Think Automation and beyond...

IDEC

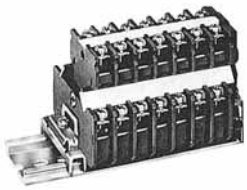
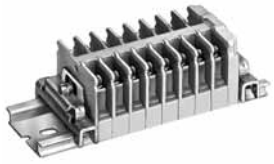
Terminal Blocks

BN/BNH, BFH, BA, BD, BTB/BTBH Series

IDEC CORPORATION

(07/03/08)

Terminal Blocks (Selection Guide)

<table>
<tr><td>Types</td><td colspan="4">Rail Mount Terminal Blocks</td></tr>
<tr><td>Series</td><td colspan="3">BN-W/BNH-W Series</td><td>BFH Series</td></tr>
<tr><td>Appearance</td><td>UL recognized
CSA certified (600V)
EN compliant (TÜV approved)
Complies with JIS C 2811.
  </td><td>Double-deck type.
8 mm (top deck), 10.5 mm (bottom deck) terminal centers.
  </td><td>All terminals are short-circuited with a built-in common jumper.
  </td><td>Finger-safe structure with spring-up screw terminal.
  </td></tr>
<tr><td>Terminal Centers</td><td>7 mm to 57 mm</td><td>8 mm, 10.5 mm</td><td>8 mm</td><td>7, 8, 11, 14 mm</td></tr>
<tr><td>No. of Poles</td><td colspan="2">Modular construction
1-pole = 1 block
2, 3, 4-pole = 1 block (large capacity type)</td><td>4, 8, 10-pole</td><td>Modular construction
1-pole = 1 block</td></tr>
<tr><td>Applicable Wire
Rated Current
Terminal Screw</td><td colspan="2">
<table>
<tr><th>Wire (mm²)∗</th><th>Current (A)∗</th><th>Terminal Screw∗</th></tr>
<tr><td>1.25</td><td>16</td><td>M3</td></tr>
<tr><td>2</td><td>21</td><td>M3.5</td></tr>
<tr><td>3.5</td><td>30</td><td>M4</td></tr>
<tr><td>5.5</td><td>40</td><td>M4</td></tr>
<tr><td>8</td><td>50</td><td>M5</td></tr>
<tr><td>14</td><td>70</td><td>M5</td></tr>
<tr><td>22</td><td>94</td><td>M6</td></tr>
<tr><td>38</td><td>132</td><td>M8</td></tr>
<tr><td>60</td><td>175</td><td>M8</td></tr>
<tr><td>100</td><td>240</td><td>M10</td></tr>
<tr><td>150</td><td>310</td><td>M12</td></tr>
<tr><td>200</td><td>370</td><td>M12</td></tr>
<tr><td>240</td><td>430</td><td>M16</td></tr>
<tr><td>325</td><td>520</td><td>M16</td></tr>
</table>
∗According to JIS C 2811.</td><td>
<table>
<tr><th>Wire (mm²)∗</th><th>Current (A)∗</th><th>Terminal Screw∗</th></tr>
<tr><td>1.25</td><td>16
Common Current</td><td>M3</td></tr>
</table>
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<tr><th>Wire (mm²)∗</th><th>Current (A)∗</th><th>Terminal Screw∗</th></tr>
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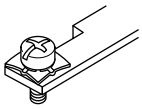
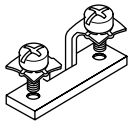
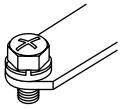
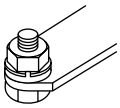
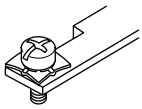
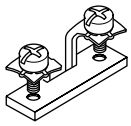
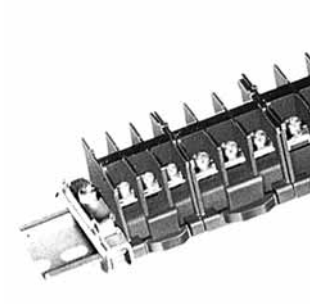
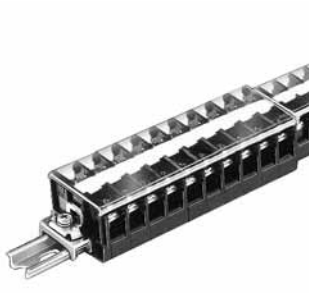
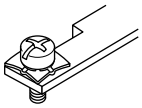
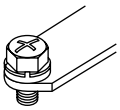
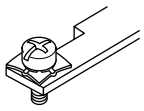
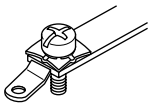
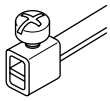
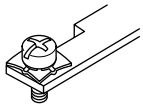
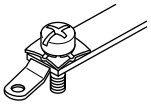
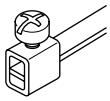
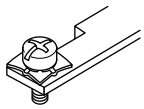
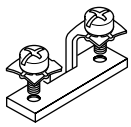
5.5
14</td><td>16
21
40
70</td><td>M3
M3.5
M4
M5</td></tr>
</table>
∗According to JIS C 2811.</td></tr>
<tr><td>Terminal Shape</td><td colspan="2">Self-lifting
 
Touch-down
 
Screw (for large capacity type)
 
Stud
  </td><td>Self-lifting
  </td><td>Finger-safe
Spring-up screw
  </td></tr>
<tr><td>Rail</td><td colspan="3">DIN 35 mm
 
BAA
BAP
IEC C30
 
BNCA
BNCP
DIN 35 mm + C30
 
BNJA</td><td></td></tr>
<tr><td>Rated Voltage</td><td colspan="2">600V (660V)</td><td>600V</td><td>600V</td></tr>
<tr><td>Insulation Resistance</td><td colspan="2">100 MΩ minimum</td><td>100 MΩ minimum</td><td>100 MΩ minimum</td></tr>
<tr><td>Dielectric Strength</td><td colspan="2">2500V AC, 1 minute</td><td>2500V AC, 1 minute</td><td>2500V AC, 1 minute</td></tr>
<tr><td>Housing Material
(standard color)</td><td colspan="2">Modified PPE
(black)</td><td>Modified PPE
(light gray)</td><td>Polycarbonate
(gray)</td></tr>
<tr><td>Features</td><td colspan="2">• Touch-down construction reduces wiring time.
• Terminal blocks can be mounted on 3 different types of rails.
• Molded from UL recognized flame-retardant resin UL94V-0.
• Also available with a fuse or disconnecting switch.</td><td>• Same shape and size as BN15MW.
• The housing color is light gray.
• The same accessories can be used for standard types.</td><td>• IDEC's finger-safe protection ensures safety and reduces wiring time.
• No need for dust covers. (degree of protection: IP20)
• Molded from UL recognized flame-retardant resin UL94V-0.</td></tr>
<tr><td>Approvals</td><td colspan="2">UL, CSA, TÜV</td><td>—</td><td>UL, CSA, TÜV</td></tr>
<tr><td>Page</td><td>5</td><td>18</td><td>19</td><td>28</td></tr>
</table>

Rail Mount Terminal Blocks	Rail Mount Miniature Terminal Blocks	Surface Mount Terminal Blocks	
BA Series	**BD Series**	**BD Series**	**BTB/BTBH Series**
Three poles in one block. Made of polyamide.	Space-saving miniature terminal block. Mount on 15-mm-wide DIN rail.	Miniature terminal block with 8, 7, 5 mm terminal centers.	Rugged surface mount terminal block with 8.5 to 15.5 mm terminal centers.
			
7.9 to 60 mm	5, 7, 8 mm	5, 7, 8 mm	8.5, 10.5, 12, 15.5 mm
Modular construction, 1 pole = 1 block 3-pole = 1 block (for M3, M3.5, M4 terminal screws)	Modular construction 1-pole = 1 block	2 to 35-pole (8 mm terminal centers) 2 to 40-pole (7 mm terminal centers) 2 to 56-pole (5 mm terminal centers)	2 to 30-pole (2 to 20-pole for BTB50C and BTBH50C)
Wire (mm^2)∗ / Current (A)∗ / Terminal Screw∗ 1.25 / 16 / M3 2 / 21 / M3.5 3.5 / 30 / M4 5.5 / 40 / M4 14 / 70 / M5 22 / 94 / M6 38 / 132 / M8 100 / 240 / M10 200 / 370 / M12 ∗According to JIS C 2811.	Wire (mm^2)∗ / Current (A)∗ / Terminal Screw∗ 1.25 / 16, 14 (Note) / M3 ∗According to JIS C 2811. Note: 16A (8 mm terminal centers) 14A (7mm, 5 mm terminal centers)	Wire (mm^2)∗ / Current (A)∗ / Terminal Screw∗ 1.25 / 16, 14 (Note) / M3 ∗According to JIS C 2811. Note: 16A (8 mm terminal centers) 14A (7mm, 5 mm terminal centers)	Wire (mm^2)∗ / Current (A)∗ / Terminal Screw∗ 1.25 / 16 / M3 2 / 21 / M3.5 5.5 / 40 / M4 14 / 70 / M5 ∗According to JIS C 2811.
Self-lifting  Screw (for large capacity type) 	Self-lifting  Screw/Solder  Cage Screw 	Self-lifting  Screw/Solder  Cage Screw 	Self-lifting  Touch-down 
DIN 35 mm  BAA BAP DIN 35 mm + C30  BNJA	DIN 15 mm BDA BDP	—	—
600V	380V/250V	380V/250V	600V
100 MΩ minimum	100 MΩ minimum	100 MΩ minimum	100 MΩ minimum
2500V AC, 1 minute	2500V AC, 1 minute	2500V AC, 1 minute	2500V AC, 1 minute
Polyamide (black)	Modified PPE (black, blue – BD8 only)	Modified PPE (black)	Modified PPE (black)
• Large capacity terminal blocks can be surface mounted. • Also available with a fuse or disconnecting switch.	• Miniature terminal blocks mount on 15-mm-wide DIN rail.	• Space-saving miniature terminal block. • Rugged construction.	• Touch-down terminals. • Flame resistant UL94V-0. • Rugged construction.
UL, CSA	UL, CSA	UL, CSA	UL, CSA, TÜV
33	**39**	**40**	**47**

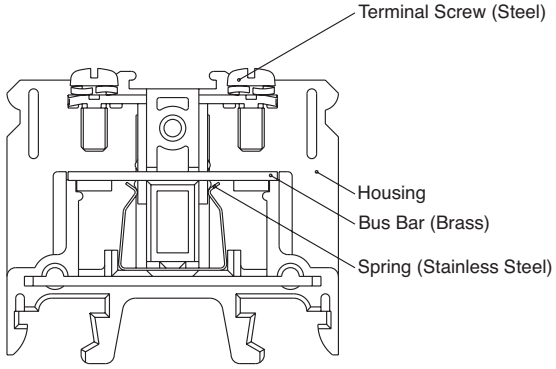
Safety Precautions

- Remove power to the terminal blocks before starting installation, removal, wiring, maintenance, and inspection of the products. Failure to remove power may cause electrical shocks.
- For wiring, use wires of proper size to meet voltage and current requirements. Tighten the terminal screws to the recommended tightening torque. Failure to tighten the terminal screws may cause overheating and fire. Also, the screws may become loose due to vibrations. Tighten regularly.
- The recommended tightening torque is shown below:

Screw Size	Tightening Torque (N·m)	Screw Size	Tightening Torque (N·m)
M3	0.6 to 1.0	M6	3.9 to 5.4
M3.5	1.0 to 1.3	M8	10 to 13.5
M4	1.4 to 2.0	M10	21 to 28
M5	2.6 to 3.7	M12	38 to 49
		M116	83 to 116

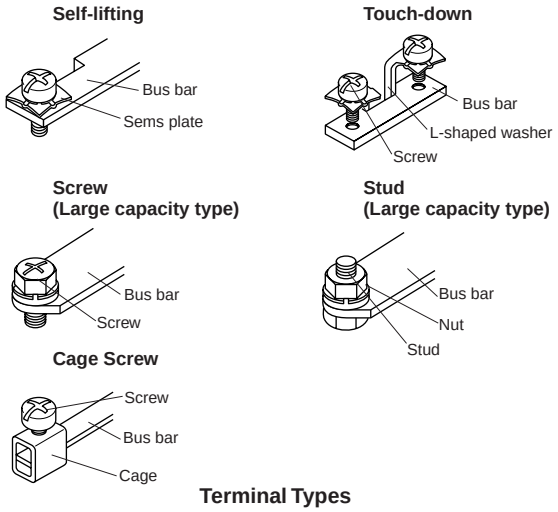
- For large capacity types, take into consideration the tension of the wires and tightening torque and make sure that the crimping terminals are not twisted.
- Grooves on the head of the hex bolt, for large capacity types are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
- Use an insulated crimping terminal.
- Install a dust cover after wiring.

Terminal Block Structure



Color: Black
Material: Modified PPE

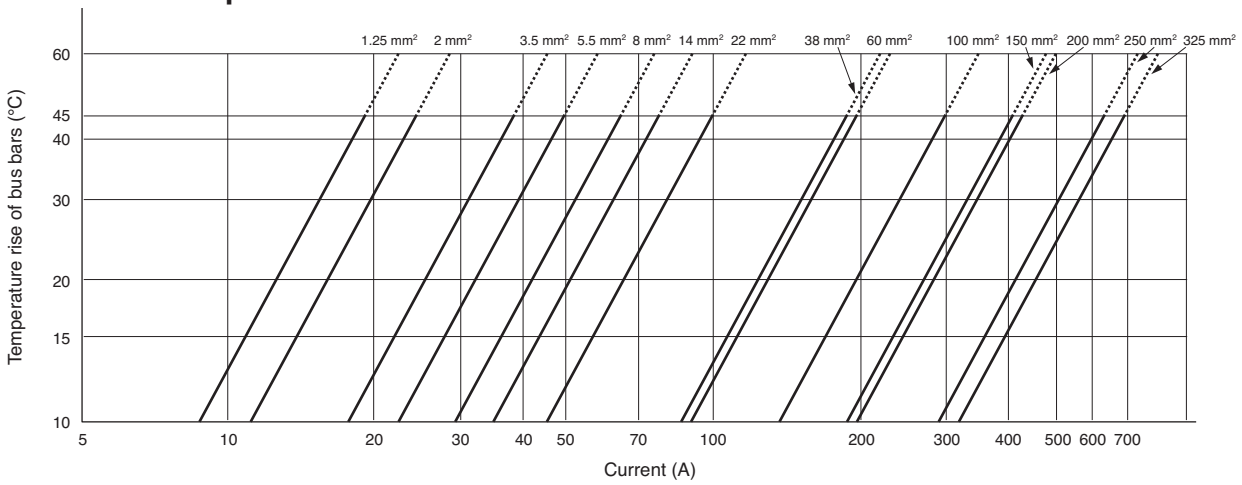
BNH10W (Example)



Terminal Types

Selecting Terminal Blocks by Current According to JIS Standards

Current vs. Temperature Rise at Bus Bars



How to read the graph

When using IDEC terminal blocks, make sure that the operating temperature and the temperature of the bus bars do not exceed 100°C. However, the upper limit of the temperature rise is limited to 45°C by JIS C 2811.

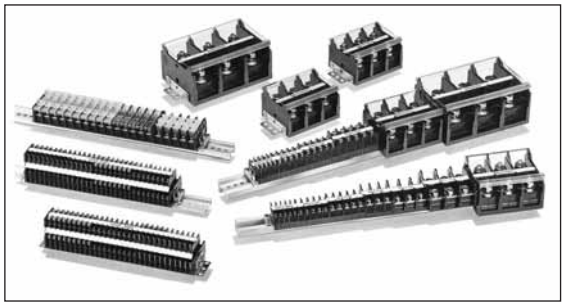
Operating temperature + Temperature rise at bus bars ≤ 100°C

Note: Select wires according to the allowable temperature, operating temperature, and temperature rise of bus bars.

UL recognized, CSA certified, and TUV compliant. Touch-down terminals reduce wiring time.

- Molded from UL94V-0 material with excellent flame and shock resistance.
- Terminal blocks can be mounted on a 35-mm-wide DIN rail and 30-mm-wide IEC type C rail.

- 9.5-mm-wide marking strips can be used on all models. 17-mm-wide sliding type marking strips also available. (BN10W to BN30W)
- Terminal blocks of different shapes and capacities can be installed without using an end plate. (BN☐10W to BN☐150W)
- Screw and stud terminal types available for large capacity terminal blocks.
- Additional mounting and removal of terminals is easy. (BN☐10W to BN☐150W)



- Complies with JIS C 2811.
- UL recognized, CSA certified, and EN compliant (TÜV approved). (Except common terminal types)

UL1059
File No. E78117

CSA C 22.2 No.158
File No. LR64803

EN60947-1, EN60947-7-1
License No.
Standard Types: R9551701
Large Capacity Types: J9551516
J9650886 (BN500☐, BN600☐ only)
Double-Deck Types: R9650688

Touch-down terminal blocks reduce wiring time. (BNH-W/BNDH-W Series)

1. Insert the Crimping Terminal

Terminal screw is always in the open position. No need to loosen the screw.

2. Push the Screw Down

Push the screw down to hold the wire in place.

3. Tighten the Screw

The screws can be tightened easily with a pneumatic screwdriver.

Material

Parts Name	Material
Housing	Modified PPE
Bus Bars	Brass (Nickel-plated)
Terminal Screw	Steel (Zinc chrome-plated)
Spring	Stainless steel (touch-down type only)

General Ratings

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100 MΩ minimum
Operating Temperature	–25 to +55°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

Ratings/Terminal Screw Tightening Torque

Types	Type No.		UL/CSA Ratings		EN Ratings (∗1)		JIS Ratings		Terminal Screw	Tightening Torque (N·m)
	Self-Lifting	Touch-Down	Voltage/ Current	Wire Size (AWG)	Voltage/ Current	Wire Size [mm²/(AWG)]	Voltage/ Current	Wire Size (mm²)		
Standard Types	BN10W	BNH10W	600V/10A	22-16	660V/16A	1.25/(22-16)	600V/16A	1.25	M3	0.6 to 1.0
	BN15MW	BNH15MW	600V/10A	22-14	660V/22A	2/(22-14)	600V/16A	1.25 (2) ∗2	M3	0.6 to 1.0
	BN15LW	BNH15LW	600V/15A	22-14	660V/22A	2/(22-14)	600V/21A	2	M3.5	1.0 to 1.3
	BN15MWT	BNH15MWT	600V/15A	22-14	660V/22A	2/(22-14)	600V/21A	2	M3.5	1.0 to 1.3
	BN15LWT	BNH15LWT	600V/15A	22-14	660V/22A	3.5/(22-14)	600V/30A	3.5	M4	1.4 to 2.0
	BN30W	BNH30W	600V/30A	18-10	660V/38A	5.5/(18-10)	600V/40A	5.5	M4	1.4 to 2.0
	BN40W	BNH40W	600V/40A	16-8	660V/50A	8/(16-8)	600V/50A	8	M5	2.6 to 3.7
	BN50W	BNH50W	600V/50A	16-6	660V/67A	14/(16-6)	600V/70A	14	M5	2.6 to 3.7
Large Capacity Types	BN75W		600V/75A	16-4	660V/94A	22/(8-4)	600V/94A	22	M6	3.9 to 5.4
	BN100W		600V/100A	16-2	660V/132A	38/(2)	600V/132A	38	M8	10 to 13.5
	BN150W		600V/150A	16-1/0	660V/175A	60/(1/0)	600V/175A	60	M8	
	BN200BW☐, BN200NW☐		600V/200A	4/0	660V/240A	100/(4/0)	600V/240A	100	M10	21 to 28
	BN300BW☐, BN300NW☐		600V/310A	300MCM	660V/310A	150/ (300MCM)	600V/310A	150	M10	
	BN400BW☐, BN400NW☐		600V/350A	400MCM	660V/370A	200/ (400MCM)	600V/370A	200	M12	38 to 49
	BN500BW☐, BN500NW☐		600V/500A	500MCM	660V/430A	240/ (500MCM)	600V/430A	250	M16	83 to 116
	BN600NW☐		600V/600A	600MCM	660V/520A	300/ (600MCM)	600V/520A	325	M16	
With Disconnecting Switch	BNT20	—	—	—	—	—	600V/20A	5.5	M4	1.4 to 2.0
With Fuse	BNF10S	—	—	—	—	—	600V/10A	5.5	M4	1.4 to 2.0
	BNF10N	—	—	—	—		600V/10A	5.5	M4	
Double-Deck Types	BND15W	BNDH15W	600V/10A	22-14	660V/22A	2/(22-14)	600V/16A	1.25 (2) ∗2	M3	0.6 to 1.0
	BND15LW	BNDH15LW	600V/15A	22-14	660V/22A	2/(22-14)	600V/21A	2	M3.5	1.0 to 1.3
	BND15WT	BNDH15WT	600V/15A	22-14	660V/22A	2/(22-14)	600V/21A	2	M3.5	1.0 to 1.3
Common Terminal Types	BN15MC☐	—	—	—	—	—	600V/16A Common Current	1.25 (2) ∗2	M3	0.6 to 1.0

∗1: Ratings approved by TÜV based on EN60947-7-1.
∗2: The rated applicable wire size is 1.25 mm², but 2 mm² wires can also be connected. The wire size in ( ) does not comply with JIS standards.

Types of Terminal Blocks

Terminal Type		Type No.	Ordering Type No.	Terminal Screw	Width (mm)	Package Quantity	Page
• Standard Types							
Self-Lifting	1-pole	BN10W	BN10WPN50	M3	7	50	8
		BN15MW	BN15MWPN50	M3	8	50	
		BN15LW	BN15LWPN50	M3.5	10.5	50	
		BN15MWT	BN15MWTPN50	M3.5	8	50	
		BN15LWT	BN15LWTPN50	M4	10.5	50	
		BN30W	BN30WPN50	M4	12	50	9
		BN40W	BN40WPN20	M5	14	20	
		BN50W	BN50WPN20	M5	15.5	20	
Touch-Down	1-pole	BNH10W	BNH10WPN50	M3	7	50	8
		BNH15MW	BNH15MWPN50	M3	8	50	
		BNH15LW	BNH15LWPN50	M3.5	10.5	50	
		BNH15MWT	BNH15MWTPN50	M3.5	8	50	
		BNH15LWT	BNH15LWTPN50	M4	10.5	50	
		BNH30W	BNH30WPN50	M4	12	50	9
		BNH40W	BNH40WPN20	M5	14	20	
		BNH50W	BNH50WPN20	M5	15.5	20	
• Large Capacity Types (Rail Mount Type)							
Screw	1-pole	BN75W	BN75WPN10	M6	20	10	11
		BN100W	BN100WPN05	M8	26	5	11
		BN150W	BN150WPN05	M8	26	5	12
	2-pole	BN200BW2	BN200BW2	M10	37	1	13
	3-pole	BN200BW3	BN200BW3				
	4-pole	BN200BW4	BN200BW4				
	2-pole	BN300BW2	BN300BW2	M10	44	1	13
	3-pole	BN300BW3	BN300BW3				
	4-pole	BN300BW4	BN300BW4				
	2-pole	BN400BW2	BN400BW2	M12	57	1	15
	3-pole	BN400BW3	BN400BW3				
	4-pole	BN400BW4	BN400BW4				
Stud	2-pole	BN200NW2	BN200NW2	M10	37	1	13
	3-pole	BN200NW3	BN200NW3				
	4-pole	BN200NW4	BN200NW4				
	2-pole	BN300NW2	BN300NW2	M10	44	1	14
	3-pole	BN300NW3	BN300NW3				
	4-pole	BN300NW4	BN300NW4				
	2-pole	BN400NW2	BN400NW2	M12	57	1	15
	3-pole	BN400NW3	BN400NW3				
	4-pole	BN400NW4	BN400NW4				
• Large Capacity Type (Surface Mount Type)							
Screw	2-pole	BN200BW2K	BN200BW2K	M10	37	1	13
	3-pole	BN200BW3K	BN200BW3K				
	4-pole	BN200BW4K	BN200BW4K				
	2-pole	BN300BW2K	BN300BW2K	M10	44	1	14
	3-pole	BN300BW3K	BN300BW3K				
	4-pole	BN300BW4K	BN300BW4K				
	2-pole	BN400BW2K	BN400BW2K	M12	57	1	15
	3-pole	BN400BW3K	BN400BW3K				
	4-pole	BN400BW4K	BN400BW4K				
	2-pole	BN500BW2K	BN500BW2K	M16	57	1	16
	3-pole	BN500BW3K	BN500BW3K				
	4-pole	BN500BW4K	BN500BW4K				
Stud	2-pole	BN200NW2K	BN200NW2K	M10	37	1	13
	3-pole	BN200NW3K	BN200NW3K				
	4-pole	BN200NW4K	BN200NW4K				
	2-pole	BN300NW2K	BN300NW2K	M10	44	1	14
	3-pole	BN300NW3K	BN300NW3K				
	4-pole	BN300NW4K	BN300NW4K				
	2-pole	BN400NW2K	BN400NW2K	M12	57	1	15
	3-pole	BN400NW3K	BN400NW3K				
	4-pole	BN400NW4K	BN400NW4K				
	2-pole	BN500NW2K	BN500NW2K	M16	57	1	16
	3-pole	BN500NW3K	BN500NW3K				
	4-pole	BN500NW4K	BN500NW4K				
	2-pole	BN600NW2K	BN600NW2K	M16	57	1	16
	3-pole	BN600NW3K	BN600NW3K				
	4-pole	BN600NW4K	BN600NW4K				

∗ The rated applicable wire size is 1.25 mm^2, but 2 mm^2 wires can also be connected.
The wire size in ( ) does not comply with JIS standards.

Types of Terminal Blocks

Terminal Type		Type No.	Ordering Type No.	Terminal Screw	Width (mm)	Package Quantity	Page
• With Disconnecting Switch, Fuse							
Disconnecting Switch	1-pole	BNT20	BNT20PN20	M4	15	20	17
With Fuse	1-pole	BNF10S-☐	BNF10S-☐APN20	M4	15	20	
		BNF10N-☐	BNF10N-☐APN20				
• Double-Deck Terminal Block							
Self-Lifiting Type	1-pole	BND15W	BND15WPN25	M3	8	25	18
Touch-Down Type		BNDH15W	BNDH15WPN25				
Self-Lifting Type	1-pole	BND15LW	BND15LWPN25	M3.5	10.5	25	
Touch-Down Type		BNDH15LW	BNDH15LWPN25				
Self-Lifting Type	1-pole	BND15WT	BND15WTPN25	M3.5	12	25	
Touch-Down Type		BNDH15WT	BNDH15WTPN25				
• Common Terminal							
Self-Lifting Type 16A (Common Current)	4-pole	BN15MC4	BN15MC4PN10	M3	8	10	19
	8-pole	BN15MC8	BN15MC8PN10				
	10-pole	BN15MC10	BN15MC10PN10				

∗The wire size in ( ) does not comply with JIS standards.
The rated applicable wire size is 1.25 mm^2, but 2 mm^2 wires can also be connected.
Specify the fuse rating in place of ☐. 1A: 1, 3A: 3, 5A: 5.

