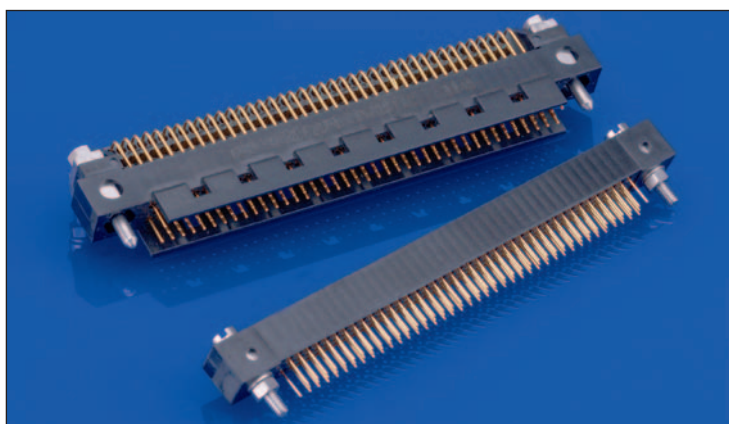




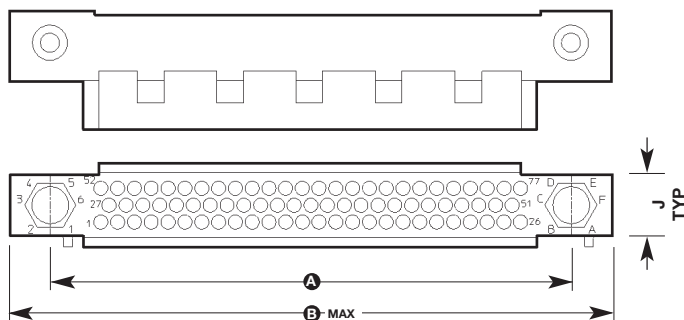
HPH PCB/MALE CABLE

- Straight TBS, R/A TBS, male crimp, Flex SMT, solder bucket, stacking, pin carrier
- Pin size/current: 0.6mm/4 amp
- Pitch: 1.905mm/0.075" on a staggered pitch of 0.953mm/0.0375
- No. of contacts: 20, 50, 77, 102, 119, 128, 152, 202, 253, 303

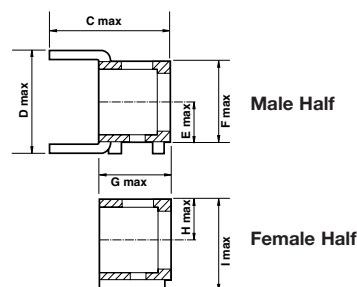
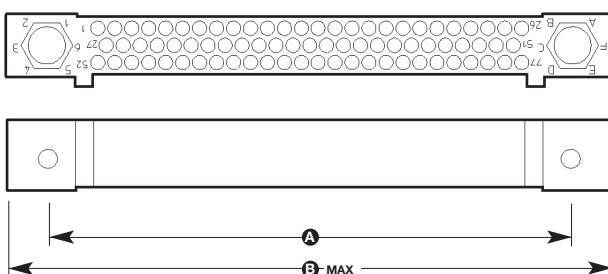
PERFORMANCE/SPECIFICATION			
MATERIAL		CURRENT RATING	4 Amps
Insulator	Polyphenylene sulphide	INSULATION	5 Gigohms minimum at 500Vdc
Contact pin & socket	Copper alloy	MECHANICAL ENDURANCE	In excess of 2000 operations
Socket wires	Beryllium copper	ENGAGEMENT/WITHDRAWAL FORCES	0.42 N (1.5 oz) nominal per contact
		TEMPERATURE RANGE	-55°C to +125°C
Guides	Stainless steel	VOLTAGE RATING	170 V dc or ac peak nominal
Contact Plating	MIL-G-45204 gold plate	PROOF VOLTAGE	800V minimum
Contact Resistance	7 milliohms maximum	MALE PIN DIAMETER	0.6mm nominal

HPH INSULATORS

Male Half



Female Half

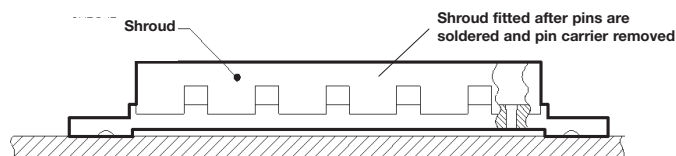
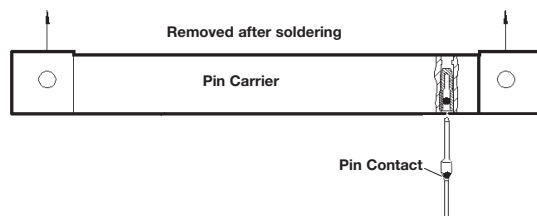


HPH Insulator Dimension Table

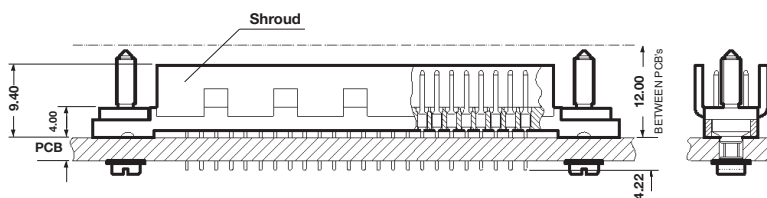
	A	B	C	D	E	F	G	H	I	J	
20	22.86	32.18	13.50	9.36	3.51	7.01	8.00	3.51	8.21	7.01	mm
	0.900	1.267	0.531	0.369	0.138	0.276	0.315	0.138	0.323	0.276	inches
50	41.91	51.23	13.50	9.36	3.51	7.01	8.00	3.51	8.21	7.01	mm
	1.650	2.017	0.531	0.369	0.138	0.276	0.315	0.138	0.323	0.276	inches
77	59.06	68.38	13.50	9.36	3.51	7.01	8.00	3.51	8.21	7.01	mm
	2.325	2.692	0.531	0.369	0.138	0.276	0.315	0.138	0.323	0.276	inches
102	59.18	68.50	13.50	11.26	4.46	8.91	8.00	4.46	10.11	8.91	mm
	2.330	2.697	0.531	0.443	0.176	0.351	0.315	0.176	0.398	0.351	inches
119	85.73	95.05	13.50	9.36	3.51	7.01	8.00	3.51	8.21	7.01	mm
	3.375	3.742	0.531	0.369	0.138	0.276	0.315	0.138	0.323	0.276	inches
128	59.06	68.23	13.50	13.17	5.41	10.82	8.00	5.41	12.02	10.82	mm
	2.325	2.686	0.531	0.519	0.213	0.426	0.315	0.213	0.473	0.426	inches
152	106.68	116.50	13.50	9.36	3.51	7.01	8.00	3.51	8.21	7.01	mm
	4.200	4.587	0.531	0.369	0.138	0.276	0.315	0.138	0.323	0.276	inches
202	106.68	116.50	13.50	11.26	4.46	8.91	8.00	4.46	10.11	8.91	mm
	4.200	4.587	0.531	0.443	0.176	0.351	0.315	0.176	0.398	0.351	inches
253	106.68	116.50	13.50	13.17	5.41	10.82	8.00	5.41	12.02	10.82	mm
	4.200	4.587	0.531	0.519	0.213	0.426	0.315	0.213	0.473	0.426	inches
303	106.68	116.50	13.50	15.22	6.36	13.2	8.00	6.36	13.20	13.2	mm
	4.200	4.587	0.531	0.599	0.250	0.520	0.315	0.250	0.520	0.520	inches

HPH INSULATORS/PIN CARRIER SHROUDED PIN CARRIER

Shrouded Pin Carrier



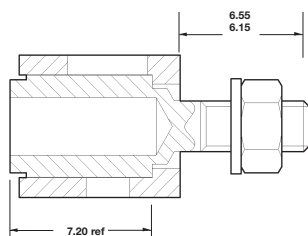
Shrouded insulator shown with pins and guides.
Ready to mate with standard female connector fitted with suitable female
pin carrier guides.



