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ZHYF

MIL-DTL-38999 SERIES CONNECTORS

北京中航宇飞科技有限公司

BEIJING ZHYF TECHNOLOGY CO., LTD

企业简介
Company Profile

ZHYF has a professional background for more than 20 years in push pull and hash environment connectors, Our products are used widely in the application of military communication, medical electronics, audio-video, testing and measurement instrumentations, etc. We also design and manufacture special Fiber Optic Connectors and custom cable assembly for harsh environments.

ZHYF has established its quality management system according to ISO 9001, and 5S management system. Product standards meet the requirement of MIL, UL and IEC, Chinese military GJB accordingly.

ZHYF can design connectors according to customer specifications. In any case, high quality and reliability connection is the primary target for the company to achieve.

Relying on the experienced professional team, we will provide partners with more than expected connectivity solutions.

VISION：To be a shining star in connector industry!

MISSION: Relying on the experienced professional team, to provide partners with more than expected connectivity solutions.


管理体系认证证书

兹 证 明

北京中航宇飞科技有限公司

国军标管理体系符合标准：GJB9001C-2017《国军标管理体系 要求》


QUALITY MANAGEMENT SYSTEM CERTIFICATE

Sichuan Yufei Connection Electronics Co., Ltd.

GB/T 19001-2016 idt ISO9001:2015

Development, production and sales of connectors and cable assemblies

NOA Testing & Certification Group Ltd.


CERTIFICATE OF MANAGEMENT SYSTEM CERTIFICATION

SICHUAN YUFEI CONNECTION ELECTRONICS CO., LTD.

GJB9001C-2017

DESIGN, DEVELOPMENT, PRODUCTION AND SERVICE OF METAL CONNECTORS AND CABLE ASSEMBLY

CESI Certification Co., Ltd.

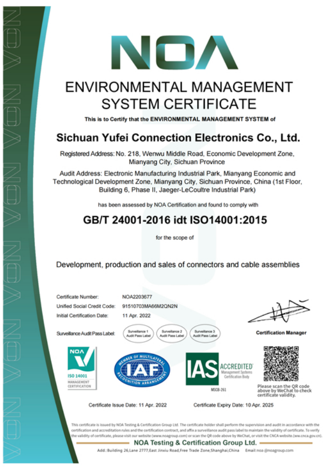

OCCUPATIONAL HEALTH & SAFETY MANAGEMENT SYSTEM CERTIFICATE

Sichuan Yufei Connection Electronics Co., Ltd.

GB/T 45001-2020 idt ISO45001:2018

Development, production and sales of connectors and cable assemblies

NOA Testing & Certification Group Ltd.


ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATE

Sichuan Yufei Connection Electronics Co., Ltd.

GB/T 24001-2016 idt ISO14001:2015

Development, production and sales of connectors and cable assemblies

NOA Testing & Certification Group Ltd.


CERTIFICATE OF MANAGEMENT SYSTEM CERTIFICATION

BEIJING ZHYF TECHNOLOGY CO., LTD.

GJB9001C-2017

CESI Certification Co., Ltd.


环境管理体系认证证书

四川宇飞连接电子有限公司

GB/T 24001-2016 idt ISO14001:2015 标准

连接器及线缆组件的研发、生产和销售

挪亚检测认证集团有限公司


管理体系认证证书

兹 证 明

四川宇飞连接电子有限公司

国军标管理体系符合标准：GJB9001C-2017《国军标管理体系 要求》

ZHYF

CONTENTS

GJB599 (MIL-DTL-38999 series)

MIL-DTL-38999 I series electrical connector

Brief introduction

- Comply with MIL-DTL-38999 I series
- Quick bayonet coupling, small size, light weight and high density
- EMI/RFI shielding
- Removable crimp contact with scoop-proof design
- Various receptacle mounting: Box mounting, wall-through mounting,front mounting, rear mounting and jam nut mounting
- Withstand strong vibration
- Standard back accessories, comply with GJB1784; and special backshell (Ti-Ni ring) for shielding cable
- 9 housing sizes, 74 polarizations and various modification types
- 5 key leading structure to avoid mismating
- Application: military systems such as aviation, aerospace, weapon, and other electronic equipment systems
- Enterprise standard: 21E0.204.102JT

Application

The product is used to connect current and signal.

Main technical characteristics

[Mechanical]

——Housing: Aluminum alloy/stainless steel

——Plating:

B class: olive green cadmium plating

E class: stainless steel passive

F class: electroless nickel plating

——Insulator: Thermoset plastic

——Grommet and seal: Silicon rubber

——Contact: Gold-plated copper alloy, crimping, soldering, PCB

——Endurance: 500 cycles

——Vibration:

Sinusoid vibration: frequency 10-2000Hz, acceleration: 294m/s^2

Random vibration: frequency 100-1000Hz, power spectral density: 1g^2/Hz

——Shock: At 3 ms half sinusoid, peak value of acceleration: 300g

[Environmental]

——Operating temperature:

B class: -65℃~+175℃

E, F class: -65℃~+200℃

——Salt spray: According to method 1001 GJB1217

B class 500h, E class 1000h

F class 48h

——Relative humidity: 98% at 40℃

——Operating height:≤30480m

——Anti-moisture, salt spray, mould, rain, dust

Operating environment

The products can be used in harsh environments like strong vibration, rain, sand, damp heat and so on.

[Electrical]

——Contact resistance and rating current

Contact size	Operating dia.(mm)	Contact resistance(mΩ)	Rating current(A)
22D	Φ0.76	≤12	5
20#	Φ1.00	≤5	7.5
16#	Φ1.60	≤2.5	13
12#	Φ2.40	≤1.5	23
10#	Φ3.15	≤1.0	40

——EMI shielding:

100MHz~1GHz: minimum attenuation 85dB

1GHz~10GHz: minimum attenuation 50dB

——Withstanding voltage: V

Service rating	M	N	I	II
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000

*Different contact layouts have different service rating. Please see the contact layouts table.

——Insulation resistance:

Normal≥5000MΩ Damp heat≥100MΩ

——Electrical continuity between shells:

B class ≤2.5mΩ F class ≤1.0mΩ

E class ≤50mΩ

Ordering information

Basic series*	JY	27467	T	17	F	35	P	N	–H

Type

27467 – Plug (T)
27466 – Wall–through square flange receptacle (front mounting) (T)
27656 – Wall–through square flange receptacle (rear mounting) (T)
27496 – Box square flange receptacle (front mounting) (E)
27505 – Box square flange receptacle (rear mounting) (E)
27468 – Jam nut receptacle (T)

Housing type

T– with thread for backshell
E– without thread for backshell

Housing size

09–11–13–15–17–19–21–23–25

Housing plating

B–olive green cadmium plating
E–stainless steel passive F–electroless nickel plating

Contact layout

see contact layouts for details

Contact type

Crimping and soldering contact: P–pin, S–socket
PCB contact: PL–long PCB pin SL–long PCB socket
PC–short PCB pin SC–short PCB socket

Polarization

N–normal A, B, C, D–alternative
If customer choose crimping contacts, N can be omitted in ordering. For other contacts, N should be stated clearly. (09# shell only has N, A and D polarization)

Soldering contact type

(only for soldering connectors)
H–soldering contact

Notes:

1. GJB599A series are made according to the same standard with MIL–DTL–38999K series. The difference is that: the basic part number of GJB599A is JY, while MIL–DTL–38999K is MS. GJB599A series is interchangeable with MIL–DLT–38999K series.
2. The applicable protective cap, backshell and square flange cushion details can be found in Page 12~20.
3. If the operating environment requires oil resistance, the connector sealing components should choose fluorinated silicone rubber. When placing orders, plus C1 at the end of the original part number (for example: JY27467T17F35PNC1).

[Part number example]

JY27467T25E35SN–H

JY series plug, threaded shell end, can be mounted with accessory, 25# shell, stainless steel passive plating, 35# layout, filled with sockets, N polarization, soldering contacts.

Crimping contacts

Contact size	Dia. mm	Pin color	Socket color	Inner dia. of crimp boot(mm)	Outer dia. of crimp boot(mm)	Section of wire(mm)	AWG	Insulator Outer dia. of wire(mm)	Removal tool code	Crimping tool
22D	Φ0.76	Orange—blue—black	Orange—yellow—gray	0.85	1.20	0.08 0.125 0.2 0.3	28 26 24 22	0.76～1.37	M81969/14—01	YJQ—02
20#	Φ1.00	Orange—blue—orange	Orange—green—brown	1.17	1.78	0.2 0.3 0.5	24 22 20	1.02～2.11	M81969/14—10	YJQ—02 XCXY—01
16#	Φ1.60	Orange—blue—yellow	Orange—green—red	1.68	2.62	0.5 0.8 1.0 1.2	20 18 16	1.65～2.77	M81969/14—03	XCXY—01
12#	Φ2.4	Orange—blue—green	Orange—green—orange	2.49	3.84	2.0 3.0	14 12	2.46～3.61	M81969/14—04	XCXY—01
10#	Φ3.15	Green—red—gray	Green—orange—purple	3.40	4.65	4.8	10	3.42～4.12	M81969/14—05	XCXY—01 YTQ
8#	Φ3.6	——	——	4.55	6.4	8.37	8	6.4～6.9	M81969/14—12	YTQ

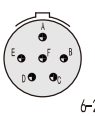
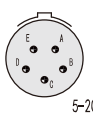
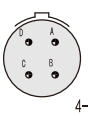
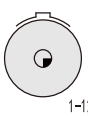
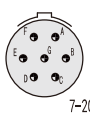
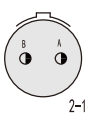
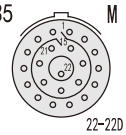
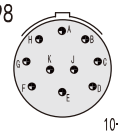
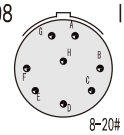
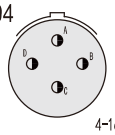
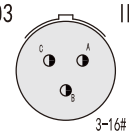
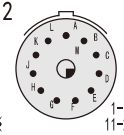
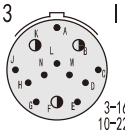
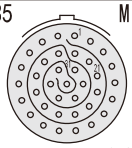
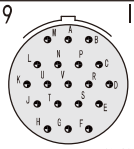
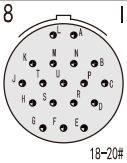
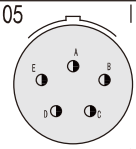
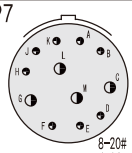
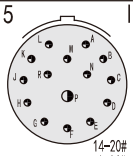
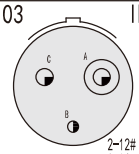
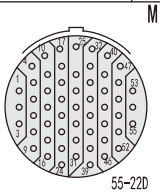
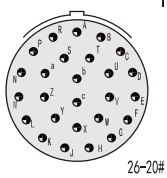
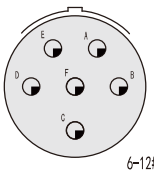
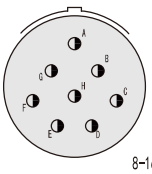
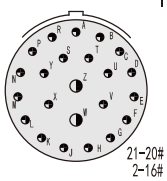
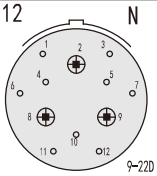
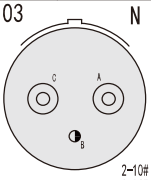
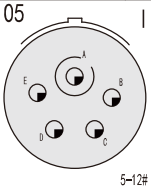
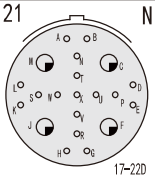
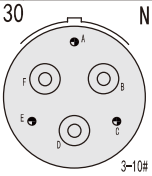
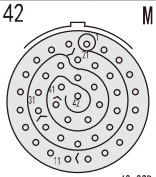
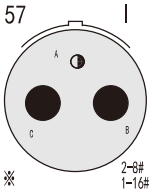
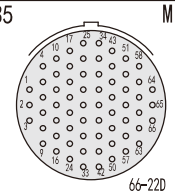
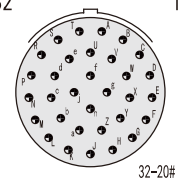
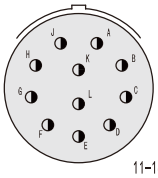
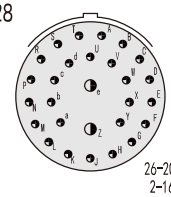
Notes:

1. For instructions of the applicable crimping tools please find page XX
2. Applicable for GJB599 Ⅰ, Ⅲ, Ⅳ series.

Soldering contacts

Contact size	Inner dia. of soldering cup	AWG
22D	ϕ0.9	22
20#	ϕ1.1	20
16#	ϕ1.9	16
12#	ϕ2.9	12
10#	ϕ3.6	10
8#	ϕ4.8	8

Contact layouts (viewed from front face of male insulator)

Housing size						
09	35 M  6-22D	98 I  3-20#	03 I ※  3-20#			
11	35 M  13-22D	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#
13	35 M  22-22D	98 I  10-20#	08 I  8-20#	04 I  4-16#	03 II  3-16#	12 N  1-12# 11-22# ※	13 I  3-16# 10-22# ※
15	35 M  37-22D	19 I  19-20#	18 I  18-20#	05 II  5-16#	97 I  8-20# 4-16#	15 I  14-20# 1-16#	03 II  2-12# 1-16#
17	35 M  55-22D	26 I  26-20#	06 I  6-12#	08 II  8-16#	99 I  21-20# 2-16#		
	12 N  9-22D 3-12# Shielding	03 N  2-10# 1-16#	05 I  5-12#	21 N  17-22D 4-12#	30 N  3-10# 3-20#	42 M  42-22D	57 I  2-8# 1-16# ※
19	35 M  66-22D	32 I  32-20#	11 II  11-16#	28 I  26-20# 2-16#	30 I 29-20# 1-16#		
	45 M 67-22D	18 M 14-22D 4-8# Dual coaxial	96 I 9-12#	18a M 4-8# 14-22D			
21	35 M 79-22D	41 I 41-20#	16 II 16-16#	39 I 37-20# 2-16#	11 II 11-12#		

Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12# ⊕ 12# Shielding ⊕ 12# Coaxial ◎ 10# ◓ 8# Dual coaxial ● 8#

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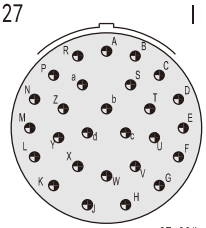
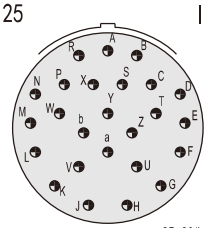
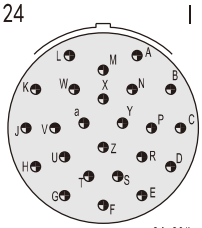
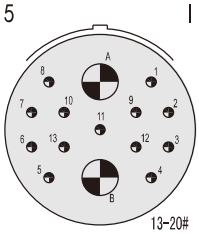
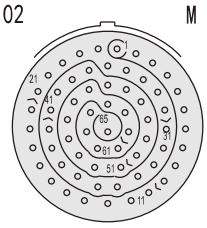
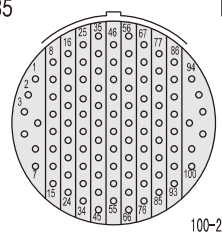
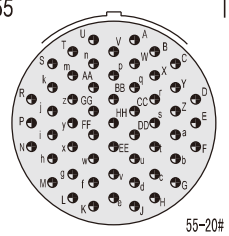
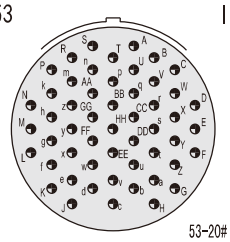
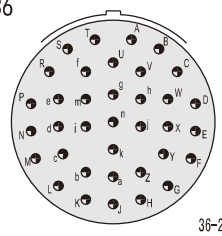
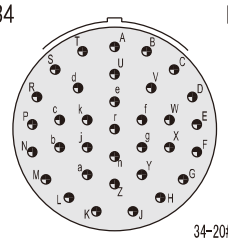
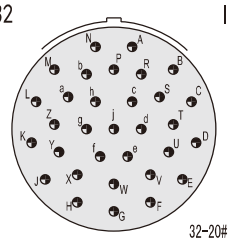
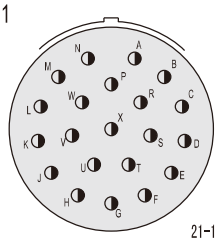
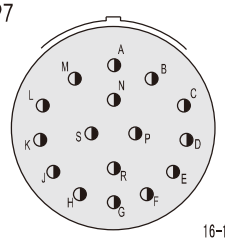
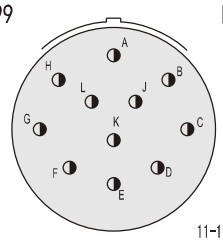
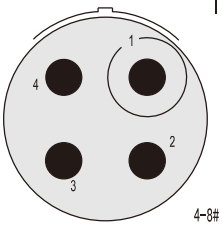
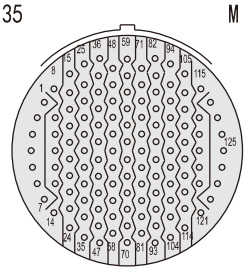
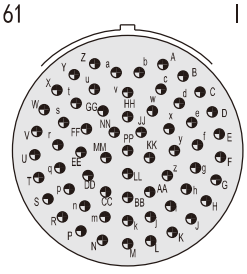
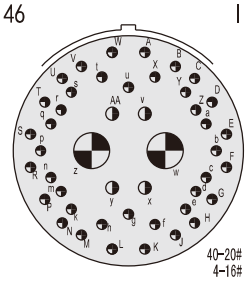
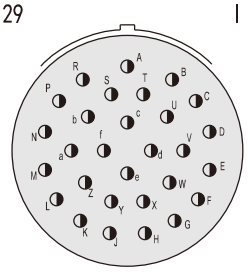
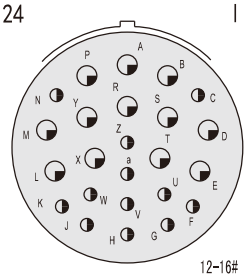
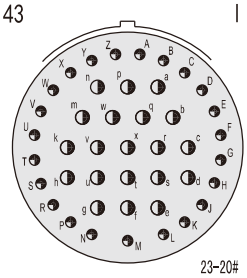
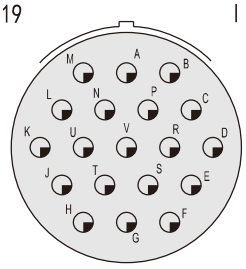
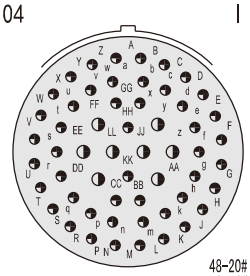
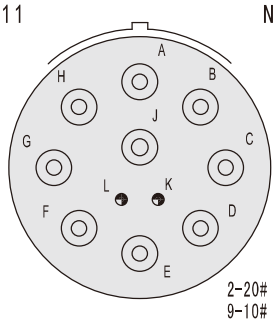
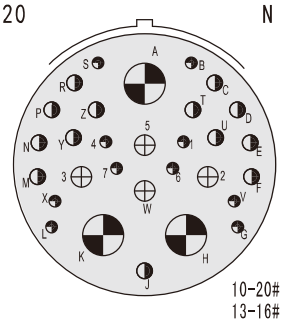
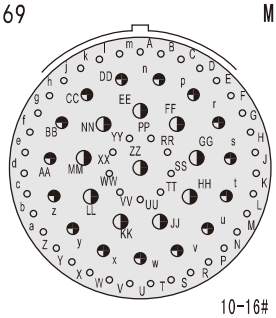
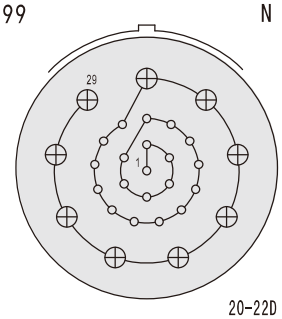
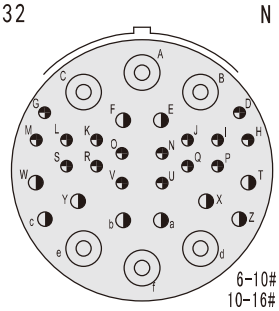
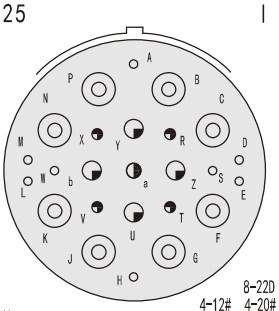
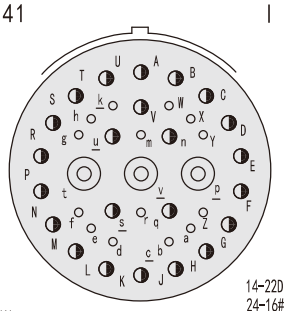
21	27 I  27-20#	25 I  25-20#	24 I  24-20#	15 I  13-20# 2-8# Dual coaxial	02 M  65-22D
23	35 M  100-22D#	55 I  55-20#	53 I  53-20#	36 I  36-20#	
	34 I  34-20#	32 I  32-20#	21 II  21-16#	97 I  16-16#	
	99 II  11-16#	04 I  4-8#			
25	35 M  128-22D	61 I  61-20#	46 I  40-20# 4-16# 2-8# Dual coaxial	29 I  29-16#	
	24 I  12-16# 12-12#	43 I  23-20# 20-16#	19 I  19-12#	04 I  48-20# 8-16#	

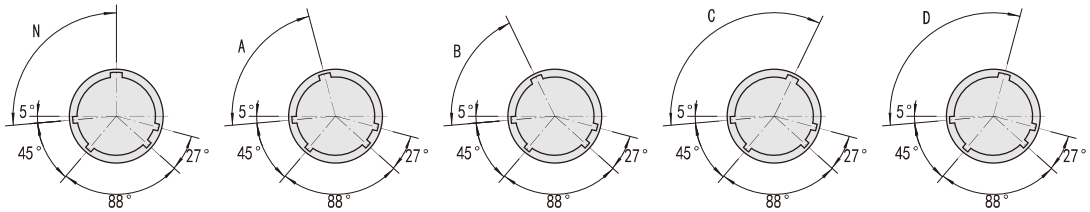
Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12# ⊕ 12# Shielding ⊕ 12# Coaxial ◎ 10# ◓ 8# Dual coaxial ● 8#

25	11 N  2-20# 9-10#	20 N  10-20# 13-16# 1-12# Coaxial, 3-12# Shielding 3-8# Dual coaxial	69 M  10-16# 15-20# 44-22D	99 N  20-22D 9-12# Coaxial
	32 N  6-10# 10-16# 16-20#	25 I  ※ 8-22D 4-12# 4-20# 8-10# 1-16#	41 I  ※ 14-22D 24-16# 3-10#	

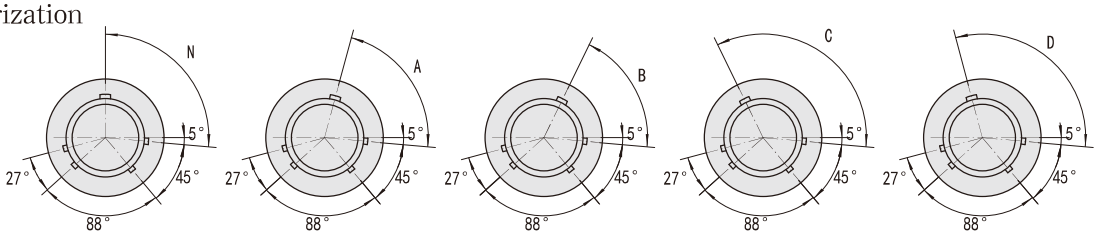
Notes: "※" stands for derived inserts.

Polarization

Receptacle Polarization



Plug Polarization



Polarization code	09	11	13	15	17	19	21	23	25
N	95°	95°	95°	95°	95°	95°	95°	95°	95°
A	77°	81°	75°	74°	77°	77°	77°	80°	80°
B	non	67°	63°	61°	65°	65°	65°	69°	69°
C	non	123°	127°	129°	125°	125°	125°	121°	121°
D	113°	109°	115°	116°	113°	113°	113°	110°	110°

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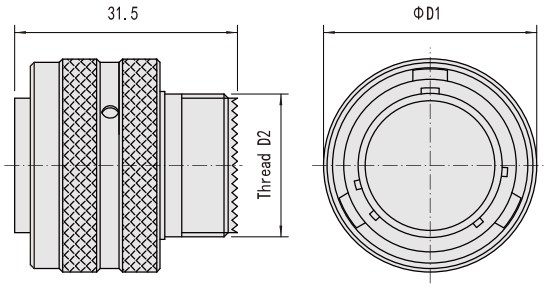
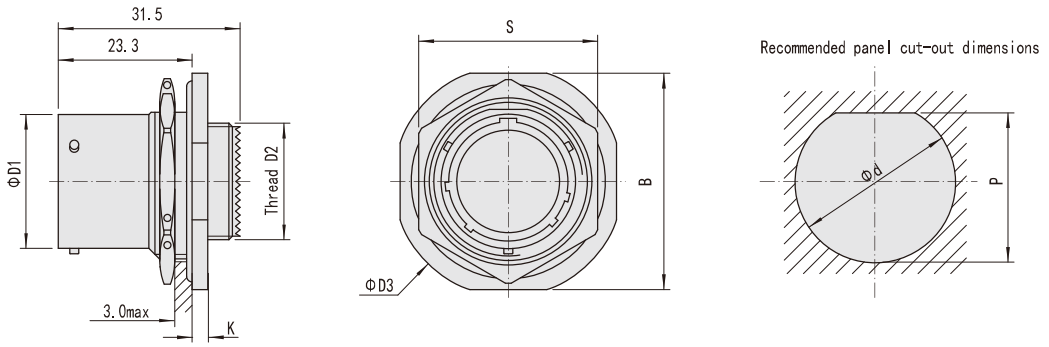
Outline dimensions

[Plug JY27467]



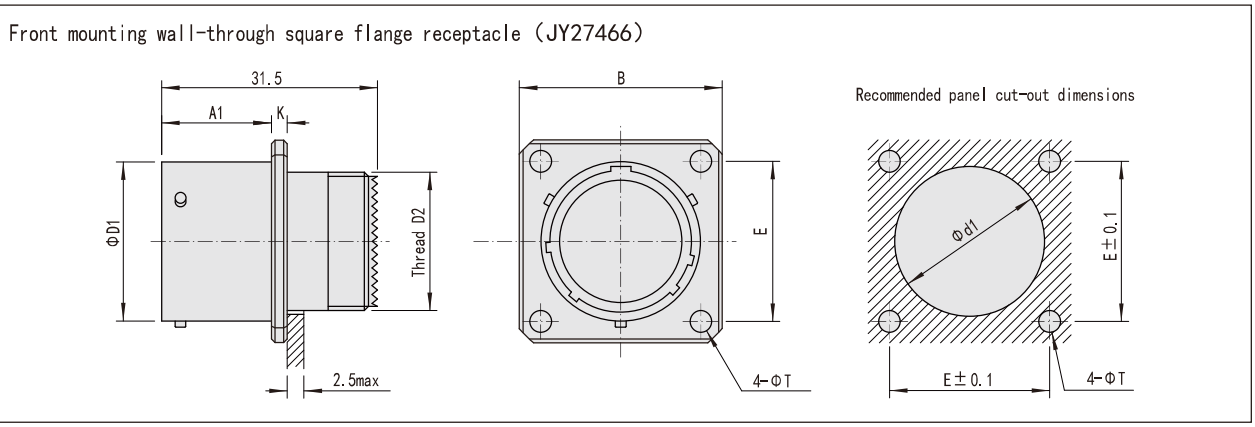
housing size	D1	Thread D2 UNEF-2A
09	21.7	0.4375-28
11	25.0	0.5625-24
13	28.2	0.6875-24
15	31.3	0.8125-20
17	34.4	0.9375-20
19	37.4	1.0625-18
21	40.5	1.1875-18
23	44.0	1.3125-18
25	46.8	1.4375-18

[Jam nut receptacle JY27468]

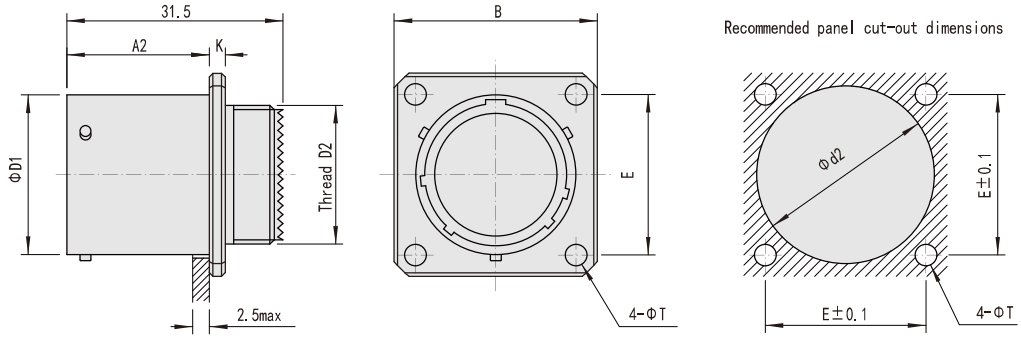


housing size	D1	Thread D2 UNEF-2A	D3	K	B	S	d	P
09	14.6	0.4375-28	30.2	2.8	27.0	22.3	17.7	17.0
11	17.8	0.5625-24	35.0	2.8	31.8	25.5	21.0	19.6
13	21.6	0.6875-24	38.1	2.8	35.0	30.2	25.6	24.3
15	24.8	0.8125-20	41.3	2.8	38.1	33.4	28.8	27.6
17	28.0	0.9375-20	44.5	2.8	41.3	36.6	32.0	30.7
19	30.7	1.0625-18	49.3	3.6	46.0	39.7	35.2	33.9
21	33.8	1.1875-18	52.4	3.6	49.2	42.9	38.3	37.1
23	37.0	1.3125-18	55.6	3.6	52.4	46.1	41.5	40.0
25	40.2	1.4375-18	58.8	3.6	55.6	50.8	44.7	43.4

[Wall-through square flange receptacle JY27466 JY27656]



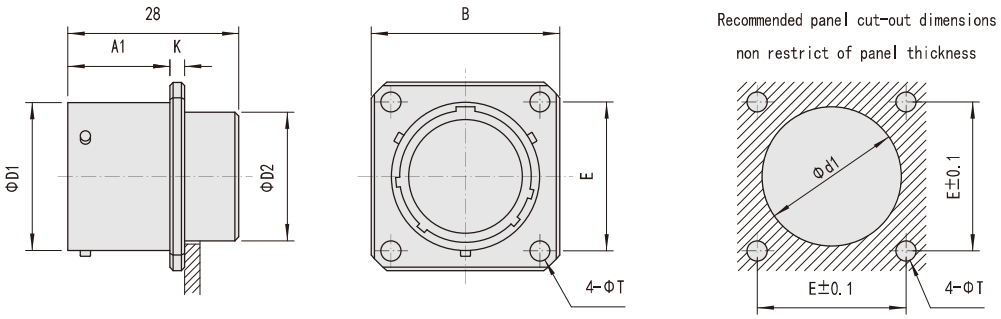
Back mounting wall-through square flange receptacle (JY27656)



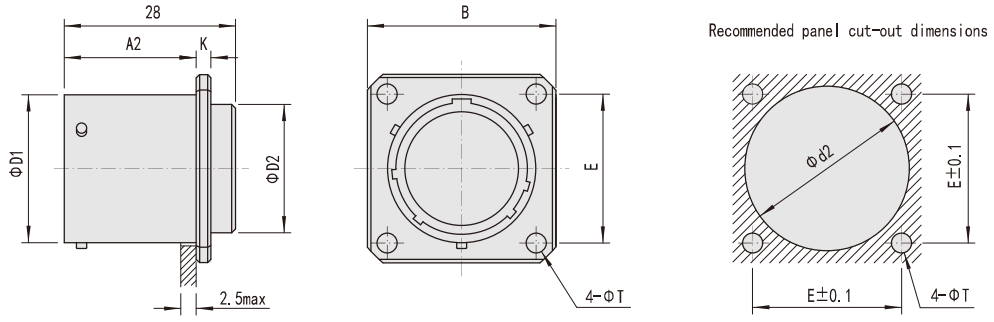
housing size	D1	Thread D2 UNEF-2A	A1	A2	K	B	E	T	d1	d2
09	14.6	0.4375-28	16.1	20.9	2.4	23.8	18.26	3.2	12.5	16.7
11	17.8	0.5625-24	16.1	20.9	2.4	26.2	20.62	3.2	15.5	20.2
13	21.6	0.6875-24	16.1	20.9	2.4	28.6	23.02	3.2	19.5	24.5
15	24.8	0.8125-20	16.1	20.9	2.4	31.0	24.62	3.2	21.5	27.7
17	28.0	0.9375-20	16.1	20.9	2.4	33.3	26.98	3.2	25.0	30.9
19	30.7	1.0625-18	16.1	20.9	2.4	36.5	29.36	3.2	28.0	32.9
21	33.8	1.1875-18	15.3	20.1	3.1	39.7	31.76	3.2	31.5	36.2
23	37.0	1.3125-18	15.3	20.1	3.1	42.9	34.92	3.7	34.5	39.3
25	40.2	1.4375-18	15.3	20.1	3.1	46.0	38.10	3.7	37.5	42.5

[Box square flange receptacle JY27496 JY27505]

Front mounting box square flange receptacle (JY27496)



Back mounting box square flange receptacle (JY27505)



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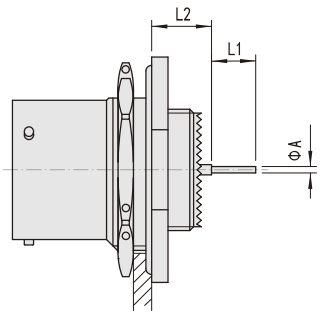
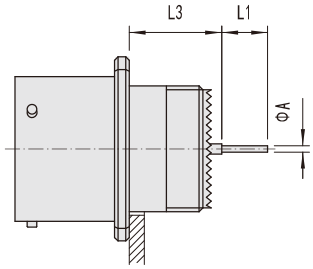
housing size	D1	D2	A1	A2	K	B	E	T	d1	d2
09	14.6	11.2	16.1	20.9	2.4	23.8	18.26	3.2	12.5	16.7
11	17.8	14.5	16.1	20.9	2.4	26.2	20.62	3.2	15.5	20.2
13	21.6	18.0	16.1	20.9	2.4	28.6	23.02	3.2	19.5	24.5
15	24.8	20.5	16.1	20.9	2.4	31.0	24.62	3.2	21.5	27.7
17	28.0	23.8	16.1	20.9	2.4	33.3	26.98	3.2	25.0	30.9
19	30.7	26.5	16.1	20.9	2.4	36.5	29.36	3.2	28.0	32.9
21	33.8	29.7	15.3	20.1	3.1	39.7	31.76	3.2	31.5	36.2
23	37.0	32.8	15.3	20.1	3.1	42.9	34.92	3.7	34.5	39.3
25	40.2	36.0	15.3	20.1	3.1	46.0	38.10	3.7	37.5	42.5

[GJB599 I series receptacle with PCB contacts]

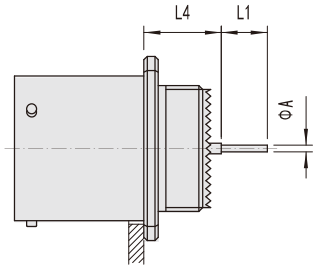
JY27468 receptacle



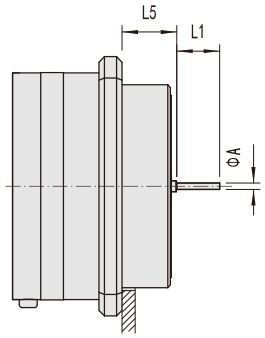
JY27466 receptacle



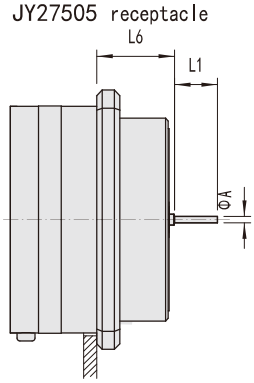
JY27656 receptacle



JY27496 receptacle



JY27505 receptacle

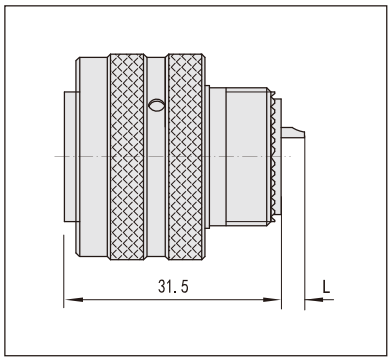


PCB contact type		L1	A
22D	Long PCB contact	8.5	0.7
	Short PCB contact	4.0	
20#	Long PCB contact	8.5	0.7
	Short PCB contact	5.0	
16#	Long PCB contact	8.5	1.15
	Short PCB contact	5.0	

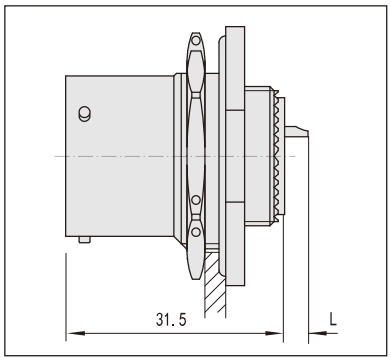
Dimensions with different contacts			Shell size 09–11–13–15–17–19	Shell size 21–23–25
L2	With 22D# pin	max	10.06	10.06
		min	9.06	9.06
	With 22D# socket	max	10.06	10.06
		min	8.74	8.74
	With 20# or 16# pin/socket	max	10.23	10.23
		min	9.24	9.24
L3	With 22D# pin	max	15.08	15.08
		min	13.91	13.91
	With 22D# socket	max	15.08	15.08
		min	13.58	13.58
	With 20# or 16# pin/socket	max	15.25	15.25
		min	14.08	14.08
L4	With 22D# pin	max	12.47	13.22
		min	11.60	12.35
	With 22D# socket	max	12.47	13.22
		min	11.27	12.02
	With 20# or 16# pin/socket	max	12.64	13.39
		min	11.77	12.52
L5	With 22D# pin	max	11.08	11.08
		min	9.91	9.91
	With 22D# socket	max	11.08	11.08
		min	9.58	9.58
	With 20# or 16# pin/socket	max	11.25	11.25
		min	10.08	10.08
L6	With 22D# pin	max	8.47	9.22
		min	7.60	8.35
	With 22D# socket	max	8.47	9.22
		min	7.27	8.02
	With 20# or 16# pin/socket	max	8.64	9.39
		min	7.77	8.52

[GJB599 I series soldering products outline dimensions]

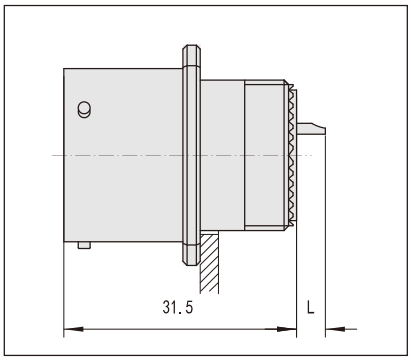
JY27467 plug



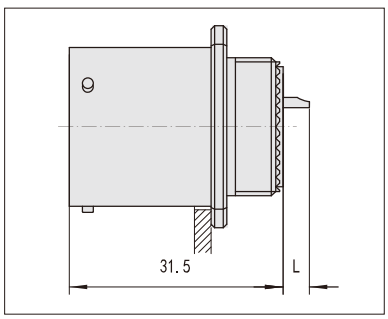
JY27468 receptacle



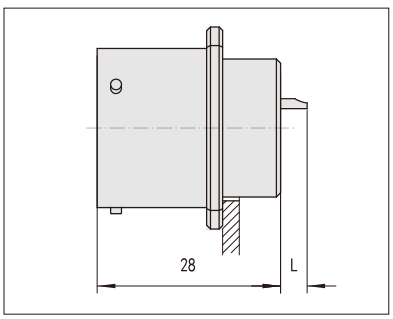
JY27466 receptacle



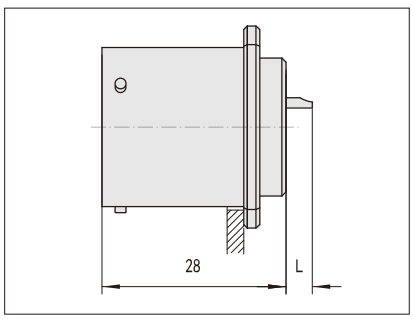
JY27656 receptacle



JY27496 receptacle



JY27505 receptacle

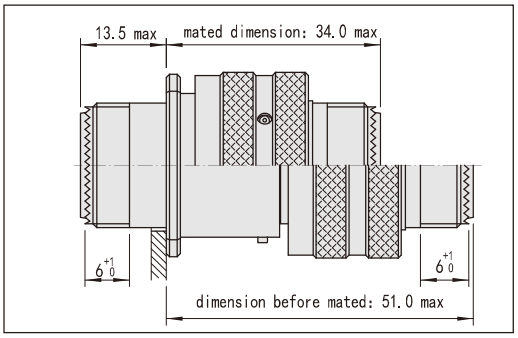


Soldering contact size	L	Inner dia. of soldering cup	AWG
22D	4	ϕ0.9	22
20#	4	ϕ1.1	20
16#	4	ϕ1.9	16
12#	4	ϕ2.9	12
10#	6	ϕ3.6	10
8#	6	ϕ4.8	8

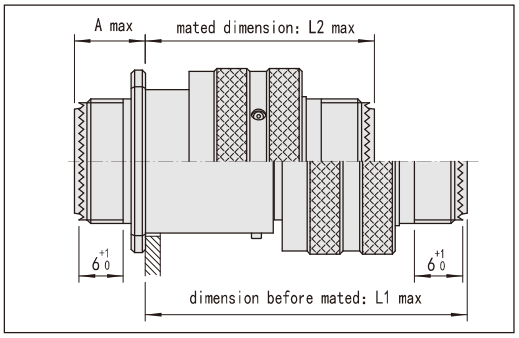
Notes: coaxial contacts don't have soldering types.

[dimension after mating]

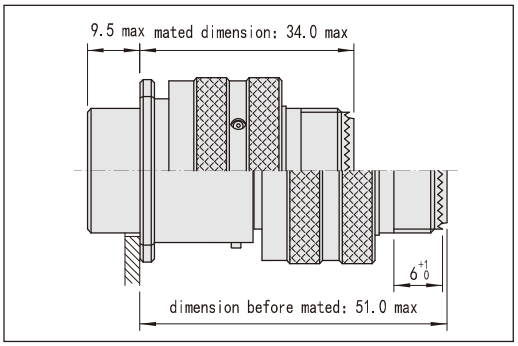
Wall-through square flange (front mounting)
receptacle (MS27466)/plug (MS27467)



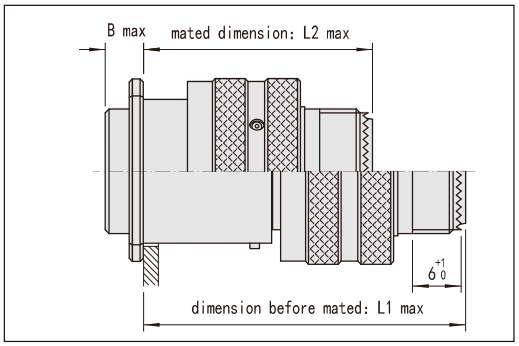
Wall-through square flange (rear mounting)
receptacle (MS27656)/plug (MS27467)



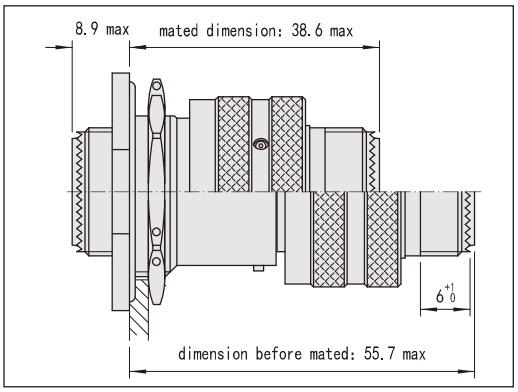
Box square flange front-mounting
receptacle (MS27496)/plug (MS27467)



Box square flange rear-mounting
receptacle (MS27505)/plug (MS27467)



Jam nut receptacle (MS27468)/plug (MS27467)



Notes: the total length of connectors that can be mounted with accessories refers to the connector length plus accessory length minus thread engagement length.

housing size		09	11	13	15	17	19	21	23	25
L1	max	53.3	53.3	53.3	53.3	53.3	53.3	52.5	52.5	52.5
L2	max	36.4	36.4	36.4	36.4	36.4	36.4	35.6	35.6	35.6
A	max	11.1	11.1	11.1	11.1	11.1	11.1	11.9	11.9	11.9
B	max	7.1	7.1	7.1	7.1	7.1	7.1	7.9	7.9	7.9

Protective caps for plug and receptacle

[Ordering information]

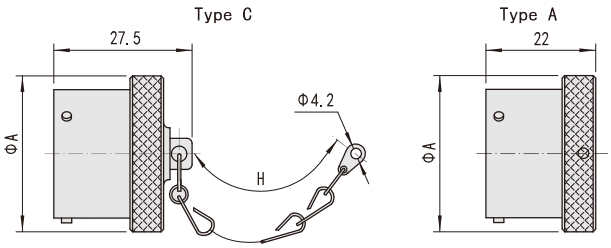
Basic series*		JY	27501	F	11	C	L
Type	MS27501—protective cap for plug MS27502—protective cap for receptacle						
Housing plating	B — olive green cadmium plating F — electroless nickel plating						
Housing size	09—11—13—15—17—19—21—23—25						
Fixing type	A — without chain N — stainless steel chain with ring S — stainless steel string with connecting lug C — stainless steel chain with connecting lug R — nylon cord with connecting plate E — nylon cord with ring						
Length mark	Omit — standard length L — 127mm of chain length M — 152.4mm of chain length (MS27501) N — 177.8mm of chain length (MS27501)						

Notes:

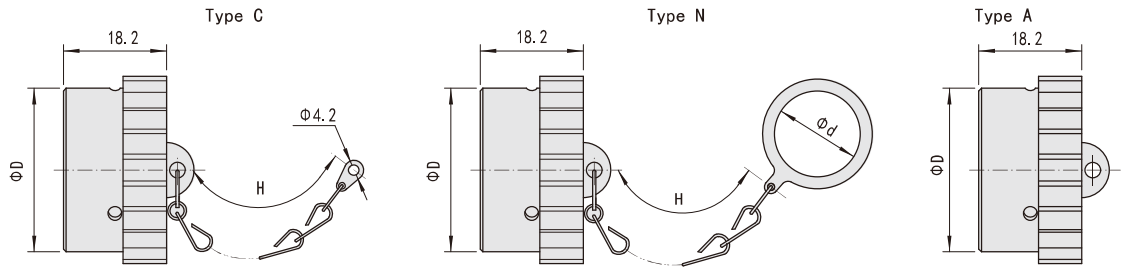
1. JY27502 is composite—material protective cap. When ordering JY27502, "—" means no plating.
2. The protective cap is ordered separately, not supplied with the connectors.
3. Part number JY27502 plus (J) means metal—shell protective cap, E refers to stainless steel plating. For example: JY27502E17C(J)

[Outline dimensions]

Plug protective cap JY27501 (MS27501)



Receptacle protective cap JY27502 (MS27502)



housing size		09	11	13	15	17	19	21	23	25
A	max	20.5	23.7	26.9	30.1	33.2	36.4	39.6	42.8	45.9
D	max	21.7	23.5	29.0	31.6	34.8	38.0	41.1	44.2	46.0
d	min	18.0	21.1	26.0	29.0	32.4	35.5	38.6	42.0	44.7
H	max	76.2	76.2	88.9	88.9	88.9	88.9	101.6	101.6	101.6

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Standard rear accessories (applicable for GJB599 I series and II series connectors)

Comply with GJB1784 (equivalent to MIL-C-85049)

Notes:

1) For the accessories listed below, part number "J1784" is the same with "J1784 A".

2) The below steps can help prevent looseness. When using the accessories, at least one step should be adapted.

①Put the fuse through the socket to anti looseness;

②Coat some thread glue at the product termination, and tighten the jam nut;

③Use heat shrink sleeve against looseness.

3) For the accessory which carries a set screw, coat some thread glue on the set screw first and then tighten the screw.

4) If the applicable products of the cable accessory is mounted with 8# contacts, please choose longer cable accessory, such as J1784/49H type or J1784/18A type; this is meant to prevent the contact positioner affects the cable accessory.

5) The table below is on the GJB599 series soldering products and crimping products with their correspondingly applicable cable accessories. As the modified products and accessories are so many that we can not list them one by one. The form below is only for reference, please consult our engineers for details.

Connector type	Applicable cable accessory type	Applicable cable accessory part number
GJB599I & II series crimping connector	Non-clamping and non-shielding cable accessory	1、J1784/27、HA type
	Clamping and non-shielding cable accessory	1、J1784/49、HB type
		2、J1784/49-xx (short)
		3、J1784/47、HC type
	Shielding and non-clamping cable accessory	1、TJ1784/62、HD type
		2、J1784/62
		3、J1784/85
		4、J1784/87
		5、JY599 I -FJA00
		6、JY599 I -FJA90
		7、JY599 I xxFJC00
		8、JY599 I xxFJE00
	Shielding and clamping cable accessory	1、TJ1784/62-xxB、HE type
		2、TJ1784/62-xxC-xx
		3、J1784/18A series (rain-proof)
GJB599I & II series soldering connector	Non-clamping and non-shielding cable accessory	1、J1784/27、HA type
	Clamping and non-shielding cable accessory	1、J1784/49H
		2、J1784/47、HC type
	Shielding and non-clamping cable accessory	1、TJ1784/62、HD type
		2、J1784/62
		3、J1784/85
		4、J1784/87
		5、JY599 I -FJA00
		6、JY599 I -FJA90
	Shielding and clamping cable accessory	1、TJ1784/62-xxB、HE type
		2、TJ1784/62-xxC-xx
		3、J1784/18A series (rain-proof)

[GJB1784 ordering information]

Basic series	J1784 /	27-	14	N

Type

27 - A type back nut (Non-clamping and non-shielding cable accessory)
49 - B type straight cable clamp (Clamping and non-shielding cable accessory)
47 - C type elbow cable clamp (Clamping and non-shielding cable accessory)
62 - D type screen-termination accessory (part number plus "T")
(Shielding and non-clamping cable accessory)
62 - heatshrink boot accessory (Shielding and non-clamping cable accessory)

Accessory shell size	08	10	12	14	16	18	20	22	24
For MIL-C-38999 I series	09	11	13	15	17	19	21	23	25
For MIL-C-38999 II series	08	10	12	14	16	18	20	22	24

Plating

W - olive green cadmium plating N - electroless nickel plating
S - stainless steel passive

Notes:
①GJB 1784 series are made based on the same standard with MIL-C-85049. The difference is that: the basic part number of GJB 1784 series is "J1784", while the basic part number of MIL-C-85049 is "M85049". GJB1784 series are interchangeable with MIL-C-85049.
②The above cable accessory shell size should be marked with even number. Odd number is forbidden.

[Intra-industry accessory ordering information]

Type	HA-	F	18

HA - Boot-shaped backshell
HB - Straight cable clamp
HC - Right-angle cable clamp
HD - Shielding backshell
HE - Shielding straight cable clamp

Plating

B - olive green cadmium plating
F - electroless nickel plating S- stainless steel passive

Accessory shell size	08	10	12	14	16	18	20	22	24
For MIL-C-38999 I series	09	11	13	15	17	19	21	23	25
For MIL-C-38999 II series	08	10	12	14	16	18	20	22	24

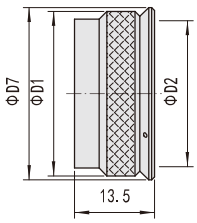
[Part number comparison]

GJB1784 accessory type	Intra-industry accessory type
J1784/27-×W J1784/27-×N	HA-B× HA-F×
J1784/49-×W J1784/49-×N	HB-B× HB-F×
J1784/47-×W J1784/47-×N	HC-B× HC-F×
TJ1784/62-×W TJ1784/62-×N	HD-B× HD-F×
TJ1784/62-×WB TJ1784/62-×NB	HE-B× HE-F×

(In the table, "×" stands for shell size. We recommend that customers place orders according to GJB1784 accessory type. Intra-industry types can be used when necessary.)

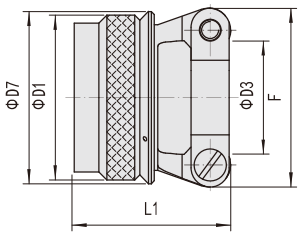
[Outline dimensions]

J1784/27-
(HA type)
Back nut



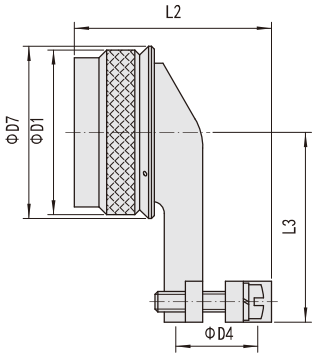
Anti-rotating accessory. This type tightens the grommet to ensure the connector's environmental characteristics. This type can not clamp the cable, applied in normal environment.

J1784/49-
(HB type)
Straight cable clamp



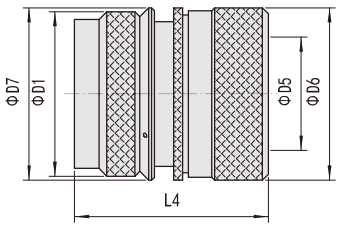
Anti-rotating, cable- clamping accessory. This type tightens the grommet and clamps the cable to insure the connector's environmental characteristics. It is applied in tensile force environment.

J1784/47-
(HC type)
elbow cable clamp



Anti-rotating, 90° cable clamping accessory. This type tightens the grommet and clamps the cable 90° to insure the connector's environmental characteristics. It is applied in tensile force environment.

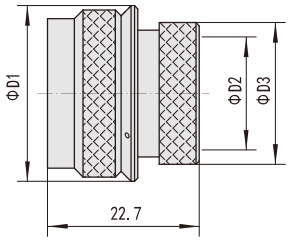
TJ1784/62-
(HD type)
Backshell for shielding termination



Anti-rotating, crimping shielding net accessory. This type tightens the grommet and contains a shielding net to insure the connector's EMI shielding characteristics. It is applied in light tensile force environment.

housing size		08	10	12	14	16	18	20	22	24
D1	max	15.6	18.6	21.8	25.0	28.2	31.0	34.2	37.3	40.5
D2	max	7.9	10.8	13.6	16.9	20.1	22.4	25.6	28.8	31.9
D3	min	2.49	3.87	4.83	6.6	7.19	8.26	8.71	9.68	10.62
	max	5.94	5.94	8.33	11.61	15.6	16.1	17.73	20.9	21.66
D4	min	3.2	4.0	4.8	5.5	6.4	7.9	9.5	10.3	14.3
	max	6.4	9.5	11.1	14.3	15.9	19.1	22.2	23.8	25.4
D5	max	7.0	9.7	12.8	14.9	18.0	20.0	23.2	26.3	28.9
D6	max	17.0	19.9	23.1	26.3	29.5	32.5	35.7	38.9	42.0
D7	max	16.9	19.9	23.1	26.3	29.5	32.3	35.5	38.6	41.8
F	max	20.0	20.0	23.4	26.6	30.6	34.0	35.8	39.0	40.6
L1	max	23.4	23.4	23.4	27.8	27.8	27.8	27.8	29.9	29.9
L2	max	29.0	32.0	33.5	36.5	38.5	41.5	44.5	46.0	48.0
L3	max	25.0	26.0	27.5	31.0	32.5	34.0	34.5	36.5	43.5
L4	max	31.2	31.2	31.2	33.2	33.2	33.2	36.2	36.2	36.2

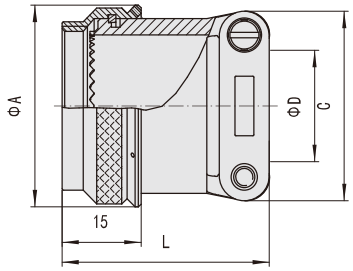
J1784/62- backshell for heat shrink sleeve
(Shielding and non-clamping cable accessory)



Anti-rotating, crimping shielding net accessory. This type tightens the grommet, connects the shielding net and backshell, and contains a shielding net to insure the connector's environmental and EMI shielding characteristics. This type can not clamp the cable. It is applied in light tensile force environment.。

Part number	D1	D2	D3
J1784/62-08N	16.9	7.9	11.6
J1784/62-10N	19.9	10.9	14.7
J1784/62-12N	23.1	13.7	17.6
J1784/62-14N	26.3	16.9	21.2
J1784/62-16N	29.5	20.1	24.4
J1784/62-18N	32.3	22.5	26.4
J1784/62-20N	35.5	25.4	30.9
J1784/62-22N	38.6	28.5	33.8
J1784/62-24N	41.8	31.6	36.9

J1784/49H-soldering straight cable clamp
(Clamping and non-shieldingcable accessory)

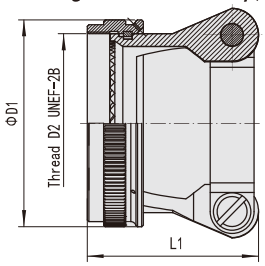


The functions are the same with J1784/49. It can be mated with soldering products.

Part number	A max	C	L max	D
J1784/49H-08N	18.0	20.0	26.4	2.49~5.94
J1784/49H-10N	22.0	21.0	27.9	3.87~5.94
J1784/49H-12N	25.1	23.4	29.4	4.83~8.33
J1784/49H-14N	29.0	26.6	30.9	6.6~11.61
J1784/49H-16N	32.1	30.6	33.1	7.19~15.6
J1784/49H-18N	35.1	34.0	36.2	8.26~16.1
J1784/49H-20N	38.1	35.8	39.4	8.71~17.73
J1784/49H-22N	41.1	39.0	42.5	9.68~20.9
J1784/49H-24N	44.1	40.6	44.6	10.62~21.66

[J1784/49-××N(short)]

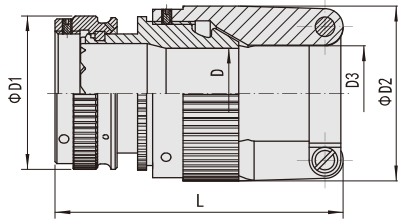
(Clamping and non-shielding cable accessory)



Anti-rotating, cable clamping accessory. This type tightens the grommet, clamps the cable and clamps the cable to insure the connector's environmental characteristics. It is applied in tensile force environment. The length is shorter compared with J1784/49 accessory.

Accessory part number	D1	Thread D2	L1	Lead-out dia.
J1784/49-10N(short)	19.5	0.5625-24	20.8	5.1~10
J1784/49-12N(short)	22.6	0.6875-24	19	6.7~12.9
J1784/49-14N(short)	25.8	0.8125-20	25.2	8.4~16
J1784/49-16N(short)	29	0.9375-20	25.3	9.2~18.5
J1784/49-18N(short)	32.2	1.0625-18	26.7	10~21.5
J1784/49-20N(short)	35.3	1.1875-18	26.8	11.2~24.75
J1784/49-22N(short)	38.5	1.3125-18	32	11.6~22.6

TJ1784/62-NB (HE type)
Shielding straight cable clamping backshell
(Shielding clamping cable accessory)

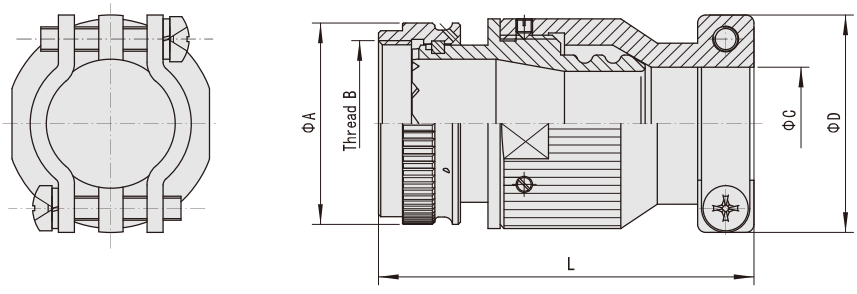


Anti-rotating, crimping shielding net and cable clamp accessory. This type tightens the grommet, connects the shielding net and backshell, clamps the cable and contains a shielding net to insure the connector's EMI shielding characteristics. It is applied in tensile force environment.

Part number	D	D1	D2	D3	L
TJ1784/62-08NB	6.5	16.3	19.4	6.8	39.0
TJ1784/62-10NB	9.7	19.5	22.5	9.2	39.0
TJ1784/62-12NB	12.8	22.6	25.7	12.6	39.0
TJ1784/62-14NB	14.9	25.8	28.9	16	45.0
TJ1784/62-16NB	18	29.0	32.1	17.5	45.0
TJ1784/62-18NB	20	32.2	35.3	21.5	46.5
TJ1784/62-20NB	23.2	35.3	38.4	24.8	51.3
TJ1784/62-22NB	26.3	38.5	41.6	22.6	56.6
TJ1784/62-24NB	28.9	41.7	44.8	23.1	57.3

[TJ1784/62-××NC-××]

(Shielding clamping cable accessory)



Anti-rotating, crimping shielding net and cable clamp accessory. This type tightens the grommet, connects the shielding net and backshell, clamps the cable and contains a shielding net to insure the connector's EMI shielding characteristics. It is applied in tensile force environment.

