

# BNC 75Ω connector

## BNC75 Series

### ■ Features

#### 1. 50Ω-based BNC connector, 75Ω type

BNC type products are widely used as 50Ω connectors. Hirose's BNC75 is rated for 75Ω and can be mated with the other BNC connectors.

#### 2. Easy on, easy-off bayonet lock system

Bayonet lock system that is easy to use and operate.

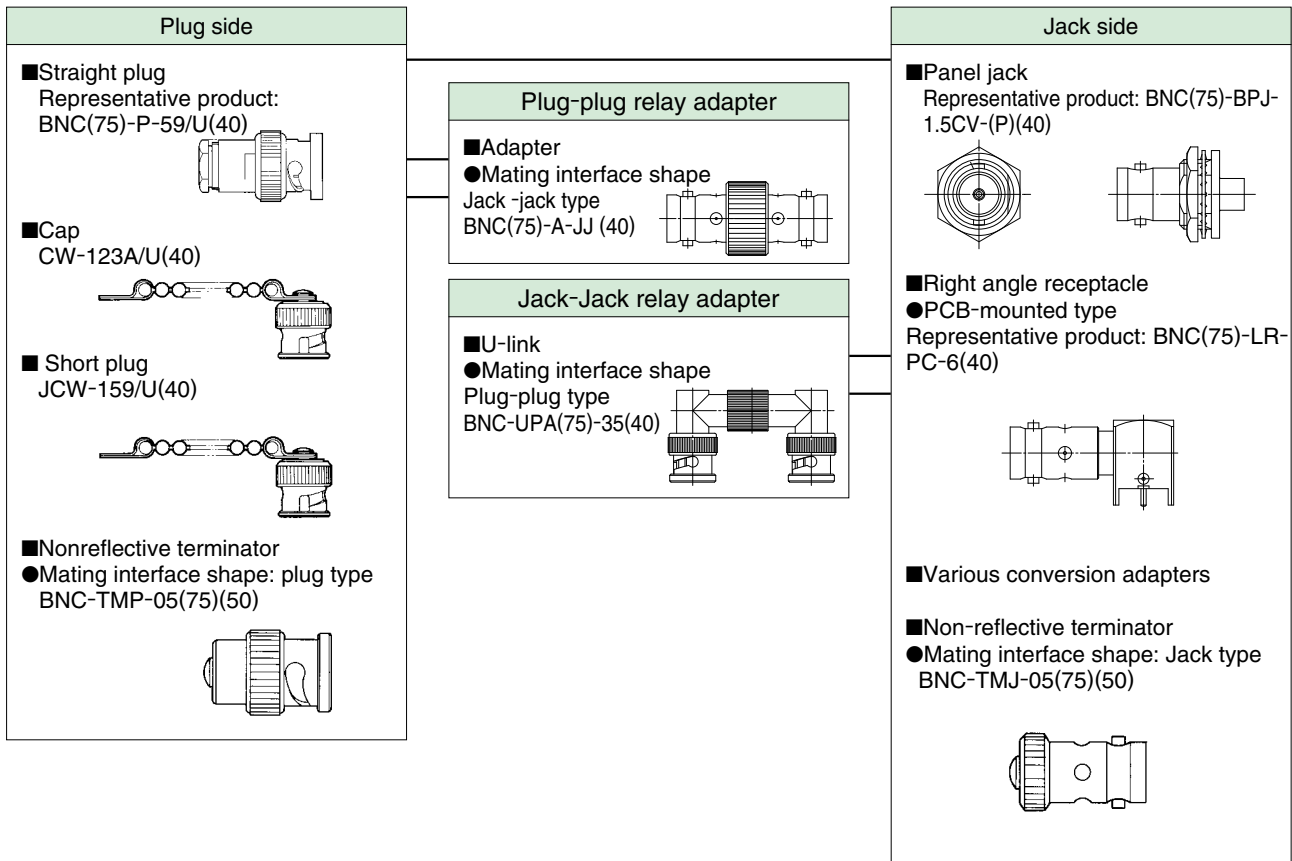
#### 3. Applicable cable

Cable for this connector is coaxial with the diameter of approximately  $\phi 1.5 - \phi 6$  (1.5C-QEV.CW etc.)

