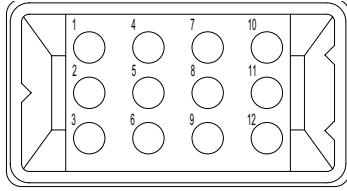
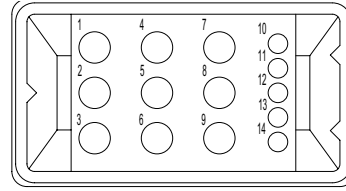


**MMIP SERIES CONTACT VARIANTS**

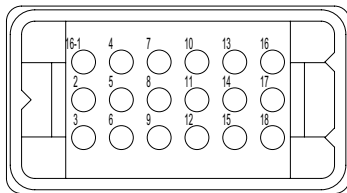
**FACE VIEW OF MALE OR REAR VIEW OF FEMALE**



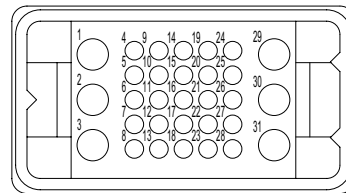
**MMIP12W12 VARIANT**  
12 Size 12 Contacts



**MMIP14W9 VARIANT**  
9 Size 12 and 5 Size 20 Contacts



**MMIP18 VARIANT**  
18 Size 16 Contacts

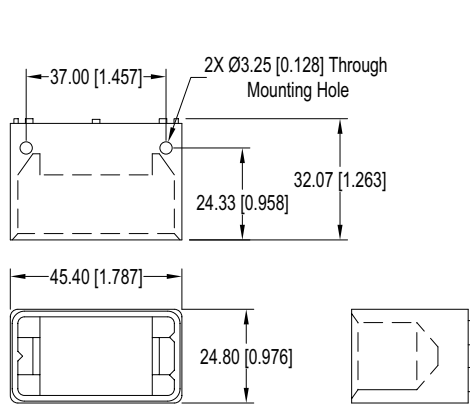


**MMIP31W6 VARIANT**  
6 Size 12 and 25 Size 20 Contacts

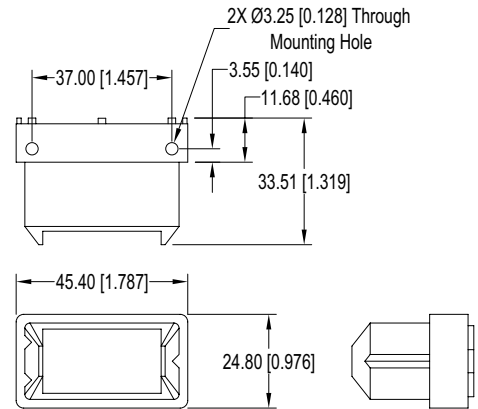
Refer to page 8 for Application Specific Arrangements.

**MMIP CONNECTOR OUTLINE DIMENSIONS**

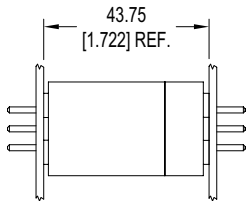
**Male Connector Dimensions**



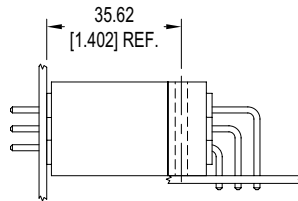
**Female Connector Dimensions**



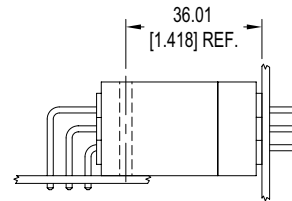
**MMIP CONNECTOR MATING DIMENSIONS**



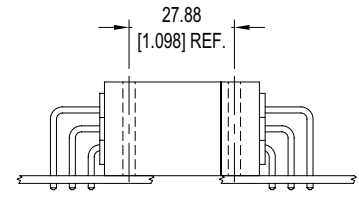
Straight Board Mount  
or Panel Mount  
Female to Straight  
Board Mount or  
Panel Mount Male.



Right Angle Board  
Mount Female to  
Straight Board Mount  
or Panel Mount Male.



Straight Board Mount  
or Panel Mount  
Female to Right  
Angle Board Mount  
Male.

