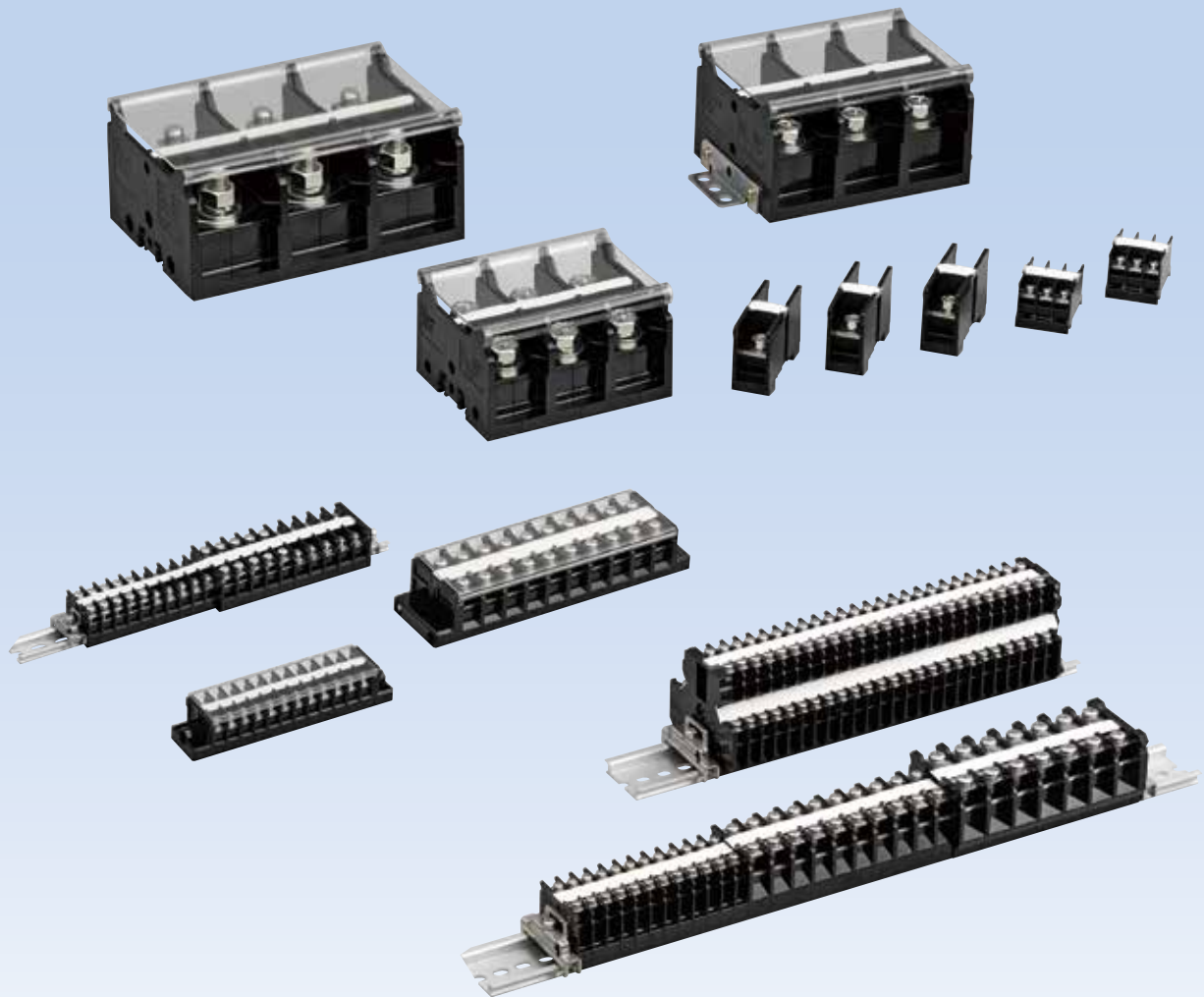





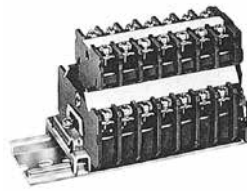

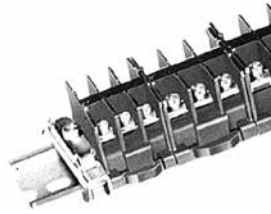
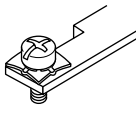
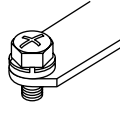
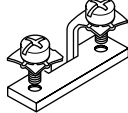
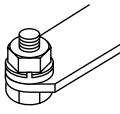
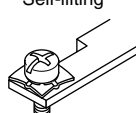
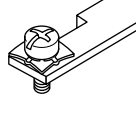
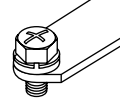





Think Automation and beyond...

Terminal Blocks

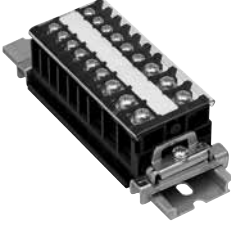



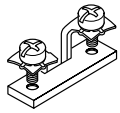
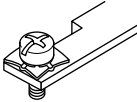
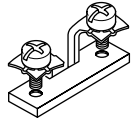
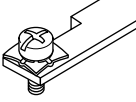
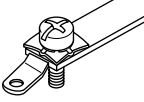
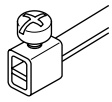
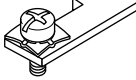
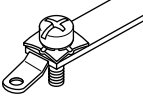
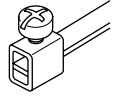


BN1U, BN-W/BNH-W, BA, BTB/BTBH, BD



Terminal Blocks (Selection Guide)

Style	Rail Mount Terminal Blocks			Rail Mount Terminal Blocks																																																																																																									
Series	BN-W/BNH-W Series	BND/BNDH Series	BN15MC Series	BA Series																																																																																																									
Shape	UL recognized CSA certified (600V) EN compliant (TÜV approved) Complies with JIS C 2811. 	Double-deck. 8 mm (top deck), 10.5 mm (bottom deck) terminal centers. 	All terminals are short-circuited with a built-in common jumper. 	Three poles in one block. Made of polyamide. 																																																																																																									
Terminal Centers	7 mm to 57 mm	8 mm, 10.5 mm	8 mm	7.9 to 60 mm																																																																																																									
No. of Poles	Modular construction 1-pole = 1 block 2, 3, 4-pole = 1 block (large capacity)		4, 8, 10-pole	Modular construction, 1 pole = 1 block 3-pole = 1 block (for M3, M3.5, M4 terminal screws)																																																																																																									
Applicable Wire Rated Current Terminal Screw	<table border="1"> <thead> <tr> <th>Wire (mm²)*</th> <th>Current (A)*</th> <th>Terminal Screw*</th> </tr> </thead> <tbody> <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> </tbody> </table> * According to JIS C 2811.		Wire (mm ²)*	Current (A)*	Terminal Screw*	1.25	16	M3	2	21	M3.5	3.5	30	M4	5.5	40	M4	8	50	M5	14	70	M5	22	94	M6	38	132	M8	60	175	M8	100	240	M10	150	310	M12	200	370	M12	240	430	M16	325	520	M16	<table border="1"> <thead> <tr> <th>Wire (mm²)*</th> <th>Current (A)*</th> <th>Terminal Screw*</th> </tr> </thead> <tbody> <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>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>100</td><td>240</td><td>M10</td></tr> <tr><td>200</td><td>370</td><td>M12</td></tr> </tbody> </table> * According to JIS C 2811.	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	<table border="1"> <thead> <tr> <th>Wire (mm²)*</th> <th>Current (A)*</th> <th>Terminal Screw*</th> </tr> </thead> <tbody> <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>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>100</td><td>240</td><td>M10</td></tr> <tr><td>200</td><td>370</td><td>M12</td></tr> </tbody> </table> * According to JIS C 2811.	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
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Terminal Shape	Self-lifting  Screw (for large capacity type) 	Touch-down  Stud 	Self-lifting 	Self-lifting  Screw (for large capacity type) 																																																																																																									
Rail	DIN 35 mm  BAA BAP	IEC C30  BNCA BNCP	DIN 35 mm + C30  BNJA	DIN 35 mm  BAA BAP	DIN 35 mm + C30  BNJA																																																																																																								
Rated Voltage	600V (660V)		600V	600V																																																																																																									
Insulation Resistance	100 MΩ minimum		100 MΩ minimum	100 MΩ minimum																																																																																																									
Dielectric Strength	2500V AC, 1 minute		2500V AC, 1 minute	2500V AC, 1 minute																																																																																																									
Housing Material (standard color)	Modified PPE (black)		Modified PPE (light gray)	PPE (black)																																																																																																									
Features	<ul style="list-style-type: none"> • 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. 		<ul style="list-style-type: none"> • Same shape and size as BN15MW. • The housing color is light gray. • The same accessories can be used for standard types. 	<ul style="list-style-type: none"> • Large capacity terminal blocks can be surface mounted. • Also available with a fuse or disconnecting switch. 																																																																																																									
Approvals	UL, CSA, TÜV (major models)		—	UL, CSA																																																																																																									
Page	5	18	19	28																																																																																																									

Terminal Blocks (Selection Guide)

	Rail Mount Terminal Blocks	Surface Mount Terminal Blocks	Rail Mount Miniature Terminal Blocks	Surface Mount Terminal Blocks																																							
	BN1U	BTB/BTBH Series	BD Series	BD Series																																							
	Spring-up screws with temporary hold. UL recognized for field wiring (FW2).	Rugged surface mount terminal block with 8.5 to 15.5 mm terminal centers.	Space-saving miniature terminal block. Mount on 15-mm-wide DIN rail.	Miniature terminal block with 5, 7, 8 mm terminal centers.																																							
																																											
	7, 8, 11 mm	8.5, 10.5, 12, 15.5 mm	5, 7, 8 mm	5, 7, 8 mm																																							
	Modular construction	2 to 30-pole (2 to 20-pole for BTB50C and BTBH50C)	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)																																							
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	Spring-up (with temporary hold function) 	Self-lifting  Touch-down 	Self-lifting  Screw/Solder  Cage Screw 	Self-lifting  Screw/Solder  Cage Screw 																																							
	DIN 35 mm IEC C30 DIN 35 mm + C30  BAA BAP BNCA BNCP BNJA	—	DIN 15 mm  BDA BDP	—																																							
	600V (660V)	600V	380V/250V	380V/250V																																							
	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																																							
	Modified PPE (black)	Modified PPE (black)	Modified PPE (black, blue – BD8 only)	Modified PPE (black)																																							
	<ul style="list-style-type: none"> Spring-up screws save up to 30% wiring time (compared to IEC standard terminal blocks). Same height for M3, M3.5, and M4 types. 	<ul style="list-style-type: none"> Touch-down terminals. Flame resistant UL94V-0. Rugged construction. 	<ul style="list-style-type: none"> Miniature terminal blocks mount on 15-mm-wide DIN rail. 	<ul style="list-style-type: none"> Space-saving miniature terminal block. Rugged construction. 																																							
	UL, CSA, TÜV	UL, CSA, TÜV	UL, CSA	UL, CSA																																							
	34	37	45	46																																							

Terminal Blocks

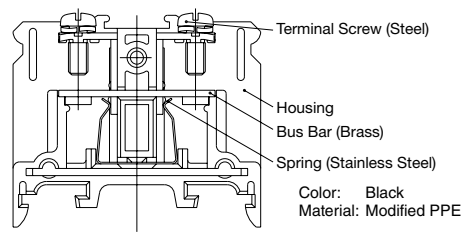
Safety Precautions

- 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:

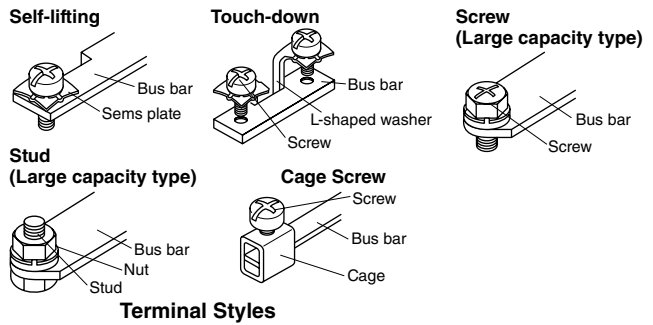
Screw Size	Tightening Torque (N·m)	Screw Size	Tightening Torque (N·m)
M3	0.6 to 1.0	M6	3.9 to 5.4
M3.5	1.0 to 1.3	M8	10 to 13.5
M4	1.4 to 2.0	M10	21 to 28
M5	2.6 to 3.7	M12	38 to 49
		M116	83 to 116

- 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



BNH10W (Example)



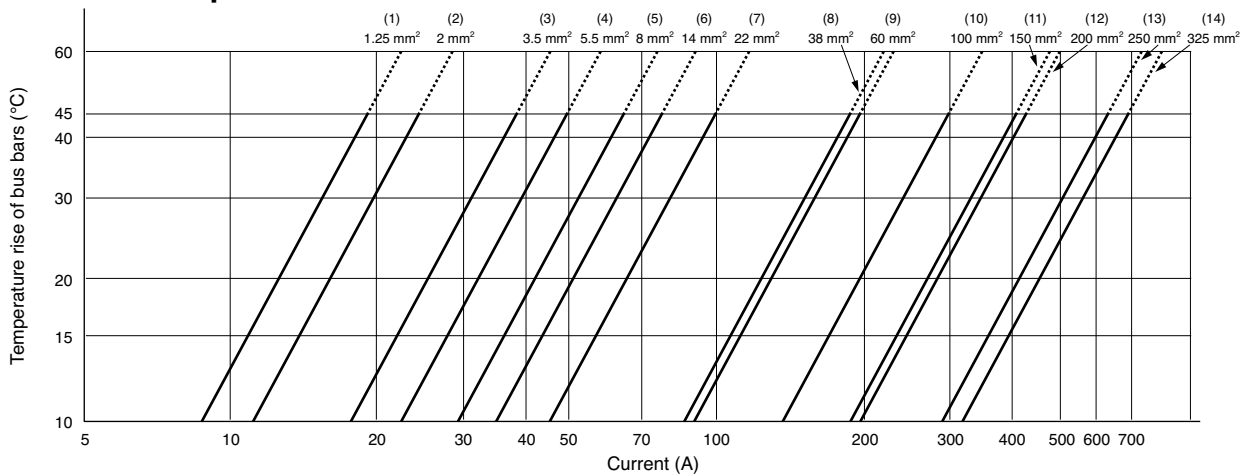
Selecting Terminal Blocks by Current According to JIS Standards

IDEC's terminal blocks are compliant with JIS C 2811, and JIS C 8201-7-1. The current varies depending on the operating conditions (wire type, number of bundle wire, operating temperature, etc.). See the table below for choosing the terminal block.

When using the terminal blocks as UL, CSA, and TÜV approved products, refer to UL, CSA, and TÜV ratings.

Applicable Wire (mm ²)	1.25	2	3.5	5.5	8	14	22	38	60	100	150	200	240	325
Current (A)	16	21	30	40	50	70	94	132	175	240	310	370	430	520
Current vs. Temperature Rise at Bus Bars	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)Cu
BN1U Series	BN1U-16W	BN1U-20W	—	BN1U-40W	—									
BN-W Series	BN10W BNH10W BN15MW BNH15MW BND15W BNDH15W	BN15LW BNH15LW BN15MWT BNH15MWT BND15LW BNDH15LW BND15WT BNDH15WT	BN15LWT BNH15LWT	BN30W BNH30W	BN40W BNH40W	BN50W BNH50W	BN75W	BN100W	BN150W BN150NW	BN200BW BN200NW	BN300BW BN300NW	BN400BW BN400NW	BN500BW BN500NW	BN600NW
BA Series	BA111T	BA211T	—	BA311T	—	BA411S	BA611S	BA711S	—	BA811S	—	BA911S	—	
BTB Series	BTB15C	BTB15LC	—	BTB30C	—	BTB50C	—							
BD Series	BD8 BD8S	—												

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.

About SCCR of Terminal Block

When exporting machine or systems to the USA, the smallest short-circuit current rating of the control board's main circuit must be displayed as SCCR (short-circuit current rating) value. SCCR is specified by UL508A-2001, Supplement SB, Table SB4.1. The value is 10kA for terminal block.

BN-W/BNH-W series Terminal Blocks

UL recognized, CSA certified, and TÜV 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.

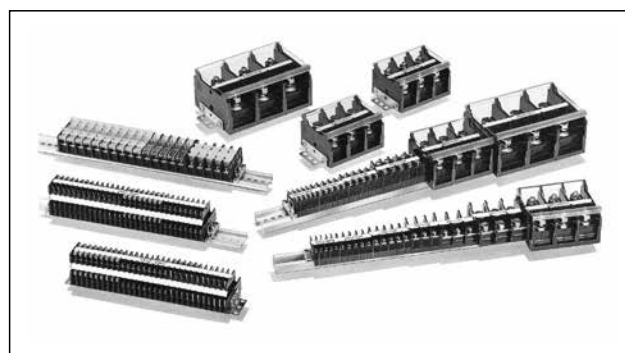


- 9.5-mm-wide marking strips can be used on all models. 17-mm-wide sliding type marking strips also available. (BN10W to BN30W)
- Terminal blocks of different shapes and capacities can be installed without using an end plate. (BN/BNH10W to BN/BNH150W)
- Screw and stud terminals available for large capacity terminal blocks.
- Additional mounting and removal of terminals is easy. (BN/BNH10W to BN/BNH30W)
- Complies with JIS C 8201-7-1.
- UL recognized, CSA certified, and EN compliant (TÜV approved). (Except common terminal and models with fuse)
- UL recognized for field wiring (FW2).