HPH INSULATORS/PIN CARRIER GUIDES SHROUDED PIN CARRIER GUIDES

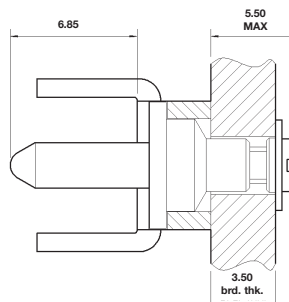
STYLE AM

Non Polarized Guide Socket
Vertical Mounting

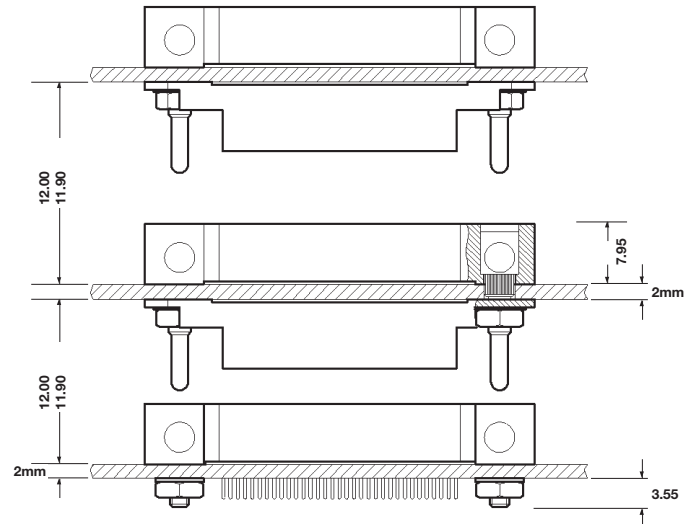
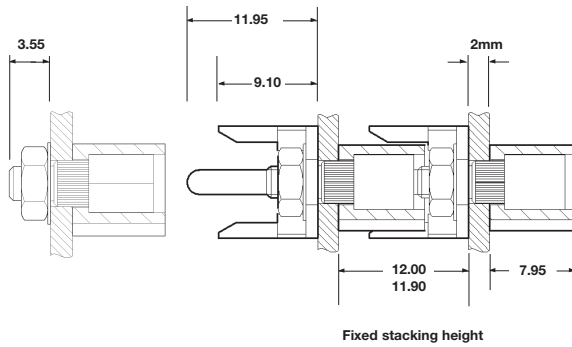


STYLE 9A

Non Polarized Guide Pin
Vertical Mounting



HPH STACKING INSULATORS STACKING CONNECTOR APPLICATION

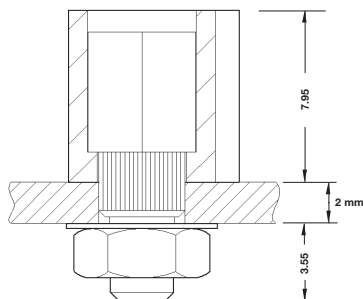


Stacking connectors are currently only available in 50, 77 & 102 ways.

HPH STACKING GUIDES

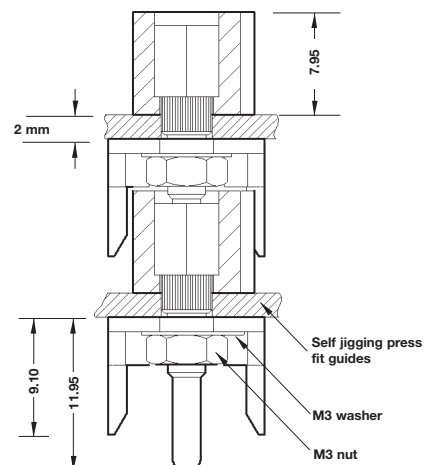
Style AU FEMALE

Non Polarized Vertical Mounting Stacking



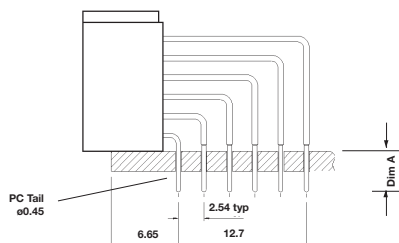
Style AT MALE

Non Polarized Vertical Mounting Stacking



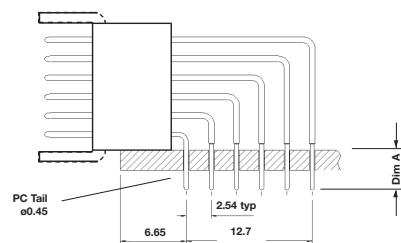
HPH STANDARD PCB TERMINATIONS

FEMALE 90° PCB



Dimensions applicable to 3, 4 and 5 row insulators also.

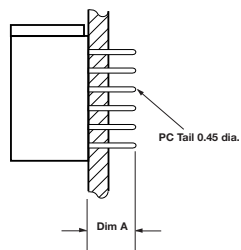
MALE 90° PCB



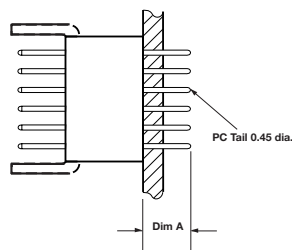
Dimensions applicable to 3, 4 and 5 row insulators also.

TERMINATION	Dim. A
B π	2.85 0.112"
L#	4.00 0.157"

FEMALE VERTICAL PCB



MALE VERTICAL PCB



TERMINATION	Dim. A
P*	4.50 0.177"
K Ω	6.70 0.264"

* Off the shelf # Off the shelf Male Ω Off the shelf Female † Subject to availability π Made to order

HPH STANDARD GUIDES MALE/FEMALE

FEMALE GUIDE INDEX

Style AU	Stacking;	Non-polarized;	Vertical mounting;
Style HA		Polarized;	Vertical mounting;
Style HD		Polarized;	Vertical mounting;
Style HN		Polarized;	Vertical mounting;
Style SC	Jack socket;	Non-polarized;	Vertical mounting;
Style TJ	T-Jack socket;	Non-polarized;	Transverse mounting;
Style TP	T-Jack socket;	Non-polarized;	Transverse mounting;
Style TT	T-Jack socket;	Non-polarized;	Transverse mounting;

