

N J C Series

N J C



Non-waterproof

R o H S

Safety standard certified products available

Overview

- Connectors designed in accordance with JIS C 5432.
- A large selection of products with a large number of derivatives added.
- A variety of products certified by safety standards having proven performance in a wide range of applications including semiconductor equipment and various measuring instruments.

Feature

RoHS	RoHS Directive compliant
Waterproof	Non
Lock method	Thread lock
Features of mechanism/ material	○ Die cast shell with zinc alloy or aluminum alloy. ○ Smooth coupling thanks to employment of 5-key system guide. ○ Installation in a small space enabled by use of the L za.
Standards	○ JIS C 5432 compliant connectors available. ○ UL • CSA standard certified connectors available. (UL : UL1977 CSA : C22.2 No.182.3) ○ Safety standard certified connectors available. (EN61984 compliant, TÜV certified) Note: The specifications of safety standard certified products are slightly different from those of standard products. For the rated voltage, current and cable conductor cross sectional area, refer to A List of Standards Acquired (pp.127 and 130).
Cable termination	Soldering

Characteristics

Insulation resistance , Withstand voltage , Contact resistance p.38



The pin contact type has an **exposed electrode**. If it is used on the [power supply] side, it may cause **electric shock** or **short-circuit accidents**. To prevent such accidents, use the socket contact type on the [power supply] side and the pin contact type on the [equipment] side.

NJC Series

Product No. designation

NJC - 20 ■ - P M

① ② ③ ④ ⑤ ⑥ ⑦

- ① Series designation
- ② Shell size
- ③ Number of contacts
- ④ Shell shape
- ⑤ Contact shape < Pin (male) contact : M , Socket (female) contact : F >
- ⑥ Guide position change symbol (X , Y , Z) 《 Required only when changing the guide position 》
- ⑦ Safety standard specification (< UL • CSA > , < TUV >)
《 Required only when safety standard is to be specified. 》 For applicable products, see pp.127 and 130.

Cable termination : Soldering

《Option》

- When using a plural number of same products at the same time, the guide position can be changed in order to prevent mis-insertion.

(For applicable products, see below.)

Product name example : NJC-2010-PF~~X~~

Guide position change symbol (X , Y , Z) in the **red character part**.

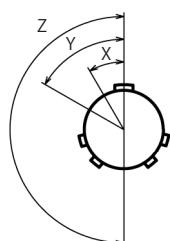
Material and Finish

	Material	Finish
Shell	Shell size 16 , 20 , 24 : Zinc alloy (Partially aluminum alloy)	Crape chrome plating Special treatment
	Shell size 28 , 32 : Aluminum alloy	
Insulator	Synthetic resin	—
Contact	Copper alloy	Silver plating Gold plating

To change the guide position (Following number of contacts only)

Shell size	Number of Contacts	Guide Position Symbol		
		X	Y	Z
16	* 3	30°	60°	180°
	* 5	45°	90°	315°
20	* 7	30°	—	—
	* 10	45°	90°	315°
	12		95°	190°
24	* 10	45°	90°	315°
	14			
	* 16			
28	* 16	45°	90°	315°
	* 24			

* UL • CSA products supported also.



An image of guide position change

< When viewed from the pin (male)
contact side coupling face >

Operating temperature range

Shell size	Number of Contacts	Operating temperature range
20	2 , 3 , 4 , 5	-40°C to +100°C
24		
32	3 , 4	-25°C to +85°C
16	3 , 5	
20	7 , 10 , 12	
24	10 , 14 , 16	
28	16 , 24	-25°C to +60°C
16	8	
20	14	
24	21 , 24	
28	31 , 37	
32	8 , 10 , 12	

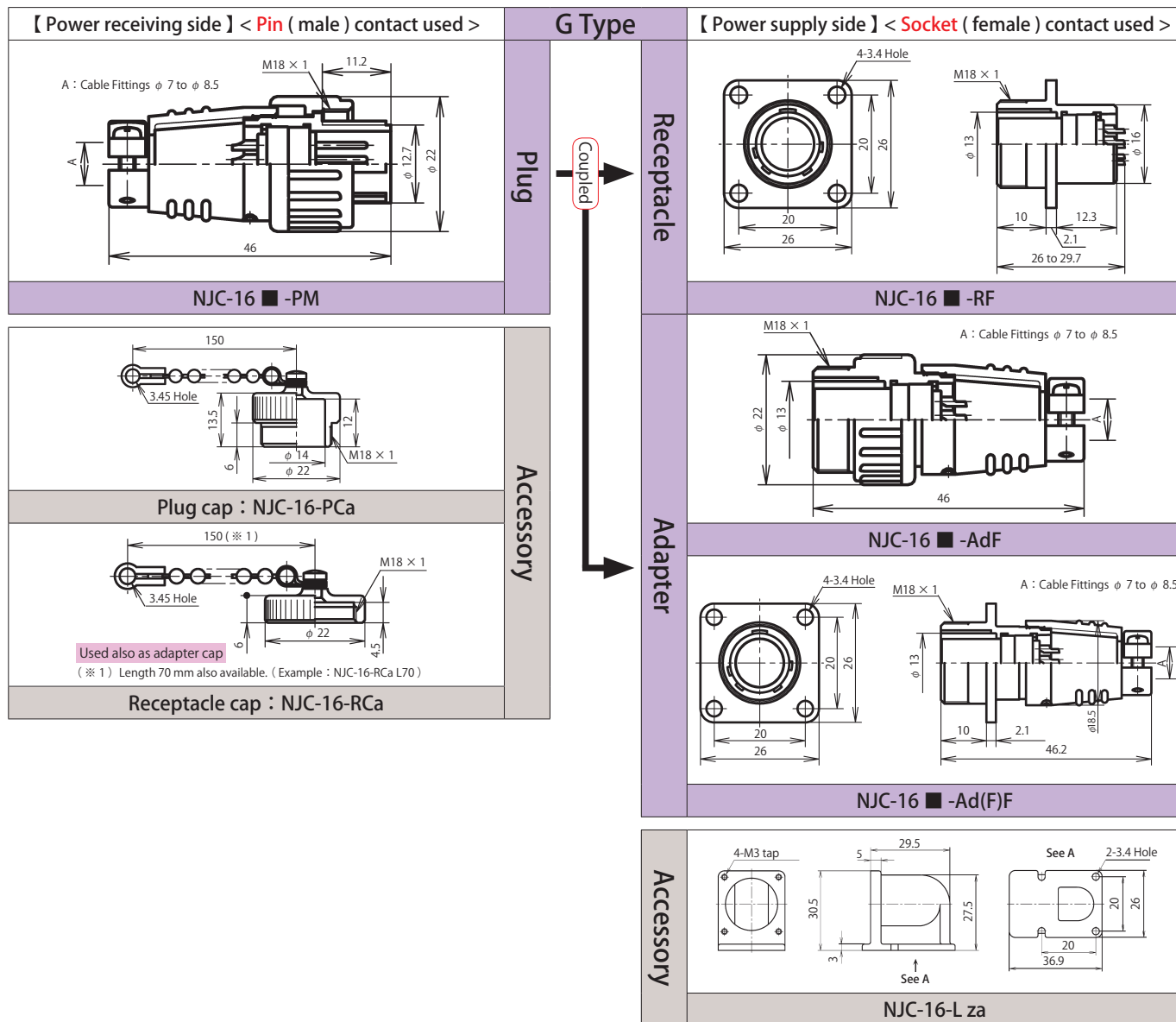
Upper limit of ambient temperature at rated current

