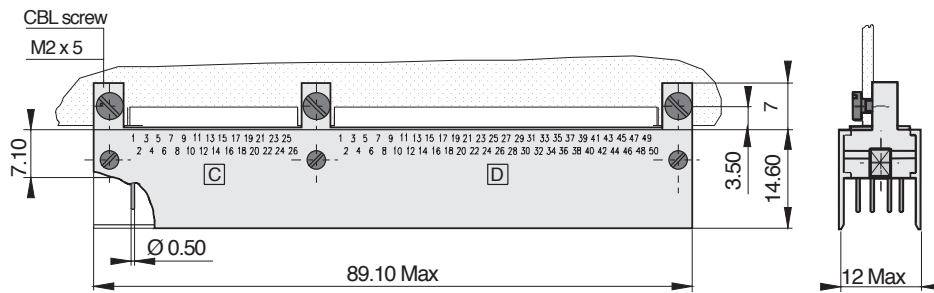


* Theoretical dimensions

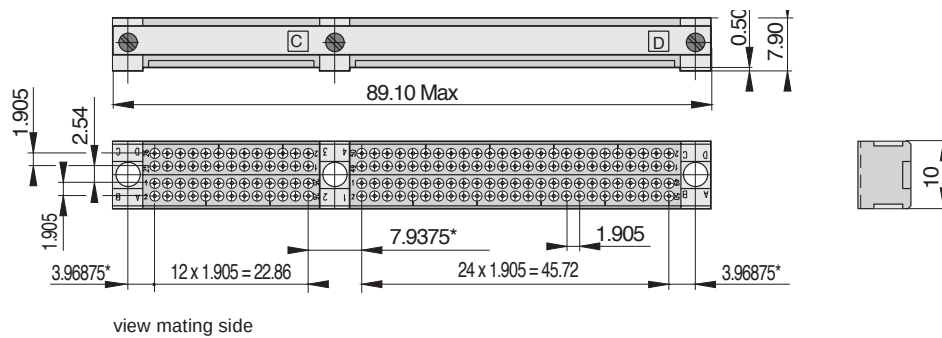
The termination side contact configurations are specified on board preparation details

Connector dimensions

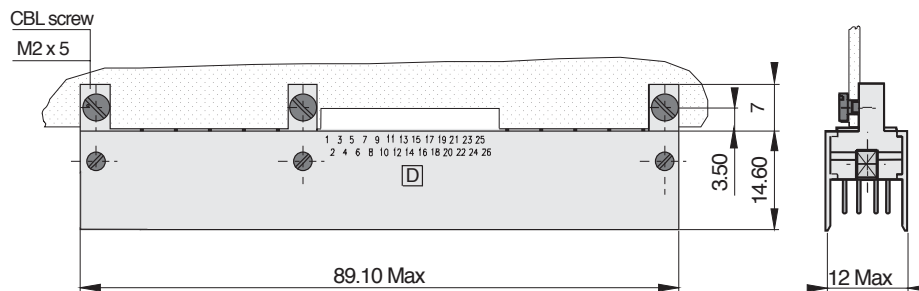
152 contacts Plug



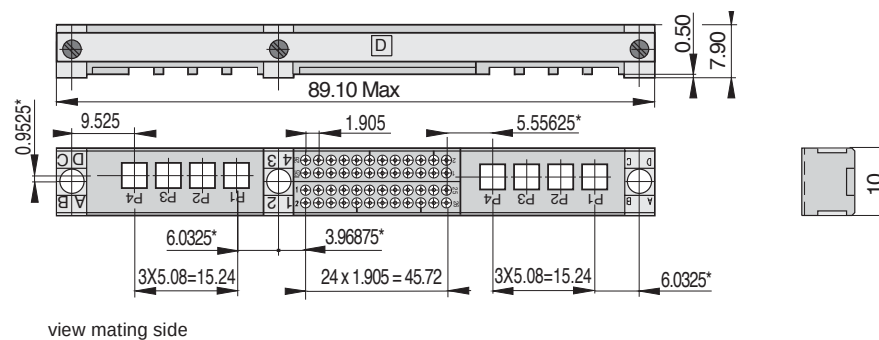
152 contacts Receptacle



6XA Plug



6XA Receptacle



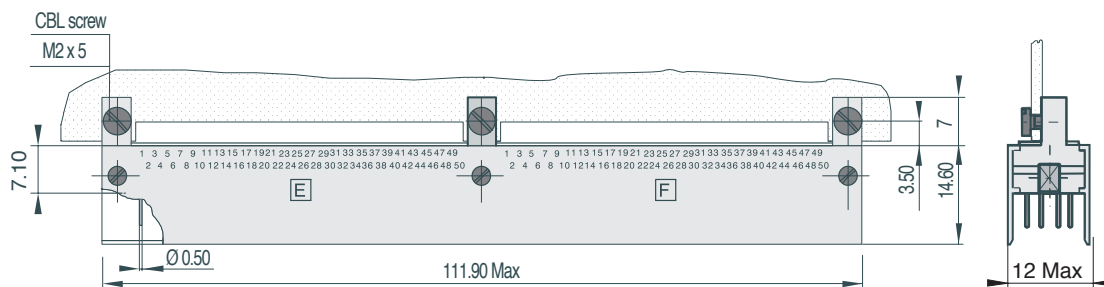
* Theoretical dimensions

The termination side contact configurations are specified on board preparation details