#### 4. Applicable specifications

Electronic Industries Association of Japan's temporary specifications (EIAJ RCX-5233)

### ■ Functional diagram



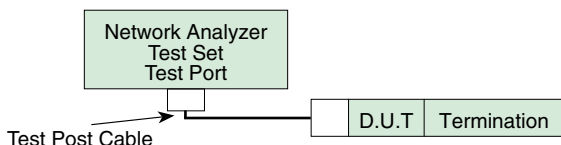
## Product Specifications

|             |  |                             |  |                               |
|-------------|--|-----------------------------|--|-------------------------------|
| Rated value | Nominal characteristic impedance<br>Rated voltage<br>Rated frequency | 75Ω<br>AC150Vrms<br>DC~3GHz | Operation temperature range<br>Operating relative humidity | -30°C~+60°C<br>Maximum of 85% |
|-------------|--|-----------------------------|--|-------------------------------|

| Items                                  | Specifications   | Conditions   |
|--|--|--|
| 1. Contact resistance                  | Maximum of 6mΩ   | Measured at a maximum of DC 100 mA   |
| 2. Insulation resistance               | Minimum of 1,000 MΩ  | Measured at DC 500 V   |
| 3. Withstanding voltage                | No flashover or dielectric breakdown.  | AC 500 V for one minute  |
| 4. Voltage Standing Wave Ratio (*)     | Maximum of 1.3   | Up to DC 3GHz  |
| 5. Retaining force of a female contact | Minimum of 0.6N  | Measured by a pin gauge of φ 1.32 mm   |
| 6. Mating cycles                       | Contact resistance: a maximum of 20 mΩ   | 500 times  |
| 7. Vibration Resistance                | No electrical discontinuity for 1 μs or longer.<br>No damage, crack or looseness of parts.   | Frequency: 10 - 500Hz, half amplitude: 0.75mm<br>Acceleration: 98m/s <sup>2</sup> , 3 axis directions, 10 cycles each              |
| 8. Shock resistance                    | No electrical discontinuity for 1 μs or longer.<br>No damage, crack or looseness of parts.   | Acceleration : 490m/s <sup>2</sup> , duration: 11ms<br>Half-sine, 3 directions, 3 times each                                       |
| 9. Moisture resistance                 | Insulation resistance: a minimum of 100 MΩ (at high temperatures)<br>Insulation resistance: a minimum of 1000 MΩ (when dry)<br>No damage, crack or looseness of parts. | Temperature: +25°C - +65°C<br>Humidity: 80 - 96%<br>Left for 240 hours   |
| 10. Thermal shock resistance           | No damage, crack or looseness of parts.  | (-55°C for 30 minutes → 5 - 35°C for a maximum of 5 minutes → 85°C for 30 minutes → 5 - 35°C for a maximum of 5 minutes), 5 cycles |
| 11. Corrosion resistance               | No heavy corrosion.  | In a 5 % salt water solution for 48 hours on end   |

\*Some products may have different specifications from those shown above.

The specification values of the Voltage Standing Wave Ratio (V.S.W.R.) are the values measured in the measuring system shown in the Figure below:



## Material

| Parts          | Materials        | Finish                        | Remarks         |
|----------------|------------------|-------------------------------|-----------------|
| Shell          | Brass            | Silver plating/nickel plating | —               |
| Male contact   | Brass            | Silver plating/gold plating   | —               |
| Female contact | Beryllium copper | Silver plating/gold plating   | —               |
| Insulator      | PTFE resin       | —                             | Flame retardant |
| Gasket         | Silicone rubber  | —                             | —               |

## Ordering information

**BNC(75) - L P - 59/U**

①

②

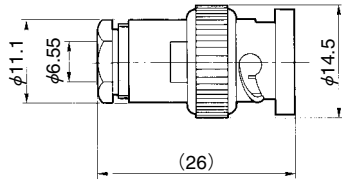
③

④

|  |  |
|--|--|
| ① Series name: BNC(75)<br>:Complies with BNC75Ω  | ④ 1) For plug / jack<br>..Applicable cable<br>2) For receptacle<br>PC: PCB-mounted type<br>3) For adapter<br>: Mating interface shape<br>4) All other cases<br>..additional number |
| ② Shape of connectors<br>None: Straight type<br>L: Right angle type<br>B: Bulk head type |  |
| ③ Connector type<br>P: Plug<br>PJ: Panel jack<br>R: Receptacle<br>PA: Panel adapter      |  |

