

N Series

# N Type Coaxial Connectors



RF



MIL Standard



Wide Variation



Jun.1.2024 Copyright 2024 HIROSE ELECTRIC CO., LTD. All Rights Reserved.



# Features

---

## 1. 50Ω Impedance Matching Type, Coaxial Connector

This N series is a medium-sized coaxial connector with 50Ω impedance matching type.

It is robust, highly reliable, and has been used in defense communications, and measuring equipment.

It is not compatible with 75Ω impedance matching NC type or NTT specifications S type.

## 2. Highly Impedance Matching (Up to 10GHz)

Frequency is available up to 10GHz.

## 3. Applicable Standards

MIL-C-39012  
IEC 60169-16  
JIS C 5411

## Product Specifications

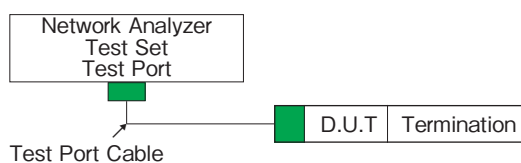
Nominal Characteristic Impedance (Note)	50 $\Omega$	Operating Temperature	-30 to +60°C
Frequency Range	0 to 10GHz	Operating Relative Humidity	95% Max.

Note: When used in low frequency (up to about 0 to 200 MHz), there is no particular difference in electrical performance between a 75  $\Omega$  cable and a 50  $\Omega$  cable.

Items	Specifications	Conditions
Contact Resistance	3m $\Omega$ Max.	Measured at 100mA DC
Insulation Resistance	1000M $\Omega$ Min.	Measured at 500V DC
Withstanding Voltage	No insulation breakdown	1500V AC for 1 min.
V.S.W.R.*	1.2 Max.	Up to 2GHz
Female Contact Retention Force	1N Min.	Measured with $\phi$ 1.6 pin gauge
Mating Durability	Contact Resistance : 10m $\Omega$ Min.	500 times
Vibration Resistance	No electrical discontinuity of 1 $\mu$ s or more No damage, cracks, or parts dislocation	Frequency : 10 to 500Hz, Total amplitude : 1.5mm, Acceleration : 98m/s <sup>2</sup> , 10 cycles in each of the 3 axes direction
Shock	No electrical discontinuity of 1 $\mu$ s or more No damage, cracks, or parts dislocation	Acceleration : 490m/s <sup>2</sup> , Duration : 11ms, Sine half-wave waveform, 3 cycles in each of the 3 axes direction
Humidity	No damage, cracks, or parts dislocation	Temperature : +25°C to +65°C Humidity : 80 to 96% , Left for 240hours
Temperature Cycle	No damage, cracks, or parts dislocation	(-55°C : 30 min. → 5 to 35°C : within 5 min. → 85°C : 30 min. → 5 to 35°C : within 5 min.) 5 cycles
Corrosion Resistance	No corrosion that impairs function	Continuous 48 hour cycle in 5% salt water solution

Note : Information contained in this catalog represents general requirements for this Series.  
Contact us for the drawings and specifications for a specific part number shown.

\*The above V.S.W.R. specification values were measured using the measurement system shown below.



Note1: The cable connector is measured with the connector attached to the applicable cable (10cm).  
Note2: The board connector is measured with the connector attached to a 50  $\Omega$  board.

## Materials / Finish

Component	Material	Finish (Note)	Remarks
Shell	Brass	Silver Plating Nickel Plating	-
Male Contact	Brass	Silver Plating Gold Plating	-
Female Contact	Beryllium Copper	Silver Plating Gold Plating	-
Insulator	PTFE	-	Noncombustible
Rubber Gasket	Silicone Rubber	-	Noncombustible

Note: Silver plating combines with sulfur in the air to form silver sulfide, which discolors, but does not affect its properties.

### About Discoloration of Silver Plating

The discoloration is only on the surface and the contact area is wiped so there is no problem with electrical contact.

## Product Number Structure

Refer to the chart below when determining the product specifications from the product number.

