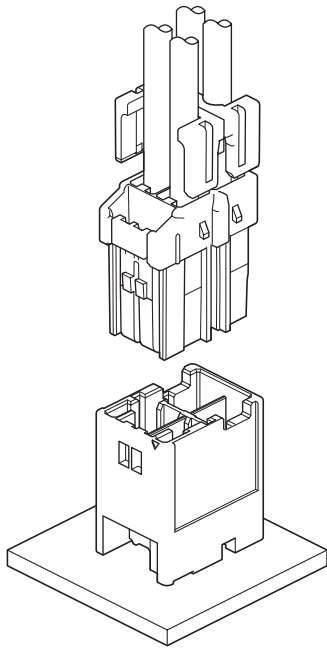


# BNI CONNECTOR

3.3mm pitch/Disconnectable Crimp style connectors



**This is a 3.3 mm pitch wire-to-board connector, having incomplete mating prevention mechanism when mating connector.**

**3 type key patterns prevent mismatching insertion when using multiple pieces of connector in the same model.**

- Keying structure
- Secure locking device
- Inertia lock structure
- Possible to use the retainer
- Header dealing with potting treatment

## Specifications

- Current rating: 4 A AC, DC (Refer to the table below.)
- Voltage rating: 300 V AC, DC
- Temperature range: -25°C to +85°C (including temperature rise in applying electrical current)
- Contact resistance: Initial value/ 10 mΩ max.  
After environmental tests/ 20 mΩ max.
- Insulation resistance: 1,000 MΩ min.
- Withstanding voltage: 1,500 VAC/minute
- Applicable wire: Conductor size/ AWG #24 to #20  
Insulation O.D./ 1.3 mm to 2.5 mm
- Applicable PC board thickness: 1.6 mm

Note: The current rating differs depending on the number of circuits and the wire size used in each connector. The table below lists the current rating as a function of the number of circuits and the wire size.

Current unit: A

Circuits	Wire size (AWG)		
	#20	#22	#24
2	4	3	3
3	4	3	2
4	4	3	2
6	4	3	2
8	4	3	2
10	4	3	2
12	4	3	2

Note: Do not branch in parallel current which exceeds the rated current (e.g. more than 4 A in the case of 2 circuits with AWG #20). If branched in parallel, current imbalance or other problems may develop. If it is absolutely necessary to branch such a large current in parallel, design the circuits without causing any imbalance and provide an extra margin for each circuit.

- \* Refer to "General Instruction and Notice when using Terminals and Connectors" at the end of this catalog.
- \* Contact JST for details.
- \* Compliant with RoHS.

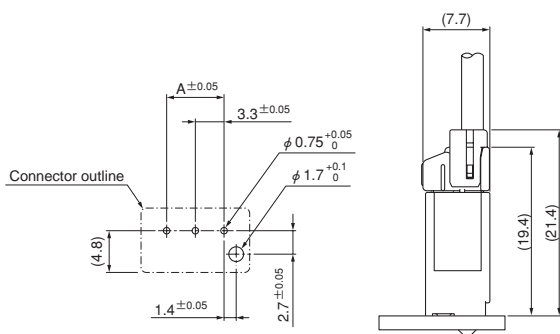
## Standards

- Ⓜ Recognized E60389
- Ⓢ Certified LR20812

## PC board layout and Assembly layout

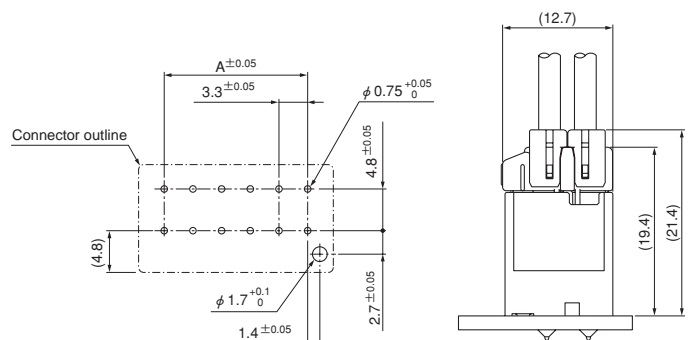
### Single-row type

<2, 3 circuits>



### Double-row type

<4, 6, 8, 10, 12 circuits>



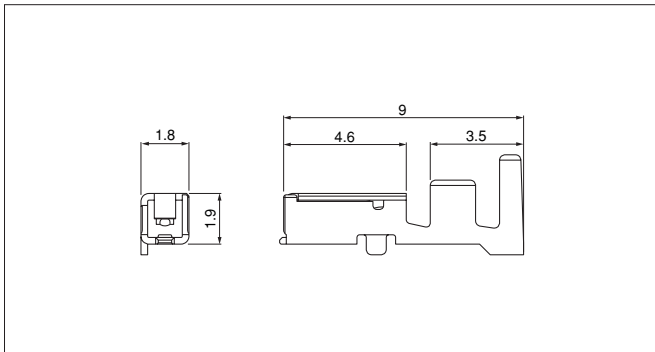
Note: 1. The above figure is the figure viewed from the connector mounting side.