Applicable Standards	Mark	Certification Organization/File No.
UL1059		UL recognized File No. E78117
CSA C 22.2 No.158		CSA File No. LR64803
EN60947-7-1		TÜV Rheinland License No. Standard: R9551701 Large Capacity: J9551516 J9650886 (BN500□, BN600□ only) Double-Deck: R9650688

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)



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

1. Insert the Crimping Terminal
2. Push the Screw Down
3. Tighten the Screw



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

Push the screw down to temporarily hold the wire in place.

The screws can be tightened easily with a pneumatic screwdriver.

General Ratings

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100 MΩ minimum
Operating Temperature	-25 to +55°C (no freezing)
Storage Temperature	-25 to +70°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

Ratings/Terminal Screw Tightening Torque

Style	Part 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	BN10W ★	BNH10W ★	600V/15A	22-16	660V/16A	1.25/(22-16)	800V/16A	1.25	M3	0.6 to 1.0
	BN15MW ★	BNH15MW ★	600V/15A	22-14	660V/22A	2/(22-14)	800V/16A	1.25 (2) *2	M3	0.6 to 1.0
	BN15LW ★	BNH15LW ★	600V/20A	22-14	660V/22A	2/(22-14)	630V/21A	2	M3.5	1.0 to 1.3
	BN15MWT ★	BNH15MWT ★	600V/15A	22-14	660V/22A	2/(22-14)	800V/21A	2	M3.5	1.0 to 1.3
	BN15LWT ★	BNH15LWT ★	600V/30A	22-14	660V/22A	3.5/(22-14)	630V/30A	3.5	M4	1.4 to 2.0
	BN30W ★	BNH30W ★	600V/35A	18-10	660V/38A	5.5/(18-10)	630V/40A	5.5	M4	1.4 to 2.0
	BN40W ★	BNH40W ★	600V/40A	16-8	660V/50A	8/(16-8)	630V/50A	8	M5	2.6 to 3.7
Large Capacity	BN50W ★	BNH50W ★	600V/50A	16-6	660V/67A	14/(16-6)	800V/70A	14	M5	2.6 to 3.7
	BN75W ★		600V/80A	16-4	660V/94A	22/(8-4)	1000V/94A	22	M6	3.9 to 5.4
	BN100W		600V/100A	16-2	660V/132A	38/(2)	1000V/132A	38	M8	10 to 13.5
	BN150W		600V/150A	16-1/0	660V/175A	60/(1/0)	1000V/175A	60	M8	10 to 13.5
	BN150NW		600V/150A	16-1/0	660V/175A	60/(1/0)	630V/175A	60	M8	10 to 13.5
	BN200BW□, BN200NW□		600V/200A	4/0	660V/240A	100/(4/0)	800V/240A	100	M10	21 to 28
	BN200BW□K, BN200NW□K		600V/200A	4/0	660V/240A	100/(4/0)	800V/240A	100	M10	
	BN300BW□, BN300NW□		600V/310A	300MCM	660V/310A	150/(300MCM)	800V/310A	150	M10	
	BN300BW□K, BN300NW□K		600V/310A	300MCM	660V/310A	150/(300MCM)	800V/310A	150	M10	
	BN400BW□, BN400NW□		600V/350A	400MCM	660V/370A	200/(400MCM)	800V/370A	200	M12	38 to 49
	BN400BW□K, BN400NW□K		600V/350A	400MCM	660V/370A	200/(400MCM)	800V/370A	200	M12	
	BN500BW□K, BN500NW□K		600V/500A	500MCM	660V/430A	240/(500MCM)	800V/430A	250	M16	83 to 116
	BN600NW□K		600V/600A	600MCM	660V/520A	300/(600MCM)	800V/520A	325	M16	
	With Disconnecting Switch	BNT20	—	—	—	—	—	600V/20A	5.5	M4
With Fuse	BNF10S	—	—	—	—	—	600V/10A	5.5	M4	1.4 to 2.0
	BNF10N	—	—	—	—	—	600V/10A	5.5	M4	
Double-Deck	BND15W	BNDH15W	600V/10A	22-14	660V/22A	2/(22-14)	800V/16A	1.25 (2) *2	M3	0.6 to 1.0
	BND15LW	BNDH15LW	600V/15A	22-14	660V/22A	2/(22-14)	800V/21A	2	M3.5	1.0 to 1.3
	BND15WT	BNDH15WT	600V/15A	22-14	660V/22A	2/(22-14)	800V/21A	2	M3.5	1.0 to 1.3
Common Terminal	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.

*3: Part No. with ★ is UL recognized for field wiring (FW2).

• Specify the number of poles in place of □.

BN-W/BNH-W Series Terminal Blocks

Terminal Blocks											
Terminal Style	Part No.	Ordering No.	Applicable Wire (mm ²)	Terminal Screw	Width (mm)	Package Quantity	Page				
Standard											
Self-Lifting	1-pole	16A	BN10W	BN10WPN50	1.25	M3	7	50	8		
			BN15MW	BN15MWPN50	1.25 (2) (Note)	M3	8	50			
		21A	BN15LW	BN15LWPN50	2	M3.5	10.5	50	9		
			BN15MWT	BN15MWTPN50	2	M3.5	8	50			
		30A	BN15LWT	BN15LWTPN50	3.5	M4	10.5	50	10		
		40A	BN30W	BN30WPN50	5.5	M4	12	50			
		50A	BN40W	BN40WPN20	8	M5	14	20	10		
70A	BN50W	BN50WPN20	14	M5	15.5	20					
Touch-Down	1-pole	16A	BNH10W	BNH10WPN50	1.25	M3	7	50	8		
			BNH15MW	BNH15MWPN50	1.25 (2) (Note)	M3	8	50			
		21A	BNH15LW	BNH15LWPN50	2	M3.5	10.5	50	9		
			BNH15MWT	BNH15MWTPN50	2	M3.5	8	50			
		30A	BNH15LWT	BNH15LWTPN50	3.5	M4	10.5	50	10		
		40A	BNH30W	BNH30WPN50	5.5	M4	12	50			
		50A	BNH40W	BNH40WPN20	8	M5	14	20	10		
70A	BNH50W	BNH50WPN20	14	M5	15.5	20					
Large Capacity (Rail Mount)											
Screw	1-pole	94A	BN75W	BN75WPN10	22	M6	20	10	11		
		132A	BN100W	BN100WPN05	38	M8	26	5			
		175A	BN150W	BN150WPN05	60	M8	26	5			
	2-pole	240A	BN200BW2	BN200BW2	100	M10	37	1	13		
			BN200BW3	BN200BW3							
	3-pole	310A	BN200BW4	BN200BW4	150	M10	44	1	14		
			BN300BW2	BN300BW2							
	4-pole	370A	BN300BW3	BN300BW3	200	M12	57	1	15		
			BN300BW4	BN300BW4							
	Stud	1-pole	175A	BN150NW	BN150NWPN05	60	M8	26	5	12	
2-pole			240A	BN200NW2	BN200NW2	100	M10	37	1		13
3-pole			240A	BN200NW3	BN200NW3						
4-pole		310A	BN200NW4	BN200NW4	150	M10	44	1	14		
			BN300NW2	BN300NW2							
3-pole		370A	BN300NW3	BN300NW3	200	M12	57	1	15		
			BN300NW4	BN300NW4							
2-pole		430A	BN400NW2	BN400NW2	250	M16	57	1	16		
			BN400NW3	BN400NW3							
3-pole		520A	BN400NW4	BN400NW4	325	M16	57	1	16		
	BN600NW2K		BN600NW2K								
4-pole	520A	BN600NW3K	BN600NW3K	325	M16	57	1	16			
		BN600NW4K	BN600NW4K								
Large Capacity (Surface Mount)											
Screw	2-pole	240A	BN200BW2K	BN200BW2K	100	M10	37	1	13		
			BN200BW3K	BN200BW3K							
			BN200BW4K	BN200BW4K							
	3-pole	310A	BN300BW2K	BN300BW2K	150	M10	44	1	14		
			BN300BW3K	BN300BW3K							
	4-pole	370A	BN300BW4K	BN300BW4K	200	M12	57	1	15		
			BN400BW2K	BN400BW2K							
	2-pole	430A	BN400BW3K	BN400BW3K	250	M16	57	1	16		
			BN400BW4K	BN400BW4K							
	3-pole	520A	BN500BW2K	BN500BW2K	325	M16	57	1	16		
BN500BW3K			BN500BW3K								
4-pole	520A	BN500BW4K	BN500BW4K	325	M16	57	1	16			
		BN600NW2K	BN600NW2K								
2-pole	240A	BN200NW2K	BN200NW2K	100	M10	37	1	13			
		BN200NW3K	BN200NW3K								
3-pole	310A	BN200NW4K	BN200NW4K	150	M10	44	1	14			
		BN300NW2K	BN300NW2K								
4-pole	370A	BN300NW3K	BN300NW3K	200	M12	57	1	15			
		BN300NW4K	BN300NW4K								
2-pole	430A	BN400NW2K	BN400NW2K	250	M16	57	1	16			
		BN400NW3K	BN400NW3K								
3-pole	520A	BN400NW4K	BN400NW4K	325	M16	57	1	16			
		BN500NW2K	BN500NW2K								
4-pole	520A	BN500NW3K	BN500NW3K	325	M16	57	1	16			
		BN500NW4K	BN500NW4K								
2-pole	240A	BN600NW2K	BN600NW2K	325	M16	57	1	16			
		BN600NW3K	BN600NW3K								
3-pole	310A	BN600NW4K	BN600NW4K	325	M16	57	1	16			
		BN600NW2K	BN600NW2K								
4-pole	370A	BN600NW3K	BN600NW3K	325	M16	57	1	16			
		BN600NW4K	BN600NW4K								

* 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.

BN-W/BNH-W Series Terminal Blocks

Terminal Blocks

Terminal Style	Part No.	Ordering No.	Applicable Wire (mm ²)	Terminal Screw	Width (mm)	Package Quantity	Page	
With Disconnecting Switch, Fuse								
Disconnecting Switch	20A	1-pole	BNT20	BNT20PN20	5.5	M4	15	17
With Fuse	10A	1-pole	BNF10S-□ BNF10N-□	BNF10S-□APN20 BNF10N-□APN20	5.5	M4	15	
Double-Deck Terminal Block								
Self-Lifting	16A	1-pole	BND15W	BND15WPN25	1.25 (2)*	M3	8	25
Touch-Down			BNDH15W	BNDH15WPN25				
Self-Lifting	21A	1-pole	BND15LW	BND15LWPN25	2	M3.5	8	25
Touch-Down			BNDH15LW	BNDH15LWPN25				
Self-Lifting	21A	1-pole	BND15WT	BND15WTPN25	2	M3.5	12	25
Touch-Down			BNDH15WT	BNDH15WTPN25				
Common Terminal								
Self-Lifting Type 16A (Common Current)	4-pole	BN15MC4	BN15MC4PN10	1.25 (2)*	M3	8	10	18
	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 mm², but 2 mm² 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.

X: Necessary
O: Optional

Terminal		Part No.	Accessories (X: Necessary)												
			End Plate	Rail	End 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	X	X	X	O	O	O	O	O	O	O	—	—	—
		BNH10W, BNH15MW, BNH15LW, BNH15MWT, BNH15LWT, BNH30W	X	X	X	O	O	O	O	—	O	O	—	—	—
	50A to 70A Self-Lifting Touch-Down	BN40W, BN50W, BNH40W, BNH50W	X	X	X	O	O	O	O	—	O	—	—	—	—
Large Capacity	Rail Mount 1-Pole 94A to 175A	BN75W, BN100W, BN150W, BN150NW	X	X	X	O	O	O	O	—	—	—	—	—	—
	Rail Mount 240A to 370A	BN200BW□, BN300BW□, BN400BW□ BN200NW□, BN300NW□, BN400NW□	—	X	X	—	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	—	—	—	—	Supplied	Supplied	—	—	—	—	—	—	—
With Disconnecting Switch	BNT20	X	X	X	O	O	O	O	—	—	—	—	—	—	
With Fuse	BNF10S, BNF10N	X	X	X	O	—	O	O	—	—	—	—	—	—	
Double-Deck	BND15W, BND15LW, BNDH15W, BNDH15LW, BND15WT, BNDH15WT	X	X *1	X *1	O	O	O	O	—	X	—	X *2	X	X	
Common Terminal	BN15MC□	—	X	X	—	O	O	O	O	—	—	—	—	—	
			20	21		22		23	24						
Page															

*1: Accessory not necessary for surface mounting.

*2: Accessory not necessary for rail mounting.

Specify the number of poles in place of □.

BN-W/BNH-W Series Terminal Blocks

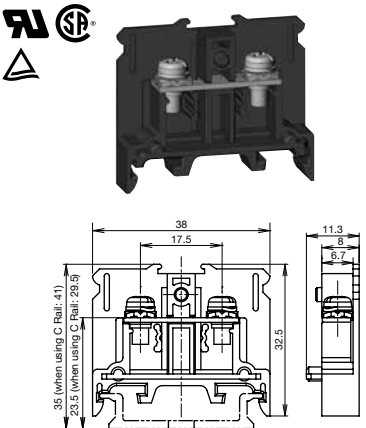
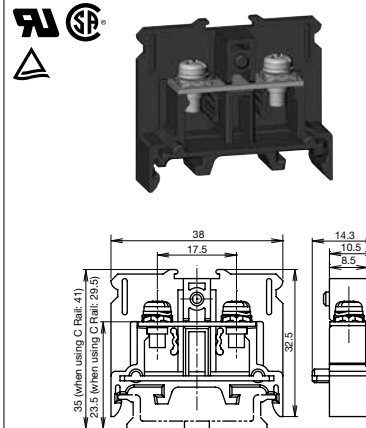
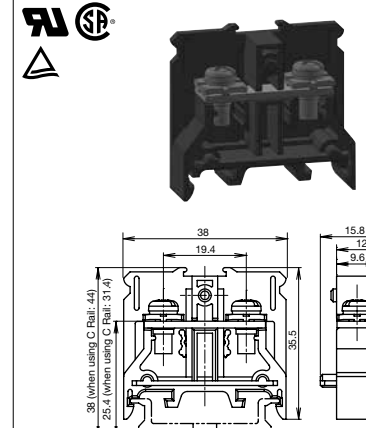
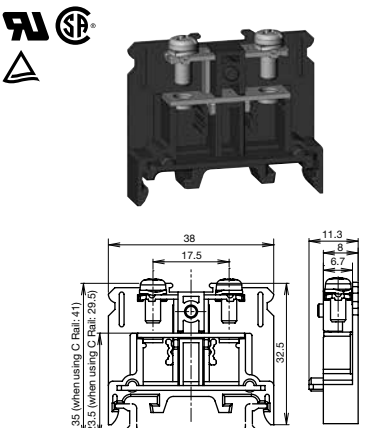
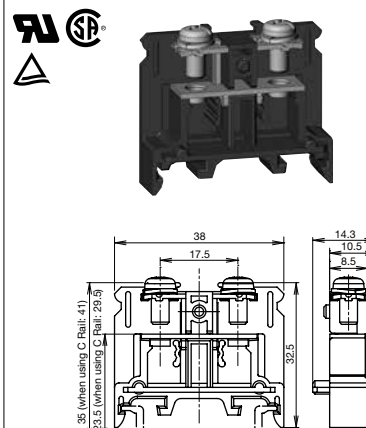
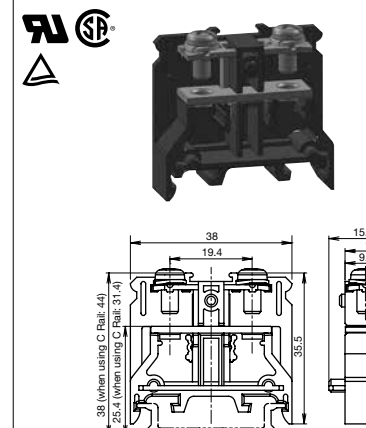
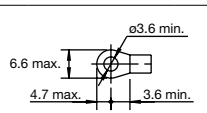
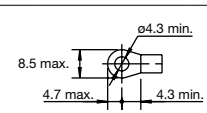
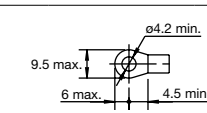
	Standard			Touch-Down Terminal						
	Part No.	BN10W 16A M3	BN15MW 16A M3	BN15LW 21A M3.5	Part No.	BNH10W 16A M3	BNH15MW 16A M3	BNH15LW 21A M3.5		
Self-Lifting Terminal	Dimensions									
	Ordering No.	BN10WPN50	BN15MWP50	BN15LWPN50						
	Package Quantity	50	50	50						
	Weight (Approx.)	6.5g	7.3g	10g						
Touch-Down Terminal	Dimensions									
	Ordering No.	BNH10WPN50	BNH15MWP50	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	800V	600V	660V	800V	600V	660V	800V
	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	15A	16A	16A	15A	22A	16A	20A	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/End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)								
	C Rail/End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)								
	DIN + C Rail/End 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.