### Standard Product

#### N - P - 5DV

①    ②    ③

① Series Name	N	③ Cable Type	
② Connector Type	P : Plug PR : Plug Receptacle PJ : Panel Jack PA : Panel Adapter		

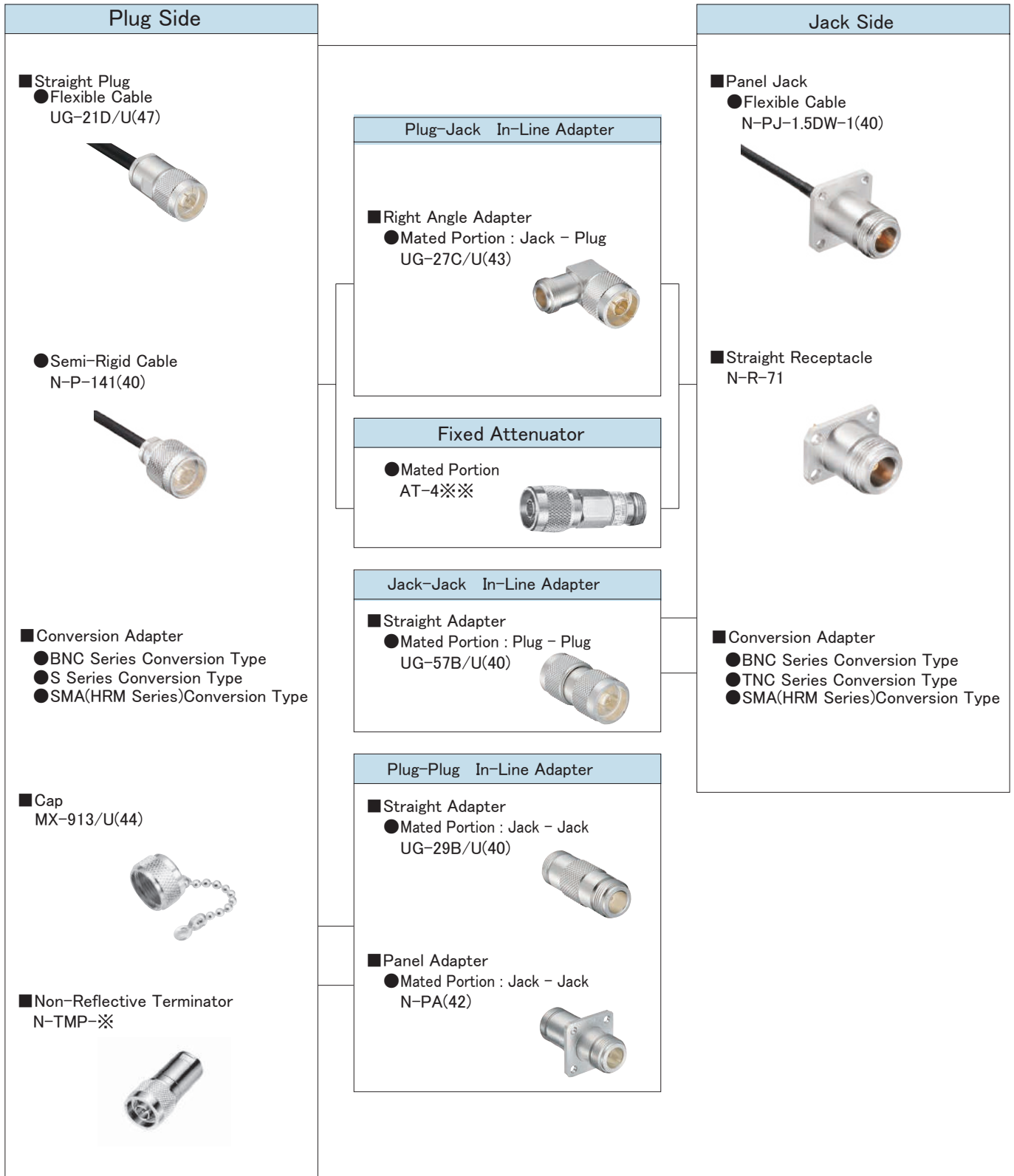
### MIL Applicable Product

#### UG - 21 D /U

①    ②    ③    ①

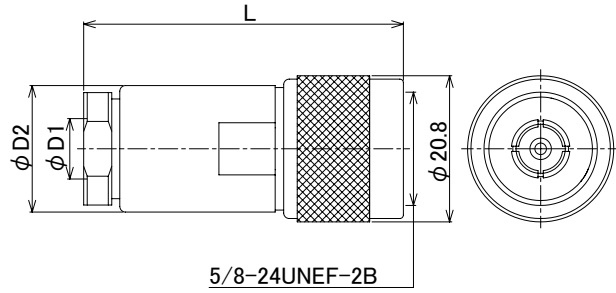
① Symbol for High Frequency Coaxial Connectors	UG	③ Improvement Symbol	
② Identification No.			

