



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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COMNEC[®]

TECHNOLOGY IN CONNECTORS[™]

IP67 WATER RESISTANT I/O CONNECTORS



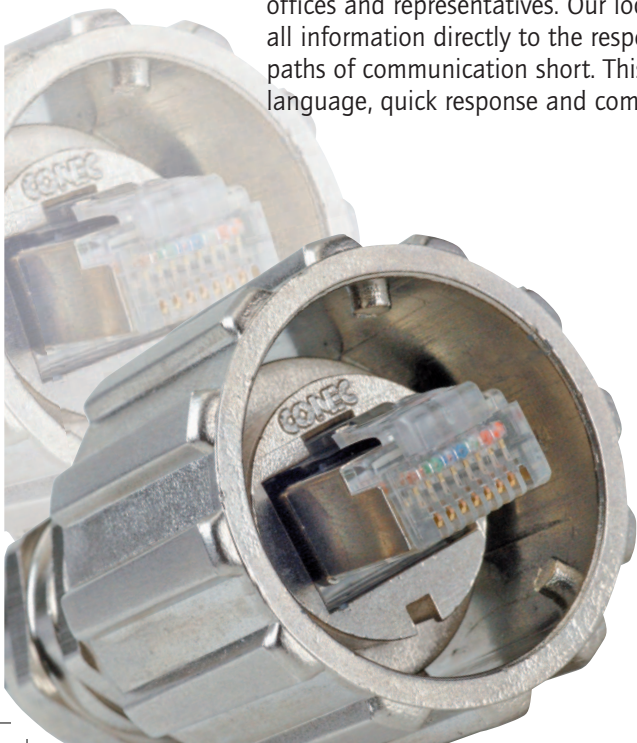


GERMANY

As a leading manufacturer of connectors, CONEC develops, produces and markets its products around the world to customers in the machine-tool, electronics and communications industries.

CONEC has dedicated itself to make a contribution to progress in the connector industry and to satisfy its customers through innovation, quality and excellent service. Around the world, our organization operates as a customer-oriented team.

CONEC is present in numerous countries with its own branch offices and representatives. Our local sales consultants transmit all information directly to the responsible departments to keep the paths of communication short. This provides support in the local language, quick response and competent consulting.





CANADA



USA

CONEC designs and manufactures products in modern facilities. The products are made in accordance to the highest quality standards and industry specifications.

CONEC provides reliable and effective solutions to OEM,EMS and cable houses.



OUR PHILOSOPHY – CUSTOMER SATISFACTION.



Quality is realized right from the beginning with Total Quality Management concept. Therefore our customers are included into all our processes, starting with design phase, first sampling, series production release and continuous sales support. The phases will be accompanied by drawings, samples and test reports. The entire quality process is documented and approved. CONEC is certified to ISO/TS16949:2002.

CONEC inhouse is equipped with modern test systems. We can verify the requirements and implement a continuous product improvement process to meet and exceed future requirements. To fulfill international and national requirements most of CONEC product series are registered by UL, CSA or VDE



CONEC IS YOUR SPECIALIST FOR DESIGN AND PRODUCTION OF SPECIAL CUSTOMIZED PRODUCTS.

Flexibility, assurance and rapid response are required in today's market more than ever before. CONEC fulfills these demands with central order-processing and well implemented quality control systems. Statistical process control as well as just in time deliveries are a common practice. Numerous customers honored this performance by approving CONEC to a "Preferred Supplier" status.



Are you looking for application-specific solutions?
Standard products do not meet your needs?
The implementation deadline is tight?

CONEC experienced design team can create your solution for you:

- Special Interconnect solutions to customers specifications
- Prototypes and small series production batches
- Connectors with increased IP ratings for harsh environments.

Contact us to discuss your special requirements.



PRODUCT LINES



I/O Connectors

D-SUB connectors, Standard, Combination and Water Resistant; D-SUB Hoods and D-SUB accessories; Filter D-SUB Connectors, Standard, Combination and Water Resistant; Filter Adapters; Filter Plates; RJ45-IP67 Industrial Ethernet Connector System; USB 2.0-IP67 Connector System; RJ45 Magnetic Modular Jacks



Embedded Connectors

DIN 41617 Connectors; DIN EN 60603-2 Connectors; DIN 41651 Insulation Displacement Connectors; CompactPCI Connectors; AdvancedTCA Connectors; MicroTCA Connectors; PC104-, PC104+ Connectors



Sensor Actor Line / Circular Connectors

M12x1 Connectors, Overmolded and Field Attachable, Sockets, Junction Boxes, M12x1 Connector Systems for High Temperature, Food+Beverage, Bus Systems; M8x1 Overmolded Connectors; 7/8" Connectors; Rund24 Connectors; Valve Connectors



Fiber Optic

SC-LC-FC-ST-Connectors; Adapters; Hybrid Adapters; IP67 Outdoor Connectors; Patch cords



Coaxial Connectors

SMA, SSMA, MMCX, TNC, N, MCX, Mixed Adapters und BNC connectors; D-SUB and DIN Coaxial Contacts; D-SUB and DIN High-Current Contacts

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SECTION 1

IP67 D-SUB CONNECTORS

Connector systems able to meet special demands are needed for industrial use in harsh environments.

The water resistant connector system developed by CONEC is intended for applications where dust and water are factors.

The system includes D-Subminiature Connectors in standard and high density configurations as well as corresponding accessories, such as water resistant hoods and protective caps.

The Solid Body connector series is an advanced development of the CONEC water resistant D-SUB series.

This series is designed with a one piece, "Solid Body" zinc diecast housing. This robust design performs better to mechanical impacts during installation and operation and has less possible leak paths. It complies to current solder requirements with RoHS compliant solder temperatures.

The type of protection is defined by IEC 60529 which also specifies the suitability of electrical components for various ambient conditions.

CONEC water resistant connectors ensure a continuously secure connection compliant with the IP67 rating. They are dustproof and protect against temporary submersion in water.





System details:

- Standard design with metal shell and O-ring
- One piece "solid body" design available for increased mechanical stresses
- Seal in the connector, water cannot penetrate into the housing
- Available for front and rear side panel mounting
- Connector without frame for cable housing
- Special threaded parts, 4-40 UNC and M 3
- Plastic materials comply with UL 94 V0
- Machined precision contacts for heavy duty usage
- Various gold plating options available
- All conventional contact termination types available
- Various accessories, including waterproof hoods and protective caps

The following pages indicate examples from our extensive product line. For additional and detail information please contact us direct or visit us at www.conec.com.



TECHNICAL DATA

Materials	D-Subminiature, Standard 9, 15, 25, 37 and 50 position	D-Subminiature, High Density 15, 26, 44, 62 and 78 position
Insulator	Polyester GF UL94 V-0	
Contacts	CU alloy	
Contact plating	Gold plated over nickel	
Shell	Brass tin plated (Standard) Stainless steel on request	
Mechanical and electrical characteristics		
Test voltage U eff/NN	1000 V	
Working voltage	125 V ≈ depending on isolation coordination (refer to DIN VDE 0110/IEC 664-1)	
Current rating	7.5 A (UL) / 5 A (CSA,VDE)	3 A (UL,VDE) / 2.5 A (CSA)
Contact resistance	max. 10 mΩ prior to stressing, Δ R max. 10 mΩ after stressing per DIN 41652, Part 2	
Insulation resistance	≥ 5 GΩ	
Clearance and creepage distance	contact – contact ≥ .004" / 1.0 mm contact – earth ≥ .047" / 1.2 mm	≥ .024" / 0.6 mm
Operating temperature	– 25 °C to + 105 °C	
Mating and unmating forces	9 pos. ≤ 30 N 15 pos. ≤ 50 N 25 pos. ≤ 83 N 37 pos. ≤ 123 N 50 pos. ≤ 167 N	15 pos. ≤ 50 N 26 pos. ≤ 84 N 44 pos. ≤ 120 N 62 pos. ≤ 70 N 78 pos. ≤ 200 N
Quality class	A = Quality class 3 = 50 mating cycles B = Quality class 2 = 200 mating cycles C = Quality class 1 = 500 mating cycles	

Technical alterations are subject to change without notice.