BN-W/BNH-W Series Terminal Blocks

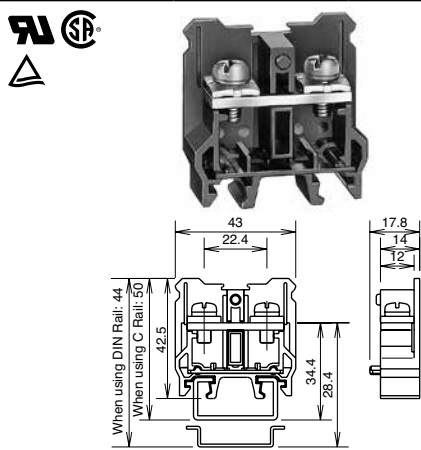
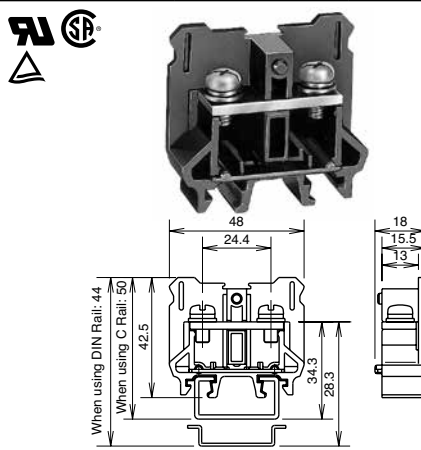
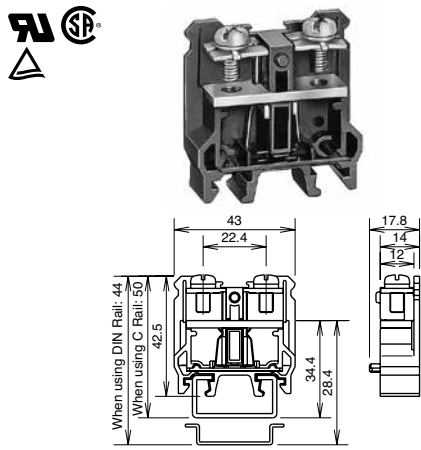
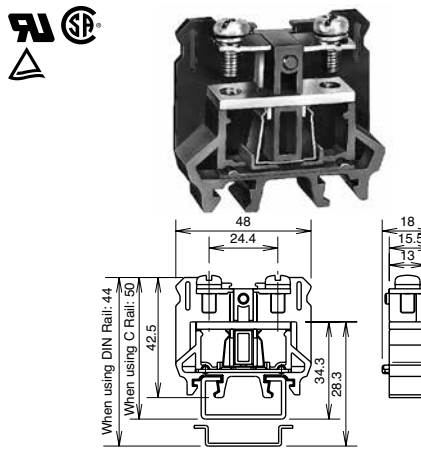
BN15MWT 21A M3.5			BN15LWT 30A M4			BN30W 40A M4		
								
BN15MWTPN50			BN15LWTPN50			BN30WPN50		
50			50			50		
7g			10g			15.6g		
BNH15MWT 21A M3.5			BNH15LWT 30A M4			BNH30W 40A M4		
								
BNH15MWTPN50			BNH15LWTPN50			BNH30WPN50		
50			50			50		
8g			11g			16.8g		
UL/CSA	EN	JIS	UL/CSA	EN	JIS	UL/CSA	EN	JIS
600V	660V	800V	600V	660V	630V	600V	660V	630V
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	30A	22A	30A	35A	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 2.0 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)		

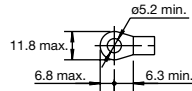
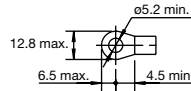
*1: The wire size in () does not comply with JIS standards.

*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.

BN-W/BNH-W Series Terminal Blocks

Standard	Self-Lifting Terminal	Part No.	BN40W	50A	M5	BN50W	70A	M5
		Dimensions						
		Ordering No.	BN40WPN20			BN50WPN20		
		Package Quantity	20			20		
		Weight (Approx.)	25g			25.4g		
	Touch-Down Terminal	Part No.	BNH40W	50A	M5	BNH50W	70A	M5
		Dimensions						
		Ordering No.	BNH40WPN20			BNH50WPN20		
		Package Quantity	20			20		
		Weight (Approx.)	25g			29g		

Standards	UL/CSA	EN	JIS	UL/CSA	EN	JIS	
Insulation Voltage	600V	660V	630V	600V	660V	800V	
Wire Size *1	16-8 AWG	8 mm ² (16-8 AWG)	8 mm ²	16-6 AWG	14 mm ² (16-6 AWG)	14 mm ²	
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/End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/ BNL6 (see page 21)			Aluminum: BAA1000, Steel: BAP1000 (see page 20)/ BNL8 (see page 21)		
	C Rail/End 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/End 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.

BN-W/BNH-W Series Terminal Blocks

Part No.		BN75W 94A M6			BN100W 132A M8		
Large Capacity Screw Terminal	Dimensions						
	Ordering 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	1000V	600V	660V	1000V
	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	80A	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 Fastener	BNM3 (see page 22)					
	DIN Rail/End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL8 (see page 21)					
	Type C Rail/End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL8 (see page 21)					
DIN+Type C Rail/End 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.

BN-W/BNH-W Series Terminal Blocks

Large Capacity Screw Terminal	Part No.	BN150W	175A	M8	BN150NW	175A	M8	
	Dimensions							
	Ordering No.	BN150WPN05			BN150NWP05			
	Packaging Quantity	5			5			
Weight (Approx.)	88g			95g				

Standards	UL/CSA	EN	JIS	—	—	JIS
Insulation Voltage	600V	660V	1000V	—	—	630V
Wire Size	16-1/0 AWG	60 mm ² (1/0 AWG)	60 mm ²	—	—	60 mm ²
Rated Current *1	150A	175A	175A	—	—	175A
Terminal screw *2	M8			M8		
Crimping Terminal	2-8 to 60-8			2-8 to 60-8		
Max. No. of Crimping Terminals	2			2		
Socket Wrench	12.7 mm square drive hexagonal socket 13 (*2)			12.7 mm square drive hexagonal socket 13 (*2)		
Tightening Torque	10 to 13.5 N · m			10 to 13.5 N · m		

Crimping Terminal Dimensions (mm) *3	
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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)	PVC 1m/BNM7, Fiber glass 1m/BNM9 PVC 25m/BNM725 (see page 22)
	Marking Strip Fastner	BNM3 (see page 22)	
	DIN Rail/End Clip	Aluminum BAA1000, Steel: BAP1000 (see page 20)/ BNL8 (see page 21)	
	Type C Rail/End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/ BNL8 (see page 21)	
	DIN+Type C Rail/End 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.
- *4: Applicable wrench or screwdriver can be used for tightening screws.

BN-W/BNH-W Series Terminal Blocks

		Part No.	BN200BW□	240A	M10	BN200BW□K	240A	M10	Surface Mount
Large Capacity	Screw Terminal	Dimensions							
		Package Quantity	1			1			
	Weight (Approx.)	2P: 430g, 3P: 650g, 4P: 870g			2P: 490g, 3P: 710g, 4P: 930g				
	Part No.	BN200NW□	240A	M10	BN200NW□K	240A	M10	Surface Mount	
Large Capacity	Stud Terminal	Dimensions							
		Package Quantity	1			1			
	Weight (Approx.)	2P: 500g, 3P: 720g, 4P: 940g			2P: 560g, 3P: 780g, 4P: 1000g				
	Part No.	BN200NW□	240A	M10	BN200NW□K	240A	M10	Surface Mount	
Specification / Ratings	Standards	UL/CSA	EN	JIS	UL/CSA	EN	JIS		
	Insulation Voltage	600V	660V	800V	600V	660V	800V		
	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 (*2)			12.7 mm square drive hexagonal socket 17 (*2)				
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)			—				
	End 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.

BN-W/BNH-W Series Terminal Blocks

Large Capacity	Screw Terminal	Part no.	BN300BW□	310A	M10	BN300BW□K	310A	M10	Surface Mount
		Dimensions							
	Package Quantity	1			1				
	Weight (Approx.)	2P: 480g, 3P: 750g, 4P: 1020g			2P: 540g, 3P: 810g, 4P: 1080g				
Large Capacity	Stud Terminal	Part no.	BN300NW□	310A	M10	BN300NW□K	310A	M10	Surface Mount
		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	800V	600V	660V	800V
	Wire Size	300 MCM	150 mm ² (300 MCM)	150 mm ²	300 MCM	150 mm ² (300 MCM)	150 mm ²
	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 (*2)			12.7 mm square drive hexagonal socket 17 (*2)		
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)			—		
	End 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.

BN-W/BNH-W Series Terminal Blocks

	Screw Terminal			Stud Terminal			
	Part no.	BN400BW□	370A	M12	BN400BW□K	370A	M12
Large Capacity	Dimensions						
		Package Quantity	1			1	
	Weight (Approx.)	2P: 950g, 3P: 1400g, 4P: 1860g			2P: 1030g, 3P: 1480g, 4P: 1940g		
	Dimensions						
		Package Quantity	1			1	
	Weight (Approx.)	2P: 980g, 3P: 1460g, 4P: 1930g			2P: 1060g, 3P: 1540g, 4P: 1990g		
Specification / Ratings	Standards	UL/CSA	EN	JIS	UL/CSA	EN	JIS
	Insulation Voltage	600V	660V	800V	600V	660V	800V
	Wire Size	400 MCM	200 mm ² (400 MCM)	200 mm ²	400 MCM	200 mm ² (400 MCM)	200 mm ²
	Rated Current *1	350A	370A	370A	350A	370A	370A
	Terminal Screw	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 (*2)			12.7 mm square drive hexagonal socket 19 (*2)		
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)			—		
	End Clip	BNL8 (see page 21)			—		


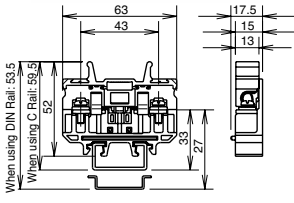



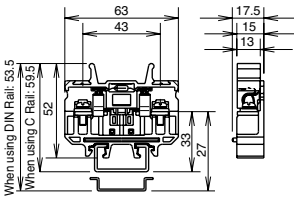


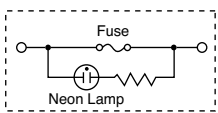

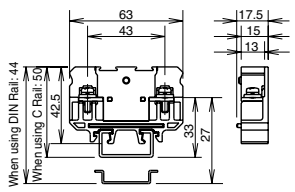


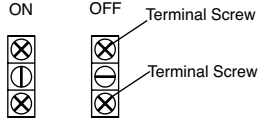
*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.
 *2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range 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.

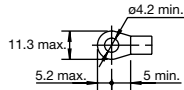
BN-W/BNH-W Series Terminal Blocks

Large Capacity Surface Mount	Screw Terminal	Part No	BN500BW□K	430A	M16	Surface Mount	—		
		Dimensions							
		Package Quantity	1						
		Weight (Approx.)	2P: 1550g, 3P: 2250g, 4P: 2950g						
		Part No.	BN500NW□K	430A	M16	Surface Mount	BN600NW□K	520A	M16
	Stud Terminal	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	
		Insulation Voltage	600V	660V	800V	600V	660V	800V	
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 (*2)			12.7 mm square drive hexagonal socket 24 (*2)					
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.

BN-W/BNH-W Series Terminal Blocks

	BNF10S 10A M4	BNF10N (With Lamp) 10A M4		BNT20 20A M4
Self-Lifting Terminal with Fuse	    <p>Fuse Ratings</p> <ul style="list-style-type: none"> Rated Voltage: 250V Rated Current: 1, 3, 5A Cartridge Fuse: JIS C 6575-2 6.35×31.8 mm or 6.40×30.0 mm <p>• Part No.: BNF10S-1A BNF10S-3A BNF10S-5A</p> <p>• Cartridge used: FGB1 by FUJI Terminal Industry Co., Ltd.</p> <p>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.</p> <ul style="list-style-type: none"> Part No.: BNF10SW Rated Insulation Voltage: 600V Rated Current: 10A Applicable Wire: 18-10 AWG UL File No.: E78117 CSA File No.: LR64803 	    <p>• Internal Connection</p>  <p>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.</p> <p>Fuse Ratings</p> <ul style="list-style-type: none"> Rated Voltage: 250V Rated Current: 1, 3, 5A Cartridge Fuse: JIS C 6575-2 6.35×31.8mm or 6.40×30.0mm <p>• Part No.: BNF10N-1A BNF10N-3A BNF10N-5A</p>	Self-Lifting Terminal with Disconnecting Switch	    <p>Notes:</p> <ul style="list-style-type: none"> Rated Current: 20A This terminal block cannot be used as a disconnect switch. When switching on/off, make sure that voltage is not applied. <p>ON OFF Terminal Screw</p> 
	Ordering No.	BNF10S-□APN20		BNF10N-□APN20
Package Quantity	20	20	Package Quantity	20
Weight (Approx.)	34g	34g	Weight (Approx.)	36g




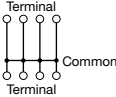
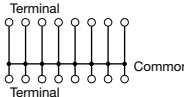
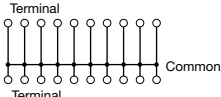
Standards		JIS	JIS
Specification / Ratings	Insulation Voltage	600V	600V
	Wire Size	5.5 mm ²	5.5 mm ²
	Rated Current	10A max.	20A
	Terminal Screw	M4	M4
	Crimping Terminal	1.25-4 to 5.5-4	1.25-4 to 5.5-4
	Max. No. of Crimping Terminals	2	2
	Tightening Torque	1.4 to 2.0 N·m	1.4 to 2.0 N·m
Crimping Terminal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

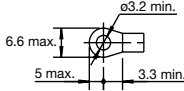
BN-W/BNH-W Series Terminal Blocks

Part No.		BND15W 16A M3	BND15LW 21A M3.5	BND15WT 21A M3.5						
Self-Lifting Terminal	Dimensions									
	Ordering No.	BND15WPN25	BND15LWPN25	BND15WTPN25						
	Package Quantity	25	25	25						
	Weight (Approx.)	16g	23g	17g						
Touch-Down Terminal	Part No.	BNDH15W 16A M3	BNDH15LW 21A M3.5	BNDH15WT 21A M3.5						
	Dimensions									
	Ordering 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	800V	600V	660V	800V	600V	660V	800V
	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	2 mm 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			M3.5		
	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 22)								
	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/End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)								
	C Rail/End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)								
DIN+C Rail/End 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.

BN-W/BNH-W Series Terminal Blocks

Common Terminal Self-Lifting Terminal	Part No.	BN15MC4	16A (common current)	M3	BN15MC8	16A (common current)	M3	BN15MC10	16A (common current)	M3
	No. of Poles	4			8			10		
	Shape									
	Dimensions									
	Ordering No.	BN15MC4PN10			BN15MC8PN10			BN15MC10PN10		
	Package Quantity	10			10			10		
Weight (Approx.)	30g			57g			70g			
Color	Light Gray			Light Gray			Light Gray			

Standards	JIS														
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	<table border="1"> <tr> <td>End Plate</td> <td>Supplied</td> </tr> <tr> <td>Dust Cover</td> <td>BNC230 (see page 21)</td> </tr> <tr> <td>Marking Strip</td> <td>PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725 (see page 22)</td> </tr> <tr> <td>Marking Strip Fastener</td> <td>BNM3 (see page 22)</td> </tr> <tr> <td>DIN Rail / End Clip</td> <td>Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)</td> </tr> <tr> <td>C Rail / End Clip</td> <td>Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)</td> </tr> <tr> <td>DIN+C Rail / End Clip</td> <td>Aluminum: BNJA1000 (see page 20)/BNL6, BNL7 (see page 21)</td> </tr> </table>	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 / End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)	C Rail / End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)	DIN+C Rail / End Clip	Aluminum: BNJA1000 (see page 20)/BNL6, BNL7 (see page 21)
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 / End Clip	Aluminum: BAA1000, Steel: BAP1000 (see page 20)/BNL6 (see page 21)														
C Rail / End Clip	Aluminum: BNCA1000, Steel: BNCP1000 (see page 20)/BNL7 (see page 21)														
DIN+C Rail / End Clip	Aluminum: BNJA1000 (see page 20)/BNL6, BNL7 (see page 21)														

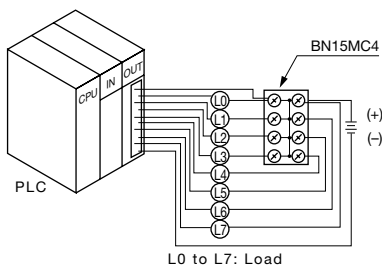
Note1: The rated applicable wire size is 1.25 mm², but 2 mm² wires can also be connected.
The wire size in () does not comply with JIS standards.

Note2: Do not remove the built-in common jumper. Common terminal type terminal blocks cannot be disassembled.

Note3: Make sure that all terminal screws are tightened to an appropriate tightening torque before power is applied.

Note4: Specifications are in compliance with JIS C 8201-7-1 except values in ().

