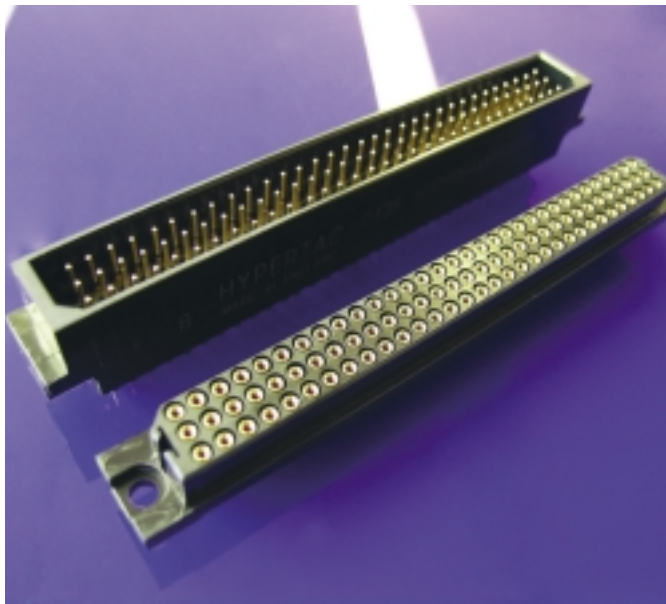
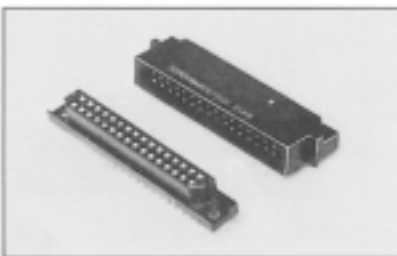
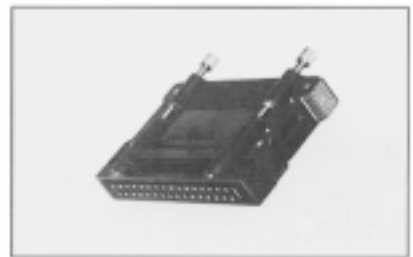
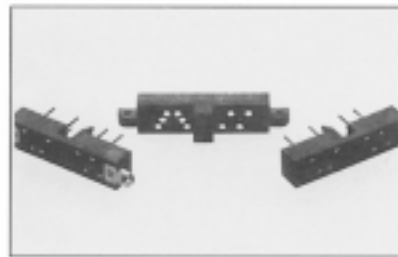
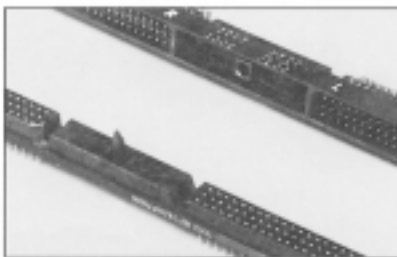
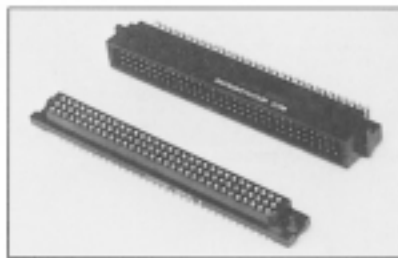
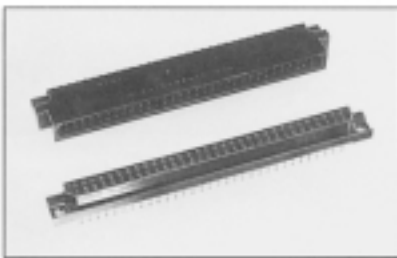




Signal Connector DIN 41612

- HDC and HDD interchangeable with DIN41612 C and D
- 0.6 mm and 1.0 mm Hypertac® contacts, in a two or three row format
- Up to 192 positions
- HDT style offers mixed arrangements with signal, power and up to 12 co-axial contacts
- Accessories include Double Eurocard aligners and plastic covers
- HDD Style up to 32 heavy duty 1.0 mm contacts plus a maximum of 16 contacts 0.6 mm dia



Applicable Markets:

Mil-Aero Space Marine



Front release/rear removable contacts

Contact insertion

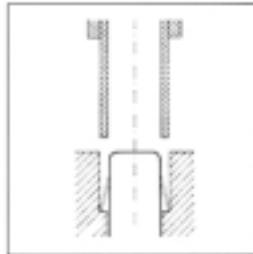
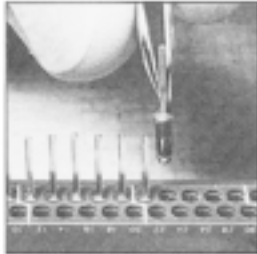
Contact removal

- 1 Assembly Tool Tweezer - Non Ferrous



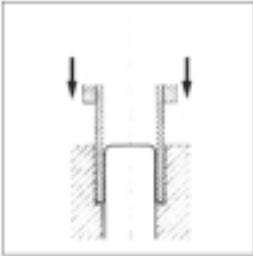
- 1 Extraction Tool HPD - 286 0.6 mm male and female contacts and 1 mm male contact. HD240 1 mm female contact

- 2 Pick up contact with tweezer, align flats on contact with flats in insulator



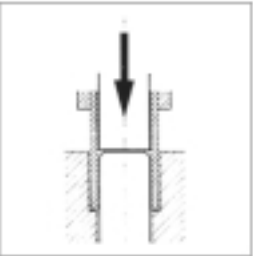
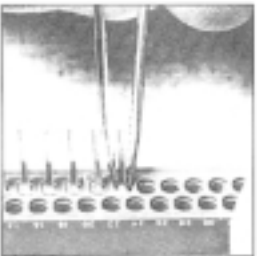
- 2 Holding main body of extraction tool, align above contact cavity on mating face of insulator

- 3 Insert contact into insulator insuring flats are correctly aligned



- 3 Insert tubular tip fully, insuring that tool remains in line with the contact cavity. To avoid damage, do not rotate or exert side-ways movement. This will retract contact retention clip ears from engagement with the shoulder in the contact cavity

- 4 Push contact fully into insulator and insure that contact shoulder is 0.15 mm minimum below insulator face. This will insure the contact retention clips ears spring out and engage behind the shoulder inside the contact cavity. A gentle pull - not exceeding 18N (4.0 lb) will check for correct installation



- 4 With the tool held fully inserted, depress handle. This will eject the contact out of the rear of the insulator

Two part circuit board connectors HDB - HDC - HDD - HDS - HDT

Connector finish ordering code	Description	Component	Component finish ordering code	Qualified to	Plating thickness*
U	Gold plate	Socket	-/9	ASTM-B-488	1.27 mm Gold plate
		Pin	-/7	ASTM-B-488	1.27 mm Gold plate

* Plating thickness

These values apply to mating surfaces

The gold plating finishes published here are the standard finishes offered by Hypertac. If the customer has a particular application which may require a non-standard gold finish, then this can be applied to a suitable specification.

The Hypertac® sockets have a very low wear rate and in the interest of maintaining low prices we will always select or recommend a minimum thickness of plating for the desired application of the customer. The construction of the Hypertac® socket enables a high degree of selective plating to be achieved - only the contact wire need carry the mating surface plating.

Two part printed circuit board

Number of positions	Overall length mm	Contact rating at S.T.P. Amps	Number of contact rows	Contact pitch mm	Contact pin Ø mm	Connector prefix	Shrouded/unshrouded
32	94.90	4.0	2	5.08	0.6	HDB	Shrouded
32	94.90	4.0	2	5.08	0.6	HDC	Shrouded
32	94.90	7.5	2	5.08	1.0	HDD	Shrouded
32+10	94.90	7.5+4.0	3	2.54	1.0+0.6	HDD	Shrouded
32+16	94.90	7.5+4.0	3	2.54	1.0+0.6	HDD	Shrouded
58	94.90	4.0	2	2.54	0.6	HDB	Shrouded
64	94.90	4.0	2	2.54	0.6	HDC	Shrouded
64	94.90	4.0	2	2.54	0.6	HDB	Shrouded
90	94.90	4.0	3	2.54	0.6	HDC	Shrouded
96	94.90	4.0	3	2.54	0.6	HDC	Shrouded

Dimensions are in mm

Specification

All values at s.t.p. unless otherwise stated. The majority of values given are BS Specification or similar, but in all respects the performance is superior.

Materials

Insulators	
HDB/C/D/S	: Glass reinforced phenolic
HDT	: Thermoplastic
Contacts	: Copper alloy
Socket wires	: Copper alloy
Polarising studs	: Copper alloy
and pins	: Nickel plated

Voltage Rating	
HDB/C/S/T	: 170V dc or ac peak nominal
HDD	: 250V dc or ac peak nominal
Proof Voltage	
HDB/C/S/T	: 1.0kV minimum
HDD	: 1.5kV minimum
Insulation Resistance	: 5 gigohms minimum at 500V. dc

Signal and Power Contacts

Male pin diameter	: 0.6mm nominal
	: 1.0mm nominal
	: 3.6mm nominal

Contact plating	: Refer to Ordering Information
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Contact resistance	
0.6mm contact	: 7 milliohms maximum
1.0mm contact	: 3 milliohms maximum
3.6mm contact	: 1 milliohm maximum

Termination resistance (i.d.c.)	: 3 milliohms maximum
---------------------------------	-----------------------

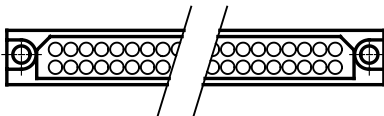
Current rating	
0.6mm contact	: 4 Amps
1.0mm contact	: 7.5 Amps
3.6mm contact	: 10 Amps

Engagement/Withdrawal forces	
0.6mm contact	: 0.28N (1.0 oz.) per contact
Mechanical endurance	: In excess of 2000 operations with appropriate plating finish

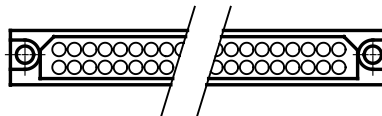
Co-axial Contacts	
Impedence	: 50 ohm
Frequency	: 0 - 10 GHz

Dielectric withstanding voltage	: 750V rms
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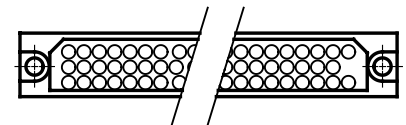
Temperature	: -55 to + 125°C
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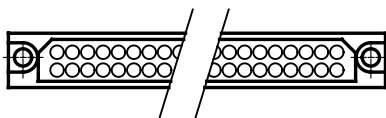
HDB-64 Position



