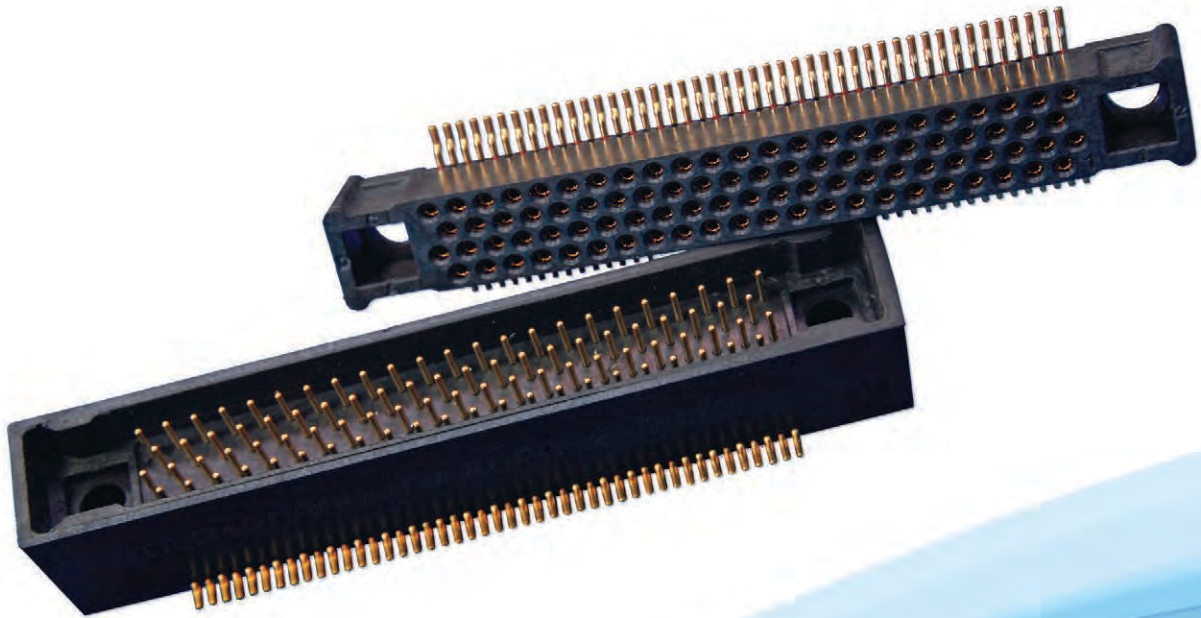


# HDLP SERIES

*High Density, Low Profile Connectors*



- ▶ High density contact arrangement
- ▶ Light weight, low profile mated height
- ▶ Surface mount termination technology
- ▶ Miniature Hyperboloid contact
- ▶ Interfacial seal
- ▶ Polarized and scoop proof
- ▶ Pick and place compatible

# TECHNICAL CHARACTERISTICS

## MECHANICAL

<b>Contact Diameter</b>	0.015 inches/0.39 mm
<b>Contact Life Cycles</b>	2,000+ operations
<b>Temperature Range</b>	-55°C to 125°C
<b>Extraction Forces</b>	1.0 oz./28.3 gr.

## MATERIAL

<b>Insulator Material</b>	Liquid crystal polymer (LCP)
<b>Contact Material</b>	Copper alloy
<b>Socket Wire Material</b>	Beryllium copper
<b>Interfacial Seal Material</b>	Fluorosilicone
<b>Guides Material</b>	Stainless steel

## ELECTRICAL

<b>Contact Plating</b>	ASTM-488-B (Type III, grade C, Class 1)
<b>Contact Resistance</b>	8 milliohms max.
<b>Current Rating</b>	1 Amp per contact
<b>Voltage Rating</b>	110 VDC or AC peak nominal

## CONTACT PLATING FINISHES

Connector Finish Ordering Code	Description	Component	Component Finish Ordering Code	Conforms to	Plating Thickness*
U	Gold Plate	Socket	-/9	ASTM-488-B (Type III, grade C, Class 1)	1.27 µm gold plate min. 50 µin gold plate min.
		Pin	-/7	ASTM-488-B (Type III, grade C, Class 1)	1.27 µm gold plate min. 50 µin gold plate min.