MALE GUIDE INDEX

Style AT	Stacking;	Non-polarized;	Vertical mounting;
Style PE	T-bracket;	Polarized;	Transverse mounting;
Style PF	T-bracket;	Polarized;	Transverse mounting;
Style PG	T-bracket;	Polarized;	Transverse mounting;
Style PN	T-bracket;	Polarized;	Transverse mounting;
Style PP	T-bracket;	Polarized;	Transverse mounting;
Style PQ	T-bracket;	Polarized;	Transverse mounting;
Style PT	T-bracket;	Polarized;	Transverse mounting;
Style QC	L-bracket;	Polarized;	Transverse mounting;
Style QF	L-bracket;	Polarized;	Transverse mounting;
Style QQ	L-bracket;	Polarized;	Transverse mounting;
Style Q3	L-bracket;	Polarized;	Transverse mounting;
Style 3C	Jacking;	Non-polarized;	Rotating free connector;
Style 3F	Jacking;	Non-polarized;	Vertical mounting;
Style NA		Polarized;	Vertical mounting;
Style NB		Polarized;	Vertical mounting;

MALE GUIDES

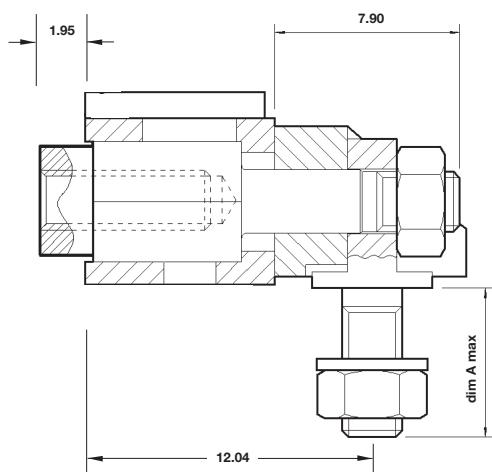
	AT	PE	PF	PG	PN	PP	PQ	PT	QC	QF	QQ	Q3	3C	3F	NA	NB
AU																
HA																
HD																
HN																
SC																
TJ																
TP																
TT																

FEMALE GUIDES

HPH STANDARD GUIDES FEMALE

Style T

Jack Socket Non Polarized
Transverse Mounting T Bracket

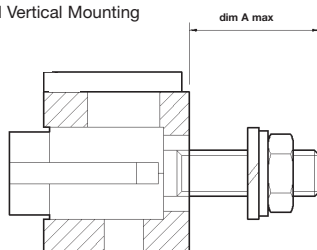


Style 3 Row	Style 4 Row	Style 5 Row	Board Thickness	Dim A
TJ			2.54 0.100"	5.70 0.224"
	TP	TT	3.20 0.126"	6.30 0.248"

Can be used for male connectors also

Style H

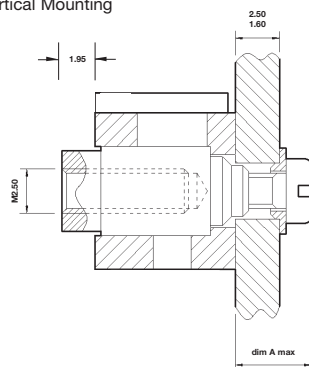
Polarized Vertical Mounting



Style	Board Thickness	Dim A max
HA	2.54 0.100"	6.55 0.257"
HD	3.20 0.125"	7.20 0.283"
HN	4.00 0.157"	9.00 0.354"

Style SC

Jack Socket Non Polarized
Vertical Mounting

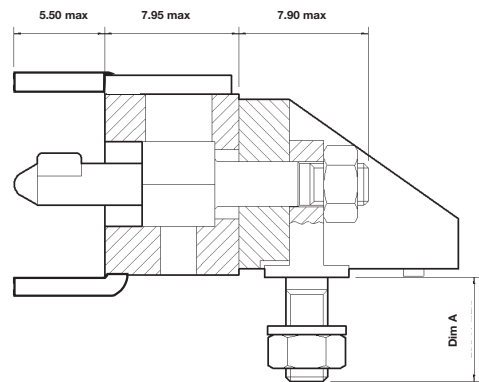


Style	Board Thickness	Dim A max
SC	2.50 0.098"	4.30 0.169"

HPH
STANDARD GUIDES MALE

Style P

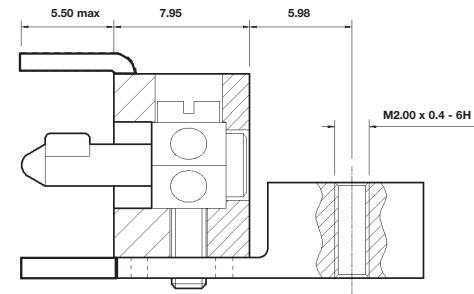
Polarized Transverse Mounting
(showing 5 row style)



STYLE	No. of Rows	Board Thickness	Dim. A max.
PE/PF/PG	3/4/5	2.00 0.078"	5.10 0.200"
PN/PP/PQ	3/4/5	3.20 0.125"	6.30 0.248"
PT	6	2.60 0.102"	5.70 0.224"

Style Q

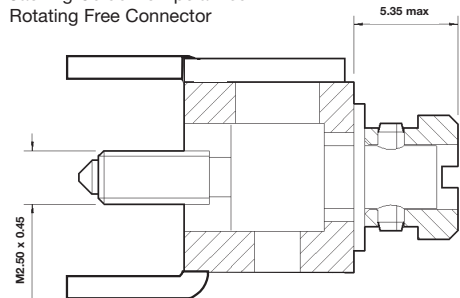
Polarized Transverse Mounting L Bracket



Style 3 Row	Style 4 Row	Style 5 Row	Style 6 Row	Board Thickness
QC	QF	QQ		2.54 0.100"
			Q3	3.20 0.126"

Style 3C

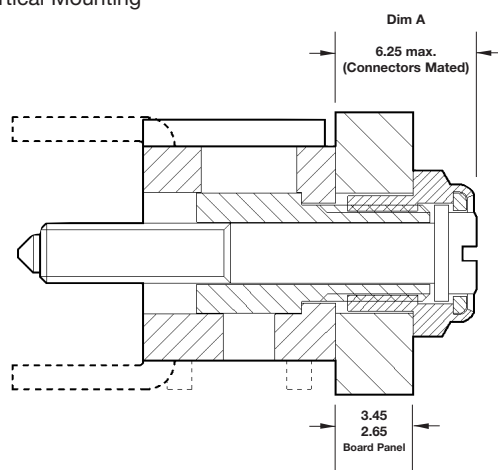
Jacking Guide Non-polarized Rotating Free Connector



HPH STANDARD GUIDES MALE

Style 3F

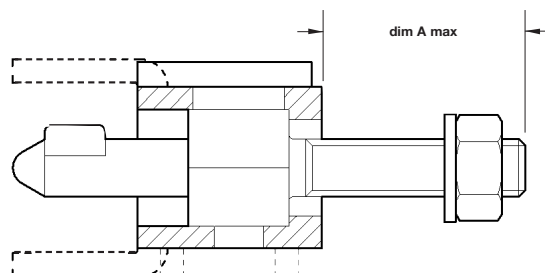
Jacking Guide Non-polarized
Vertical Mounting



Style	Board Thickness	Dim A max
3F	2.95 - 3.45 0.116" - 0.136"	6.25 0.246"