TÜV products only

Shell size	Number of Contacts			
	2	3	4	5
20	+80°C	+80°C	+75°C	—
24	+70°C	+70°C	+80°C	+80°C
32	—	+70°C	+70°C	—

(Note) Max.ambient temp. at rated current

(Based on TÜV certification test results)



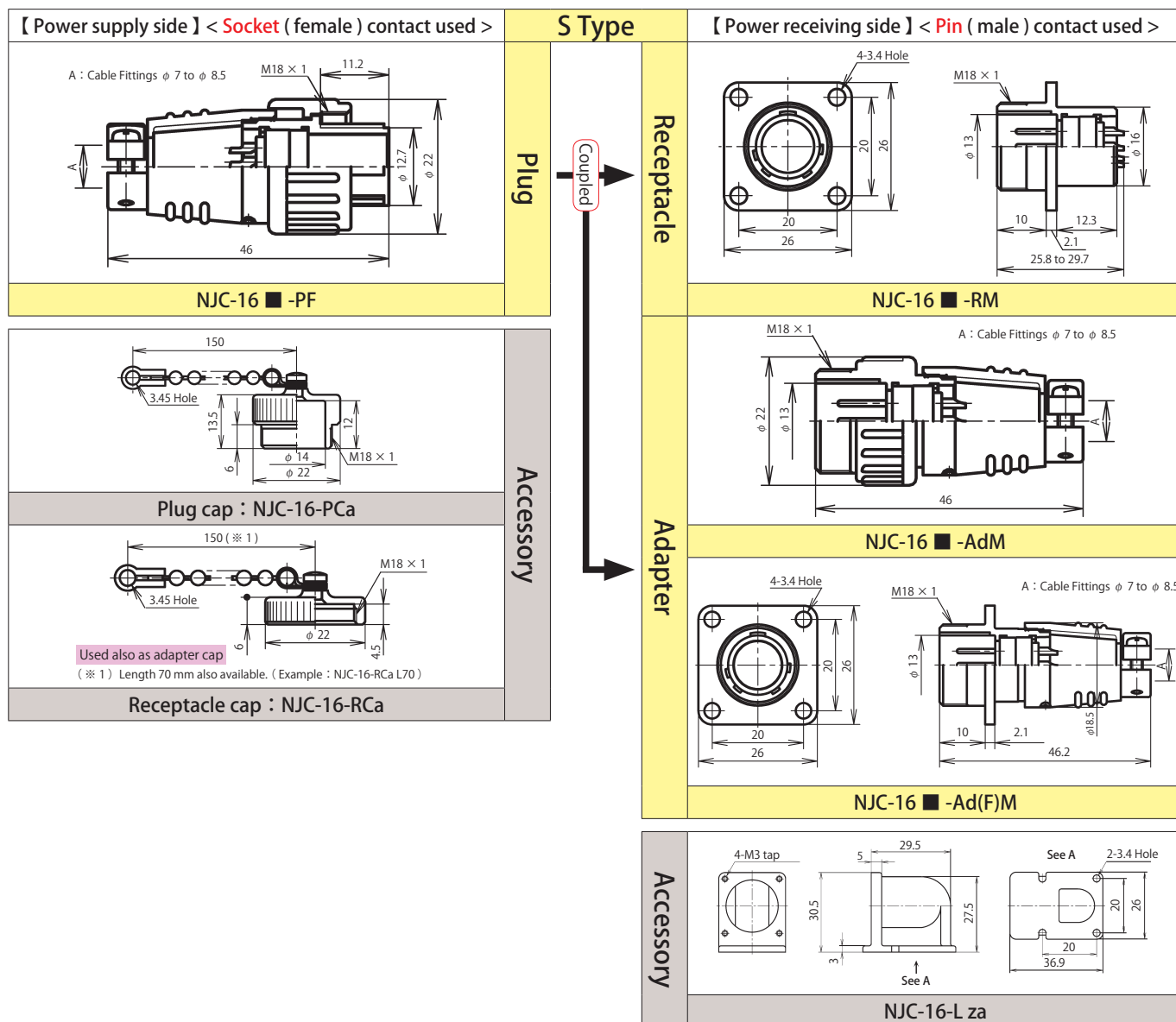
■ indicates the number of contacts.

The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on p.127.

Shell size	Number of Contacts	3	5	8
16	Contact arrangement <When viewed from the pin (male) contact coupling side>			
	Safety standard (Note-1)	UL・CSA		—
	Rating (Allowable current for signals)	125V		—
	Withstand voltage (V r.m.s.)	1,500	1,000	500
	Wire size (mm ²)	1.25	0.5	0.3
	Remarks	—		For signals

[] : Gold plating contact

Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.



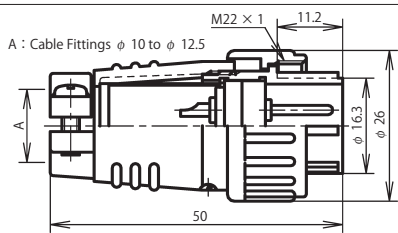
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Shell size	Number of Contacts	3	5	8
16	Contact arrangement <When viewed from the pin (male) contact coupling side>			
	Safety standard (Note-1)	UL・CSA		—
	Rating (Allowable current for signals)	125V		—
		10A	5A	[3A]
	Withstand voltage (V r.m.s.)	1,500	1,000	500
	Wire size (mm ²)	1.25	0.5	0.3
	Remarks	—		For signals

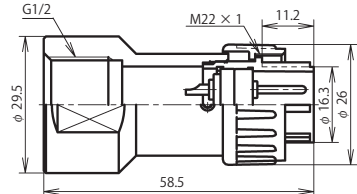
Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.