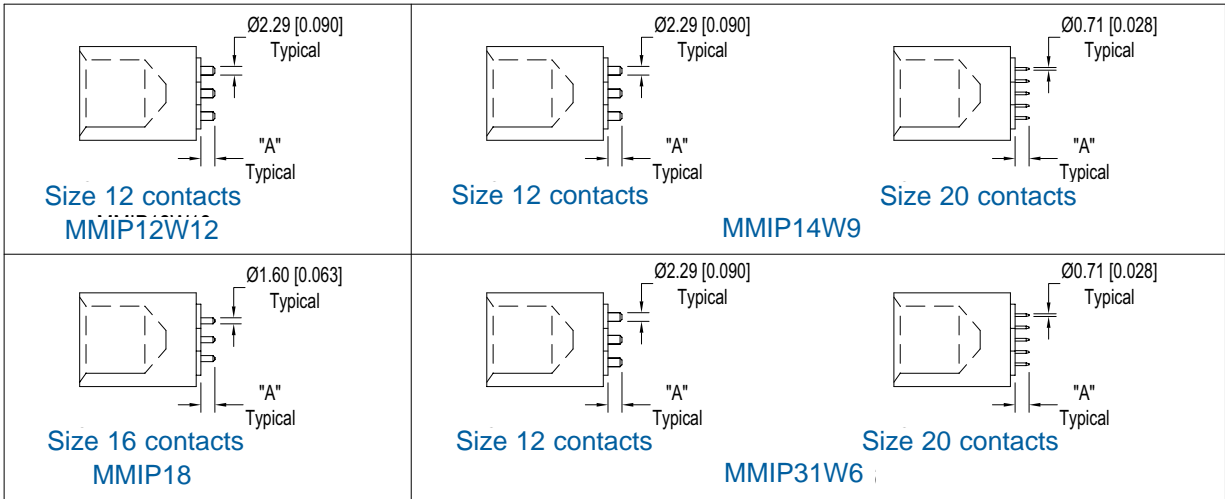


Right Angle Board  
Mount Female to  
Right Angle Board  
Mount Male.

**CONNECTOR TERMINATION DIMENSIONS**

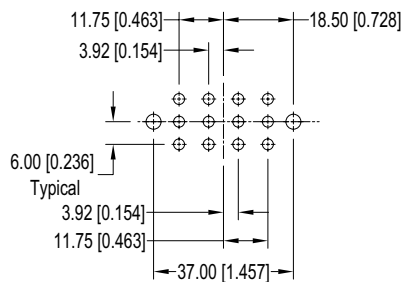
CODE	"A" LENGTH
3	3.71 [0.146]
32	9.58 [0.377]

MALE CONNECTOR SHOWN  
FOR REFERENCE ONLY

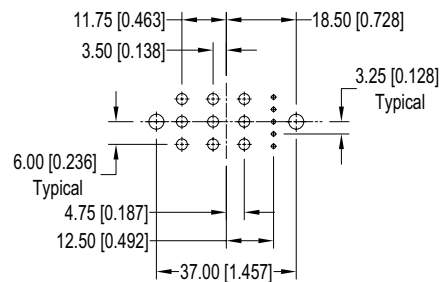


**CONTACT HOLE PATTERNS**

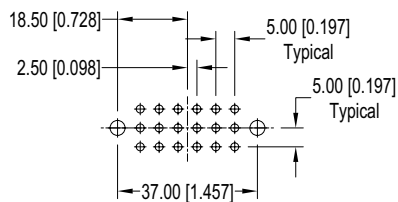
Hole pattern shown is for male connector; use mirror image for female connector.