Accessories

When ordering accessories, check if the accessories are necessary by referring to the table.
×: Necessary
○: Optional

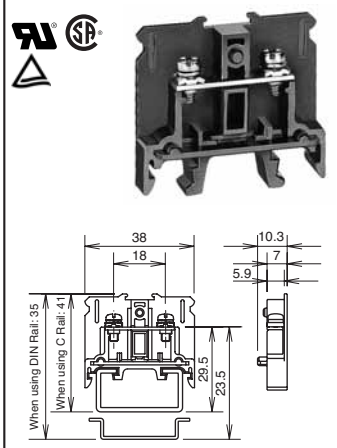
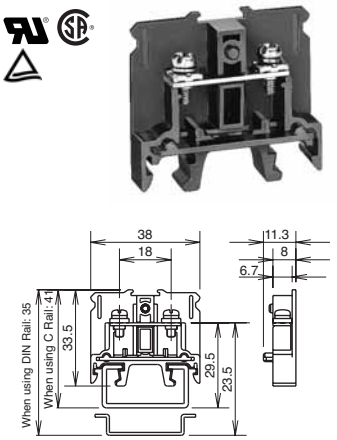
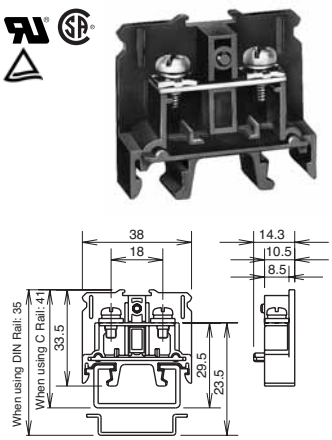
Terminal Types		Type No.	End Plate	Rail	Mounting Clip	Rail Mounting Clip	Dust Cover	Marking Strip	Marking Strip Fastener	Sliding Marking Strip	Jumper	Removal Tool	Surface Mount Clip	Connecting Rod	Connecting Nut
Standard	16A to 40A Self-Lifting Touch-Down	BN10W, BN15MW, BN15LW, BN15MWT, BN15LWT, BN30W	×	×	×	○	○	○	○	○	○	○	—	—	—
		BNH10W, BNH15MW, BNH15LW, BNH15MWT, BNH15LWT, BNH30W	×	×	×	○	○	○	○	—	○	○	—	—	—
	50A to 70A Self-Lifting Touch-Down	BN40W, BN50W, BNH40W, BNH50W	×	×	×	○	○	○	○	—	—	—	—	—	—
Large Capacity	Rail Mount 1-Pole 94A to 175A	BN75W, BN100W, BN150W	×	×	×	○	○	○	○	—	—	—	—	—	—
	Rail Mount 240A to 370A	BN200BW☐, BN300BW☐, BN400BW☐ BN200NW☐, BN300NW☐, BN400NW☐	—	×	×	—	Supplied	Supplied	—	—	—	—	—	—	—
	Surface Mount 240A to 520A	BN200BW☐K, BN300BW☐K, BN400BW☐K BN200NW☐K, BN300NW☐K, BN400NW☐K BN500BW☐K, BN500NW☐K, BN600NW☐K	—	—	—	—			—	—	—	—	—	—	—
With Disconnecting Switch		BNT20	×	×	×	○	○	○	○	—	—	—	—	—	—
With Fuse		BNF10S, BNF10N	×	×	×	○	—	○	○	—	—	—	—	—	—
Double-Deck		BND15W, BND15LW, BNDH15W, BNDH15LW, BND15WT, BNDH15WT	×	× ∗1	× ∗1	○	○	○	○	—	×	—	× ∗2	×	×
Common Terminal		BN15MC☐	—	×	×	—	○	○	○	○	—	—	—	—	—
Page			20		21			22			23, 24				

∗1: Accessory not necessary for surface mounting.
∗2: Accessory not necessary for rail mounting.

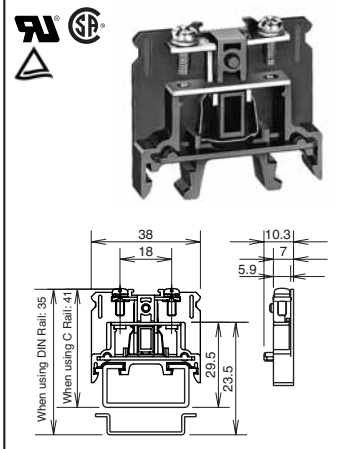
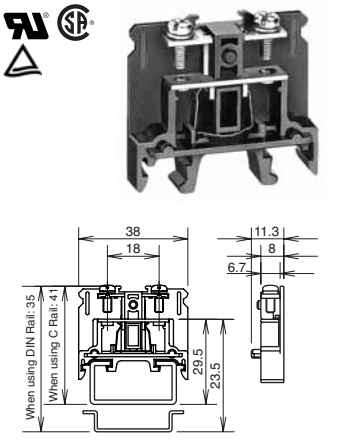
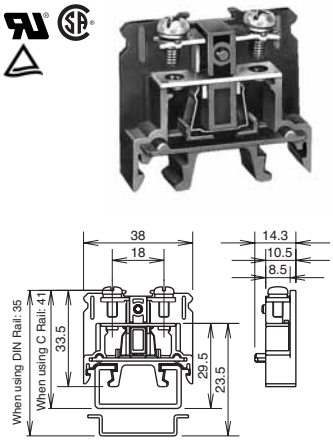
Specify the number of poles in place of ☐.

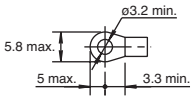
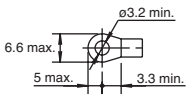
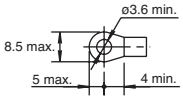
Standard Type

Self-Lifting Terminal

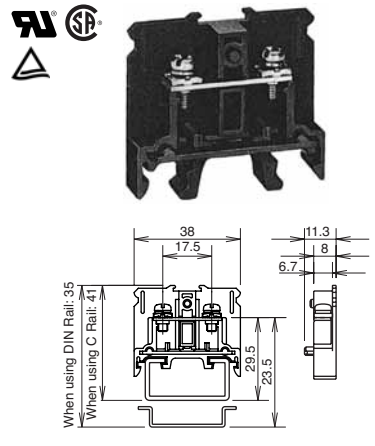
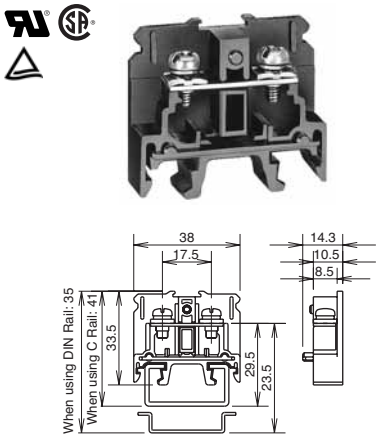
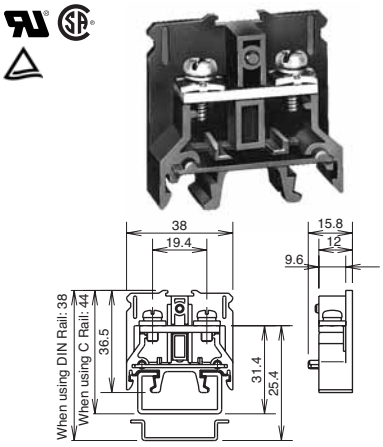
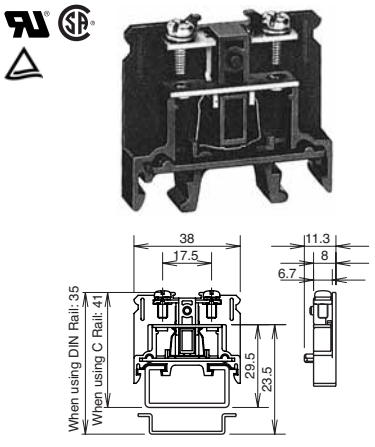
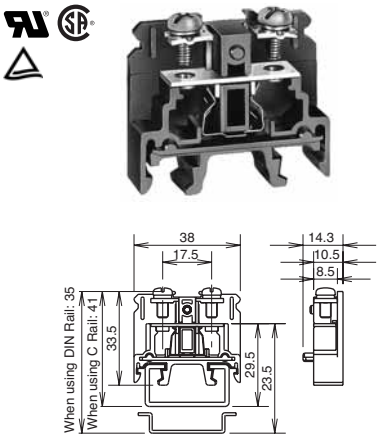
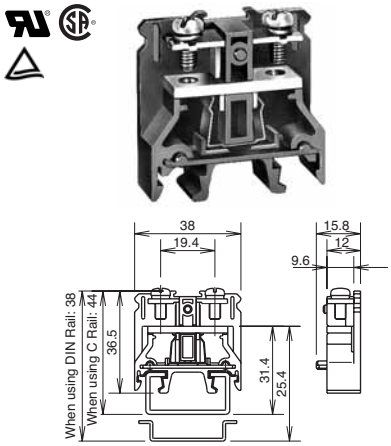
Type No.	BN10W	BN15MW	BN15LW
Dimensions			
Ordering Type No.	BN10WPN50	BN15MWPN50	BN15LWPN50
Package Quantity	50	50	50
Weight (Approx.)	6.5g	7.3g	10g

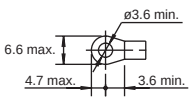
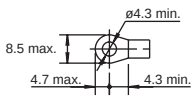
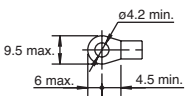
Touch-Down Terminal

Type No.	BNH10W	BNH15MW	BNH15LW
Dimensions			
Ordering Type No.	BNH10WPN50	BNH15MWPN50	BNH15LWPN50
Package Quantity	50	50	50
Weight (Approx.)	7.5g	8.2g	11.2g

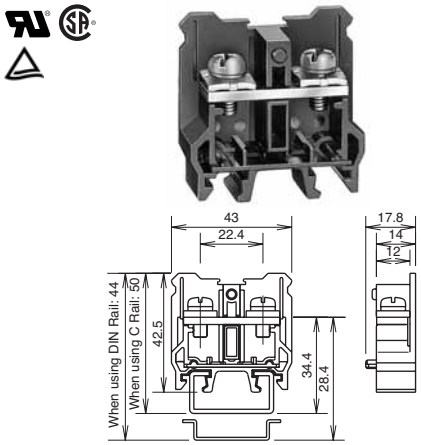
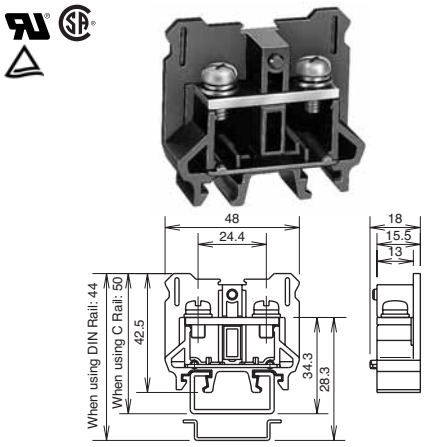
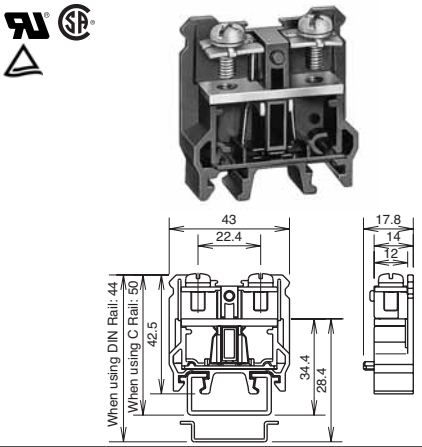
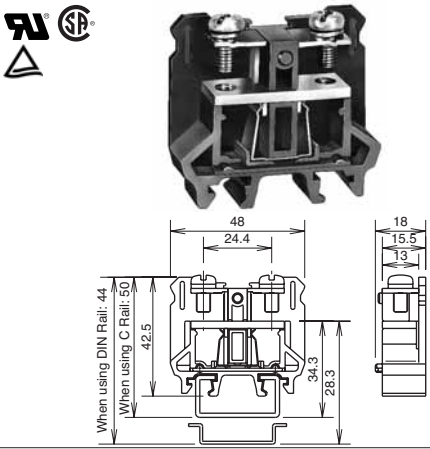
Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V	600V	660V	600V
	Wire Size ∗1	22-16 AWG	1.25 mm^2 (22-16 AWG)	1.25 mm^2	22-14 AWG	2 mm^2 (22-14 AWG)	1.25 mm^2 (2mm^2 max)	22-14 AWG	2 mm^2 (22-14 AWG)	2 mm^2
	Rated Current ∗2	10A	16A	16A	10A	22A	16A	15A	22A	21A
	Terminal screw	M3			M3			M3.5		
	Crimping Terminal	1.25-3			1.25-3 (2-3)			2-3.5		
	Max. No. of Crimping Terminals	2			2			2		
	Tightening Torque	0.6 to 1.0 N·m			0.6 to 1.0 N·m			1.0 to 1.3 N·m		
Crimping Terminal Dimensions (mm) ∗3										
Accessories	End Plate	BNE15W (see page 20)								
	Dust Cover	BNC230 (see page 21)								
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725 (see page 22)								
	Marking Strip Fastner	BNM3 (see page 22)								
	DIN Rail/Mounting Cip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)								
	C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)								
	DIN + C Rail/Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL6, BNL7 (see page 21)								

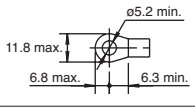
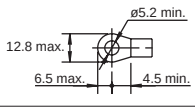
∗1: The wire size in ( ) does not comply with JIS standards.
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

	BN15MWT	BN15LWT	BN30W
			
	BN15MWTPN50	BN15LWTPN50	BN30WPN50
	50	50	50
	7g	10g	15.6g
	BNH15MWT	**BNH15LWT**	**BNH30W**
			
	BNH15MWTPN50	BNH15LWTPN50	BNH30WPN50
	50	50	50
	8g	11g	16.8g

	UL/CSA	EN	JIS	UL/CSA	EN	JIS	UL/CSA	EN	JIS
	600V	660V	600V	600V	660V	600V	600V	660V	600V
	22-14 AWG	2 mm^2 (22-14 AWG)	2 mm^2	22-14 AWG	3.5 mm^2 (22-14 AWG)	3.5 mm^2	18-10 AWG	5.5 mm^2 (18-10 AWG)	5.5 mm^2
	15A	22A	21A	15A	22A	30A	30A	38A	40A
	M3.5			M4			M4		
	1.25-3.5 to 2-3.5			1.25-4 to 3.5-4			1.25-4 to 5.5-4		
	2			2			2		
	1.0 to 1.3 N·m			1.4 to 2 N·m			1.4 to 2.0 N·m		
									
	BNE15W (see page 20)						BNE30W (see page 20)		
	BNC230 (see page 21)						BNC230 (see page 21)		
	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/725 (see page 22)								
	BNM3 (see page 22)								
	Aluminum: BAA1000, Steel: BAP1000 (see page 20) /BNL6 (see page 21)								
	Aluminum: BNCA1000, Steel: BNCP1000 (see page: 20)/BNL7 (see page 21)								
	Aluminum: BNJA1000 (see page 20)/BNL6 (see page 21)						Aluminum: BNJA1000 (see page 20)/ BNL6, BNL7 (see page 21)		

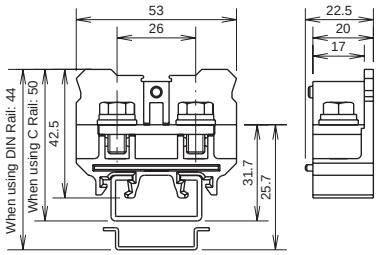
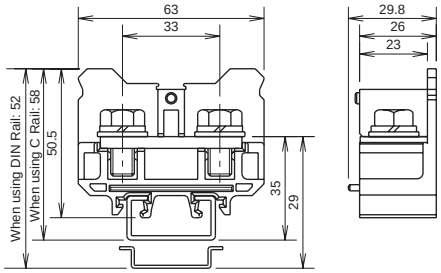
∗1: The wire size in ( ) does not comply with JIS standards.
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

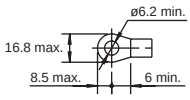
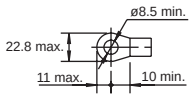
Standard Type	Self-Lifting Terminal	Type No.	**BN40W**	**BN50W**
		Dimensions		
		Ordering Type No.	BN40WPN20	BN50WPN20
		Package Quantity	20	20
		Weight (Approx.)	25g	25.4g
	Touch-Down Terminal	Type No.	**BNH40W**	**BNH50W**
		Dimensions		
		Ordering Type No.	BNH40WPN20	BNH50WPN20
		Package Quantity	20	20
		Weight (Approx.)	25g	29g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size ∗1	16-8 AWG	8 mm² (16-8 AWG)	8 mm²	16-6 AWG	14 mm² (16-6 AWG)	14 mm²
	Rated Current ∗2	40A	50A	50A	50A	67A	70A
	Terminal screw	M5			M5		
	Crimping Terminal	1.25-5 to 8-5			1.25-5 to 14-5		
	Max. No. of Crimping Terminals	2			2		
	Tightening Torque	2.6 to 3.7 N·m			2.6 to 3.7 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories	End Plate	BNE40W (see page 20)			BNE50W (see page 20)		
	Dust cover	BNC330 (see page 21)			BNC320 (see page 21)		
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/725 (see page 22)					
	Marking Strip Fastner	BNM3 (see page 22)					
	DIN Rail/Mounting Ciip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/ BNL6 (see page 21)			Aluminum: BAA1000, Steel: BAP1000 (see page 20)/ BNL8 (see page 21)		
	C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/ BNL7 (see page 21)			Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/ BNL8 (see page 21)		
	DIN + C Rail/Mounting Clip	Aluminum: BNJA1000 (see page 20)/ BNL6, BNL7 (see page 21)			Aluminum: BNJA1000 (see page 20) /BNL8 (see page 21)		

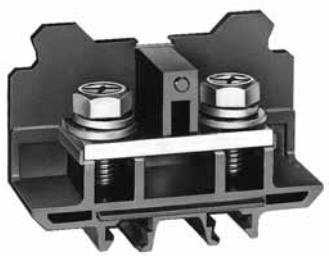
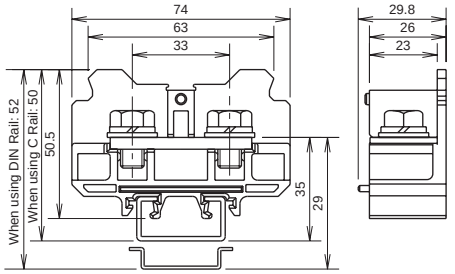
∗1: The wire size in ( ) does not comply with JIS standards.
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

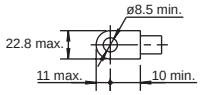
Large Capacity Type
Screw Terminal

Type No.	BN75W	BN100W
Dimensions	 	 
Ordering Type No.	BN75WPN10	BN100WPN05
Package Quantity	10	5
Weight (Approx.)	45g	86g

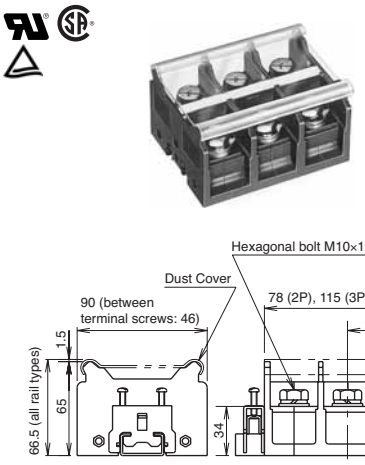
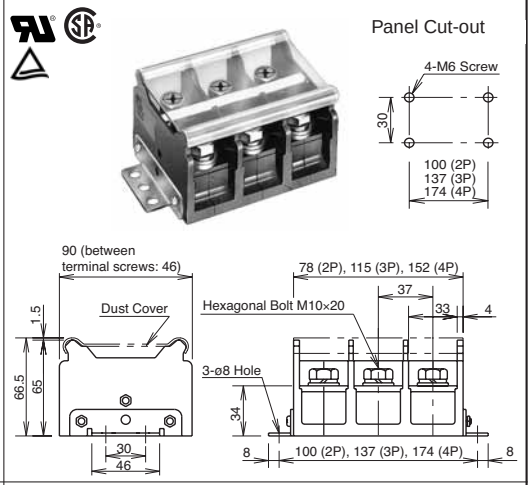
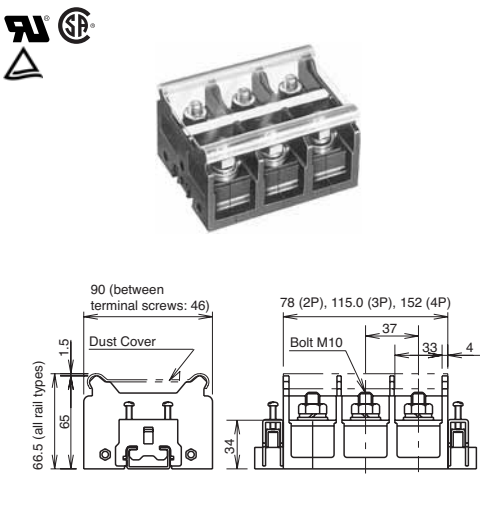
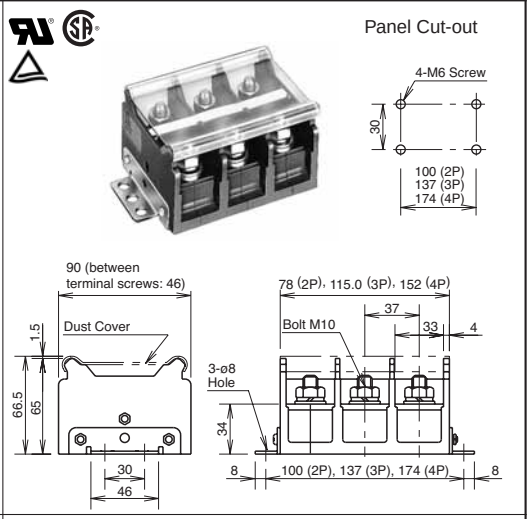
Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size	16-4 AWG	22 mm^2 (8-4 AWG)	22 mm^2	16-2 AWG	38 mm^2 (2AWG)	38 mm^2
	Rated Current ∗1	75A	94A	94A	100A	132A	132A
	Terminal screw ∗2	M6			M8		
	Crimping Terminal	2-6 to 22-6			2-8 to 38-8		
	Max. No. of Crimping Terminals	2			2		
	Socket Wrench	12.7 mm square drive hexagonal socket 10			12.7 mm square drive hexagonal socket 13		
	Tightening Torque	3.9 to 5.4 N·m			10 to 13.5 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories	End Plate	BNE75W (see page 20)			BNE100W (see page 20)		
	Dust Cover	BNC420 (see page 21)			BNC520 (see page 21)		
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725 (see page 22)					
	Marking Strip Fastner	BNM3 (see page 22)					
	DIN Rail/Mounting Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL8 (see page 21)					
	Type C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL8 (see page 21)					
	DIN+Type C Rail/Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL8 (see page 21)					

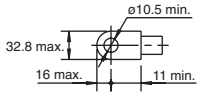
∗1: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

Large Capacity Type Screw Terminal	Type No.	**BN150W**
	Dimensions	 
	Ordering Type No.	BN150WPN05
	Packaging Quantity	5
	Weight (Approx.)	88g

Standards		UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	660V
	Wire Size	16-1/0 AWG	60 mm^2 (1/0 AWG)	60 mm^2
	Rated Current ∗1	150A	175A	175A
	Terminal screw ∗2	M8		
	Crimping Terminal	2-8 to 60-8		
	Max. No. of Crimping Terminals	2		
	Socket Wrench	12.7 mm square drive hexagonal socket 13		
	Tightening Torque	10 to 13.5 N·m		
Crimping Terminal Dimensions (mm) ∗3				
Accessories	End Plate	BNE150W (see page 20)		
	Dust Cover	BNC520 (see page 21)		
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9 PVC 25m/BNM725 (see page 22)		
	Marking Strip Fastner	BNM3 (see page 22)		
	DIN Rail/Mounting Clip	Aluminum BAA1000, Steel: BAP1000 (see page 20)/ BNL8 (see page 21)		
	Type C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/ BNL8 (see page 21)		
	DIN+Type C Rail/ Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL8 (see page 21)		

∗1: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

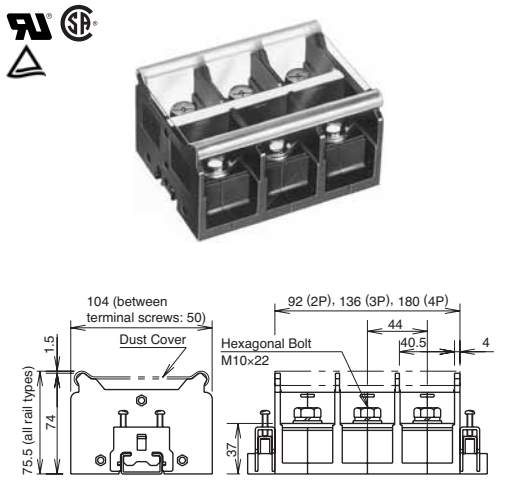
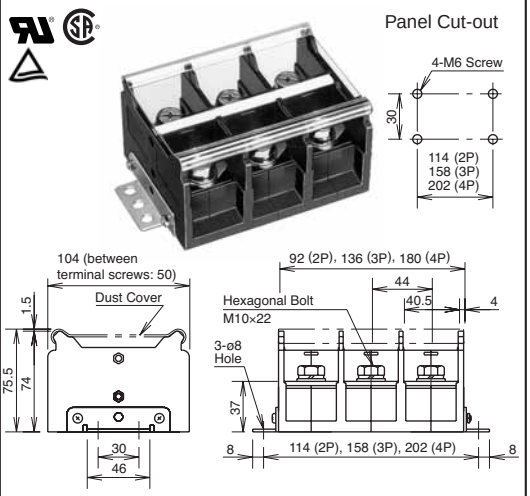
Large Capacity Type	Screw Terminal	Type No.	**BN200BW□**	**BN200BW□K** Surface Mount Type
		Dimensions		
		Package Quantity	1	1
		Weight (Approx.)	2P: 430g, 3P: 650g, 4P: 870g	2P: 490g, 3P: 710g, 4P: 930g
	Stud Terminal	Type No.	**BN200NW□**	**BN200NW□K** Surface Mount Type
		Dimensions		
		Package Quantity	1	1
		Weight (Approx.)	2P: 500g, 3P: 720g, 4P: 940g	2P: 560g, 3P: 780g, 4P: 1000g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size	4/0 AWG	100 mm^2 (4/0 AWG)	100 mm^2	4/0 AWG	100 mm^2 (4/0 AWG)	100 mm^2
	Rated Current ∗1	200A	240A	240A	200A	240A	240A
	Terminal Screw ∗2	M10			M10		
	Crimping Terminal	5.5-10 to 100-10			5.5-10 to 100-10		
	Max. No. of Crimping Terminals	2			2		
	Socket Wrench	12.7 mm square drive hexagonal socket 17			12.7 mm square drive hexagonal socket 17		
	Tightening Torque	21 to 28 N·m			21 to 28 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories (Supplied)		End Plate, Dust Cover (see page 20, 21), Marking Strip (see page 21) are supplied. (Note) Marking Strip Fastener (BNM3) is not necessary.					
Accessories	DIN Rail	Aluminum: BAA1000, Steel: BAP1000 (see page 20)			—		
	C Rail	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)			—		
	DIN+C Rail	Aluminum: BNJA1000 (see page 20)			—		
	Mounting Clip	BNL8 (see page 21)			—		

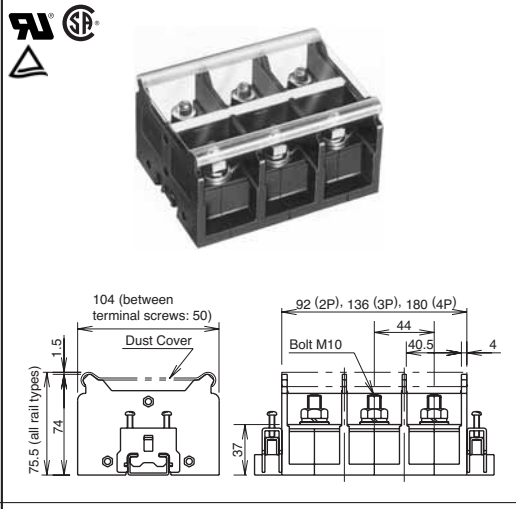
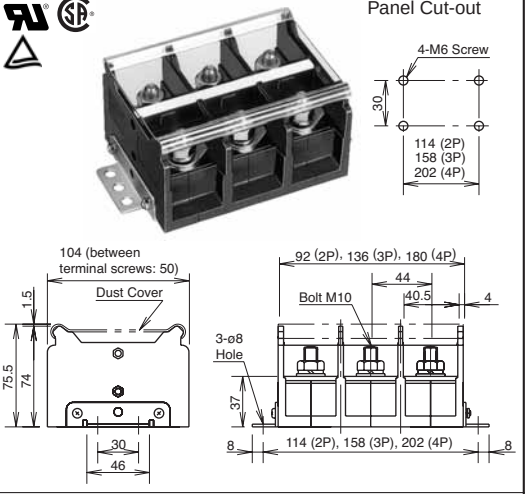
∗1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
Specify the number of poles in place of □. 2-pole: 2, 3-pole: 3, 4-pole: 4.

