

# NEW Series



Waterproof IP-67

Safety standard certified products available

RoHS

Quick lock

## Overview

- Safety standard certified, waterproof connectors based on NRW. Certified by UL • CSA standards also.
- Grounding of prioritized contact structure to make these connectors suitable for use in a wide variety of fields including semiconductor equipment and various outdoor equipment.

## Feature

RoHS	RoHS Directive compliant
Waterproof	Waterproof connector 【 Waterproof function IP-67 when coupled 】
Lock method	Quick lock
Features of mechanism/ material	<ul style="list-style-type: none"> <li>○ Protection circuit structure: Ground contact of sequence structure. ( prioritized contact )</li> <li>○ Shell made of weather-resistant, high-strength plastic.</li> <li>○ Light weight and sturdy.</li> <li>○ Installation in a small space enabled by use of the L za.</li> </ul>
Standards	<ul style="list-style-type: none"> <li>○ Safety standard certified connectors available. ( EN61984 compliant , TÜV certified )</li> <li>○ UL • CSA standard certified connectors available. ( UL : UL1977 CSA : C22.2 No.182.3 )</li> </ul>
Cable termination	Soldering

## Characteristics

Shell size	Contact	Insulation resistance ( M Ω )	Contact resistance ( m Ω )	Withstand voltage ( V r.m.s. )
20	3	DC 500V 2,000 min.	3 max.	1,500
24	3	DC 500V 2,000 min.	3 max.	1,500
	4			
28	4	DC 500V 2,000 min.	3 max.	1,500
	8			

( Waterproof ) No trace of water exposure after being kept at a water pressure of 40 kPa for 24 hours in the coupled state in its normal state of use.

# NEW Series

## Product No. designation

**NEW - 24 ■ - P F □**

- 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 Symbol indicating cable packing size. 《 Plug & adapter require symbol to be specified. 》

All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

## Cable termination : Soldering

## Material and Finish

	Material	Finish
Shell	Synthetic resin	—
Insulator		
Contact	Copper alloy	Silver plating
Packing	Synthetic rubber	—

## Operating temperature range

Shell size	Number of Contacts	Operating temperature range	Upper limit of ambient temperature at rated current ( Note )
20	3	-25°C to +85°C	+80°C
24	3		+74°C
	4		+80°C
28	4		+67°C
	8		+77°C

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

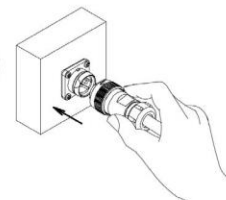


The pin contact type has an **exposed electrode**. If it is used on the [ power supply ] side, it may cause **electric shock** or **short-circuit accidents**. To prevent such accidents, use the socket contact type on the [ power supply ] side and the pin contact type on the [ equipment ] side.

## Insertion

Align the plug and the guide of the mating connector ( receptacle/adaptor ) and push in straight.

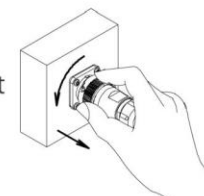
**Caution:** When inserting, do not turn the coupling nut.



## Extraction

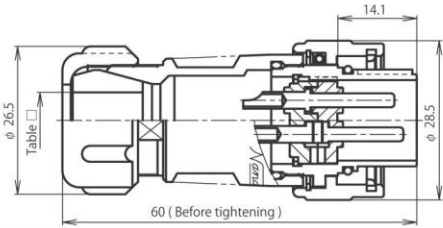
With the coupling nut turned CCW 45 degrees in the arrow direction, extract the connector.

**Caution:** When extracting, do not turn the end bell.

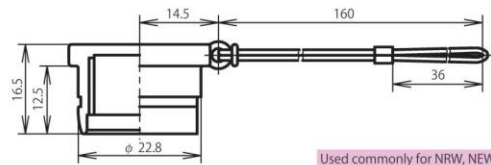


# NEW Series Shell Size 20

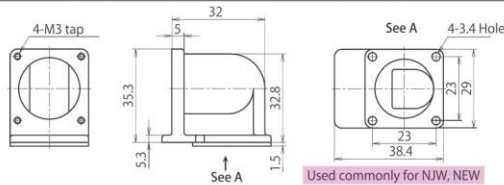
【 Power receiving side 】 < Pin ( male ) contact used >



