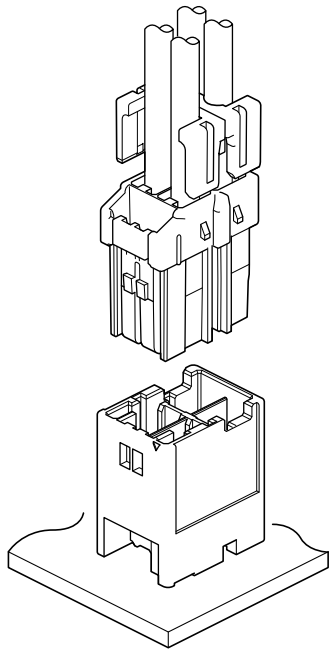


BNI CONNECTOR

3.3 mm pitch/Disconnectable Crimp style connectors



This is a 3.3 mm pitch wire-to-board connector with a mechanism to prevent incomplete mating. Three different key patterns per number of circuits in the same model are provided to prevent incorrect mating when multiple pieces of connector are used in close proximity.

- Keying structure
- Secure locking device
- Inertia lock structure
- Retainer mountable type
- Header suitable for potting process

Standards

Ⓜ: Recognized E 60389

Ⓢ: Certified LR 20812

Specifications

- Current rating: 4 A AC/DC (AWG #20)

* The following table shows the rated current when applying current for all circuits in each combination of the number of circuits and the wire to be used.

Unit: A

No. of 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

Notes on parallel branching current :

Do not branch to the multiple circuits in parallel current which exceeds the rated current, as it may cause problems such as imbalance when applying current.

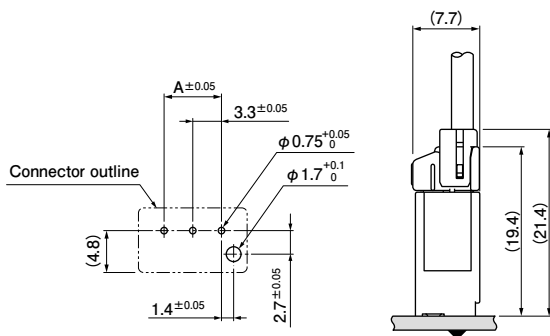
If it is unavoidable that branch in parallel is necessary, design the circuits while suppressing the unbalanced current and proving the sufficient margin to the rated current.

- 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
- * In using the products, refer to "Handling Precautions for Terminals and Connectors" described on our website (Technical documents of Product information page).
- * RoHS2 compliance
- * Dimensional unit: mm
- * Contact JST for details.

PC board layout and Assembly layout

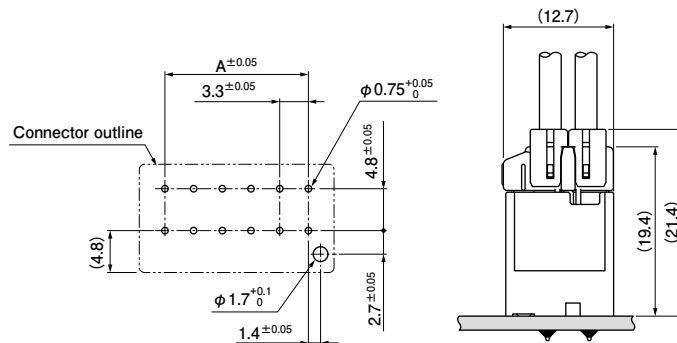
Single-row type

<2, 3 circuits>



Dual-row type

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



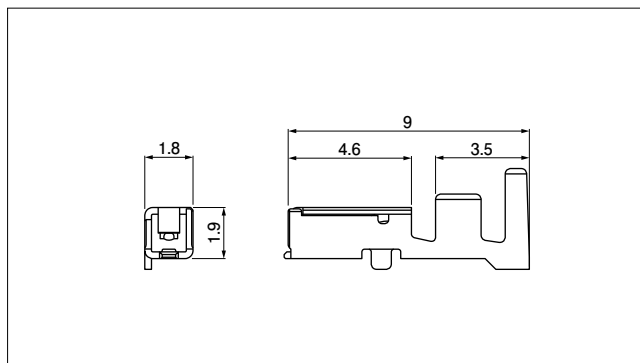
Note: 1. The above figure is the figure viewed from the connector mounting side .

2. A dimension: See "Header" section on page 4.

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

4. 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.

Contact



Model No.	Applicable wire range		Q'ty/ reel	
	Conductor size	AWG (mm ²)		Insulation O.D. (mm)
SBNI-01T-P0.5	#24 to #20	(0.2 to 0.5)	1.3 to 2.5	5,000

Material and Finish

Copper alloy, tin-plated

RoHS2 compliance

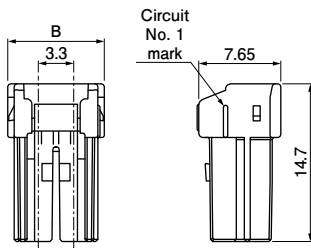
Crimping machine

Contact	Crimping machine	Applicator	Crimp applicator with dies
SBNI-01T-P0.5	AP-K2N	MKS-L	APLMK SBNI01-05

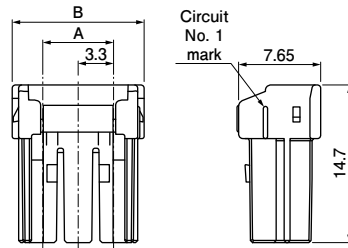
Note: Contact JST for fully automatic crimping applicator.

