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## SECTION 2

# IP67 D-SUB CONNECTORS

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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 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
- Basic connector dimensions - without frame - in compliance with DIN 41652 / MIL-C-24308
- All conventional contact termination types available
- Various accessories, including waterproof hoods and protective caps

# PART NUMBER CREATOR

6 S T D 0 9 S A M 9 9 B 3 O X

**Product Line**

- 6 = Shell brass tin plated with die-cast frame
- 4\* = Shell brass tin plated with plastic frame or without frame
- 8\* = Shell stainless steel with or without die-cast frame
- 9\* = Shell stainless steel with plastic frame
- \* on request

**Variations**

- STD = D-SUBMINIATURE, Standard
- HDD = D-SUBMINIATURE, High Density

**Position for STD**

- 09 = 9 pos.
- 15 = 15 pos.
- 25 = 25 pos.
- 37 = 37 pos.
- 50 = 50 pos.

**Position for HDD**

- 15 = 15 pos.
- 26 = 26 pos.
- 44 = 44 pos.
- 62 = 62 pos.
- 78 = 78 pos.

**Contact type**

- P = Plug connector
- S = Socket connector
- A = Adapter

**Quality class for contacts**

- A = Quality class 3 = 50 mating cycles
- B = Quality class 2 = 200 mating cycles
- C = Quality class 1 = 500 mating cycles

**Termination**

- M = Solder cup
- R = Solder pin, straight
- T = Solder pin, angled, .189"/4.80 mm
- U = Solder pin, angled, .276"/7.00 mm
- Z = Solder pin, angled, .465"/11.8 mm
- Y = Solder pin, angled, .220"/5.60 mm (high density design only)
- A = Adapter

**Capacitance**

- 99 = Without filter for STD and HDD

**Mounting style**

- A1 = Riveted for wire assembly shell without sealing frame
- B2 = M3 threaded insert
- B3 = 4-40 UNC threaded insert
- B4 = M3 front spacer
- B5 = 4-40 UNC front spacer
- B7 = 4-40 UNC front spacer and rear mounting stud
- B8 = M3 threaded lock
- B9 = 4-40 UNC front spacer
- E1 = M3 threaded rear spacer with PCB clip .063"/1.60 mm
- E2 = Threaded rear spacer with PCB clip, PCB 1,60 mm
- S1 = Metal bracket, M3 threaded insert
- S2 = Metal bracket, 4-40 UNC threaded insert
- S3 = Metal bracket, M3 threaded insert and PCB clip
- S4 = Metal bracket, 4-40 UNC threaded insert and PCB clip
- R1 = Metal bracket, M3 threaded insert
- R2 = Metal bracket, 4-40 UNC threaded insert
- R3 = Metal bracket, M3 threaded insert and PCB clip
- R4 = Metal bracket, 4-40 UNC threaded insert and PCB clip

- OX = Standard

# 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 ≈   60 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.

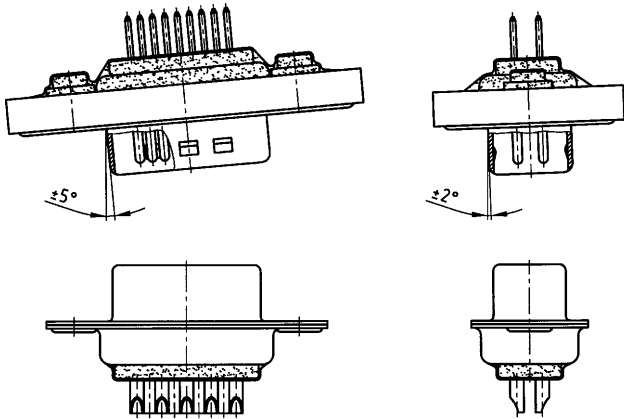
This system, described in IEC 60529, was developed to represent standard values for respective protection:

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

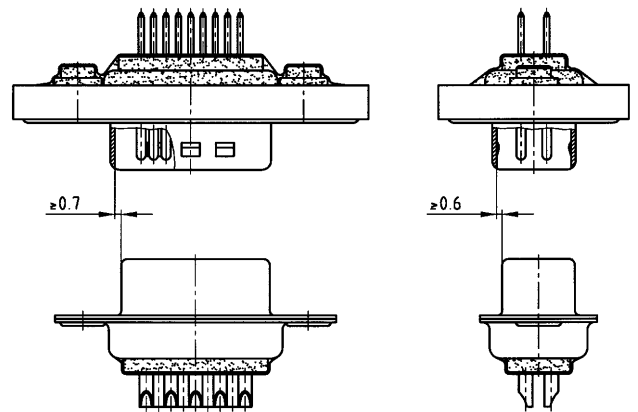
The first digit describes the level of protection for life, contacting objects and the intrusion of foreign bodies. The second digit describes the level of protection against the ingress of liquids. The larger the first and second digits are, the greater afforded protection is, e.g. IP55 must also meet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

# MATING CONDITIONS

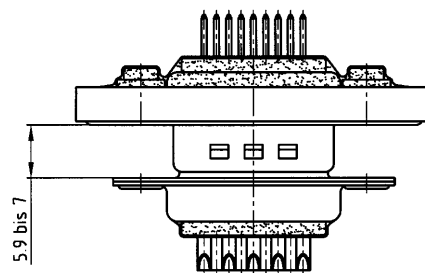
Float mount tolerance guide



Rigid mount tolerance guide



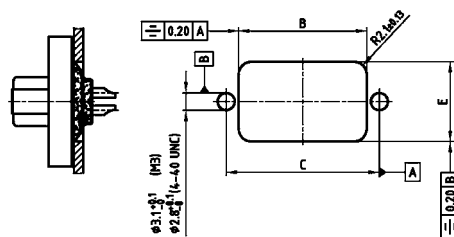
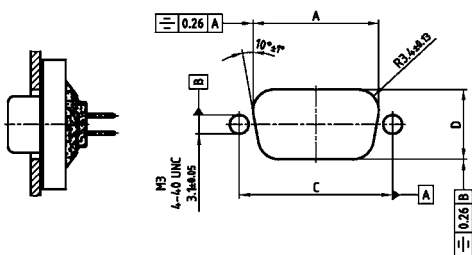
Rigid mount vertical to tolerance guide



## PANEL CUT-OUT

Rear panel mounting IP67 D-SUB Connectors

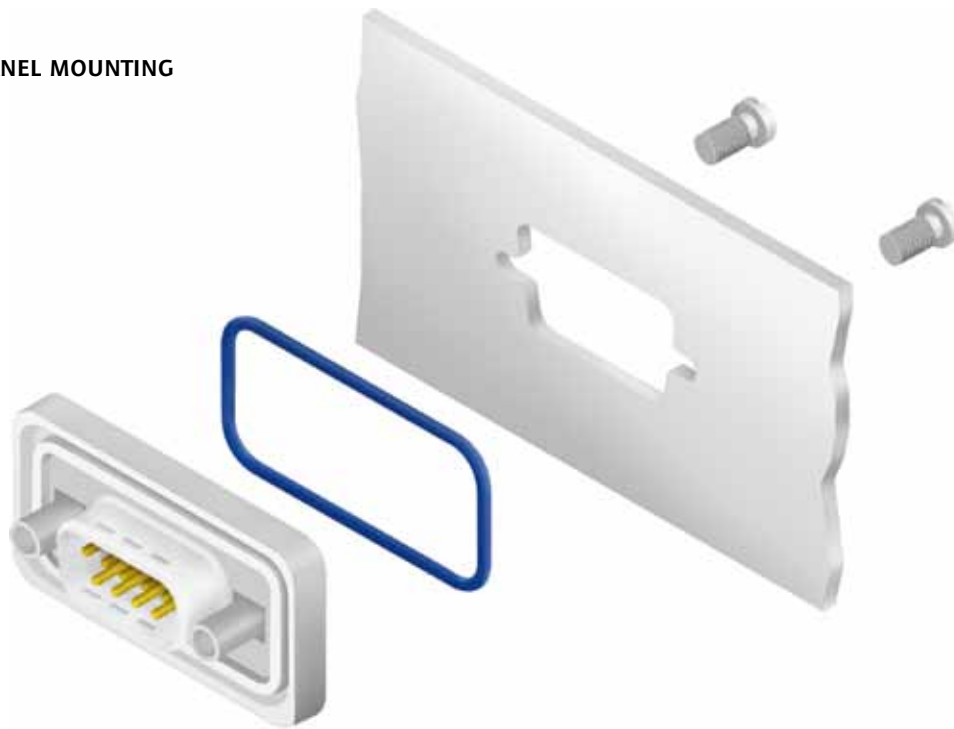
Front panel mounting IP67 D-SUB Connectors



Shell size	A $\pm 0.1$	B $\pm 0.1$	C $\pm 0.1$	D $\pm 0.1$	E $\pm 0.1$
1	20.50	20.90	25.00	11.40	13.00
2	28.80	29.20	33.30	11.40	13.00
3	42.50	42.90	47.04	11.40	13.00
4	59.10	59.40	63.50	11.40	13.00
5	56.30	57.00	61.10	14.10	15.80

## PANEL MOUNTING

### FRONT PANEL MOUNTING



### REAR PANEL MOUNTING

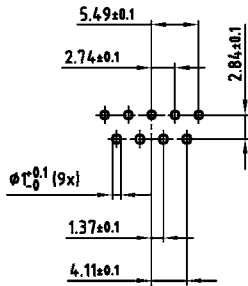


The hex bolts illustrated here (4-40 UNC or M3 threads) are included in the delivery complement of every connector with a sealing frame. The length of this spacer has been selected to accommodate a panel thickness of .063"/1.6 mm such that it does not extend beyond the plug-in height. Furthermore, the hex bolts outside threads are shorter than standard hex bolts. Material: stainless steel.

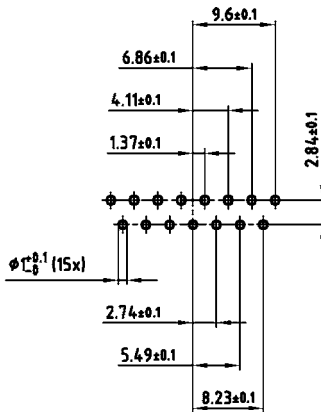
# PCB LAYOUT, D-SUB STANDARD

Solder pin, straight – without rear spacer PCB clip – Plug and Socket connector

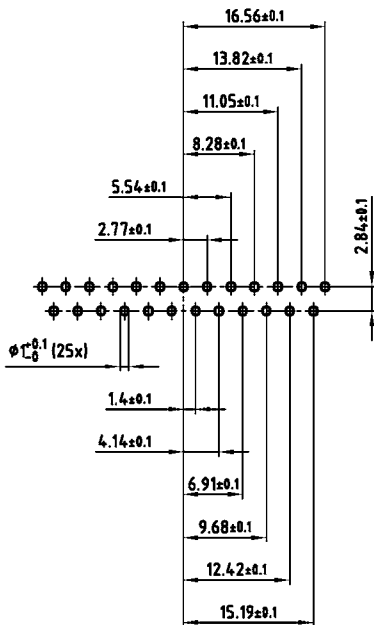
9 POS.



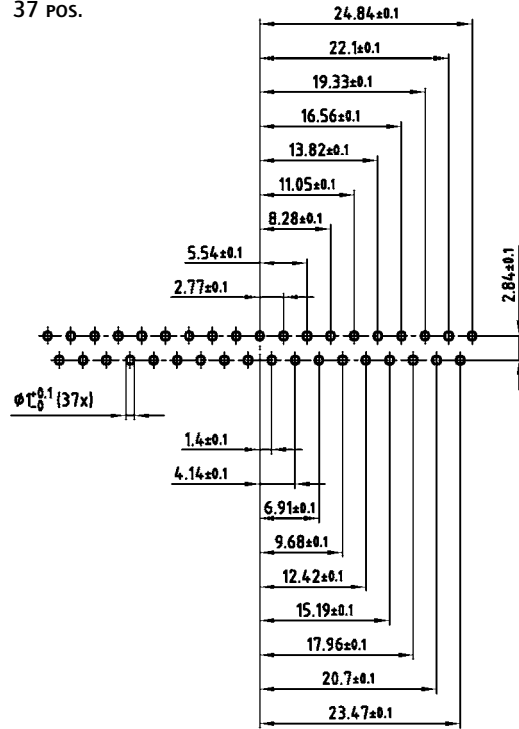
15 POS.



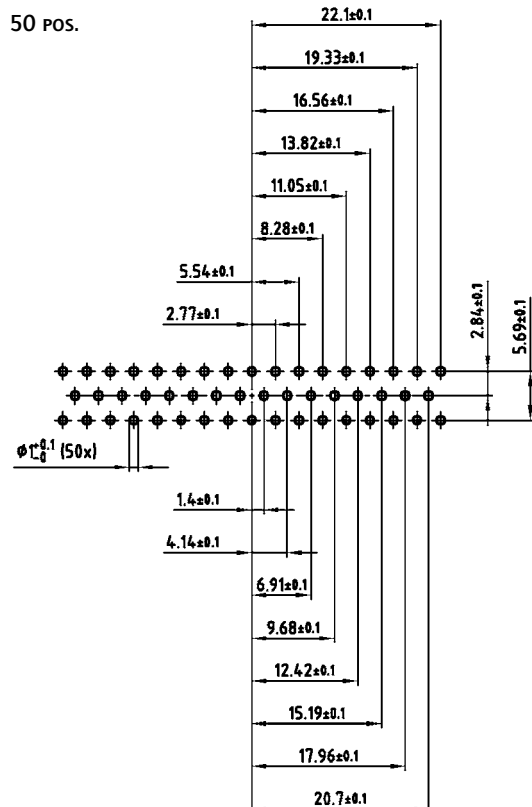
25 POS.



37 POS.



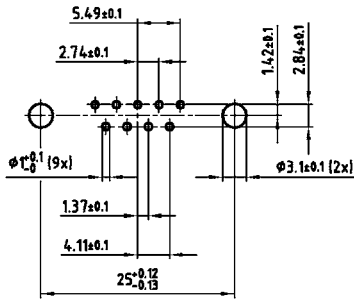
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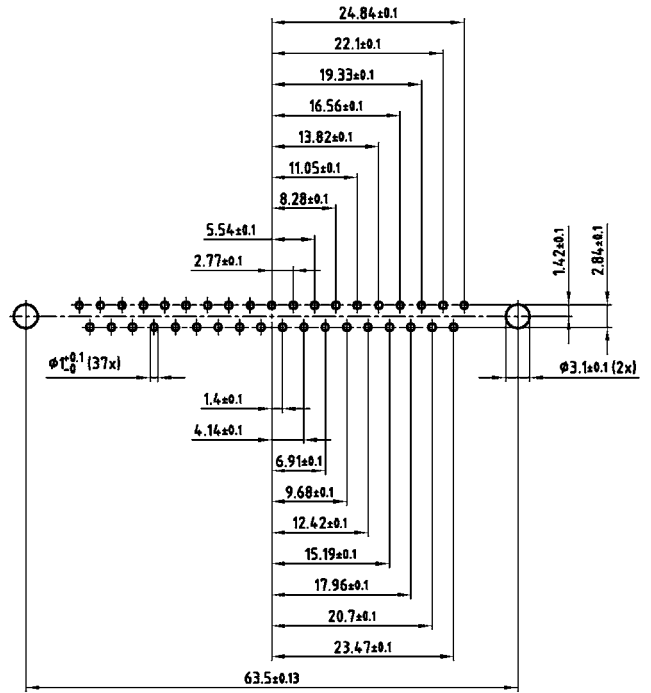
# PCB LAYOUT, D-SUB STANDARD

Solder pin, straight – With rear spacer PCB clip – Plug and Socket connector

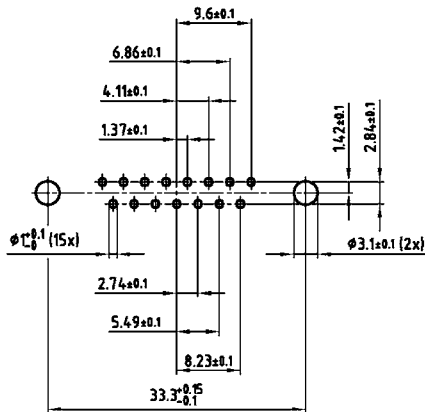
9 POS.



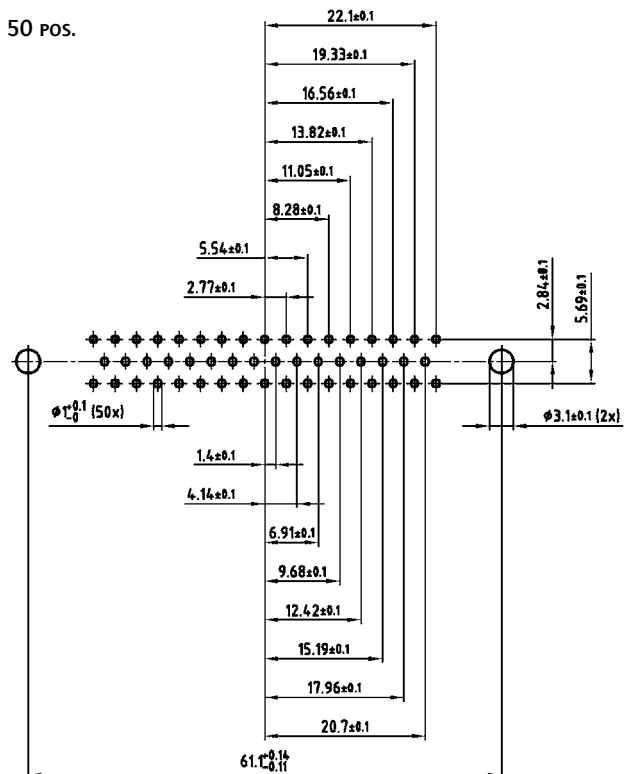
37 POS.



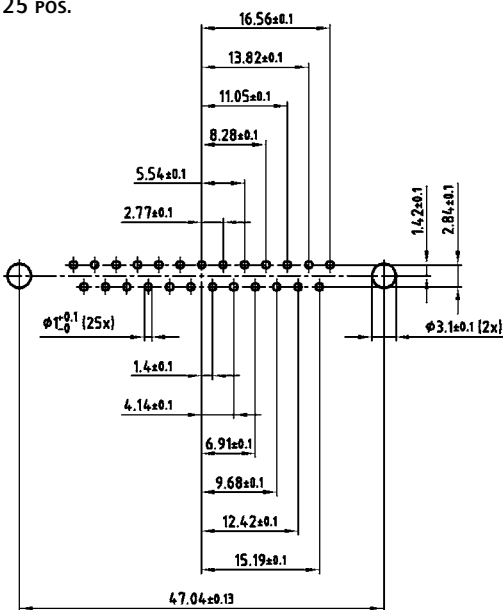
15 POS.