NEW-20 ■ -PM □



Plug waterproof cap : NRW-20-PCa • 1



NJW-20-L za

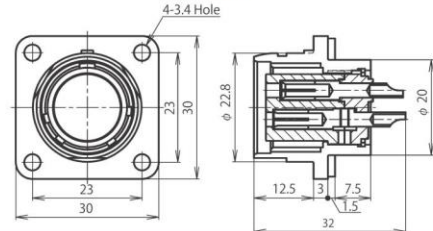
G Type

Plug

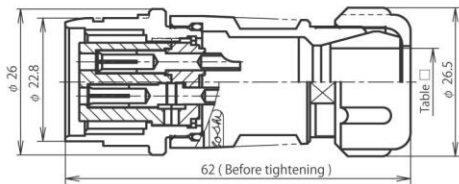


Accessory

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



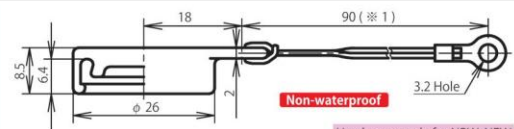
NEW-20 ■ -RF



NEW-20 ■ -AdF □

Receptacle

Adapter

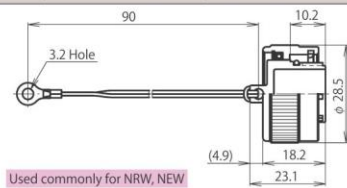


Non-waterproof

Used commonly for NRW, NEW

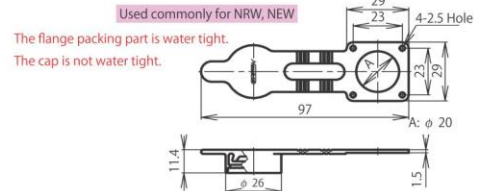
(※ 1) Length 35 mm also available. ( Example : NRW-20-RCa L35 )

Receptacle rubber cap : NRW-20-RCa



Used commonly for NRW, NEW

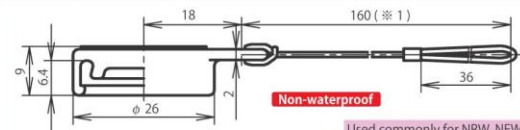
Receptacle waterproof cap : NRW-20-RCa • 1



Used commonly for NRW, NEW  
The flange packing part is water tight.  
The cap is not water tight.

Accessory

Receptacle rubber cap : NRW-20-RCa • 2

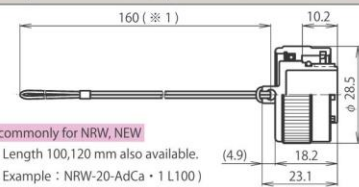


Non-waterproof

Used commonly for NRW, NEW

(※ 1) Length 100,120 mm also available. ( Example : NRW-20-AdCa L100 )

Adapter rubber cap : NRW-20-AdCa



Used commonly for NRW, NEW

(※ 1) Length 100,120 mm also available.  
( Example : NRW-20-AdCa • 1 L100 )

Adapter waterproof cap : NRW-20-AdCa • 1

NEW

20

For the plug and adapter , be sure to select □ ( cable packing symbol ).

Table □

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol	Outer diameter of cable used
20	8	φ 7.0 to φ 8.5
	10	φ 8.6 to φ 10.5
	12	φ 10.6 to φ 12.5

■ indicates the number of contacts.

Shell size	Number of Contacts	3
20	Contact arrangement <When viewed from the pin (male) contact coupling side>	
	Safety standard (Note-1)	UL·CSA, TÜV
	Rating	250V 15A
	Withstand voltage (V r.m.s.)	1,500
	Wire size AWG	#14

The cable to use should have a conductor cross sectional area shown in the left-side table.

