

# D-SUBMINIATURE HIGH DENSITY CONNECTORS

## OVERVIEW

The new High Density D-Subminiature range is part of FCI's I/O-Connections portfolio which provides customers access to a wide range of industry standard and application specific I/O interconnect solutions. FCI's I/O connector solutions complete your board and system designs by providing high-density and high-speed interfaces to enable interconnect technologies for networking, storage and memory and complementary products for power distribution. Our range of standardized I/O solutions enables full compliance to industry standards, such as Ethernet, SFF, Infiniband, USB, PCMCIA or HDMI. FCI also has the capability to provide customized I/O solutions optimized to address application specific requirements.

Through FCI's high-speed, power, assembly and mechanical packaging expertise, you gain the advantage of getting your signals out of the box at optimal cost and performance. FCI's I/O connectors - coupled with FCI's extensive range of backplane and board-to-board connectors and cable assembly products-enable complete link solutions for your equipment designs.

FCI's D-Subminiature connectors are part of an industry standard for applications requiring robust and reliable connectors. These D-Subminiature connectors are one of the most popular Input - Output interconnects, addressing a wide variety of applications in Telecommunications, Data, Consumer, Industrial, Military, Instrumentation and Medical markets. Since many years FCI offers a wide range of D-Subminiature connectors to meet all design requirements, and to address increasing needs for high density packaging, FCI developed the D-Subminiature High Density Range.



## FEATURES & BENEFITS

- Compact-D is the answer to increasing need for higher density packaging
- Contact layout 15 to 78 positions available
- Selected layouts are also available in Press-fit & Pin-in-Paste version
- Comes with different PCB mounting and panel mounting accessory options
- RoHS compliant

## TARGET MARKETS/APPLICATIONS

- Data
  - Servers
  - Server & storage blades
  - External storage system
  - HDDs
  - HDD carrier
- Industrial, Instrumentation & Medical
  - Embedded system boards
- Communications
  - Processor & storage blades
  - Mezzanine cards

# D-SUBMINIATURE HIGH DENSITY CONNECTORS

## TECHNICAL INFORMATION

### MATERIALS

- Insulator: Glass Filled Thermoplastic (UL94V-0) Black
- Contact: Copper alloy
- Shell: SPCC steel

### ELECTRICAL PERFORMANCE

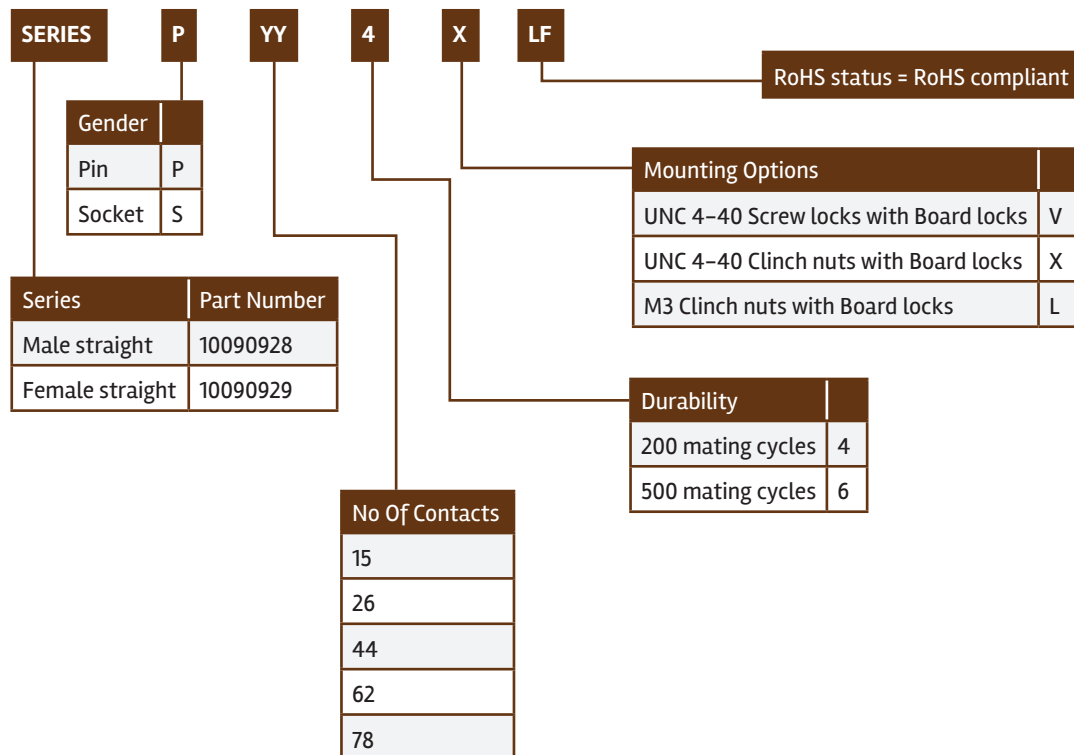
- Rated Current: 2.5A
- Rated Voltage: 250V
- Contact Resistance: 25mΩ max. Initial & 40mΩ max. After
- Insulation resistance: 5000mΩ min. at 500V DC
- Dielectric Strength: 750V RMS
- Operating temperature range: 55°C to +105°C

### MECHANICAL PERFORMANCE

- Mating/Un-mating cycles: 200/500
- Insertion/Extraction force per contact: 5 N max. / 0.2 N min.

