

MIL-DTL-32139 Nano-D Connectors

R06 Series Crimping Connectors

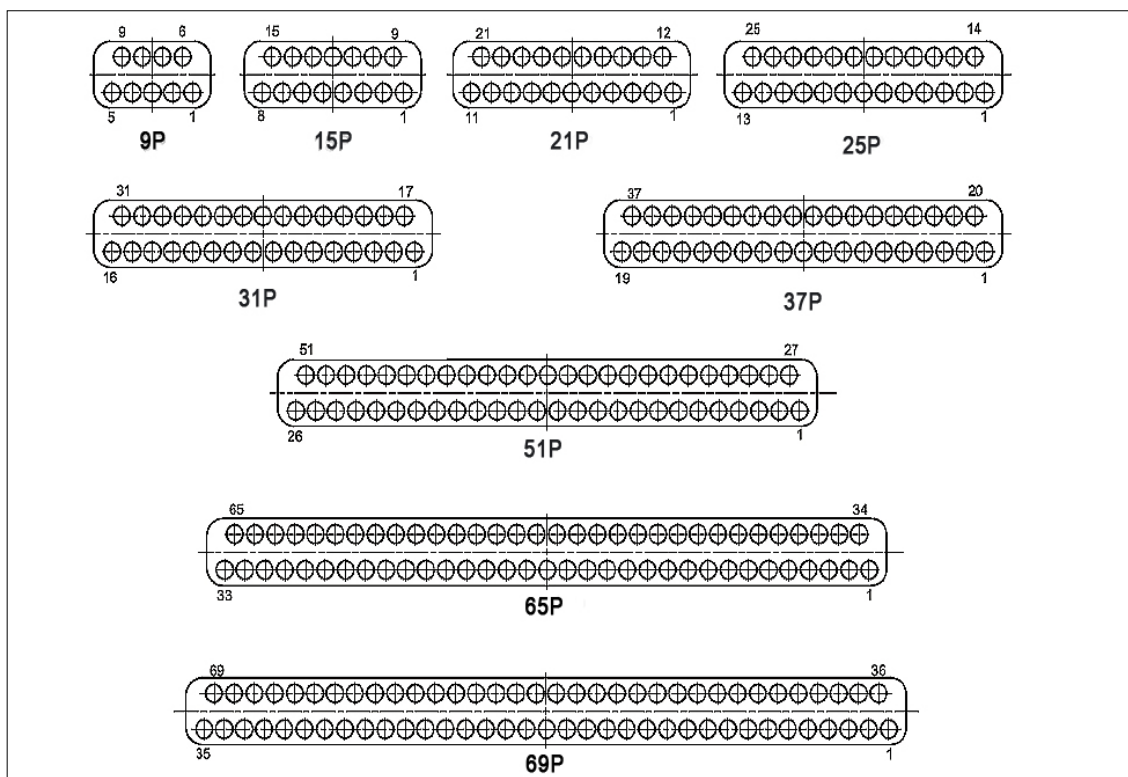
Brief Introduction

- Contacts: 9, 15, 21, 25, 31, 37, 51, 65, 69 pins
- Twist flexible nano pin (twist pin), 0.635mm pitch, nano miniature outline dimension.
- Screw nut locking, it is gently when insert and extract, stably locked.
- It is used for all kinds for electric circuit system interconnection which have high density, nano, light, highly reliable requirement, it can meet light and miniaturize demand.
- Plug with twist pin, receptacle with socket, free terminal with locking screw, fixed terminal with nut, standard mated connector locked by screw and nut.
- Standard: MIL-DTL-32139.
- The sectional area of crimp conductive cable is 0.035mm^2 .
- Undefined tolerance is $\pm 0.13\text{mm}$

Specifications

- | | | | |
|---|---------------------------------|--------------------------|----------------------------------|
| ■ Environment: | -55°C~+125°C | ■ Contact Resistance: | $\leq 21\text{m}\Omega$ |
| ■ Vibration: | 10HZ~2000HZ 196m/s ² | ■ Insulation Resistance: | $\geq 5000\text{M}\Omega$ 100VDC |
| ■ Shock: | 980m/s ² 6ms | ■ Dielectric Strength: | 250V |
| ■ Rated Current: | 1A | ■ Machine Life: | 200 times |
| ■ Random Vibration: Power spectrum density 0.4G ² /Hz, r.m.s value of total acceleration 23.1G | | | |

Contact Arrangements



Remark: The above layout is view from plug mate side end face.



How To Order

Series	R06	-2	2	1	-C	1	-9	PI	0	-JC	-30	9	10
Contact Row: 2—Two Rows													
Shell Plating: 2—Nickel Plating													
Contact Plating: 1—Gold Plating													
Tail Termination Type : C—Crimp													
Mounting Style: 1—Free Mounted 2—Vertical Mounted 3—Horizontal Mounted 4—Crimp Siamese 5—Nut Mounted 6—Flange Mounted 7—Floating Mounted													
Contact Number: 9,15,21,25,31,37,51,65,69pins													
Contact Type PI—Pin in Plug RH—Socket in Receptacle													
Tail Cover : 0—Without Tail Cover 1—With Tail Cover (For Free Mounted C1 Series,Vertical Mounted C2 Series and Horizontal Mounted C3 Series Only)													
Locking Hardware Type: No Code—No Locking Hardware JC—Locking Screw (Straight Slot) JC1—Locking Screw (Hex, Not Recommend) TH—Connect Nut NH—Guide Hole With Nut Mounted													
Wire Gage: 30—AWG30													
Wire Color: 9—White T—Ten Color Repeating													
Wire Length: 10—Wire Length in cm. "10" Specifies 10cm													

Choose Mating Connector

- When choosing mating connector with locking accessories usually choose the locking component which one side with connect nut(TH), the other side with locking screw(JC).
- When choosing product with guide accessories,connector without locked component but only with guide component,it need fix on mounting panel after mated,for avoiding connector take off. When choosing mating connector with guide components usually choose the guide component which one side with guide pin, the other side with guide hole.