Note-1 : All connectors are UL · CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

# NEW Series Shell Size 20

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

**NEW-20 ■ -PF □**

**S Type**

Coupled

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

**NEW-20 ■ -RM**

**NEW-20 ■ -AdM □**

**Accessory**

Used commonly for NRW, NEW

**Plug waterproof cap : NRW-20-PCa • 1**

Used commonly for NJW, NEW

**NJW-20-L za**

**Accessory**

Non-waterproof

Used commonly for NRW, NEW

(※ 1) Length 35 mm also available. ( Example : NRW-20-RCa L35 )

**Receptacle rubber cap : NRW-20-RCa**

Used commonly for NRW, NEW

**Receptacle waterproof cap : NRW-20-RCa • 1**

Used commonly for NRW, NEW

The flange packing part is water tight.  
The cap is not water tight.

**Receptacle rubber cap : NRW-20-RCa • 2**

Non-waterproof

Used commonly for NRW, NEW

(※ 1) Length 100,120 mm also available. ( Example : NRW-20-AdCa L100 )

**Adapter rubber cap : NRW-20-AdCa**

Used commonly for NRW, NEW

(※ 1) Length 100,120 mm also available. ( Example : NRW-20-AdCa • 1 L100 )

**Adapter waterproof cap : NRW-20-AdCa • 1**

**NEW**

**20**

**Table □**

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol □	Outer diameter of cable used
20	8	φ 7.0 to φ 8.5
	10	φ 8.6 to φ 10.5
	12	φ 10.6 to φ 12.5

■ indicates the number of contacts.

Shell size	Number of Contacts	3
20	Contact arrangement <When viewed from the pin (male) contact coupling side>	
	Safety standard (Note-1)	UL-CSA, TÜV
	Rating	250V 15A
	Withstand voltage (V r.m.s.)	1,500
	Wire size AWG	#14

The cable to use should have a conductor cross sectional area shown in the left-side table.

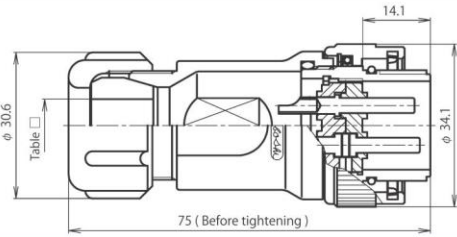
Note-1 : All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

NEW

20

# NEW Series Shell Size 24

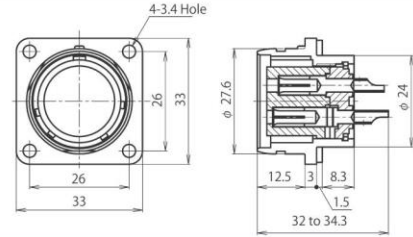
【 Power receiving side 】 < Pin ( male ) contact used >