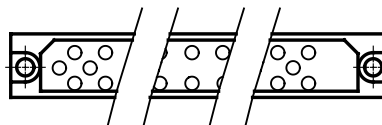
HDS-32 Position



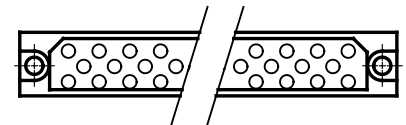
HDC-96 Position



HDD-32 Position

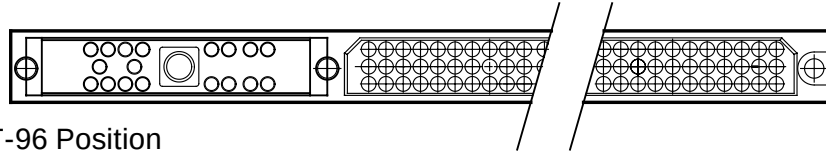


HDD-42 Position

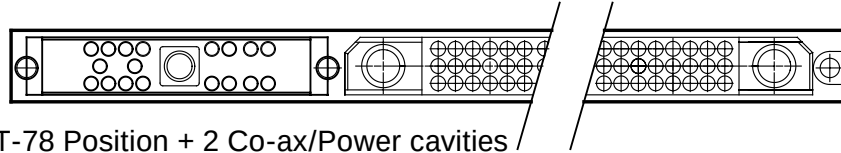


HDD-48 Position

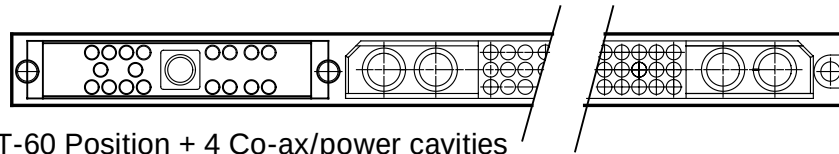
Specification



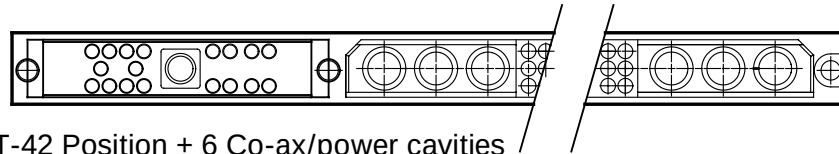
HDT-96 Position



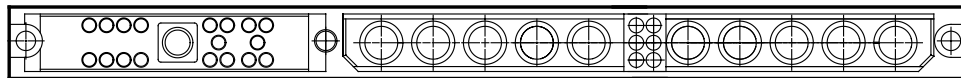
HDT-78 Position + 2 Co-ax/Power cavities



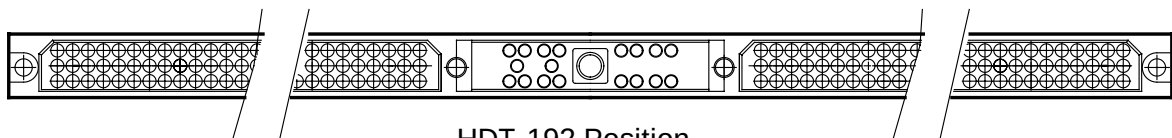
HDT-60 Position + 4 Co-ax/power cavities



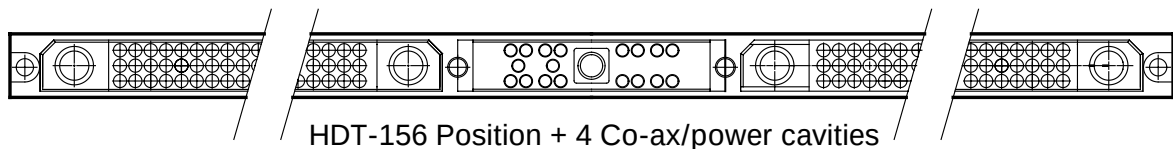
HDT-42 Position + 6 Co-ax/power cavities



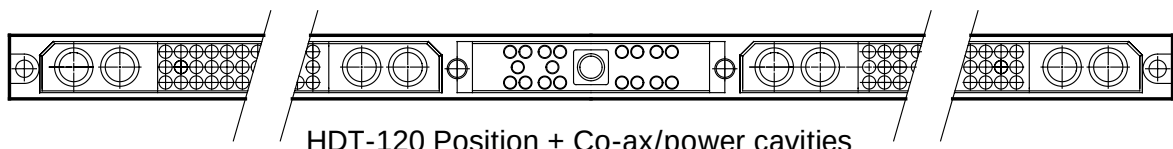
HDT-6 Position + 10 Co-ax/power cavities



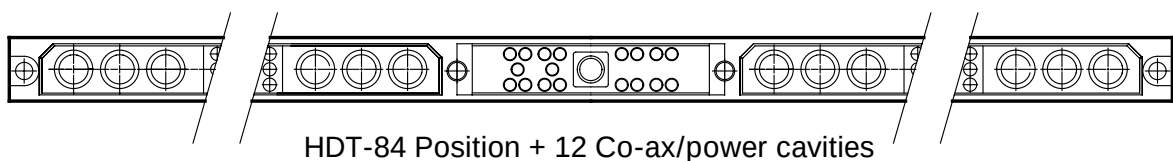
HDT-192 Position



HDT-156 Position + 4 Co-ax/power cavities



HDT-120 Position + Co-ax/power cavities

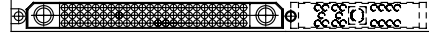


HDT-84 Position + 12 Co-ax/power cavities

Dimensions are in mm

Ordering Information

S O L I D I N S U L A T O R

PREFIX HDB, HDC, HDD HDS, HDT NUMBER OF SIGNAL CAVITIES 024, 032, 042, 060, 064, 078, 084, 096, 120, 156, 192 With HDT style connectors, the number of signal pins defines the number of co-ax/power cavities e.g. 78 denotes 78 signal pins + 2 co-ax/power cavities. CONTACT PLATING – SIGNAL CONTACTS U - Gold Plate Note: The finish is the normal standard, for other finishes contact sales office. CONTACT GENDER – SIGNAL CONTACTS M - Pin contacts, shrouded insulator F - Socket contacts, unshrouded insulator Note: Order to state if contacts are to be supplied loose. Crimp contacts are always supplied loose. Co-ax and power contacts are to be ordered separately. CONTACT TERMINATIONS – SIGNAL CONTACTS B - Through Board Solder 90° (Male & Female) C - Crimp Barrel (Male & Female) G - Through Board Solder Straight (Male only) L - Through Board Solder 90° (Male Only) N - Through Board Solder Straight Extra Long (Male Only) P - Through Board Solder Straight (Male & Female) S - Solder Bucket (Male & Female) W - Wire Wrap (Female Only) X - Through Board Solder Straight (Female Only) Z - Wire Wrap Long (Male & Female) POLARISING 0 - No polarising parts supplied W - Standard polarising parts supplied loose ABCDEFGHIJKLMNPRTUV - Standard polarising positions (See page 22 — not applicable to HDT) Y - Non standard polarising to customers specifications	HDC 096 U F W G 0000	VARIATION CODES X000 - Solder Dipped Terminations 0116  HDT-42 way Signal 6 Coax Male Insulator without DIN aligner 0117  HDT-42 way Signal 6 Coax Female Insulator without DIN aligner 0118  HDT-78 way Signal 2 Coax Male Insulator without DIN aligner 0119  HDT-78 way Signal 2 Coax Female Insulator without DIN aligner 0120  HDT-60 way Signal 4 Coax Male Insulator without DIN aligner 0121  HDT-60 way Signal 4 Coax Female Insulator without DIN aligner 0122  HDT-6 way Signal 10 Coax Male Insulator without DIN aligner 0123  HDT-6 way Signal 10 Coax Female Insulator without DIN aligner
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NON-STANDARD CONNECTORS

Longer contact pins, which mate before standard pins, are available and can be supplied to order. Any contact or polarising arrangement will be considered on request and supplied if practicable. Centre block in HDT connector can be used with contacts. Planforms for HDT single eurocard can be offered reversed (i.e. alignment block on right of connector instead of left).
Consult Hypertac Ltd Sales Office for all above.

Row and contact identification

TWO ROW - STYLE HDB/HDS

Male Half Termination Face

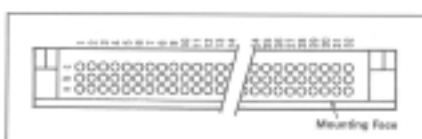


Female Half Termination Face

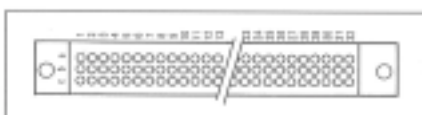


THREE ROW - STYLE HDC/HDD

Male Half Termination Face

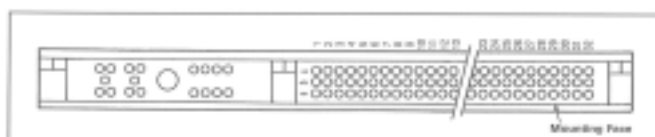


Female Half Termination Face

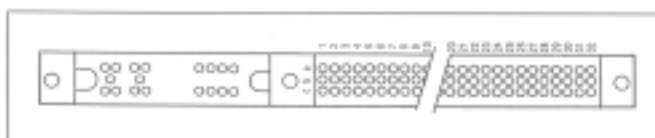


THREE ROW - STYLE HDT

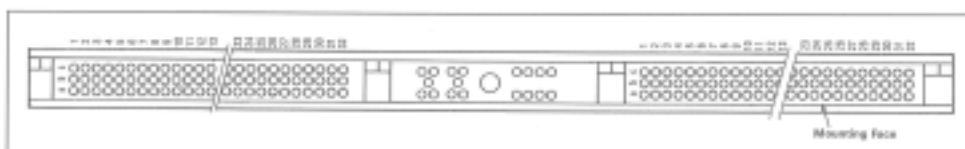
Male Half Termination Face



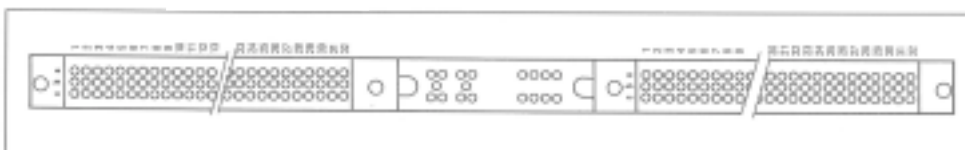
Female Half Termination Face



Male Half Termination Face



Female Half Termination Face

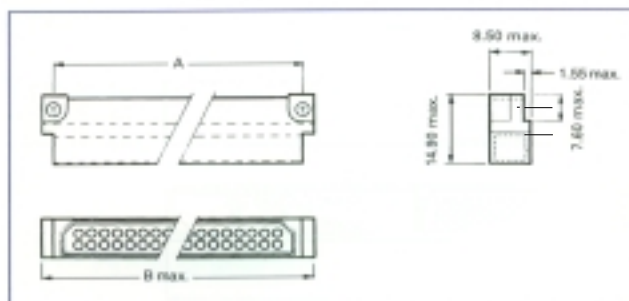


Insulators

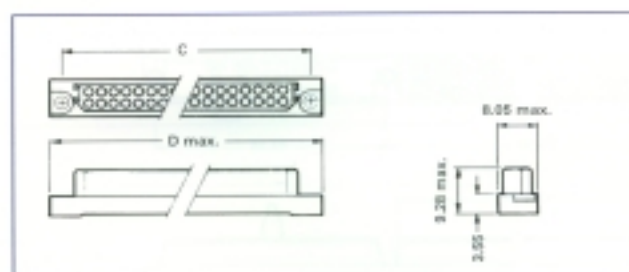
All diagrams are shown in 3rd angle projection and dimensioned in millimetres