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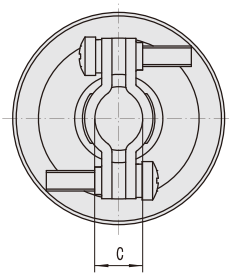
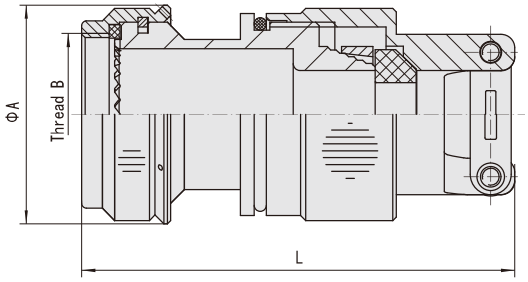
Accessory part number	A	Thread B UNEF	C	D	L
TJ1784/62-08NC-08	16.3	0.4375-28	8	20	39.7
TJ1784/62-10NC-08	19.5	0.5625-24	8	20	39.7
TJ1784/62-10NC-10			10	20	40.7
TJ1784/62-12NC-10	22.6	0.6875-24	10	20	40.7
TJ1784/62-12NC-12			12	25	47.4
TJ1784/62-14NC-12	25.8	0.8125-20	12	25	47.4
TJ1784/62-14NC-14			14	27	47.4
TJ1784/62-14NC-16			16	27	47.4
TJ1784/62-16NC-16	29	0.9375-20	16	27	47.4
TJ1784/62-16NC-19			19	32	47.4
TJ1784/62-18NC-19	32.2	1.0625-18	19	32	47.4
TJ1784/62-18NC-22			22	33	47.4
TJ1784/62-20NC-22	35.3	1.1875-18	22	33	47.4
TJ1784/62-20NC-25			25	36.5	47.4
TJ1784/62-22NC-25	38.5	1.3125-18	25	36.5	47.4
TJ1784/62-22NC-28			28	40	47.4
TJ1784/62-24NC-28	41.7	1.4375-18	28	40	47.4
TJ1784/62-24NC-31			31	44	47.4

[Ordering information]

J1784/18A series (Shielding clamping cable accessory)

Basic series	J1784/	18A-	25	N	09	A
Type	18A-straight shielding cable clamp (applied for GJB599 Ⅰ、Ⅱ series)					
Housing size	See form 1					
Housing plating	N- electroless nickel plating W- olive green cadmium plating S- stainless steel passive					
Lead-out dia.	See form 1 and form 2 for reference.					
Length	See form 3					





Anti-rotating, cable clamp accessory with crimping shielding net. This type tightens the grommet, connects the shielding net and backshell, clamps the cable, proof the rain and contains a shielding net to insure the connector's environmental and EMI shielding characteristics. It is applied in fierce environment. This accessory type of different length is available. It is applied in high & low frequency mixed environment that needs long-length accessory.

Form 1

housing size	Lead–out dia. No.	A	Thread B
09	01～02	18	0.4375–28UNEF
11	01～03	22	0.5625–24UNEF
13	02～04	25	0.6875–24UNEF
15	02～05	28	0.8125–20UNEF
17	02～06	32	0.9375–20UNEF
19	03～07	35	1.0625–18UNEF
21	03～08	38	1.1875–18UNEF
23	03～09	41	1.3125–18UNEF
25	04～10	44	1.4375–18UNEF

Form 2

Lead–out dia. No.	Applicable cable dia. range C
01	1.57～3.18
02	3.18～6.35
03	6.35～9.53
04	9.53～12.7
05	12.7～15.88
06	15.88～19.05
07	19.05～22.23
08	22.23～25.4
09	25.4～28.58
10	28.58～31.75

Form 3

Housing size	Length code	L
09～25	standard (omit)	62.7
09～25	A	88.1
15～25	B	113.5
21～25	C	138.9

Special backshell (for MIL–C–38999 series I and II series)

This type of backshells is designed to clamp tightly the shielding cable with shielding net, which falls into straight and right angle categories. The accessory can be used with Ti–Ni alloy memory ring. After heated, the ring will shrink and clamp shielding layer on the end of the accessory and achieve 360° EMI shielding.

＊ Ti–Ni alloy memory ring' s heating and shrinking: using hot–wind gun to heat. The process takes about 45 seconds to 1 minute. When the temperature color indicator of memory ring change from green to black, it means that memory ring has been shrunk and heating should be stopped. At this time, the temperature of ring is about 165℃. Please note that memory ring should be symmetrically heated.

Ordering information

J1784/85, J1784/87 shielding backshell

Basic series	J1784/	85–	10	N	A	–05

Type 85–straight, 87–right–angle (for MIL–C–38999 series I & II)

Accessory shell size	08	10	12	14	16	18	20	22	24
For MIL–C–38999 I series	09	11	13	15	17	19	21	23	25
For MIL–C–38999 II series	08	10	12	14	16	18	20	22	24

Housing plating
W – olive green cadmium plating
N – electroless nickel plating
S – stainless steel passive

Ti–Ni ring
omit– without Ti–Ni ring
A –with Ti–Ni ring

Leading–out diameter or Ti–Ni ring size
Without Ti–Ni ring, specify leading–out diameter
With Ti–Ni ring, specify size of Ti–Ni ring

JY599 I -FJA00、JY599 I -FJA90 shielding backshell

Basic series	JY599	I	15	FJA	00	F	A	-05

Series code: I (Applied for GJB599 I 、 II series)

Accessory shell size	09	11	13	15	17	19	21	23	25
For MIL-C-38999 I series	09	11	13	15	17	19	21	23	25
For MIL-C-38999 II series	08	10	12	14	16	18	20	22	24

Accessory type: FJA、FJC、FJE

Structure:
00 – straight
90 – 90° right–angle

Housing plating:
B – olive green cadmium plating
F – electroless nickel plating
E – stainless steel passive

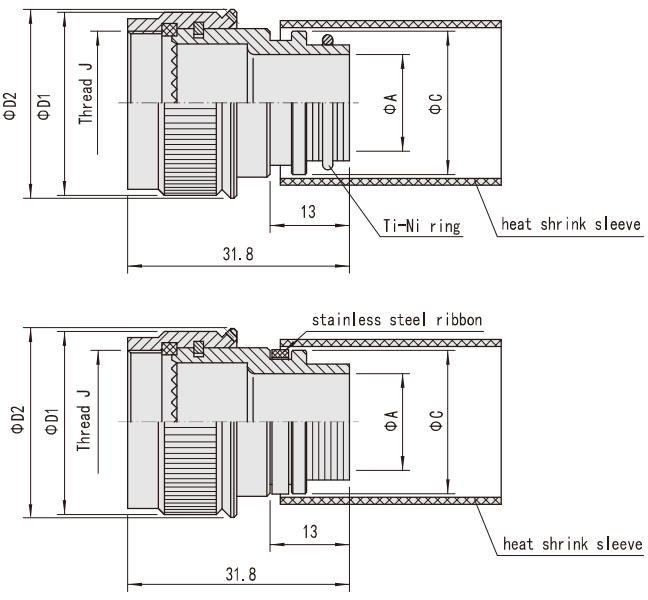
Ti–Ni ring:
omit – without Ti–Ni ring
A – with Ti–Ni ring (only for FJA, FJC)

Outlet diameter or Ti–Ni ring size:
Without Ti–Ni ring, specify outlet diameter
With Ti–Ni ring, specify size of Ti–Ni ring

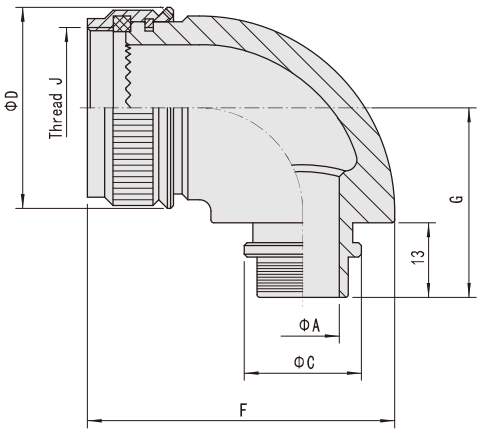
Notes:
1. This type of accessory is applied in harsh environment where disassembling is not frequently needed. It can achieve shielding both inside and outside.
2. the steel ribbon and bundling clamp need to be ordered separately if they are needed. The steel ribbon type is "A31189(07-08-221)", and the bundling clamp type is "A30199 TIE-DEX II (14-04-3216)".
3. J1784/85、J1784/87 is the same with JY599-FJA00 and JY599 I -FJA90. Only the naming is different.

Outline dimensions

Straight accessory (J1784/85 or JY599I-FJA00)



Right–angle accessory (J1784/87 or JY599I-FJA90)



No.	Housing No.	Ti–Ni ring size	Shielding standard (Tin–copper plating mark dia.)	A outlet dia.		C		F	D1	D2	G	Thread J UNEF–2B
				Straight	90°	Straight	90°					
1	09	TR–04	6×10 (0.15~0.20)	6.3	6.3	14	14	36.3	17	18	26	0.4375–28
		TR–05	10×16 (0.15~0.20)	7.9	7.9	15.5	15					
		TR–06	10×16 (0.15~0.20)	9.5	9.5	17.1	15					
2	11	TR–04	6×10 (0.15~0.20)	6.3	6.3	14	14	37.8	21	22	26	0.5625–24
		TR–05	10×16 (0.15~0.20)	7.9	7.9	15.5	15.5					
		TR–06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1					
		TR–07	10×16 (0.12~0.20)	11.1	11.1	18.7	18					
		TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	18					
3	13	TR–04	6×10 (0.15~0.20)	6.3	6.3	14	14	43.3	24	25	29	0.6875–24
		TR–05	10×16 (0.15~0.20)	7.9	7.9	15.5	15.5					
		TR–06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1					
		TR–07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7					
		TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3					
		TR–10	16×24 (0.10~0.30)	16	16	23.5	23.0					
4	15	TR–05	10×16 (0.15~0.20)	7.9	–	15.5	–	45.1	27	28	29	0.8125–20
		TR–06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1					
		TR–07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7					
		TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3					
		TR–10	16×24 (0.10~0.30)	16	16	23.5	23.5					
		TR–12	16×24 (0.10~0.30)	19	19	26.7	25.5					
5	17	TR–05	10×16 (0.15~0.20)	7.9	–	15.5	–	48.8	31	32	33	0.9375–20
		TR–06	10×16 (0.15~0.20)	9.5	10.5	17.1	17.1					
		TR–07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7					
		TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3					
		TR–10	16×24 (0.10~0.30)	16	16	23.5	23.5					
		TR–12	16×24 (0.10~0.30)	19	19	26.7	26.7					
		TR–14	24×30 (0.10~0.30)	22.2	22.2	30	28					
6	19	TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3	51.6	34	35	33	1.0625–18
		TR–10	16×24 (0.10~0.30)	16	16	23.5	23.5					
		TR–12	16×24 (0.10~0.30)	19	19	26.7	26.7					
		TR–14	24×30 (0.10~0.30)	22.2	22.2	30	30					
		TR–16	24×30 (0.10~0.30)	25.4	25.4	33	32					
7	21	TR–08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3	53.8	37	38	39	1.1875–18
		TR–10	16×24 (0.10~0.30)	16	16	23.5	23.5					
		TR–12	16×24 (0.10~0.30)	19	19	26.7	26.7					
		TR–14	24×30 (0.10~0.30)	22.2	22.2	30	30					
		TR–16	24×30 (0.10~0.30)	25.4	25.4	33	33					
		TR–18	30×40 (0.10~0.30)	28.5	–	36.2	–					
8	23	TR–10	16×24 (0.10~0.30)	16	16	23.5	23.5	56.3	40	41	39	1.3125–18
		TR–12	16×24 (0.10~0.30)	19	19	26.7	26.7					
		TR–14	24×30 (0.10~0.30)	22.2	22.2	30	30					
		TR–16	24×30 (0.10~0.30)	25.4	25.4	33	33					
		TR–18	30×40 (0.10~0.30)	28.5	28.5	36.2	36.2					
		TR–20	30×40 (0.10~0.30)	31.8	–	39.4	–					
9	25	TR–10	16×24 (0.10~0.30)	16	16	23.5	–	61.8	43	44	44	1.4375–18
		TR–12	16×24 (0.10~0.30)	19	19	26.7	26.7					
		TR–14	24×30 (0.10~0.30)	22.2	22.2	30	30					
		TR–16	24×30 (0.10~0.30)	25.4	25.4	33	33					
		TR–18	30×40 (0.10~0.30)	28.5	28.5	36.2	36.2					
		TR–20	30×40 (0.10~0.30)	31.8	31.8	39.4	39.4					
		TR–22	30×40 (0.10~0.30)	35	35	42.5	42					

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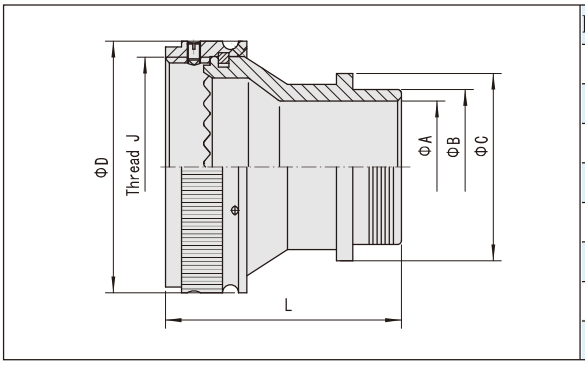
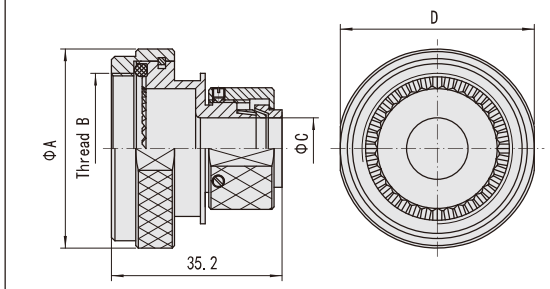
[JY599 Ⅰ xxFJC00] （Shielding and non-clamping cable accessory）



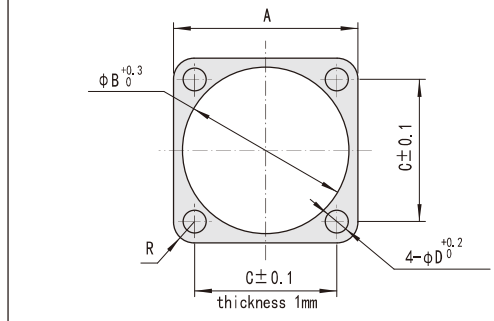
Housing size	A	B	C	D	Thread J UNEF	L	Ti-Ni ring type
11	8.3	11	15	18.6	0.5625-24	29	TR-05
13	10	12.7	16.6	21.8	0.6875-24	29	TR-06
15	11.1	14.3	18.5	25	0.8125-20	29	TR-07
17	13.1	15.9	19.8	28.2	0.9375-20	29	TR-08
19	16.2	19	23	30.9	1.0625-18	29	TR-10
21	16.2	19	23	34.1	1.1875-18	29	TR-10
23	19.5	22.2	26.2	37.5	1.3125-18	29	TR-12
25	19.5	22.2	26.2	40.5	1.4375-18	29	TR-12

[JY599 Ⅰ xxFJE00] （Shielding and non-clamping cable accessory）



Housing size	A	Thread B UNEF	C Lead-out dia.	D
09	22	0.4375-28	6.3、7.9、9.5	20
11	25	0.5625-24	6.3、7.9、9.5、11.1、12.7	23
13	28	0.6875-24	6.3、7.9、9.5、11.1、12.7、16	27
15	32	0.8125-20	7.9、9.5、11.1、12.7、16、19	30
17	35	0.9375-20	7.9、9.5、11.1、12.7、16、19、22.2	33
23	44	1.3125-18	16、19、22.2、25.4、28.5、31.8	42
25	47	1.4375-18	19、22.2、25.4、28.5、31.8、35	45

[Square flange cushion]



Housing size	Square flange cushion code	Conductive square flange cushion code	A	B	C	D	R
09	21E8-701-849-A1	21E8-701-850-A2	23.9	14.8	18.26	3.3	3.2
11	21E8-701-851-A1	21E8-701-852-A2	26.3	18.0	20.62	3.3	3.2
13	21E8-701-853-A1	21E8-701-854-A2	28.7	21.8	23.01	3.3	3.2
15	21E8-701-855-A1	21E8-701-856-A2	31.1	25.0	24.61	3.3	3.2
17	21E8-701-857-A1	21E8-701-858-A2	33.4	28.2	26.97	3.3	3.2
19	21E8-701-859-A1	21E8-701-860-A2	36.6	30.9	29.36	3.3	3.2
21	21E8-701-861-A1	21E8-701-862-A2	39.8	34.0	31.75	3.3	3.2
23	21E8-701-863-A1	21E8-701-864-A2	43.0	37.2	34.93	3.8	3.7
25	21E8-701-865-A1	21E8-701-866-A2	46.1	40.4	38.10	3.8	3.7

MIL-DTL-38999 Ⅱ series electrical connector

Brief introduction

- Comply with GJB 599A (MIL-DTL-38999K) Ⅱ series
- Quick bayonet coupling
- Smallest size, lightest weight, shortest shell of the series
- EMI/RFI shielding
- Removable crimping contact, without scoop-proof function
- Enterprise standard: 21E0.204.102JT

Application

The product is used to connect current and signal.

Operating environment

This series is light type and applied in the environment without strong vibration, rain, sand, damp heat.

Main technical characteristics

[Mechanical]

——Housing: Aluminum alloy, stainless steel

——Plating:

B class: Olive green cadmium plating

E class: Stainless steel passive

F class: Electroless nickel plating

——Insulator: Thermoset plastic

——Grommet and seal: Silicon rubber

——Contact: Gold plating copper alloy, crimping, soldering, PCB

——Endurance: 500 cycles

——Vibration: Random vibration: at frequency 100~1000Hz, power spectral density: $1g^2/Hz$

——Shock: At 3 ms half sinusoid, peak value of acceleration: 300g

[Electrical]

——Contact resistance and current rating:

Contact size	Operating dia.(mm)	Contact resistance (mΩ)	Current rating (A)
22D	Φ0.76	≤12	5
20#	Φ1.00	≤5	7.5
16#	Φ1.60	≤2.5	13
12#	Φ2.40	≤1.5	23

——EMI shielding:

100MHz~1GHz, minimum attenuation 45dB

——Withstanding voltage: V

Service rating*	M	I	Ⅱ
Sea level	1300	1800	2300
21000m	800	1000	1000

*Different contact layouts have different service rating. Please see the contact layout remarks.

——Insulating resistance:

Normal≥5000MΩ Damp heat≥100MΩ

——housing-to-housing continuity:

B class≤2.5mΩ F class≤1.0mΩ

E class≤50mΩ

[Environmental]

——Operating temperature:

B class: -65℃~+175℃

E, F class: -65℃~+200℃

——Salt spray: According to method 1001 GJB1217

B class: 500 h E class: 1000h

F class: 48 h

——Relative humidity: 98% at 40℃

——Operating height: ≤30480m

Ordering information

Basic series	JY	27472	T	14	F	35	P		–H
Type	27473–plug (T) 27484–shielding plug (T) 27472–wall–through square flange receptacle (front mounting) (T) 27497–wall–through square flange receptacle (rear mounting) (T) 27513–box square flange receptacle (front mounting) (E) 27508–box square flange receptacle (rear mounting) (E) 27474–jum nut receptacle (T)								
Housing	T–with thread and stop teeth for backshell(the backshells are the same with ones of GJB599 series I .see Page 13 to 20) E–without thread and stop teeth for backshell								
Housing size	08–10–12–14–16–18–20–22–24								
Plating	B –aluminum alloy shell with olive green cadmium plating F –aluminum alloy shell with electroless nickel plating E –stainless steel shell, passive								
Contact layout	see the contact layout figure								
Contact	Crimping and soldering contact: P–pin, S–socket PCB contact: PL–long PCB pin SL–long PCB socket PC–short PCB pin SC–short PCB socket								
Polarization	N–normal A, B, C, D–alternative (If customer chooses crimping contacts, N can be omitted in ordering. For other contacts, N should be stated clearly. 08# shell only has N, A and D polarization)								
Soldering contact code	(only for soldering connectors) H–soldering contact								

Notes:

1. GJB599A series are made according to the same standard with MIL–DTL–38999K series. The difference is that: the basic part number of GJB599A is JY, while MIL–DTL–38999K is MS. GJB599A series are interchangeable with MIL–DLT–38999K series.
2. For details of applicable sealing cap, rear accessories and square flange cushions please find Page 31 to 32.
3. If the operating environment requires oil resistance, the connector sealing components should be made of fluorinated silicone rubber. When placing orders, plus C1 at the end of the original part number (for example: JY27467T17F35PNC1).

[Part number example]

JY27472T14E35PN–H:JY series front–mounting box square flange receptacle, threaded termination, with stop teeth and accessory for backshell, 14# shell of stainless steel material, passive, 35# layout, filled with pins, N polarization, soldering contacts only for soldering connectors.

Crimping contacts

Contact size	Dia. mm	Pin color	Socket color	ID of crimp boot mm	OD of crimp boot mm	Section of wire mm^2	AWG	Wire insulator OD	Removal tool code	Crimping tool
22D	Φ0.76	Orange–blue–black	Orange–green–yellow	0.85	1.20	0.08 0.125 0.2 0.3	28 26 24 22	0.76～1.37	M81969/14–01	YJQ–02
20#	Φ1.00	Orange–blue–orange	Orange–green–purple	1.17	1.78	0.2 0.3 0.5	24 22 20	1.02～2.11	M81969/14–10	YJQ–02 XCXY–01
16#	Φ1.60	Orange–blue–yellow	Orange–green–gray	1.68	2.62	0.5 0.8 1.0 1.2	20 18 16	1.65～2.77	M81969/14–03	XCXY–01
12#	Φ2.40	Orange–blue–green	Orange–green–white	2.49	3.84	2.0 3.0	14 12	2.46～3.61	M81969/14–04	XCXY–01

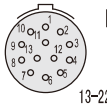
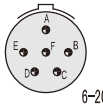
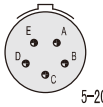
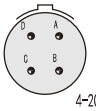
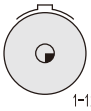
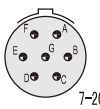
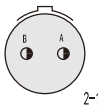
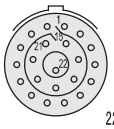
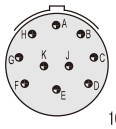
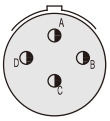
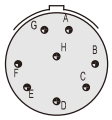
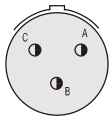
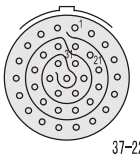
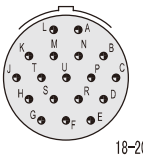
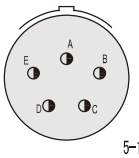
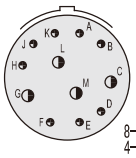
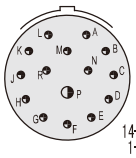
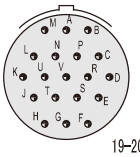
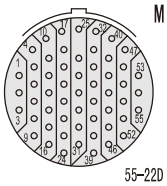
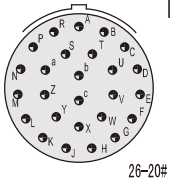
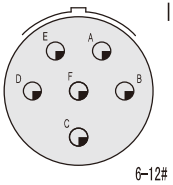
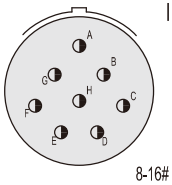
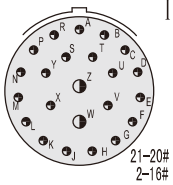
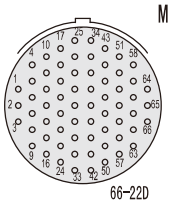
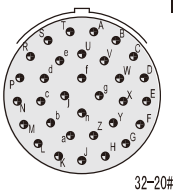
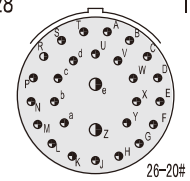
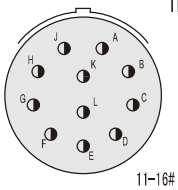
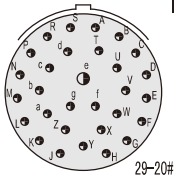
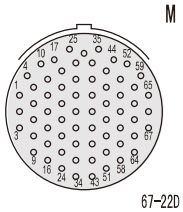
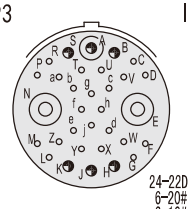
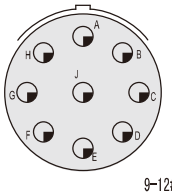
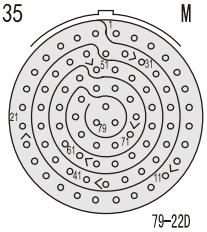
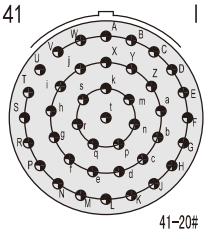
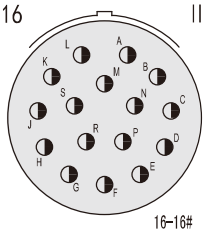
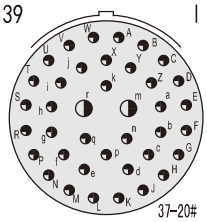
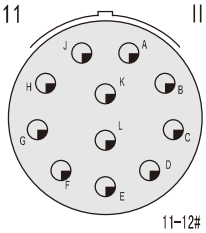
Remarks: The applicable crimping tool's instructions can be found in page 151.

Soldering contacts

Contact size	Soldering cup ID	AWG
22D	ϕ0.9	22
20#	ϕ1.1	20
16#	ϕ1.9	16
12#	ϕ2.9	12

Remarks: coaxial contacts don't have soldering types.

Insert arrangement (viewed from front face of male insulator)

Housing size						
08	35 M  6-22D	98 I  3-20#				
10	35 M  13-22D	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#
12	35 M  22-22D	98 I  10-20#	04 I  4-16#	08 I  8-20#	03 II  3-16#		
14	35 M  37-22D	18 I  18-20#	05 II  5-16#	97 I  8-20# 4-16#	15 I  14-20# 1-16#		
	19 I  19-20#						
16	35 M  55-22D	26 I  26-20#	06 I  6-12#	08 II  8-16#	99 I  21-20# 2-16#		
18	35 M  66-22D	32 I  32-20#	28 I  26-20# 2-16#	11 II  11-16#	30 I  29-20# 1-16#		
	45 M  67-22D	93 I  24-22D 6-20# 2-10#	96 I  9-12#				
20	35 M  79-22D	41 I  41-20#	16 II  16-16#	39 I  37-20# 2-16#	11 II  11-12#		

Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12#

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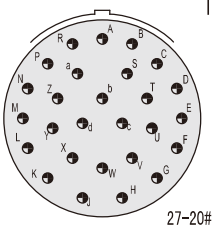
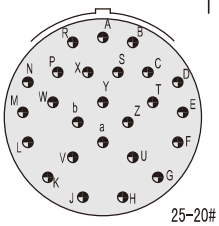
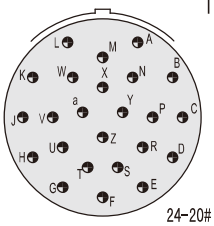
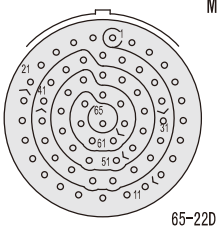
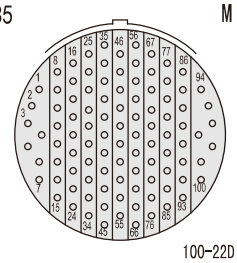
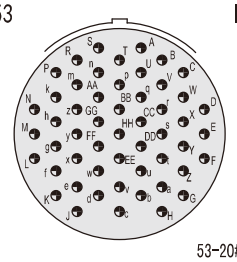
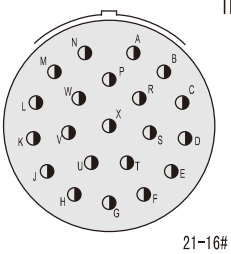
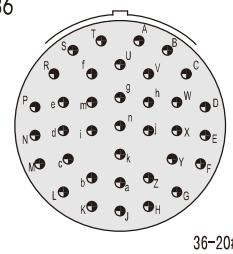
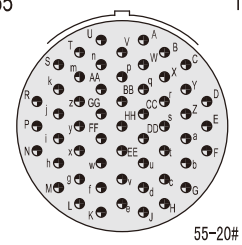
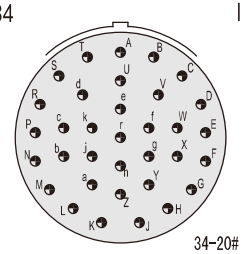
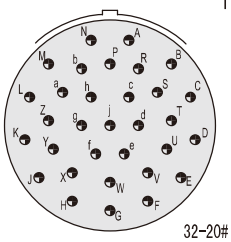
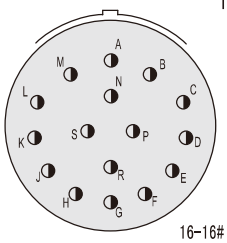
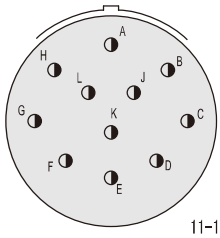
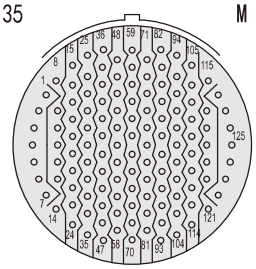
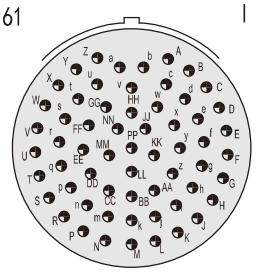
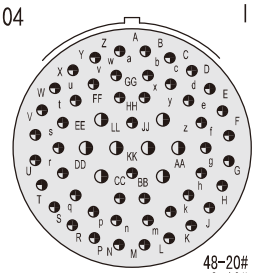
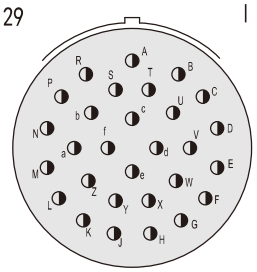
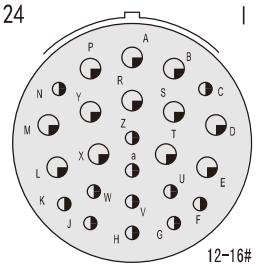
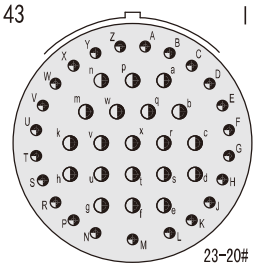
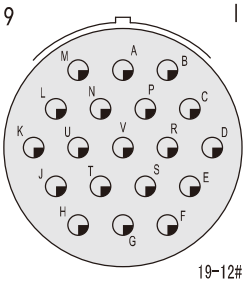
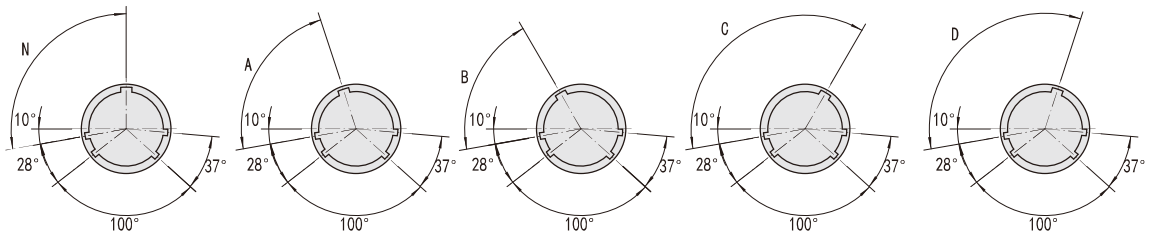
20	27 I  27-20#	25 I  25-20#	24 I  24-20#	02 M  65-22D
22	35 M  100-22D	53 I  53-20#	21 II  21-16#	36 I  36-20#
	55 I  55-20#	34 I  34-20#	32 I  32-20#	97 I  16-16#
	99 II  11-16#			
24	35 M  128-22D	61 I  61-20#	04 I  48-20# 8-16#	29 I  29-16#
	24 I  12-16# 12-12#	43 I  23-20# 20-16#	19 I  19-12#	

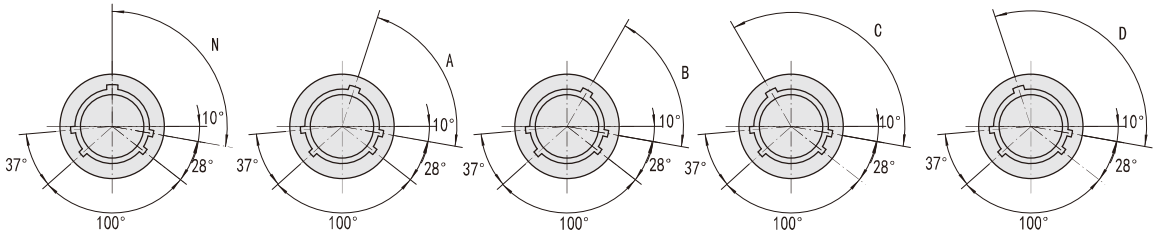
Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12#

Polarization

Receptacle Polarization



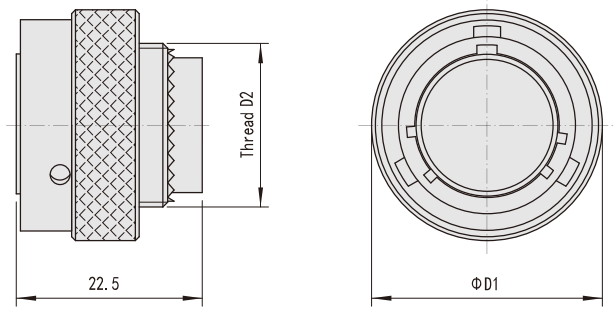
Plug Polarization



Polarization code	08	10	12	14	16	18	20	22	24
N	100°	100°	100°	100°	100°	100°	100°	100°	100°
A	82°	86°	80°	79°	82°	82°	82°	85°	85°
B	non	72°	68°	66°	70°	70°	70°	74°	74°
C	non	128°	132°	134°	130°	130°	130°	126°	126°
D	118°	114°	120°	121°	118°	118°	118°	115°	115°

Outline dimension

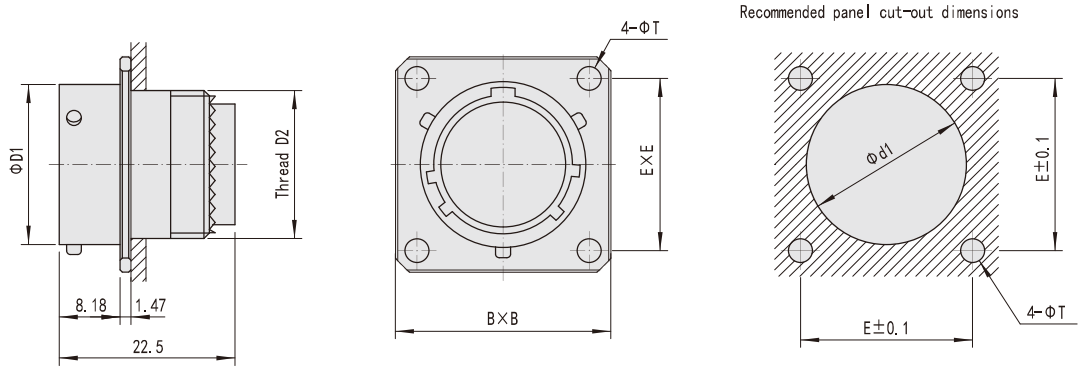
[Plug JY27473/JY27484]



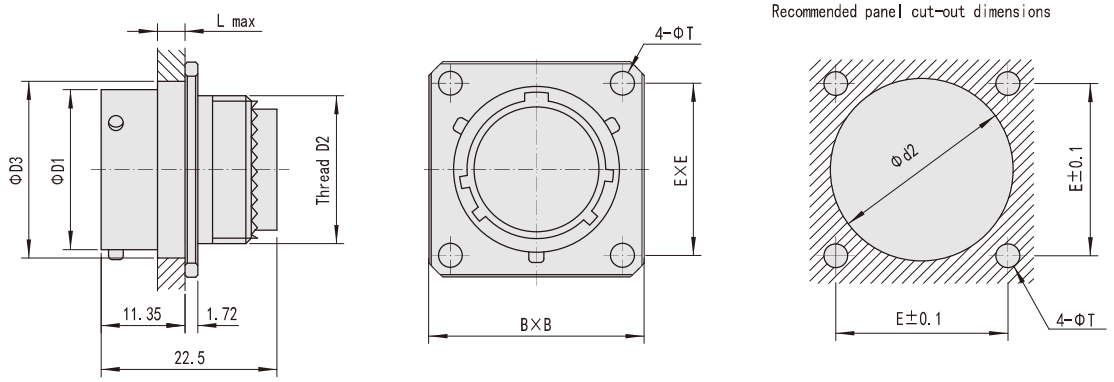
Housing size	D1	Thread D2 UNEF-2A
08	19.00	0.4375-28
10	21.80	0.5625-24
12	26.20	0.6875-24
14	29.30	0.8125-20
16	32.50	0.9375-20
18	35.70	1.0625-18
20	38.80	1.1875-18
22	41.68	1.3125-18
24	44.86	1.4375-18

[Wall—through square flange receptacle JY27472/JY27497]

Front mounting wall-through square flange receptacle (JY27472)



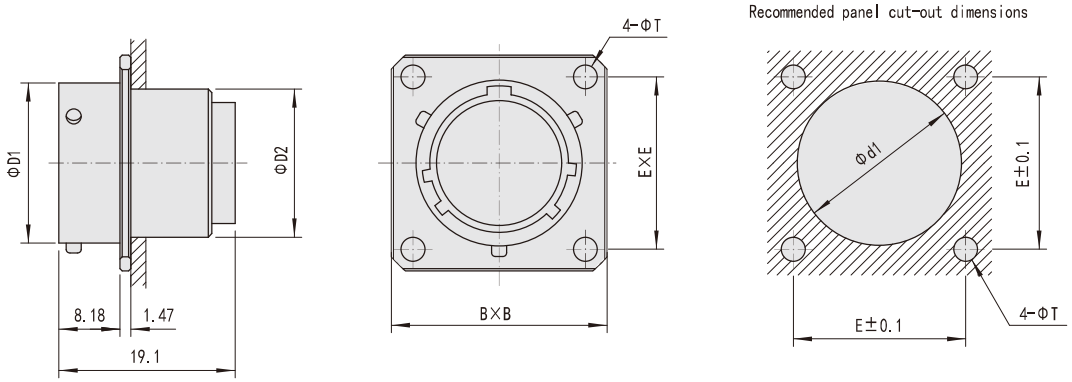
Back mounting wall-through square flange receptacle (JY27497)



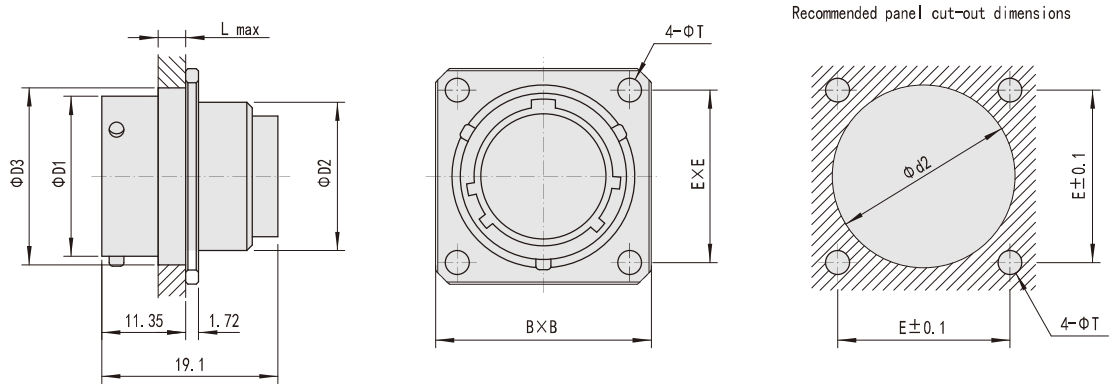
Housing size	D1	Thread D2 UNEF—2A	D3	L max	B	E	T	d1	d2
08	12.00	0.4375—28	13.20	3.71	21.00	15.09	3.2	12.5	14.2
10	15.00	0.5625—24	16.14	3.71	24.10	18.26	3.2	15.5	17.5
12	19.05	0.6875—24	20.50	3.71	26.50	20.62	3.2	19.5	21.3
14	22.23	0.8125—20	23.60	3.71	28.90	23.01	3.2	21.5	25.0
16	25.40	0.9375—20	26.80	3.71	31.21	24.61	3.2	25.0	27.3
18	28.58	1.0625—18	30.00	3.71	33.60	26.97	3.2	28.0	31.3
20	31.75	1.1875—18	33.20	4.27	36.80	29.36	3.2	31.5	34.5
22	34.93	1.3125—18	36.35	4.27	40.00	31.75	3.2	34.5	37.5
24	38.10	1.4375—18	39.50	4.27	43.10	34.93	3.9	37.5	40.6

[Box square flange receptacle JY27513/JY27508]

Front mounting box square flange receptacle (JY27513)



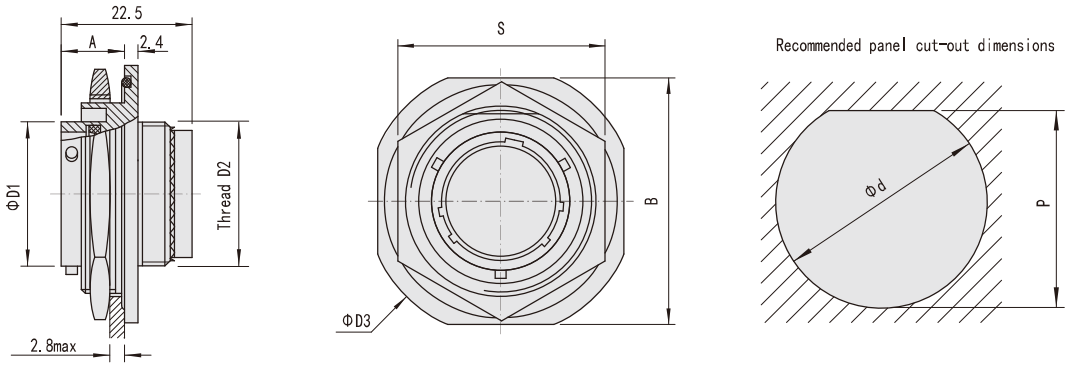
Back mounting box square flange receptacle (JY27508)



Housing size	D1	D2	D3	L max	B	E	T	d1	d2
08	12.00	11.51	13.20	3.71	21.00	15.09	3.2	12.5	14.2
10	15.00	14.68	16.14	3.71	24.10	18.26	3.2	15.5	17.5
12	19.05	17.86	20.50	3.71	26.50	20.62	3.2	19.5	21.3
14	22.23	21.03	23.60	3.71	28.90	23.01	3.2	21.5	25.0
16	25.40	24.21	26.80	3.71	31.21	24.61	3.2	25.0	27.3
18	28.58	26.97	30.00	3.71	33.60	26.97	3.2	28.0	31.3
20	31.75	30.18	33.20	4.27	36.80	29.36	3.2	31.5	34.5
22	34.93	33.32	36.35	4.27	40.00	31.75	3.2	34.5	37.5
24	38.10	36.53	39.50	4.27	43.10	34.93	3.9	37.5	40.6

Remarks: aviation standard jam nut is recommended for square flange receptacle mounting.

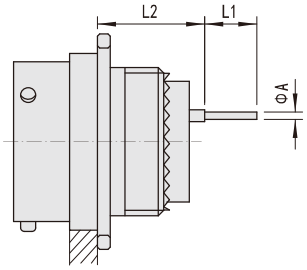
[Jam nut receptacle JY27474]



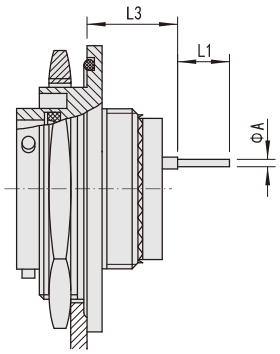
Housing size	D1	Thread D2 UNEF-2A	D3	A	B	S	d	p
08	12.00	0.4375-28	34.95	11.1	31.75	27.40	22.46	21.08
10	15.00	0.5625-24	38.10	11.1	34.95	30.61	25.58	24.26
12	19.05	0.6875-24	41.28	11.1	38.10	33.75	28.80	27.53
14	22.23	0.8125-20	44.45	11.1	41.28	36.96	31.98	30.68
16	25.40	0.9375-20	49.23	11.1	45.24	40.10	35.15	33.86
18	28.58	1.0625-18	51.21	11.1	48.00	43.31	38.28	37.06
20	31.75	1.1875-18	54.38	11.8	51.21	46.45	41.50	40.03
22	34.93	1.3125-18	57.53	11.8	54.36	51.23	44.68	43.21
24	38.10	1.4375-18	60.71	11.8	57.53	54.41	47.85	46.38

[GJB599 Ⅱ series receptacle with PCB contacts]

JY27497 receptacle

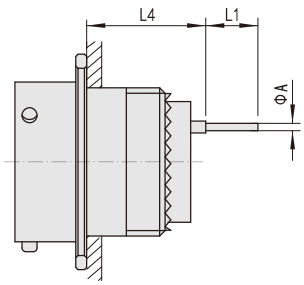


JY27474 receptacle

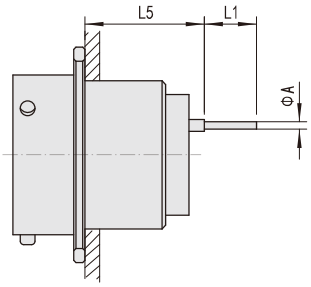


PCB contact type		L1	A
22D	Long PCB contact	8.5	0.7
	Short PCB contact	4.0	
20#	Long PCB contact	8.5	0.7
	Short PCB contact	5.1	
16#	Long PCB contact	8.5	1.15
	Short PCB contact	5.1	

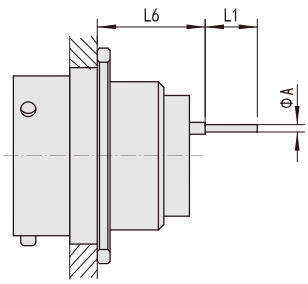
JY27472 receptacle



JY27513 receptacle



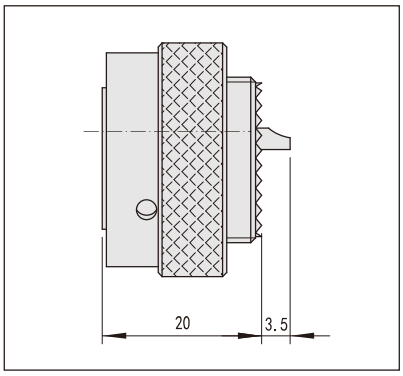
JY27508 receptacle



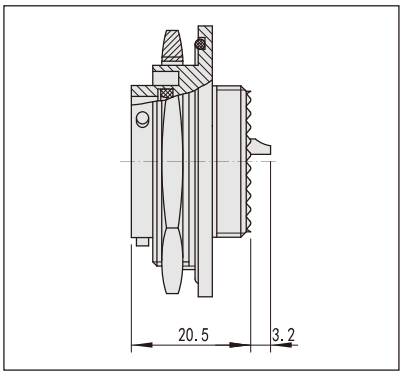
Dimensions with different contacts		Shell size 08–10–12–14–16–18	Shell size 20–22–24
L2	With 22D# pin/socket	13.40	13.40
	With 20# or 16# pin/socket	13.57	13.57
L3	With 22D# pin/socket	13.61	12.95
	With 20# or 16# pin/socket	13.78	13.12
L4	With 22D# pin/socket	15.1	15.1
	With 20# or 16# pin/socket	15.27	15.27
L5	With 22D# pin/socket	11.1	11.1
	With 20# or 16# pin/socket	11.27	11.27
L6	With 22D# pin/socket	9.4	9.4
	With 20# or 16# pin/socket	9.57	9.57

[GJB599 Ⅱ series soldering products]

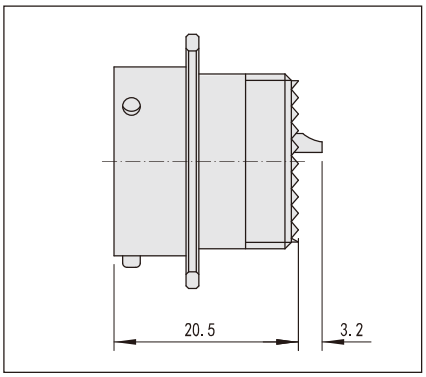
JY27473 plug



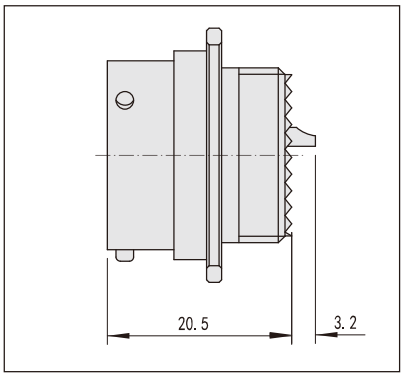
JY27474 receptacle



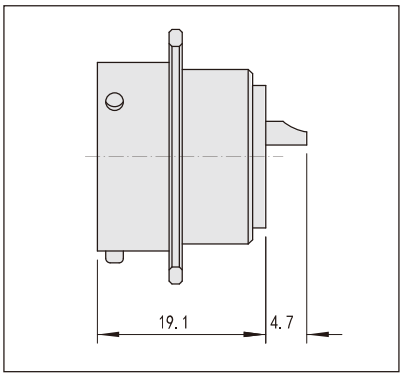
JY27472 receptacle



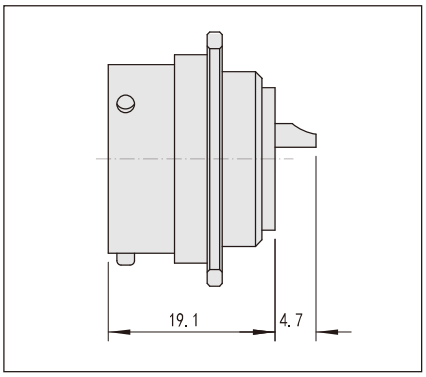
JY27497 receptacle



JY27513 receptacle

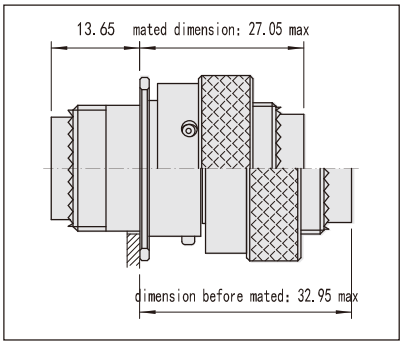


JY27508 receptacle

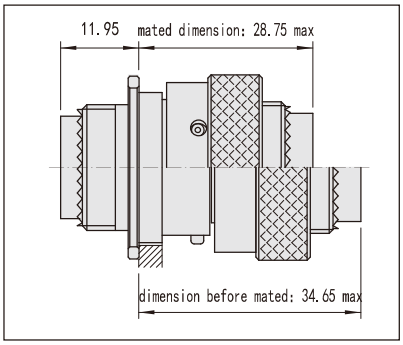


Dimension after mating

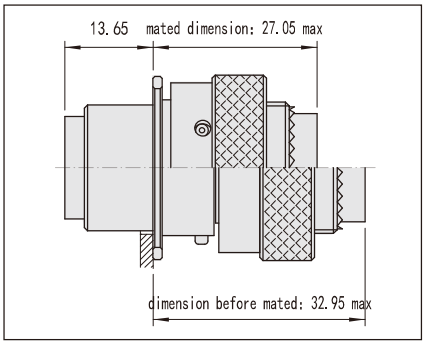
Wall-through square flange(front mounting) receptacle (JY27472)/plug (JY27473)



Wall-through square flange(rear mounting) receptacle (JY27497)/plug (JY27473)



Box mounting square flange (front mounting) receptacle (JY27472)/plug (JY27473)



Sealing cap

[Ordering information]

Basic series	JY27510	F	10	C	L

JY27510 – sealing cap for plug (MS27510)
JY27511 – sealing cap for receptacle (MS27511)

Plating
B – olive green cadmium plating F – eletroless nickel plating
E – stainless steel passive

Housing size

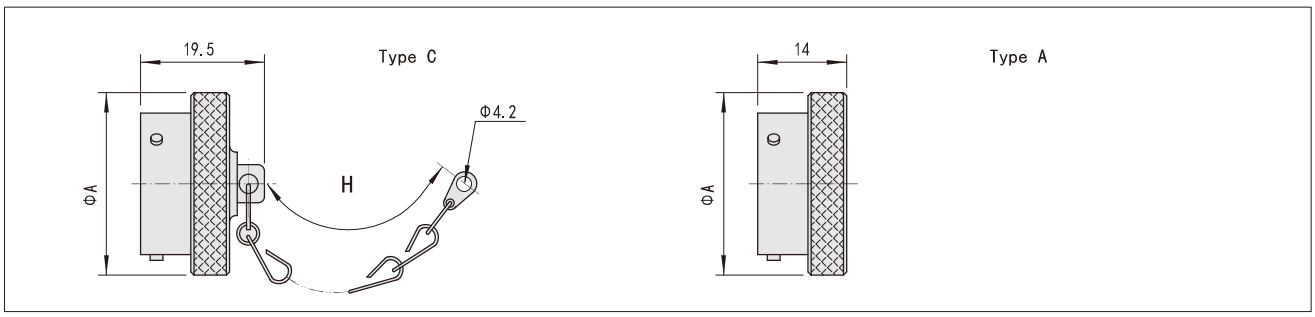
Chain type
C – stainless steel chain with connecting lug N – stainless steel chain with ring
S – stainless steel string with connecting lug R – nylon string with connecting lug
A – without chain E – nylon string with ring

Length mark
Omit – standard length
L– 127mm of chain length
M– 152.4mm of chain length (only applied for JY27510)
N– 177.8mm of chain length (only applied for JY27510)

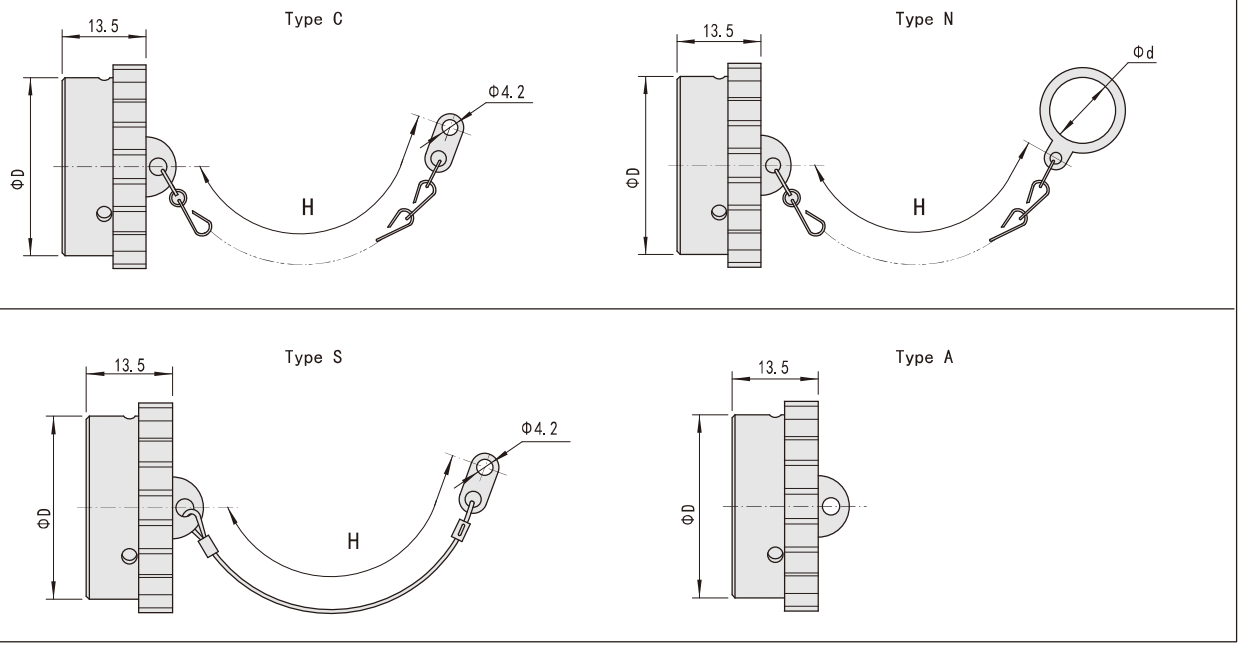
Note: Sealing cap is ordered separately, not supplied with connector.

[Outline dimensions]

Plug protective cap
JY27510 (MS27510)



Receptacle protective cap
JY27511 (MS27511)

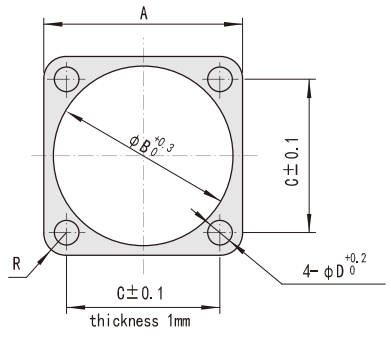


Housing size		08	10	12	14	16	18	20	22	24
A	max	18.2	21.5	25.4	28.7	31.7	35.0	38.1	41.4	44.4
D	max	18.5	21.7	25.3	29.0	31.6	34.8	38.0	41.1	44.2
d	min	22.6	26.0	29.0	32.4	35.5	38.6	42.0	44.7	48.5
H	max	76.2	76.2	88.9	88.9	88.9	88.9	101.6	101.6	101.6

Backshell

Remarks: The applicable accessories are the same as the ones of GJB599 Ⅰ series. See page 13 to 21 for details.

[Square flange cushion]



Housing size	Square flange cushion code	Conductive square flange cushion code	A	B	C	D	R
08	21E8-701-867-A1	21E8-701-868-A2	21.1	13.4	15.09	3.3	3.2
10	21E8-701-869-A1	21E8-701-870-A2	24.2	16.3	18.26	3.3	3.2
12	21E8-701-871-A1	21E8-701-872-A2	26.6	21.5	20.62	3.3	3.2
14	21E8-701-873-A1	21E8-701-874-A2	29.0	24.7	23.01	3.3	3.2
16	21E8-701-875-A1	21E8-701-876-A2	31.3	27.0	24.61	3.3	3.2
18	21E8-701-877-A1	21E8-701-878-A2	33.7	31.0	26.97	3.3	3.2
20	21E8-701-879-A1	21E8-701-880-A2	36.9	34.2	29.36	3.3	3.2
22	21E8-701-881-A1	21E8-701-882-A2	40.1	37.4	31.75	3.3	3.2
24	21E8-701-883-A1	21E8-701-884-A2	43.2	40.5	34.93	4.1	4.0

Http://www.zhyf.com Email: sales@zhyf-bj.com

MIL-DTL-38999 Ⅲ series electrical connector

Brief introduction

- Comply with GJB 599A (MIL-DTL-38999K) Ⅲ series
- Quick tri-start thread coupling with anti-decoupling mechanism
- Small volume, light weight, high contact density
- EMI/RFI shielding
- Removable crimping contact, scoop-proof pin
- 12#, 16# contact cavities can be filled with fiber optic contacts
- 12#, 10#, 8#contact cavities can be filled with coaxial contacts or shielding contacts
- Fireproof shell, composite material shell, and aluminum alloy shell with various plating
- Withstanding high strength vibration under high temperature, and applied in harsh environment like wind, sand, moist, etc.
- Enterprise standard: 21E0.204.102JT

Application

The product is used to connect electrical signals.

Main technical characteristics

[Mechanical]

——Housing: Aluminum alloy, stainless steel
——Plating: W – olive green cadmium plating
F – electroless nickel plating
K – stainless steel passive
——Insulator: Thermoplastic or thermo-set
——Grommet and seal: Silicon rubber
——Contact: Gold plating copper alloy
——Endurance: 500 cycles
——Shock: 3ms half sinusoid
Peak value of acceleration: 300g

[Electrical]

——Withstanding voltage: V

Service rating	Sea level	21000 m
M	1300	800
N	1000	600
I	1800	1000
II	2300	1000

Remarks: Different contact layouts have different service rating. Please see the contact layout form for details.

——Contact resistance and rating current:

Contact size	Operating dia. mm	Contact resistance mΩ	Rating current A
22D	Φ0.76	≤12	5
20#	Φ1.00	≤5	7.5
16#	Φ1.60	≤2.5	13
12#	Φ2.40	≤1.5	23
10#	Φ3.15	≤1.0	40

[Environmental]

——Operating temperature:
W class: −65℃～175℃
F & K class: −65℃～200℃
——Sealing: Comply with the requirement of MIL-DTL-38999K high altitude immersion

Operating environment

The products can be used in some harsh environments like strong vibration, rain, sand, damp heat and so on.

——Vibration:
Sinusoid: 60g, with temperature cycling and simulating accessories (36 hours)
Random: under high temperature, frequency 100～1000Hz, power spectrum density $1g^2$/Hz, rms 41.7g under ambient temperature, frequency 100～1000Hz, power spectrum density $5g^2$/Hz, rms 49.5g
——Contact retention (mini force in N)
22D#: 45N 20#: 67N 16#: 111N
12#: 111N 10#: 111N 8#: 111N

——Insulation resistance: ≥5000MΩ (at 500Vdc)
——Electricity of shell:
W class: 2.5 mΩ
F class: 1 mΩ K class: 10 mΩ
——EMI shielding:
100MHz～1GHz, minimum attenuation 85dB (F class、W class)
1GHz～10GHz, minimum attenuation 65dB (F class), 50dB (W class)
——8# coaxial contact:
frequency bandwidth: 0～20MHz
Voltage rating: Max. 500VAC
21000 meter height: 125VAC
Voltage drop:
inner and middle contact ≤55mV under 1A
outer contact ≤75mV under 12A

——Salt spray: According to method 1001 GJB 1217
W class: 500 hours F class: 48 hours
K class:1000 hours
——Damp heat: 10 cycles in 24 hours according to MIL-DTL-38999K
——Resistance to fluids: Fuels, coolant, solvent

Ordering information

Basic series	J599/	20	W	B	35	P	N	−H
Housing type	20 − square flange receptacle 24 − jam nut receptacle 26 − RFI shielding plug							
Plating	W − olive green cadmium plating F − electroless nickel plating K − stainless steel passivation							
Housing Size Index No.	A to J $\frac{09}{A}$ $\frac{11}{B}$ $\frac{13}{C}$ $\frac{15}{D}$ $\frac{17}{E}$ $\frac{19}{F}$ $\frac{21}{G}$ $\frac{23}{H}$ $\frac{25}{J}$							
Contact layout	please see the contact layout figure							
Contact type	P −pin, crimping and soldering type S −socket, crimping and soldering type PL −pin, long PCB contact SL −socket, long PCB contact PC −pin, short PCB contact SC −socket, short PCB contact A −special pin contact B −special socket contact							
Polarization	N − normal A, B, C, D, E − alternative							
Soldering contact code (only for soldering connectors)	H − soldering contact							

Notes:

1. GJB599A series is designed according to the same standard with MIL-DTL-38999K series. The difference is that: the basic part number of GJB599A is J599, while MIL-DTL-38999K is D38999. The two series are interchangeable with each other.
2. A and B stand for the non-standard contacts that are different from the GJB1611 standard (For example: shielding, coaxial, optic contact, etc.). These contact types need to be ordered separately, the part number details can be found in the instruction of GJB599 III series special contacts.
3. The applicable sealing cap, backshell and square flange rubber washer details can be found in Page 46 to 57
4. If the operating environment requires high oil resistance, the connector sealing components should be fluorinated silicone rubber. When users order this product, add C1 at the end of the original part number (Example: J599/20FE35PNC1)

[Part number example]

J599/20KB35PN−H

J599 series square flange receptacle, stainless steel passivated shell, B# shell size, 35# insert arrangement, filled with pins, crimping and soldering, N polarization. Soldering contacts are only applicable for soldering connector types.