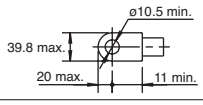
Large Capacity Type

Screw Terminal

Type no.	BN300BW□	BN300BW□K Surface Mount Type
Dimensions		
Package Quantity	1	1
Weight (Approx.)	2P: 480g, 3P: 750g, 4P: 1020g	2P: 540g, 3P: 810g, 4P: 1080g

Stud Terminal

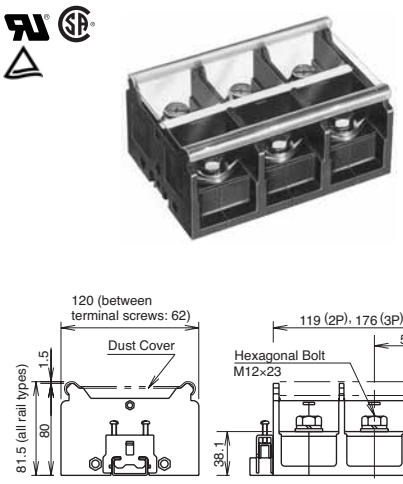
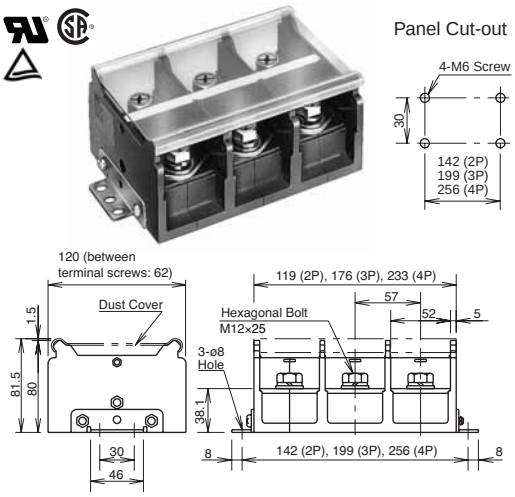
Type no.	BN300NW□	BN300NW□K Surface Mount Type
Dimensions		
Package Quantity	1	1
Weight (Approx.)	2P: 540g, 3P: 810g, 4P: 1080g	2P: 600g, 3P: 870g, 4P: 1140g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size	300 MCM	150 mm² (300 MCM)	150 mm²	300 MCM	150 mm² (300 MCM)	150 mm²
	Rated Current ∗1	310A	310A	310A	310A	310A	310A
	Terminal Screw ∗2	M10			M10		
	Crimping Terminal	5.5-10 to 150-10			5.5-10 to 150-10		
	Max. No. of Crimping Terminals	2			2		
	Socket Wrench	12.7 mm square drive hexagonal socket 17			12.7 mm square drive hexagonal socket 17		
	Tightening Torque	21 to 28 N·m			21 to 28 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories (Supplied)		End Plate, Dust Cover (see page 20, 21), Marking Strip (see page 22) are supplied. (Note) Marking Strip Fastener (BNM3) is not necessary.					
Accessories	DIN Rail	Aluminum: BAA1000, Steel: BAP1000 (see page 20)			—		
	C Rail	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)			—		
	DIN+C Rail	Aluminum: BNJA1000 (see page 20)			—		
	Mounting Clip	BNL8 (see page 21)			—		

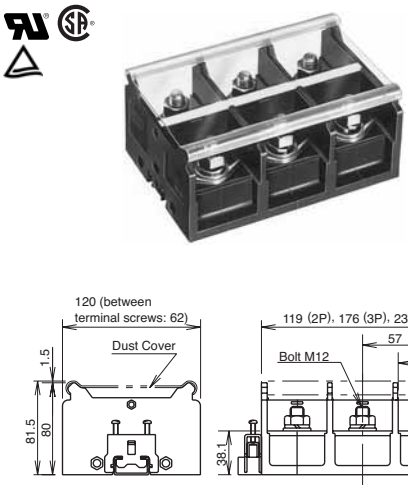
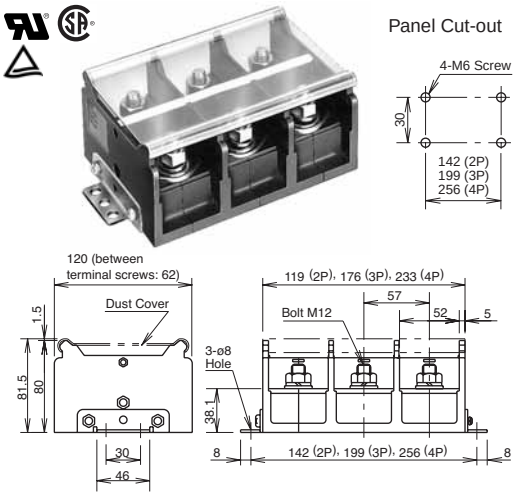
∗1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
Specify the number of poles in place of □. 2-pole: 2, 3-pole: 3, 4-pole: 4.

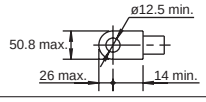
Large Capacity Type

Screw Terminal

Type no.	**BN400BW□**	**BN400BW□K** Surface Mount Type
Dimensions		
Package Quantity	1	1
Weight (Approx.)	2P: 950g, 3P: 1400g, 4P: 1860g	2P: 1030g, 3P: 1480g, 4P: 1940g

Stud Terminal

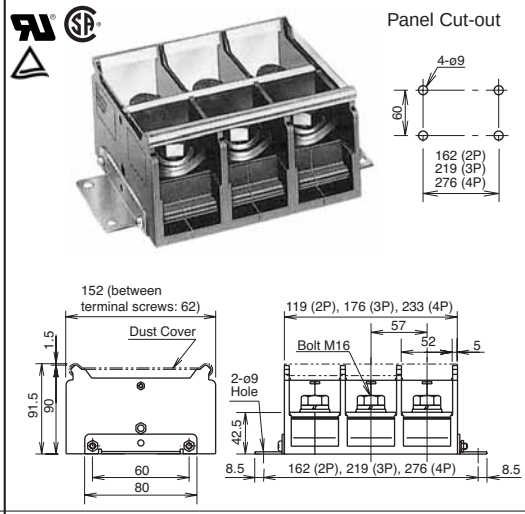
Type No.	**BN400NW□**	**BN400NW□K** Surface Mount Type
Dimensions		
Package Quantity	1	1
Weight (Approx.)	2P: 980g, 3P: 1460g, 4P: 1930g	2P: 1060g, 3P: 1540g, 4P: 1990g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size	400 MCM	200 mm² (400 MCM)	200 mm²	400 MCM	200 mm² (400 MCM)	200 mm²
	Rated Current ∗1	350A	370A	370A	350A	370A	370A
	Terminal Screw ∗2	M12			M12		
	Crimping Terminal	14-12 to 200-12			14-12 to 200-12		
	Max. No. of Crimping Terminals	2			2		
	Socket Wrench	12.7 mm square drive hexagonal socket 19			12.7 mm square drive hexagonal socket 19		
	Tightening Torque	38 to 49 N·m			38 to 49 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories (Supplied)		End Plate, Dust Cover (see page 20, 21), Marking Strip (see page 22) are supplied. (Note) Marking Strip Fastener (BNM3) is not necessary.					
Accessories	DIN Rail	Aluminum: BAA1000, Steel: BAP1000 (see page 20)			—		
	C Rail	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)			—		
	DIN+C Rail	Aluminum: BNJA1000 (see page 20)			—		
	Mounting Clip	BNL8 (see page 21)			—		

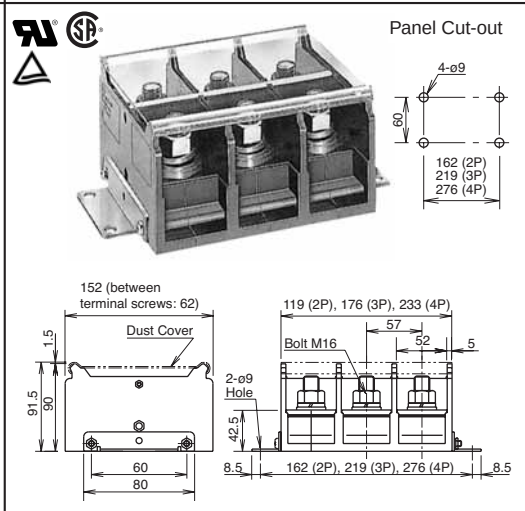
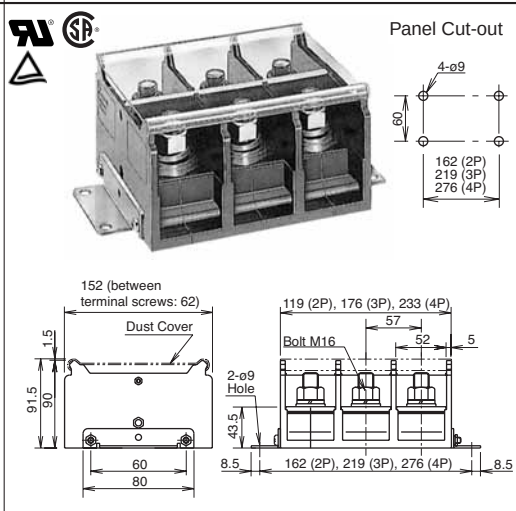
∗1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
Specify the number of poles in place of □. 2-pole: 2, 3-pole: 3, 4-pole: 4.

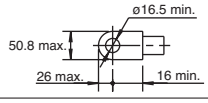
Large Capacity Surface Mount Type

Screw Terminal

Type No	**BN500BW□K** Surface Mount Type	—
Dimensions		—
Package Quantity	1	—
Weight (Approx.)	2P: 1550g, 3P: 2250g, 4P: 2950g	—

Stud Terminal

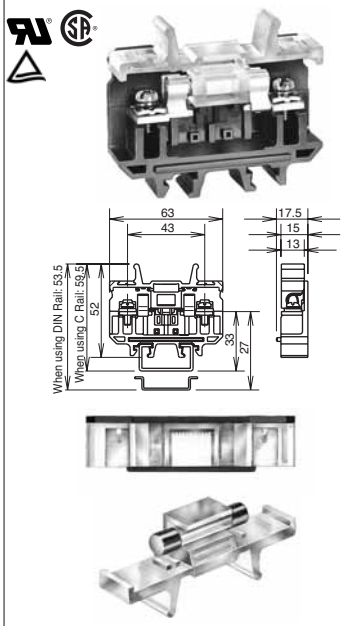
Type No.	**BN500NW□K** Surface Mount Type	**BN600NW□K** Surface Mount Type
Dimensions		
Package Quantity	1	1
Weight (Approx.)	2P: 1600g, 3P: 2300g, 4P: 3000g	2P: 1650g, 3P: 2400g, 4P: 3150g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V
	Wire Size	500 MCM	240 mm^2 (500 MCM)	250 mm^2	600 MCM	300 mm^2 (600 MCM)	325 mm^2
	Rated Current ∗1	500A	430A	430A	600A	520A	520A
	Terminal Screw ∗2	M16			M16		
	Crimping Terminal	14-16 to 200-16	325-16		14-16 to 200-16	325-16	
	Max. No. of Crimping Terminals	2	1		2	1	
	Socket Wrench	12.7 mm square drive hexagonal socket 24			12.7 mm square drive hexagonal socket 24		
	Tightening Torque	83 to 116 N·m			83 to 116 N·m		
Crimping Terminal Dimensions (mm) ∗3							
Accessories (Supplied)		End Plate, Dust Cover (see page 20, 21), Marking Strip (see page 22) are supplied. (Note) Marking Strip Fastener (BNM3) is not necessary.					

∗1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
Specify the number of poles in place of □. 2-pole: 2, 3-pole: 3, 4-pole: 4.

Self-Lifting Terminal with Fuse

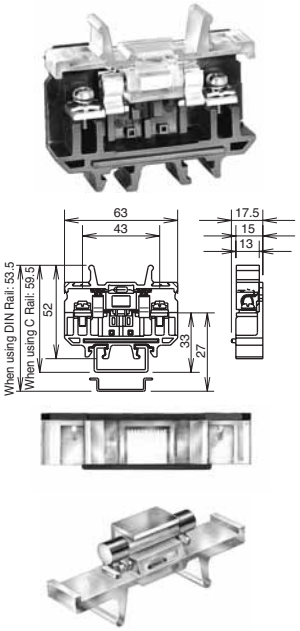
BNF10S



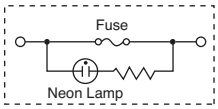
Fuse Ratings
- Rated Voltage: 250V
- Rated Current: 1, 3, 5A
- Cartridge Fuse: 6.35×31.8 mm or 6.40×30.0 mm
- Type No.: BNF10S-1A, BNF10S-3A, BNF10S-5A

Notes: UL/CSA approved products shown below are not supplied with fuses. When UL/CSA approval is required for fuse terminal blocks, use UL/CSA-rated fuses.
- Type No.: BNF10SW
- Rated Insulation Voltage: 600V
- Rated Current: 10A
- Applicable Wire: 18-10 AWG
- UL File No.: E78117
- CSA File No.: LR64803

BNF10N (With Lamp)



- Internal Connection



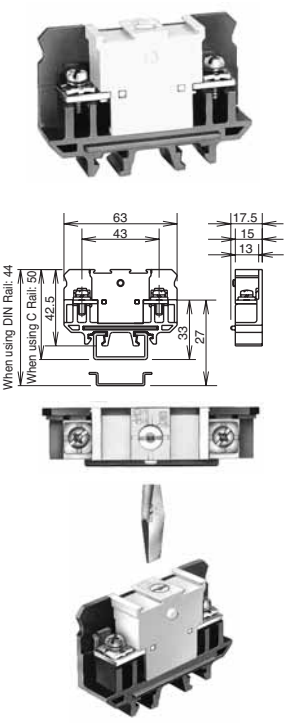
Notes: Neon lamp turns on when the fuse blows.
For the neon lamp to turn on, the voltages must be from 100 to 250V AC.

Fuse Ratings
- Rated Voltage: 250V
- Rated Current: 1, 3, 5A
- Cartridge Fuse: 6.35×31.8mm or 6.40×30.0mm
- Type No.: BNF10N-1A, BNF10N-3A, BNF10N-5A

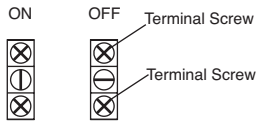
Ordering Type No.	BNF10S-☐APN20	BNF10N-☐APN20
Package Quantity	20	20
Weight (Approx.)	34g	34g

Self-Lifting Terminal with Disconnecting Switch

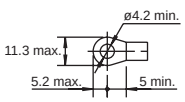
BNT20

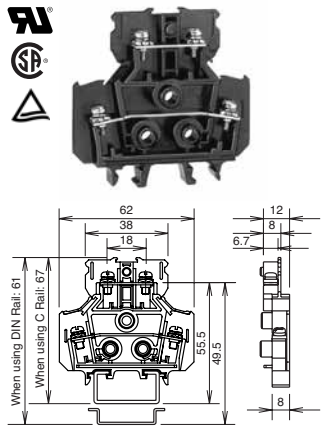
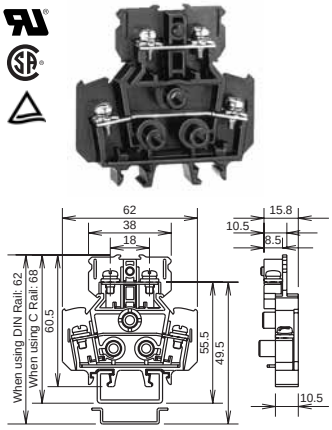
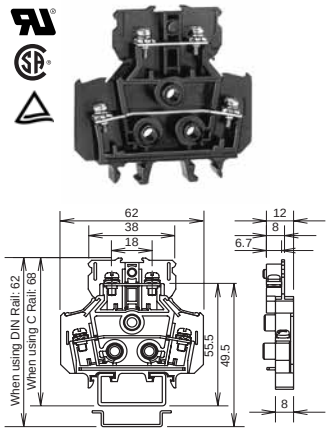
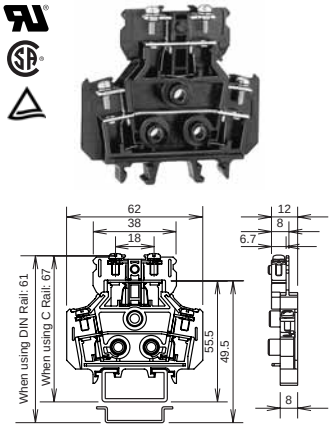
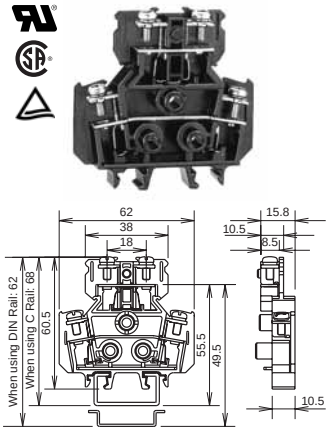
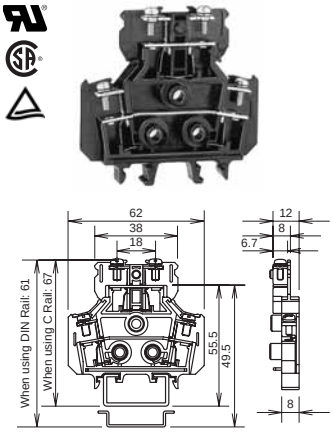


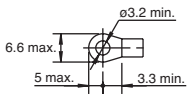
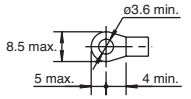
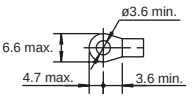
Notes:
- Rated Current: 20A
- This terminal block cannot be used as a disconnect switch.
- When switching on/off, make sure that voltage is not applied.



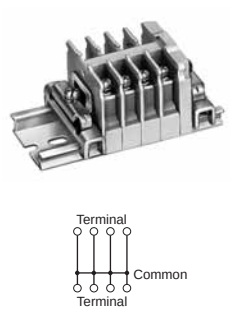
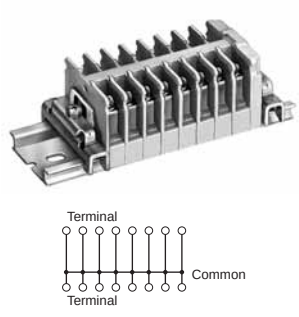
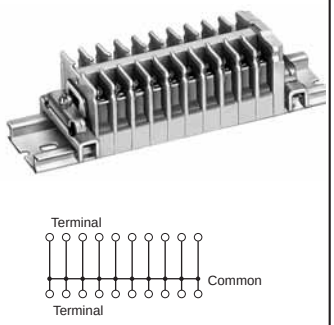
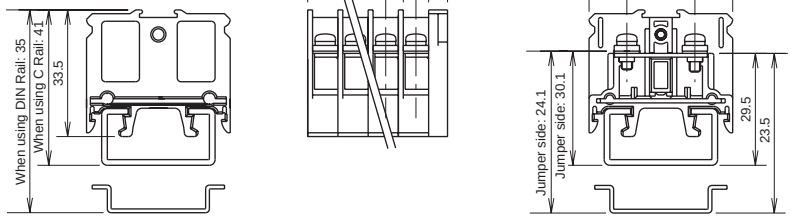
Ordering Type No.	BNT20PN20
Package Quantity	20
Weight (Approx.)	36g

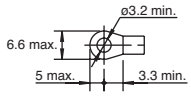
Standards		JIS	JIS
Specification / Ratings	Insulation Voltage	600V	600V
	Wire Size	5.5 mm^2	5.5 mm^2
	Rated Current	10A max.	20A
	Terminal Screw	M4	M4
	Crimping Terminal	1.25-4 to 5.5-4	1.25-4 to 5.5-4
	Max. No. of Crimping Terminals	2	2
	Tightening Torque	1.4 to 2.0 N·m	1.4 to 2.0 N·m
Crimping Terminal Dimensions (mm)			
Accessories	End Plate	BNE20 (see page 20)	
	Dust Cover	—	BNC520 (see page 20)
	Marking Strip	—	PVC 1m/BNM7, Fiber glass 1m/BNM9 PVC 25m/BNM725 (see page 22)
	DIN Rail/Mounting Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20) /BNL6 (see page 21)	
	C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20) /BNL6 (see page 21)	
	DIN+C Rail/Mounting Clip	Aluminum: BNJA1000 (see page 20) /BNL6 (see page 21)	

Double-Deck Terminal Block	Self-Lifting Terminal	Type No.	**BND15W**	**BND15LW**	**BND15WT**
		Dimensions			
		Ordering Type No.	BND15WPN25	BND15LWPN25	BND15WTPN25
		Package Quantity	25	25	25
		Weight (Approx.)	16g	23g	17g
	Touch-Down Terminal	Type No.	**BNDH15W**	**BNDH15LW**	**BNDH15WT**
		Dimensions			
		Ordering Type No.	BNDH15WPN25	BNDH15LWPN25	BNDH15WTPN25
		Package Quantity	25	25	25
		Weight (Approx.)	17g	26g	17g

Standards		UL/CSA	EN	JIS	UL/CSA	EN	JIS	UL/CSA	EN	JIS
Specification / Ratings	Insulation Voltage	600V	660V	600V	600V	660V	600V	600V	660V	600V
	Wire Size	22-14 AWG	2 mm^2 (22-14 AWG)	1.25 mm^2 (2 mm^2 max)	22-14 AWG	2 mm^2 (22-14 AWG)	2 mm^2	22-14 AWG	2mm^2 (22-14 AWG)	2 mm^2
	Rated Current ∗1	10A	22A	16A	15A	22A	21A	15A	22A	21A
	Terminal Screw ∗2	M3			M3.5			M3		
	Crimping Terminal	1.25-3 (2-3)			2-3.5			1.25-3.5 to 2-3.5		
	Max. No. of Crimping Terminals	2			2			2		
	Tightening Torque	0.6 to 1 N·m			1 to 1.3 N·m			1.0 to 1.3 N·m		
Crimping Terminal (mm) ∗3										
Accessories	End Plate	BNDE15W/BNDE15W2 (see page 20)			BNDE15LW/BNDE15LW2 (see page 20)			BNDE15W/BNDE15W2 (see page 20)		
	Dust Cover	Upper Deck: BNC230, Lower Deck: BNC240 (see page 21)								
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725 (see page 21)								
	Marking Strip Fastener	BNM3 (see page 22)								
	Surface Mounting Clip	BNDL2 (see page 24)								
	Connecting Rod/ Connecting Nut	Connecting Rod: BNR1, BNR2, Connecting Nut: BNN1 (see page 24)								
	DIN Rail/Mounting Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)								
	C Rail/Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7(see page 21)								
	DIN+C Rail/Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL6, BNL7(see page 21)								

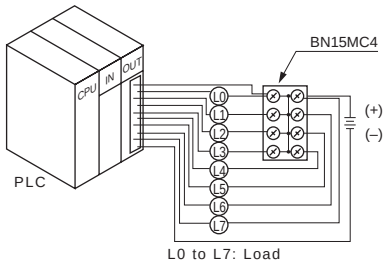
∗1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
∗2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
∗3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

		Type No.	BN15MC4	BN15MC8	BN15MC10
Common Terminal	Self-Lifting Terminal	No. of Poles	4	8	10
		Appearance			
		Dimensions			
		Ordering Type No.	BN15MC4PN10	BN15MC8PN10	BN15MC10PN10
		Package Quantity	10	10	10
		Weight (Approx.)	30g	57g	70g
		Color	Light Gray	Light Gray	Light Gray

Standards		JIS
Specification / Ratings	Insulation Voltage	600V
	Wire Size	1.25 mm^2 (2 mm^2 max.)
	Rated Current	16A/Common Current
	Terminal Screw	M3
	Crimping Terminal	1.25-3 (2-3)
	Max. No. of Crimping Terminals	2
	Tightening Torque	0.6-1.0 N·m
Crimping Terminal Dimensions (mm)		
Accessories	End Plate	Supplied
	Dust Cover	BNC230 (see page 21)
	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725 (see page 22)
	Marking Strip Fastener	BNM3 (see page 22)
	DIN Rail / Mounting Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)
	C Rail / Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)
	DIN+C Rail / Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL6, BNL7 (see page 21)

1. The rated applicable wire size is 1.25 mm^2, but 2 mm^2 wires can also be connected. The wire size in ( ) does not comply with JIS standards.
2. Do not remove the built-in common jumper. Common terminal type terminal blocks cannot be disassembled.
3. Make sure that all terminal screws are tightened to an appropriate tightening torque before power is applied.
4. Specifications are in compliance with JIS C 2811 except values in ( ).