Application Example



Features

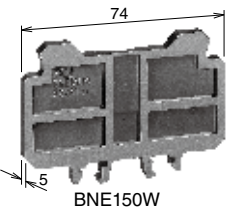
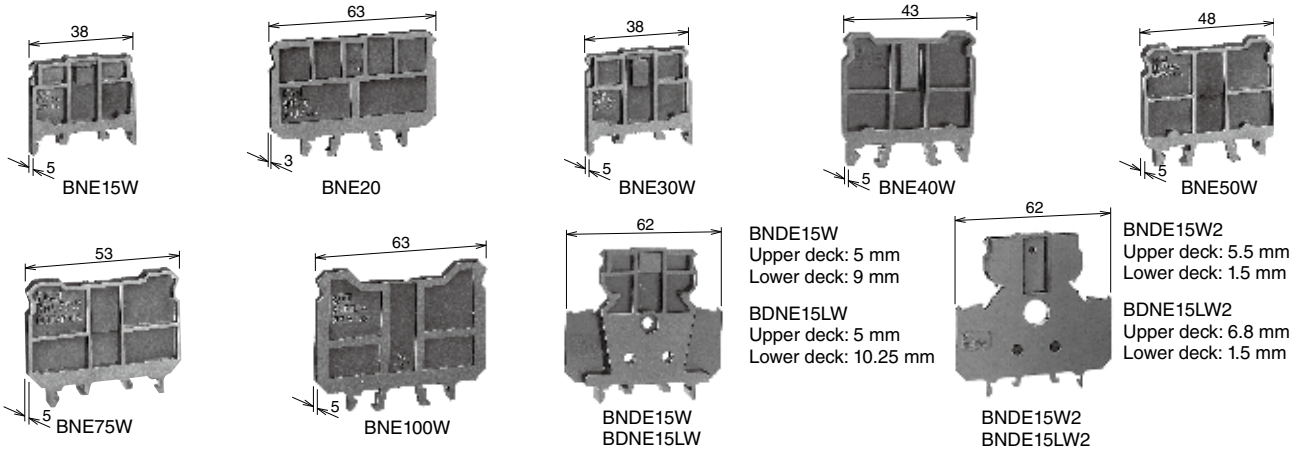
- All terminals are short-circuited by a built-in common jumper. External jumpers are not required.
- Accessories (marking strip, cover, and rails) are compatible with standard types.
- Common terminal type terminal blocks can be combined with other standard types as they are identical in shape and in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

BN-W/BNH-W Series Terminal Blocks

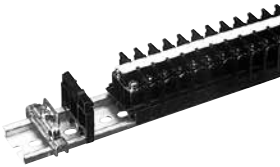
Accessories (End Plate / Rail)

End Plates

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



Securing a marking strip with the end plate

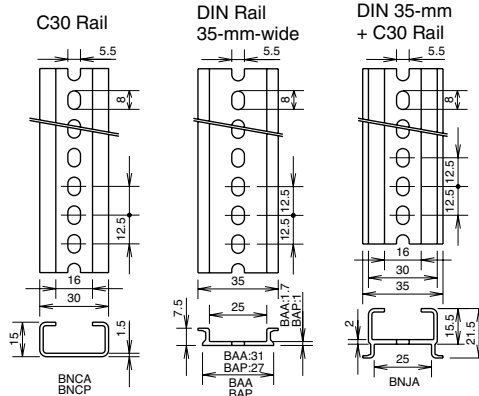
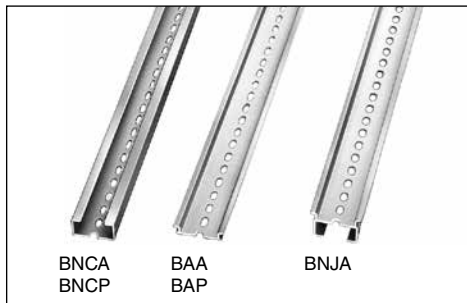


	Part No.	Ordering No.	Applicable Terminal Blocks	Thickness (mm)	Weight (Approx.)	Package Quantity
End Plate	BNE15W	BNE15WPN10	BN10W, BNH10W BN15MW, BNH15MW BN15LW, BNH15LW BN15MWT, BNH15MWT BN15LWT, BNH15LWT	5.0	4g	10
	BNE20	BNE20PN10	BNT20, BNF10S, BNF10N	3.0	8g	
	BNE30W	BNE30WPN10	BN30W, BNH30W	5.0	4g	
	BNE40W	BNE40WPN10	BN40W, BNH40W	5.0	5g	
	BNE50W	BNE50WPN10	BN50W, BNH50W	5.0	6g	
	BNE75W	BNE75WPN10	BN75W	5.0	6g	
	BNE100W	BNE100WPN10	BN100W	5.0	9g	
	BNE150W	BNE150WPN10	BN150W, BN150NW	5.0	10g	
	BNDE15W	BNDE15WPN10	BND15W, BND15WT, BNDH15W, BNDH15WT	Upper deck: 5.0 Lower deck: 9.0	5.5g	
	BNDE15LW	BNDE15LWPN10	BND15LW, BNDH15LW	Upper deck: 5.0 Lower deck: 10.25	6g	
End Plate for Securing End Plate	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	

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

Rails

Rails for mounting terminal blocks. Available in five styles.



Approvals:
IEC60715
JIS C 2812

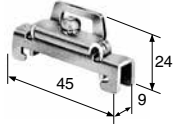
Length	Part No.	Ordering No.	Material	Weight (Approx.)	Package Quantity
1000 mm	BNCA1000	BNCA1000PN10	Aluminum	260g	10
	BNCP1000	BNCP1000PN10	Steel	700g	10
	BAA1000	BAA1000PN10	Aluminum	200g	10
	BAP1000	BAP1000PN10	Steel	320g	10
	BNJA1000	BNJA1000PN10	Aluminum	340g	10

BN-W/BNH-W Series Terminal Blocks

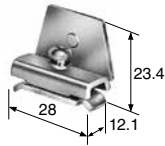
Accessories (End Clip / Rail Mounting Clip / Dust Cover)

End Clips

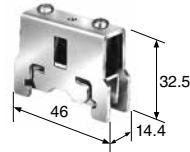
Used to secure the ends of the terminal blocks assembled on the rail.



BNL6 (M4 Screw)
Tightening torque: 1.1 N·m



BNL7 (M4 Screw)



BNL8 (M4 Screw)

- Material: Steel
- Plating: Trivalent zinc chromate

Note: Slide the end clip onto the DIN rail.

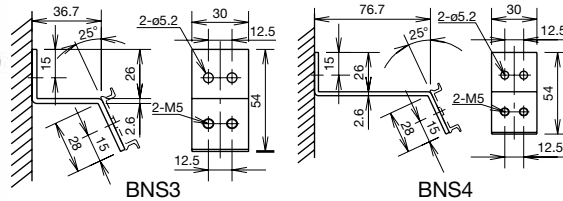
Part No.	Ordering No.	Rails	For Terminal Blocks up to BND and BN□40	For BN□50 and BN□75	For Terminal Blocks BN□100 and larger	Weight (Approx.)	Package Quantity
BNL6	BNL6PN10	BAA, BAP	×	× (*2)	—	15.2g	10
BNL7	BNL7PN10	BNCA, BNCP, BNJA	×	× (*2)	—	16g	10
BNL8	BNL8PN10	BAA, BAP, BNCA, BNCP, BNJA	— (*1)	×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

*1: Do not use BNL8 because the insulation distance will be insufficient if used.

*2: We recommend you to use BNL8 for secure hold.

Rail Mounting Clips

Used to raise the DIN rail from the panel surface.

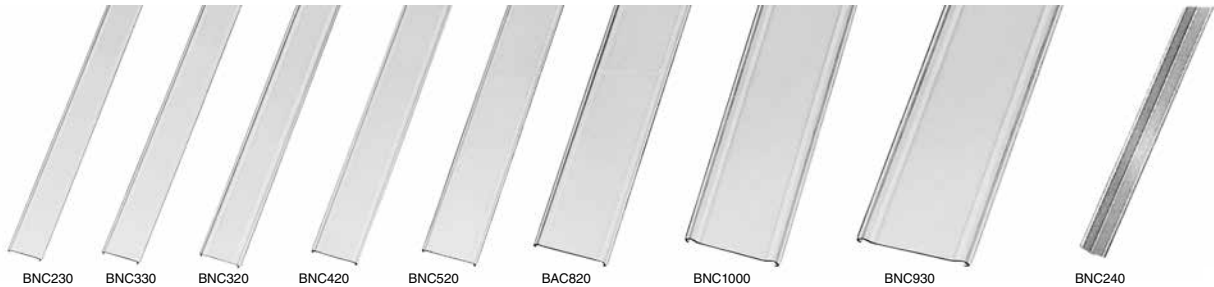


Part No.	Ordering No.	Weight (Approx.)	Package Quantity
BNS3	BNS3PN10	51.3g	10
BNS4	BNS4PN10	76.2g	10

- Material: Steel
- Plating: Trivalent zinc chromate

Dust Cover

Material: Polycarbonate



Length	Width (mm)	Part No.	Ordering No.	Terminal Blocks (□: No. of Poles)	Weight (Approx.)	Package Quantity
1m	39.6	BNC230	BNC230PN10	BN10W, BNH10W, BN15MW, BNH15MW, BN15LW, BNH15LW, BN30W, BNH30W, BN15MWT, BNH15MWT, BN15LWT, BNH15LWT	56g	10
	43	BNC330	BNC330PN10	BN40W, BNH40W	57g	10
	49.6	BNC320	BNC320PN10	BN50W, BNH50W	64g	10
	54.6	BNC420	BNC420PN10	BN75W	72g	10
	65	BNC520	BNC520PN10	BN150W, BN150NW, BNT20, BN100W	96g	10
	82	BAC820	BAC820PN10	BN200BW□(K), BN200NW□(K)	204g	10
	96	BNC910	BNC910PN10	BN300BW□(K), BN300NW□(K)	222g	10
	110	BNC1000	BNC1000PN10	BN400BW□(K), BN400NW□(K)	256g	10
	145	BNC930	BNC930PN10	BN500BW□(K), BN500NW□(K), BN600NW□(K)	310g	10

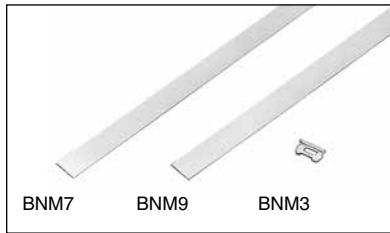
Dust Covers for Double Deck Terminal Blocks

Length	Part No.	Ordering 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

BN-W/BNH-W Series Terminal Blocks

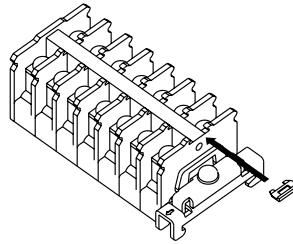
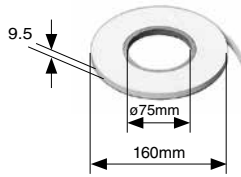
Accessories (Marking Strips / Marking Strip Fastener / Slide Marking Strip)

Marking Strips, Marking Strip Fastener

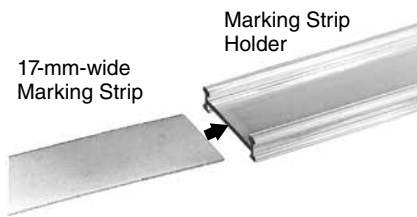


Item	Part No.	Ordering No.	Weight (approx.)	Package Quantity	Specification
Marking Strip	BNM7	BNM7PN10	7.2g	10	PVC (glossy surface) 1000 mm × 9.5 mm × 0.5 mm
	BNM9	BNM9PN10	6.4g	10	Fiber glass (matte surface) 1000 mm × 9.5 mm × 0.5 mm
	BNM725	BNM725	—	1	PVC (matte surface) 25 m × 9.5 mm × 0.5 mm
Marking Strip Fastener	BNM3	BNM3PN50	0.1g	50	

• To install the marking strip fastener

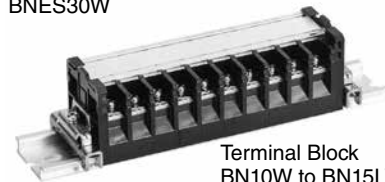


Sliding Marking Strip (BN10W to BN30W)



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



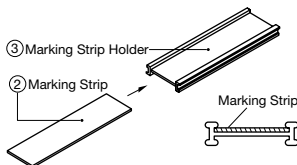
Terminal Block
BN10W to BN15LWT
BN30W

Item	Part No.	Ordering 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

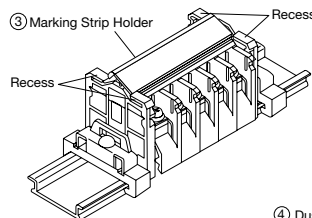
Note: Length 1000 mm × Width 9.5 mm × Thickness 0.5 mm

Installing the Sliding Marking Strip

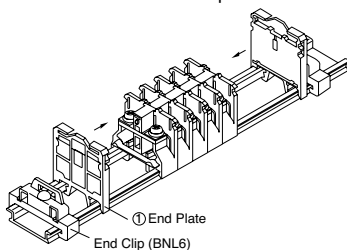
1. Insert the marking strip into the groove of the top of the marking strip holder.



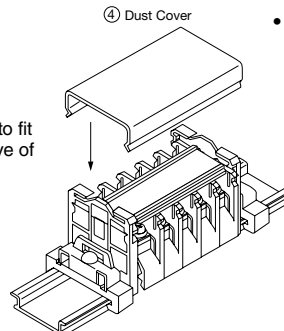
3. Insert the marking strip holder into the recess of the end plate.



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

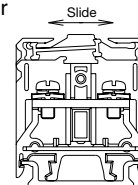


4. Press the dust cover to fit onto the bottom groove of the end plate.



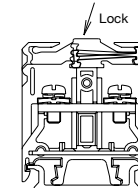
Movement

• Sliding movement of the marking strip holder



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

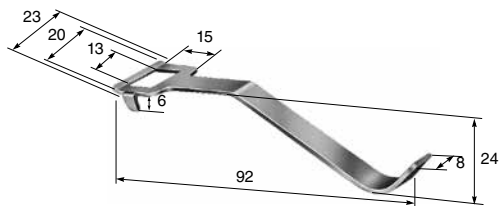
• To lock the marking strip holder



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

BN-W/BNH-W Series Terminal Blocks

Accessories (Removal Tool)



A tool for removing terminal blocks from the DIN rail.

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

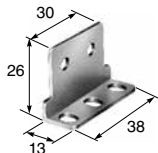
- Material: Steel
- Plating: Zinc

Applicable terminal blocks:

BN10W, BNH10W, BN15MW, BNH15MW, BN15MWT, BNH15MWT, BN15LW, BNH15LW, BN15LWT, BNH15LWT, BN30W, BNH30W (page 8 and 9)

Accessories for BND Double-Deck Terminal Blocks

Surface Mounting Clip



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

- Material: Steel
- Plating: Zinc

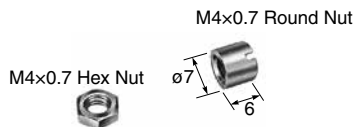
Connecting Rods



Part No.	Ordering No.	Applicable Terminal Block	Weight (Approx.)	Dimensions (mm)	Package Quantity
BNR1	BNR1PN10	BND15W, BNDH15W BND15WT, BNDH15WT	21g	265 mm (M4x0.7)	10
BNR2	BNR2PN10	BND15LW, BNDH15LW	43g	500 mm (M4x0.7)	10

- Material: Steel
- Plating: Zinc

Connecting Nuts



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

- Material: Steel
- Plating: Zinc

BN-W/BNH-W Series Terminal Blocks

Calculating Rail Lengths and Mounting Centers

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

$$L_1 = 12.5 \times N$$

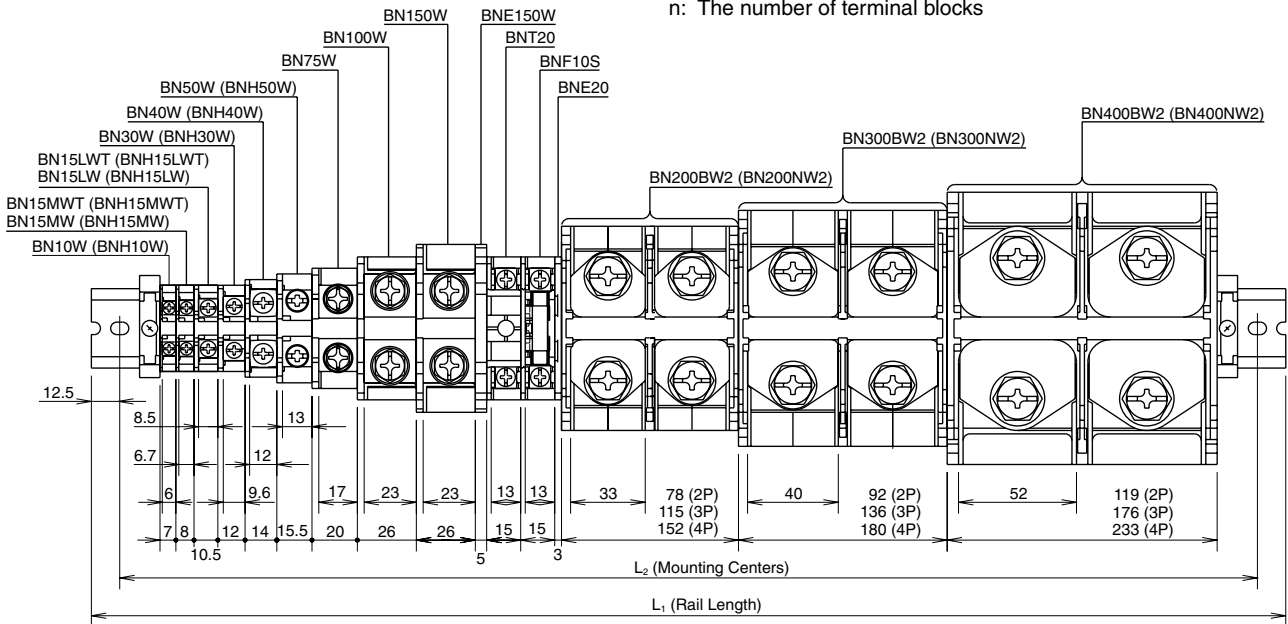
$$L_2 = L_1 - 25$$

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.