Style N

Polarized Vertical Mounting

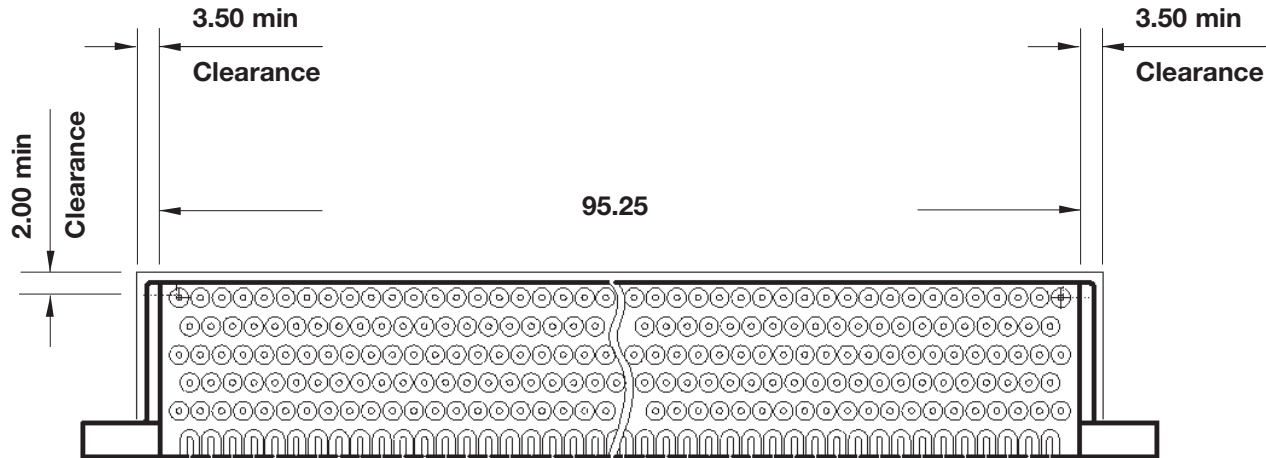


Style	Board Thickness	Dim A max
NA	2.54 0.100"	6.55 0.258"
NB	5.08 0.200"	9.00 0.354"

HPH PCB PREPARATION DETAILS

Important: Please allow the following clearance dimensions around all 90° PCB layout configurations to accommodate the alignment comb shown below.

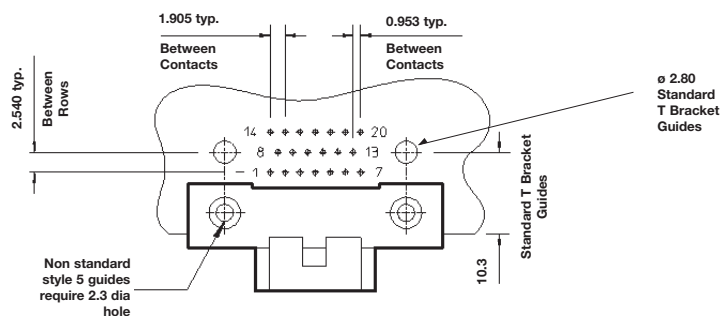
PCB 90° ALIGNMENT COMB DETAILS



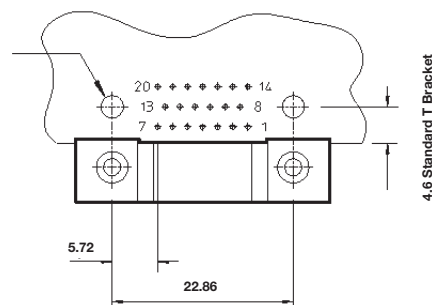
303 way showing typical clearance dimensions (applies to all 90° styles).