TWO ROW - STYLE HDB/HDS

Shrouded Male Half (Pin Contacts)

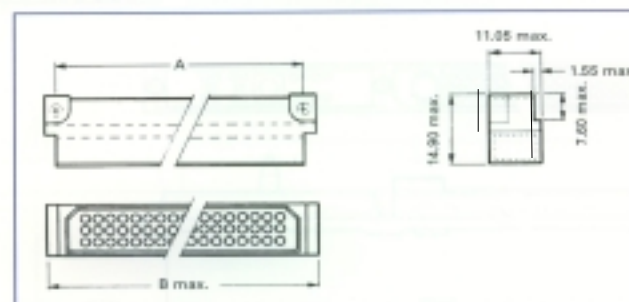


Female Half (Socket Contacts)

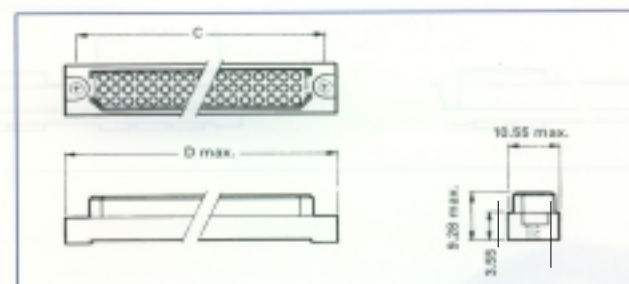


THREE ROW - STYLE HDC/HDD

Shrouded Male Half (Pin Contacts)



Female Half (Socket Contacts)



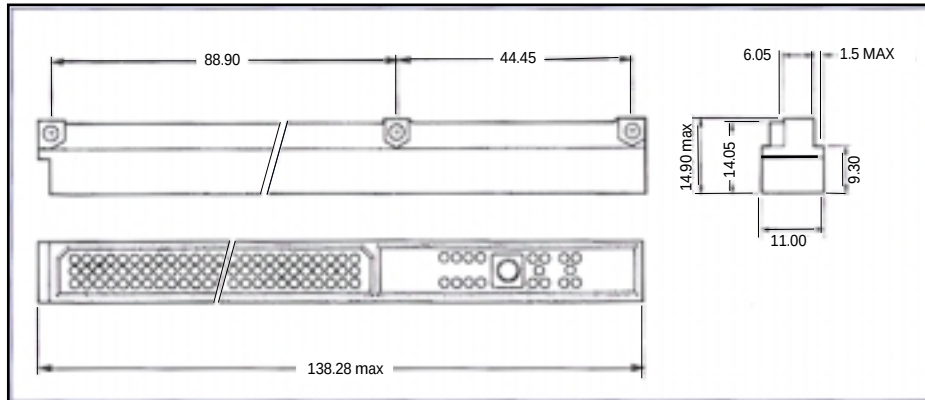
	DIMENSION A	DIMENSION B	DIMENSION C	DIMENSION D
HDB/C/D	88.90	93.90	90.00	94.90
HDS	48.31	53.26	49.46	54.26