IP-CODE FIGURE DEFINITIONS

1. Code figure	Definition	Remark
0	Not protected	
1	Protected against access to hazardous parts by the back of the hand. Protected against fixed foreign objects $\varnothing \geq 1.969'' / 50 \text{ mm}$.	
2	Protected against access to hazardous parts with a finger. Protected against fixed foreign objects $\varnothing \geq .492'' / 12.5 \text{ mm}$.	
3	Protected against access to hazardous parts with a tool. Protected against fixed foreign objects $\varnothing \geq .098'' / 2.5 \text{ mm}$.	
4	Protected against access to hazardous parts with a wire. Protected against fixed foreign objects $\varnothing \geq .039'' / 1 \text{ mm}$.	
5	Protected against access to hazardous parts with a wire. Dust protected.	Ingress of dust is not completely blocked. But dust may not penetrate to the extent that satisfactory operation of the device or safety is impaired.
6	Protected against access to hazardous parts with a wire. Dustproof. No ingress of dust.	
2. Code figure	Definition	Remark
0	Not protected	
1	Protected against dropper.	
2	Protected against dropper when the shell is tipped as much as 15° .	
3	Protected against spray water	Up to 60° of either side of the vertical, such spray water shall have no harmful effects.
4	Protected against splash water	On the shell from all directions, no harmful effects shall be incurred.
5	Protected against jets of water.	
6	Protected against strong jets of water.	
7	Protected against the effects of temporary submersion in water.	Water may not ingress in a volume that would cause harmful effects when the shell is submerged in water for 30 min at a depth of 1 m.
8	Protected against the effects of continuous submersion in water.	Water may not ingress in a volume that would cause harmful effects when the shell is continuously submerged in water under conditions agreed between manufacturer and user. However, these conditions must be more stringent than those described under code figure 7.
9k	Protected against water from high-pressure or steam cleaning.	

Explanation to spray water protected (IP) systems and their environment.

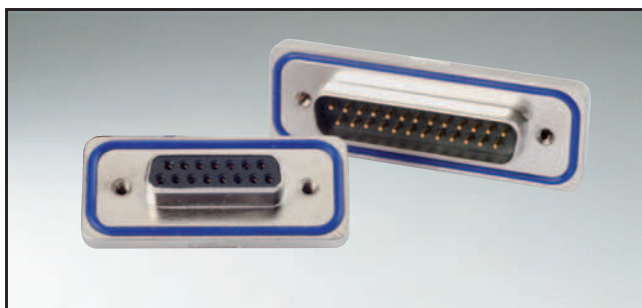
This system, described in IEC 60529, was developed to represent standard values for respective protection:

- a) Contact with, and ingress of, fixed foreign objects
- b) The ingress of liquids to which the inside is to be exposed.

The first digit describes the level of protection for life, contacting objects and the intrusion of foreign bodies. The second digit describes the level of protection against the ingress of liquids. The larger the first and second digits are, the greater afforded protection is, e.g. IP55 must also meet the requirements of all lower protection levels, such as IP22, IP23, IP34 and IP54.

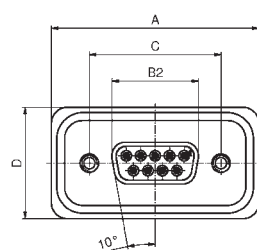
D-SUB STANDARD – IP67 SOLID BODY

Solder cup – Precision machined contacts – For wire size AWG 20

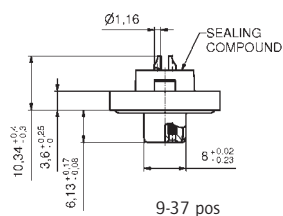


RoHS compliant

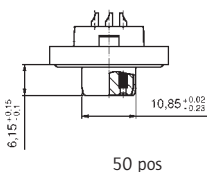
SOCKET CONNECTOR



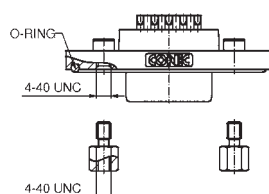
No. of pos.	A	B2 ±0.25	C	D
09	39.40 ±0.3	16.46	25.00 ±0.12 -0.13	21.1 ±0.3 -0
15	47.70 ±0.3	24.79	33.32 ±0.13 -0.12	21.1 ±0.3 -0
25	61.40 ±0.3	38.50	47.04 ±0.13	21.1 ±0.3 -0
37	78.00 ±0.3	54.96	63.50 ±0.13	21.1 ±0.3 -0
50	75.60 ±0.3 -0.1	52.55	61.10 ±0.14 -0.11	23.9 ±0.3 -0.1



9-37 pos



50 pos



ORDER DATA

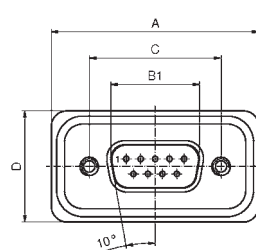
SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	15-000613
15	Threaded insert	15-000623
25	Threaded insert	15-000633
37	Threaded insert	15-000643
50	Threaded insert	15-002103

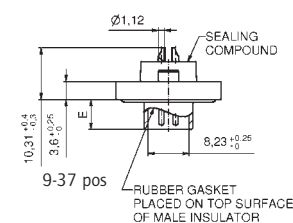
DESCRIPTION

- Suitable for wire size **AWG 20**
- Mounting style:
4-40 UNC threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

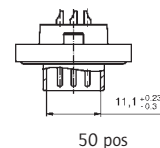
PLUG CONNECTOR



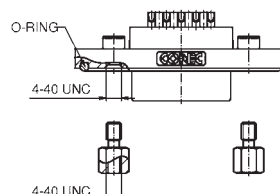
No. of pos.	A	B1	C	D	E
09	39.40 ±0.3	16.81 ±0.22 0.02	25.00 ±0.12 -0.13	21.1 ±0.3 -0	6.00 ±0.12 -0.18
15	47.70 ±0.3	25.14 ±0.22 0.02	33.32 ±0.13 -0.12	21.1 ±0.3 -0	6.00 ±0.12 -0.18
25	61.40 ±0.3	38.86 ±0.22 0.02	47.04 ±0.13	21.1 ±0.3 -0	5.99 ±0 -0.3
37	78.00 ±0.3	55.32 ±0.22 0.02	63.50 ±0.13	21.1 ±0.3 -0	5.99 ±0 -0.3
50	75.60 ±0.3 -0.1	52.80 ±0.12	61.10 ±0.14 -0.11	23.9 ±0.3 -0.1	5.99 ±0.3 -0.1



9-37 pos



50 pos



PLUG CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	15-000573
15	Threaded insert	15-000583
25	Threaded insert	15-000593
37	Threaded insert	15-000603
50	Threaded insert	15-002093