NEW-24 ■ -PM □

G Type

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



NEW-24 ■ -RF

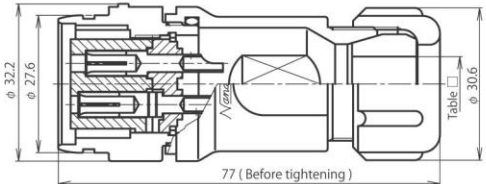
Plug

Receptacle

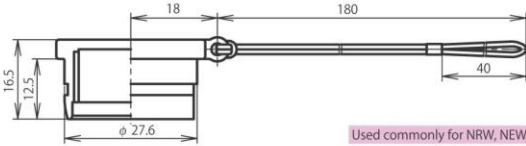


Accessory

Adapter

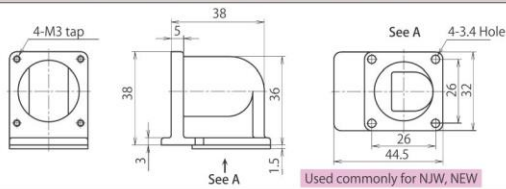


NEW-24 ■ -AdF □



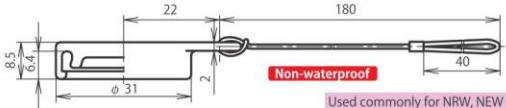
Plug waterproof cap : NRW-24-PCa • 1

Used commonly for NRW, NEW



NJW-24-Lza

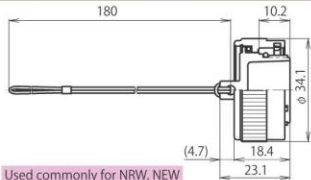
Used commonly for NJW, NEW



Adapter rubber cap : NRW-24-AdCa

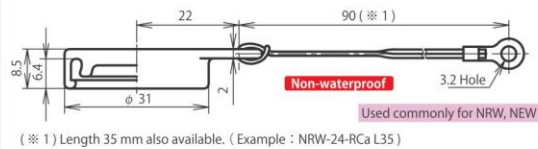
Non-waterproof

Used commonly for NRW, NEW



Adapter waterproof cap : NRW-24-AdCa • 1

Used commonly for NRW, NEW

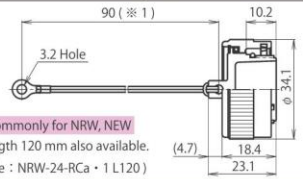


Receptacle rubber cap : NRW-24-RCa

Non-waterproof

Used commonly for NRW, NEW

(※ 1) Length 35 mm also available. ( Example : NRW-24-RCa L35 )

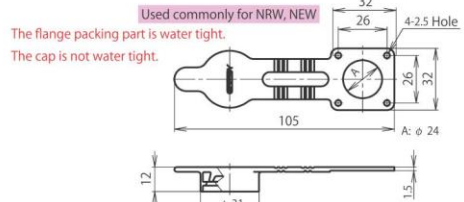


Receptacle waterproof cap : NRW-24-RCa • 1

Used commonly for NRW, NEW

(※ 1) Length 120 mm also available.

( Example : NRW-24-RCa • 1 L120 )



Receptacle rubber cap : NRW-24-RCa • 2

Used commonly for NRW, NEW

The flange packing part is water tight.

The cap is not water tight.

For the plug and adapter , be sure to select □ ( cable packing symbol ).

Table □

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol □	Outer diameter of cable used
24	11	φ 9.5 to φ 11.0
	13	φ 11.1 to φ 13.0
	15	φ 13.1 to φ 15.0

■ indicates the number of contacts.

Shell size	Number of Contacts	3	4
24	Contact arrangement <When viewed from the pin (male) contact coupling side>		
	Safety standard (Note-1)	UL • CSA , TÜV	
	Rating	250V 20A	250V 15A
	Withstand voltage ( V r.m.s. )	1,500	
	Wire size AWG	#12	#14

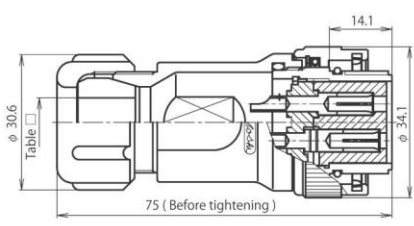
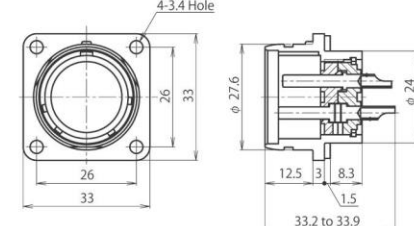
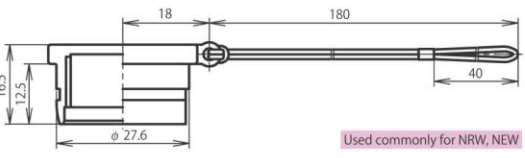
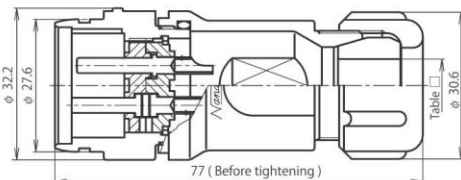
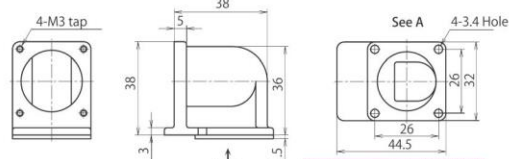
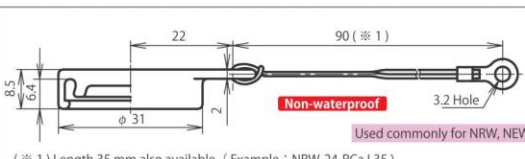
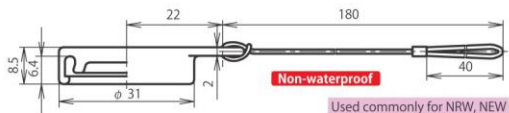
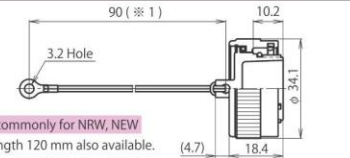
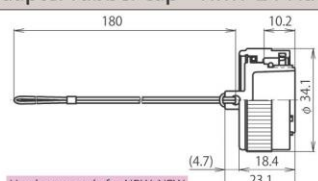
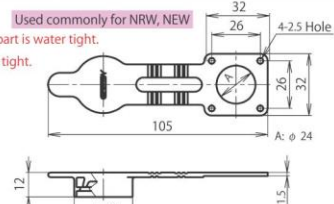
The cable to use should have a conductor cross sectional area shown in the left-side table.