[] : Gold plating contact

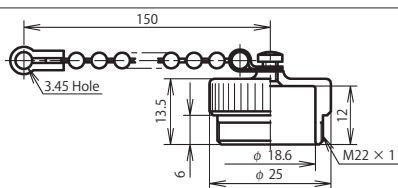
【 Power receiving side 】 < Pin (male) contact used >



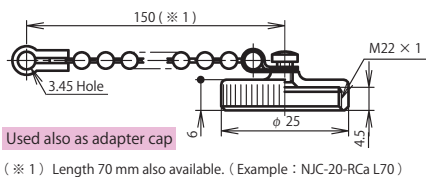
NJC-20 ■ -PM



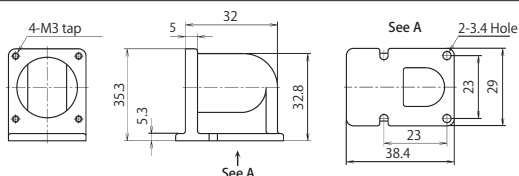
NJC-20 ■ -GPM1/2 (Note)



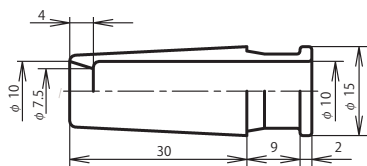
Plug cap : NJC-20-PCa



Receptacle cap : NJC-20-RCa



NJC-20-L za



Cable bushing : NJC-20-CB

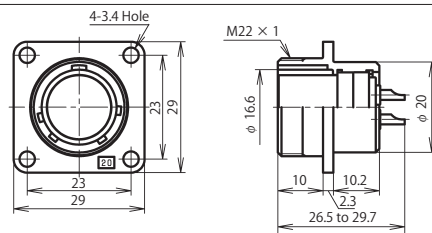
G Type

Plug

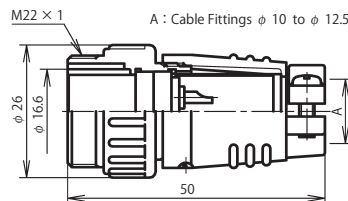
Accessory



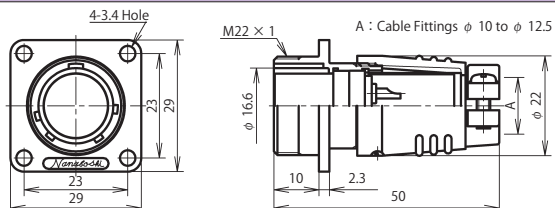
【 Power supply side 】 < Socket (female) contact used >



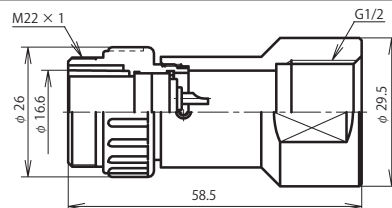
NJC-20 ■ -RF



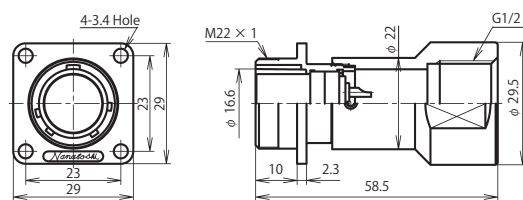
NJC-20 ■ -AdF



NJC-20 ■ -Ad(F)F

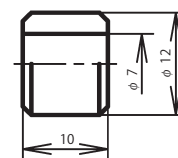


NJC-20 ■ -GAdF1/2 (Note)



NJC-20 ■ -GAd(F)F1/2 (Note)

Accessory



Cable bushing : CBAS-12-7

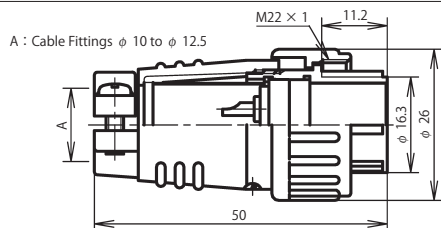
■ indicates the number of contacts.
The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on pp.127 and 130.

Shell size	Number of Contacts	2	3	4	5	7	10	12	14
20	Contact arrangement <When viewed from the pin (male) contact coupling side>								
	Safety standard (Note-1)	UL-CSA TÜV	UL-CSA TÜV	UL-CSA TÜV	UL-CSA				—
	Rating (Allowable current for signals)	250V				—			
	Withstand voltage (V r.m.s.)	15A				10A			
	Wire size (mm ²)	2				1.25			
	Remarks	—				0.5			

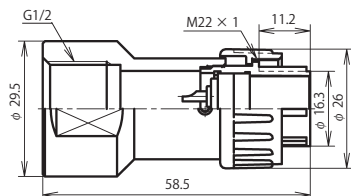
Note-1: Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

JIS mark refers to JIS C 5432 compliant products.
[] : Gold plating contact

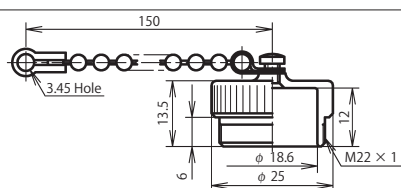
【 Power supply side 】 < Socket (female) contact used >



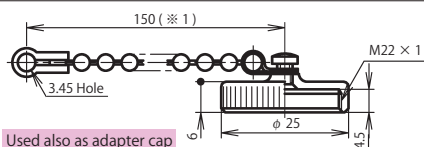
NJC-20 ■ -PF



NJC-20 ■ -GPF1/2 (Note)



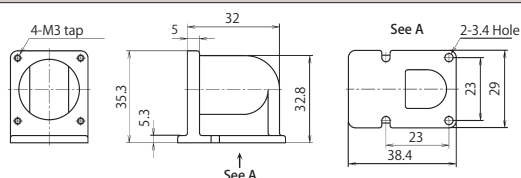
Plug cap : NJC-20-PCa



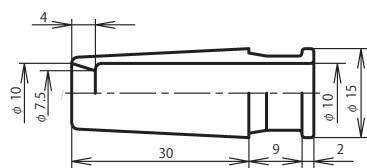
Used also as adapter cap

(※ 1) Length 70 mm also available. (Example : NJC-20-RCa L70)