HPH PCB STANDARD 90° PREPARATIONS DETAILS

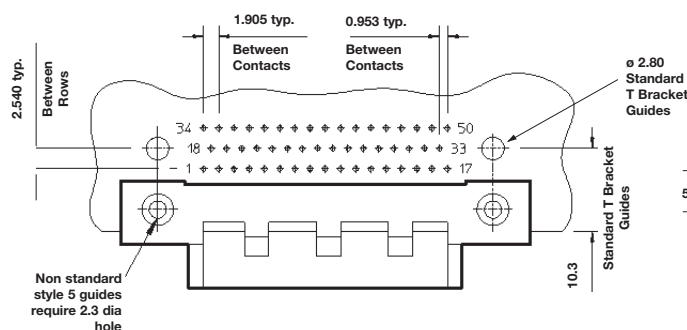
**20 WAY 90° PCB LAYOUT
MALE**



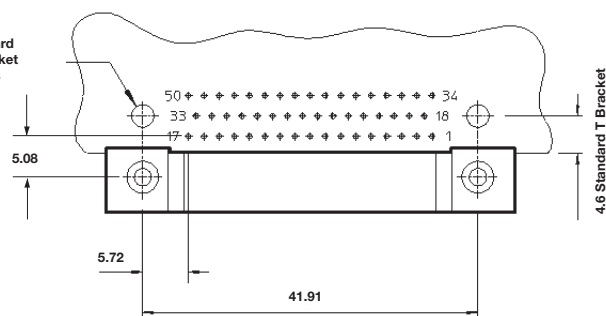
**20 WAY 90° PCB LAYOUT
FEMALE**



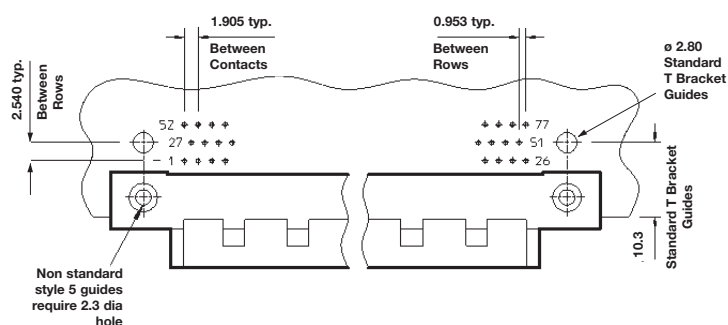
**50 WAY 90° PCB LAYOUT
MALE**



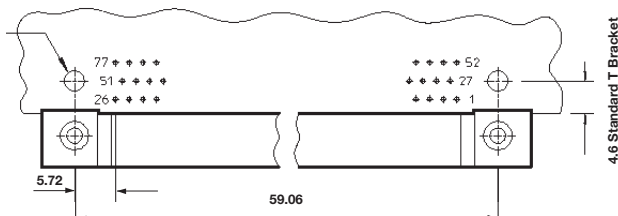
**50 WAY 90° PCB LAYOUT
FEMALE**



**77 WAY 90° PCB LAYOUT
MALE**

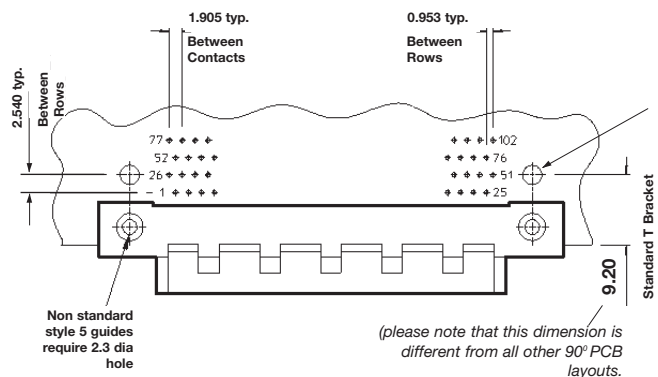


**77 WAY 90° PCB LAYOUT
FEMALE**

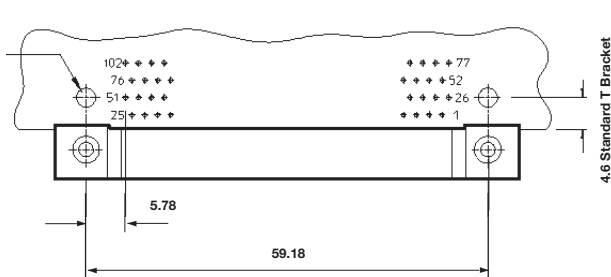


HPH PCB STANDARD 90° PREPARATIONS DETAILS

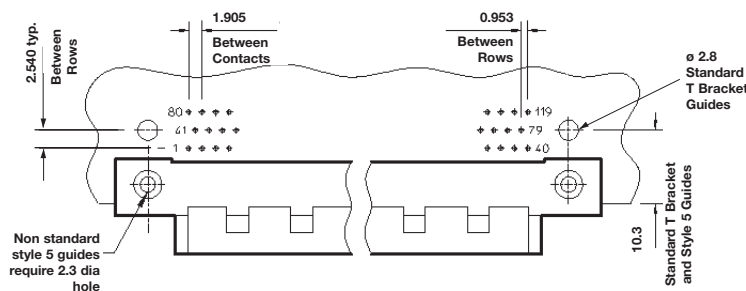
102 WAY 90° PCB LAYOUT MALE



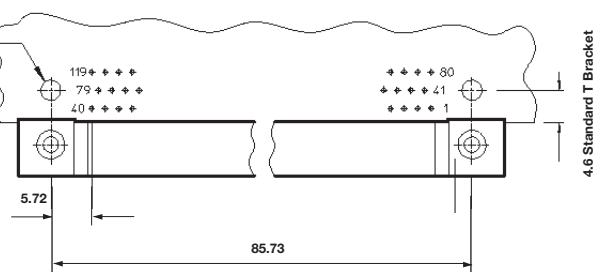
102 WAY 90° PCB LAYOUT FEMALE



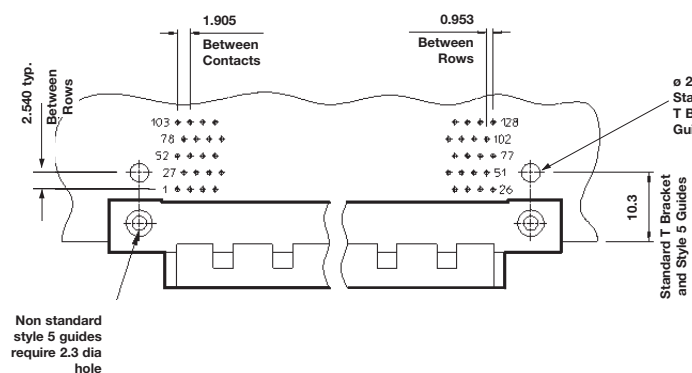
119 WAY 90° PCB LAYOUT MALE



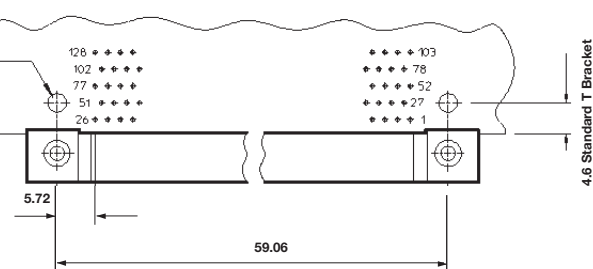
119 WAY 90° PCB LAYOUT FEMALE



128 WAY 90° PCB LAYOUT MALE

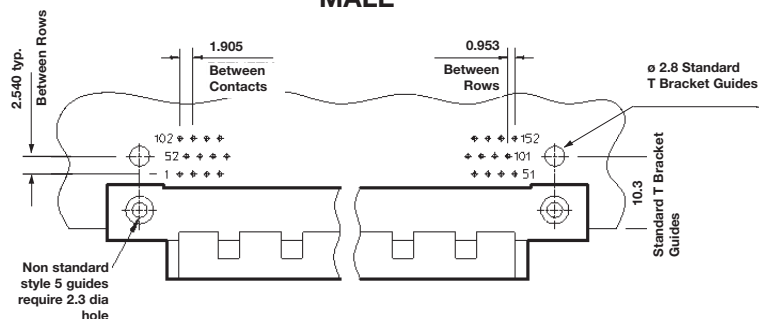


128 WAY 90° PCB LAYOUT FEMALE

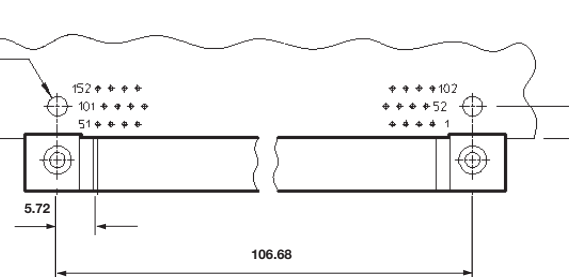


HPH PCB STANDARD 90° PREPARATIONS DETAILS

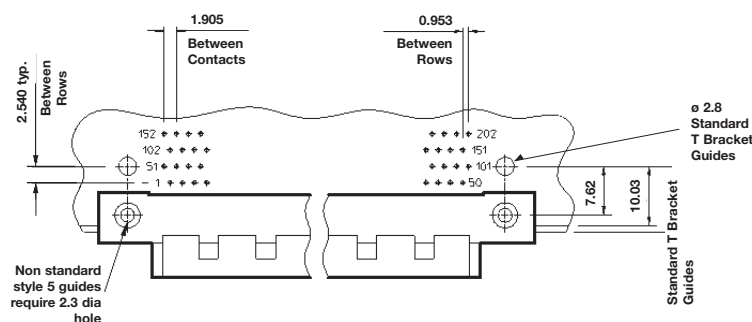
**152 WAY 90° PCB LAYOUT
MALE**



