

# MIL-DTL-83513 Micro D-Sub Connectors

## R04A Series Solder Cup Connector



### Brief Introduction

- Micro-D connectors
- Twist pin contact, high density interconnection
- Metal shell, plated nickel or cadmium
- Solder cup connector
- Meet MIL-DTL-83513

### Specification

- Environment temperature:  $-55\text{ }^{\circ}\text{C} \sim 125\text{ }^{\circ}\text{C}$
- Vibration:  $10\text{Hz} \sim 2000\text{Hz}$ ,  $196\text{m/s}^2$
- Random vibration: Power spectrum density  $0.4\text{G}^2/\text{Hz}$ , root mean square value of total acceleration  $23.1\text{G}$
- Shock:  $735\text{m/s}^2$  11sm
- Rated current: 3A
- Contact resistance:  $\leq 10\text{ m}\Omega$
- Insulation resistance:  $\geq 5000\text{ M}\Omega$
- Dielectric strength: 800V
- Durability: 500 times

### Product Stereogram

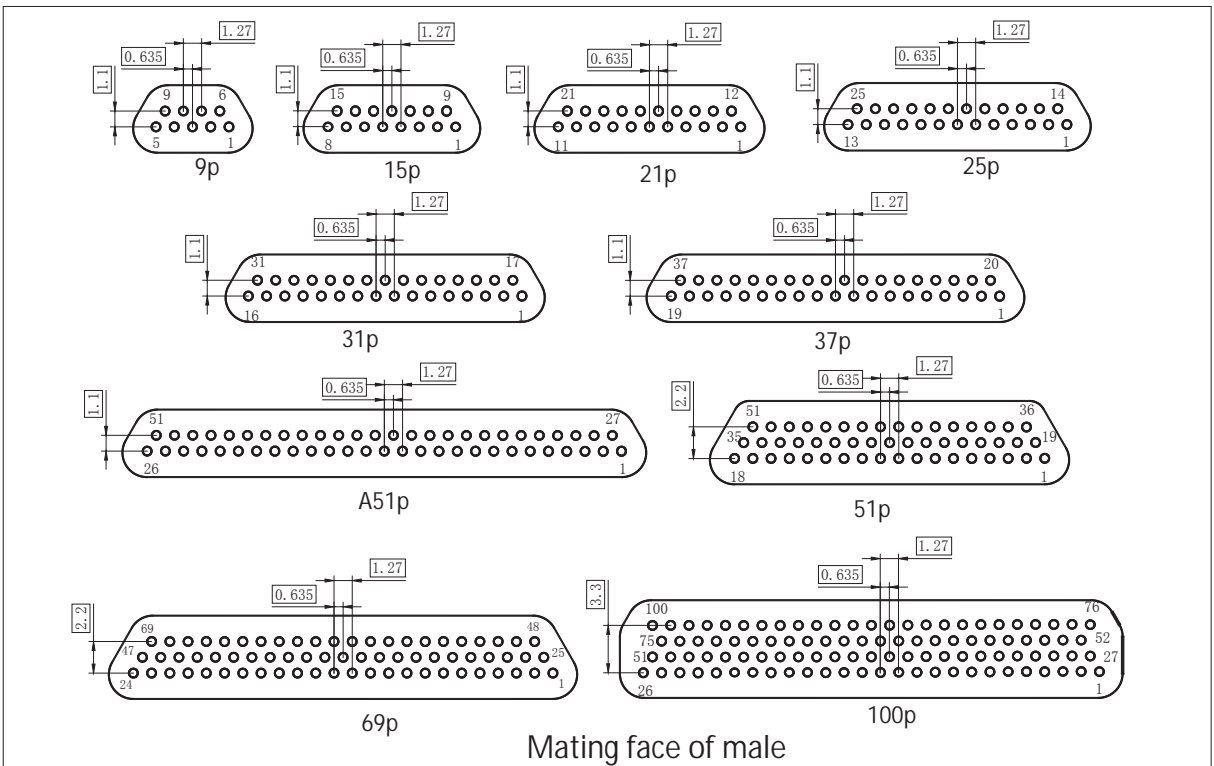


Plug



Receptacle

## Contact arrangements

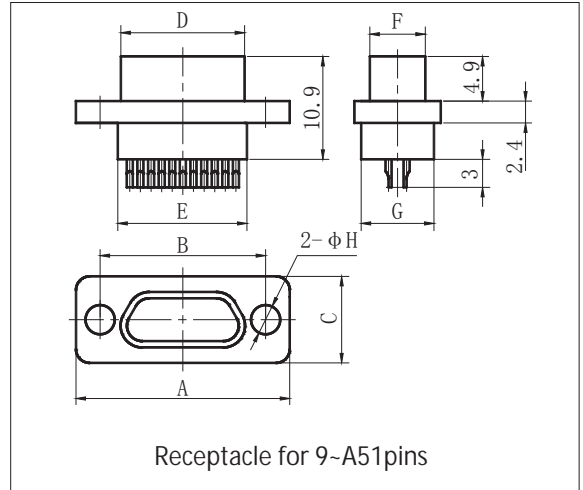
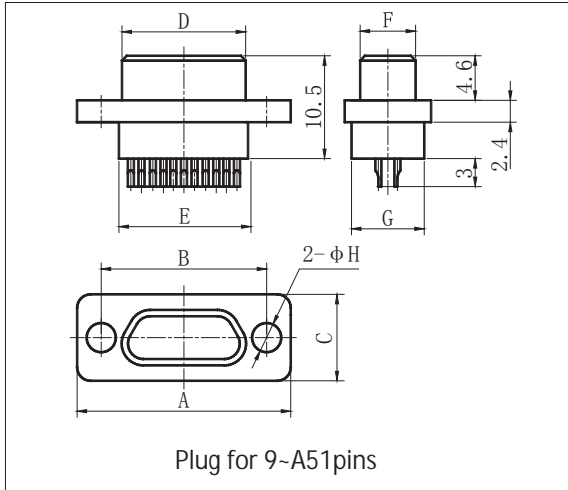


## How to order

Sample part number:	R04A	-31	PI	J	B01	AB
Series:	R04A-Micro D connectors for MIL-DTL-83513					
Contact number:	9,15,21,25,31,37,A51,51,69,100pins					
Contact type:	PI-pin in plug      RH-socket in receptacle					
Termination style:	J- solder cup connector					
Locking hardware:	blank-without      B01-locking hardware, please see page5 to page9					
Backshell:	blank-without      AB-AB style backshell, please see page10 to page12.					