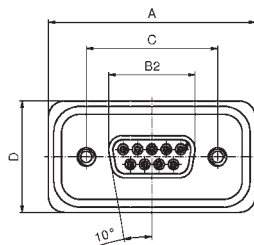
D-SUB STANDARD – IP67 SOLID BODY

Solder pin – Straight – Precision machined contacts

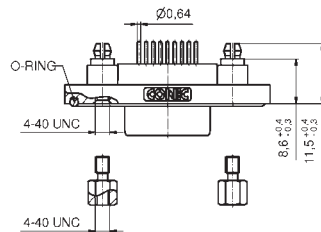
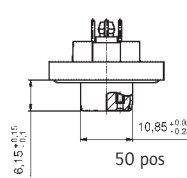
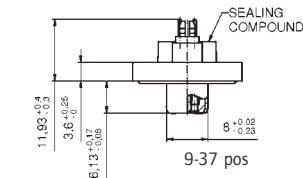


RoHS compliant

SOCKET CONNECTOR



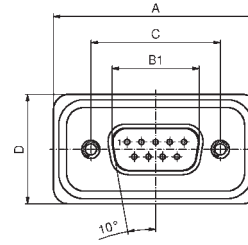
No. of pos.	A	B2	C	D
09	39.40 ^{+0.3} ₋₀	16.46 ⁺⁰ _{-0.25}	25.00 ^{+0.12} _{-0.13}	21.1 ^{+0.3} ₋₀
15	47.70 ^{+0.3} ₋₀	24.79 ^{+0.13} _{-0.12}	33.32 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₋₀
25	61.40 ^{+0.3} ₋₀	38.50 ^{+0.13} ₋₀	47.04 ^{+0.13} ₋₀	21.1 ^{+0.3} ₋₀
37	78.00 ^{+0.3} ₋₀	54.96 ^{+0.13} ₋₀	63.50 ^{+0.13} ₋₀	21.1 ^{+0.3} ₋₀
50	75.60 ^{+0.3} _{-0.1}	52.55 ^{+0.14} _{-0.11}	61.10 ^{+0.14} _{-0.11}	23.9 ^{+0.3} _{-0.1}



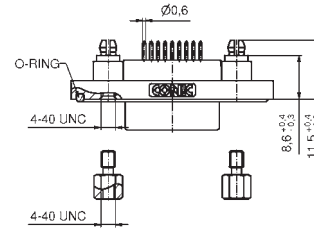
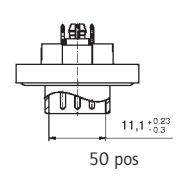
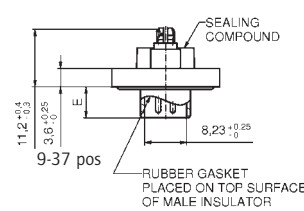
DESCRIPTION

- Mounting style:
4-40 UNC threaded rear spacer with PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

PLUG CONNECTOR



No. of pos.	A	B1	C	D	E
09	39.40 ^{+0.3} ₋₀	16.81 ^{+0.23} _{-0.02}	25.00 ^{+0.12} _{-0.13}	21.1 ^{+0.3} ₋₀	6.00 ^{+0.12} _{-0.18}
15	47.70 ^{+0.3} ₋₀	25.14 ^{+0.23} _{-0.02}	33.32 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₋₀	6.00 ^{+0.12} _{-0.18}
25	61.40 ^{+0.3} ₋₀	38.86 ^{+0.23} _{-0.02}	47.04 ^{+0.13} ₋₀	21.1 ^{+0.3} ₋₀	5.99 ⁺⁰ _{-0.3}
37	78.00 ^{+0.3} ₋₀	55.32 ^{+0.23} _{-0.02}	63.50 ^{+0.13} ₋₀	21.1 ^{+0.3} ₋₀	5.99 ⁺⁰ _{-0.3}
50	75.60 ^{+0.3} _{-0.1}	52.80 ^{+0.13} _{-0.12}	61.10 ^{+0.14} _{-0.11}	23.9 ^{+0.3} _{-0.1}	5.99 ⁺⁰ _{-0.1}



ORDER DATA

SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded rear spacer PCB clip	15-000453
15	Threaded rear spacer PCB clip	15-000463
25	Threaded rear spacer PCB clip	15-000473
37	Threaded rear spacer PCB clip	15-000483
50	Threaded rear spacer PCB clip	15-002063

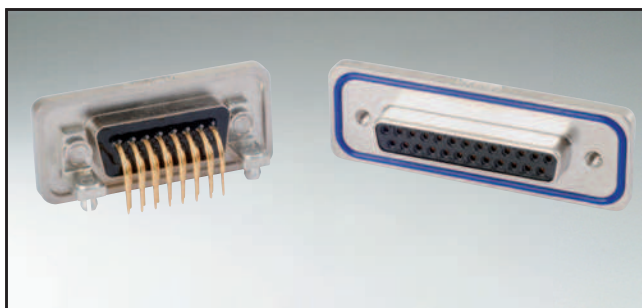
PLUG CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded rear spacer PCB clip	15-000413
15	Threaded rear spacer PCB clip	15-000423
25	Threaded rear spacer PCB clip	15-000433
37	Threaded rear spacer PCB clip	15-000443
50	Threaded rear spacer PCB clip	15-002053

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness
For different PCB thickness please contact factory.

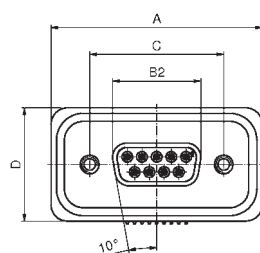
D-SUB STANDARD – IP67 SOLID BODY

Solder pin – Angled – .402" / 10.2 mm – Precision machined contacts – Metal bracket

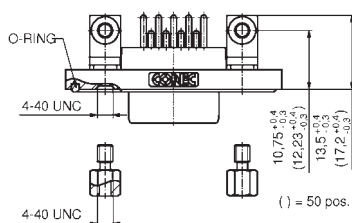
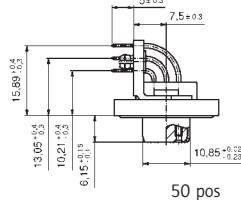
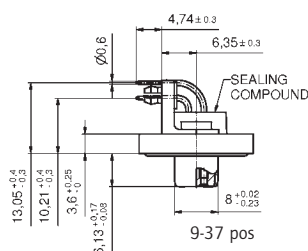


RoHS compliant

SOCKET CONNECTOR



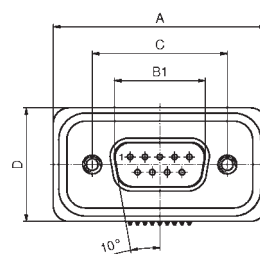
No. of pos.	A	B2 ±0.025	C	D
09	39.40 ^{+0.3} ₀	16.46	25.00 ^{+0.12} _{-0.13}	21.1 ^{+0.3} ₀
15	47.70 ^{+0.3} ₀	24.79	33.32 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀
25	61.40 ^{+0.3} ₀	38.50	47.04 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀
37	78.00 ^{+0.3} ₀	54.96	63.50 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀
50	75.60 ^{+0.3} _{-0.1}	52.55	61.10 ^{+0.14} _{-0.11}	23.9 ^{+0.3} _{-0.1}