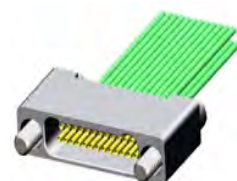
R06 Series Free Mounted Crimping Connectors

How To Order

Series	R06	-2	2	1	-C	1	-25	PI	0	-JC	-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
1—Free Mounted													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
PI—Pin in Plug RH—Socket in Receptacle													
Tail Cover:													
0—Without Tail Cover													
Locking Hardware Type:													
JC—Locking Screw (Straight Slot, "C" Dimension is 1.5mm)													
JC1— Locking Screw (Hex, Not Recommend , "C" Dimension is 2.1mm)													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													



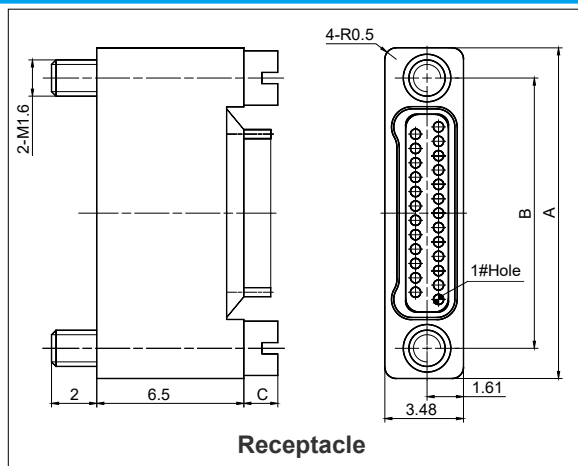
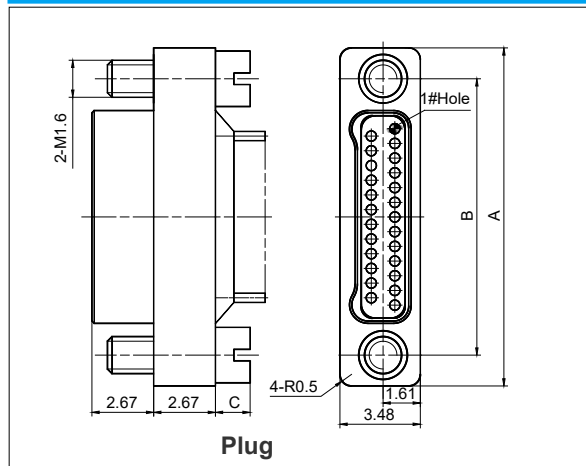
Plug



Receptacle

- Remark: 1. Locking screws are fixed on the outer shell, can't be disassembled
2. Connectors are free mounted, not fixed, usually mated with connectors with nuts.
3. Recommend JC Screws (straight slot screw), tightened by miniature straight screwdriver.
4. When choosing JC1 Screws (hex screw), tightened by 1.27mm subtense hex screwdriver.

Outline Dimensions



Pin Count	Dimensions		Pin Count	Dimensions		Pin Count	Dimensions	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

Remark: All dimensions are in mm.



R06 Series Free Mounted Crimping Connectors With Tail Cover

How To Order

Part Number:	R06	-2	2	1	-C	1	-25	PI	1	E1	-JC	-30	9	10
Series:	R06—Nano-D Connectors For MIL-DTL-32139													
Contact Row:	2—Two Rows													
Shell Plating:	2—Nickel Plating													
Contact Plating:	1—Gold Plating													
Tail Termination Type:	C—Crimp													
Mounting Style:	1—Free Mounted													
Contact Number:	9,15,21,25,31,37,51,65,69pins													
Contact Type:	PI—Pin in Plug RH—Socket in Receptacle													
Tail Cover:	1—With Tail Cover													
Extended Type:	No Code—Standard Type E1—Braided Shield Install (Nickel over Copper) E2—Braided Shield Install (Silver over Copper)													
Locking Hardware Type:	JC—Locking Screw (Straight Slot, "E" Dimension is 1mm, See Page 115 Outline Dimensions) JC1— Locking Screw (Hex, Not Recommend . "E" Dimension is 1.6mm, See Page 115 Outline Dimensions)													
Wire Gage:	30—AWG30													
Wire Color:	9—White T—Ten Color Repeating													
Wire Length:	10—Wire Length in cm. "10" Specifies 10cm													