Receptacle cap : NJC-20-RCa



NJC-20-L za



Cable bushing : NJC-20-CB

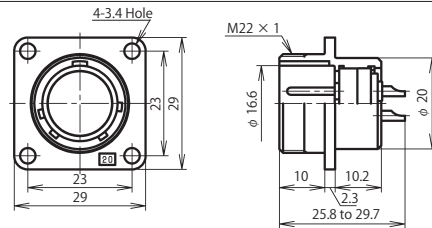
S Type

Plug

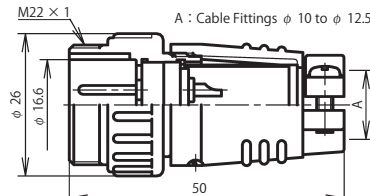
Accessory



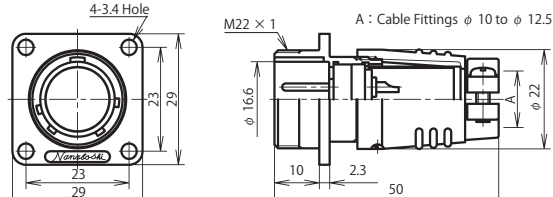
【 Power receiving side 】 < Pin (male) contact used >



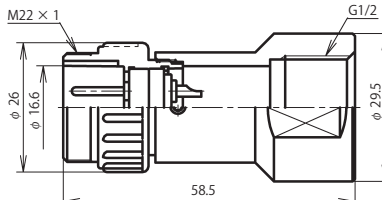
NJC-20 ■ -RM



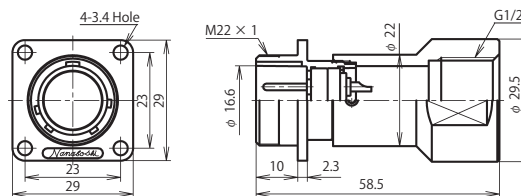
NJC-20 ■ -AdM



NJC-20 ■ -Ad(F)M

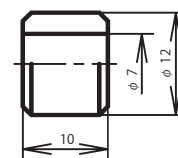


NJC-20 ■ -GAdM1/2 (Note)



NJC-20 ■ -GAd(F)M1/2 (Note)

Accessory



Cable bushing : CBAS-12-7

Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

■ indicates the number of contacts.

The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on pp.127 and 130.

Shell size	Number of Contacts	2	3	4	5	7	10	12	14
20	Contact arrangement <When viewed from the pin (male) contact coupling side>								
	Safety standard (Note-1)	UL·CSA TÜV	UL·CSA TÜV	UL·CSA TÜV	UL·CSA				—
	Rating (Allowable current for signals)	250V				5A			
	Withstand voltage (V r.m.s.)	1,500				1,000			
	Wire size (mm ²)	2				0.5			
	Remarks	—				For signals			

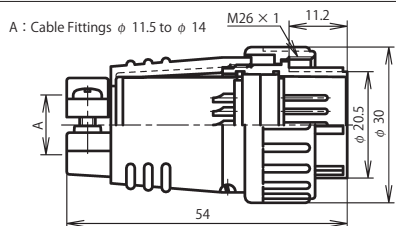
Note-1: Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

JIS mark refers to JIS C 5432 compliant products.

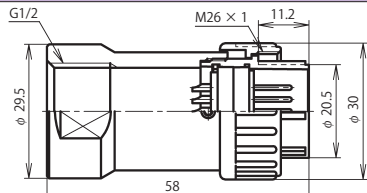
[] : Gold plating contact

NJC Series Shell Size 24

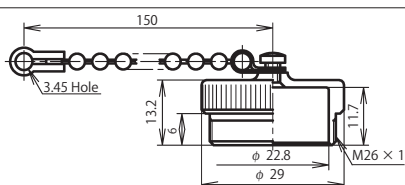
【 Power receiving side 】 < Pin (male) contact used >



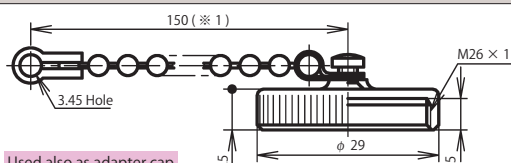
NJC-24 ■ -PM



NJC-24 ■ -GPM1/2 (Note)

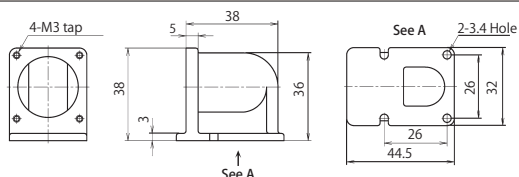


Plug cap : NJC-24-PCa



Used also as adapter cap
(※ 1) Length 50,70 mm also available. (Example : NJC-24-RCa L70)

Receptacle cap : NJC-24-RCa



NJC-24-L za

Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

G Type

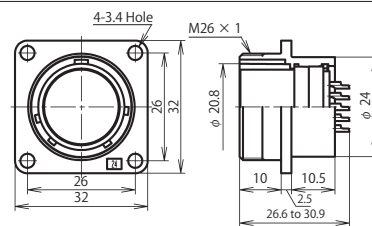
Plug



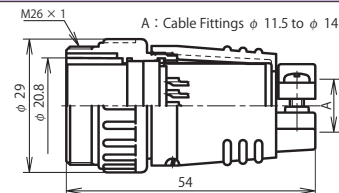
Receptacle

Adapter

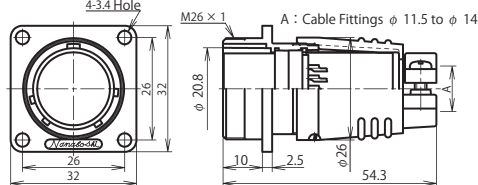
【 Power supply side 】 < Socket (female) contact used >



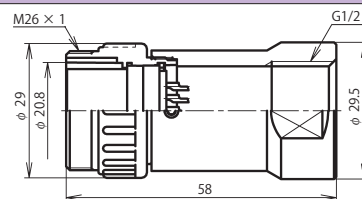
NJC-24 ■ -RF



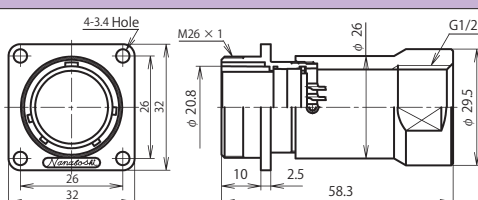
NJC-24 ■ -AdF



NJC-24 ■ -Ad(F)F

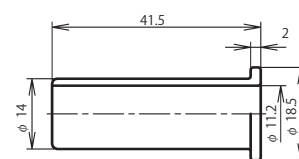


NJC-24 ■ -GAdF1/2 (Note)



NJC-24 ■ -GAd(F)F1/2 (Note)

Accessory



Cable bushing : NJC-24-CB

■ indicates the number of contacts.