# HOW TO ORDER



## 1 ▶ CONNECTOR FAMILY

2 ▶ **ALIGNMENT PIPS** **1** WITH **2** WITHOUT *Default is 2 if insulator style is 9*

## 3 ▶ INSULATOR HEIGHT/STYLE

**1** SINGLE **2** DOUBLE **9** 90° *Default is 9 for 90° contact termination (90° female not currently available)*

4 ▶ **NUMBER OF CONTACTS** **030** **058** **090** **118**

5 ▶ **CONTACT PLATING** **U** STANDARD GOLD PLATING **S** GOLD PLATE WITH TIN DIPPED TERMINATIONS *(PC Tail only)*

6 ▶ **CONTACT GENDER** **M** MALE **F** FEMALE

## 7 ▶ CONTACT TERMINATIONS *Contact factory for more details*

- C** Through board solder-Straight PC Tail - 2.26mm long
- D** Through board solder-Straight PC Tail - 3.16mm long
- E** Through board solder-Straight PC Tail - 3.86mm long
- H** Through board solder-90° PC Tail - 2.26mm long
- J** Through board solder-90° PC Tail - 3.16mm long
- K** Through board solder-90° PC Tail - 3.86mm long
- Q** Surface Mount - Straight

## 8 ▶ GUIDES *Contact factory for more details*

- AA** No Guide hardware
- B** Locking socket
- C** Contact factory
- D** Locking post
- E** Contact factory
- F** Polarizing socket
- G** Contact factory
- H** Polarizing pin
- I** Contact factory
- J** Connector to board fixing
- K** Contact factory
- L** Guide socket
- M** Contact factory
- O** Guide pin
- P** Contact factory
- Q** Polarized transverse mounting

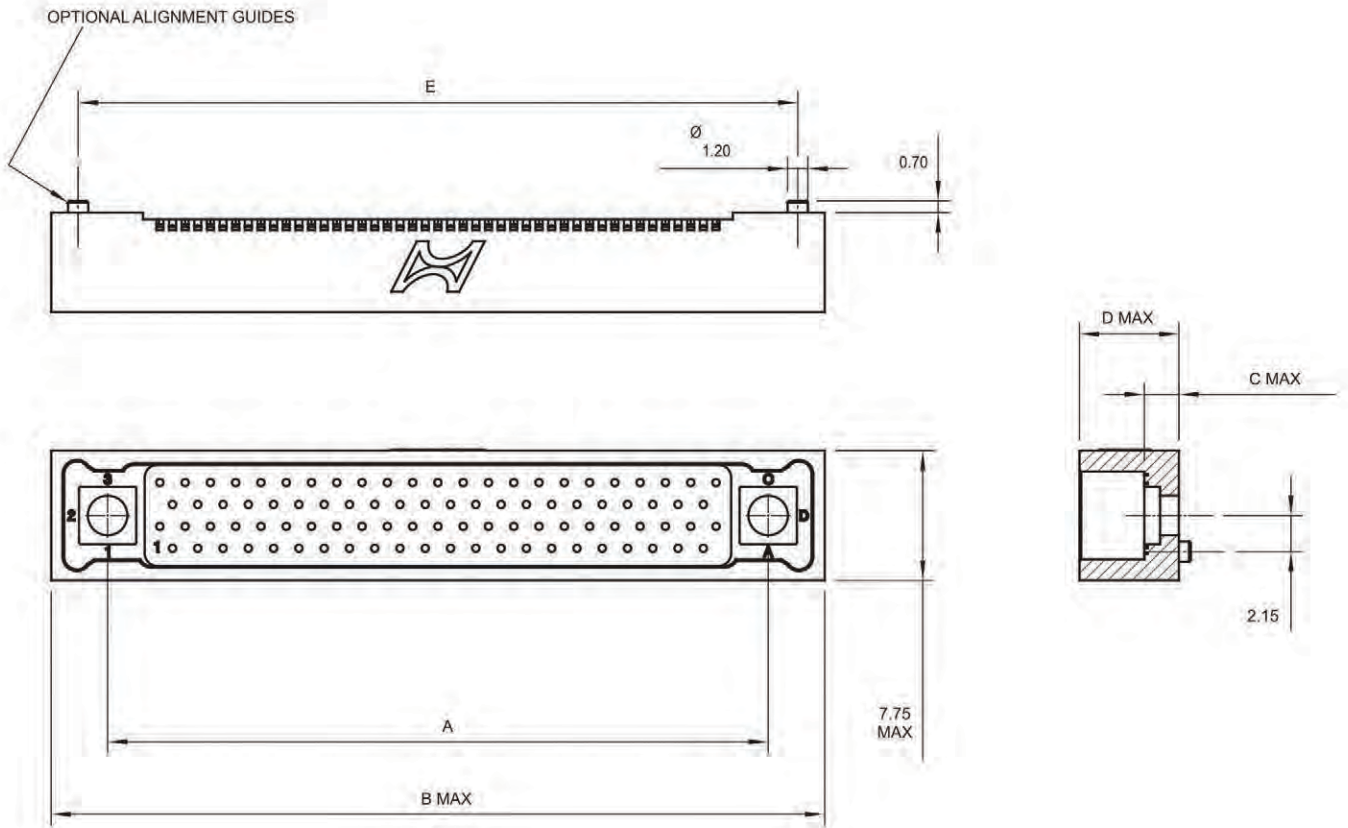
## 9 ▶ STANDARD VARIATIONS *Contact factory for more details*