Crimping contacts

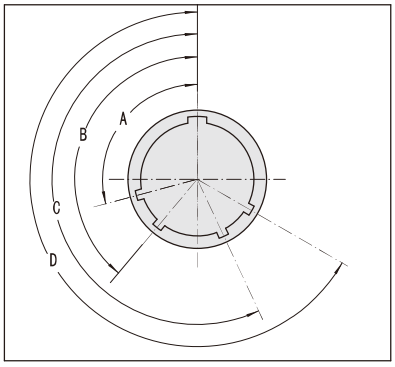
Contact size	Dia. mm	Pin color	Socket color	ID of crimp boot mm	OD of crimp boot mm	Section of wire mm^2	AWG	Wire insulator OD	Removal tool code	Crimping tool
22D	ϕ0.76	Orange−blue−black	Orange−yellow−gray	0.85	1.20	0.08 0.125 0.2 0.3	28 26 24 22	0.76~1.37	M81969/14−01	YJQ−02
20#	ϕ1.00	Orange−blue−orange	Orange−green−brown	1.17	1.78	0.2 0.3 0.5	24 22 20	1.02~2.11	M81969/14−10	YJQ−02 XCXY−01
16#	ϕ1.60	Orange−blue−yellow	Orange−green−red	1.68	2.62	0.5 0.8 1.0 1.2	20 18 16	1.65~2.77	M81969/14−03	XCXY−01
12#	ϕ2.40	Orange−blue−green	Orange−green−orange	2.49	3.84	2.0 3.0	14 12	2.46~3.61	M81969/14−04	XCXY−01
10#	ϕ3.15	Green−red−gray	Green−orange−purple	3.40	4.65	4.8	10	3.42~4.12	M81969/14−05	YTQ
8#	ϕ3.6	—	—	4.55	6.4	8.37	8	6.4~6.9	M81969/14−12	YTQ

Soldering contacts

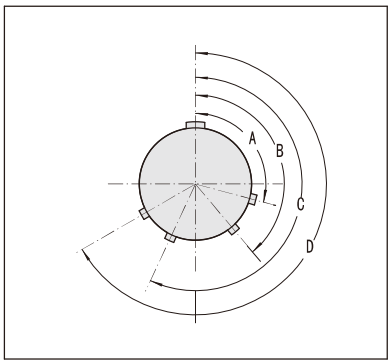
Contact size	Soldering cup ID	AWG
22D	Φ0.9	22
20#	Φ1.1	20
16#	Φ1.9	16
12#	Φ2.9	12
10#	Φ3.6	10
8#	Φ4.8	8

Polarization

[Front view of receptacle]



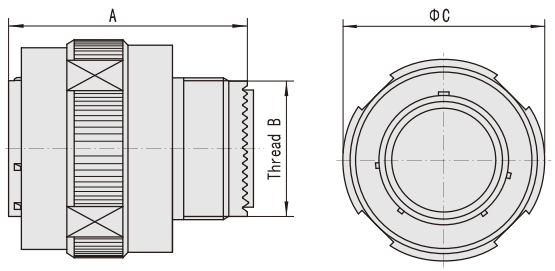
[Front view of plug]



Housing size	MS Shell	Polarization	N	A	B	C	D	E
9	A	A° B° C° D°	105 140 215 265	102 132 248 320	80 118 230 312	35 140 205 275	64 155 234 304	91 131 197 240
11	B	A° B° C° D°	95 141 208 236	113 156 182 292	90 145 195 252	53 156 220 255	119 146 176 298	51 141 184 242
13	C	A° B° C° D°	95 141 208 236	113 156 182 292	90 145 195 252	53 156 220 255	119 146 176 298	51 141 184 242
15	D	A° B° C° D°	95 141 208 236	113 156 182 292	90 145 195 252	53 156 220 255	119 146 176 298	79 153 197 272
17	E	A° B° C° D°	80 142 196 293	135 170 200 310	49 169 200 244	66 140 200 257	62 145 180 280	79 153 197 272
19	F	A° B° C° D°	80 142 196 293	135 170 200 310	49 169 200 244	66 140 200 257	62 145 180 280	79 153 197 272
21	G	A° B° C° D°	80 142 196 293	135 170 200 310	49 169 200 244	66 140 200 257	62 145 180 280	79 153 197 272
23	H	A° B° C° D°	80 142 196 293	135 170 200 310	49 169 200 244	66 140 200 257	62 145 180 280	79 153 197 272
25	J	A° B° C° D°	80 142 196 293	135 170 200 310	49 169 200 244	66 140 200 257	62 145 180 280	79 153 197 272

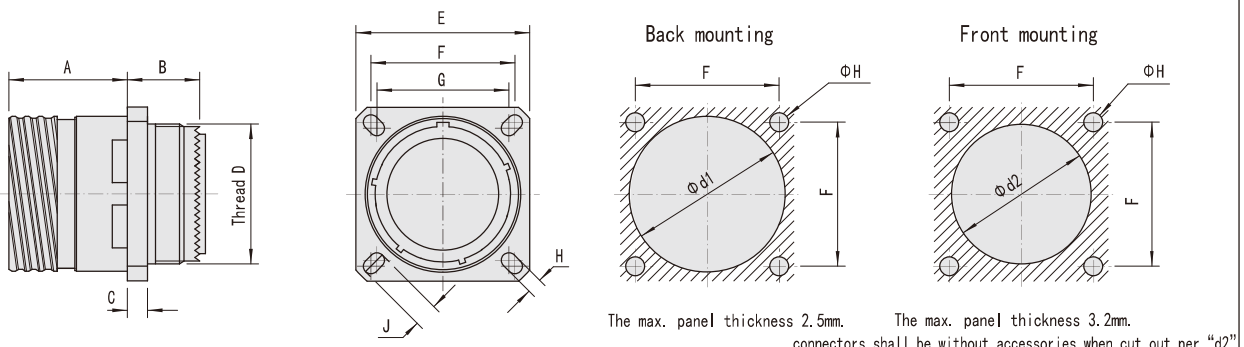
Outline dimensions

[Plug]



Housing size	MS housing	A max	Thread B	C max
9	A	31.00	M12×1–6g	21.80
11	B	31.00	M15×1–6g	25.00
13	C	31.00	M18×1–6g	29.40
15	D	31.00	M22×1–6g	32.40
17	E	31.00	M25×1–6g	35.60
19	F	31.00	M28×1–6g	38.50
21	G	31.00	M31×1–6g	41.70
23	H	31.00	M34×1–6g	44.90
25	J	31.00	M37×1–6g	48.00

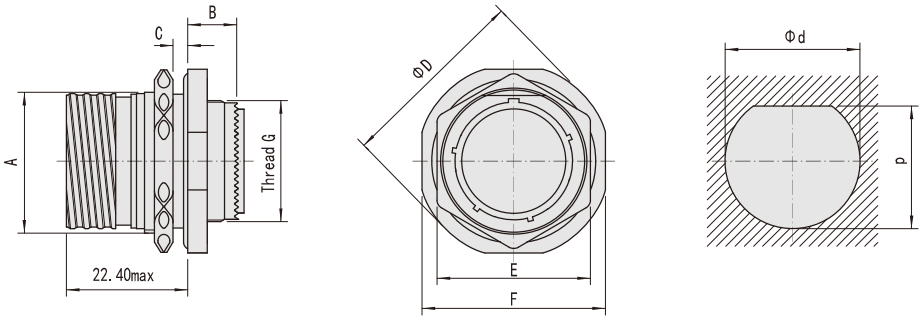
[Square flange receptacle]



The max. panel thickness 2.5mm. The max. panel thickness 3.2mm.
connectors shall be without accessories when cut out per "d2"

Housing size	MS housing	A max	B max	C max	Thread D	E	F	G	H	J	d1 min	d2 min
9	A	20.90	10.80	2.50	M12×1–6g	23.80	18.26	15.09	3.25	5.49	16.66	13.11
11	B	20.90	10.80	2.50	M15×1–6g	26.20	20.62	18.26	3.25	4.93	20.22	15.88
13	C	20.90	10.80	2.50	M18×1–6g	28.60	23.01	20.62	3.25	4.93	23.42	19.05
15	D	20.90	10.80	2.50	M22×1–6g	31.00	24.61	23.01	3.25	4.39	26.59	23.01
17	E	20.90	10.80	2.50	M25×1–6g	33.30	26.97	24.61	3.25	4.93	30.96	25.81
19	F	20.90	10.80	2.50	M28×1–6g	36.50	29.36	26.97	3.25	4.93	32.94	28.98
21	G	20.10	11.50	3.20	M31×1–6g	39.70	31.75	29.36	3.25	4.93	36.12	32.16
23	H	20.10	11.50	3.20	M34×1–6g	42.90	34.93	31.75	3.91	6.15	39.29	34.93
25	J	20.10	11.50	3.20	M37×1–6g	46.00	38.10	34.93	3.91	6.15	42.47	37.69

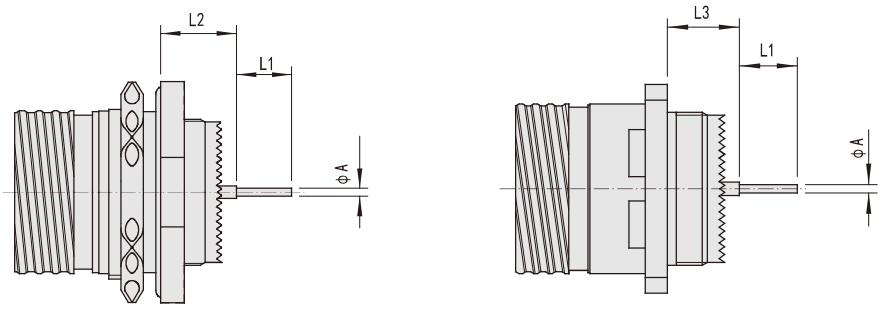
[Jam nut receptacle]



Housing size	MS housing	A	B max	C max	D max	E max	F	Thread G	d	p
9	A	16.50	9.90	3.20	30.50	24.00	27.00	M12×1-6g	17.70	16.99
11	B	19.30	9.90	3.20	35.20	27.00	31.80	M15×1-6g	20.88	19.53
13	C	24.00	9.90	3.20	38.40	32.00	34.90	M18×1-6g	25.58	24.26
15	D	27.20	9.90	3.20	41.60	36.00	38.10	M22×1-6g	28.80	27.53
17	E	30.40	9.90	3.20	44.80	37.00	41.30	M25×1-6g	31.98	30.68
19	F	33.40	9.90	3.20	49.30	41.00	46.00	M28×1-6g	35.15	33.86
21	G	36.50	9.90	3.20	52.70	46.00	49.20	M31×1-6g	38.28	37.06
23	H	39.70	9.90	3.20	55.90	50.00	52.40	M34×1-6g	41.50	40.24
25	J	42.80	9.90	3.20	59.00	51.23	55.60	M37×1-6g	44.68	43.41

[GJB599Ⅲ series receptacle with PCB contacts]

J599/24 receptacle　　J599/20 receptacle

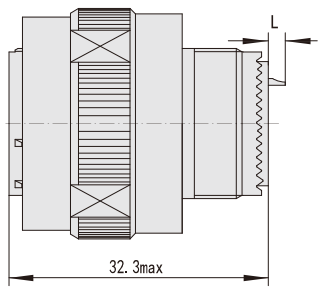


PCB contact type		L1	A
22D	Long PCB contact	8.5	0.7
	Short PCB contact	4.0	
20#	Long PCB contact	8.5	0.7
	Short PCB contact	5.1	
16#	Long PCB contact	8.5	1.15
	Short PCB contact	5.1	

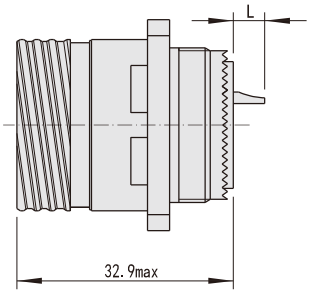
Dimensions with different contacts			Shell size 09–11	Shell size 13–15–17–19–21–23–25
L2	With 22D# pin	min	10.52	10.34
		max	11.46	11.28
	With 22D# socket	min	10.19	10.01
		max	11.46	11.28
	With 20# or 16# pin/socket	min	10.69	10.51
		max	11.63	11.45
L3	With 22D# pin	min	9.48	9.48
		max	10.58	10.58
	With 22D# socket	min	9.15	9.15
		max	10.58	10.58
	With 20# or 16# pin/socket	min	9.65	9.65
		max	10.75	10.75

[GJB599 Ⅲ series soldering connectors]

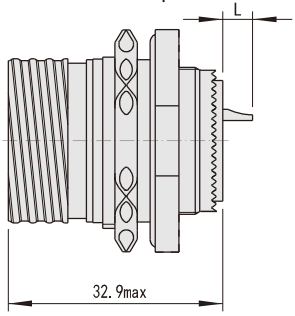
J599/26 plug



J599/20 receptacle



J599/24 receptacle



Soldering contact size	L
22D	4
20#	4
16#	4
12#	4
10#	6
8#	6

Remarks: there is no soldering type for coaxial contacts.

MIL-DTL-38999 III Series Electrical connector with composite shell

Main technical characteristics

[Mechanical]

——Housing: Composite material (the weight is 30% lighter than aluminum alloy shell)
——Plating: J - Olive green cadmium plating
M - Electroless nickel plating
——Insulator: Thermoplastic or thermo-set plastic
——Grommet and seal: Silicon rubber
——Contact: Gold plating copper alloy
——Endurance: 1500 cycles
——Shock: 3ms half sinusoid, peak value of acceleration: 300g
——Vibration:
Sine: 60g, with temperature cycling and simulated accessory (36 hours)
Random: 41.7grms in high temperature, frequency 100-1000Hz, PSD: $1g^2/Hz$
49.5grms in ambient temperature, frequency 100-1000Hz, PSD: $5g^2/Hz$

[Electrical]

——Withstanding voltage: (Vrms)

Service rating	Sea level	21000 m
M	1300	800
N	1000	600
I	1800	1000
II	2300	1000

* Different contact layouts have different service rating. Please see the insert arrangement table.

——Contact resistance and rating current:

Contact size	Operating dia.	Contact resistance	Rating current
22D	Φ0.76	≤12	5
20#	Φ1.00	≤5	7.5
16#	Φ1.60	≤2.5	13
12#	Φ2.40	≤1.5	23
10#	Φ3.15	≤1.0	40

[Environmental]

——Salt spray: 2000 hours
——Operating temperature:
J class: -65℃ ~ 175℃
M class: -65℃ ~ 200℃
——Sealing: Comply with the requirement of MIL-DTL-38999K high altitude immersion
——Damp heat: 10 cycles in 24 hours according to MIL-DTL-38999K
——Fluid resistant: Various fuels, coolant, solvent

——Contact retention(mini force in N)
22D#: 45N 20#: 67N
16#: 111N 12#: 111N
10#: 111N 8#: 111N

——Insulation resistance: ≥5000MΩ (500V DC)
——Electricity of shell:
J class:3 mΩ
M class:3 mΩ
——Shielding
under 100MHz~1GHz: J class & M class: 85dB
under 1GHz~10GHz : M class: 65 dB
J class: 50 dB
——8# coaxial contact:
frequency bandwidth: 0-20MHz
Voltage rating: Max: 500Vac.
21000m: 125Vac.
Voltage drop: inner and middle contact ≤55mV under 1A
Outer contact ≤75mV under 12A

Ordering information

Basic series	J599/	20	J	B	35	P	N	-H

Housing type	20—square flange receptacle 24—jam nut receptacle 26—RFI shielding plug									
Plating	J—olive green cadmium plating M—electroless nickel plating									
Housing size Index No.		09	11	13	15	17	19	21	23	25
	AtoJ	A	B	C	D	E	F	G	H	J
Layout	see "GJB599 III series insert arrangement" for detail									
Contact type	P—pin, crimping H—pin, crimping, 1500 cycles PL—pin, long PCB contact PC—pin, short PCB contact A—special pin contact									
	S—socket, crimping J—socket, crimping, 1500 cycles SL—socket, long PCB contact SC—socket, short PCB contact B— special socket contact									
Polarization	N—normal A、B、C、D、E—alternative									
Soldering contact code (only for soldering connectors)	H—soldering contact									

Notes:
1. GJB599A series is designed according to the same standard with MIL-DTL-38999K series. The difference is that: the basic part number of GJB599A is J599, while MIL-DTL-38999K is D38999. The two series are interchangeable with each other.
2. A and B stands for the contacts that are different from the GJB1611 standard (For example: shielding, coaxial, optic contact, etc.). These contact types need to be ordered separately, the part number details can be found in the instruction of GJB599 III series special contacts.
3. The applicable sealing cap, backshell and square flange cushion details can be found in Page 46 to 57.
4. If the operating environment requires oil resistance, the connector sealing components should be fluorinated silicone rubber. When placing orders, plus C1 at the end of the original part number (Example: J599/20JE35PNC1)

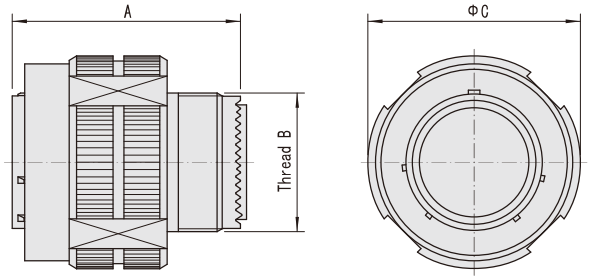
[Part number example]

J599/20JB35PN-H

J599 series square flange receptacle, olive green cadmium plating shell, B# shell size, 35# insert arrangement, filled with pins, crimping, N polarization. Soldering contacts are only applicable for soldering connector types.

Outline dimensions

[Plug]



Housing size	MS housing	A max	Thread B	C max
9	A	31.00	M12×1-6g	21.80
11	B	31.00	M15×1-6g	25.00
13	C	31.00	M18×1-6g	29.40
15	D	31.00	M22×1-6g	32.40
17	E	31.00	M25×1-6g	35.60
19	F	31.00	M28×1-6g	38.50
21	G	31.00	M31×1-6g	41.70
23	H	31.00	M34×1-6g	44.90
25	J	31.00	M37×1-6g	48.00

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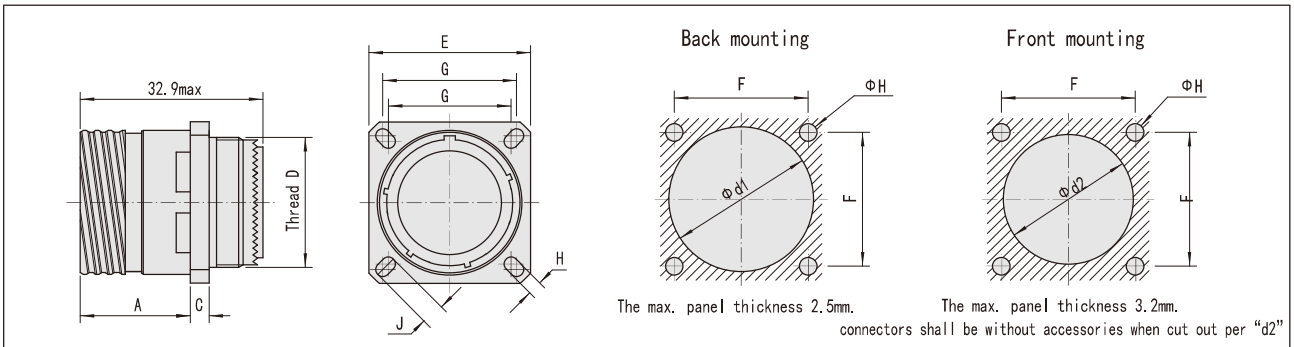
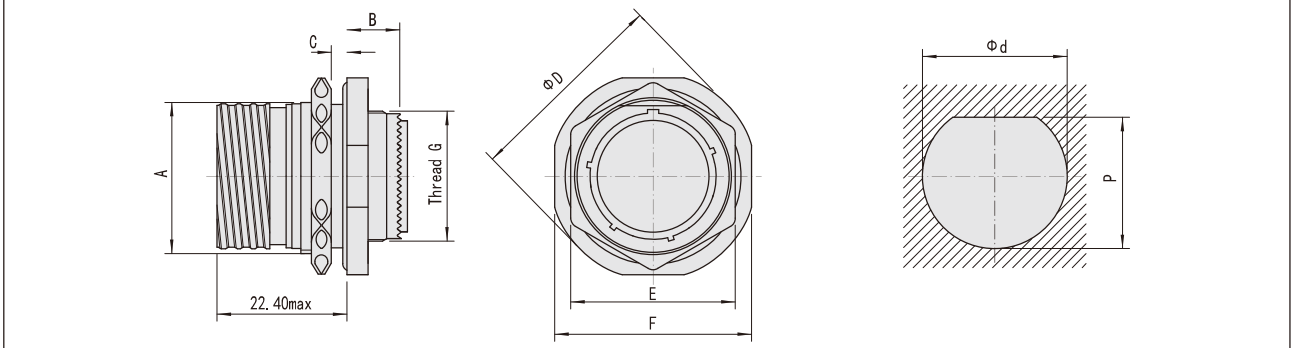
[Square flange receptacle]



Housing size	MS housing	A max	C max	Thread D	E	F	G	H	J	d1 min	d2 min
9	A	19.80	3.65	M12×1-6g	23.80	18.26	15.09	3.25	5.49	16.66	13.11
11	B	19.80	3.65	M15×1-6g	26.20	20.62	18.26	3.25	4.93	20.22	15.88
13	C	19.80	3.65	M18×1-6g	28.60	23.01	20.62	3.25	4.93	23.42	19.05
15	D	19.80	3.65	M22×1-6g	31.00	24.61	23.01	3.25	4.39	26.59	23.01
17	E	19.80	3.65	M25×1-6g	33.30	26.97	24.61	3.25	4.93	30.96	25.81
19	F	19.80	3.65	M28×1-6g	36.50	29.36	26.97	3.25	4.93	32.94	28.98
21	G	19.00	4.35	M31×1-6g	39.70	31.75	29.36	3.25	4.93	36.12	32.16
23	H	19.00	4.35	M34×1-6g	42.90	34.93	31.75	3.91	6.15	39.29	34.93
25	J	19.00	4.35	M37×1-6g	46.00	38.10	34.93	3.91	6.15	42.47	37.69

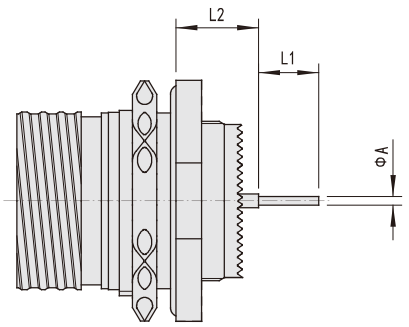
[Jam nut receptacle]



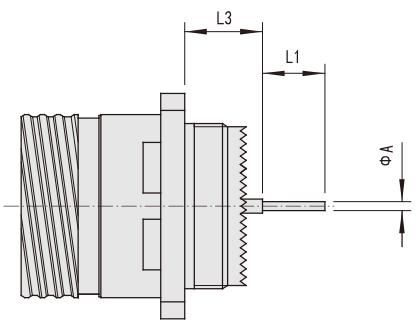
Housing size	MS housing	A	B max	C max	D max	E max	F	Thread G	d	p
9	A	16.50	9.90	3.20	30.50	24.00	27.00	M12×1-6g	17.70	16.99
11	B	19.30	9.90	3.20	35.20	27.00	31.80	M15×1-6g	20.88	19.53
13	C	24.00	9.90	3.20	38.40	32.00	34.90	M18×1-6g	25.58	24.26
15	D	27.20	9.90	3.20	41.60	36.00	38.10	M22×1-6g	28.80	27.53
17	E	30.40	9.90	3.20	44.80	37.00	41.30	M25×1-6g	31.98	30.68
19	F	33.40	9.90	3.20	49.30	41.00	46.00	M28×1-6g	35.15	33.86
21	G	36.50	9.90	3.20	52.70	46.00	49.20	M31×1-6g	38.28	37.06
23	H	39.70	9.90	3.20	55.90	50.00	52.40	M34×1-6g	41.50	40.24
25	J	42.80	9.90	3.20	59.00	51.23	55.60	M37×1-6g	44.68	43.41

[GJB599Ⅲ series receptacle with PCB contacts]

J599/24 receptacle



J599/20 receptacle



PCB contact type		L1	A
22D	Long PCB contact	8.5	0.7
	Short PCB contact	4.0	
20#	Long PCB contact	8.5	0.7
	Short PCB contact	5.1	
16#	Long PCB contact	8.5	1.15
	Short PCB contact	5.1	

Dimensions with different contacts			Housing size 09–11	Housing size 13–15–17–19–21–23–25
L2	With 22D# pin	min	10.52	10.34
		max	11.46	11.28
	With 22D# socket	min	10.19	10.01
		max	11.46	11.28
	With 20# or 16# pin/socket	min	10.69	10.51
		max	11.63	11.45
L3	With 22D# pin	min	9.48	9.48
		max	10.58	10.58
	With 22D# socket	min	9.15	9.15
		max	10.58	10.58
	With 20# or 16# pin/socket	min	9.65	9.65
		max	10.75	10.75

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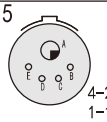
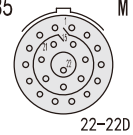
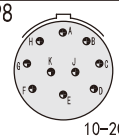
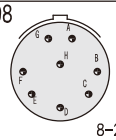
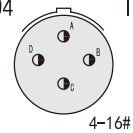
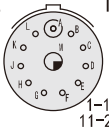
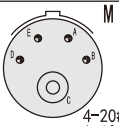
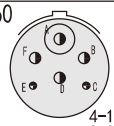
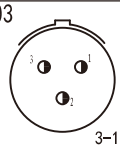
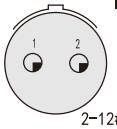
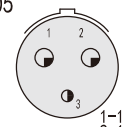
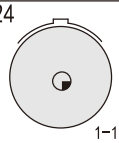
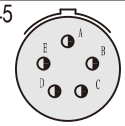
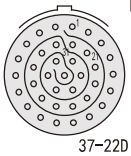
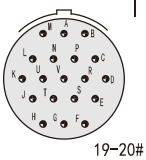
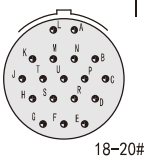
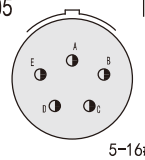
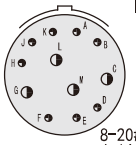
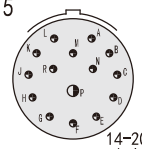
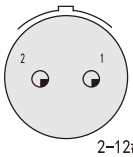
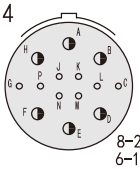
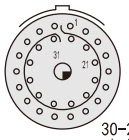
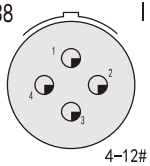
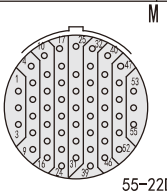
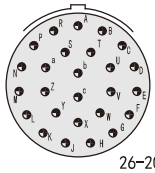
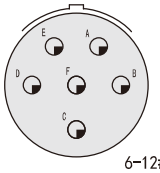
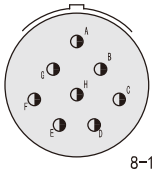
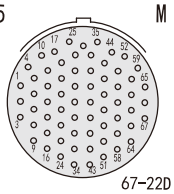
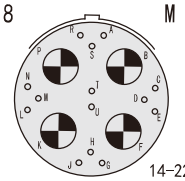
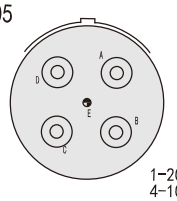
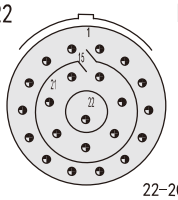
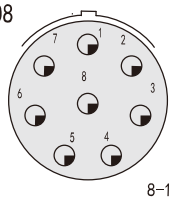
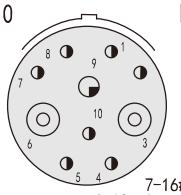
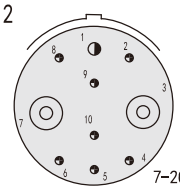
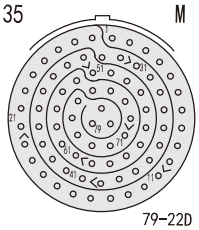
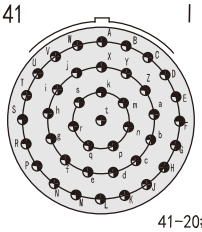
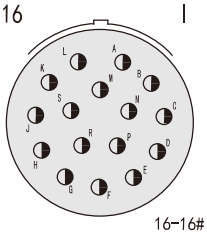
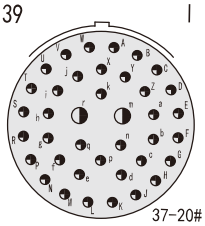
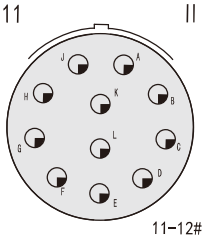
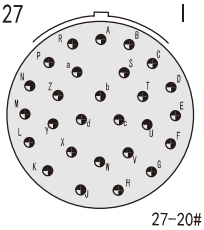
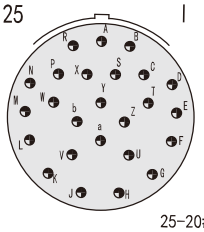
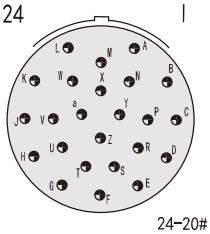
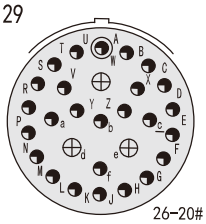
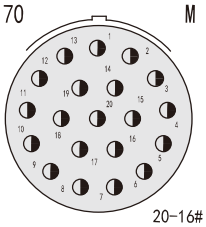
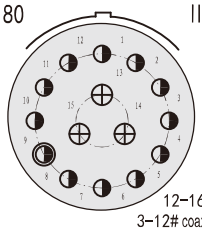
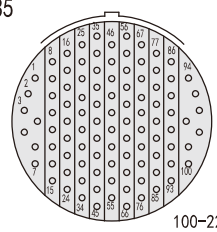
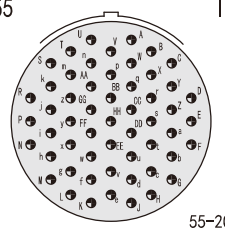
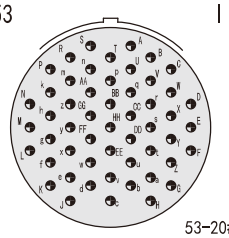
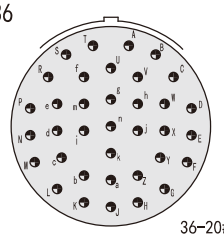
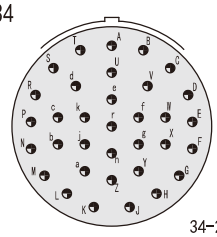
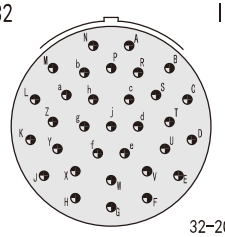
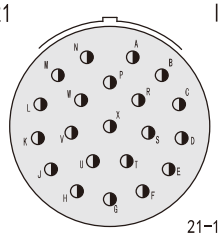
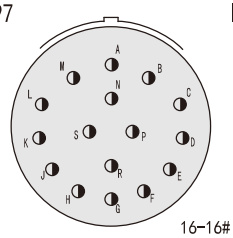
GJB599III series insert arrangement (mating view of insulator with pin)

Housing size								
09 (A)	35 M  6-22D	98 I  3-20#	02 I  2-20#	03 I  3-20#	10 I  1-12#	11 I  1-16#		
11 (B)	35 M  13-22D	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#	
	15 N  4-22D 1-12#							
13 (C)	35 M  22-22D	98 I  10-20#	08 I  8-20#	04 I  4-16#	12 N  1-12# 11-22D	50 M  4-20# 1-10#	60 I  4-16# 2-20#	
	03 II  3-16#	02 I  2-12#	05 I  1-16# 2-12#	24 II  1-12#	45 I  5-16#			
15 (D)	35 M  37-22D	19 I  19-20#	18 I  18-20#	05 II  5-16#	97 I  8-20# 4-16#	15 I  14-20# 1-16#		
	02 II  2-12#	14 N  8-22D 6-16#	31 M  30-22D 1-12#	38 I  4-12#				
17 (E)	35 M  55-22D	26 I  26-20#	06 I  6-12#	08 II  8-16#	99 I 21-20# 2-16#			
	16 3-20# 1-16# 2-10#	27 I 7-12#	42 I 42-22D					
19 (F)	35 M 66-22D	32 I 32-20#	11 II 11-16#	28 I 26-20# 2-16#	30 I 29-20# 1-16#			

Contact size 22D 20# 16# 12# 12# Coaxial 10# 8# Dual coaxial 8#

19 (F)	45 M  67-22D	18 M  14-22D 4-8#Dual coaxial	05  1-20# 4-10#	22 I  22-20#	08 M  8-12#
	10 I  7-16# 1-12#, 2-10#	12 I  7-20# 1-16#, 2-10#			
21 (G)	35 M  79-22D	41 I  41-20#	16 I  16-16#	39 I  37-20# 2-16#	11 II  11-12#
	27 I  27-20#	25 I  25-20#	24 I  24-20#	29  26-20# 3-12# coaxial	70 M  20-16#
	80 II  12-16# 3-12# coaxial				
23 (H)	35 M  100-22D	55 I  55-20#	53 I  53-20#	36 I  36-20#	
	34 I  34-20#	32 I  32-20#	21 II  21-16#	97 I  16-16#	

Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12# ⊕ 12# Coaxial ◎ 10# ◔ 8# Dual coaxial ● 8#

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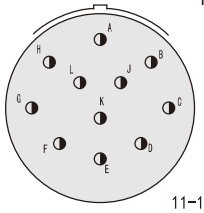
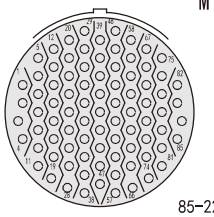
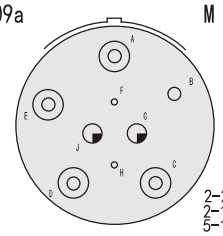
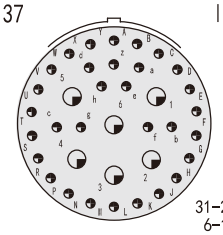
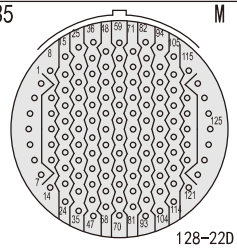
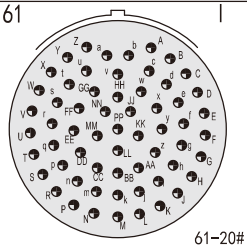
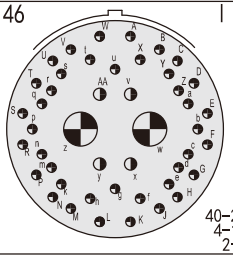
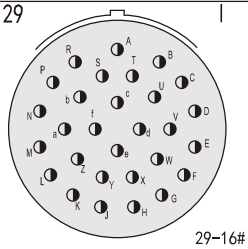
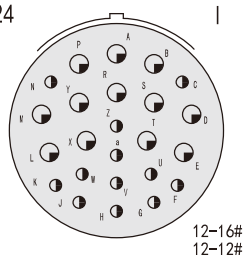
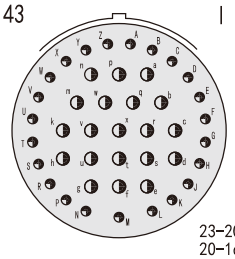
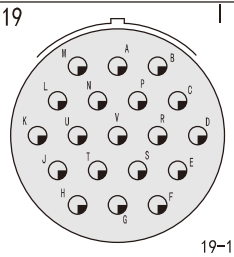
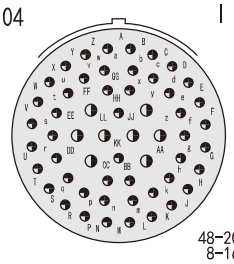
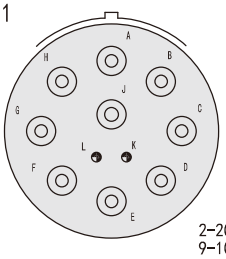
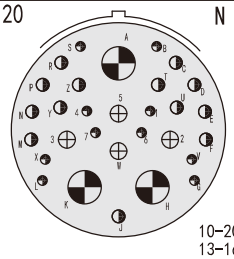
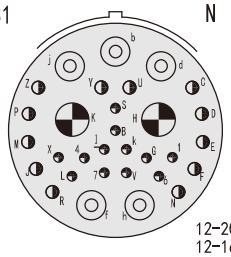
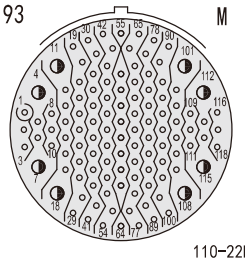
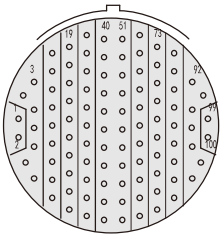
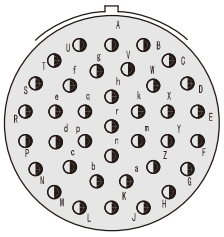
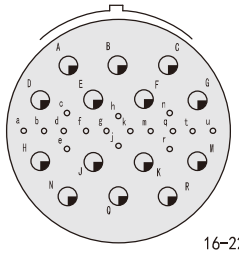
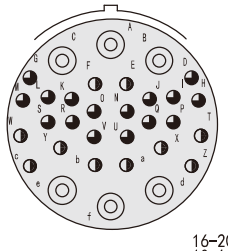
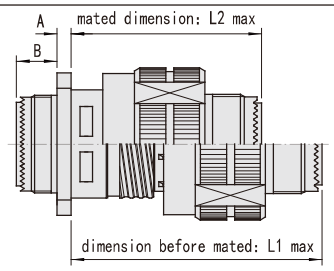
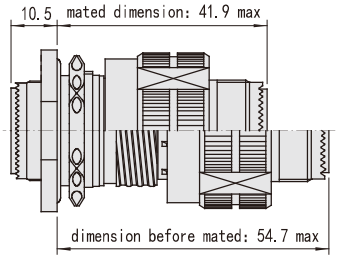
	99 II  11-16#	2 M  85-22D	09a M  2-22D 2-12# 5-10#	37 II  31-20# 6-12#
25 (J)	35 M  128-22D	61 I  61-20#	46 I  40-20# 4-16# 2-8#	29 I  29-16#
	24 I  12-16# 12-12#	43 I  23-20# 20-16#	19 I  19-12#	04 I  48-20# 8-16#
	11  2-20# 9-10#	20 N  10-20# 13-16# 1-12#coaxial, 3-12#Shielding 3-8#Dual coaxial	31 N  12-20# 12-16# 5-10# 2-8#Dual coaxial	93 M  110-22D 8-16#
	2 M  100-22D	37 I  37-16#	30 N  16-22D 14-12#	32 N  16-20# 10-16# 6-10#

Dimensions after mating

Square flange receptacle (J599/20) /plug (J599/26)



Jam nut receptacle (J599/24) /plug (J599/26)



Housing size		09	11	13	15	17	19	21	23	25
L1	max	53.2	53.2	53.2	53.2	53.2	53.2	52.4	52.4	52.4
L2	max	40.3	40.3	40.3	40.3	40.3	40.3	39.6	39.6	39.6
A	max	2.5	2.5	2.5	2.5	2.5	2.5	3.2	3.2	3.2
B	max	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6

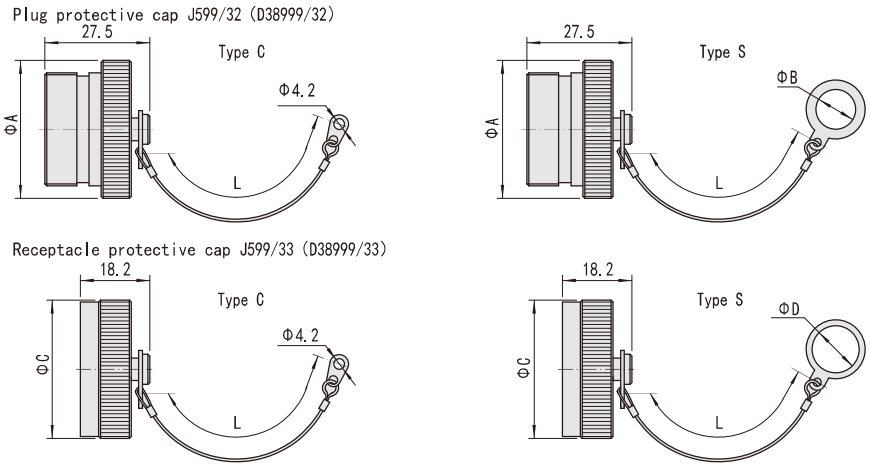
Sealing caps of plug and receptacle

[Ordering information]

Basic series	J599/	32	F	09	N
Type	32 – sealing cap of plug (equivalent to D38999/32) 33 – sealing cap of receptacle (equivalent to D38999/33)				
Plating	W– aluminum alloy shell, olive green cadmium plating F– aluminum alloy shell, electroless nickel plating K– stainless steel passive J– composite material shell, olive green cadmium plating M– composite material shell, electroless nickel plating				
Shell size	09–11–13–15–17–19–21–23–25				
Chain type	R–stainless steel string with connecting plate (for square flange receptacle) N – stainless steel string with ring (for jam nut receptacle) C–nylon string with connecting plate (for square flange receptacle) S–nylon string with ring (for jam nut receptacle)				

Remarks: The sealing cap is ordered separately, not supplied with the connectors.

[Outline dimensions]



Housing size		09	11	13	15	17	19	21	23	25
A	max	22.86	25.40	30.48	33.02	36.83	39.37	43.18	44.45	48.26
B	min	12.92	17.78	19.27	22.60	25.62	28.95	31.97	34.03	38.32
C	max	22.86	27.86	30.48	31.75	36.83	38.10	41.91	44.45	48.26
D	min	17.78	21.33	25.62	28.95	31.97	35.30	38.32	41.65	44.45
L	max	127.00	127.00	127.00	127.00	127.00	127.00	127.00	127.00	127.00

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Standard back accessory (applicable for GJB599 Ⅲ series connectors)

Comply with GJB1784 (equivalent to MIL-C-85049)

Notes:

1) For the accessories listed below, part number "J1784" is the same with "J1784 A".

2) The below steps can help prevent looseness. When using the accessories, at least one step should be adapted.

①Put the fuse through the socket to anti looseness;

②Coat some thread glue at the product termination, and tighten the jam nut;

③Use heat shrink sleeve against looseness.

3) For the accessory which carries a set screw, coat some thread glue on the set screw first and then tighten the screw.

4) If the applicable products of the cable accessory is mounted with 8# contacts, please choose longer cable accessory, such as J1784/38H type or J1784/18 type; this is meant to prevent the contact positioner affects the cable accessory.

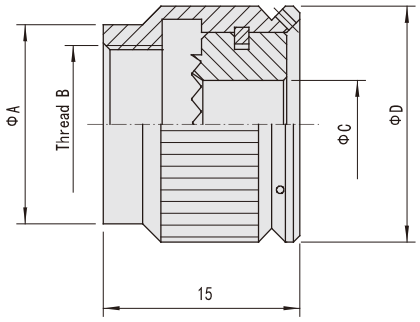
5) The table below is on the GJB599 series soldering products and crimping products with their correspondingly applicable cable accessories. As the modified products and accessories are so many that we can not list them one by one. The form below is only for reference, please consult our engineers for details.

Connector type	Applicable cable accessory type	Applicable cable accessory part number
GJB599 Ⅲ series crimping connector	Non-clamping and non-shielding cable accessory	1、J1784/14
	Clamping and non-shielding cable accessory	1、J1784/38
		2、J1784/39
		3、J1784/16
		4、J1784/91-××J (composite material)
		5、J1784/92-××J (composite material)
	Shielding and non-clamping cable accessory	1、J1784/20
		2、J1784/20-××J (composite material)
		3、J1784/69
		4、J1784/88
		5、J1784/90
		6、JY599Ⅲ-FJA00
		7、JY599Ⅲ-FJA90
		8、JY599Ⅲ-xxFJB00F
		9、JY599ⅢxxFJC00
		10、JY599ⅢxxFJE00
	Shielding and clamping cable accessory	1、J1784/38-××NB
		2、J1784/18系列 (rain-proof)
GJB599 Ⅲ series soldering connector	Non-clamping and non-shielding cable accessory	1、J1784/14
	Clamping and non-shielding cable accessory	1、J1784/38H
		2、J1784/16H
		3、J1784/91H-××J (composite material)
	Shielding and non-clamping cable accessory	1、J1784/20
		2、J1784/69
		3、J1784/88
		4、J1784/90
		5、JY599Ⅲ-FJA00
		6、JY599Ⅲ-FJA90
	Shielding and clamping cable accessory	1、J1784/18系列 (rain-proof)

[Ordering information]

Basic series		J1784 /	38 –	15	N
Type	14–back nut 20– shielding backshell 39– right–angle cable clamp	16– right–angle cable clamp 38– straight cable clamp 69– heat shrink sleeve backshell			
Housing size	09–11–13–15–17–19–21–23–25				
Housing plating	W– olive green cadmium plating S– stainless steel passive	N – electroless nickel plating			

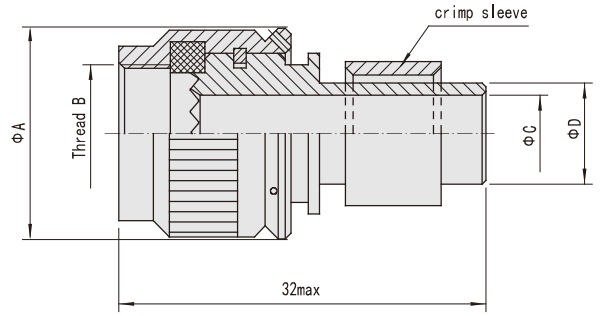
[J1784/14–back nut] (Non–clamping cable accessory, non shielding)



Anti–rotating accessory. This type tightens the grommet to insure the connector's environmental characteristics. This type can not clamp the cable. It is applied in normal environment.

Housing size	A	Thread B	C	D
09	15.2	M12×1	7.9	19
11	18.2	M15×1	10.8	22
13	21.2	M18×1	13.6	25.1
15	25.1	M22×1	16.9	29
17	28.1	M25×1	20.1	32.1
19	31.1	M28×1	22.1	35.1
21	34.0	M31×1	25.2	38.1
23	37.0	M34×1	28.3	41.1
25	40.0	M37×1	31.6	44.1

[J1784/20–shielding back accessory] (Shielding non–clamping cable accessory)



Anti–rotating, crimping shielding net accessory. This type tightens the grommet and contains a shielding net to insure the connector's environmental and EMI shielding characteristics. This type can not clamp the cable. It is applied in light tensile force environment.

Housing size	A	Thread B	C	D	Compression block
09	19	M12×1	6.55	8.81	08
11	22	M15×1	8.63	12.65	10
13	25.1	M18×1	10.90	12.95	12
15	29	M22×1	14.10	16.00	14
17	32.1	M25×1	17.25	19.30	16
19	35.1	M28×1	20.40	22.61	18
21	38.1	M31×1	23.60	25.65	20
23	41.1	M34×1	26.40	28.70	22
25	44.1	M37×1	28.40	30.53	24

Note:The crimp sleeve is needed to be crimped by special crimp tool. YTQ crimp tool is applicable for size 09–19 and YTQ–01 for size 09–25 must be ordered separately.

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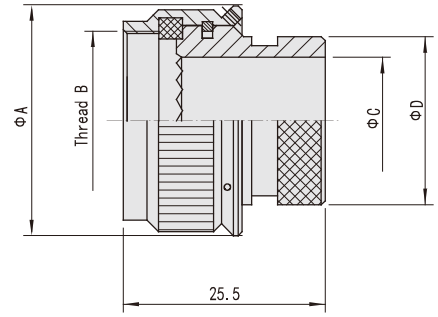
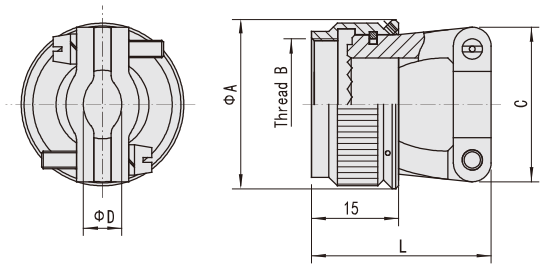
[J1784/69—heat shrink sleeve back c] (Shielding non—clamping cable accessory)



Anti-rotating, crimping shielding net accessory. This type tightens the grommet and contains a shielding net to insure the connector's environmental and EMI shielding characteristics. This type can not clamp the cable. It is applied in light tensile force environment.

Housing size	A	Thread B	C	D
09	19.0	M12×1	6.7	13.5
11	22.0	M15×1	9.9	15.3
13	25.1	M18×1	12.8	19.6
15	29.0	M22×1	16.0	21.2
17	32.1	M25×1	19.2	24.4
19	35.1	M28×1	21.4	26.4
21	38.1	M31×1	24.6	30.9
23	41.1	M34×1	27.7	34.4
25	44.1	M37×1	30.9	36.6

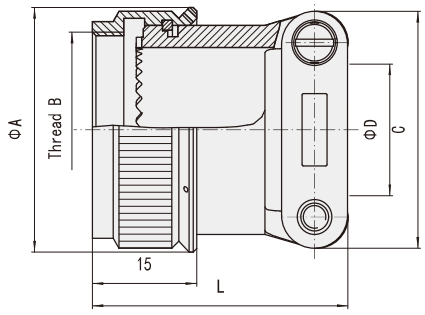
[J1784/38—Straight cable clamp] (Clamping cable accessory, non shielding)



Anti-rotating, cable clamping accessory. This type tightens the grommet and clamps the cable to insure the connector's environmental characteristics. It is applied in tensile force environment.

Housing size	A max	Thread B	C max	D min	D max	L max
09	19.0	M12×1	20.0	2.49	5.94	27.0
11	22.0	M15×1	21.0	3.87	5.94	28.5
13	25.1	M18×1	23.4	4.83	8.33	30.0
15	29.0	M22×1	26.6	6.60	11.61	31.5
17	32.1	M25×1	30.6	7.19	15.60	33.5
19	35.1	M28×1	34.0	8.26	16.10	36.6
21	38.1	M31×1	35.8	8.71	17.73	39.8
23	41.1	M34×1	39.0	9.68	20.90	42.9
25	44.1	M37×1	40.6	10.62	21.66	45.0

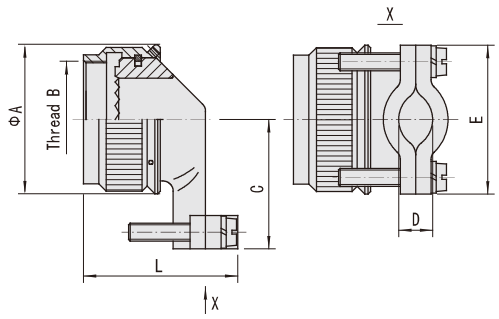
[J1784/38H—Soldering straight cable clamp] (Clamping cable accessory, non shielding)



The function is the same with J1784/38, it is mated with soldering products.

Housing size	A max	Thread B	C max	D min	D max	L max
09	19.0	M12×1	20.0	2.49	5.94	27.0
11	22.0	M15×1	21.0	3.87	5.94	28.5
13	25.1	M18×1	23.4	4.83	8.33	30.0
15	29.0	M22×1	26.6	6.60	11.61	31.5
17	32.1	M25×1	30.6	7.19	15.60	33.5
19	35.1	M28×1	34.0	8.26	16.10	36.6
21	38.1	M31×1	35.8	8.71	17.73	39.8
23	41.1	M34×1	39.0	9.68	20.90	42.9
25	44.1	M37×1	40.6	10.62	21.66	45.0

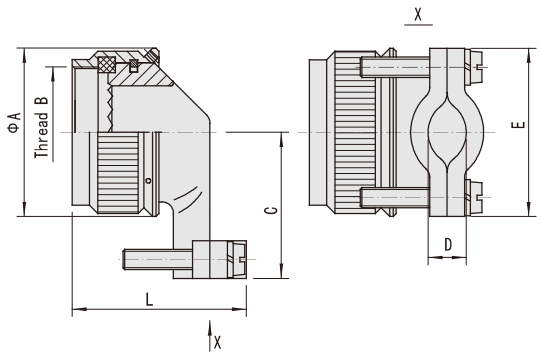
[J1784/39—Right—angle cable clamp]　(Clamping cable accessory, non shielding)



Anti-rotating, 90° cable clamping accessory. This type tightens the grommet and clamps the cable 90° to insure the connector's environmental characteristics. It is applied in tensile force environment.

Housing size	A max	Thread B	C max	D min	D max	E max	L max
09	19.0	M12×1	20.60	2.49	5.94	21.6	29.5
11	22.0	M15×1	22.00	3.87	5.94	22.8	29.5
13	25.1	M18×1	23.60	4.83	8.33	26.0	31.9
15	29.0	M22×1	25.20	6.60	11.61	29.0	35.1
17	32.1	M25×1	26.80	7.19	15.60	30.6	39.1
19	35.1	M28×1	31.30	8.26	16.10	37.0	41.5
21	38.1	M31×1	32.90	8.71	17.73	39.0	43.3
23	41.1	M34×1	34.50	9.68	20.90	41.0	46.5
25	44.1	M37×1	36.10	10.62	21.66	42.0	47.1

[J1784/16—Right—angle cable clamp]　(Clamping cable accessory, non shielding)

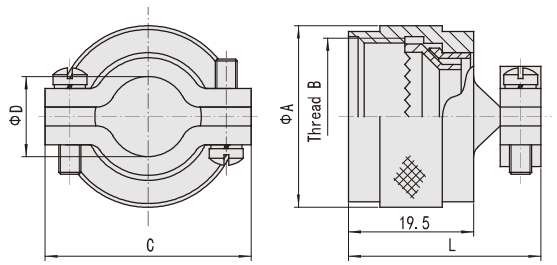


Anti-rotating, 90° cable clamping accessory. Compared with J1784/39 accessory, the difference is that the lead-out dia. (D) is larger.

Housing size	A max	Thread B	C max	D min	D max	E max	L max
09	19.0	M12×1	20.0	2.85	6.71	21	25.9
11	22.0	M15×1	21.5	6	9.96	26.5	29.2
13	25.1	M18×1	23.0	8.45	12.85	31.5	32
15	29.0	M22×1	25.0	12	16.03	36.5	35.2
17	32.1	M25×1	27.0	11.1	19.2	31	36.4
19	35.1	M28×1	28.5	13.75	21.46	37	40.7
21	38.1	M31×1	29.5	19.3	24.64	35	43.8
23	41.1	M34×1	31.0	21.4	27.81	35	43
25	44.1	M37×1	33.0	23.5	30.99	37	44.2

[J1784/38—××NB]　(Shielding clamping cable accessory)

Not available for soldering products.

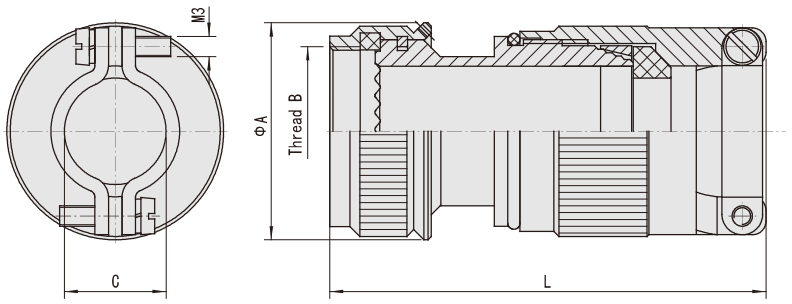


Aaccessory type	A	Thread B	C	D min	D max	L
J1784/38—09NB	16.4	M12×1	18.6	3.5	5.7	29.2
J1784/38—11NB	19.2	M15×1	20.6	5.0	7.9	29.2
J1784/38—13NB	23.0	M18×1	24.5	7.4	11.4	29.2
J1784/38—15NB	25.7	M22×1	26.0	9.0	12.9	29.8
J1784/38—17NB	29.0	M25×1	33.0	12.8	17.0	31.0
J1784/38—19NB	31.5	M28×1	36.3	13.2	17.9	32.0
J1784/38—21NB	34.7	M31×1	39.0	14.8	21.1	32.0
J1784/38—23NB	37.5	M34×1	41.4	16.4	24.3	32.0
J1784/38—25NB	41.0	M37×1	44.5	18.0	27.5	32.0

Http://www.zhyf.com　Email: sales@zhyf-bj.com

[J1784/18—××N] (Shielding clamping cable accessory)

Basic series	J1784/	18—	25	N	09	A
Type	18—straight shielding cable clamp					
Housing size	see form 1					
Housing plating	N— electroless nickel plating W— olive green cadmium plating S— stainless steel passive					
Lead-out dia.	See form 1 and form 2 for reference.					
Length code	See form 3					



Anti-rotating, crimping shielding net accessory. This type tightens the grommet and contains a shielding net to insure the connector's environmental and EMI shielding characteristics. It is applied in fierce environment. This accessory type has different length to choose. It is applied in high & low frequency mixed environment and place that need long accessory.

Form 1

Housing size	Lead-out dia. No.	A	Thread B
09	01～02	19	M12×1
11	01～03	22	M15×1
13	02～04	25.1	M18×1
15	02～05	29	M22×1
17	02～06	32	M25×1
19	03～07	35	M28×1
21	03～08	38	M31×1
23	03～09	41.1	M34×1
25	04～10	44.1	M37×1

Form 2

Lead-out dia. No.	Cable dia. range (C)
01	1.57～3.18
02	3.18～6.35
03	6.35～9.53
04	9.53～12.7
05	12.7～15.88
06	15.88～19.05
07	19.05～22.23
08	22.23～25.4
09	25.4～28.58
10	28.58～31.75

Form 3

Housing size	Length code	L
09～25	Standard (omit)	64.4
09～25	A	89.8
15～25	B	115.2
21～25	C	140.6

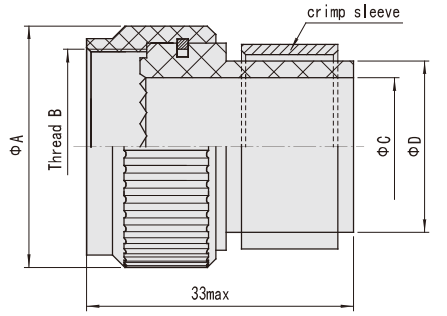
Composite material back accessory

[Ordering information]

Basic seires	J1784 /	91–	15	J
Type	20—shielding backshell 91—straight cable clamp (only for crimping products) 91H—straight cable clamp (for soldering and crimping products) 92— Right—angle cable clamp			
Housing size	09—11—13—15—17—19—21—23—25			
Housing plating	J — olive green cadmium plating M — electroless nickel plating			

[J1784/20—××J (composite material)] (Shielding non—clamping cable accessory)

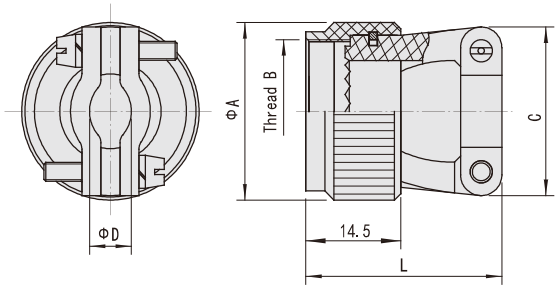
Not available for soldering connectors, only available for crimping connectors.



Housing size	A	Thread B	C	D
09	21.8	M12×1	6.73	12.65
11	25	M15×1	8.71	12.95
13	29.5	M18×1	11.1	16
15	32.5	M22×1	14.27	19.3
17	35.5	M25×1	17.45	22.61
19	38.5	M28×1	20.62	25.65
21	41.5	M31×1	23.8	28.7
23	45	M34×1	26.57	30.53
25	48	M37×1	28.58	34.52

[J1784/91—××J (composite material)] (Clamping cable accessory, non shielding)

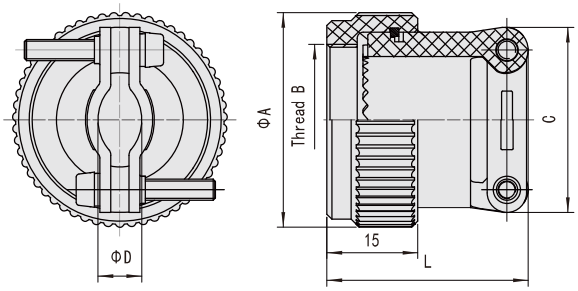
Not available for soldering connectors, only available for crimping connectors.



Housing size	A max	Thread B	C max	D min	D max	L max
09	21.8	M12×1	20.0	4.00	5.94	27.0
11	25	M15×1	20.0	4.00	5.94	28.5
13	29.5	M18×1	23.4	4.83	8.33	30.0
15	32.5	M22×1	26.6	6.60	11.61	31.5
17	35.5	M25×1	30.6	7.19	15.60	33.5
19	38.5	M28×1	34.0	8.26	16.10	36.6
21	41.5	M31×1	35.8	8.71	17.73	39.8
23	45	M34×1	39.0	9.68	20.90	42.9
25	48	M37×1	40.6	10.62	21.66	45.0

[J1784/91H—××J (soldering, composite material)] (Clamping cable accessory, non shielding)

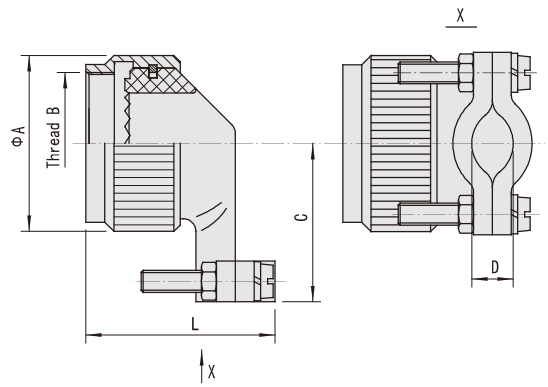
Available for both soldering connectors and crimping connectors.