# Functional Diagram



## Straight Plug

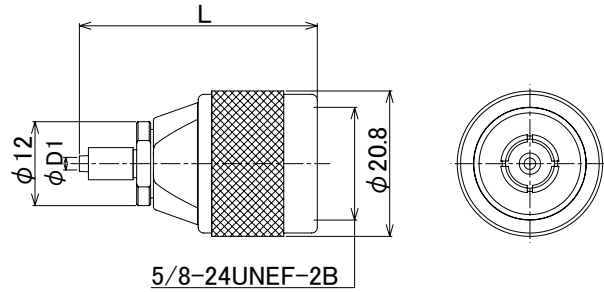
### ●Flexible Cable



Unit : mm

Part No.	HRS No.	Applicable Cable	φ D1	φ D2	L	Purchase Unit
UG-21D/U(47)	CL0301-0003-0-47	RG-8/U, RG-9/U	11.1	19	38	20pcs per bag
N-P-5DV(40)	CL0301-0120-3-40	5D-2V	8.6	18	45.5	5pcs per bag

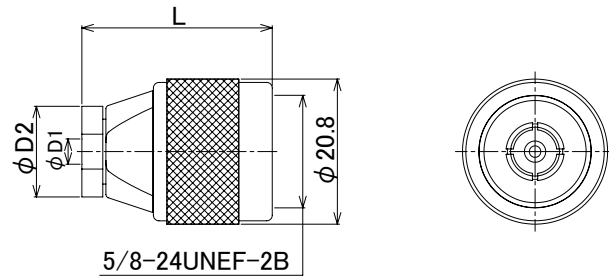
### ●Flexible Cable (Small-Diameter Cable)



Unit : mm

Part No.	HRS No.	Applicable Cable	φ D1	L	Purchase Unit
N-P-1.5DQS(40)	CL0301-0267-1-40	1.5D-Q.SUPER	1.8	34.05	20pcs per bag
N-P-2.5DQS(40)	CL0301-0276-2-40	2.5D-Q.SUPER	2.9	35.6	
N-P-1.5DW	CL0301-0320-2-00	1.5D-2W	1.8	34.05	

## ● Semi-Rigid Cable

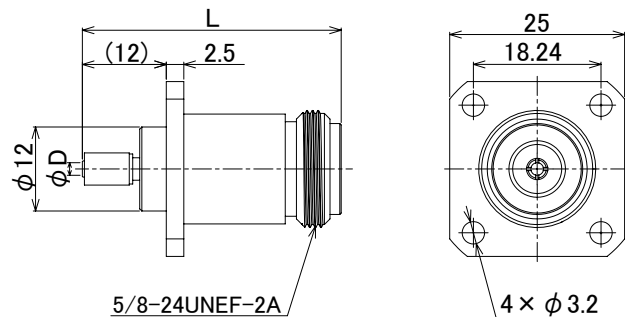


Unit : mm

Part No.	HRS No.	Applicable Cable	$\phi D1$	$\phi D2$	L	Purchase Unit
N-P-141(40)	CL0301-0162-3-40	UT-141A	3.63	13	27.3	5pcs per bag
N-P-141-2(A)(40)	CL0301-0262-8-40	UT-141A	3.64	5	25.7	

## Panel Jack

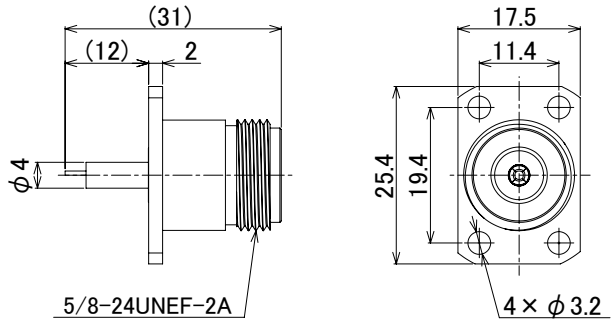
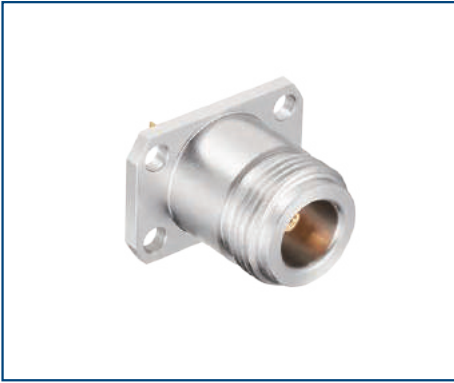
### ● Flexible Cable