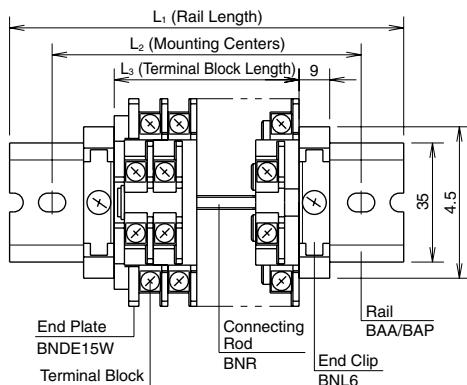
N: Rounded up numerical number from the calculated value of M.
(Example: N for 19.1 is 20)

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

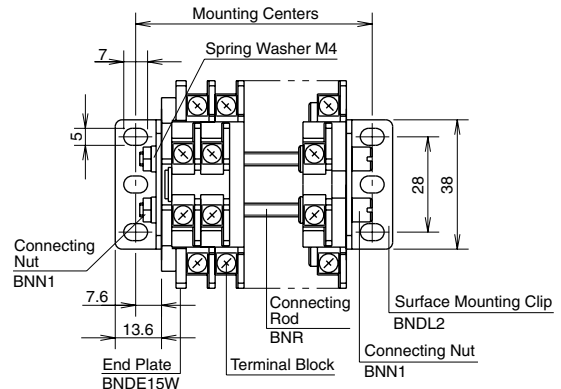
- A: Thickness of each terminal block
- B: Thickness of end plate
- C: Thickness of end clip when using 2 pieces of:
 - BNL6 = 56.0 mm
 - BNL7 = 62.5 mm
 - BNL8 = 67.0 mm
- n: The number of terminal blocks



Rail Length (Double-Deck)



Mounting Centers (Double-Deck)



Calculating the length (mm)

Part 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 For BND15LW, BNDH15LW

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

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

*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, particularly when many terminal blocks are combined.

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

Calculating the length (mm)

Part No.	BND15W BNDH15W BND15WT	BND15LW BNDH15LW
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

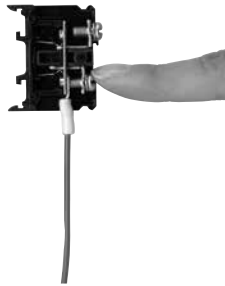
BN-W/BNH-W Series Terminal Blocks

Instructions

How to Use Touch-Down Terminals



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



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

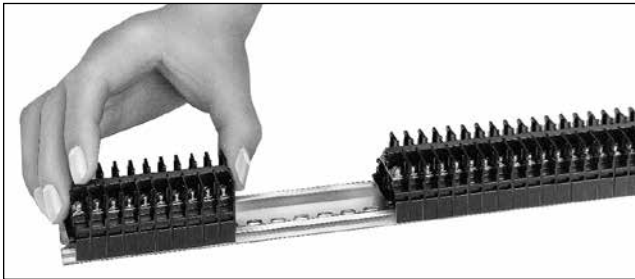


3. When the wiring is in position, tighten all the screws simultaneously.

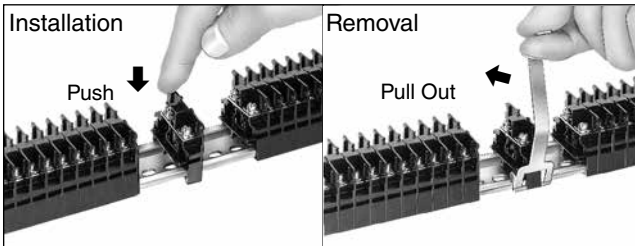


4. To remove the wiring, loosen the screw and lightly push out.

Installation and Removal on Rails



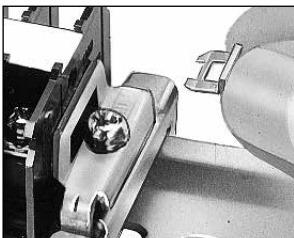
Additional Installation and Removal (on DIN Rail)



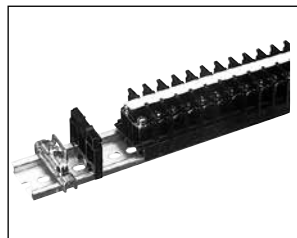
- The following terminal blocks can be added or removed:
BN10W, BNH10W, BN15MW, BNH15MW, BN15LW, BNH15LW, BN30W, BNH30W, BN15MWT, BNH15MWT, BN15LWT, BNH15LWT
- Can be installed/removed for two to three times maximum.

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

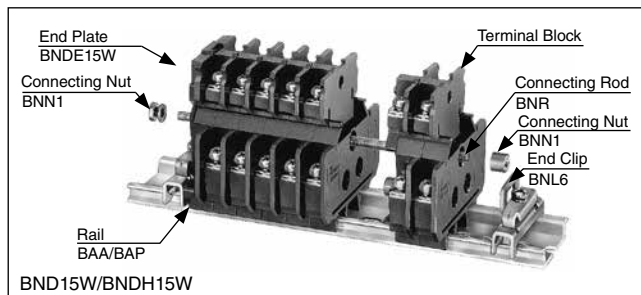


Installing End Plate

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

Installation of Double-Deck Terminal Blocks (BND)

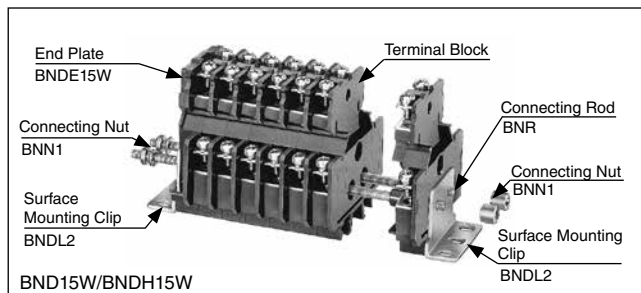
Rail Mount (photo: when using BND15W, BNDH15W, BNDE15W2)



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 end clips at both ends of the rail.

Surface Mount



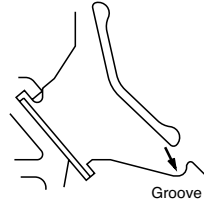
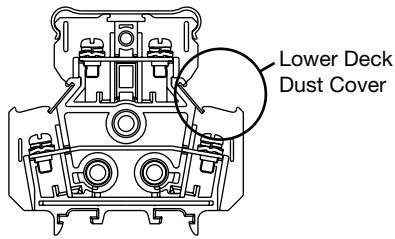
BND15W/BNDH15W

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).

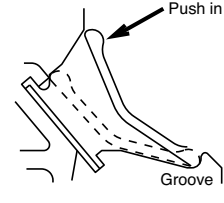
Instructions

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.

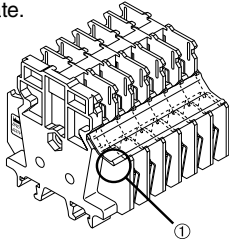


2. With the lower end of the dust cover pressed into the groove, push in the top end in the direction of the arrow.

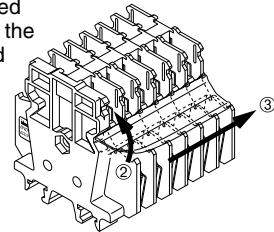
Removing Dust Covers from Lower Deck Terminals

Turn the power off before removing the dust cover.

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

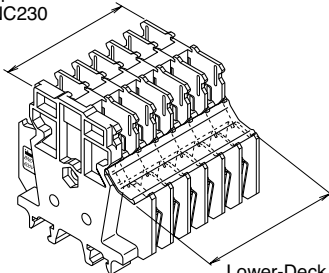


2. Lift up in the direction of the arrow.
3. If the dust cover cannot be removed all at once, place fingers between the terminal block and dust cover, and slowly remove the dust cover.



Length of Double-Deck Dust Covers

Upper-Deck Dust Cover
BNC230



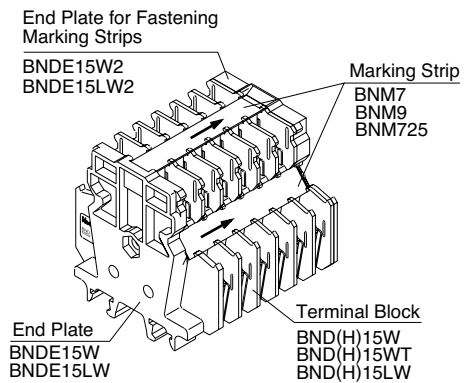
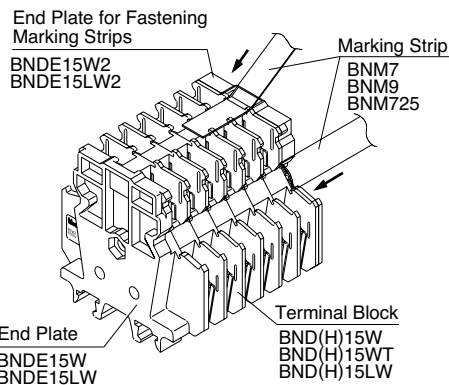
Lower-Deck Dust Cover
BNC240

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.



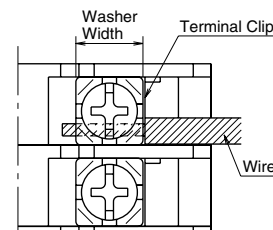
Notes on Wiring

Crimping Terminals

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

Without Crimping Terminals

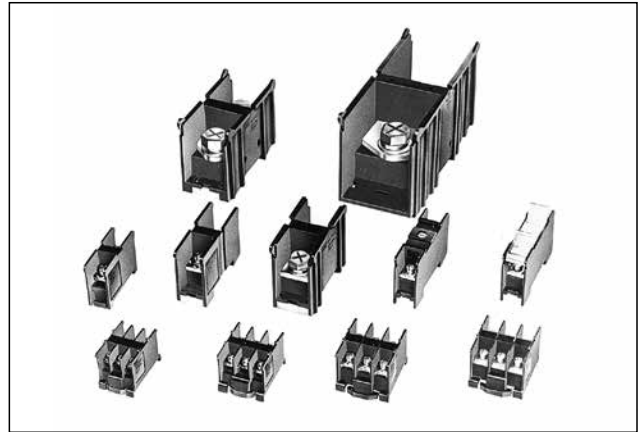
- Insert the wire until the insulation comes into contact with the terminal metal part.
- Strip the insulation so that the wire is longer than the width of the wire clamp.
- When connecting two wires, use wires of the same size.



BA Series Terminal Blocks

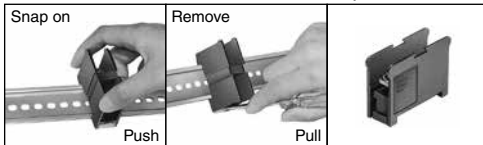
Quick-mount terminal blocks for mounting on 35-mm-wide DIN rails. Current capacities from 16A to 400V (600V).

- 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.
- Material: PPE (black)
- Complies with JIS C 2811.
- UL recognized and CSA certified. (BA111T, BA211T, BA311T, BA411S, BAF111SU, BAF111SNU)



Applicable Standards	Mark	Certification Organization/ File No.
UL1059		UL recognized File No. E78117
CSA 22.2 No. 158		CSA (File No. LR64803)

Quick-mount Unlatch No end plates required



General Ratings

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100MΩ minimum
Operating Temperature	-25 to +55°C (no freezing)
Storage Temperature	-25 to 70°C (no freezing)
Operating Humidity	45 to 85% RH (no condensation)

Terminal Blocks

Style	Part No.	Ordering 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	22-14	600V/16A	1.25 mm ² (2 mm ²)	M3	0.6 to 1.0	20	
		BA211T	BA211TPN20	300V/20A	22-12	600V/21A	2 mm ² (3.5 mm ²)	M3.5	1.0 to 1.3	20	
		BA311T	BA311TPN20	150V/30A	18-10	600V/40A	5.5 mm ²	M4	1.4 to 2.0	20	
1-pole	Self-Lifting	BA411S	BA411SPN50	600V/40A	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	
		BA711S	BA711SPN06	—	—	600V/132A	38 mm ²	M8	10 to 13.5	6	
	Large Capacity	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/ With Lamp	BAF111SU	BAF111SUPN20	600V/10A	18-10	600V/10A	5.5 mm ²	M4	1.4 to 2.0	20	
		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 Part 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

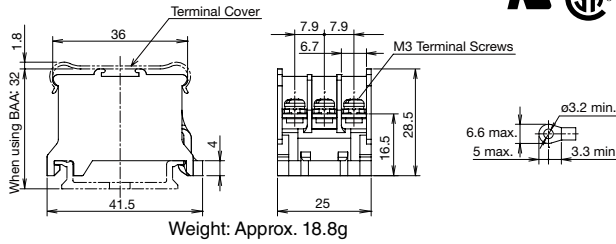
Part No.	Accessories (× Necessary)						
	DIN Rail	End Clip	Marking Strip	Dust Cover	Connecting Rod	Connecting Nut	Surface Mounting Clip
BA111T, BA411S, BAT20, BA211T, BA611S, BA711S, BA311T	×	×	○	○	—	—	—
BA811S, BA911S	×	×	○	○	×	×	▲
BAF111S□, BAF111SN□, BAF111SU, BAF111SNU	×	×	○	*	—	—	—

Material

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

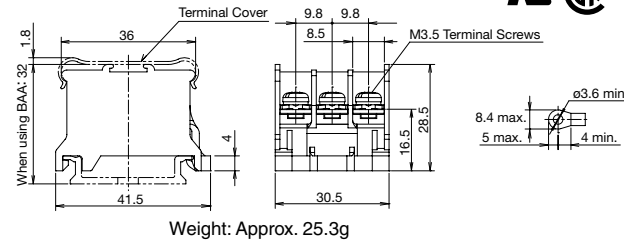
BA Series Terminal Blocks

BA111T (3 Pole) 16A M3



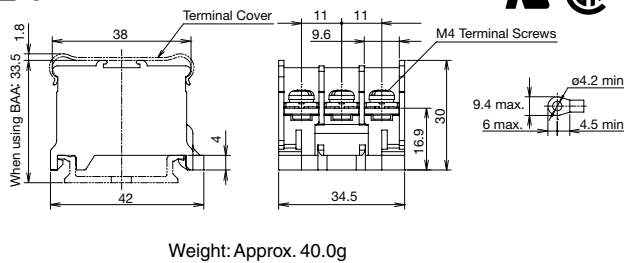
Standards	UL/CSA	JIS
Insulation Voltage	300V	600V
Rated Current *2	15A max.	16A
Dielectric Strength	2,500V AC, 1 minute	
Insulation Resistance	100 MΩ minimum	
Wire Size *1	22-14 AWG	1.25 mm ² (2 mm ²)
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC220
	Rail	BAP1000, BAA1000
	See page	31

BA211T (3 Pole) 21A M3.5



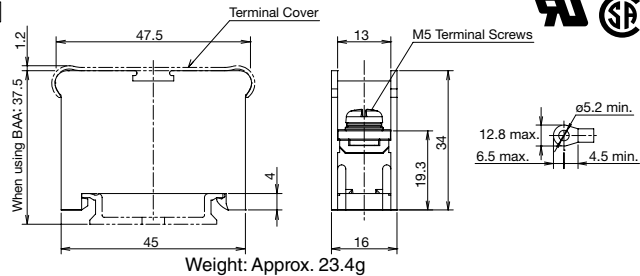
Standards	UL/CSA	JIS
Insulation Voltage	300V	600V
Rated Current *2	20A max.	21A
Dielectric Strength	2,500V AC, 1 minute	
Insulation Resistance	100 MΩ minimum	
Wire Size *1	22-12 AWG	2 mm ² (3.5 mm ²)
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC220
	Rail	BAP1000, BAA1000
	See page	31

BA311T (3 Pole) 40A M4



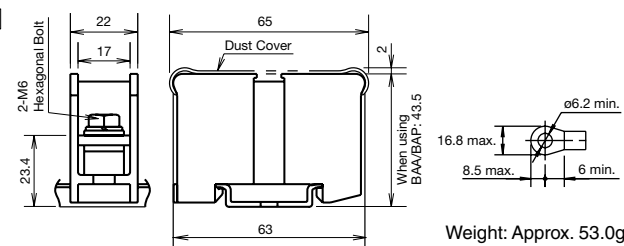
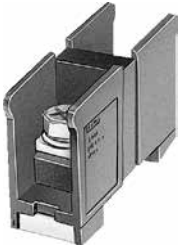
Standards	UL/CSA	JIS
Insulation Voltage	150V	600V
Rated Current *2	30A max.	40A
Dielectric Strength	2,500V AC, 1 minute	
Insulation Resistance	100 MΩ minimum	
Wire Size *1	18-10 AWG	5.5 mm ²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC230
	Rail	BAP1000, BAA1000
	See page	31

BA411S 70A M5



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 mm ²
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC320
	Rail	BAP1000, BAA1000
	See page	31

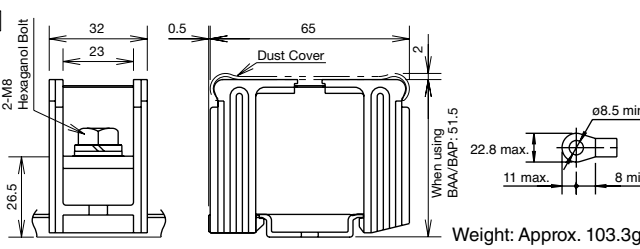
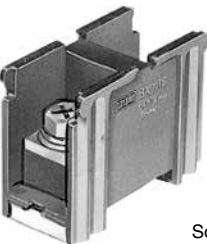
BA611S 94A M6



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 mm ²	
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC520
	Rail	BAP1000, BAA1000
	See page	31

BA711S 132A M8



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 mm ²	
Accessories	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BNC520
	Rail	BAP1000, BAA1000
	See page	31

*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.