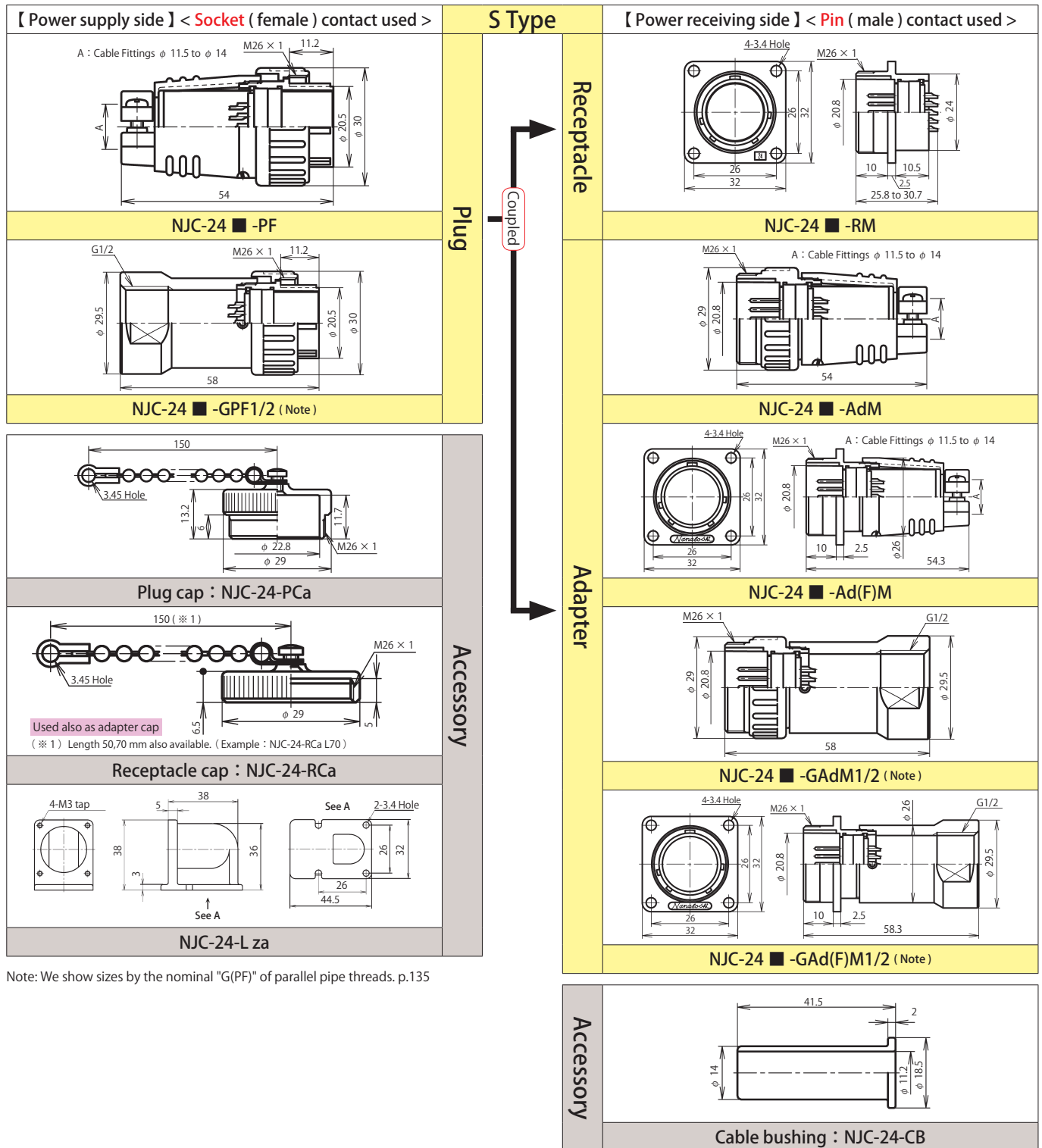
The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on pp.127 and 130.

Shell size	Number of Contacts	2	3	4	5	10	14	16	21	24
24	Contact arrangement <When viewed from the pin (male) contact coupling side>									
	Safety standard (Note-1)	UL-CSA TÜV	UL-CSA TÜV	UL-CSA TÜV	UL-CSA TÜV	UL-CSA				—
	Rating (Allowable current for signals)	250V					—			
	Withstand voltage (V r.m.s.)	1,500					1,000			
	Wire size (mm ²)	3.5					0.5			
	Remarks	—					For signals			

JIS mark refers to JIS C 5432 compliant products.