Housing

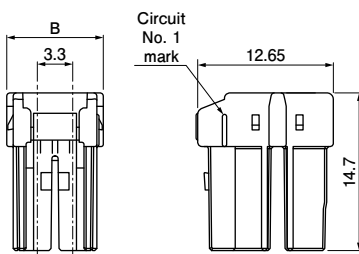
Single-row type <2 circuits>



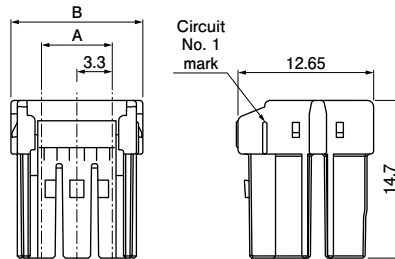
<3 circuits>



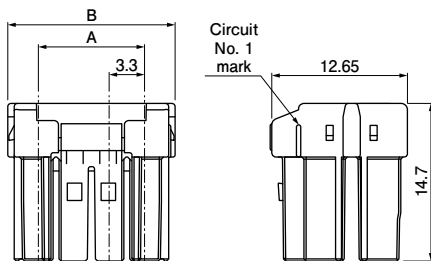
Dual-row type <4 circuits>



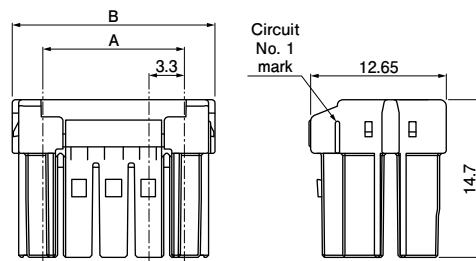
<6 circuits>



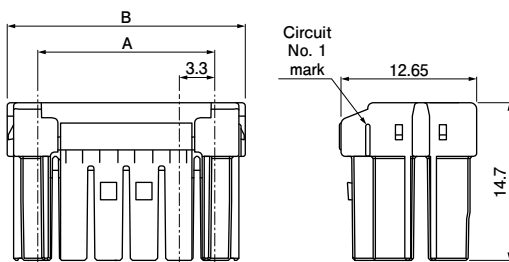
<8 circuits>



<10 circuits>



<12 circuits>



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

Material and Finish

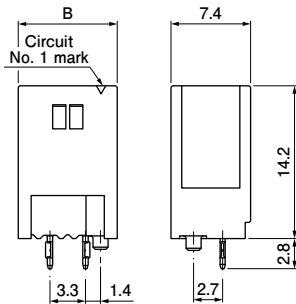
PA 66 (Glass-filled), UL94V-0, natural

RoHS2 compliance

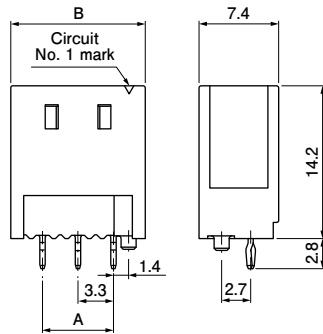
Header

Single-row type

<2 circuits>

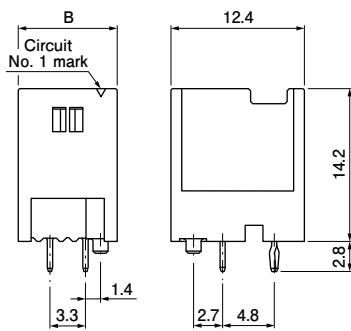


<3 circuits>

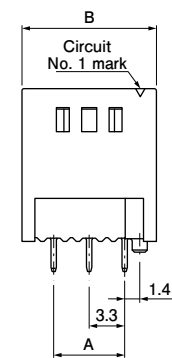


Dual-row type

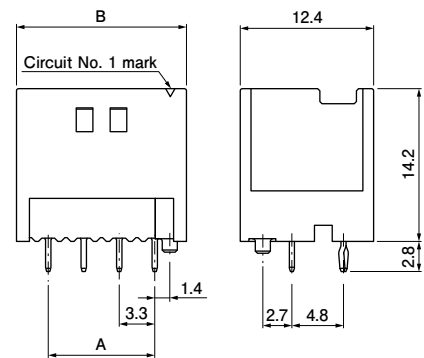
<4 circuits>



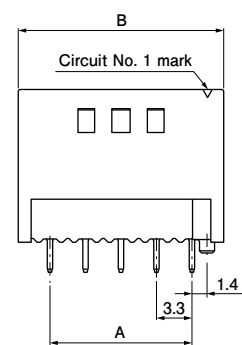
<6 circuits>



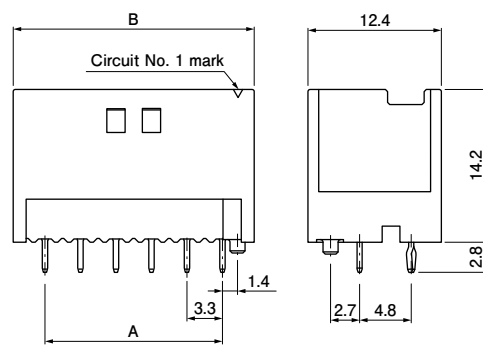
<8 circuits>



<10 circuits>



<12 circuits>



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

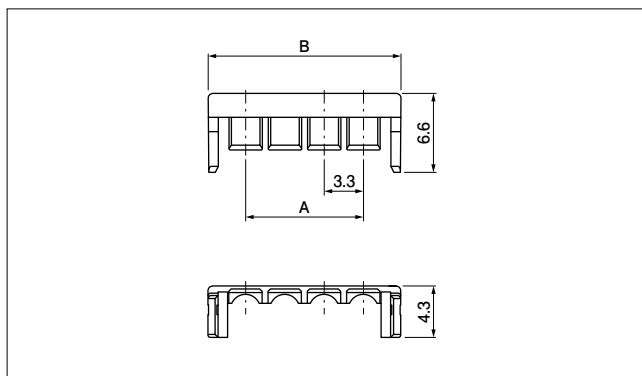
Material and Finish

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

RoHS2 compliance

BNI CONNECTOR

Retainer



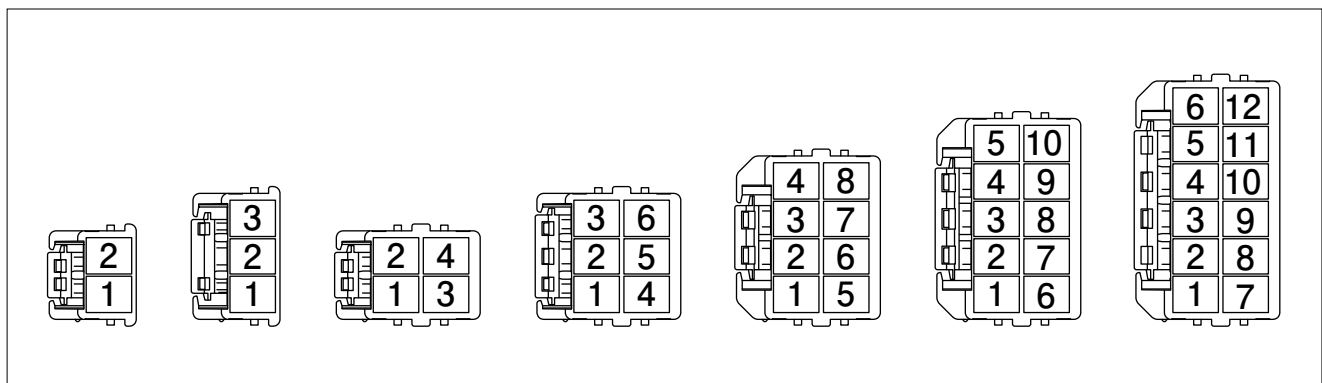
No. of circuits	Model No.	Dimensions (mm)		Q'ty/bag
		A	B	
2	BNIS-02V	—	9.6	2,000
3	BNIS-03V	6.6	12.9	2,000
4	BNIS-04V	9.9	16.2	2,000