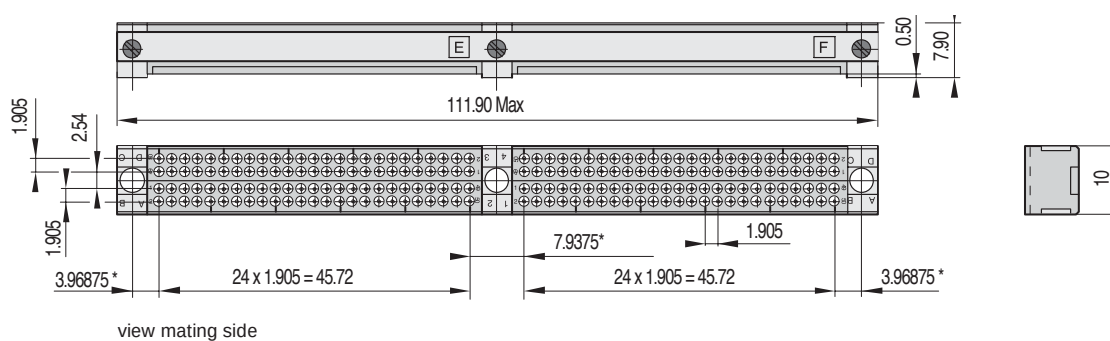
Dimensions are in mm

Connector dimensions

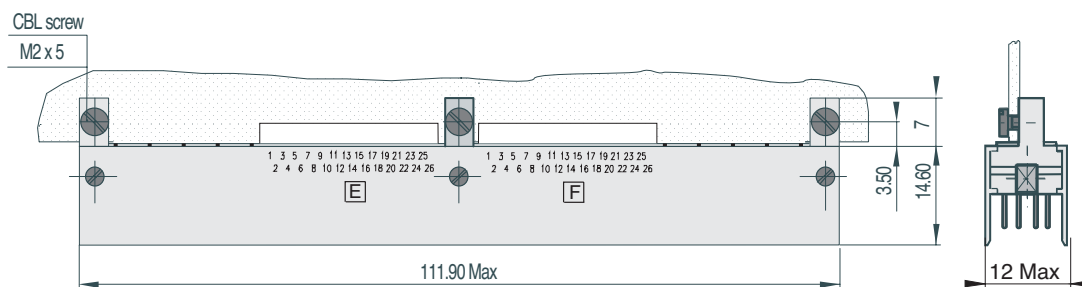
200 contacts Plug



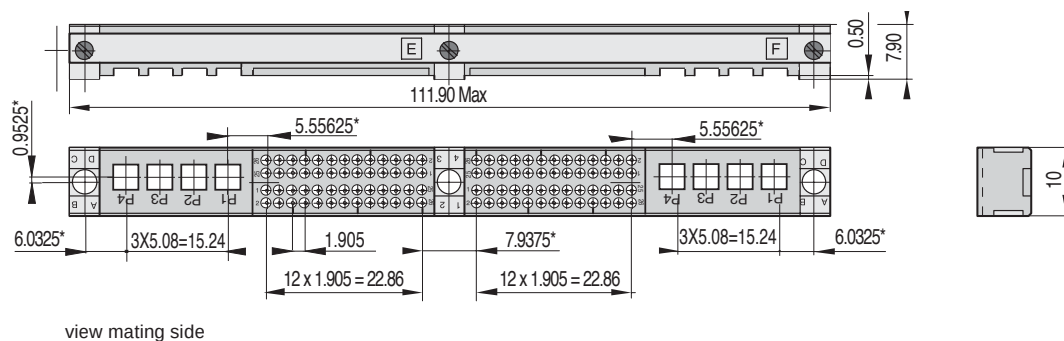
200 contacts Receptacle



2XA Plug



2XA Receptacle



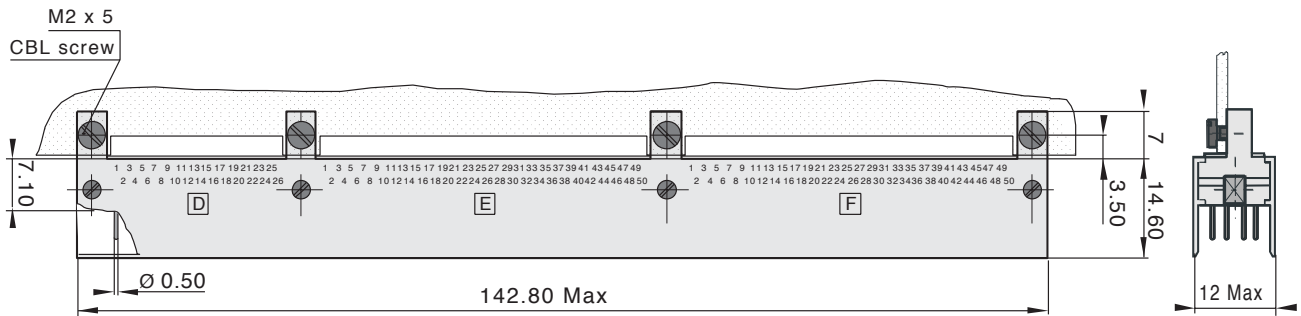
* Theoretical dimensions

The termination side contact configurations are specified on board preparation details