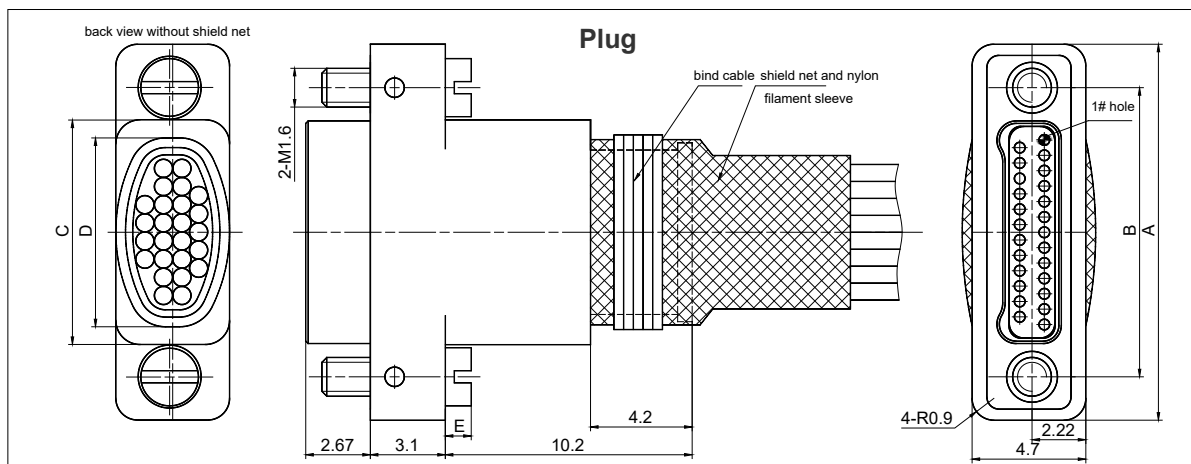
Plug



Receptacle

Remark: 1. Connector with integrated tail cover, binded shielded jacket on tail cover, shielded whole connector and tail cover is non-removable.
2. Connectors are free mounted, not fixed, usually mated with connectors with nuts.
3. Recommend JC Screws (straight slot screw), tightened by miniature straight screwdriver.
4. When choosing JC1 Screws (hex screw), tightened by 1.27mm subsize hex screwdriver.

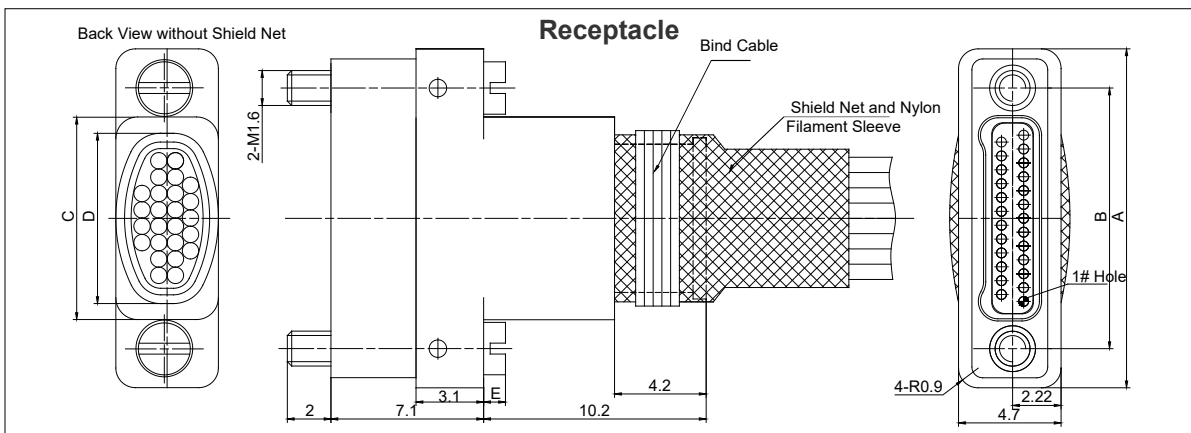
Outline Dimensions



Pin Count	Dimensions				Pin Count	Dimensions			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm.

Outline Dimensions



Pin Count	Dimensions				Pin Count	Dimensions			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm.



R06 Series Vertical Mounted Crimping Connectors

How To Order

Series	R06	-2	2	1	-C	2	-25	RH	0	-TH	-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
2—Vertical Mounted													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
PI—Pin in Plug RH—Socket in Receptacle													
Tail cover:													
0—Without Tail Cover													
Locking Hardware Type:													
TH—Connect Nut													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													



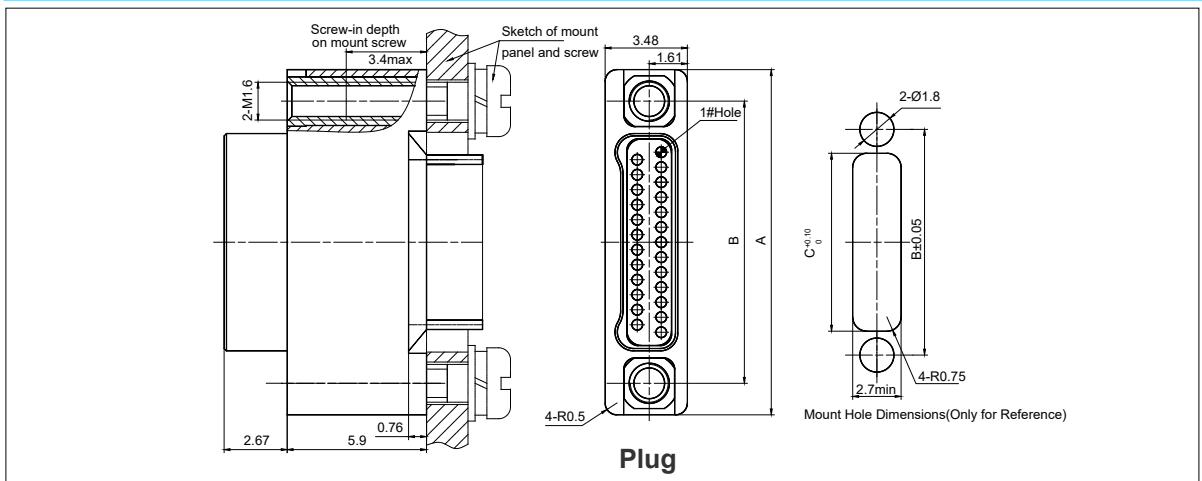
Plug



Receptacle

Remark: 1. Connecting nut with thread structure, forepart is used for locking the screw, back part is used for mounting.
2. Connectors with connecting nuts are usually mated with connectors with locking screws.