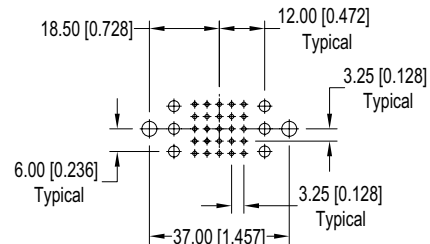
**MMIP12W12**



**MMIP14W9**



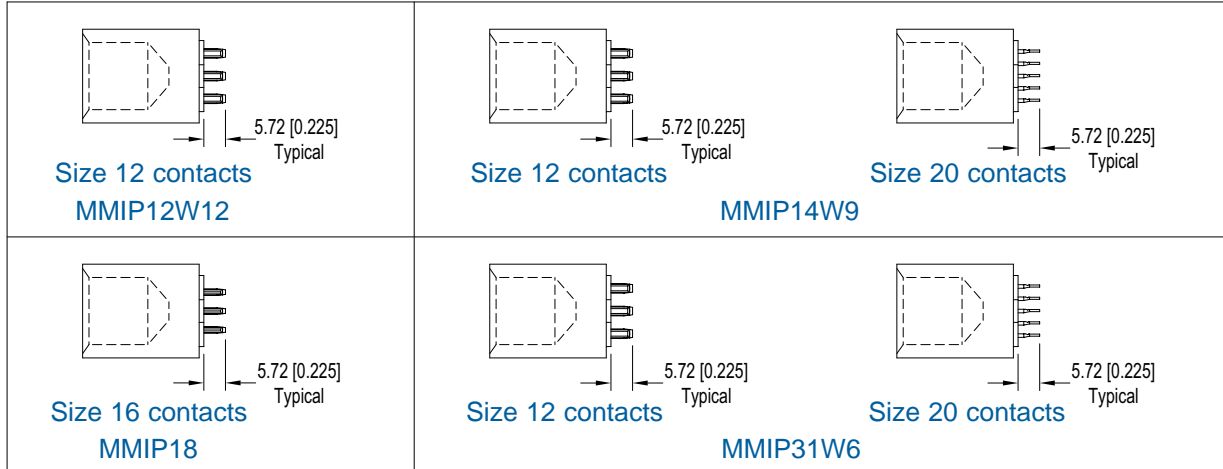
**MMIP18**



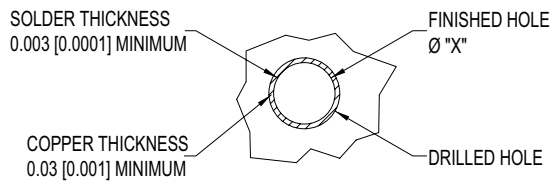
**MMIP31W6**

Suggest  $\varnothing 1.14$  [0.045] holes for size 20 contact holes.  
Suggest  $\varnothing 2.11$  [0.083] holes for size 16 contact holes.  
Suggest  $\varnothing 2.90$  [0.114] holes for size 12 contact holes.  
Suggest  $\varnothing 3.96 \pm 0.08$  [0.156  $\pm$  0.003] holes for connector mounting holes.

**CONNECTOR TERMINATION DIMENSIONS**  
MALE CONNECTOR SHOWN FOR REFERENCE ONLY



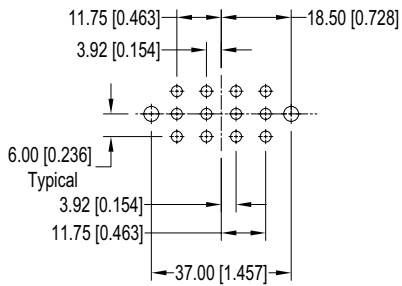
**PRINTED BOARD  
CONTACT HOLE REQUIREMENT**



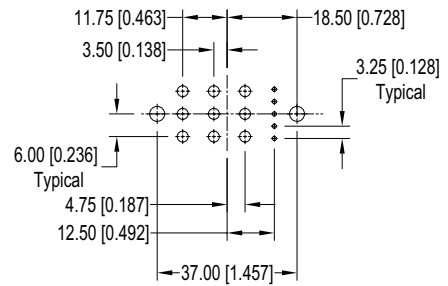
CONTACT SIZE	Ø "X"
12	2.39±0.05 [0.094±0.002]
16	1.600+0.090-0.060 [0.0630+0.0035-0.0024]
20	1.000+0.090-0.060 [0.0394+0.0035-0.0024]

**CONTACT HOLE PATTERNS**

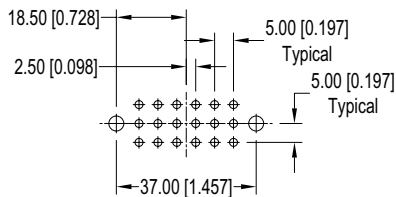
Hole pattern shown is for male connector; use mirror image for female connector.