Dimensions are in mm

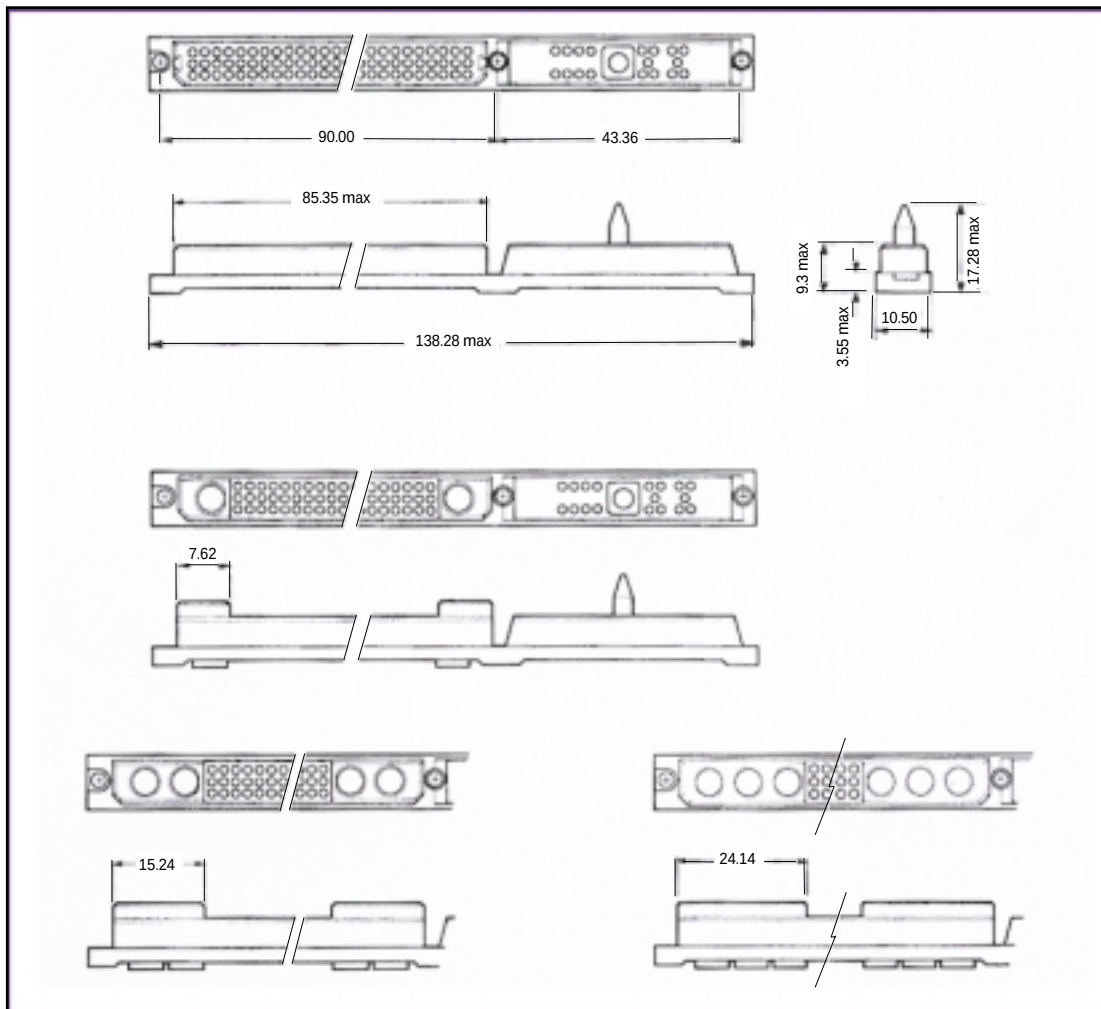
Insulators

THREE ROW - STYLE HDT

Shrouded Male Half



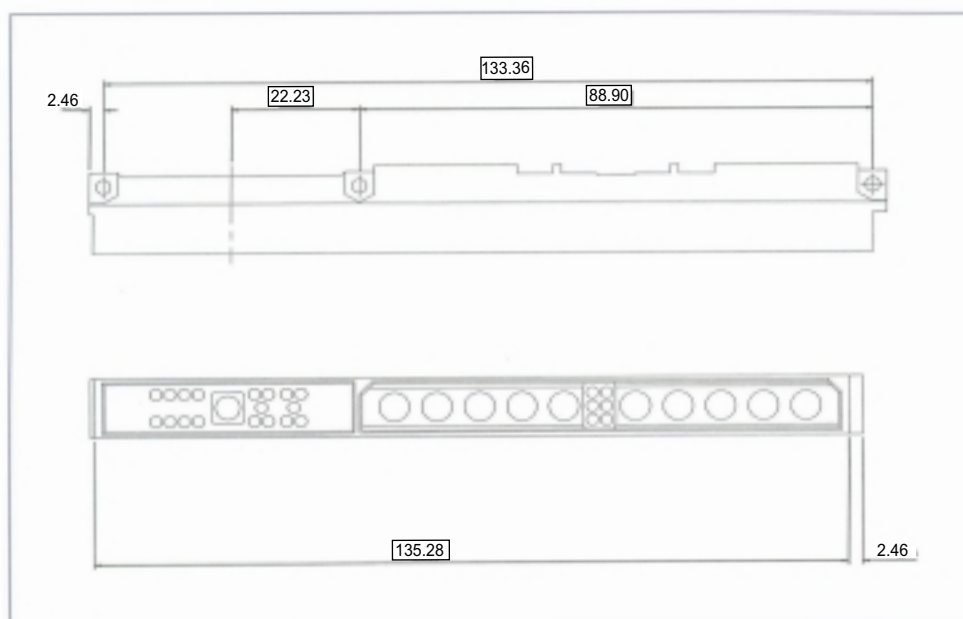
Female Half



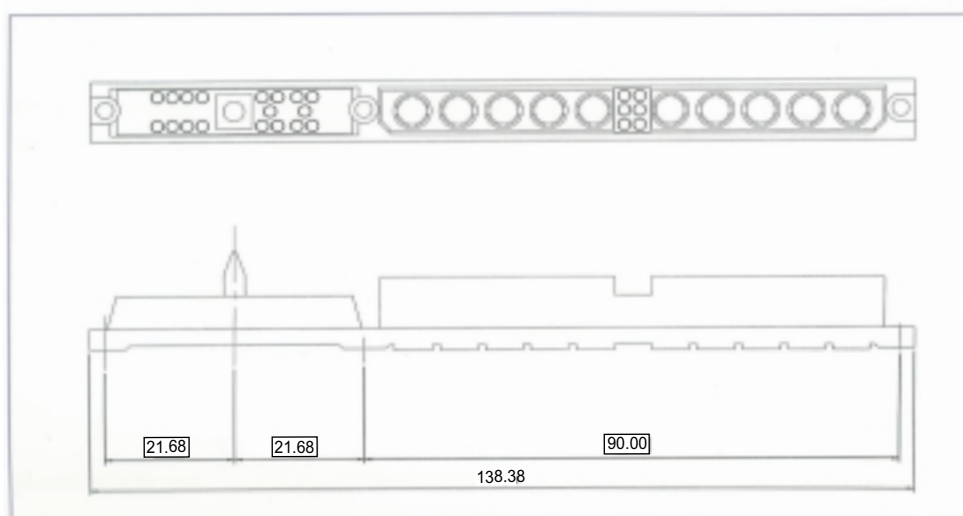
Insulators

THREE ROW - STYLE HDT

Shrouded Male Half



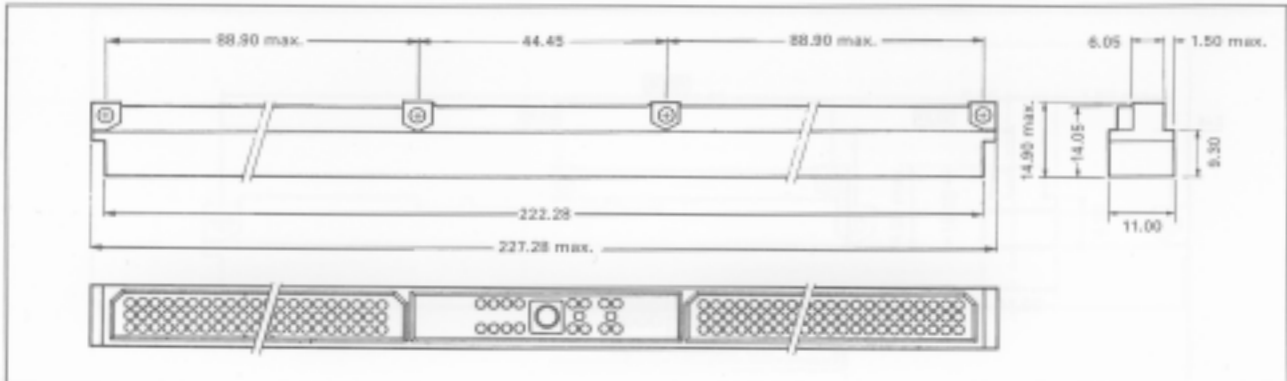
Female Half



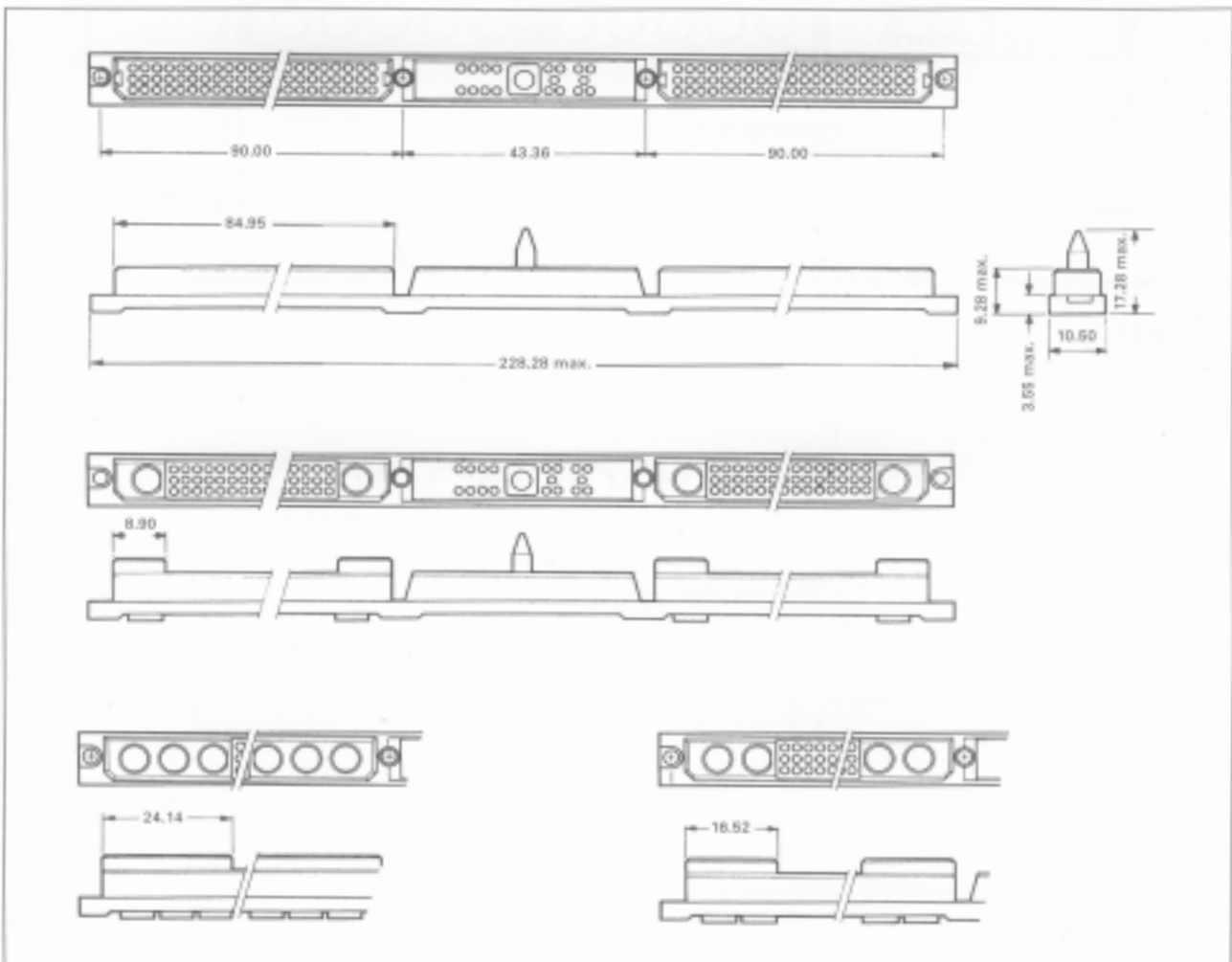
Insulators

THREE ROW - STYLE HDT

Shrouded Male Half



Female Half

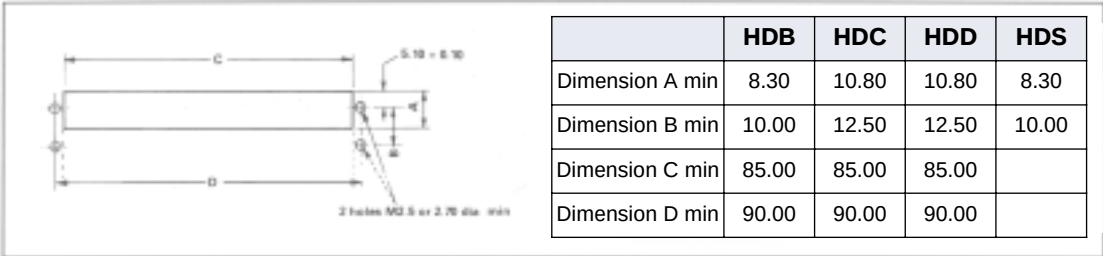


Panel preparation details

HDB/HDC/HDD/HDS

CONNECTOR MOUNTING

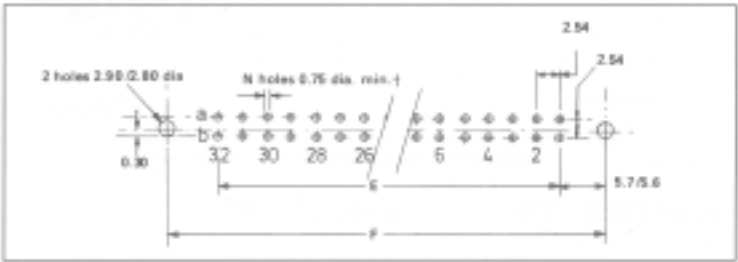
M2.5 screws must be cheese head type - not supplied



Board preparation details

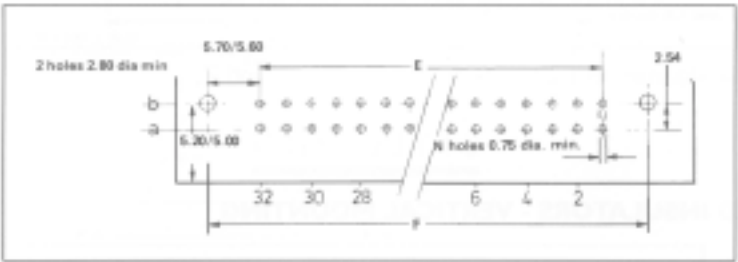
STYLE HDB/HDS

UNSHROUDED INSULATORS - VERTICAL MOUNTING

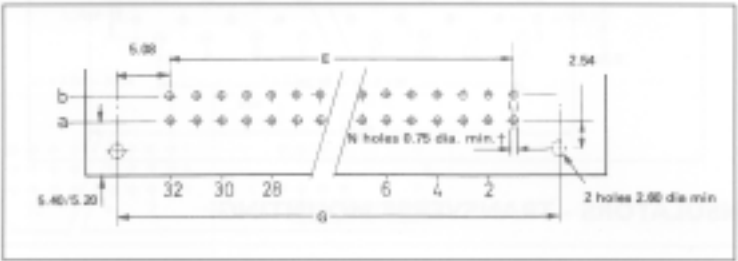


UNSHROUDED INSULATORS - TRANSVERSE MOUNTING

(for connectors fitted with female through board solder 90° terminations and using mounting conversion bracket ref. HD 214)