Note-1 : All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

NEW

24

# NEW Series Shell Size 24

【 Power supply side 】 < Socket ( female ) contact used >	S Type	【 Power receiving side 】 < Pin ( male ) contact used >
 <p>NEW-24 ■ -PF □</p>	<p>Coupled</p> <p>Receptacle</p> <p>Adapter</p>	 <p>NEW-24 ■ -RM</p>
 <p>Plug waterproof cap : NRW-24-PCa • 1</p>		 <p>NEW-24 ■ -AdM □</p>
 <p>NJW-24-L za</p>	<p>Accessory</p>	 <p>Receptacle rubber cap : NRW-24-RCa</p>
 <p>Adapter rubber cap : NRW-24-AdCa</p>		 <p>Receptacle waterproof cap : NRW-24-RCa • 1</p>
 <p>Adapter waterproof cap : NRW-24-AdCa • 1</p>		 <p>Receptacle rubber cap : NRW-24-RCa • 2</p>



For the plug and adapter , be sure to select □ ( cable packing symbol ).

## Table □

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol □	Outer diameter of cable used
24	11	φ 9.5 to φ 11.0
	13	φ 11.1 to φ 13.0
	15	φ 13.1 to φ 15.0

■ indicates the number of contacts.

Shell size	Number of Contacts	3	4
24	Contact arrangement <When viewed from the pin (male) contact coupling side>		
	Safety standard (Note-1)	UL • CSA , TÜV	
	Rating	250V 20A	250V 15A
	Withstand voltage ( V r.m.s. )	1,500	
	Wire size AWG	#12	#14

The cable to use should have a conductor cross sectional area shown in the left-side table.

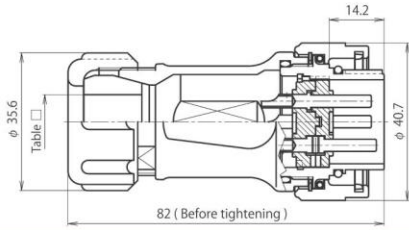
Note-1 : All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

NEW

24

# NEW Series Shell Size 28

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

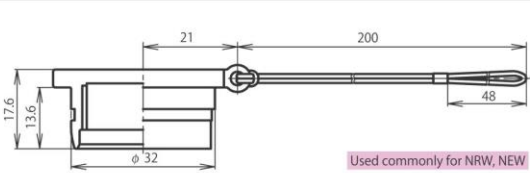


NEW-28 ■ -PM □

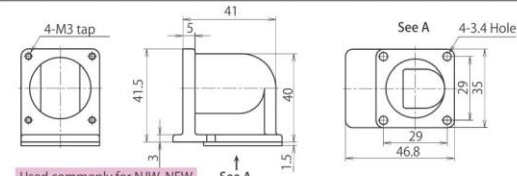
Plug



Accessory



Plug waterproof cap : NRW-28-PCa • 1



NJW-28-L za

For the plug and adapter , be sure to select □ ( cable packing symbol ).

## Table □

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol □	Outer diameter of cable used
28	10	φ 9.0 to φ 10.9
	12	φ 11.0 to φ 12.4
	14	φ 12.5 to φ 14.0
	16	φ 14.1 to φ 16.0
	18	φ 16.1 to φ 18.0

■ indicates the number of contacts.