## R04A series Solder cup connectors

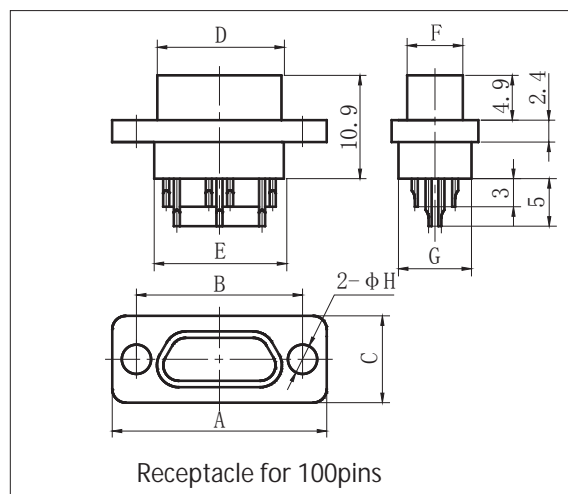
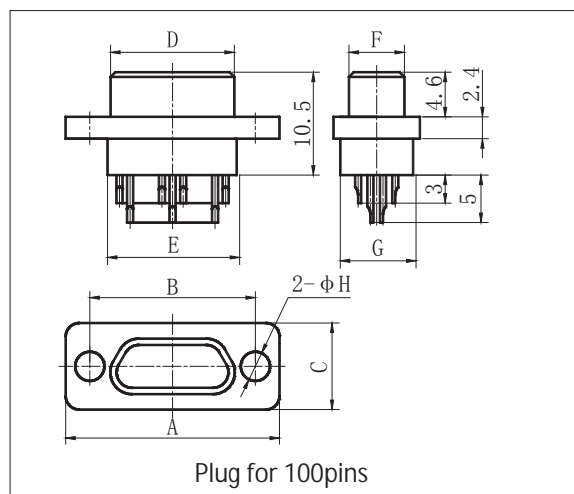
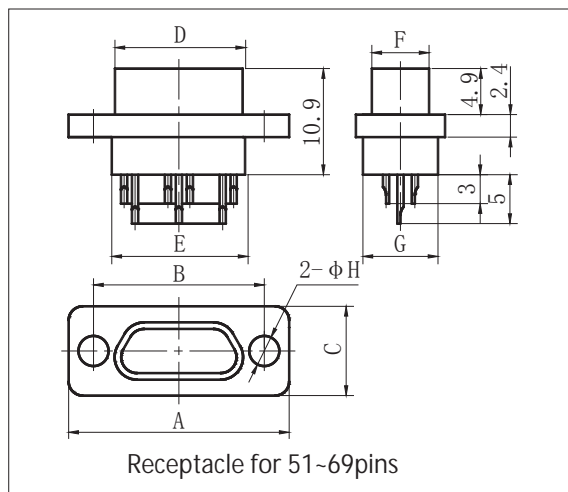
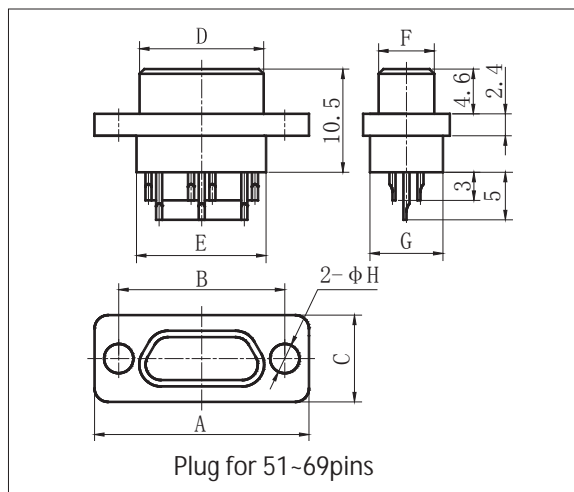
### Outline Dimension



Contact Nos	Outline dimension(in mm)							
	A	B	C	D	E	F	G	H
9PI	19.6	14.3	7.6	8.4	9.9	4.7	6.8	2.31
15PI	23.5	18.2	7.6	12.3	13.8	4.7	6.8	2.31
21PI	27.3	22	7.6	16.1	17.6	4.7	6.8	2.31
25PI	29.8	24.5	7.6	18.6	20.2	4.7	6.8	2.31
31PI	33.6	28.3	7.6	22.4	24	4.7	6.8	2.31
37PI	37.4	32.1	7.6	26.2	27.8	4.7	6.8	2.31
A51PI	46.3	41	7.6	35	36.7	4.7	6.8	2.31
9RH	19.6	14.3	7.6	9.9	9.9	6.1	6.8	2.31
15RH	23.5	18.2	7.6	13.7	13.8	6.1	6.8	2.31
21RH	27.3	22	7.6	17.5	17.6	6.1	6.8	2.31
25RH	29.8	24.5	7.6	20.1	20.2	6.1	6.8	2.31
31RH	33.6	28.3	7.6	23.9	24	6.1	6.8	2.31
37RH	37.4	32.1	7.6	27.7	27.8	6.1	6.8	2.31
A51RH	46.3	41	7.6	36.5	36.7	6.1	6.8	2.31