Unit : mm

Part No.	HRS No.	Applicable Cable	$\phi D$	L	Purchase Unit
N-WPJ-2.5DW(40)	CL0301-0298-5-40	2.5D-HQEW	2.85	40.2	5pcs per bag
N-WPJ-1.5DW-1(40)	CL0301-0306-1-40	1.5D-HQEW	1.8	37	20pcs per bag
N-PJ-1.5DW-1(40)	CL0301-0312-4-40	1.5D-HQEW	1.8	37	10pcs per bag

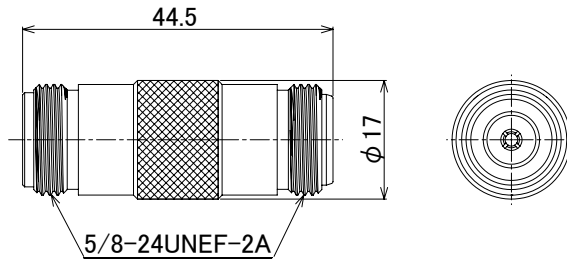
## Receptacle



Part No.	HRS No.	Purchase Unit
N-R-71	CL0301-0014-0-00	50pcs per tray

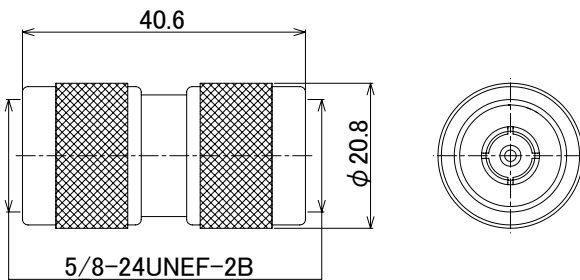
## Adapter

### ● Straight Adapter (Mated Portion : Jack - Jack)



Part No.	HRS No.	Purchase Unit
UG-29B/U(45)	CL0301-0035-6-45	5pcs per bag

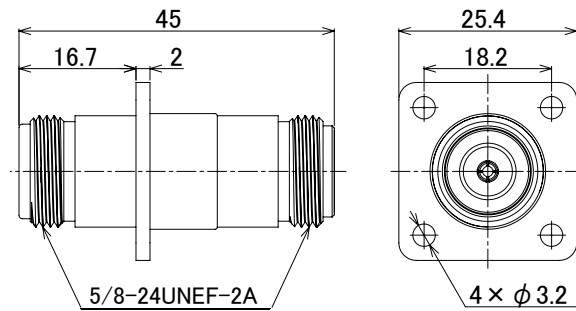
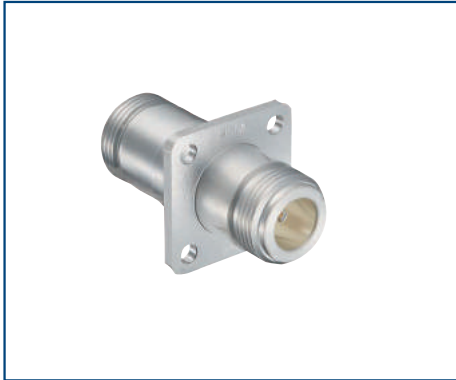
### ● Straight Adapter (Mated Portion : Plug - Plug)