Outline Dimensions

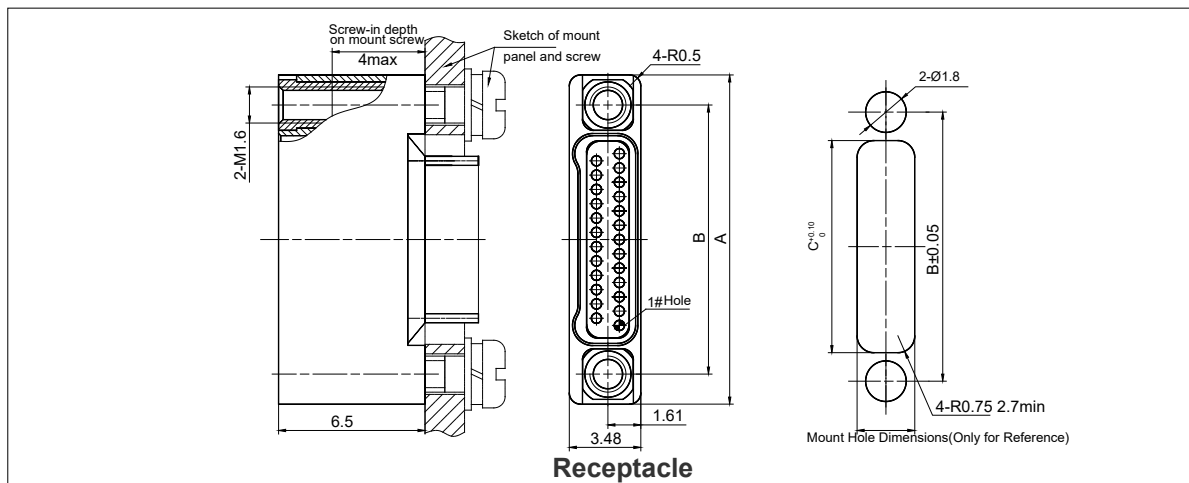


Pin Count	Dimensions			Pin Count	Dimensions			Pin Count	Dimensions		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm.



Outline Dimensions



Pin Count	Dimensions			Pin Count	Dimensions			Pin Count	Dimensions		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm.



R06 Series Vertical Mounted Crimping Connectors With Tail Cover

How To Order

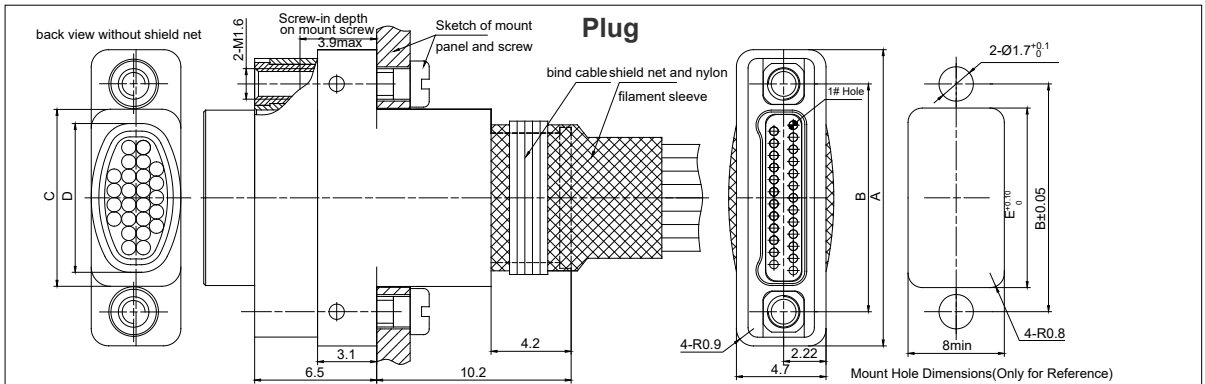
Part Number:	R06	-2	2	1	-C	2	-25	PI	1	E1	-TH	-30	9	10	 Plug
Series:	R06—Nano-D Connectors For MIL-DTL-32139														
Contact Row:	2—Two Rows														
Shell Plating:	2—Nickel Plating														
Contact Plating:	1—Gold Plating														
Tail Termination Type:	C—Crimp														
Mounting Style:	2—Vertical Mounted														
Contact Number:	9,15,21,25,31,37,51,65,69pins														
Contact Type:	PI—Pin in Plug RH—Socket in Receptacle														
Tail Cover:	1—With Tail Cover														
Extended Type:	No Code—Standard Type E1—Braided Shield Install (Nickel over Copper) E2—Braided Shield Install (Silver over Copper)														 Receptacle
Locking Hardware Type:	TH—Connect Nut														
Wire Gage:	30—AWG30														
Wire Color:	9—White T—Ten Color Repeating														
Wire Length:	10—Wire Length in cm. "10" Specifies 10cm														

Remark: 1. Connector with integrated tail cover, binded shielded jacket on tail cover, shielded whole connector and tail cover is non-removable.

2. Usually mated with connectors with screws.

3. These series connectors are limited by dimension, standard M1.6mm screws are not suitable to them, we provide special-made M1.6*6mm mounted screws.