*4: 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.

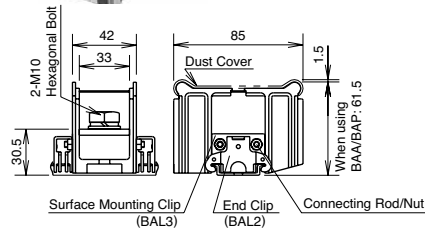
BA Series Terminal Blocks

BA811S 240A M10

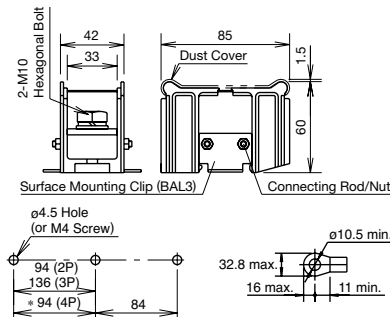


Socket wrench: 12.7 mm square drive hexagonal socket 17

Weight: Approx. 185.0g



Surface Mounting

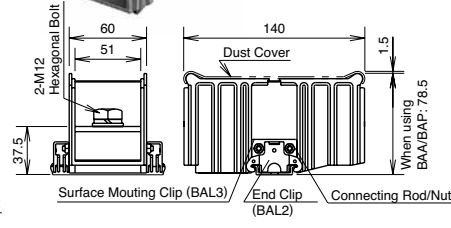


BA911S 370A M12

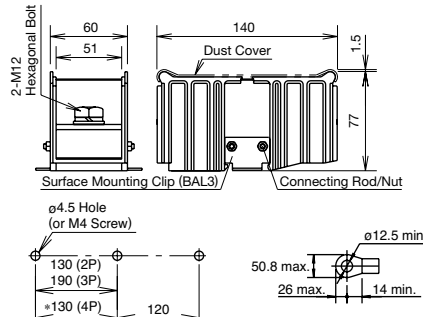


Socket wrench: 12.7 mm square drive hexagonal socket 19

Weight: Approx. 406.3g

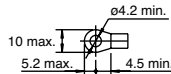
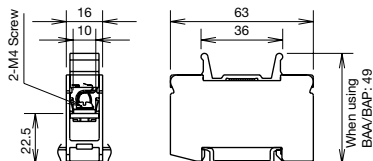


Surface Mounting



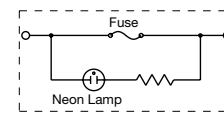
Part No.	BA811S	BA911S
Insulation Voltage	600V	
Rated Current *2	240A	370 (400A)
Dielectric Strength	2,500V AC, 1 minute	
Insulation Resistance	100MΩ minimum	
Wire Size	100 mm ²	200 mm ² *1 (200 mm ² 2 wires) (325 mm ² 1 wire)
Terminal Screw	M10	M12
Accessories	Connecting Rod	BNR1, BNR2, BNL8
	Connecting Nut	BAN1
	End Clip/ Surface Mounting Clip	BAL2, BAL3
	Marking Strip Width	9.5 mm (BNM7, BNM9, BNM725)
	Dust Cover	BAC820 BNC92
	Rail	BAP1000, BAA1000
See page	31	

BAF111S (Fuse) 10A M4



• 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, BNM725)
	Dust Cover	—
	Rail	BAP1000, BAA1000
	See page	31

• Fuse ratings
Rated voltage: 250V
Rated current: 1, 3, 5A
Cartridge fuse: JIS C6575-2
6.35×31.8 mm

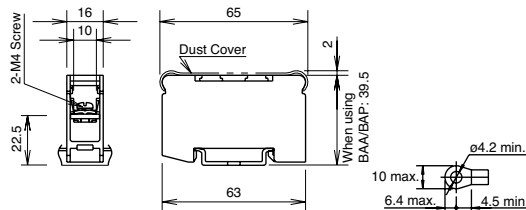
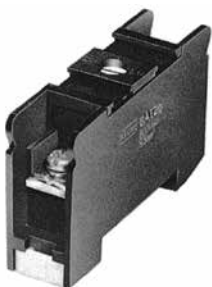
Part No.
BAF111S-1A
BAF111S-3A
BAF111S-5A
BAF111SN-1A
BAF111SN-3A
BAF111SN-5A

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, BNM725)
	Dust Cover	—
	Rail	BAP1000, BAA1000
	See page	31

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

BAT20 (With Disconnecting Switch) 20A M4



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	31

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

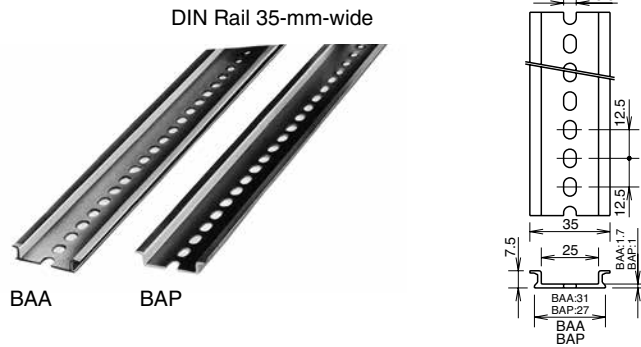
*1: The wire size in () does not comply with JIS standards.

*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



Length	Part No.	Ordering No.	Material	Weight (Approx.)	Package Quantity
1000 mm	BAA1000 (Note)	BAA1000PN10	Aluminum	200g	10
	BAP1000	BAP1000PN10	Steel	320g	10

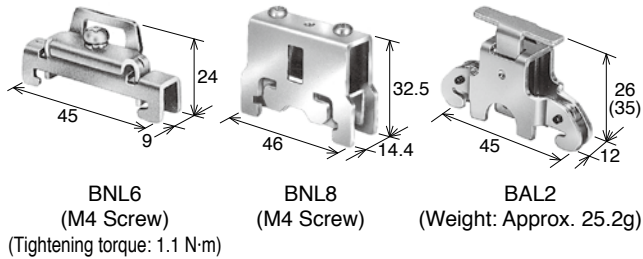
Note: 2000 mm is also available. Contact IDEC.

Marking Strip (BNM)

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

End Clip

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



(Tightening torque: 1.1 N·m)

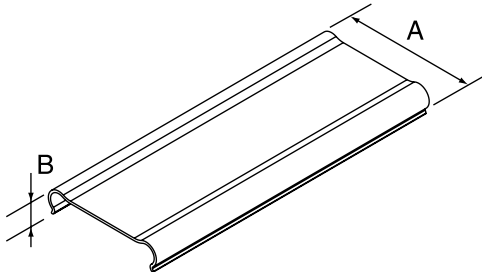
Material: Steel (zinc chrome-plated)

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

Notes on Selecting End 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

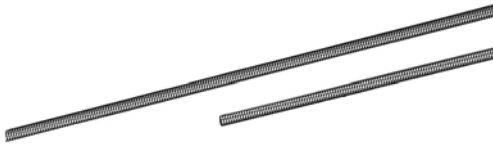


Material: Polycarbonate

Item	Part No.	Ordering 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

BA Series Terminal Blocks

Connecting Rod/Connecting Nut (For BA811S, BA911S)



BNR1: M4 × 0.7 L = 265 (21.0g)
BNR2: M4 × 0.7 L = 500 (43.0g)



BAN1: M4 × 0.7 (2.5g)

Item	Part No.	Ordering 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

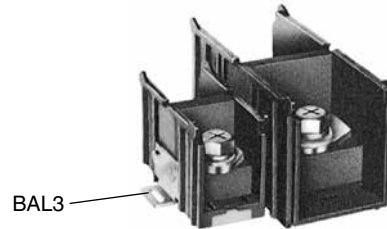
Surface Mounting Clip (For BA811S and BA911S Only)



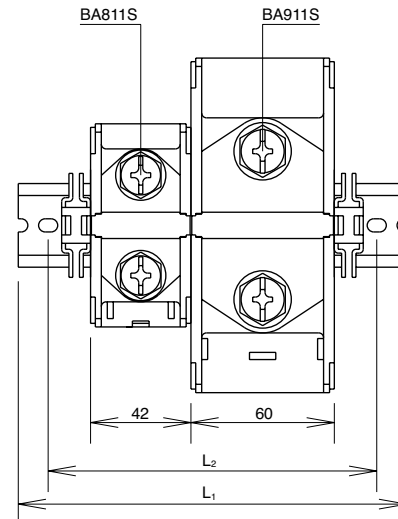
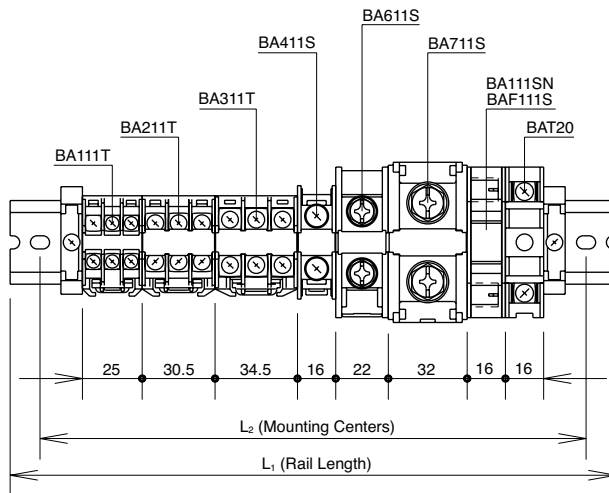
Used on the ends of groups of terminal blocks for direct mounting to panels.

Material: Steel (zinc-chrome plated)

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



Calculating Rail / Connecting Rod Length



Calculating Rail Length

For BAA, BAP 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: End 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

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

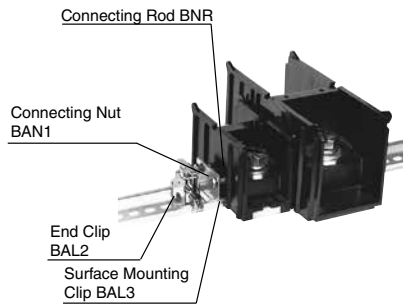
n_1 : BA811S

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 end 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.

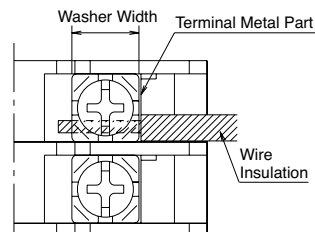
Notes on Wiring

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.

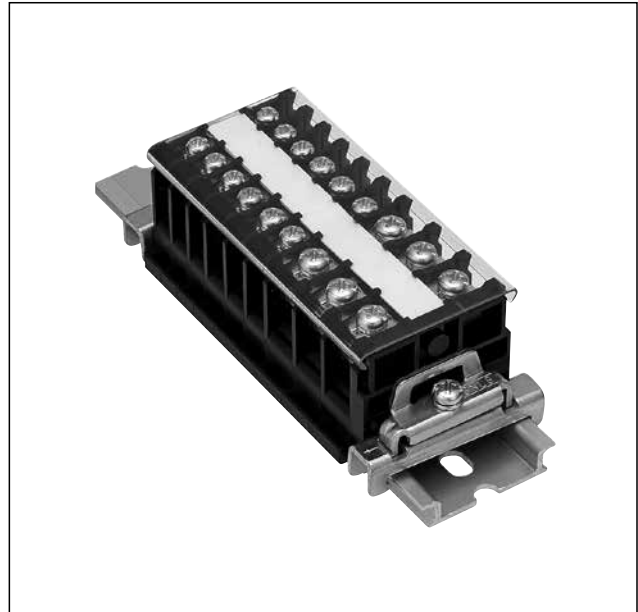


BN1U Spring-Up Screw Terminal Blocks

Spring-up screws save up to 30% wiring time (compared to IDEC standard terminal blocks)

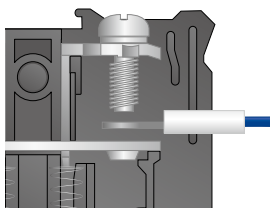
- Spring-up screws with temporary hold function.
- M3, M3.5, and M4 types are all in the same height and width.
- The same dust covers, marking strips (9.5-mm-wide), and end plates can be used.
- Can be mounted on a 35-mm-wide DIN rail or 30-mm-wide C type rail.
- Each block can be easily removed from a 35-mm-wide DIN rail using a flat screwdriver.
- UL recognized for field wiring (FW2).
- UL recognized, CSA certified, and EN compliant (TÜV approved).

Applicable Standards	Mark	Certification Organization / File No.
UL1059		UL recognized File No.E78117
CSA C22.2 No.158		CSA LR64803
EN60947-7-1		TÜV Rheinland License No.R9551701



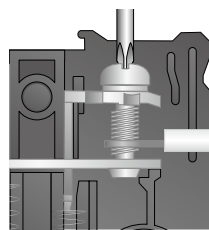
BN1U Spring-Up Screw Terminal Blocks

- ① The terminal screw is always in the lifted position, ready for wiring. A ring terminal can be inserted easily.

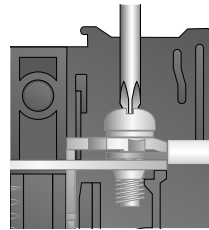


Immediate Tightening

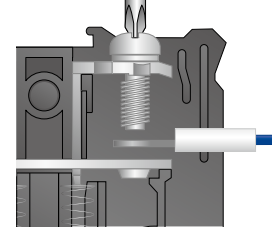
- ② Push the terminal screw straight down to the bus bar using a screwdriver.



- ③ Tighten the terminal screw.

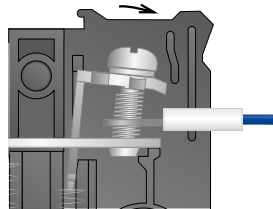


- ④ When loosening, the screw springs straight up.

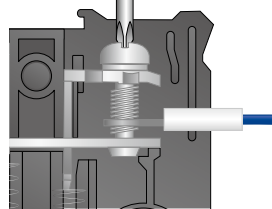


Temporary Hold

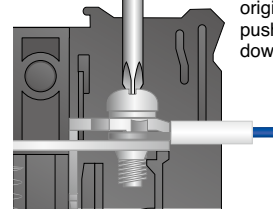
- ② After pressing the terminal screw to the bus bar, tilt the terminal screw in the direction as shown.



- ③ When tightening the screw, make sure that it is in the upright position.



- ④ Tighten the terminal screw.



If the screw stops at the temporary position, the screw will return to the original position by pushing further down.

Ratings·Terminal Screw Tightening Torque

Part No.	JIS		UL		CSA		EN		Terminal Screw	Terminal Screw Recommended Tightening Torque
	Rated Insulation Voltage Current	Applicable Wire (mm ²)	Rated Insulation Voltage Current	Applicable Wire (mm ²)	Rated Insulation Voltage Current	Applicable Wire (mm ²)	Rated Insulation Voltage Current	Applicable Wire (mm ²)		
BN1U-16W	16A	1.25 (2) (Note)	15A	22-14AWG	15A	22-14AWG	22A	2 (22-14AWG)	M3	0.6 to 1.0N·m
BN1U-20W	21A	2	15A	22-14AWG	15A	22-14AWG	22A	2 (22-14AWG)	M3.5	1.0 to 1.3N·m
BN1U-40W	40A	5.5	35A	18-10AWG	35A	18-10AWG	38A	5.5 (18-10AWG)	M4	1.4 to 2.0N·m

Note: Rated applicable wire is 1.25mm², and 2mm² wire can be connected.