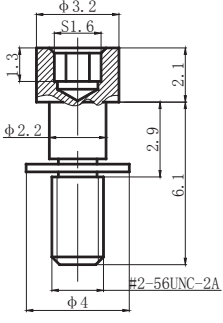
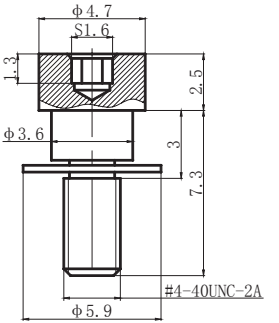
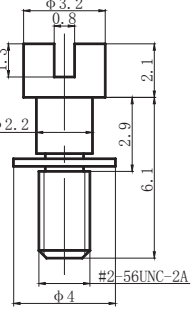
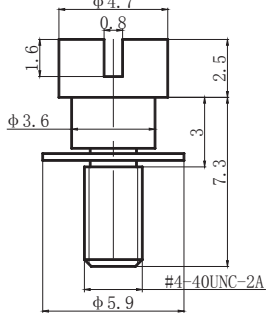
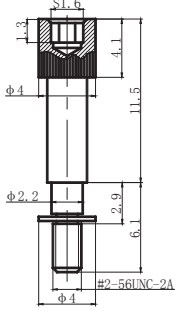
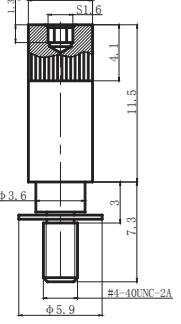
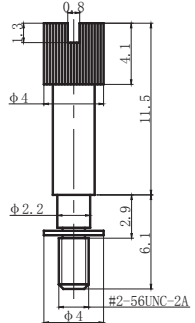
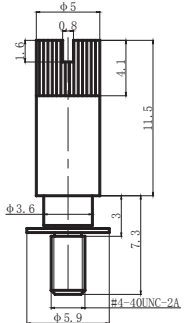
## R04A series Solder cup connectors

### Outline Dimension



Contact Nos	Outline dimension(in mm)							
	A	B	C	D	E	F	G	H
51PI	36.2	30.9	8.7	25	26.6	5.8	7.9	2.31
69PI	43.8	38.5	8.7	32.6	34.2	5.8	7.9	2.31
100PI	54.7	45.7	9.7	35.1	36.6	6.8	9.1	3.7
51RH	36.2	30.9	8.7	26.5	26.6	7.2	7.9	2.31
69RH	43.8	38.5	8.7	34.1	34.2	7.2	7.9	2.31
100RH	54.7	45.7	9.7	36.6	36.6	8.3	9.1	3.7

### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B01	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> </ol>		
B02	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> </ol>		
B03	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> </ol>		
B04	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> </ol>		

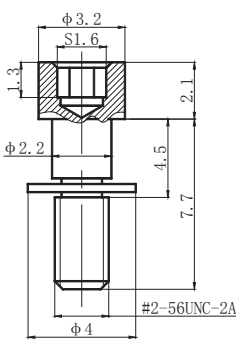
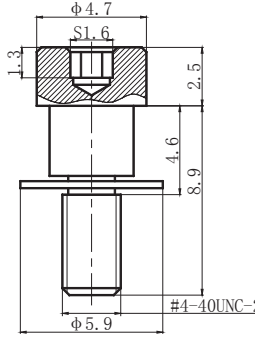
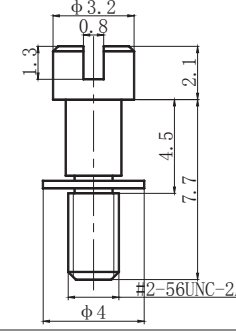
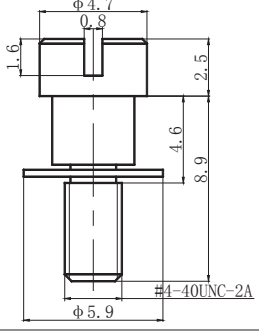
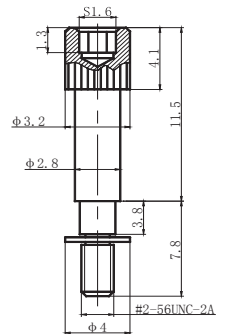
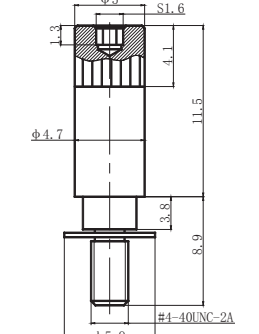
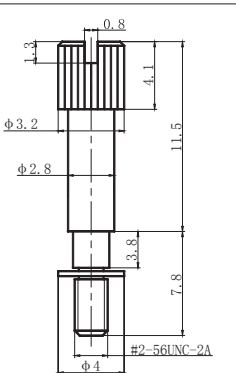
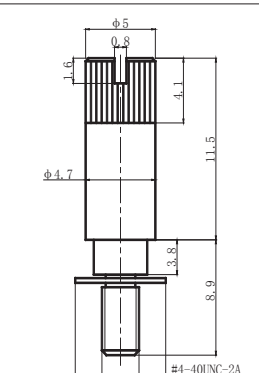
Note: all dimensions are in mm.