Application Example



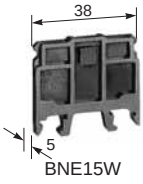
Features

- All terminals are short-circuted by a built-in common jumper. External jumpers are not required.
- Accessories (marking strip, cover, and rails) are compatible with standard types.
- Common terminal type terminal blocks can be combined with other standard types as they are identical in shape and in size as BN15MW.
- Color: Light Gray

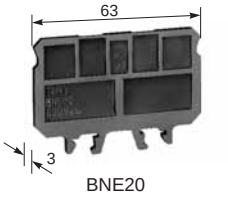
Accessories (End Plate / Rail)

End Plates

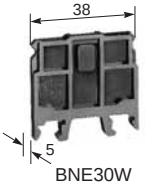
Used for ends of terminal blocks. Also used to hold the marking strips in place.



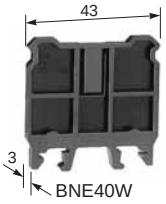
BNE15W



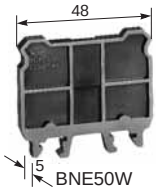
BNE20



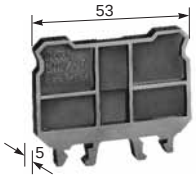
BNE30W



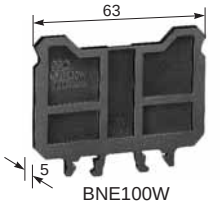
BNE40W



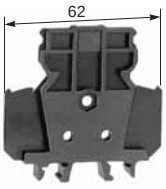
BNE50W



BNE75W



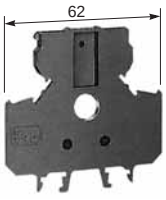
BNE100W



BNDE15W
BDNE15LW

BNDE15W
Upper deck: 5 mm
Lower deck: 9 mm

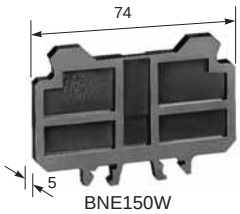
BDNE15LW
Upper deck: 5 mm
Lower deck: 10.25 mm



BNDE15W2
BNDE15LW2

BNDE15W2
Upper deck: 5.5 mm
Lower deck: 1.5 mm

BDNE15LW2
Upper deck: 6.8 mm
Lower deck: 1.5 mm

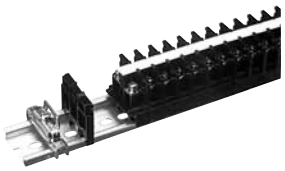


BNE150W

Type No.	Ordering Type No.	Applicable Terminal Blocks	Thickness (mm)	Weight (Approx.)	Package Quantity
BNE15W	BNE15WPN10	BN10W, BNH10W BN15MW, BNH15MW BN15LW, BNH15LW BN15MWT, BNH15MWT BN15LWT, BNH15LWT	5.0	4g	10
BNE20	BNE20PN10	BNT20, BNF10S, BNF10N	3.0	8g	10
BNE30W	BNE30WPN10	BN30W, BNH30W	5.0	4g	10
BNE40W	BNE40WPN10	BN40W, BNH40W	5.0	5g	10
BNE50W	BNE50WPN10	BN50W, BNH50W	5.0	6g	10
BNE75W	BNE75WPN10	BN75W	5.0	6g	10
BNE100W	BNE100WPN10	BN100W	5.0	9g	10
BNE150W	BNE150WPN10	BN150W	5.0	10g	10
BNDE15W	BNDE15WPN10	BND15W, BND15WT, BNDH15W, BNDH15WT	Upper deck: 5.0 Lower deck: 9.0	5.5g	10
BNDE15LW	BNDE15LWPN10	BND15LW, BNDH15LW	Upper deck: 5.0 Lower deck: 10.25	6g	10
BNDE15W2	BNDE15W2PN10	BND15W, BND15WT, BNDH15W, BNDH15WT	Upper deck: 5.5 Lower deck: 1.5	5.5g	10
BNDE15LW2	BNDE15LW2PN10	BND15LW, BNDH15LW	Upper deck: 6.8 Lower deck: 1.5	6g	10

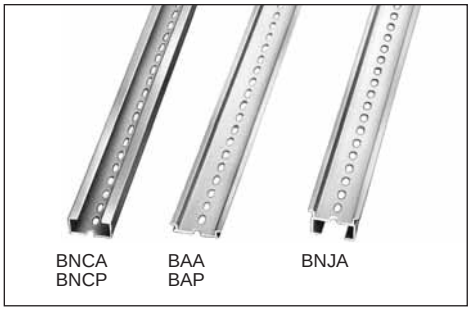
Note: BNDE15W2 and BNDE15LW2 are end plates used for securing marking strips at the end of double deck terminal blocks.

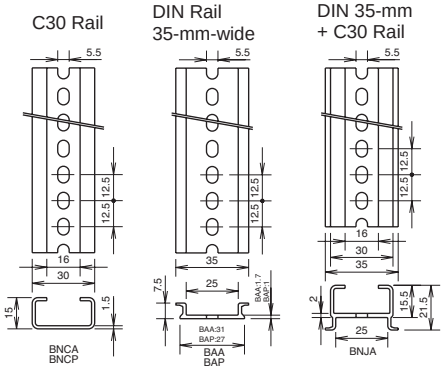
- Securing a marking strip with the end plate



Rails

Rails for mounting terminal blocks. Available in five types.





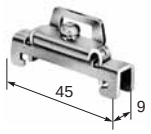
- Approvals:
  IEC60715
  JIS C 2812

Length	Type No.	Ordering Type No.	Material	Weight (Approx.)	Package Quantity
1000 mm	BNCA1000	BNCA1000PN10	Aluminum	260g	10
	BNCP1000	BNCP1000PN10	Steel	700g	10
	BAA1000	BAA1000PN10	Aluminum	200g	10
	BAP1000	BAP1000PN10	Steel	320g	10
	BNJA1000	BNJA1000PN10	Aluminum	340g	10

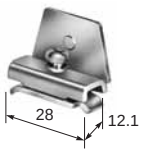
Accessories (Mounting Clip / Rail Mounting Clip / Dust Cover)

Mounting Clips

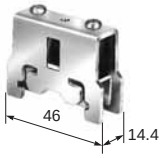
Used to secure the ends of the terminal blocks assembled on the rail.



BNL6



BNL7



BNL8

- Material: Steel
- Plating: Zinc

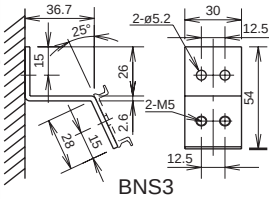
Note: Slide the mounting clip onto the DIN rail.

Type No.	Ordering Type No.	Rails	For Terminal Blocks up to BND and BN□40	For BN□50 and BN□75	For Terminal Blocks BN□100 and larger	Weight (Approx.)	Package Quantity
BNL6	BNL6PN10	BAA, BAP	×	×(∗2)	—	15.2g	10
BNL7	BNL7PN10	BNCA, BNCP, BNJA	×	×(∗2)	—	16g	10
BNL8∗	BNL8PN10	BAA, BAP, BNCA, BNCP, BNJA	—(∗1)	×	×	56g	10

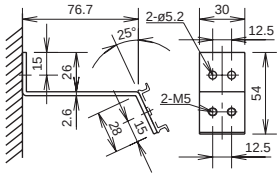
∗1: Do not use BNL8 because the insulation distance will be insuffiecient if used.
∗2: We recommend you to use BNL8 for secure hold.

Rail Stand-Offs

Used to raise the DIN rail from the panel surface.



BNS3



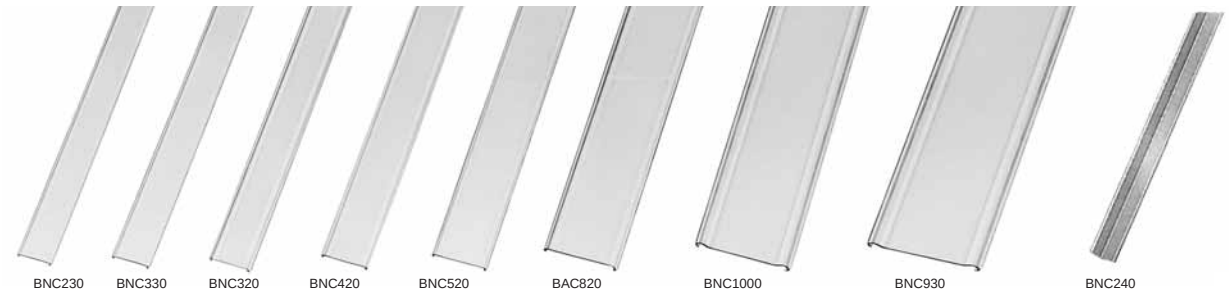
BNS4

Type No.	Ordering Type No.	Weight (Approx.)	Package Quantity
BNS3	BNS3PN10	51.3g	10
BNS4	BNS4PN10	76.2g	10

- Material: Steel
- Plating: Zinc

Dust Cover

Material: Polycarbonate



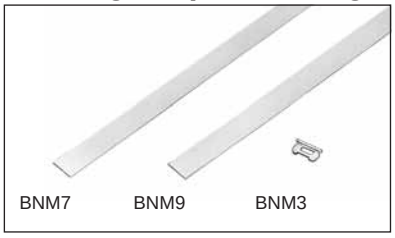
Length	Type No.	Ordering Type No.	Terminal Blocks (□: No. of Poles)	Weight (Approx.)	Package Quantity
1m	BNC230	BNC230PN10	BN10W, BNH10W, BN15MW, BNH15MW, BN15LW, BNH15LW, BN30W, BNH30W, BN15MWT, BNH15MWT, BN15LWT, BNH15LWT	56g	10
	BNC330	BNC330PN10	BN40W, BNH40W	57g	10
	BNC320	BNC320PN10	BN50W, BNH50W	64g	10
	BNC420	BNC420PN10	BN75W	72g	10
	BNC520	BNC520PN10	BN150W, BNT20, BN100W	96g	10
	BAC820	BAC820PN10	BN200BW□(K), BN200NW□(K)	204g	10
	BNC910	BNC910PN10	BN300BW□(K), BN300NW□(K)	222g	10
	BNC1000	BNC1000PN10	BN400BW□(K), BN400NW□(K)	256g	10
	BNC930	BNC930PN10	BN500BW□(K), BN500NW□(K), BN600NW□(K)	310g	10

Dust Covers for Double Deck Terminal Blocks

Length	Type No.	Ordering Type No.	Terminal Block	Weight (Approx.)	Package Quantity
1m	Upper Deck BNC230	BNC230PN10	BND15W, BNDH15W, BND15LW, BNDH15LW, BND15WT, BNDH15WT	56g	10
	Lower Deck BNC240	BNC240PN10		15g	10

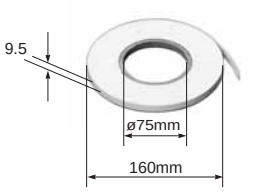
Accessories (Marking Strips / Marking Strip Fastener / Slide Marking Strip)

Marking Strips, Marking Strip Fastener

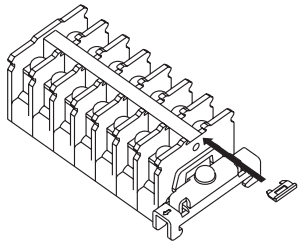


Item	Type No.	Ordering Type No.	Weight (approx.)	Package Quantity	Specification
Marking Strip	BNM7	BNM7PN10	7.2g	10	PVC (glossy surface) 1000 mm × 9.5 mm × 0.5 mm
	BNM9	BNM9PN10	6.4g	10	Fiber glass (matte surface) 1000 mm × 9.5 mm × 0.5 mm
Marking Strip Fastener	BNM3	BNM3PN50	0.1g	50	

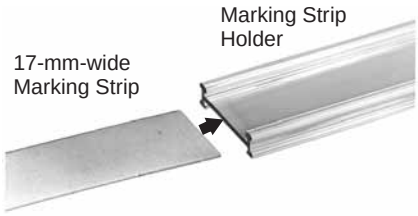
25m PVC marking strips also available.
Type No.: BNM725
Size: 9.5 mm × 25m × 0.5 mm



• To install the marking strip fastener



Sliding Marking Strip (BN10W to BN30W)



17-mm-wide marking strip

• Both top and bottom sides of the marking strip holder can be used.

End plate (Thickness 5 mm)
BNES15W
BNES30W

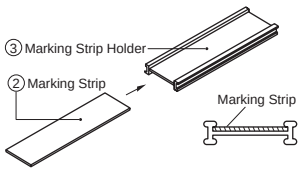
Terminal Block
BN10W to BN15LWT
BN30W

Item	Type No.	Ordering Type No.	Terminal Blocks	Specification	Package Quantity
① End Plate	BNES15W	BNES15WPN10	BN10W to BN15LWT	For sliding marking strip	10
	BNES30W	BNES30WPN10	BN30W	For sliding marking strip	10
② Marking Strip	BNM5	BNM5PN10	BN10W to BN15LWT BN30W	PVC (Note)	10
③ Marking Strip Holder	BNMH1	BNMH1PN10		1m	10
④ Dust Cover	BNCS230	BNCS230PN10		1m	10

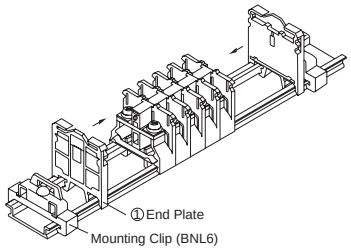
Note: Length 1000 mm × Width 9.5 mm × Thickness 0.5 mm

Installing the Sliding Marking Strip

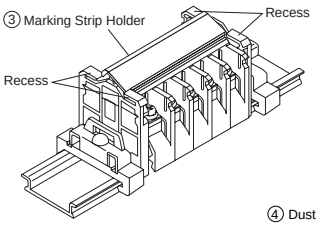
1. Insert the marking strip into the groove of the top of the marking strip holder.



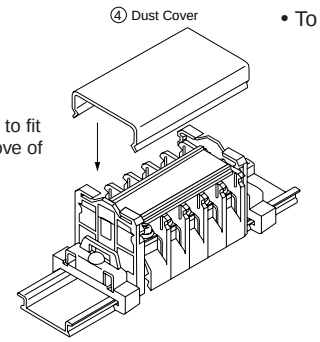
2. Installing the end plate
Attach the end plates to the terminal blocks and secure with mounting clips.



3. Insert the marking strip holder into the recess of the end plate.

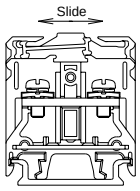


4. Press the dust cover to fit onto the bottom groove of the end plate.



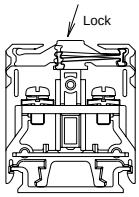
Movement

• Sliding movement of the marking strip holder



When sliding the marking strip holder, slide by holding both edges of the holder.

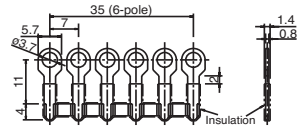
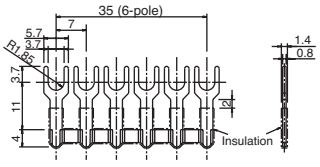
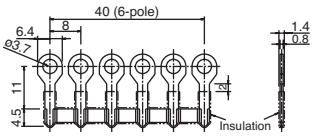
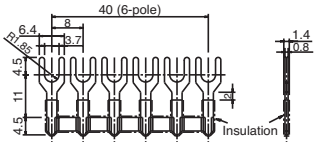
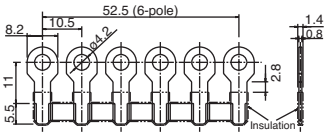
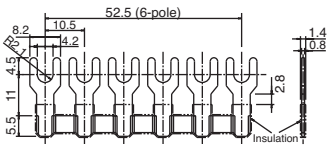
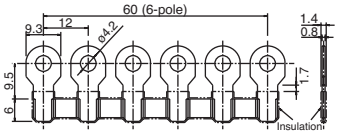
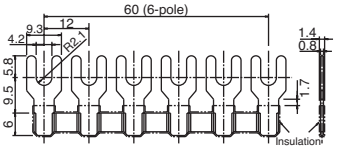
• To lock the marking strip holder



To lock the marking strip holder, lock by holding both edges of the holder.

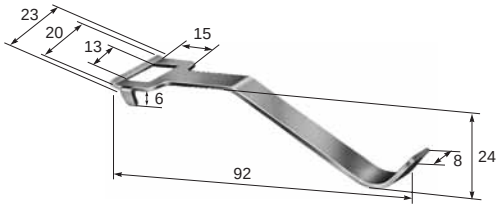
Accessories (Jumper)

• **Jumpers for 6 Poles** (Material: Brass, Plating: Nickel-plated, Insulation: PVC)

Type No.	Ordering Type No.	Terminal Centers	Insulation	Dimensions	Current	Applicable Terminal Block	Weight (Approx.)	Package Quantity
BNJ16	BNJ16PN10	7 mm	Without		10A	BN10W BNH10W	3g	10
BNJ16B	BNJ16BPN10		With					10
BNJ16F	BNJ16FPN10		Without				3g	10
BNJ16FB	BNJ16FBPN10		With					10
BNJ26W	BNJ26WPN10	8 mm	Without		20A	BN15MW BNH15MW BN15MWT BNH15MWT BND15W BNDH15W BND15WT BNDH15WT	3g	10
BNJ26WB	BNJ26WBPN10		With					10
BNJ26FW	BNJ26FWPN10		Without				3g	10
BNJ26FWB	BNJ26FWBPN10		With					10
BNJ46	BNJ46PN10	10.5 mm	Without		20A	BN15LW BNH15LW BN15LWT BNH15LWT BND15LW BNDH15LW	6g	10
BNJ46B	BNJ46BPN10		With					10
BNJ46F	BNJ46FPN10		Without				6g	10
BNJ46FB	BNJ46FBPN10		With					10
BNJ56	BNJ56PN10	12 mm	Without		30A	BN30W BNH30W	6g	10
BNJ56B	BNJ56BPN10		With					10
BNJ56F	BNJ56FPN10		Without				6g	10
BNJ56FB	BNJ56FBPN10		With					10

Note: Insulation color: Black
Insulation material: PVC

Accessories (Removal Tool)



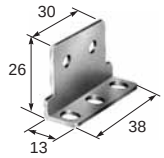
A tool for removing terminal blocks from the DIN rail.

Ordering Type No.	Weight (Approx.)	Package Quantity
BND2	8.6g	1

- Material: Steel
- Plating: Zinc

Accessories for BND Double-Deck Terminal Blocks

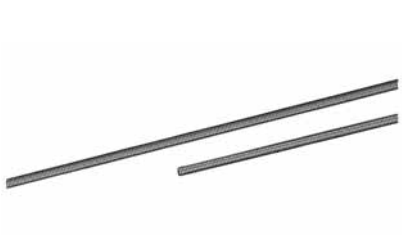
Surface Mounting Clip



Type No.	Ordering Type No.	Applicable Terminal Block	Weight (Approx.)	Package Quantity
BNDL2	BNDL2PN10	BND15W, BNDH15W BND15WT, BNDH15WT BND15LW, BNDH15LW	14.3g	10

- Material: Steel
- Plating: Zinc

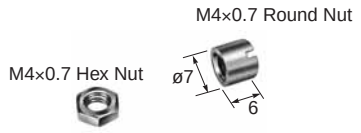
Connecting Rods



Type No.	Ordering Type No.	Applicable Terminal Block	Weight (Approx.)	Dimensions (mm)	Package Quantity
BNR1	BNR1PN10	BND15W, BNDH15W BND15WT, BNDH15WT BND15LW, BNDH15LW	21	265 mm (M4×0.7)	10
BNR2	BNR2PN10		40	500 mm (M4×0.7)	10

- Material: Steel
- Plating: Zinc

Connecting Nuts



Type No.	Ordering Type No.	Applicable Terminal Block	Weight (Approx.)	Package Quantity
BNN1	BNN1PN1H	BND15W, BNDH15W BND15WT, BNDH15WT BND15LW, BNDH15LW	14	100 (pairs of both nuts)

- Material: Steel
- Plating: Zinc

Calculating Rail Lengths and Mounting Centers

• BNCA, BNCP, BAA, BAP, and BNJA Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

Note: This formula is for calculating the maximum rail length including tolerance. Depending on the combination of terminal blocks, the required rail length may be shorter than the calculated value, particularly when many terminal blocks are combined.

N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\,n + B + C}{12.5}$$

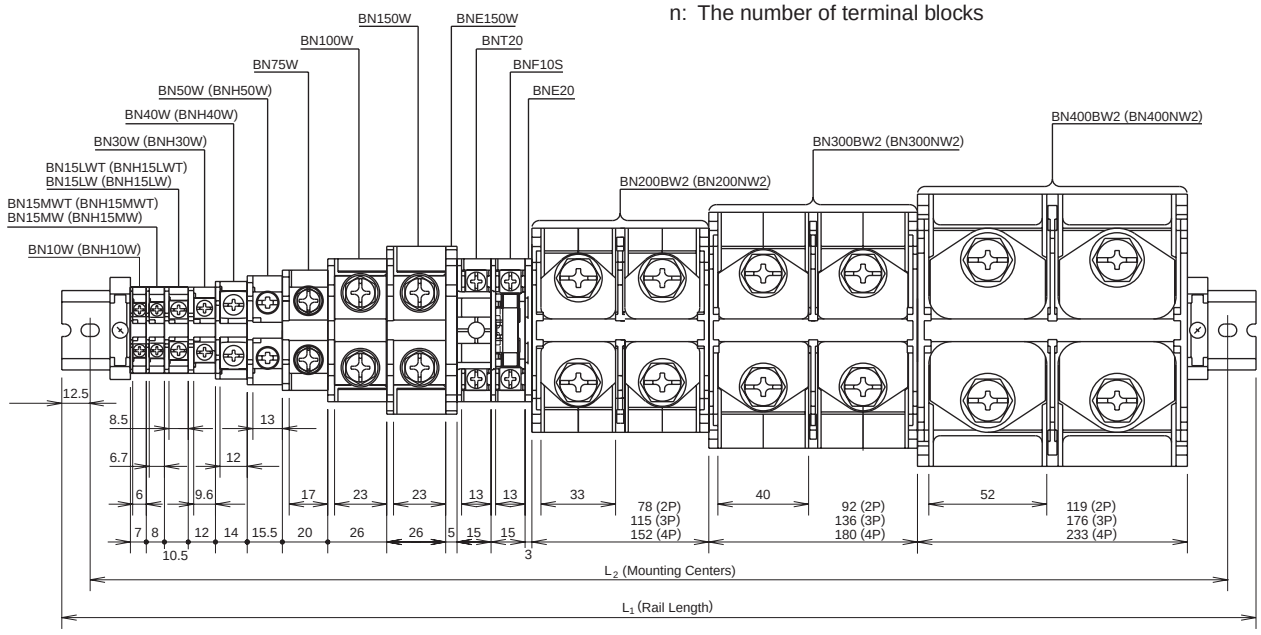
A: Thickness of each terminal block

B: Thickness of end plate

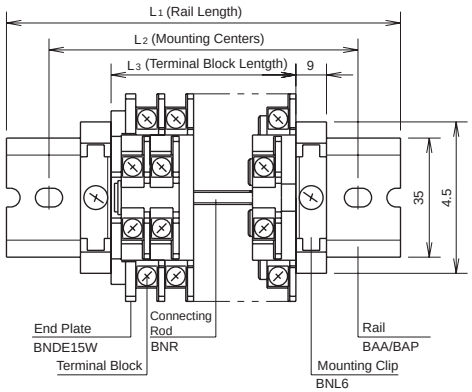
C: Thickness of mounting clip when using 2 pieces of:

BNL6 = 56.0 mm
BNL7 = 62.5 mm
BNL8 = 67.0 mm

n: The number of terminal blocks



Rail Length (Double-Deck)



Calculating the length (mm)

Type No.	BND15W BNDH15W BND15WT	BND15LW BNDH15LW
L1 (∗1)	12.5 × N	
L2 (∗2)	$L_1 - 25$	
L3 (∗1, ∗2)	8 × n + 9	10.5 × n + 10.3
Connecting Rod Length (∗1, ∗2)	8 × n + 8.7	10.5 × n + 10

N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

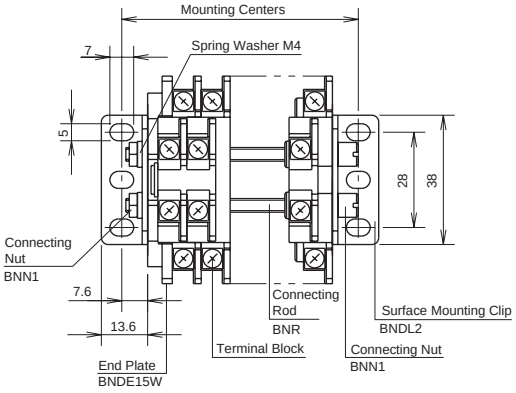
For BND15W, BNDH15W, BND15WT

$$M = \frac{(8 \times n + 9 + 62.5)}{12.5}$$

For BND15LW, BNDH15LW

$$M = \frac{10.5 \times n + 10.3 + 62.5}{12.5}$$

Mounting Centers (Double-Deck)



Calculating the length (mm)

Type No.	BND15W BNDH15W BND15WT	BND15LW BNDHLW
Mounting Centers (∗1, ∗2)	8 × n + 24.2	10.5 × n + 25.5
Connecting Rod Length (∗1, ∗2)	8 × n + 20.2	10.5 × n + 21.5

n: The number of terminal blocks

∗1: This formula is for calculating the maximum rail length including tolerance. Depending on the combination of terminal blocks, the required rail length may be shorter than the calculated value, particluarly when many terminal blocks are combined.

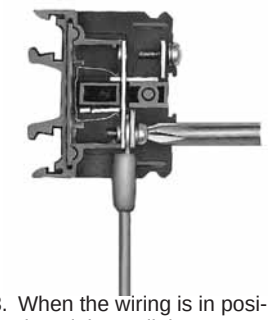
∗2: The length will be 1.5 mm longer when end plates BNDE15W2 and BNDE15LW2 are used.

Instructions

How to Use Touch-Down Terminals

1. With the terminal screws in the up position, insert a ring-type crimping terminal.

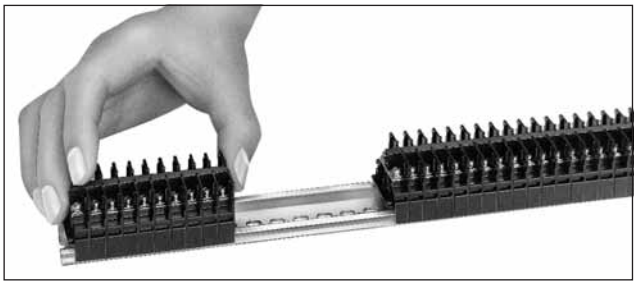
2. Push down the head of the screw lightly to hold the crimping terminal.