50 POS.



25 POS.

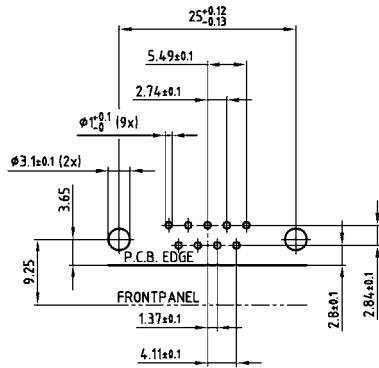


PCB layout Kat1kFUA (View: component side)

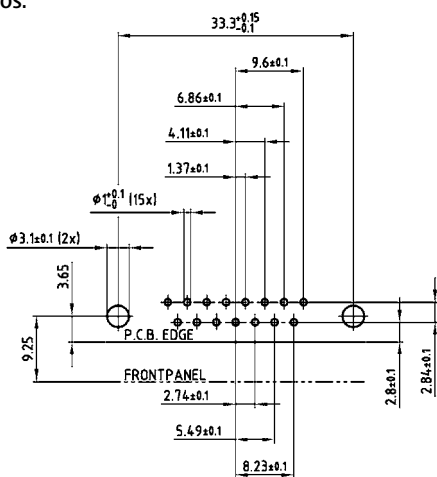
# PCB LAYOUT, D-SUB STANDARD

Solder pin, angled, .189" / 4.8 mm – Plug and Socket connector

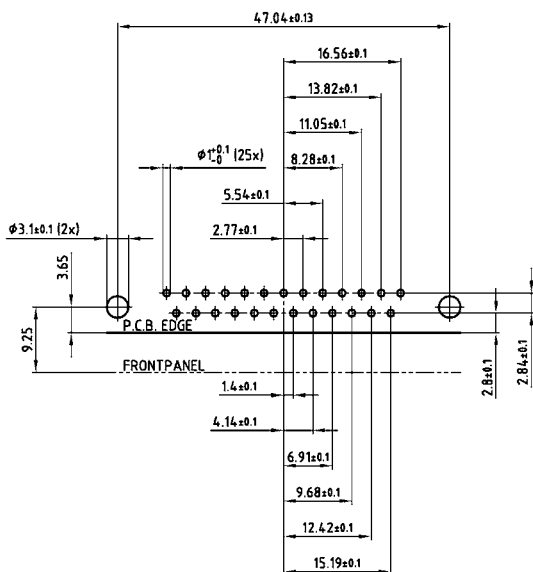
9 POS.



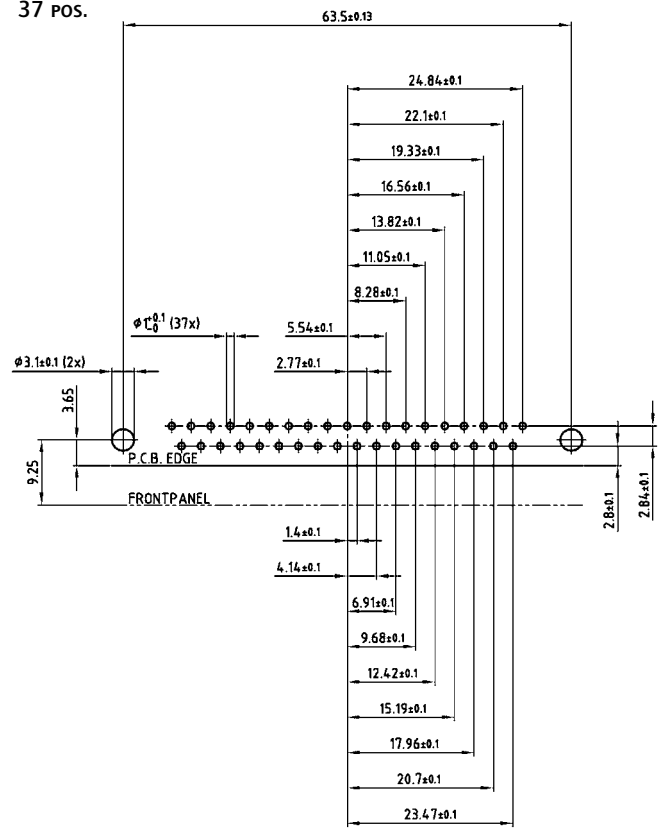
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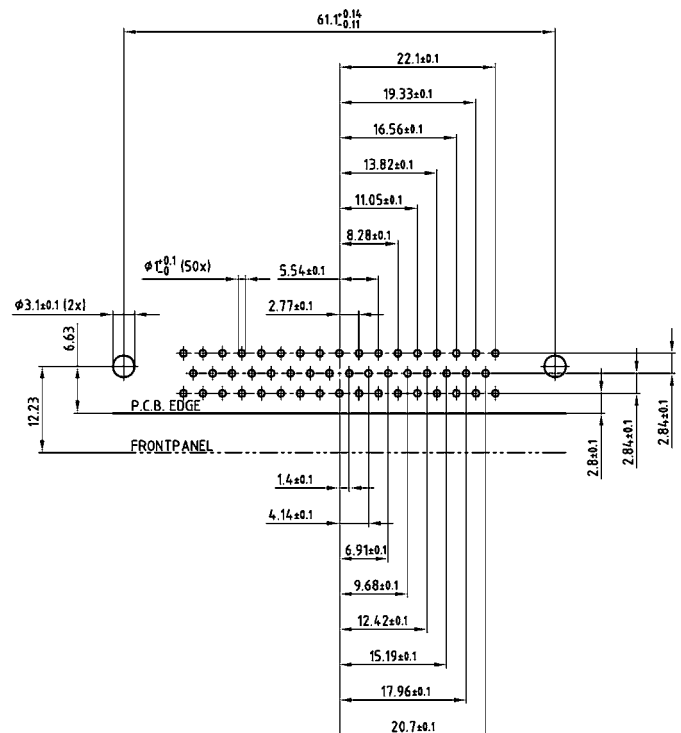
25 POS.



37 POS.



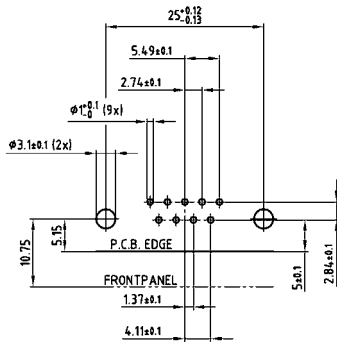
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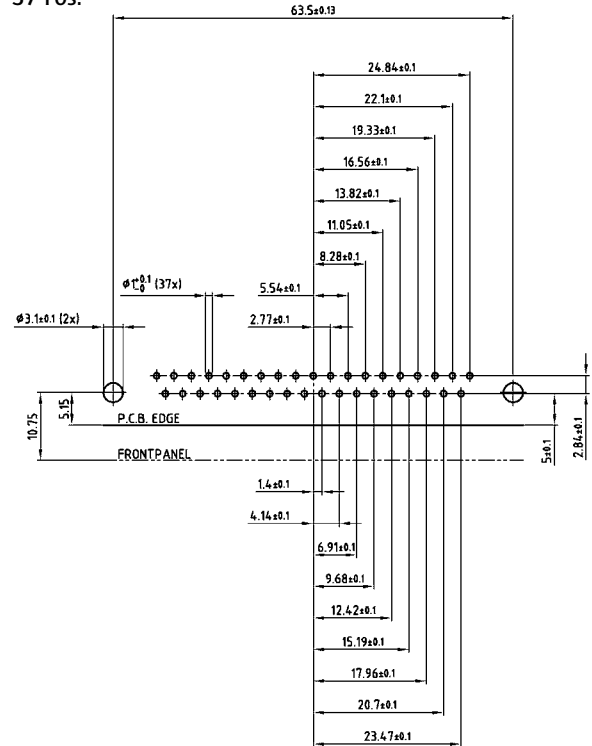
# PCB LAYOUT, D-SUB STANDARD

Solder pin, angled, .276" / 7.0 mm – Plug and Socket connector

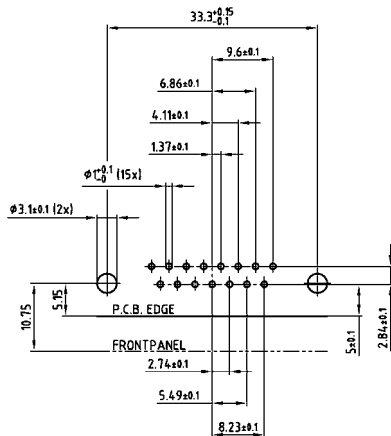
9 pos.



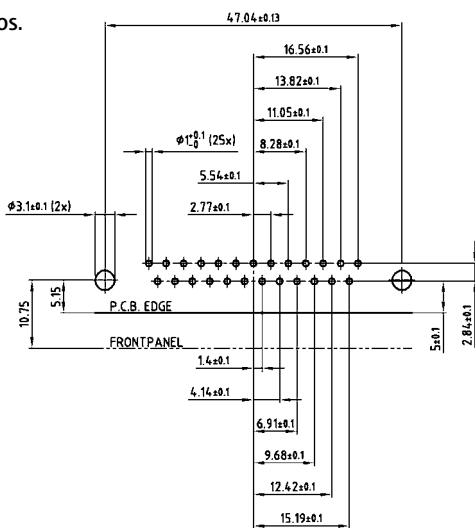
37 pos.



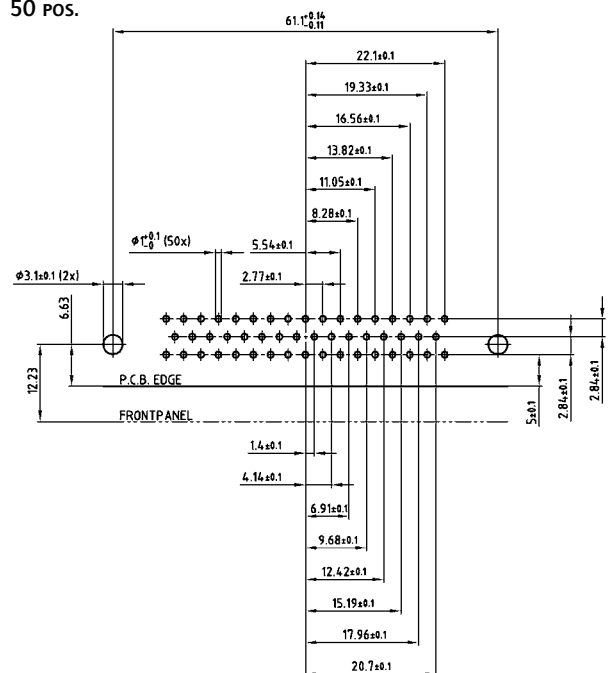
15 pos.



25 pos.



50 pos.

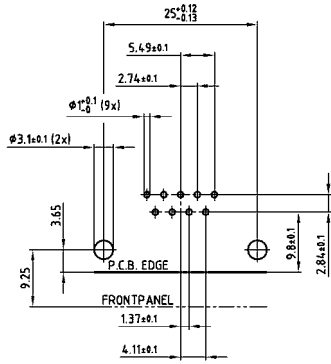


PCB layout Kat1 kgTA (View: component side)

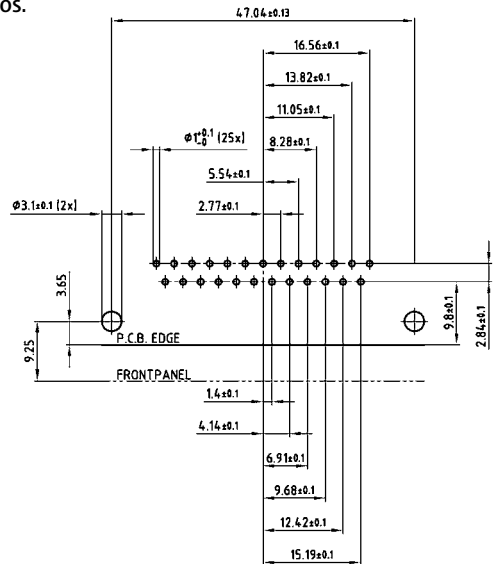
# PCB LAYOUT, D-SUB STANDARD

Solder pin, angled, .464" / 11.8 mm – Plug and Socket connector

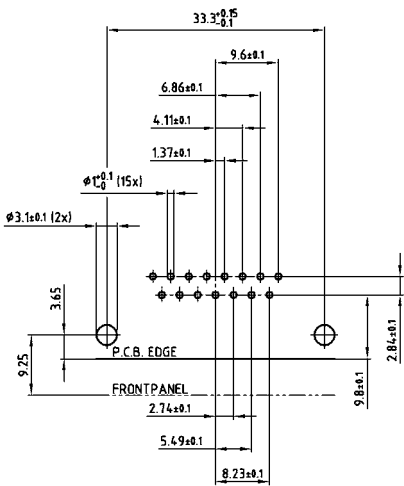
9 POS.



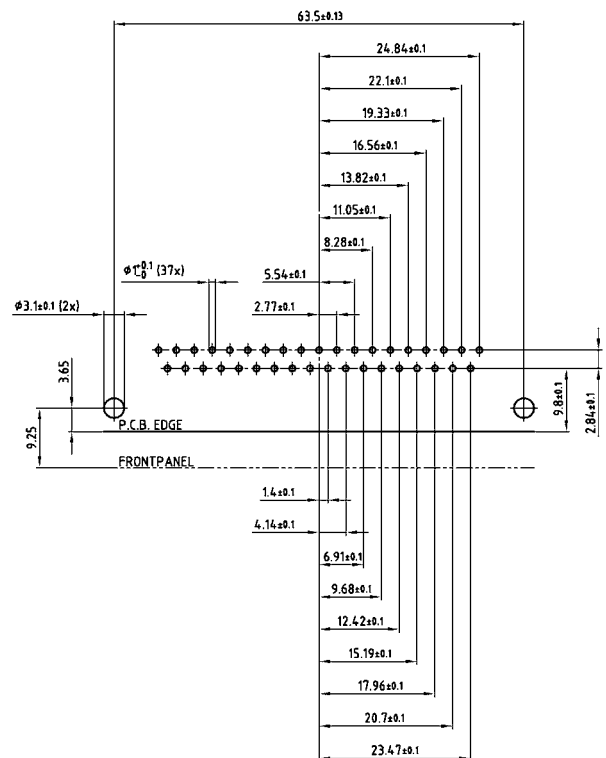
25 POS.



15 POS.



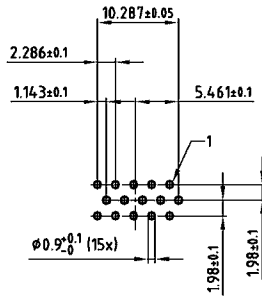
37 POS.



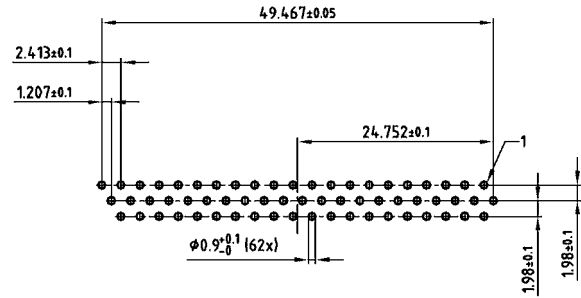
# PCB LAYOUT, D-SUB HIGH DENSITY

Solder pin, straight – Socket connector

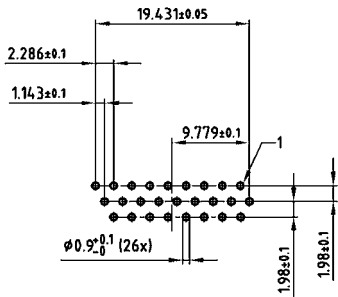
15 POS.



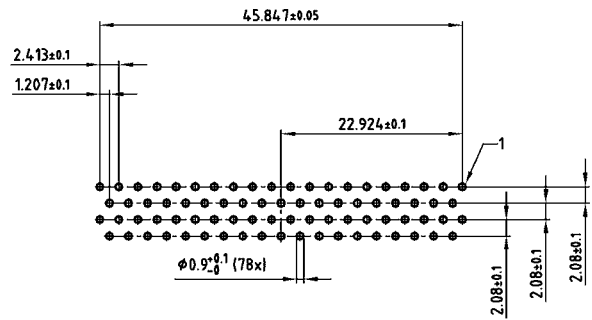
62 POS.



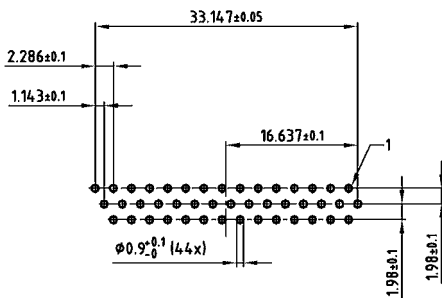
26 POS.



78 POS.



44 POS.

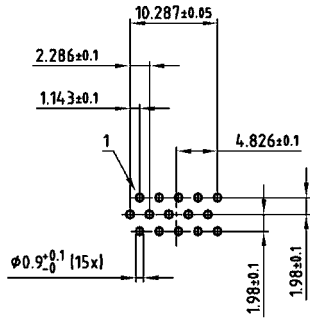




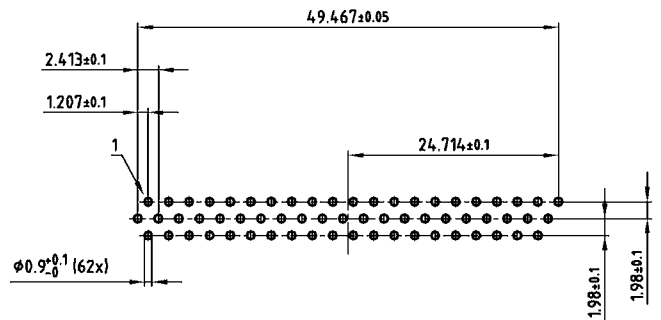
# PCB LAYOUT, D-SUB HIGH DENSITY

Solder pin, straight – Without rear spacer PCB clip – Plug connector

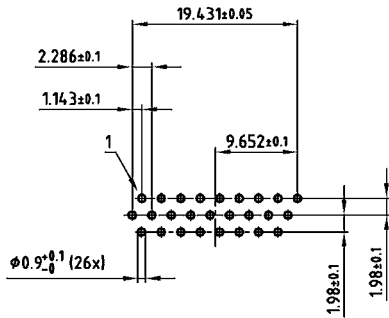
15 POS.



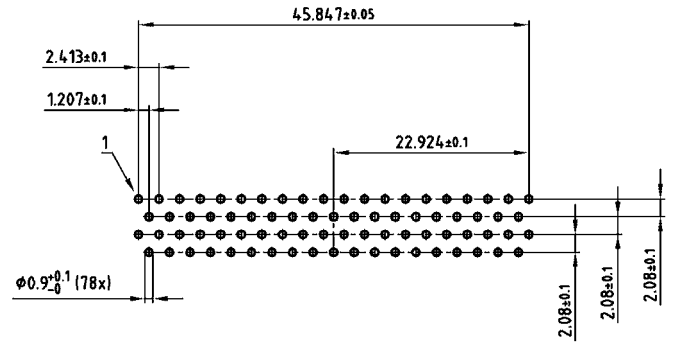
62 POS.



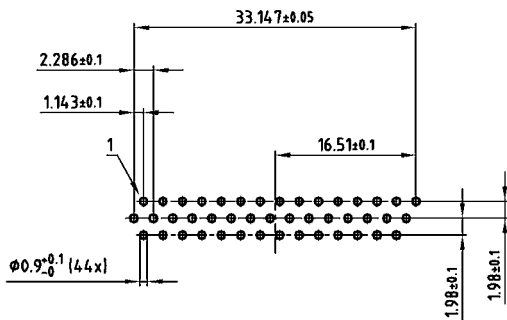
26 POS.



