NJC Series

Non-waterproof

RoHS

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.

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

Cable termination : Soldering

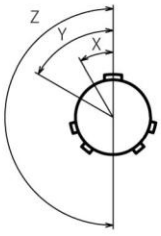
Material and Finish

	Material	Finish
Shell	Shell size 16 , 20 , 24 : Zinc alloy (Partially aluminum alloy) Shell size 28 , 32 : Aluminum alloy	Crape chrome plating Special treatment
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℃ to +100℃
24		
32	3 , 4	
16	3 , 5	-25℃ to +85℃
20	7 , 10 , 12	
24	10 , 14 , 16	
28	16 , 24	
16	8	-25℃ to +60℃
20	14	
24	21 , 24	
28	31 , 37	
32	8 , 10 , 12	

Upper limit of ambient temperature at rated current

TÜV products only

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

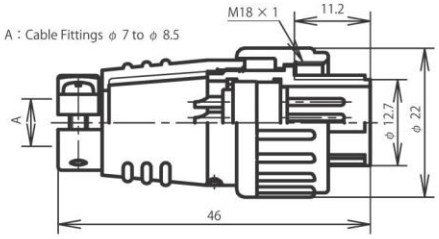
(**Note**) Max.ambient temp. at rated current
(Based on TÜV certification test results)

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

G Type

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

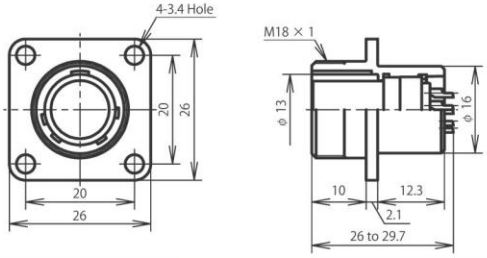
Plug



NJC-16 ■ -PM

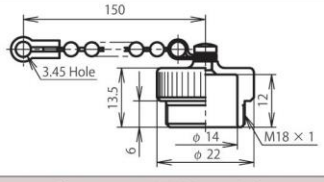
Coupled

Receptacle

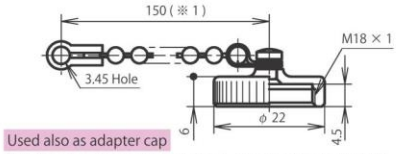


NJC-16 ■ -RF

Accessory



Plug cap : NJC-16-PCa

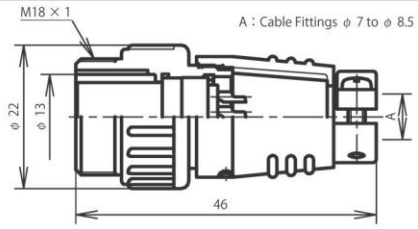


Used also as adapter cap

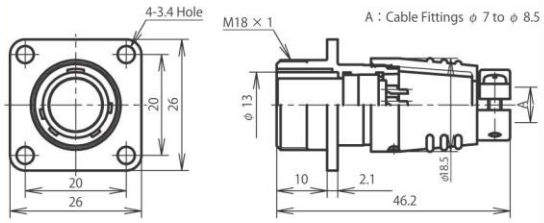
(※ 1) Length 70 mm also available. (Example : NJC-16-RCa L70)

Receptacle cap : NJC-16-RCa

Adapter

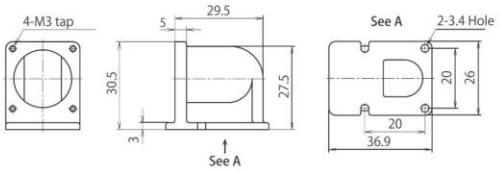


NJC-16 ■ -AdF



NJC-16 ■ -Ad(F)F

Accessory



NJC-16-L za

■ 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.

[ ] : Gold plating contact

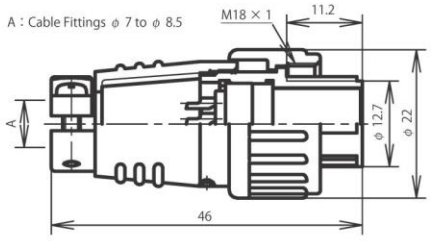
Shell size	Number of Contacts	3	5	8
16	Contact arrangement <When viewed from the pin (male) contact coupling side>			
	Safety standard (Note-1)	UL・CSA		—
	Rating	125V		—
	(Allowable current for signals)	10A	5A	[3A]
	Withstand voltage (V r.m.s.)	1,500	1,000	500
	Wire size (㎟)	1.25	0.5	0.3
	Remarks	—		For signals

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

S Type

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

Plug

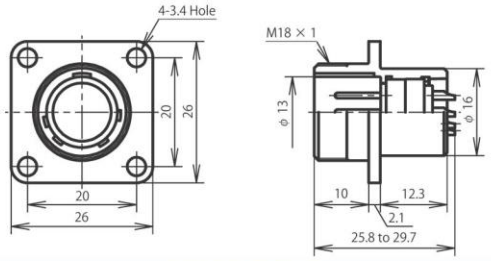


NJC-16 ■ -PF

Coupled

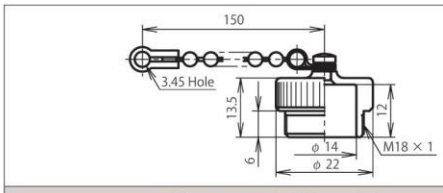
【Power receiving side】< Pin (male) contact used >