SHROUDED INSULATORS - TRANSVERSE MOUNTING

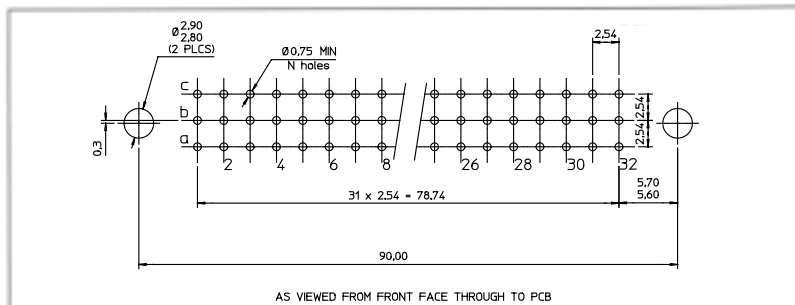


	HDS
Dimension E	38.10
Dimension F	49.40
Dimension G	48.31
	HDB
Dimension E	78.74
Dimension F	90.00
Dimension G	88.90

Board preparation details

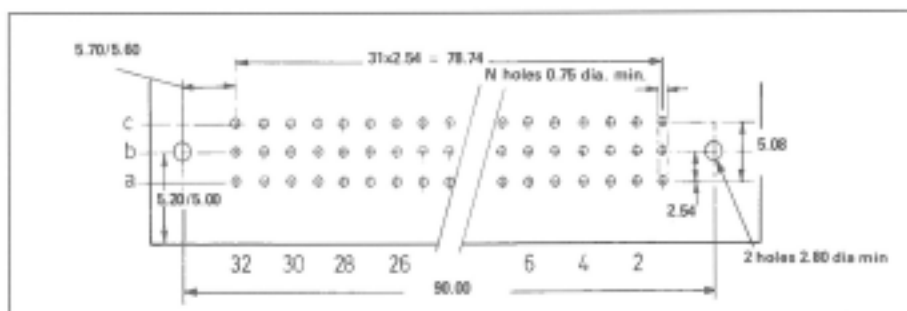
STYLE HDC

UNSHROUDED INSULATORS - VERTICAL MOUNTING

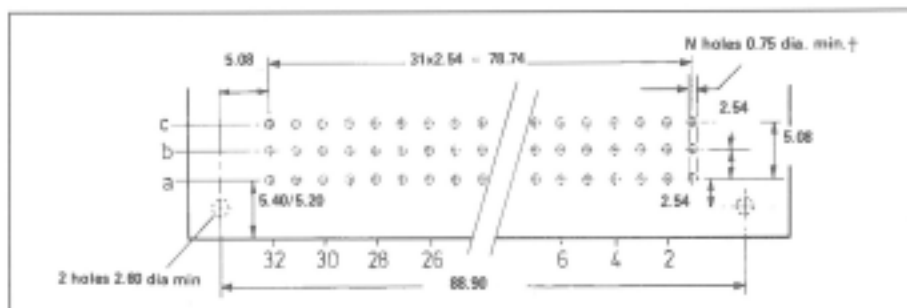


UNSHROUDED INSULATORS - TRANSVERSE MOUNTING

(for connectors fitted with female through board solder 90° terminations and using mounting conversion bracket ref. HD 214)



SHROUDED INSULATORS - TRANSVERSE MOUNTING

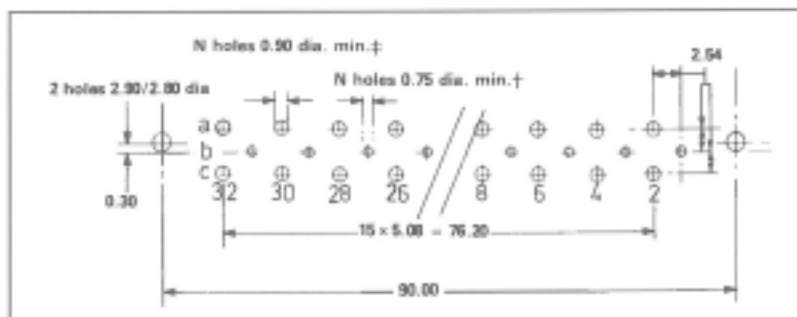


† N holes: Increase dia. min. to 1.2 for termination styles F, W and Z.

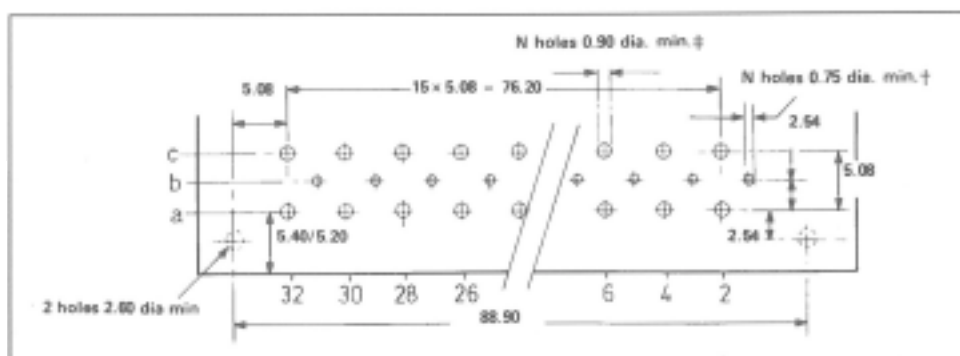
Board preparation details

STYLE HDD

UNSHROUDED INSULATORS - VERTICAL MOUNTING



SHROUDED INSULATORS - TRANSVERSE MOUNTING



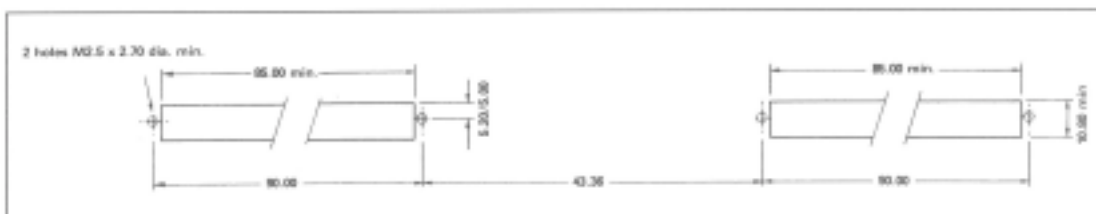
N holes: $\dagger$ and $\pm$ to be increased, when needed, to accept wrap post F, W and Z terminations $\pm$ to 1.65 dia. min $\dagger$ to 1.20 dia. min

Panel preparation details

HDT

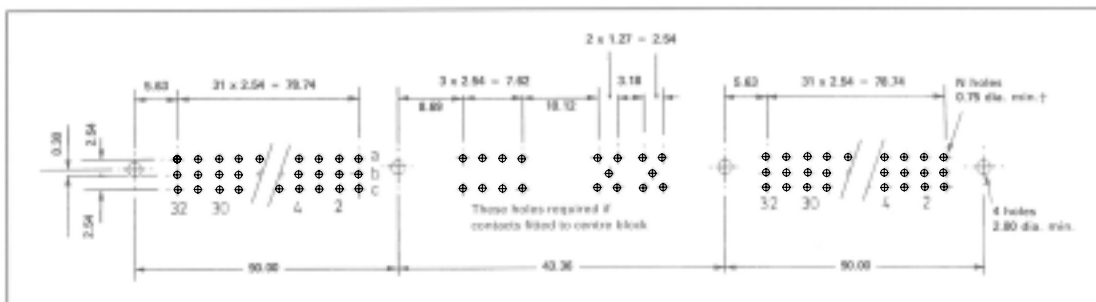
CONNECTOR MOUNTING

M2.5 screws must be cheese head type - not supplied



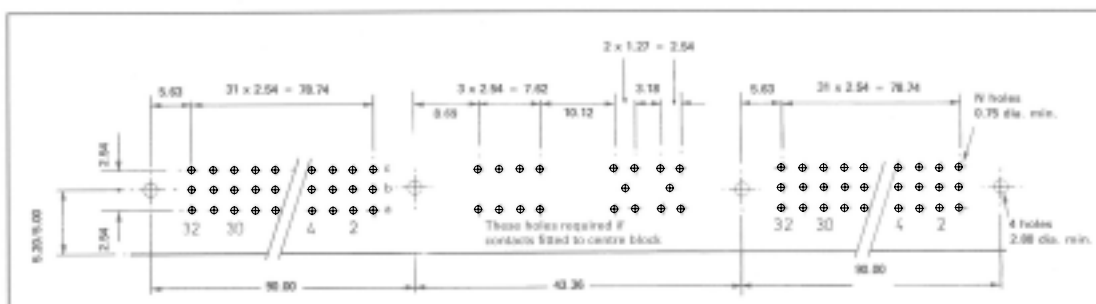
BOARD PREPARATION DETAILS STYLE HDT

UNSHROUDED INSULATORS - VERTICAL MOUNTING

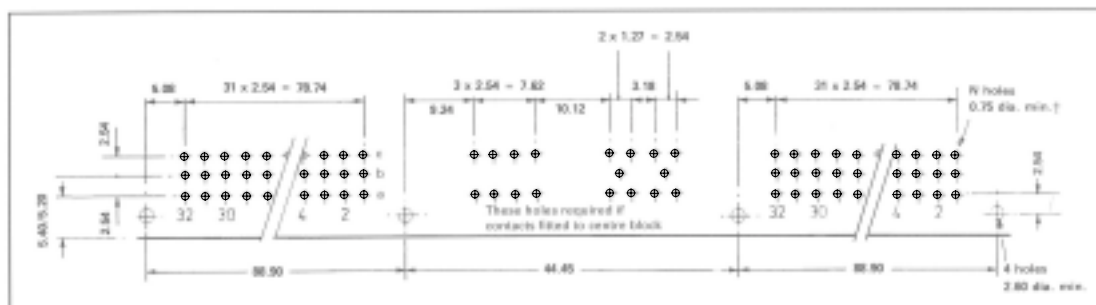


UNSHROUDED INSULATORS - TRANSVERSE MOUNTING

(for connectors fitted with female through board solder 90° terminations and using mounting conversion bracket ref. HD 214)



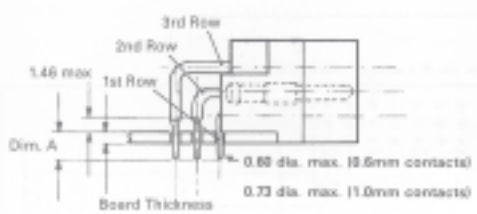
SHROUDED INSULATORS - TRANSVERSE MOUNTING