78 POS.



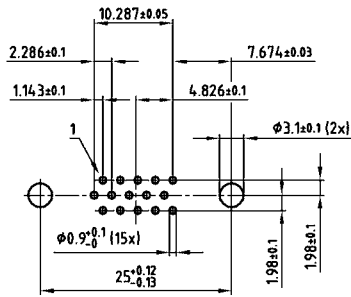
44 POS.



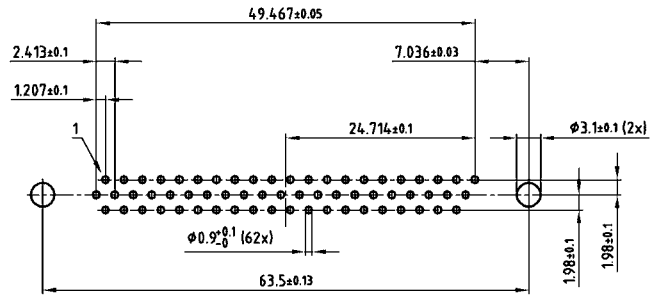
# PCB LAYOUT, D-SUB HIGH DENSITY

Solder pin, straight – With rear spacer PCB clip – Plug connector

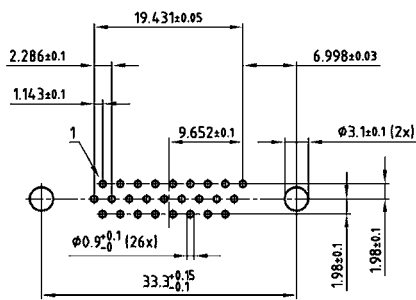
15 pos.



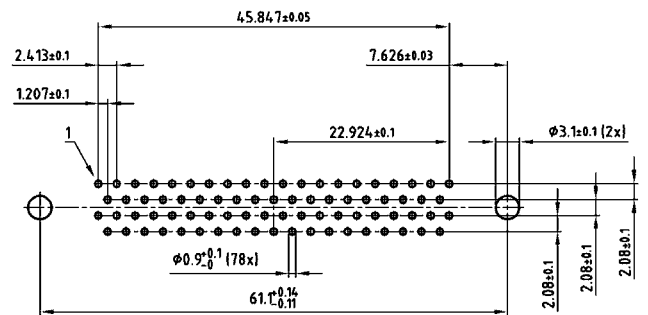
62 pos.



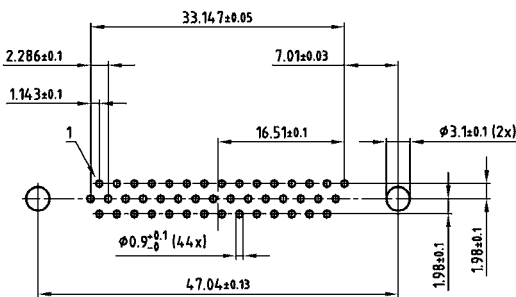
26 pos.



78 pos.



44 pos.

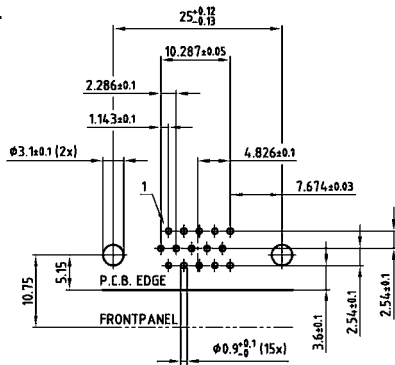




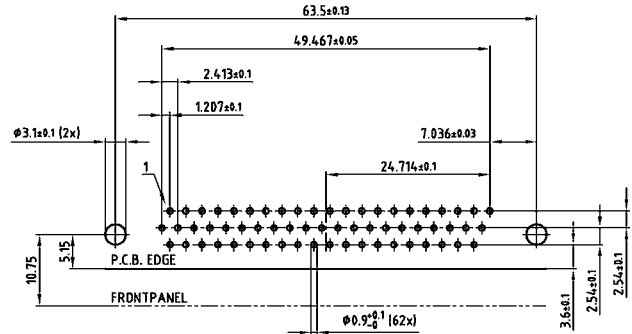
# PCB LAYOUT, D-SUB HIGH DENSITY

Solder pin, angled, .220" / 5.6 mm – Plug connector

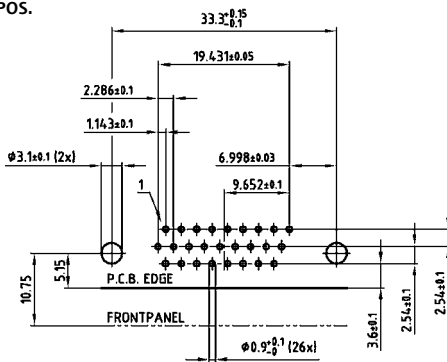
15 POS.



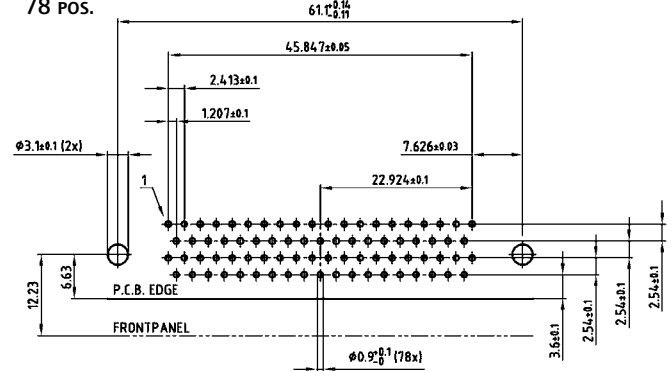
62 POS.



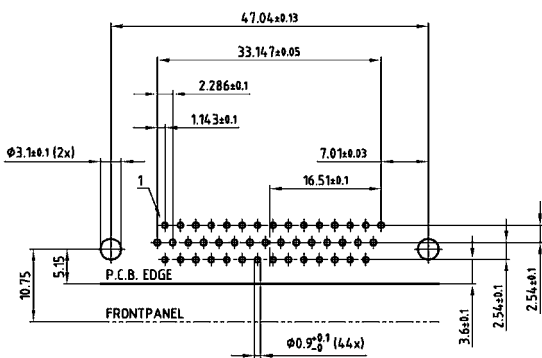
26 POS.



78 POS.



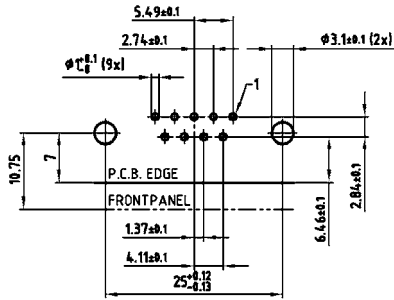
44 POS.



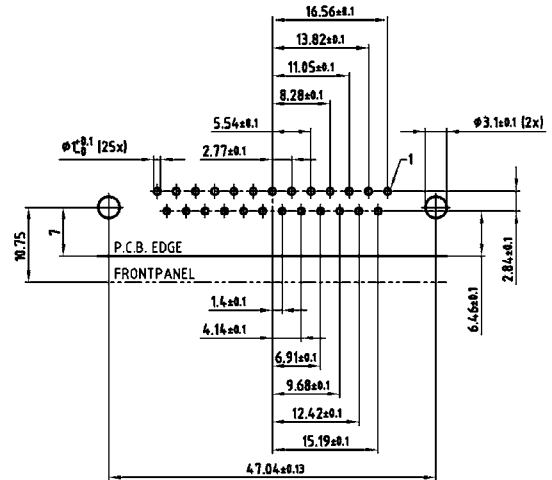
# PCB LAYOUT, D-SUB SOLID BODY

Solder pin, angled, .402" / 10.2 mm – Socket connector

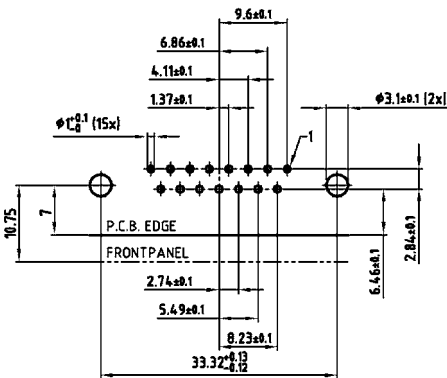
9 POS.



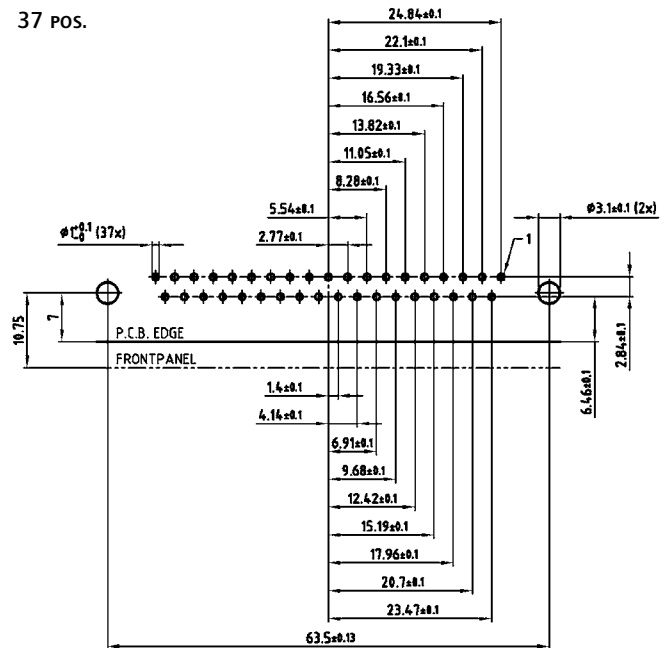
25 POS.



15 POS.



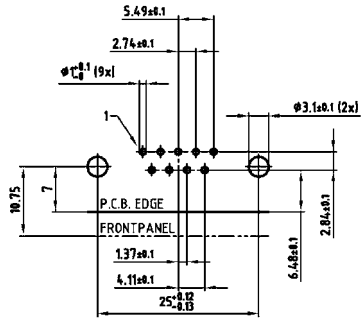
37 POS.



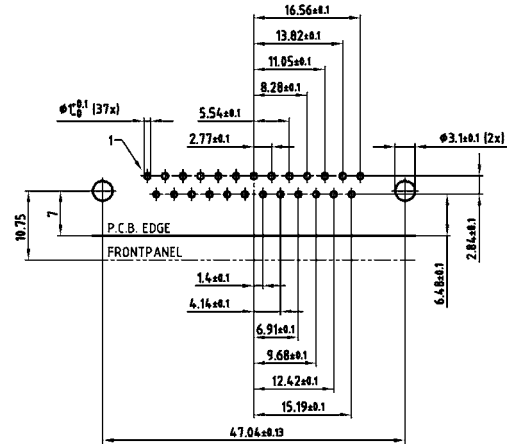
# PCB LAYOUT, D-SUB SOLID BODY

Solder pin, angled, .402" / 10.2 mm – Plug connector

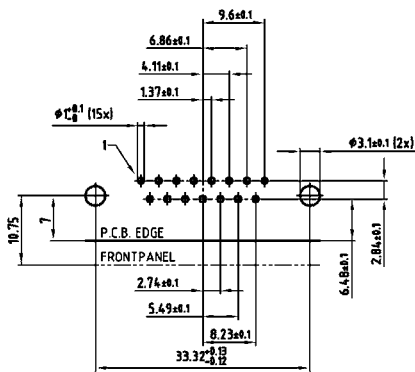
9 pos.



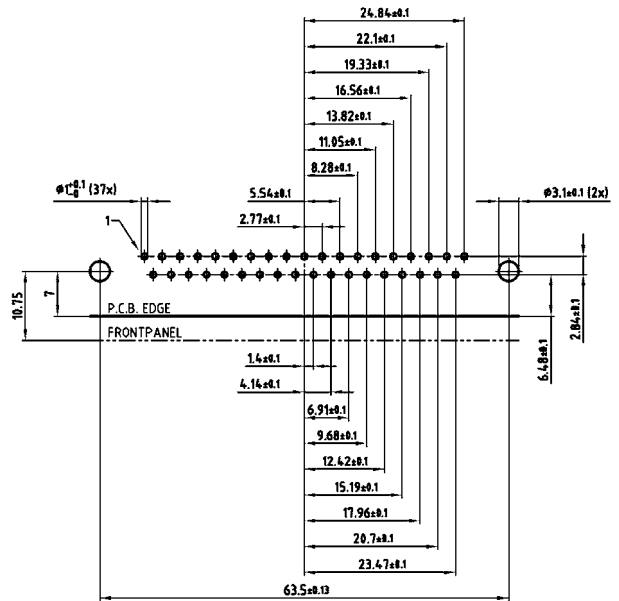
25 pos.



15 pos.



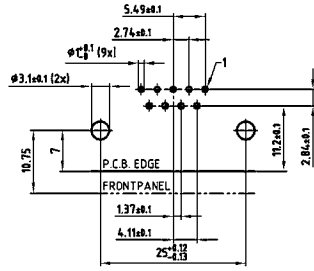
37 pos.



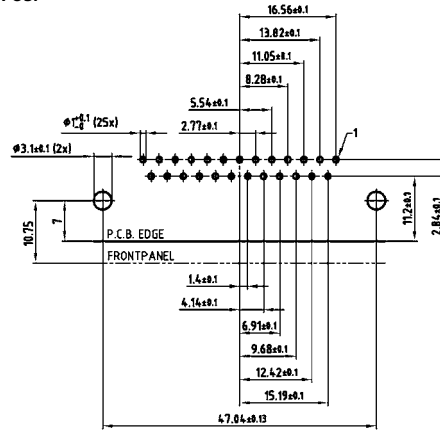
# PCB LAYOUT, D-SUB SOLID BODY

Solder pin, angled, .587" / 14.9 mm – Socket connector

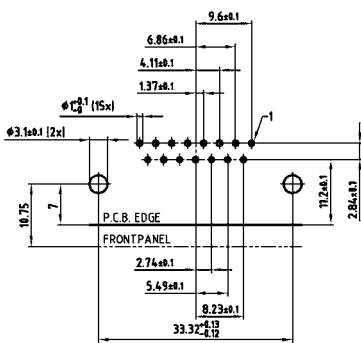
9 POS.



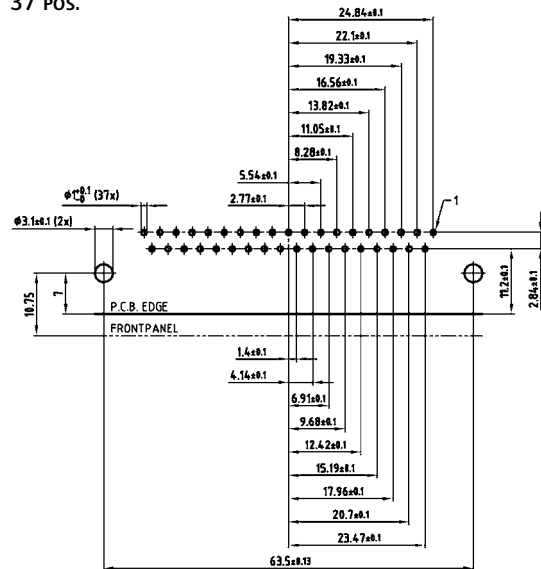
25 POS.



15 POS.



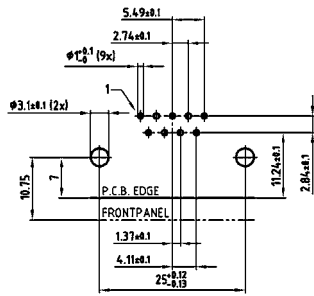
37 POS.



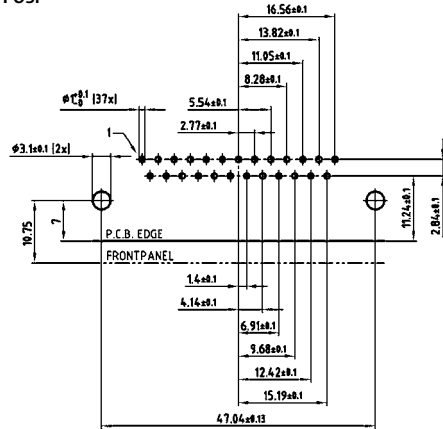
# PCB LAYOUT, D-SUB SOLID BODY

Solder pin, angled, .587" / 14.9 mm – Plug connector

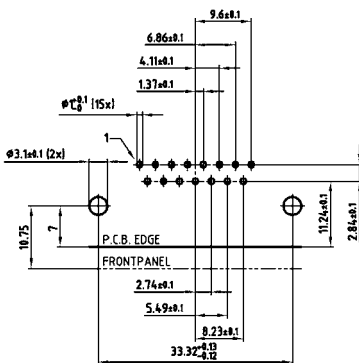
9 POS.



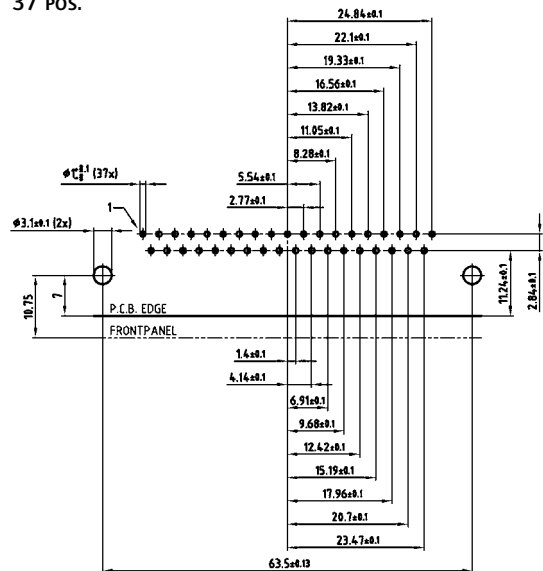
25 POS.



15 POS.



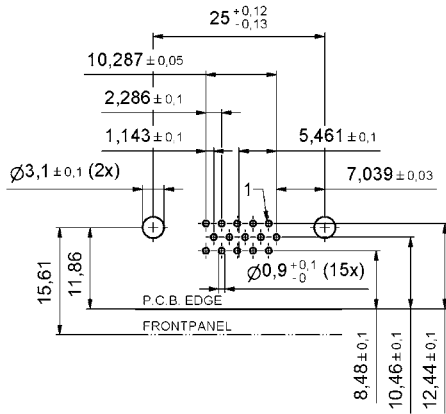
37 POS.



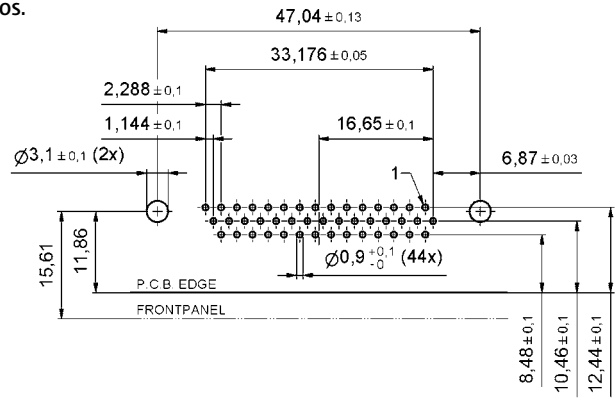
# PCB LAYOUT, D-SUB SOLID BODY – HIGH DENSITY

Solder pin, angled, .484" / 12.3 mm – Socket connector

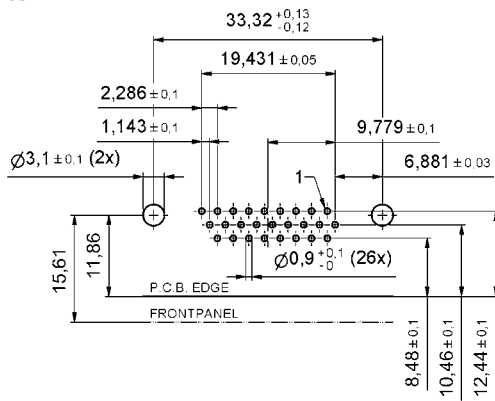
15 POS.