2. Tolerances are non-cumulative: ±0.05 mm for all centers.

3. Hole dimensions differ according to the type of PC board and piercing method. The dimensions above should serve as a guideline. Contact JST for details.

# BNI CONNECTOR

## Contact



Model No.	Applicable wire		Insulation O.D. (mm)	Q'ty/ reel
	mm <sup>2</sup>	AWG#		
<b>SBNI-01T-P0.5</b>	0.2~0.5	24~20	1.3~2.5	5,000

### Material and Finish

Copper alloy, tin-plated (reflow treatment)

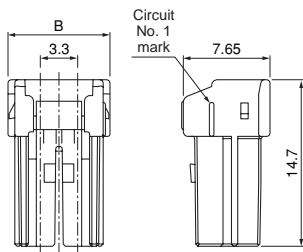
### RoHS compliance

Contact	Crimping machine	Applicator		
		Crimp applicator	Dies	Crimp applicator with dies
<b>SBNI-01T-P0.5</b>	AP-K2N	MKS-L	MK/SBN1-01-05	APLMK SBN01-05
		—	—	—

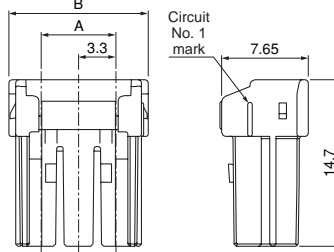
## Housing

### Single-row type

<2 circuits>

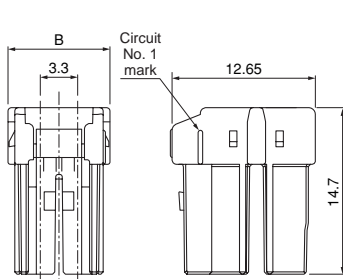


<3 circuits>

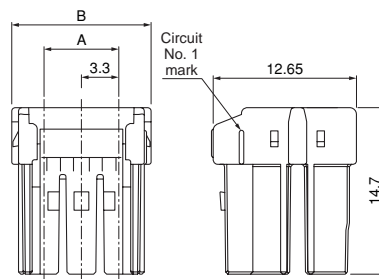


### Double-row type

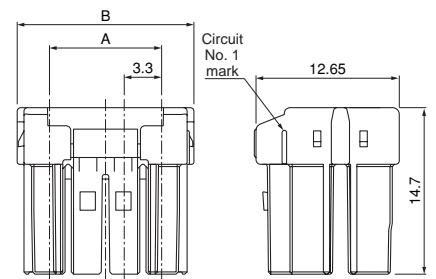
<4 circuits>



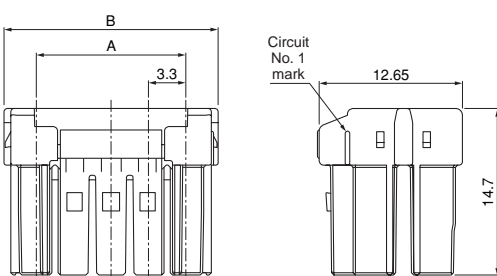
<6 circuits>



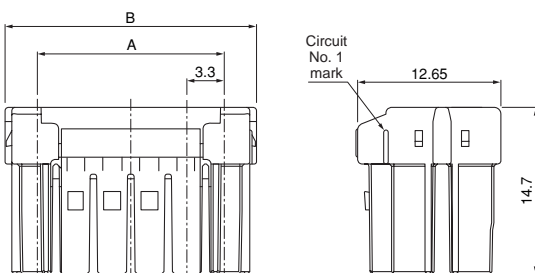
<8 circuits>



<10 circuits>



<12 circuits>



Type	Circuits	Model No.	Dimensions (mm)		Q'ty/ bag
			A	B	
Single-row type	2	<b>BNIRP-02V-A-S</b>	—	9.0	1,000
	3	<b>BNIRP-03V-A-S</b>	6.6	12.3	1,000
Double-row type	4	<b>BNIRP-04V-W-A-S</b>	—	9.0	1,000
	6	<b>BNIRP-06V-W-A-S</b>	6.6	12.3	1,000
	8	<b>BNIRP-08V-W-A-S</b>	9.9	15.6	1,000
	10	<b>BNIRP-10V-W-A-S</b>	13.2	18.9	500
	12	<b>BNIRP-12V-W-A-S</b>	16.5	22.2	500