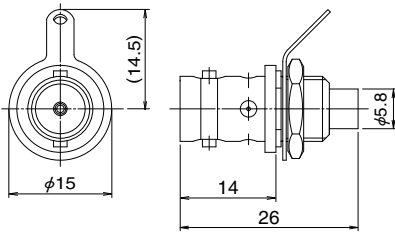
## Plugs

### ● Straight plug

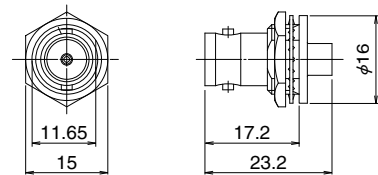


| Part No.           | HRS No.       | Applicable cables | RoHS |
|--------------------|---------------|-------------------|------|
| BNC(75)-P-59/U(40) | 302-0292-5 40 | RG-59/U           | Yes  |

### ● Panel jack (nut securing type)



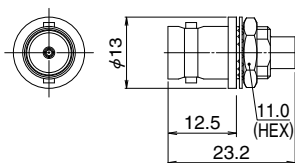
| Part No.                | HRS No.       | Applicable cables | Remarks                               | Mounting hole dimension | RoHS |
|-------------------------|---------------|-------------------|---------------------------------------|-------------------------|------|
| BNC(75)-BPJ-1.5CW-2(40) | 302-0343-4 40 | 1.5C-2W           | Ships with toothed lug terminal strip | 2-2                     | Yes  |



| Part No.                  | HRS No.       | Applicable cables | Remarks                              | Mounting hole dimension | RoHS |
|---------------------------|---------------|-------------------|--------------------------------------|-------------------------|------|
| BNC(75)-BPJ-1.5CV-(P)(40) | 302-0369-8 40 | 1.5C-2V           | Ships with hex nut                   | 2-1                     | Yes  |
| BNC(75)-BPJ-1.5CV-1(40)   | 302-0375-0 40 | 1.5C-2V           | Ships with round nut (refer to Note) |                         |      |
| BNC(75)-BPJ-1.5CW(P)(40)  | 302-0388-2 40 | 1.5C-2W           | Ships with hex nut                   |                         |      |

(Note) Requires dedicated jigs.

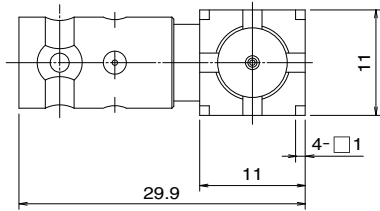
※The shape diagram is a representative example.



| Part No.                | HRS No.       | Applicable cables | Mounting hole dimension | RoHS |
|-------------------------|---------------|-------------------|-------------------------|------|
| BNC(75)-BPJ-1.5CV-2(40) | 302-0380-0 40 | 1.5C-2V           | 3-1                     | Yes  |

## ■ Receptacles

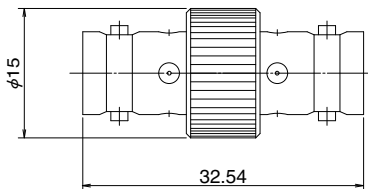
### ● Right angle receptacle (PCB-mounted type)



| Part No.            | HRS No.       | Mounting hole dimension | RoHS |
|---------------------|---------------|-------------------------|------|
| BNC(75)-LR-PC-6(40) | 302-0363-1 40 | 4-1                     | Yes  |

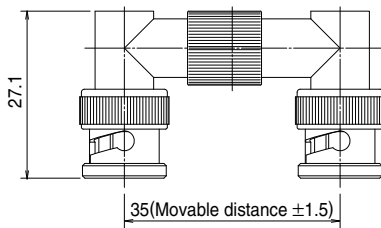
## ■ Adapters

### ● Straight adapter



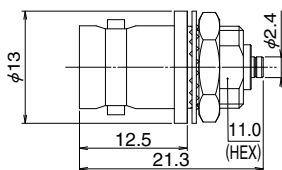
| Part No.         | HRS No.       | RoHS |
|------------------|---------------|------|
| BNC(75)-A-JJ(40) | 302-0384-1 40 | Yes  |

### ● U-link (Mating interface shape: plug-plug)



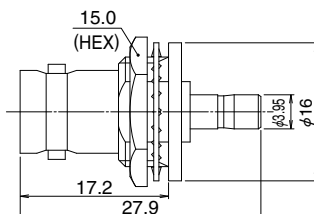
| Part No.           | HRS No.       | RoHS |
|--------------------|---------------|------|
| BNC-UPA(75)-35(40) | 302-0301-4 40 | Yes  |