The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B05	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>		
B06	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>		
B07	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>		
B08	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AA, AB, AC, AD AG type backshell</li> </ol>		

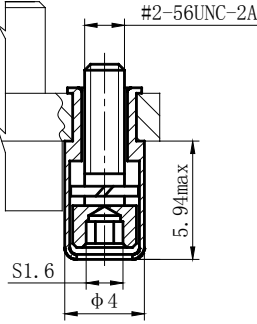
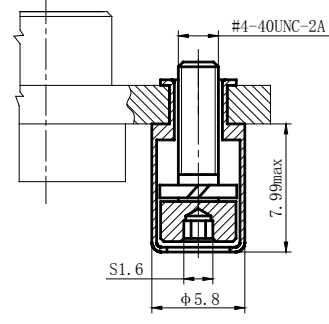
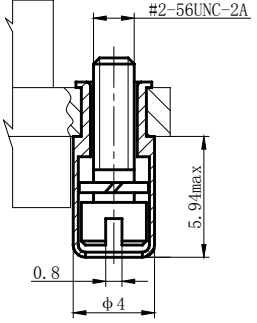
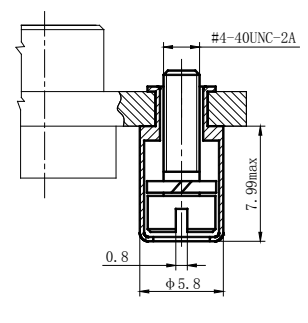
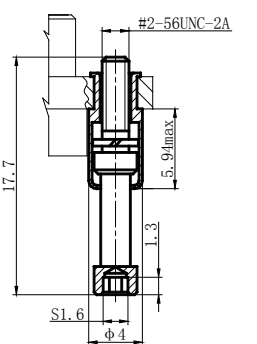
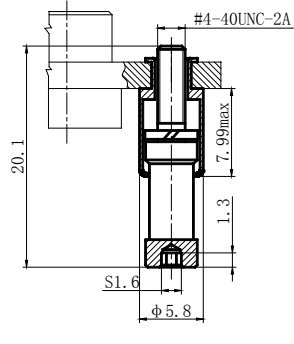
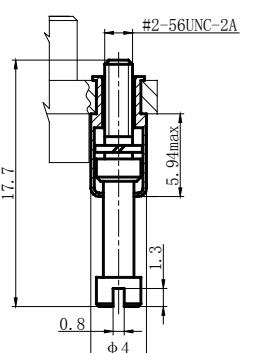
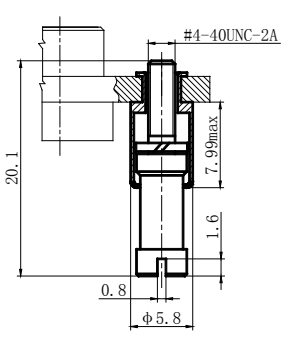
Note: all dimensions are in mm.

### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
B10	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B11	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Short jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B12	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Hex socket head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		
B13	<ol style="list-style-type: none"> <li>1. Removable hardware.</li> <li>2. Long jackscrew with a retainer ring.</li> <li>3. Slot head</li> <li>4. Used for connetors with AH, AJ type backshell.</li> </ol>		

Note: all dimensions are in mm.