### Material

Glass-filled PA 66, UL94V-0, natural

### RoHS compliance

<For reference> As the color identification, the following alphabet shall be put in the underlined part. For availability, delivery and minimum order quantity, contact JST.

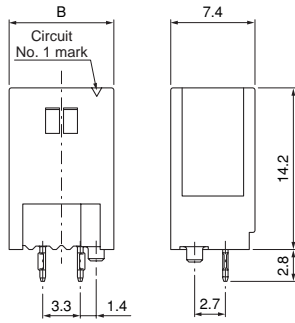
ex. **BNIRP-04V-W-A-S**  
S...natural M...green E...blue

# BNI CONNECTOR

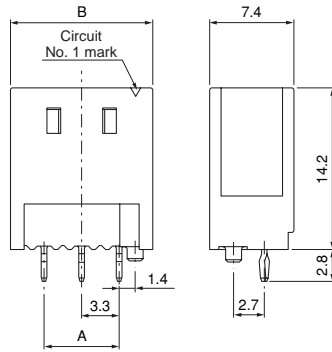
## Shrouded header

### Single-row type

<2 circuits>

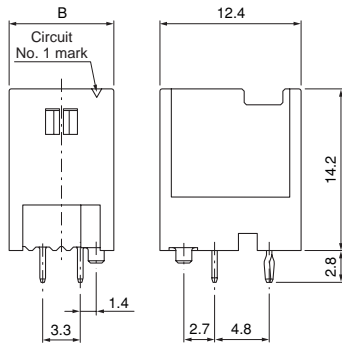


<3 circuits>

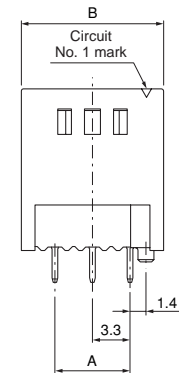


### Double-row type

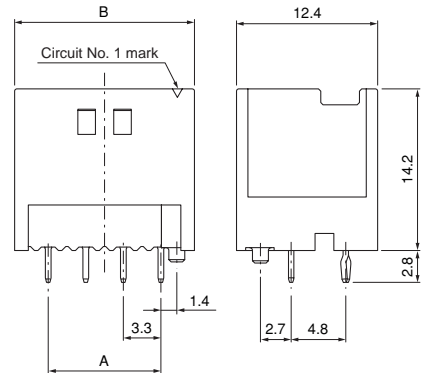
<4 circuits>



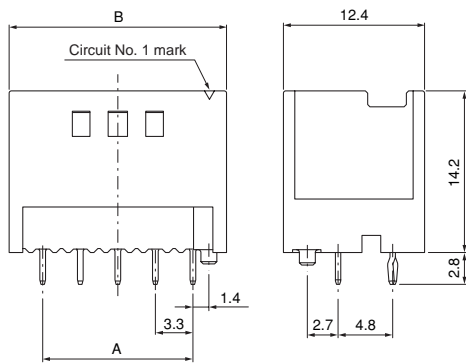
<6 circuits>



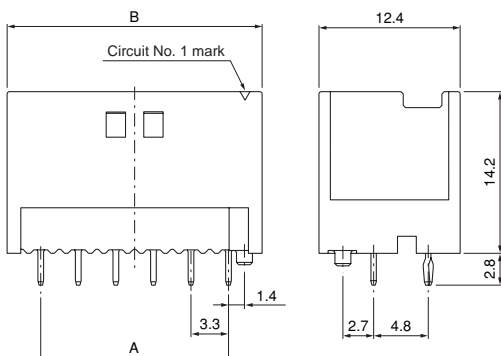
<8 circuits>



<10 circuits>



<12 circuits>



Type	Circuits	Model No.	Dimensions (mm)		Q'ty/ bag
			A	B	
Single-row type	2	<b>B02B-BNISK-A-1</b>	—	9.2	310
	3	<b>B03B-BNISK-A-1</b>	6.6	12.5	260
Double-row type	4	<b>B04B-BNISK-A-1W</b>	—	9.2	210
	6	<b>B06B-BNISK-A-1W</b>	6.6	12.5	170
	8	<b>B08B-BNISK-A-1W</b>	9.9	15.8	140
	10	<b>B10B-BNISK-A-1W</b>	13.2	19.1	110
	12	<b>B12B-BNISK-A-1W</b>	16.5	22.4	80