Terminal Blocks

Type	Part No.	Ordering No.	Rated Applicable Wire (mm ²)	Terminal Screw	Terminal Width (mm)	Package Quantity	Page
16A	BN1U-16W	BN1U-16WPN50	1.25 (2)	M3	7	50	35
21A	BN1U-20W	BN1U-20WPN50	2	M3.5	8		
40A	BN1U-40W	BN1U-40WPN50	5.5	M4	11		

(Based on JIS C2811)

BN1U Spring-Up Screw Terminal Blocks

Terminal Blocks

Part No.	BN1U-16W 16A M3	BN1U-20W 21A M3.5	BN1U-40W 40A M4
Dimensions			
Ordering No.	BN1U-16WPN50	BN1U-20WPN50	BN1U-40WPN50
Package Quantity	50	50	50
Weight (Approx.)	7g	8g	14g

Specifications and Ratings

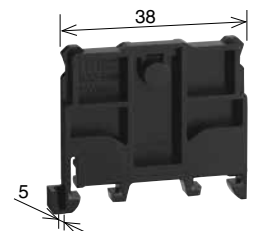
Standards	UL	CSA	EN	JIS	UL	CSA	EN	JIS	UL	CSA	EN	JIS
	UL1059	CSA C22.2 No.158	EN 60947-7-1	JIS C 2811	UL1059	CSA C22.2 No.158	EN 60947-7-1	JIS C 2811	UL1059	CSA C22.2 No.158	EN 60947-7-1	JIS C 2811
Insulation Voltage	600V		660V	600V	600V		660V	600V	600V		660V	600V
Wire Size	22-14 AWG		2 mm ² 22-14 AWG	1.25 mm ² (2 mm ²)	22-14 AWG		2 mm ² 22-14 AWG	2 mm ²	18-10 AWG		5.5 mm ² 18-10 AWG	5.5 mm ²
Rated Current	15A		22A	16A	15A		22A	21A	35A		38A	40A
Terminal Screw	M3				M3.5				M4			
Max. No. of Crimp Terminals	2				2				2			
Tightening Torque	0.6 to 1.0 N·m				1.0 to 1.3 N·m				1.4 to 2.0 N·m			
Terminal Centers	7 mm				8 mm				11 mm			
Crimp Terminal Dimensions (mm)												
Operating Temperature	-25 to +55°C (no freezing)											
Storage Temperature	-25 to +70°C (no freezing)											
Operating Humidity	45 to 85% RH (no condensation)											
Mounting Method	Rail mounting											
Insulation Resistance	100 MΩ minimum (500V DC megger)											
Dielectric Strength	2500V AC, 1 minute											
Vibration Resistance	Frequency: 5 to 55 Hz, Amplitude: 0.5 mm											
Shock Resistance	1000 m/s ² (100G)											
Accessories	End Plate	BN9Z-E16W										
	Dust Cover	BTB-CV30L2 (1000 mm), BTB-CV30L1 (500 mm)										
	Marking Strip	BNM7: PVC 1m, BNM9: Fiber glass: 1m, BNM725: PVC 25m										
	Marking Strip Fastener	BNM3										
	DIN Rail / End Clip	BAA1000: Aluminium, BAP1000: Steel / BNL6										
	C Rail / End Clip	BNCA1000: Aluminium, BNCP1000: Steel / BNL7										
	35 mm DIN + C Rail / End Clip	BNJA1000: Aluminium / BNL6 (35-mm-DIN rail side), BNL7 (C rail side)										
	Jumpers	BNJ16, BNJ16B BNJ16F, BNJ16FB			BNJ26W, BNJ26WB BNJ26FW, BNJ26FWB				BPJ-56, BPJ-56B BPJ-56F, BPJ-56FB			

Material

Housing	Modified PPE (UL94V-0)
End Plate	Modified PPE (UL94V-0)
Bus Bar	Brass (nickel-plated)
Terminal Screw	Steel (zinc trivalent chrome-plated)
Spring	Stainless steel

End Plate

Part No.	BN9Z-E16W
Ordering No.	BN9Z-E16WPN10
Applicable Terminal Block	BN1U-16W, BN1U-20W, BN1U-40W
Package Quantity	10
Weight (Approx.)	3g



BN1U Spring-Up Screw Terminal Blocks

Accessories

Rail

Length	Item	Part No.	Ordering No.	Material	Weight (Approx.)	Package Quantity
1000 mm	35-mm-wide DIN Rail	BAA1000	BAA1000PN10	Aluminum (anodized)	200g	10
		BAP1000	BAP1000PN10	Steel (trivalent chrome-plated)	320g	10
	30-mm-wide C Rail	BNCA1000	BNCA1000PN10	Aluminum (anodized)	260g	10
		BNCP1000	BNCP1000PN10	Steel (trivalent chrome-plated)	700g	10
	35-mm-wide DIN+C Rail	BNJA1000	BNJA1000PN10	Aluminum (anodized)	340g	10

End Clip

Part No.	Ordering No.	Material (Surface Treatment)	Weight (Approx.)	Applicable Rail	Package Quantity
BNL6	BNL6PN10	Steel (trivalent chrome-plated)	15.2g	35-mm-wide DIN Rail (BAA, BAP, BNJA)	10
BNL7	BNL7PN10	Steel (trivalent chrome-plated)	16g	30-mm-wide C Rail (BNCA, BNCP, BNJA)	10

Dust Cover

Length	Part No.	Ordering No.	Material	Weight (Approx.)	Applicable Terminal Blocks	Package Quantity
1000 mm	BTB-CV30L2	BTB-CV30L2PN10	Polycarbonate (UL94V-0)	53g	BN1U-16W, BN1U-20W, BN1U-40W	10
500 mm	BTB-CV30L1	BTB-CV30L1		27g	BN1U-16W, BN1U-20W, BN1U-40W	1

• BNC230 dust cover (1000 mm) can also be mounted to the BN1U-16W and BN1U-20W terminal blocks.

Marking Strip, Marking Strip Fastener

Item	Part No.	Ordering No.	Weight	Package Quantity	Description
9.5-mm-wide Marking Strip	BNM7	BNM7PN10	7.2g	10	PVC (glossy surface), length 1000 mm × width 9.5 mm × thickness 0.5 mm
	BNM9	BNM9PN10	6.4g	10	Fiber glass (matte surface), length 1000 mm × width 9.5 mm × thickness 0.5 mm
	BNM725	BNM725	–	1 (25m)	PVC (matte surface), length 25m × width 9.5 mm × thickness 0.5 mm
Marking Strip Fastner	BNM3	BNM3PN50	0.1g	10	Material: polycarbonate

Jumper

Terminal Centers	Terminal Style	Insulation	Part No.	Ordering No.	Maximum Rated Current *	Applicable Terminal	Package Quantity
7 mm (6 poles)	Ring	Without	BNJ16	BNJ16PN10	10A	BN1U-16W	10
		With	BNJ16B	BNJ16BPN10			
	Fork	Without	BNJ16F	BNJ16FPN10			
		With	BNJ16FB	BNJ16FBPN10			
8 mm (6 poles)	Ring	Without	BNJ26W	BNJ26WPN10	20A	BN1U-20W	10
		With	BNJ26WB	BNJ26WBPN10			
	Fork	Without	BNJ26FW	BNJ26FWPN10			
		With	BNJ26FWB	BNJ26FWBPN10			
11 mm (6 poles)	Ring	Without	BPJ-56	BPJ-56PN10	20A	BN1U-40W	10
		With	BPJ-56B	BPJ-56BPN10			
	Fork	Without	BPJ-56F	BPJ-56FPN10			
		With	BPJ-56FB	BPJ-56FBPN10			

* The maximum rated current is the value of each pole.

Notes on Wiring

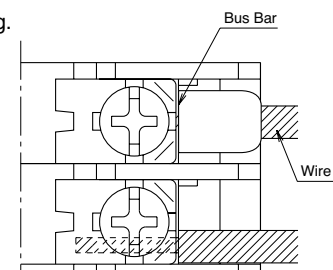
- Tighten all terminal screws including unused terminal screws.
- Be careful not to drop a terminal block (without an end plate) as the spring may fall out from the housing.
- Tighten the terminal screw to the recommended tightening torque.

Crimp Terminals

- When using crimp terminals, be sure to use insulated terminals to prevent electrical shocks.

Without Crimp Terminals




- Insert wire until the insulation comes into contact with the bus bar.
- Strip the insulation so that the wire is longer than the washer width. (BN1U-16W: approx. 9 mm, BN1U-20W: approx. 9 mm, BN1U-40W: approx. 11 mm)
- 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) 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 8201-7-1.
- UL recognized and CSA certified.

Applicable Standards	Mark	Certification Organization/ File No.
UL1059		UL recognized File No. E78117
CSA 22.2 No. 158		CSA (File No. LR64803)
EN60947-1 EN60947-7-1		TÜV Rheinland License No. R9551515



General Specifications

Dielectric Strength	2500V AC, 1 minute
Insulation Resistance	100 MΩ minimum
Operating Temperature	-25 to +55°C (no freezing)
Storage Temperature	-25 to +70°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

Part	Part 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	22-14	500V/22A	2 (18-14)	630V/16A	1.25 (2) *	M3	0.6 to 1.0
		BTB15LC□	300V/15A	22-12	500V/22A	2 (18-14)	630V/21A	2	M3.5	1.0 to 1.3
		BTB30C□	300V/30A	18-10	500V/38A	5.5 (14-10)	630V/40A	5.5	M4	1.4 to 2.0
		BTB50C□	600V/50A	16-6	500V/67A	14 (10-6)	1000V/70A	14	M5	2.6 to 3.7
BTBH	Touch-down	BTBH15C□	300V/10A	22-14	500V/22A	2 (18-14)	630V/16A	1.25 (2) *	M3	0.6 to 1.0
		BTBH15LC□	300V/15A	22-14	500V/22A	2 (18-14)	630V/21A	2	M3.5	1.0 to 1.3
		BTBH30C□	300V/30A	18-10	500V/38A	5.5 (14-10)	630V/40A	5.5	M4	1.4 to 2.0
		BTBH50C□	600V/50A	16-6	500V/67A	14 (10-6)	630V/70A	14	M5	2.6 to 3.7

* The rated applicable wire size is 1.25 mm², but 2 mm² wire can also be used.

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 □.

BTB/BTBH Series Surface Mount Terminal Blocks

BTB15C/BTBH15C

Style	No. of Poles	Part 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

Style	No. of Poles	Part 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
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	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	630V
Wire Size	22-14 AWG	2 mm ² (18-14 AWG)	1.25 mm ² (2 mm ²) *
Rated Current	10A	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 43)		

* 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.

BTB/BTBH Series Surface Mount Terminal Blocks

BTB15LC/BTBH15LC

Style	No. of Poles	Part 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

Style	No. of Poles	Part 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
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	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	630V
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 43)		

BTB/BTBH Series Surface Mount Terminal Blocks

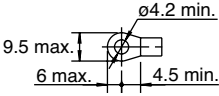
BTB30C/BTBH30C

Style	No. of Poles	Part 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

Style	No. of Poles	Part No.	Package Quantity
BTBH30C (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
	19	BTBH30C19	1
	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		
	UL/CSA	EN	JIS
Standards	UL/CSA	EN	JIS
Insulation Voltage	300V	500V	630V
Wire Size	18-10 AWG	5.5 mm ² (14-10 AWG)	5.5 mm ²
Rated Current	30A	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 43)		

BTB/BTBH Series Surface Mount Terminal Blocks

BTB50C/BTBH50C

Style	No. of Poles	Part 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

Style	No. of Poles	Part 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		BTB50C	BTBH50C
	Standards	UL/CSA	EN	JIS
Insulation Voltage	600V	500V	1000V	630V
Wire Size	16-6 AWG	14 mm ² (10-6 AWG)	14 mm ²	
Rated Current	50A	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)				
Accessory: Jumper	BNJ62, BNJ62B (page 43)			

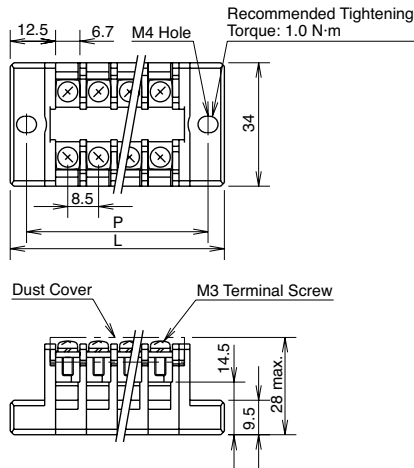
BTB/BTBH series Surface Mount Terminal Blocks

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)

16A M3



Dimensions L and P (mm)

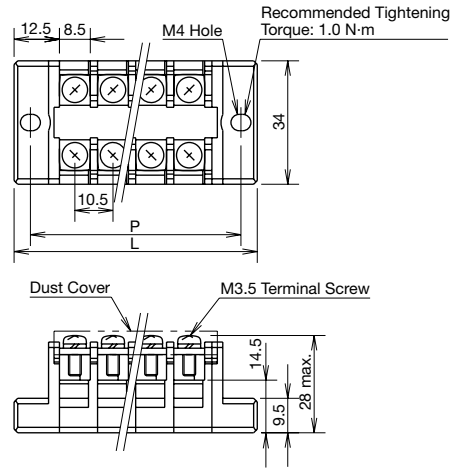
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	42	50.5	59	67.5	76	84.5	93	101.5	110	118.5	127	135.5	144	152.5	161
P	33	41.5	50	58.5	67	75.5	84	92.5	101	109.5	118	126.5	135	143.5	152

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)

21A M3.5



Dimensions L and P (mm)

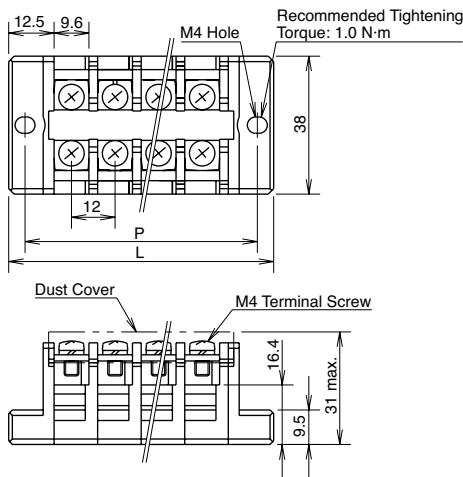
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	46	56.5	67	77.5	88	98.5	109	119.5	130	140.5	151	161.5	172	182.5	193
P	37	47.5	58	68.5	79	89.5	100	110.5	121	131.5	142	152.5	163	173.5	184

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)

40A M4



Dimensions L and P (mm)

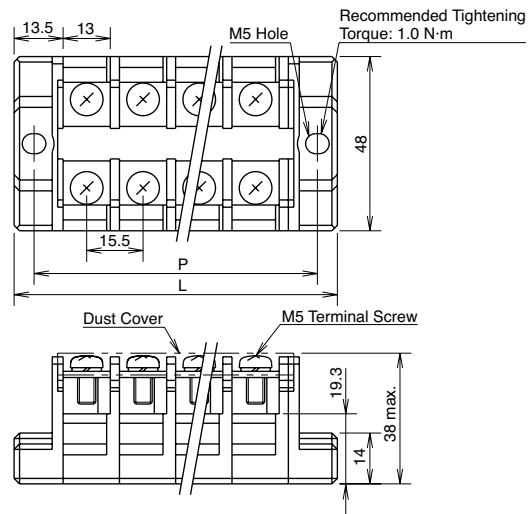
No. of Poles	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L	49	61	73	85	97	109	121	133	145	157	169	181	193	205	217
P	40	52	64	76	88	100	112	124	136	148	160	172	184	196	208

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)

70A M5



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

BTB/BTBH series Surface Mount Terminal Blocks

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	Part No.	Ordering 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.

Jumper for 2 poles

Part No.	Ordering No.	Terminal Centers	Insulation	Dimensions	Current (Note 1, 2)	Applicable Terminal Block	Package Quantity
BNJ62	BNJ62PN10	14.5 mm	Without	Ring Terminal	80A	BTB50 BTBH50	10
BNJ62B	BNJ62BPN10		With				

- Material: nickel-coated brass
- Sheath: PVC

Note 1: Ensure that the total current to the jumper does not exceed the maximum current.

Note 2: Ensure that the current does not exceed the rated current of the terminal block to be used.

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

Applicable Terminal Block	Part No.	Ordering No.	Material	Size	Package Quantity
BTB/BTBH (all models)	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 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

BTB/BTBH Series Surface Mount Terminal Blocks

Safety Precautions

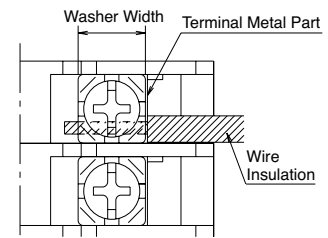
Notes on Wiring

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.
- To prevent damage, ensure to use plain washers when installing.



BD Series Terminal Blocks

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

- Surface mount terminal blocks available.
- Rail mount can be mounted on 15-mm-wide DIN rails.
- BD8 rail mount available in black or blue color.
- Flame-resistant plastic (UL94V-0).
- Can be mounted on the rail easily.
- Space-saving low profile style
- Safe robust construction
- Complies with JIS C 2811.
- UL recognized and CSA certified.

Applicable Standards	Mark	Certification Organization/ File No.
UL1059		UL recognized File No. E78117
CSA 22.2 No. 158		CSA (File No. LR64803)



Rail Mount

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

* The applicable rated wire size is 1.25mm², but 2mm² wire can also be connected.
The wire size in () does not comply with JIS standards.

Accessories

Part No.	Accessories (sold separately)					
	End Plate	Rail	Dust Cover	Marking Strip	End Clip	Terminal Jumper
BD8-R	x	x	○		x	○
BD8S-R	x	x	○	○	x	○
BD7-RB	x	x	○	○	x	○
BDK5-RB	x	x	○	○	x	—
	50			51		
	Page					

- x: Accessories needed when mounting terminal blocks. Order separately.
- : Order if necessary.
- Order a dust cover, marking strip (fiber), and jumper when necessary (see page 50 and 51).