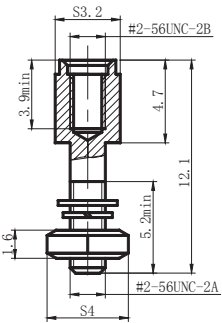
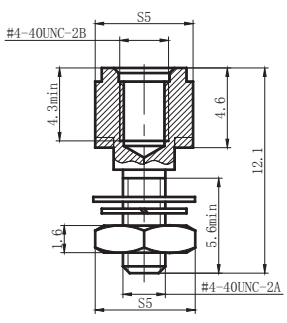
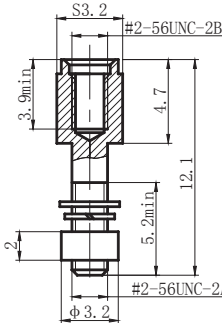
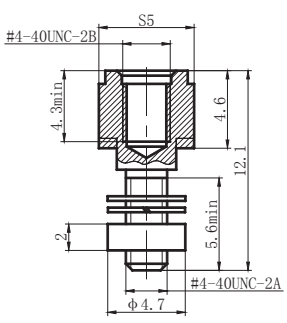
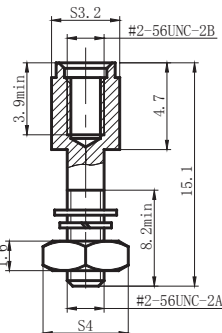
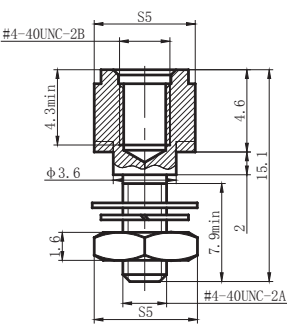
## The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
S01	1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Hex socket head		
S02	1. Non removable hardware. 2. Short jackscrew with a retainer sleeve. 3. Slot socket head		
S03	1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Hex socket head		
S04	1. Non removable hardware. 2. Long jackscrew with a retainer sleeve. 3. Slot socket head		

Note: all dimensions are in mm.

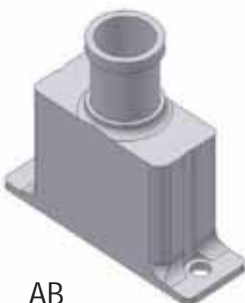

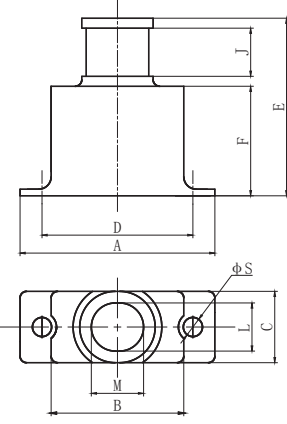
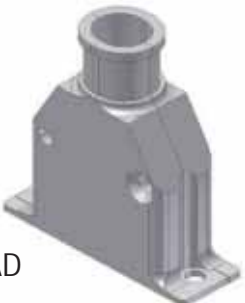
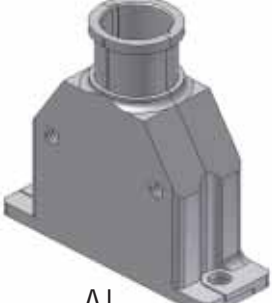

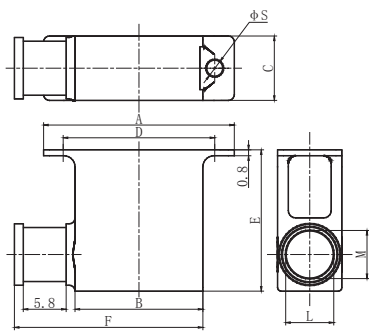


### The mating locking hardware

Code	Feature	Outline dimension	
		for 9~69pins	for 100pins
N01	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for front panel mounting.</li> <li>The thickness of panel is not more than 2mm.</li> </ol>		
N06	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for connectors with backshell.</li> </ol>		
N07	<ol style="list-style-type: none"> <li>Hex head jackpost.</li> <li>Used for front panel mounting.</li> <li>The thickness of panel is not more than 5mm.</li> </ol>		

Note: all dimensions are in mm.

### Backshell

Stereogram & feature		Outline dimension
 <p>AB</p> <p>AB style: one-piece, standard type</p>	 <p>AC</p> <p>AC style: one-piece, wide entry.</p>	
 <p>AD</p> <p>AD style: two-piece, elongated type</p>	 <p>AJ</p> <p>AJ style: two-piece, non-skid and elongated type</p>	
 <p>AG</p> <p>AG style: one-piece, standard type with 90° entry</p>		

Notes: all dimensions are in mm.

## Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	φS	L	M
R04A-9-AB	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	-	4.7
R04A-15-AB	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	-	5.8
R04A-21-AB	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	-	6.5
R04A-25-AB	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	7.8
R04A-31-AB	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	8.3
R04A-37-AB	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	9.5
R04A-A51-AB	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	13
R04A-51-AB	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	11.9
R04A-69-AB	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	15.7
R04A-100-AB	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	17.4
R04A-9-AC	19.6	11.2	8.7	14.3	21.4	13.2	5.8	2.31	6.7	7.9
R04A-15-AC	23.5	15	8.7	18.2	21.4	13.2	5.8	2.31	6.7	11.6
R04A-21-AC	27.3	18.8	8.7	22	21.4	13.2	5.8	2.31	6.7	15.4
R04A-25-AC	29.8	21.4	8.7	24.5	21.4	13.2	5.8	2.31	6.7	18
R04A-31-AC	33.6	25.2	8.7	28.3	21.4	13.2	5.8	2.31	6.7	21.8
R04A-37-AC	37.4	29	8.7	32.1	21.4	13.2	5.8	2.31	6.7	25.6
R04A-A51-AC	46.3	37.9	8.7	41	21.4	13.2	5.8	2.31	6.7	26.2
R04A-51-AC	36.2	27.8	9.7	30.9	23.7	15.5	5.8	2.31	7.5	23.4
R04A-69-AC	43.8	35.4	9.7	38.5	23.7	15.5	5.8	2.31	7.5	29.4
R04A-100-AC	54.7	38.7	11	45.7	24.2	16	5.8	3.7	8.7	34.1
R04A-9-AD	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04A-15-AD	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04A-21-AD	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04A-25-AD	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04A-31-AD	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04A-37-AD	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04A-A51-AD	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04A-51-AD	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04A-69-AD	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04A-100-AD	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04A-9-AJ	19.6	12.1	8.7	14.3	29.4	21.2	5.8	2.31	-	4.7
R04A-15-AJ	23.5	16	8.7	18.2	29.4	21.2	5.8	2.31	-	5.8
R04A-21-AJ	27.3	19.8	8.7	22	29.4	21.2	5.8	2.31	-	6.5
R04A-25-AJ	29.8	22.3	8.7	24.5	29.4	21.2	5.8	2.31	6.6	7.9
R04A-31-AJ	33.6	26.1	8.7	28.3	29.4	21.2	5.8	2.31	6.6	8.4
R04A-37-AJ	37.4	29.9	8.7	32.1	29.4	21.2	5.8	2.31	6.6	9.5
R04A-A51-AJ	46.3	38.8	8.7	41	29.4	21.2	5.8	2.31	6.6	13.1
R04A-51-AJ	36.2	28.7	9.7	30.9	31.7	23.5	5.8	2.31	7.5	11.9
R04A-69-AJ	43.8	36.3	9.7	38.5	31.7	23.5	5.8	2.31	7.5	15.7
R04A-100-AJ	54.7	38.8	11	45.7	32.2	24	5.8	3.7	8.7	17.5
R04A-9-AG	19.6	11.2	8.7	14.3	17.3	19.4	-	2.31	-	4.7
R04A-15-AG	23.5	15	8.7	18.2	18.4	23.2	-	2.31	-	5.8
R04A-21-AG	27.3	18.8	8.7	22	19.1	27	-	2.31	-	6.5
R04A-25-AG	29.8	21.4	8.7	24.5	20.4	29.6	-	2.31	6.7	7.8

### Outline dimension of backshell

Part No.	Outline dimension( in mm)									
	A	B	C	D	E	F	J	$\phi$ S	L	M
R04A-31-AG	33.6	25.2	8.7	28.3	20.9	33.4	-	2.31	6.7	8.3
R04A-37-AG	37.4	29	8.7	32.1	22.1	37.2	-	2.31	6.7	9.5
R04A-A51-AG	46.3	37.9	8.7	41	25.6	46.1	-	2.31	6.7	13
R04A-51-AG	36.2	27.8	9.7	30.9	24.5	36	-	2.31	7.5	11.9
R04A-69-AG	43.8	35.4	9.7	38.5	28.3	43.6	-	2.31	7.5	15.7
R04A-100-AG	54.7	38.7	11	45.7	30	46.9	-	3.7	8.7	17.4