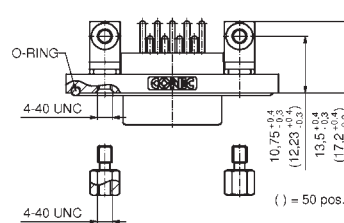
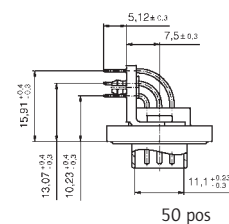
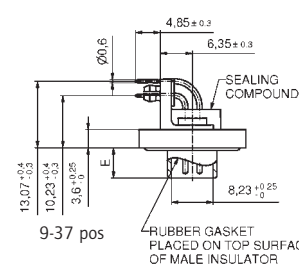
DESCRIPTION

- Mounting style:
mounting bracket, 4-40 UNC PCB clip
including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

PLUG CONNECTOR



No. of pos.	A	B1	C	D	E
09	39.40 ^{+0.3} ₀	16.81 ^{+0.22} _{0.02}	25.00 ^{+0.12} _{-0.13}	21.1 ^{+0.3} ₀	6.00 ^{+0.12} _{-0.18}
15	47.70 ^{+0.3} ₀	25.14 ^{+0.22} _{0.02}	33.32 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀	6.00 ^{+0.12} _{-0.18}
25	61.40 ^{+0.3} ₀	38.86 ^{+0.22} _{0.02}	47.04 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀	5.99 ⁺⁰ _{-0.3}
37	78.00 ^{+0.3} ₀	55.32 ^{+0.22} _{0.02}	63.50 ^{+0.13} _{-0.12}	21.1 ^{+0.3} ₀	5.99 ⁺⁰ _{-0.3}
50	75.60 ^{+0.3} _{-0.1}	52.80 ^{+0.13} _{-0.12}	61.10 ^{+0.14} _{-0.11}	23.9 ^{+0.3} _{-0.1}	5.99 ⁺⁰ _{-0.1}



ORDER DATA

SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket / PCB clip	15-000773
15	Mounting bracket / PCB clip	15-000783
25	Mounting bracket / PCB clip	15-000793
37	Mounting bracket / PCB clip	15-000803
50	Mounting bracket / PCB clip	15-002143

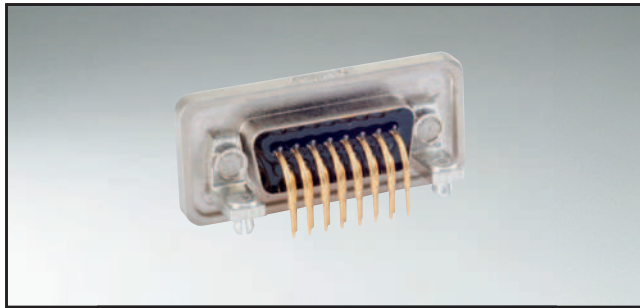
PLUG CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket / PCB clip	15-000733
15	Mounting bracket / PCB clip	15-000743
25	Mounting bracket / PCB clip	15-000753
37	Mounting bracket / PCB clip	15-000763
50	Mounting bracket / PCB clip	15-002133

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness
For different PCB thickness please contact factory.

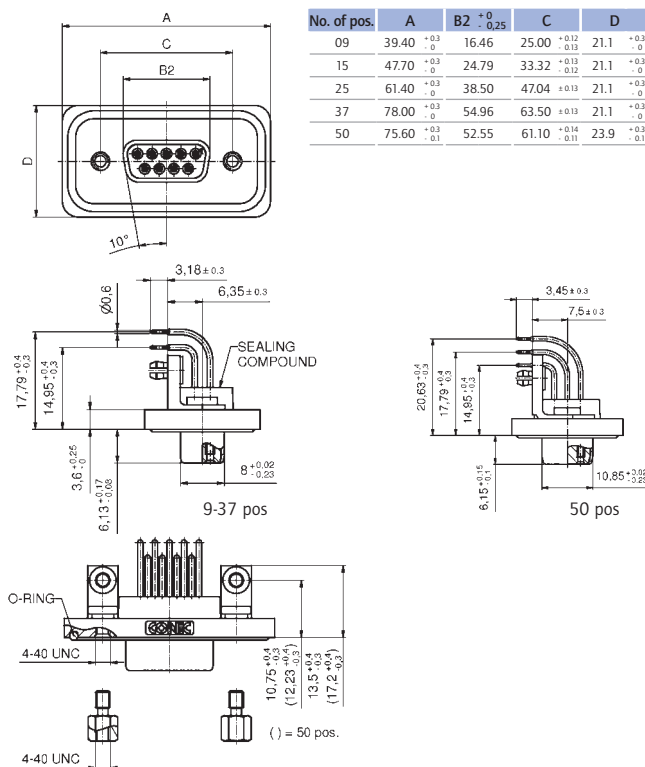
D-SUB STANDARD – IP67 SOLID BODY

Solder pin – Angled – .590" / 14.9 mm – Precision machined contacts – Metal bracket



RoHS compliant

SOCKET CONNECTOR



ORDER DATA

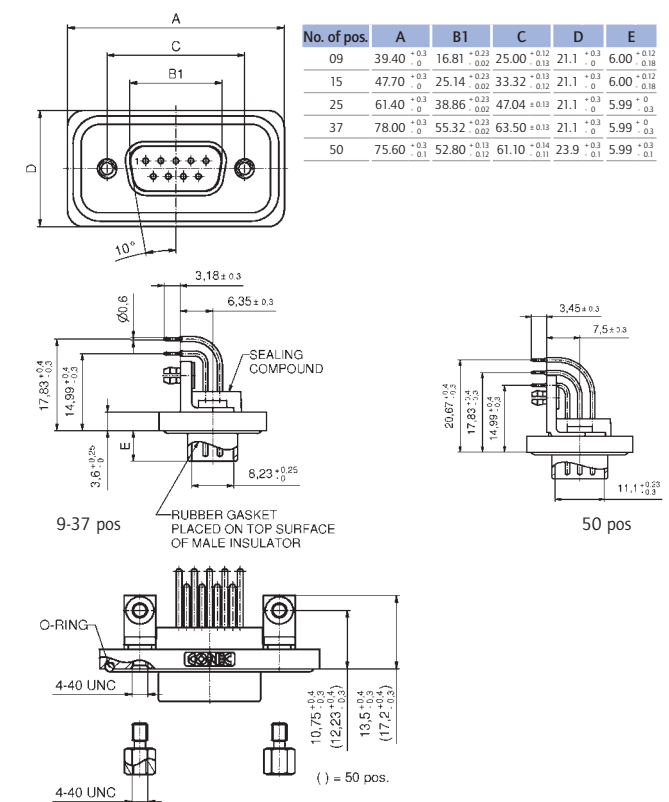
SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket / PCB clip	15-000853
15	Mounting bracket / PCB clip	15-000863
25	Mounting bracket / PCB clip	15-000873
37	Mounting bracket / PCB clip	15-000883
50	Mounting bracket / PCB clip	15-002163

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness
For different PCB thickness please contact factory.