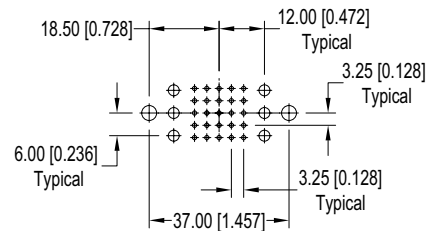
MMIP12W12



MMIP14W9



MMIP18



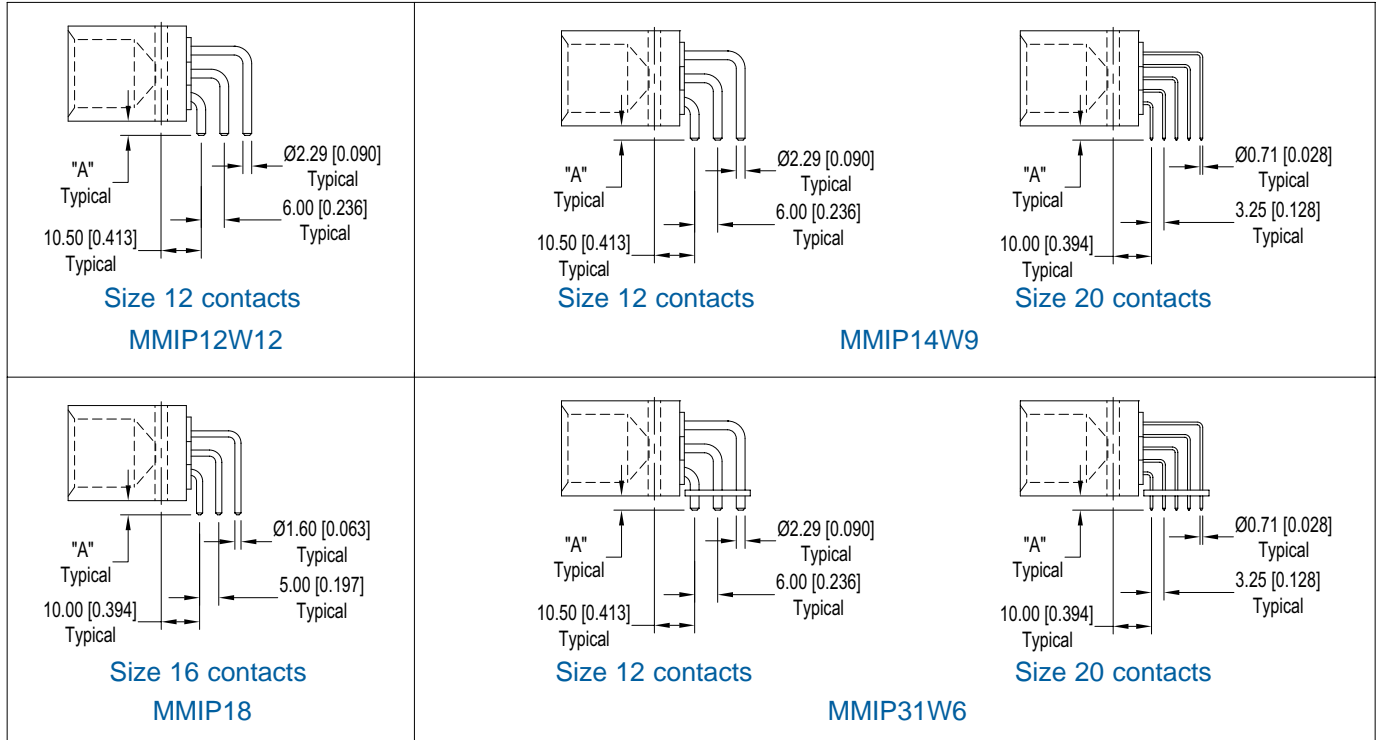
MMIP31W6

Suggest Ø3.96±0.08 [0.156±0.003] holes for connector mounting holes.

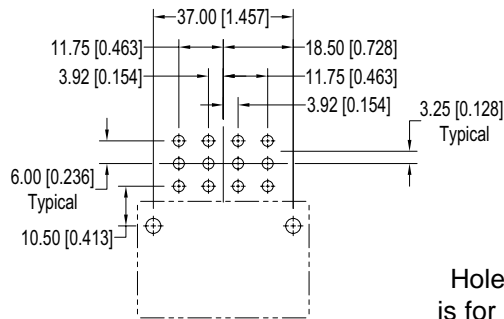
**CONNECTOR TERMINATION DIMENSIONS**

CODE	"A" LENGTH
4	3.71 [0.146]
42	9.58 [0.377]

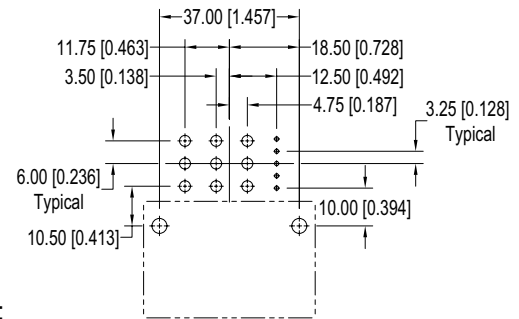
MALE CONNECTOR SHOWN  
FOR REFERENCE ONLY