[] : Gold plating contact

Note-1: Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

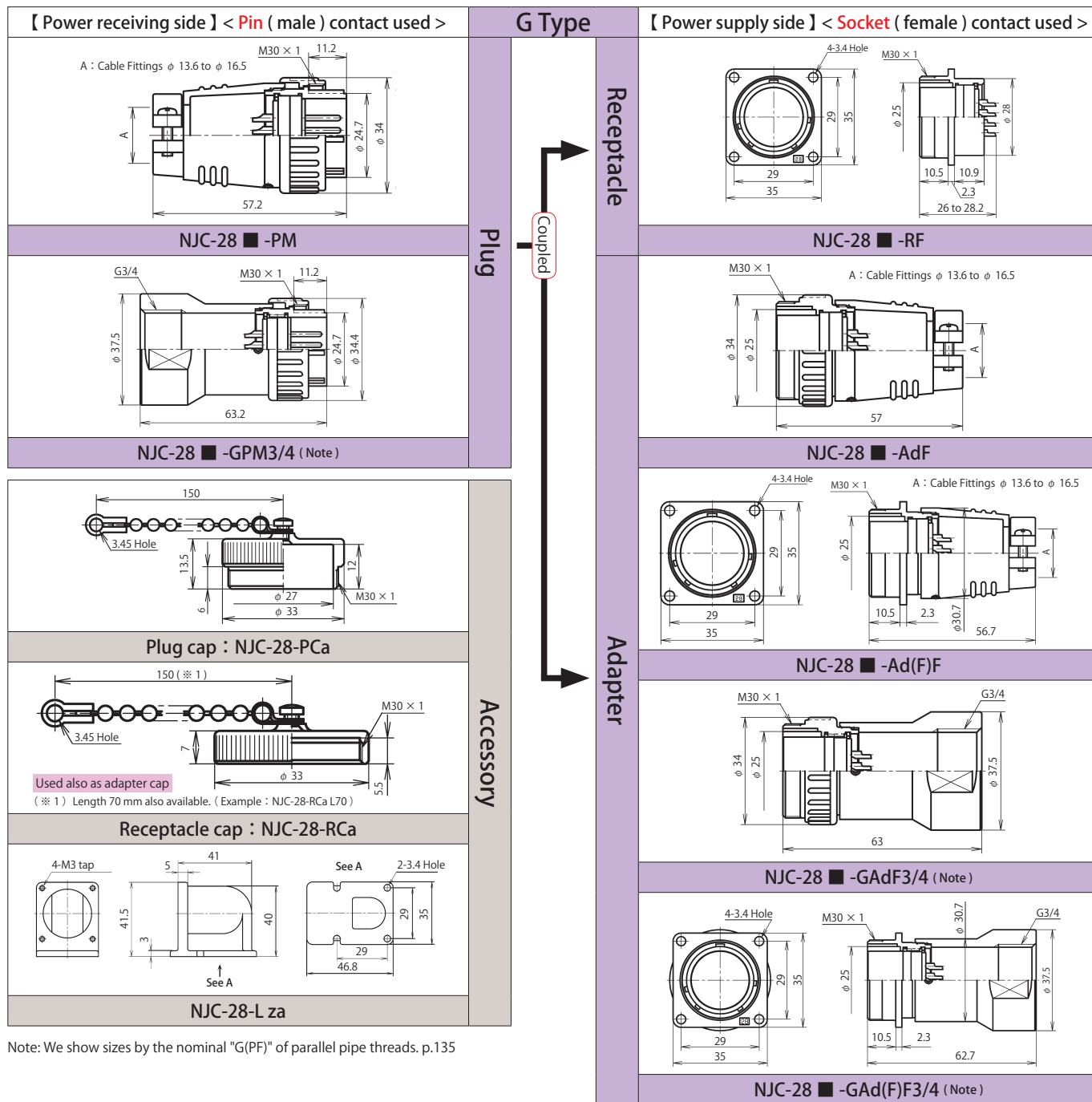


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24	Contact arrangement <When viewed from the pin (male) contact coupling side>									
	Safety standard (Note-1)	UL-CSA TÜV	UL-CSA TÜV	UL-CSA TÜV	UL-CSA TÜV	UL-CSA	UL-CSA	UL-CSA	UL-CSA	UL-CSA
	Rating (Allowable current for signals)	250V								
	Withstand voltage (V r.m.s.)	1,500								
	Wire size (mm ²)	3.5								
	Remarks	—								

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■ indicates the number of contacts.

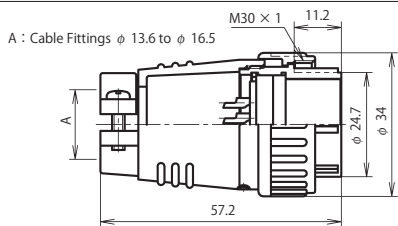
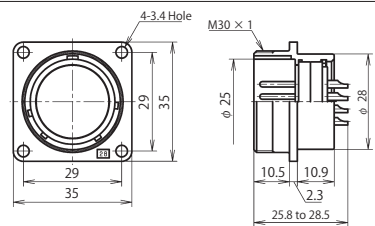
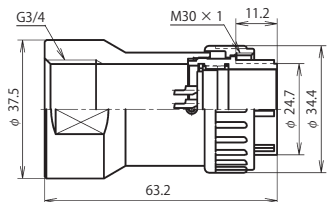
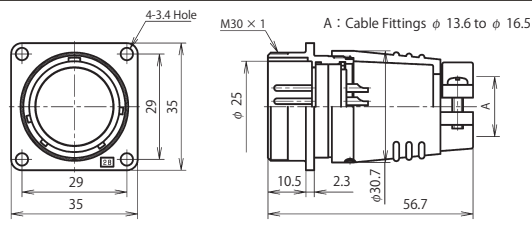
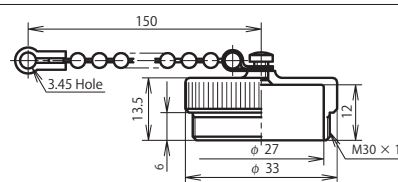
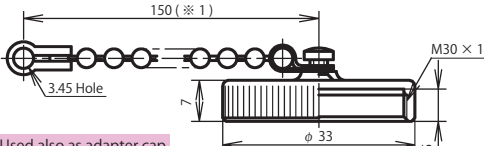
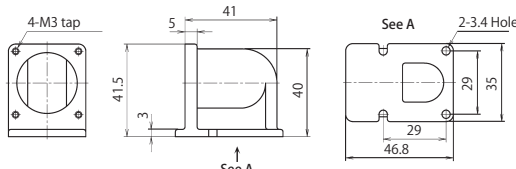
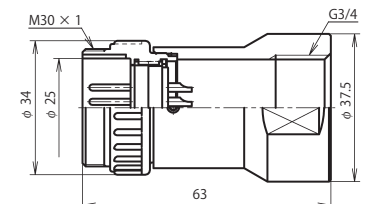
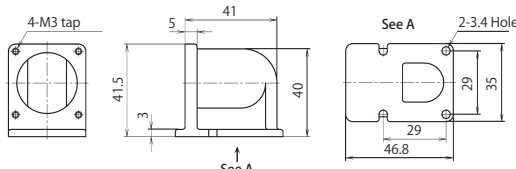
The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on p.127.

Shell size	Number of Contacts	16	24	31	37
28	Contact arrangement <When viewed from the pin (male) contact coupling side>				
	Safety standard (Note-1)	UL・CSA		—	
	Rating (Allowable current for signals)	250V		—	
	Withstand voltage (V r.m.s.)	1,000		500	
	Wire size (mm ²)	1.25	0.5	3pcs=0.75 28pcs=0.3	0.3
	Remarks	—		For signals	

JIS mark refers to JIS C 5432 compliant products.

[] : Gold plating contact

Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.