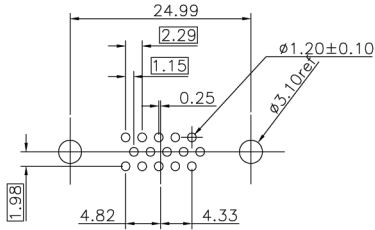
## HIGH DENSITY D-SUBMINIATURE STRAIGHT

### ORDERING INFORMATION

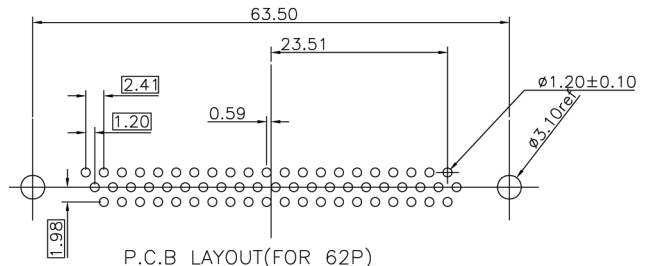


# ► D-SUBMINIATURE HIGH DENSITY CONNECTORS

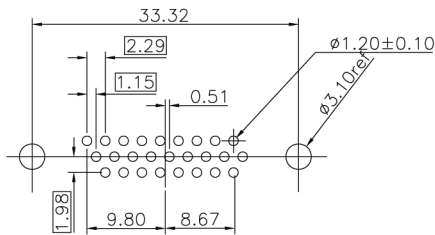
## PCB LAYOUT



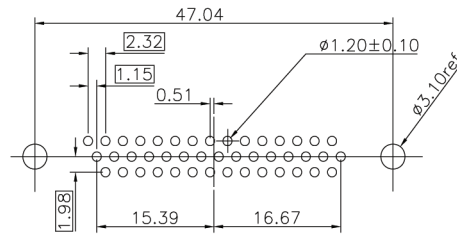
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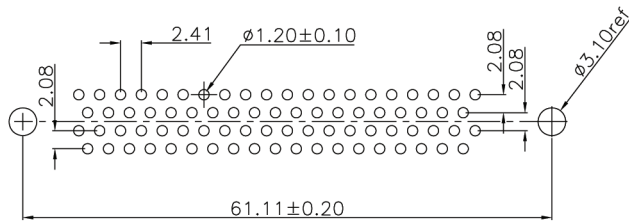
P.C.B LAYOUT(FOR 62P)



P.C.B LAYOUT(FOR 26P)



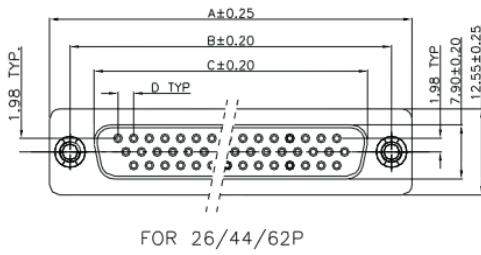
P.C.B LAYOUT(FOR 44P)



P.C.B LAYOUT (FOR 78P)

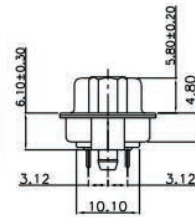
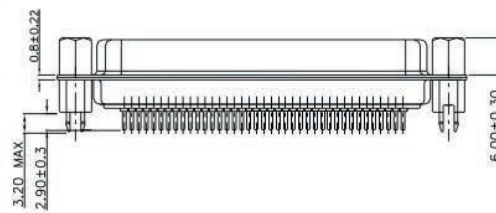
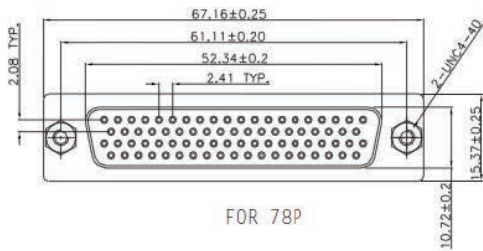
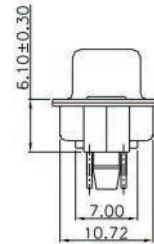
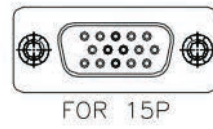
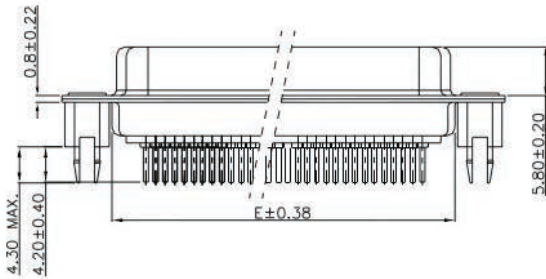
# ▶ D-SUBMINIATURE HIGH DENSITY CONNECTORS

## DIMENSION FOR MOUNTING OPTION 'X/L'



Pos.	Part Number	A	B	C	D	E
15P	10090929-S15**LF	30.81	24.99	16.33	2.29	19.10
26P	10090929-S26**LF	39.24	33.32	24.66	2.29	27.75
44P	10090929-S44**LF	53.04	47.04	38.38	2.29	41.30
62P	10090929-S62**LF	69.32	63.50	54.84	2.41	57.40