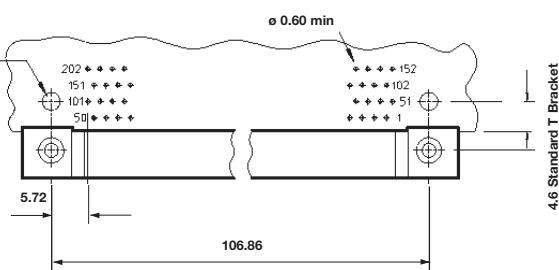
**152 WAY 90° PCB LAYOUT
FEMALE**



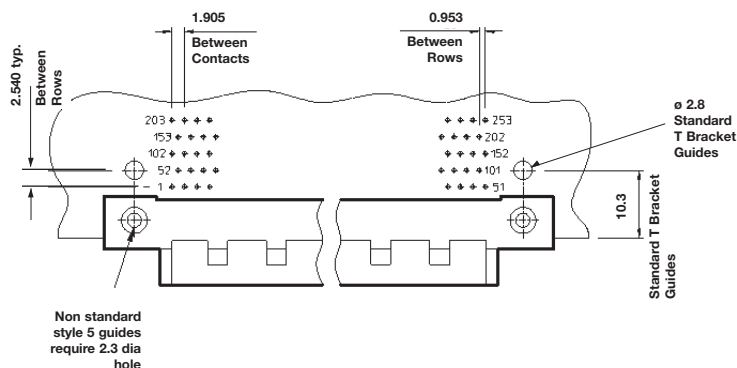
**202 WAY 90° PCB LAYOUT
MALE**



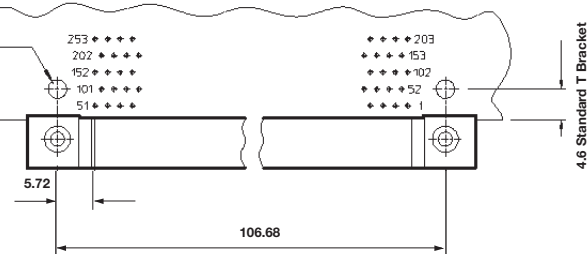
**202 WAY 90° PCB LAYOUT
FEMALE**



**253 WAY 90° PCB LAYOUT
MALE**

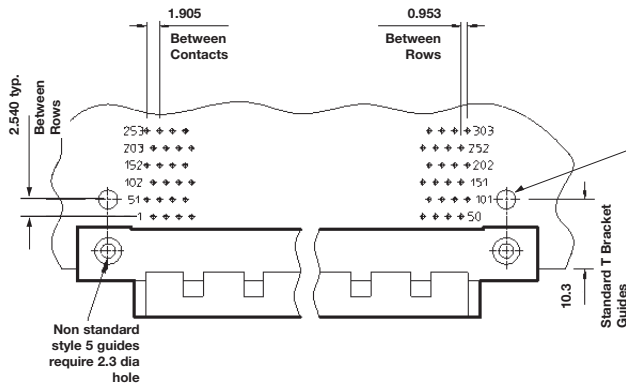


**253 WAY 90° PCB LAYOUT
FEMALE**

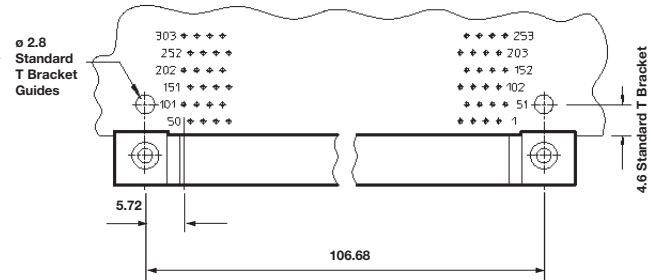


HPH PCB STANDARD 90° PREPARATIONS DETAILS

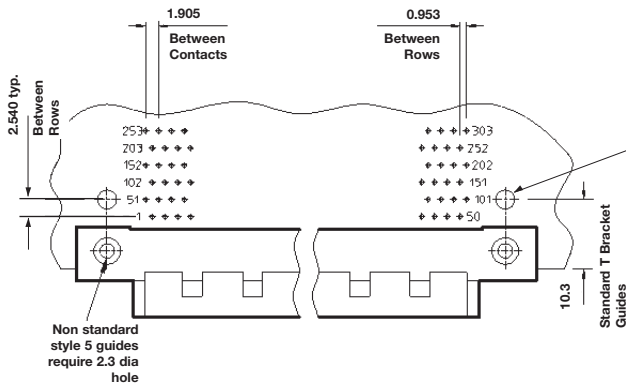
303 WAY 90° PCB LAYOUT MALE



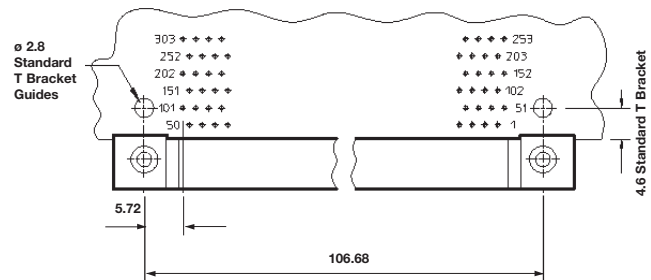
303 WAY 90° PCB LAYOUT FEMALE



303 WAY 90° PCB LAYOUT MALE



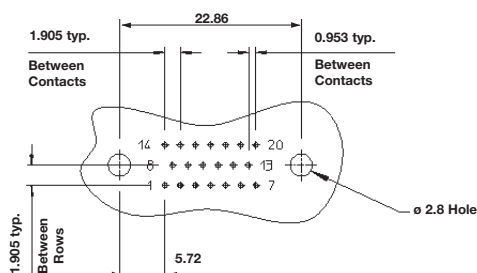
303 WAY 90° PCB LAYOUT FEMALE



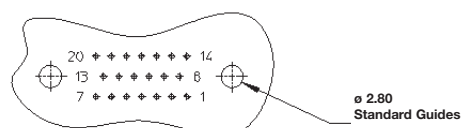
HPH PCB STANDARD VERTICAL PREPARATIONS DETAILS

NOTE: VERTICAL GUIDE CENTERS ALIGN WITH THE CENTER OF THE PCB CONTACT LAYOUT.

20 WAY VERTICAL PCB LAYOUT MALE



20 WAY VERTICAL PCB LAYOUT FEMALE

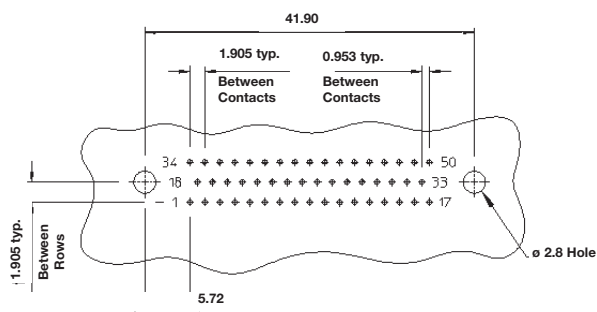


HPH

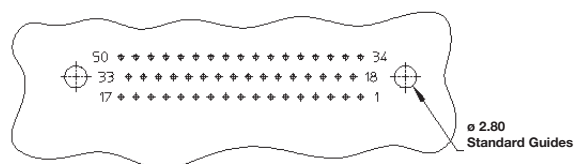
PCB STANDARD VERTICAL PREPARATIONS DETAILS

NOTE: VERTICAL GUIDE CENTERS ALIGN WITH THE CENTER OF THE PCB CONTACT LAYOUT.