Part No.	HRS No.	Purchase Unit
UG-57B/U(40)	CL0301-0018-7-40	5pcs per bag

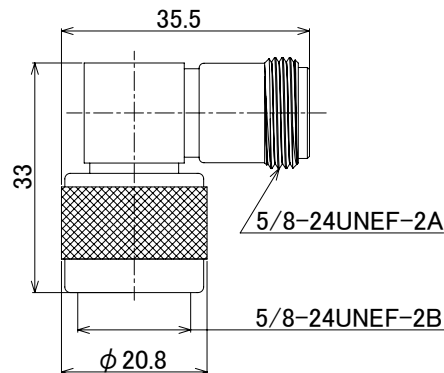


### ● Panel Adapter (Mated Portion : Jack - Jack)



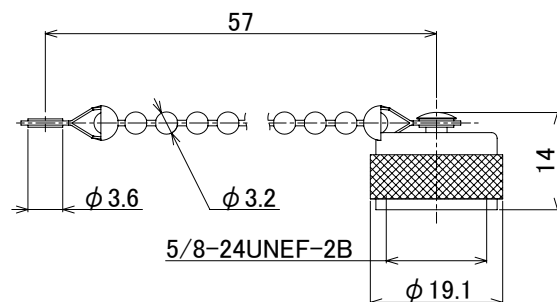
Part No.	HRS No.	Purchase Unit
N-PA(42)	CL0301-0036-9-42	5pcs per bag

### ● Right Angle Adapter (Mated Portion : Plug - Jack)



Part No.	HRS No.	Purchase Unit
UG-27C/U(43)	CL0301-0015-9-43	5pcs per bag

## Cap



Part No.	HRS No.	Purchase Unit
MX-913/U(44)	CL0301-0020-9-44	5pcs per bag

## Conversion Adapter List

For external dimensions, please refer to "Conversion Adapter".

Mated Part1		Mated Part2		Part No.	HRS No.	Purchase Unit
Series Name	Mated Portion	Series Name	Mated Portion			
N	Plug	BNC	Jack	JUG-201A/U(40)	CL0311-0007-8-40	5pcs per bag
		S	Jack	N.P-S.J(40)	CL0311-0245-6-40	20pcs per bag
		SMA (HRM)	Plug	HRM-555S(40)	CL0311-0125-4-40	5pcs per bag
	Jack		HRM-554S(40)	CL0311-0123-9-40		
	Jack	SMA (HRM)	Plug	HRM-553S	CL0311-0121-3-00	
				HRM-557SV	CL0311-0272-9-00	
		Jack	HRM-552S	CL0311-0119-1-00		
			HRM-556SV	CL0311-0298-2-00		

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.

N-TM Series

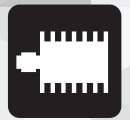
# N Type Coaxial Connectors Non-Reflective Terminator



RF



MIL Standard



Terminator



## Product Number Structure

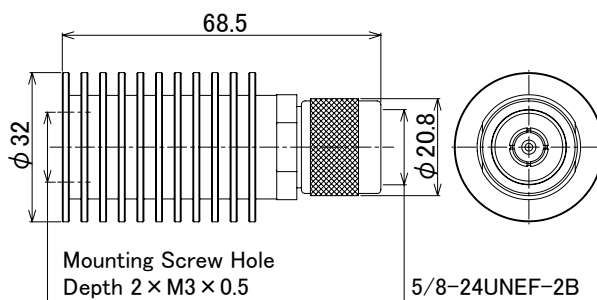
Refer to the chart below when determining the product specifications from the product number.

### N - TM P - 5 - (40)

①      ②      ③      ④      ⑤

① Series Name	N	④ Power	5 : 5W
② TM	Terminator	⑤ Specification No.	40 : RoHS Compliant
③ Connector Type	P : Plug		

## Non-Reflective Terminator



Part No.	HRS No.	Frequency (GHz)	V.S.W.R. (Max)		Power (W)	Purchase Unit
			0 to 2GHz	2 to 6GHz		
N-TMP-5(40)	CL0353-0033-0-40	0 to 6	1.15	1.20	5	20pcs per bag

## While Taking into Consideration

Specifications mentioned in this catalog are reference values.

When considering to order or use this product, please review the Drawing and Product Specifications sheets.

Use an appropriate cable when using the connector in combination with cables.

If considering usage of a non-specified cable, please contact your sales representative.

If assembly process is done by jigs & tools which are not identified by Hirose, the warranty of the product may be affected.

If considering usage for below mentioned applications, please contact your sales representative.

In cases where the application will demand a high level of reliability, such as automotive, medical instruments, public infrastructure, aerospace/defense etc. Hirose must review before assurance of reliability can be given.