#### Material and Finish

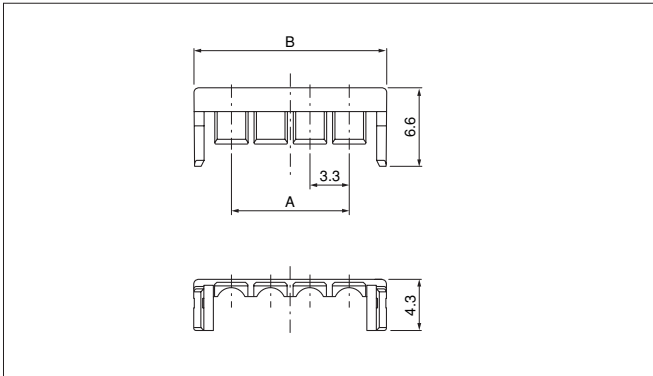
Post: Copper alloy, copper-undercoated, tin-plated (reflow treatment)  
Wafer: Glass-filled PA 66, UL94V-0, natural

#### RoHS compliance

<For reference> As the color identification, the following alphabet shall be put in the underlined part.  
For availability, delivery and minimum order quantity, contact JST.

ex. **B04B-BNISK-A-1W**  
S...natural M...green E...blue

## Retainer



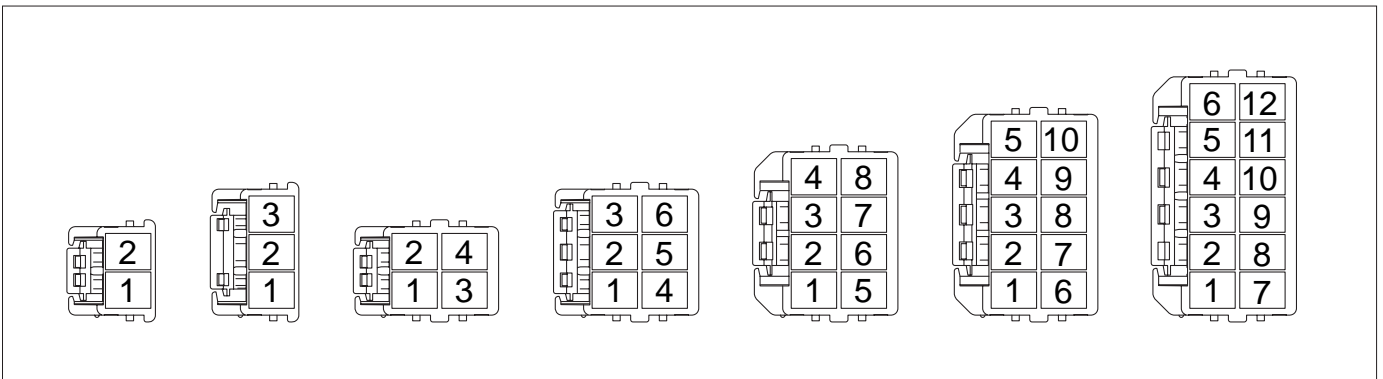
Circuits	Model No.	Dimensions (mm)		Q'ty/ bag
		A	B	
2	<b>BNIS-02V</b>	—	9.6	2,000
3	<b>BNIS-03V</b>	6.6	12.9	2,000
4	<b>BNIS-04V</b>	9.9	16.2	2,000
5	<b>BNIS-05V</b>	13.2	19.5	1,000
6	<b>BNIS-06V</b>	16.5	22.8	1,000

### Material

Glass-filled PA 66, UL94V-0, natural

### RoHS compliance

## Contact position location numbers



## Contact position location numbers

Key pattern	A	B	C
Color	Natural	Green	Blue
Single-row type			
Double-row type			
Housing Model No.	BNIRP-( )V-( )-A-S	BNIRP-( )V-( )-B-M	BNIRP-( )V-( )-C-E
Header Model No.	B( )B-BNISK-A-1( )	B( )B-BNIMK-B-1( )	B( )B-BNIEK-C-1( )

\*The above figure is view from the mating side of header.