† N holes: increase dia. min to 1.20 for termination styles F, W and Z

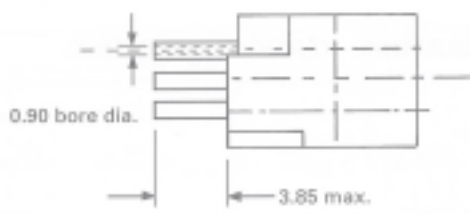
Dimensions are in mm

Male contact terminations and codes

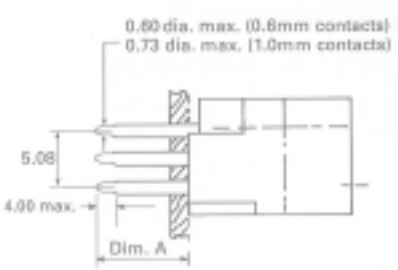


Term style	Pin dia.	Board thickness	Dimension A maximum	Part number		
				1st Row	2nd Row	3rd Row
B	0.6 mm	1.6 mm	2.75	HD151/7	HD152/7	HD153/7
B	1.0 mm	1.6 mm	2.75	HD154/7		HD155/7
L	0.6 mm	3.2 mm	4.84	HPD685/7	HPD688/7	HPD691/7

Style B/L
Through Board Solder - 90°

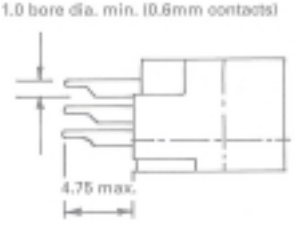


Style C
Crimp Barrel 0.6mm Pin HPD 486/7

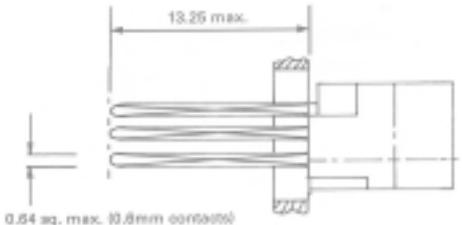


Term style	Pin dia.	Dimension A maximum	Part number
G		4.15	HD 134/7
P	0.6 mm	6.20	HPD 684/7
N	0.6 mm	14.35	HPD 603/7

Style G/N/P
Through Board Solder Straight



Style S
Solder Bucket 0.6mm Pin HPD 492/7

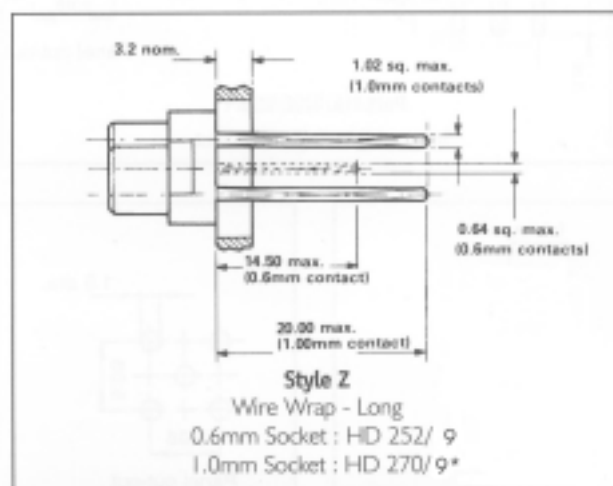
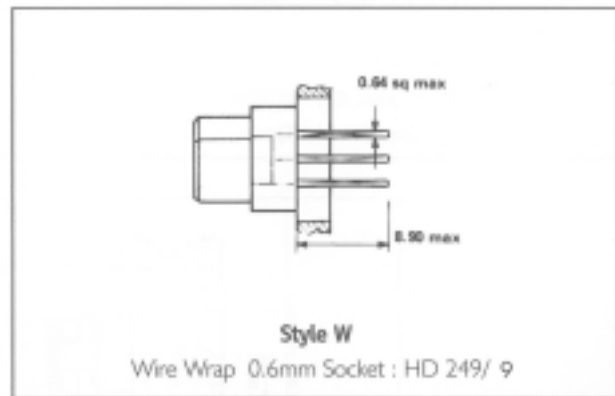
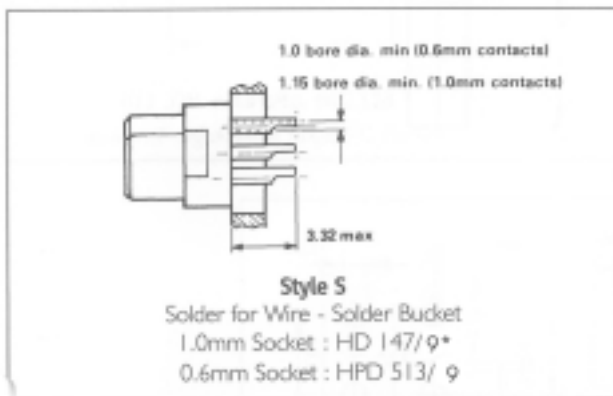
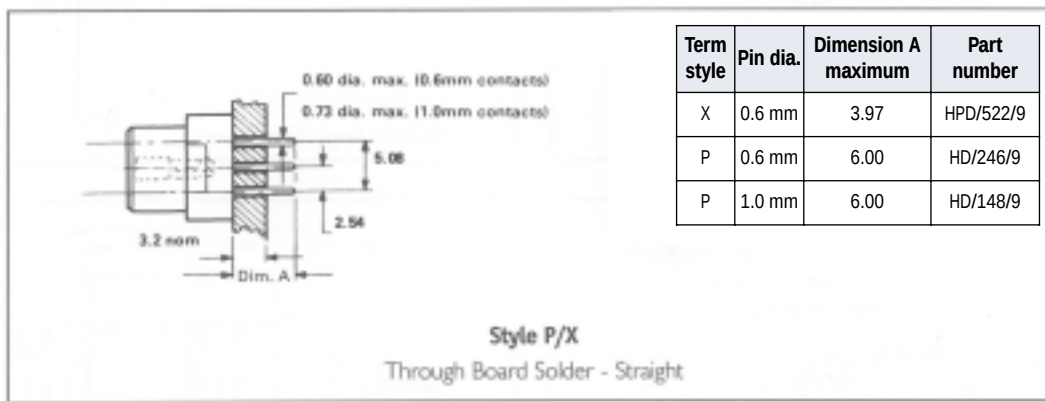
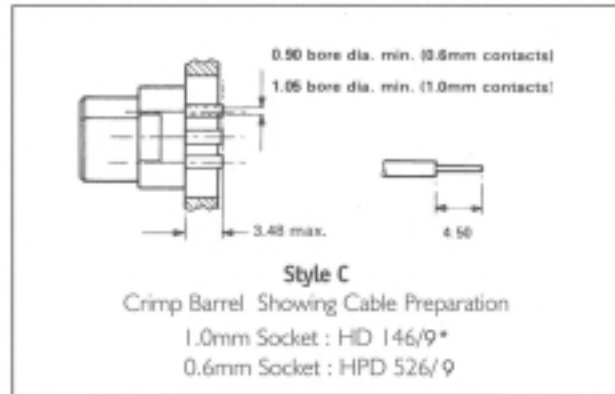
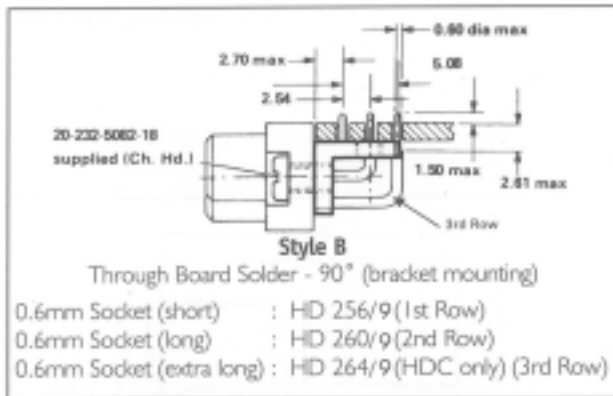


Style Z
Wire Wrap Long 0.6mm Pin HPD 490/7

* PLEASE NOTE

When using 1.0mm Pin diameter HDD 032 (Two Row) HDD 042 & 048 (Three Row) up to thirty two 1.0mm pins will be used. Plus a maximum of sixteen pins 0.6mm diameter.

Female socket terminations and codes



*Please note
When using 1.0 mm pin diameter HDD 032 (Two Row)
HDD 042 & 048 (Three Row) up to thirty two 1.0 mm
pins will be used. Plus a maximum of sixteen pins 0.6
mm diameter