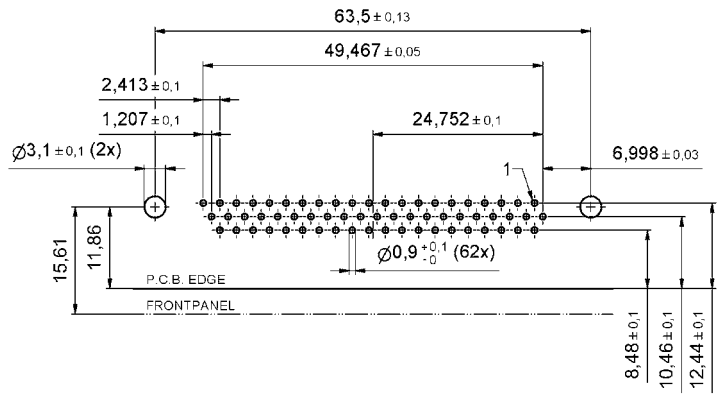
44 POS.



26 POS.



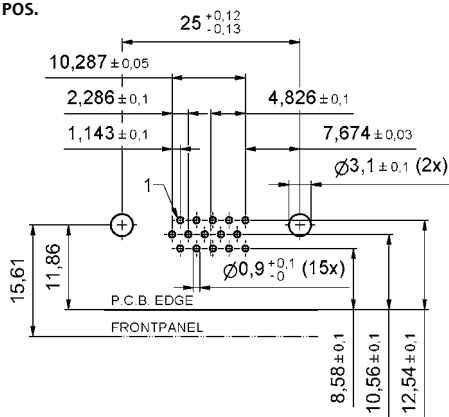
62 POS.



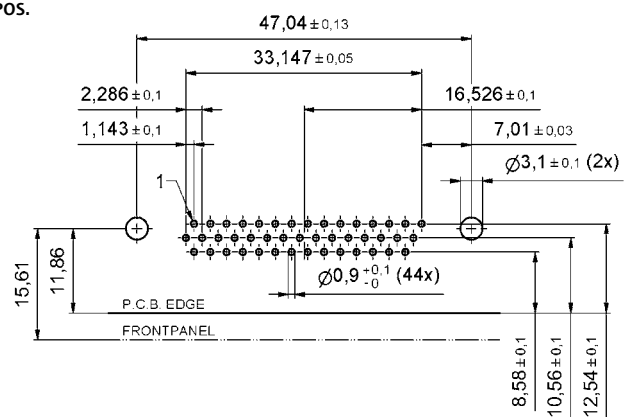
# PCB LAYOUT, D-SUB SOLID BODY – HIGH DENSITY

Solder pin, angled, .484" / 12.3 mm – Plug connector

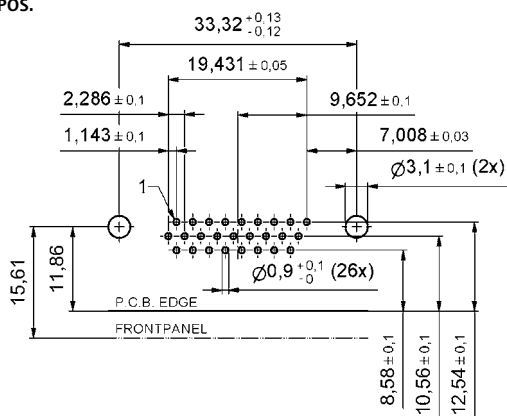
15 Pos.



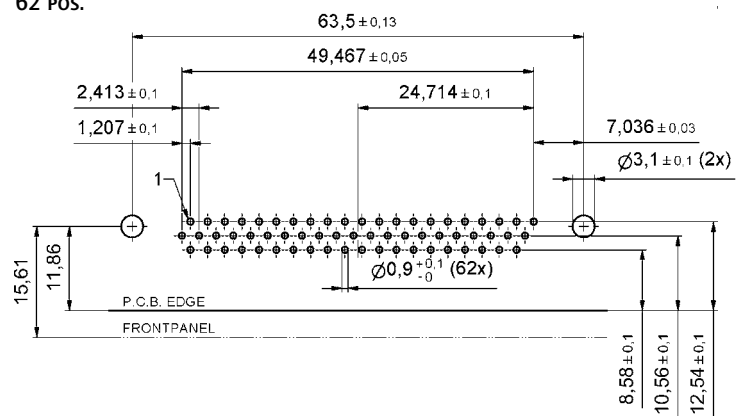
44 Pos.



26 Pos.



62 Pos.



## SOLDER PROFILE

Connector Type	Preheating		Solder terminal dipping parameters	
	max. Temperature	Duration	max. Solder bath Temperature	max. Terminal Immersion Time
Filter D-SUB	100°C	30s	260°C	5s
Combo D-SUB Filter	120°C	120s	260°C	5s
Filter D-SUB Water Resistant	100°C	30s	240°C	5s
Combo D-SUB Water Resistant	120°C	120s	240°C	5s
D-SUB Water Resistant	120°C	120s	240°C	5s
D-SUB Solid Body Type Water Resistant	150°C	180s	265°C	8s
RJ45 Modular Jack Filtered	150°C	180s	265°C	8s
Filter Plates	150°C	180s	265°C	8s

Recommended wave-solder parameters for CONEC connectors.

# CONVERSION TABLE

$\mu\text{m}$ 1/1000 mm	$\mu\text{inch}$ 1/1000 inch	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch
0,10	4	3,30	.130	10,16	.400	19,50	.768	30,90	1.217	49,50	1.949
0,20	8	3,40	.134	10,26	.402	19,70	.776	31,00	1.220	49,90	1.965
0,25	10	3,50	.138	10,36	.406	19,80	.780	31,20	1.228	50,10	1.972
0,30	12	3,60	.142	10,56	.413	19,90	.783	31,50	1.240	50,30	1.980
0,50	20	3,70	.146	10,66	.417	20,00	.787	31,70	1.248	50,50	1.988
0,70	28	3,80	.150	10,76	.421	20,10	.791	32,00	1.260	50,70	1.996
0,75	30	3,81	.150	11,00	.433	20,30	.799	32,20	1.268	50,80	2.000
0,80	32	3,90	.154	11,20	.441	20,32	.800	32,30	1.272	51,40	2.024
1,00	39	4,00	.158	11,40	.449	20,50	.807	32,50	1.280	51,50	2.028
1,27	50	4,10	.161	11,50	.453	21,00	.827	32,80	1.291	52,00	2.047
2,00	79	4,20	.165	11,60	.457	21,10	.831	33,00	1.299	52,30	2.059
2,50	98	4,30	.169	11,90	.469	21,70	.854	33,10	1.303	52,80	2.079
3,00	118	4,30	.169	11,90	.469	21,70	.854	33,10	1.303	52,80	2.079
4,00	157	4,50	.177	12,00	.472	22,00	.866	33,30	1.311	53,00	2.087
5,00	197	4,70	.185	12,20	.480	22,10	.870	33,80	1.331	53,20	2.095
		4,90	.193	12,30	.484	22,20	.874	34,00	1.339	53,80	2.118
<b>mm</b>	<b>inch</b>	5,00	.197	12,40	.488	22,30	.878	34,20	1.346	54,00	2.126
0,10	.004	5,08	.200	12,50	.492	22,40	.882	34,40	1.354	54,20	2.134
0,20	.008	5,10	.201	12,70	.500	22,50	.886	35,00	1.378	54,90	2.161
0,25	.012	5,20	.205	12,90	.508	22,60	.890	35,40	1.394	55,00	2.165
0,35	.014	5,30	.209	13,00	.512	22,80	.898	35,50	1.398	55,40	2.181
0,40	.016	5,40	.213	13,10	.516	22,86	.900	35,56	1.400	55,70	2.193
0,45	.018	5,50	.217	13,20	.520	22,90	.902	35,60	1.402	56,60	2.228
0,50	.020	5,60	.220	13,50	.532	23,00	.906	36,00	1.417	57,40	2.260
0,55	.022	5,70	.224	13,60	.535	23,10	.909	36,50	1.437	57,80	2.276
0,60	.024	5,80	.228	13,70	.539	23,30	.917	36,60	1.441	57,90	2.280
0,64	.025	6,00	.236	13,90	.547	23,50	.925	36,70	1.445	58,42	2.300
0,65	.026	6,10	.240	14,00	.551	24,00	.945	37,00	1.457	59,00	2.323
0,70	.028	6,40	.252	14,30	.563	24,30	.957	37,30	1.469	59,20	2.331
0,75	.030	6,50	.256	14,40	.567	24,60	.969	37,50	1.476	59,80	2.354
0,80	.032	6,60	.260	14,50	.571	24,90	.980	37,60	1.480	59,90	2.358
0,85	.034	6,70	.264	14,70	.579	25,00	.984	37,70	1.484	60,00	2.362
0,90	.035	6,80	.268	14,80	.583	25,10	.998	37,90	1.492	60,96	2.400
1,00	.039	6,90	.272	14,90	.587	25,40	1.000	38,00	1.496	61,10	2.406
1,20	.047	7,00	.276	14,98	.590	25,60	1.008	38,10	1.500	62,00	2.441
1,25	.049	7,10	.280	15,00	.591	25,90	1.020	39,00	1.535	63,00	2.480
1,27	.050	7,20	.283	15,20	.598	26,00	1.024	39,20	1.543	63,50	2.500
1,30	.051	7,40	.291	15,24	.600	26,30	1.035	39,30	1.547	64,00	2.520
1,35	.053	7,50	.295	15,40	.606	26,60	1.047	39,90	1.571	65,00	2.560
1,40	.055	7,60	.299	15,50	.610	26,70	1.051	40,00	1.575	67,00	2.638
1,45	.057	7,62	.300	15,60	.614	27,00	1.063	40,30	1.587	68,00	2.677
1,50	.059	7,70	.303	15,90	.626	27,20	1.071	40,40	1.591	69,00	2.717
1,60	.063	7,80	.307	16,00	.630	27,40	1.079	40,60	1.598	70,00	2.756
1,70	.067	7,98	.314	16,20	.638	27,50	1.093	41,00	1.614	71,00	2.795
1,80	.071	8,00	.315	16,50	.650	27,90	1.098	41,60	1.638	74,00	2.913
1,85	.073	8,18	.318	16,60	.654	27,94	1.100	42,70	1.681	75,00	2.953
1,90	.075	8,20	.323	16,80	.661	28,00	1.102	43,18	1.700	76,20	3.000
2,00	.079	8,30	.327	17,00	.669	28,20	1.110	44,20	1.740	77,00	3.032
2,10	.083	8,40	.331	17,20	.677	28,50	1.122	44,80	1.764	78,74	3.100
2,20	.087	8,50	.335	17,30	.681	28,70	1.130	45,80	1.803	80,00	3.150
2,30	.091	8,60	.339	17,50	.689	29,00	1.142	46,30	1.823	81,28	3.200
2,40	.095	8,90	.350	17,60	.693	29,20	1.150	46,70	1.839	84,00	3.307
2,50	.098	9,00	.354	17,70	.697	29,40	1.158	47,00	1.850	85,00	3.346
2,54	.100	9,10	.358	17,78	.700	29,50	1.161	47,20	1.858	86,36	3.400
2,60	.102	9,20	.362	17,80	.701	29,70	1.169	47,30	1.862	88,90	3.500
2,70	.106	9,30	.366	17,90	.705	29,90	1.177	47,50	1.870	90,00	3.543
2,80	.110	9,40	.370	18,00	.709	30,00	1.181	47,80	1.882	91,44	3.600
2,84	.112	9,50	.374	18,10	.713	30,20	1.189	48,00	1.890	94,00	3.701
2,90	.114	9,60	.378	18,30	.721	30,40	1.197	48,10	1.894	95,00	3.740
3,00	.118	9,70	.382	18,60	.732	30,48	1.200	48,26	1.900	100,00	3.937
3,10	.122	9,90	.390	19,00	.748	30,50	1.201	48,80	1.921	110,00	4.331
3,20	.126	10,00	.395	19,20	.756	30,80	1.213	49,10	1.933	120,00	4.724

# D-SUB STANDARD – IP67

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

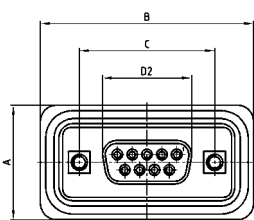


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

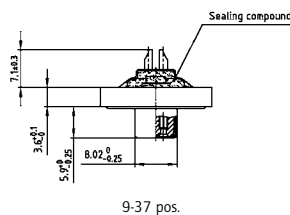
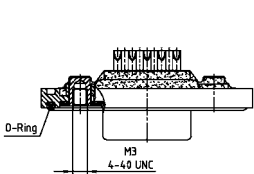
## DESCRIPTION

- Suitable for wire size **AWG 20**
- Mounting style:  
with 4-40 UNC or M3 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame  
(Black plastic frame on request)

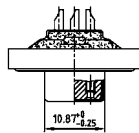
## SOCKET CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D2 -0.25
09	21.10	39.40	25.00 <sup>+0.12</sup>	16.46
15	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	24.79
25	21.10	61.40	47.04 <sup>+0.13</sup>	38.50
37	21.10	77.90	63.50 <sup>+0.13</sup>	54.96
50	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.55

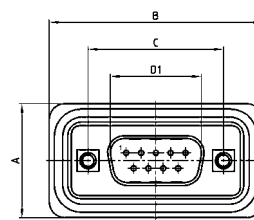


9-37 pos.

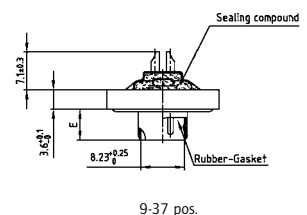
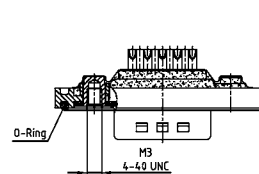


50 pos.

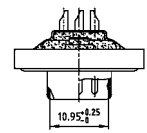
## PLUG CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D1 -0.25	E -0.30
9	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.12</sub>	16.79	5.82
15	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	25.12	5.82
25	21.10	61.40	47.04 <sup>+0.13</sup>	38.84	5.69
37	21.10	77.90	63.50 <sup>+0.13</sup>	55.30	5.69
50	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.68	5.69



9-37 pos.



50 pos.

## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09SAM99B20 X
15	M3 Threaded insert	6 STD15SAM99B20 X
25	M3 Threaded insert	6 STD25SAM99B20 X
37	M3 Threaded insert	6 STD37SAM99B20 X
50	M3 Threaded insert	6 STD50SAM99B20 X
09	4-40 UNC Threaded insert	6 STD09SAM99B30 X
15	4-40 UNC Threaded insert	6 STD15SAM99B30 X
25	4-40 UNC Threaded insert	6 STD25SAM99B30 X
37	4-40 UNC Threaded insert	6 STD37SAM99B30 X
50	4-40 UNC Threaded insert	6 STD50SAM99B30 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09PAM99B20 X
15	M3 Threaded insert	6 STD15PAM99B20 X
25	M3 Threaded insert	6 STD25PAM99B20 X
37	M3 Threaded insert	6 STD37PAM99B20 X
50	M3 Threaded insert	6 STD50PAM99B20 X
09	4-40 UNC Threaded insert	6 STD09PAM99B30 X
15	4-40 UNC Threaded insert	6 STD15PAM99B30 X
25	4-40 UNC Threaded insert	6 STD25PAM99B30 X
37	4-40 UNC Threaded insert	6 STD37PAM99B30 X
50	4-40 UNC Threaded insert	6 STD50PAM99B30 X

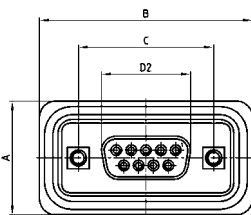
# D-SUB STANDARD – IP67

Solder pin – Straight – Precision machined contacts



RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

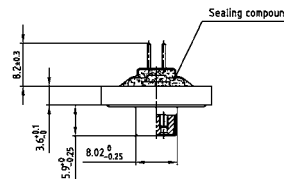
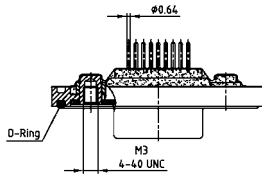
## SOCKET CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D2 -0.25
09	21.10	39.40	25.00 +0.12	16.46
15	21.10	47.70	33.30 +0.15 / -0.10	24.79
25	21.10	61.40	47.04 +0.13	38.50
37	21.10	77.90	63.50 +0.13	54.96
50	23.90	75.50	61.10 +0.14 / -0.11	52.55

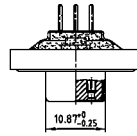
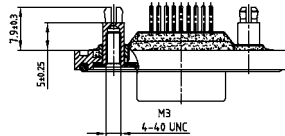
PCB layout Kat1 kFVA / Kat1 kFUA

Mounting style: Threaded insert



9-37 pos.

Mounting style:  
Threaded rear spacer with PCB clip

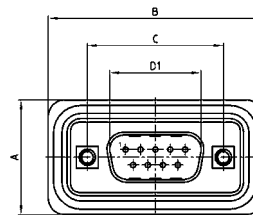


50 pos.

## DESCRIPTION

- Mounting styles:
  - with 4-40 UNC or M3 threaded insert including hex locking bolt
  - with 4-40 UNC or M3 threaded rear spacer and PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

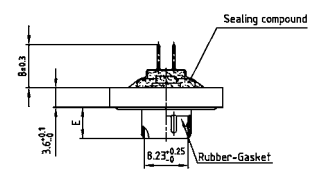
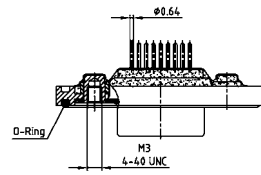
## PLUG CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D1 -0.25	E -0.30
9	21.10	39.40	25.00 +0.12 / -0.12	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	38.84	5.69
37	21.10	77.90	63.50 +0.13	55.30	5.69
50	23.90	75.50	61.10 +0.14 / -0.11	52.68	5.69

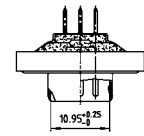
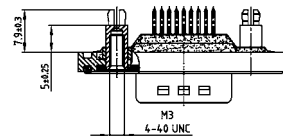
PCB layout Kat1 kFVA / Kat1 kFUA

Mounting style: Threaded insert



9-37 pos.

Mounting style:  
Threaded rear spacer with PCB clip



50 pos.