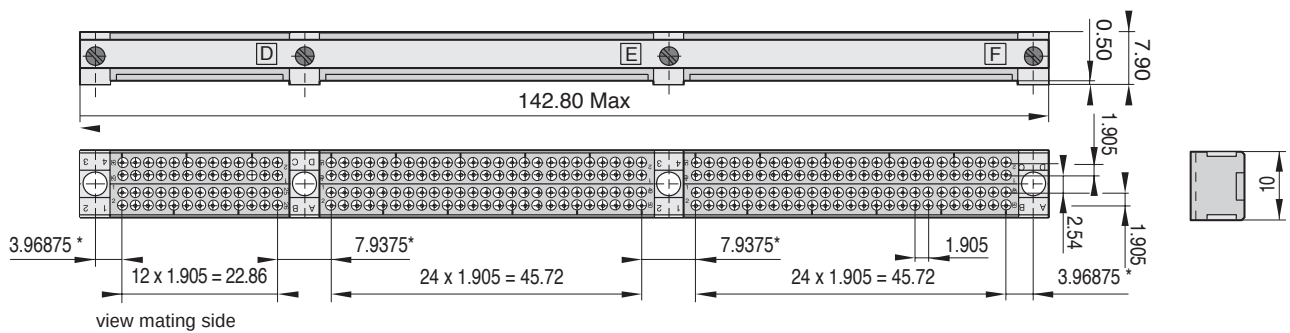
Dimensions are in mm

Connector dimensions

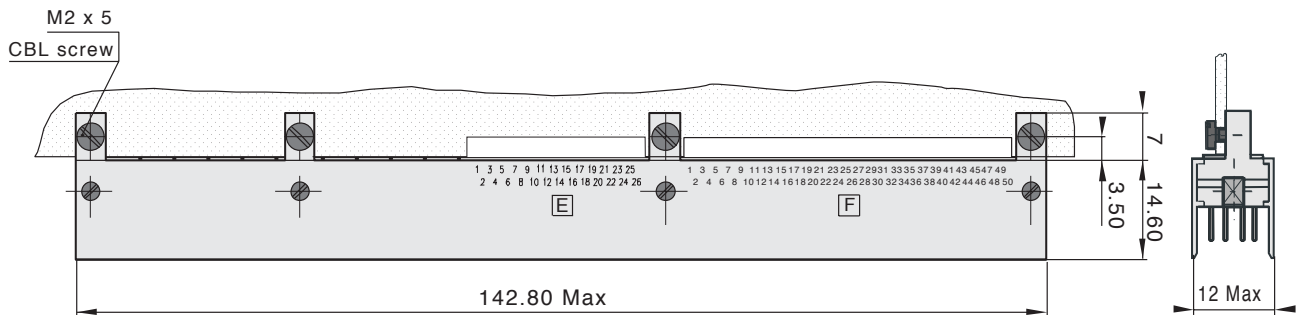
252 contacts Plug



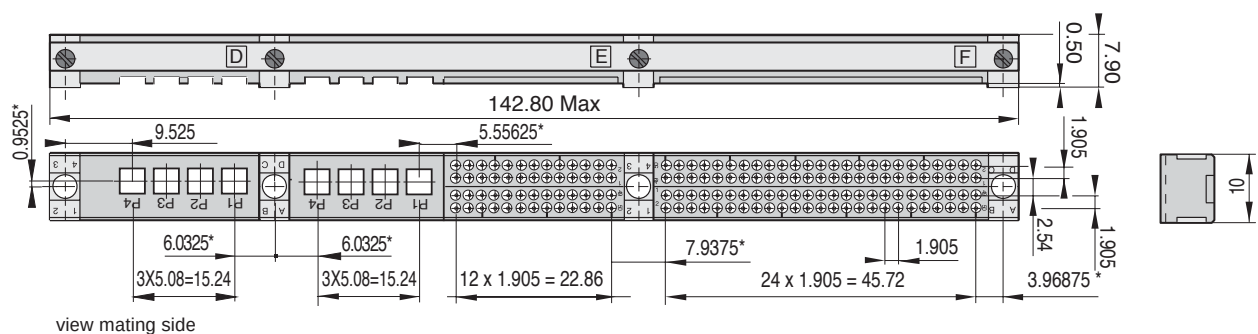
252 contacts Receptacle



7XB Plug



7XB Receptacle



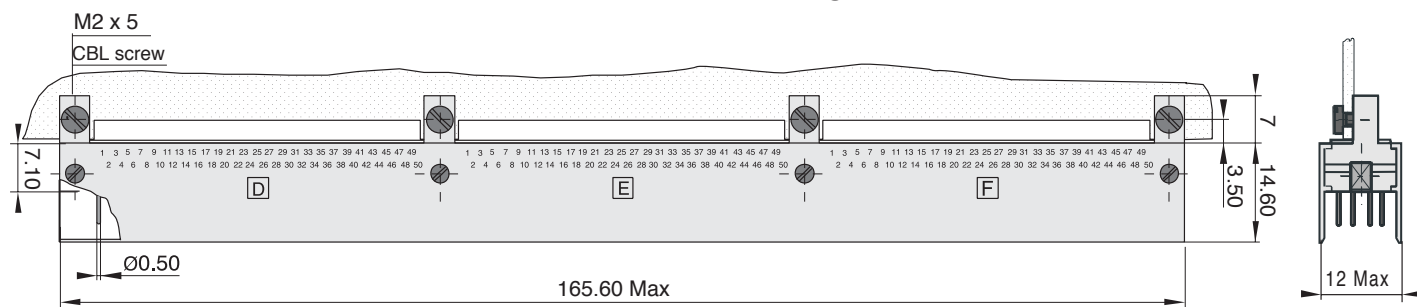
* Theoretical dimensions

The termination side contact configurations are specified on board preparation details