Dimensions are in mm

Specification

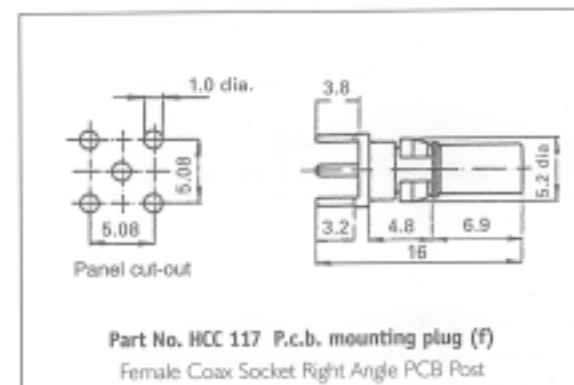
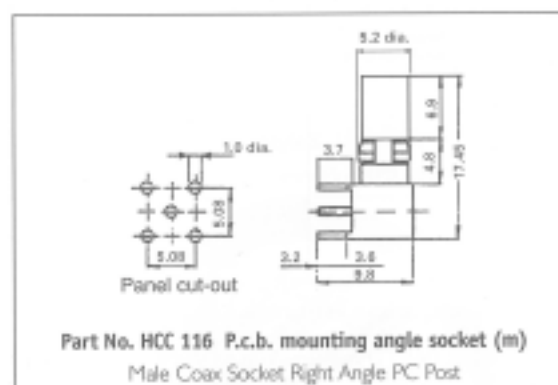
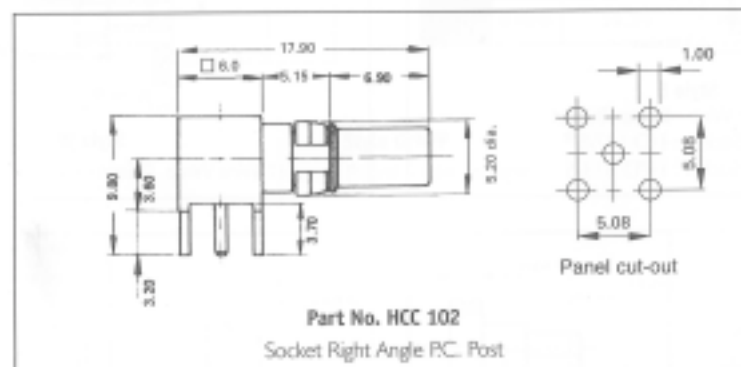
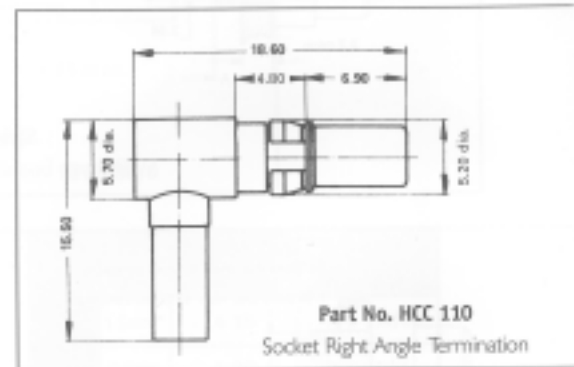
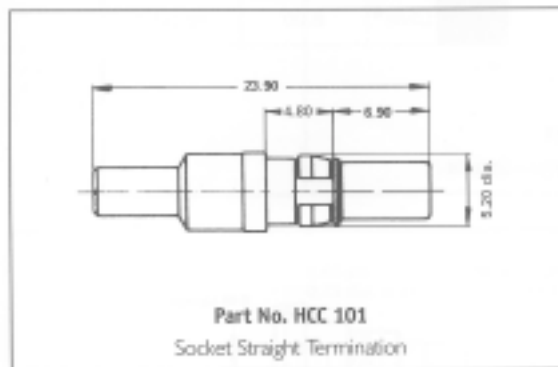
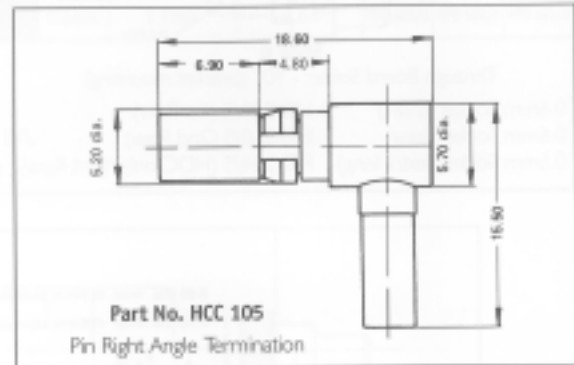
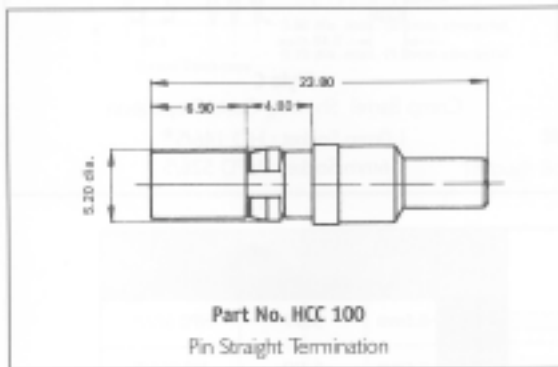
Impedance: 50 Ω

Cable group: $\left. \begin{array}{l} \text{RG 178 B/U} \\ \text{RG 196 A/U} \end{array} \right\} \text{MIL-SPEC}$

Frequency: 0 - 10 GHz

Proof Voltage: 750 / 50 Hz

Temperature Range: -55° C to +125° C

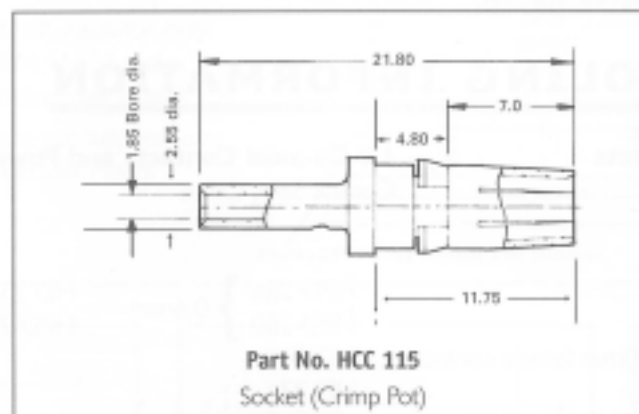
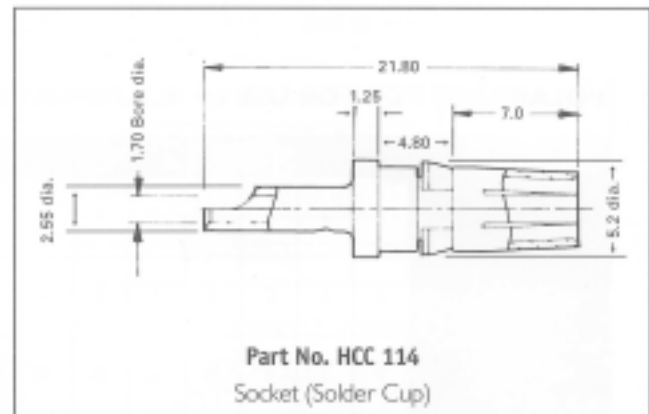
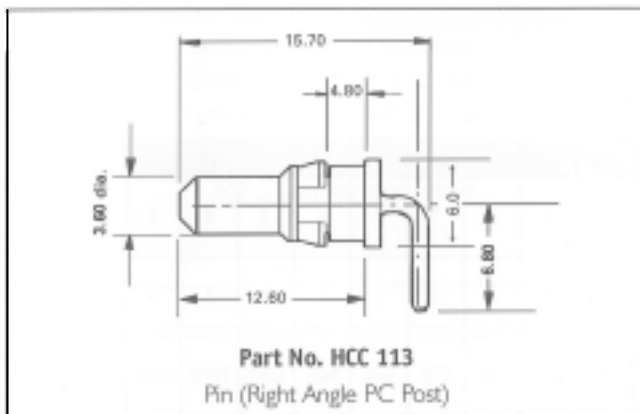
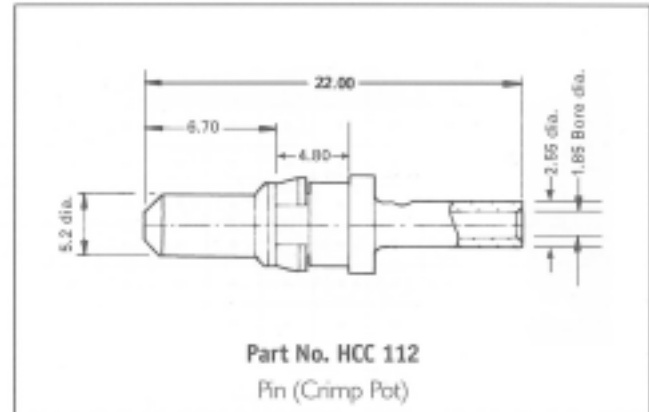
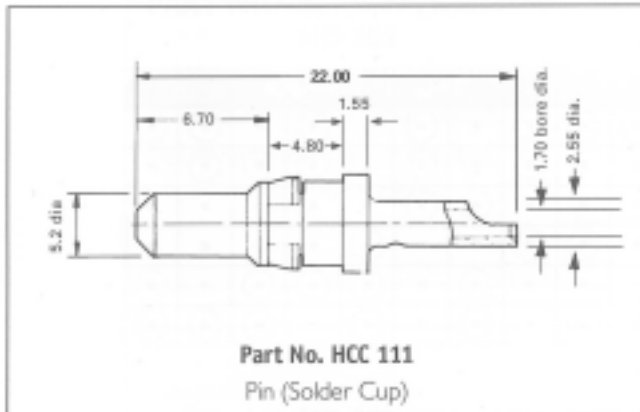


Dimensions are in mm

Power contact - DIN 41626 class 1

Specification

Nominal current: 10 A
 Cable section: 1.0 mm²
 Cable stripping length: 7.50/7.00



Polarising

POLARISING IN LIEU OF CONTACTS (HDB/HDC/HDD/HDS) FOR USE IN CONNECTOR

Standard polarising utilizes contact positions:

b-11, b-13, b-15

b-17, b-19, b-21

3 off polarising pins or studs will be supplied loose if 'W' specified. Otherwise the letters 'A' through 'V' excluding 'O' and 'Q' may be used to identify the code required out of the 20 positions available.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	P	R	S	T	U	V
b-11	*	*	*	*	⊙	*	*	⊙	⊙	*	⊙	⊙	⊙	*	⊙	*	⊙	*	⊙	⊙
b-13	⊙	*	⊙	⊙	*	*	⊙	*	*	⊙	*	*	⊙	*	⊙	*	⊙	⊙	⊙	*
b-15	⊙	⊙	⊙	*	⊙	⊙	⊙	*	⊙	*	⊙	*	*	⊙	⊙	*	*	*	*	*
b-17	⊙	⊙	*	⊙	⊙	⊙	*	⊙	*	⊙	*	⊙	⊙	*	*	⊙	*	*	*	*
b-19	*	⊙	⊙	⊙	*	*	*	⊙	⊙	*	*	*	*	⊙	*	⊙	⊙	⊙	*	⊙
b-21	*	*	*	*	*	⊙	⊙	*	*	⊙	⊙	⊙	*	⊙	*	⊙	*	⊙	⊙	⊙

Key

* = Polarising stud in female half;
Nothing in male half.

⊙ = Polarising pin in male half;
Nothing in female half.

POLARISING HDT FOR USE IN ALIGNMENT BLOCK

NO. OF CAVITIES USED	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
NUMBER OF STUDS	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9	9
NUMBER OF PINS	1	1	2	2	3	3	4	4	5	5	6	6	7	7	8	8	9
NUMBER OF POLARISATION	2	3	6	10	20	35	70	126	252	462	924	1716	3432	6435	12870	24310	48620

9 off supplied loose when style 'W' specified.