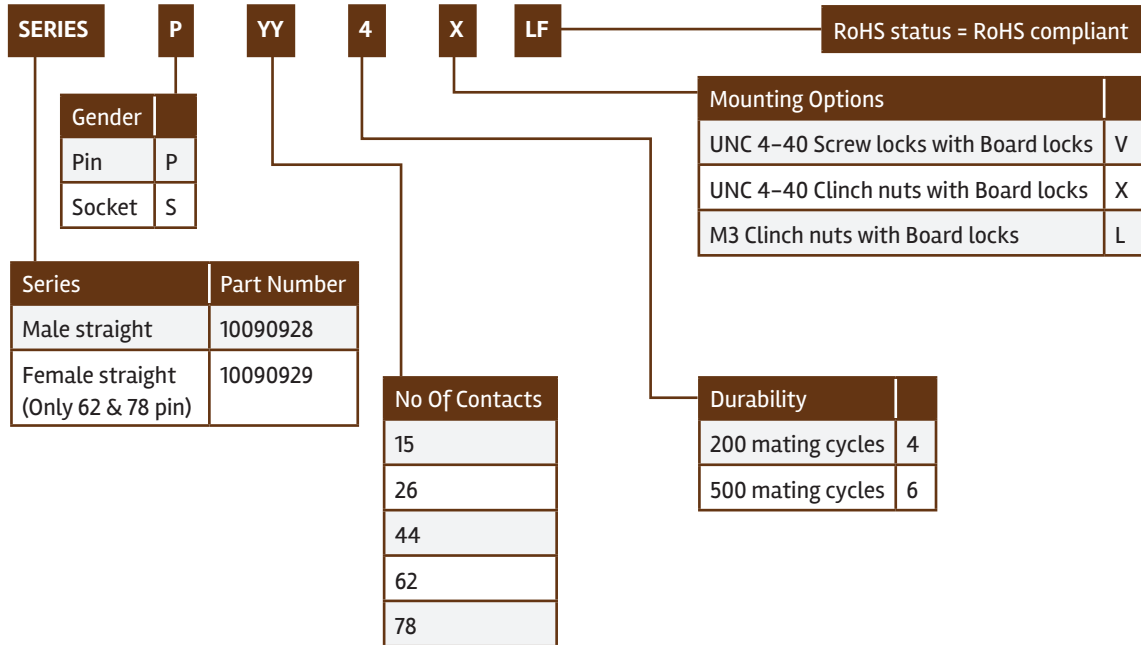
Dimensions in mm



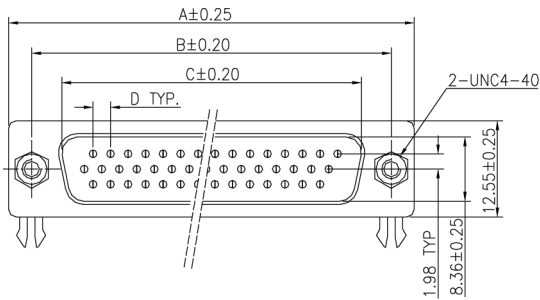
**> D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY D-SUBMINIATURE RIGHT ANGLE**

**ORDERING INFORMATION**



**DIMENSION FOR MOUNTING OPTION 'V'**



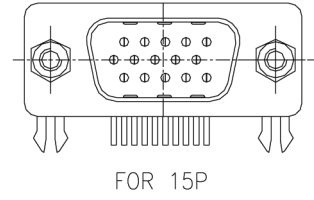
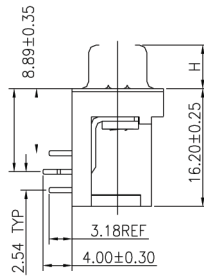
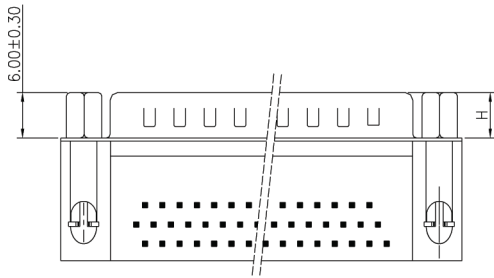
Pos.	Part Number	A	B	C	D	E	F	H
15P	10090926-P15*VLF	30.81	24.99	16.92	2.29	8.19	7.68	5.9 <sup>+0.25</sup> <sub>-0</sub>
26P	10090926-P26*VLF	39.24	33.32	25.25	2.29	8.01	7.02	5.9 <sup>+0.25</sup> <sub>-0</sub>
44P	10090926-P44*VLF	53.04	47.04	38.96	2.29	8.02	7.01	5.9 <sup>+0.25</sup> <sub>-0</sub>
62P	10090926-P62*VLF	69.32	63.50	55.42	2.41	8.21	7.03	5.9 <sup>+0.25</sup> <sub>-0</sub>

Dimensions in mm

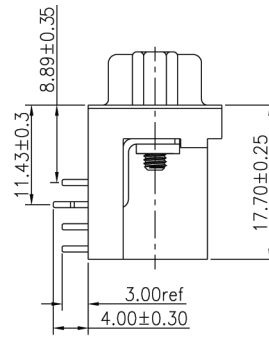
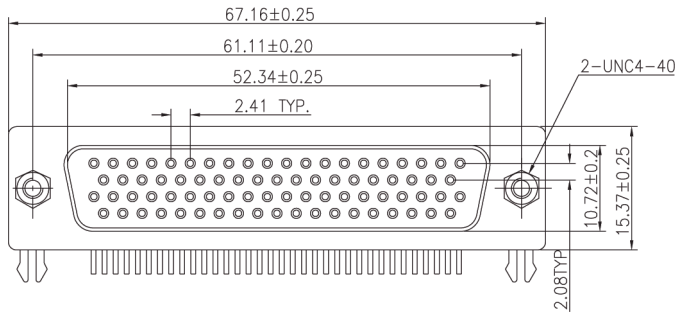
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**D-SUBMINIATURE HIGH DENSITY CONNECTORS**