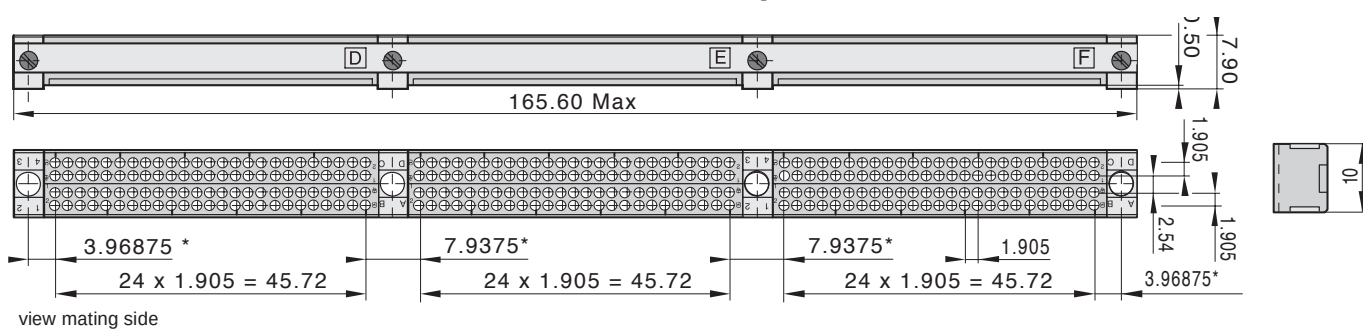
Dimensions are in mm

Connector dimensions

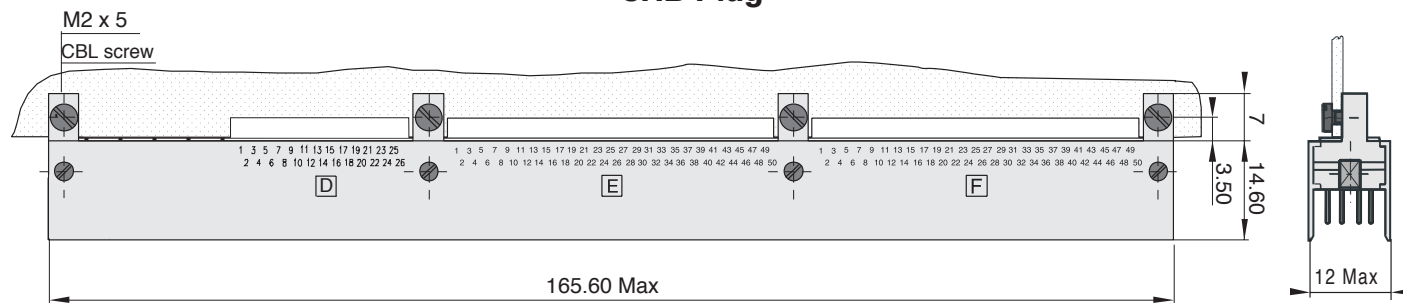
300 contacts Plug



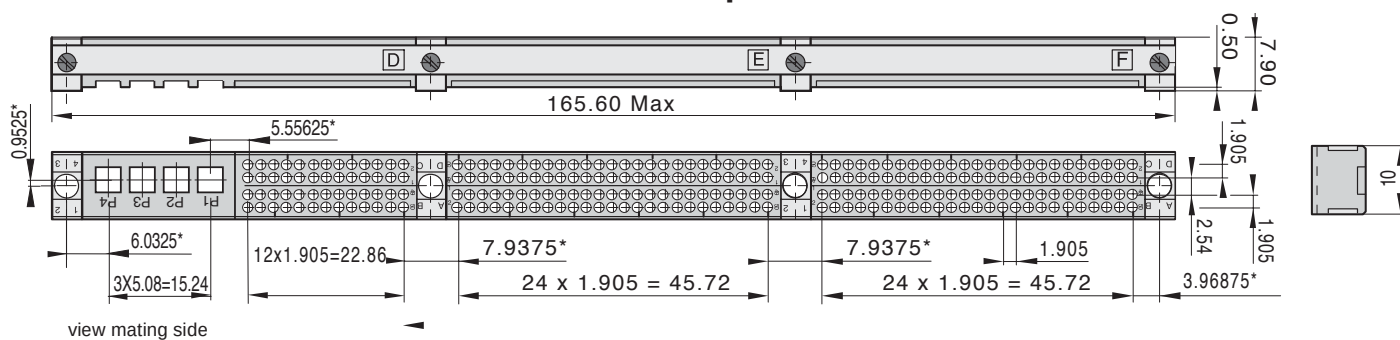
300 contacts Receptacle



3HB Plug



3HB Receptacle



* Theoretical dimensions

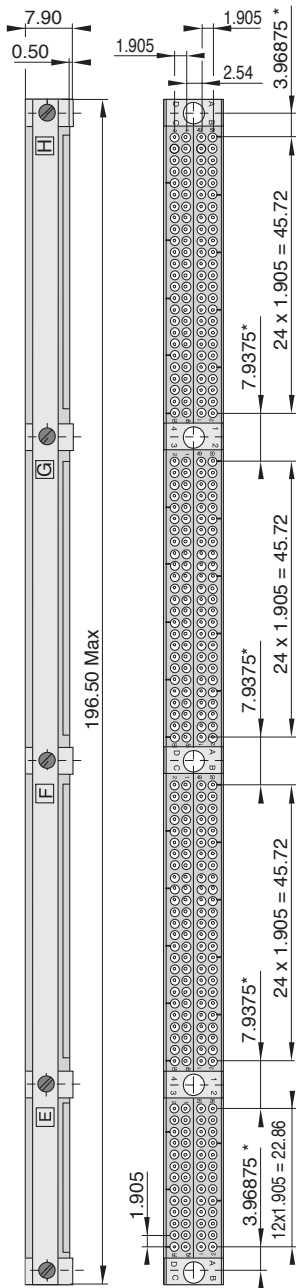
The termination side contact configurations are specified on board preparation details