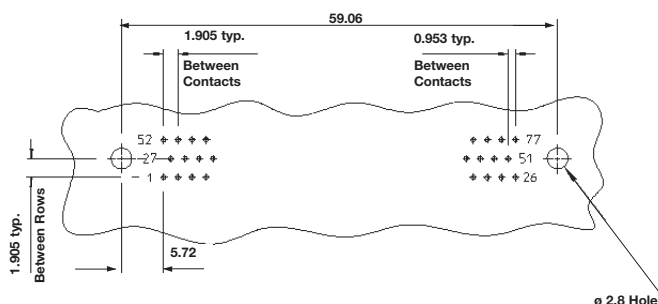
50 WAY VERTICAL PCB LAYOUT MALE



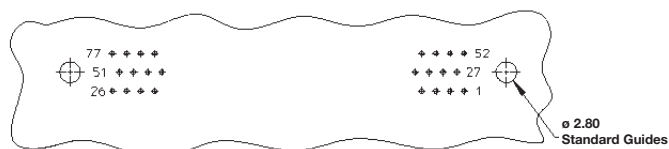
50 WAY VERTICAL PCB LAYOUT FEMALE



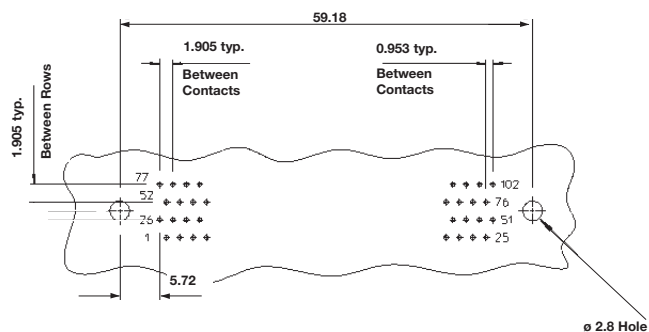
77 WAY VERTICAL PCB LAYOUT MALE



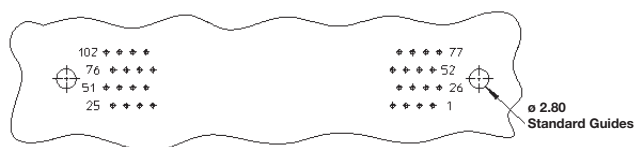
77 WAY VERTICAL PCB LAYOUT FEMALE



102 WAY VERTICAL PCB LAYOUT MALE



102 WAY VERTICAL PCB LAYOUT FEMALE

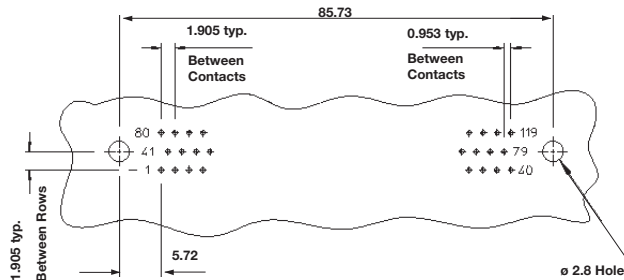


HPH

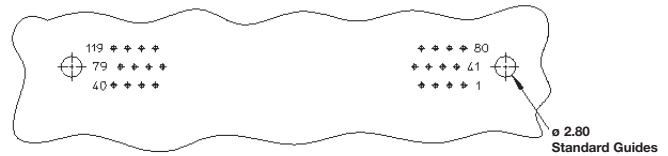
PCB STANDARD VERTICAL PREPARATIONS DETAILS

NOTE: VERTICAL GUIDE CENTERS ALIGN WITH THE CENTER OF THE PCB CONTACT LAYOUT.

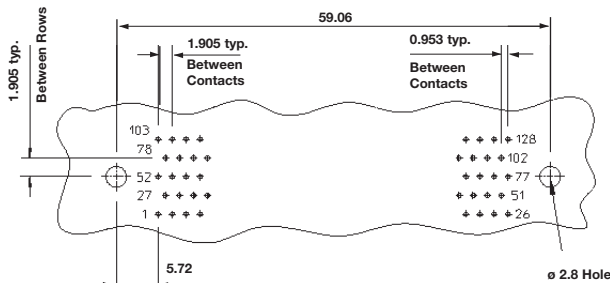
119 WAY VERTICAL PCB LAYOUT MALE



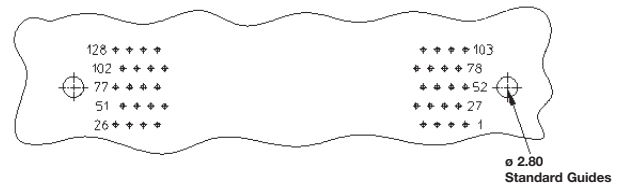
119 WAY VERTICAL PCB LAYOUT FEMALE



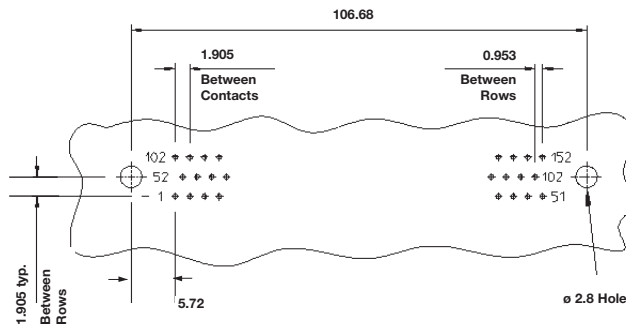
128 WAY VERTICAL PCB LAYOUT MALE



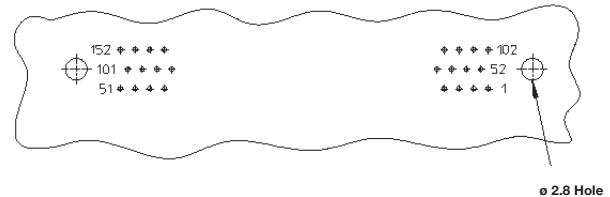
128 WAY VERTICAL PCB LAYOUT FEMALE



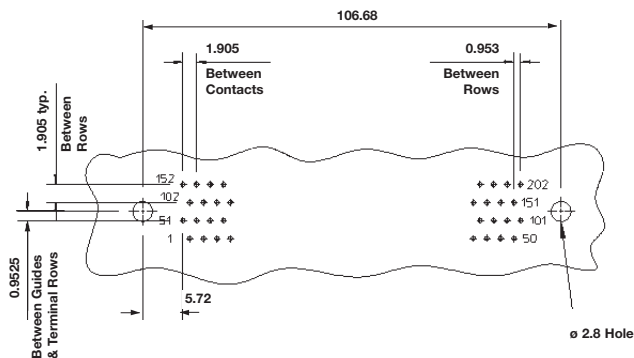
152 WAY VERTICAL LAYOUT MALE



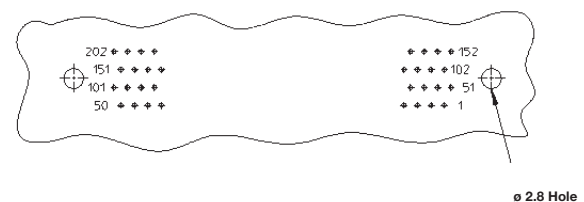
152 WAY VERTICAL PCB LAYOUT FEMALE



202 WAY VERTICAL PCB LAYOUT MALE



202 WAY VERTICAL PCB LAYOUT FEMALE

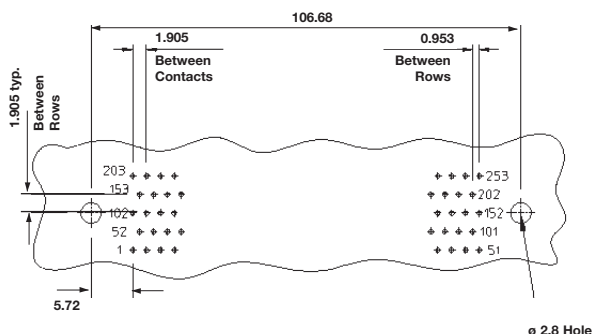


HPH

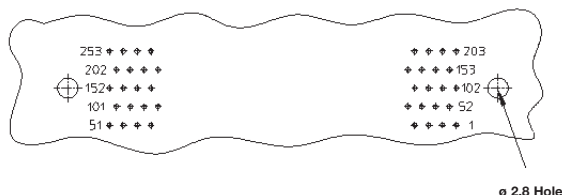
PCB STANDARD VERTICAL PREPARATIONS DETAILS

NOTE: VERTICAL GUIDE CENTERS ALIGN WITH THE CENTER OF THE PCB CONTACT LAYOUT.