**High Density 4 Rows (78 Pos)**

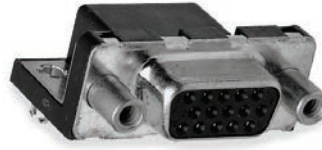




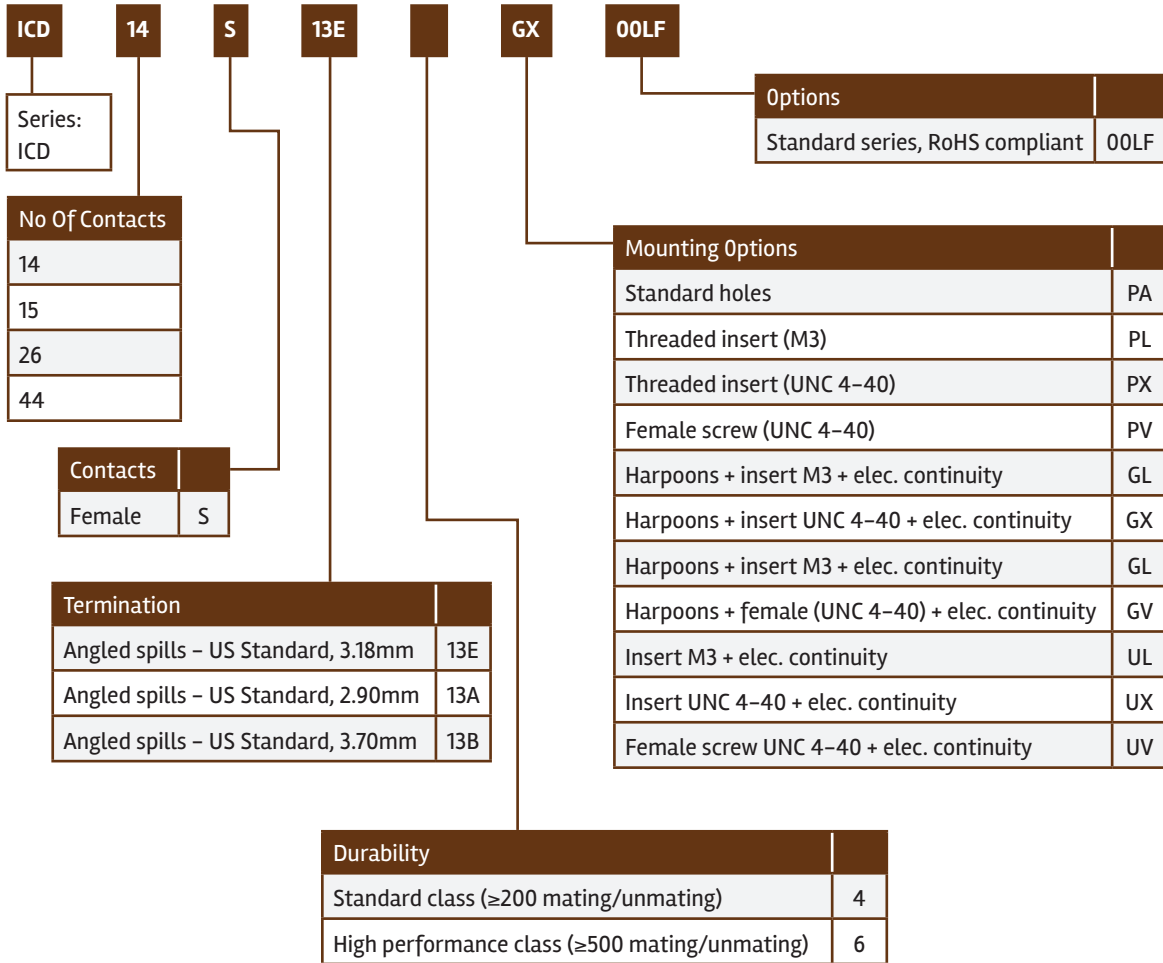
**D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY D-SUBMINIATURE RIGHT ANGLE FEMALE**

**UL** Recognised File E 118235 (R)



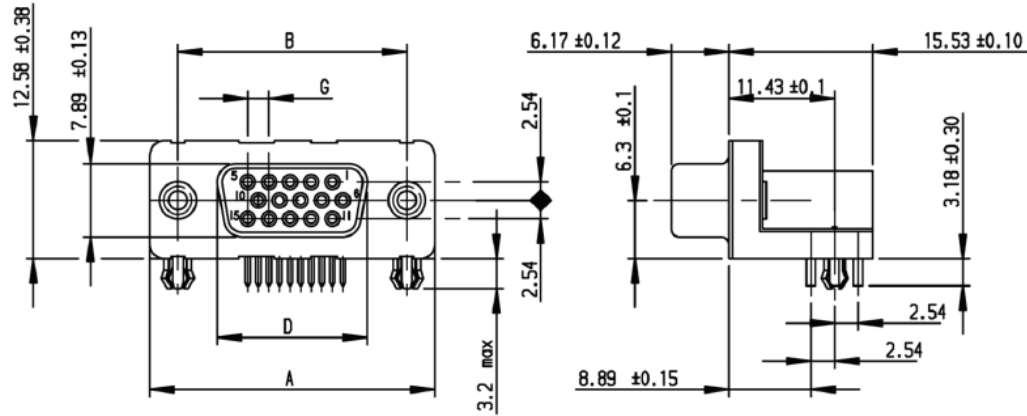
**ORDERING INFORMATION**





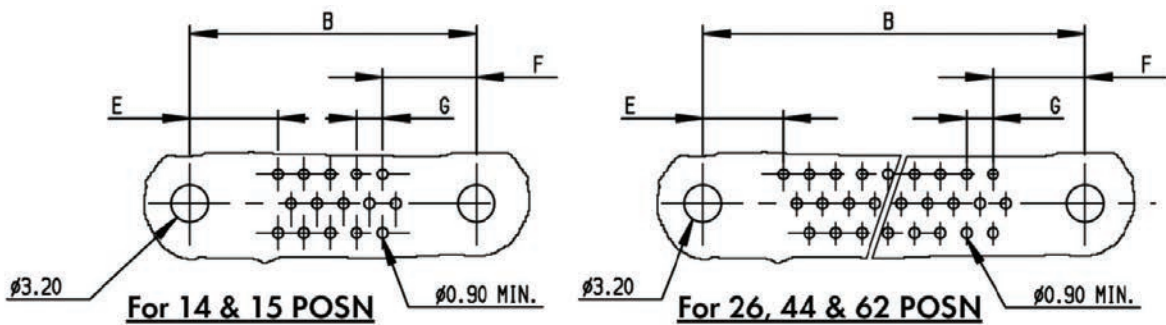
**► D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY D-SUBMINIATURE 3 ROWS  
(14-15/26/44 POS)**



Size	Dimensions						
	A + 0.38	B + 0.12	C + 0.10	D + 0.25	E	F	G
14/15	30,81	24,99	16,96	16,21	7,68	8,19	2,285
26	39,14	33,32	25,18	24,54	7,02	8,01	2,285
44	53,03	47,04	39,12	38,25	7,01	8,02	2,285