Housing size	A max	Thread B	C max	D min	D max	L max
09	21.8	M12×1	20.0	4.00	5.94	27.0
11	25	M15×1	20.0	4.00	5.94	28.5
13	29.5	M18×1	23.4	4.83	8.33	30.0
15	32.5	M22×1	26.6	6.60	11.61	31.5
17	35.5	M25×1	30.6	7.19	15.60	33.5
19	38.5	M28×1	34.0	8.40	16.10	36.6
21	41.5	M31×1	35.8	8.80	17.73	39.8
23	45	M34×1	39.0	9.80	20.90	42.9
25	48	M37×1	40.6	10.60	21.66	45.0

[J1784/92—××J (composite material)] (Clamping cable accessory, non shielding)

Not available for soldering connectors, only available for crimping connectors.



Housing size	A max	Thread B	C max	D min	D max	L max
09	21.8	M12×1	20.6	2.49	5.94	29.5
11	25	M15×1	22.0	3.87	5.94	29.5
13	29.5	M18×1	23.6	4.83	8.33	31.9
15	32.5	M22×1	25.2	6.60	11.61	35.1
17	35.5	M25×1	26.8	7.19	15.60	39.1
19	38.5	M28×1	31.3	8.26	16.10	41.5
21	41.5	M31×1	32.9	8.71	17.73	43.3
23	45	M34×1	34.5	9.68	20.90	46.5
25	48	M37×1	36.1	10.62	21.66	47.1

Special back accessory

It is especially suit for clamping tightly the shielding cable with shielding layer, which has two classes, that is straight and right angle. The accessory has adopted Ti—Ni alloy memory ring. After heated, the ring would shrink and clamp shielding layer on the end of accessory and realize the function of 360° EMI shielding..

* Ti—Ni alloy memory ring' s heating and shrinking: using hot—wind gun to heat. The process takes about 45 seconds to 1 minute. When the temperature color indicator of memory ring change from green to black, it means that memory ring has finished the shrinkage. At this time, the temperature of ring is about 165℃. Stop heating. Please note that memory ring should be symmetrically heated during heating.

[Ordering information]

J1784/88, J1784/90 backshell (Shielding non-clamping cable accessory)

Basic series										J1784/	88—	11	N	A	—05
Type	88—straight 90— right—angle														
Accessory shell size	09	11	13	15	17	19	21	23	25						
Connector shell size	A	B	C	D	E	F	G	H	J						
Housing plating	W — olive green cadmium plating N — electroless nickel plating S — stainless steel passive														
Ti—Ni ring	omit — without Ti—Ni ring A — with Ti—Ni ring														
Leading—out diameter or Ti—Ni ring size	Without Ti—Ni ring, specify leading—out diameter With Ti—Ni ring, specify size of Ti—Ni ring														

JY599Ⅲ-FJA00, JY599Ⅲ-FJA90 outside shielding backshell （Shielding non-clamping cable accessory）

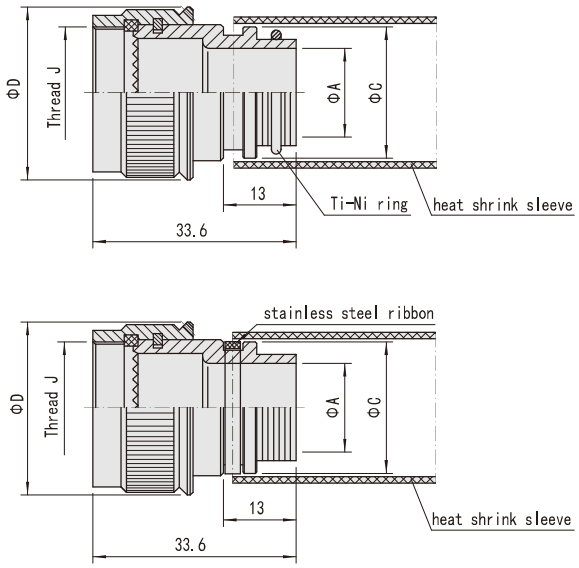
Basic series	JY599	Ⅲ	15	FJA	00	F	A	-05
Series code	Ⅲ							
Housing size	09-11-13-15-17-19-21-23-25							
Accessory type	FJA、FJB、FJC、FJE							
Type	00 – straight backshell 90 – 90° right-angle backshell							
Housing plating	W – olive green cadmium plating F – electroless nickel plating K – stainless steel passive							
Ti-Ni ring	omit – without Ti-Ni ring A – with Ti-Ni ring (only for FJA, FJC)							
Leading-out diameter or Ti-Ni ring size	Without Ti-Ni ring, specify leading-out diameter With Ti-Ni ring, specify size of Ti-Ni ring							

Remarks:

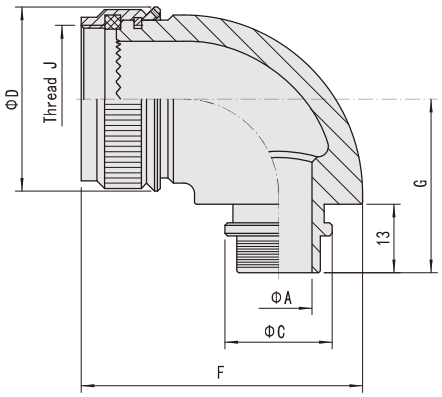
1. This accessory type is applied in some fierce environment and the place doesn't need to disassemble frequently. It can realize shielding both inside and outside.
2. If the operating environment needs steel ribbon to bundle it, the steel ribbon and bundling clamp need to be ordered separately. The steel ribbon type is "A31189(07-08-221)", the bundling clamp type is "A30199 TIE-DEX Ⅱ (14-04-3216)".
3. J1784/88、J1784/90 is the same with JY599Ⅲ-FJA00、JY599Ⅲ-FJA90, only the naming is different.

[Outline dimension]

Straight accessory (JY599Ⅲ-FJA00 or J1784/88)

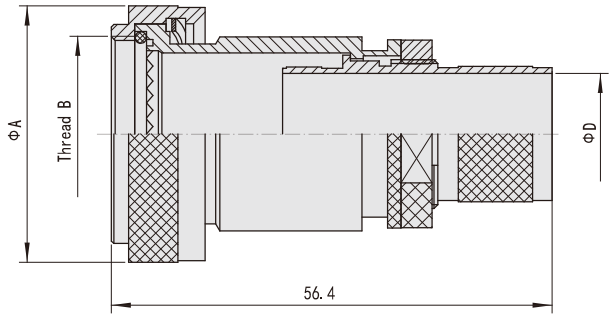


Elbow accessory (JY599Ⅲ-FJA90 or J1784/90)



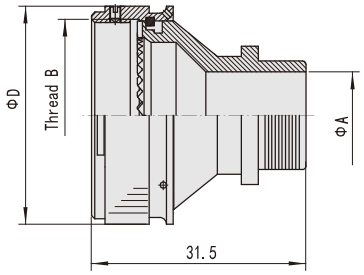
No.	Housing No.	Ti-Ni ring size	Shielding standard (Tin-copper plating mark dia.)	A outlet dia.		C		F	D	G	Thread J
				Straight	90°	Straight	90°				
1	09	TR-04	6×10 (0.15~0.20)	6.3	6.3	14	14	38.2	19	26	M12×1-6H
		TR-05	10×16 (0.15~0.20)	7.9	7.9	15.5	15				
		TR-06	10×16 (0.15~0.20)	9.5	-	17.1	-				
2	11	TR-04	6×10 (0.15~0.20)	6.3	6.3	14	14	39.7	22	26	M15×1-6H
		TR-05	10×16 (0.15~0.20)	7.9	7.9	15.5	15.5				
		TR-06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1				
		TR-07	10×16 (0.12~0.20)	11.1	11.1	18.7	18				
		TR-08	16×24 (0.12~0.25)	12.7	-	20.3	-				
3	13	TR-04	6×10 (0.15~0.20)	6.3	6.3	14	14	45.2	25.1	29	M18×1-6H
		TR-05	10×16 (0.15~0.20)	7.9	7.9	15.5	15.5				
		TR-06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1				
		TR-07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7				
		TR-08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3				
		TR-10	16×24 (0.10~0.30)	16	16	23.5	23				
4	15	TR-05	10×16 (0.15~0.20)	7.9	-	15.5	-	47.0	29	29	M22×1-6H
		TR-06	10×16 (0.15~0.20)	9.5	9.5	17.1	17.1				
		TR-07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7				
		TR-08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3				
		TR-10	16×24 (0.10~0.30)	16	16	23.5	23.5				
		TR-12	16×24 (0.10~0.30)	19	19	26.7	25.5				
5	17	TR-05	10×16 (0.15~0.20)	7.9	-	15.5	-	50.7	32.1	33	M25×1-6H
		TR-06	10×16 (0.15~0.20)	9.5	-	17.1	-				
		TR-07	10×16 (0.12~0.20)	11.1	11.1	18.7	18.7				
		TR-08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3				
		TR-10	16×24 (0.10~0.30)	16	16	23.5	23.5				
		TR-12	16×24 (0.10~0.30)	19	19	26.7	26.7				
		TR-14	24×30 (0.10~0.30)	22.2	-	30	-				
6	19	TR-08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3	53.5	35.1	33	M28×1-6H
		TR-10	16×24 (0.10~0.30)	16	16	23.5	23.5				
		TR-12	16×24 (0.10~0.30)	19	19	26.7	26.7				
		TR-14	24×30 (0.10~0.30)	22.2	22.2	30	30				
		TR-16	24×30 (0.10~0.30)	25.4	25.4	33	32				
7	21	TR-08	16×24 (0.12~0.25)	12.7	12.7	20.3	20.3	55.7	38.1	39	M31×1-6H
		TR-10	16×24 (0.10~0.30)	16	16	23.5	23.5				
		TR-12	16×24 (0.10~0.30)	19	19	26.7	26.7				
		TR-14	24×30 (0.10~0.30)	22.2	22.2	30	30				
		TR-16	24×30 (0.10~0.30)	25.4	25.4	33	33				
		TR-18	30×40 (0.10~0.30)	28.5	-	36.2	-				
8	23	TR-10	16×24 (0.10~0.30)	16	16	23.5	23.5	58.2	41.1	39	M34×1-6H
		TR-12	16×24 (0.10~0.30)	19	19	26.7	26.7				
		TR-14	24×30 (0.10~0.30)	22.2	22.2	30	30				
		TR-16	24×30 (0.10~0.30)	25.4	25.4	33	33				
		TR-18	30×40 (0.10~0.30)	28.5	28.5	36.2	36.2				
		TR-20	30×40 (0.10~0.30)	31.8	-	39.4	-				
9	25	TR-10	16×24 (0.10~0.30)	16	-	23.5	-	63.7	44.1	44	M37×1-6H
		TR-12	16×24 (0.10~0.30)	19	19	26.7	26.7				
		TR-14	24×30 (0.10~0.30)	22.2	22.2	30	30				
		TR-16	24×30 (0.10~0.30)	25.4	25.4	33	33				
		TR-18	30×40 (0.10~0.30)	28.5	28.5	36.2	36.2				
		TR-20	30×40 (0.10~0.30)	31.8	31.8	39.4	39.4				
		TR-22	30×40 (0.10~0.30)	35	35	42.5	42				

[JY599III—xxFJB00F] (Shielding non—clamping cable accessory)



Accessory P/N	A	Thread B	D
JY599Ⅲ—11FJB00F	23	M15×1	6.5
JY599Ⅲ—15FJB00F	30	M22×1	12.5
JY599Ⅲ—17FJB00F	33	M25×1	19.5
JY599Ⅲ—21FJB00F	39	M31×1	25.5

[JY599IIIxxFJC00] (Shielding non—clamping cable accessory)



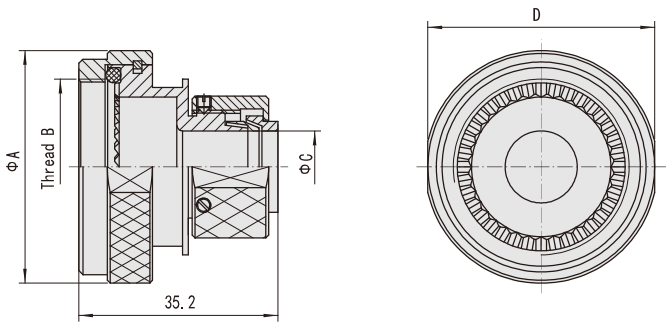
Housing size	A Lead—out dia.	Thread B	D	Ti—Ni ring type
11	7.9	M15×1	19.0	TR—05
13	9.5	M18×1	22.8	TR—06
15	12.7	M22×1	25.8	TR—08
17	16.0	M25×1	29.2	TR—10
19	19.0	M28×1	32.0	TR—12
21	22.2	M31×1	35.1	TR—14
23	25.4	M34×1	38.2	TR—16

[Part number example]

JY599Ⅲ11FJC00F—7.9 is the part number without a Ti—Ni ring;

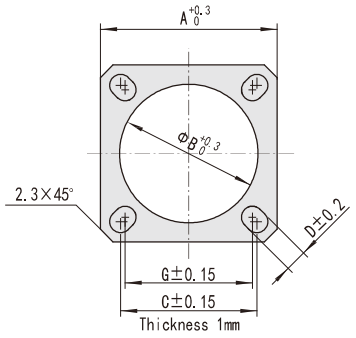
If customers need Ti—Ni ring, the part number is JY599Ⅲ11FJC00FA—05.

[JY599IIIxxFJE00] (Shielding non—clamping cable accessory)



Housing size	A	Thread B UNEF	C Lead—out dia.	D
09	22	M12×1	6.3、7.9、9.5	20
11	25	M15×1	6.3、7.9、9.5、11.1、12.7	23
13	28	M18×1	6.3、7.9、9.5、11.1、12.7、16	27
15	32	M22×1	7.9、9.5、11.1、12.7、16、19	30
17	35	M25×1	7.9、9.5、11.1、12.7、16、19、22.2	33
19	38	M28×1	12.7、16、19、22.2、25.4	36
21	41	M31×1	12.7、16、19、22.2、25.4、28.5	39
23	44	M34×1	16、19、22.2、25.4、28.5、31.8	42
25	47	M37×1	19、22.2、25.4、28.5、31.8、35	45

[Square flange cushion]



Housing size	Square flange cushion code	Conductive square flange cushion code	A	B	C	G	D
A	21E8-701-885-A1	21E8-701-886-A2	23.9	16.1	18.26	15.09	3.3
B	21E8-701-887-A1	21E8-701-888-A2	26.3	19.2	20.62	18.26	3.3
C	21E8-701-889-A1	21E8-701-890-A2	28.7	22.4	23.01	20.62	3.3
D	21E8-701-891-A1	21E8-701-892-A2	31.1	25.6	24.61	23.01	3.3
E	21E8-701-893-A1	21E8-701-894-A2	33.4	30.4	26.97	24.61	3.3
F	21E8-701-895-A1	21E8-701-896-A2	36.6	32.0	29.36	26.97	3.3
G	21E8-701-897-A1	21E8-701-898-A2	39.8	34.9	31.75	29.36	3.3
H	21E8-701-899-A1	21E8-701-900-A2	43.0	38.3	34.93	31.75	4.0
J	21E8-701-901-A1	21E8-701-902-A2	46.1	41.4	38.10	34.93	4.0

Remarks: the product is supplied with normal square flange cushion.
If customers need conductive square flange cushion, please state it in ordering.

Special contacts for GJB599Ⅲ series

Type	MIL P/N	GJB P/N	Remarks
12# pin	M39029/58-365	J1216/58-365	
12# socket	M39029/56-353	J1216/56-353	
12# pin	M39029/107-623	J1216/107-623	Endurance 1500 cycles
12# socket	M39029/106-617	J1216/106-617	Endurance 1500 cycles
12# shielding pin	M39029/28-211	J1216/28-211	
	M39029/28-412	J1216/28-412	
12# shielding socket	M39029/75-416	J1216/75-416	
	M39029/75-422	J1216/75-422	
12# coaxial pin	M39029/102-558	J1216/102-558	
12# coaxial socket	M39029/103-559	J1216/103-559	
8# dual coaxial pin	M39029/90-529	J1216/90-529	
8# dual coaxial pin	M39029/91-530	J1216/91-530	
8# simulate contact		J1784A/80-8	
12# simulate contact		J1784A/80-12	
8# sealing contact	MS27488-8 (red)	JY27488-8 (red)	
10# sealing contact	MS27488-10 (white)	JY27488-10 (white)	
12# sealing contact	MS27488-12 (yellow)	JY27488-12 (yellow)	
16# sealing contact	MS27488-16 (blue)	JY27488-16 (blue)	
20# sealing contact	MS27488-20 (red)	JY27488-20 (red)	
20D sealing contact	MS27488-22 (black)	JY27488-22 (black)	

MIL-DTL-38999Ⅳ series Electrical Connectors

Brief introduction

- Comply with GJB599 (MIL-DTL-38999) Ⅳ series
- High density, up to 128 contacts (maximum)
- Various contact types: 22D#, 20#, 16#, 12# power contact, 16#, 12# shielding contact, 12# coaxial contact, 8# twinax contact, 8# quadrax contact, 12#, 16# optic contact (different contacts are interchangeable with each other)
- Straight mating 90° rotation locking structure
- 100% scoop-proof
- With grounding spring to strengthen EMI/RFI shielding
- Various insert arrangement: high & low frequency mixed, high frequency, low frequency, optic fiber, optical & electrical mixed
- Application: Military and aerospace area with high strength vibration environment

Application

The product is used to connect current and signal.

Main technical characteristics

[Mechanical]

——Vibration

Sinusoid: frequency: 10～2000Hz, acceleration: 588m/s^2

Random: frequency: 100～1000Hz, PSD: 1g^2/Hz

——Shock: 3ms half sinusoid, peak value of acceleration: 300g

——Endurance: 500 cycles

[Environmental]

——Operating temperature:

W class: −65℃～+175℃, other class: −65℃～+200℃

——Salt spray:

cadmium plating: 500 hours　nickel plating: 48 hours

Ti alloy: 2000 hours　stainless steel: 1000 hours

——Moist proof:

According to method GJB150.10, 28 days

——Fluid resistant: Various fuels, coolant, solvent

Operating environment

The products can be used in some harsh environment like strong vibration, rain, sand, damp heat and so on.

[Electrical]

——Contact resistance and rating current:

Contact size	Operating dia.mm	Contact resistance mΩ	Rating current A
22D	Φ0.76	≤14.6	5
20#	Φ1.00	≤7.5	7.5
16#	Φ1.60	≤3.7	13
12#	Φ2.40	≤1.83	23
10#	Φ3.15	≤1.0	40
8#	Φ3.60	≤0.57	46

——Insulation resistance:

Normal≥5000MΩ; high temperature≥1000MΩ; damp heat≥100MΩ

——Withstanding voltage: V

Service rating	M	N	I	Ⅱ
Sea level	1300	1000	1800	2300
21336m	800	600	1000	1000

Remarks: Different insert arrangements have different service rating. Please see the insert arrangement table.

Contact technical characteristics

[12# coaxial contact]

——Contact resistance:

Applicable cable	Inner contact (mΩ)		Outer contact (mΩ)	
	Initial	After test	Initial	After test
SFF-50-2-51	55	66	6.25	7.5
SFF-75-1.6-51	120	144	5.83	7.0

Http://www.zhyf.com　Email: sales@zhyf-bj.com

——Low level contact resistance (only for inner contact, max value) :

Applicable cable	Initial (mΩ)	After test(mΩ)
SFF-50-2-51	55	66
SFF-75-1.6-51	120	144

——Withstanding voltage: sea level: 1000V; 15240m (11.59KPa) : 250V

——VSWR: 500MHz~3GHz, ≤1.20+0.04f

——Insertion loss: dB max=0.11 , when frequency is 3GHz, insertion loss≤0.2dB

——Impedance: 50Ω

——Tensile strength:

Applicable cable	Axial load (N)	
	Inner contact	Outer contact
SFF-50-2-51	44.48	66.72
SFF-75-1.6-51	15.57	66.72

——J1216/102 (M39029/102) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ0.52	---	---	3.34	3.90
Φ0.50	0.14	0.11	---	---

——J1216/103(M39029/103) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ2.41	---	---	8.35	10.02
Φ2.36	0.83	0.70	---	---

——Vibration: test according to condition V, method 2005, GJB1217 standard, power spectral density $5G^2/Hz$

[12# shielding contact]

——Contact resistance:

Inner contact (mΩ)		Outer contact (mΩ)	
Initial	After test	Initial	After test
120	144	5	6

——Low level contact resistance (only for inner contact) : initial 120 mΩ, after test 144 mΩ

——Withstanding voltage: sea level: 1000V; 15240m (11.59KPa) : 250V

——Tensile strength: inner contact 15.57 N, outer contact 88.96 N

——J1216/28(M39029/28) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ0.521	---	---	3.34	3.90
Φ0.495	0.14	0.11	---	---

——J1216/75(M39029/75) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ2.413	---	---	8.35	10.02
Φ2.362	0.83	0.70	---	---

[16# shielding contact]

——Contact resistance:

Applicable cable	Inner contact (mΩ)		Outer contact (mΩ)	
	Initial	After test	Initial	After test
SFF-50-2-51	55	66	6.25	7.5
SFF-75-1.6-51	120	144	5.83	7.0

——Low level contact resistance (only for inner contact) : initial 120 mΩ, after test 144 mΩ

——Withstanding voltage: sea level: 800V; 15240m (11.59KPa) : 250V

[8# twinax contact]

Conditions	Central contact (mΩ)	Middle contact (mΩ)	Outer contact (mΩ)
Initial	55	55	6.25
After test	66	66	7.5
175℃	94	94	10.67

——Low level contact resistance (only for central and middle contact) : initial 55 mΩ; after test 66 mΩ

——Withstanding voltage:

Operating conditions	Central to middle contact	Middle to outer contact
Sea level	1000V	500V
15240m	250V	125V

——Frequency: 0~20 MHz

——Rating voltage: normal: 500V, 21336m (4.39KPa) :125V

——J1216/90(M39029/90) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ2.896	---	---	5	6.12
Φ2.845	0.14	0.11	---	---

——J1216/91(M39029/91) contacts insert force and withdraw force:

Nominal pin dia. (mm)	Min withdraw force (N)		Max insert force (N)	
	Initial	After test	Initial	After test
Φ5.563	---	---	13.36	16.7
Φ5.512	0.83	0.56	---	---
Φ0.622	---	---	3.34	3.90
Φ0.597	0.14	0.11	---	---

——Tensile strength:

Applicable cable	Central contact (N)	Middle contact (N)	Outer contact (N)
SEFF-78-1-51	35.59	35.59	111.21

——Vibration：10～2000Hz，PSD：1.0G^2/Hz

——Shock：acceleration 2940 m/s^2

[8# quadrax contact]

——Rating voltage：500V（sea level），125V（21336m height）

——Contact resistance：

Inner contact (mΩ)		Outer contact (mΩ)	
Initial	After test	Initial	After test
15	30	3	4

——Insulation resistance：normal≥5000MΩ；high temperature≥1000MΩ

——Characteristic impedance：100Ω（100MHz）

——Insertion loss ≤0.3dB（100MHz）

——Crosstalk：≥40 dB（100MHz）

——insert force and withdraw force：max insert force 11N；min withdraw force 155N

[12#/16# optic contact]

——Insertion loss：≤0.3 dB（single fiber）

——Return loss：≥35 dB（only for SM optical fiber）

——Interchangeability：insertion loss ≤0.6 dB（single fiber）；return loss≥30 dB（only for SM optical fiber）

——Vibration：test according to condition Ⅵ,method 2005,GJB1217 standard,letter code J,insertion loss ≤1.5 dB

——Shock：test according to condition D，method 2004，GJB1217 standard，insertion loss ≤1.5 dB

——Operating temperature：−55℃～+125℃

——Endurance：500 cycles

Ordering information

Basic series	J599/	40	W	B	35	P	N	V	RX	01

Type

40－Wall-through square flange receptacle（mounting with backshell）
41－box mounting square flange sealing receptacle（Y class & N class）
42－box mounting square flange receptacle
43－jam nut sealing receptacle（Y class & N class）
44－jam nut receptacle （mounting with backshell）
45－tin soldering sealing receptacle（only for N class）
46－RFI shielding plug （mounting with backshell）
48－fusion welding sealing receptacle（Y class & N class）
49－cable connecting receptacle （mounting with backshell）

Plating

see plating instruction for details（Y class & N class only available for sealing receptacle）

Housing size

Housing code	B	C	D	E	F	G	H	J
Housing size	11	13	15	17	19	21	23	25

Contact layout

see insert arrangement table for details

Contact type

P－pin　　S－socket

Polarization

N－normal　　A，B，C，D，E－alternative

Modification

V－oil resistance；
G－high temperature resistance 260℃（not available for cadmium plating）

Thermo couple contacts

R×－R means only one thermo couple contact type，× refers to the contact couples and numbers.
（Remarks：if customers need different thermo couple contact types，please contact our engineer.）

Modification code

01～99
（If customers need modification types，add this code to the part number，please contact our engineer for details）

[Part number example]

J599/46KC35PN

J599 series, 46 shielding plug, plating code K which means stainless steel passivation, C# shell, 35# contact layout, filled with pin, N polarization.

Remarks:

1) In ordering information, part "8～10" is the additional instruction for part number, please state it if necessary.

2) GJB599 series is designed according to the same standard with MIL—DTL—38999 series. The difference is that: the basic part number of GJB599 is J599, while MIL—DTL—38999 is D38999. GJB599 series is interchangeable with MIL—DLT—38999 series.

3) If the operating environment requires oil resistance, the connector sealing components should choose fluorinated silicone rubber. When placing orders, plus V at the end of the original part number (for example: J599/46FC35PNV).

Plating instructions

P/N	Housing material	Plating	Salt spray	Shielding	Temperature
F[1)3)]	Aluminum alloy	nickel plating	48h	10GHz, 65dB	200℃
W	Aluminum alloy	olive green cadmium plating	500h	10GHz, 50dB	175℃
K[1)]	Stainless steel	passivation	1000h	10GHz, 45dB	200℃
S[1)]	Stainless steel	nickel plating	1000h	10GHz, 65dB	200℃
TA[1)]	Titanium alloy	——	2000h	10GHz, 65dB	200℃
R[1)]	Naval brass	nickel plating	96h	10GHz, 65dB	200℃
Y[2)]	Stainless steel	passivation	500h	10GHz, 50dB	200℃
N[2)]	Stainless steel	nickel plating	500h	10GHz, 65dB	200℃

1) Modification code G means the operating temperature is 260℃.

2) Y class & N class plating only available for sealing receptacle.

3) In JY599IV series, F plating is satin nickel plating, the color is nickel white. Please choose FT plating for accessory ordering. (FT refers to electroless nickel plating.)

Crimping contacts

Contact size	Dia. mm	Pin color	Socket color	ID of crimp boot mm	OD of crimp boot mm	Section of wire mm^2	AWG	Wire insulator OD	Removal tool code	Crimping tool
22D	φ0.76	Orange—blue—black	Orange—yellow—gray	0.85	1.20	0.08 0.125 0.2 0.3	28 26 24 22	0.76～1.37	M81969/14—01	YJQ—02
20#	φ1.00	Orange—blue—orange	Orange—green—brown	1.17	1.78	0.2 0.3 0.5	24 22 20	1.02～2.11	M81969/14—10	YJQ—02 XCXY—01
16#	φ1.60	Orange—blue—yellow	Orange—green—red	1.68	2.62	0.5 0.8 1.0 1.2	20 18 16	1.65～2.77	M81969/14—03	XCXY—01
12#	φ2.40	Orange—blue—green	Orange—green—orange	2.49	3.84	2.0 3.0	14 12	2.46～3.61	M81969/14—04	XCXY—01
10#	φ3.15	Green—red—gray	Green—orange—purple	3.40	4.65	3.0 4.8	12 10	3.42～4.12	M81969/14—05	YTQ
8#	φ3.6	——	——	4.55	6.4	8.37	8	6.4～6.9	M81969/14—12	YTQ

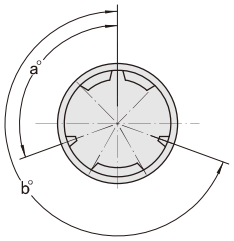
Remarks: The applicable crimping tool's instructions can be found in page 151.

Soldering contacts

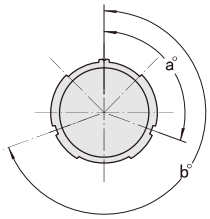
Contact size	Soldering cup ID	AWG
22D	ϕ0.9	22
20#	ϕ1.1	20
16#	ϕ1.9	16
12#	ϕ2.9	12
10#	ϕ3.6	10
8#	ϕ4.8	8

Polarization

Plug Polarization

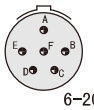
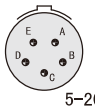
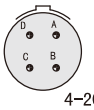
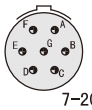
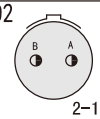
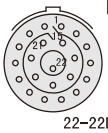
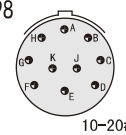
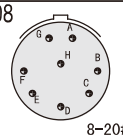
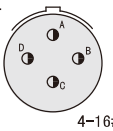
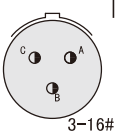
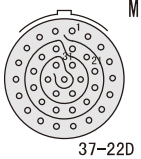
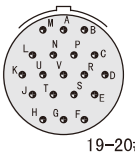
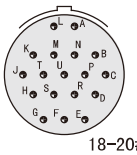
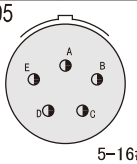
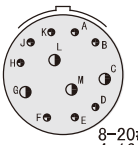
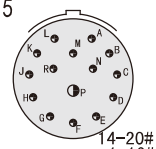
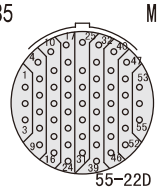
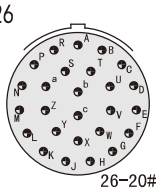
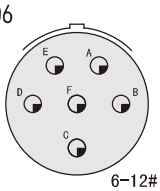
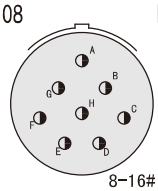
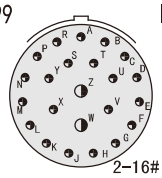
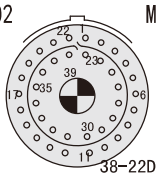
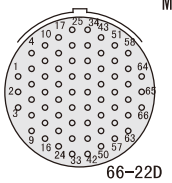
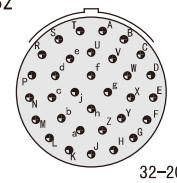
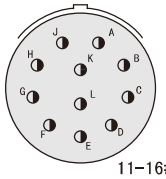
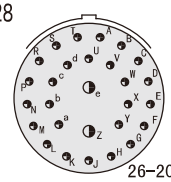
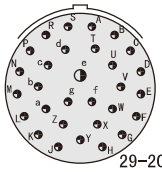
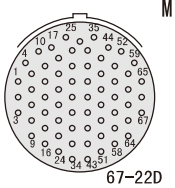
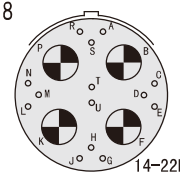
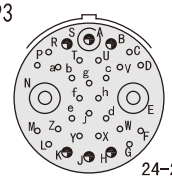
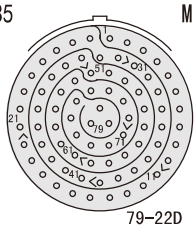
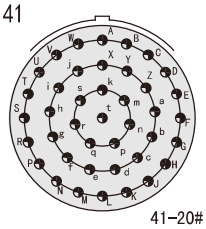
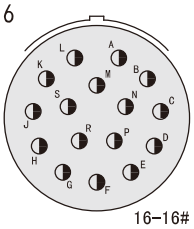
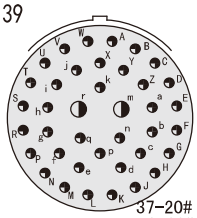
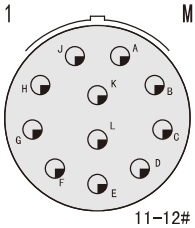
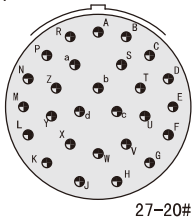
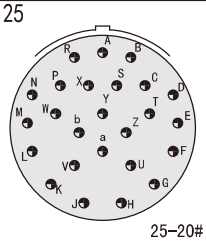


Receptacle Polarization



Polarization code	a	b
N	110°	250°
A	100°	260°
B	90°	270°
C	80°	280°
D	70°	290°
K	120°	255°

Insert arrangement (mating view of insulator with pin)

Housing size							
11 (B)	35 M  13–22D	98 I  6–20#	05 I  5–20#	04 I  4–20#	01 I  1–12#	99 I  7–20#	02 I  2–16#
13 (C)	35 M  22–22D	98 I  10–20#	08 I  8–20#	04 I  4–16#	03 I  3–16#	12 N  1–12# 11–22D	
15 (D)	35 M  37–22D	19 I  19–20#	18 I  18–20#	05 II  5–16#	97 I  8–20# 4–16#	15 I  14–20# 1–16#	
17 (E)	35 M  55–22D	26 I  26–20#	06 I  6–12#	08 II  8–16#	99 I  2–16# 21–20#	02 M  38–22D 1–8# Dual coaxial	
19 (F)	35 M  66–22D	32 I  32–20#	11 II  11–16#	28 I  26–20# 2–16#	30 I  29–20# 1–16#		
	45 M  67–22D	18 M  14–22D 4–8# Dual coaxial	93 I  24–22D 6–20# 2–10#				
21 (G)	35 M  79–22D	41 I  41–20#	16 II  16–16#	39 I  37–20# 2–16#	11 M  11–12#		
	27 I  27–20#	25 I  25–20#	24 I 24–20#				

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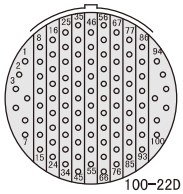
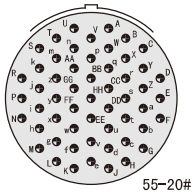
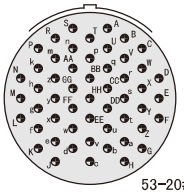
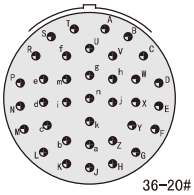
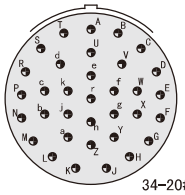
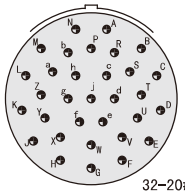
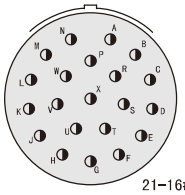
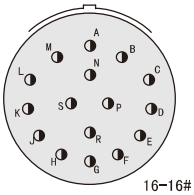
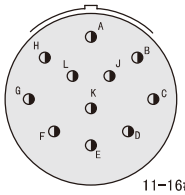
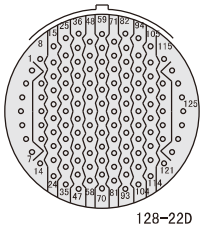
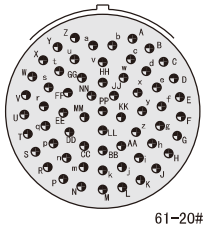
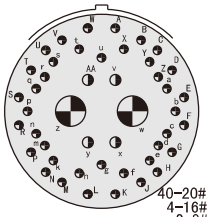
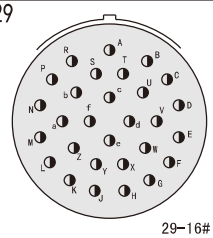
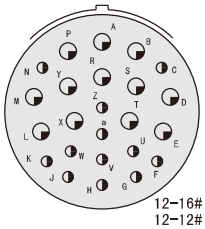
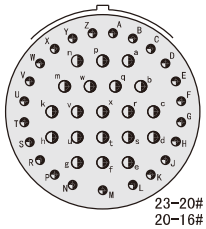
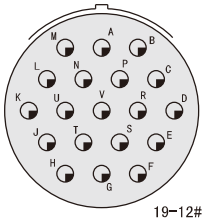
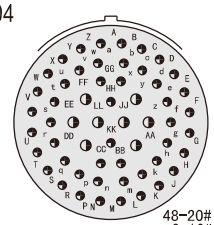
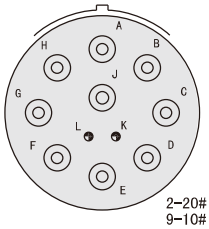
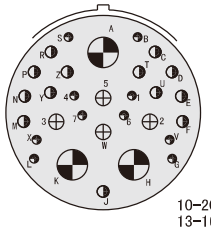
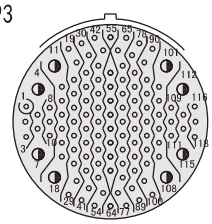
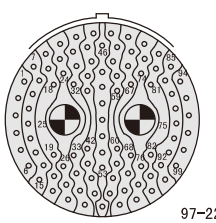
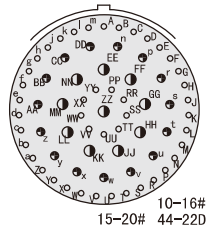
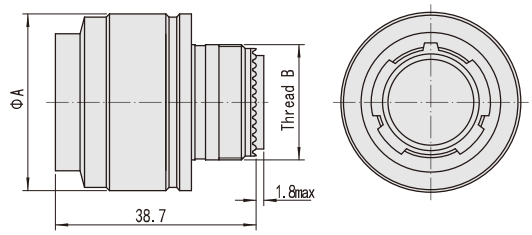
23 (H)	35 M  100-22D	55 I  55-20#	53 I  53-20#	36 I  36-20#
	34 I  34-20#	32 I  32-20#	21 II  21-16#	97 I  16-16#
	99 II  11-16#			
25 (J)	35 M  128-22D	61 I  61-20#	46 I  40-20# 4-16# 2-8#	29 I  29-16#
	24 I  12-16# 12-12#	43 I  23-20# 20-16#	19 I  19-12#	04 I  48-20# 8-16#
	11  2-20# 9-10#	20 N  10-20# 13-16# 1-12#coaxial, 3-12#Shielding 3-8# Dual coaxial	93 M  110-22D 8-16#	07 N  97-22D 2-8# Dual coaxial
	69 M  10-16# 15-20# 44-22D			

Contact size 22D 20# 16# 12# 12# Coaxial 10# 8# Dual coaxial

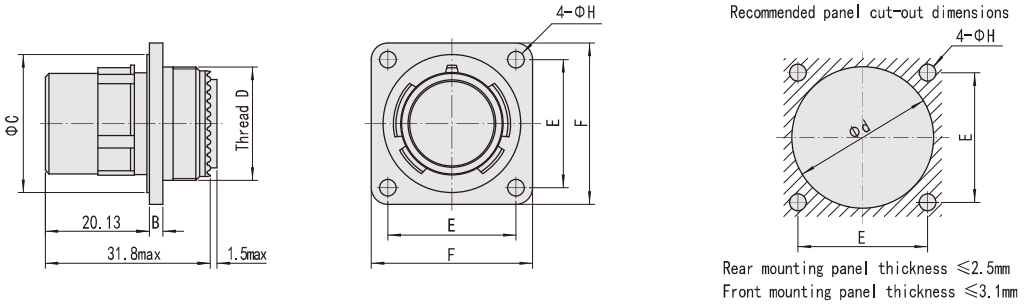
Outline dimensions

[J599/46 shielding plug]



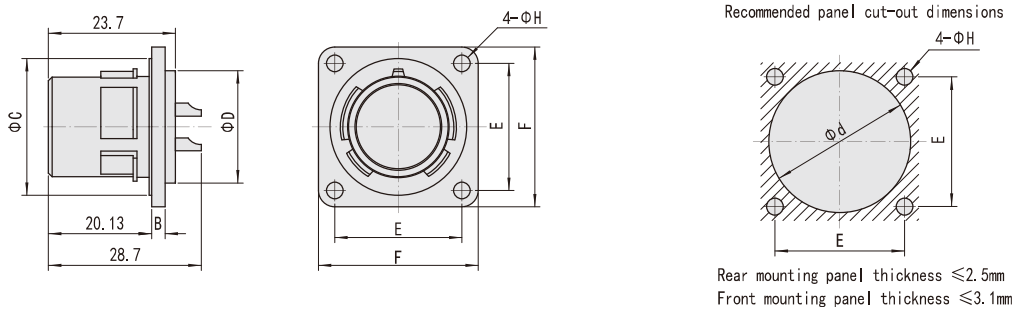
Housing size	Housing code	Amax	Thread B
11	B	26.6	M15×1
13	C	30.8	M18×1
15	D	34.0	M22×1
17	E	37.4	M25×1
19	F	40.0	M28×1
21	G	43.2	M31×1
23	H	46.5	M34×1
25	J	49.7	M37×1

[J599/40 Wall—through mounting square flange receptacle]



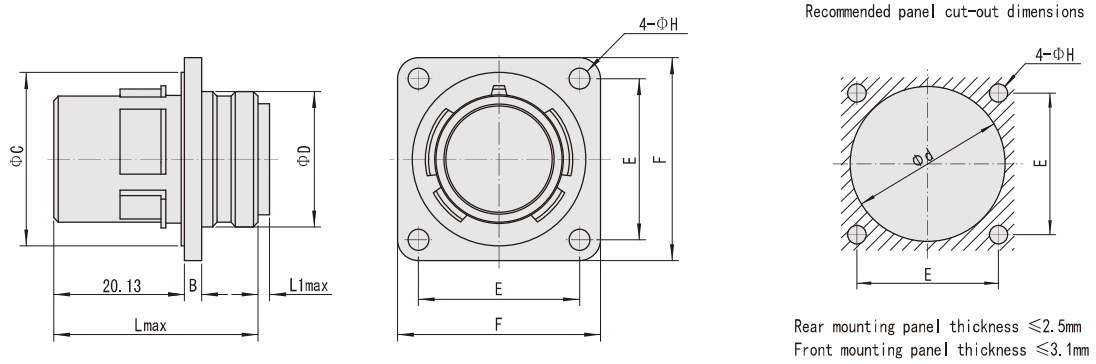
Housing size	Housing code	B max	C max	Thread B (−6g)	E	F	H	d front mount	d rear mount
11	B	2.6	20.1	M15×1	20.62	26.2	3.2	15.3	20.5
13	C	2.6	23.3	M18×1	23.02	28.6	3.2	19.2	23.7
15	D	2.6	26.5	M22×1	24.62	31.0	3.2	23.3	26.9
17	E	2.6	29.66	M25×1	26.98	33.3	3.2	25.9	31.0
19	F	2.6	32.8	M28×1	29.36	36.5	3.2	29.0	33.0
21	G	3.2	36.0	M31×1	31.76	39.7	3.2	32.2	36.2
23	H	3.2	39.2	M34×1	34.92	42.9	3.7	35.0	39.4
25	J	3.2	42.4	M37×1	38.10	46.0	3.7	37.8	42.6

[J599/41 box mounting square flange sealing receptacle]



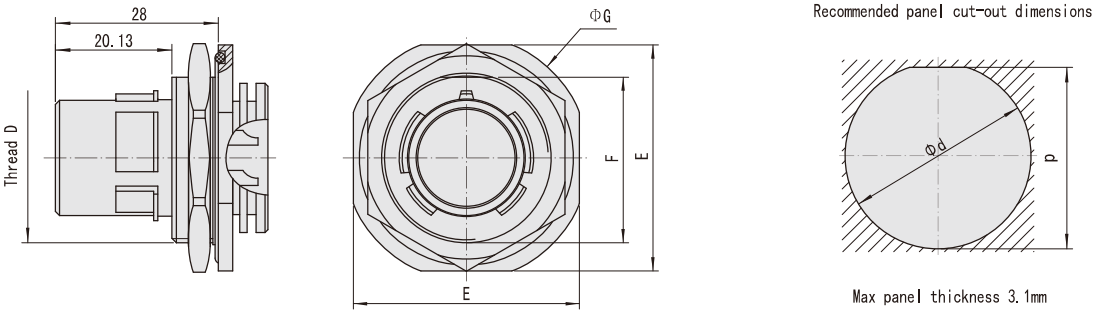
Housing size	Housing code	B max	C max	D	E	F	H	d front mount	d rear mount
11	B	2.6	20.1	15.38	20.62	26.2	3.2	16.0	20.5
13	C	2.6	23.3	18.55	23.02	28.6	3.2	19.0	23.7
15	D	2.6	26.5	22.51	24.62	31.0	3.2	23.0	26.9
17	E	2.6	29.66	25.31	26.98	33.3	3.2	26.0	31.0
19	F	2.6	32.8	29.43	29.36	36.5	3.2	29.8	33.0
21	G	3.2	36.0	31.06	31.76	39.7	3.2	31.8	36.2
23	H	3.2	39.2	34.33	34.92	42.9	3.7	35.0	39.4
25	J	3.2	42.4	37.19	38.10	46.0	3.7	38.0	42.6

[J599/42 box mounting square flange receptacle]



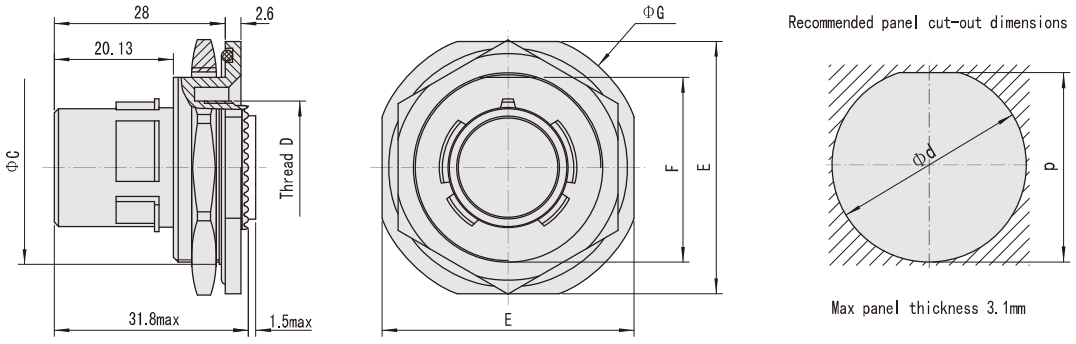
Housing size	Housing code	B max	L	L1	C max	D max	E	F	H	d front mount	d rear mount
11	B	2.6	31.2	2.1	20.1	14.6	20.62	26.2	3.2	15.3	20.5
13	C	2.6	31.2	2.1	23.3	17.5	23.02	28.6	3.2	19.2	23.7
15	D	2.6	31.2	2.1	26.5	20.7	24.62	31.0	3.2	23.3	26.9
17	E	2.6	31.2	2.1	29.66	23.9	26.98	33.3	3.2	25.9	31.0
19	F	2.6	31.2	2.1	32.8	26.6	29.36	36.5	3.2	29.0	33.0
21	G	3.2	31.8	1.5	36.0	29.6	31.76	39.7	3.2	32.2	36.2
23	H	3.2	31.8	1.5	39.2	32.9	34.92	42.9	3.7	35.0	39.4
25	J	3.2	31.8	1.5	42.4	36.1	38.10	46.0	3.7	37.8	42.6

[J599/43 Jam nut sealing receptacle]



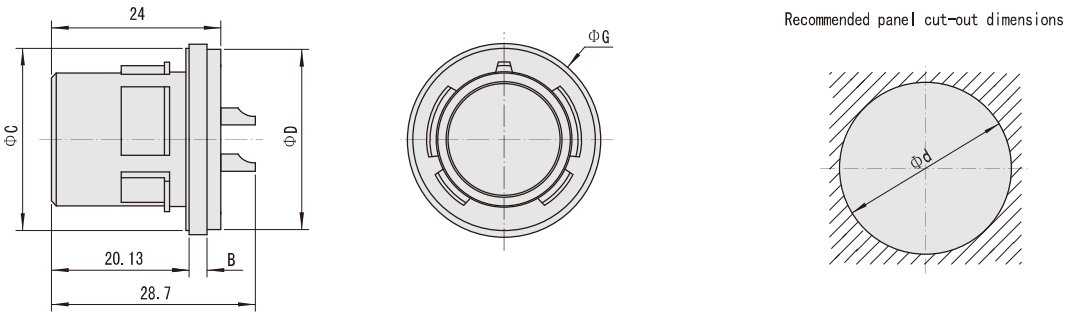
Housing size	Housing code	Thread D (-6g)	E max	F max	G max	d	p
11	B	M20×1	31.6	19.17	34.8	20.5	19.5
13	C	M25×1	34.8	23.92	38.1	25.5	24.3
15	D	M28×1	38.0	27.07	41.2	28.5	27.3
17	E	M32×1	41.1	30.25	44.5	32.5	30.7
19	F	M35×1	45.9	33.44	49.2	35.5	33.8
21	G	M38×1	49.1	36.62	52.3	38.5	37.0
23	H	M41×1	52.2	39.75	55.5	41.5	40.1
25	J	M44×1	55.4	42.98	58.6	44.5	43.1

[J599/44 Jam nut receptacle]



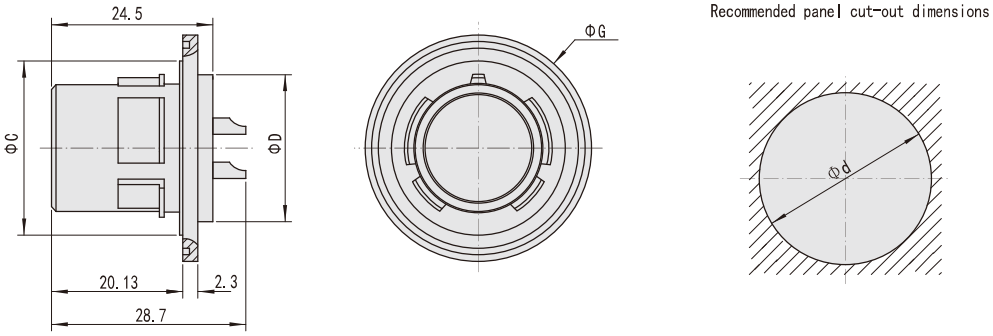
Housing size	Housing code	C max	Thread D (−6g)	E max	F max	G max	d	p
11	B	25.4	M15×1	34.9	23.93	38.1	25.6	24.3
13	C	28.58	M18×1	38.1	27.08	41.2	28.8	27.3
15	D	31.75	M22×1	41.3	30.26	44.5	32.2	30.7
17	E	34.92	M25×1	45.2	33.56	49.2	35.2	33.8
19	F	38.10	M28×1	48.0	36.61	51.2	38.4	37.0
21	G	41.28	M31×1	51.2	39.78	54.3	41.6	40.1
23	H	44.45	M34×1	54.3	42.96	57.5	44.7	43.1
25	J	47.63	M37×1	57.5	46.13	60.7	48.0	46.3

[J599/45 tin soldering sealing receptacle]



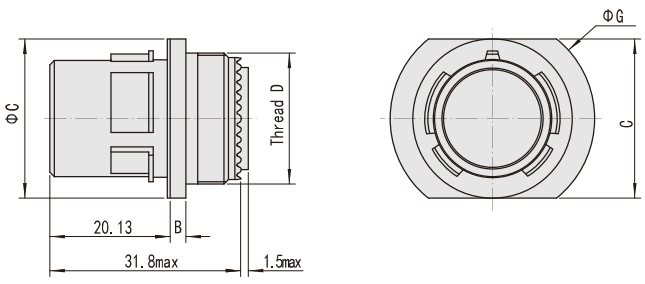
Housing size	Housing code	B max	C max	D max	G max	d
11	B	2.6	20.1	19.9	21.9	20.4
13	C	2.6	23.3	23.1	25.1	23.6
15	D	2.6	26.5	26.3	28.2	26.8
17	E	2.6	29.66	29.4	31.4	29.9
19	F	2.6	32.8	31.8	33.8	32.3
21	G	3.2	36.0	35.0	37.0	35.5
23	H	3.2	39.2	38.2	40.2	38.7
25	J	3.2	42.4	41.4	43.3	41.9

[J599/48 fusion welding sealing receptacle]



Housing size	Housing code	C max	D max	G	d
11	B	20.1	15.38	28.0	16.18
13	C	23.3	18.55	31.2	19.35
15	D	26.5	22.51	34.3	23.31
17	E	29.66	25.31	36.6	26.11
19	F	32.8	28.48	40.3	29.28
21	G	36.0	31.66	43.9	32.46
23	H	39.2	34.33	48.1	35.13
25	J	42.4	37.19	50.3	37.99

[J599/49 cable connecting receptacle]



Housing size	Housing code	B max	C max	Thread D (-6g)	G
11	B	2.6	20.1	M15×1	26.5
13	C	2.6	23.3	M18×1	29.9
15	D	2.6	26.5	M22×1	34.0
17	E	2.6	29.66	M25×1	37.2
19	F	2.6	32.8	M28×1	40.0
21	G	3.2	36.0	M31×1	43.1
23	H	3.2	39.2	M34×1	46.3
25	J	3.2	42.4	M37×1	49.6

Instructions

When using the product, first of all put the plug to the right place (contact jam nut surface meet the receptacle). Then rotate the contact jam nut 90° clockwise. The connectors mated after a clear cluck and an obvious handle; meanwhile the red color ring of the plug is covered completely. To withdraw the connector, just rotate the contact jam nut 90° anticlockwise. The connectors disconnected with each other after a clear cluck and an obvious handle; meanwhile the red color ring of the plug is appeared.

Backshell

The applicable backshell is the same with GJB599III Series. See P46～P57 for details.

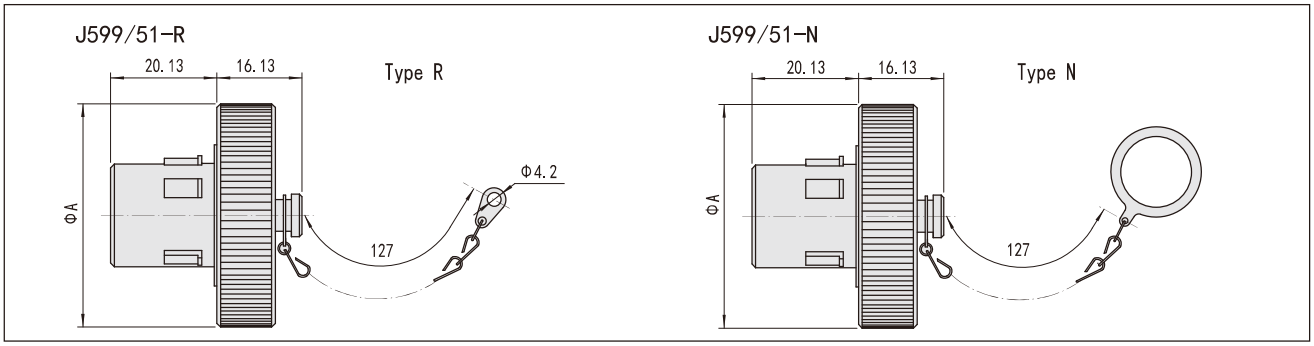
Sealing cap of plug and receptacle

[Ordering information]

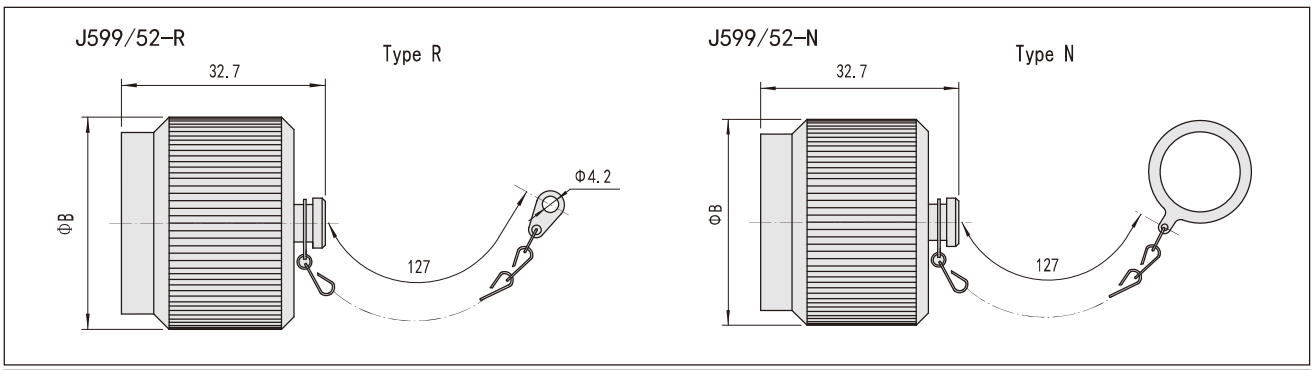
Basic series	J599/	51	F	15	N
Type	51－sealing cap of plug (MIL code is D38999/51) 52－sealing cap of receptacle (MIL code is D38999/52)				
Plating	W －aluminum shell, olive green cadmium plating F － aluminum shell, electroless nickel plating				
Shell size	11—13—15—17—19—21—23—25				
Chain type	R－stainless steel chain with connecting lug (for square flange receptacle) C—nylon string with connecting lug (for square flange receptacle) N－stainless steel chain with ring (for jam nut receptacle) E—nylon string with ring (for jam nut receptacle)				

Remarks: The sealing cap is ordered separately, not supplied with the connectors.

[Sealing cap of plug]



[Sealing cap of receptacle]



Shell size	11	13	15	17	19	21	23	25
Shell code	B	C	D	E	F	G	H	J
A	35.05	39.88	42.16	45.47	48.77	52.32	57.15	56.85
B	23.42	26.59	30.96	34.14	37.31	40.11	43.28	46.46

Http://www.zhyf.com Email: sales@zhyf-bj.com

A950 Series Environment-Resistant High Density Circular Connector

Brief introduction

- The fifth-generation advanced military connector
- A quick screw coupling with anti-decoupling mechanism
- High reliable hyperboloid socket
- Corrosion resistance, aluminum alloy salt spray: 500 hours
- 100% scoop-proof
- Excellent EMI/RFI shielding
- RF, differential and optical fiber contacts can be mixedly installed in relevant and different signals can be integratedly transmitted.
- Rear-releasing and rear-removal contact
- Termination: crimp, solder and PCB solder
- Fire proof shell, titanium alloy and aluminum alloy shell, different kinds of plating
- Enterprise standard: Q/21EJ950

Application

The product is used to. connect current and signal.

Main technical characteristics

[Mechanical]

—— Shell: aluminum alloy, stainless steel

—— Plating: K - stainless steel, passive
Z - aluminum alloy, zinc nickel plating
W - olive green cadmium plating, aluminum alloy

—— Vibration:
sine: 10~2000Hz, 60g
Random: 10~2000Hz, power spectral density $5g^2/Hz$ in ambient temperature, power spectral density $1g^2/Hz$ at high temperature

—— Shock: 3ms half sine wave, acceleration peak value 300g

—— Endurance:1000 cycles

[Electrical]

—— Contact resistance and rating current:

Contact size	Dia. (mm)	Contact resistance (mΩ)	Rating current (A)
22#	Φ0.76	12.5	5
20#	Φ1.00	5	7.5
16#	Φ1.60	2.5	13
12#	Φ2.40	1.5	23
10#	Φ3.15	1	40

—— Applicable wire:

Contact size	Cross section (mm^2)	AWG	Outer dia. of cable (mm)	
			min	max
22#	0.08、0.13、0.21、0.33	28、26、24、22	0.76	1.27
20#	0.21、0.33、0.52	24、22、20	1.02	2.11
16#	0.52、0.82、1.31	20、18、16	1.65	2.77
12#	2.08、3.31	14、12	2.46	3.61
10#	5.26	10	3.42	4.12

Operating environment

The product can be applied in military and industry field. It has excellent environmental characteristics: Anti-moisture, salt spray, mould, rain, dust, etc. It is applicable for some high strength shock environment, like engine system.

[Environmental]

—— Operating temperature: K class: -65℃~+200℃
W and Z class: -65℃~+175℃

—— Salt spray: Z class: 200h W class: 500h
K class: 1000h

—— Damp heat: according to method 1002 GJB1217 standard, 10 cycles in 24 hours

—— Fluid resistance: various fuels, coolant, solvent

—— Fungus resistance: in accordance with GJB150.10, duration: 28 days

——Insulation resistance：normal temperature 5000MΩ；High temperature 1000MΩ；Damp Heat 100MΩ

—— Withstanding voltage：V

Service raring *	M	I	Ⅱ	N
Sea level	1300	1800	2300	1000
21336m	350	400	500	260

Remarks：Different insert arrangements have different service rating. Please see the insert arrangement table.

—— EMI shielding：

100MHz～1GHz, minimum attenuation 85dB (P, W, Z class)

1GHz～10GHz, minimum attenuation 65dB (P class), 50dB (W & Z class)

[RF contact]

● 16# shielding contact (P/N：pin—J1216/76—424；socket—J1216/77—428)

● 12# shielding contact (P/N：pin —J1216/28—211；socket —J1216/75—416)

—— Low level contact resistance (only for inner contact)

Contact	Max contact resistance (mΩ)	
	Initial	After test
16#	170	204
12#	55	66

—— Test current and voltage drop：

Contact		Test current (A)	Voltage drop (mV)			
			25℃		175℃	200℃
			Initial	After test	After test	
16#	Inner contact	1	170	204	290	——
12#					——	290
16#	Outer contact	12	150	180	255	——
12#					——	255

——Withstanding voltage (between the inner and outer contact)：sea level：750 Vrms；15240m：250 Vrms

● 12# coaxial contact (P/N：pin—J1216/102—558；socket—J1216/103—559)

—— Nominal impedance：50Ω

——Operating frequency：DC0～3GHz

——Low level contact resistance (only for inner contact)：initial 55mΩ, after test 66 mΩ

——Withstanding voltage：sea level：1000 Vrms；15240m：250 Vrms

——Test current and voltage drop：

Contact	Test current (A)	Voltage drop (mV)		
		25℃		200℃
		Initial	After test	
Inner contact	1	55	66	94
Outer contact	12	75	90	128

—— VSWR：frequency：500MHz~3GHz, VSWR≤1.20+0.04F (F unit：GHz)

—— Insertion loss：dB max=0.11 (f unit：GHz) . When F is 3GHz and tested in accordance with MIL—C—39012, insertion loss ≤ 0.20dB.