### ● Conversion adapter ( BNC (75) jack to H. FL jack panel adapter)



| Part No.               | HRS No.       | Mounting hole dimension | RoHS |
|------------------------|---------------|-------------------------|------|
| BNC(75)J-H.FLJ-BPA(40) | 311-0302-8 40 | 3-1                     | Yes  |

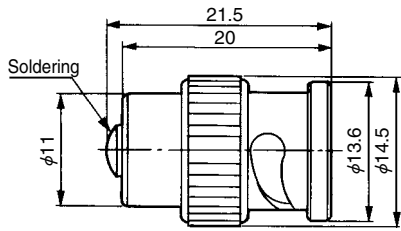
### ● Conversion adapter (BNC (75) jack to PL71 jack panel adapter)



| Part No.               | HRS No.       | Mounting hole dimension | RoHS |
|------------------------|---------------|-------------------------|------|
| BNC(75)J-PL71J-BPA(40) | 311-0304-3 40 | 2-1                     | Yes  |

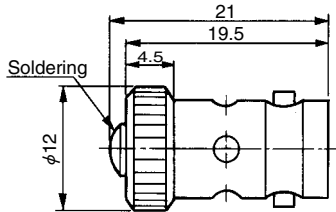
## ■ Nonreflective terminator

### ● Mating interface shape: plug type



| Part No.           | HRS No.       |
|--------------------|---------------|
| BNC-TMP-05(75)(50) | 353-0100-5 50 |

### ● Mating interface shape: Jack type



| Part No.           | HRS No.       |
|--------------------|---------------|
| BNC-TMJ-05(75)(50) | 353-0101-8 50 |

## ◆ Mounting hole dimension diagram (BNC75Ω connector)

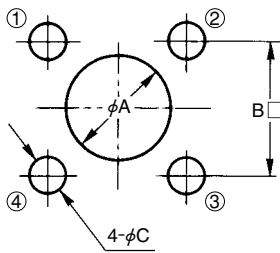


Diagram 1

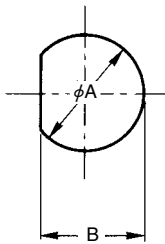


Diagram 2

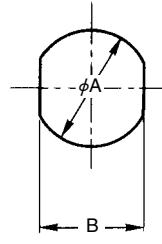


Diagram 3

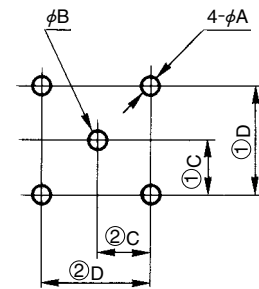


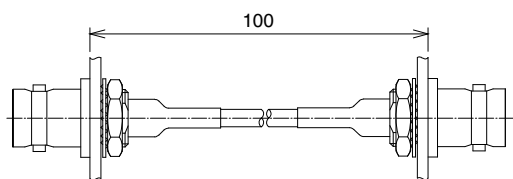
Diagram 4

| Attached diagram | No. | A                 | B                | C   | D |
|------------------|-----|-------------------|------------------|-----|---|
| 1                | 1-1 | 4.13 $^{+0.05}_0$ | 12.7             | 3   | — |
|                  | 1-2 | 11.4              | 12.7             | 3.2 | — |
|                  | 1-3 | 9.8               | 12.7             | 3   | — |
| 2                | 2-1 | 12.8 $^{+0.1}_0$  | 11.8 $^{+0.1}_0$ | —   | — |
|                  | 2-2 | 11.3 $^{+0.1}_0$  | 10.3 $^{+0.1}_0$ | —   | — |

| Attached diagram | No. | A               | B               | C               | D                |
|------------------|-----|-----------------|-----------------|-----------------|------------------|
| 3                | 3-1 | 9.6 $^{+0.1}_0$ | 8.2 $^{+0.1}_0$ | —               | —                |
| 4                | 4-1 | 1.8 $^{+0.1}_0$ | 1.8 $^{+0.1}_0$ | 5.08 $\pm 0.05$ | 10.16 $\pm 0.05$ |

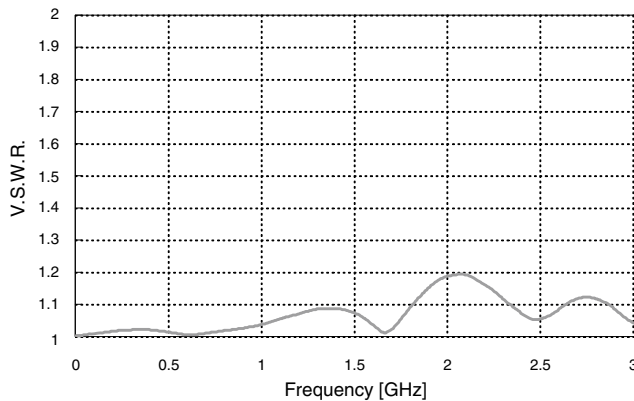
## ◆ High-frequency characteristic of 75Ω hirose product series