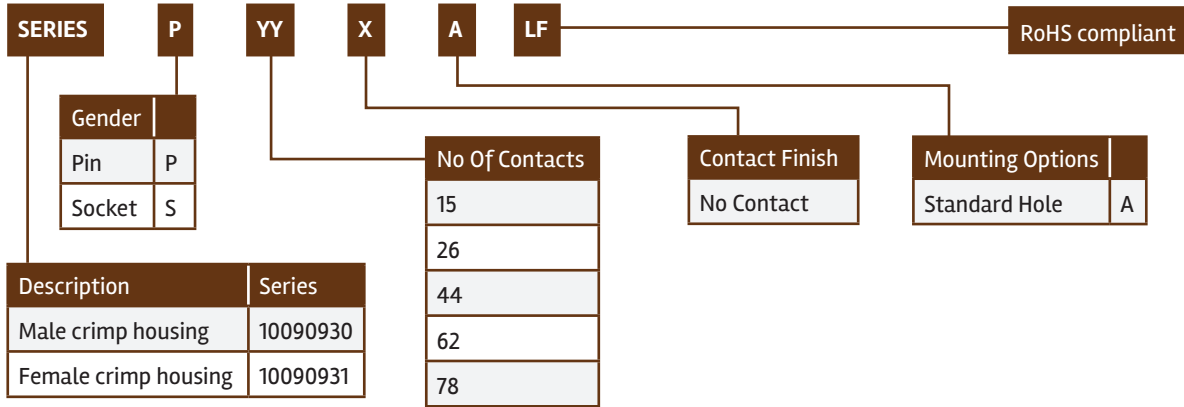
**PCB DRILLING DIMENSIONS**



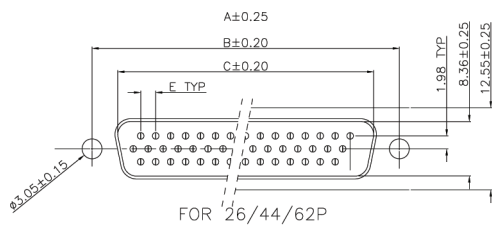
# D-SUBMINIATURE HIGH DENSITY CONNECTORS

## HIGH DENSITY D-SUBMINIATURE CRIMP HOUSING

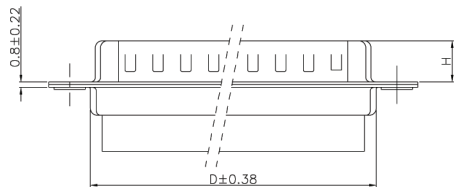
### ORDERING INFORMATION



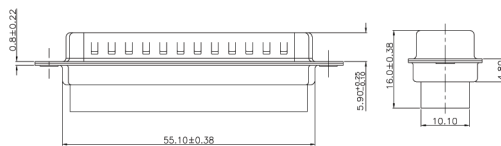
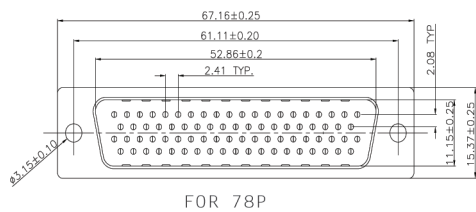
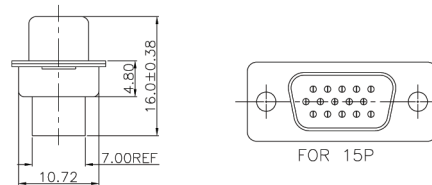
### DIMENSION



Pos.	Part Number	A	B	C	D	E	H
15P	10090930-P150ALF	30.81	24.99	16.92	19.10	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
26P	10090930-P260ALF	39.24	33.32	25.25	27.75	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
44P	10090930-P440ALF	53.04	47.04	38.96	41.30	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
62P	10090930-P620ALF	69.32	63.50	55.42	57.40	2.41	5.9 <sup>+0.25</sup> <sub>-0</sub>



Dimensions in mm



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**► D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY D-SUBMINIATURE CRIMP CONTACT**

**ORDERING INFORMATION**

<b>SERIES</b>	<b>P</b>	<b>24</b>	<b>X</b>	<b>9</b>	<b>LF</b>	RoHS compliant
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Gender	
Pin	P
Socket	S

Packaging	
Box, 500 contacts	8
Reel, 10K contacts	9

Description	Series
Male crimp housing	10090930
Female crimp housing	10090931

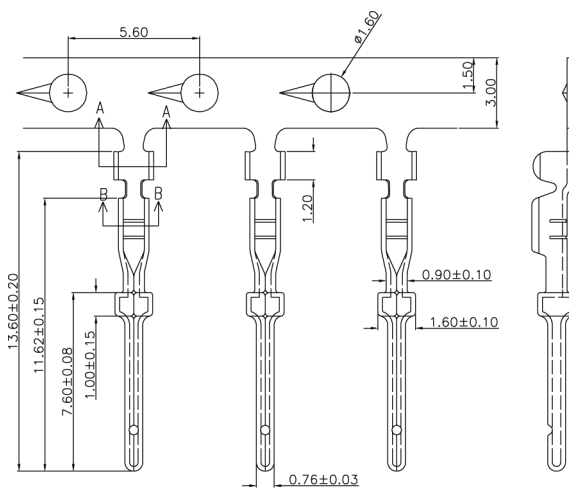
  

Gauge Size	YY
24 -28 AWG	24 - 28

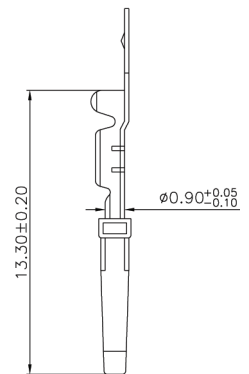
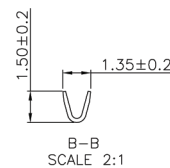
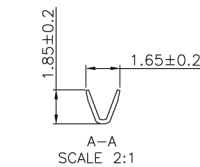
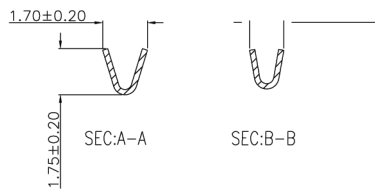
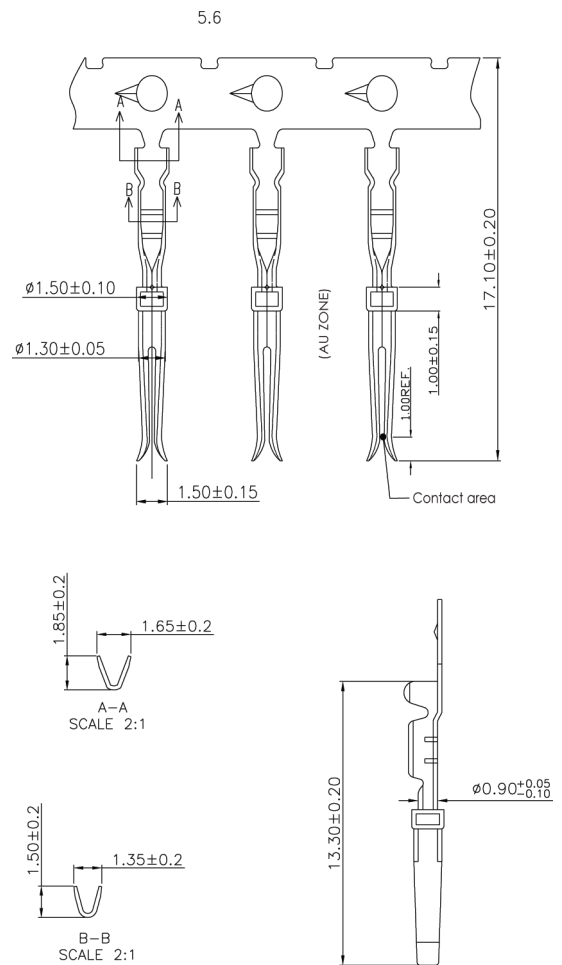
  