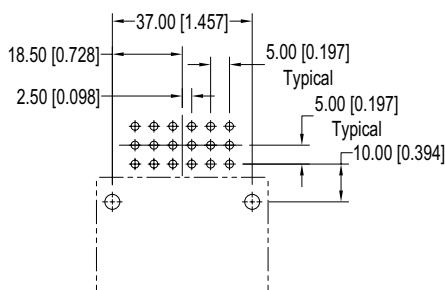
**CONTACT HOLE PATTERNS**



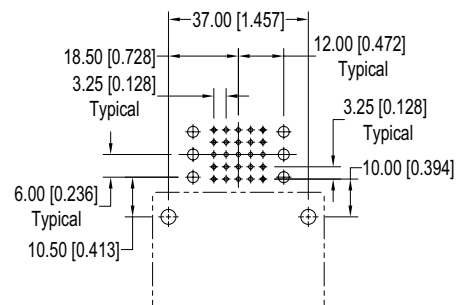
**MMIP12W12**



**MMIP14W9**



**MMIP18**



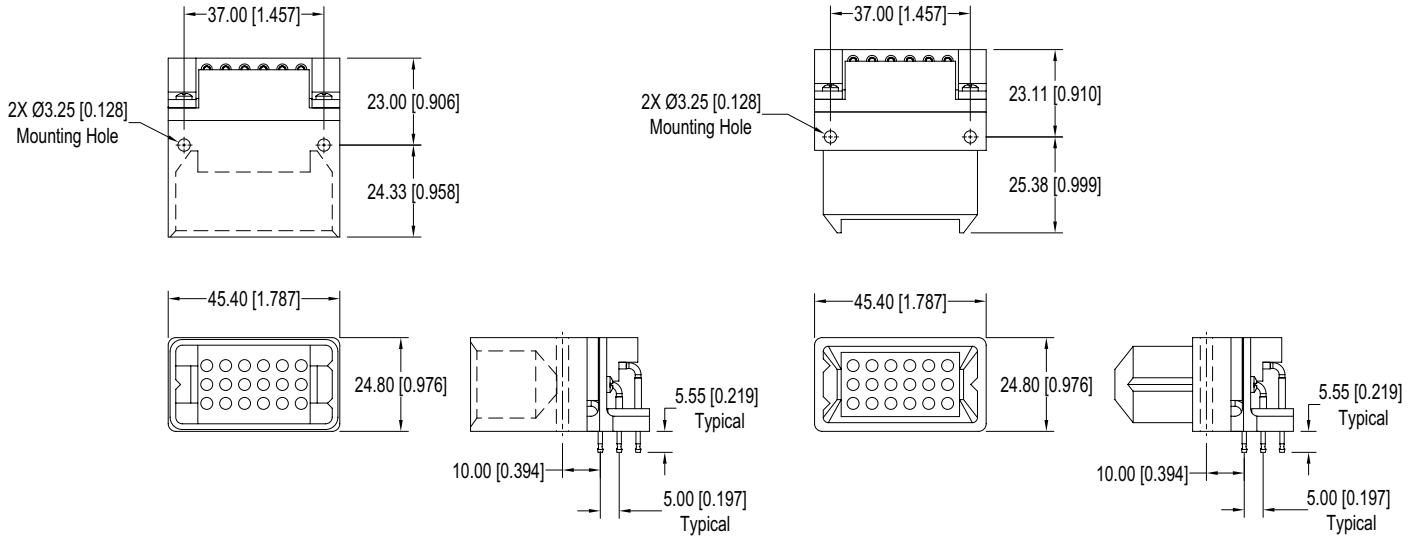
**MMIP31W6**

Hole pattern shown  
is for male connector;  
use mirror image for  
female connector.

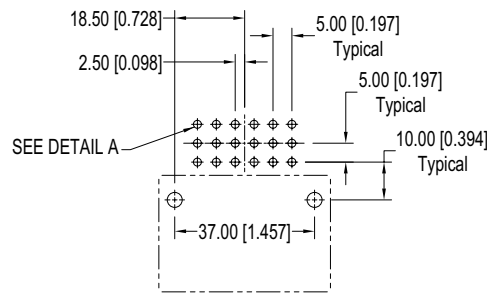
DIMENSIONS ARE IN MILLIMETERS [INCHES].  
ALL DIMENSIONS ARE SUBJECT TO CHANGE.