Dimensions are in mm

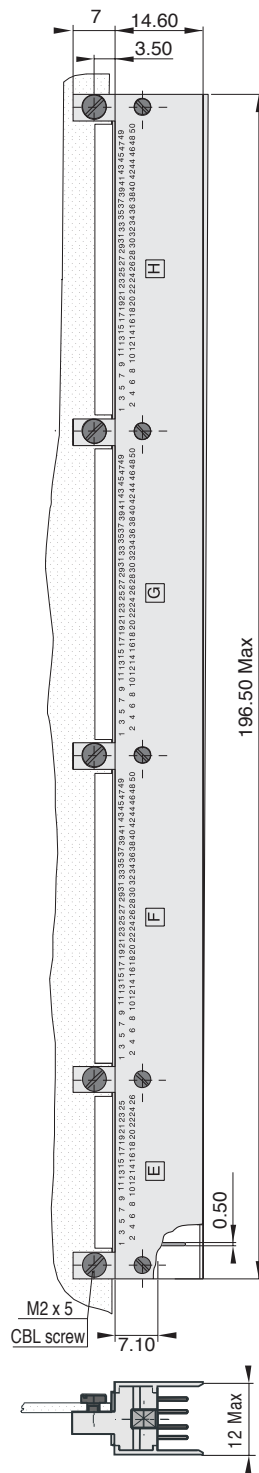
Connector dimensions

352 contacts

RECEPTACLE

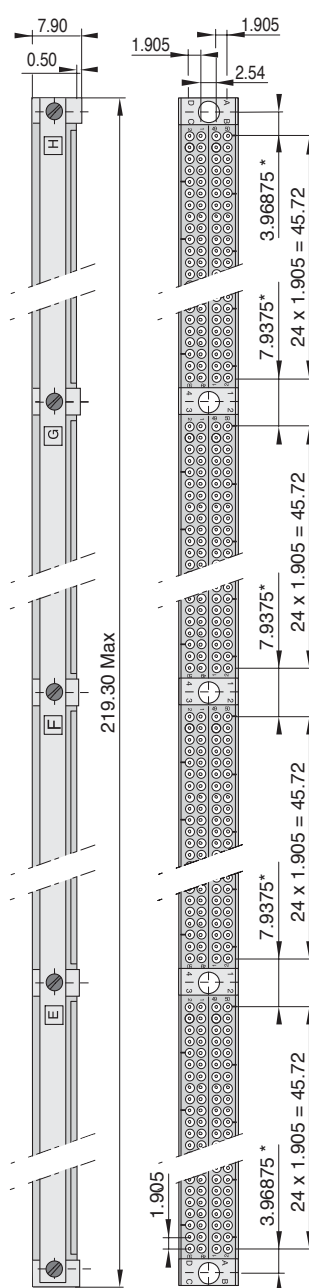


PLUG

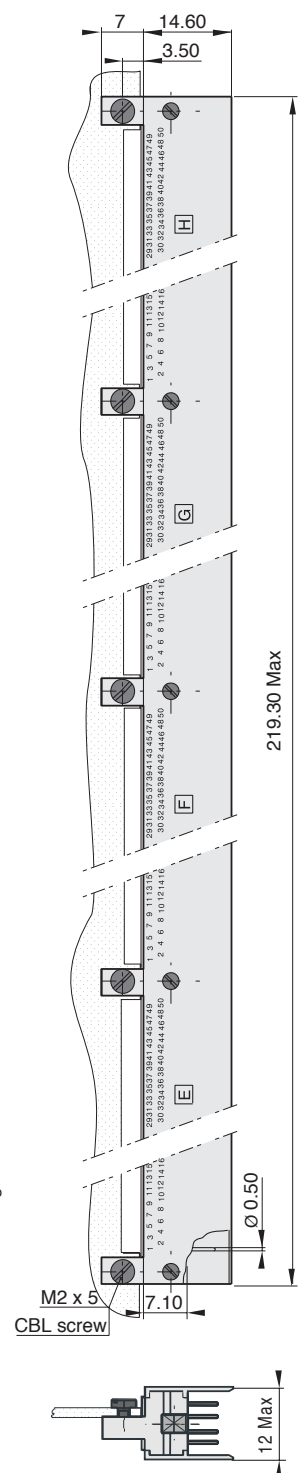


400 contacts

RECEPTACLE



PLUG



* Theoretical dimensions

The termination side contact configurations are specified on board preparation details

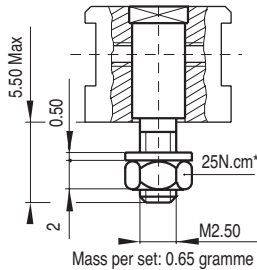
Dimensions are in mm

Guiding devices

Receptacle

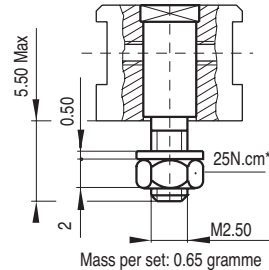
MHD 00- __ 121

Polarised female guide transverse mounting (length: 5.50)



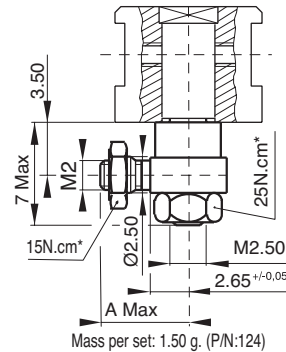
MHD 00- __ Z122

Polarised female guide transverse mounting (length: 7)



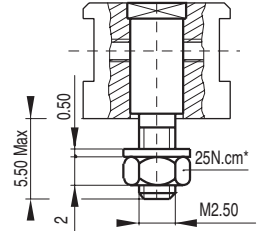
MHD 00- __ Z124 / Z134

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



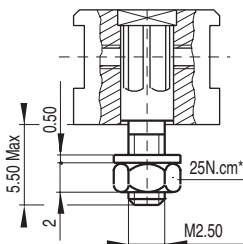
MHD 00- __ Z126

Unpolarised female guide vertical mounting



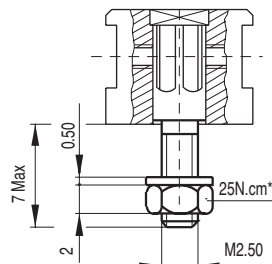
MHD 00- __ Z130

All polarity female guide vertical mounting (length: 5.50)



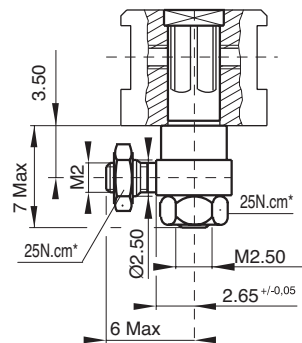
MHD 00- __ Z131

All polarity female guide vertical mounting (length: 7)



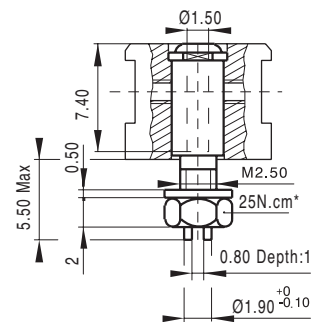
MHD 00- __ Z133

All polarity female guide transverse mounting



MHD 00- __ Z190

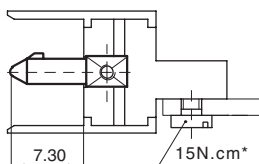
Ground female guide vertical mounting



Plug

MHD 00- __ 110

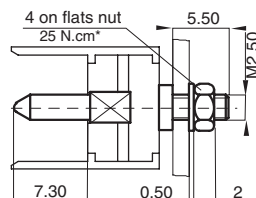
Polarised male guide transverse mounting