DESCRIPTION

- Mounting style:
mounting bracket, 4-40 UNC PCB clip
including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

PLUG CONNECTOR



PLUG CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket / PCB clip	15-000813
15	Mounting bracket / PCB clip	15-000823
25	Mounting bracket / PCB clip	15-000833
37	Mounting bracket / PCB clip	15-000843
50	Mounting bracket / PCB clip	15-002153

Solder cup – Precision machined contacts – For wire size AWG 22



Technical drawing of a rectangular connector. The drawing shows a top view of a rectangular component with rounded corners. It features a central rectangular area containing a grid of 16 circular pins (4 rows by 4 columns). Two circular mounting holes are located on the left and right sides of the component. Dimensions are indicated: A is the total width, C is the width of the central pin area, B2 is the width of the pin grid, and D is the total height. A chamfer angle of 10° is shown on the bottom-left corner.

SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
15	Threaded insert	15-000693
26	Threaded insert	15-000703
44	Threaded insert	15-000713
62	Threaded insert	15-000723
78	Threaded insert	15-002123

- Suitable for wire size **AWG 22**
- Mounting style:
4-40 UNC threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

Technical drawing of a male insulator assembly. The drawing shows a cross-section of the assembly with the following dimensions and labels:

- Top diameter: $\varnothing 1.04$
- Total height: $12.1^{+0.1}_{-0.3}$
- Height of the top section: $9.6^{+0.4}_{-0.5}$
- Height of the bottom section: $3.6^{+0.26}_{-0}$
- Dimension E: Indicated by a vertical line with arrows.
- Bottom diameter: $8.23^{+0.25}_{-0}$
- Label: "SEALING COMPOUND" pointing to the top of the assembly.
- Label: "RUBBER GASKET PLACED ON TOP SURFACE OF MALE INSULATOR" pointing to the bottom of the assembly.
- Text: "15-62 pos" at the bottom left.

No. of pos.	Mounting style 4-40 UNC	Part Number
15	Threaded insert	15-000653
26	Threaded insert	15-000663
44	Threaded insert	15-000673
62	Threaded insert	15-000683
78	Threaded insert	15-002113

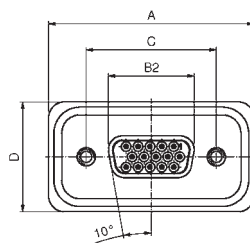
D-SUB HIGH DENSITY – IP67 SOLID BODY

Solder pin – Straight – Precision machined contacts

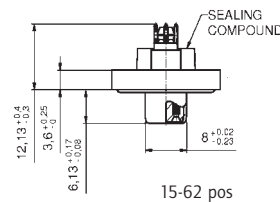


RoHS compliant

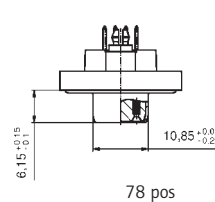
SOCKET CONNECTOR



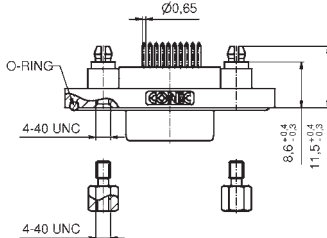
No. of pos.	A	B2 $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	D $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
15	39.40 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
26	47.70 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
44	61.40 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	38.50	47.04 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
62	78.00 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	54.96	63.50 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$
78	75.60 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$	52.55	61.10 $\begin{smallmatrix} +0.14 \\ -0.11 \end{smallmatrix}$	23.9 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$



15-62 pos



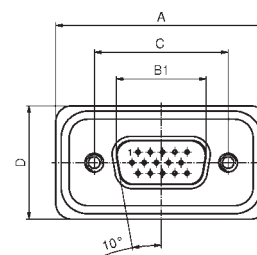
78 pos



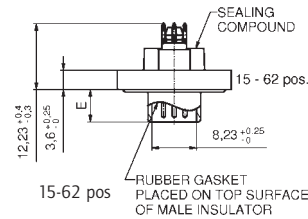
DESCRIPTION

- Mounting style:
4-40 UNC threaded rear spacer with PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

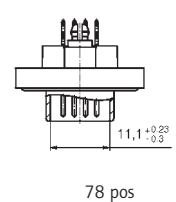
PLUG CONNECTOR



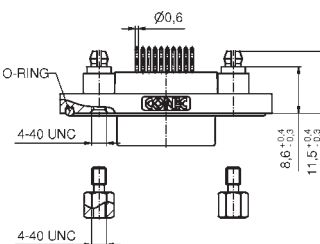
No. of pos.	A	B1 $\begin{smallmatrix} +0.23 \\ -0.02 \end{smallmatrix}$	C $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	D $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	E $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
15	39.40 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	16.81 $\begin{smallmatrix} +0.23 \\ -0.02 \end{smallmatrix}$	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
26	47.70 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	25.14 $\begin{smallmatrix} +0.23 \\ -0.02 \end{smallmatrix}$	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
44	61.40 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	38.86 $\begin{smallmatrix} +0.23 \\ -0.02 \end{smallmatrix}$	47.04 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
62	78.00 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	55.32 $\begin{smallmatrix} +0.23 \\ -0.02 \end{smallmatrix}$	63.50 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	21.1 $\begin{smallmatrix} +0.3 \\ -0 \end{smallmatrix}$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
78	75.60 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$	52.80 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	61.10 $\begin{smallmatrix} +0.14 \\ -0.11 \end{smallmatrix}$	23.9 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$	5.99 $\begin{smallmatrix} +0.3 \\ -0.1 \end{smallmatrix}$



15-62 pos



78 pos



ORDER DATA

SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
15	Threaded rear spacer PCB clip	15-000533
26	Threaded rear spacer PCB clip	15-000543
44	Threaded rear spacer PCB clip	15-000553
62	Threaded rear spacer PCB clip	15-000563
78	Threaded rear spacer PCB clip	15-002183

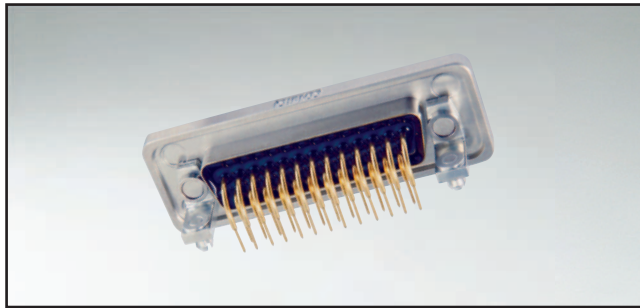
PLUG CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
15	Threaded rear spacer PCB clip	15-000493
26	Threaded rear spacer PCB clip	15-000503
44	Threaded rear spacer PCB clip	15-000513
62	Threaded rear spacer PCB clip	15-000523
78	Threaded rear spacer PCB clip	15-002073

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness
For different PCB thickness please contact factory.