Suggest Ø1.14 [0.045] holes for size 20 contact holes.  
Suggest Ø2.11 [0.083] holes for size 16 contact holes.  
Suggest Ø2.90 [0.114] holes for size 12 contact holes.  
Suggest Ø3.96±0.08 [0.156±0.003] holes for connector mounting holes.

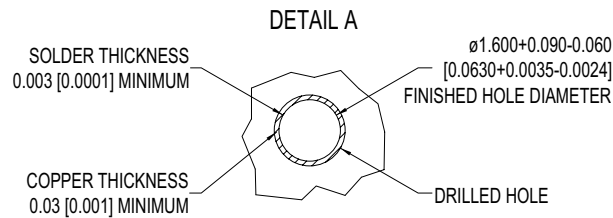
CONNECTOR TERMINATION DIMENSIONS,  
MALE AND FEMALE



CONTACT HOLE PATTERN,  
MALE AND FEMALE



MMIP18



Suggest  $\phi 3.96 \pm 0.08$  [0.156  $\pm$  0.003] holes for connector mounting positions

**ORDERING INFORMATION – CODE NUMBERING SYSTEM**

Specify Complete Connector By Following Steps 1 Through 8  
Insert "0" When Step Is Not Used

STEP	1	2	3	4	5	6	7	8
	MMIP	18	F	93	0	0	A1	

**STEP 1 - Basic Series**

MMIP - Mini-Mini-Infinity

**STEP 2 - Connector Variants**

- 12W12- 12 size 12 contacts
- 14W9 - 9 size 12 and 5 size 20 contacts
- 18 - 18 size 16 contacts
- 31W6 - 6 size 12 and 25 size 20 contacts

**STEP 3 - Connector Gender**

- M - Male
- F - Female

**STEP 4 - Type of Contact**

- 0 – Order contacts separately for cable connectors for connection systems 2, 4 and 5.
- 3 – Solder, Straight Printed Board Mount with 3.70 [0.146] tail extension for connection systems 1 and 4.
- 32 -Solder, Straight, Printed Board Mount with 9.58 [0.377] tail extension for connection systems 1 and 4.
- 4 – Solder, Right Angle Printed Board Mount with 3.70 [0.146] tail extension for connection systems 1, 2, 3 and 7.
- 42 - Solder, Right Angle Printed Board Mount with 9.58 [0.377] tail extension for connection systems 1, 2, 3 and 7.
- 63 –Press-Fit, Compliant Termination Right Angle Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. With Cross Bar. Connection systems 1, 2, 3 and 7. Available for connector variant 18 only.
- 93 –Press-Fit, Compliant Termination Straight Printed Board Mount for use with board thicknesses of 2.29 to 4.45 [0.090 to 0.175]. Connection systems 1 and 4.

**STEP 5 - Mounting Style**

- 0 – None, mounting screws supplied with board mount connector.
- N – Push-on fasteners supplied installed on board mount connector. Not recommended for code 63 and 93.

**STEP 8 - Special Options**

- Consult Technical Sales
- \* Sequential Mating
- \* Recessed Female Contacts
- \* Customer Specified Contact Arrangement
- \* Hot Plug (see note below)
- \* Other Customer Requirements

**STEP 7 - Contact Plating**

- 0 – Crimp contacts ordered separately
- A1 – Gold flash over nickel on mating end and gold flash over nickel on termination end.
- A2 – Gold flash over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with contact types 63 and 93.
- C1 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 0.80 microns [0.000030 inch] gold over nickel on termination end.
- C2 – 0.80 microns [0.000030 inch] gold over nickel on mating end and 5.00 microns [0.000200 inch] solder coat on termination end. Not available with contact types 63 and 93.

**STEP 6 - Panel Mount**

- 0 – None.
- 82 - Panel Mount 1.52 [0.060] panel thickness
- 83 - Panel Mount 2.28 [0.090] panel thickness

Hot Plug Note: If UL approval is required for a Hot Plug connector, HP must be added to the part number. This is to be prior to any special plating or MOS requirements.

Example part numbers:  
MIP28W12M300A1-HP  
MIP30WA10M400A1-HP-50-294.0

**DIMENSIONS ARE IN MILLIMETERS [INCHES].  
ALL DIMENSIONS ARE SUBJECT TO CHANGE.**