Receptacle

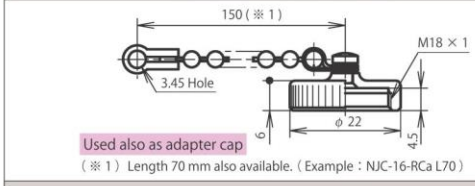


NJC-16 ■ -RM

Accessory

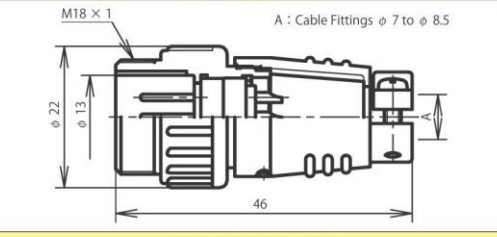


Plug cap : NJC-16-PCa

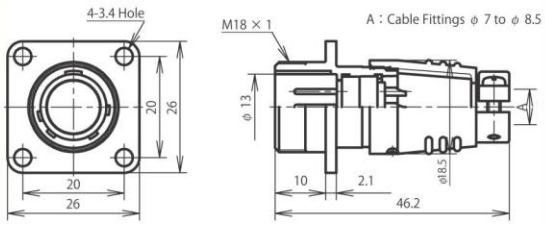


Receptacle cap : NJC-16-RCa

Adapter

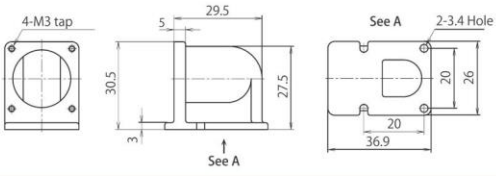


NJC-16 ■ -AdM



NJC-16 ■ -Ad(F)M

Accessory



NJC-16-L za

■ 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	125V		—
	(Allowable current for signals)	10A	5A	[3A]
	Withstand voltage (V r.m.s.)	1,500	1,000	500
	Wire size (㎟)	1.25	0.5	0.3
	Remarks	—		For signals

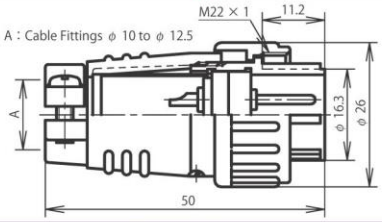
[ ] : **Gold plating contact**

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

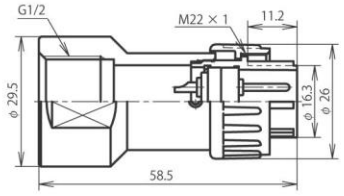
G Type

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

Plug



NJC-20 ■ -PM

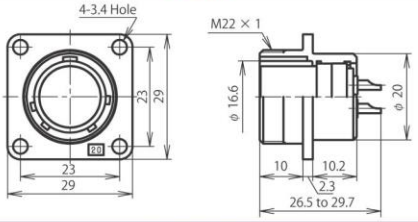


NJC-20 ■ -GPM1/2 (Note)

Coupled

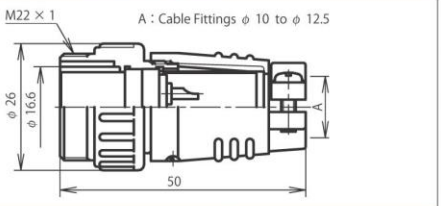
【Power supply side】< Socket (female) contact used >

Receptacle

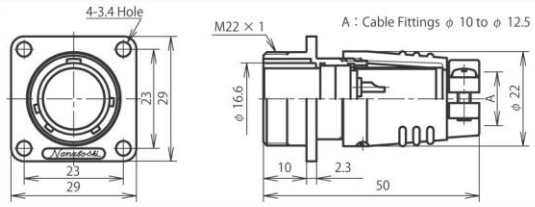


NJC-20 ■ -RF

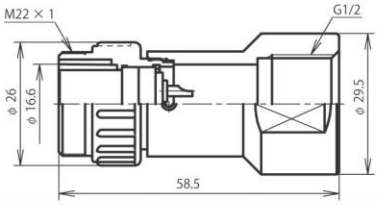
Adapter



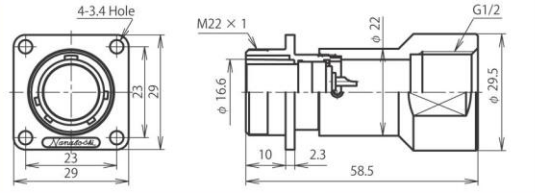
NJC-20 ■ -AdF



NJC-20 ■ -Ad(F)F

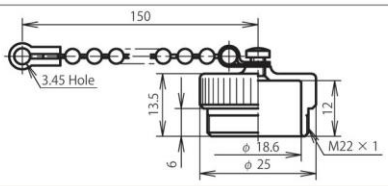


NJC-20 ■ -GAdF1/2 (Note)

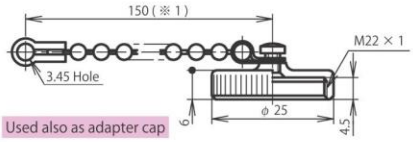


NJC-20 ■ -GAd(F)F1/2 (Note)