## ORDER DATA

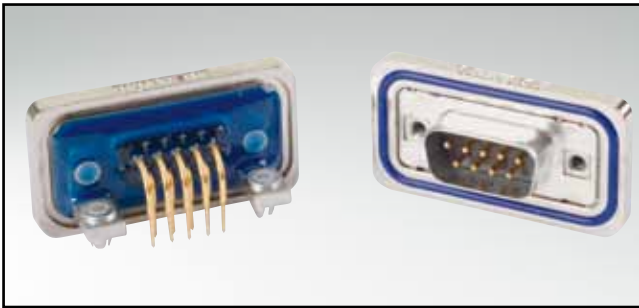
SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09SAR99B20 X
15	M3 Threaded insert	6 STD15SAR99B20 X
25	M3 Threaded insert	6 STD25SAR99B20 X
37	M3 Threaded insert	6 STD37SAR99B20 X
50	M3 Threaded insert	6 STD50SAR99B20 X
09	4-40 UNC Threaded insert	6 STD09SAR99B30 X
15	4-40 UNC Threaded insert	6 STD15SAR99B30 X
25	4-40 UNC Threaded insert	6 STD25SAR99B30 X
37	4-40 UNC Threaded insert	6 STD37SAR99B30 X
50	4-40 UNC Threaded insert	6 STD50SAR99B30 X
09	M3 Threaded rear spacer PCB clip	6 STD09SAR99E10 X
15	M3 Threaded rear spacer PCB clip	6 STD15SAR99E10 X
25	M3 Threaded rear spacer PCB clip	6 STD25SAR99E10 X
37	M3 Threaded rear spacer PCB clip	6 STD37SAR99E10 X
50	M3 Threaded rear spacer PCB clip	6 STD50SAR99E10 X
09	4-40 UNC Threaded rear spacer PCB clip	6 STD09SAR99E20 X
15	4-40 UNC Threaded rear spacer PCB clip	6 STD15SAR99E20 X
25	4-40 UNC Threaded rear spacer PCB clip	6 STD25SAR99E20 X
37	4-40 UNC Threaded rear spacer PCB clip	6 STD37SAR99E20 X
50	4-40 UNC Threaded rear spacer PCB clip	6 STD50SAR99E20 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09PAR99B20 X
15	M3 Threaded insert	6 STD15PAR99B20 X
25	M3 Threaded insert	6 STD25PAR99B20 X
37	M3 Threaded insert	6 STD37PAR99B20 X
50	M3 Threaded insert	6 STD50PAR99B20 X
09	4-40 UNC Threaded insert	6 STD09PAR99B30 X
15	4-40 UNC Threaded insert	6 STD15PAR99B30 X
25	4-40 UNC Threaded insert	6 STD25PAR99B30 X
37	4-40 UNC Threaded insert	6 STD37PAR99B30 X
50	4-40 UNC Threaded insert	6 STD50PAR99B30 X
09	M3 Threaded rear spacer PCB clip	6 STD09PAR99E10 X
15	M3 Threaded rear spacer PCB clip	6 STD15PAR99E10 X
25	M3 Threaded rear spacer PCB clip	6 STD25PAR99E10 X
37	M3 Threaded rear spacer PCB clip	6 STD37PAR99E10 X
50	M3 Threaded rear spacer PCB clip	6 STD50PAR99E10 X
09	4-40 UNC Threaded rear spacer PCB clip	6 STD09PAR99E20 X
15	4-40 UNC Threaded rear spacer PCB clip	6 STD15PAR99E20 X
25	4-40 UNC Threaded rear spacer PCB clip	6 STD25PAR99E20 X
37	4-40 UNC Threaded rear spacer PCB clip	6 STD37PAR99E20 X
50	4-40 UNC Threaded rear spacer PCB clip	6 STD50PAR99E20 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

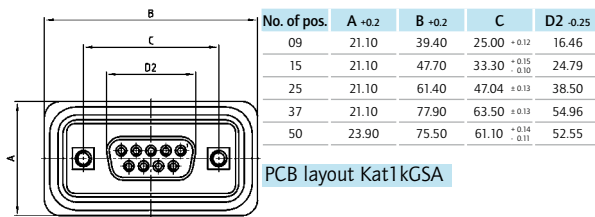
# D-SUB STANDARD – IP67

Solder pin – Angled – .189"/4.8 mm – Precision machined contacts – Metal bracket

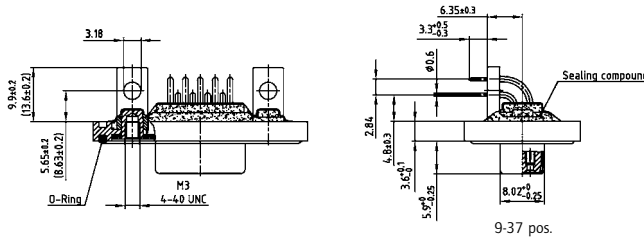


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

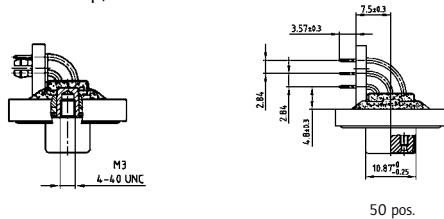
## SOCKET CONNECTOR



Mounting style: Mounting bracket, threaded insert



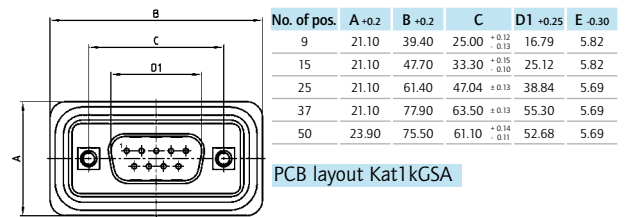
Mounting style: PCB clip, threaded insert



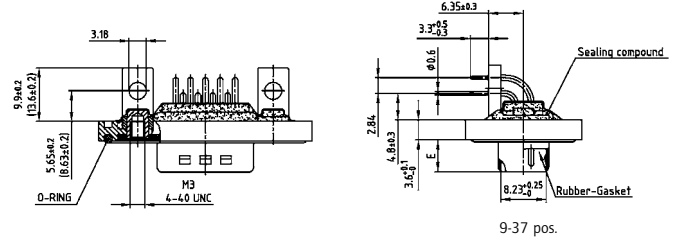
## DESCRIPTION

- Mounting styles:
  - with mounting bracket and 4-40 UNC or M3 threaded insert including hex locking bolt
  - with mounting bracket, PCB clip and M3 or UNC 4-40 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

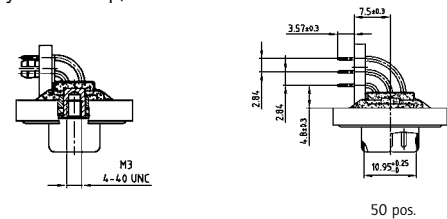
## PLUG CONNECTOR



Mounting style: Mounting bracket, threaded insert



Mounting style: PCB clip, threaded insert



## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09SAT99S10 X
15	M3 Threaded insert	6 STD15SAT99S10 X
25	M3 Threaded insert	6 STD25SAT99S10 X
37	M3 Threaded insert	6 STD37SAT99S10 X
50	M3 Threaded insert	6 STD50SAT99S10 X
09	4-40 UNC Threaded insert	6 STD09SAT99S20 X
15	4-40 UNC Threaded insert	6 STD15SAT99S20 X
25	4-40 UNC Threaded insert	6 STD25SAT99S20 X
37	4-40 UNC Threaded insert	6 STD37SAT99S20 X
50	4-40 UNC Threaded insert	6 STD50SAT99S20 X
09	PCB clip / M3 Threaded insert	6 STD09SAT99S30 X
15	PCB clip / M3 Threaded insert	6 STD15SAT99S30 X
25	PCB clip / M3 Threaded insert	6 STD25SAT99S30 X
37	PCB clip / M3 Threaded insert	6 STD37SAT99S30 X
50	PCB clip / M3 Threaded insert	6 STD50SAT99S30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09SAT99S40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15SAT99S40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25SAT99S40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37SAT99S40 X
50	PCB clip / 4-40 UNC Threaded insert	6 STD50SAT99S40 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09PAT99S10 X
15	M3 Threaded insert	6 STD15PAT99S10 X
25	M3 Threaded insert	6 STD25PAT99S10 X
37	M3 Threaded insert	6 STD37PAT99S10 X
50	M3 Threaded insert	6 STD50PAT99S10 X
09	4-40 UNC Threaded insert	6 STD09PAT99S20 X
15	4-40 UNC Threaded insert	6 STD15PAT99S20 X
25	4-40 UNC Threaded insert	6 STD25PAT99S20 X
37	4-40 UNC Threaded insert	6 STD37PAT99S20 X
50	4-40 UNC Threaded insert	6 STD50PAT99S20 X
09	PCB clip / M3 Threaded insert	6 STD09PAT99S30 X
15	PCB clip / M3 Threaded insert	6 STD15PAT99S30 X
25	PCB clip / M3 Threaded insert	6 STD25PAT99S30 X
37	PCB clip / M3 Threaded insert	6 STD37PAT99S30 X
50	PCB clip / M3 Threaded insert	6 STD50PAT99S30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09PAT99S40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15PAT99S40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25PAT99S40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37PAT99S40 X
50	PCB clip / 4-40 UNC Threaded insert	6 STD50PAT99S40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB STANDARD – IP67

Solder pin – Angled – .276"/7.0 mm – Precision machined contacts – Metal bracket

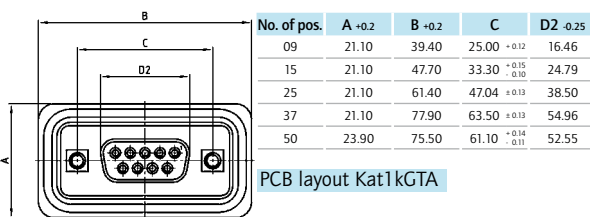


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

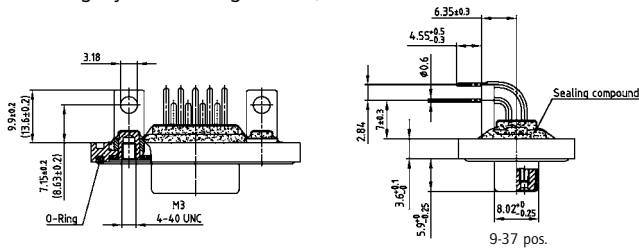
## DESCRIPTION

- Mounting styles:
  - with mounting bracket and 4-40 UNC or M3 threaded insert including hex locking bolt
  - with mounting bracket, PCB clip and M3 or UNC 4-40 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

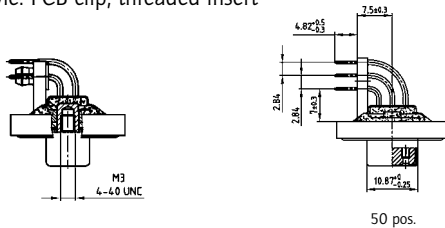
## SOCKET CONNECTOR



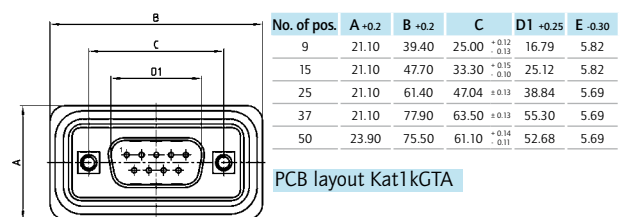
Mounting style: Mounting bracket, threaded insert



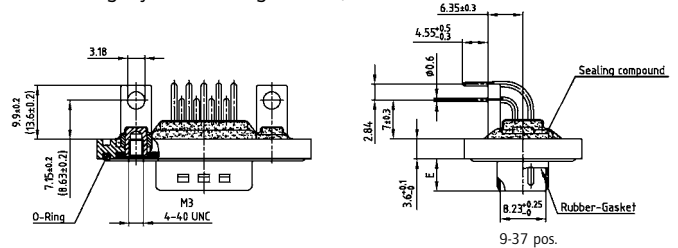
Mounting style: PCB clip, threaded insert



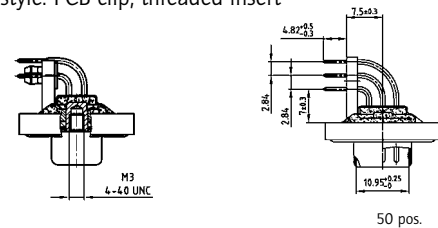
## PLUG CONNECTOR



Mounting style: Mounting bracket, threaded insert



Mounting style: PCB clip, threaded insert



## ORDER DATA

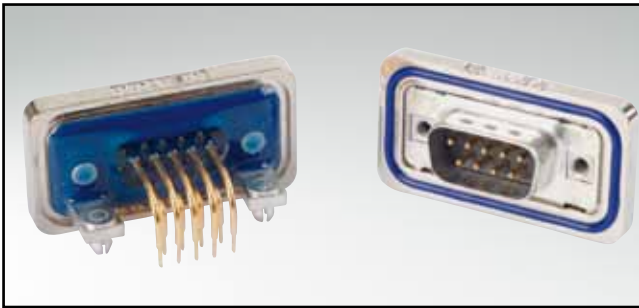
SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09SAU99R10 X
15	M3 Threaded insert	6 STD15SAU99R10 X
25	M3 Threaded insert	6 STD25SAU99R10 X
37	M3 Threaded insert	6 STD37SAU99R10 X
50	M3 Threaded insert	6 STD50SAU99R10 X
09	4-40 UNC Threaded insert	6 STD09SAU99R20 X
15	4-40 UNC Threaded insert	6 STD15SAU99R20 X
25	4-40 UNC Threaded insert	6 STD25SAU99R20 X
37	4-40 UNC Threaded insert	6 STD37SAU99R20 X
50	4-40 UNC Threaded insert	6 STD50SAU99R20 X
09	PCB clip / M3 Threaded insert	6 STD09SAU99R30 X
15	PCB clip / M3 Threaded insert	6 STD15SAU99R30 X
25	PCB clip / M3 Threaded insert	6 STD25SAU99R30 X
37	PCB clip / M3 Threaded insert	6 STD37SAU99R30 X
50	PCB clip / M3 Threaded insert	6 STD50SAU99R30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09SAU99R40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15SAU99R40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25SAU99R40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37SAU99R40 X
50	PCB clip / 4-40 UNC Threaded insert	6 STD50SAU99R40 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09PAU99R10 X
15	M3 Threaded insert	6 STD15PAU99R10 X
25	M3 Threaded insert	6 STD25PAU99R10 X
37	M3 Threaded insert	6 STD37PAU99R10 X
50	M3 Threaded insert	6 STD50PAU99R10 X
09	4-40 UNC Threaded insert	6 STD09PAU99R20 X
15	4-40 UNC Threaded insert	6 STD15PAU99R20 X
25	4-40 UNC Threaded insert	6 STD25PAU99R20 X
37	4-40 UNC Threaded insert	6 STD37PAU99R20 X
50	4-40 UNC Threaded insert	6 STD50PAU99R20 X
09	PCB clip / M3 Threaded insert	6 STD09PAU99R30 X
15	PCB clip / M3 Threaded insert	6 STD15PAU99R30 X
25	PCB clip / M3 Threaded insert	6 STD25PAU99R30 X
37	PCB clip / M3 Threaded insert	6 STD37PAU99R30 X
50	PCB clip / M3 Threaded insert	6 STD50PAU99R30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09PAU99R40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15PAU99R40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25PAU99R40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37PAU99R40 X
50	PCB clip / 4-40 UNC Threaded insert	6 STD50PAU99R40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

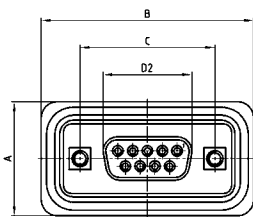
# D-SUB STANDARD – IP67

Solder pin – Angled – .464" / 11.8 mm – Precision machined contacts – Metal bracket



RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

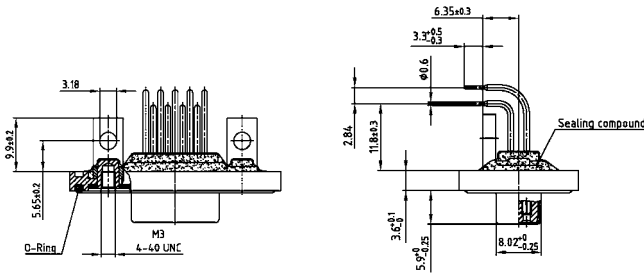
## SOCKET CONNECTOR



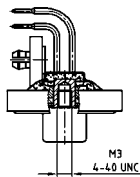
No. of pos.	A +0.2	B +0.2	C	D2 -0.25
09	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.46
15	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	24.79
25	21.10	61.40	47.04 <sup>+0.13</sup>	38.50
37	21.10	77.90	63.50 <sup>+0.13</sup>	54.96

PCB layout Kat1kGUA

Mounting style: Mounting bracket, threaded insert



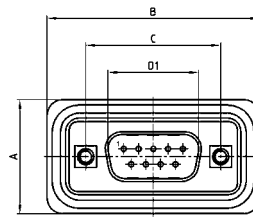
Mounting style: PCB clip, threaded insert



## DESCRIPTION

- Mounting styles:
  - with mounting bracket and 4-40 UNC or M3 threaded insert including hex locking bolt
  - with mounting bracket, PCB clip and M3 or UNC 4-40 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

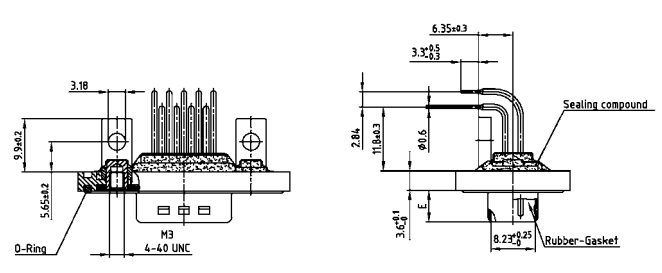
## PLUG CONNECTOR



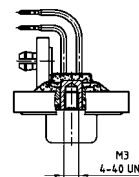
No. of pos.	A +0.2	B +0.2	C	D1 -0.25	E -0.30
9	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.79	5.82
15	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	25.12	5.82
25	21.10	61.40	47.04 <sup>+0.13</sup>	38.84	5.69
37	21.10	77.90	63.50 <sup>+0.13</sup>	55.30	5.69

PCB layout Kat1kGUA

Mounting style: Mounting bracket, threaded insert



Mounting style: PCB clip, threaded insert



## ORDER DATA

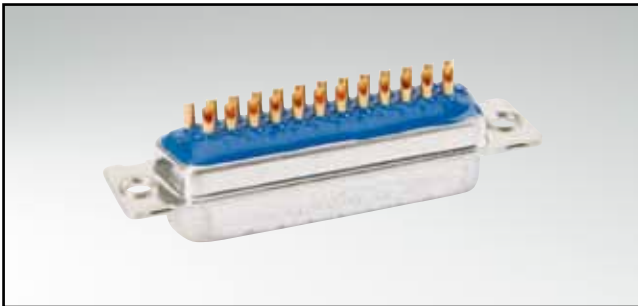
SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09SAZ99S10 X
15	M3 Threaded insert	6 STD15SAZ99S10 X
25	M3 Threaded insert	6 STD25SAZ99S10 X
37	M3 Threaded insert	6 STD37SAZ99S10 X
09	4-40 UNC Threaded insert	6 STD09SAZ99S20 X
15	4-40 UNC Threaded insert	6 STD15SAZ99S20 X
25	4-40 UNC Threaded insert	6 STD25SAZ99S20 X
37	4-40 UNC Threaded insert	6 STD37SAZ99S20 X
09	PCB clip / M3 Threaded insert	6 STD09SAZ99S30 X
15	PCB clip / M3 Threaded insert	6 STD15SAZ99S30 X
25	PCB clip / M3 Threaded insert	6 STD25SAZ99S30 X
37	PCB clip / M3 Threaded insert	6 STD37SAZ99S30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09SAZ99S40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15SAZ99S40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25SAZ99S40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37SAZ99S40 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Threaded insert	6 STD09PAZ99S10 X
15	M3 Threaded insert	6 STD15PAZ99S10 X
25	M3 Threaded insert	6 STD25PAZ99S10 X
37	M3 Threaded insert	6 STD37PAZ99S10 X
09	4-40 UNC Threaded insert	6 STD09PAZ99S20 X
15	4-40 UNC Threaded insert	6 STD15PAZ99S20 X
25	4-40 UNC Threaded insert	6 STD25PAZ99S20 X
37	4-40 UNC Threaded insert	6 STD37PAZ99S20 X
09	PCB clip / M3 Threaded insert	6 STD09PAZ99S30 X
15	PCB clip / M3 Threaded insert	6 STD15PAZ99S30 X
25	PCB clip / M3 Threaded insert	6 STD25PAZ99S30 X
37	PCB clip / M3 Threaded insert	6 STD37PAZ99S30 X
09	PCB clip / 4-40 UNC Threaded insert	6 STD09PAZ99S40 X
15	PCB clip / 4-40 UNC Threaded insert	6 STD15PAZ99S40 X
25	PCB clip / 4-40 UNC Threaded insert	6 STD25PAZ99S40 X
37	PCB clip / 4-40 UNC Threaded insert	6 STD37PAZ99S40 X

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness

# D-SUB STANDARD – IP67

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

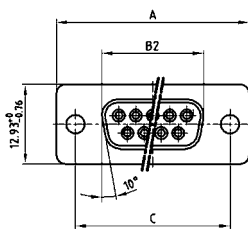


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

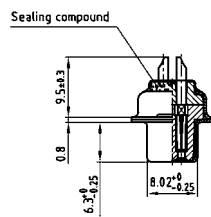
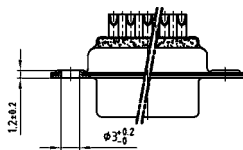
## DESCRIPTION

- 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)

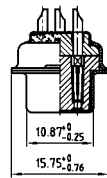
## SOCKET CONNECTOR



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

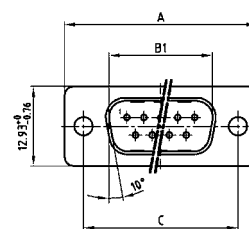


9-37 pos.