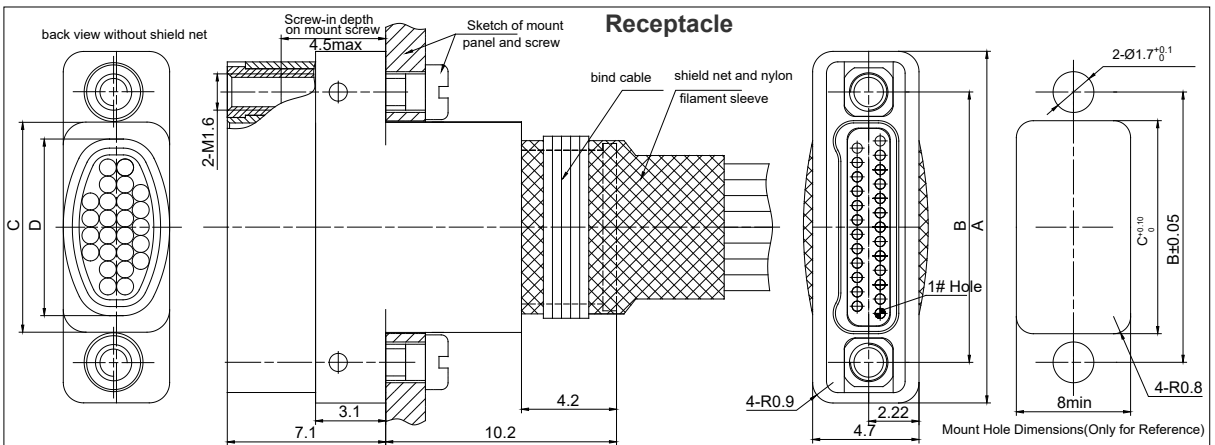
Outline Dimensions



Pin Count	Dimensions					Pin Count	Dimensions				
	A	B	C	D	E		A	B	C	D	E
9pins	10.5	6.86	4.2	3.7	4.3	15pins	12.4	8.76	6.1	5	6.2
21pins	14.3	10.67	8	6.6	8.1	25pins	15.6	11.94	9.3	7.8	9.4
31pins	17.5	13.84	11.2	9.4	11.3	37pins	19.4	15.75	13.1	11.2	13.2
51pins	23.8	20.19	17.55	15.7	17.65	65pins	28.3	24.64	22	20.1	22.1
69pins	29.5	25.91	23.25	21.4	23.35						

Remark: All dimensions are in mm.

Outline Dimensions



Pin Count	Dimensions					Pin Count	Dimensions				
	A	B	C	D	E		A	B	C	D	E
9pins	10.5	6.86	4.2	3.7	4.3	15pins	12.4	8.76	6.1	5	6.2
21pins	14.3	10.67	8	6.6	8.1	25pins	15.6	11.94	9.3	7.8	9.4
31pins	17.5	13.84	11.2	9.4	11.3	37pins	19.4	15.75	13.1	11.2	13.2
51pins	23.8	20.19	17.55	15.7	17.65	65pins	28.3	24.64	22	20.1	22.1
69pins	29.5	25.91	23.25	21.4	23.35						

Remark: All dimensions are in mm.



R06 Series Horizontal Mounted Crimping Connectors

How To Order

Series	R06	-2	2	1	-C	3	-25	RH	0	-TH	-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
3—Horizontal Mounted													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
PI—Pin in Plug RH—Socket in Receptacle													
Tail Cover:													
0—Without Tail Cover													
Locking Hardware Type:													
TH—Connect Nut													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													



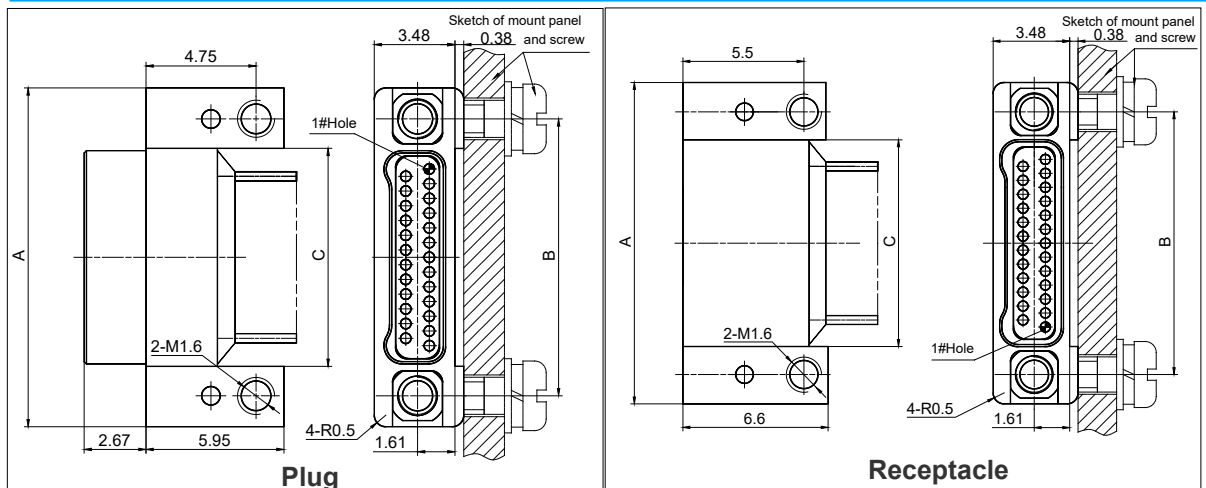
Plug



Receptacle

Remark: Connectors with connecting nuts are usually mated with connectors with locking screws.

Outline Dimensions



Pin Count	Dimensions			Pin Count	Dimensions			Pin Count	Dimensions		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.31	15pins	11.53	8.76	6.22	21pins	13.44	10.67	8.13
25pins	14.71	11.94	9.40	31pins	16.61	13.84	11.30	37pins	18.52	15.75	13.21
51pins	22.96	20.19	17.65	65pins	27.41	24.64	22.10	69pins	28.68	25.91	23.37

Remark: All dimensions are in mm.