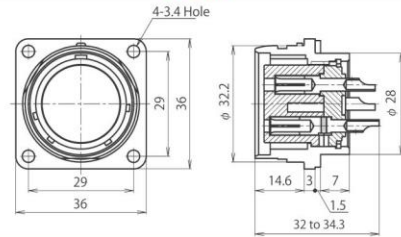
Shell size	Number of Contacts	4	8
28	Safety arrangement <When viewed from the pin (male) contact coupling side>		
	Safety standard (Note-1)	UL • CSA , TÜV	
	Rating	250V 20A	250V 15A
	Withstand voltage ( V r.m.s. )	1,500	
	Wire size AWG	#12	#14

The cable to use should have a conductor cross sectional area shown in the left-side table.

Note-1 : All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.

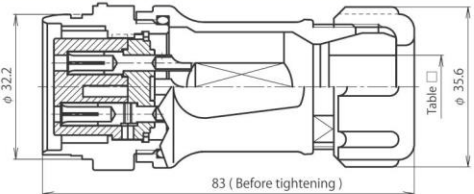
G Type

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



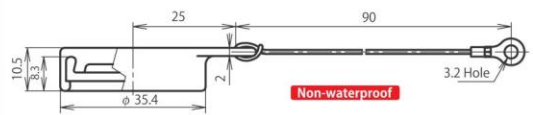
NEW-28 ■ -RF

Receptacle

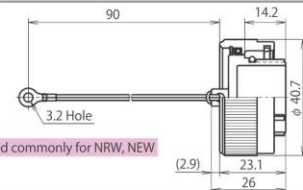


NEW-28 ■ -AdF □

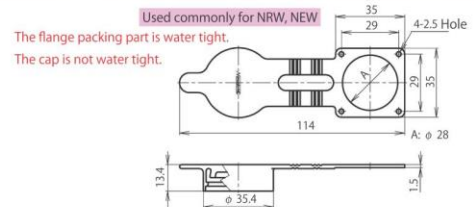
Adapter



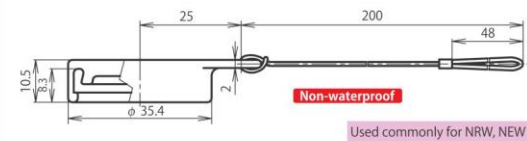
Receptacle rubber cap : NRW-28-RCa



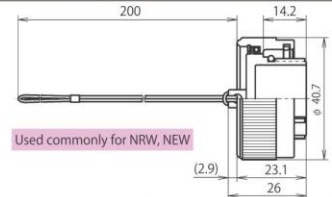
Receptacle waterproof cap : NRW-28-RCa • 1