### ● BNC (75) Series

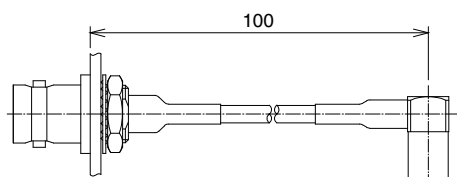


BNC(75)-BPJ-1.5CV-※

BNC(75)-BPJ-1.5CV-※

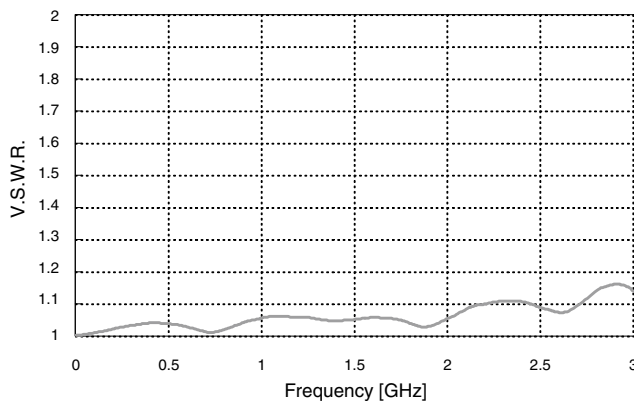


### ● PL71 Series

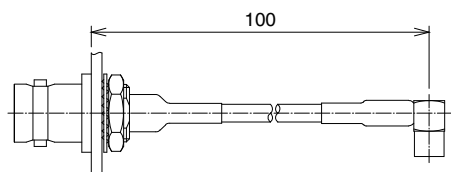


BNC(75)-BPJ-1.5CV-※

PL71-LP-1.5C(40)

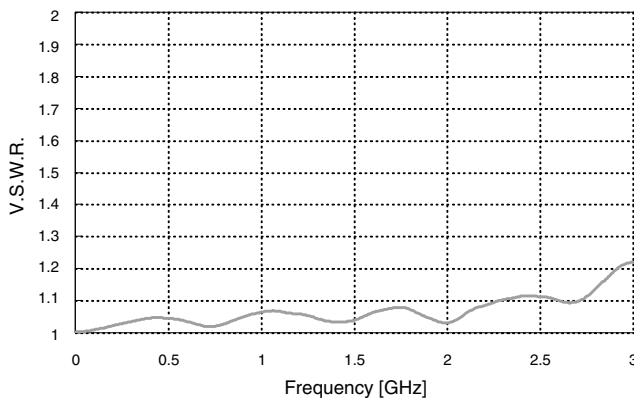


### ● PL75 Series

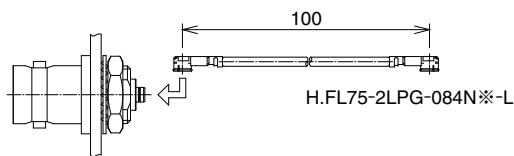


BNC(75)-BPJ-1.5CV-※

PL75-LP-1.5CV

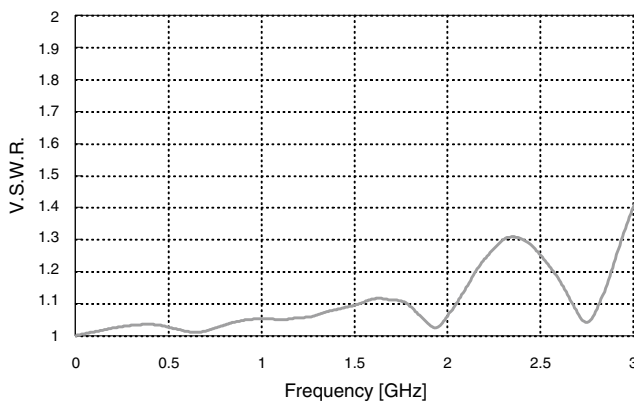


### ● H.FL75 Series



BNC(75)J-H.FLJ-BPA(40)

H.FL75-2LPG-084N-※-L



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