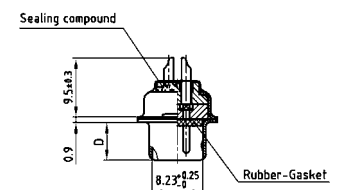
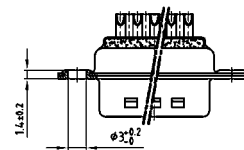


50 pos.

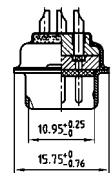
## PLUG CONNECTOR



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



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

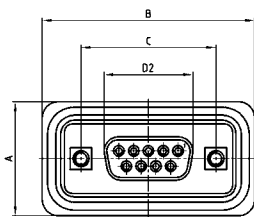
# D-SUB STANDARD – IP67

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



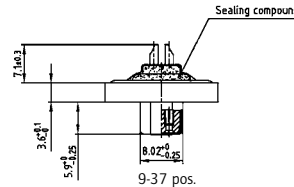
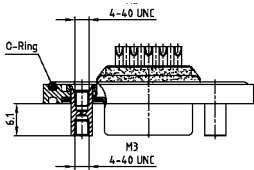
RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

## SOCKET CONNECTOR

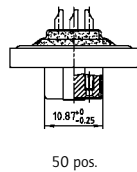
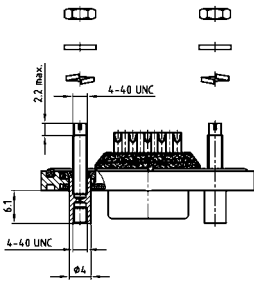


No. of pos.	A +0.2	B +0.2	C	D2 -0.25
09	21.10	39.40	25.00 ±0.12	16.46
15	21.10	47.70	33.30 <sup>+0.15</sup> / <sub>-0.10</sub>	24.79
25	21.10	61.40	47.04 ±0.13	38.50
37	21.10	77.90	63.50 ±0.13	54.96
50	23.90	75.50	61.10 <sup>+0.14</sup> / <sub>-0.11</sub>	52.55

Mounting style: Front spacer



Mounting style: Front spacer and rear mounting stud

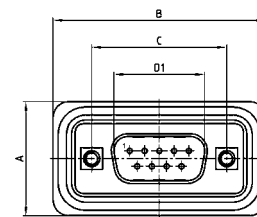


50 pos.

## DESCRIPTION

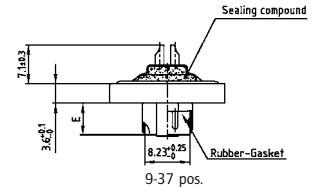
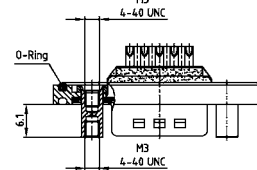
- Suitable for wire size **AWG 20**
- Mounting styles:
  - with M3 or 4-40 UNC front spacer
  - with M3 or 4-40 UNC front spacer and rear mounting stud
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

## PLUG CONNECTOR

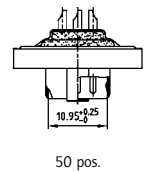
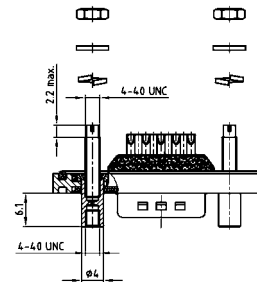


No. of pos.	A +0.2	B +0.2	C	D1 -0.25	E -0.30
9	21.10	39.40	25.00 <sup>+0.12</sup> / <sub>-0.12</sub>	16.79	5.82
15	21.10	47.70	33.30 <sup>+0.15</sup> / <sub>-0.10</sub>	25.12	5.82
25	21.10	61.40	47.04 ±0.13	38.84	5.69
37	21.10	77.90	63.50 ±0.13	55.30	5.69
50	23.90	75.50	61.10 <sup>+0.14</sup> / <sub>-0.11</sub>	52.68	5.69

Mounting style: Front spacer



Mounting style: Front spacer and rear mounting stud



50 pos.

## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Front spacer	6 STD09SAM99B40 X
15	M3 Front spacer	6 STD15SAM99B40 X
25	M3 Front spacer	6 STD25SAM99B40 X
37	M3 Front spacer	6 STD37SAM99B40 X
50	M3 Front spacer	6 STD50SAM99B40 X
09	4-40 UNC Front spacer	6 STD09SAM99B50 X
15	4-40 UNC Front spacer	6 STD15SAM99B50 X
25	4-40 UNC Front spacer	6 STD25SAM99B50 X
37	4-40 UNC Front spacer	6 STD37SAM99B50 X
50	4-40 UNC Front spacer	6 STD50SAM99B50 X
09	4-40 UNC Front spacer and rear mounting stud	6 STD09SAM99B70 X
15	4-40 UNC Front spacer and rear mounting stud	6 STD15SAM99B70 X
25	4-40 UNC Front spacer and rear mounting stud	6 STD25SAM99B70 X
37	4-40 UNC Front spacer and rear mounting stud	6 STD37SAM99B70 X
50	4-40 UNC Front spacer and rear mounting stud	6 STD50SAM99B70 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
09	M3 Front spacer	6 STD09PAM99B40 X
15	M3 Front spacer	6 STD15PAM99B40 X
25	M3 Front spacer	6 STD25PAM99B40 X
37	M3 Front spacer	6 STD37PAM99B40 X
50	M3 Front spacer	6 STD50PAM99B40 X
09	4-40 UNC Front spacer	6 STD09PAM99B50 X
15	4-40 UNC Front spacer	6 STD15PAM99B50 X
25	4-40 UNC Front spacer	6 STD25PAM99B50 X
37	4-40 UNC Front spacer	6 STD37PAM99B50 X
50	4-40 UNC Front spacer	6 STD50PAM99B50 X
09	4-40 UNC Front spacer and rear mounting stud	6 STD09PAM99B70 X
15	4-40 UNC Front spacer and rear mounting stud	6 STD15PAM99B70 X
25	4-40 UNC Front spacer and rear mounting stud	6 STD25PAM99B70 X
37	4-40 UNC Front spacer and rear mounting stud	6 STD37PAM99B70 X
50	4-40 UNC Front spacer and rear mounting stud	6 STD50PAM99B70 X

# D-SUB HIGH DENSITY – IP67

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

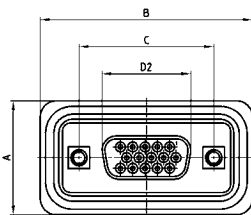


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

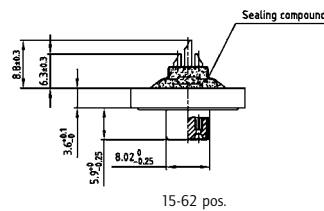
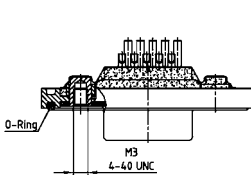
## DESCRIPTION

- Suitable for wire size **AWG 22**
- Mounting style:  
with 4-40 UNC or M3 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame  
(Black plastic frame on request)

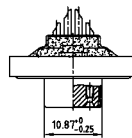
## SOCKET CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D2 -0.25
15	21.10	39.40	25.00 <sup>+0.12 -0.13</sup>	16.46
26	21.10	47.70	33.30 <sup>+0.15 -0.10</sup>	24.79
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.50
62	21.10	77.90	63.50 <sup>+0.13</sup>	54.96
78	23.90	75.50	61.10 <sup>+0.14 -0.11</sup>	52.55

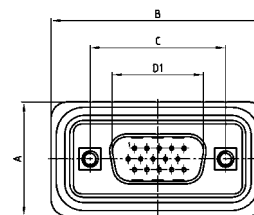


15-62 pos.

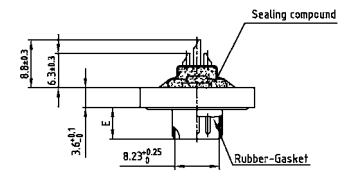
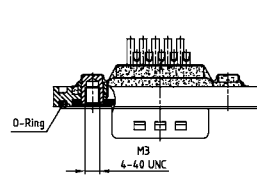


78 pos.

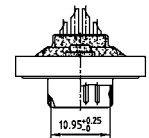
## PLUG CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D1 -0.25	E -0.30
15	21.10	39.40	25.00 <sup>+0.12 -0.13</sup>	16.79	5.82
26	21.10	47.70	33.30 <sup>+0.15 -0.10</sup>	25.12	5.82
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.84	5.69
62	21.10	77.90	63.50 <sup>+0.13</sup>	55.30	5.69
78	23.90	75.50	61.10 <sup>+0.14 -0.11</sup>	52.68	5.69



15-62 pos.



78 pos.

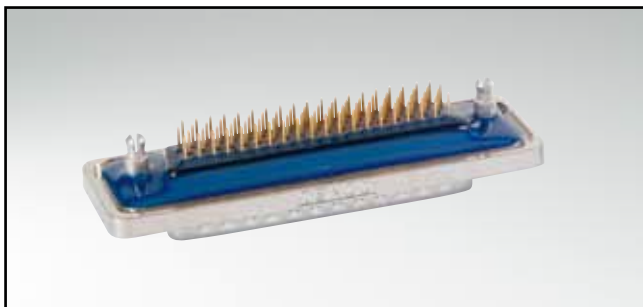
## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15SAM99B20 X
26	M3 Threaded insert	6 HDD26SAM99B20 X
44	M3 Threaded insert	6 HDD44SAM99B20 X
62	M3 Threaded insert	6 HDD62SAM99B20 X
78	M3 Threaded insert	6 HDD78SAM99B20 X
15	4-40 UNC Threaded insert	6 HDD15SAM99B30 X
26	4-40 UNC Threaded insert	6 HDD26SAM99B30 X
44	4-40 UNC Threaded insert	6 HDD44SAM99B30 X
62	4-40 UNC Threaded insert	6 HDD62SAM99B30 X
78	4-40 UNC Threaded insert	6 HDD78SAM99B30 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15PAM99B20 X
26	M3 Threaded insert	6 HDD26PAM99B20 X
44	M3 Threaded insert	6 HDD44PAM99B20 X
62	M3 Threaded insert	6 HDD62PAM99B20 X
78	M3 Threaded insert	6 HDD78PAM99B20 X
15	4-40 UNC Threaded insert	6 HDD15PAM99B30 X
26	4-40 UNC Threaded insert	6 HDD26PAM99B30 X
44	4-40 UNC Threaded insert	6 HDD44PAM99B30 X
62	4-40 UNC Threaded insert	6 HDD62PAM99B30 X
78	4-40 UNC Threaded insert	6 HDD78PAM99B30 X

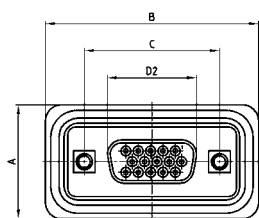
# D-SUB HIGH DENSITY – IP67

Solder pin – Straight – Precision machined contacts



RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

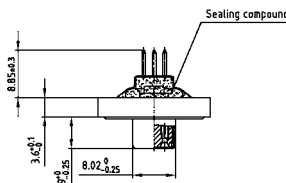
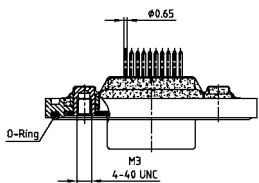
## SOCKET CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D2 -0.25
15	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.46
26	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	24.79
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.50
62	21.10	77.90	63.50 <sup>+0.13</sup>	54.96
78	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.55

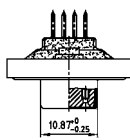
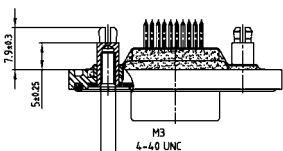
PCB layout Kat1kGDA / Kat1iT9A

Mounting style: Threaded insert



15-62 pos.

Mounting style: Threaded rear spacer with PCB clip

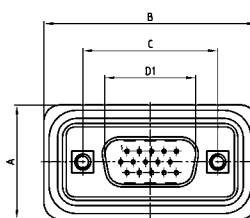


78 pos.

## DESCRIPTION

- Mounting styles:
  - with 4-40 UNC or M3 threaded insert including hex locking bolt
  - with M3 or 4-40 UNC threaded rear spacer and PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

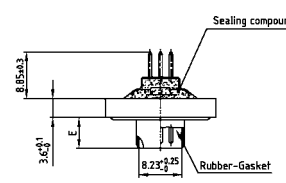
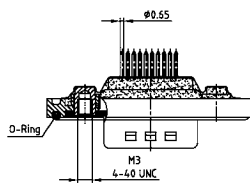
## PLUG CONNECTOR



No. of pos.	A +0.2	B +0.2	C	D1 +0.25	E -0.30
15	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.79	5.82
26	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	25.12	5.82
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.84	5.69
62	21.10	77.90	63.50 <sup>+0.13</sup>	55.30	5.69
78	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.68	5.69

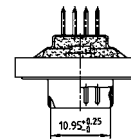
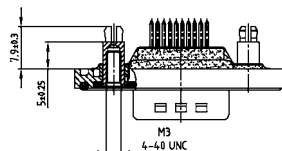
PCB layout Kat1kFWA / Kat1iU0A

Mounting style: Threaded insert



15-62 pos.

Mounting style: Threaded rear spacer with PCB clip



78 pos.

## ORDER DATA

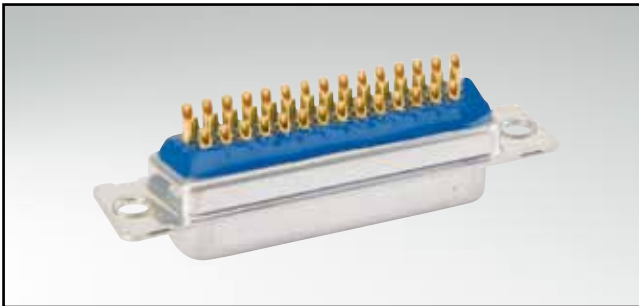
SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15SAR99B20 X
26	M3 Threaded insert	6 HDD26SAR99B20 X
44	M3 Threaded insert	6 HDD44SAR99B20 X
62	M3 Threaded insert	6 HDD62SAR99B20 X
78	M3 Threaded insert	6 HDD78SAR99B20 X
15	4-40 UNC Threaded insert	6 HDD15SAR99B30 X
26	4-40 UNC Threaded insert	6 HDD26SAR99B30 X
44	4-40 UNC Threaded insert	6 HDD44SAR99B30 X
62	4-40 UNC Threaded insert	6 HDD62SAR99B30 X
78	4-40 UNC Threaded insert	6 HDD78SAR99B30 X
15	M3 Threaded rear spacer PCB clip	6 HDD15SAR99E10 X
26	M3 Threaded rear spacer PCB clip	6 HDD26SAR99E10 X
44	M3 Threaded rear spacer PCB clip	6 HDD44SAR99E10 X
62	M3 Threaded rear spacer PCB clip	6 HDD62SAR99E10 X
78	M3 Threaded rear spacer PCB clip	6 HDD78SAR99E10 X
15	4-40 UNC Threaded rear spacer PCB clip	6 HDD15SAR99E20 X
26	4-40 UNC Threaded rear spacer PCB clip	6 HDD26SAR99E20 X
44	4-40 UNC Threaded rear spacer PCB clip	6 HDD44SAR99E20 X
62	4-40 UNC Threaded rear spacer PCB clip	6 HDD62SAR99E20 X
78	4-40 UNC Threaded rear spacer PCB clip	6 HDD78SAR99E20 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15PAR99B20 X
26	M3 Threaded insert	6 HDD26PAR99B20 X
44	M3 Threaded insert	6 HDD44PAR99B20 X
62	M3 Threaded insert	6 HDD62PAR99B20 X
78	M3 Threaded insert	6 HDD78PAR99B20 X
15	4-40 UNC Threaded insert	6 HDD15PAR99B30 X
26	4-40 UNC Threaded insert	6 HDD26PAR99B30 X
44	4-40 UNC Threaded insert	6 HDD44PAR99B30 X
62	4-40 UNC Threaded insert	6 HDD62PAR99B30 X
78	4-40 UNC Threaded insert	6 HDD78PAR99B30 X
15	M3 Threaded rear spacer PCB clip	6 HDD15PAR99E10 X
26	M3 Threaded rear spacer PCB clip	6 HDD26PAR99E10 X
44	M3 Threaded rear spacer PCB clip	6 HDD44PAR99E10 X
62	M3 Threaded rear spacer PCB clip	6 HDD62PAR99E10 X
78	M3 Threaded rear spacer PCB clip	6 HDD78PAR99E10 X
15	4-40 UNC Threaded rear spacer PCB clip	6 HDD15PAR99E20 X
26	4-40 UNC Threaded rear spacer PCB clip	6 HDD26PAR99E20 X
44	4-40 UNC Threaded rear spacer PCB clip	6 HDD44PAR99E20 X
62	4-40 UNC Threaded rear spacer PCB clip	6 HDD62PAR99E20 X
78	4-40 UNC Threaded rear spacer PCB clip	6 HDD78PAR99E20 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB HIGH DENSITY – IP67