R06 Series Horizontal Mounted Crimping Connectors with Tail Cover

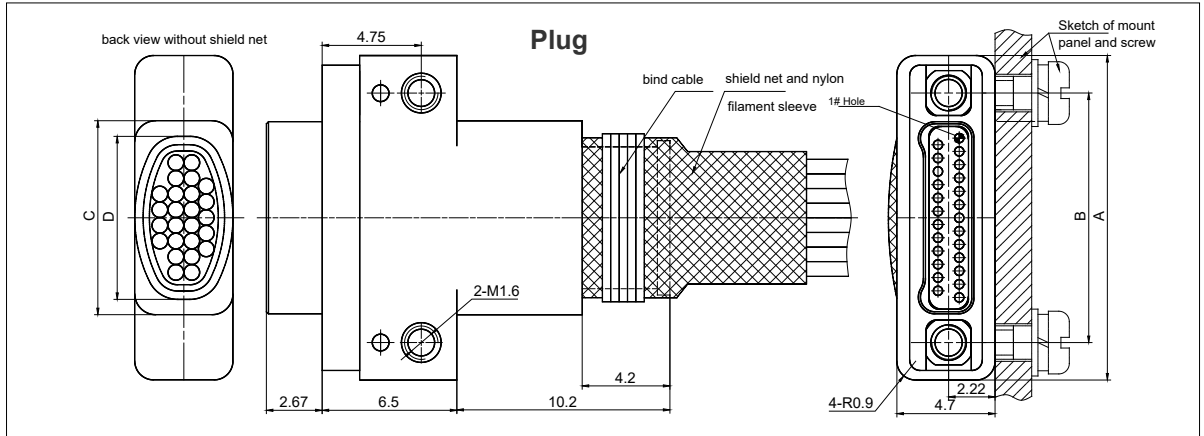
How To Order

Part Number:	R06	-2	2	1	-C	3	-25	PI	1	E1	-TH	-30	9	10	 Plug  Receptacle
Series:	R06—Nano-D Connectors For MIL-DTL-32139														
Contact Row:	2—Two Rows														
Shell Plating:	2—Nickel Plating														
Contact Plating:	1—Gold Plating														
Tail Termination Type:	C—Crimp														
Mounting Style:	3—Horizontal Mounted														
Contact Number:	9,15,21,25,31,37,51,65,69pins														
Contact Type:	PI—Pin in Plug RH—Socket in Receptacle														
Tail Cover:	1—With Tail Cover														
Extended Type:	No Code—Standard Type E1—Braided Shield Install (Nickel over Copper) E2—Braided Shield Install (Silver over Copper)														
Locking Hardware Type:	TH—Connect Nut														
Wire Gage:	30—AWG30														
Wire Color:	9—White T—Ten Color Repeating														
Wire Length:	10—Wire Length in cm. "10" Specifies 10cm														

Remark: 1. Connector with integrated tail cover, binded shielded jacket on tail cover, shielded whole connector and tail cover is non-removable.
2. Connectors with connecting nuts are usually mated with connectors with locking screws.



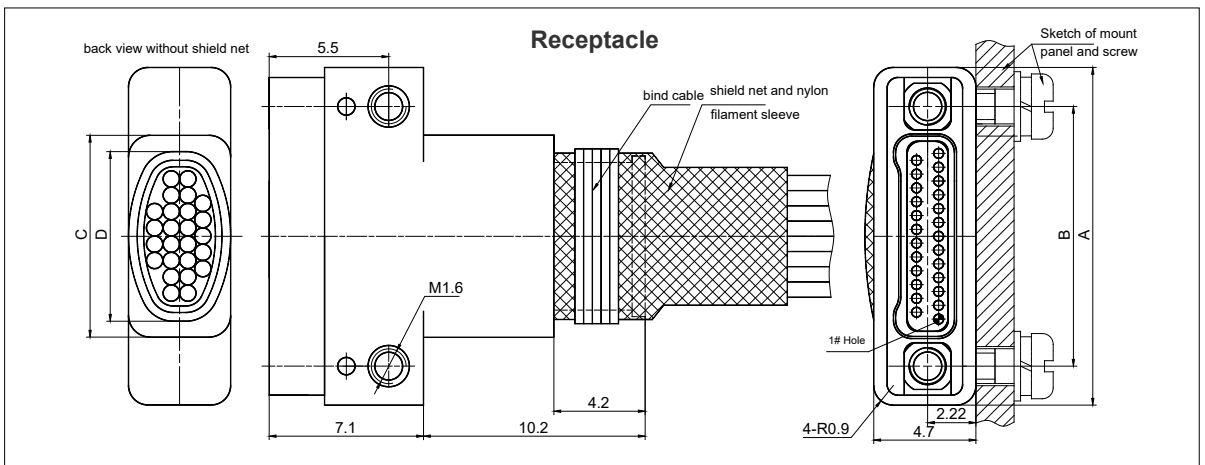
Outline Dimensions



Pin Count	Dimensions				Pin Count	Dimensions			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm.

Outline Dimensions



Pin Count	Dimensions				Pin Count	Dimensions			
	A	B	C	D		A	B	C	D
9pins	10.5	6.86	4.2	3.7	15pins	12.4	8.76	6.1	5
21pins	14.3	10.67	8	6.6	25pins	15.6	11.94	9.3	7.8
31pins	17.5	13.84	11.2	9.4	37pins	19.4	15.75	13.1	11.2
51pins	23.8	20.19	17.55	15.7	65pins	28.3	24.64	22	20.1
69pins	29.5	25.91	23.25	21.4					

Remark: All dimensions are in mm.