- 0P0** Back potted terminations and fitted with interfacial seal (preferred)
- 0PX** Tinned, back potted and fitted with interfacial seal
- 0PC** Back potted, coated to conformity and fitted with interfacial seal
- NP0** Back potted terminations and fitted with interfacial seal (preferred)
- NPX** Tinned and back potted
- NPC** Back potted and coated to conformity

INSULATORS

Dimensions are in mm

MALE / STRAIGHT



No. of positions	30		58		90		118	
	Single	Double	Single	Double	Single	Double	Single	Double
Dimension A	16.70 0.657"	-	27.20 1.070"	-	39.20 1.543"	-	49.70 1.957"	-
Dimension B	23.45 0.923"	-	33.95 1.337"	-	45.95 1.809"	-	56.45 2.222"	-
Dimension C	2.28 0.090"	6.85 0.270"	2.28 0.090"	6.85 0.270"	2.28 0.090"	6.85 0.270"	2.28 0.090"	6.85 0.270"
Dimension D	6.18 0.243"	10.75 0.423"	6.18 0.243"	10.75 0.423"	6.18 0.243"	10.75 0.423"	6.18 0.243"	10.75 0.423"
Dimension E	20.20 0.795"	-	30.70 1.209"	-	42.70 1.681"	-	53.20 2.094"	-