Accessory



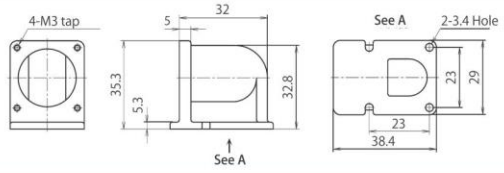
Plug cap : NJC-20-PCa



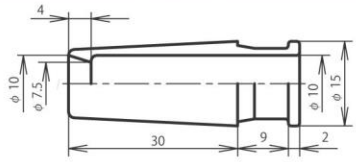
Used also as adapter cap

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

Receptacle cap : NJC-20-RCa

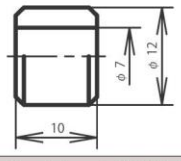


NJC-20-L za



Cable bushing : NJC-20-CB

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>					JIS	JIS		
	Safety standard (Note-1)	UL・CSA / TÜV	UL・CSA / TÜV	UL・CSA / TÜV	UL・CSA				—
	Rating (Allowable current for signals)	250V / 15A			10A		5A		— / [3A]
	Withstand voltage (V r.m.s.)	1,500				1,000			500
	Wire size (㎟)	2			1.25		0.5		0.3
	Remarks	—							For signals

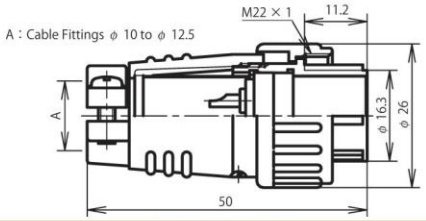
Note-1 : Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

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

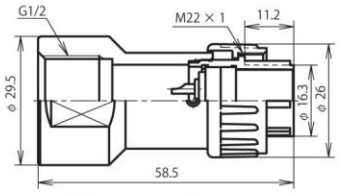
S Type

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

Plug



NJC-20 ■ -PF

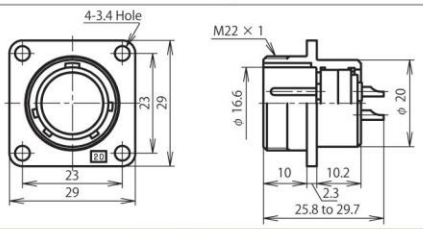


NJC-20 ■ -GPF1/2 (Note)

Coupled

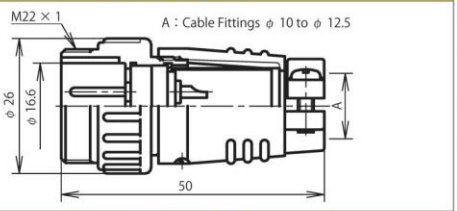
【Power receiving side】< Pin (male) contact used >

Receptacle

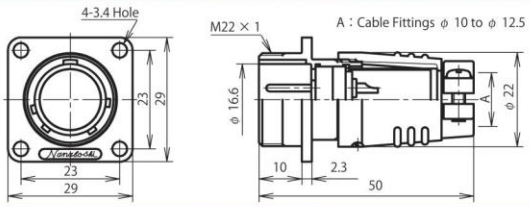


NJC-20 ■ -RM

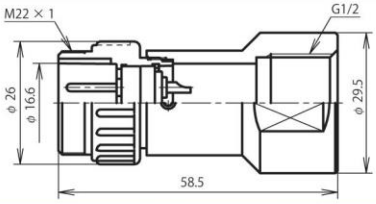
Adapter



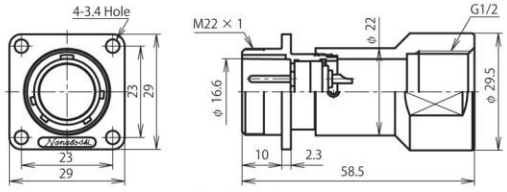
NJC-20 ■ -AdM



NJC-20 ■ -Ad(F)M

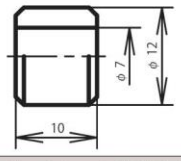


NJC-20 ■ -GAdM1/2 (Note)



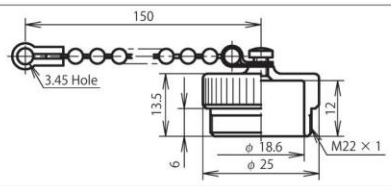
NJC-20 ■ -GAd(F)M1/2 (Note)

Accessory

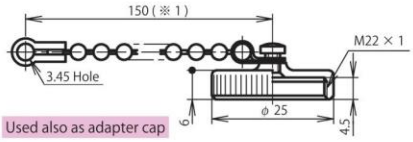


Cable bushing : CBAS-12-7

Accessory

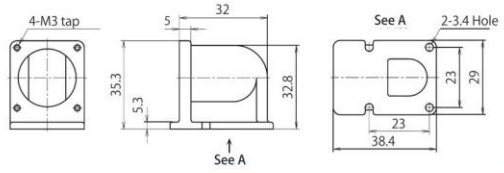


Plug cap : NJC-20-PCa

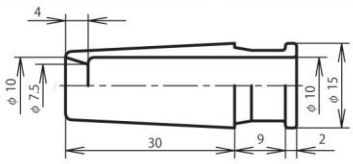


(※ 1) Length 70 mm also available. (Example : NJC-20-RCa L70)

Receptacle cap : NJC-20-RCa



NJC-20-L za



Cable bushing : NJC-20-CB

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>					JIS	JIS		
	Safety standard (Note-1)	UL・CSA TÜV	UL・CSA TÜV	UL・CSA TÜV	UL・CSA				—
	Rating (Allowable current for signals)	250V 15A		10A			5A		— [3A]
	Withstand voltage (V r.m.s.)	1,500				1,000			500
	Wire size (㎟)	2		1.25			0.5		0.3
	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.