● 12# coaxial contact (40GHz) (P/N: pin—J1216/102—558C; socket—J1216/103—559C)

—— Nominal impedance: 50Ω

—— Operating frequency: DC0～40GHz

—— VSWR: 0～18GHz: ≤1.3; 18～40GHz: ≤1.7

—— Withstanding voltage: from central conductor to outer conductor : 500 Vrms

—— Vibration: 10—2000Hz, at ambient temperature, power spectral density: $1g^2/Hz$

● 8# dual coaxial contact (P/N: pin—J1216/90—529; socket—J1216/91—530)

—— Low level contact resistance (only for central and middle contact): initial 55mΩ, after test 66 mΩ

——Test current and voltage drop:

Contact	Test current(A)	Voltage drop (mV)		
		25℃		175℃
		Initial	After test	After test
Central contact	1.0	55	66	94
Middle contact	1.0	55	66	94
Outer contact	12	75	90	128

—— Operating frequency range: 0～20MHz

—— Rating voltage: sea level: 500 Vrms; 21336m: 125 Vrms

——Withstanding voltage:

Contact	Height	Test voltage (V) rms
Central to middle	Sea level	500
Middle to outer		1000

[Differential contact]

● 8# differential contact (2 contacts P/N: pin—CF81/211—01; socket—CF82/211—01)

● 8# differential contact (4 contacts P/N: pin —CF81/411—01; socket —CF82/411—01)

——Withstanding voltage(Vrms)

Normal: from center conductor to outer conductor: 500V AC;Between center conductors: 1000V AC

——Contact resistance: ≤15mΩ (only for center contact)

—— Insulation resistance (Between center conductors) : ≥1000MΩ at 500Vdc

——Rating current: Center conductor 1A

—— Data rate: 1.65Gbps

[Optical fiber contact]

——Insertion loss :

≤1.1dB (≤4contacts) , ≤1.2dB (≤6 contacts) , ≤1.4dB

(≤8contacts) , ≤1.6dB (≤16contacts) , ≤2dB (≤61contacts)

—— Operating temperature : −40℃～+80℃

——Vibration: 10Hz～500Hz, acceleration: $98m/s^2$

——Shock: 980 m/s^2

—— Endurance : 500cycles

——Tensile strength : ≥800N (main cable)

[Special contact type]

Contact size	GJB P/N	International P/N	Applicable wire	
			National wire	International wire
16#	J1216/76-424	M39029/76-424	SFF-50-1.5-1 SFF-75-1.5-1	M17/113-RG316
16# shielding socket	J1216/77-428	M39029/77-428		
12#	J1216/28-211	M39029/28-211	SFF-50-1.5-1	M17/113-RG316
	J1216/28-412	M39029/28-412		M17/173-RG316D
12#shielding socket	J1216/75-416	M39029/75-416	SFF-50-1.5-1	M17/113-RG316
	J1216/75-422	M39029/75-422		M17/173-RG316D
12#coaxial pin(3GHz)	J1216/102-558	M39029/102-558	SFF-50-1.5-1 SFF-75-1.5-1	M17/113-RG316
12#coaxial socket(3GHz)	J1216/103-559	M39029/103-559		
12#coaxial pin(40GHz)	J1216/102-558C	——	——	UT-085C-AL-TP-LL (MICRO-COAX)
12#coaxial socket(40GHz)	J1216/103-559C	——		
8#dual coaxial shielding pin	J1216/90-529	M39029/90-529	SEFF-78-1-51	M17/176-00002
8#dual coaxial shielding socket	J1216/91-530	M39029/91-530		
8# differential (2-pin,100Ω)	CF81/211-01	——	——	HDP700001070
8#differential (2-socket,100Ω)	CF82/211-01	——		
8#differential (4-pin, 100Ω)	CF81/411-01	——	——	ET2PC236(Nexans)
8#differential (4-socket,100Ω)	CF82/411-01	——		

Note: Special contacts should be ordered separately. Consult us for ordering optical fiber contact.

Ordering information

Basic series	A950/	20	W	B	35	P	N
Type	20 – Square flange receptacle 24 – Jam nut receptacle 26 – Shielding plug						
Shell and plating	W – aluminum alloy, olive green cadmium plating K – stainless steel passive Z – aluminum alloy, zinc-nickel plating						
Shell size Index No A至J	09 11 13 15 17 19 21 23 25 A B C D E F G H J						
Insert arrangement	See insert arrangement form						
Contact type	P – pin, crimped PH – pin, soldered PL – pin, long PCB PC – pin, short PCB A – special pin S – socket, crimped SH – socket, soldered SL – socket, long PCB SC – socket, short PCB B – special socket						
Polarization	N – Normal A、B、C、D、E – alternative						

Remarks: When the pin or socket is normal, contact type should be P (or S); When the pin or socket is special,P (or S) should be changed to A (or B) and the quantity of contact should be noted after P/N, but the quantity should not marked on product marking.

[Part number example]

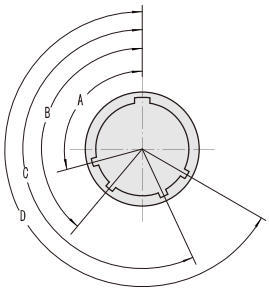
A950/20KE06PN

A950 series square flange receptacle, aluminum alloy, zinc-nickel plating, E# shell, 06 insert arrangement, pin, N polarization.

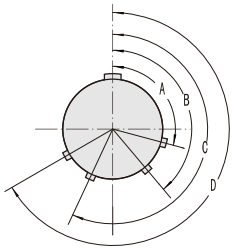
If six 12# power pins are changed to six 12# coaxial pins, P/N should be A950/20ZE06AN (6-J1216/102-558)

Polarization

Front view of receptacle

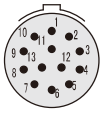
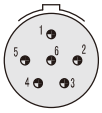
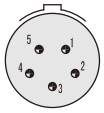
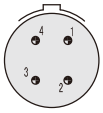
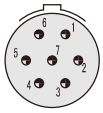
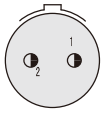
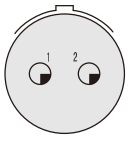
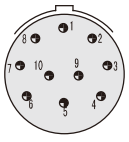
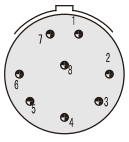
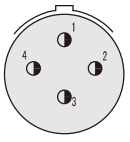
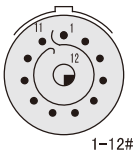
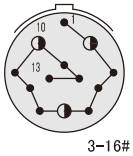
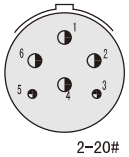
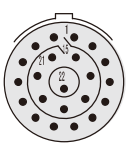
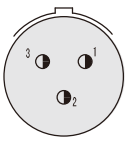
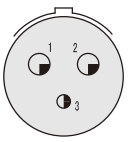
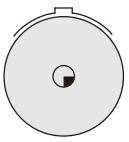
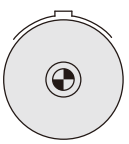


Front view of plug

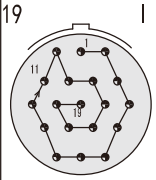
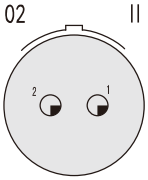
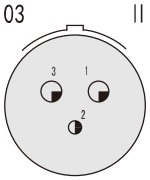
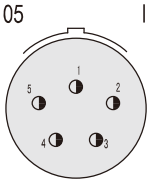
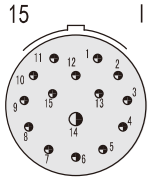
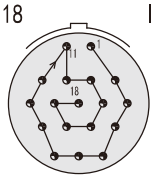
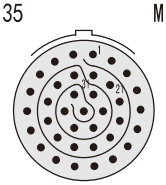


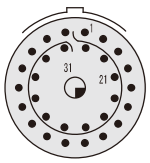
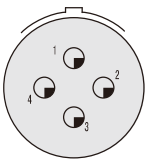
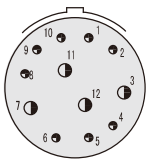
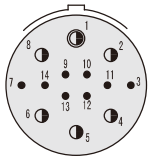
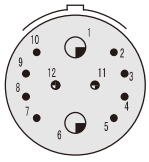
Shell size	Index No.	polarization	N	A	B	C	D	E
9	A	A°	105	102	80	35	64	91
		B°	140	132	118	140	155	131
		C°	215	248	230	205	234	197
		D°	265	320	312	275	304	240
11	B	A°	95	113	90	53	119	51
		B°	141	156	145	156	146	141
13	C	C°	208	182	195	220	176	184
		D°	236	292	252	255	298	242
15	D	A°	95	113	90	53	119	79
		B°	141	156	145	156	146	153
		C°	208	182	195	220	176	197
		D°	236	292	252	255	298	272
17	E	A°	80	135	49	66	62	79
19	F	B°	142	170	169	140	145	153
21	G	C°	196	200	200	200	180	197
23	H	D°	293	310	244	257	280	272
25	J							

Insert arrangement (viewed from front face of male insulator)

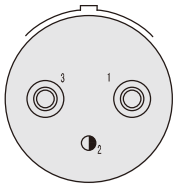
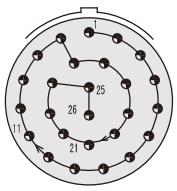
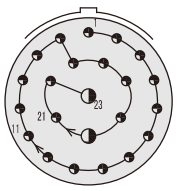
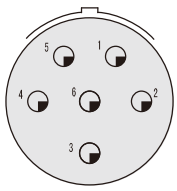
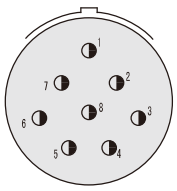
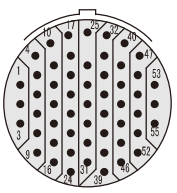
Shell size								
09 (A)	35 M  6-22#	98 I  3-20#	02 I  2-20#	03 I  3-20#	10 I  1-12#	11 I  1-16#		
11 (B)	35 M  13-22#	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#	81 I  ★1-8#dual coaxial
13 (C)	02 I  2-12#	98 I  10-20#	08 I  8-20#	04 I  4-16#	12 N  1-12# 11-22#	13 N  3-16# ★ 10-22#	60 I  2-20# ★ 4-16#	35 M  22-22#
	03 II  3-16#	05 I  ★ 1-16# 2-12#	24 II  ★ 1-12#	01  ★1-8# dual coaxial				

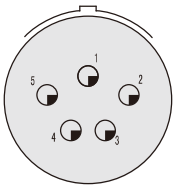
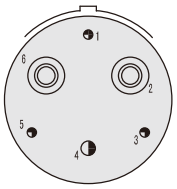
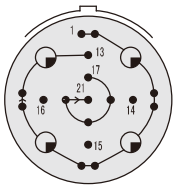
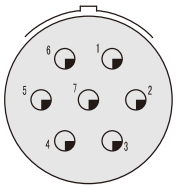
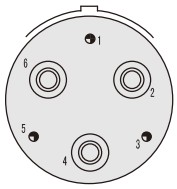
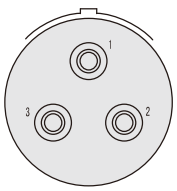
15 (D)

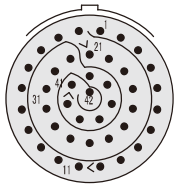
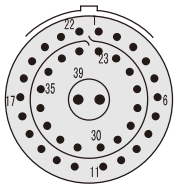
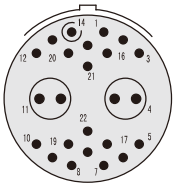
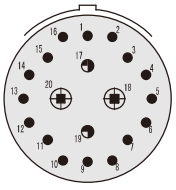
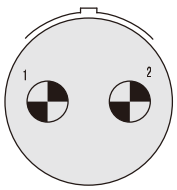
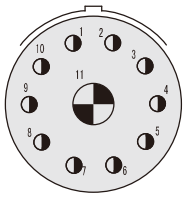
19 I	02 II	03 II	05 I	15 I	18 I	35 M
						
19–20#	2–12#	1–16# 2–12#	5–16#	1–16# 14–20#	18–20#	37–22#

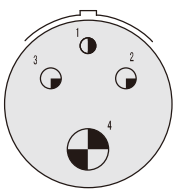
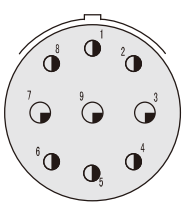
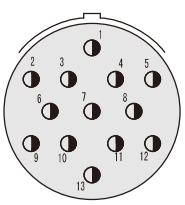
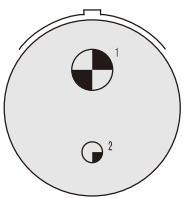
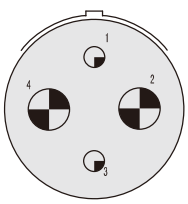
31 M	38 II	97 I	14 N	12 M		
						
1–12# 30–22#	4–12#	8–20# 4–16#	★ 8–22#; 6–16#	★ 8–22#; 2–20# 2–12#		

17 (E)

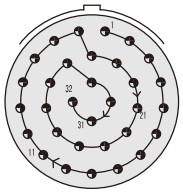
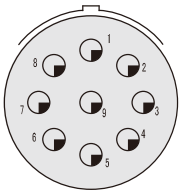
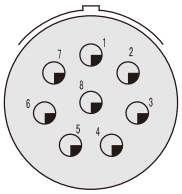
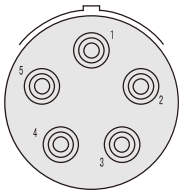
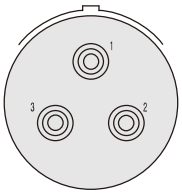
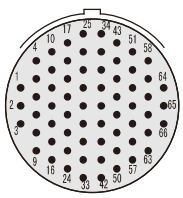
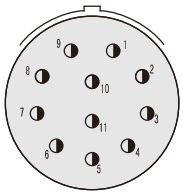
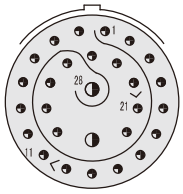
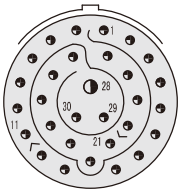
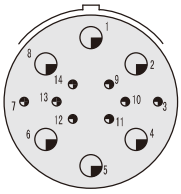
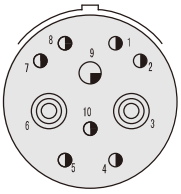
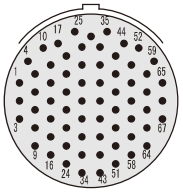
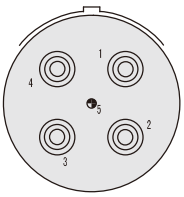
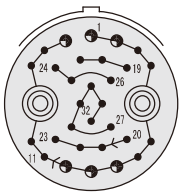
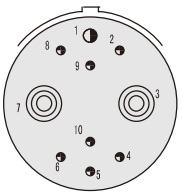
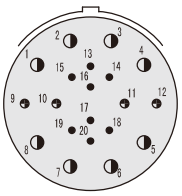
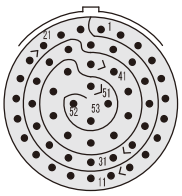
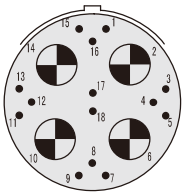
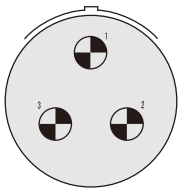
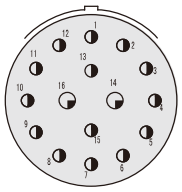
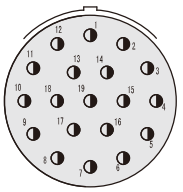
03 N	26 I	99 I	06 I	08 II	35 M
					
★ 1–16# 2–10#	26–20#	2–16# 21–20#	6–12#	8–16#	55–22#

05 I	16 I	21 N	27 I	30 N	39 II
					
★ 5–12#	3–20# 1–16#、2–10#	★ 4–12# 17–22#	7–12#	★ 3–20# 3–10#	★ 3–TDB4

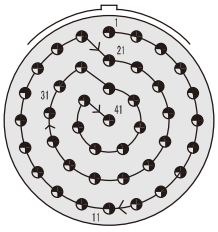
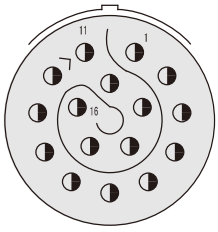
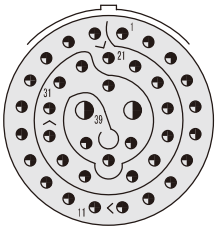
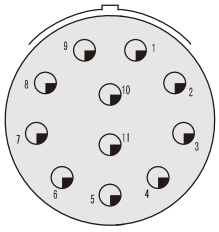
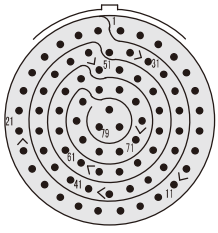
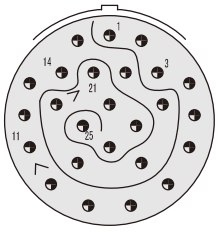
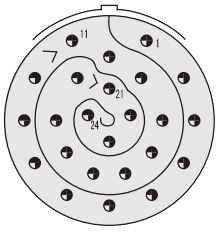
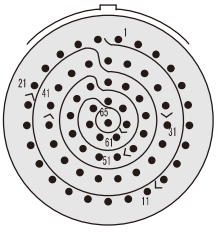
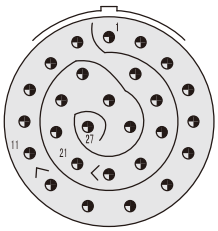
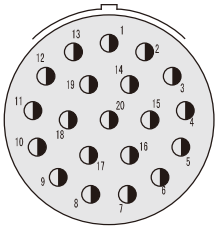
42 M	02	32	20	22	51
					
42–22#	★ 38–22# 1–8# two differential	★ 20–22# 2–8# two differential	2–20# 16–22# 2–12#shielding	★ 2–8# dual coaxial	★ 10–16# 1–8# dual coaxial

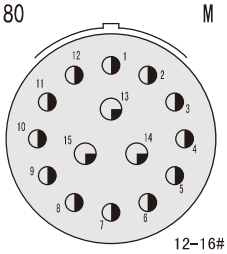
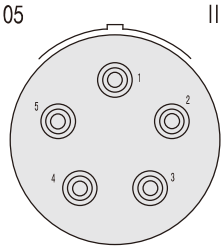
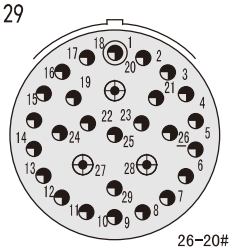
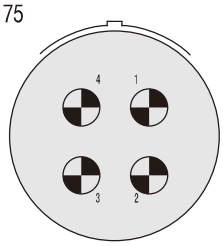
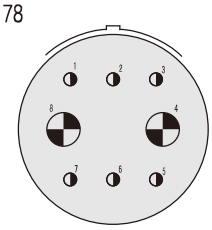
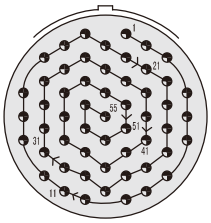
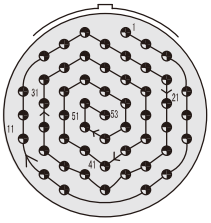
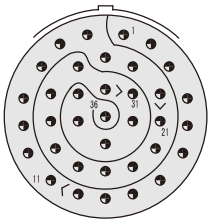
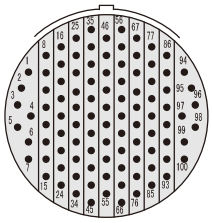
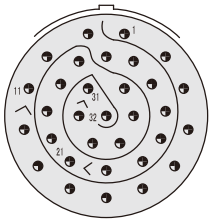
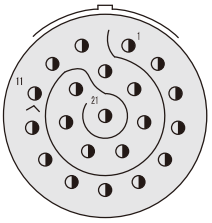
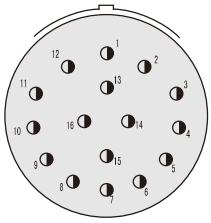
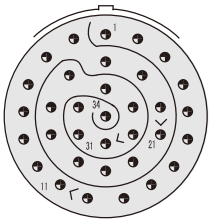
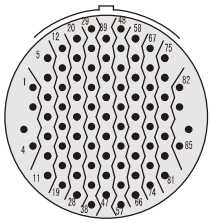
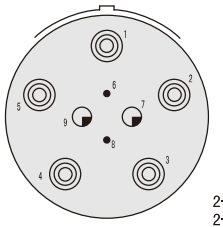
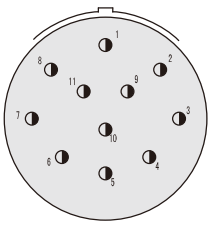
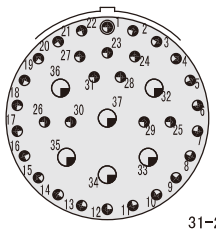
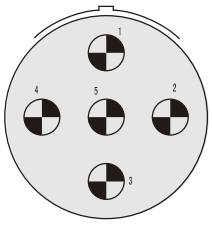
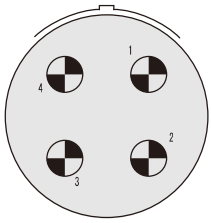
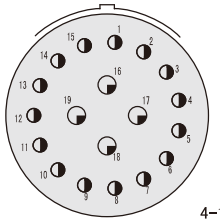
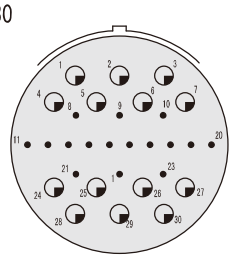
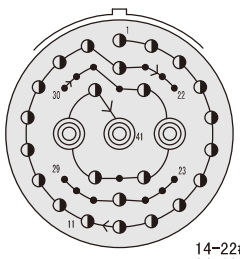
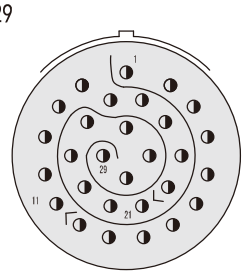
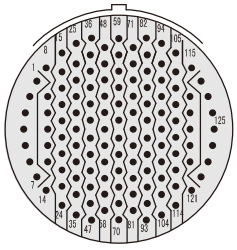
24	29	53 I	52 I	64	
					
★ 1–16# 2–12# 1–8# dual coaxial	★ 6–16# 3–12#	13–16#	★ 1–12# 1–8# dual coaxial	★ 2–12# 2–8# dual coaxial	

19 (F)

32 I	96 I	08 I	39 M	13 M	35 M
					
32-20#	★ 9-12#	★ 8-12#	★ 5-TDB4	★ 3-10#	66-22#
11 II	**28 I**	**30 I**	**14 I**	**10 I**	**45 M**
					
11-16#	2-16# 26-20#	1-16# 29-20#	6-12# ★ 8-20#	1-12# 2-10#、7-16#	67-22#
05 II	**93 I**	**12 I**	**24 I**	**53 M**	**18 M**
					
1-20# 4-10#	2-10# 6-20#、24-22#	1-16# 2-10#、7-20#	4-20# ★ 8-16#、8-22#	★ 53-22#	4-8# dual coaxial 14-22#
03	**16 M**	**19 M**			
					
★ 3-8# dual coaxial	2-12# 14-16#	19-16#			

21 (G)

41 I	16 II	39 I	11 II	35 M
				
41-20#	16-16#	2-16# 37-20#	11-12#	79-22#
25 I	**24 I**	**02 M**	**27 I**	**70 M**
				
25-20#	24-20#	65-22#	27-20#	20-16#

21 (G)	80 M  ★ 12–16# 3–12# coaxial	05 II  ★ 5–10#	29  26–20# 3–12# coaxial	75  ★ 4–8# dual coaxial	78  ★ 6–16# 2–8# dual coaxial
23 (H)	55 I  55–20#	53 I  53–20#	36 I  36–20#	35 M  100–22#	
	32 I  32–20#	21 II  21–16#	97 I  16–16#	34 I  34–20#	
	2 M  ★ 85–22#	09 M  2–12# 2–22# 5–10#	99 II  11–16#	37  ★ 31–20# 6–12#	
	05  ★ 5–8# dual coaxial	04  ★ 4–8# dual coaxial	19 M  ★ 4–12# 15–16#		
25 (J)	30 N  16–22# 14–12#	41 I  ★ 14–22# 24–16# 3–10#	29 I  29–16#	35 M  128–22#	

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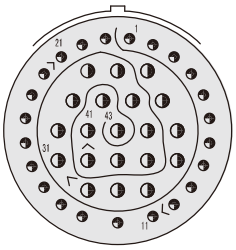
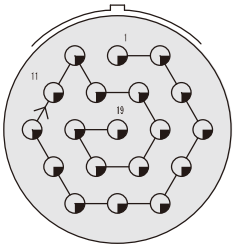
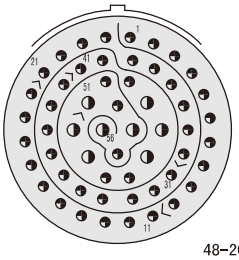
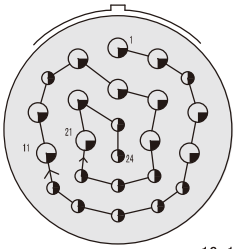
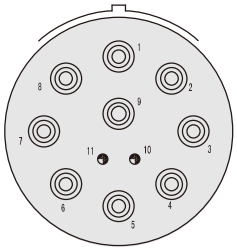
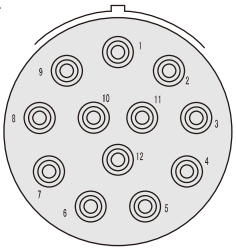
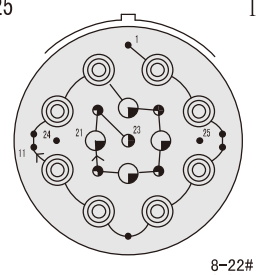
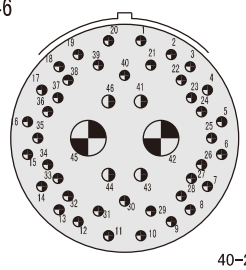
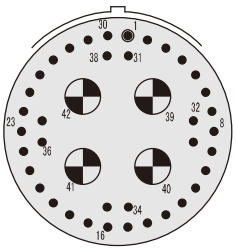
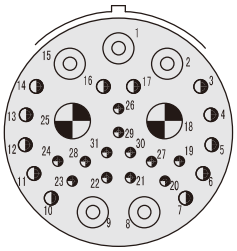
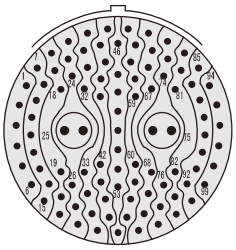
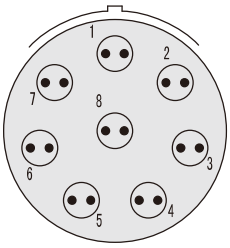
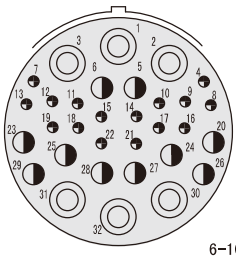
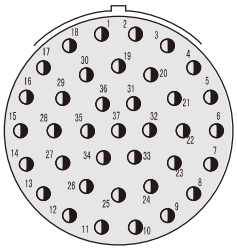
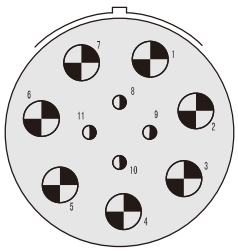
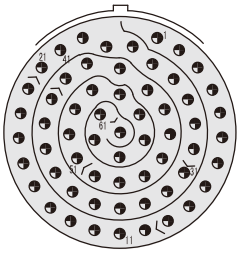
25 (J)

43 I  23-20# 20-16#	19 I  19-12#	04 I  48-20# 8-16#	24 I  12-16# 12-12#
11 N  2-20# 9-10#	12 N  ★ 12-10#	25 I  ★ 8-22# 4-20# 1-16#、4-12#、8-10#	46 I  40-20# 4-16# 2-8# dual coaxial
42  ★ 38-22# 4-8# dual coaxial	31 N  ★ 12-20# 12-16# 5-10# 2-8# dual coaxial	07 N  ★ 97-22# 2-8# two differential	08  ★ 8-8# two differential
32 N  6-10# 16-20# 10-16#	37 I  ★ 37-16#	51  ★ 4-16# 7-8# dual coaxial	61 I  ★ 61-20#

Contact size

22# 20# 16# 12# 12# shielding 12# coaxial 10# 8# dual coaxial 8# two differential 8# four differential

Remarks :"★" designates the products in design

1) 20# optical fiber contacts can be installed in 20# cavity;

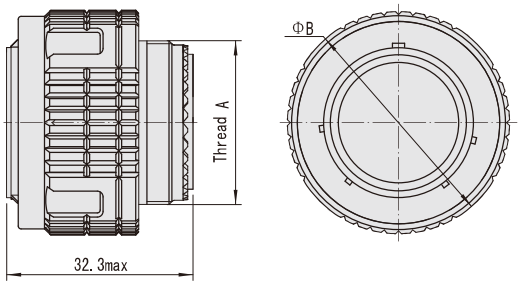
2) 16# shielding contacts and 16# optical fiber contacts can be installed in 16# cavity;

3) 12# shielding contacts, 12# coaxial contacts and 12# optical fiber contacts can be installed in 12# cavity;

4) 8# dual coaxial contacts and 8# differential contacts are in 8# cavity.

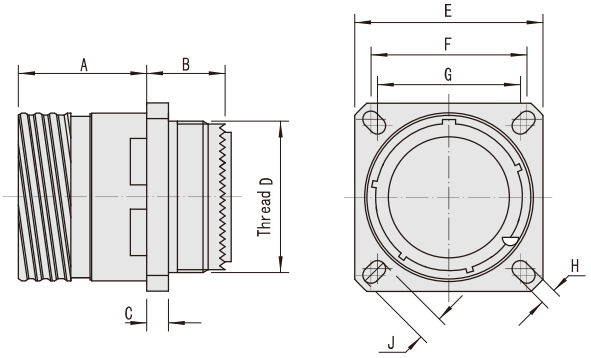
Outline dimension

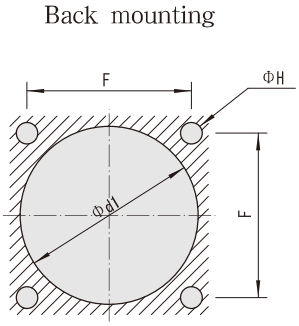
[Plug A950/26]



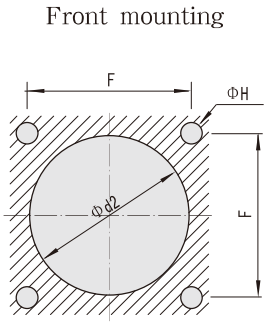
Housing size	Thread A	Bmax
09(A)	M12×1—6g	21.5
11(B)	M15×1—6g	24.5
13(C)	M18×1—6g	27.5
15(D)	M22×1—6g	31.5
17(E)	M25×1—6g	34.5
19(F)	M28×1—6g	37.5
21(G)	M31×1—6g	40.5
23(H)	M34×1—6g	43.5
25(J)	M37×1—6g	46.5

[Square flange receptacle A950/20]





panel thickness≤2.5mm



panel thickness≤3.2mm

Housing size	A	B	C	Thread D	E	F	G	H	J	d1min	d2min
09(A)	20.7	10.8	2.5	M12×1—6g	23.8	18.26	15.09	3.25	5.49	16.66	13.11
11(B)	20.7	10.8	2.5	M15×1—6g	26.2	20.62	18.26	3.25	4.93	20.22	15.88
13(C)	20.7	10.8	2.5	M18×1—6g	28.6	23.01	20.62	3.25	4.93	23.42	19.05
15(D)	20.7	10.8	2.5	M22×1—6g	31.0	24.61	23.01	3.25	4.39	26.59	23.01
17(E)	20.7	10.8	2.5	M25×1—6g	33.3	26.97	24.61	3.25	4.93	30.96	25.81
19(F)	20.7	10.8	2.5	M28×1—6g	36.5	29.36	26.97	3.25	4.93	32.94	28.98
21(G)	19.9	11.6	3.2	M31×1—6g	39.7	31.75	29.36	3.25	4.93	36.12	32.18
23(H)	19.9	11.6	3.2	M34×1—6g	42.9	34.93	31.75	3.91	6.15	39.29	34.93
25(J)	19.9	11.6	3.2	M37×1—6g	46.0	38.10	34.93	3.91	6.15	42.47	37.69

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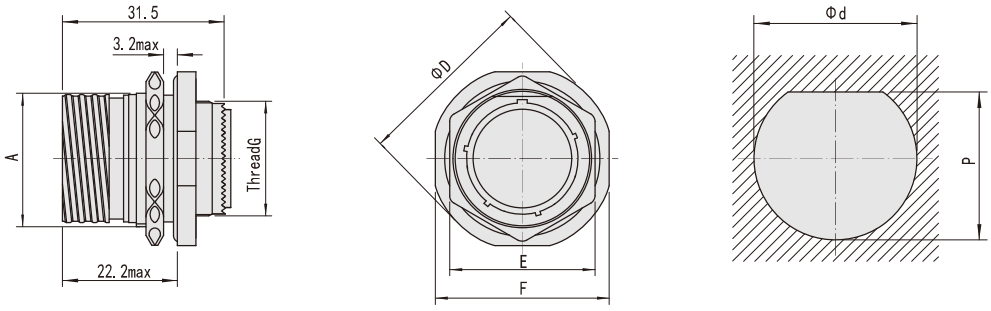
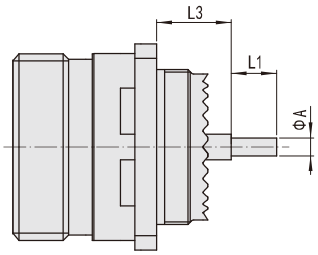
[Jam nut receptacle A950/24]



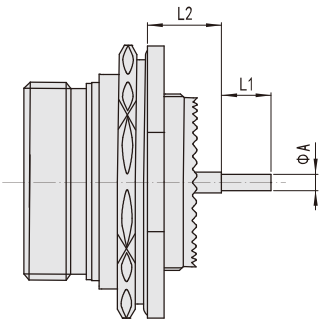
Housing size	A	Dmax	Emax	F	Thread G	d	p
09(A)	16.5	30.5	22.3	27.0	M12×1–6g	17.70	16.99
11(B)	19.3	35.2	25.5	31.8	M15×1–6g	20.88	19.53
13(C)	24.0	38.4	30.2	34.9	M18×1–6g	25.58	24.26
15(D)	27.2	41.6	33.4	38.1	M22×1–6g	28.80	27.53
17(E)	30.4	44.8	36.6	41.3	M25×1–6g	31.98	30.68
19(F)	33.4	49.3	39.7	46.0	M28×1–6g	35.15	33.86
21(G)	36.5	52.7	42.9	49.2	M31×1–6g	38.28	37.06
23(H)	39.7	55.9	46.1	52.4	M34×1–6g	41.50	40.24
25(J)	42.8	59.0	50.8	55.6	M37×1–6g	44.68	43.41

[Receptacle with PCB contacts]

A950/20 receptacle



A950/24 receptacle

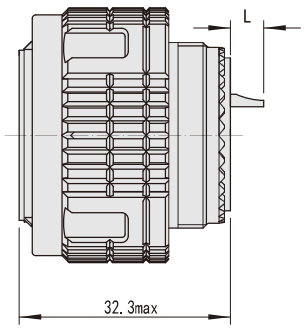


PCB contact type		L1	A
22#	Long PCB contact	8.5	0.7
	Short PCB contact	4.0	
20#	Long PCB contact	8.5	0.7
	Short PCB contact	5.1	
16#	Long PCB contact	8.5	1.15
	Short PCB contact	5.1	

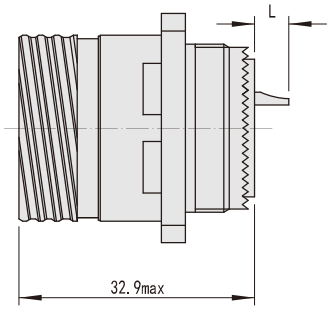
Dimensions with different contacts			Housing size A–B	Shell size C–D–E–F–G–H–J
L2	With 22D# pin	min	10.52	10.34
		max	11.46	11.28
	With 22D# socket	min	10.19	10.01
		max	11.46	11.28
	With 20# or 16# pin/socket	min	10.69	10.51
		max	11.63	11.45
L3	With 22D# pin	min	9.48	9.48
		max	10.58	10.58
	With 22D# socket	min	9.15	9.15
		max	10.58	10.58
	With 20# or 16# pin/socket	min	9.65	9.65
		max	10.75	10.75

[Soldering connectors]

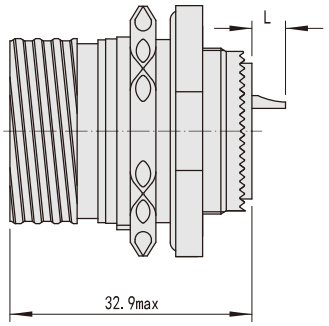
A950/26 Plug



A950/20 receptacle



A950/24 receptacle

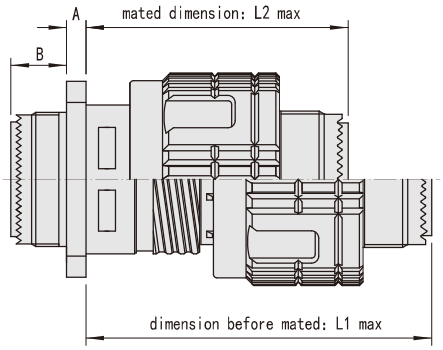


Soldering contact size	L	Inner dia. of soldering cup	AWG
22#	4	ϕ0.9	22
20#	4	ϕ1.1	20
16#	4	ϕ1.9	16
12#	4	ϕ2.9	12
10#	6	ϕ3.6	10

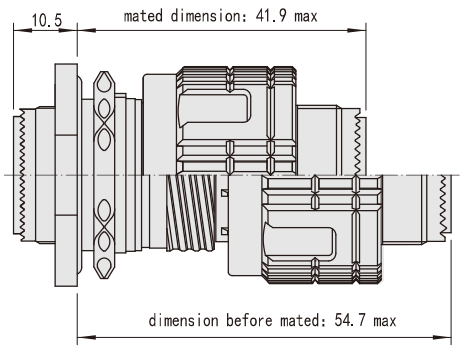
Remarks: coaxial contacts don't have soldering types.

Mated dimension

Square flange receptacle (A950/20) /plug (A950/26)



Jam nut receptacle (A950/24) /plug (A950/26)



Housing size		09(A)	11(B)	13(C)	15(D)	17(E)	19(F)	21(G)	23(H)	25(J)
L1	max	53.2	53.2	53.2	53.2	53.2	53.2	52.4	52.4	52.4
L2	max	40.3	40.3	40.3	40.3	40.3	40.3	39.6	39.6	39.6
A	max	2.5	2.5	2.5	2.5	2.5	2.5	3.2	3.2	3.2
B	max	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6	9.6

Sealing cap for plug and receptacle

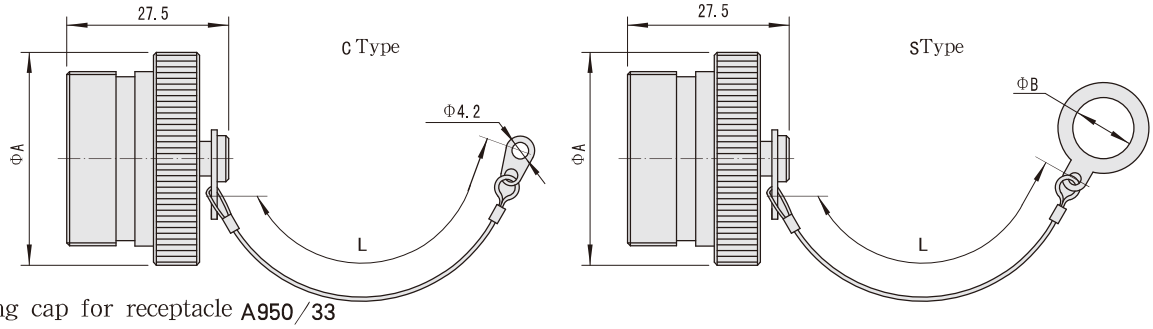
[Ordering information]

Basic series	A950/	32	W	09	N
Type	32－sealing cap for plug 33－sealing cap for receptacle				
Housing plating	W－ aluminum alloy, olive green cadmium plating Z－aluminum alloy, zinc and nickel plating K－stainless steel passive				
Housing size	09–11–13–15–17–19–21–23–25				
Chain type	R– stainless steel string with connecting lug (for square flange receptacle) C– nylon string with connecting lug (for square flange receptacle) N– stainless steel string with ring (for jam nut receptacle) S– nylon string with ring (for jam nut receptacle)				

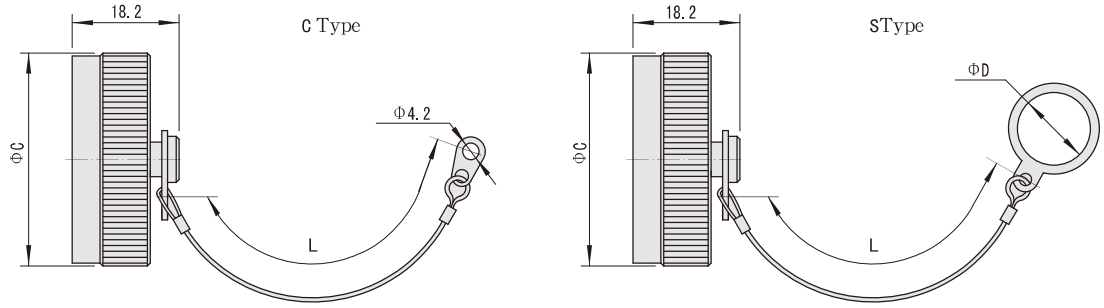
Remarks: The sealing cap is ordered separately, not supplied with the connectors.

[Outline dimension]

sealing cap for plug A950/32



sealing cap for receptacle A950/33



Housing size		09(A)	11(B)	13(C)	15(D)	17(E)	19(F)	21(G)	23(H)	25(J)
A	max	22.86	25.40	30.48	33.02	36.83	39.37	43.18	44.45	48.26
B	min	12.92	17.78	19.27	22.60	27.5	30.5	31.97	35	38.32
C	max	22.86	27.86	30.48	31.75	36.83	38.10	41.91	44.45	48.26
D	min	17.78	22.7	25.62	28.95	32.4	35.30	38.32	43	44.45
L	max	127.00	127.00	127.00	127.00	127.00	127.00	127.00	127.00	127.00

Backshell

This type of accessories are used to fix the wire and cable, falling to two categories: straight and elbow. Both categories have crimping plates installed inside, which can clamp the cable and the wire as well as shielding net to realize shielding.

Connector type	Applicable cable accessory type	Applicable cable accessory P/N
A950 series crimping connectors	Non-clamping and non-shielding cable accessory	1、J1784/14
	Non-shielding clamping cable accessor	1、J1784/38
		2、J1784/39
		3、J1784/16
	Shielding and non-clamping cable accessory	1、J1784/20
		2、J1784/69
		3、J1784/88
		4、J1784/90
		5、JY599Ⅲ-FJA00
		6、JY599Ⅲ-FJA90
		7、JY599Ⅲ-xxFJB00F
		8、JY599ⅢxxFJC00
		9、JY599ⅢxxFJE00
	Shielding clamping cable accessory	1、J1784/38-××NB
		2、J1784/18 series (rain-proof)
A950 series soldering connectors	Non-clamping and non-shielding cable accessory	1、J1784/14
	Non-shielding clamping cable accesso	1、J1784/38H
		2、J1784/16H
	Shielding and non-clamping cable access	1、J1784/20
		2、J1784/69
		3、J1784/88
		4、J1784/90
		5、JY599Ⅲ-FJA00
		6、JY599Ⅲ-FJA90
	Shielding clamping cable accessory	1、J1784/18 series (rain-proof)
A950/18, A950/38, A950/19, A950/39 are applicable for A950 series soldering and crimping connectors.		

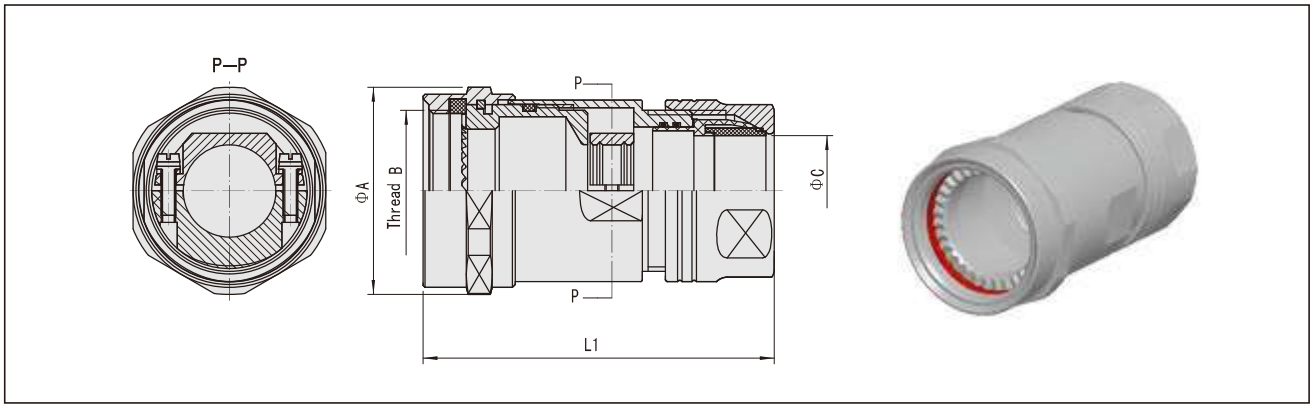
[Ordering information]

Basic series	A950/	18–	15	W	01
Type	38—straight shielding accessory 39 - elbow shielding accessory 18—straight shielding sealing accessory 19 - elbow shielding sealing accessory				
Shell size	09–11–13–15–17–19–21–23–25				
Shell plating	W—aluminum alloy, olive green cadmium plating Z—aluminum alloy, zinc and nickel plating K—stainless steel passive				
Lead–out code	Sealing accessory：01、02…… Non–sealing accessory：blank				

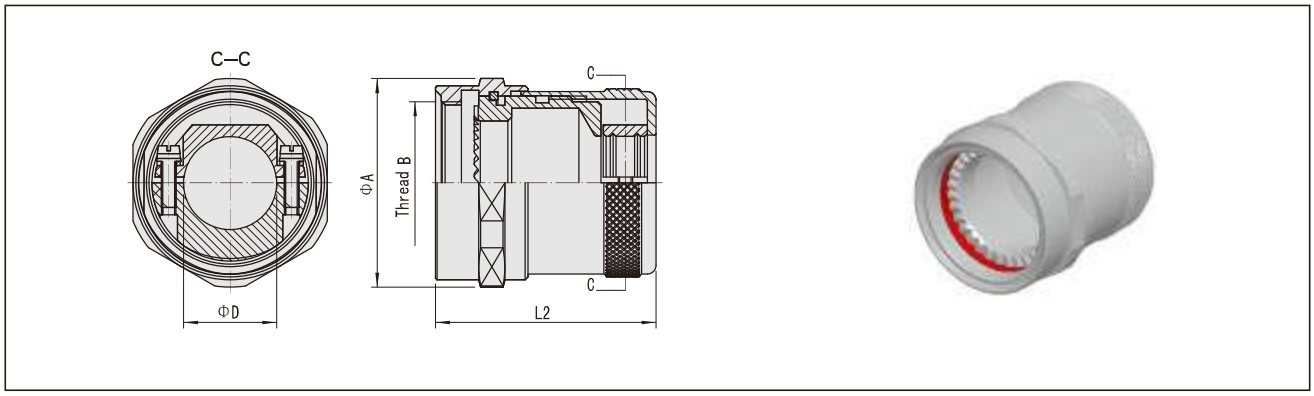
Remarks：This accessory type is not applicable for A950/20 front–mounting receptacle.

[Outline dimension]

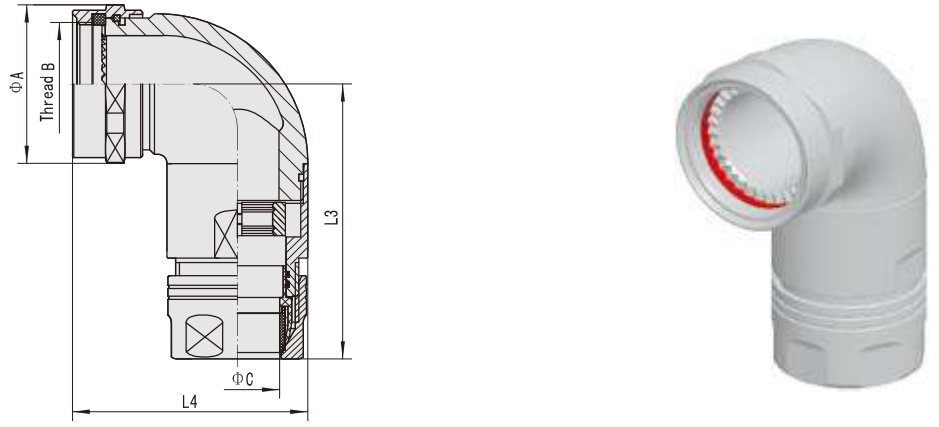
● A950/18–XXXX



● A950/38–XXXX



● A950/19—XXXX



● A950/39—XXXX

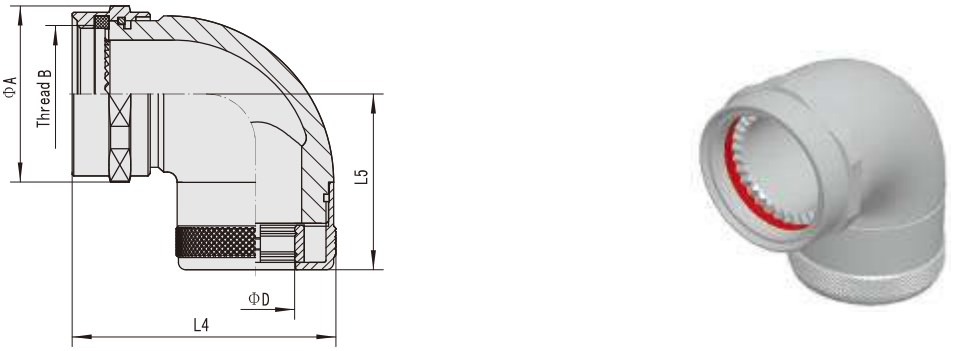


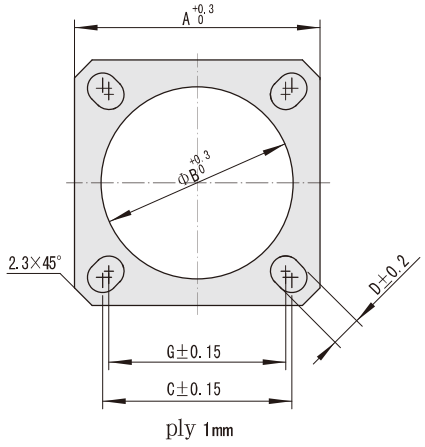
Figure 1

Hosuing size	A	Thread B	L1 max	L2 max	L3 max	L4 max	L5 max	Shielding sealing accessory lead—out dia. C code	Shielding accessory lead—out dia. D (max)
09	19	M12×1	47.6	28.7	47.4	39.2	26	01、02	4
11	22.2	M15×1	49.6	30.2	48.0	40.7	26	01、02、03	7
13	25.4	M18×1	52.1	31.7	52.0	46.2	29	01、02、03	10
15	29.6	M22×1	57.7	33.2	56.0	48.0	29	01、02、03	12
17	32.8	M25×1	59.7	35.2	60.0	51.7	33	01、02、03	14
19	36	M28×1	64.7	38.3	62.0	54.5	33	01、02、03	16
21	39.2	M31×1	68.0	41.5	68.0	56.7	39	01、02、03	19
23	42.4	M34×1	71.0	44.6	68.0	59.2	39	01、02、03	22
25	45.6	M37×1	73.1	46.7	73.0	64.7	44	01、02、03	25

Figure 2

Housing size	Lead-out code	Lead-out dimension range (C)
09	01	3.5~5.5
	02	2~4
11	01	5~7.5
	02	3.5~5.5
13	01	7.5~10.5
	02	5~7.5
	03	3.5~5.5
15	01	8.5~12
	02	7.5~10.5
	03	5~7.5
17	01	10.5~15
	02	8.5~12
	03	7.5~10.5
19	01	13.5~18
	02	10.5~15
	03	8.5~12
21	01	16.5~21
	02	13.5~18
	03	10.5~15
23	01	18.5~23.5
	02	16.5~21
	03	13.5~18
25	01	21.5~26.5
	02	18.5~23.5
	03	16.5~21

Square flange cushion



Housing size	Square flange cushion code	Conductive square flange cushion code	A	B	C	G	D
A	21E8-701-885	21E8-701-886	23.9	16.1	18.26	15.09	3.3
B	21E8-701-887	21E8-701-888	26.3	19.2	20.62	18.26	3.3
C	21E8-701-889	21E8-701-890	28.7	22.4	23.01	20.62	3.3
D	21E8-701-891	21E8-701-892	31.1	25.6	24.61	23.01	3.3
E	21E8-701-893	21E8-701-894	33.4	30.4	26.97	24.61	3.3
F	21E8-701-895	21E8-701-896	36.6	32.0	29.36	26.97	3.3
G	21E8-701-897	21E8-701-898	39.8	34.9	31.75	29.36	3.3
H	21E8-701-899	21E8-701-900	43.0	38.3	34.93	31.75	4.0
J	21E8-701-901	21E8-701-902	46.1	41.4	38.10	34.93	4.0

Remarks: the connectors are supplied with normal type square flange cushion. If customers need conductive square flange cushion, please state it in ordering. (If customers require a different part number, we will add C2 at the end of the original part number)

A950 series hermetic connector

Brief introduction

A950 series hermetic connector is designed according to GJB599A (MIL-DTL-38999K) standard, and can be divided into 2 main types: sealing connector and wall-through sealing connector. In A950 series, the contact is glass sealed into receptacle shell or adaptor shell, thus the connector has excellent hermetic performance. The mated plug remains the normal non-sealing types.

A950 series sealing receptacle and wall-through sealing receptacle types are listed below:

Receptacle type	Mounting type	Part number	Feature
A950 series sealing receptacle	Square flange mounting	A950/21 $^{Y}_{N}$-P	Stainless steel shell; screw coupling; Contact: tin soldering pin
	Jam nut mounting	A950/23 $^{Y}_{N}$-P	
A950 series wall-through sealing receptacle	Square flange mounting	A950/20 $^{Y}_{N}$-C	Stainless steel shell; screw coupling; Contact: wall-through pin
	Jam nut mounting	A950/24 $^{Y}_{N}$-C	

Main technical characteristics

[Mechanical]

——Housing: stainless steel
——Plating: Y class: stainless steel passive
N class: electroless nickel plating
——Insulator: melten glass
——Grommet and seal: Silicon rubber
——Contact: fernico, nickel alloy with gold plating, soldered termination
——Endurance: 1000 cycles
——Shock: At 3 ms half sinusoid, peak value of acceleration: 300g
——Vibration:Sinusoid vibration: frequency 10-2000Hz, acceleration: 294m/s^2
Random vibration: frequency 100-1000Hz, density of power chart: 1g^2/Hz

[Environmental]

——Operating temperature: -65℃ ~ +200℃
——Hermetic: differential pressure 1 bar, air leakage attenuation ≤1×10^{-3} Pa cm^3/ s

[Electrical]

——Withstanding voltage: V

Service rating*	M	N	I	II
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000

* Different insert arrangements have different service rating. Please see the insert arrangement table.

——EMI shielding:
100MHz ~ 1GHz, minimum attenuation 85dB
1GHz ~ 10GHz, minimum attenuation 50dB

——Contact resistance and rating current:

Contact size	Operating dia mm	Contact resistance(mΩ)	Rating current(A)
22D	Φ0.76	≤25.0	5
20#	Φ1.00	≤10.0	7.5
16#	Φ1.60	≤5.0	13
12#	Φ2.40	≤3.0	23

——Insulation resistance: normal≥5000MΩ

Ordering information

Basic series	A950/	21	Y	E	35	P	N
Type	21-square flange sealing receptacle 23-jam nut sealing receptacle 20-wall-through sealing square flange receptacle 24-wall-through sealing jam nut receptacle						
Housing plating	Y-stainless steel passive N-electroless nickel plating						
Housing size Housing code	A to J 09 11 13 15 17 19 21 23 25 A B C D E F G H J						
Insert arrangement	see insert arrangement table for details						
Contact	For sealing receptacle: P-pin For wall-through sealing receptacle: C-wall-through pin						
Polarization	N-normal A, B, C, D, E-alternative						

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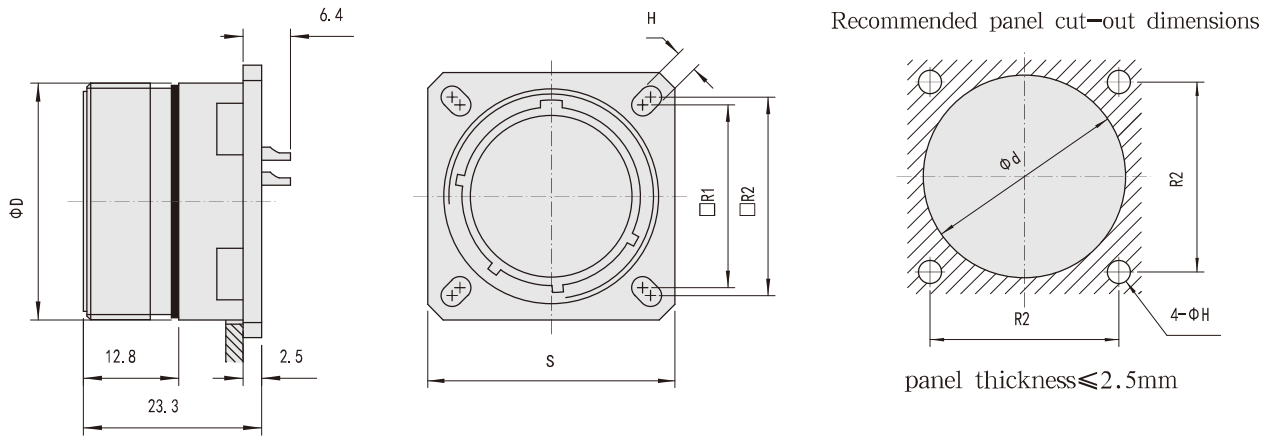
Remarks:
1、The two plugs mated with wall-through sealing receptacle are both filled with sockets. One is left plug, and the other one is right plug. When customers placing orders, plus "-U" at the end of the original plug part number to state left plug, and keep the original part number for right plug.

[Part number example]

A950/21YE35PN
A950 series square flange sealing receptacle, stainless steel passive shell, E# shell size, 35# insert arrangement, filled with pins, N polarization
A950/20YE35CN
A950 series wall-through sealing square flange receptacle, stainless steel passive shell, E# shell size, 35# insert arrangement, filled with wall-through pins, N polarization.