Durability	X
200 mating cycles	4
500 mating cycles	6

**MALE CONTACT DIMENSION**



**FEMALE CONTACT DIMENSION**



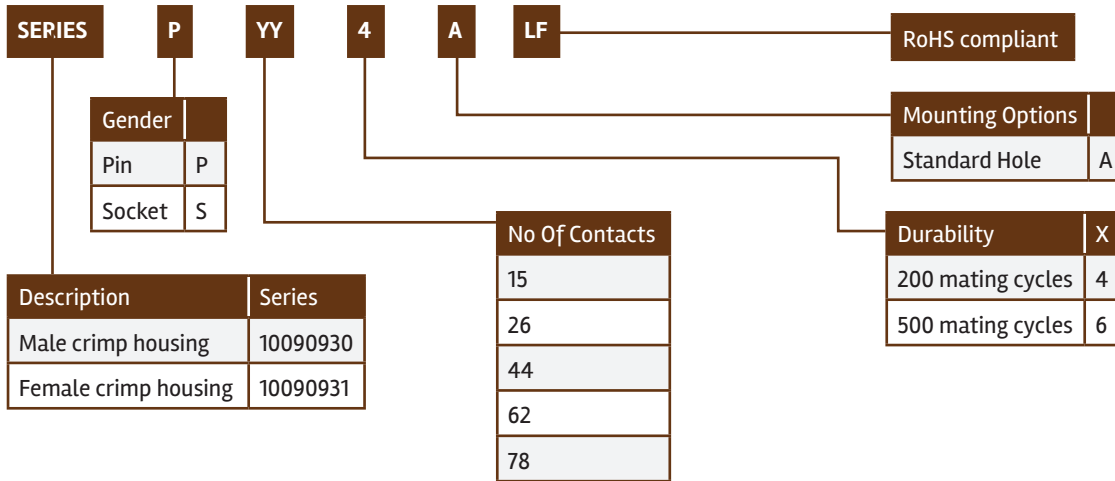
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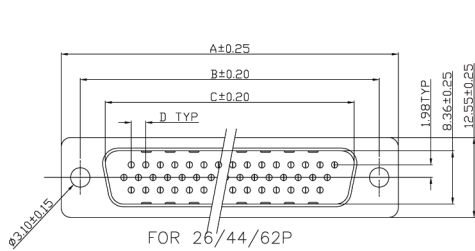
# D-SUBMINIATURE HIGH DENSITY CONNECTORS

## HIGH DENSITY D-SUBMINIATURE SOLDER BUCKET

### ORDERING INFORMATION

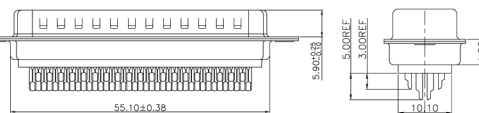
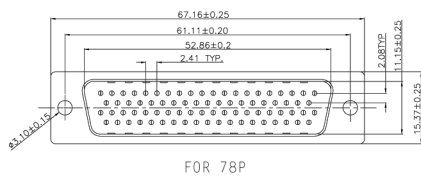
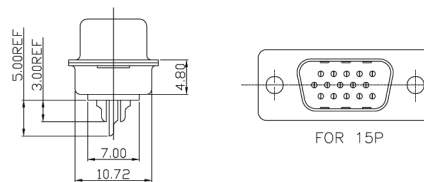
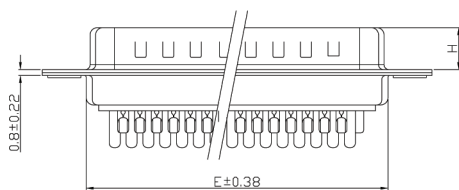


### DIMENSION



Pos.	Part Number	A	B	C	D	E	H
15P	10090769-P15*ALF	30.81	24.99	16.92	19.10	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
26P	10090769-P26*ALF	39.24	33.32	25.25	27.75	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
44P	10090769-P44*ALF	53.04	47.04	38.96	41.30	2.29	5.9 <sup>+0.25</sup> <sub>-0</sub>
62P	10090769-P62*ALF	69.32	63.50	55.42	57.40	2.41	5.9 <sup>+0.25</sup> <sub>-0</sub>

Dimensions in mm



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**D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY PRESS FIT 78 PIN**