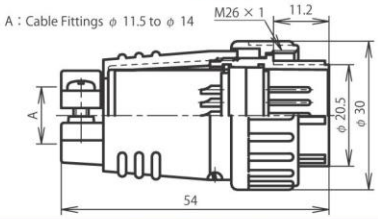
JIS mark refers to JIS C 5432 compliant products.
[ ] : Gold plating contact

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

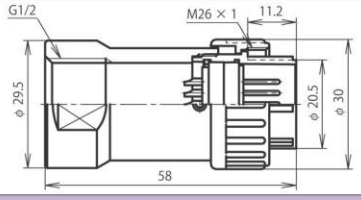
G Type

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

Plug



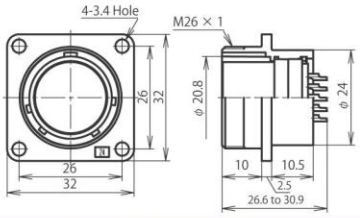
NJC-24 ■ -PM



NJC-24 ■ -GPM1/2 (Note)

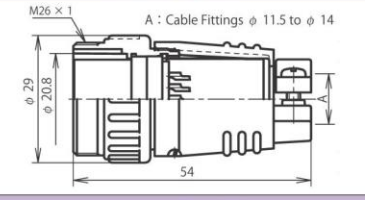
Coupled

Receptacle

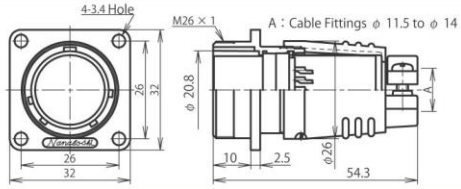


NJC-24 ■ -RF

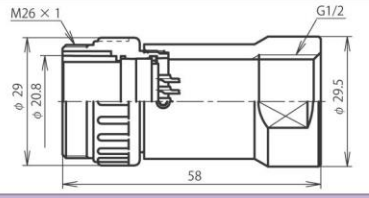
Adapter



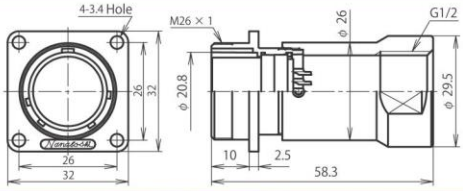
NJC-24 ■ -AdF



NJC-24 ■ -Ad(F)F

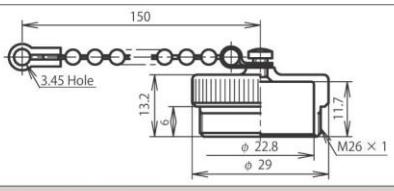


NJC-24 ■ -GAdF1/2 (Note)

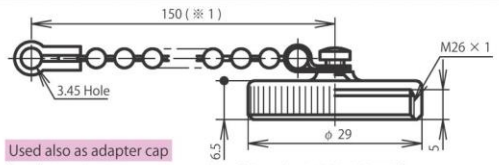


NJC-24 ■ -GAd(F)F1/2 (Note)

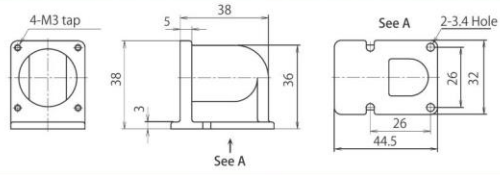
Accessory



Plug cap : NJC-24-PCa

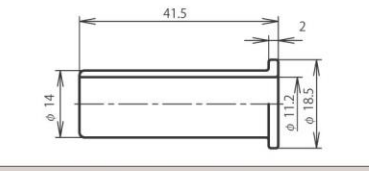


Receptacle cap : NJC-24-RCa



NJC-24-L za

Accessory



Cable bushing : NJC-24-CB

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	10	14	16	21	24
24	Contact arrangement <When viewed from the pin (male) contact coupling side>					JIS 		JIS 		
	Safety standard (Note-1)	UL·CSA TÜV	UL·CSA TÜV	UL·CSA TÜV	UL·CSA TÜV	UL·CSA			—	
	Rating (Allowable current for signals)	250V							—	
		20A		15A		10A	5A		3pcs=6A [18pcs=3A]	[3A]
	Withstand voltage (V r.m.s.)	1,500				1,000			500	
	Wire size (㎟)	3.5		2		1.25	0.5		3pcs= 0.75 18pcs= 0.3	0.3
	Remarks	—							For signals	

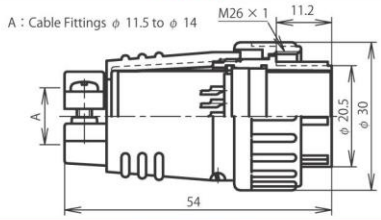
Note-1 : Specified separately. Selection of either "specified as a set of UL and CSA" or "TÜV specified." For safety standards, see pp.127 and 130.