R06 Series Crimp Siamese Crimping Connectors

How To Order

Series	R06	-2	2	1	-C	4	-25	PI	0	-JC	-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
4—Crimp Siamese													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
PI—Pin (Plug Connector Both Ends)													
RH—Socket (Receptacle Connector Both Ends)													
PH—Pin Connector to Socket Connector													
Tail Cover:													
0—Without Tail Cover													
Locking Hardware Type:													
JC—For Contact Type PI (Locking Screw JC, Straight Slot, For Plug Connector Both Ends)													
JH—For Contact Type PH (Locking Screw JC for Plug Connector, Connect Nut TH for Receptacle Connector)													
TH1—For Contact Type PI (Connect Nut TH, For Plug Connector Both Ends)													
TH2—For Contact Type RH (Connect Nut TH, For Receptacle Connector Both Ends)													
TH3—For Contact Type PH (Connect Nut TH, For Plug Connector and Receptacle Connector Both)													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White													
T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													

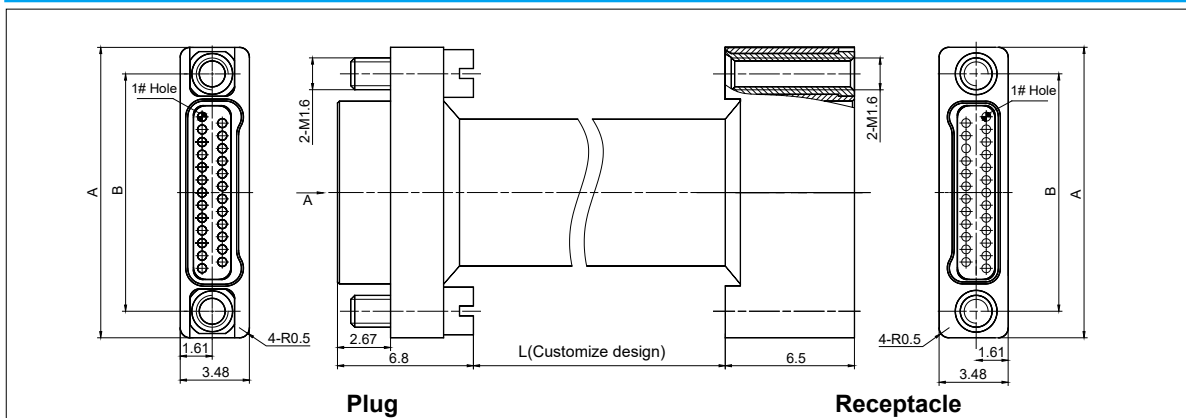


PI



PH

Outline Dimensions



Pin Count	Dimensions		Pin Count	Dimensions		Pin Count	Dimensions	
	A	B		A	B		A	B
9pins	9.63	6.86	15pins	11.53	8.76	21pins	13.44	10.67
25pins	14.71	11.94	31pins	16.61	13.84	37pins	18.52	15.75
51pins	22.96	20.19	65pins	27.41	24.64	69pins	28.68	25.91

Remark: All dimensions are in mm.



R06 Series Nut Mounted Crimping Receptacle with Guide Hole

How To Order

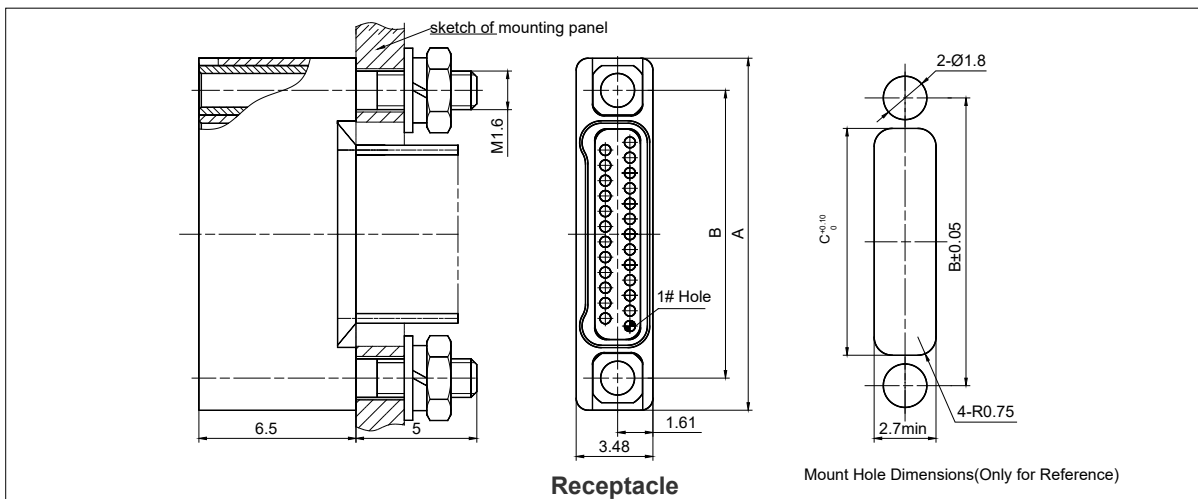
Series	R06	-2	2	1	-C	5	-25	RH	0	-NH	-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
5—Nut Mounted													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
RH—Socket in Receptacle													
Tail Cover:													
0—Without Tail Cover													
Locking Hardware Type:													
NH—Guide Hole With Nut Mounted													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													



Receptacle

Remark: Connectors with guide holes are usually mated with plugs with guide pins.

Outline Dimensions



Pin Count	Dimensions			Pin Count	Dimensions			Pin Count	Dimensions		
	A	B	C		A	B	C		A	B	C
9pins	9.63	6.86	4.2	15pins	11.53	8.76	6.1	21pins	13.44	10.67	8
25pins	14.71	11.94	9.3	31pins	16.61	13.84	11.2	37pins	18.52	15.75	13.1
51pins	22.96	20.19	17.55	65pins	27.41	24.64	22	69pins	28.68	25.91	23.25

Remark: All dimensions are in mm.