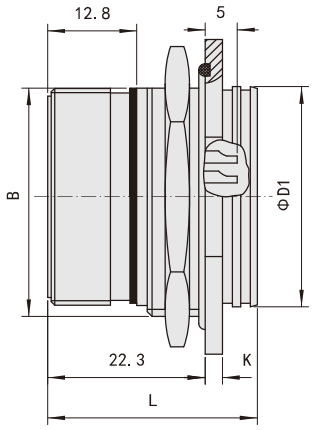
Outline dimension

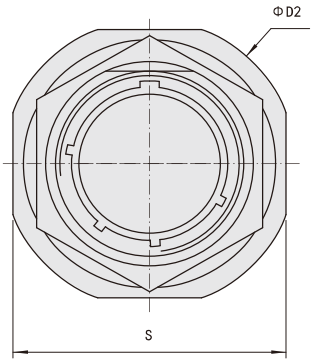
[A950/21square flange sealing receptacle]



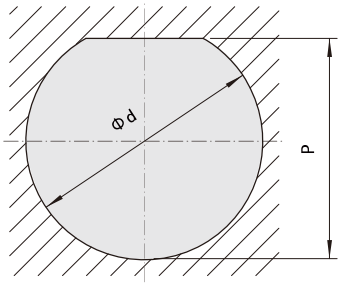
Housing size	Housing code	D	R1	R2	S	H	d
9	A	15.88	15.09	18.26	23.8	3.25	16.66
11	B	19.05	18.26	20.62	26.2	3.25	20.22
13	C	22.23	20.62	23.01	28.6	3.25	23.42
15	D	25.40	23.01	24.61	31.0	3.25	26.59
17	E	30.16	24.61	26.97	33.3	3.25	30.96
19	F	31.80	26.97	29.36	36.5	3.25	32.94
21	G	34.73	29.36	31.75	39.7	3.25	36.12
23	H	38.10	31.75	34.93	42.9	3.90	39.29
25	J	41.20	34.93	38.10	46.0	3.90	42.47

[A950/23 jam nut sealing receptacle]





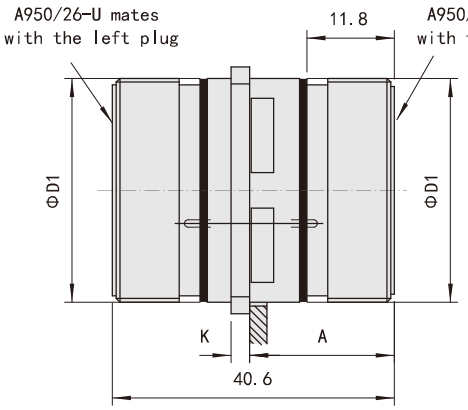
Recommended panel cut-out dimensions

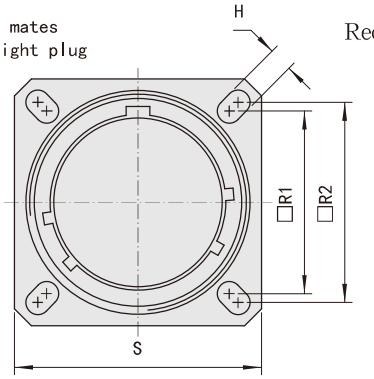


panel thickness≤3mm

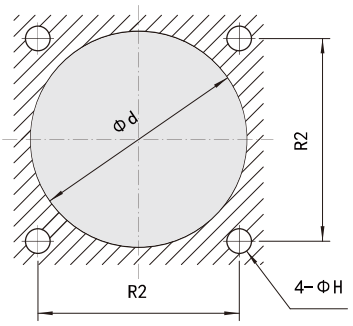
Housing size	Housing code	D1	D2	S	B	L	K	d	p
9	A	16.6	30.5	27.0	16.5	29.2	2.6	17.70	16.99
11	B	19.7	35.2	31.8	19.3	29.2	2.6	20.88	19.53
13	C	23.0	38.4	34.9	24.0	29.3	2.6	25.58	24.26
15	D	26.2	41.6	38.1	27.2	29.3	2.6	28.80	27.53
17	E	29.3	44.8	41.3	30.4	29.3	2.6	31.98	30.68
19	F	32.5	49.3	46.0	33.4	30.1	3.4	35.15	33.86
21	G	35.7	52.7	49.2	36.5	30.1	3.4	38.28	37.06
23	H	38.9	55.9	52.4	39.7	30.1	3.4	41.50	40.24
25	J	42.0	59.0	55.6	42.8	30.1	3.4	44.68	43.41

[A950/20 wall-through sealing square flange receptacle]





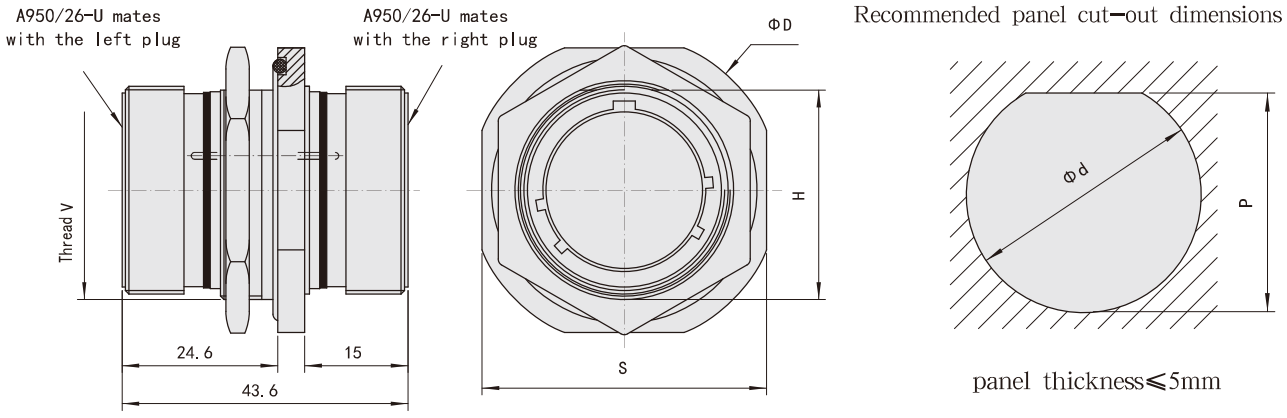
Recommended panel cut-out dimensions



panel thickness≤5mm

Housing size	Housing code	D1	A	K	R1	R2	S	H	d
9	A	15.88	22.5	2.1	15.09	18.26	23.8	3.25	16.66
11	B	19.05	22.5	2.1	18.26	20.62	26.2	3.25	20.22
13	C	22.23	22.5	2.1	20.62	23.01	28.6	3.25	23.42
15	D	25.40	22.5	2.1	23.01	24.61	31.0	3.25	26.59
17	E	30.16	22.5	2.1	24.61	26.97	33.3	3.25	30.96
19	F	31.80	22.5	2.1	26.97	29.36	36.5	3.25	32.94
21	G	34.73	21.7	2.8	29.36	31.75	39.7	3.25	36.12
23	H	38.10	21.7	2.8	31.75	34.93	42.9	3.90	39.29
25	J	41.20	21.7	2.8	34.93	38.10	46.0	3.90	42.47

[A950/24 wall-through sealing jam nut receptacle]



Housing size	Housing code	D	S	H	Thread V	d	p
9	A	30.5	27.0	16.5	0.6875-24UNEF	17.70	16.99
11	B	35.2	31.8	19.3	0.8125-20UNEF	20.88	19.53
13	C	38.4	34.9	24.0	1.0000-20UNEF	25.58	24.26
15	D	41.6	38.1	27.2	1.1250-18UNEF	28.80	27.53
17	E	44.8	41.3	30.4	1.2500-18UNEF	31.98	30.68
19	F	49.3	46.0	33.4	1.3750-18UNEF	35.15	33.86
21	G	52.7	49.2	36.5	1.5000-18UNEF	38.28	37.06
23	H	55.9	52.4	39.7	1.6250-18UNEF	41.50	40.24
25	J	59.0	55.6	42.8	1.7500-20UN	44.68	43.41

GJB599 series configuration layout index

NO.	Configuration code				Service rating	Contact No.	Contact size and No.							
	I	II	III	IV			22D	20	16	12	12coaxial	10	8	8 dual coaxial
1	09–35	08–35	A35		M	6	6							
2	09–98	08–98	A98		I	3		3						
3	11–35	10–35	B35	B35	M	13	13							
4	11–04		B04	B04	I	4		4						
5	11–05	10–05	B05	B05	I	5		5						
6	11–98	10–98	B98	B98	I	6		6						
7	11–99	10–99	B99	B99	I	7		7						
8	11–02		B02	B02	I	2			2					
9	11–01		B01	B01	I	1				1				
10	13–35	12–35	C35	C35	M	22	22							
11	13–98	12–98	C98	C98	I	10		10						
12	13–08	12–08	C08	C08	I	8		8						
13	13–04	12–04	C04	C04	I	4			4					
14	13–03	12–03		C03	II	3			3					
15			C12	C12	N	12	11			1				
16			C50	C50	M	5		4				1		
17			C60	C60	I	6		2	4					
18	15–35	14–35	D35	D35	M	37	37							
19	15–19	14–19	D19	D19	I	19		19						
20	15–18	14–18	D18	D18	I	18		18						
21	15–05	14–05	D05	D05	II	5			5					
22	15–15	14–15	D15	D15	I	15		14	1					
23	15–97	14–97	D97	D97	I	12		8	4					
24	15–03				II	3			1	2				
25	17–35	16–35	E35	E35	M	55	55							
26	17–42				M	42	42							
27	17–26	16–26	E26	E26	I	26		26						
28	17–08	16–08	E08	E08	II	8			8					
29	17–06	16–06	E06	E06	I	6				6				
30	17–05				II	5				5				
31	17–99	16–99	E99	E99	I	23		21	2					
32	17–12				N	12	9				3			
33	17–03				N	3			1			2		
34	17–21					21	17			4				
35	17–30				N	6		3				3		
36				E02	M	39	38							1
37	19–35	18–35	F35	F35	M	66	66							
38	19–45	18–45	F45	F45	M	67	67							
39		18–53			M	53	53							
40	19–32	18–32	F32	F32	I	32		32						
41	19–11	18–11	F11	F11	II	11			11					
42	19–96	18–96			I	9				9				
43	19–28	18–28	F28	F28	I	28		26	2					

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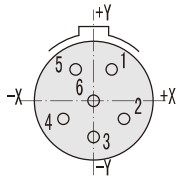
NO.	Configuration code				Service rating	Contact No.	Contact size and No.							
	I	II	III	IV			22D	20	16	12	12coaxial	10	8	8 dual coaxial
44	19–30	18–30	F30	F30	I	30		29	1					
45	19–18		F18	F18	M	18	14							4
46	19–18a				M	18	14						4	
47		18–93	F93	F93	I	32	24	6				2		
48			F05	F05		5		1				4		
49	21–35	20–35	G35	G35	M	79	79							
50	21–02	20–02			M	65	65							
51	21–41	20–41	G41	G41	I	41		41						
52	21–27	20–27	G27	G27	I	27		27						
53	21–25	20–25	G25	G25	I	25		25						
54	21–24	20–24	G24	G24	I	24		24						
55	21–16	20–16	G16	G16	II	16			16					
56	21–11	20–11	G11	G11	II	11				11				
57	21–39	20–39	G39	G39	I	39		37	2					
58	21–15				I	15		13						2
59			G29	G29		29		26			3			
60				G75	N	4								4
61	23–35	22–35	H35	H35	M	100	100							
62	23–55	22–55	H55	H55	I	55		55						
63	23–53	22–53	H53	H53	I	53		53						
64	23–36	22–36	H36	H36	I	36		36						
65	23–34	22–34	H34	H34	I	34		34						
66	23–32	22–32	H32	H32	I	32		32						
67	23–21	22–21	H21	H21	II	21			21					
68	23–97	22–97	H97	H97	I	16			16					
69	23–99	22–99	H99	H99	II	11			11					
70	23–04				I	4							4	
71	25–35	24–35	J35	J35	M	128	128							
72	25–61	24–61	J61	J61	I	61		61						
73	25–29	24–29	J29	J29	I	29			29					
74	25–19	24–19	J19	J19	I	19				19				
75	25–24	24–24	J24	J24	I	24			12	12				
76	25–43	24–43	J43	J43	I	43		23	20					
77	25–04	24–04	J04	J04	I	56		48	8					
78	25–11		J11	J11		11		2				9		
79	25–20		J20	J20	N	30		10	13		4			3
80	25–46		J46	J46	I	46		40	4					2
81	25–69			J69	M	69	44	15	10					
82	25–99				N	29	20				9			
83	25–32				N	32		16	10			6		
84			J31	J31	N	31		12	12			5		2
85			J93	J93	M	118	110		8					
86				J07	M	99	97							2
87				J08	N	8								8

GJB599 series PCB cut-out dimension (insulator with pins section view)

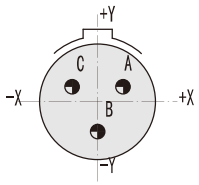
Applicable to GJB 599 Ⅰ、Ⅱ、Ⅲ series PCB products. The contact layout code takes 599 Ⅰ series for example.
PCB cut- out diameter: 22D# min 0.9mm, 20# min 1.0mm, 16# min 1.3mm (for reference)

9-35
(6-22D)



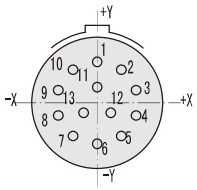
Cavity No	Coordinate	
	X	Y
1	+1.14	+1.98
2	+1.98	-1.14
3	0.00	-2.29
4	-1.98	-1.14
5	-1.14	+1.98
6	0.00	0.00

9-98
(3-20#)



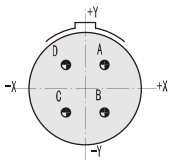
Cavity No	Coordinate	
	X	Y
A	+1.65	+0.97
B	0.00	-1.91
C	-1.65	+0.97

11-35
(13-22D)



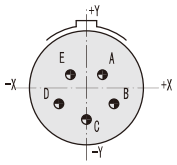
Cavity No	Coordinate		Cavity No	Coordinate	
	X	Y		X	Y
1	0.00	+3.71	8	-3.51	-1.14
2	+2.16	+3.00	9	-3.51	+1.14
3	+3.51	+1.14	10	-2.16	+3.00
4	+3.51	-1.14	11	0.00	+1.42
5	+2.16	-3.00	12	+1.24	-0.89
6	0.00	-3.71	13	-1.24	-0.89
7	-2.16	-3.00			

11-04
(4-20#)



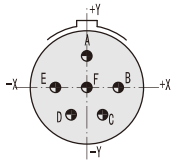
Cavity No	Coordinate	
	X	Y
A	+1.65	+1.65
B	+1.65	-1.65
C	-1.65	-1.65
D	-1.65	+1.65

11-05
(5-20#)



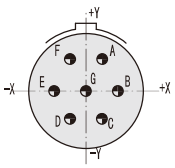
Cavity No	Coordinate	
	X	Y
A	+1.65	+1.42
B	+2.87	-1.65
C	0	-3.30
D	-2.87	-1.65
E	-1.65	+1.42

11-98
(6-20#)



Cavity No	Coordinate	
	X	Y
A	0.00	+3.30
B	+3.30	0.00
C	+1.65	-2.87
D	-1.65	-2.87
E	-3.30	0.00
F	0.00	0.00

11-99
(7-20#)



Cavity No	Coordinate	
	X	Y
A	+1.65	+2.87
B	+3.30	0.00
C	+1.65	-2.87
D	-1.65	-2.87
E	-3.30	0.00
F	-1.65	+2.87
G	0.00	0.00

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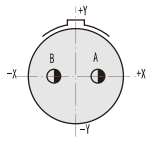
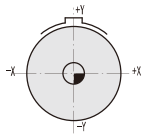
11—02
(2—16#)



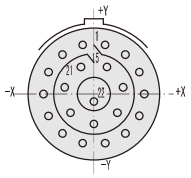
Cavity No	Coordinate	
	X	Y
A	+2.41	0.00
B	−2.41	0.00

11—01
(1—12#)



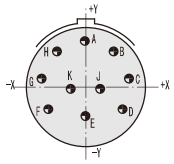
Cavity No	Coordinate	
	X	Y
A	0.00	0.00

13—35
(22—22D)



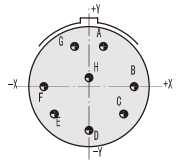
Cavity No	Coordinate		Cavity No	Coordinate		Cavity No	Coordinate	
	X	Y		X	Y		X	Y
1	+1.14	+5.00	9	−3.20	−4.01	17	+2.36	−1.91
2	+3.20	+4.01	10	−4.62	−2.24	18	0.00	−3.05
3	+4.62	+2.24	11	−5.16	0.00	19	−2.36	−1.91
4	+5.16	0.00	12	−4.62	+2.24	20	−2.97	+0.66
5	+4.62	−2.24	13	−3.20	+4.01	21	−1.14	+2.72
6	+3.20	−4.01	14	−1.14	+5.00	22	0.00	−0.76
7	+1.14	−5.00	15	+1.14	+2.72			
8	−1.14	−5.00	16	+2.97	+0.66			

13—98
(10—20#)



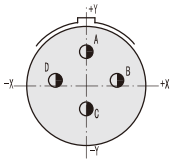
Cavity No	Coordinate		Cavity No	Coordinate	
	X	Y		X	Y
A	0.00	+4.95	F	−4.17	−2.67
B	+3.18	+3.81	G	−4.90	+0.76
C	+4.90	+0.76	H	−3.18	+3.81
D	+4.17	−2.67	J	+1.65	−0.38
E	0.00	−3.43	K	−1.65	−0.38

13—08
(8—20#)



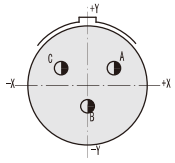
Cavity No	Coordinate		孔位序号	Coordinate	
	X	Y		X	Y
A	+1.65	+3.99	E	−3.05	−3.05
B	+4.32	0.00	F	−4.32	0.00
C	+3.05	−3.05	G	−1.65	+3.99
D	0.00	−4.32	H	0.00	+1.12

13—04
(4—16#)



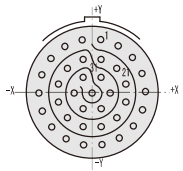
Cavity No	Coordinate	
	X	Y
A	0.00	+3.81
B	+3.71	+0.89
C	0.00	−2.11
D	−3.71	+0.89

13—03
(3—16#)



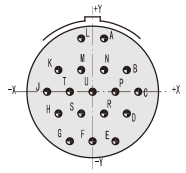
Cavity No	Coordinate	
	X	Y
A	+2.39	+1.47
B	0.00	−2.82
C	−2.39	+1.47

15–35
(37–22D)



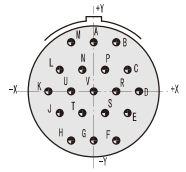
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	+1.14	+6.65	14	−6.76	−0.25	27	−4.32	−1.27
2	+3.12	+5.51	15	−6.45	+2.03	28	−4.32	+1.02
3	+5.36	+4.06	16	−5.36	+4.06	29	−3.12	+3.02
4	+6.45	+2.03	17	−3.12	+5.51	30	−1.14	+4.37
5	+6.76	−0.25	18	−1.14	+6.65	31	+1.14	+1.88
6	+6.27	−2.49	19	+1.14	+4.37	32	+2.29	−0.10
7	+5.08	−4.45	20	+3.12	+3.02	33	+1.14	−2.08
8	+3.30	−5.89	21	+4.32	+1.02	34	−1.14	−2.08
9	+1.14	−6.65	22	+4.32	−1.27	35	−2.29	−0.10
10	−1.14	−6.65	23	+3.12	−3.23	36	−1.14	+1.88
11	−3.30	−5.89	24	+1.14	−4.37	37	0.00	−0.10
12	−5.08	−4.45	25	−1.14	−4.37			
13	−6.27	−2.49	26	−3.12	−3.23			

15–18
(18–20#)



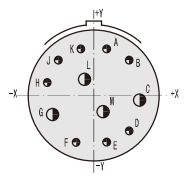
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.65	+6.40	H	−4.95	−2.87	R	+1.65	−2.87
B	+4.95	+2.87	J	−6.60	0.00	S	−1.65	−2.87
C	+6.60	0.00	K	−4.95	+2.87	T	−3.30	0.00
D	+4.95	−2.87	L	−1.65	+6.40	U	0.00	0.00
E	+3.30	−5.72	M	−1.65	+2.87			
F	0.00	−5.72	N	+1.65	+2.87			
G	−3.30	−5.72	P	+3.30	0.00			

15–19
(19–20#)



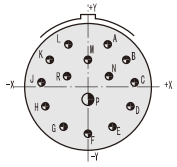
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0.00	+5.72	H	−3.30	−5.72	R	+3.30	0.00
B	+3.30	+5.72	J	−4.95	−2.87	S	+1.65	−2.87
C	+4.95	+2.87	K	−6.60	0.00	T	−1.65	−2.87
D	+6.60	0.00	L	−4.95	+2.87	U	−3.30	0.00
E	+4.95	−2.87	M	−3.30	+5.72	V	0.00	0.00
F	+3.30	−5.72	N	−1.65	+2.87			
G	0.00	−5.72	P	+1.65	+2.87			

15–97
(8–20#, 4–16#)



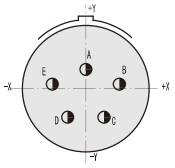
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.65	+5.94	G	−5.26	−2.41
B	+4.52	+4.52	H	−5.94	+1.65
C	+5.84	−0.58	J	−4.52	+4.52
D	+4.52	−4.52	K	−1.65	+5.94
E	+1.65	−5.94	L	−1.19	+2.06
F	−2.26	−5.97	M	+1.19	−2.06

15–15
(14–20#，1–16#)



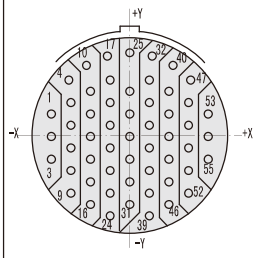
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.54	+5.72	J	−6.20	+0.36
B	+5.13	+3.56	K	−5.13	+3.56
C	+6.20	+0.36	L	−2.54	+5.72
D	+5.54	−2.87	M	0.00	+3.56
E	+3.20	−5.31	N	+2.79	+1.02
F	0.00	−6.22	P	0.00	−1.96
G	−3.20	−5.31	R	−2.79	+1.02
H	−5.54	−2.87			

15–05
(5–16#)



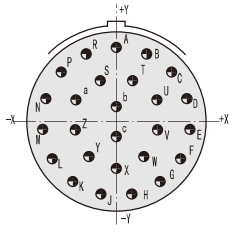
Cavity No	Coordinate X	Coordinate Y
A	0.00	+2.54
B	+4.42	+0.61
C	+2.39	−3.76
D	−2.39	−3.76
E	−4.42	+0.61

17–35
(55–22D)



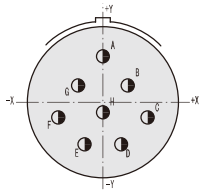
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	−7.92	+2.18	20	−1.98	+1.04	39	+1.98	−8.10
2	−7.92	−0.10	21	−1.98	−1.24	40	+4.37	+7.09
3	−7.92	−2.39	22	−1.98	−3.53	41	+3.96	+4.47
4	−6.15	+5.61	23	−1.98	−5.82	42	+3.96	+2.18
5	−5.94	+3.33	24	−1.98	−8.10	43	+3.96	−0.10
6	−5.94	+1.04	25	0.00	+8.36	44	+3.96	−2.39
7	−5.94	−1.24	26	0.00	+4.47	45	+3.96	−4.67
8	−5.94	−3.53	27	0.00	+2.18	46	+3.96	−6.96
9	−5.94	−5.82	28	0.00	−0.10	47	+6.15	+5.61
10	−4.37	+7.09	29	0.00	−2.39	48	+5.94	+3.33
11	−3.96	+4.47	30	0.00	−4.67	49	+5.94	+1.04
12	−3.96	+2.18	31	0.00	−6.96	50	+5.94	−1.24
13	−3.96	−0.10	32	+2.26	+8.03	51	+5.94	−3.53
14	−3.96	−2.39	33	+1.98	+5.61	52	+5.94	−5.82
15	−3.96	−4.67	34	+1.98	+3.33	53	+7.92	+2.18
16	−3.96	−6.96	35	+1.98	+1.04	54	+7.92	−0.10
17	−2.26	+8.03	36	+1.98	−1.24	55	+7.92	−2.39
18	−1.98	+5.61	37	+1.98	−3.53			
19	−1.98	+3.33	38	+1.98	−5.82			

17–26
(26–20#)



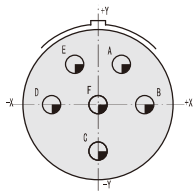
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0.00	+8.15	K	−4.80	−6.60	V	+4.52	−0.91
B	+3.33	+7.44	L	−7.06	−4.09	W	+3.02	−3.84
C	+6.07	+5.44	M	−8.10	−0.86	X	0.00	−5.16
D	+7.75	+2.51	N	−7.75	+2.51	Y	−3.02	−3.84
E	+8.10	−0.86	P	−6.07	+5.44	Z	−4.52	−0.91
F	+7.06	−4.09	R	−3.33	+7.44	a	−4.45	+2.39
G	+4.80	−6.60	S	−1.78	+4.50	b	0.00	+1.65
H	+1.70	−7.98	T	+1.78	+4.50	c	0.00	−1.65
J	−1.70	−7.98	U	+4.45	+2.39			

17–08
(8–16#)



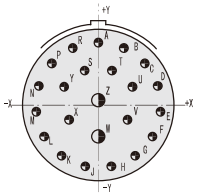
Cavity No	Coordinate X	Coordinate Y
A	0.00	+5.99
B	+3.25	+2.18
C	+5.84	−1.98
D	+2.39	−5.49
E	−2.39	−5.49
F	−5.84	−1.98
G	−3.25	+2.18
H	0.00	−1.32

17–06
(6–12#)



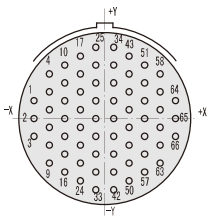
Cavity No	Coordinate X	Coordinate Y
A	+3.07	+5.31
B	+6.12	0.00
C	0.00	−6.12
D	−6.12	0.00
E	−3.07	+5.31
F	0.00	0.00

17–99
(21–20#, 2–16#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0.00	+8.15	J	−1.70	−7.98	T	+1.78	+4.50
B	+3.33	+7.44	K	−4.80	−6.60	U	+4.45	+2.39
C	+6.07	+5.44	L	−7.06	−4.09	V	+3.81	−1.91
D	+7.75	+2.51	M	−8.10	−0.86	W	0.00	−4.09
E	+8.10	−0.86	N	−7.75	+2.51	X	−3.81	−1.91
F	+7.06	−4.09	P	−6.07	+5.44	Y	−4.45	+2.39
G	+4.80	−6.60	R	−3.33	+7.44	Z	0.00	+0.64
H	+1.70	−7.98	S	−1.78	+4.50			

19–35
(66–22D)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	−9.07	+2.29	23	−3.12	−5.72	45	+3.12	+3.43
2	−9.07	0	24	−3.12	−8.00	46	+3.12	+1.14
3	−9.07	−2.29	25	−1.14	+9.14	47	+3.12	−1.14
4	−7.09	+5.72	26	−1.14	+6.86	48	+3.12	−3.43
5	−7.09	+3.43	27	−1.14	+4.57	49	+3.12	−5.72
6	−7.09	+1.14	28	−1.14	+2.29	50	+3.12	−8.00
7	−7.09	−1.14	29	−1.14	0	51	+5.11	+6.86
8	−7.09	−3.43	30	−1.14	−2.29	52	+5.11	+4.57
9	−7.09	−5.72	31	−1.14	−4.57	53	+5.11	+2.29
10	−5.11	+6.86	32	−1.14	−6.86	54	+5.11	0
11	−5.11	+4.57	33	−1.14	−9.14	55	+5.11	−2.29
12	−5.11	+2.29	34	+1.14	+9.14	56	+5.11	−4.57
13	−5.11	0	35	+1.14	+6.86	57	+5.11	−6.86
14	−5.11	−2.29	36	+1.14	+4.57	58	+7.09	+5.72
15	−5.11	−4.57	37	+1.14	+2.29	59	+7.09	+3.43
16	−5.11	−6.86	38	+1.14	0	60	+7.09	+1.14
17	−3.12	+8.00	39	+1.14	−2.29	61	+7.09	−1.14
18	−3.12	+5.72	40	+1.14	−4.57	62	+7.09	−3.43
19	−3.12	+3.43	41	+1.14	−6.86	63	+7.09	−5.72
20	−3.12	+1.14	42	+1.14	−9.14	64	+9.07	+2.29
21	−3.12	−1.14	43	+3.12	+8.00	65	+9.07	0
22	−3.12	−3.43	44	+3.12	+5.72	66	+9.07	−2.29

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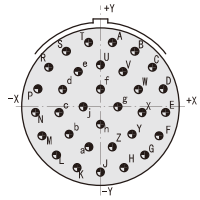
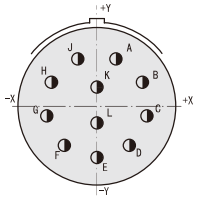
19–32
(32–20#)



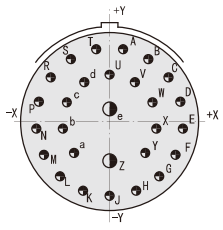
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.68	+8.97	M	−8.15	−4.06	Z	+1.65	−5.61
B	+4.80	+7.75	N	−9.07	−0.84	a	−1.65	−5.61
C	+7.26	+5.51	P	−8.76	+2.49	b	−4.42	−3.84
D	+8.76	+2.49	R	−7.26	+5.51	c	−5.79	−0.84
E	+9.07	−0.84	S	−4.80	+7.75	d	−5.31	+2.41
F	+8.15	−4.06	T	−1.68	+8.97	e	−3.15	+4.90
G	+6.15	−6.73	U	0	+5.84	f	0	+2.44
H	+3.30	−8.51	V	+3.15	+4.90	g	+2.44	0
J	0	−9.12	W	+5.31	+2.41	h	0	−2.44
K	−3.30	−8.51	X	+5.79	−0.84	j	−2.44	0
L	−6.15	−6.73	Y	+4.42	−3.84			

19–11
(11–16#)



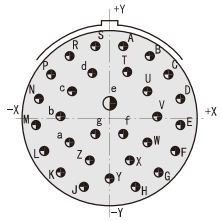
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.67	+6.60	G	−6.99	−1.35
B	+6.35	+3.35	H	−6.35	+3.35
C	+6.99	−1.35	J	−2.67	+6.60
D	+4.55	−5.46	K	0	+2.67
E	0	−7.14	L	0	−2.34
F	−4.55	−5.46			

19–28
(26–20#,2–16#)



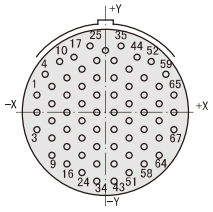
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.68	+8.97	L	−6.15	−6.73	X	+5.79	−0.84
B	+4.80	+7.75	M	−8.15	−4.06	Y	+4.42	−3.84
C	+7.26	+5.51	N	−9.07	−0.84	Z	0	−4.85
D	+8.76	+2.49	P	−8.76	+2.49	a	−4.42	−3.84
E	+9.07	−0.84	R	−7.26	+5.51	b	−5.79	−0.84
F	+8.15	−4.06	S	−4.80	+7.75	c	−5.31	+2.41
G	+6.15	−6.73	T	−1.68	+8.97	d	−3.15	+4.90
H	+3.30	−8.51	U	0	+5.84	e	0	+1.57
J	0	−9.12	V	+3.15	+4.90			
K	−3.30	−8.51	W	+5.31	+2.41			

19–30
(29–20#,1–16#)



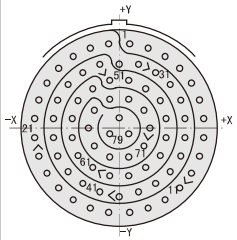
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.65	+8.79	L	−8.00	−4.01	X	+2.44	−5.16
B	+4.72	+7.59	M	−8.92	−0.84	Y	0	−7.37
C	+7.16	+5.33	N	−8.64	+2.36	Z	−2.44	−5.16
D	+8.64	+2.36	P	−7.16	+5.33	a	−4.90	−2.97
E	+8.92	−0.84	R	−4.72	+7.59	b	−5.79	+0.20
F	+8.00	−4.01	S	−1.65	+8.79	c	−4.60	+3.28
G	+5.99	−6.63	T	+2.13	+5.51	d	−2.13	+5.51
H	+3.15	−8.38	U	+4.60	+3.28	e	0	+1.83
J	−3.15	−8.38	V	+5.79	+0.20	f	+1.75	−1.93
K	−5.99	−6.63	W	+4.90	−2.97	g	−1.75	−1.93

19–45
(67–22D#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	−9.07	+2.06	24	−3.12	−8.23	47	+3.12	+0.91
2	−9.07	−0.23	25	−2.24	+9.14	48	+3.12	−1.37
3	−9.07	−2.51	26	0	+8.61	49	+3.12	−3.66
4	−7.72	+5.41	27	−1.14	+6.63	50	+3.12	−5.94
5	−7.09	+3.20	28	−1.14	+4.34	51	+3.12	−8.23
6	−7.09	+0.91	29	−1.14	+2.06	52	+6.20	+7.11
7	−7.09	−1.37	30	−1.14	−0.23	53	+5.11	+4.34
8	−7.09	−3.66	31	−1.14	−2.51	54	+5.11	+2.06
9	−7.09	−5.94	32	−1.14	−4.80	55	+5.11	−0.23
10	−6.20	+7.11	33	−1.14	−7.09	56	+5.11	−2.51
11	−5.11	+4.34	34	−1.14	−9.37	57	+5.11	−4.80
12	−5.11	+2.06	35	+2.24	+9.14	58	+5.11	−7.09
13	−5.11	−0.23	36	+1.14	+6.63	59	+7.72	+5.41
14	−5.11	−2.51	37	+1.14	+4.34	60	+7.09	+3.20
15	−5.11	−4.80	38	+1.14	+2.06	61	+7.09	+0.91
16	−5.11	−7.09	39	+1.14	−0.23	62	+7.09	−1.37
17	−3.96	+7.65	40	+1.14	−2.51	63	+7.09	−3.66
18	−3.12	+5.49	41	+1.14	−4.80	64	+7.09	−5.94
19	−3.12	+3.20	42	+1.14	−7.09	65	+9.07	+2.06
20	−3.12	+0.91	43	+1.14	−9.37	66	+9.07	−0.23
21	−3.12	−1.37	44	+3.96	+7.65	67	+9.07	−2.51
22	−3.12	−3.66	45	+3.12	+5.49			
23	−3.12	−5.94	46	+3.12	+3.20			

21–35
(79–22D)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	+1.35	+10.82	21	−10.85	−1.22	41	−2.49	−8.18	61	−3.40	−5.05
2	+3.71	+10.26	22	−10.85	+1.22	42	−4.67	−7.11	62	−5.28	−3.53
3	+5.89	+9.19	23	−10.31	+3.58	43	−6.55	−5.59	63	−6.02	−1.22
4	+7.77	+7.67	24	−9.27	+5.77	44	−7.90	−3.58	64	−6.02	+1.22
5	+9.27	+5.77	25	−7.77	+7.67	45	−8.43	−1.22	65	−5.28	+3.53
6	+10.31	+3.58	26	−5.89	+9.19	46	−8.43	+1.22	66	−3.40	+5.05
7	+10.85	+1.22	27	−3.71	+10.26	47	−7.90	+3.58	67	−1.22	+3.71
8	+10.85	−1.22	28	−1.35	+10.82	48	−6.55	+5.59	68	+1.22	+3.71
9	+10.31	−3.58	29	0	+8.20	49	−4.67	+7.11	69	+3.18	+2.29
10	+9.27	−5.77	30	+2.49	+8.18	50	−2.49	+8.18	70	+3.94	0
11	+7.77	−7.67	31	+4.67	+7.11	51	−1.22	+6.12	71	+3.18	−2.29
12	+5.89	−9.19	32	+6.55	+5.59	52	+1.22	+6.12	72	+1.22	−3.71
13	+3.71	−10.26	33	+7.90	+3.58	53	+3.40	+5.05	73	−1.22	−3.71
14	+1.35	−10.82	34	+8.43	+1.22	54	+5.28	+3.53	74	−3.18	−2.29
15	−1.35	−10.82	35	+8.43	−1.22	55	+6.02	+1.22	75	−3.94	0
16	−3.71	−10.26	36	+7.90	−3.58	56	+6.02	−1.22	76	−3.18	+2.29
17	−5.89	−9.19	37	+6.55	−5.59	57	+5.28	−3.53	77	0	+1.33
18	−7.77	−7.67	38	+4.67	−7.11	58	+3.40	−5.05	78	+1.22	−0.74
19	−9.27	−5.77	39	+2.49	−8.18	59	+1.22	−6.12	79	−1.22	−0.74
20	−10.31	−3.58	40	0	−8.81	60	−1.22	−6.12			

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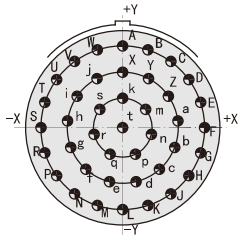
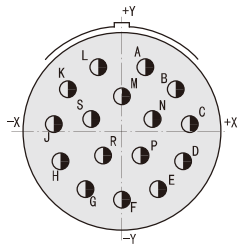
21-41
(41-20#)



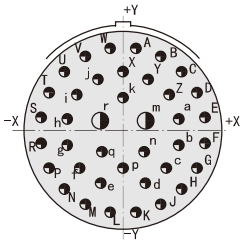
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+10.60	R	−10.09	−3.28	f	−4.78	−5.39
B	+3.28	+10.09	S	−10.60	0	g	−6.73	−2.55
C	+6.23	+8.58	T	−10.09	+3.28	h	−7.15	+0.87
D	+8.58	+6.23	U	−8.58	+6.23	i	−5.92	+4.09
E	+10.09	+3.28	V	−6.23	+8.58	j	−3.35	+6.38
F	+10.60	0	W	−3.28	+10.09	k	0	+3.81
G	+10.09	−3.28	X	0	+7.20	m	+2.98	+2.38
H	+8.58	−6.23	Y	+3.35	+6.38	n	+3.71	−0.85
J	+6.23	−8.58	Z	+5.92	+4.09	p	+1.66	−3.43
K	+3.28	−10.09	a	+7.15	+0.87	q	−1.66	−3.43
L	0	−10.60	b	+6.73	−2.55	r	−3.71	−0.85
M	−3.28	−10.09	c	+4.78	−5.39	s	−2.98	+2.38
N	−6.23	−8.58	d	+1.73	−6.99	t	0	0
P	−8.58	−6.23	e	−1.73	−6.99			

21-16
(16-16#)



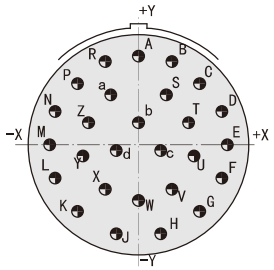
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+3.00	+8.18	G	−4.62	−7.37	N	+3.91	+1.57
B	+6.88	+5.36	H	−7.82	−3.81	P	+2.39	−3.10
C	+8.66	+0.91	J	−8.66	+0.91	R	−2.39	−3.10
D	+7.82	−3.81	K	−6.88	+5.36	S	−3.91	+1.57
E	+4.62	−7.37	L	−3.00	+8.18			
F	0	−8.71	M	0	+4.45			

21-39
(37-20#, 2-16#)



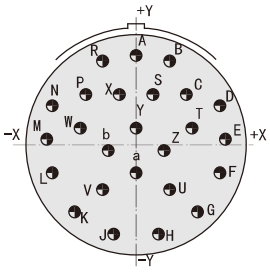
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.65	+10.44	P	−9.42	−4.80	d	+2.84	−6.73
B	+4.80	+9.42	R	−10.44	−1.65	e	−2.84	−6.73
C	+7.47	+7.47	S	−10.44	+1.65	f	−5.51	−4.80
D	+9.42	+4.80	T	−9.42	+4.80	g	−7.11	−1.88
E	+10.44	+1.65	U	−7.47	+7.47	h	−7.11	+1.45
F	+10.44	−1.65	V	−4.80	+9.42	i	−5.89	+4.55
G	+9.42	−4.80	W	−1.65	+10.44	j	−3.20	+6.50
H	+7.47	−7.47	X	0	+7.49	k	0	+4.17
J	+4.80	−9.42	Y	+3.20	+6.50	m	+2.90	+1.22
K	+1.65	−10.44	Z	+5.89	+4.55	n	+2.69	−2.72
L	−1.65	−10.44	a	+7.11	+1.45	p	0	−4.80
M	−4.80	−9.42	b	+7.11	−1.88	q	−2.69	−2.72
N	−7.47	−7.47	c	+5.51	−4.80	r	−2.90	+1.22

21–27
(27–20#)



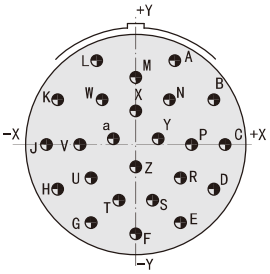
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+10.16	K	−6.99	−7.62	V	+3.81	−5.08
B	+3.81	+9.53	L	−9.53	−3.81	W	0	−6.35
C	+6.99	+6.99	M	−10.16	0	X	−3.81	−5.08
D	+9.53	+3.81	N	−9.53	+3.81	Y	−6.35	−1.27
E	+10.16	0	P	−6.99	+6.99	Z	−5.72	+2.54
F	+9.53	−3.81	R	−3.81	+9.53	a	−3.18	+5.72
G	+6.99	−7.62	S	+3.18	+5.72	b	0	+2.54
H	+2.54	−10.16	T	+5.72	+2.54	c	+2.54	−0.64
J	−2.54	−10.16	U	+6.35	−1.27	d	−2.54	−0.64

21–25
(25–20#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+10.16	K	−6.99	−7.62	V	−3.81	−5.08
B	+3.81	+9.53	L	−9.53	−3.18	W	−6.35	+1.91
C	+5.72	+5.72	M	−10.16	+0.64	X	−1.91	+5.72
D	+9.53	+4.45	N	−9.53	+4.45	Y	0	+1.91
E	+10.16	+0.64	P	−5.72	+5.72	Z	+3.18	−0.64
F	+9.53	−3.18	R	−3.81	+9.53	a	0	−3.18
G	+6.99	−7.62	S	+1.91	+5.72	b	−3.18	−0.64
H	+2.54	−10.16	T	+6.35	+1.91			
J	−2.54	−10.16	U	+3.81	−5.08			

21–24
(24–20#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+4.45	+9.53	J	−10.16	0	T	−1.91	−6.35
B	+8.89	+5.08	K	−8.89	+5.08	U	−5.08	−3.81
C	+10.16	0	L	−4.45	+9.53	V	−6.35	0
D	+8.89	−5.08	M	0	+7.62	W	−3.81	+5.08
E	+5.08	−8.89	N	+3.81	+5.08	X	0	+3.81
F	0	−10.16	P	+6.35	0	Y	+2.54	+0.64
G	−5.08	−8.89	R	+5.08	−3.81	Z	0	−2.54
H	−8.89	−5.08	S	+1.91	−6.35	a	−2.54	+0.64

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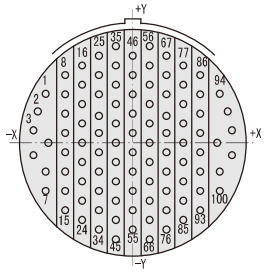
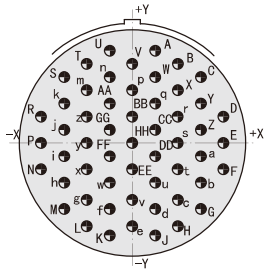
23–35
(100–22D)



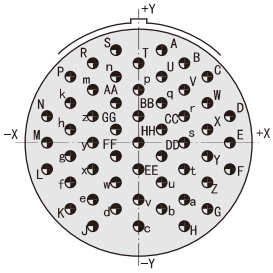
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	−10.87	+6.12	35	−2.11	+12.07	69	+4.22	+6.05
2	−11.86	+3.91	36	−2.11	+9.65	70	+4.22	+3.63
3	−12.40	+1.55	37	−2.11	+7.24	71	+4.22	+1.22
4	−10.54	0	38	−2.11	+4.83	72	+4.22	−1.19
5	−12.40	−1.55	39	−2.11	+2.41	73	+4.22	−3.61
6	−10.87	−3.61	40	−2.11	0	74	+4.22	−6.02
7	−10.87	−6.02	41	−2.11	−2.41	75	+4.22	−8.43
8	−8.43	+8.46	42	−2.11	−4.83	76	+4.22	−10.85
9	−8.43	+6.05	43	−2.11	−7.24	77	+6.32	+9.65
10	−8.43	+3.63	44	−2.11	−9.65	78	+6.32	+7.24
11	−8.43	+1.22	45	−2.11	−12.07	79	+6.32	+4.83
12	−8.43	−1.19	46	0	+10.87	80	+6.32	+2.41
13	−8.43	−3.61	47	0	+8.46	81	+6.32	0
14	−8.43	−6.02	48	0	+6.05	82	+6.32	−2.41
15	−8.43	−8.43	49	0	+3.63	83	+6.32	−4.83
16	−6.32	+9.65	50	0	+1.22	84	+6.32	−7.24
17	−6.32	+7.24	51	0	−1.19	85	+6.32	−9.65
18	−6.32	+4.83	52	0	−3.61	86	+8.43	+8.46
19	−6.32	+2.41	53	0	−6.02	87	+8.43	+6.05
20	−6.32	0	54	0	−8.43	88	+8.43	+3.63
21	−6.32	−2.41	55	0	−10.85	89	+8.43	+1.22
22	−6.32	−4.83	56	+2.11	+12.07	90	+8.43	−1.19
23	−6.32	−7.24	57	+2.11	+9.65	91	+8.43	−3.61
24	−6.32	−9.65	58	+2.11	+7.24	92	+8.43	−6.02
25	−4.22	+10.87	59	+2.11	+4.83	93	+8.43	−8.43
26	−4.22	+8.46	60	+2.11	+2.41	94	+10.87	+6.12
27	−4.22	+6.05	61	+2.11	0	95	+11.86	+3.91
28	−4.22	+3.63	62	+2.11	−2.41	96	+12.40	+1.55
29	−4.22	+1.22	63	+2.11	−4.83	97	+10.54	0
30	−4.22	−1.19	64	+2.11	−7.24	98	+12.40	−1.55
31	−4.22	−3.61	65	+2.11	−9.65	99	+10.87	−3.61
32	−4.22	−6.02	66	+2.11	−12.07	100	+10.87	−6.02
33	−4.22	−8.43	67	+4.22	+10.87			
34	−4.22	−10.85	68	+4.22	+8.46			

23–55
(55–20#)



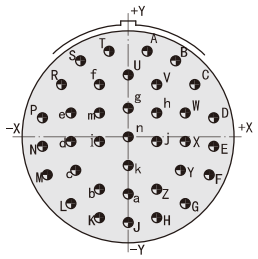
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.84	+11.56	W	+2.84	+8.26	r	+5.72	+3.30
B	+5.72	+9.91	X	+5.72	+6.60	s	+5.72	0
C	+8.53	+8.26	Y	+8.53	+4.95	t	+5.72	−3.30
D	+11.43	+3.30	Z	+8.53	+1.65	u	+2.84	−4.95
E	+11.43	0	a	+8.53	−1.65	v	0	−6.60
F	+11.43	−3.30	b	+8.53	−4.95	w	−2.84	−4.95
G	+8.53	−8.26	c	+5.72	−6.60	x	−5.72	−3.30
H	+5.72	−9.91	d	+2.84	−8.26	y	−5.72	0
J	+2.84	−11.56	e	0	−9.91	z	−5.72	+3.30
K	−2.84	−11.56	f	−2.84	−8.26	AA	−2.84	+4.95
L	−5.72	−9.91	g	−5.72	−6.60	BB	0	+3.30
M	−8.53	−8.26	h	−8.53	−4.95	CC	+2.84	+1.65
N	−11.43	−3.30	i	−8.53	−1.65	DD	+2.84	−1.65
P	−11.43	0	j	−8.53	+1.65	EE	0	−3.30
R	−11.43	+3.30	k	−8.53	+4.95	FF	−2.84	−1.65
S	−8.53	+8.26	m	−5.72	+6.60	GG	−2.84	+1.65
T	−5.72	+9.91	n	−2.84	+8.26	HH	0	0
U	−2.84	+11.56	p	0	+6.60			
V	0	+9.91	q	+2.84	+4.95			

23–53
(53–20#)



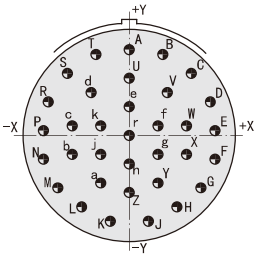
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.84	+11.56	V	+5.72	+6.60	r	+5.72	+3.30
B	+5.72	+9.91	W	+8.53	+4.95	s	+5.72	0
C	+8.53	+8.26	X	+8.53	+1.65	t	+5.72	−3.30
D	+11.43	+3.30	Y	+8.53	−1.65	u	+2.84	−4.95
E	+11.43	0	Z	+8.53	−4.95	v	0	−6.60
F	+11.43	−3.30	a	+5.72	−6.60	w	−2.84	−4.95
G	+8.53	−8.26	b	+2.84	−8.26	x	−5.72	−3.30
H	+5.72	−10.41	c	0	−9.91	y	−5.72	0
J	−5.72	−10.41	d	−2.84	−8.26	z	−5.72	+3.30
K	−8.53	−8.26	e	−5.72	−6.60	AA	−2.84	+4.95
L	−11.43	−3.30	f	−8.53	−4.95	BB	0	+3.30
M	−11.43	0	g	−8.53	−1.65	CC	+2.84	+1.65
N	−11.43	+3.30	h	−8.53	+1.65	DD	+2.84	−1.65
P	−8.53	+8.26	k	−8.53	+4.95	EE	0	−3.30
R	−5.72	+9.91	m	−5.72	+6.60	FF	−2.84	−1.65
S	−2.84	+11.56	n	−2.84	+8.26	GG	−2.84	+1.65
T	0	+9.91	p	0	+6.60	HH	0	0
U	+2.84	+8.26	q	+2.84	+4.95			

23–36
(36–20#)



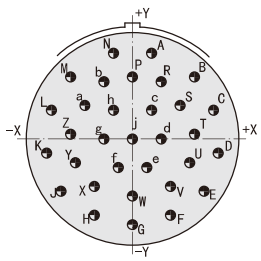
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.54	+11.43	N	−11.43	−1.27	b	−3.81	−6.99
B	+6.35	+10.16	P	−11.43	+2.54	c	−6.99	−4.45
C	+8.89	+6.99	R	−8.89	+6.99	d	−7.62	−0.64
D	+11.43	+2.54	S	−6.35	+10.16	e	−7.62	+3.18
E	+11.43	−1.27	T	−2.54	+11.43	f	−3.81	+6.99
F	+10.80	−5.08	U	0	+8.26	g	0	+3.81
G	+7.62	−8.89	V	+3.81	+6.99	h	+3.81	+3.18
H	+3.81	−10.80	W	+7.62	+3.18	j	+3.81	−0.64
J	0	−11.43	X	+7.62	−0.64	k	0	−3.81
K	−3.81	−10.80	Y	+6.99	−4.45	i	−3.81	−0.64
L	−7.62	−8.89	Z	+3.81	−6.99	m	−3.81	+3.18
M	−10.80	−5.08	a	0	−7.62	n	0	0

23–34
(34–20#)



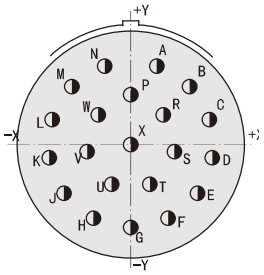
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+11.43	N	−11.43	−3.18	b	−7.62	−2.54
B	+4.45	+10.80	P	−11.43	+0.64	c	−7.62	+1.27
C	+8.26	+8.26	R	−10.80	+4.45	d	−5.08	+5.72
D	+10.80	+4.45	S	−8.26	+8.26	e	0	+3.81
E	+11.43	+0.64	T	−4.45	+10.80	f	+3.81	+1.27
F	+11.43	−3.18	U	0	+7.62	g	+3.81	−2.54
G	+9.53	−6.99	V	+5.08	+5.72	h	0	−3.81
H	+6.35	−9.53	W	+7.62	+1.27	j	−3.81	−2.54
J	+2.54	−11.43	X	+7.62	−2.54	k	−3.81	+1.27
K	−2.54	−11.43	Y	+3.81	−6.35	r	0	0
L	−6.35	−9.53	Z	0	−7.62			
M	−9.53	−6.99	a	−3.81	−6.35			

23–32
(32–20#)



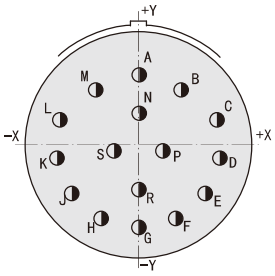
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+2.54	+11.43	M	−8.26	+8.26	Z	−8.26	+0.64
B	+8.26	+8.26	N	−2.54	+11.43	a	−6.35	+4.45
C	+10.8	+3.81	P	0	+8.26	b	−3.81	+7.62
D	+11.43	−1.91	R	+3.81	+7.62	c	+2.54	+3.81
E	+9.53	−6.99	S	+6.35	+4.45	d	+3.81	0
F	+5.08	−10.16	T	+8.26	+0.64	e	+1.91	−3.81
G	0	−11.43	U	+7.62	−3.18	f	−1.91	−3.81
H	−5.08	−10.16	V	+5.08	−6.35	g	−3.81	0
J	−9.53	−6.99	W	0	−7.62	h	−2.54	+3.81
K	−11.43	−1.91	X	−5.08	−6.35	j	0	0
L	−10.8	+3.81	Y	−7.62	−3.18			

23–21
(21–16#)



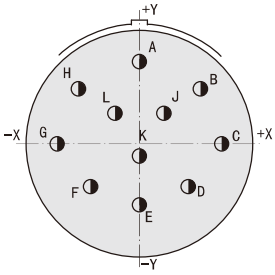
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+3.25	+9.78	H	–4.65	–9.19	R	+4.06	+3.71
B	+7.34	+7.24	J	–8.33	–6.07	S	+5.44	–0.89
C	+9.80	+3.12	K	–10.16	–1.65	T	+2.39	–4.93
D	+10.16	–1.65	L	–9.80	+3.12	U	–2.39	–4.93
E	+8.33	–6.07	M	–7.34	+7.24	V	–5.44	–0.89
F	+4.65	–9.19	N	–3.25	+9.78	W	–4.06	+3.71
G	0	–10.31	P	0	+6.22	X	0	0

23–97
(16–16#)



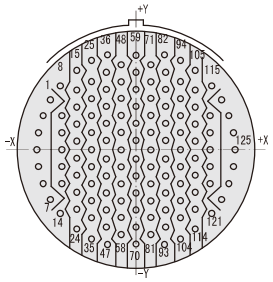
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+8.74	G	0	–10.31	N	0	+3.96
B	+5.33	+6.86	H	–4.65	–9.19	P	+3.05	–0.76
C	+9.80	+3.12	J	–8.33	–6.07	R	0	–5.54
D	+10.16	–1.65	K	–10.16	–1.65	S	–3.05	–0.76
E	+8.33	–6.07	L	–9.80	+3.12			
F	+4.65	–9.19	M	–5.33	+6.86			

23–99
(11–16#)



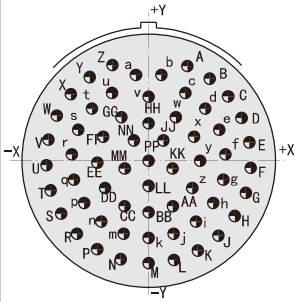
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+10.26	G	–10.26	0
B	+7.62	+6.86	H	–7.62	+6.86
C	+10.26	0	J	+3.05	+3.81
D	+6.10	–5.33	K	0	–1.52
E	0	–7.62	L	–3.05	+3.81
F	–6.10	–5.33			

25–35
(128–22D)



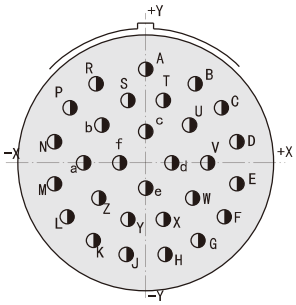
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
1	−12.17	+7.09	33	−6.32	−7.24	65	0	−1.19	97	+6.32	+4.83
2	−13.21	+4.83	34	−6.32	−9.65	66	0	−3.61	98	+6.32	+2.41
3	−13.87	+2.41	35	−6.32	−12.07	67	0	−6.02	99	+6.32	0
4	−14.10	0	36	−4.06	+13.49	68	0	−8.43	100	+6.32	−2.41
5	−13.87	−2.41	37	−4.22	+10.85	69	0	−10.85	101	+6.32	−4.83
6	−13.21	−4.83	38	−4.22	+8.43	70	0	−14.10	102	+6.32	−7.24
7	−12.17	−7.09	39	−4.22	+6.02	71	+2.11	+12.07	103	+6.32	−9.65
8	−10.77	+9.07	40	−4.22	+3.61	72	+2.11	+9.65	104	+6.32	−12.07
9	−10.54	+4.83	41	−4.22	+1.19	73	+2.11	+7.24	105	+8.43	+11.28
10	−10.54	+2.41	42	−4.22	−1.19	74	+2.11	+4.83	106	+8.43	+8.43
11	−10.54	0	43	−4.22	−3.61	75	+2.11	+2.41	107	+8.43	+6.02
12	−10.54	−2.41	44	−4.22	−6.02	76	+2.11	0	108	+8.43	+3.61
13	−10.54	−4.83	45	−4.22	−8.43	77	+2.11	−2.41	109	+8.43	+1.19
14	−10.77	−9.07	46	−4.22	−10.85	78	+2.11	−4.83	110	+8.43	−1.19
15	−8.43	+11.28	47	−4.22	−13.26	79	+2.11	−7.24	111	+8.43	−3.61
16	−8.43	+8.43	48	−2.11	+12.07	80	+2.11	−9.65	112	+8.43	−6.02
17	−8.43	+6.02	49	−2.11	+9.65	81	+2.11	−12.07	113	+8.43	−8.43
18	−8.43	+3.61	50	−2.11	+7.24	82	+4.06	+13.49	114	+8.43	−10.85
19	−8.43	+1.19	51	−2.11	+4.83	83	+4.22	+10.85	115	+10.77	+9.07
20	−8.43	−1.19	52	−2.11	+2.41	84	+4.22	+8.43	116	+10.54	+4.83
21	−8.43	−3.61	53	−2.11	0	85	+4.22	+6.02	117	+10.54	+2.41
22	−8.43	−6.02	54	−2.11	−2.41	86	+4.22	+3.61	118	+10.54	0
23	−8.43	−8.43	55	−2.11	−4.83	87	+4.22	+1.19	119	+10.54	−2.41
24	−8.43	−10.85	56	−2.11	−7.24	88	+4.22	−1.19	120	+10.54	−4.83
25	−6.32	+12.60	57	−2.11	−9.65	89	+4.22	−3.61	121	+10.77	−9.07
26	−6.32	+9.65	58	−2.11	−12.07	90	+4.22	−6.02	122	+12.17	+7.09
27	−6.32	+7.24	59	0	+13.26	91	+4.22	−8.43	123	+13.21	+4.83
28	−6.32	+4.83	60	0	+10.85	92	+4.22	−10.85	124	+13.87	+2.41
29	−6.32	+2.41	61	0	+8.43	93	+4.22	−13.26	125	+14.10	0
30	−6.32	0	62	0	+6.02	94	+6.32	+12.60	126	+13.87	−2.41
31	−6.32	−2.41	63	0	+3.61	95	+6.32	+9.65	127	+13.21	−4.83
32	−6.32	−4.83	64	0	+1.19	96	+6.32	+7.24	128	+12.17	−7.09

25–61
(61–20#)



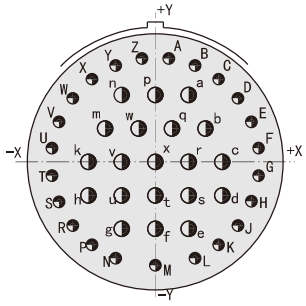
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+4.98	+12.70	Y	−7.98	+11.05	v	0	+8.59
B	+7.98	+11.05	Z	−4.98	+12.70	w	+3.73	+5.66
C	+10.49	+8.71	a	−1.73	+11.53	x	+6.02	+3.10
D	+12.32	+5.84	b	+1.73	+11.53	y	+6.78	−0.25
E	+13.39	+2.57	c	+4.39	+9.22	z	+5.79	−3.53
F	+13.61	−0.76	d	+7.24	+7.19	AA	+3.33	−5.92
G	+12.98	−4.17	e	+9.19	+4.45	BB	0	−6.78
H	+11.53	−7.29	f	+10.13	+1.17	CC	−3.33	−5.92
J	+9.35	−9.93	g	+9.96	−2.24	DD	−5.79	−3.53
K	+6.58	−11.94	h	+8.66	−5.41	EE	−6.78	−0.25
L	+3.40	−13.18	i	+6.38	−7.98	FF	−6.02	+3.10
M	0	−13.64	j	+3.38	−9.63	GG	−3.73	+5.66
N	−3.40	−13.18	k	0	−10.21	HH	0	+5.08
P	−6.58	−11.94	m	−3.38	−9.63	JJ	+2.67	+2.39
R	−9.35	−9.93	n	−6.38	−7.98	KK	+3.43	−1.04
S	−11.53	−7.29	p	−8.66	−5.41	LL	0	−3.35
T	−12.98	−4.17	q	−9.96	−2.24	MM	−3.43	−1.04
U	−13.61	−0.76	r	−10.13	+1.17	NN	−2.67	+2.39
V	−13.39	+2.57	s	−9.19	+4.45	PP	0	0
W	−12.32	+5.84	t	−7.24	+7.19			
X	−10.49	+8.71	u	−4.39	+9.22			

25–29
(29–16#)



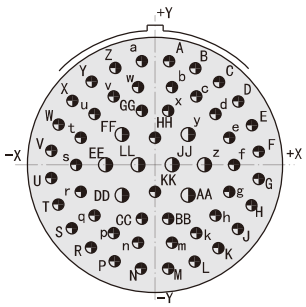
Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	0	+12.22	L	−10.03	−7.04	X	+2.31	−7.37
B	+6.55	+10.31	M	−11.91	−2.77	Y	−2.31	−7.37
C	+10.03	+7.04	N	−11.91	+2.77	Z	−6.10	−4.60
D	+11.91	+2.77	P	−10.03	+7.04	a	−8.10	0
E	+11.91	−2.77	R	−6.55	+10.31	b	−5.79	+4.93
F	+10.03	−7.04	S	−2.31	+8.15	c	0	+4.09
G	+6.68	−10.31	T	+2.31	+8.15	d	+3.40	0
H	+2.31	−11.99	U	+5.79	+4.93	e	0	−3.30
J	−2.31	−11.99	V	+8.10	0	f	−3.40	0
K	−6.68	−10.31	W	+6.10	−4.60			

25–43
(23–20#,20–16#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.75	+13.49	S	−12.52	−5.21	h	−8.74	−4.37
B	+5.16	+12.57	T	−13.49	−1.75	k	−8.74	0
C	+8.23	+10.80	U	−13.49	+1.75	m	−6.55	+4.37
D	+10.77	+8.28	V	−12.52	+5.21	n	−4.37	+8.74
E	+12.52	+5.21	W	−10.77	+8.28	p	0	+8.74
F	+13.49	+1.75	X	−8.23	+10.80	q	+2.18	+4.37
G	+13.49	−1.75	Y	−5.16	+12.57	r	+4.37	0
H	+12.52	−5.21	Z	−1.75	+13.49	s	+4.37	−4.37
J	+10.77	−8.28	a	+4.37	+8.74	t	0	−4.37
K	+8.23	−10.80	b	+6.55	+4.37	u	−4.37	−4.37
L	+5.16	−12.57	c	+8.74	0	v	−4.37	0
M	0	−13.49	d	+8.74	−4.37	w	−2.18	+4.37
N	−5.16	−12.57	e	+4.37	−8.74	x	0	0
P	−8.23	−10.80	f	0	−8.74			
R	−10.77	−8.28	g	−4.37	−8.74			

25–04
(48–20#,8–16#)



Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y	Cavity No	Coordinate X	Coordinate Y
A	+1.75	+13.49	W	−12.52	+5.21	t	−9.58	+3.35
B	+5.16	+12.57	X	−10.77	+8.28	u	−7.90	+6.38
C	+8.23	+10.80	Y	−8.23	+10.80	v	−5.38	+8.74
D	+10.77	+8.28	Z	−5.16	+12.57	w	−2.18	+10.08
E	+12.52	+5.21	a	−1.75	+13.49	x	+1.75	+6.68
F	+13.49	+1.75	b	+2.18	+10.08	y	+4.37	+3.78
G	+13.49	−1.75	c	+5.38	+8.74	z	+6.55	0
H	+12.52	−5.21	d	+7.90	+6.38	AA	+4.37	−3.78
J	+10.77	−8.28	e	+9.58	+3.35	BB	+1.75	−6.68
K	+8.23	−10.80	f	+10.46	0	CC	−1.75	−6.68
L	+5.16	−12.57	g	+9.58	−3.35	DD	−4.37	−3.78
M	+1.75	−13.49	h	+7.90	−6.38	EE	−6.55	0
N	−1.75	−13.49	k	+5.38	−8.74	FF	−4.37	+3.78
P	−5.16	−12.57	m	+2.18	−10.08	GG	−1.75	+6.68
R	−8.23	−10.80	n	−2.18	−10.08	HH	0	+3.35
S	−10.77	−8.28	p	−5.38	−8.74	JJ	+2.18	0
T	−12.52	−5.21	q	−7.90	−6.38	KK	0	−3.35
U	−13.49	−1.75	r	−9.58	−3.35	LL	−2.18	0
V	−13.49	+1.75	s	−10.46	0			

GJB599 Series Hermetically Sealed Connectors

Description

GJB599 I, II and III series sealed connectors are designed according to GJB599A (MIL-DTL-38999K) and the relevant specification sheet in order to meet the hermetic performance. They are composed of hermetic electrical connector and thru-bulkhead sealed connector. The contact is sintered and adapted to the shell of receptacle; therefore the connector has the excellent hermetic performance. The matching plug is the common un-sealed plug,

GJB 599 series hermetic receptacle and thru-bulkhead receptacle are composed of:

Receptacle type	Mounting type	Mark	Feature
GJB599 I series sealed receptacle	square flange mounting	JY27469Y-P	stainless steel shell;quick bayonet coupling;contact: soldered pin,soldered socket
	jam nut mounting	JY27470Y-P	
	solder mounting	JY27471Y-P	
GJB599 I series thru-bulkhead sealed receptacle	square flange mounting	JY27466Y-C	stainless steel shell;quick bayonet coupling;contact: thru-bulkhead pin
	jam nut mounting	JY27468Y-C	
GJB599 II series sealed receptacle	wall square flange mounting (With thread on the rear)	JY27475Y-P	stainless steel shell;quick bayonet coupling;contact: soldered pin
	box square flange mounting (without thread on the rear)	JY27476Y-P	
	jam nut mounting	JY27477Y-P	
	solder mounting	JY27478Y-P	
GJB599III series sealed receptacle	square flange mounting	J599/21 $^{Y}_{N}$-P	stainless steel shell;thread quick coupling;contact: soldered pin,soldered socket
	jam nut mounting	J599/23 $^{Y}_{N}$-P	
	solder mounting	J599/25 $^{Y}_{N}$ P	
	weld mounting	J599/27 $^{Y}_{N}$-P	
GJB599III series thru-bulkhead sealed receptacle	square flange mounting	J599/20 $^{Y}_{N}$-C	stainless steel shell;thread quick coupling;contact: thru-bulkhead pin
	jam nut mounting	J599/24 $^{Y}_{N}$-C	

Application

The product is used to connect current and signal.