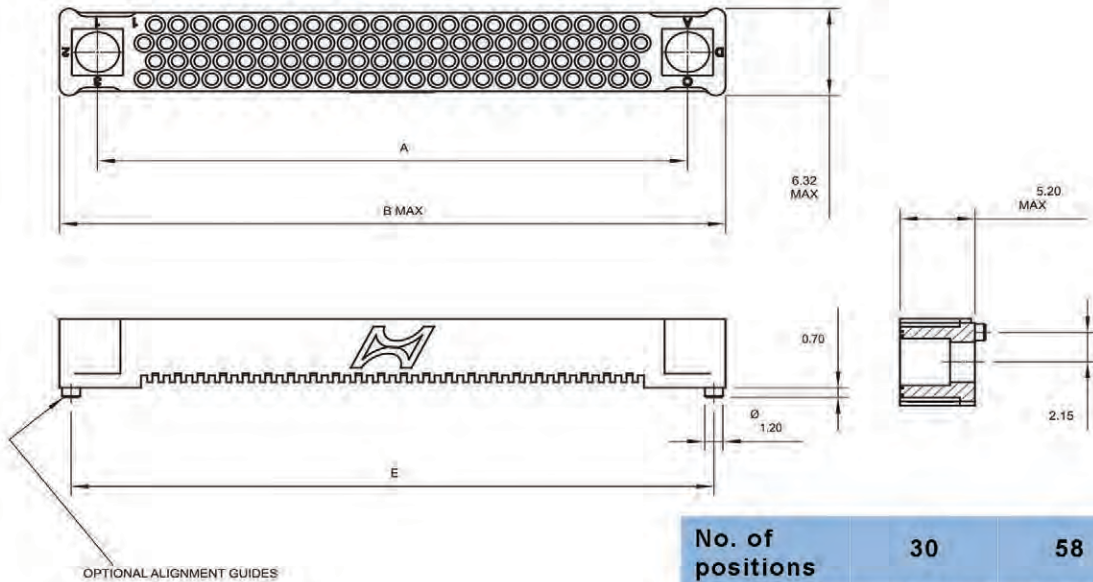
Dimensions are in mm  
inches



INSULATORS

Dimensions are in mm

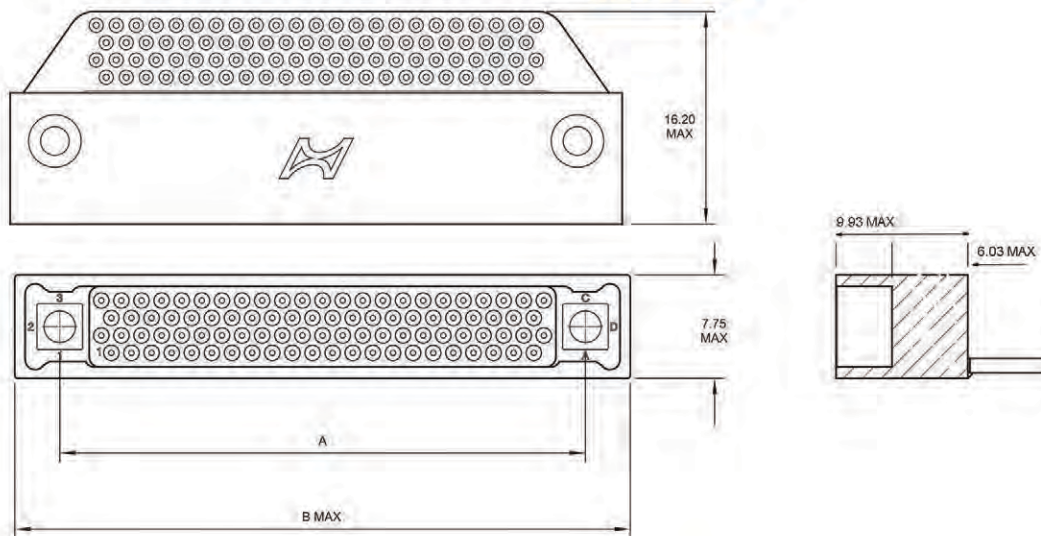
FEMALE/STRAIGHT



No. of positions	30	58	90	118
Dimension A	16.70 0.657"	27.20 1.070"	39.20 1.543"	49.70 1.957"
Dimension B	21.80 0.858"	32.30 1.272"	44.30 1.744"	54.80 2.157"
Dimension C	20.20 0.795"	30.70 1.209"	42.70 1.681"	53.20 2.094"

Dimensions are in mm  
inches

MALE 90°



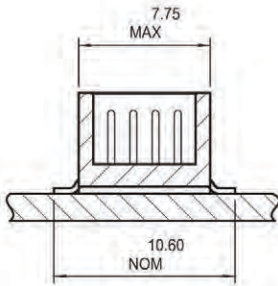
No. of positions	30	58	90	118
Dimension A	16.70 0.657"	27.20 0.657"	39.20 1.543"	49.70 2.222"
Dimension B	23.45 0.923"	33.95 1.337"	45.95 1.809"	56.45 2.222"

Dimensions are in mm  
inches

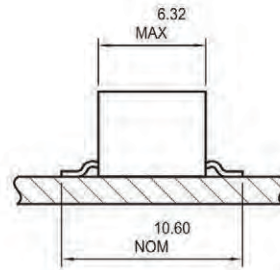
▶ CONTACT TERMINATIONS

Dimensions are in mm

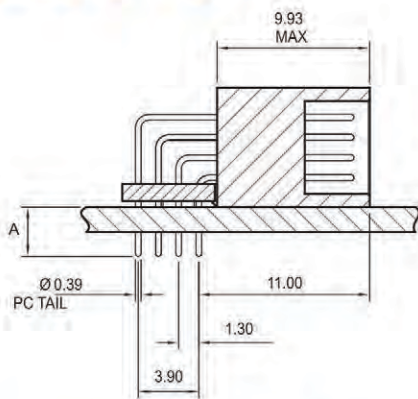
MALE SMT



FEMALE SMT



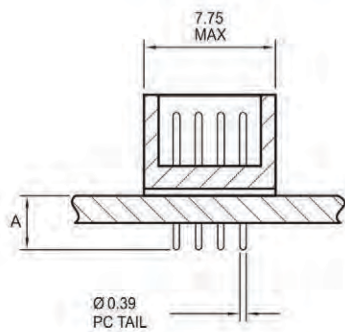
MALE 90° PCB



Termination Style	Dimension A
H	2.26 0.089"
J	3.16 0.124"
K	3.86 0.152"