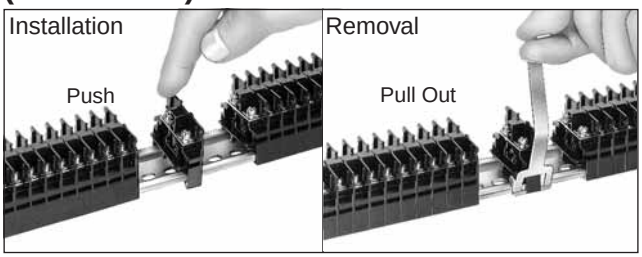
3. When the wiring is in position, tighten all the screws simultaneously.

4. To remove the wiring, loosen the screw and lightly push up.

Installation and Removal on Rails



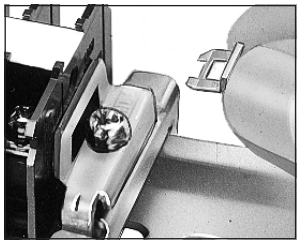
Additional Installation and Removal (on DIN Rail)



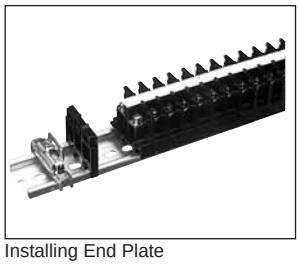
Notes: The following terminal blocks can be added or removed:
BN10W, BNH10W, BN15MW, BNH15MW, BN15LW, BNH15LW, BN30W, BNH30W, BN15MWT, BNH15MWT, BN15LWT, BNH15LWT

Securing the Ends of the Marking Strip

The ends of the marking strip can be secured with a marking strip fastener (or end plate).



To Secure the Marking Strip

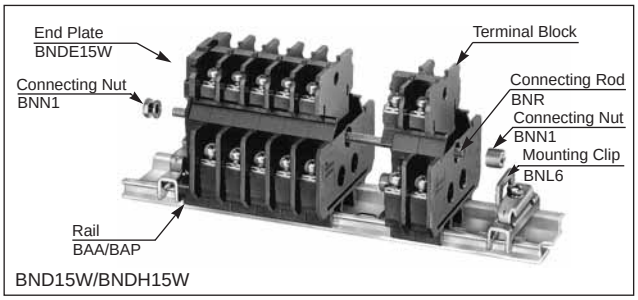


Installing End Plate

For double-deck types, use an end plate to secure marking strips (BNDE15W2, BNDE15LW2).

Installation of Double-Deck Terminal Blocks (BND Type)

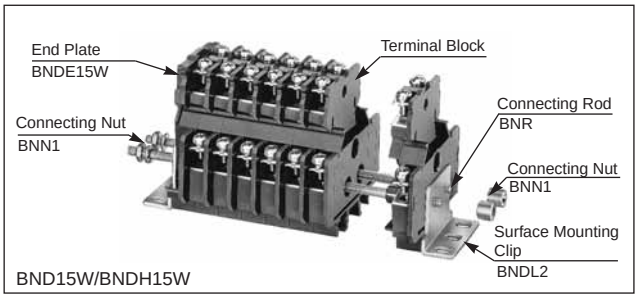
• Rail Mount



BND15W/BNDH15W

1. Install end plate. Then mount the terminal blocks onto the DIN rail.
2. Insert connecting rod (BNR) through each hole of the terminal blocks.
3. Secure the ends of the connecting rods with connecting nuts (BNN1).
4. To prevent side-to-side movement on the DIN rail, use the BNL6 mounting clips at both ends of the rail.

• Surface Mount



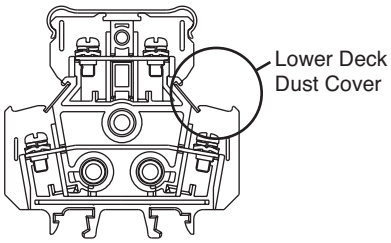
BND15W/BNDH15W

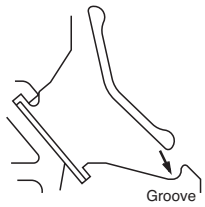
1. Assemble a row of terminal blocks with end plates on exposed ends.
2. Use BNDL2 mounting clips at both ends of a row.
3. With the two holes of the mounting clip (BNDL2) aligned with the terminal block holes, insert a connecting rod (BNR) through each hole.
4. Secure the ends of the connecting rods with the connecting nuts (BNN1).

Instructions

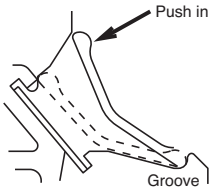
Dust Covers on the Lower Deck Terminal of Double-Deck Terminal Blocks

• Installing Dust Covers on Lower Deck Terminals





1. Press the lower end of the dust cover into the groove.

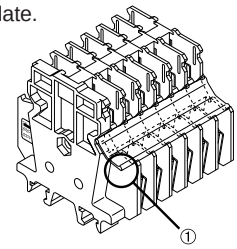


2. With the lower end of the dust cover pressed into the groove, push in the top end in the direction of the arrow.

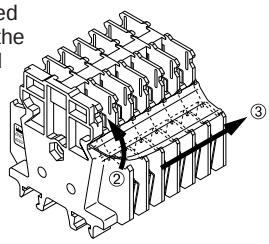
• Removing Dust Covers from Lower Deck Terminals

Turn the power off before removing the dust cover.

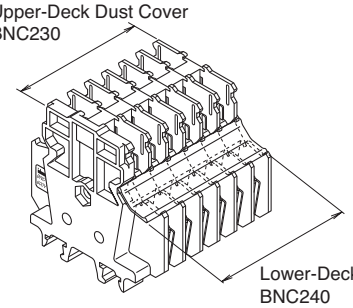
1. Hold the end of the dust cover which is extruding from the end plate.



2. Lift up in the direction of the arrow.
3. If the dust cover cannot be removed all at once, place fingers between the terminal block and dust cover, and slowly remove the dust cover.



Length of Double-Deck Dust Covers



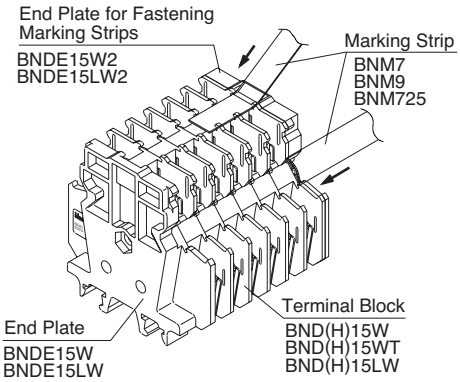
Cut required length depending on the number of terminal blocks used. (Length in mm)

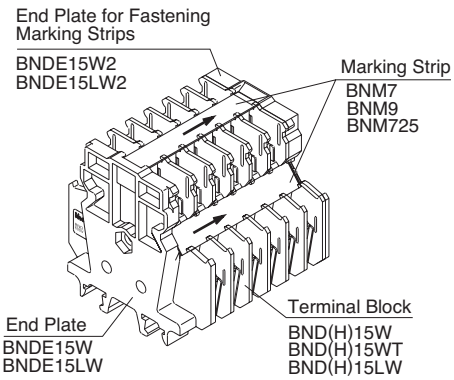
Terminal Block	Dust Cover	1-pole	2-pole	3-pole	4-pole	5-pole	6-pole	7-pole	8-pole	n-pole
BND(H)15W BND(H)15WT	Upper Deck	12	20	28	36	44	52	60	68	8 (n+1) – 4
	Lower Deck	16	24	32	32	48	56	64	72	8 (n+1)
BND(H)15LW	Upper Deck	16	26.5	37	47.5	58	68.5	79	89.5	10.5 (n+1) – 5
	Lower Deck	21	31.5	42	52.5	63	73.5	84	94.5	10.5 (n+1)

Securing Marking Strip with Marking Strip Fasteners for Double-Deck Terminal Blocks

Because marking strips can be secured without using marking strip fasteners, installation time can be shortened.

Also, marking strips can be inserted and removed after installation.





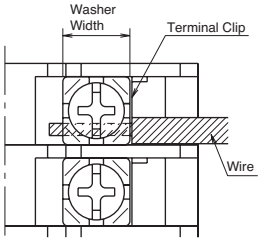
Notes on Wiring

Crimping Terminals

• When using crimping terminals, be sure to use insulated terminals to prevent electric shocks.

Without Crimping Terminals

• Insert the wire until the insulation comes into contact with the terminal metal part.
• Strip the insulation so that the wire is longer than the width of the wire clamp.
• When connecting two wires, use wires of the same size.



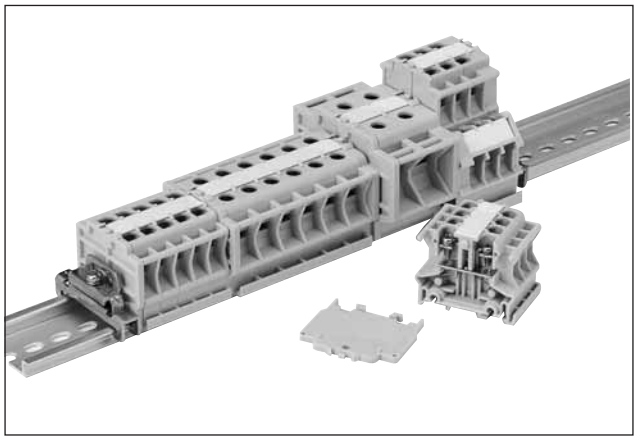
BFH Series Finger-Safe Terminal Blocks

Spring-up screw terminal with finger-safe structure ensures safety and saves wiring time.

- Degree of protection: IP20. No need for dust covers.
- Molded from UL94V-0 material with excellent flame and shock resistance.
- Mounts on both DIN rail 35-mm wide and C30 rails.
- UL, c -UL recognized and EN compliant (TÜV approved).

c UL us UL1059
CSA C22.2 No. 158
File No. E78117

EN60947-7-1
License No.
R2-50007314
R2-50007320
(BFDH20)



Specifications

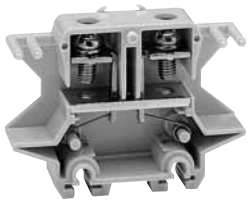
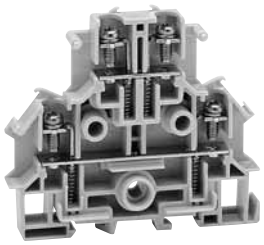
• General Ratings

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100MΩ minimum
Operating Temperature	–25 to +55°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

• Material

Part Name	Material
Housing	Modified Polycarbonate (gray)
Bus Bar	Brass (nickel-plated)
Terminal Screw	Steel (zinc chrome-plated)

Types

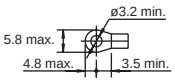
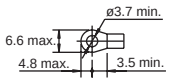
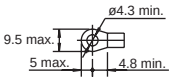
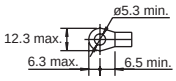
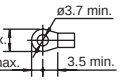
Type No.	BFH10	BFH20	BFH30	BFH50	BFDH20
Ordering Type No.	BFH10PN50	BFH20PN50	BFH30PN50	BFH50PN20	BFDH20PN20
Appearance					
Package Quantity	50	50	50	20	20

Accessories

Description	Type No.	Ordering Type No.	Applicable Terminal Block	Dimensions	Package Quantity
End Plate	BFE20	BFE20PN10	BFH10, BFH20	Thickness 3 mm	10
End Plate	BFE30	BFE30PN10	BFH30	Thickness 3 mm	10
End Plate	BFE50	BFE50PN10	BFH50	Thickness 3 mm	10
End Plate (right/left pair) *	BFDE20	BFDE20PN05	BFDH20	Thickness (pair) 8 mm	5
Jumper (with insulation)	BNJ16B	BNJ16BPN10	BFH10	Terminal centers 7 mm	10
Jumper (with insulation)	BNJ26WB	BNJ26WBPN10	BFH20, BFDH20	Terminal centers 8 mm	10
Jumper (with insulation)	BFJ264B	BFJ264BPN10	BFH30	Terminal centers 11 mm	10
Jumper (with insulation)	BFJ802B	BFJ802BPN10	BFH50	Terminal centers 14 to 15 mm	10
Mounting Clip	BNL6	BNL6PN10	BFH10, BFH20 BFH30, BFH50	Width 9 mm	10
Mounting Clip	BFL-TXE2	BFL-TXE2PN10	BFDH20	Width 13.2 mm	10
Marking Strip (polypropylene)	BNM625	BNM625	BFH10, BFH20 BFH30, BFH50 BFDH20	Length 25m Width 9. 5 mm	1

* One package contains 5 pairs of right and left end plates. 10 pieces total.

Ratings

Ratings		BFH10	BFH20	BFH30	BFH50	BFDH20
Insulation Voltage	UL/c-UL	600V	600V	600V	600V	600V
	IEC/EN	600V	600V	600V	600V	600V
	JIS	600V	600V	600V	600V	600V
Rated Current	UL/c-UL	10A	20A	30A	65A	15A
	IEC/EN	15A	20A	40A	60A (80A-AWG 6, 16 mm^2)	20A
	JIS	16A	21A	40A	70A	21A
Wire Size	UL/c-UL	20-16 AWG	20-14 AWG	18-10 AWG	16-6 AWG	20-14 AWG
	IEC/EN	20-16 AWG (0.5-1.5 mm^2)	20-14 AWG (0.5-2.5 mm^2)	18-10 AWG (0.75-6 mm^2)	16-8 AWG (1.5-10 mm^2) 6 AWG (16 mm^2)	20-14 AWG (0.5-2.5 mm^2)
	JIS	1.25 mm^2	2 mm^2	5.5 mm^2	14 mm^2	2 mm^2
Crimping Terminal (mm)	UL/c-UL IEC/EN JIS					
Tightening Torque	UL/c-UL	0.9 N·m	1.3 N·m	1.8 N·m	2.7 N·m	1.3 N·m
	IEC/EN	0.9 N·m	1.3 N·m	1.8 N·m	2.7 N·m	1.3 N·m
	JIS	0.6 to 0.9 N·m	1.0 to 1.3 N·m	1.4 to 1.8 N·m	2.2 to 2.8 N·m	1.0 to 1.3 N·m

File No. of Safety Standards

Organization	Standards	BFH10	BFH20	BFH30	BFH50	BFDH20
c UL us	UL1059	E78117				
	CSA C22.2 No.158	E78117				
	EN60947-7-1	R2-50007314				R2-50007320

Structure

Type No.		BFH10	BFH20	BFH30	BFH50	BFDH20
Terminal Screw		M3×3	M3.5×8	M4×10	M5×12	M3.5×8
Strength	Tightening Torque	1.1 N·m	1.8 N·m	2.5 N·m	3.5 N·m	1.8 N·m
	Tension	50N	100N	100N	200N	100N
Terminal Centers		7 mm	8 mm	11 mm	14 mm	8 mm
Weight (Approx.)		7.8g	8.8g	13.8g	29.5g	21g
Accessories	End Plate	BFE20 (see page 32)		BFE30 (see page 32)	BFE50 (see page 32)	BFDE20 (see page 32)
	Mounting Clip	BNL6 (see page 32)				BFL-TXE2 (see page 32)
	Marking Strip	BNM625				
	DIN Rail 35 mm/ Mounting Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)				
	C30 Rail/ Mounting Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)				
	DIN 35 + C30 Rail/ Mounting Clip	Aluminum: BNJA1000 (see page 20)/BNL6,7 (see page 21)				
	Jumper	BNJ16B (see page 32)	BNJ26WB (see page 32)	BFJ264B (see page 32)	BFJ802B (see page 32)	BNJ26WB (see page 32)

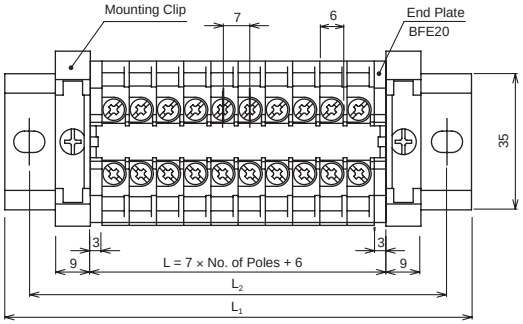
Selecting Terminal Blocks by Current According to JIS Standards

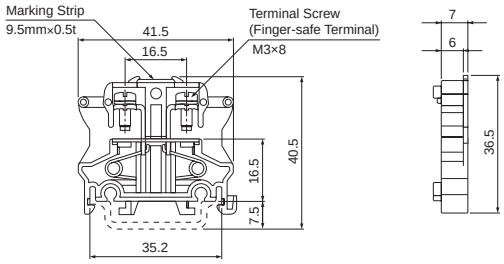
The allowable current of terminal blocks during operation differs according to operating conditions (types of wire, number of wires, ambient temperature, etc.). Select terminal blocks by referring to the graph on page 4.

When using terminal block as UL, c-UL, TÜV approved products, observe UL, c-UL, TÜV (EN) ratings.

Dimensions

• BFH10





• BNCA, BNCP, BAA, and BAP Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

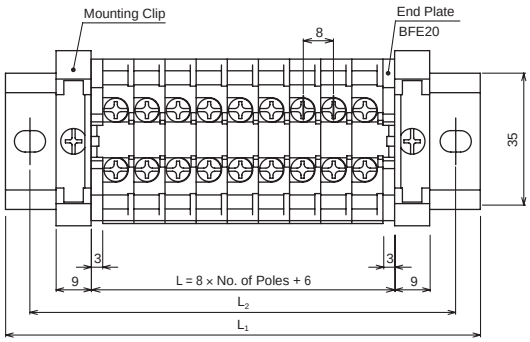
Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

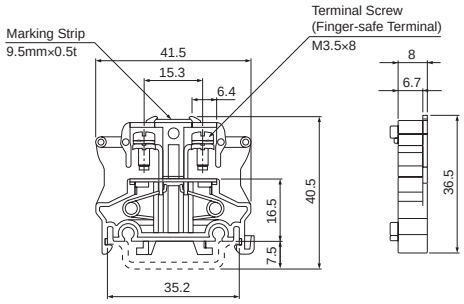
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\, n + B + C}{12.5}$$

A: Thickness of each terminal block
B: Thickness of end plate
C: Thickness of mounting clip when using 2 pieces of BNL6 = 56.0 mm
n: The number of terminal blocks

• BFH20





• BNCA, BNCP, BAA, and BAP Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

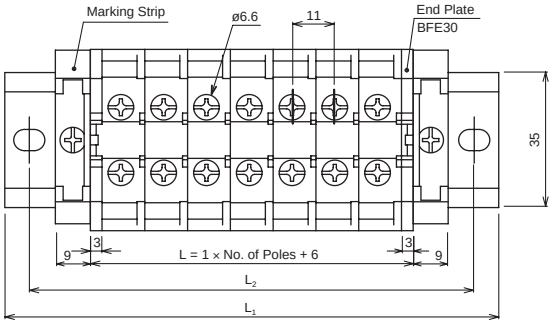
Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

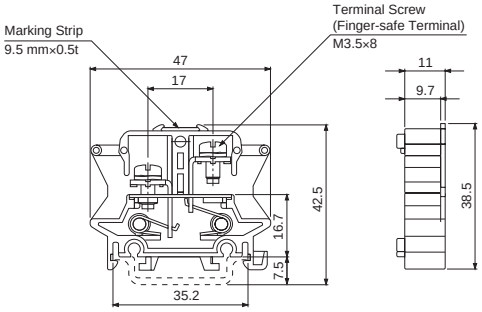
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\, n + B + C}{12.5}$$

A: Thickness of each terminal block
B: Thickness of end plate
C: Thickness of mounting clip when using 2 pieces of BNL6 = 56.0 mm
n: The number of terminal blocks

• BFH30





• BNCA, BNCP, BAA, and BAP Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

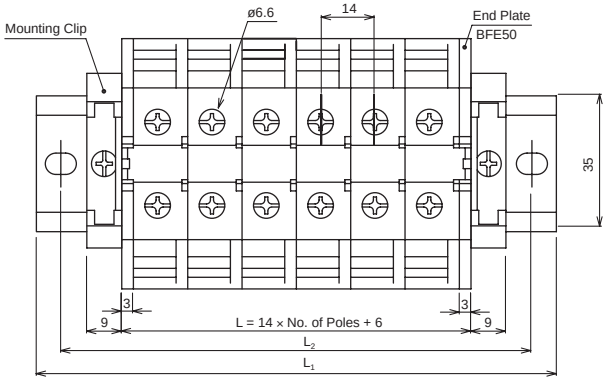
Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

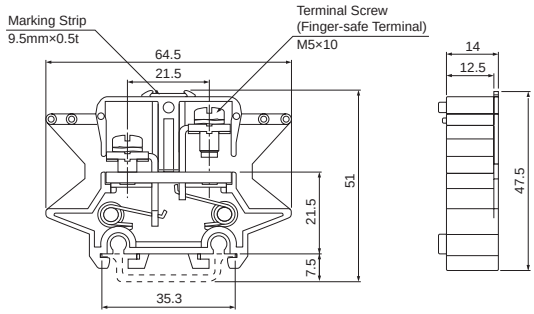
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\, n + B + C}{12.5}$$

A: Thickness of each terminal block
B: Thickness of end plate
C: Thickness of mounting clip when using 2 pieces of BNL6 = 56.0 mm
n: The number of terminal blocks

• BFH50





• BNCA,BNCP, BAA, and BAP Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

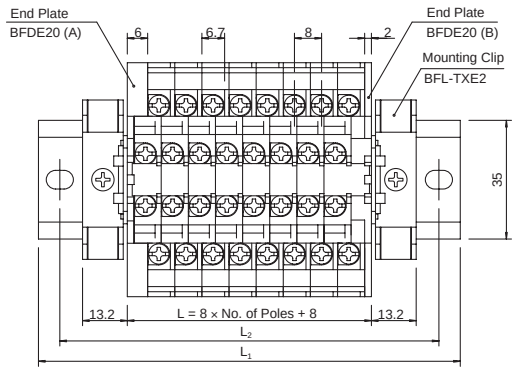
Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

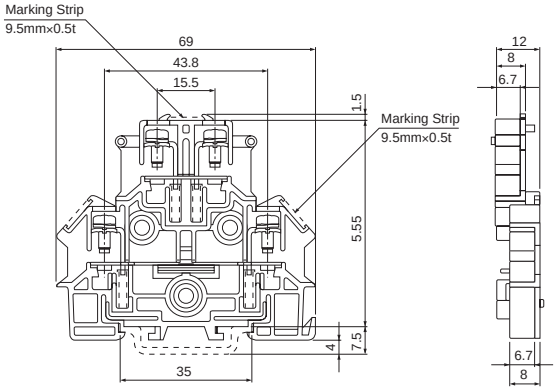
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\, n + B + C}{12.5}$$

A: Thickness of each terminal block
B: Thickness of end plate
C: Thickness of mounting clip when using 2 pieces of BNL6 = 56.0 mm
n: The number of terminal blocks

• BFDH20





• BNCA,BNCP, BAA, and BAP Rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

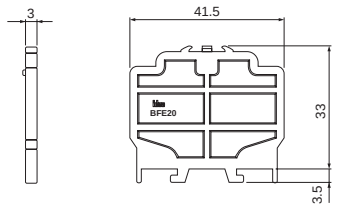
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

n : The number of terminal blocks

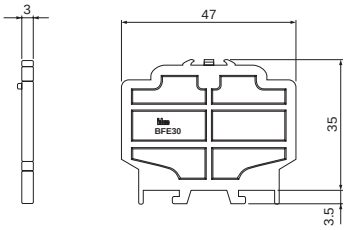
$$M = \frac{8 \times n + 8 + 64}{12.5}$$

End-Plate Dimensions Material: Polycarbonate

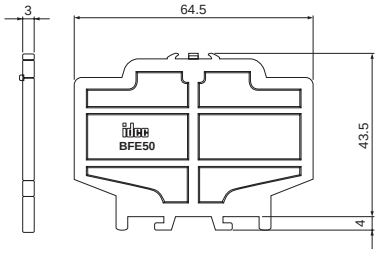
• BFE20 (For BFH10/BFH20)



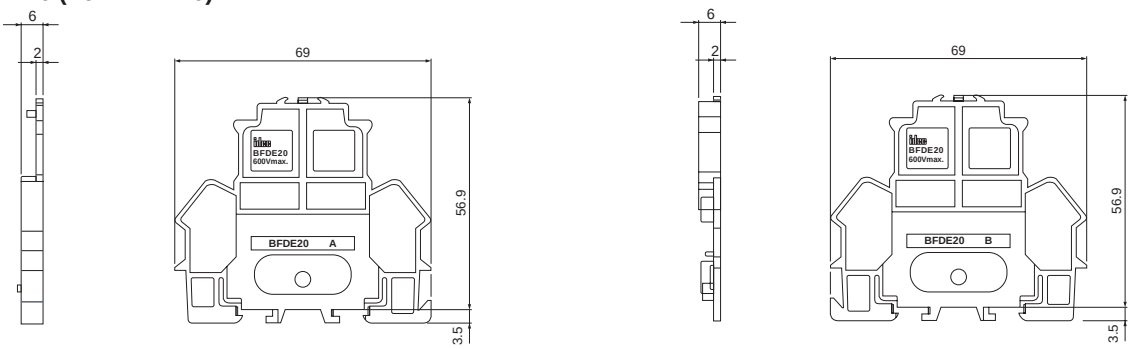
• BFE30 (For BFH30)



• BFE50 (For BFH50)



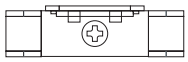
• BFDE20 (For BFDH20)

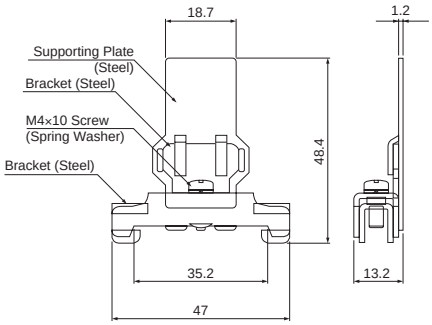


Other Dimensions

• BFL-TXE2 (Mounting Clip)

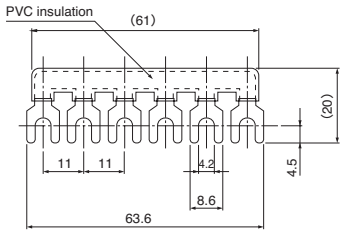
Material: Steel
Plating: Zinc





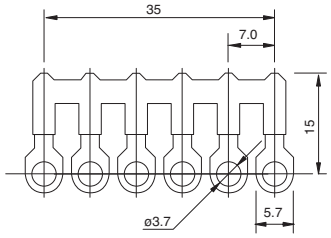
<Jumper material>
Material: Brass/Copper 0.8 mm thick
Plating: Nickel
Insulation: PVC

• BFJ264B (Jumper)



• Maximum Rated Current: 40A

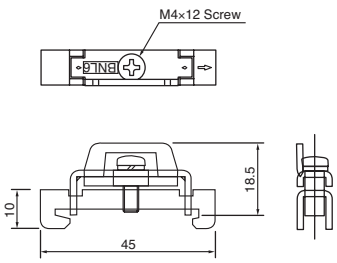
• BFJ16B (Jumper)



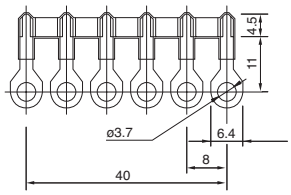
• Maximum Rated Current: 10A

• BNL6 (Mounting Clip)

Material: Steel
Plating: Zinc

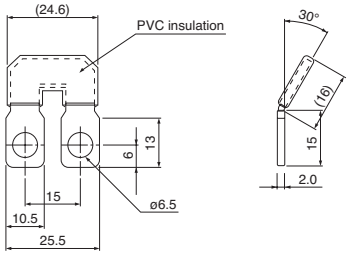


• BNJ26WB (Jumper)



• Maximum Rated Current: 20A

• BFJ808 (Jumper)



• Maximum Rated Current: 80A

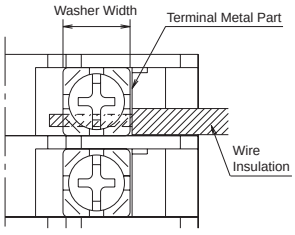
Notes on Wiring

Crimping Terminals

• When using crimping terminals, be sure to use insulated terminals to prevent electric shocks.