Main technical characteristics

[Mechanical]

——Housing: Stainless steel

——Plating: I、II series: E class stainless steel passive
N class nickel electroplating
III series: Y class stainless steel passive
N class nickel electroplating

——Insulator: Fused glass material for the insulator with pin

[Electrical]

——Withstanding voltage: V

Service rating*	M	N	I	II
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000

Note: Different contact layouts have different service rating. Please see the contact layouts.

——EMI shielding:
The minimum attenuation is 85dB at 100MHz~1GHz
The minimum attenuation is 50dB at 1GHz~10GHz

[Environmental]

—— emperature: -65℃ ~ +200℃

—— Hermetic: Air leakage rate ⩽1×10-3 Pa cm^3/s, pressure differential 1 atmosphere

Operating environment

The products can be used in some atrocious environment like strong vibration, rain, sand, damp heat and so on.

—— Sealing ring and grommet: Silicon rubber

—— Contact: Fe-Ni-Co sealing copper, gold plating over nickel, solder termination

—— Durability: 500 cycles

—— Shock: 3ms half-sine wave, acceleration peak value 300g

—— Vibration: Sine: frequency 10~2000Hz
acceleration294m/s^2
Random: frequency 100~1000Hz power spectral density $1g^2/Hz$

—— Contact resistance and rated current:

Contact size	Diameter mm	Contact resistance mΩ	Rated current A
22D	Φ0.76	⩽28	5
20#	Φ1.00	⩽12	7.5
16#	Φ1.60	⩽8.5	13
12#	Φ2.40	⩽5.0	23

——Insulation resistance: normal⩾5000MΩ

Ordering information

[GJB599 Ⅰ Series]

Basic series*	JY	27469	Y	17	N	35	P	N

Type	27469－square flange mounting sealed receptacle 27470－jam nut mounting sealed receptacle 27471－solder mounting sealed receptacle (only N plating) 27466－thru-bulkhead square flange sealed receptacle 27468－thru-bulkhead jam nut sealed receptacle
Housing type	Y－hermetic type
Housing size	09－11－13－15－17－19－21－23－25
Plating	E－stainless steel passive　N－nickel electroplating
Insert arrangement	See Contact Layout
Contact	For hermetic receptacle：P－pin　S－socket For thru-bulkhead sealed receptacle：C－thru-bulkhead pin
Polarization	N－Normal；A/B/C/D－Alternative

Note：

1. GJB599A and MIL-DTL-38999K series ordering information are same except their basic series. JY is for GJB599A and MS is for MIL-DTL-38999K. They can be interchangeable.
2. The two corresponding plugs should be loaded with sockets, one is left plug and the other is right plug, -U should be marked at the P/N of the left plug. The right plug should be marked in the normal manner.

[Code sample]

JY27469Y17E35PN

JY series square flange mounting receptacle, sealed, 17# shell, nickel electroplating, 35 insert arrangement, pin contact, N polarization.

[GJB599 Ⅱ Series]

Basic series*	JY	27475	Y	16	N	35	P	N

Type	27475－wall mounting square flange sealed receptacle 27476－box mounting square flange sealed receptacle 27477－jam nut mounting sealed receptacle 27478－solder mounting sealed receptacle (only N plating)
Housing type	Y－hermetic type
Housing size	08－10－12－14－16－18－20－22－24
Plating	E－stainless steel passive　N－nickel electroplating
Insert arrangement	See the insert arrangement
Contact	P－Pin
Polarization	N－Normal；A/B/C/D－Alternative

Note：GJB599A and MIL-DTL-38999K have the same ordering information except their basic code. JY is for GJB599A and MS is for MIL-DTL-38999K. Both can be interchangeable.

[Code sample]

JY27475Y16N35PN

JY series wall mounting square flange sealed receptacle, hermetic sealed, 16# housing, nickel electroplating, 35#contact layout, pin contact, N polarization

[GJB599Ⅲ Series]

Basic series*	J599/	21	Y	E	35	P	N

Type	21—square flange mounting sealed receptacle 23—jam nut mounting sealed receptacle 25—solder mounting sealed receptacle (only N plating) 27—weld mounting sealed receptacle 20—thru—bulkhead square flange sealed receptacle 24—thru—bulkhead jam nut sealed receptacle
Plating	Y—stainless steel passive N—stainless steel nickel electroplating

Housing size		09	11	13	15	17	19	21	23	25
Housing code	AtoJ	A	B	C	D	E	F	G	H	J

Insert arrangement	See the insert arrangement
Contact	For hermetic receptacle: P—pin S—socket For thru—bulkhead sealed receptacle: C—thru—bulkhead pin
Polarization	N—Normal; A/B/C/D—Alternative

Note: 1. GJB599A and MIL—DTL—38999K have the same ordering information except their basic code. J599 is for GJB599A and D38999 is for MIL—DTL—38999K. both can be interchangeable.
2. The two corresponding plugs should be loaded with sockets, one is left plug and the other is right plug, —U should be added at the end of the code on left plugs while right plugs should be marked in the original manner.

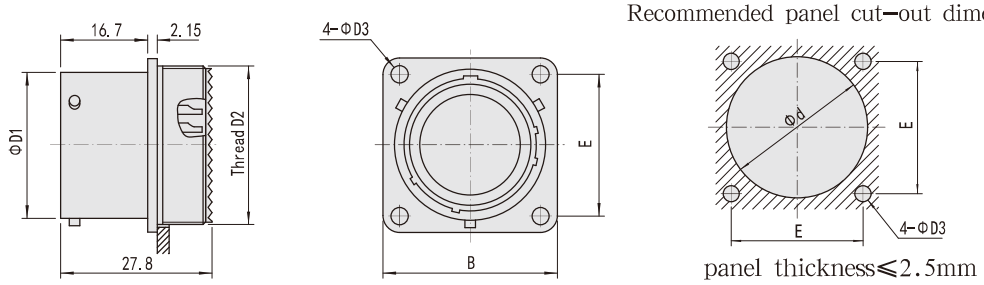
[Code sample]

J599/21YE35PN
J599 series square flange mounting sealed receptacle, passivation—stainless steel, E housing code, pin contact, N polarization

Outline dimension

GJB599 Ⅰ series sealed receptacle

[JY27469 through—wall sealing receptacle]

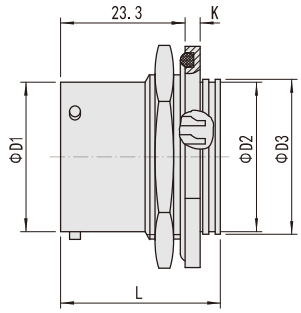


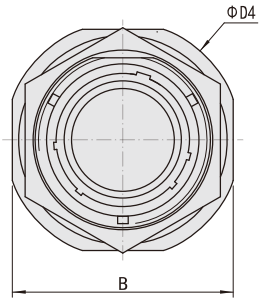
Housing size	D1	Thread D2	D3	B	E	d
9	14.53	0.6875—24UNEF	3.2	23.8	18.26	19.5
11	17.78	0.8125—20UNEF	3.2	26.2	20.62	21.5
13	21.59	0.9375—20UNEF	3.2	28.6	23.02	25.0
15	24.77	1.0625—18UNEF	3.2	31.0	24.62	28.0
17	27.94	1.1875—18UNEF	3.2	33.3	26.98	31.5
19	30.66	1.3125—18UNEF	3.2	36.5	29.36	34.5
21	33.83	1.4375—18UNEF	3.2	39.7	31.76	37.5
23	37.01	1.5625—18UNEF	3.7	42.9	34.92	40.7
25	40.18	1.6875—18UNEF	3.7	46.0	38.10	43.8

Note: The housing size of the accessory should be twice bigger than that of the receptacle when selecting the accessory

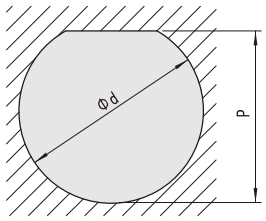
Http://www.zhyf.com Email: sales@zhyf-bj.com

[JY27470 jam nut mounting sealed receptacle]





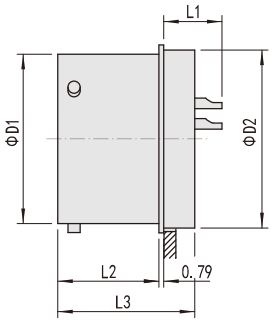
Recommended punching dimensions on panel

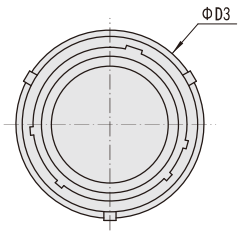


panel thickness≤3mm

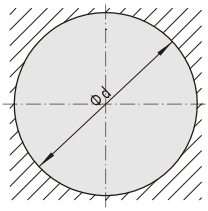
Housing size	D1	D2	D3	D4	L	K	B	d	p
9	14.53	15.29	16.31	30.18	29.9	2.8	26.97	17.7	17.0
11	17.78	18.44	19.46	34.93	29.9	2.8	31.75	21.0	19.6
13	21.59	21.64	22.66	38.10	29.9	2.8	34.93	25.6	24.3
15	24.77	24.84	25.86	41.28	29.9	2.8	38.10	28.8	27.6
17	27.94	27.99	29.01	44.45	29.9	2.8	41.28	32.0	30.7
19	30.66	31.19	32.21	49.23	30.7	3.6	46.02	35.2	33.9
21	33.83	34.34	35.36	52.37	30.7	3.6	49.23	38.3	37.1
23	37.01	37.54	38.56	55.58	30.7	3.6	52.37	41.5	40.0
25	40.18	40.69	41.71	58.72	30.7	3.6	55.58	44.7	43.4

[JY27471 solder mounting sealed receptacle]





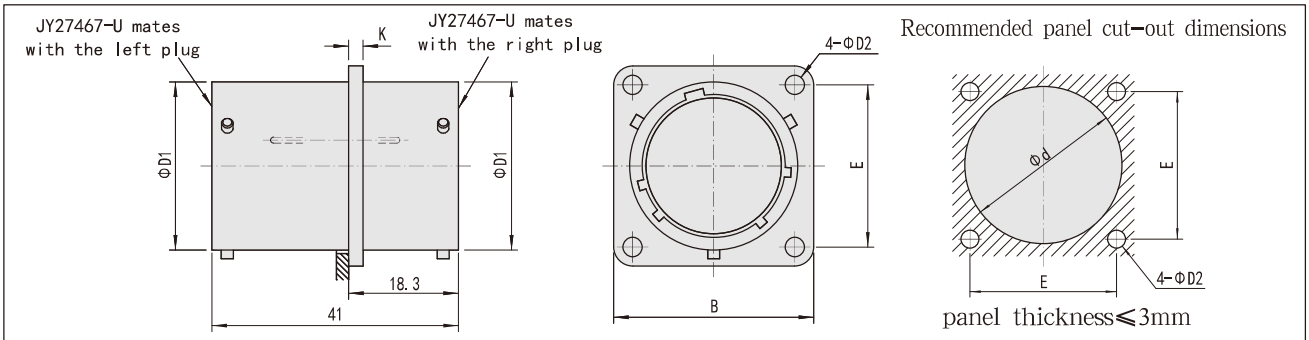
Recommended punching dimensions on panel



Housing size	D1	D2	D3	d	L1max		L2		L3	
					With pin	With socket	With pin	With socket	With pin	With socket
9	14.53	17.07	19.05	17.6	9.6	10.09	16.7	18.97	22.3	25
11	17.78	19.84	21.44	20.3	9.6	10.09	16.7	18.97	22.3	25
13	21.59	23.01	24.61	23.5	9.6	10.09	16.7	18.97	22.3	25
15	24.77	26.19	27.79	26.7	9.6	10.09	16.7	18.97	22.3	25
17	27.94	29.36	30.94	29.9	9.6	10.09	16.7	18.97	22.3	25
19	30.66	31.75	33.32	32.3	9.6	10.09	16.7	18.97	22.3	25
21	33.83	34.93	36.53	35.4	9.6	10.09	16.7	18.97	22.3	25
23	37.01	38.10	39.70	38.6	9.6	10.85	16.7	18.97	23.1	25.8
25	40.18	41.28	42.88	41.8	9.6	9.55	16.7	18.97	23.1	25.8

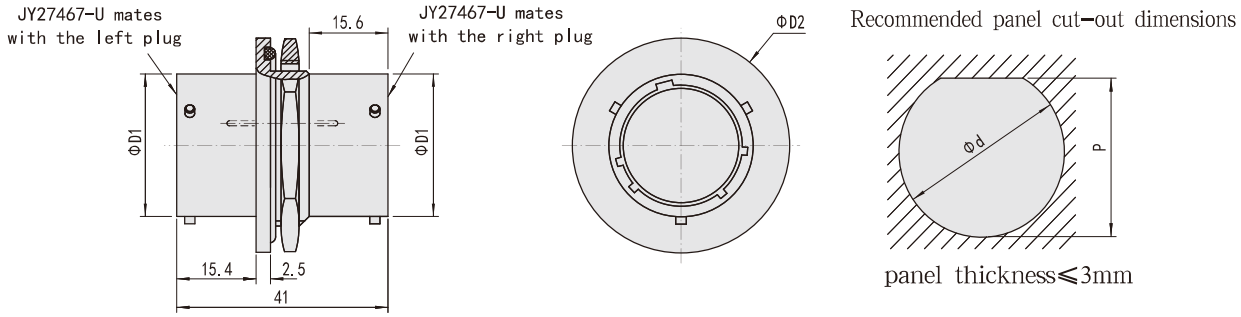
GJB599 | Series Thru-bulkhead sealed receptacle

[JY27466 wall mounting square flange receptacle]



Housing size	D1	K	D2	B	E	d
9	14.53	2.16	3.2	23.8	18.26	16.7
11	17.78	2.16	3.2	26.2	20.62	20.2
13	21.59	2.16	3.2	28.6	23.02	24.5
15	24.77	2.16	3.2	31.0	24.62	27.7
17	27.94	2.16	3.2	33.3	26.98	30.9
19	30.66	2.16	3.2	36.5	29.36	32.9
21	33.83	2.92	3.2	39.7	31.76	36.2
23	37.01	2.92	3.7	42.9	34.92	39.3
25	40.18	2.92	3.7	46.0	38.10	42.5

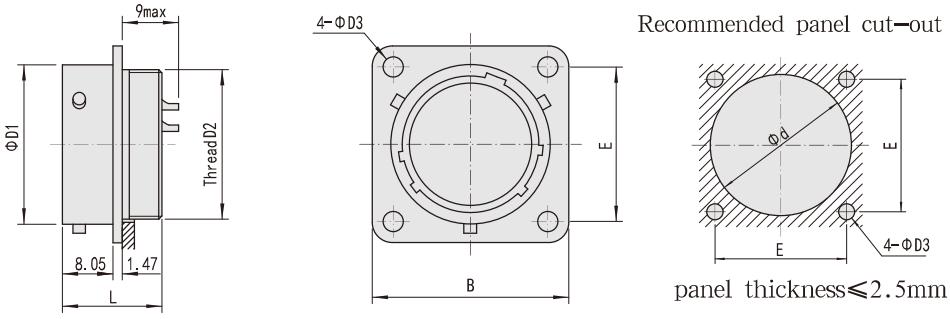
[JY27468 jam nut mounting thru-bulkhead sealed receptacle]



Housing size	D1	D2	d	p
9	14.53	26.97	17.7	17.0
11	17.78	29.53	21.0	19.6
13	21.59	34.92	25.6	24.3
15	24.77	38.50	28.8	27.6
17	27.94	42.00	32.0	30.7
19	30.66	46.02	35.2	33.9
21	33.83	49.6	38.3	37.1
23	37.01	53.16	41.5	40.0
25	40.18	59.82	44.7	43.4

GJB599 II Series Sealed Receptacle

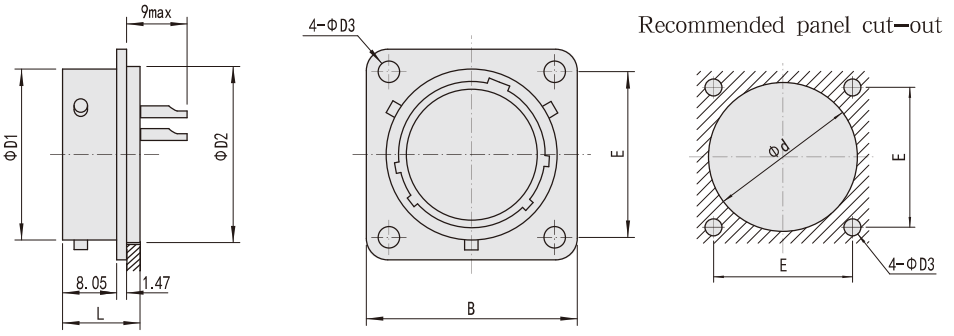
[JY27475 wall mounting sealed receptacle]



Housing size	D1	Thread D2	L	D3	B	E	d
8	12.00	0.5625-24UNEF	15.9	3.2	21.0	15.09	15.5
10	15.00	0.6875-24UNEF	15.9	3.2	24.1	18.26	19.5
12	19.05	0.8125-20UNEF	15.9	3.2	26.5	20.62	21.5
14	22.23	0.9375-20UNEF	15.9	3.2	28.9	23.01	25.0
16	25.40	1.0625-18UNEF	15.9	3.2	31.2	24.61	28.0
18	28.58	1.1875-18UNEF	15.9	3.2	33.6	26.97	31.5
20	31.75	1.3125-18UNEF	15.9	3.2	36.8	29.36	34.5
22	34.93	1.4375-18UNEF	19.1	3.2	40.0	31.75	37.5
24	38.10	1.5625-18UNEF	19.1	4.0	43.1	34.93	40.7

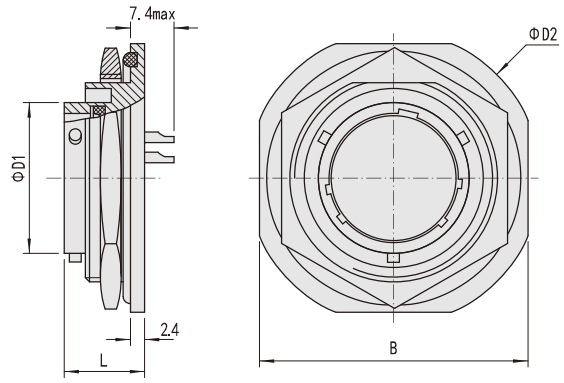
Note: When choosing the accessory, the accessory shell size should be two sizes larger than the receptacle.

[JY27476 box mounting sealed receptacle]

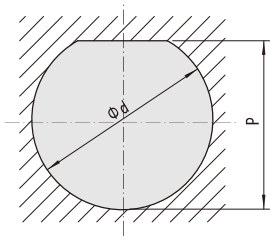


Housing size	D1	D2	L	D3	B	E	d
8	12.00	14.27	11.5	3.2	21.0	15.09	15.3
10	15.00	17.07	11.5	3.2	24.1	18.26	18.1
12	19.05	19.84	11.5	3.2	26.5	20.62	20.8
14	22.23	23.01	11.5	3.2	28.9	23.01	24.0
16	25.40	26.19	11.5	3.2	31.2	24.61	27.2
18	28.58	29.36	11.5	3.2	33.6	26.97	30.4
20	31.75	31.75	11.5	3.2	36.8	29.36	32.8
22	34.93	34.93	12.3	3.2	40.0	31.75	35.9
24	38.10	38.10	12.3	4.0	43.1	34.93	39.1

[JY27477 jam nut mounting sealed receptacle]



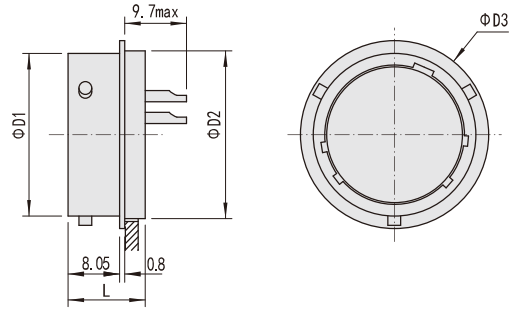
Recommended panel cut-out dimensions



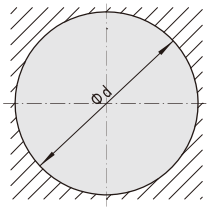
panel thickness≤2.8mm

Housing size	D1	D2	L	B	d	p
8	12.00	34.95	13.5	31.75	22.46	21.08
10	15.00	38.10	13.5	34.95	25.58	24.26
12	19.05	41.28	13.5	38.10	28.80	27.53
14	22.23	44.45	13.5	41.28	31.98	30.68
16	25.40	49.23	13.5	45.24	35.15	33.86
18	28.58	51.21	13.5	48.00	38.28	37.06
20	31.75	54.38	14.2	51.21	41.50	40.03
22	34.93	57.53	14.2	54.36	44.68	43.21
24	38.10	60.71	14.2	57.53	47.85	46.38

[JY27478 solder mounting sealed receptacle]



Recommended panel cut-out dimensions



Housing size	D1	D2	D3	L	d
8	12.00	14.27	17.45	12.0	14.8
10	15.00	17.07	20.24	12.0	17.6
12	19.05	19.84	23.01	12.0	20.3
14	22.23	23.01	26.19	12.0	23.5
16	25.40	26.19	29.36	12.0	26.7
18	28.58	29.36	32.54	12.0	29.9
20	31.75	31.75	34.93	12.0	32.3
22	34.93	34.93	38.10	12.8	35.4
24	38.10	38.10	41.28	12.8	38.6

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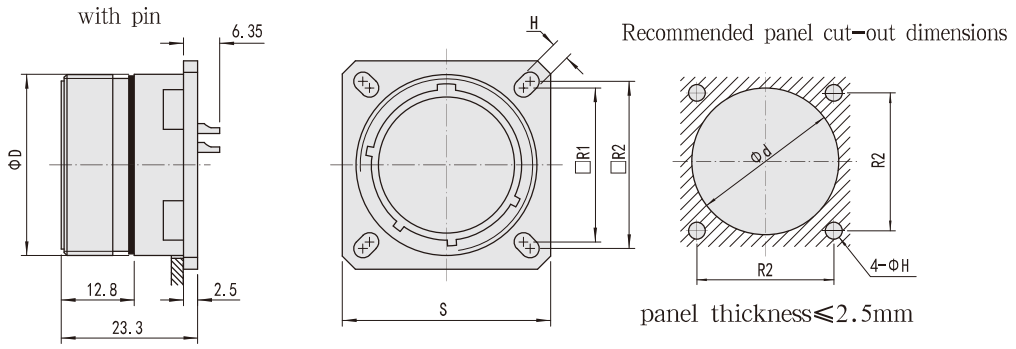
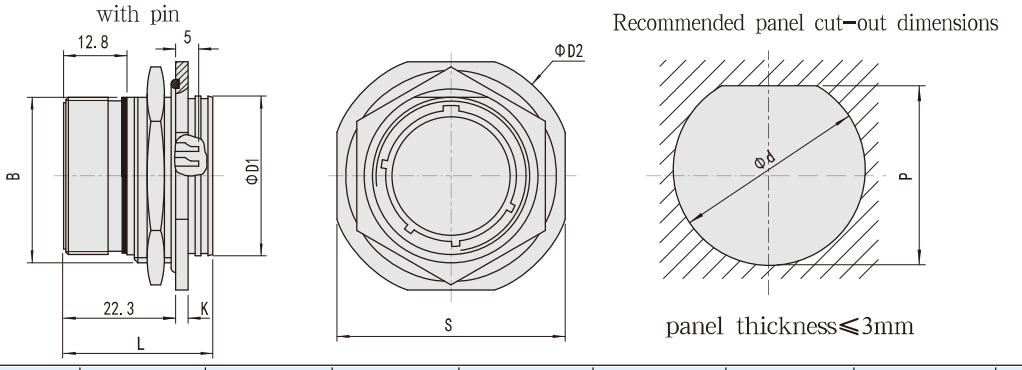
GJB599 Ⅲ Series Sealed Receptacle

[J599/21 square flange mounting sealed receptacle]



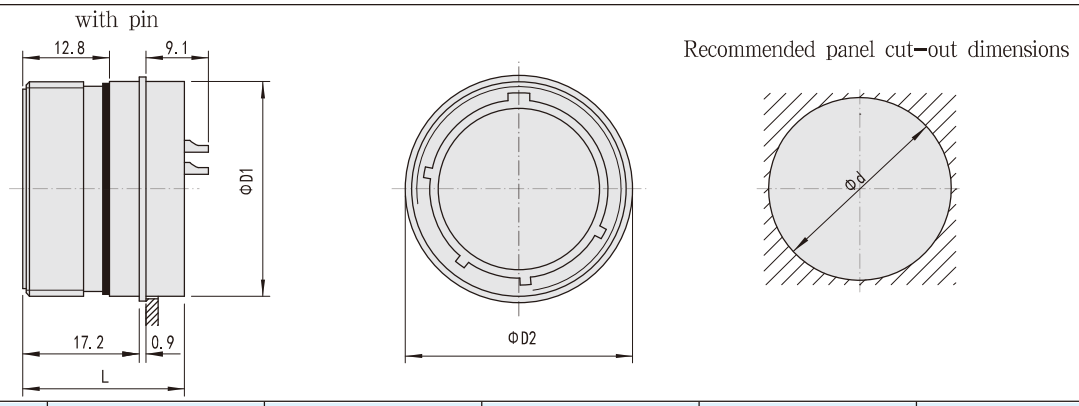
Housing size	Housing code	D	R1	R2	S	H	d
9	A	15.88	15.09	18.26	23.8	3.25	16.66
11	B	19.05	18.26	20.62	26.2	3.25	20.22
13	C	22.23	20.62	23.01	28.6	3.25	23.42
15	D	25.40	23.01	24.61	31.0	3.25	26.59
17	E	30.16	24.61	26.97	33.3	3.25	30.96
19	F	31.80	26.97	29.36	36.5	3.25	32.94
21	G	34.73	29.36	31.75	39.7	3.25	36.12
23	H	38.10	31.75	34.93	42.9	3.90	39.29
25	J	41.20	34.93	38.10	46.0	3.90	42.47

[J599/23 jam nut mounting sealed receptacle]



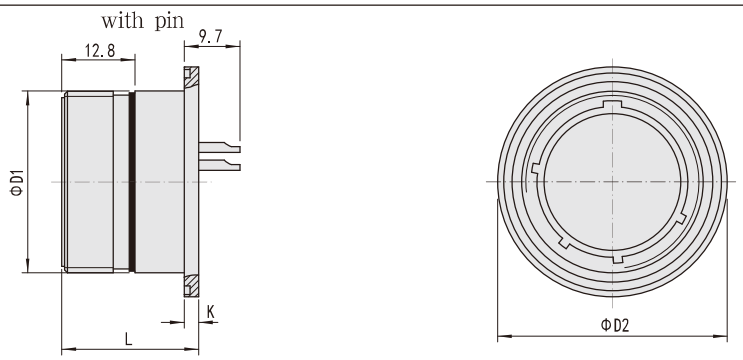
Housing size	Housing code	D1	D2	S	B	L	K	d	p
9	A	16.6	30.5	27.0	16.5	29.2	2.6	17.70	16.99
11	B	19.7	35.2	31.8	19.3	29.2	2.6	20.88	19.53
13	C	23.0	38.4	34.9	24.0	29.3	2.6	25.58	24.26
15	D	26.2	41.6	38.1	27.2	29.3	2.6	28.80	27.53
17	E	29.3	44.8	41.3	30.4	29.3	2.6	31.98	30.68
19	F	32.5	49.3	46.0	33.4	30.1	3.4	35.15	33.86
21	G	35.7	52.7	49.2	36.5	30.1	3.4	38.28	37.06
23	H	38.9	55.9	52.4	39.7	30.1	3.4	41.50	40.24
25	J	42.0	59.0	55.6	42.8	30.1	3.4	44.68	43.41

[J599/25 solder mounting sealed receptacle]



Housing size	Shell code	D1	D2	L	d
9	A	17.1	19.4	23.8	17.6
11	B	19.9	21.8	23.8	20.4
13	C	23.1	24.9	23.8	23.6
15	D	26.2	28.1	23.8	26.7
17	E	29.4	31.3	23.8	29.9
19	F	31.8	33.6	23.8	32.3
21	G	35.0	36.8	23.8	35.5
23	H	38.2	40.0	24.6	38.7
25	J	41.3	43.2	24.6	41.8

[J599/27 熔焊安装密封插座]



Housing size	Housing code	D1	D2	L	K
9	A	15.88	25.0	24.1	3.2
11	B	19.05	28.1	24.1	3.2
13	C	22.23	31.3	24.1	3.2
15	D	25.40	34.5	24.1	3.2
17	E	30.16	36.7	24.1	3.2
19	F	31.80	40.4	24.1	3.2
21	G	34.73	44.0	24.1	3.2
23	H	38.10	48.2	24.9	4.0
25	J	41.20	50.4	24.9	4.0

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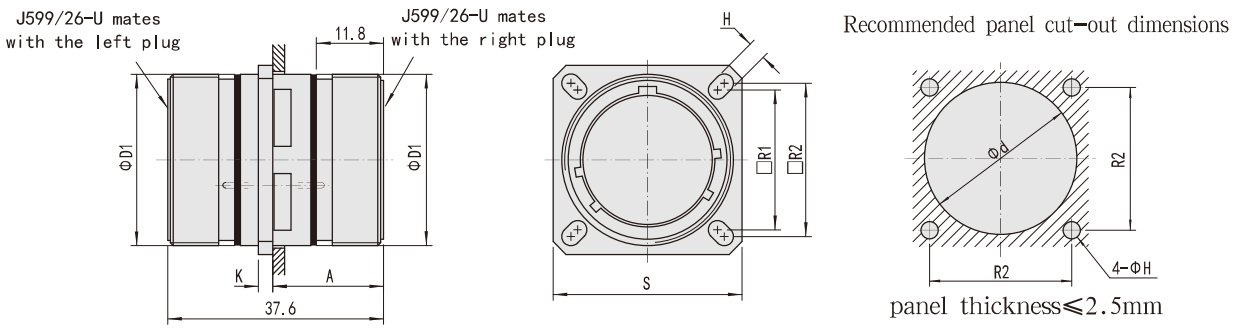
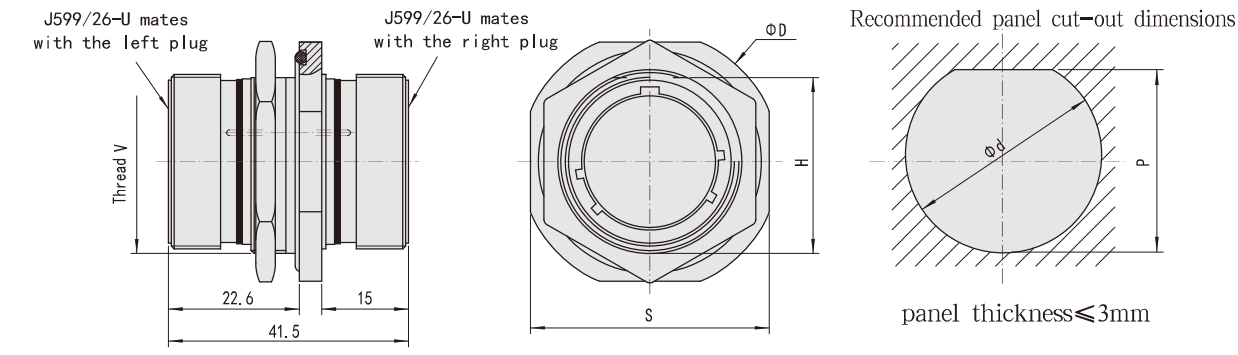
GJB599Ⅲ Series Thru-bulkhead Sealed Receptacle

[J599/20 square flange mounting thru-bulkhead sealed receptacle]



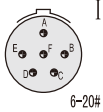
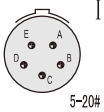
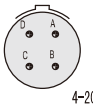
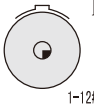
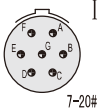
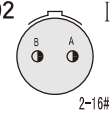
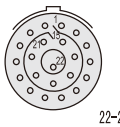
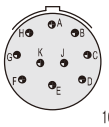
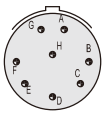
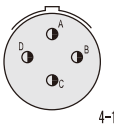
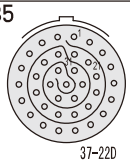
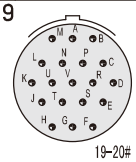
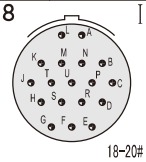
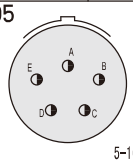
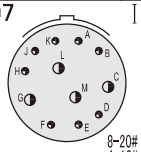
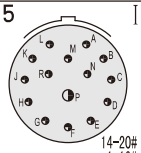
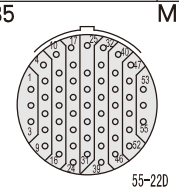
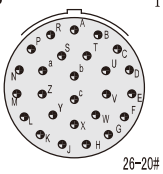
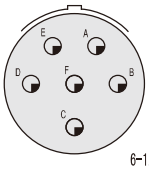
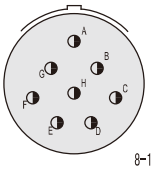
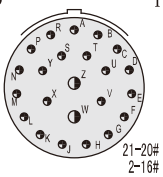
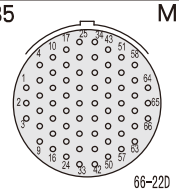
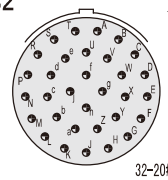
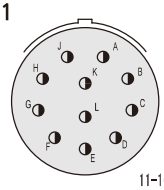
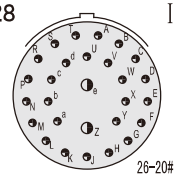
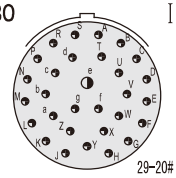
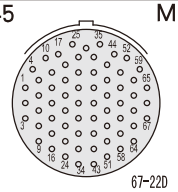
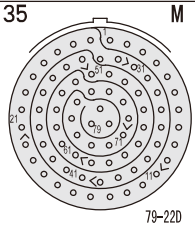
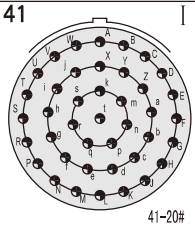
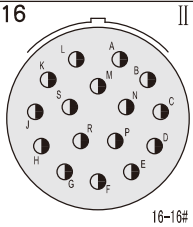
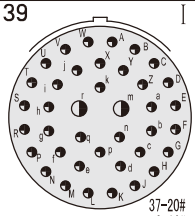
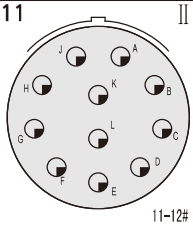
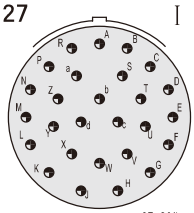
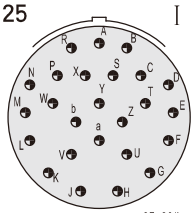
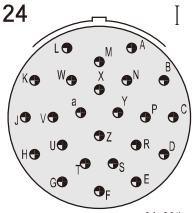
Housing size	Housing code	D1	A	K	R1	R2	S	H	d
9	A	15.88	19.5	2.1	15.09	18.26	23.8	3.25	16.66
11	B	19.05	19.5	2.1	18.26	20.62	26.2	3.25	20.22
13	C	22.23	19.5	2.1	20.62	23.01	28.6	3.25	23.42
15	D	25.40	19.5	2.1	23.01	24.61	31.0	3.25	26.59
17	E	30.16	19.5	2.1	24.61	26.97	33.3	3.25	30.96
19	F	31.80	19.5	2.1	26.97	29.36	36.5	3.25	32.94
21	G	34.73	18.7	2.8	29.36	31.75	39.7	3.25	36.12
23	H	38.10	18.7	2.8	31.75	34.93	42.9	3.90	39.29
25	J	41.20	18.7	2.8	34.93	38.10	46.0	3.90	42.47

[J599/24 jam nut mounting thru-bulkhead sealed receptacle]



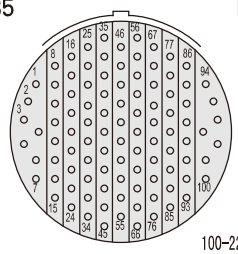
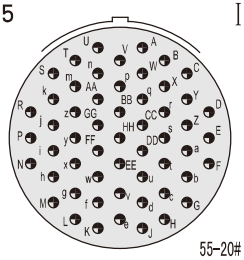
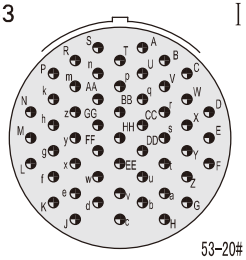
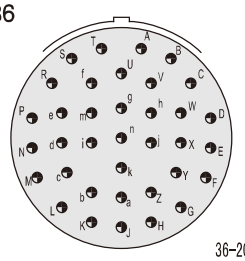
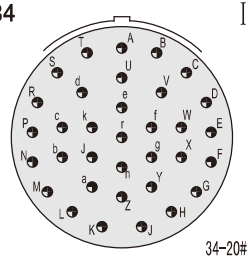
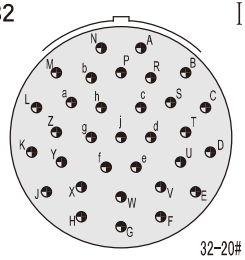
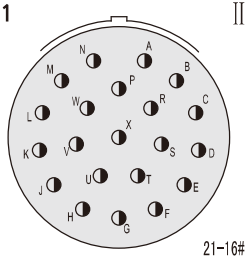
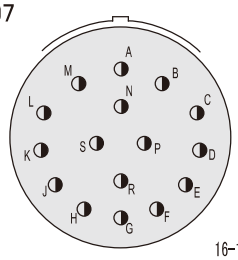
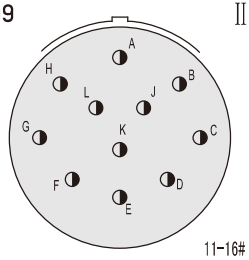
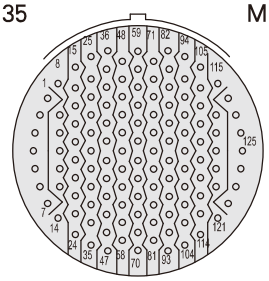
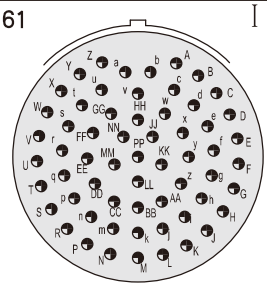
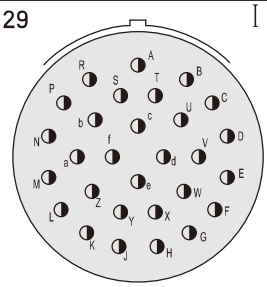
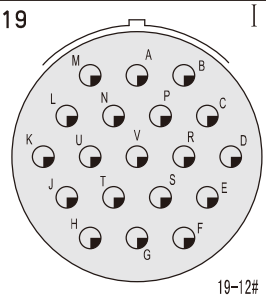
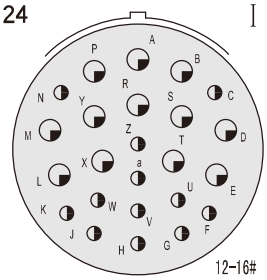
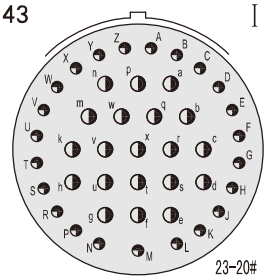
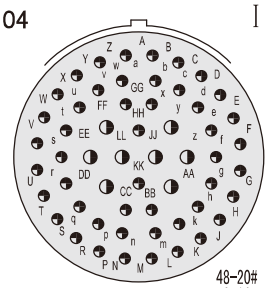
Housing size	Housing code	D	S	H	Thread V	d	p
9	A	30.5	27.0	16.5	0.6875-24UNEF	17.70	16.99
11	B	35.2	31.8	19.3	0.8125-20UNEF	20.88	19.53
13	C	38.4	34.9	24.0	1.0000-20UNEF	25.58	24.26
15	D	41.6	38.1	27.2	1.1250-18UNEF	28.80	27.53
17	E	44.8	41.3	30.4	1.2500-18UNEF	31.98	30.68
19	F	49.3	46.0	33.4	1.3750-18UNEF	35.15	33.86
21	G	52.7	49.2	36.5	1.5000-18UNEF	38.28	37.06
23	H	55.9	52.4	39.7	1.6250-18UNEF	41.50	40.24
25	J	59.0	55.6	42.8	1.7500-20UN	44.68	43.41

GJB599 Series Sealed Connector Insert Arrangement（front view of pin insert）

Housing size I	Housing size II	Housing size III						
09	08	A	35 M  6-22D	98 I  3-20#				
11	10	B	35 M  13-22D	98 I  6-20#	05 I  5-20#	04 I  4-20#	01 I  1-12#	99 I  7-20#	02 I  2-16#
13	12	C	35 M  22-22D	98 I  10-20#	08 I  8-20#	04 I  4-16#		
15	14	D	35 M  37-22D	19 I  19-20#	18 I  18-20#	05 II  5-16#	97 I  8-20# 4-16#	15 I  14-20# 1-16#
17	16	E	35 M  55-22D	26 I  26-20#	06 I  6-12#	08 II  8-16#	99 I  21-20# 2-16#	
19	18	F	35 M  66-22D	32 I  32-20#	11 II  11-16#	28 I  26-20# 2-16#	30 I  29-20# 1-16#	
			45 M  67-22D					
21	20	G	35 M  79-22D	41 I  41-20#	16 II  16-16#	39 I  37-20# 2-16#	11 II  11-12#	
			27 I  27-20#	25 I  25-20#	24 I  24-20#			

Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12#

Http://www.zhyf.com Email: sales@zhyf-bj.com

Housing size I	Housing size II	Housing size III				
23	22	H	35 M  100-22D	55 I  55-20#	53 I  53-20#	36 I  36-20#
			34 I  34-20#	32 I  32-20#	21 II  21-16#	97 I  16-16#
			99 II  11-16#			
25	24	J	35 M  128-22D	61 I  61-20#	29 I  29-16#	19 I  19-12#
			24 I  12-16# 12-12#	43 I  23-20# 20-16#	04 I  48-20# 8-16#	

Contact size ○ 22D ◔ 20# ◑ 16# ◕ 12#

GJB599Ⅰ（MIL-DTL-38999Ⅰ Series）Space Grade Circular Connectors

Brief introduction

- Compliant with GJB 599 (MIL-DTL-38999) Ⅰ series
- Quick bayonet coupling
- Small size and light weight
- High density of contacts
- EMI / RFI shielding
- Interface sealing
- Scoop-proof structure
- Application: space, aviation and military system
- Thermal vacuum outgassing resistance
- Radiation resistance

Main technical performances

[Mechanical]

—Housing: Aluminum alloy, stainless steel

—Plating:

F class: Electroless nickel plating

E class: Passivation-stainless steel

—Insulator: Thermosetting plastic

—Grommet and seal: Silicon rubber

—Contact: Gold-plating copper alloy, crimped and removal

—Endurance: 500 cycles

—Vibration: frequency100～1000Hz (high temperature); Power spectral density 1g2/HZ; corresponding rms 41.7g;

At ambient temperature, frequency 100~1000HZ; power spectral density 5g2/Hz; corresponding rms 49.5g

—Shock: 3ms half sine wave, acceleration peak 300g

[Electrical]

——Contact resistance and current rating:

Contact size	Operating Dia.mm	Contact resistance mΩ	Current rating A
22D#	φ0.76	≤12	5
20#	φ1.00	≤5	7.5
16#	φ1.60	≤2.5	13
12#	φ2.40	≤1.5	23
10#	φ3.15	≤1.0	40

——EMI shielding:

Minimum attenuation 85dB at 100MHz～1GHz

Minimum attenuation 50dB at 1GHz～10GHz

——Withstanding voltage: V

Service rating*	M	N	I	Ⅱ
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000
30480m	800	600	1000	1000
30480m～100000m	200	150	250	300

* Different contact layout has different service rating, see the letter in the top right corner for the details.

—Insulation resistance:

normal≥5000MΩ humidity≥100MΩ

—Continuity between housings:

F class ≤1.0mΩ

[Environmental]

—Operating temperature: −65℃ ~ +200℃

—Salt fog: In accordance with GJB1217, method 1001

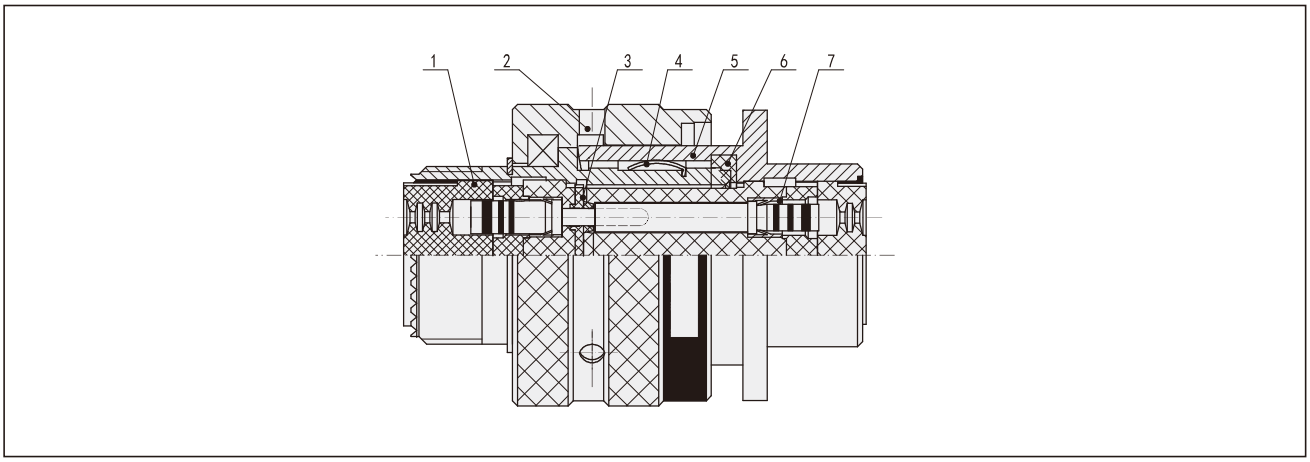
F class 48h

—Relative humidity: 98% at 40℃

—Humidity resistance, corrosion resistance, fungus resistance, rain resistance and dust proof

—Thermal vacuum outgassing resistance: non-metallic material weight loss≤1.0%, volatile condensable material (VCM)≤0.1%;

—Radiation resistance: Cobalt 60γ ray radiation source, dose rate is 0.5Gy/s, the total absorption dose $\geq 5\times10^{5}$Gy.



1.The fluid immersion and the low—atmospheric pressure immersion of the grommet complaint with GJB599A;

2.Bayonet coupling mechanism for quick coupling and looseness proof;

3.Interfacial sealing; every contact can be sealed

4.Shielding spring: housing is conductive before the electrical connection and provides EMI and RFI shielding.

5.5 key polarization for blind mating and anti—mismating

6.Hermetic: realize Sealing insulator outside and ensure fluid immersion;

7.Metal locating spring: ensure the inner reliability of the connector after the contact installed.

Ordering Information

Basic series	JY	27467	G	17	F	35	P	N
Type	27467— Plug 27466— Wall type square flange front mounting receptacle 27656— Wall type square flange rear mounting receptacle 27468— Jam nut mounting receptacle							
Class	G— Space grade, thread termination, with accessory							
Housing size	09—11—13—15—17—19—21—23—25							
Plating	F— Electroless nickel plating E— Stainless steel passive							
Insert arrangement	See the insert arrangement of 599 I							
Contact	Crimped P—pin S—socket							
Polarization	N—Normal; A、B、C、D—Alternative							

Note: GJB599 and MIL—C—38999 series have the same ordering information except their basic code. JY is for GJB599 and MS is for MIL—C—38999. Both can be interchangeable

[Code sample]

JY27467G17F35PN

JY series plug, space grade, thread terminal, with accessory, 17# housing, electroless nickel plating, 35# contact layout, contacts fixed pins, N polarization

Crimped contact, housing polarization, outline dimension and accessory are same as those of GJB599 I series electrical connector

GJB599 Ⅱ Series (MIL-DTL-38999 Ⅱ Series) Space Grade Circular Electrical Connectors

Brief introduction

- Complaint with GJB 599 (MIL-DTL-38999) Ⅱ series
- Quick bayonet coupling
- Small size and light weight
- High contact density
- EMI / RFI shielding
- Interfacial sealing
- Scoop-proof
- Application: space, aviation and military system
- Thermal vacuum outgassing resistance
- Radiation resistance

Main technical characteristics

[Mechanical]

—Housing: Aluminum alloy, stainless steel

—Plating:

F class Electroless nickel plating

E class Passivation-stainless steel

—Insulator: Thermosetting plastic

—Grommet and sealing ring: Silicon rubber plastic

—Contact: Gold plated copper alloy, crimped and removal

[Electrical]

——Contact resistance and current rating:

Contact size	Operating Dia.mm	Contact resistance mΩ	Current rating A
22D	φ0.76	≤12	5
20#	φ1.00	≤5	7.5
16#	φ1.60	≤2.5	13
12#	φ2.40	≤1.5	23

——EMI shielding:

Minimum attenuation 85dB at 100MHz~1GHz

Minimum attenuation 50dB at 1GHz~10GHz

[Environmental]

—Operating temperature: -65℃~+200℃

—Salt fog: complaint with GJB1217, method 1001

F class 48h

—Relative humidity: 98% at 40℃

—Humidity resistance, corrosion resistance, fungus resistance, rain resistance and dust proof

—Endurance : 500 cycles

—Vibration:

At high temperature, frequency 100~1000Hz power spectral density $1g^2/HZ$, the corresponding rms 41.7g;

At ambient temperature, frequency 100~1000HZ, power spectral density $5g^2/Hz$, the corresponding rms 49.5g

—Shock: 3ms half sine wave, acceleration 300g

——Withstanding voltage: V

Service rating	M	N	I	Ⅱ
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000
30480m	800	600	1000	1000
30480m~100000m	200	150	250	300

* Different contact layout has different service rating, see the letter in the top right corner for the details.

——Insulation resistance:

normal≥5000MΩ humidity≥100MΩ

——Continuity between shells:

F class ≤1.0mΩ

non-metallic material weight loss≤1.0%, volatile condensable material≤0.1%;

—Radiation resistance: Cobalt 60γ ray radiation source, dose rate is 0.5Gy/s, the total absorption dose $\geq 5\times10^5$Gy.

—Thermal vacuum outgassing resistance:

1.The fluid immersion and the altitude immersion of the grommet complaint with GJB599A;

2.Bayonet coupling mechanism for quick coupling and anti—rotation;

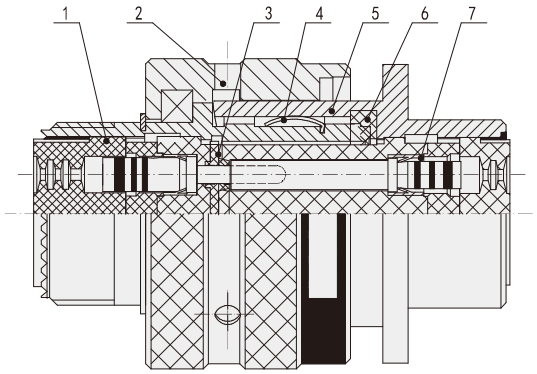
3.Interfacial sealing; every contact can be sealed;

4.Shielding spring: EMI and RFI shielding;

5.5 key polarization for blind mating and anti—mismating;

6.Hermetic: realize is Sealing insulator outside and ensure fluid immersion;

7.Metal locating spring: ensure the inner reliability of the connector after the contact installed.



Ordering Information

Basic series	JY	27473	G	17	F	35	P	N
Type	27473— Plug 27484— Shielding plug 27474— Jam nut mounting receptacle 27472— Wall type square flange front mounting receptacle 27497— Wall type square flange rear mounting receptacle							
Class	G— Space grade, thread termination, with accessory							
Housing size	08—10—12—14—16—18—20—22—24							
Plating	F— Space grade, electroless nickel plating E— Stainless steel passive							
Insert arrangement	See the insert arrangement of 599 II							
Contact	Crimped P—pin S—socket							
Polarization	N—Normal; A、B、C、D—Alternative							

Note: GJB599 and MIL—C—38999 series have the same ordering information except their basic code. JY is for GJB599 and MS is for MIL—C—38999. Both can be interchangeable

[Code sample]

JY27473G17F35PN

JY series plug, space grade, thread termination, with accessory, 17# housing, space grade housing, electroless nickel plating, 35# contact layout, contacts fixed pins, N polarization

Crimped contact, housing polarization, outline dimension and accessory are same as those of GJB599II series electrical connector

GJB599 III Series (MIL-DTL-38999III Series) Space Grade Circular Electrical Connectors

Brief introduction

- Comply with GJB 599 (MIL-DTL-38999) III series
- Quick bayonet coupling
- Small size and light weight
- High contact density
- EMI / RFI shielding
- Interfacial sealing
- Scoop-proof
- Application: space, aviation and military system
- Thermal vacuum outgassing resistance
- Radiation resistance

Main technical characteristics

[Mechanical]

—Housing: Aluminum alloy, stainless steel

—Plating:

G class Electroless nickel plating

—Insulator: Thermosetting plastic

—Grommet and seal: Silicon rubber

—Contact: Gold plating copper alloy, crimped and removal

—Endurance: 500 cycles

—Vibration:

At high temperature, frequency 100～1000Hz power spectral density $1g^2/HZ$, the corresponding rms 41.7g;

At ambient temperature, frequency 100~1000HZ, power spectral density $5g^2/Hz$, the corresponding rms 49.5g

—Shock: 3ms half sine wave, acceleration 300g

[Electrical]

——Contact resistance and current rating:

Contact size	Operating Dia.mm	Contact resistance mΩ	Current rating A
22D	φ0.76	≤12	5
20#	φ1.00	≤5	7.5
16#	φ1.60	≤2.5	13
12#	φ2.40	≤1.5	23
10#	φ3.15	≤1.0	40

—EMI shielding:

Minimum attenuation 85dB at 100MHz～1GHz

Minimum attenuation 65dB at 1GHz～10GHz

——Withstanding voltage: V

Service rating	M	N	I	II
Sea level	1300	1000	1800	2300
21000m	800	600	1000	1000
30480m	800	600	1000	1000
30480m～100000m	200	150	250	300

* Different contact layout has different service rating, see the contact layout for details.

—Insulation resistance:

normal≥5000MΩ humidity≥100MΩ

—Continuity between housings:

F class ≤1.0mΩ

[Environmental]

—Operating temperature: −65℃～+200℃

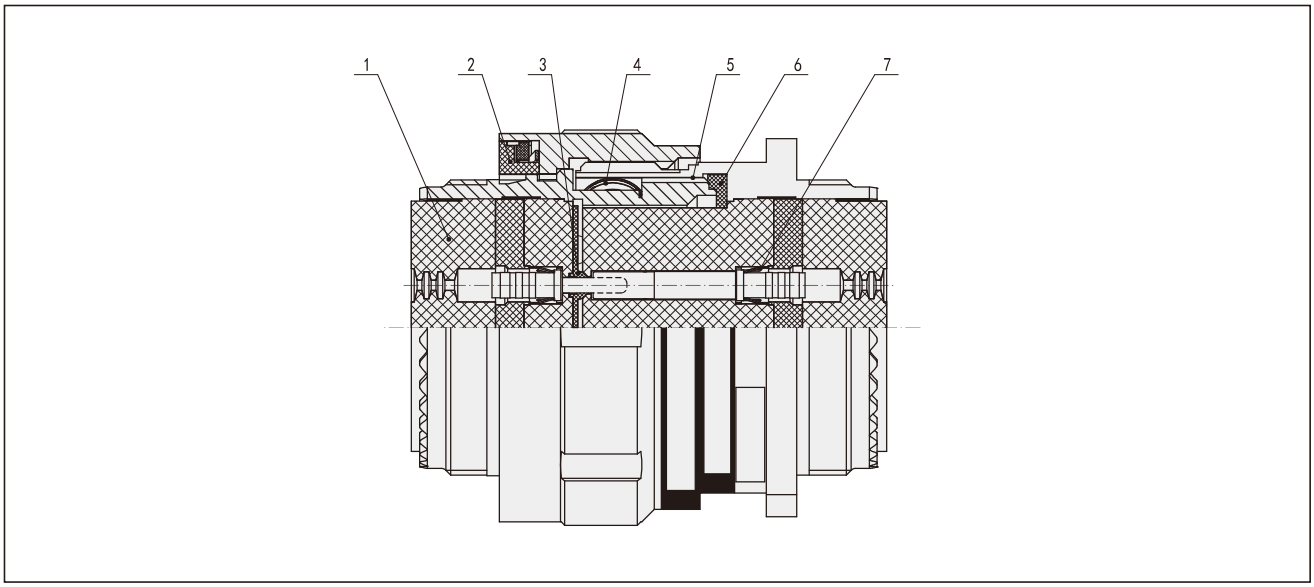
—Salt fog: complaint with GJB1217, method 1001, F class 48h

—Relative humidity: 98% at 40℃

—humidity resistance, corrosion resistance, fungus resistance, rain resistance and dust proof

—thermal vacuum outgassing resistance: non-metallic material weight loss≤1.0%, volatile condensable material≤0.1%;

—Radiation resistance: Cobalt 60γ ray radiation source, dose rate is 0.5Gy/s, the total absorption dose≥5×10^5Gy.



1.The fluid immersion and the altitude immersion of the grommet complaint with GJB599A;

2.looseness proof mechanism: The ration between mating force and the decoupling force is 1; 2;

3.Interfacial sealing; every contact can be sealed;

4.Shielding spring: housing is conductive before the electrical connection and provide EMI and RFI shielding;

5.5 keyways polarization for blind mating and anti-mismating;

6.Hermetic: realize Sealing insulator outside and ensure fluid immersion;

7.Metal locating spring: ensure the inner reliability of the connector after the contact installed.

Ordering Information

Basic series		J599/	20	G	B	35	P	N
Type	20— Square flange receptacle 24— Jam nut receptacle 26—RFI shielding plug							
Class	G— Space grade, thread termination, with accessory							
Housing size Index No.	A to J	09 11 13 15 17 19 21 23 25 A B C D E F G H J						
Insert arrangement	See the insert arrangement of 599 I							
Contact	P—pin S—socket							
Polarization	N—Normal; A、B、C、D—Alternative							

Note: GJB599 and MIL—C—38999 series ordering information are same except their basic series. JY is for GJB599 and MS is for MIL—C—38999. They can be interchangeable.