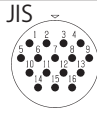
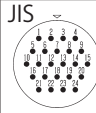
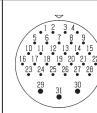
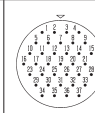
【 Power supply side 】 < Socket (female) contact used >		S Type	【 Power receiving side 】 < Pin (male) contact used >			
 A : Cable Fittings ϕ 13.6 to ϕ 16.5	Plug			Receptacle		
NJC-28 ■ -PF			NJC-28 ■ -RM			
			NJC-28 ■ -AdM			
NJC-28 ■ -GPF3/4 (Note)	Adapter			NJC-28 ■ -Ad(F)M		
 Plug cap : NJC-28-PCa			 Used also as adapter cap (※ 1) Length 70 mm also available. (Example : NJC-28-RCa L70)	 NJC-28-L za	 NJC-28 ■ -GAdM3/4 (Note)	
						Receptacle cap : NJC-28-RCa
		 NJC-28-L za				NJC-28 ■ -GAd(F)M3/4 (Note)

Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

■ indicates the number of contacts.

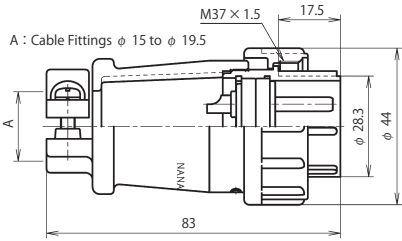
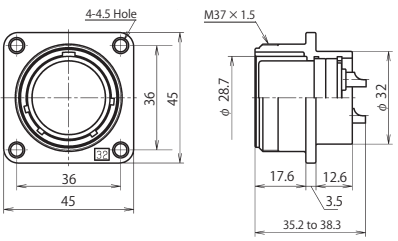
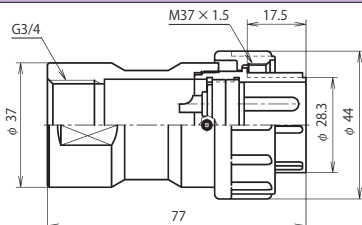
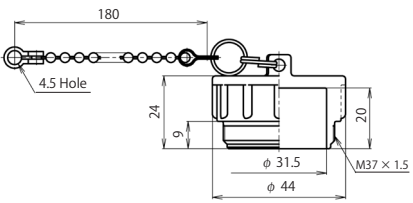
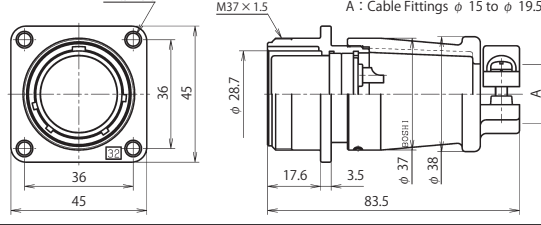
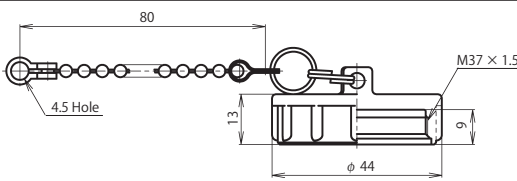
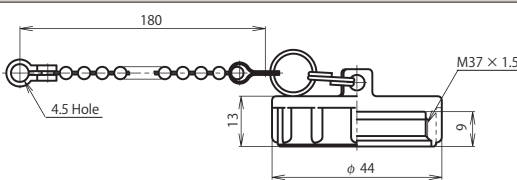
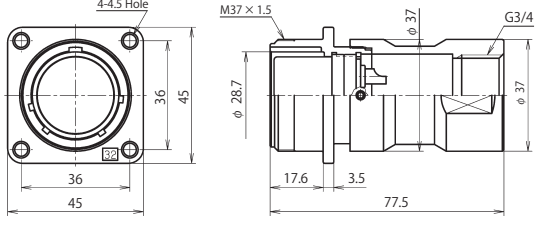
The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on p.127.

Shell size	Number of Contacts	16	24	31	37
28	Contact arrangement <When viewed from the pin (male) contact coupling side>				
	Safety standard (Note-1)	UL・CSA		—	
	Rating (Allowable current for signals)	250V		—	
	Withstand voltage (V r.m.s.)	1,000		500	
	Wire size (mm ²)	1.25	0.5	3pcs=0.75 28pcs=0.3	0.3
	Remarks	—		For signals	

JIS mark refers to JIS C 5432 compliant products.

[] : Gold plating contact

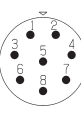
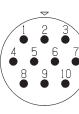
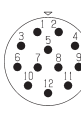
Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.

【 Power receiving side 】 < Pin (male) contact used >		G Type		【 Power supply side 】 < Socket (female) contact used >	
Plug		Coupled	Receptacle		NJC-32 ■ -RF
	NJC-32 ■ -PM				
					
Accessory		Adapter	NJC-32 ■ -AdF		NJC-32 ■ -Ad(F)F
	Plug cap : NJC-32-PCa				
					
	Receptacle cap : NJC-32-RCa				
			NJC-32 ■ -GAdF3/4 (Note)		NJC-32 ■ -GAd(F)F3/4 (Note)
	Adapter cap : NJC-32-AdCa				

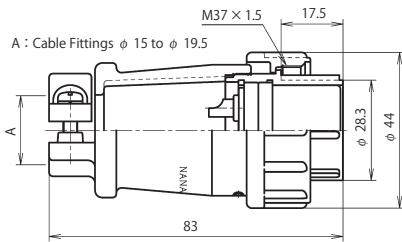
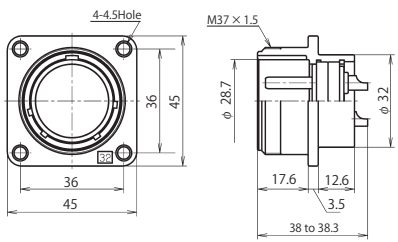
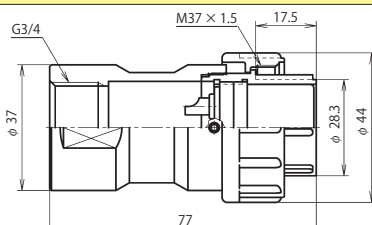
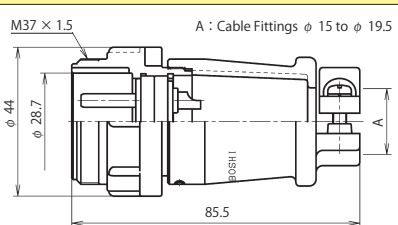
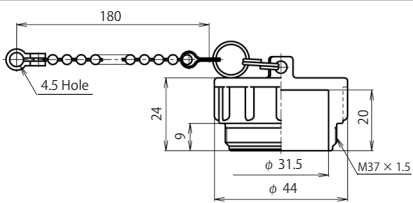
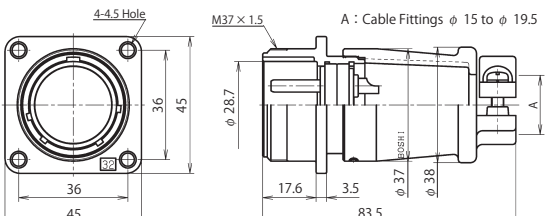
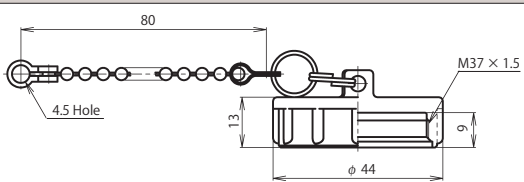
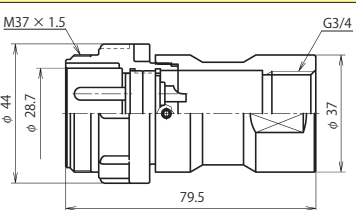
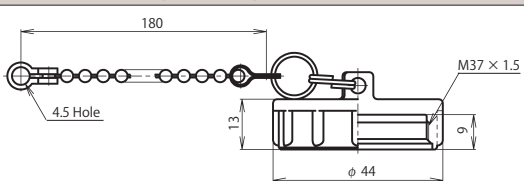
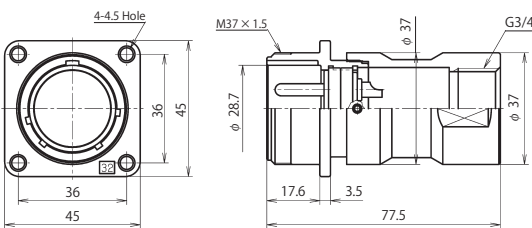
Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