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

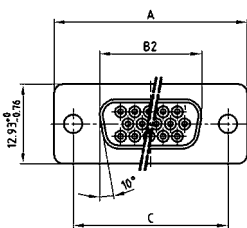


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

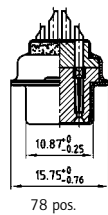
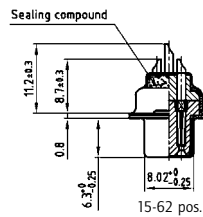
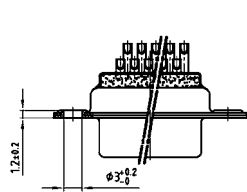
## DESCRIPTION

- 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)

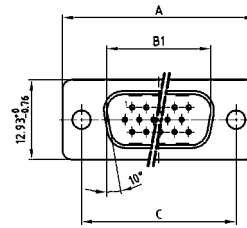
## SOCKET CONNECTOR



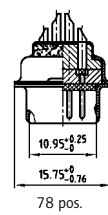
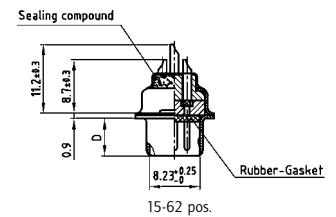
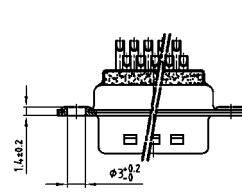
No. of pos.	A +0.76	B2 -0.25	C
15	31.19	16.46	25.00 <sup>+0.12</sup> / <sub>-0.13</sub>
26	39.52	24.79	33.30 <sup>+0.15</sup> / <sub>-0.10</sub>
44	53.42	38.50	47.04 <sup>+0.13</sup>
62	69.70	54.96	63.50 <sup>+0.13</sup>
78	67.31	52.55	61.10 <sup>+0.14</sup> / <sub>-0.11</sub>



## PLUG CONNECTOR



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



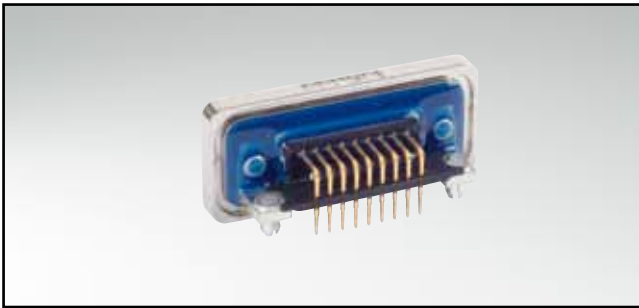
## ORDER DATA

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

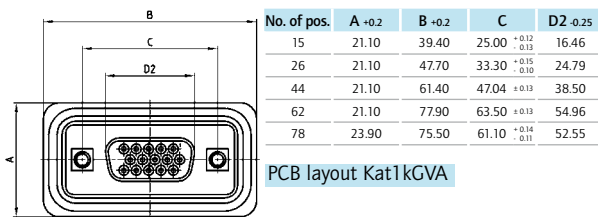
# D-SUB HIGH DENSITY – IP67

Solder pin – Angled – .220"/5,6 mm – Precision machined contacts – Metal bracket

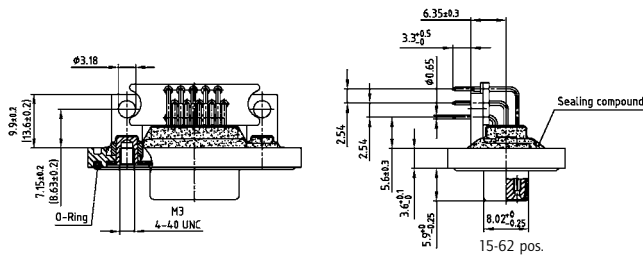


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

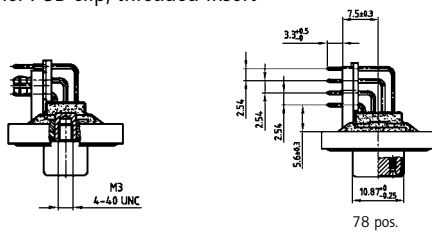
## SOCKET CONNECTOR



Mounting style: Mounting bracket, threaded insert



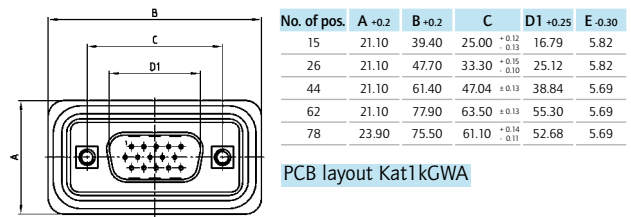
Mounting style: PCB clip, threaded insert



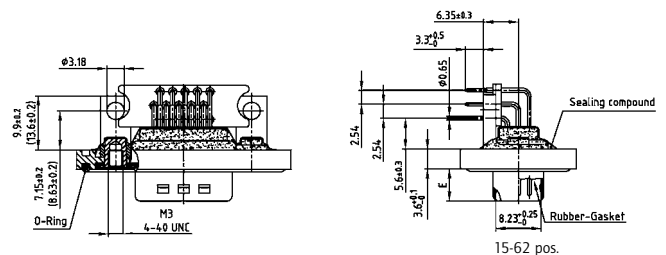
## DESCRIPTION

- Mounting styles:
  - with mounting bracket and 4-40 UNC or M3 threaded insert including hex locking bolt
  - with mounting bracket, PCB clip and 4-40 UNC or M3 threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

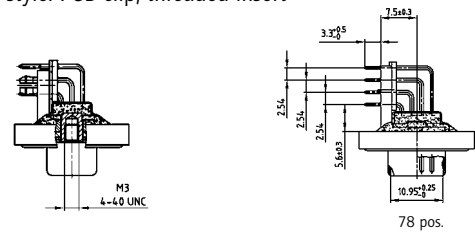
## PLUG CONNECTOR



Mounting style: Mounting bracket, threaded insert



Mounting style: PCB clip, threaded insert



## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15SAY99R10 X
26	M3 Threaded insert	6 HDD26SAY99R10 X
44	M3 Threaded insert	6 HDD44SAY99R10 X
62	M3 Threaded insert	6 HDD62SAY99R10 X
78	M3 Threaded insert	6 HDD78SAY99R10 X
15	4-40 UNC Threaded insert	6 HDD15SAY99R20 X
26	4-40 UNC Threaded insert	6 HDD26SAY99R20 X
44	4-40 UNC Threaded insert	6 HDD44SAY99R20 X
62	4-40 UNC Threaded insert	6 HDD62SAY99R20 X
78	4-40 UNC Threaded insert	6 HDD78SAY99R20 X
15	PCB clip / M3 Threaded insert	6 HDD15SAY99R30 X
26	PCB clip / M3 Threaded insert	6 HDD26SAY99R30 X
44	PCB clip / M3 Threaded insert	6 HDD44SAY99R30 X
62	PCB clip / M3 Threaded insert	6 HDD62SAY99R30 X
78	PCB clip / M3 Threaded insert	6 HDD78SAY99R30 X
15	PCB clip / 4-40 UNC Threaded insert	6 HDD15SAY99R40 X
26	PCB clip / 4-40 UNC Threaded insert	6 HDD26SAY99R40 X
44	PCB clip / 4-40 UNC Threaded insert	6 HDD44SAY99R40 X
62	PCB clip / 4-40 UNC Threaded insert	6 HDD62SAY99R40 X
78	PCB clip / 4-40 UNC Threaded insert	6 HDD78SAY99R40 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Threaded insert	6 HDD15PAY99R10 X
26	M3 Threaded insert	6 HDD26PAY99R10 X
44	M3 Threaded insert	6 HDD44PAY99R10 X
62	M3 Threaded insert	6 HDD62PAY99R10 X
78	M3 Threaded insert	6 HDD78PAY99R10 X
15	4-40 UNC Threaded insert	6 HDD15PAY99R20 X
26	4-40 UNC Threaded insert	6 HDD26PAY99R20 X
44	4-40 UNC Threaded insert	6 HDD44PAY99R20 X
62	4-40 UNC Threaded insert	6 HDD62PAY99R20 X
78	4-40 UNC Threaded insert	6 HDD78PAY99R20 X
15	PCB clip / M3 Threaded insert	6 HDD15PAY99R30 X
26	PCB clip / M3 Threaded insert	6 HDD26PAY99R30 X
44	PCB clip / M3 Threaded insert	6 HDD44PAY99R30 X
62	PCB clip / M3 Threaded insert	6 HDD62PAY99R30 X
78	PCB clip / M3 Threaded insert	6 HDD78PAY99R30 X
15	PCB clip / 4-40 UNC Threaded insert	6 HDD15PAY99R40 X
26	PCB clip / 4-40 UNC Threaded insert	6 HDD26PAY99R40 X
44	PCB clip / 4-40 UNC Threaded insert	6 HDD44PAY99R40 X
62	PCB clip / 4-40 UNC Threaded insert	6 HDD62PAY99R40 X
78	PCB clip / 4-40 UNC Threaded insert	6 HDD78PAY99R40 X

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB HIGH DENSITY – IP67

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

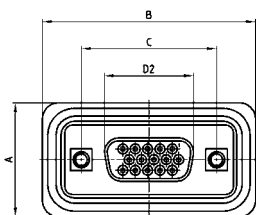


RoHS compliant - CSA listed, File No.LR115000-1 UL listed, File No. E202784

## DESCRIPTION

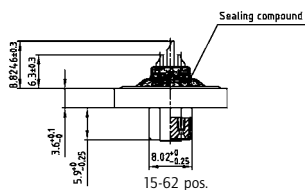
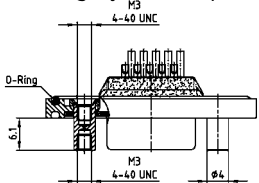
- Suitable for wire size **AWG 22**
- Mounting styles:
  - with M3 or 4-40 UNC front spacer
  - with M3 or 4-40 UNC front spacer and rear mounting stud
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated (stainless steel available on request)
- Nickel plated die-cast frame (Black plastic frame on request)

## SOCKET CONNECTOR

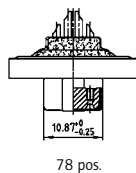
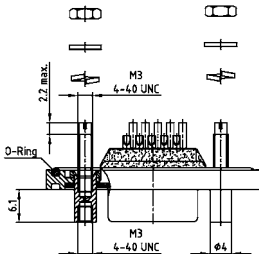


No. of pos.	A +0.2	B +0.2	C	D2 -0.25
15	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.46
26	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	24.79
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.50
62	21.10	77.90	63.50 <sup>+0.13</sup>	54.96
78	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.55

Mounting style: Front spacer

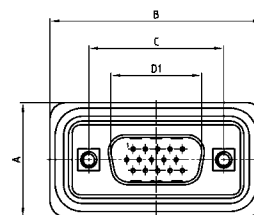


Mounting style: Front spacer and rear mounting stud



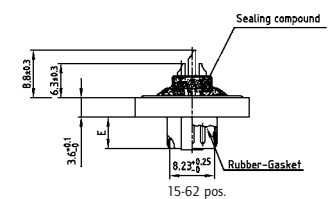
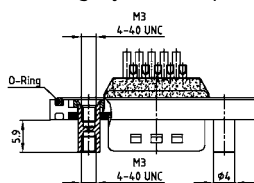
78 pos.

## PLUG CONNECTOR

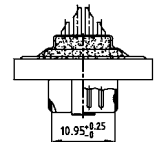
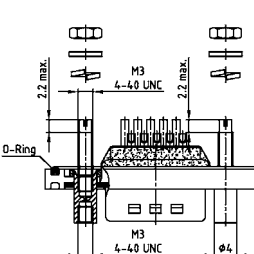


No. of pos.	A +0.2	B +0.2	C	D1 +0.25	E -0.30
15	21.10	39.40	25.00 <sup>+0.12</sup> <sub>-0.13</sub>	16.79	5.82
26	21.10	47.70	33.30 <sup>+0.15</sup> <sub>-0.10</sub>	25.12	5.82
44	21.10	61.40	47.04 <sup>+0.13</sup>	38.84	5.69
62	21.10	77.90	63.50 <sup>+0.13</sup>	55.30	5.69
78	23.90	75.50	61.10 <sup>+0.14</sup> <sub>-0.11</sub>	52.68	5.69

Mounting style: Front spacer



Mounting style: Front spacer and rear mounting stud



78 pos.

## ORDER DATA

SOCKET CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Front spacer	6 HDD15SAM99B40 X
26	M3 Front spacer	6 HDD26SAM99B40 X
44	M3 Front spacer	6 HDD44SAM99B40 X
62	M3 Front spacer	6 HDD62SAM99B40 X
78	M3 Front spacer	6 HDD78SAM99B40 X
15	4-40 UNC Front spacer	6 HDD15SAM99B50 X
26	4-40 UNC Front spacer	6 HDD26SAM99B50 X
44	4-40 UNC Front spacer	6 HDD44SAM99B50 X
62	4-40 UNC Front spacer	6 HDD62SAM99B50 X
78	4-40 UNC Front spacer	6 HDD78SAM99B50 X
15	4-40 UNC Front spacer and rear mounting stud	6 HDD15SAM99B70 X
26	4-40 UNC Front spacer and rear mounting stud	6 HDD26SAM99B70 X
44	4-40 UNC Front spacer and rear mounting stud	6 HDD44SAM99B70 X
62	4-40 UNC Front spacer and rear mounting stud	6 HDD62SAM99B70 X
78	4-40 UNC Front spacer and rear mounting stud	6 HDD78SAM99B70 X

PLUG CONNECTOR		
No. of pos.	Mounting style	Part Number
15	M3 Front spacer	6 HDD15PAM99B40 X
26	M3 Front spacer	6 HDD26PAM99B40 X
44	M3 Front spacer	6 HDD44PAM99B40 X
62	M3 Front spacer	6 HDD62PAM99B40 X
78	M3 Front spacer	6 HDD78PAM99B40 X
15	4-40 UNC Front spacer	6 HDD15PAM99B50 X
26	4-40 UNC Front spacer	6 HDD26PAM99B50 X
44	4-40 UNC Front spacer	6 HDD44PAM99B50 X
62	4-40 UNC Front spacer	6 HDD62PAM99B50 X
78	4-40 UNC Front spacer	6 HDD78PAM99B50 X
15	4-40 UNC Front spacer and rear mounting stud	6 HDD15PAM99B70 X
26	4-40 UNC Front spacer and rear mounting stud	6 HDD26PAM99B70 X
44	4-40 UNC Front spacer and rear mounting stud	6 HDD44PAM99B70 X
62	4-40 UNC Front spacer and rear mounting stud	6 HDD62PAM99B70 X
78	4-40 UNC Front spacer and rear mounting stud	6 HDD78PAM99B70 X

# D-SUB STANDARD – IP67 SOLID BODY

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

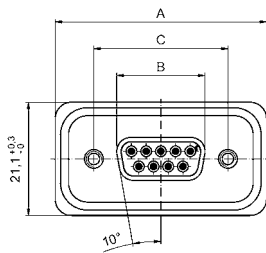


RoHS compliant

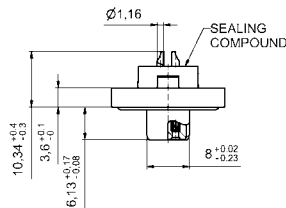
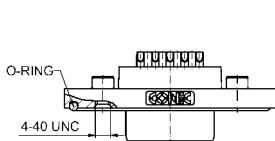
## DESCRIPTION

- 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

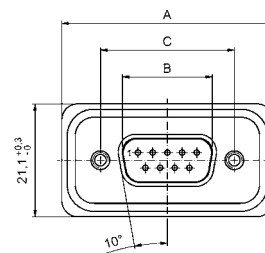
## SOCKET CONNECTOR



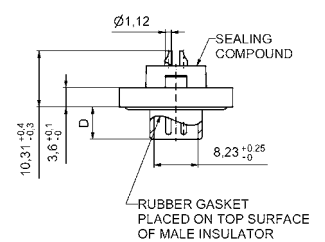
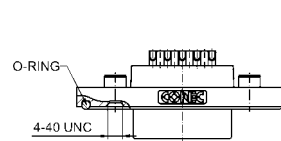
No. of pos.	A $+0.2$ -0	B $+0$ -0.25	C
09	39.40	16.46	25.00 $+0.12$ -0.13
15	47.70	24.79	33.32 $+0.13$ -0.12
25	61.40	38.50	47.04 $+0.13$
37	78.00	54.96	63.50 $+0.13$



## PLUG CONNECTOR



No. of pos.	A $+0.2$ -0	B $+0$ -0.25	C	D
09	39.40	16.81	25.00 $+0.12$ -0.13	6.00 $+0.12$ -0.18
15	47.70	25.14	33.32 $+0.13$ -0.12	6.00 $+0.12$ -0.18
25	61.40	38.86	47.04 $+0.13$	5.99 $+0$ -0.3
37	78.00	55.32	63.50 $+0.13$	5.99 $+0$ -0.3



## 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

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

# D-SUB STANDARD – IP67 SOLID BODY

Solder pin – Straight – Precision machined contacts

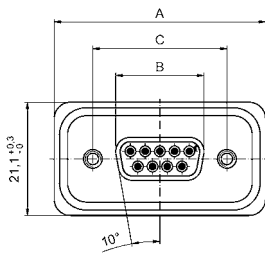


RoHS compliant

## DESCRIPTION

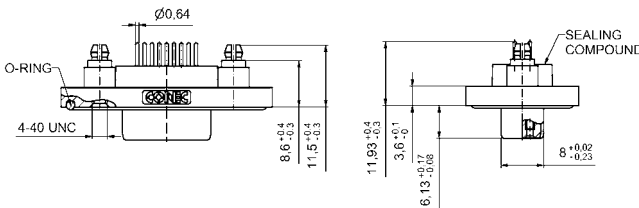
- Mounting style:  
4-40 UNC threaded rear spacer with PCB clip including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

## SOCKET CONNECTOR

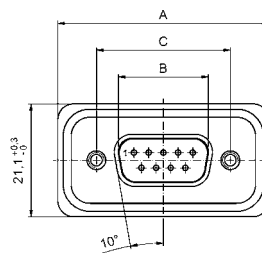


No. of pos.	A +0.2	B -0.2	C
09	39.40	16.46	25.00 <sup>+0.12</sup> / <sub>-0.13</sub>
15	47.70	24.79	33.32 <sup>+0.12</sup> / <sub>-0.12</sub>
25	61.40	38.50	47.04 <sup>+0.13</sup> / <sub>-0.13</sub>
37	78.00	54.96	63.50 <sup>+0.13</sup> / <sub>-0.13</sub>

PCB layout Kat1kFUA

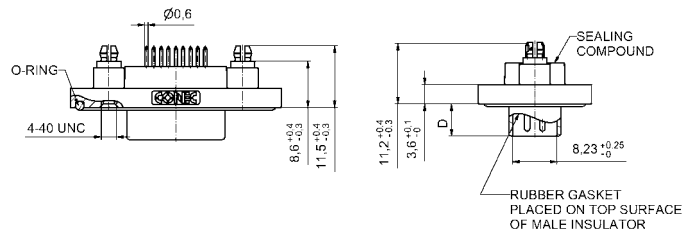


## PLUG CONNECTOR



No. of pos.	A +0.2	B -0.2	C	D
09	39.40	16.81	25.00 <sup>+0.12</sup> / <sub>-0.13</sub>	6.00 <sup>+0.12</sup> / <sub>-0.18</sub>
15	47.70	25.14	33.32 <sup>+0.12</sup> / <sub>-0.12</sub>	6.00 <sup>+0.12</sup> / <sub>-0.18</sub>
25	61.40	38.86	47.04 <sup>+0.13</sup> / <sub>-0.13</sub>	5.99 <sup>+0.13</sup> / <sub>-0.3</sub>
37	78.00	55.32	63.50 <sup>+0.13</sup> / <sub>-0.13</sub>	5.99 <sup>+0.13</sup> / <sub>-0.3</sub>