**UL** UL Recognised File E 118235 (R)



**ORDERING INFORMATION**

<b>SERIES</b>	<b>6</b>	<b>GL</b>	<b>OOLF</b>	RoHS compatible EU directive 2002/95/EC
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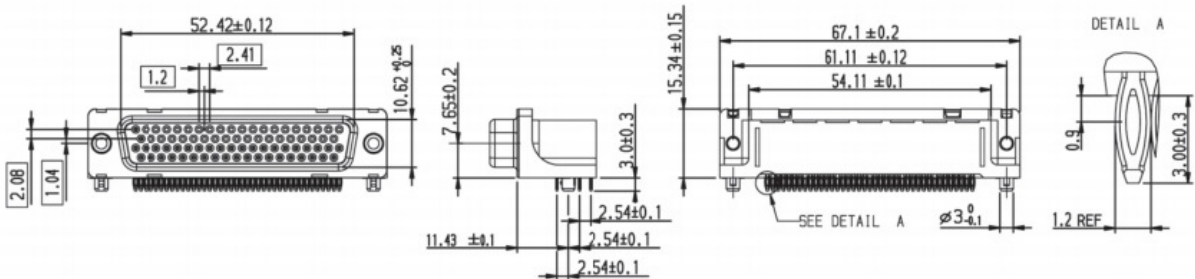
Description	Series
78 way straight female press-fit	CD78S80C

Durability	
Standard class (>200 mating/unmating)	4
High performance class (>500 mating/unmating)	6

Mounting Options	
Harpoons + insert M3 + elec. continuity	GL
Harpoons + insert UNC 4-40 + elec. continuity	GX
Harpoons + female screw UNC 4-40 + elec. continuity	GV



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# D-SUBMINIATURE HIGH DENSITY CONNECTORS

## HIGH DENSITY PRESS FIT 78 PIN

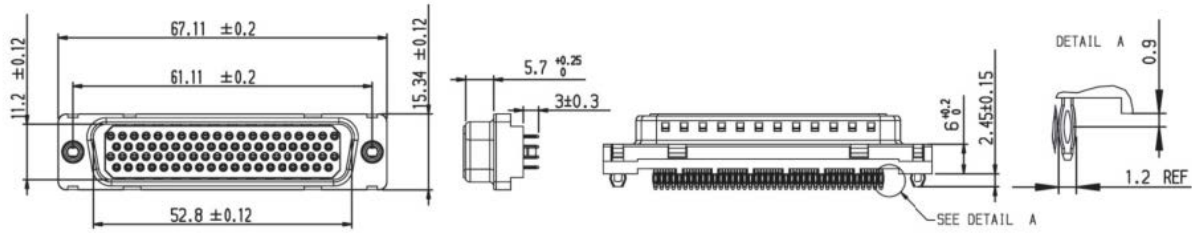
### ORDERING INFORMATION

**SERIES**    **6**    **GL**    **OOLF**    **RoHS compatible EU directive 2002/95/EC**

Description	Series
78 way straight male press-fit	CD78P91C

Mounting Options	
Harpoons + insert M3 + elec. continuity	GL
Harpoons + insert UNC 4-40 + elec. continuity	GX
Harpoons + female screw UNC 4-40 + elec. continuity	GV

Durability	
Standard class (>200 mating/unmating)	4
High performance class (>500 mating/unmating)	6



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**► D-SUBMINIATURE HIGH DENSITY CONNECTORS**

**HIGH DENSITY PRESS FIT 62 PIN**

**ORDERING INFORMATION**

<b>SERIES</b>	<b>6</b>	<b>GL</b>	<b>00LF</b>	RoHS compatible EU directive 2002/95/EC
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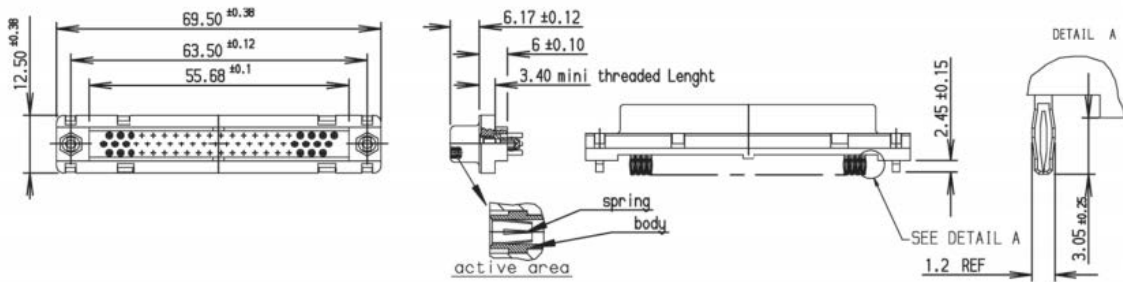
Description	Series
62 way straight female press-fit	CD62S91C

Durability	
Standard class (>200 mating/unmating)	4
High performance class (>500 mating/unmating)	6

Mounting Options	
Harpoons + insert M3 + elec. continuity	GL
Harpoons + insert UNC 4-40 + elec. continuity	GX
Harpoons + female screw UNC 4-40 + elec. continuity	GV



## D-SUBMINIATURE HIGH DENSITY CONNECTORS

### PRESS-FIT FEATURES

Application by pressure on insulator. Eye of the needle design.

Metalized Hole Dimension		Hole Press fit – Contact SnPb	Hole Press fit – Contact Sn	Hole Press fit – Harpoon SnPb	Hole Press fit – harpoon Sn	Hole Press fit – Contact Copper OSP	Hole Press fit – Harpoon Copper OSP
P.C.B hole definition (note 1 and 2)	Drill diameter	∅ 1,15 ref (note 3)	∅ 1,15 ref (note 3)	∅ 3,22 ref (note 3)	∅ 3,22 ref (note 3)	∅ 3,22 ref (note 3)	∅ 3,22 ref (note 3)
	Drilled hole	∅ 1,12 – ∅ 1,18	∅ 1,12 – ∅ 1,18	∅ 3,19 – ∅ 3,25	∅ 3,19 – ∅ 3,25	∅ 3,19 – ∅ 3,25	∅ 3,19 – ∅ 3,25
		25µm min. – 50µ max.	25µm min. – 50µ max.	25µm min. – 50µ max.	25µm min. – 50µ max.	25µm min. – 50µ max.	25µm min. – 50µ max.
	Tin lead plating	5µm min. – 15µ max.		5µm min. – 15µ max.			
	Pur lead plating		0,8µm min. – 1,2µ max.		0,8µm min. – 1,2µ max.		
	OSP plating (copper)					0,20µm min. – 0,5µ max	0,20µm min. – 0,5µ max.
	Finish hole	∅ 0,94 – ∅ 1,09	∅ 1,00 – ∅ 1,09	∅ 3,00 – ∅ 3,20	∅ 3,08 – ∅ 3,20	∅ 1,01 – ∅ 1,09	∅ 3,09 – ∅ 3,20