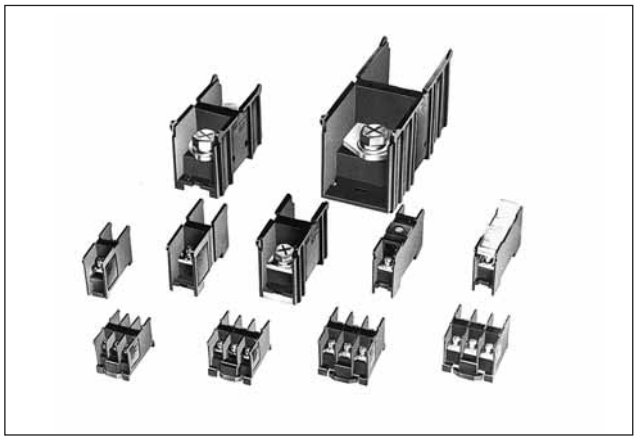
Without Crimping Terminals

• Insert the wire until the insulation comes into contact with the terminal metal part.
• Strip the insulation so that the wire is longer than the width of the wire clamp.
• When connecting two wires, use wires of the same size.



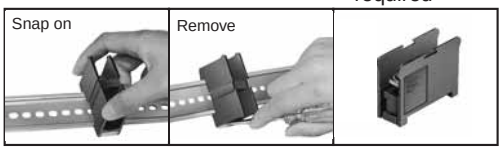
BA Series Terminal Blocks

Quick-mount terminal blocks for mounting on 35-mm-wide DIN rails. Current capacities from 16A to 400V (600V).



- Snaps on to 35-mm-wide DIN rails.
- Wide range of current capacities from 16A to 400A. Insulation voltage is 600V.
- No end plates are required.
- 3-pole units, fuse blocks with blown fuse indicators available.
- Large capacity types (BA811S, BA911S) can be mounted directly to panels.
- Complies with JIS C 2811.
- UL recognized and CSA certified. (BA111T, BA211T, BA311T, BA411S, BAF111SU, BAF111SNU)

• Quick-mount • Unlatch • No end plates required



UL1059
File No. E78117

CSA 22.2 No. 158
File No. LR64803

General Ratings

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100MΩ minimum
Operating Temperature	–25 to +55°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

Types of Terminal Blocks

Type		Type No.	Ordering Type No.	UL/CSA		JIS		Terminal Screw	Tightening Torque (N·m)	Package Quantity
				Voltage/Current	Wire Size (AWG)	Voltage/ Current	Wire Size (mm^2)			
3-pole	Self-Lifting	BA111T	BA111TPN20	300V/15A max.	22-14	600V/16A	1.25 mm^2 (2 mm^2)	M3	0.6 to 1.0	20
		BA211T	BA211TPN20	300V/20A max.	22-12	600V/21A	2 mm^2 (3.5 mm^2)	M3.5	1.0 to 1.3	20
		BA311T	BA311TPN20	150V/30A max.	18-10	600V/40A	5.5 mm^2	M4	1.4 to 2.0	20
1-pole	Self-Lifting	BA411S	BA411SPN50	600V/40A max.	16-6	600V/70A	14 mm^2	M5	2.6 to 3.7	50
		BA611S	BA611SPN10	—	—	600V/94A	22 mm^2	M6	3.9 to 5.4	10
	Large Capacity	BA711S	BA711SPN06	—	—	600V/132A	38 mm^2	M8	10 to 13.5	6
		BA811S	BA811SPN06	—	—	600V/240A	100 mm^2	M10	21 to 28	6
		BA911S	BA911SPN06	—	—	600V/370A	200 mm^2 (200 mm^2 2 wires) (325 mm^2 1 wire)	M12	38 to 49	6
	Fuse	BAF111S-□	BAF111S-□PN20	—	—	600V/10A	5.5 mm^2	M4	1.4 to 2.0	20
	Fuse with Lamp	BAF111SN-□	BAF111SN-□PN20	—	—	600V/10A	5.5 mm^2	M4	1.4 to 2.0	20
	Without Fuse	BAF111SU	BAF111SUPN20	600V/10A	18-10	600V/10A	5.5 mm^2	M4	1.4 to 2.0	20
	WIthout Fuse/With Lamp	BAF111SNU	BAF111SNUPN20	600V/10A	18-10	600V/10A	5.5 mm^2	M4	1.4 to 2.0	20
	With Disconnecting Switch	BAT20	BAT20PN20	—	—	600V/20A	5.5 mm^2	M4	1.4 to 2.0	20

1. Specify fuse ratings 1A, 3A, or 5A in place of □ in the Type No.
2. The wire size in ( ) does not comply with JIS standards.
3. The voltage/current differ according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
4. Use a socket wrench or screwdriver for tightening screws.

○: Order when a marking strip or a dust cover is needed.
▲: Used for surface mounting
∗: Dust cover with fuse holder

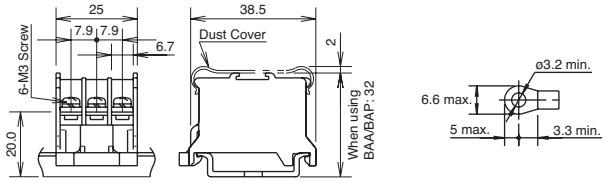
Type No.	Accessories (× Necessary)						
	DIN Rail	Mounting Clip	Marking Strip	Dust Cover	Connecting Rod	Connecting Nut	Surface Mounting
BA111T, BA411S, BAT20, BA211T, BA611S, BA711S, BA311T	×	×	○	○	—	—	—
BA811S, BA911S	×	×	○	○	×	×	▲
BAF111S□, BAF111SN□, BAF111SU, BAF111SNU	×	×	○	∗	—	—	—

Specify the number of poles in place of □.

Material

Parts Name	Material
Housing	Polyamide
Bus Bar	Brass (nickel-plated)
Terminal Screw	Steel (zinc chrome-plated)

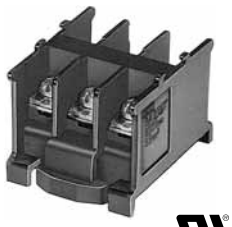
• BA111T (3 Pole)

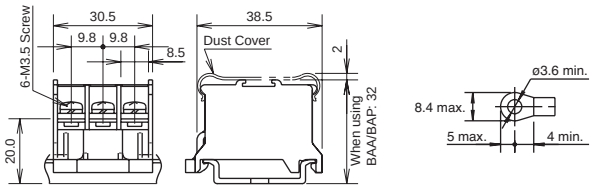


Weight: Approx. 18.8g

Standards		UL/CSA	JIS
Insulation Voltage		300V	600V
Rated Current ∗2		15A max.	16A
Dielectric Strength		2,500V AC, 1 minute	
Insulation Resistance		100 MΩ minimum	
Wire Size ∗1		22-12 AWG	1.25 mm² (2 mm²)
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)	
	Dust Cover	BNC220	
	Rail	BAP1000, BAA1000	
	See page	36	

• BA211T (3 Pole)

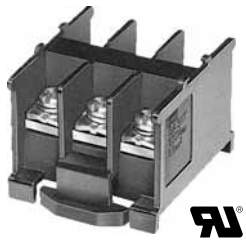


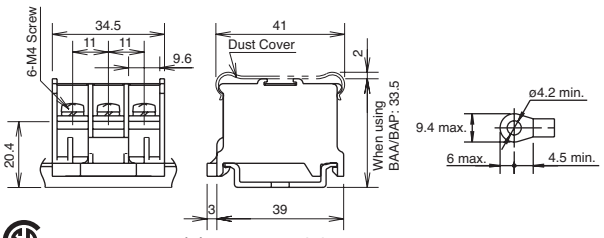


Weight: Approx. 25.3g

Standards		UL/CSA	JIS
Insulation Voltage		300V	600V
Rated Current ∗2		20A max.	21A
Dielectric Strength		2,500V AC, 1 minute	
Insulation Resistance		100 MΩ minimum	
Wire Size ∗1		22-12 AWG	2 mm² (3.5 mm²)
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)	
	Dust Cover	BNC220	
	Rail	BAP1000, BAA1000	
	See page	36	

• BA311T (3 Pole)

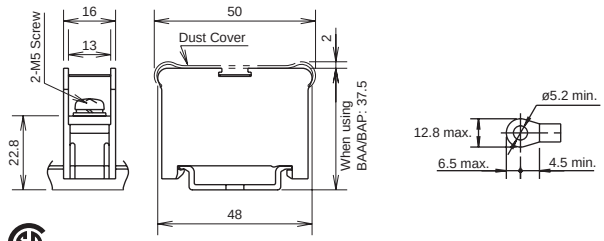




Weight: Approx. 40.0g

Standards		UL/CSA	JIS
Insulation Voltage		150V	600V
Rated Current ∗2		30A max.	40A
Dielectric Strength		2,500V AC, 1 minute	
Insulation Resistance		100 MΩ minimum	
Wire Size ∗1		18-10 AWG	5.5 mm²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)	
	Dust Cover	BNC220	
	Rail	BAP1000, BAA1000	
	See page	36	

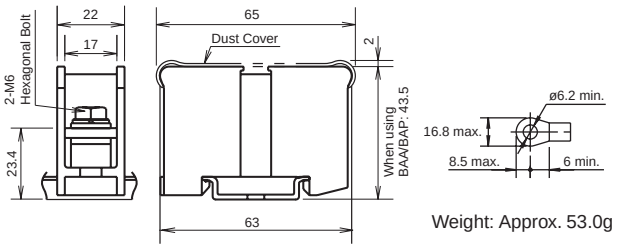
• BA411S



Weight: Approx. 23.4g

Standards		UL/CSA	JIS
Insulation Voltage		600V	600V
Rated Current ∗2		40A max.	70A
Dielectric Strength		2,500V AC, 1 minute	
Insulation Resistance		100 MΩ minimum	
Wire Size ∗1		16-6 AWG	14 mm²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)	
	Dust Cover	BNC320	
	Rail	BAP1000, BAA1000	
	See page	36	

• BA611S

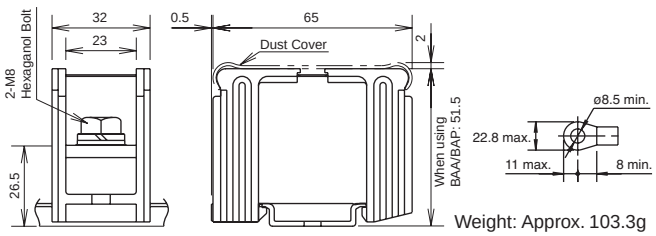


Weight: Approx. 53.0g

Socket wrench: 12.7 mm square drive hexagonal socket 10 ∗3

Insulation Voltage		600V
Rated Current ∗2		94A max.
Dielectric Strength		2,500V AC, 1 minute
Insulation Resistance		100 MΩ minimum
Wire Size		22 mm²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)
	Dust Cover	BNC520
	Rail	BAP1000, BAA1000
	See page	36

• BA711S



Weight: Approx. 103.3g

Socket wrench: 12.7 mm square drive hexagonal socket 13 ∗3

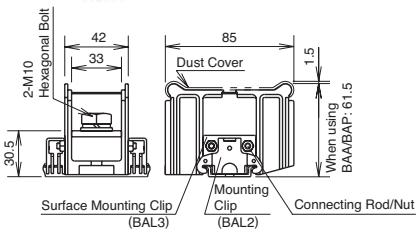
Insulation Voltage		600V
Rated Current ∗2		132A max.
Dielectric Strength		2,500V AC, 1 minute
Insulation Resistance		100 MΩ minimum
Wire Size		38 mm²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)
	Dust Cover	BNC520
	Rail	BAP1000, BAA1000
	See page	36

∗1: The wire size in ( ) does not comply with JIS standards.
∗2: The voltage/current differ according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: Screws can be tightened with a socket wrench.

• BA811S

Socket wrench: 12.7 mm square drive hexagonal socket 17

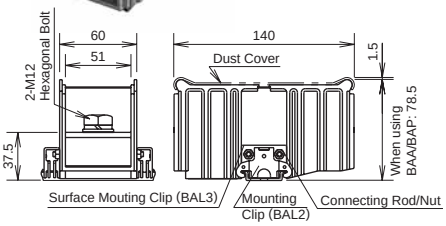
Weight: Approx. 185.0g



• BA911S

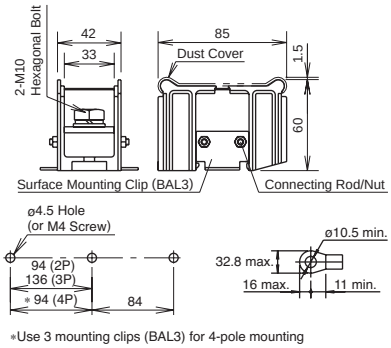
Socket wrench: 12.7 mm square drive hexagonal socket 19

Weight: Approx. 406.3g



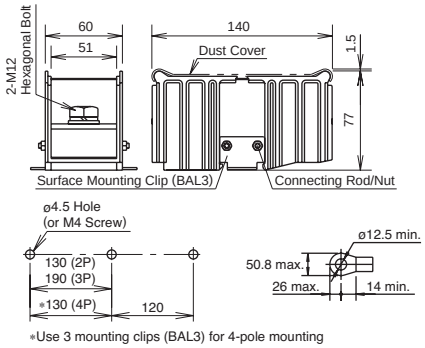
Type No.		BA811S	BA911S
Insulation Voltage		600V	
Rated Current ∗2		240A	370 (400A)
Dielectric Strength		2,500V AC, 1 minute	
Insulation Resistance		100MΩ minimum	
Wire Size		100 mm^2	200 mm^2 ∗1 (200 mm^2 2 wires) (325 mm^2 1 wire)
Terminal Screw		M10	M12
Accessories	Connecting Rod	BNR1, BNR2	
	Connecting Nut	BAN1	
	Mounting Clip/ Surface Mounting Clip	BAL2, BAL3	
	Marking Strip Width	9.5 mm (BNM7, BNM9)	
	Dust Cover	BAC820	BNC92
	Rail	BAP1000, BAA1000	
	See page	36	

Surface Mounting



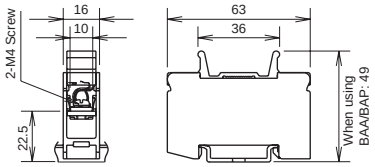
∗Use 3 mounting clips (BAL3) for 4-pole mounting

Surface Mounting

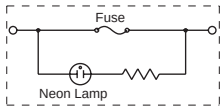


∗Use 3 mounting clips (BAL3) for 4-pole mounting

• BA911S□□□ (Fuse Type)



- BAF111SN is equipped with a neon lamp (for 100 or 200V AC) which turns on when the fuse is blown.
- Internal Connection



BAF111S (with fuse)/BAF111SN (with fuse/lamp)

Insulation Voltage		600V
Rated Current		10A max. (depends on fuse rating)
Dielectric Strength		2,500V AC, 1 minute
Insulation Resistance		100MΩ minimum
Wire Size		5.5 mm^2
Terminal Screw		M4
Accessories	Marking Strip Width	9.5mm (BNM7, BNM9)
	Dust Cover	—
	Rail	BAP1000, BAA1000
	See page	36

- Fuse ratings
  Rated voltage: 250V
  Rated current: 1, 3, 5A
  Cartridge fuse: 6.35×31.8 mm

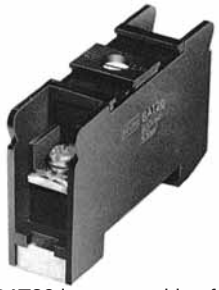
Type No.
BAF111S-1A
BAF111S-3A
BAF111S-5A
BAF111SN-1A
BAF111SN-3A
BAF111SN-5A

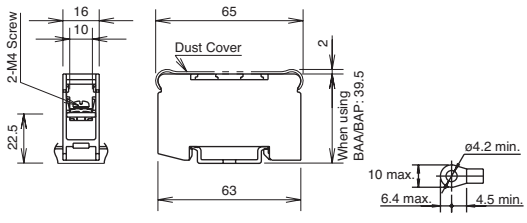
BAF111S (with fuse)/BAF111SN (without fuse/with lamp)

Insulation Voltage		600V
Rated Current		10A max. (depends on fuse rating)
Dielectric Strength		2,500V AC, 1 minute
Insulation Resistance		100 MΩ minimum
Wire Size		18-10 AWG
Terminal Screw		M4
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)
	Dust Cover	—
	Rail	BAP1000, BAA1000
	See page	36

- Use UL/CSA approved fuses (10A maximum)
- Fuse size 6.35×31.8 mm 6.40×30 mm

• BAT20 (With Disconnecting Switch)





Insulation Voltage		600V
Rated Current		20A
Dielectric Strength		2,500V AC, 1 minute
Insulation Resistance		100 MΩ minimum
Wire Size		5.5 mm^2 max.
Terminal Screw		M4
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9)
	Dust Cover	BNC520
	Rail	BAP1000, BAA1000
	See page	36

BAT20 is not capable of breaking circuits. Do not apply voltage when opening or closing the circuit. Turn the slot using a screwdriver.

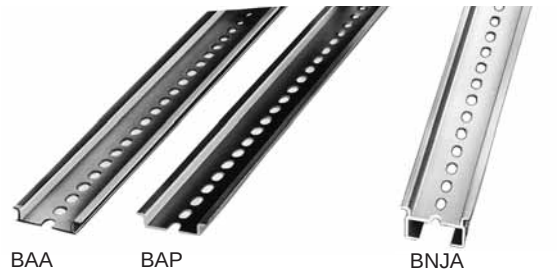
∗1: The wire size in ( ) does not comply with JIS standards.
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.

Accessories

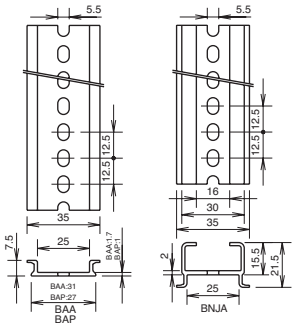
• Rails

DIN Rail 35-mm-wide

DIN Rail 35-mm + C30 Rail



BAA BAP BNJA



Length	Type No.	Ordering Type No.	Material	Weight (Approx.)	Package Quantity
1000 mm	BAA1000	BAA1000PN10	Aluminum	200g	10
	BAP1000	BAP1000PN10	Steel	320g	10
	BNJA1000	BNJA1000PN10	Aluminum	340g	10

Marking Strip (BNM Type)

Material	Type No.	Ordering Type No.	Package Quantity	Dimensions
PVC (glossy surface)	BNM7	BNM7PN10	10	9.5 × 0.5t × 1m
Fiber Glass (matte surface)	BNM9	BNM9PN10	10	9.5 × 0.5t × 1m
PVC (glossy surface)	BNM725	BNM725	1	9.5 × 0.5t × 25m

• Mounting Clip

Used on the ends of a group of terminal blocks to secure and prevent sliding along the rails.

BNL6 BAL2 BNL8

Weight: Approx. 25.2g

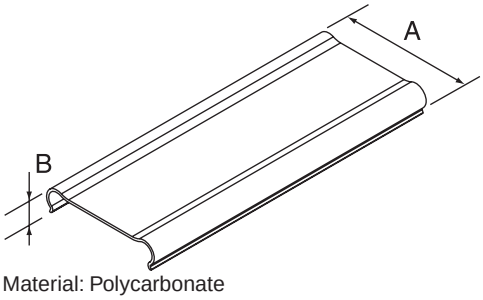
Material: Steel (zinc chrome-plated)

Type No.	Ordering Type No.	Package Quantity
BNL6	BNL6PN10	10
BNL8	BNL8PN10	10
BAL2	BAL2PN10	10

Notes on Selecting Mounting Clips

- When using BA611S, use BAL2 or BNL8. Also, when using BA711S, BA811S, BA911S of 100A or larger, use BAL2 or BNL8.
- When mounting rails vertically, use BAL2 or BNL8.

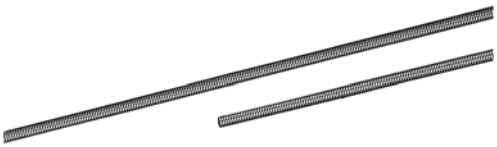
• Dust Cover



Material: Polycarbonate

Item	Type No.	Ordering Type No.	Size (mm)		Terminal Block	Package Quantity
			A	B		
Dust Cover (1m)	BNC220	BNC220PN10	37.6	8.5	BA111T, BA211T	10
	BNC230	BNC230PN10	39.6	8.5	BA311T	10
	BNC320	BNC320PN10	49.6	8.5	BA411S	10
	BNC520	BNC520PN10	65.0	9.0	BA611S, BA711S, BAT20	10
	BAC820	BAC820PN10	85.0	10.6	BA811S	10
Dust Cover (500 mm)	BNC92	BNC92PN10	140.5	9.8	BA911S	10

• Connecting Rod/Connecting Nut (For BA811S, BA911S)



BNR1: M4× 0.7 L = 265
BNR2: M4×0.7 L = 500

Nut M4×0.7

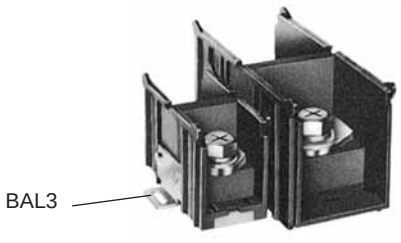
Item	Type No.	Ordering Type No.	Weight (Approx.)	Package Quantity	Remarks
Connecting Rod (265 mm)	BNR1	BNR1PN10	2.6g	10	M4×0.7
Connecting Rod (500 mm)	BNR2	BNR2PN10	43g	10	M4×0.7
Connecting Nut (4 pcs/set)	BAN1	BAN1PN10	2.5g	10	M4×0.7

• Surface Mounting Clip (For BA811S and BA911S Only)

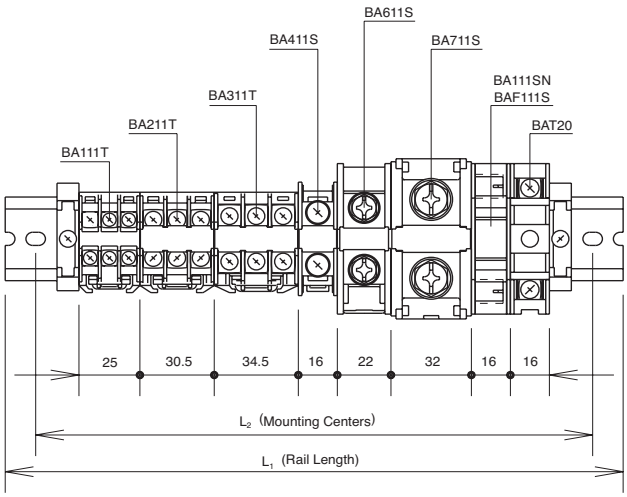
Used on the ends of groups of terminal blocks for direct mounting to panels.

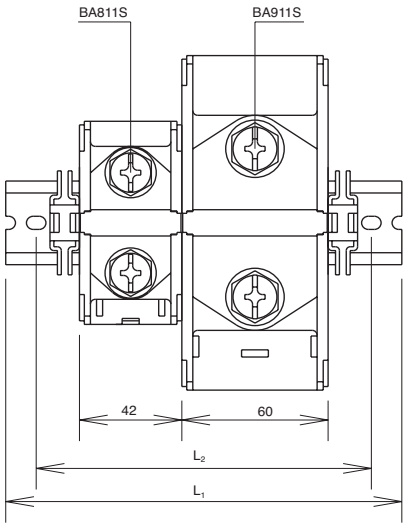
Material: Steel (zinc-chrome plated)

Type No.	Ordering Type No.	Weight (approx.)	Package Quantity
BAL3	BAL3PN10	12.4g	10



• Calculating Rail / Connecting Rod Length





• Calculating Rail Length

For BAA, BAP type rails

$L_1 = 12.5 \times N$

$L_2 = L_1 - 25$

A: Total thickness of each terminal block
B: Tolerance of stacking thickness
0.1 mm per block
C: Mounting Clip
When using 2 pieces of BNL6 or BAL2 = 62.5
N: Rounded up numerical number from the calculated value of M.
(Example: N for 19.1 is 20)

$$M = \frac{A + B + C}{12.5}$$

Note: This formula is for calculating the maximum rail length including tolerance. The rail length may be shorter than the calculated value, depending on how the terminal blocks are combined.

• Calculating Connecting Rod Length

$L = 42 \times n_1 + 60 \times n_2 + 10.2$

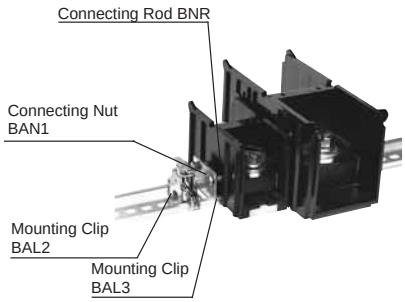
n_1: BA811S

n_2: BA911S

n: The number of terminal blocks

Instructions

Installation of BA811S and BA911S



• Rail Mount

1. Mount the terminal block on DIN rail.
2. Mount the surface mounting clips (BAL3) on both ends and slide 2 connecting rods (BNR) through the holes in the terminal blocks.
3. Tighten both ends of the connecting rod with a connecting nut (BAN1).
4. Secure the terminal blocks with mounting clips (BAL2).

• Surface Mount

1. Mount the terminal block to the panel.
2. Mount the surface mounting clips (BAL3) on both ends and slide 2 connecting rods (BNR) through the holes in the terminal blocks.
3. Tighten both ends of the connecting rod with connecting nuts (BAN1).
4. Secure the terminal blocks to the panel.

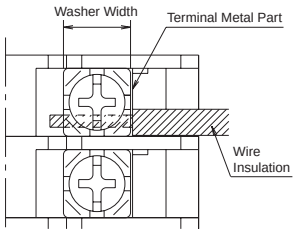
Notes on Wiring

Crimping Terminals

- When using crimping terminals, be sure to use insulated terminals to prevent electric shocks.