Mass per set: 0.55 .gramme

MHD 00- __ Z112

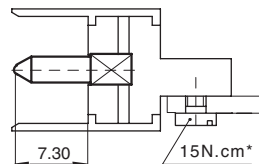
Unpolarised male guide vertical mounting



Mass per set: 1.35 .gramme

MHD 00- __ Z125

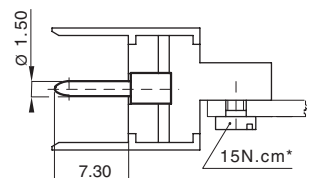
Unpolarised male guide transverse mounting



Mass per st: 0.55 .gramme

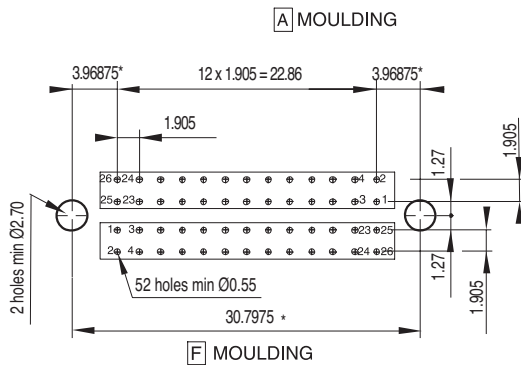
MHD 00- __ Z191

Ground male contact transverse mounting

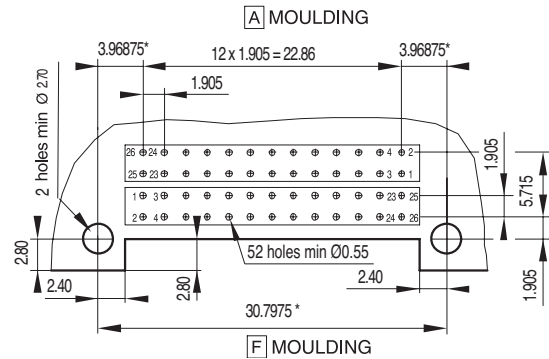


52 contact board preparation details (1)

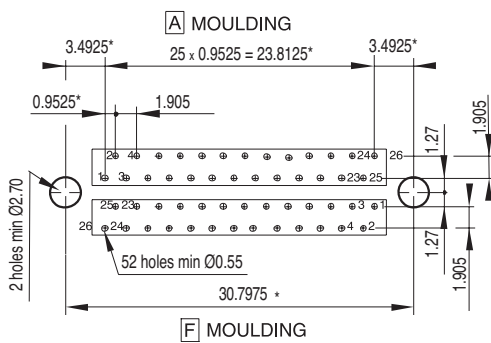
Straight termination receptacle guides: 121, 122, 126, 130, 131, 190



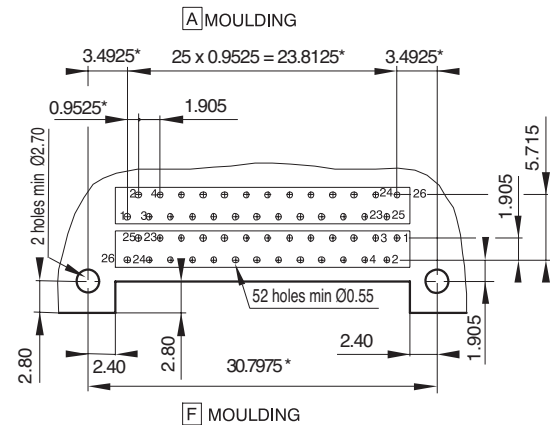
90° termination receptacle guides: 124, 133, 134