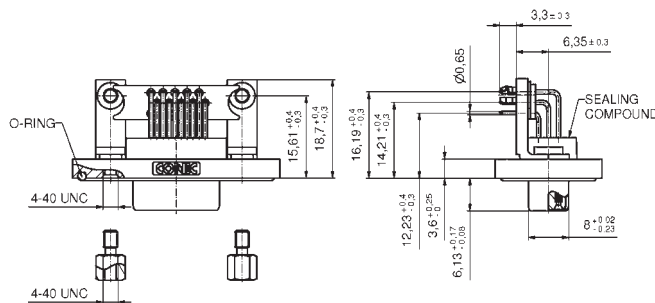
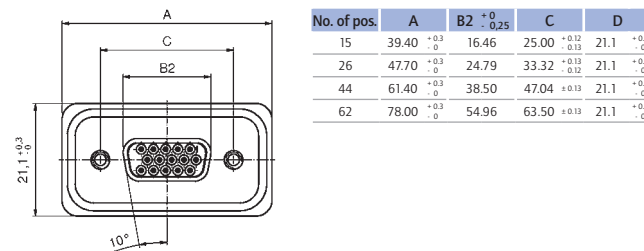
D-SUB HIGH DENSITY – IP67 SOLID BODY

Solder pin – Angled – .485" / 12,3 mm – Precision machined contacts – Metal bracket



RoHS compliant

SOCKET CONNECTOR

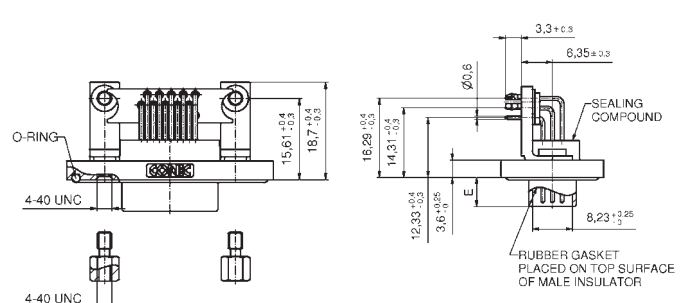
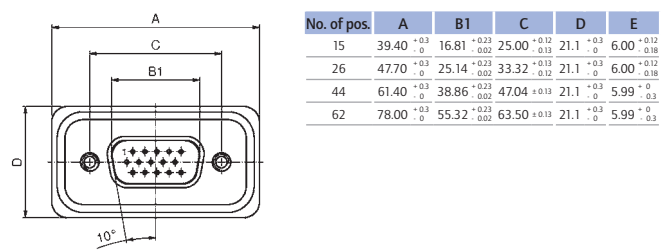


15-62 pos

DESCRIPTION

- Mounting style:
Mounting bracket, 4-40 UNC PCB clip
including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

PLUG CONNECTOR



15-62 pos

ORDER DATA

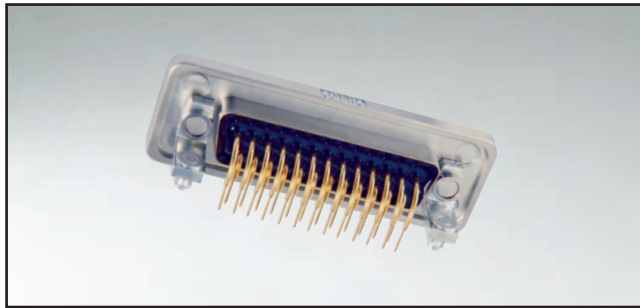
SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
15	Mounting bracket / PCB clip	15-000933
26	Mounting bracket / PCB clip	15-000943
44	Mounting bracket / PCB clip	15-000953
62	Mounting bracket / PCB clip	15-000963

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness
For different PCB thickness please contact factory.

PLUG CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
15	Mounting bracket / PCB clip	15-000893
26	Mounting bracket / PCB clip	15-000903
44	Mounting bracket / PCB clip	15-000913
62	Mounting bracket / PCB clip	15-000923

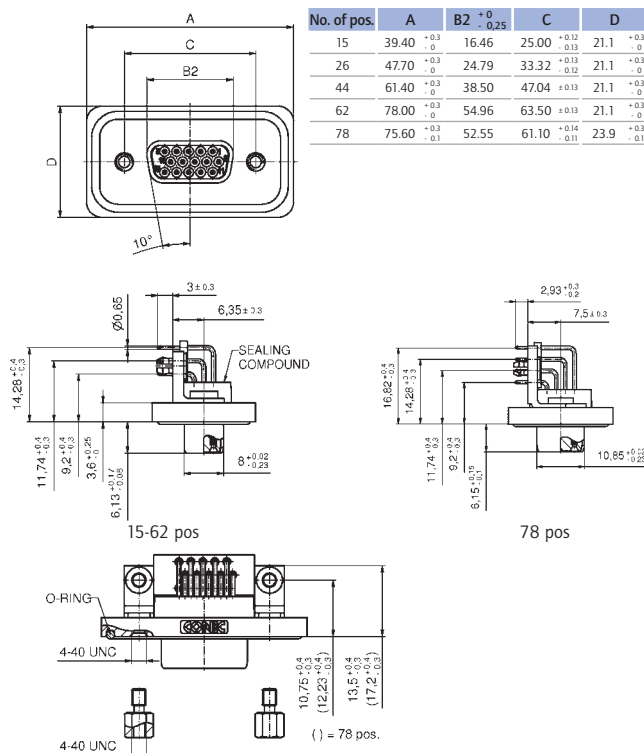
D-SUB HIGH DENSITY – IP67 SOLID BODY

Solder pin – Angled – .362"/11.7 mm – Precision machined contacts – Metal bracket



RoHS compliant

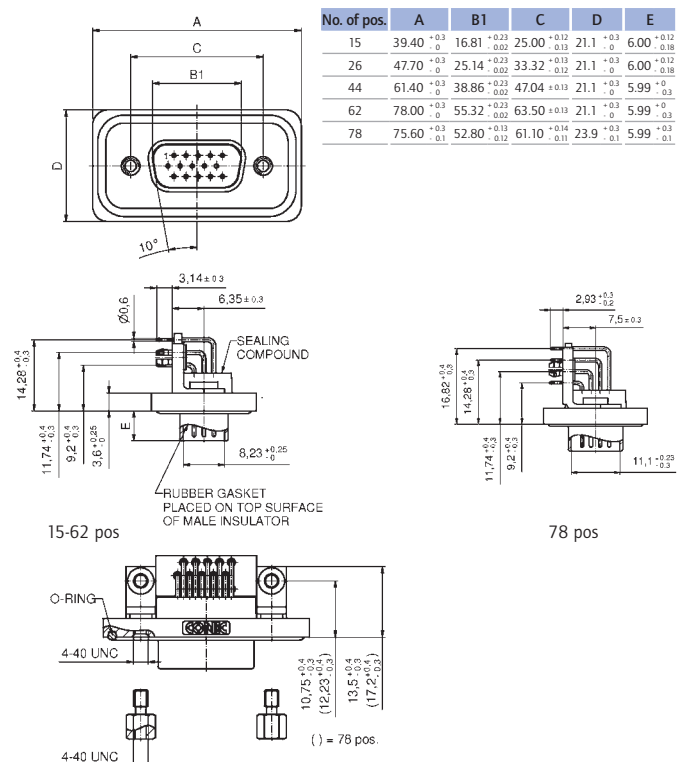
SOCKET CONNECTOR



DESCRIPTION

- Mounting style:
Mounting bracket, 4-40 UNC PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

PLUG CONNECTOR



ORDER DATA

SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
15	Mounting bracket/PCB clip	15-002243
26	Mounting bracket/PCB clip	15-002253
44	Mounting bracket/PCB clip	15-002263
62	Mounting bracket/PCB clip	15-002273
78	Mounting bracket/PCB clip	15-002283

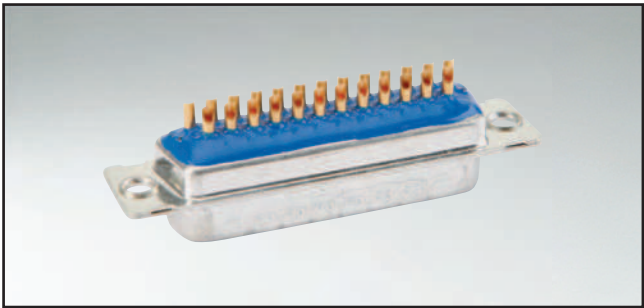
PLUG CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
15	Mounting bracket/PCB clip	15-002193
26	Mounting bracket/PCB clip	15-002203
44	Mounting bracket/PCB clip	15-002213
62	Mounting bracket/PCB clip	15-002223
78	Mounting bracket/PCB clip	15-002233

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness
For different PCB thickness please contact factory.