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

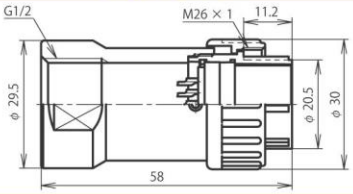
S Type

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

Plug



NJC-24 ■ -PF

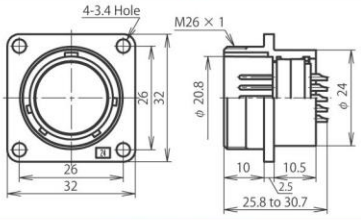


NJC-24 ■ -GPF1/2 (Note)

Coupled

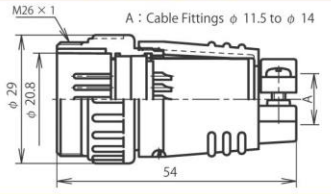
【Power receiving side】< Pin (male) contact used >

Receptacle

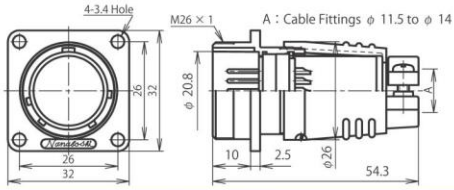


NJC-24 ■ -RM

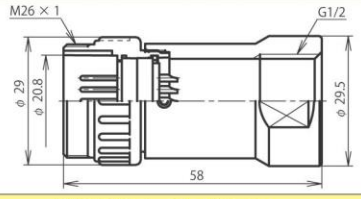
Adapter



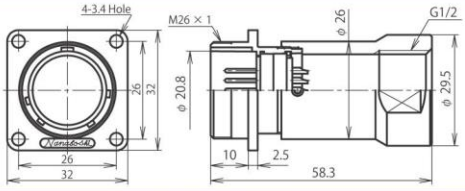
NJC-24 ■ -AdM



NJC-24 ■ -Ad(F)M

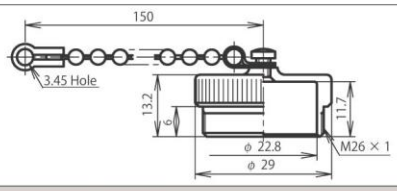


NJC-24 ■ -GAdM1/2 (Note)

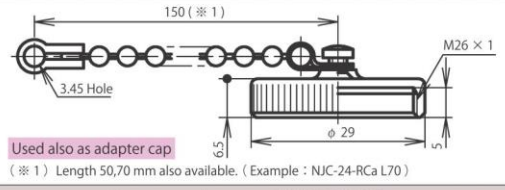


NJC-24 ■ -GAd(F)M1/2 (Note)

Accessory

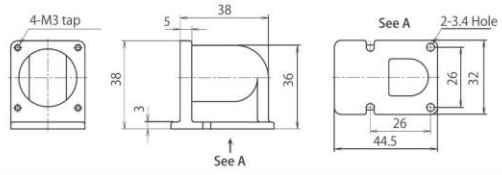


Plug cap : NJC-24-PCa



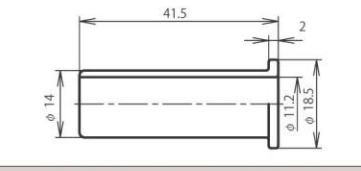
(※ 1) Length 50,70 mm also available. (Example : NJC-24-RCa L70)

Receptacle cap : NJC-24-RCa



NJC-24-L za

Accessory



Cable bushing : NJC-24-CB

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.

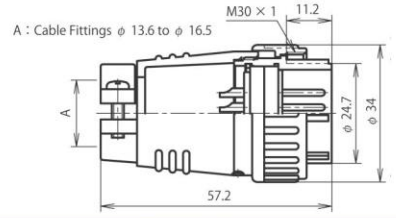
Shell size	Number of Contacts	2	3	4	5	10	14	16	21	24
24	Contact arrangement <When viewed from the pin (male) contact coupling side>					JIS 		JIS 		
	Safety standard (Note-1)	UL·CSA TÜV	UL·CSA TÜV	UL·CSA TÜV	UL·CSA TÜV	UL·CSA			—	
	Rating (Allowable current for signals)	250V							—	
		20A		15A		10A	5A		3pcs=6A [18pcs=3A]	[3A]
	Withstand voltage (V r.m.s.)	1,500				1,000			500	
	Wire size (mm²)	3.5		2		1.25	0.5		3pcs= 0.75 18pcs= 0.3	0.3
	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.