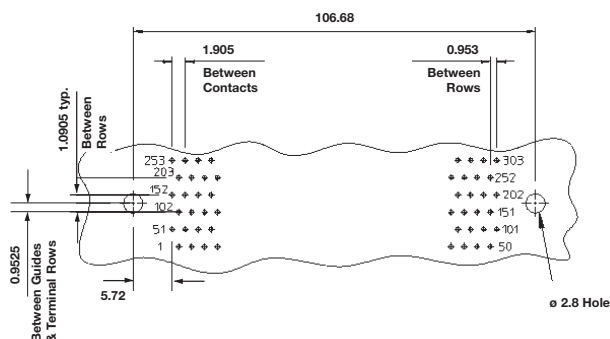
253 WAY VERTICAL PCB LAYOUT MALE



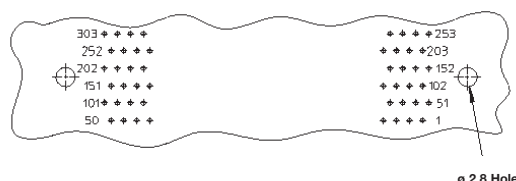
253 WAY VERTICAL PCB LAYOUT FEMALE



303 WAY VERTICAL PCB LAYOUT MALE



303 WAY VERTICAL PCB LAYOUT FEMALE

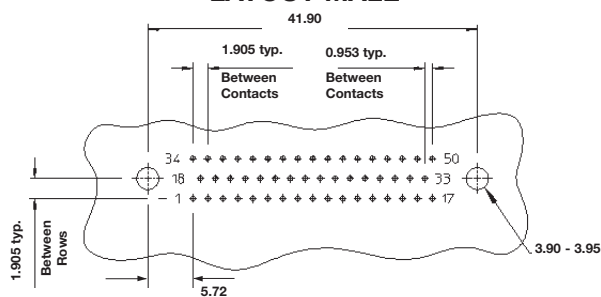


HPH

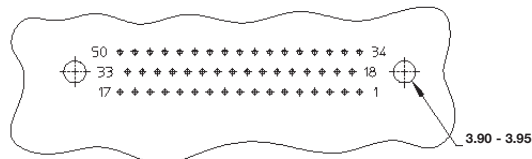
PCB STACKING PREPARATIONS DETAILS

NOTE: STACKING GUIDE CENTRES ALIGN WITH THE CENTRE OF THE PCB CONTACT LAYOUT.

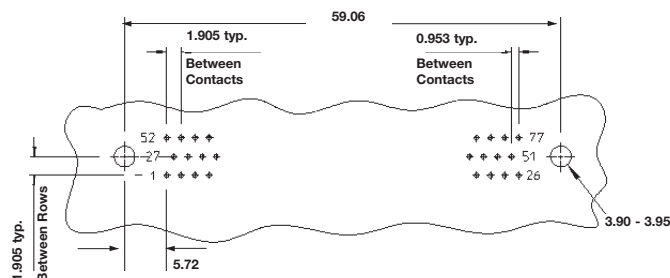
50 WAY PCB STACKING LAYOUT MALE



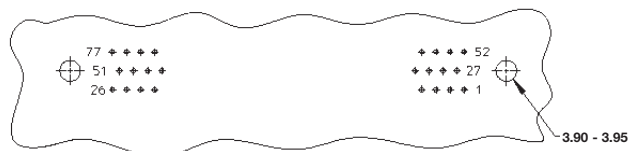
50 WAY PCB STACKING LAYOUT FEMALE



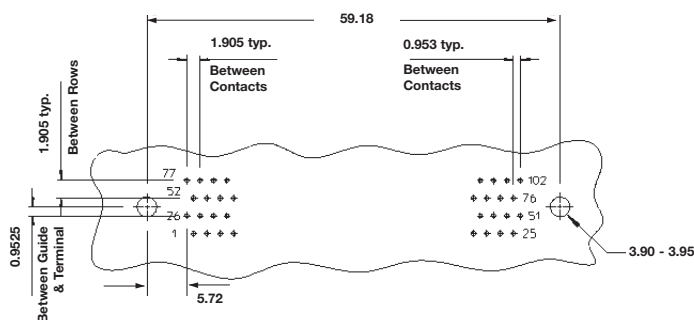
77 WAY PCB STACKING LAYOUT MALE



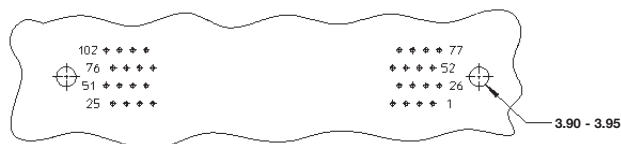
77 WAY PCB STACKING LAYOUT FEMALE



102 WAY PCB STACKING LAYOUT MALE



102 WAY 90° PCB STACKING LAYOUT FEMALE



Stacking connectors are currently only available in 50, 77 & 102 ways.
If you have further requirements please contact your local sales office.

ORDERING INFORMATION

CONTACT GENDER

M = Male
F = Female
D π = Shrouded pin carrier
C π = Pin carrier (not shown)

CONTACT TERMINATION

B π = Through board solder - 90° (standard)
L# = Through board solder - 90° (long)
P* = Through board solder - straight (standard)
P* = Use also for terminating female stacking connector
K ω = Through board solder - straight (long)
N ω = PCB stacking through board solder
Y π = Pin carrier - male only
F π = Flex Terminations (consult sales office)

HPH **077** **U** **M** **B** **P** **F** **0P0**

PREFIX

No. of CAVITIES

20†, 50*, 77*, 102*, 119*, 128*,
152*, 202*, 253*, 303 π

CONTACT PLATING

U = Gold Plate per MIL-G-45204
S = U Plating with tin dipped termination

P **A**
PA† = Crimp Pin

STANDARD VARIATIONS

0P0 = Back Potted
0S0 = Loose shroud supplied (for male stacking connector)
000 = No Potting

POLARIZING/GUIDES

*AU = Guide socket non-polarized vertical mounting (for female stacking guide)
*HA,HD,HN = Guide socket polarized vertical mounting
*SC = Jack socket non-polarized, vertical mounting
*TJ,TP,TT = Jack socket non-polarized, transverse mounting (T bracket)
*AT = Guide pin non-polarized vertical mounting (for male stacking guide)
*PE,PF,PG,PN,PP,PQ,PT = Guide pin polarized transverse mounting (T bracket)
 π QC,QF,QQ,Q3 = Guide pin polarized transverse mounting (L bracket)
*3C = Jacking non-polarized, rotating free connector
3F π = Jacking non-polarized, vertical mounting
AM π , GA π = Guide Socket / Pin for non-polarized shrouded pin carrier application
NA π ,NB π = Guide pin polarized, vertical mounting

Other termination, guide and insulator styles exist but will carry a premium both in cost and lead time.
Please consult the sales office for further information.

* Off the shelf # Off the shelf Male Ω Off the shelf Female † Subject to availability π Made to order