PCB layout Kat1kFUA



## ORDER DATA

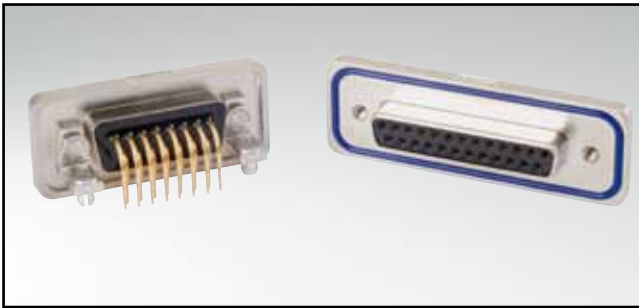
SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded rear spacer PCB clip	15-000453
15	Threaded rear spacer PCB clip	15-000463
25	Threaded rear spacer PCB clip	15-000473
37	Threaded rear spacer PCB clip	15-000483

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

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB STANDARD – IP67 SOLID BODY

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

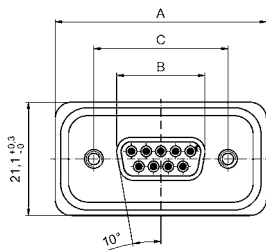


RoHS compliant

## 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

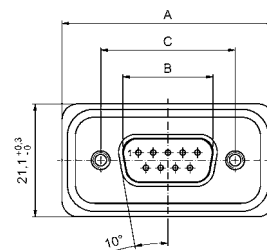
## SOCKET CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ -0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C	D
09	39.40	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
15	47.70	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
25	61.40	38.50	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
37	78.00	54.96	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$

PCB layout Kat1kGMA

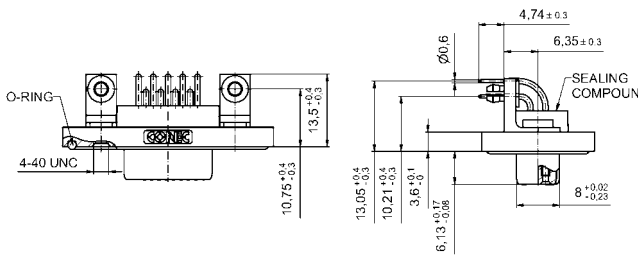
## PLUG CONNECTOR



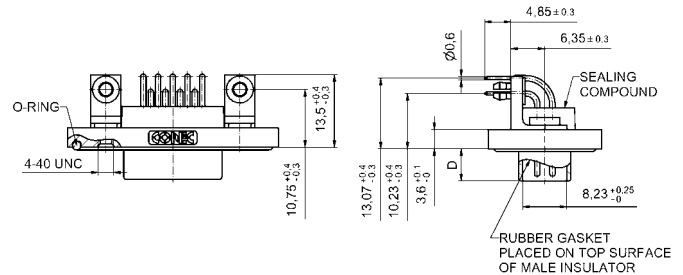
No. of pos.	A $\begin{smallmatrix} +0.2 \\ -0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C	D
09	39.40	16.81	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
15	47.70	25.14	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
25	61.40	38.86	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
37	78.00	55.32	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$

PCB layout Kat1kGNA

Mounting style: Mounting bracket, PCB clip



Mounting style: Mounting bracket, PCB clip



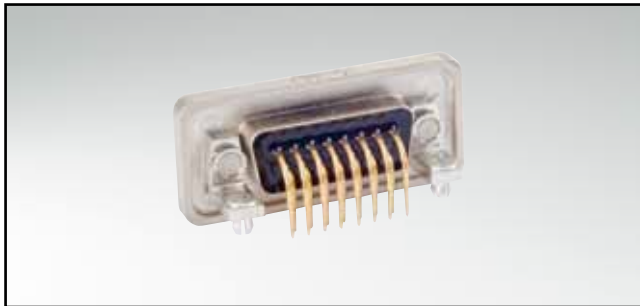
## ORDER DATA

SOCKET CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket/PCB clip	15-000773	09	Mounting bracket/PCB clip	15-000733
15	Mounting bracket/PCB clip	15-000783	15	Mounting bracket/PCB clip	15-000743
25	Mounting bracket/PCB clip	15-000793	25	Mounting bracket/PCB clip	15-000753
37	Mounting bracket/PCB clip	15-000803	37	Mounting bracket/PCB clip	15-000763

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness

# D-SUB STANDARD – IP67 SOLID BODY

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

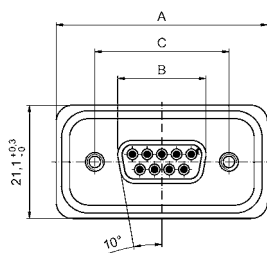


RoHS compliant

## 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

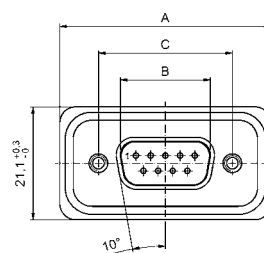
## SOCKET CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ -0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C
09	39.40	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$
15	47.70	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$
25	61.40	38.50	47.04 $\pm 0.13$
37	78.00	54.96	63.50 $\pm 0.13$

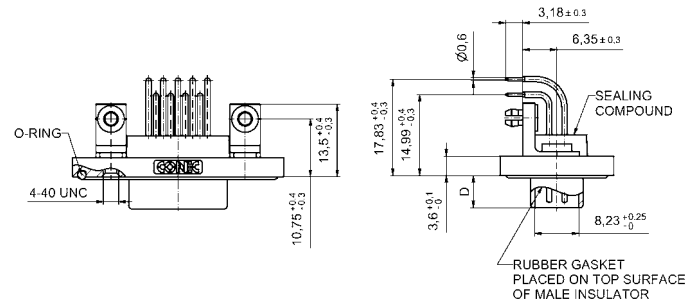
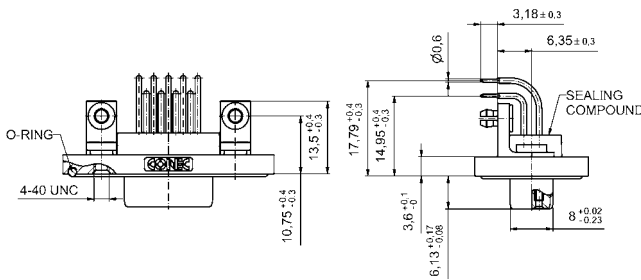
PCB layout Kat1kGOA

## PLUG CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ -0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C	D
09	39.40	16.81	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
15	47.70	25.14	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
25	61.40	38.86	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
37	78.00	55.32	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$

PCB layout Kat1kGPA



## ORDER DATA

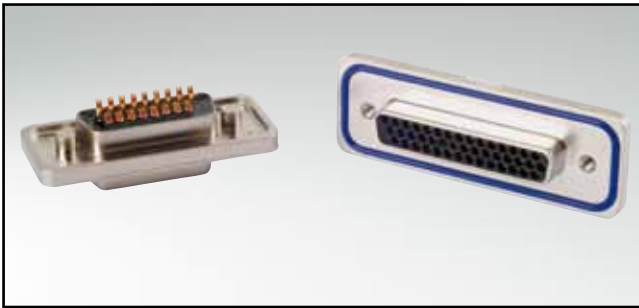
SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
09	Mounting bracket/PCB clip	15-000853
15	Mounting bracket/PCB clip	15-000863
25	Mounting bracket/PCB clip	15-000873
37	Mounting bracket/PCB clip	15-000883

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

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB HIGH DENSITY – IP67 SOLID BODY

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

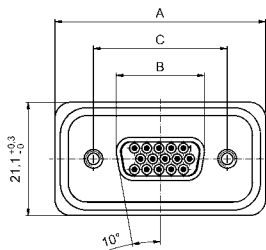


RoHS compliant

## DESCRIPTION

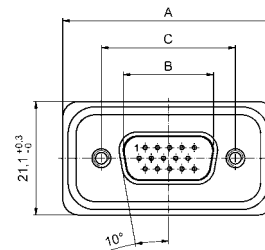
- Suitable for wire size **AWG 22**
- Mounting style:  
4-40 UNC threaded insert including hex locking bolt
- Quality class 3 (also available in quality class 1)
- One-piece zinc die-cast nickel plated shell
- IP67 for harsh environments, pressure-proof up to 1.45 PSI
- Higher protection on request

## SOCKET CONNECTOR

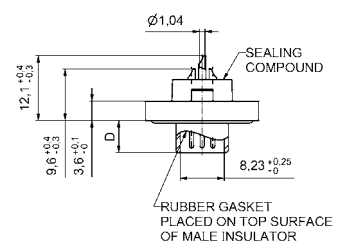
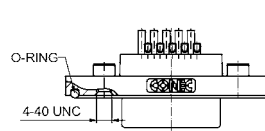
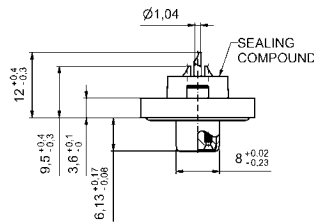
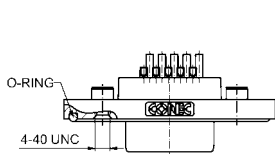


No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C
15	39.40	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.12 \end{smallmatrix}$
26	47.70	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$
44	61.40	38.50	47.04 $\pm 0.13$
62	78.00	54.96	63.50 $\pm 0.13$

## PLUG CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C	D
15	39.40	16.81	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
26	47.70	25.14	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
44	61.40	38.86	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
62	78.00	55.32	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$



## ORDER DATA

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

PLUG CONNECTOR		
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

# D-SUB HIGH DENSITY – IP67 SOLID BODY

Solder pin – Straight – Precision machined contacts

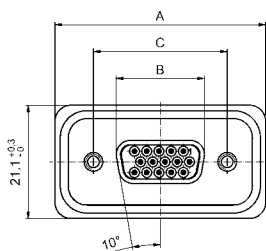


RoHS compliant

## 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

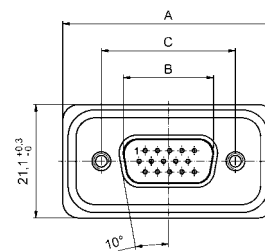
## SOCKET CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ 0.25 \end{smallmatrix}$	C
15	39.40	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.12 \end{smallmatrix}$
26	47.70	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$
44	61.40	38.50	47.04 $\pm 0.13$
62	78.00	54.96	63.50 $\pm 0.13$

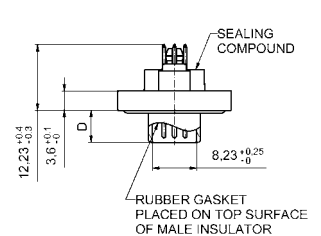
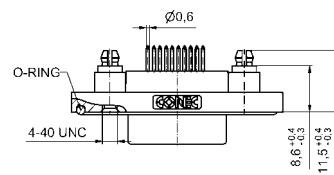
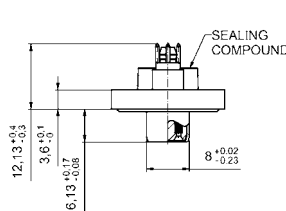
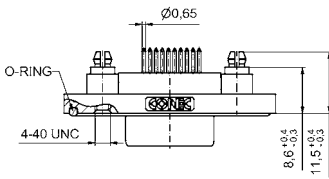
PCB layout Kat1i9A

## PLUG CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ 0.25 \end{smallmatrix}$	C	D
15	39.40	16.81	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
26	47.70	25.14	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
44	61.40	38.86	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
62	78.00	55.32	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$

PCB layout Kat1iU0A



## ORDER DATA

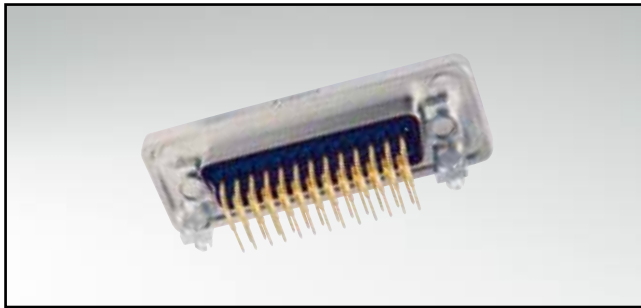
SOCKET CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number
15	Threaded rear spacer PCB clip	15-000533
26	Threaded rear spacer PCB clip	15-000543
44	Threaded rear spacer PCB clip	15-000553
62	Threaded rear spacer PCB clip	15-000563

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

PCB clip .122"/3.1 ± .004"/0.10 mm hole diameter and .063"/1.6 mm circuit board thickness

# D-SUB HIGH DENSITY – IP67 SOLID BODY

Solder pin – Angled – .484" / 12,3 mm – Precision machined contacts – Metal bracket

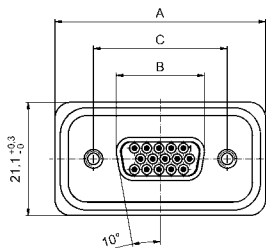


RoHS compliant

## 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

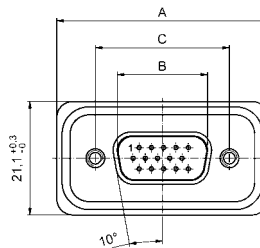
## SOCKET CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C
15	39.40	16.46	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$
26	47.70	24.79	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$
44	61.40	38.50	47.04 $\pm 0.13$
62	78.00	54.96	63.50 $\pm 0.13$

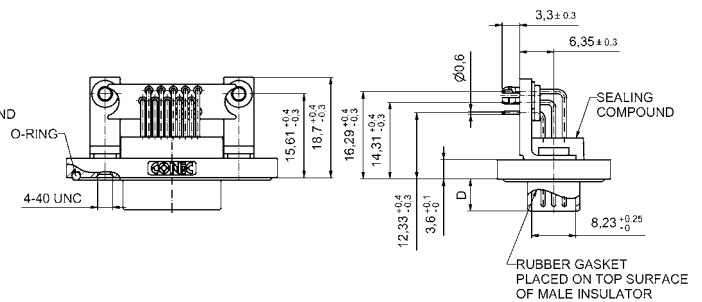
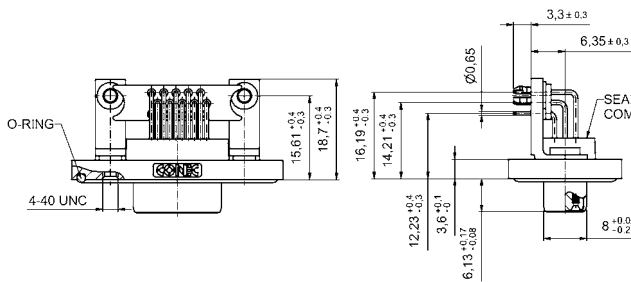
PCB layout Kat1kGQA

## PLUG CONNECTOR



No. of pos.	A $\begin{smallmatrix} +0.2 \\ 0 \end{smallmatrix}$	B $\begin{smallmatrix} +0 \\ -0.25 \end{smallmatrix}$	C	D
15	39.40	16.81	25.00 $\begin{smallmatrix} +0.12 \\ -0.13 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
26	47.70	25.14	33.32 $\begin{smallmatrix} +0.13 \\ -0.12 \end{smallmatrix}$	6.00 $\begin{smallmatrix} +0.12 \\ -0.18 \end{smallmatrix}$
44	61.40	38.86	47.04 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$
62	78.00	55.32	63.50 $\pm 0.13$	5.99 $\begin{smallmatrix} +0 \\ -0.3 \end{smallmatrix}$

PCB layout Kat1kGRA



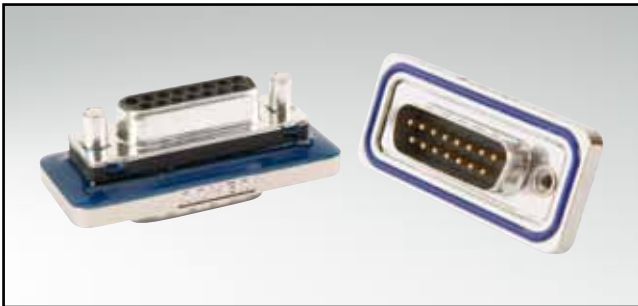
## ORDER DATA

SOCKET CONNECTOR			PLUG CONNECTOR		
No. of pos.	Mounting style 4-40 UNC	Part Number	No. of pos.	Mounting style 4-40 UNC	Part Number
15	Mounting bracket / PCB clip	15-000933	15	Mounting bracket / PCB clip	15-000893
26	Mounting bracket / PCB clip	15-000943	26	Mounting bracket / PCB clip	15-000903
44	Mounting bracket / PCB clip	15-000953	44	Mounting bracket / PCB clip	15-000913
62	Mounting bracket / PCB clip	15-000963	62	Mounting bracket / PCB clip	15-000923

PCB clip .122" / 3.1 ± .004" / 0.10 mm hole diameter and .063" / 1.6 mm circuit board thickness

# D-SUB STANDARD – IP67

## Interface adapter – Connector Saver

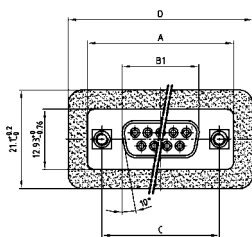


RoHS compliant

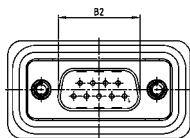
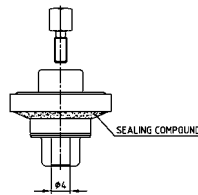
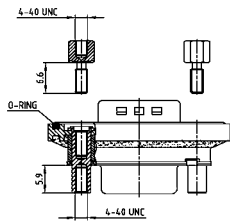
### DESCRIPTION

- Plug to socket adapter
- Mounting style:  
4-40 UNC threaded rear spacer including hex locking bolt
- Precision machined contacts
- Quality class 3 (also available in quality class 1)
- Shell: Brass tin plated
- Nickel plated die-cast frame

### PRODUCT DRAWING



No. of Pos.	A -0.76	B1 -0.25	B2 +0.25	C	D +0.2
9	31.19	16.46	16.79	25.00 <sup>+0.12</sup> / <sub>0.13</sub>	39.40
15	39.52	24.79	25.12	33.30 <sup>+0.15</sup> / <sub>0.10</sub>	47.70
25	53.42	38.50	38.84	47.04 <sup>+0.13</sup>	61.40
37	69.70	54.96	55.30	63.50 <sup>+0.13</sup>	77.90



### ORDER DATA

#### ADAPTER PLUG CONNECTOR - SOCKET CONNECTOR

No. of pos.	Mounting style 4-40 UNC	Part Number
09	Threaded rear spacer	6 STD09AAA99B90 X
15	Threaded rear spacer	6 STD15AAA99B90 X
25	Threaded rear spacer	6 STD25AAA99B90 X
37	Threaded rear spacer	6 STD37AAA99B90 X