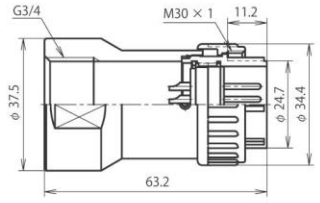
JIS mark refers to JIS C 5432 compliant products.
[ ] : Gold plating contact

G Type

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



NJC-28 ■ -PM



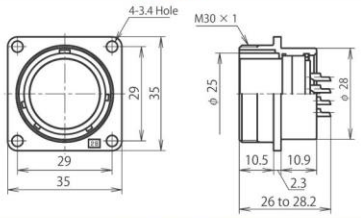
NJC-28 ■ -GPM3/4 (Note)

Plug

Coupled

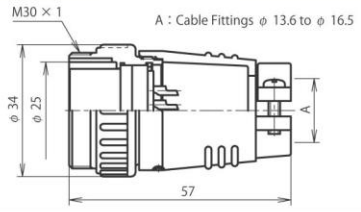
Receptacle

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

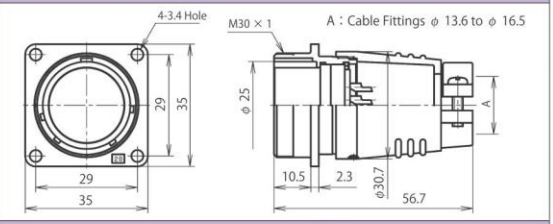


NJC-28 ■ -RF

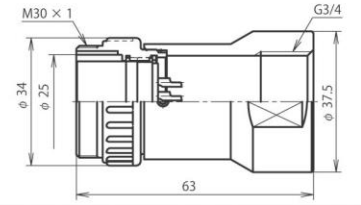
Adapter



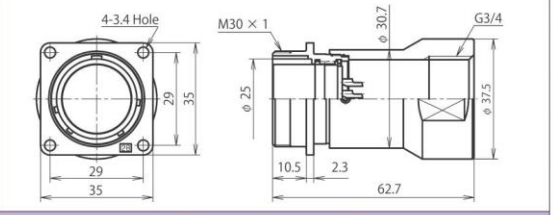
NJC-28 ■ -AdF



NJC-28 ■ -Ad(F)F

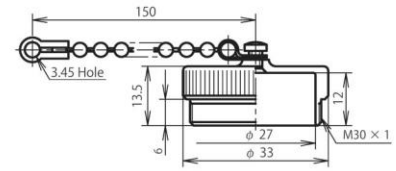


NJC-28 ■ -GAdF3/4 (Note)

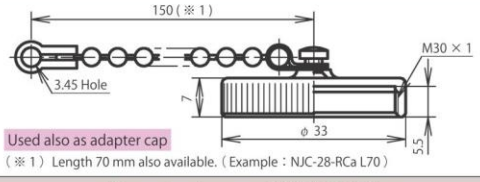


NJC-28 ■ -GAd(F)F3/4 (Note)

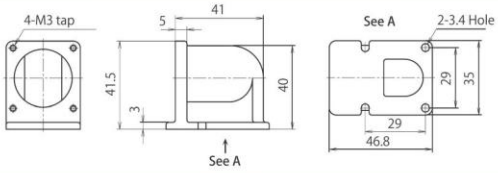
Accessory



Plug cap : NJC-28-PCa



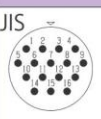
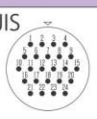
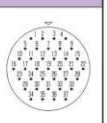
Receptacle cap : NJC-28-RCa



NJC-28-L za

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>	JIS 	JIS 		
	Safety standard (Note-1)	UL・CSA		—	
	Rating (Allowable current for signals)	250V		—	
		10A	5A	3pcs=6A [28pcs=3A]	[3A]
	Withstand voltage (V r.m.s.)	1,000		500	
	Wire size (㎟)	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

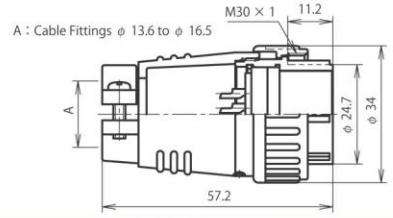
Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.

S Type

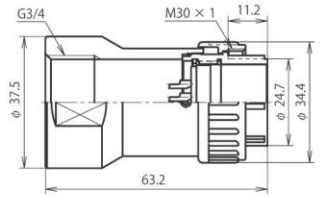
【Power supply side】< Socket (female) contact used >

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

Plug



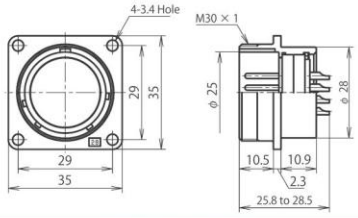
NJC-28 ■ -PF



NJC-28 ■ -GPF3/4 (Note)

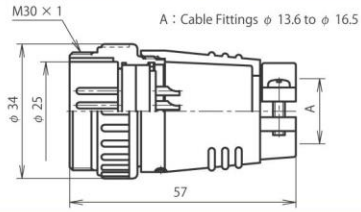
Coupled

Receptacle

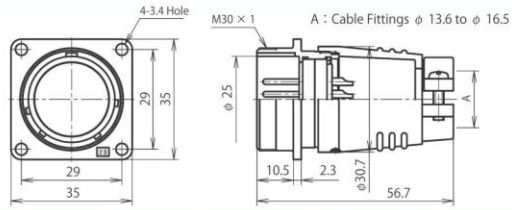


NJC-28 ■ -RM

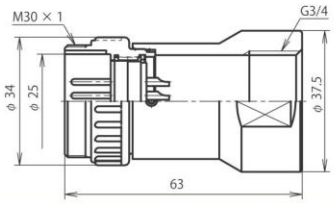
Adapter



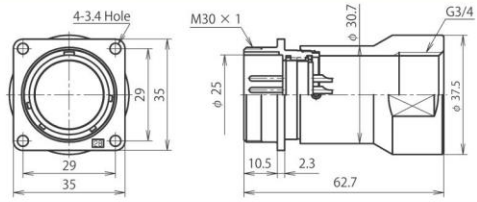
NJC-28 ■ -AdM



NJC-28 ■ -Ad(F)M

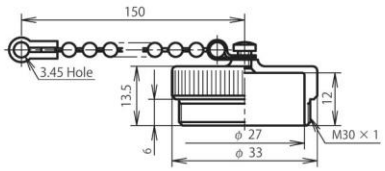


NJC-28 ■ -GAdM3/4 (Note)