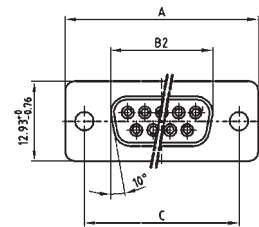
D-SUB STANDARD – IP67

Solder cup – Precision machined contacts – For hood Assembly –
For wire size AWG 20

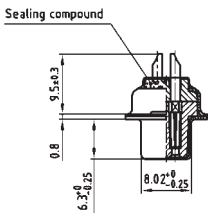
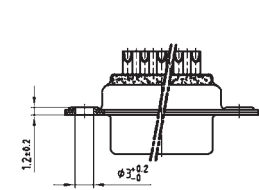


RoHS compliant

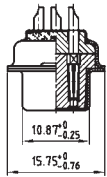
SOCKET CONNECTOR



No. of pos.	A +0.76	B2 -0.25	C
09	31.19	16.46	25.00 +0.12 -0.13
15	39.52	24.79	33.30 +0.15 -0.10
25	53.42	38.50	47.04 +0.13
37	69.70	54.96	63.50 +0.13
50	67.31	52.55	61.10 +0.14 -0.11



9-37 pos.

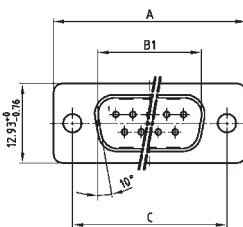


50 pos.

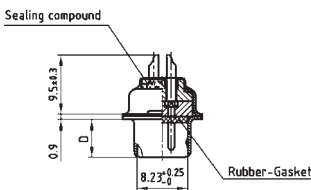
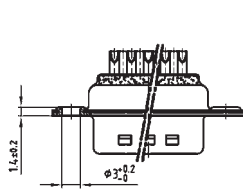
DESCRIPTION

- Suitable for wire size **AWG 20**
- Mounting style:
with through-hole, Ø .118" / 3.0 mm
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)

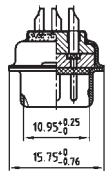
PLUG CONNECTOR



No. of pos.	A +0.76	B1 +0.25	C
09	31.19	16.79	25.00 +0.12 -0.13
15	39.52	25.12	33.30 +0.15 -0.10
25	53.42	38.84	47.04 +0.13
37	69.70	55.30	63.50 +0.13
50	67.31	52.68	61.10 +0.14 -0.11



9-37 pos.



50 pos.

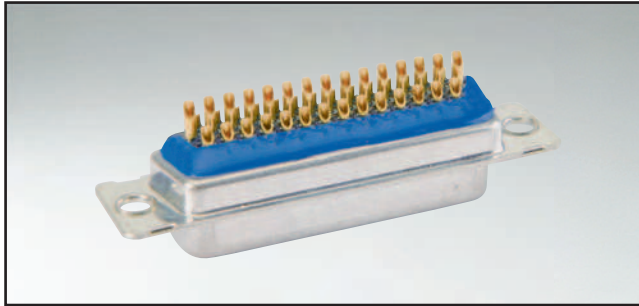
ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	Through-hole	4 STD09SAM99A10 X
15	Through-hole	4 STD15SAM99A10 X
25	Through-hole	4 STD25SAM99A10 X
37	Through-hole	4 STD37SAM99A10 X
50	Through-hole	4 STD50SAM99A10 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	Through-hole	4 STD09PAM99A10 X
15	Through-hole	4 STD15PAM99A10 X
25	Through-hole	4 STD25PAM99A10 X
37	Through-hole	4 STD37PAM99A10 X
50	Through-hole	4 STD50PAM99A10 X

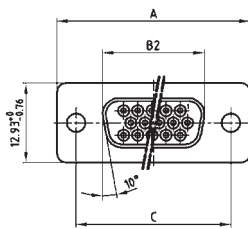
D-SUB HIGH DENSITY – IP67

Solder cup – Precision machined contacts – For hood Assembly –
For wire size AWG 22

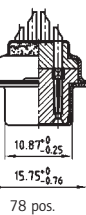
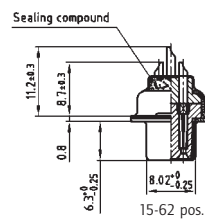
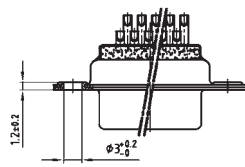


RoHS compliant

SOCKET CONNECTOR



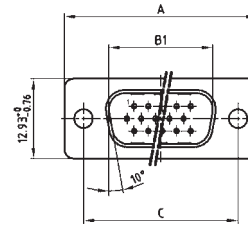
No. of pos.	A +0.76	B2 -0.25	C
15	31.19	16.46	25.00 ^{+0.12} / _{-0.13}
26	39.52	24.79	33.30 ^{+0.15} / _{-0.10}
44	53.42	38.50	47.04 ^{+0.13} / _{-0.10}
62	69.70	54.96	63.50 ^{+0.13} / _{-0.10}
78	67.31	52.55	61.10 ^{+0.14} / _{-0.11}



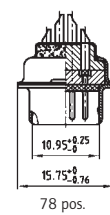
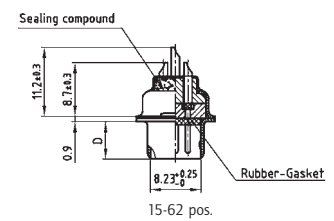
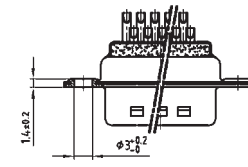
DESCRIPTION

- Suitable for wire size **AWG 22**
- Mounting style:
with through-hole, Ø .118" / 3.0 mm
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)

PLUG CONNECTOR



No. of pos.	A +0.76	B1 +0.25	C	D1 -0.30
15	31.19	16.79	25.00 ^{+0.12} / _{-0.13}	6.12
26	39.52	25.12	33.30 ^{+0.15} / _{-0.10}	6.12
44	53.42	38.84	47.04 ^{+0.13} / _{-0.10}	5.99
62	69.70	55.30	63.50 ^{+0.13} / _{-0.10}	5.99
78	37.31	62.68	61.10 ^{+0.14} / _{-0.11}	5.99



ORDER DATA

SOCKET CONNECTOR

No. of pos.	Mounting style	Part Number
15	Through-hole	4 HDD15SAM99A10 X
26	Through-hole	4 HDD26SAM99A10 X
44	Through-hole	4 HDD44SAM99A10 X
62	Through-hole	4 HDD62SAM99A10 X
78	Through-hole	4 HDD78SAM99A10 X

PLUG CONNECTOR

No. of pos.	Mounting style	Part Number
15	Through-hole	4 HDD15PAM99A10 X
26	Through-hole	4 HDD26PAM99A10 X
44	Through-hole	4 HDD44PAM99A10 X
62	Through-hole	4 HDD62PAM99A10 X
78	Through-hole	4 HDD78PAM99A10 X

SECTION 2

IP67 FILTER D-SUB CONNECTORS

Many applications in harsh, industrial environments place additional demands on the interface.