Note 1 : These dimensions must be respected to ensure press-fit pin performance

Note 2 : According to IEC-352-S specification

Note 3 : Vital requirement for press-fit pin performance

### PRESS-FIT PERFORMANCE

	Press-fit Contacts	Press-fit Contacts
Insertion force	<100 N	<120 N
SnPb/Extraction force	>30 N	<100 N
Copper Extraction force	>20 N	<100 N



## D-SUBMINIATURE HIGH DENSITY CONNECTORS

### ACCESSORIES (HOODS)

Plastic: Core Range PNs	Metalised: Core Range PNs	Metalllic: Core Range PNs
86303637BLF	863093C09MLF	8655MH0901BLF
86303638BLF	863093C15MLF	8655MH1501BLF
86303639BLF	863093C25MLF	8655MH2501BLF

Part Description	FCI Part Number
Dsub High density straight 15 way solder pin	10090928-P154VLF
Dsub High density straight 26 way solder pin	10090928-P264VLF
Dsub High density straight 44 way solder pin	10090928-P444VLF
Dsub High density straight 62 way solder pin	10090928-P624VLF
Dsub High density straight 78 way solder pin	10090928-P784VLF
Dsub High density straight 15 way solder socket	10090929-S154VLF
Dsub High density straight 26 way solder socket	10090929-S264VLF
Dsub High density straight 44 way solder socket	10090929-S444VLF
Dsub High density straight 62 way solder socket	10090929-S624VLF
Dsub High density straight 78 way solder socket	10090929-S784VLF
Dsub High density straight 15 way solder pin	10090928-P154XLF
Dsub High density straight 26 way solder pin	10090928-P264XLF
Dsub High density straight 44 way solder pin	10090928-P444XLF
Dsub High density straight 62 way solder pin	10090928-P624XLF
Dsub High density straight 78 way solder pin	10090928-P784XLF
Dsub High density straight 15 way solder socket	10090929-S154XLF
Dsub High density straight 26 way solder socket	10090929-S264XLF
Dsub High density straight 44 way solder socket	10090929-S444XLF
Dsub High density straight 62 way solder socket	10090929-S624XLF
Dsub High density straight 78 way solder socket	10090929-S784XLF
Dsub High density right angle 15 way solder pin	10090926-P154VLF
Dsub High density right angle 26 way solder pin	10090926-P264VLF
Dsub High density right angle 44 way solder pin	10090926-P444VLF
Dsub High density right angle 62 way solder pin	10090926-P624VLF
Dsub High density right angle 78 way solder pin	10090926-P784VLF
Dsub High density right angle 15 way solder socket	ICD15S13E4GV00LF
Dsub High density right angle 26 way solder socket	ICD26S13E4GV00LF
Dsub High density right angle 44 way solder socket	ICD44S13E4GV00LF
Dsub High density right angle 62 way solder socket	10090927-S624VLF
Dsub High density right angle 78 way solder socket	10090927-S784VLF
Dsub High density right angle 15 way solder pin	10090926-P154XLF
Dsub High density right angle 26 way solder pin	10090926-P264XLF
Dsub High density right angle 44 way solder pin	10090926-P444XLF
Dsub High density right angle 62 way solder pin	10090926-P624XLF

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or visit us at [www.fci.com](http://www.fci.com)

#### Disclaimer

Please note that the above information is subject to change without notice.

## D-SUBMINIATURE HIGH DENSITY CONNECTORS

### PART NUMBER LIST

Part Description	FCI Part Number
Dsub High density right angle 78 way solder pin	10090926-P784XLF
Dsub High density right angle 15 way solder socket	ICD15S13E4GX00LF
Dsub High density right angle 26 way solder socket	ICD26S13E4GX00LF
Dsub High density right angle 44 way solder socket	ICD44S13E4GX00LF
Dsub High density right angle 62 way solder socket	10090927-S624XLF
Dsub High density right angle 78 way solder socket	10090927-S784XLF
Dsub High density 15 way solder bucket pin	10090769-P154ALF
Dsub High density 26 way solder bucket pin	10090769-P264ALF
Dsub High density 44 way solder bucket pin	10090769-P444ALF
Dsub High density 62 way solder bucket pin	10090769-P624ALF
Dsub High density 78 way solder bucket pin	10090769-P784ALF
Dsub High density 15 way solder bucket socket	10090770-S154ALF
Dsub High density 26 way solder bucket socket	10090770-S264ALF
Dsub High density 44 way solder bucket socket	10090770-S444ALF
Dsub High density 62 way solder bucket socket	10090770-S624ALF
Dsub High density 78 way solder bucket socket	10090770-S784ALF
Dsub High density 15 way crimp pin	10090930-P150ALF
Dsub High density 26 way crimp pin	10090930-P260ALF
Dsub High density 44 way crimp pin	10090930-P440ALF
Dsub High density 62 way crimp pin	10090930-P620ALF
Dsub High density 78 way crimp pin	10090930-P780ALF
Dsub High density 15 way crimp socket	10090931-S150ALF
Dsub High density 26 way crimp socket	10090931-S260ALF
Dsub High density 44 way crimp socket	10090931-S440ALF
Dsub High density 62 way crimp socket	10090931-S620ALF
Dsub High density 78 way crimp socket	10090931-S780ALF
Dsub crimp loose contact gold flash pin	10090932-P2448LF
Dsub crimp 10000 contact reel gold flash pin	10090932-P2449LF
Dsub crimp loose contact gold flash socket	10090933-S2448L
Dsub crimp 10000 contact reel gold flash socket	10090933-S2449LF
Dsub High Density 78 way right angle Press-fit socket	CD78S80C6GV00LF
Dsub High Density 78 way straight Press-fit pin	CD78P91C6GV00LF
Dsub High Density 62 way straight Press-fit socket	CD62S91C6GV00LF

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