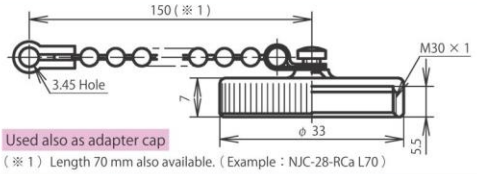


NJC-28 ■ -GAd(F)M3/4 (Note)

Accessory

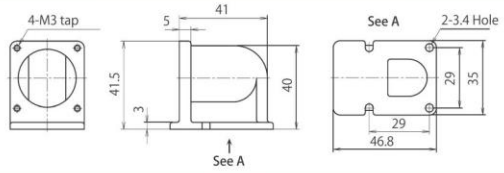


Plug cap : NJC-28-PCa



(※ 1) Length 70 mm also available. (Example : NJC-28-RCa L70)

Receptacle cap : NJC-28-RCa



NJC-28-L za

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>	JIS	JIS		
	Safety standard (Note-1)	UL・CSA		—	
	Rating (Allowable current for signals)	250V		—	
		10A	5A	3pcs=6A [28pcs=3A]	[3A]
	Withstand voltage (V r.m.s.)	1,000		500	
	Wire size (㎟)	1.25	0.5	3pcs=0.75 28pcs=0.3	0.3
	Remarks	—		For signals	

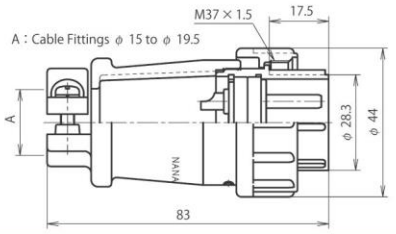
JIS mark refers to JIS C 5432 compliant products.

[ ] : Gold plating contact

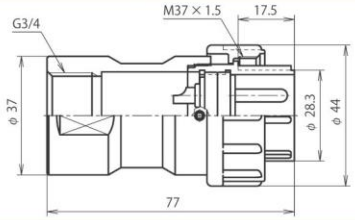
Note-1 : Specified separately. "Specified as a set of UL and CSA". For safety standards, see p.127.

G Type

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



NJC-32 ■ -PM



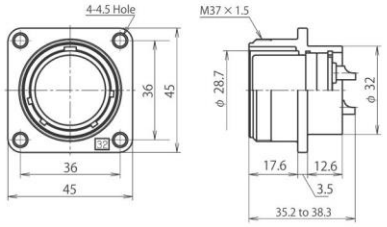
NJC-32 ■ -GPM3/4 (Note)

Plug

Coupled

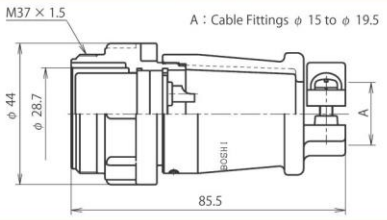
Receptacle

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

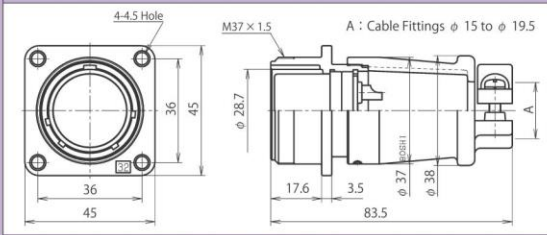


NJC-32 ■ -RF

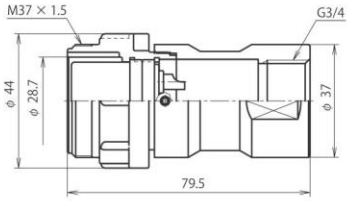
Adapter



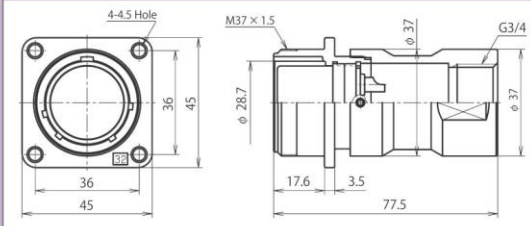
NJC-32 ■ -AdF



NJC-32 ■ -Ad(F)F

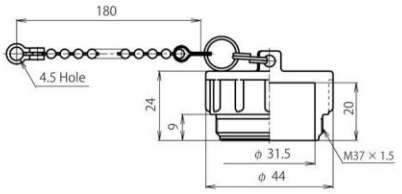


NJC-32 ■ -GAdF3/4 (Note)

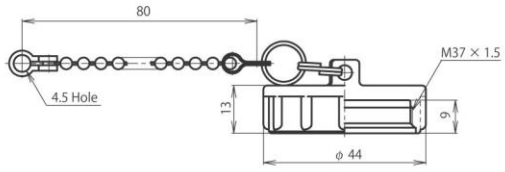


NJC-32 ■ -GAd(F)F3/4 (Note)

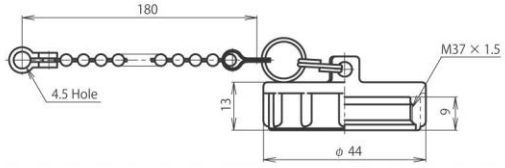
Accessory



Plug cap : NJC-32-PCa



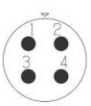
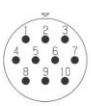
Receptacle cap : NJC-32-RCa



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.