[Code sample]

J599/20GB35PN

J599 series square flange receptacle, space grade housing plating, electroless nickel plating, B # housing, 35# contact layout, contacts fixed pin, N polarization

Crimped contact, housing polarization, outline dimension and accessory are same as those of GJB599II series electrical connector

GJB599Ⅲ Series High & Low Frequency Integrated Connector

Brief introduction

- Comply with GJB599A (Equivalent to MIL-DTL-38999) Ⅲ series
- Power, high speed, high frequency and optical contacts can be mixed
- Different contacts with the same size can be interchanged
- Microwave signal, high speed data, optical fiber and power signal can be integratedly connected
- A quick screw coupling with anti-decoupling mechanism
- 100% scoop-proof
- Excellent EMI/RFI shielding
- Application: aviation, aerospace crafts and other electronic & electrical equipment

Main technical characteristics

[Mechanical]

——Shell: Aluminum alloy, stainless steel, composite material

——Plating:

W—olive green cadmium plating, aluminum alloy

F—electroless nickel plating, aluminum alloy

K—stainless steel passive

J—olive green cadmium plating, composite material

M—electroless nickel plating, composite material

——Insulator: Thermoplastic or thermoset

——Grommet and seal: Silicon rubber

——Contact: gold plating, copper alloy

——Endurance: 500 cycles

——Shock: 3ms half sine wave, acceleration 300g

——Vibration:

Sine: 60g, with temperature cycling and simulated accessories (36 hours)

Random: 44.1grms in high temperature

49.5grms in ambient temperature

——Contact retention (mini force in N)

22D#: 45N 20#: 67N 8 #: 111N

12#: 111N, 16#: 111N

[Environmental]

——Operating temperature:

W and J class: -65℃~175℃

F, K and M class: -65℃~200℃

——Sealing: mated connectors meet altitude immersion requirements of MIL-C 38999

——Salt spray: According to GJB 1217, method 1001

F class: 48 h W class: 500 h

K class: 1000 h J and M class: 2000 h

——Damp heat: according to MIL-C-38999: 24 hours, 10 cycles

——Fluid resistance: Various fuels, coolant, solvent

[Electrical]

——shells continuity

W class: 2.5 mΩ F class: 1 mΩ

——Shielding

——10GHz: 65dB (F)

——10GHz: 50dB (W)

——1GHz: 85dB (F and W)

——Withstanding voltage (Vrms)

Service rating	Sea level	21000m
M	1300	800
N	1000	600
I	1800	1000
II	2300	1000

——Insulation resistance:

≥5000MΩ at 500Vdc

[Electrical characteristics of contact]

Power contact

——Contact resistance:

22D#: 14.6mΩ 20#: 7.3 mΩ

16#: 3.8 mΩ 12#: 1.7 mΩ

——Current rating:

22D#: 5A 20#: 7.5A

16#: 13A 12#: 23A

10#: 40A

16# shielding contact

——Low level contact resistance (only for inner contact)

Max contact resistance (mΩ)	
Initial	After test
170	204

——Test current and voltage drop:

Contact	Test current (A)	Max voltage drop (mV)		
		25℃		175℃
		Initial	After test	After test
Inner contact	1	170	204	290
Outer contact	12	150	180	255

——Voltage rating:(Between inner contact and outer contact):

Sea level: 750 Vrms 15240m: 250 Vrms

12# shielding contact

——Low level contact resistance (only for inner contact):

initial : 55mΩ after test: 66mΩ

——Contact resistance (test current and voltage drop):

Contact	Test current (A)	Max voltage drop (mV)		
		25^{+3}_{0}℃		200^{+3}_{0}℃
		Normal	After test	
Inner contact	1	170	204	290
Outer contact	12	150	180	255

——Withstanding voltage:

Sea level: 750V 15240m (11.59KPa) : 250 Vrms

12# coaxial contact

——Nominal impedance: 50Ω

——Low level contact resistance (only for inner contact)

Max contact resistance (mΩ)	
Initial	After test
55	66

——Withstanding voltage:

Sea level:: 1000V 15240m (11.59KPa) : 250 Vrms

——Contact resistance (Voltage drop and test current):

Contact	Test current (A)	Max voltage drop (mV)		
		25^{+3}_{0}℃		200^{+3}_{0}℃
		Normal	After test	
Inner contact	1	55	66	94
Outer contact	12	75	90	128

——VSWR:

Frequency: 500MHz~3GHz, under the following three conditions, VSWR≤1.20+0.04F(F unit: GHz)

(1) Pin and socket are mated completely

(2) Pin/ socket contact: 1.27±0.13mm

(3) Pin/ socket contact:2.54±0.13mm

——Insertion loss: dB max=0.11$\sqrt{F}$

(F unit: GHz), When F is at 3GHz and tested in accordance with MIL-C-39012., insertion loss should not be more than 0.20dB

8# twinaxial contact

——Low level contact resistance (only for center contact and intermediate middle contact)

Max contact resistance (mΩ)	
Initial	After test
55	66

——Contact resistance (Test current and voltage drop):

Contact	Test current (A)	Max voltage drop (mV)		
		25℃		175℃
		Initial	After test	After test
Center contact	1.0	55	66	94
Inter contact	1.0	55	66	94
Outer contact	12	75	90	128

——Operating frequency:: 0~20MHz

——Voltage rating:

Sea level: 500 Vrms 21336m: 125 Vrms

——Withstanding voltage:

Contact	Height	Test voltage (V) rms
From center to intermediate	Sea level	1000
From intermediate to outer		500

TDB4 contact

——Impedance:: 50Ω

——Operating frequency: 0~10GHz

——VSWR: ≤1.3

——Withstanding voltage (Between center conductor and outer conductor) : 750 (Vrms)

——Insulation resistance: ≥ 1000MΩ at 500Vdc

8# differential contact

2 types: 2 contacts & 4 contacts

——Withstanding voltage (Vrms)

Normal: from center conductor to outer conductor: 500V AC

Between center conductor: 1000V AC

——Contact resistance:

≤15mΩ (only for center contact)

——Insulation resistance (Between center conductors) : ≥1000MΩ at 500Vdc

——Rated current: Center conductor 1A

——Data rate: 1.65Gbps

High frequency contact

Contact size	GJB P/N	International P/N	Applicable wire	
			National wire	International wire
16# shielding pin	J1216/76-424	M39029/76-424	SFF-50-1.5-1 SFF-75-1.5-1	M17/113-RG316
16# shielding socket	J1216/77-428	M39029/77-428		
12# shielding pin	J1216/28-211	M39029/28-211	SFF-50-1.5-1	M17/113-RG316
	J1216/28-412	M39029/28-412		M17/113-RG316D
12# shielding socket	J1216/75-416	M39029/75-416	SFF-50-1.5-1	M17/113-RG316
	J1216/75-422	M39029/75-422		M17/113-RG316D
12# coaxial pin	J1216/102-558	M39029/102-558	SFF-50-1.5-1 SFF-75-1.5-1	M17/113-RG316
12# coaxial socket	J1216/103-559	M39029/103-559		
8# twinaxial shielding pin	J1216/90-529	M39029/90-529	SEFF-78-1-51	M17/176-00002
8# twinaxial shielding socket	J1216/91-530	M39029/91-530		
TDB4 high frequency pin	TDB4-Ka	—	670-141	
TDB4 high frequency socket	TDB4-Ja	—	670-141	
8# differential (2-pin, 100Ω)	CF81/211-01	—		HDP700001070
8# differential (2-socket,100Ω)	CF82/211-01	—		
8# differential (4-pin, 100Ω)	CF81/411-01	—		CEC-RWC-18664 ABS1503KD24
8# differential (4-socket, 100Ω)	CF82/411-01	—		

High Frequency Contact Assembly Instruction

For high frequency contact assembly note, see appendix 2.

Ordering information

Basic series	J599/	20	W	B	10	P	N
Type	20- Square flange receptacle 24- Jam nut receptacle 26-RFI-shielding plug						
Plating	W -Olive green cadmium plating F -Electroless nickel plating K - Stainless steel passive J - Composite, olive green cadmium plating M - Composite, electroless nickel plating						
Shell size Index No.	A to J: 09 A; 11 B; 13 C; 15 D; 17 E; 19 F; 21 G; 23 H; 25 J						
Insert arrangement	See insert arrangement						
Contact type	P - pin A designated pin S - socket B designated socket PF—8# differential pin SF—8# differential socket						
Polarization	N -Normal A、B、C、D、E -alternative						

Note: When the pin or socket is normal, contact type should be P (or S); When the pin or socket is special, P (or S) should be changed to A (or B) and the quantity of contacts should be noted after P/N, but the quantity should not marked on product marking.

[Part number example]

Square flange receptacle, electroless nickel plating, 06 insert arrangement, pin, N polarization; P/N should be J599/20FE06PN. If six 12# power pins are changed to six 12# coaxial pins, P/N should be J599/20FE06AN (6-J1216/102-558).

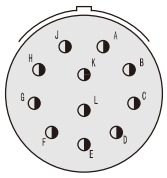
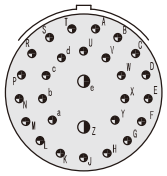
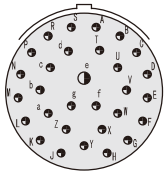
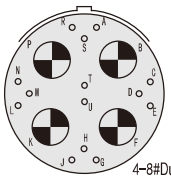
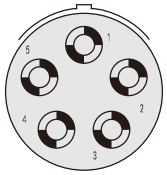
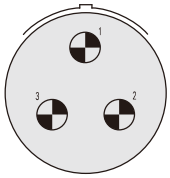
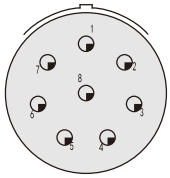
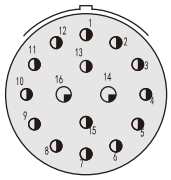
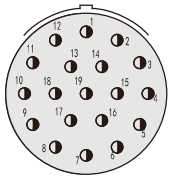
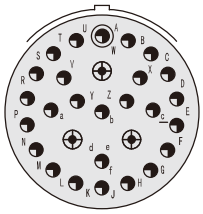
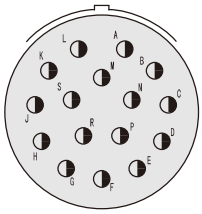
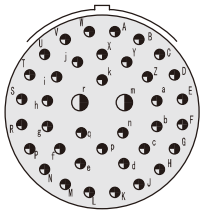
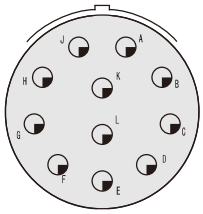
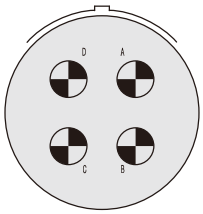
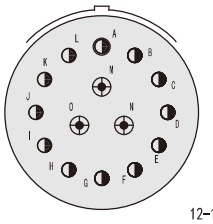
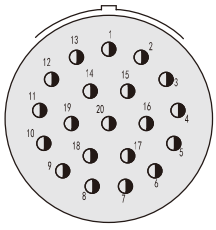
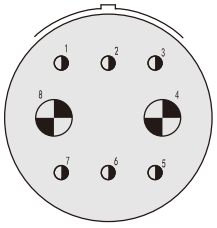
Polarization and outline dimension

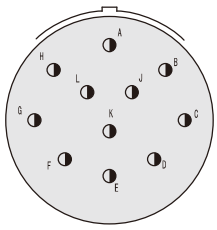
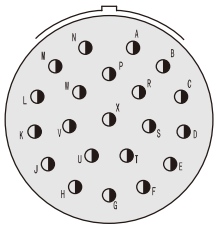
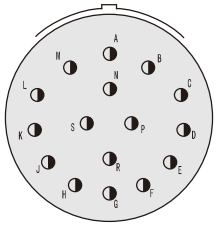
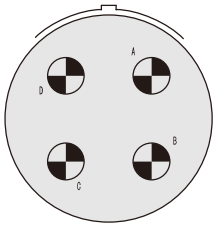
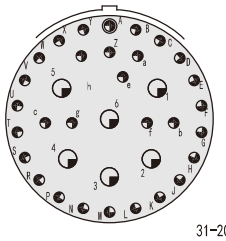
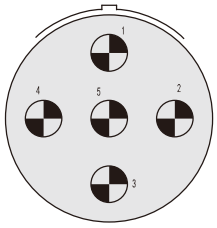
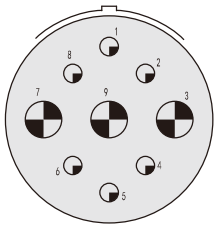
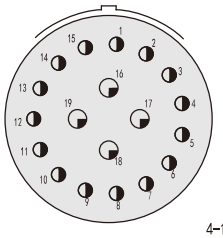
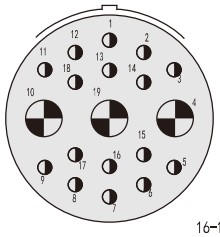
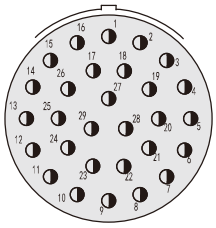
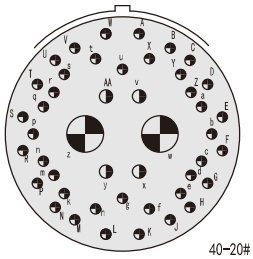
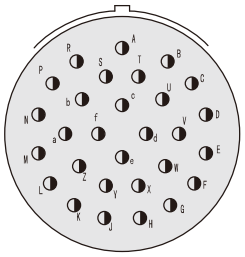
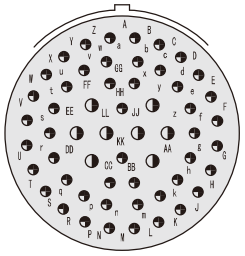
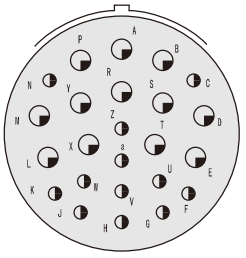
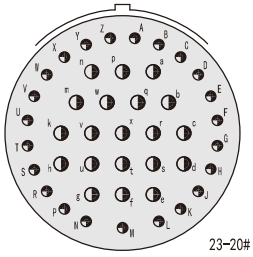
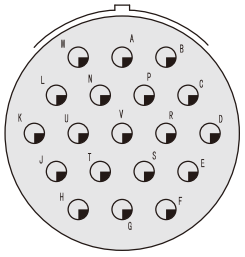
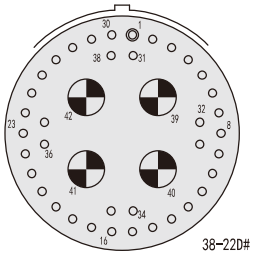
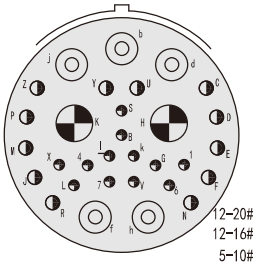
[Same as GJB599Ⅲ series electrical connector]

Insert arrangement (viewed from front face of male insulator)

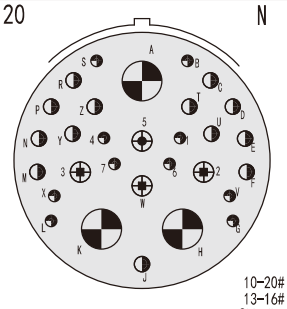
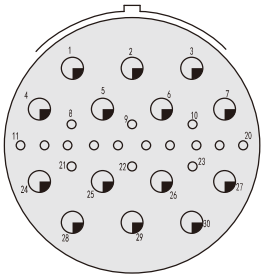
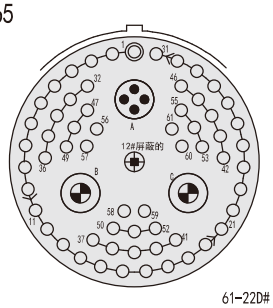
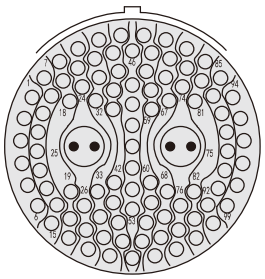
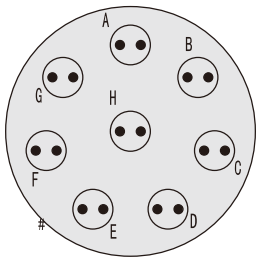
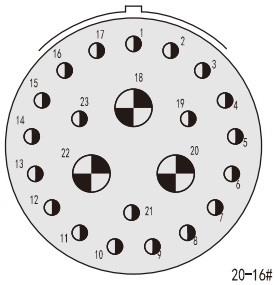
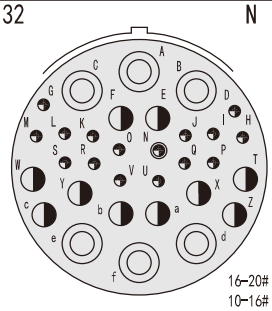
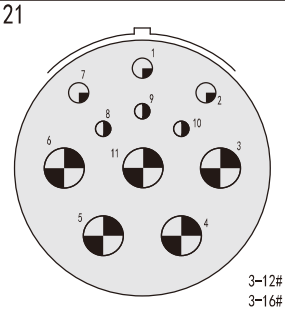
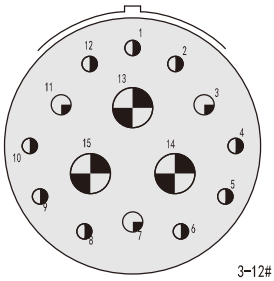
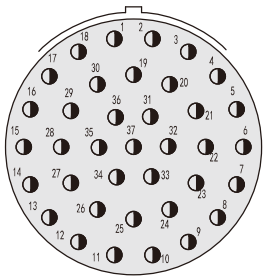
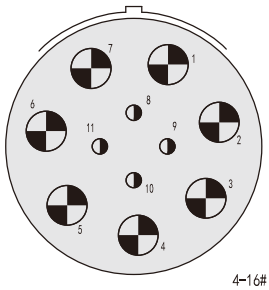
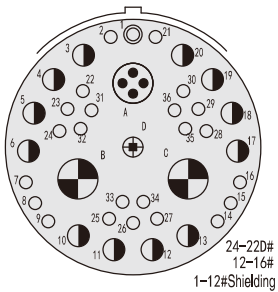
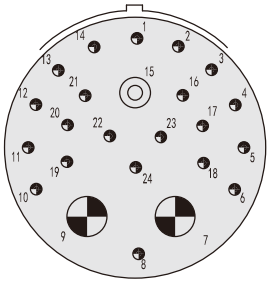
Note: 12# power contacts, 12# shielding contacts and 12# coaxial contacts are in 12# cavity.
16# power contacts and 16# shielding contacts are in 16# cavity.
8# power contacts, 8# twinaxial contacts and 8# differential contacts are in 8# cavity.

Shell size						
09 (A)	10 I 1-12#	11 I 1-16#				
11 (B)	01 I 1-12#	02 I 2-16#	81 I 1-8#Dual coaxial			
13 (C)	12 N 1-12# 11-22D#	60 I 4-16# 2-20#	04 I 4-16#	01 I 1-8#Dual coaxial	24 II 1-12#	
	02 I 2-12#	45 I 5-16#				
15 (D)	05 II 5-16#	97 I 8-20# 4-16#	15 I 14-20# 1-16#	02 II 2-12#	14 N 8-22# 6-16#	12 M 8-22# 2-20# 2-12#Shielding
	38 4-12#	39 M 13-22D# 2-TDB4#	48 M 8-16#	58 7-16# 1-12#		
17 (E)	06 I 6-12#	08 II 8-16#	99 I 21-20# 2-16#	02 M 38-22# 1-8#(2-differential)	32 N 20-22# 2-8#(2-differential)	05 I 5-12#
	07 7-12#	11 3-12# 8-20#	23 2-12# 1-8#Dual coaxial	20 I 16-22# 2-20# 2-12#Shielding	39 3-TDB4	22 2-8#Dual coaxial
	51 M 10-16# 1-8#Dual coaxial	24 1-16# 2-12# 1-8#Dual coaxial	27 I 7-12#	53 I 13-16#	52 1-12# 1-8#Dual coaxial	64 2-12# ★ 2-8#Dual coaxial
	75 2-8#Dual coaxial					

19 (F)	11 II  11–16#	28 I  26–20# 2–16#	30 I  29–20# 1–16#	18 M  4–8#Dual coaxial 14–22D#
	39  5–TDB4	03  3–8#Dual coaxial	8 N  8–12#	16 M  2–12# 14–16#
	19 M  16–16#			
21 (G)	29 M  26–20# 3–12# coaxial	16 II  16–16#	39 I  37–20# 2–16#	11 II  11–12#
	75 M  4–8#Dual coaxial	80 M  12–16# 3–12# coaxial	70 M  20–16#	78  6–16# 2–8#Dual coaxial

23 (H)	99 II  11-16#	21 II  21-16#	97 I  16-16#	04 N  4-8#Dual coaxial
	37  31-20# 6-12#	05 N  5-8#Dual coaxial	09  6-12# 3-8#Dual coaxial	19  4-12# 15-16#
	15  16-16# 3-8#Dual coaxial	29  29-16#		
25 (J)	46 I  40-20# 4-16# 2-8#Dual coaxial	29 I  29-16#	04 I  48-20# 8-16#	24 I  12-16# 12-12#
	43 I  23-20# 20-16#	19 I  19-12#	42  38-22D# 4-8#Dual coaxial	31 N  12-20# 12-16# 5-10# 2-8#Dual coaxial

25
(J)

20 N  10-20# 13-16# 3-12#Shielding 1-12# coaxial 3-8#Dual coaxial	30  14-12# 16-22D#	65  61-22D# 1-12# 1-8#(4-differential) 2-8#Dual coaxial	07  97-22D# 2-8#(2-differential)
08  8-8#(2-differential)	23 I  20-16# 3-8#Dual coaxial	32 N  16-20# 10-16# 6-10#	21  3-12# 3-16# 5-8#Dual coaxial
15  3-12# 9-16# 3-8#Dual coaxial	37 I  37-16#	51 N  4-16# 7-8#Dual coaxial	44  24-22D# 12-16# 1-12#Shielding 1-8#(4-differential) 2-8#Dual coaxial
24b  21-20# 2-8#Dual coaxial 1-10# coaxial			

Contact size 
22D 20# 16# 16#Shielding 12# 12#Shielding 12# coaxial 10# 8#(4-differential) 8#Dual coaxial 8#(2-differential) 8# TDB4

Http://www.zhyf.com Email: sales@zhyf-bj.com

GJB599 Series Power Connectors

Brief introduction

- Outline dimension compliant with GJB 599A(MIL—DTL—38999)Ⅲ series
- For the high—power signal transmission in the power supply between equipments
- Rated current：7.5A～185A
- A quick thread coupling with anti—loosening mechanism
- Crimp or solder terminal
- Plug and receptacle fix pins or sockets

Application

The product is used in high—power signal transmission in the power supply between equipments.

Operating environment

The products can be used in harsh environments with strong vibration, rain, sand, damp heat, etc.

Main technical characteristics

[Mechanical]

—Housing：Aluminum alloy, stainless steel

—Plating：W— army green cadmium plating
F—electroless nickel plating
K— passivation—stainless steel

—Insulator：thermosetting plastic

—Grommet and seal：silicon rubber

—Contact：gold—plating copper alloy

[Electrical]

—Rated voltage, withstand voltage (V) and insulation resistance (MΩ)：

Operation environment	Rating voltage	Withstanding voltage	Insulation resistance
Normal temperature	500	1300	⩾5000
Heat and damp	500	750	⩾100

—Electricity of housing：
W class：2.5 mΩ；
F class：1 mΩ；
K class：5mΩ；

—Shielding
—10GHz, 65dB(F)
—10GHz, 50dB(W)
—1GHZ, 85 dB(F & W)

[Environmental]

W class：—65℃～175℃
F class：—65℃～200℃

—Sealing：Compliant with the requirement of MIL—DTL—38999K high altitude immersion

—Endurance：500 cycles

—Shock：3ms half sinusoid
Peak value of acceleration：300g

—Vibration：sinusoid：100～1000Hz,
Power spectral density： $1g^2/Hz$,
Avg. value of square root corresponded：41.7grms

—Contact resistance and rated current：

Contact size	Contact resistance mΩ	Rating current A
20#	⩽8.5	7.5
16#	⩽4.5	13
12#	⩽2.2	23
10#	⩽1.2	33
8#	⩽0.7	46
6#	⩽0.5	60
4#	⩽0.35	80
0#	⩽0.17	150
2/0#	⩽0.124	185

—Salt fog：Compliant with method 1001, GJB 1217
500 hours (W class)
48 hours (F class)
1000 hours (K class)

—Damp heat：10 cycles in 24 hours according to MIL—DTL—38999K

—Resistance to fluids：Fuels, coolant, solvent

Ordering information

Basic series	J599/	20	W	G	05	P	N	-H
Housing type	20—square flange receptacle 24—jam nut receptacle 26— plug with RFI shielding							
Plating	W－olive green cadmium plating F－electroless nickel plating K－stainless steel passive							
Housing No. Index No.	E to J 17 E, 19 F, 21 G, 23 H, 25 J							
Contact layout	see the insert arrangement figure							
Contact type	P—pin S—socket							
Polarization	N－normal A, B, C, D, E －alternative							
Solder contact identification only for solder connectors)	H—solder contact							

Note: 1.The applicable terminal accessories for this series are same as GJB599III. J1784/38 cable accessories and other angled accessories can not be operated with this series. Recommend J1784/38H and J1784/18H long cable accessories.
2.If the operation environment has oil—resistant requirement, the material of sealing components should be fluorinated silicone rubber and add "C1" at the end of the original code. (Example: J599/20FG48PNC1)

[Code sample]

J599/20KG05PN—H: J599 series square flange receptacles, G # stainless steel passivation housing, 05# contact layout fixed pins, and N polarization. (Solder contacts are only applicable for solder connectors.)

Crimping contacts

Contact size	Dia. mm	Contact crimp boot		Applicable wire			Crimping tensile strength N		Crimping contact resistance mΩ
		ID mm	Section mm^2	AWG	Section mm^2	Section dia.	Initial value	After thermal test	
20#	Φ1.0	1.17	1.07	24	0.2047	0.511	30	23	1.0
				22	0.3247	0.643	49	33	0.8
				20	0.5189	0.813	74	62	0.7
16#	Φ1.60	1.68	2.22	20	0.5189	0.813	74	62	0.7
				18	0.8107	1.02	167	147	0.5
				16	1.318	1.29	206	184	0.4
12#	Φ2.4	2.49	4.87	14	2.075	1.63	314	271	0.3
				12	3.332	2.05	471	413	0.2
10#	Φ3.15	3.40	9.07	10	5.26	2.59	601	540	0.1
8#	Φ3.6	4.55	16.25	8	8.37	3.26	881	801	0.05
6#	Φ4.52	5.9	27.3	6	13.3	4.11	1330	1201	0.05
4#	Φ5.72	7.1	39.5	4	21.15	5.19	1780	1601	0.03
0#	Φ9.07	11.48	103.4	0	53.49	8.25	3110	2802	0.02
2/0#	Φ10.31	12.65	125.6	00	67.43	9.27	3340	3003	0.01

Note:1)Solder contacts are irremovable, please do not fix into connectors before soldering wiring.
2)Solder contacts are packaged in pieces. After soldering wiring, fix contacts into the connectors. Ensure there are a few of horizontal space for the contact during crimping wiring by crimp tool.
3)Applicable crimping tool for crimp contacts is YTQ—00 hand hydraulic crimp tool.
4)Crimp products are supplied with contact locator. Before crimping contacts, put the locator on the wire, and then mount with contacts into the connectors.
5)Metallic extractor is designed with the crimp product and needs to be ordered separately.

Contact size	10#	8#	6#	4#	0#	2/0#
Remove tool	JY599—QX—10#	JY599—QX—8#	JY599—QX—6#	JY599—QX—4#	JY599—QX—0#	JY599—QX—2/0#

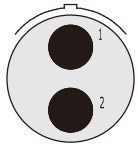
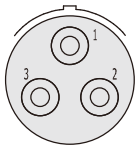
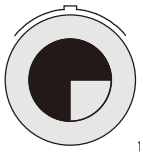
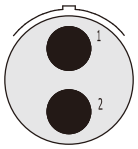
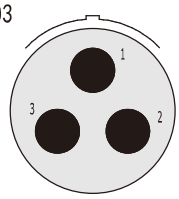
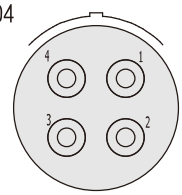
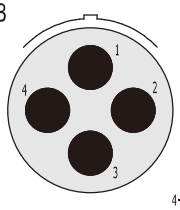
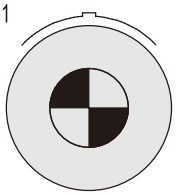
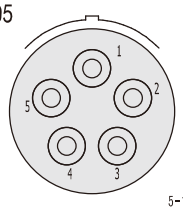
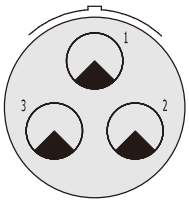
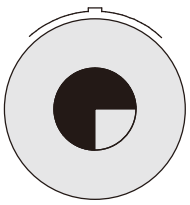
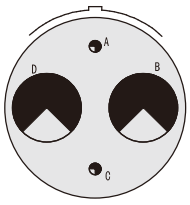
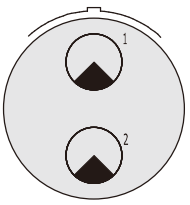
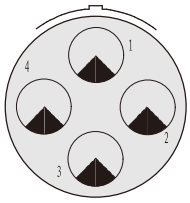
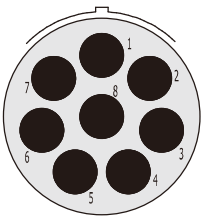
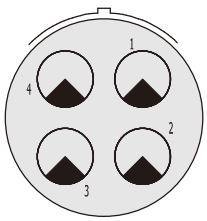
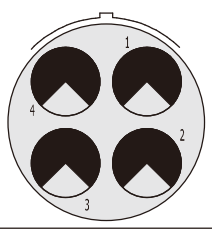
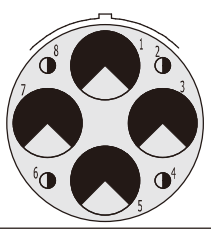
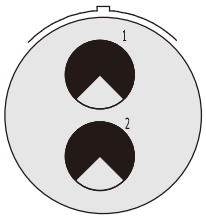
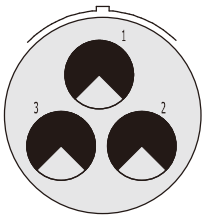
YTQ crimp mould	10#	8#	6#	4#
Pin	YTQ—18—Z	YTQ—24—Z YTQ—28—Z	YTQ—30—Z YTQ—32—Z	YTQ—34—Z YTQ—39—Z
Socket	YTQ—18—K	YTQ—24—K YTQ—28—K	YTQ—30—K YTQ—32—K	YTQ—34—K YTQ—39—K

The crimp mould listed in the figure is matched with YTQ—00 crimp tool, and need to be ordered separately.

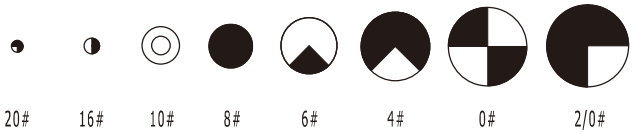
Outline dimensions

[Same with GJB599Ⅲ series connectors]

Contact layout (front viewed of male insulator)

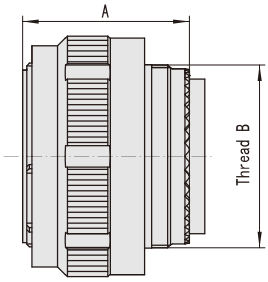
Housing size					
17 (E)	62  2-8#				
19 (F)	13  3-10#	01  1-2/0#	02  2-8#		
21 (G)	03  3-8#	04  4-10#	48  4-8#	31  1-0#	05  5-10#
23 (H)	03  3-6#	01  1-2/0#	24  2-4# 2-20#	12  2-6#	
	44 				
25 (J)	18  8-8#	34  4-6#	14  4-4#	28  4-4# 4-16#	
	22  2-4#	33  3-4#			

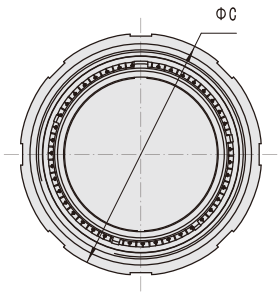
new pins can be added if needed



Outline dimension

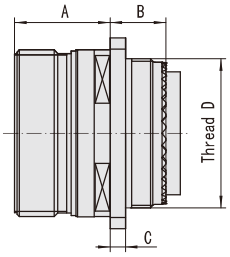
[Plug]

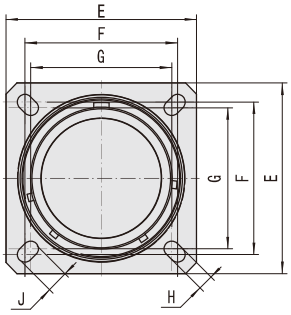


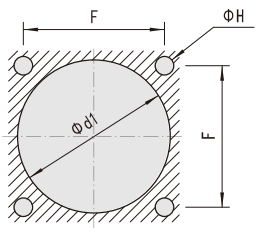


Housing size	MS housing size	A max	Thread B	C max
17	E	31.00	M25×1–6g	35.60
19	F	31.00	M28×1–6g	38.50
21	G	31.00	M31×1–6g	41.70
23	H	31.00	M34×1–6g	44.90
25	J	31.00	M37×1–6g	48.00

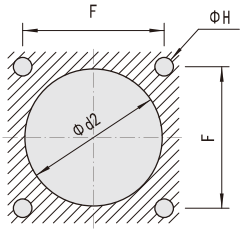
[Square flange receptacle]







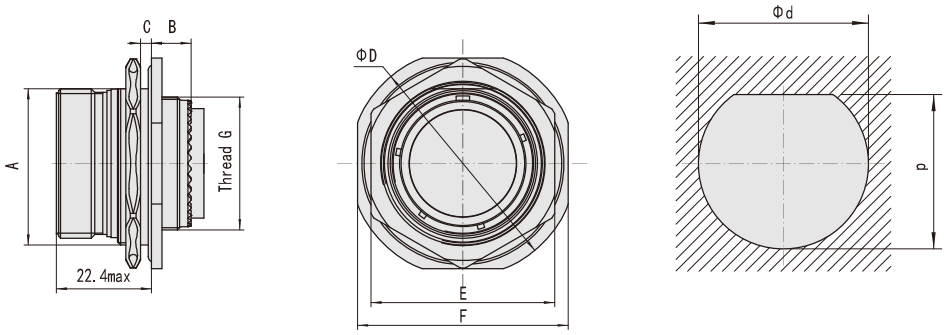
vaximum thickness of board 2.5mm.



Maximum thickness of board 3.2mm
Φd2 means the terminal punching dimensions without accessory

Housing size	MS Housing size	A max	B max	C max	Thread D	E	F	G	H	J	d1 min	d2 min
17	E	20.9	10.8	2.5	M25×1–6g	33.3	26.97	24.61	3.25	4.93	30.96	25.81
19	F	20.9	10.8	2.5	M28×1–6g	36.5	29.36	26.97	3.25	4.93	32.94	28.98
21	G	20.1	11.6	3.2	M31×1–6g	39.7	31.75	29.36	3.25	4.93	36.12	32.16
23	H	20.1	11.6	3.2	M34×1–6g	42.9	34.93	31.75	3.91	6.15	39.29	34.93
25	J	20.1	11.6	3.2	M37×1–6g	46.0	38.10	34.93	3.91	6.15	42.47	37.69

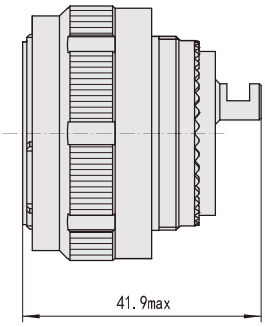
[Jam nut receptacle]



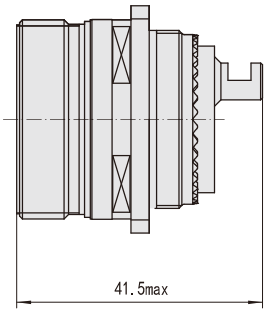
Housing size	MS Housing size	A	B max	C max	D max	E max	F	Thread G	d	p
17	E	30.40	9.90	3.20	44.80	37.00	41.30	M25×1–6g	31.98	30.68
19	F	33.40	9.90	3.20	49.30	41.00	46.00	M28×1–6g	35.15	33.86
21	G	36.50	9.90	3.20	52.70	46.00	49.20	M31×1–6g	38.28	37.06
23	H	39.70	9.90	3.20	55.90	50.00	52.40	M34×1–6g	41.50	40.24
25	J	42.80	9.90	3.20	59.00	51.23	55.60	M37×1–6g	44.68	43.41

GJB599III series soldering power connector

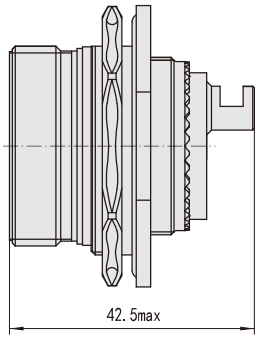
J599/26 plug



J599/20 receptacle



J599/24 receptacle



Solder contact size	Solder wiring cup inner Φ	The max. applicable wire gauge (AWG)
20#	ϕ1.1	20
16#	ϕ1.9	16
10#	ϕ3.6	10
8#	ϕ4.5	8
6#	ϕ5.5	6
4#	ϕ7.1	4
0#	ϕ11.5	0
2/0#	ϕ12.6	00

GJB599 Series high density ultra-miniature (JYS) connectors

Brief introduction

- High density, ultra-miniature design, light weight and high mechanical strength
- Aluminum alloy
- Applicable for extremely small space
- Quick bayonet coupling
- Crimped and removable contact or PCB contact
- Housing sizes: 2#, 4#, 6#
- Enterprise standard: Q/21EJ733

Ordering information

Basic series	JYS	0	P	02	05	P	N
Housing type	0—oval-shaped mounting receptacle 1—cable wiring receptacle 2— oval-shaped receptacle with PCB contacts 3—jam nut receptacle 6—plug						
Housing materia	P—aluminum alloy with satin nickel plating						
Housing size	02—04—06						
Insert arrangement	see the insert arrangement figure						
Contact type	P—pin S—socket PC—short PCB pin SC—short PCB socket						
Polarization	N—normal A、B、C、D—alternatives						

[Code sample]

JYS0P0205PN: JYS series elliptical flange mounting receptacle, aluminum alloy housing with satin nickel plating, 02# housing size, 05# contact layout, contacts fixed pins, and N polarization.

Main technical characteristics

[Environmental]

—Temperature range: −55℃～+175℃
—Relative humidity: 98%
—Salt fog: P type: 48h
—Fluid resistance: Fuels, coolant, solvent and more

[Mechanical]

—Endurance: 250 cycles
—Vibration: 10～2000Hz,147m/s²
—Shock: 10～2000Hz, 3ms, 300g
—Ccontact retention: 26# 35N, 22D# 45N

[Electrical]

——Contact resistance and rated current:

Contact size	Contact resistance (mΩ)	Rated current (A)
26#	15	3
22D	12	5

—Insulation resistance: Under normal temperature and pressure: ⩾5000MΩ
—Service level

Service level	Withstanding voltage at sea level Vrms
22D contact	1000
26# contact	400

—Housing electric continuity: <60mΩ (P class)

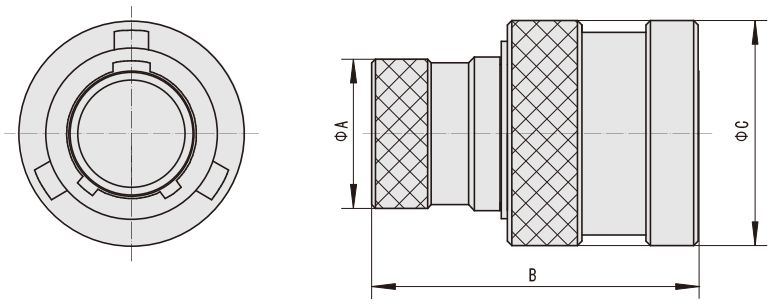
Crimping contacts

Contact size	Dia. mm	ID of crimp boot mm	OD of crimp boot mm	Section of wire mm²	AWG	Crimping tool
26#	Φ0.5	Φ0.45	Φ0.8	0.05 0.08	30 28	M81969/ 14—01—02
22D	Φ0.76	Φ0.85	Φ1.20	0.08 0.125 0.2 0.3	28 26 24 22	M81969/ 14—01

Http://www.zhyf.com Email: sales@zhyf-bj.com

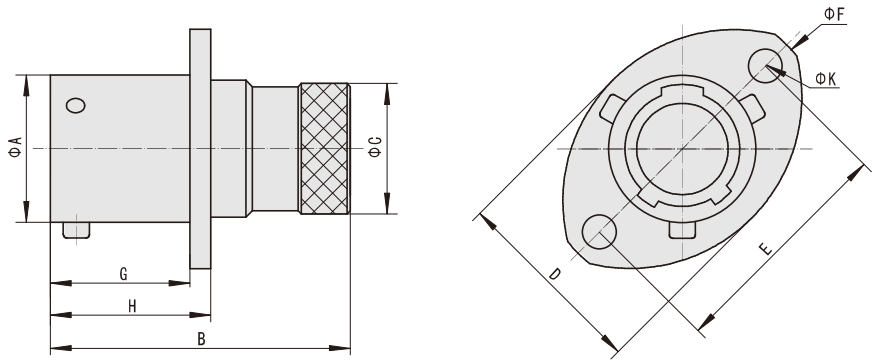
Outline dimensions

[type 6 plug]



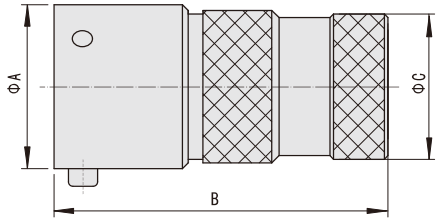
Housing size	A	B	C
02	7.2	17.5	11
04	8.6	18.3	13.5
06	10	22	15.1

[type 0 receptacle]



Housing size	A	B	C	D	E	F	G	H	K
02	8.3	17.5	7.2	10.6	13.6	17.6	9.5	11	2.1
04	10.1	18.3	8.6	13.2	16.2	20.8	10	11.6	2.2
06	11.3	23	10	15	18	22.6	10.7	12.3	2.2

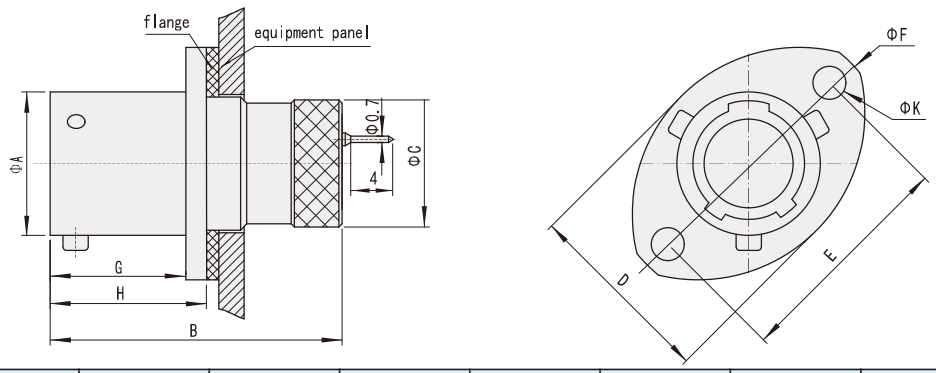
[type 1 wiring receptacle]



Housing size	A	B	C
02	8.3	17.5	7.2
04	10.1	18.3	8.6
06	11.3	23	10

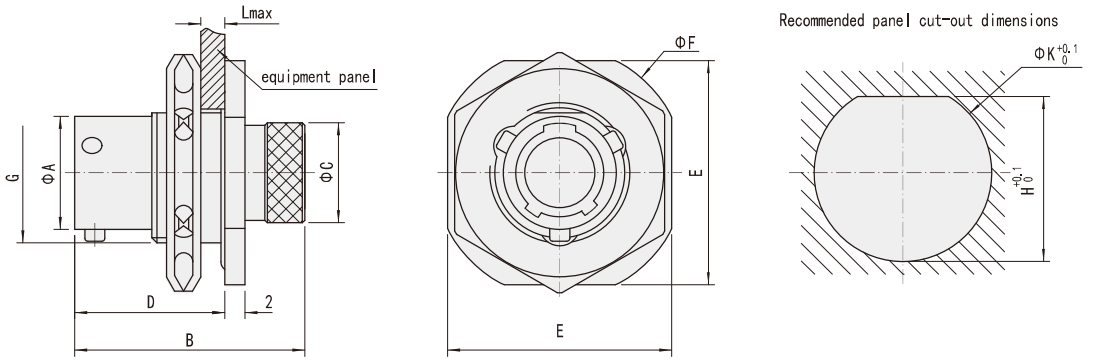
[type 2 PCB receptacle]

2 type PCB receptacle outline dimension is the same with 0 type receptacle



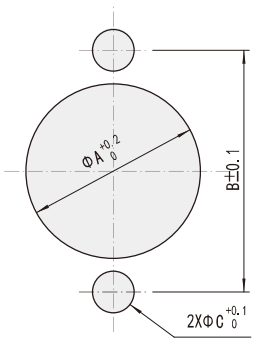
Housing size	A	B	C	D	E	F	G	H	K
02	8.3	17.5	7.2	10.6	13.6	17.6	9.5	11.2	2.1
04	10.1	18.3	8.6	13.2	16.2	20.8	10	12	2.2
06	11.3	23	10	15	18	22.6	10.7	12.7	2.2

[type 3 jam nut receptacle]



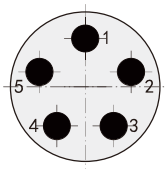
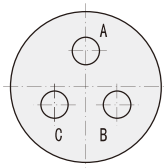
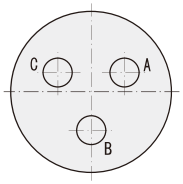
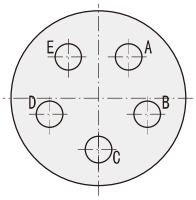
Housing size	A	B	C	D	E	F	G	L	H	K
02	8.3	17.5	7.2	14	16.4	18	M10×0.75	2.3	9.4	10.2
04	10.1	18.3	8.6	15	20.2	22	M12×1	3	11.5	12.8
06	11.3	23	10	15	22.4	25	M14×1	3	13.2	14.2

[Recommended panel cutout dimensions for type 0 receptacle and type 2 receptacle]



Housing size	A	B	C
02	7.5	13.6	2.1
04	9	16.2	2.2
06	10.5	18	2.2

Insert arrangement

Housing size	Insert arrangement	Contact No.	Figure
02	02-05	5-26#	
02	02-35	3-22D	
04	04-35	3-22D	
06	06-35	5-22D	

GJB599 | Series Float Mounting Electrical Connector for Cabinets (JYF Series)

Brief introduction

- EMI shielding
- Grounding housing before contacts are inserted
- Low weight, volume saving
- 8 housing sizes from 11# to 25#
- 100% scoop-proof to avoid bending pin during mating
- Number of contacts: from 1 cores to 128cores
- Contact size: 22D, 20#, 16#, 12#, 8#, 4#
- Applicable terminal accessory according to standard J1784
- Contact layout: same as GJB599 I series 11#~25# housing

Product features

The receptacles of the JYF series connectors are mounted in the fixed unit of equipment, and the plugs mounted in the free unit. The JYF series connectors have no self-latching and deblocking mechanisms. Locking and deblocking function must be supplied by the equipment itself.

As the floating plugs of the JYF series, the matching tolerance between the free unit and the fixed unit could be adjusted, and the distortion or excursion caused by some factors such as a load, can be absorbed. The floating scope of a plug is showed as figure 1.

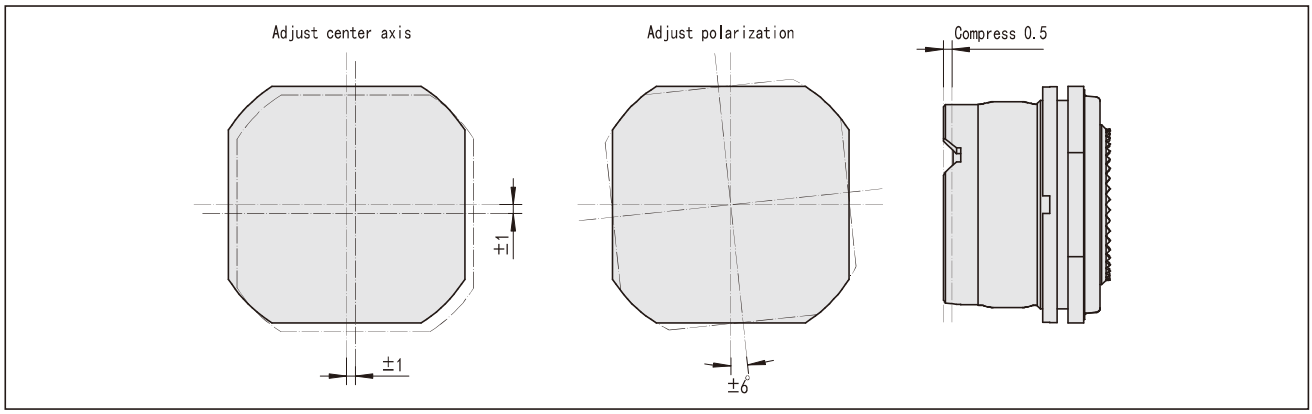


Figure 1 Range for plug

Order information

Basic series	JYF	27467	T	25	B	42	P	N
Type	27467: jam nut plug 27999: square flange plug 27466: wall-type square flange receptacle (front mounting,) 27496: box square flange receptacle(front mounting,) 27468: jam nut receptacle							
Housing type	T – thread termination E – no thread termination							
Housing size	11/13/15/17/19/21/23/25							
Housing plating	B: army green cadmium plating F: electroless nickel plating							
Contact layout	(as GJB599 I series)							
Contact type	P – pin S – socket							
Polarization	N: the common polarization only							

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Main technical characteristics

[Environmental]

—Operation temperature:
Army—green cadmium plating:—65℃ ~ +175℃
Electroless nickel plating:—65℃ ~ +200℃
—high temperature resistance: 1000 h
—Relative humidity: 98% at 40℃
—Air leakage rate:≤16 cm3/h at 2 pressure difference
—Salt fog
Army—green cadmium plating: 500 h
Electroless nickel plating: 48 h
—Fluid immersion resistance: against various fuels, coolant, solvent

[Mechanical]

——Retention force of insulators in the housing: 7 bars
——Retention force of contacts in the insulator:

Contact size	22D	20#	16#	12#	8#	4#
Max load(N)	45	67	110	150	150	150

——Mating and unmating force

Housing size	Max mating force(N)	Min unmating force(N)
11	20×10	12×10
13	30×10	13×10
15	35×10	15×10
17	50×10	16×10
19	55×10	18×10
21	65×10	22×10
23	80×10	27×10
25	102×10	34×10

—Endurance: 500 cycles
—Random vibration: 10~2000Hz, acceleration peak 28g
—Sinusoid vibration: 10~2000Hz, acceleration peak 30g
—Shock: 3ms one thirds sinusoid, acceleration peak 150g

[Electrical]

——Rated current of contact:

Contact size	22D	20#	16#	12#	8#	4#
Rated current(A)	5	7.5	13	23	60	100

——Contact resistance:

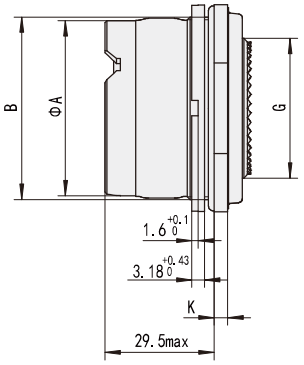
Contact size	22D	20#	16#	12#	8#	4#
Contact resistance(mΩ)	8	4.7	2	1.1	0.6	0.26

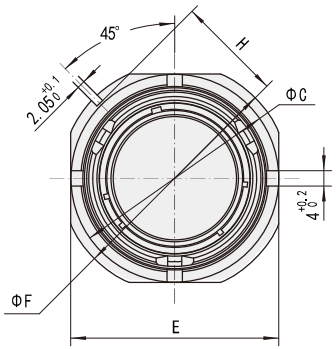
——Insulation resistance:
Normal ≥5000MΩ; high temperature ≥1000MΩ
——Service rating

Operation class	Withstanding voltage at sea level (Vrms)	Withstanding voltage at 21000 m (Vrms)	Operating voltage	
			Vrms	Vdc
M	1300	800	400	550
N	1000	600	300	400
I	1800	1000	600	850
II	2300	1000	900	1250

Outline dimension

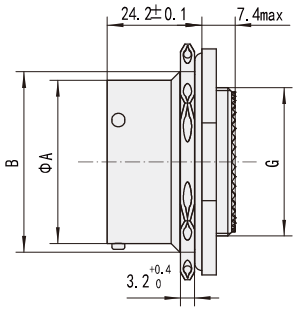
[Jam nut plug JYF27467]

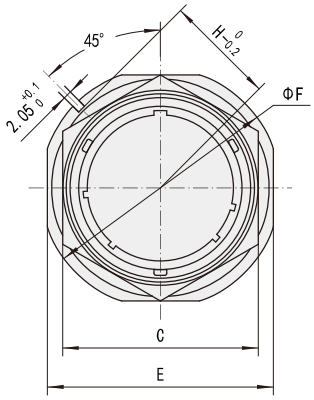


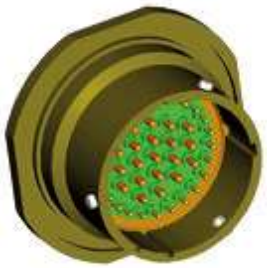


Housing size	A	B	C	E	F	G	$H_{-0.25}^{0}$	K
11	23	1.0000−20 UNEF−2A	32.23	32.16	38.10	0.5625−24 UNEF−2A	16.92	2.77
13	26.8	1.1250−18 UNEF−2A	35.25	36.34	41.28	0.6875−24 UNEF−2A	18.51	2.77
15	30	1.2500−18 UNEF−2A	38.40	38.51	44.45	0.8125−20 UNEF−2A	20.10	2.77
17	33.22	1.3750−18 UNEF−2A	41.60	41.69	49.23	0.9375−20 UNEF−2A	22.67	2.77
19	36.2	1.5000−18 UNEF−2A	46.30	46.43	52.37	1.0625−18 UNEF−2A	24.26	3.56
21	39.4	1.6250−18 UNEF−2A	49.60	49.64	55.58	1.1875−18 UNEF−2A	25.84	3.56
23	42.6	1.7500−18 UNEF−2A	52.70	52.78	58.72	1.3125−18 UNEF−2A	27.43	3.56
25	45.68	1.8750−16 UNEF−2A	53.93	54.03	59.10	1.4375−18 UNEF−2A	27.58	3.56

[Jam nut receptacle JYF27468]

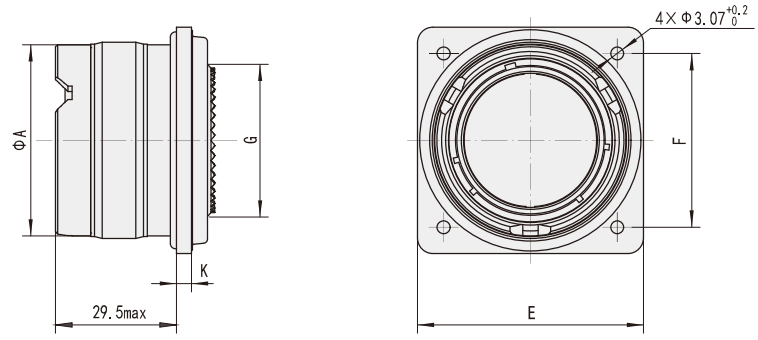






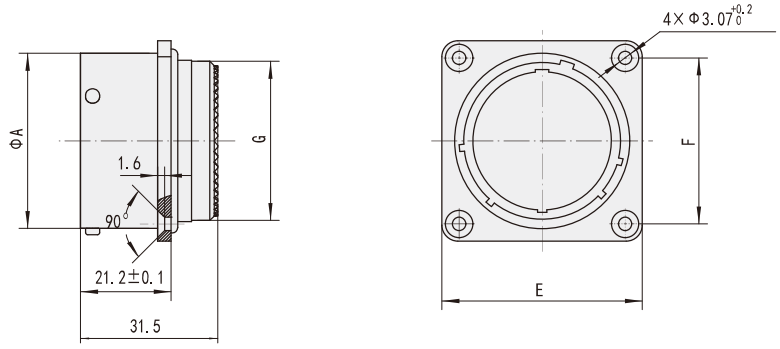
Housing size	A	B	C	E	F	G	H
11	17.81	0.8125−20 UNEF−2A	25.8	31.49	35.20	0.5625−24 UNEF−2A	15.33
13	21.62	1.0000−20 UNEF−2A	30	34.69	38.38	0.6875−24 UNEF−2A	16.92
15	24.80	1.1250−18 UNEF−2A	33	37.79	41.55	0.8125−20 UNEF−2A	18.51
17	27.97	1.2500−18 UNEF−2A	37	40.99	44.73	0.9375−20 UNEF−2A	20.10
19	30.69	1.3750−18 UNEF−2A	40	45.79	49.51	1.0625−18 UNEF−2A	22.67
21	33.86	1.5000−18 UNEF−2A	43	48.99	52.65	1.1875−18 UNEF−2A	24.26
23	37.04	1.6250−18 UNEF−2A	46	52.09	55.86	1.3125−18 UNEF−2A	25.84
25	40.22	1.7500−18 UNEF−2A	51.20	55.29	59	1.4375−18 UNEF−2A	27.43

[Square flange plug JYF27999]



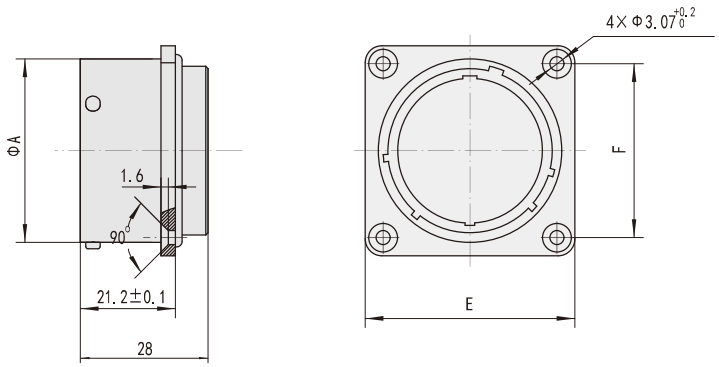
Housing size	A	E	F	G	K
11	23	33.60	25.5	0.5625−24 UNEF−2A	2.77
13	26.8	36.30	28	0.6875−24 UNEF−2A	2.77
15	30	39.50	30	0.8125−20 UNEF−2A	2.77
17	33.22	41.69	32	0.9375−20 UNEF−2A	2.77
19	36.2	46.43	35	1.0625−18 UNEF−2A	3.56
21	39.4	49.64	37	1.1875−18 UNEF−2A	3.56
23	42.6	53.00	39.5	1.3125−18 UNEF−2A	3.56
25	45.68	54.50	41.5	1.4375−18 UNEF−2A	3.56

[Wall−mounting square flange receptacle(front mounting) JYF27466]



Housing size	A	E	F	G
11	17.81	28.3	20.62	0.5625−24 UNEF−2A
13	21.62	30.7	23.01	0.6875−24 UNEF−2A
15	24.80	32.3	24.61	0.8125−20 UNEF−2A
17	27.97	34.7	26.97	0.9375−20 UNEF−2A
19	30.69	37.1	29.36	1.0625−18 UNEF−2A
21	33.86	39.7	31.75	1.1875−18 UNEF−2A
23	37.04	42.9	34.93	1.3125−18 UNEF−2A
25	40.22	46	38.10	1.4375−18 UNEF−2A

[Box square flange receptacle (front mounting)JYF27496]



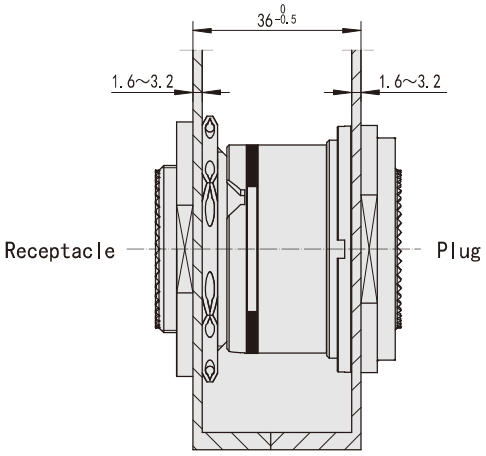
Housing size	A	E	F
11	17.81	28.3	20.62
13	21.62	30.7	23.01
15	24.80	32.3	24.61
17	27.97	34.7	26.97
19	30.69	37.1	29.36
21	33.86	39.7	31.75
23	37.04	42.9	34.93
25	40.22	46	38.10

Installation

Notes:

——The dimension between the two flanges is critical for it assures the technical characteristics after mating.
——The guide system independent of the connector makes the float unit in place
——no mechanical pressure should be put on the rear of plug by cables.

Mated connectors (jam nut plug and jam nut receptacle)



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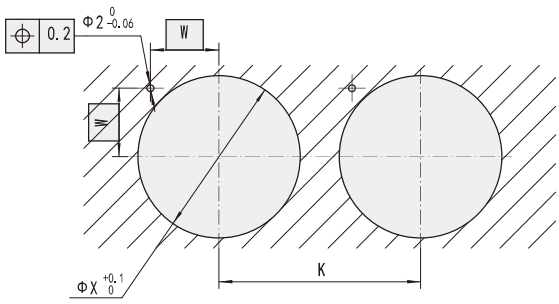
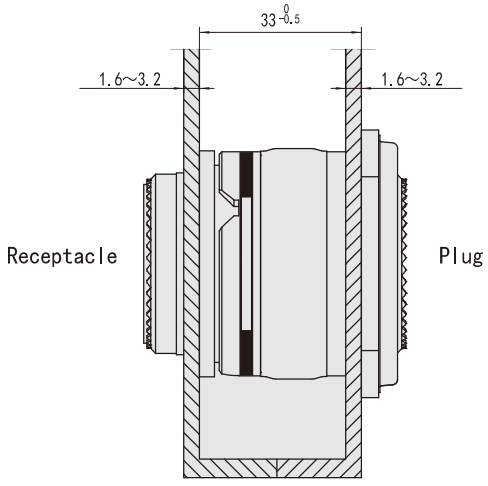
Panel cutout dimensions and recommended nut coupling torque (applicable to jam nut plug and receptacle)



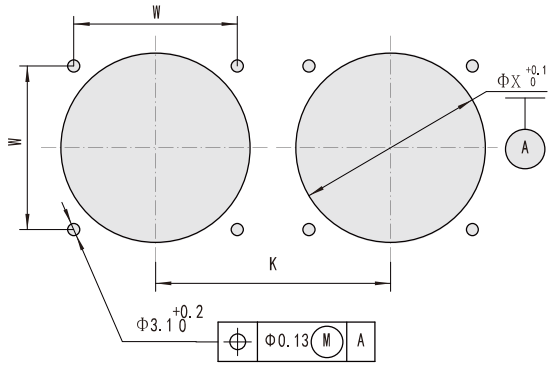
Housing size of plug	K(min)	W	X	Nut coupling torque	
				min	max
11	32.60	12.81	25.58	6.2	6.8
13	36	13.94	28.80	7.9	8.5
15	39.60	15.06	31.98	9	9.6
17	43.30	16.88	35.15	10.2	10.7
19	47	18.00	38.28	11.3	12.4
21	50.60	19.12	41.50	12.4	13.6
23	54.20	20.24	44.68	13.6	14.7
25	59.70	20.30	48.08	15.8	16.9

Housing size of receptacle	K(min)	W	X	Nut coupling torque	
				min	max
11	32.60	11.69	20.88	4.5	5.7
13	36	12.81	25.58	6.2	6.8
15	39.60	13.94	28.80	7.9	8.5
17	43.30	15.06	31.98	9	9.6
19	47	16.88	35.15	10.2	10.7
21	50.60	18.00	38.28	11.3	12.4
23	54.20	19.12	41.50	12.4	13.6
25	59.70	20.24	44.68	13.6	14.7

Mating connectors (square flange plug & receptacle)



[Panel punching dimensions for square flange plug]



Housing size	Punching dimension of plug		
	$\Phi X^{+0.1}_{0}$	W	K(min)
11	25.58	25.5	36
13	28.80	28	39.6
15	31.98	30	43.3
17	35.15	32	47
19	38.28	35	50.6
21	41.50	37	54.2
23	44.68	39.5	59.7
25	48.08	41.5	59.7

Housing size	Punching dimension of receptacle		
	$\Phi X^{+0.1}_{0}$	W	K(min)
11	16.78	20.62	36
13	19.98	23.01	39.6
15	22.88	24.61	43.3
17	25.88	26.97	47
19	29.08	29.36	50.6
21	32.28	31.75	54.2
23	34.08	34.93	59.7
25	37.28	38.1	59.7

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