Tooling information

0.6mm and 1.0mm Contacts

Contact extraction tool

0.6mm male and female
contacts and 1.0mm male

Contacts

Spare tips for above

Contact extraction tool for 1.0mm female contacts

Spare tips from above

Polarising component tool

Contact Insertion Tool

Crimp tool positioner

for 0.6mm contacts

for 1.0mm contacts

Crimp tool (0.6mm and 1.0mm contacts)

1.0mm Co-axial Contacts and Power Contacts

Consult Sales Office

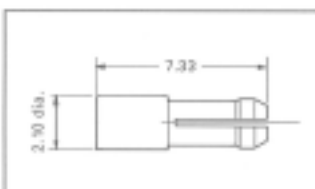
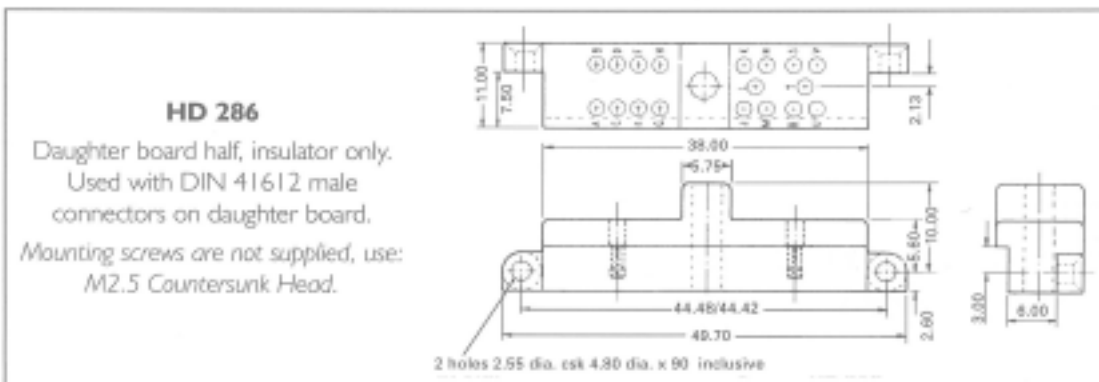
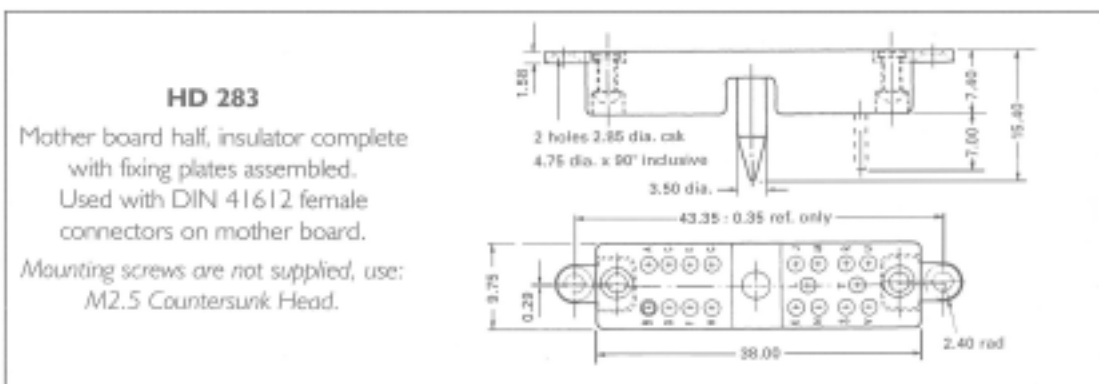
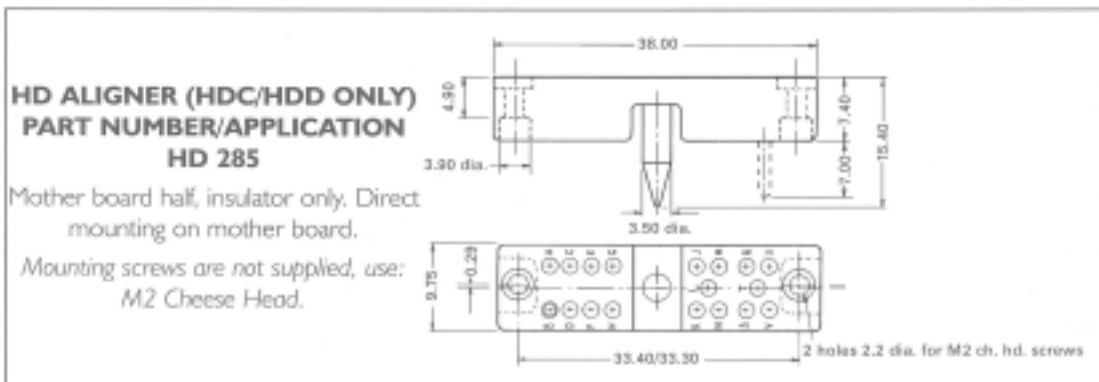
	: HPD 286	} 0.6mm	HD 232	} 1.0mm male
	: HPD 280		HPD 280	
	: HD 240			
	: HD 236			
	: HD 210			
	: Use non ferrous long pointed tweezers			
	: HPD 309			
	: HD 272			
	: MIL-C-22520/201 (BS 5310-34-300)			

CRIMP INFORMATION

AWG	NUMBER AND NOMINAL DIAMETER OF WIRES	CRIMP TOOL SELECTOR POSITION	
		0.6mm CONTACT	1.0mm CONTACT
20	19/0.20mm	—	6
22	19/0.15mm	5	5
24	7/0.20mm	5	4
24	19/0.118mm	4	—
26	7/0.15mm	4	—

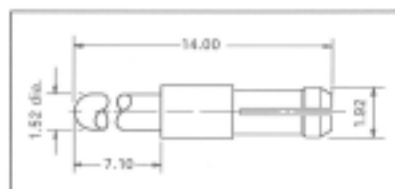
Accessories

All diagrams are shown in 3rd angle projection and dimensioned in millimetres



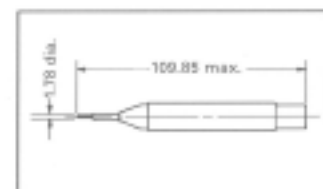
HD 181

Polarising stud (front removal)
 Use with HD 286



HD 182

Polarising pin (front removal)
 Use with HD 283 and HD 285



HD 210

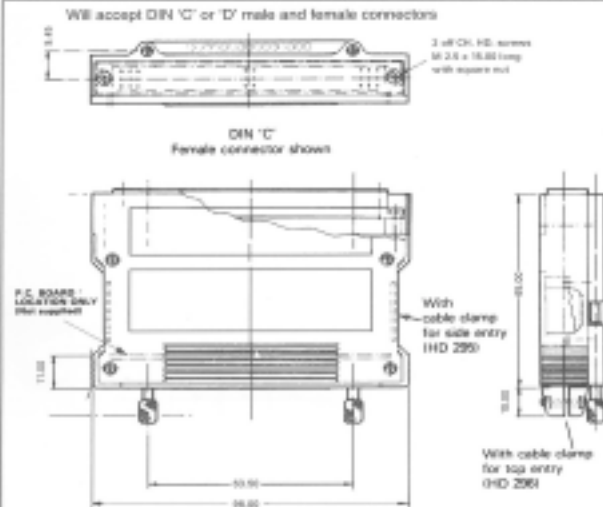
Removal Tool

Polarising pins and studs are to be ordered separately and will be supplied loose.

Cover (HDC / HDD only)

All diagrams are shown in 3rd angle projection and dimensioned in millimetres

Will accept DIN 'C' or 'D' male and female connectors



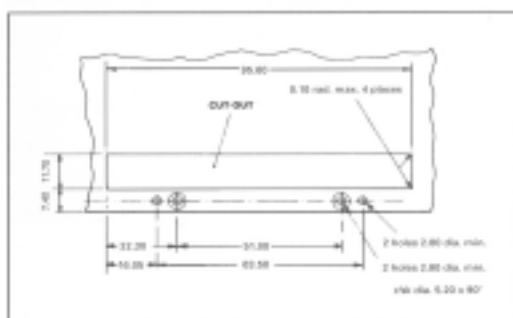
SPECIFICATION

Materials: Thermoplastic and stainless steel.

Ordering Codes:

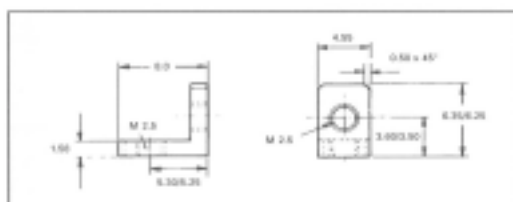
	Cover style		
	SINGLE side entry	DUAL side entry	TOP side entry
For use with:			
Female connector	HD 295/1	HD 295/2	HD 296/1
Male connector	HD 295/3	HD 295/4	HD 296/2
Accessories:			
Cable clamp kit	HD 320	---	HD 321
Bracket	---	HD 297	---

PANEL PREPARATION



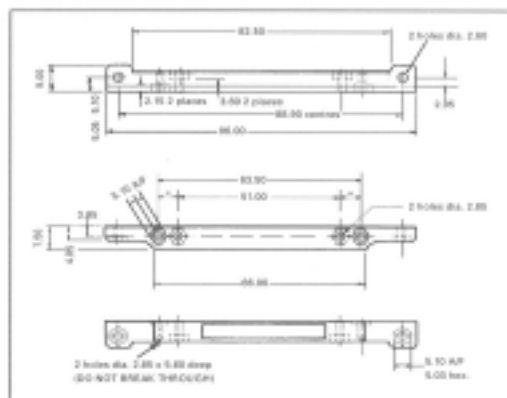
MOUNTING BRACKET HD 214

Nickel plated copper alloy screws for securing bracket to insulator
20-232-5082-18



BRACKET HD 297

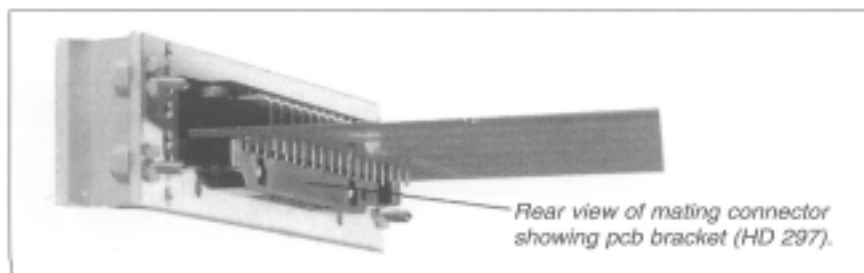
(for use in conjunction with male connector only)



ALIGNMENT COMB

HD 173 (HDC Style)
HD 174 (HDD Style)

Supplied loose for use with through board solder - 90° termination.



Dimensions are in mm