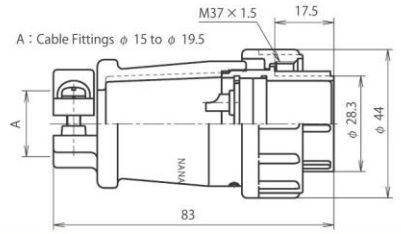
Shell size	Number of Contacts	3	4	8	10	12
32	Contact arrangement <When viewed from the pin (male) contact coupling side>					
	Safety standard (Note-1)	UL・CSA / TÜV	UL・CSA / TÜV	UL・CSA		
	Rating	250V 30A		250V 10A		
	Withstand voltage (V r.m.s.)	2,000		1,500		
	Wire size (㎟)	5.5 , 6		2		

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.

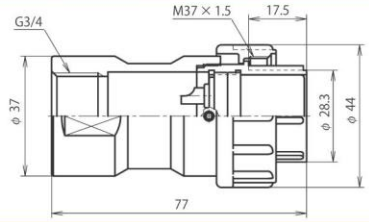
S Type

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

Plug

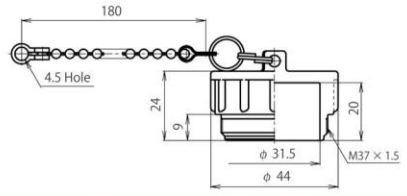


NJC-32 ■ -PF

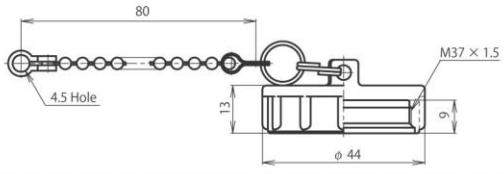


NJC-32 ■ -GPF3/4 (Note)

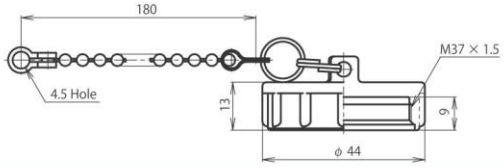
Accessory



Plug cap : NJC-32-PCa



Receptacle cap : NJC-32-RCa

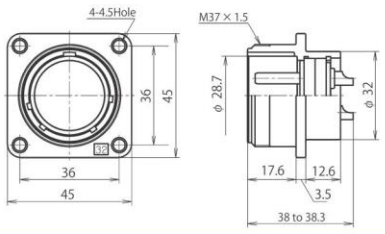


Adapter cap : NJC-32-AdCa

Coupled

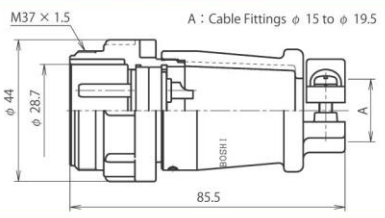
【Power receiving side】< Pin (male) contact used >

Receptacle

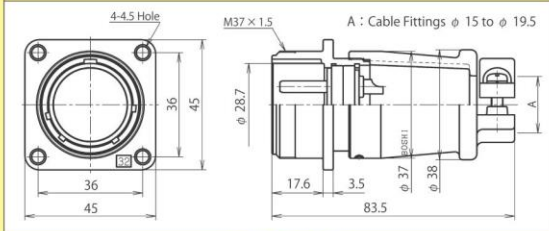


NJC-32 ■ -RM

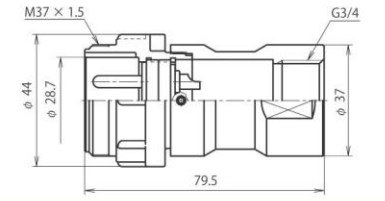
Adapter



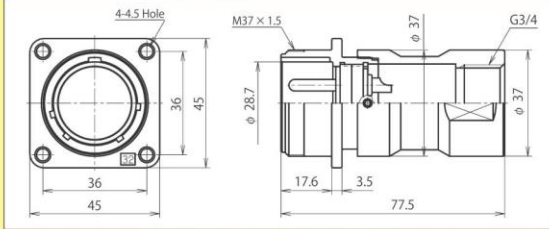
NJC-32 ■ -AdM



NJC-32 ■ -Ad(F)M



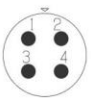
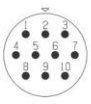
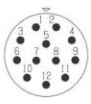
NJC-32 ■ -GAdM3/4 (Note)



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 (㎟)	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.

Number of contacts

Shell size	Contact	Insulation resistance (MΩ)			Contact resistance (mΩ)			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.			5 max.					
	12									
	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									
	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									