Without Crimping Terminals

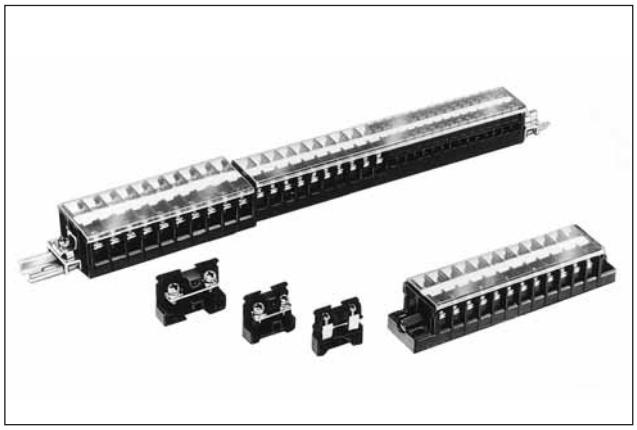
- Insert the wire until the insulation comes into contact with the terminal metal part.
- Strip the insulation so that the wire is longer than the width of the wire clamp.
- When connecting two wires, use wires of the same size.



BD Series Terminal Blocks

Space-saving miniature terminal blocks. Surface mount and DIN rail mount types available.

- Surface mount type terminal blocks available.
- Rail mount types can be mounted on 15-mm-wide DIN rails.
- BD8 rail mount type available in black or blue color.
- Flame-resistant plastic (UL94V-0).
- Complies with JIS C 2811.
- UL recognized and CSA certified.



UL1059
File No. E78117

CSA22.2 No.158
File No. LR64803

Rail Mount Type

Types

Terminal centers	Terminal Shape	Type No.	Ordering Type No.	Housing Color	Wire Size	Package Quantity
8 mm	M3 screw (self-lifting type)	BD8-RB	BD8-RBPN50	Black	1.25 mm^2 (2 mm^2 max.) ∗	50
		BD8-RS	BD8-RSPN50	Blue		50
	M3 screw / solder (self-lifting type)	BD8S-RB	BD8S-RBPN50	Black		50
		BD8S-RS	BD8S-RSPN50	Blue		50
7 mm	M3 screw (self-lifting type)	BD7-RB	BD7-RBPN50	Black		50
5 mm	M3 cage screw	BDK5-RB	BDK5-RBPN50	Black	1.25 mm^2	50

∗ The wire size in ( ) does not comply with JIS standards.

Accessories

Type No.	Accessories (Optional)					
	End Plate	Rail	Dust Cover	Marking Strip	Mounting Clip	Terminal Jumper
BD8-R	×	×	○	○	×	○
BD8S-R	×	×	○	○	×	○
BD7-RB	×	×	○	○	×	○
BDK5-RB	×	×	○	○	×	—
	44			45		
	Page					

×: Accessories needed when mounting terminal blocks. Order seperately.
○: Order if necessary.

- Dust cover and marking strip (fiber) is supplied with the terminal block.
- Order a jumper when necessary (see page 45).

Tightening Torque for Terminal Screw

For safe use of the terminal blocks, tighten the screw as shown below.

Terminal Screw	M3
Recommended Tightening Torque	0.6 to 1.0 N·m

Material

Parts Name	Material
Housing	Modified PPE
Terminal Metal Part	Brass (nickel-plated)
Terminal Metal Part (BD8S only)	Brass (tin-plated)
Terminal Screw	Steel (zinc chromate-plated)

Surface Mount Type

Types

Terminal centers	Terminal Shape	Type No. (□: No. of Poles)	Housing Color	No. of Poles	Wire Size
8 mm	M3 screw (self-lifting type)	BD8-MB□	Black	2 to 35	1.25 (2) mm^2 ∗
8 mm	M3 screw/solder (self-lifting type)	BD8S-MB□	Black	2 to 35	1.25 (2) mm^2 ∗
7 mm	M3 screw (self-lifting type)	BD7-MB□	Black	2 to 40	1.25 (2) mm^2 ∗
5 mm	M3 cage clamp	BDK5-MB□	Black	2 to 56	1.25 mm^2 ∗

∗ The rated applicable wire size is 1.25 mm^2, but 2 mm^2 wires can also be connected.

Ordering Information

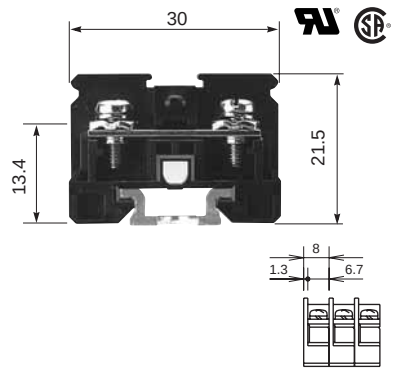
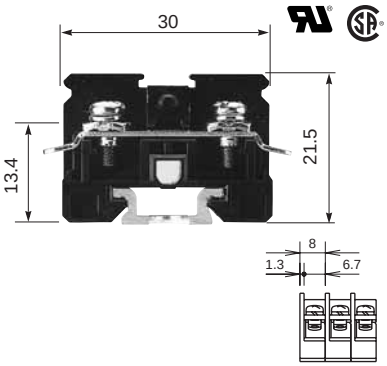
When ordering, specify the Type No. and the number of poles required. Dust covers and marking strips are supplied with terminal blocks.

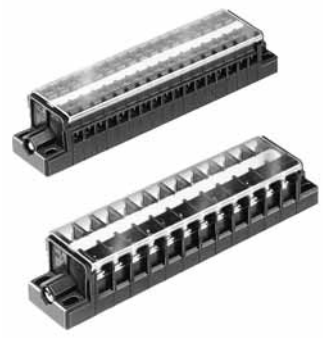
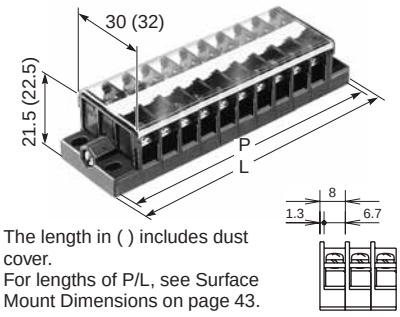
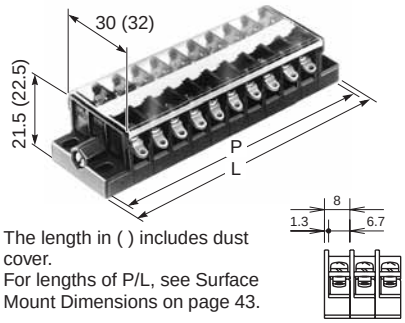
Material

Parts	Material
Housing	Modified PPE
Terminal Metal Part	Brass (nickel-plated)
Terminal Metal Part (BD8S)	Brass (tin-plated)
Terminal Screw	Steel (zinc chromate-plated)

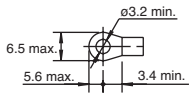
Accessories

- Dust covers and marking strips are supplied with the terminal block.
- Order jumpers if required (see page 42).

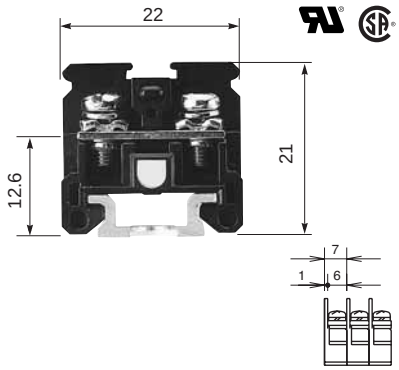
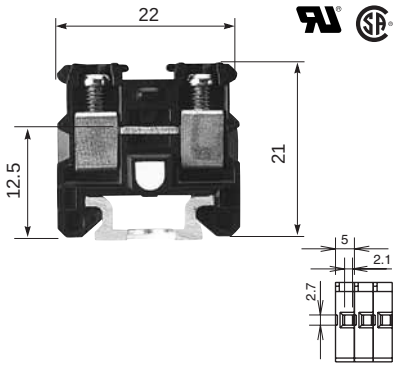
	Terminal Centers	8 mm Terminal Centers	
	Type No. (Specify a color code in place of ∗.)	**BD8-R∗ (Self-Lifting)**	**BD8S-R∗ (Screw / Solder)**
Rail Mount			

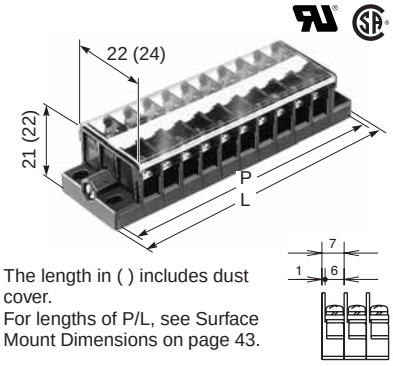
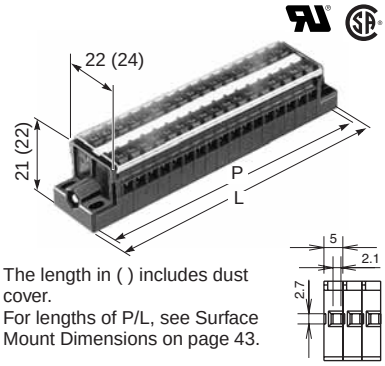
	Type No. (Specify the no. of poles in place of □.)	BD8-MB□ (Self-Lifting)	BD8S-MB□ (Screw / Solder)
Surface Mount		 The length in ( ) includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 43.	 The length in ( ) includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 43.

Specifications

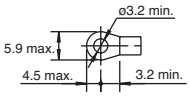
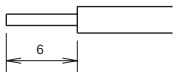
Standards			UL/CSA	JIS	UL/CSA	JIS
Ratings	Insulation Voltage		300V ∗1	380V	300V ∗1	250V
	Rated Current ∗2		15A	16A	15A	16A
	Dielectric Strength		2500V AC, 1 minute			
	Insulation Resistance		100 MΩ minimum			
	Operating Temperature		–25 to +55°C (no freezing)			
	Operating Humidity		45 to 85% RH (no condensation)			
	Wire Size		14-20 AWG (solid wire/ stranded wire)	1.25 mm^2 (2 mm^2 max) ∗3	14-20 AWG (solid wire/ stranded wire)	1.25 mm^2 (2 mm^2 max) ∗3
Others	Terminal Screw		M3			
	Crimping Terminal					
	Maximum No. of Crimping Terminals		2		1	
	Housing Color (color code)		Black (B), Blue (S). Only black available for surface mount terminal blocks			
	Weight		4.8g (per pole)			
Accessories	End Plate (for rail mount)		BDE11∗ (see page 44)			
	Rail (for rail mount)	15-mm-wide DIN Rail	BDA1000 (aluminum) (see page 44)			
			BDP1000 (steel) (see page 44)			
	Dust Cover		BDC1000 (see page 44)			
	Marking Strip	PVC (glossy surface)	BDM11 (see page 45)			
		Fiber Glass (matte surface)	BDM12 (see page 45)			
	Mounting Clip (for rail mount)		BDL11 (see page 44)			
	Jumper		BNJ26W, BNJ26WB, BNJ26FW, BNJ26FWB (see page 45)			

∗1: The rated voltage when power is applied is 250V under UL recognition. (Example: Office automation equipment, home electric appliances, facsimile, and other information processing equipment.)
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: The wire size in ( ) does not comply with JIS standards.
∗ Color code: B (black), S (blue)

Terminal Centers		7-mm Terminal Centers	5-mm Terminal Centers
Rail Mount	Type	BD7-RB (Self-Lifting)	BDK5-RB (Cage Clamp)
			

Surface Mount	Type No. (Specify the no. of poles in place of □)	BD7-MB□ (Self-Lifting)	BDK5-MB□ (Cage Clamp)
		 The length in ( ) includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 43.	 The length in ( ) includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 43.

Specifications

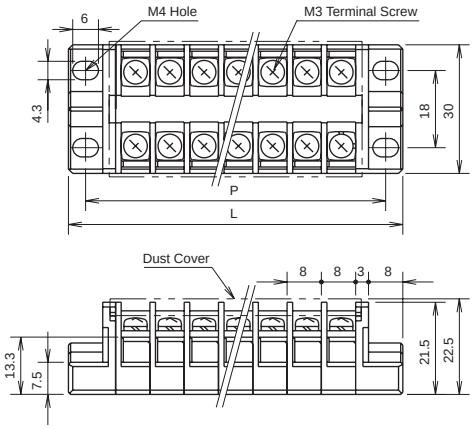
Standards			UL/CSA	JIS	UL/CSA	JIS
Ratings	Insulation Voltage		300V ∗1	250V	300V ∗1	250V
	Rated Current ∗2		10A	14A	10A	14A
	Dielectric Strength		2500V AC / 1 minute			
	Insulation Resistance		100 MΩ or more			
	Operating Temperature		–25 to +55°C (no freezing)			
	Operating Humidity		45 to 85% RH (no condensation)			
	Wire Size		16-20 AWG (solid wire/ stranded wire)	1.25 mm^2 (2 mm^2 max) ∗3	16-20AWG (solid wire)	1.25 mm^2
Others	Terminal Screw		M3			
	Crimping Terminal				Recommended stripping length of the wire cage 	
	Maximum No. of Crimping Terminals		2		1	
	Housing Color		Black			
	Weight (approx.)		3.6g (per pole)		3.4g (per pole)	
Accessories	End Plate (for rail mount)		BDE12B (see page 44)			
	Rail (for Rail Mount)	15-mm-wide DIN Rail	BDA1000 (aluminum) (see page 44)			
			BDP1000 (steel) (see page 44)			
	Dust Cover		BDC1000S (see page 44)			
	Marking Strip	PVC (smooth surface)	BNM8 (see page 45)			
		Fiber Glass (rough surface)	BNM10 (see page 45)			
	Mounting Clip (for rail mount)		BDL11 (see page 45)			
	Jumper		BDJ10, BDJ10B, BDJ10F, BDJ10FB (see page 45)		—	

∗1: The rated voltage when power is applied is 250V under UL recognition. (Example: Office automation equipment, home electric appliances, facsimile, and other information processing equipment.)
∗2: The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
∗3: The wire size in ( ) does not comply with JIS standards.

Panel Mount Dimensions

- L (Length of the terminal block) and P (mounting hole centers) are nominal dimensions for each terminal block. Because the terminal blocks are combined together with bolts, there may be differences in the dimensions depending on the number of poles combined.

BD8-MB□ (8-mm Terminal Centers)



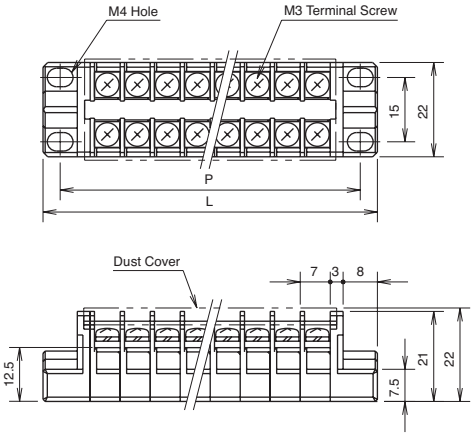
• Dimensions L and P (mm)

No. of Poles	2	3	4	5	6	8	10	12	14	15
L	37.9	45.85	53.8	61.75	69.7	85.6	101.5	117.4	133.3	141.25
P	29.9	37.85	45.8	53.75	61.7	77.6	93.5	109.4	125.3	133.25

No. of Poles	16	18	20	25	30	35	Calculation Formula
L	149.2	165.1	181	220.75	260.5	300.3	$L = 22 + (7.95n)^{\pm 0.5}$
P	141.2	157.1	173	212.75	252.5	292.3	$P = 14 + (7.95n)^{\pm 0.5}$

Weight (per pole): 4.8g (BD8)
n = number of poles

BD7-MB□ (7-mm Terminal Centers)



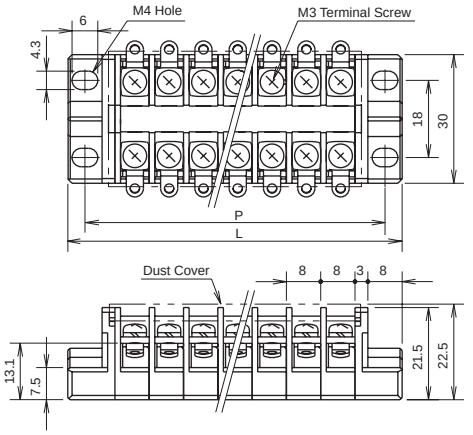
• Dimensions L and P (mm)

No. of Poles	2	3	4	5	6	8	10	12	14	15
L	35.8	42.7	49.6	56.5	63.4	77.2	91	104.8	118.6	125.5
P	27.8	34.7	41.6	48.5	55.4	69.2	83	96.8	110.6	117.5

No. of Poles	16	18	20	25	30	35	40	Calculation Formula
L	132.4	146.2	160	194.5	229	263.5	298	$L = 22 + (6.9n)^{\pm 0.5}$
P	124.4	138.2	152	186.5	221	255.5	290	$P = 14 + (6.9n)^{\pm 0.5}$

Weight (per pole): 3.6g (BD7)
n = number of poles

BD8S-MB□ (8-mm Terminal Centers)



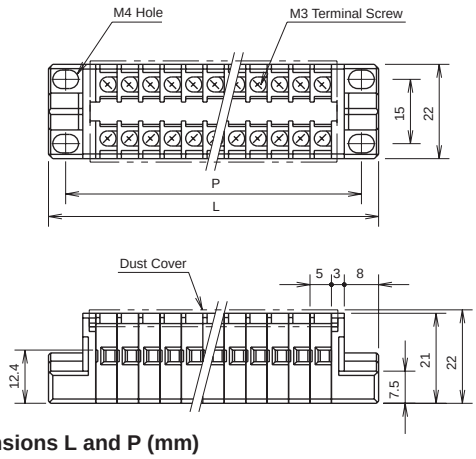
• Dimensions L and P (mm)

No. of Poles	2	3	4	5	6	8	10	12	14	15
L	37.9	45.85	53.8	61.75	69.7	85.6	101.5	117.4	133.3	141.25
P	29.9	37.85	45.8	53.75	61.7	77.6	93.5	109.4	125.3	133.25

No. of Poles	16	18	20	25	30	35	Calculation Formula
L	149.2	165.1	181	220.75	260.5	300.3	$L = 22 + (7.95n)^{\pm 0.5}$
P	141.2	157.1	173	212.75	252.5	292.3	$P = 14 + (7.95n)^{\pm 0.5}$

Weight (per pole): 4.8g (BD8)
n = number of poles

BDK5-MB□ (5-mm Terminal Centers)



• Dimensions L and P (mm)

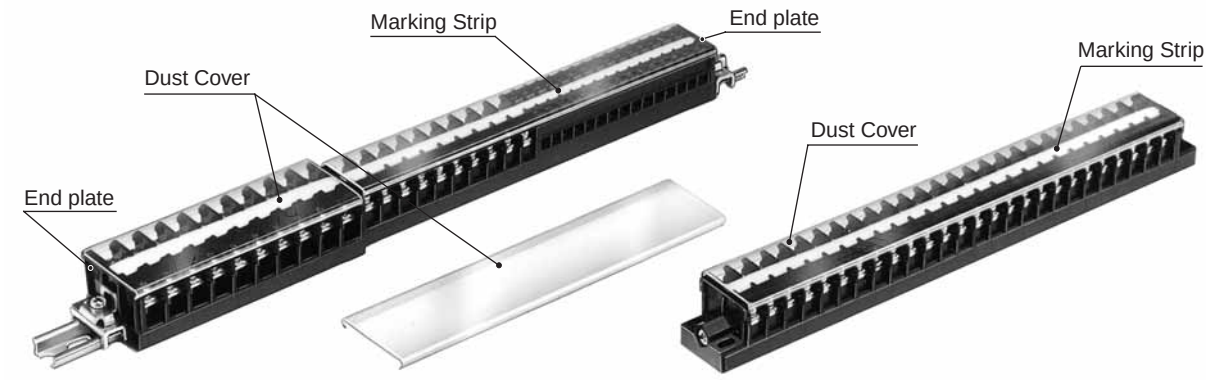
No. of Poles	2	3	4	5	6	8	10	12	14	15
L	31.9	36.9	41.8	46.8	51.7	61.6	71.5	81.4	91.3	96.3
P	23.9	28.9	33.8	38.8	43.7	53.6	63.5	73.4	83.3	88.3

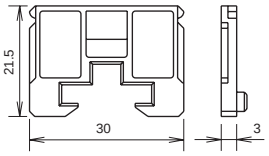
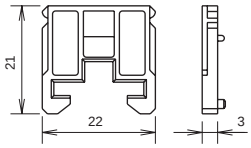
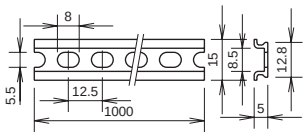
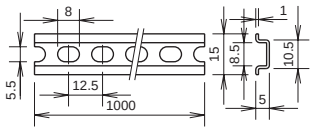
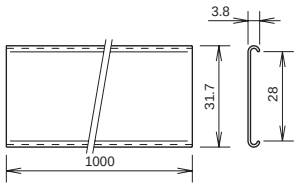
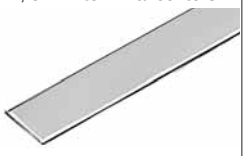
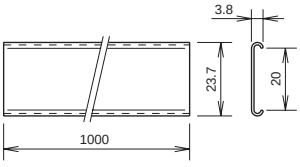
No. of Poles	16	18	20	25	30	35	40	45	50	51
L	101.2	111.1	121	145.8	170.5	195.3	220	244.8	269.5	274.5
P	93.2	103.1	113	137.8	162.5	187.3	212	236.8	261.5	266.5

No. of Poles	52	53	54	55	56	Calculation Formula
L	279.4	284.35	289.3	294.25	299.2	$L = 22 + (4.95n)^{\pm 0.5}$
P	271.4	276.35	281.3	286.25	291.2	$P = 14 + (4.95n)^{\pm 0.5}$

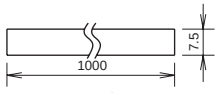
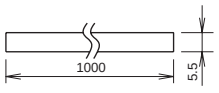
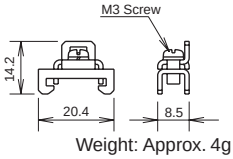
Weight (per pole): 3.4g (BDK5)
n = number of poles

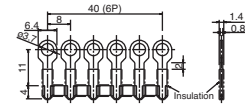
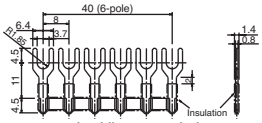
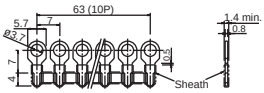
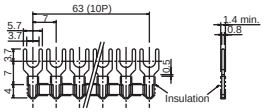
Accessories



	Appearance		Type No.	Ordering Type No.	Package Quantity	Dimensions	Remarks
End Plate	8-mm terminal centers  Material: Modified PPE	Black	BDE11B	BDE11BPN10	10		• Used for ends of terminal blocks. For use on: BD8-R∗ BD8S-R∗ • Weight: 1g
		Blue	BDE11S	BDE11SPN10			
	7-mm, 5-mm terminal centers  Material: Modified PPE	Black	BDE12B	BDE12BPN10	10		• Used for ends of terminal blocks. For use on: BD7-RB BDK5-RB • Weight: 1g
Rail	DIN Rail 15-mm wide Aluminum, Length: 1m 	BDA1000		BDA1000PN10	10		• DIN rail for mounting terminal blocks. For use on: BD8-R∗ BD8S-R∗ BD7-RB BDK5-RB
	DIN Rail 15-mm wide Steel, Length: 1m 	BDP1000		BDP1000PN10	10		
Dust Cover	8-mm terminal centers  Polycarbonate, Length: 1m	BDC1000		BDC1000PN10	10		• Transparent plastic cover for terminal blocks. For use on: BD8-R∗ BD8-MB☐ BD8S-R∗ BD8S-MB☐
	7-mm, 5-mm terminal centers  Polycarbonate, Length: 1m	BDC1000S		BDC1000SPN10	10		• Transparent plastic cover for terminal blocks. For use on: BD7-RB∗ BD7-MB☐ BDK5-RB∗ BDK5-MB☐

Specify the color code in place of ∗. B (black), S (blue)
☐: Number of poles

Appearance		Material	Type No.	Ordering Type No.	Package Quantity	Dimensions (mm)	Terminal Block
Making Strip	8-mm terminal centers 	PVC (glossy surface)	BDM11	BDM11PN10	10		BD8-R∗ BD8-MB☐ BD8S-R∗ BD8S-MB☐
		Fiber glass (matte surface)	BDM12	BDM12PN10	10		
	7-mm, 5-mm terminal centers 	PVC (glossy surface)	BNM8	BNM8PN10	10		BD7-RB BD7-MB☐ BDK5-RB BDK5-MB☐
		Fiber glass (matte surface)	BNM10	BNM10PN10	10		
Mounting Clip		Steel (zinc-plated)	BDL11	BDL11PN10	10	 Weight: Approx. 4g	BD8-R∗ BD8S-R∗ BD7-RB BDK5-RB

Description			Type No.	Ordering Type No.	Dimensions	Rated Current	Package Quantity	Applicable Terminal Block
Jumper	8-mm Terminal Centers Material: Brass (nickel-plated)	Ring	BNJ26W	BNJ26WPN10	 Dashed lines: Insulation	20A	10	BD8-R∗ BD8-MB☐ BD8S-R∗ BD8S-MB☐
			BNJ26WB Insulation: PVC	BNJ26WBPN10			10	
		Fork	BNJ26FW	BNJ26FWPN10	 Dashed lines: Insulation	20A	10	
			BNJ26FWB Insulation: PVC	BNJ26FWBPN10			10	
	For 10-pole 7-mm Terminal Centers Material: Brass (nickel-plated)	Ring	BDJ10	BDJ10PN10	 Dashed lines: Insulation	10A	10	BD7-RB BD7-MB☐
			BDJ10B Insulation: PVC	BDJ10BPN10			10	
		Fork	BDJ10F	BDJ10FPN10	 Dashed lines: Insulation	10A	10	
			BDJ10FB Insulation: PVC	BDJ10FBPN10			10	

Calculating the Rail Length (When the same type terminal block is mounted)

• BDA and BDP Rails

$L_1 = 12.5 \times N$

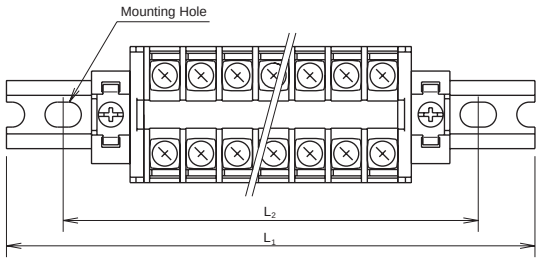
$L_2 = L_1 - 25$

N: Rounded up numerical number from the calculated value of M.
(Example: N for 19.1 is 20)

$$M = \frac{(A + 0.1)\, n + 68.5}{12.5}$$

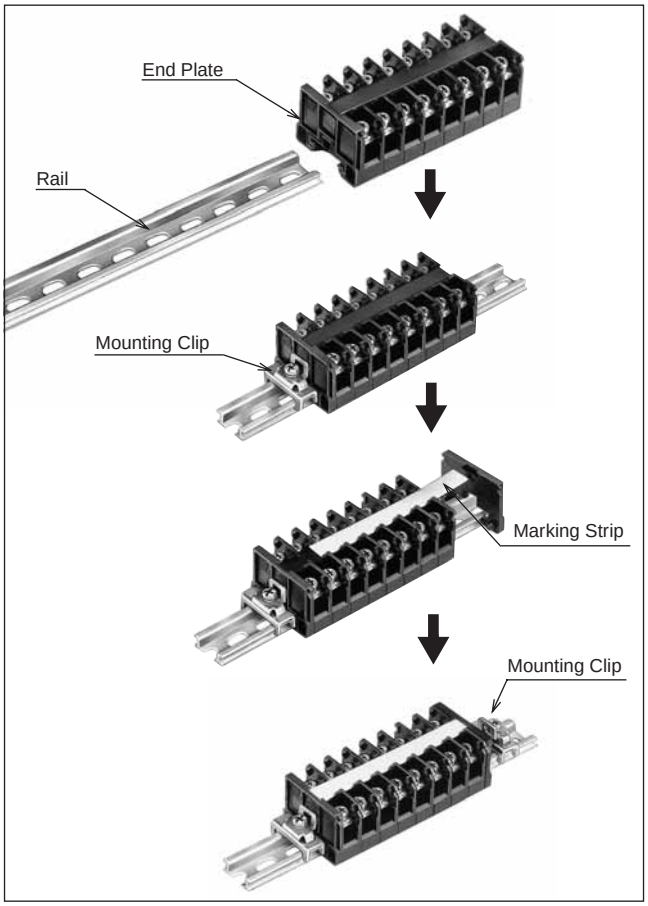
A: Thickness of each terminal block
n: The number of terminal blocks

Note: This formula is for calculating the maximum rail length including tolerance. Depending on the combination of terminal blocks, the required rail length may be shorter than the calculated value, particularly when many terminal blocks are combined.