5	BNIS-05V	13.2	19.5	1,000
6	BNIS-06V	16.5	22.8	1,000

Material and Finish

PA 66 (Glass-filled), UL94V-0, natural

RoHS2 compliance

Contact position location numbers



Product combination list

Key pattern	A	B	C
Color	Natural	Green	Blue
Single-row			
Header			
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 figures above show the top view of the header.

Model number allocation

Contact

S BNI - 01 T - P 0.5

Form: S...Strip form

Series name

Applicable wire range: 01...AWG #24 to AWG #20

Surface finish: T...Tin-plated

Material: P...Copper alloy

Applicable post size

Housing

BNI RP - 04 V - W - A - S

Series name

Part name: Retainer mountable type

No. of circuits

Flammability: V...UL94V-0

Type: None...Single-row type, W...Dual-row type

Key pattern: A...Key pattern A
B...Key pattern B
C...Key pattern C

Color: S...Natural, M...Green, E...Blue

Header

B 04 B - BNI S K - A - 1 W

Shape of assembled product: B...Top entry type

No. of circuits

Part name: Header

Series name

Color: S...Natural, M...Green, E...Blue

Indication of clinch: K...Clinched

Key pattern: A...Key pattern A
B...Key pattern B
C...Key pattern C

With/Without boss: 1...With boss

Type: None...Single-row type, W...Dual-row type

Retainer

BNI S - 02 V

Series name

Part name: Retainer

No. of circuits

Flammability: V...UL94V-0