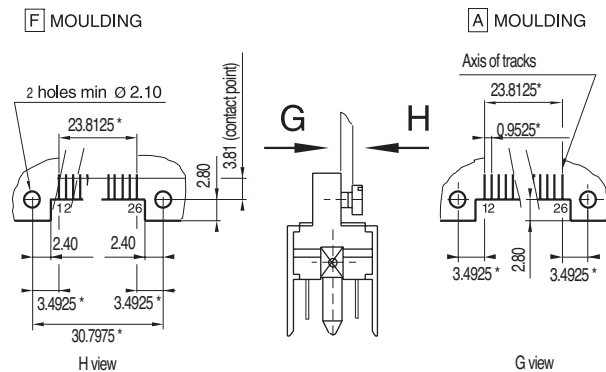
Straight termination plug guides: 112



90° termination plug guides: 110, 125, 191

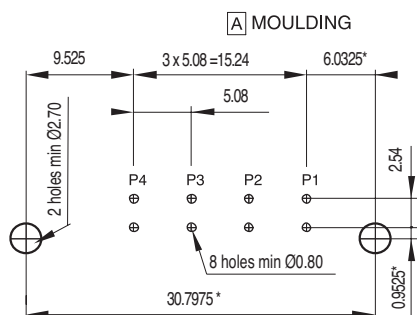
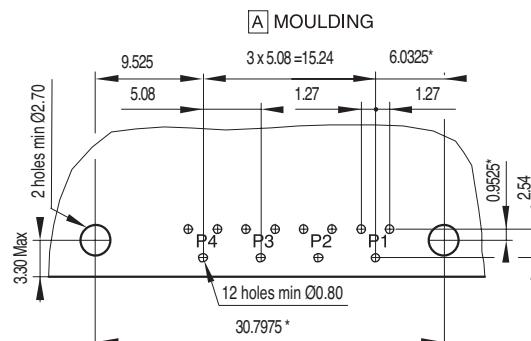
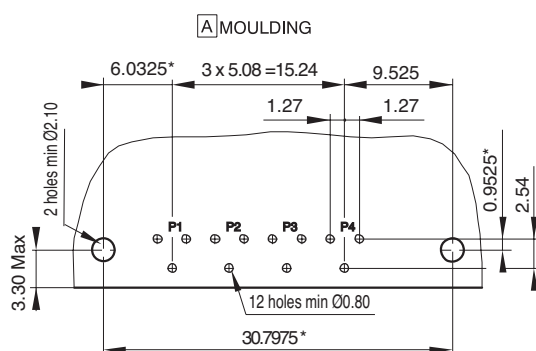
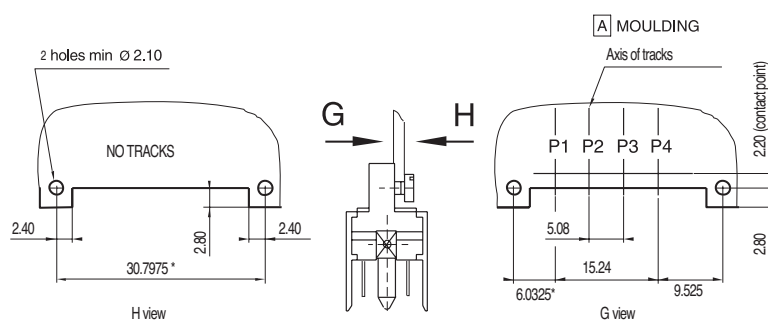


Surface mount termination plug guides: 110, 125, 191



(1): see important note on 1HB preparation board details.

5 HA contact board preparation details (1)

straight termination receptacle
guides: 121, 122, 126, 130, 131, 190

90° termination receptacle
guides: 124, 133, 134

90° termination plug
guides: 110, 125, 191

Surface mount termination plug
guides: 110, 125, 191


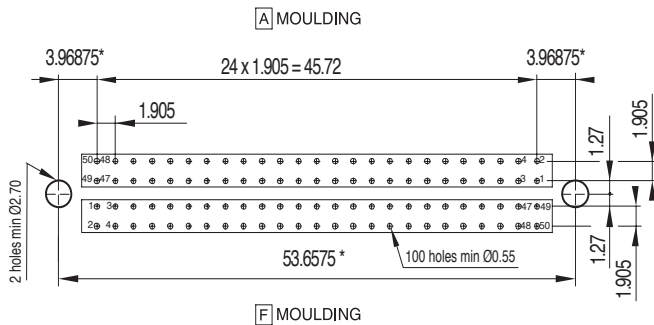
Other contact board preparations details shown on following pages

(1): see important note on 1HB preparation board details.

100 contact board preparation details (1)