Instructions

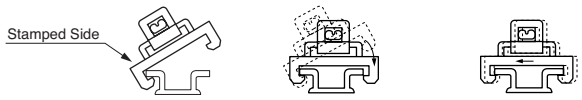
Installation of Rail Mount Terminal Blocks



• When using DIN Rail

1. Determine the length of the DIN rail according to the width of the terminal blocks.
2. Assemble the terminal blocks with an end plate on one side, and then install them onto the DIN rail. (When mounting BD8, BD7, and BDK5 series on the same DIN rail, use end plates at the end of assemblies of each series.
3. Install a mounting clip (BDL11) so that the terminal blocks are mounted in the center of the DIN rail. See “Installing the mounting clip” below.
4. Insert the marking strip and fasten with another end plate.
5. Install the marking clip (BDL11) on the other end of the terminal block
6. Cover the terminal block with the dust cover.

• Installing the mounting clip



Hook the stamped side of the mounting clip on the DIN rail.

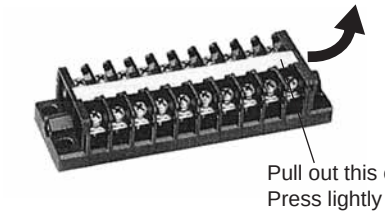
Push the mounting clip on the DIN rail.

Slide the mounting clip to the stamped side and tighten the screw.

Installing and Removing the Marking Strip

When removing the marking strip, pull out the end of the marking strip with the tip of a screwdriver.

To install, insert the marking strip into the terminal block from one end and press in the other end of the marking strip.



Pull out this end.
Press lightly to insert.

Installing Surface Mount Terminal Blocks

To install surface mount terminal blocks, use four screws and tighten four corners of the terminal blocks to a torque of 1.0 N·m maximum.

For screw types and tightening torque, see the table below.
See page 43 for mounting hole dimensions.

Screw Size (For BD8)	Screw Size (For BD/BDK5)	Tightening Torque
M4 screw only	—	1.0 N·m maximum
M4 screw + M4 plain washer	M3 screw + M3 plain washer	
	M3.5 screw + M3.5 plain washer	
M4 screw + M4 plain washer + M4 spring washer	M3 screw + M3 plain washer+ M3 spring washer	
	M3.5 screw + M3.5 plain washer + M3.5 spring washer	

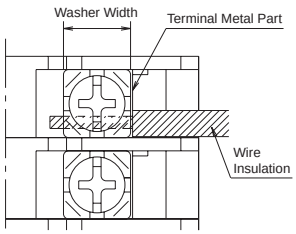
Notes on Wiring

Crimping Terminals

• When using crimping terminals, be sure to use insulated terminals to prevent electric shocks.

Without Crimping Terminals

• Insert the wire until the insulation comes into contact with the terminal metal part.
• Strip the insulation so that the wire is longer than the width of the wire clamp.
• When connecting two wires, use wires of the same size.



BTB/BTBH Series Surface Mount Terminal Blocks

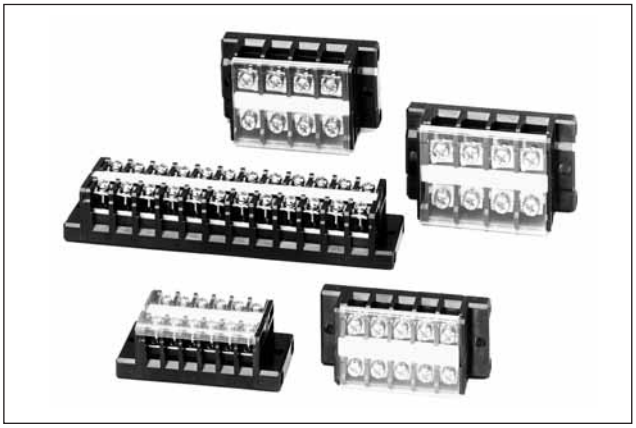
Surface mount terminal blocks with 2 to 30 poles. Touch-down terminals reduce wiring time.

- Self-lifting (BTB series) and touch down terminal (BTBH) types available.
- Flame-resistant plastic (UL94V-0).
- Terminal blocks can be easily combined and all poles can be secured with a pair of connecting rods and nuts.
- Complies with JIS C 2811.
- UL recognized and CSA certified.

UL1059
File No. E78117

CSA22.2 No.158
File No. LR64803

EN60947-1
EN60947-7-1
License No. R9551515



General Specifications

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100 MΩ minimum
Operating Temperature	–25 to +55°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

Material

Parts Name	Material
Housing	Modified PPE
Bus Bar	Brass (nickel-plated)
Terminal Screw	Steel (zinc chrome-plated)
Connecting Rod/Nut	Steel (zinc chrome-plated)
Dust Cover	Polycarbonate

Ratings and Terminal Screw Tightening Torque

Type		Type No.	UL/CSA		EN		JIS		Terminal Screw	Tightening Torque
			Voltage/Current	Wire Size (AWG)	Voltage/Current	Wire Size (AWG)	Voltage/Current	Wire Size (mm^2)		
BTB	Self-lifting	BTB15C☐	300V/10A max.	22-14	500V/22A	2 (18-14)	600V/16A	1.25 (2 max.) ∗	M3	0.6 to 1.0
		BTB15LC☐	300V/15A max.	22-12	500V/22A	2 (18-14)	600V/21A	2	M3.5	1.0 to 1.3
		BTB30C☐	300V/30A max.	18-10	500V/38A	5.5 (14-10)	600V/40A	5.5	M4	1.4 to 2.0
		BTB50C☐	600V/50A max.	16-6	500V/67A	14 (10 -6)	600V/70A	14	M5	2.6 to 3.7
BTBH	Touch-down	BTBH15C☐	300V/10A max.	22-14	500V/22A	2 (18-14)	600V/16A	1.25 (2 max.) ∗	M3	0.6 to 1.0
		BTBH15LC☐	300V/15A max.	22-14	500V/22A	2 (18-14)	600V/21A	2	M3.5	1.0 to 1.3
		BTBH30C☐	300V/30A max.	18-10	500V/38A	5.5 (14-10)	600V/40A	5.5	M4	1.4 to 2.0
		BTBH50C☐	600V/50A max.	16-6	500V/67A	14 (10-6)	600V/70A	14	M5	2.6 to 3.7

∗ The wire size in ( ) does not comply with JIS standards.
The rated current differs according to operating conditions. See “Selecting Terminal Blocks by Current According to JIS Standards” on page 4.
Specify the number of poles in place of ☐.

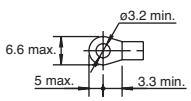
BTB15C/BTBH15C

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTB15C (Self-lifting terminal)	2	BTB15C2	1
	3	BTB15C3	1
	4	BTB15C4	1
	5	BTB15C5	1
	6	BTB15C6	1
	7	BTB15C7	1
	8	BTB15C8	1
	9	BTB15C9	1
	10	BTB15C10	1
	11	BTB15C11	1
	12	BTB15C12	1
	13	BTB15C13	1
	14	BTB15C14	1
	15	BTB15C15	1
	16	BTB15C16	1
	17	BTB15C17	1
	18	BTB15C18	1
	19	BTB15C19	1
	20	BTB15C20	1
	21	BTB15C21	1
	22	BTB15C22	1
	23	BTB15C23	1
	24	BTB15C24	1
	25	BTB15C25	1
	26	BTB15C26	1
	27	BTB15C27	1
	28	BTB15C28	1
	29	BTB15C29	1
	30	BTB15C30	1

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTBH15C (Touch-down terminal)	2	BTBH15C2	1
	3	BTBH15C3	1
	4	BTBH15C4	1
	5	BTBH15C5	1
	6	BTBH15C6	1
	7	BTBH15C7	1
	8	BTBH15C8	1
	9	BTBH15C9	1
	10	BTBH15C10	1
	11	BTBH15C11	1
	12	BTBH15C12	1
	13	BTBH15C13	1
	14	BTBH15C14	1
	15	BTBH15C15	1
	16	BTBH15C16	1
	17	BTBH15C17	1
	18	BTBH15C18	1
	19	BTBH15C19	1
	20	BTBH15C20	1
	21	BTBH15C21	1
	22	BTBH15C22	1
	23	BTBH15C23	1
	24	BTBH15C24	1
	25	BTBH15C25	1
	26	BTBH15C26	1
	27	BTBH15C27	1
	28	BTBH15C28	1
	29	BTBH15C29	1
	30	BTBH15C30	1

Note: Dust covers and marking strips are supplied with the terminal block.

Specifications

	BTB15C/BTBH15C		
Standards	UL/CSA	EN	JIS
Insulation Voltage	300V	500V	600V
Wire Size	22-14 AWG	2 mm^2 (18-14 AWG)	1.25 mm^2 (2 mm^2 max) ∗
Rated Current	10A max.	22A	16A
Terminal screw	M3		
Crimping Terminal	1.25-3 (2-3)		
Max. No. of Crimping Terminals	2		
Tightening Torque	0.6 to 1.0 N·m		
Crimping Terminal Dimensions (mm)			
Accessory: Jumper	BNJ36, BNJ36B, BNJ36F, BNJ36FB (see page 53)		

∗ The rated applicable wire size is 1.25 mm^2, but 2 mm^2 wires can also be connected.

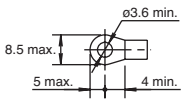
BTB15LC/BTBH15LC

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTB15LC (Self-lifting terminal)	2	BTB15LC2	1
	3	BTB15LC3	1
	4	BTB15LC4	1
	5	BTB15LC5	1
	6	BTB15LC6	1
	7	BTB15LC7	1
	8	BTB15LC8	1
	9	BTB15LC9	1
	10	BTB15LC10	1
	11	BTB15LC11	1
	12	BTB15LC12	1
	13	BTB15LC13	1
	14	BTB15LC14	1
	15	BTB15LC15	1
	16	BTB15LC16	1
	17	BTB15LC17	1
	18	BTB15LC18	1
	19	BTB15LC19	1
	20	BTB15LC20	1
	21	BTB15LC21	1
	22	BTB15LC22	1
	23	BTB15LC23	1
	24	BTB15LC24	1
	25	BTB15LC25	1
	26	BTB15LC26	1
	27	BTB15LC27	1
	28	BTB15LC28	1
	29	BTB15LC29	1
	30	BTB15LC30	1

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTBH15LC (Touch-down terminal)	2	BTBH15LC2	1
	3	BTBH15LC3	1
	4	BTBH15LC4	1
	5	BTBH15LC5	1
	6	BTBH15LC6	1
	7	BTBH15LC7	1
	8	BTBH15LC8	1
	9	BTBH15LC9	1
	10	BTBH15LC10	1
	11	BTBH15LC11	1
	12	BTBH15LC12	1
	13	BTBH15LC13	1
	14	BTBH15LC14	1
	15	BTBH15LC15	1
	16	BTBH15LC16	1
	17	BTBH15LC17	1
	18	BTBH15LC18	1
	19	BTBH15LC19	1
	20	BTBH15LC20	1
	21	BTBH15LC21	1
	22	BTBH15LC22	1
	23	BTBH15LC23	1
	24	BTBH15LC24	1
	25	BTBH15LC25	1
	26	BTBH15LC26	1
	27	BTBH15LC27	1
	28	BTBH15LC28	1
	29	BTBH15LC29	1
	30	BTBH15LC30	1

Note: Dust covers and marking strips are supplied with the terminal block.

Specifications

	BTB15LC/BTBH15LC		
Standards	UL/CSA	EN	JIS
Insulation Voltage	300V	500V	600V
Wire Size	22-14 AWG	2 mm^2 (18-14 AWG)	2 mm^2
Rated Current	15A	22A	21A
Terminal screw	M3.5		
Crimping Terminal	2-3.5		
Max. No. of Crimping Terminals	2		
Tightening Torque	1.0 to 1.3 N·m		
Crimping Terminal Dimensions (mm)			
Accessory: Jumper	BNJ46, BNJ46B, BNJ46F, BNJ46FB (see page 53)		

BTB30C/BTBH30C

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTB30C (Self-lifting terminal)	2	BTB30C2	1
	3	BTB30C3	1
	4	BTB30C4	1
	5	BTB30C5	1
	6	BTB30C6	1
	7	BTB30C7	1
	8	BTB30C8	1
	9	BTB30C9	1
	10	BTB30C10	1
	11	BTB30C11	1
	12	BTB30C12	1
	13	BTB30C13	1
	14	BTB30C14	1
	15	BTB30C15	1
	16	BTB30C16	1
	17	BTB30C17	1
	18	BTB30C18	1
	19	BTB30C19	1
	20	BTB30C20	1
	21	BTB30C21	1
	22	BTB30C22	1
	23	BTB30C23	1
	24	BTB30C24	1
	25	BTB30C25	1
	26	BTB30C26	1
	27	BTB30C27	1
	28	BTB30C28	1
	29	BTB30C29	1
	30	BTB30C30	1

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTBH15C (Touch-down terminal)	2	BTBH30C2	1
	3	BTBH30C3	1
	4	BTBH30C4	1
	5	BTBH30C5	1
	6	BTBH30C6	1
	7	BTBH30C7	1
	8	BTBH30C8	1
	9	BTBH30C9	1
	10	BTBH30C10	1
	11	BTBH30C11	1
	12	BTBH30C12	1
	13	BTBH30C13	1
	14	BTBH30C14	1
	15	BTBH30C15	1
	16	BTBH30C16	1
	17	BTBH30C17	1
	18	BTBH30C18	1
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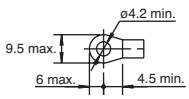
	20	BTBH30C20	1
	21	BTBH30C21	1
	22	BTBH30C22	1
	23	BTBH30C23	1
	24	BTBH30C24	1
	25	BTBH30C25	1
	26	BTBH30C26	1
	27	BTBH30C27	1
	28	BTBH30C28	1
	29	BTBH30C29	1
	30	BTBH30C30	1

Note: Dust covers and marking strips are supplied with the terminal block.

Specifications

	BTB30C/BTBH30C		
Standards	UL/CSA	EN	JIS
Insulation Voltage	300V	500V	600V
Wire Size	18-10 AWG	5.5 mm^2 (14-10 AWG)	5.5 mm^2
Rated Current	30A max.	38A	40A
Terminal screw	M4		
Crimping Terminal	1.25-4 to 5.5-4		
Max. No. of Crimping Terminals	2		
Tightening Torque	1.4 to 2.0 N·m		
Crimping Terminal Dimensions (mm)			
Accessory: Jumper	BNJ56, BNJ56B, BNJ56F, BNJ56FB (see page 53)		

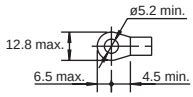
BTB50C/BTBH50C

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTB50C (Self-lifting terminal)	2	BTB50C2	1
	3	BTB50C3	1
	4	BTB50C4	1
	5	BTB50C5	1
	6	BTB50C6	1
	7	BTB50C7	1
	8	BTB50C8	1
	9	BTB50C9	1
	10	BTB50C10	1
	11	BTB50C11	1
	12	BTB50C12	1
	13	BTB50C13	1
	14	BTB50C14	1
	15	BTB50C15	1
	16	BTB50C16	1
	17	BTB50C17	1
	18	BTB50C18	1
	19	BTB50C19	1
	20	BTB50C20	1

Type	No. of Poles	Type No. (Ordering Type No.)	Package Quantity
BTBH50C (Touch-down terminal)	2	BTBH50C2	1
	3	BTBH50C3	1
	4	BTBH50C4	1
	5	BTBH50C5	1
	6	BTBH50C6	1
	7	BTBH50C7	1
	8	BTBH50C8	1
	9	BTBH50C9	1
	10	BTBH50C10	1
	11	BTBH50C11	1
	12	BTBH50C12	1
	13	BTBH50C13	1
	14	BTBH50C14	1
	15	BTBH50C15	1
	16	BTBH50C16	1
	17	BTBH50C17	1
	18	BTBH50C18	1
	19	BTBH50C19	1
	20	BTBH50C20	1

Note: Dust cover and marking strips are supplied with the terminal block.

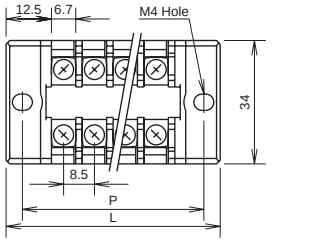
Specifications

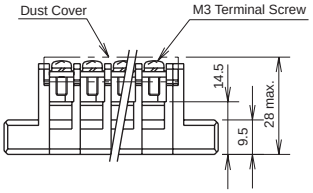
	BTB50C/BTBH50C		
Standards	UL/CSA	EN	JIS
Insulation Voltage	600V	500V	600V
Wire Size	16-6 AWG	14 mm^2 (10-6 AWG)	14 mm^2
Rated Current	50A max.	67A	70A
Terminal screw	M5		
Crimping Terminal	1.25-5 to 14-5		
Max. No. of Crimping Terminals	2		
Tightening Torque	2.6 to 3.7 N·m		
Crimping Terminal Dimensions (mm)			

Dimensions

• L (Length of the terminal block) and P (mounting hole centers) are nominal dimensions for each terminal block. Because the terminal blocks are combined together with bolts, there may be differences in the dimensions depending on the number of poles combined.

BTB15C□/BTBH15C□ (8.5-mm Terminal Centers)





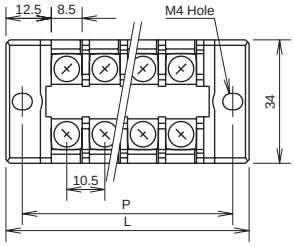
• Dimensions L and P (mm)

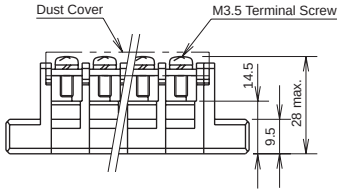
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	42	50.5	59	67.5	76	84.5	93	101.5	110	118.5	127	135.5	144	152.5	161
P	33	41.5	50	58.5	67	75.5	84	92.5	101	109.5	118	126.5	135	143.5	152

No. of Poles	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—
L	169.5	178	186.5	195	203.5	212	220.5	229	237.5	246	254.5	263	271.5	280	—
P	160.5	169	177.5	186	194.5	203	211.5	220	228.5	237	245.5	254	262.5	271	—

Weight (per pole) BTB15: Approx. 9g
BTBH15: Approx. 10g

BTB15LC□/BTBH15LC□ (10.5-mm Terminal Centers)





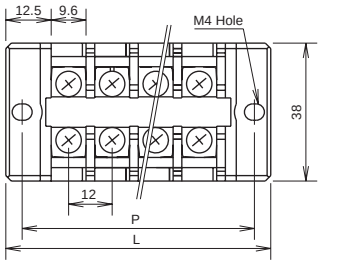
• Dimensions L and P (mm)

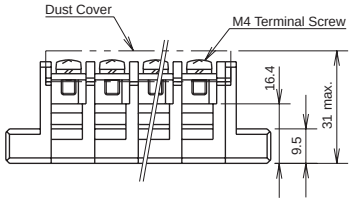
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193
P	37	47.5	58	68.5	79	89.5	100	110.5	121	131.5	142	152.5	163	173.5	184

No. of Poles	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—
L	203.5	214	224.5	235	245.5	256	266.5	277	287.5	298	308.5	319	329.5	340	—
P	194.5	205	215.5	226	236.5	247	257.5	268	278.5	289	299.5	310	320.5	331	—

Weight (per pole) BTB15L: Approx. 12g
BTBH15L: Approx. 13g

BTB30C□/ BTBH30C□ (12-mm Terminal Centers)





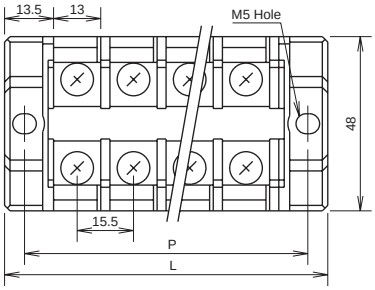
• Dimensions L and P (mm)

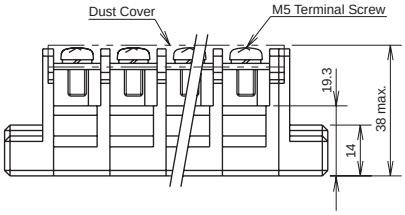
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	49	61	73	85	97	109	121	133	145	157	169	181	193	205	217
P	40	52	64	76	88	100	112	124	136	148	160	172	184	196	208

No. of Poles	17	18	19	20	21	22	23	24	25	26	27	28	29	30	—
L	229	241	253	265	277	289	301	313	325	337	349	361	373	385	—
P	220	232	244	256	268	280	292	304	316	328	340	352	364	376	—

Weight (per pole) BTB30: Approx. 20g
BTBH30: Approx. 22g

BTB50C□/BTBH50C□ (15.5-mm Terminal Centers)





• Dimensions L and P (mm)

No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	58	73.5	89	104.5	120	135.5	151	166.5	182	197.5	213	228.5	244	259.5	275
P	47	62.5	78	93.5	109	124.5	140	155.5	171	186.5	202	217.5	233	248.5	264

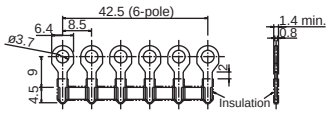
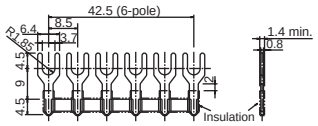
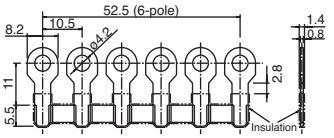
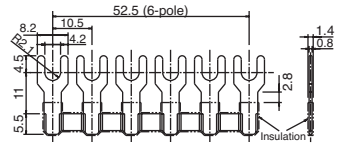
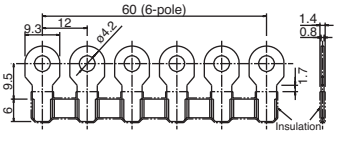
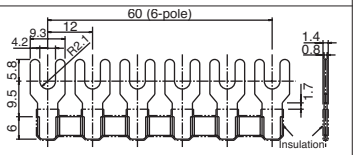
No. of Poles	17	18	19	20
L	290.5	306	321.5	337
P	279.5	295	310.5	326

Weight (per pole) BTB50: Approx. 35g
BTBH50: Approx. 40g

Accessories

The dust cover and marking strip (fiber) are supplied with the product.

• **Jumpers for 6 Poles** (Material: Brass, Plating: Nickel, Insulation: PVC)

Terminal Center	Shape	Insulation	Type No.	Ordering Type No.	Dimensions (mm)	Rated Current	Package Quantity	Applicable Terminal Block
8.5 mm	Ring	Without	BNJ36	BNJ36PN10		20A	10	BTB15 BTBH15
		With	BNJ36B	BNJ36BPN10				
	Fork	Without	BNJ36F	BNJ36FPN10				
		With	BNJ36FB	BNJ36FBPN10				
10.5 mm	Ring	Without	BNJ46	BNJ46PN10		20A	10	BTB15L BTBH15L
		With	BNJ46B	BNJ46BPN10				
	Fork	Without	BNJ46F	BNJ46FPN10				
		With	BNJ46FB	BNJ46FBPN10				
12 mm	Ring	Without	BNJ56	BNJ56PN10		30A	10	BTB30 BTBH30
		With	BNJ56B	BNJ56BPN10				
	Fork	Without	BNJ56F	BNJ56FPN10				
		With	BNJ56FB	BNJ56FBPN10				

Notes: Jumpers for more than 6 poles are not available.

• **Marking Strip (Supplied with the terminal block. Order as spare parts when necessary)**

Applicable Terminal Block	Type No.	Ordering Type No.	Material	Size	Package Quantity
BTB/BTBH (all types)	BNM9	BNM9PN10	Fiber strip (matte surface)	1000 mm × 9.5 mm × 0.5 mm	10

• **Dust Cover (Supplied with the terminal block. Order as spare parts when necessary)**

Applicable Terminal Block	Ordering Type No.	Material	Length	Package Quantity
BTB15C/BTBH15C BTB15LC/BTBH15LC	BTB-CV15L1	Polycarbonate	500 mm	1
BTB30C/BTBH30C	BTB-CV30L1	Polycarbonate	500 mm	1
BTB50C/BTBH50C	BTB-CV50L1	Polycarbonate	500 mm	1

Safety Precautions

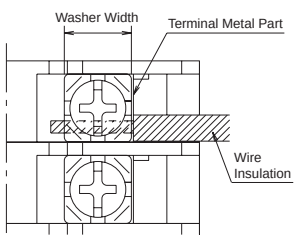
Notes on Wiring

Crimping Terminals

• When using crimping terminals, be sure to use insulated terminals to prevent electric shocks.

Without Crimping Terminals

• Insert the wire until the insulation comes into contact with the terminal metal part.
• Strip the insulation so that the wire is longer than the width of the wire clamp.
• When connecting two wires, use wires of the same length.



Specifications and other descriptions in this catalog are subject to change without notice.

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