The filtered, water resistant connector system developed by CONEC is well suited for applications that require increased EMC protection under ambient conditions where there is risk of dust and moisture.

The system includes D-Subminiature Connectors in standard and high-density designs.

This connector system designed to IEC 60529 with an IP67 rating. In order to ensure these requirements are met, special sealing measures have been taken for these connectors and their sealing frames. Special water resistant accessories and protective caps supplement the product line.

System details:

- Metal frame with O-ring for sealing
- Seal in the connector plug- water cannot penetrate into the housing
- Available for front side or rear side panel of the enclosure
- Connector without frame for cable housing
- Special threaded parts, 4-40 UNC and M 3
- Plastic materials comply with UL 94 V0
- Machined precision contacts for heavy duty usage
- Various gold plating options available
- All conventional contact termination types available
- Special accessories, e.g. water resistant hoods and sealing caps

The following pages indicate examples from our extensive product line. For additional and detail information please contact us direct or visit us at www.conec.com.



TECHNICAL DATA

Materials	Filter D-SUB Standard 9, 15, 25, 37 and 50 position	Filter D-SUB High Density 15, 26, 44, and 62 position
Insulator	Polyester GF UL94 V-0	
Contacts	CU alloy	
Contact plating	Gold plated over nickel, solder area tin plated	
Shell	Brass tin plated (standard) / Stainless steel on request	
Mechanical and electrical characteristics		
Dielectric with standing voltage	Standard 424 VDC	Standard 300 VDC
Working voltage	100 VDC Depending on isolation coordination (refer to DIN VDE 0110/IEC 664-1)	100 VDC
Contact resistance	Max. 10 mΩ prior to stressing, Δ R max. 10 mΩ after stressing per DIN 41652, Part 2	
Insulation resistance	≥ 1GΩ	
Current rating	7.5 A (UL) / 5 A (CSA, VDE)	3 A (UL, VDE) / 2.5 A (CSA)
Voltage surge 10/700μs	Standard 300 V	Standard 300 V
Temperature working range	-25°C to +105°C	-25°C to +85°C
Capacitor values For other capacitance values please contact the factory.	180 pF ± 20% tolerance 370 pF ± 20% tolerance 830 pF ± 20% tolerance 1300 pF ± 20% tolerance	180 pF ± 20% tolerance 370 pF ± 20% tolerance 830 pF ± 20% tolerance
Mating and unmating forces	9 pos. ≤ 30 N 15 pos. ≤ 50 N 25 pos. ≤ 83 N 37 pos. ≤ 123 N 50 pos. ≤ 167 N	15 pos. ≤ 50 N 26 pos. ≤ 84 N 44 pos. ≤ 120 N 62 pos. ≤ 170 N
Quality class	A = Quality class 3 = 50 mating cycles B = Quality class 2 = 200 mating cycles C = Quality class 1 = 500 mating cycles	
Degree of protection	Requirement according to IEC 60529 – IP67	

Technical alterations are subject to change without notice

D-SUB STANDARD – IP67

Plug connector – Solder cup – Precision machined contacts – For wire size AWG 26

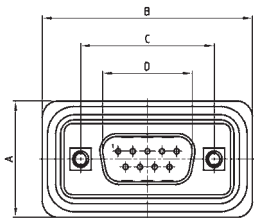


RoHS compliant – CSA listed, File No.: LR 115000-1 –UL listed, File No.: E 202784

DESCRIPTION

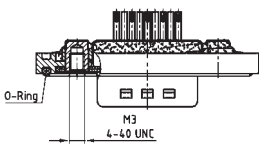
- Suitable for wire size **AWG 26**
- Mounting style:
with 4-40 UNC or M3 threaded insert
- incl. hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel on request)
- Nickel plated die-cast frame
(Black plastic frame on request)

PRODUCT DRAWING

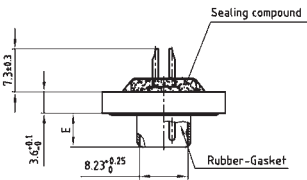


No. of pos.	A +0.20	B +0.20	C	D +0.25	E -0.30
09	21.10	39.40	25.00 ^{+0.12} / _{-0.13}	16.79	5.82
15	21.10	47.70	33.30 ^{+0.15} / _{-0.10}	25.12	5.82
25	21.10	61.40	47.04 ^{+0.13} / _{-0.13}	38.84	5.69
37	21.10	77.90	63.50 ^{+0.13} / _{-0.13}	55.30	5.69
50	23.90	75.50	61.10 ^{+0.14} / _{-0.11}	52.68	5.69

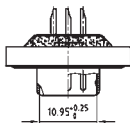
Mounting style: Threaded insert



9-37 pos.



50 pos.



ORDER DATA

Capacitance 180 pF					
PLUG CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style M3	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	6 STF09PAM01 B20 X	09	Threaded insert	6 STF09PAM01 B30 X
15	Threaded insert	6 STF15PAM01 B20 X	15	Threaded insert	6 STF15PAM01 B30 X
25	Threaded insert	6 STF25PAM01 B20 X	25	Threaded insert	6 STF25PAM01 B30 X
37	Threaded insert	6 STF37PAM01 B20 X	37	Threaded insert	6 STF37PAM01 B30 X
50	Threaded insert	6 STF50PAM01 B20 X	50	Threaded insert	6 STF50PAM01 B30 X

C-FILTER D-SUB STANDARD – IP67

Plug connector – Solder cup – Precision machined contacts – For wire size AWG 26

ORDER DATA

Capacitance 370 pF

PLUG CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style M3	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	6 STF09PAM03B20 X	09	Threaded insert	6 STF09PAM03B30 X
15	Threaded insert	6 STF15PAM03B20 X	15	Threaded insert	6 STF15PAM03B30 X
25	Threaded insert	6 STF25PAM03B20 X	25	Threaded insert	6 STF25PAM03B30 X
37	Threaded insert	6 STF37PAM03B20 X	37	Threaded insert	6 STF37PAM03B30 X
50	Threaded insert	6 STF50PAM03B20 X	50	Threaded insert	6 STF50PAM03B30 X

Capacitance 830 pF

PLUG CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style M3	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	6 STF09PAM04B20 X	09	Threaded insert	6 STF09PAM04B30 X
15	Threaded insert	6 STF15PAM04B20 X	15	Threaded insert	6 STF15PAM04B30 X
25	Threaded insert	6 STF25PAM04B20 X	25	Threaded insert	6 STF25PAM04B30 X
37	Threaded insert	6 STF37PAM04B20 X	37	Threaded insert	6 STF37PAM04B30 X
50	Threaded insert	6 STF50PAM04B20 X	50	Threaded insert	6 STF50PAM04B30 X

Capacitance 1300 pF

PLUG CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style M3	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded insert	6 STF09PAM05B20 X	09	Threaded insert	6 STF09PAM05B30 X
15	Threaded insert	6 STF15PAM05B20 X	15	Threaded insert	6 STF15PAM05B30 X
25	Threaded insert	6 STF25PAM05B20 X	25	Threaded insert	6 STF25PAM05B30 X
37	Threaded insert	6 STF37PAM05B20 X	37	Threaded insert	6 STF37PAM05B30 X
50	Threaded insert	6 STF50PAM05B20 X	50	Threaded insert	6 STF50PAM05B30 X