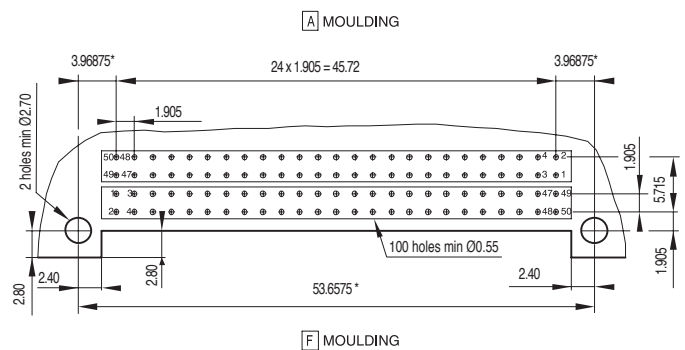
Straight termination receptacle

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



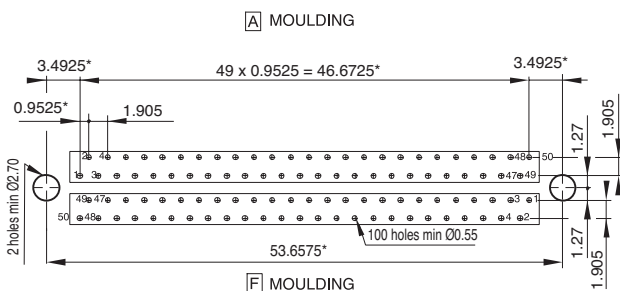
90° termination receptacle

guides: 124, 133, 134



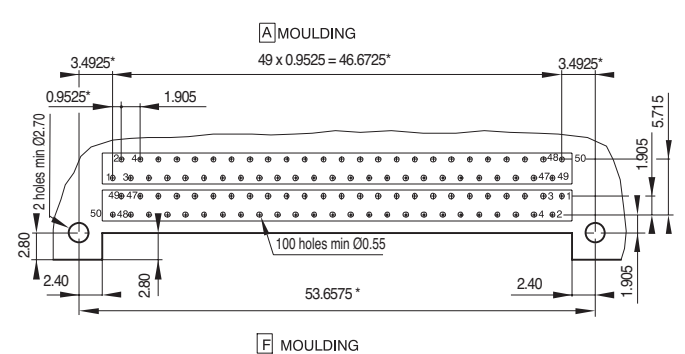
Straight termination plug

guides: 112



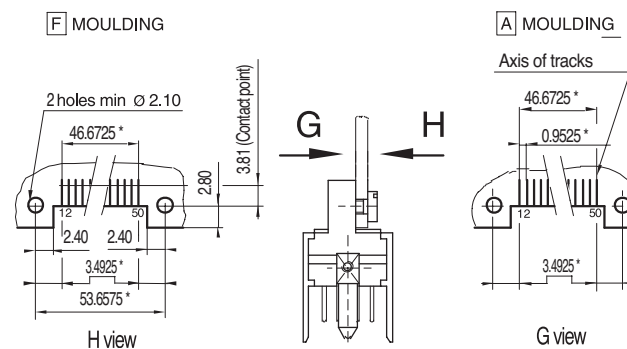
90° termination plug

guides: 110, 125, 191



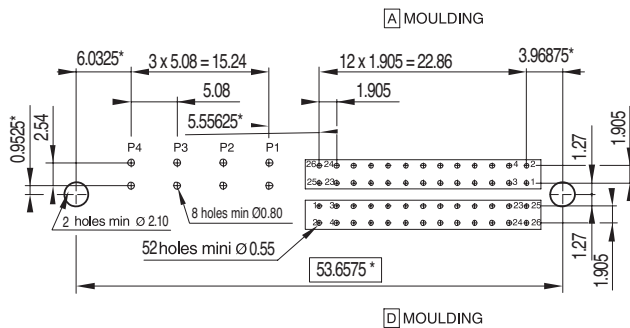
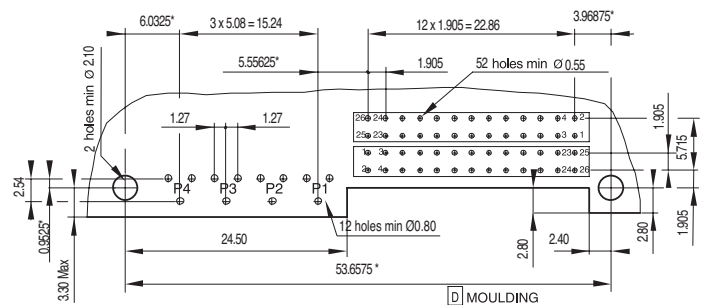
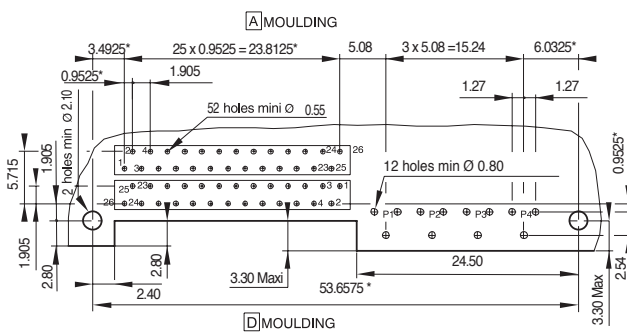
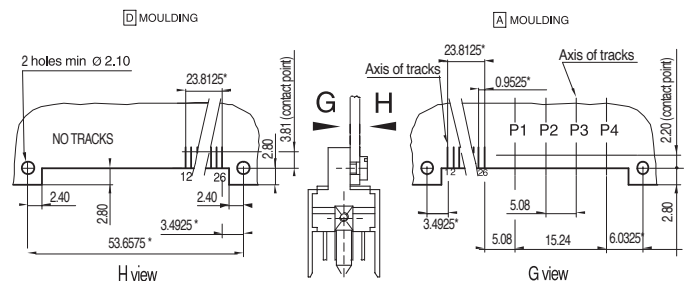
Surface mount termination plug

guides: 110, 125, 191



(1): see important note on 1HB preparation board details.

1 HB contact board preparation details (1)

Straight termination receptacle
guides: 121, 122, 126, 130, 131, 190

90° termination receptacle
guides: 124, 133, 134

90° termination plug
guides: 110, 125, 191

Surface mount termination plug
guides: 110, 125, 191
**(1) Important note**

Drilling layouts shown concern the following full configurations: 052, 5HA, 100, 1HB.

Other arrangements, shown on "MODULES CONFIGURATION" page, require a specific drilling layout to ensure the correct mounting of

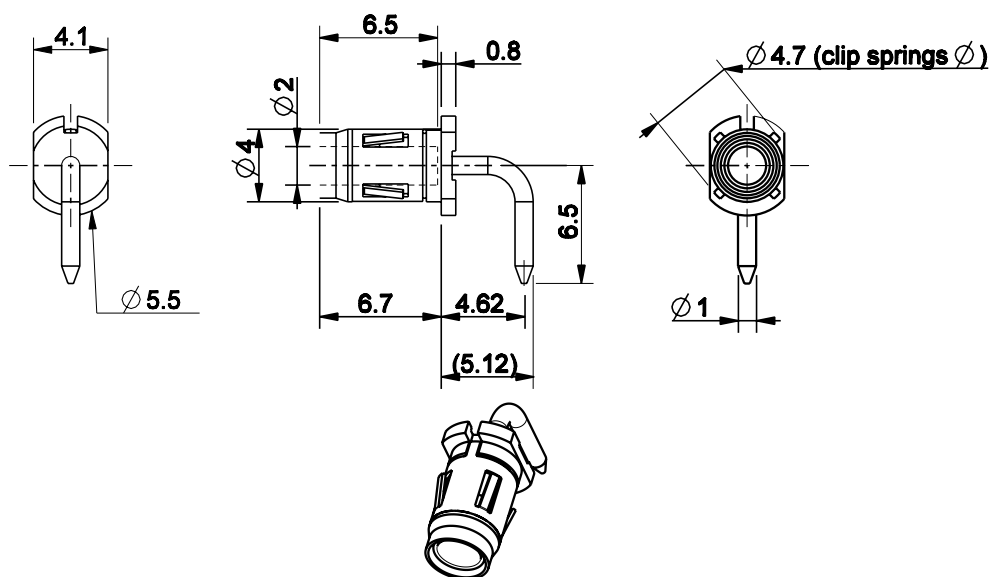
the chosen connector, that you must obtain from our technical department.

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

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

Female	P/N
90° termination	020 084 2. 10 R G1
Straight termination	020 056 2. 30 R G1
Solder bucket termination	020 060 2. 40 R 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 3.2mm 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 3.2mm 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 3.2mm Max	KMX 3-M 142	KMX 3-F 142
Straight termination tail for direct mounting on to PCB	KMX 3-M 032	KMX 3-F 032
90° termination tail for direct mounting on to PCB	KMX 3-M 041	KMX 3-F 041
SMT termination	KMX 3-M 172	KMX 3-F 172

EXTRACTION TOOLS

P/N: SD-03000CX003

Dimensions are in mm