Receptacle rubber cap : NRW-28-RCa • 2



Adapter rubber cap : NRW-28-AdCa

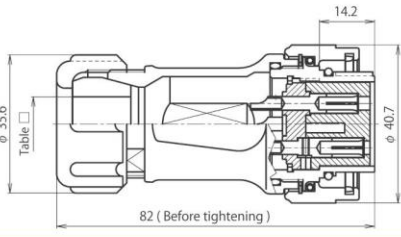

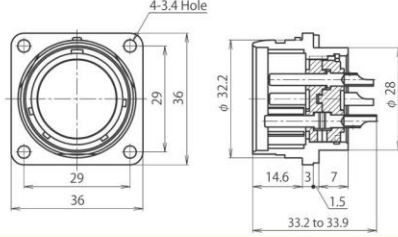
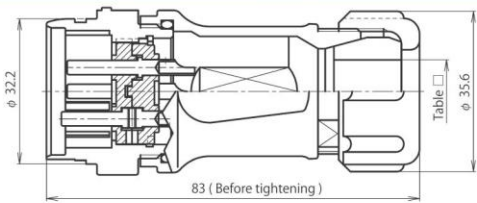
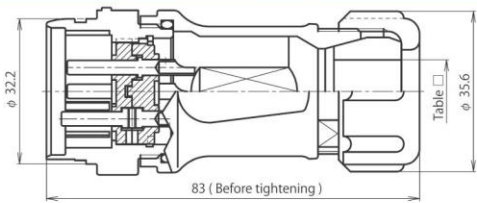
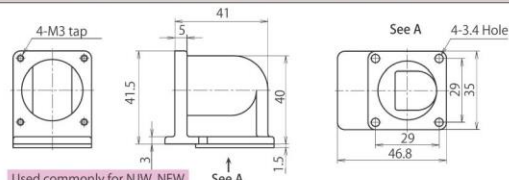
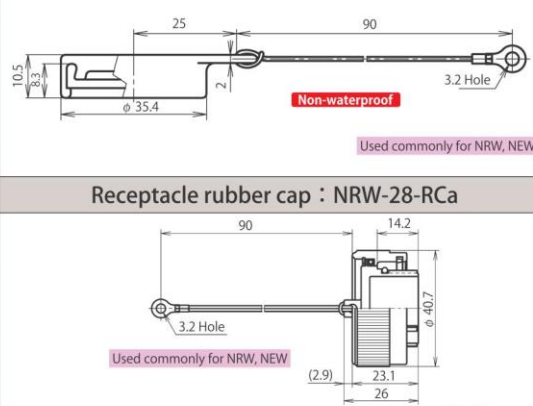
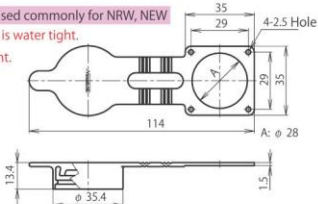
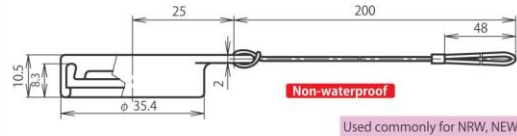
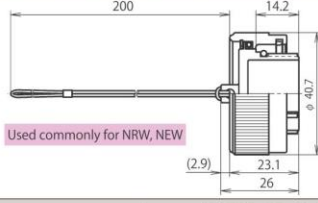


Adapter waterproof cap : NRW-28-AdCa • 1

NEW

28

# NEW Series Shell Size 28

【 Power supply side 】 < Socket ( female ) contact used >		S Type	【 Power receiving side 】 < Pin ( male ) contact used >	
 <p><b>NEW-28 ■ -PF □</b></p>		Coupled 	 <p><b>NEW-28 ■ -RM</b></p>	
 <p><b>NEW-28 ■ -AdM □</b></p>			 <p><b>NEW-28 ■ -AdM □</b></p>	
<p><b>Accessory</b></p> <p>Plug waterproof cap : NRW-28-PCa • 1</p>  <p>Used commonly for NJW, NEW</p> <p><b>NJW-28-L za</b></p>		<p><b>Accessory</b></p> <p>Receptacle rubber cap : NRW-28-RCa</p>  <p>Used commonly for NRW, NEW</p> <p>Receptacle waterproof cap : NRW-28-RCa • 1</p> <p>Used commonly for NRW, NEW</p> <p>The flange packing part is water tight. The cap is not water tight.</p>  <p>Receptacle rubber cap : NRW-28-RCa • 2</p>  <p>Used commonly for NRW, NEW</p> <p>Adapter rubber cap : NRW-28-AdCa</p>  <p>Used commonly for NRW, NEW</p> <p>Adapter waterproof cap : NRW-28-AdCa • 1</p>		

NEW

28



For the plug and adapter , be sure to select □ ( cable packing symbol ).

**Table □**

In order to secure the intended waterproof function, a cable to be used for the plug/adapter should have an appropriate specification and structure.

Shell size	Symbol □	Outer diameter of cable used
28	10	φ 9.0 to φ 10.9
	12	φ 11.0 to φ 12.4
	14	φ 12.5 to φ 14.0
	16	φ 14.1 to φ 16.0
	18	φ 16.1 to φ 18.0

■ indicates the number of contacts.

Shell size	Number of Contacts	4	8
28	Contact arrangement <When viewed from the pin (male) contact coupling side>		
	Safety standard (Note-1)	UL • CSA , TÜV	
	Rating	250V 20A	250V 15A
	Withstand voltage (V r.m.s.)	1,500	
	Wire size AWG	#12	#14

The cable to use should have a conductor cross sectional area shown in the left-side table.

Note-1 : All connectors are UL • CSA , TÜV certified. Not necessary to specify a standard by a product name. For safety standards, see pp.128 and 130.