■ indicates the number of contacts.

The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on pp.127 and 130.

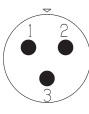
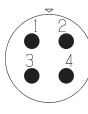
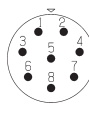
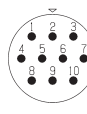
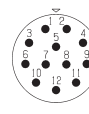
Shell size	Number of Contacts	3	4	8	10	12
32	Contact arrangement <When viewed from the pin (male) contact coupling side>					
	Safety standard (Note-1)	UL・CSA TÜV	UL・CSA TÜV	UL・CSA		
	Rating	250V 30A			250V 10A	
	Withstand voltage (V r.m.s.)	2,000			1,500	
	Wire size (mm ²)	5.5, 6			2	

Note-1: Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

【 Power supply side 】 < Socket (female) contact used >		S Type		【 Power receiving side 】 < Pin (male) contact used >	
 A : Cable Fittings ϕ 15 to ϕ 19.5 M37 $\times$ 1.5 17.5 28.3 44 83		Plug	Coupled	 4-4.5Hole M37 $\times$ 1.5 28.7 36 45 36 45 17.6 12.6 3.5 38 to 38.3	
NJC-32 ■ -PF				NJC-32 ■ -RM	
 G3/4 M37 $\times$ 1.5 17.5 37 28.3 44 77				 M37 $\times$ 1.5 A : Cable Fittings ϕ 15 to ϕ 19.5 44 28.7 85.5	
NJC-32 ■ -GPF3/4 (Note)		Adapter		NJC-32 ■ -AdM	
 180 4.5 Hole 24 9 31.5 44 M37 $\times$ 1.5				 4-4.5 Hole M37 $\times$ 1.5 A : Cable Fittings ϕ 15 to ϕ 19.5 44 28.7 36 45 36 45 17.6 3.5 37 38 83.5	
Plug cap : NJC-32-PCa				NJC-32 ■ -Ad(F)M	
 80 4.5 Hole 13 M37 $\times$ 1.5 9 44				 M37 $\times$ 1.5 G3/4 44 28.7 79.5	
Receptacle cap : NJC-32-RCa				NJC-32 ■ -GAdM3/4 (Note)	
 180 4.5 Hole 13 M37 $\times$ 1.5 9 44		 4-4.5 Hole M37 $\times$ 1.5 G3/4 44 28.7 36 45 36 45 17.6 3.5 37 77.5			
Adapter cap : NJC-32-AdCa		NJC-32 ■ -GAd(F)M3/4 (Note)			

Note: We show sizes by the nominal "G(PF)" of parallel pipe threads. p.135

■ indicates the number of contacts.
 The conductor cross sectional area is less than the following value. However, for safety standard certified products, use a cable having a value shown on pp.127 and 130.

Shell size	Number of Contacts	3	4	8	10	12
32	Contact arrangement <When viewed from the pin (male) contact coupling side>					
	Safety standard (Note-1)	UL・CSA	TÜV	UL・CSA	TÜV	UL・CSA
	Rating	250V 30A		250V 10A		
	Withstand voltage (V r.m.s.)	2,000		1,500		
	Wire size (mm ²)	5.5 , 6		2		

Note-1: Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

NJC Series Characteristics

Number of contacts

Shell size	Contact	Insulation resistance (M Ω)			Contact resistance (m Ω)			Withstand voltage (V r.m.s.)			
		Normal products	Safety standard		Normal products	Safety standard		Normal products	Safety standard		
			UL • CSA	TÜV		UL • CSA	TÜV		UL • CSA	TÜV	
16	3	DC 500V 2,000 min.		—	3 max.		—	1,500		—	
	5	DC 500V 1,000 min.			5 max.			1,000			
	8	DC 250V 1,000 min.	—		5 max.	—		500	—		
20	2	DC 500V 2,000 min.			3 max.			1,500			
	3										
	4										
	5	DC 500V 2,000 min.		—	3 max.		—	1,500		—	
	7				1,000						
	10							DC 500V 1,000 min.			
	12	DC 500V 1,000 min.		5 max.		1,000					
14	DC 250V 1,000 min.	—		5 max.	—		500	—			
24	2	DC 500V 5,000 min.		DC 500V 2,000 min.		3 max.			1,500		
	3										
	4										
	5										
	10	DC 500V 2,000 min.		—	3 max.		—	1,000		—	
	14	DC 500V 1,000 min.			5 max.						
	16	DC 500V 1,000 min.			5 max.						
	21	DC 250V 1,000 min.		—		5 max.	—		500	—	
	24										
28	16	DC 500V 2,000 min.		—	3 max.		—	1,000		—	
	24	DC 500V 1,000 min.			5 max.						
	31	DC 250V 1,000 min.		—		5 max.	—		500	—	
	37										
32	3	DC 500V 2,000 min.			3 max.			2,000			
	4										
	8	DC 500V 2,000 min.		—	3 max.		—	1,500		—	
	10										
	12										