Dimensions are in mm  
inches

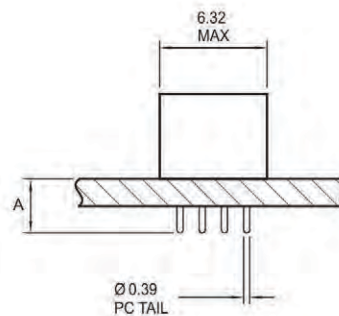
MALE VERTICAL PCB



Termination Style	Dimension A
C	2.26 0.089"
D	3.16 0.124"
E	3.86 0.152"

Dimensions are in mm  
inches

FEMALE VERTICAL PCB



Termination Style	Dimension A
C	2.26 0.089"
D	3.16 0.124"
E	3.86 0.152"

Dimensions are in mm  
inches



# SMITHS CONNECTORS PRODUCT LINES

## PCB



- ▶ Low, medium and high density board-to-board, cable to board and stacking
- ▶ Rugged standard
- ▶ Low profile
- ▶ Signal, power, coaxial & high speed configurations
- ▶ Self configurable board-to-board
- ▶ Spring probe connectors
- ▶ Mixed signal, power and coaxial contact connectors
- ▶ Different termination styles: solder cup, crimp, SMT and SMT flex, press fit, solder dip.

## HIGH POWER



- ▶ Circular
- ▶ Configurable rectangular
- ▶ Ruggedized
- ▶ Single and Multi-Way Connectors
- ▶ Power contact up to 1,200 Amps
- ▶ Excellent performance in harsh environment conditions
- ▶ Cable assembling

## EMI/EMP FILTER



- ▶ EMI/RFI filtering and transient protection
- ▶ RoHS compliant solderless filter connectors available
- ▶ Circular, ARINC, D-Subminiature Micro-D
- ▶ Filtered adapters for "bolt on" EMI /EMP solutions
- ▶ Filter hybrid capability

## MODULAR/RECTANGULAR



- ▶ Configurable with modules for signal, power, coax, fiber optics and/or pneumatics
- ▶ Easy configuration in a single frame
- ▶ For rack & panel, and cable applications
- ▶ Guided hardware for blind
- ▶ D-sub connectors
- ▶ Micro-D style
- ▶ Signal connectors for hand held and docking stations

## CIRCULAR



- ▶ Metal and Plastic
- ▶ Industrial M12, M23, M40, M58
- ▶ Crimp and solder terminations
- ▶ Various types of cable clamps
- ▶ Push Pull/ latch mechanism
- ▶ Color coding

## HEAVY DUTY



- ▶ Ultra reliable hyperboloid contact
- ▶ Modular solution: signal, power, data contacts, and fiber optics
- ▶ High resistance in harsh environment
- ▶ EMC shielding
- ▶ Easy cable mounting
- ▶ High pressure up to 35K PSI, 250° C
- ▶ High temperature up to 440° C

## SPRING PROBE



- ▶ Z-axis compliant
- ▶ Blind mate engagement
- ▶ Long cycle life
- ▶ High density
- ▶ Extreme miniaturization
- ▶ Printed circuit board test
- ▶ Bare board test
- ▶ Coaxial contacts

## MIL/AERO STANDARD



- ▶ Standard military interface
- ▶ ARINC interface
- ▶ ARINC 801
- ▶ Custom inserts

## HIGH SPEED COPPER/FIBER



- ▶ Quadrx and Twinax Connectors
- ▶ Rugged D-Sub Connectors
- ▶ ARINC and MIL-STD Contacts
- ▶ Micro Twinax/Quadrx
- ▶ Butt-Joint and Expanded Beam Contacts
- ▶ ARINC 801 Termini
- ▶ Floating Fiber Termini



# SMITHS CONNECTORS

## GLOBAL SUPPORT

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