R06 Series Flange Mounted Crimping Receptacle with Guide Hole

How To Order

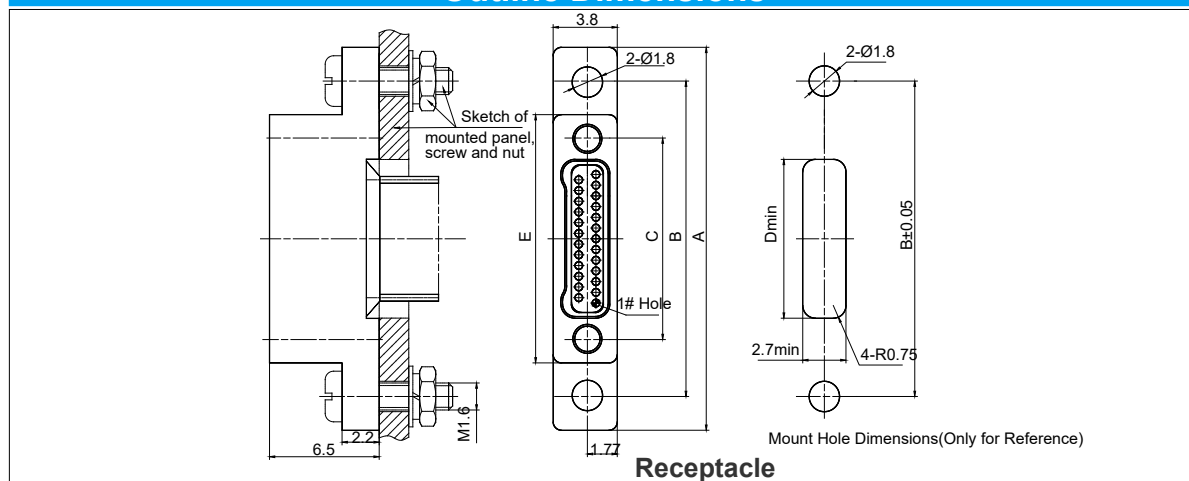
Series	R06	-2	2	1	-C	6	-25	RH	0		-30	9	10
Contact Row:													
2—Two Rows													
Shell Plating:													
2—Nickel Plating													
Contact Plating:													
1—Gold Plating													
Tail Termination Type:													
C—Crimp													
Mounting Style:													
6—Flange Mounted													
Contact Number:													
9,15,21,25,31,37,51,65,69pins													
Contact Type:													
RH—Socket in Receptacle													
Tail Cover:													
0—Without Tail Cover													
Locking Hardware Type:													
No Code—No Locking Hardware													
Wire Gage:													
30—AWG30													
Wire Color:													
9—White T—Ten Color Repeating													
Wire Length:													
10—Wire Length in cm. "10" Specifies 10cm													



Receptacle

Remark: Connectors with guide holes are usually mated with plugs with guide pins.

Outline Dimensions



Receptacle

Pin Count	Dimensions					Pin Count	Dimensions				
	A	B	C	D	E		A	B	C	D	E
9pins	17.6	13.6	6.86	4.2	9.63	15pins	19.5	15.5	8.76	6.1	11.53
21pins	21.4	17.4	10.67	8	13.44	25pins	22.7	18.7	11.94	9.3	14.71
31pins	24.6	20.6	13.84	11.2	16.61	37pins	26.5	22.5	15.75	13.1	18.52
51pins	30.9	26.9	20.19	17.6	22.96	65pins	35.4	31.4	24.64	22	27.41
69pins	36.7	32.7	25.91	23.3	28.68						

Remark: All dimensions are in mm.



R06 Series Floating Mounted Crimping Plug Connectors

How To Order

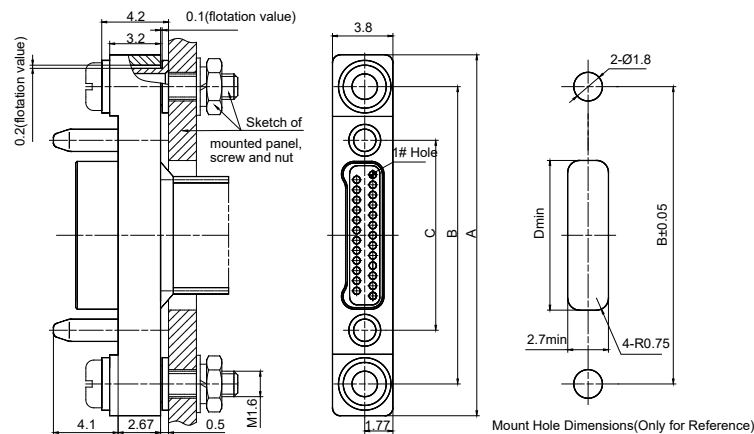
Series	R06	-2	2	1	-C	7	-25	PI	0	-30	9	10
Contact Row:												
2—Two Rows												
Shell Plating:												
2—Nickel Plating												
Contact Plating:												
1—Gold Plating												
Tail Termination Type:												
C—Crimp												
Mounting Style:												
7—Floating Mounted												
Contact Number:												
9,15,21,25,31,37,51,65,69pins												
Contact Type:												
PI—Pin in Plug												
Tail Cover:												
0—Without Tail Cover												
Locking Hardware Type:												
No Code—No Locking Hardware												
Wire Gage:												
30—AWG30												
Wire Color:												
9—White T—Ten Color Repeating												
Wire Length:												
10—Wire Length in cm. "10" Specifies 10cm												



Plug

Remark: 1.Connectors with guide pins and floating tubes ,application on blind-mate connectors.
2.Usually mated with receptacle with guide hole.

Outline Dimensions



Plug

Pin Count	Dimensions				Pin Count	Dimensions			
	A	B	C	D		A	B	C	D
9pins	17.6	13.6	6.86	4.2	15pins	19.5	15.5	8.76	6.1
21pins	21.4	17.4	10.67	8	25pins	22.7	18.7	11.94	9.3
31pins	24.6	20.6	13.84	11.2	37pins	26.5	22.5	15.75	13.1
51pins	30.9	26.9	20.19	17.6	65pins	35.4	31.4	24.64	22
69pins	36.7	32.7	25.91	23.3					

Remark: All dimensions are in mm.