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)

BD Series Terminal Blocks

Surface Mount

Terminal centers	Terminal Shape	Part No. (□: No. of Poles)	Housing Color	No. of Poles	Wire Size
8 mm	M3 screw (self-lifting)	BD8-MB□	Black	2 to 35	1.25 (2) mm ² *
8 mm	M3 screw/solder (self-lifting)	BD8S-MB□	Black	2 to 35	1.25 (2) mm ² *
7 mm	M3 screw (self-lifting)	BD7-MB□	Black	2 to 40	1.25 (2) mm ² *
5 mm	M3 cage clamp	BKD5-MB□	Black	2 to 56	1.25 mm ² *

* The rated applicable wire size is 1.25 mm², but 2 mm² wires can also be connected.

Ordering Information

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


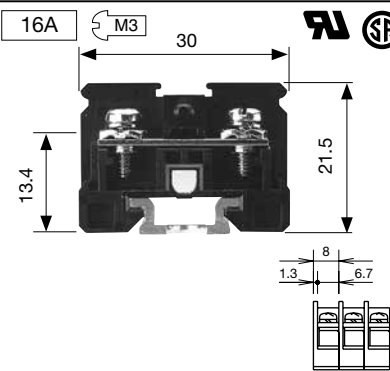
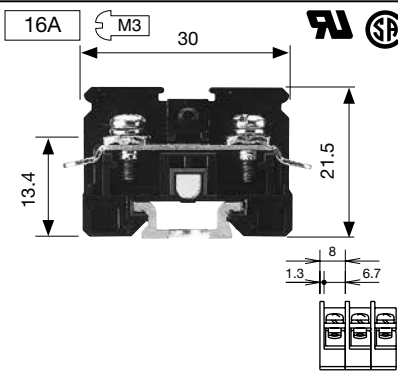
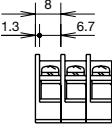
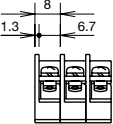
Material

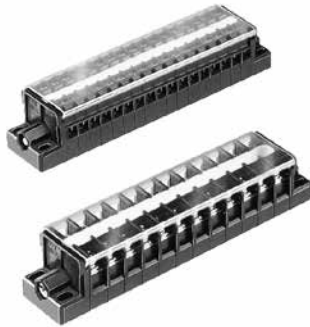
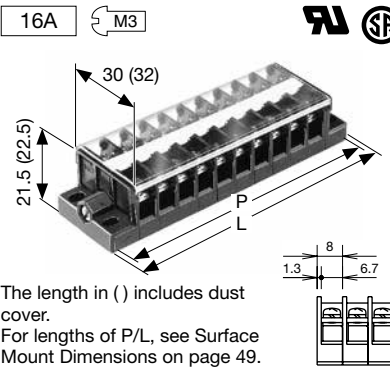
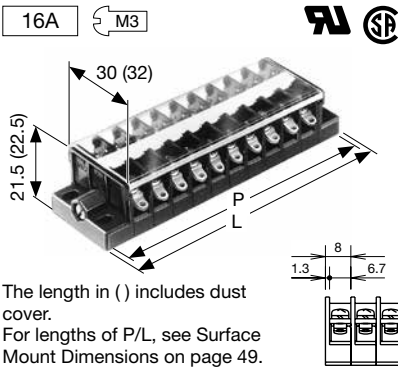
Parts	Material
Housing	Modified PPE
Terminal Metal Part	Brass (nickel-plated)
Terminal Metal Part (BD8S)	Brass (tin-plated)
Terminal Screw	Steel (zinc chromate-plated)

Accessories

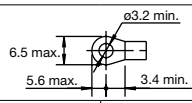
- Dust covers and marking strips are supplied with the terminal block.
- Order jumpers if required (see page 51).

BD Series Terminal Blocks

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

Part 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 49.	The length in () includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 49.

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)			
	Storage Temperature	-25 to +70°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) *3	14-20 AWG (solid wire/ stranded wire)	1.25 mm ² (2 mm ²) *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 50)			
	Rail (for rail mount)	15-mm-wide DIN Rail	BDA1000 (aluminum) (see page 50)		
	Dust Cover	BDP1000 (steel) (see page 50)			
	Marking Strip	PVC (glossy surface)	BDC1000 (see page 50)		
		Fiber Glass (matte surface)	BDM11 (see page 51)		
	End Clip (for rail mount)	BDM12 (see page 51)			
Jumper	BDL11 (see page 51)				
	BNJ26W, BNJ26WB, BNJ26FW, BNJ26FWB (see page 51)				


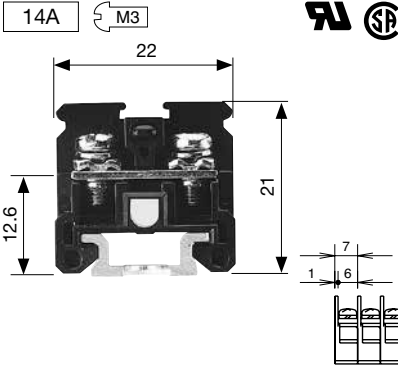
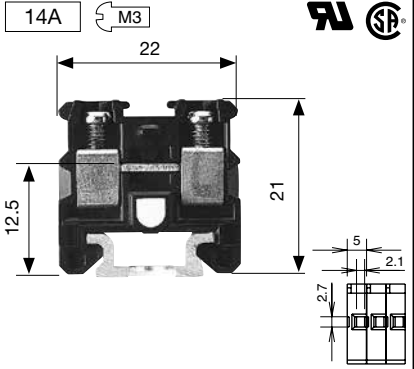


*1: The rated voltage when power is applied is 250V under UL recognition. (Example: Office automation equipment, home electric appliances, facsimile, and other information processing equipment.)

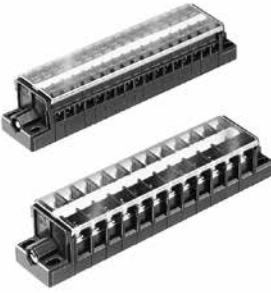
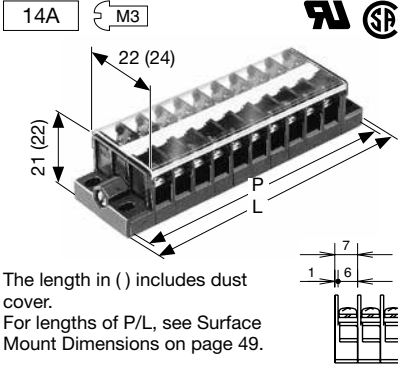
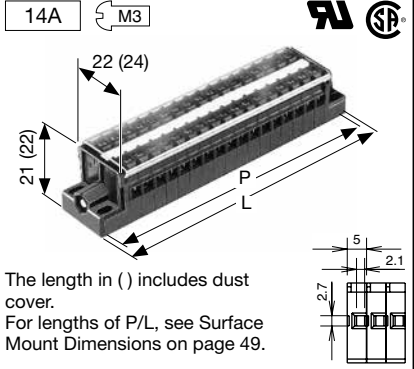
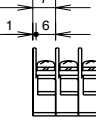
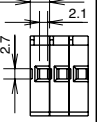
*2: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.

*3: The wire size in () does not comply with JIS standards.

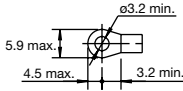
* Color code: B (black), S (blue)

BD Series Terminal Blocks

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

Part No. (Specify the no. of poles in place of □)		BD7-MB□ (Self-Lifting)	BDK5-MB□ (Cage Clamp)
Surface Mount		 <p>The length in () includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 49.</p>	 <p>The length in () includes dust cover. For lengths of P/L, see Surface Mount Dimensions on page 49.</p>
			

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)			
	Storage Temperature	-25 to +70°C (no freezing)			
	Operating Humidity	45 to 85% RH (no condensation)			
Others	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
	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 50)			
	Rail (for Rail Mount)	15-mm-wide DIN Rail	BDA1000 (aluminum) (see page 50)		
			BDP1000 (steel) (see page 50)		
	Dust Cover	BDC1000S (see page 50)			
	Marking Strip	PVC (smooth surface)	BNM8 (see page 51)		
		Fiber Glass (rough surface)	BNM10 (see page 51)		
	End Clip (for rail mount)	BDL11 (see page 51)			
Jumper	BDJ10, BDJ10B, BDJ10F, BDJ10FB (see page 51)		—		

*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.)

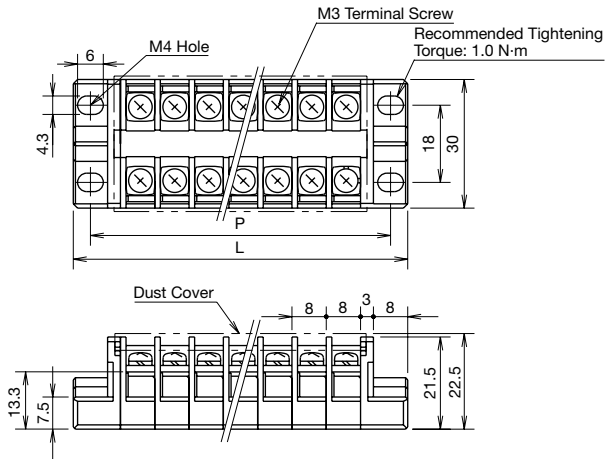
*2: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on page 4.

*3: The wire size in () does not comply with JIS standards.

Surface 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)



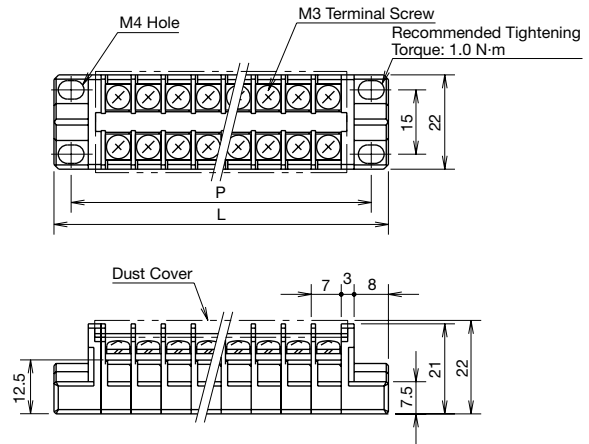
Dimensions L and P (mm)

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	$L = 22 + (7.95n)^{+0.5}$
P	141.2	157.1	173	212.75	252.5	292.3	$P = 14 + (7.95n)^{+0.5}$

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

BD7-MB□ (7-mm Terminal Centers)



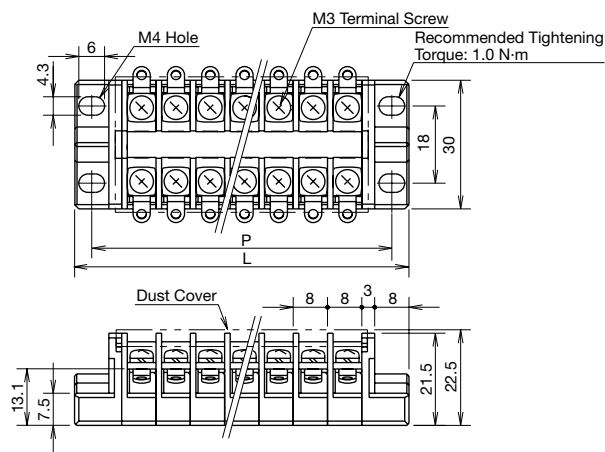
Dimensions L and P (mm)

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	$L = 22 + (6.9n)^{+0.5}$
P	124.4	138.2	152	186.5	221	255.5	290	$P = 14 + (6.9n)^{+0.5}$

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

BD8S-MB□ (8-mm Terminal Centers)



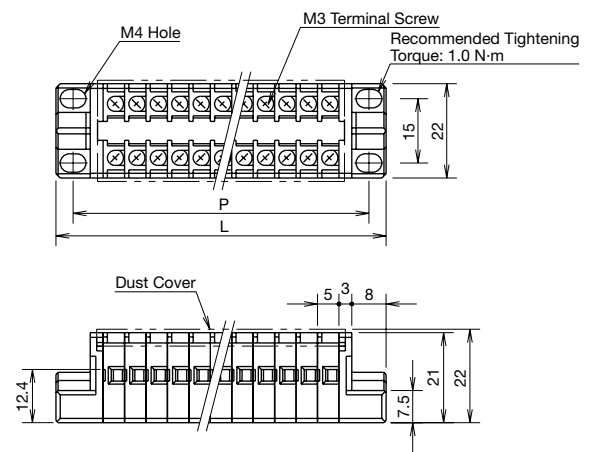
Dimensions L and P (mm)

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	$L = 22 + (7.95n)^{+0.5}$
P	141.2	157.1	173	212.75	252.5	292.3	$P = 14 + (7.95n)^{+0.5}$

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

BDK5-MB□ (5-mm Terminal Centers)



Dimensions L and P (mm)

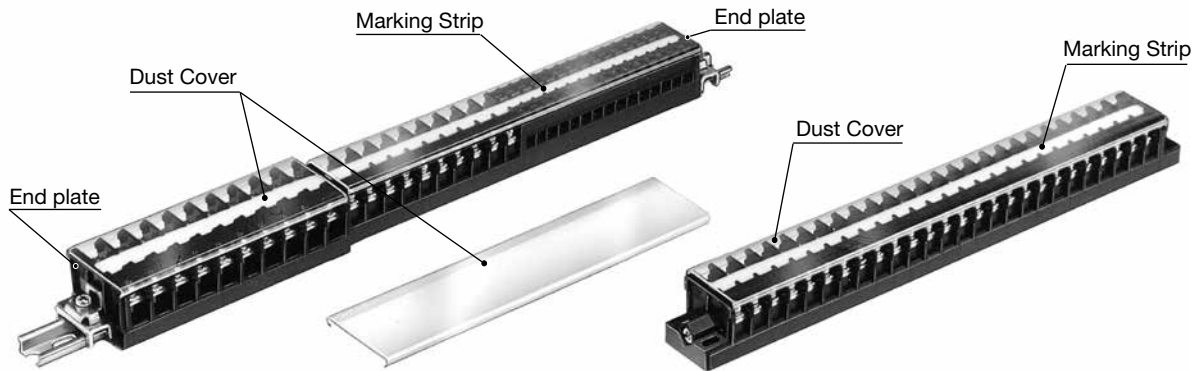
No. of Poles	2	3	4	5	6	8	10	12	14	15
L	31.9	36.9	41.8	46.8	51.7	61.6	71.5	81.4	91.3	96.3
P	23.9	28.9	33.8	38.8	43.7	53.6	63.5	73.4	83.3	88.3


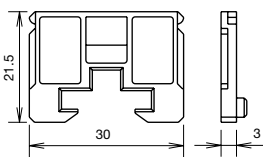

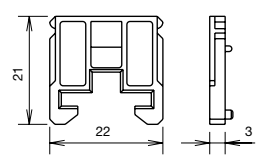

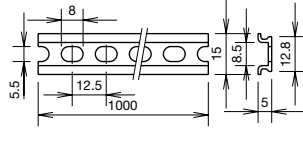



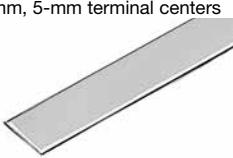
No. of Poles	16	18	20	25	30	35	40	45	50	51
L	101.2	111.1	121	145.8	170.5	195.3	220	244.8	269.5	274.5
P	93.2	103.1	113	137.8	162.5	187.3	212	236.8	261.5	266.5

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

BD Series Terminal Blocks

Accessories



Shape	Part No.	Ordering No.	Package Quantity	Dimensions	Remarks	
End Plate 8-mm terminal centers  Material: Modified PPE	Black	BDE11B	BDE11BPN10	10		<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> 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		<ul style="list-style-type: none"> 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

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

BD Series Terminal Blocks

Shape	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)	Terminal Block	
Marking 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		
End Clip	Steel (zinc-plated)	BDL11	BDL11PN10	10	<p>Weight: Approx. 4g Recommended tightening torque: 0.5 to 0.7 N·m</p>	BD8-R* BD8S-R* BD7-RB BDK5-RB	

Description		Part No.	Ordering No.	Dimensions	Rated Current	Package Quantity	Applicable Terminal Block
Jumper	For 6-pole 8-mm Terminal Centers	Ring	BNJ26W	BNJ26WPN10		10	BD8-R* BD8-MB□ BD8S-R* BD8S-MB□
			BNJ26WB Insulation: PVC	BNJ26WBPN10		10	
		Fork	BNJ26FW	BNJ26FWPN10		10	
			BNJ26FWB Insulation: PVC	BNJ26FWBPN10		10	
	For 10-pole 7-mm Terminal Centers	Ring	BDJ10	BDJ10PN10		10	BD7-RB BD7-MB□
			BDJ10B Insulation: PVC	BDJ10BPN10		10	
		Fork	BDJ10F	BDJ10FPN10		10	
			BDJ10FB Insulation: PVC	BDJ10FBPN10		10	

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

BDA and BDP Rails

$$L_1 = 12.5 \times N$$

$$L_2 = L_1 - 25$$

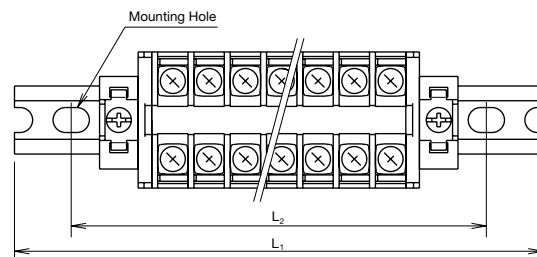
N: Rounded up numerical number from the calculated value of M.
(Example: N for 19.1 is 20)

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

A: Thickness of each terminal block

n: The number of terminal blocks

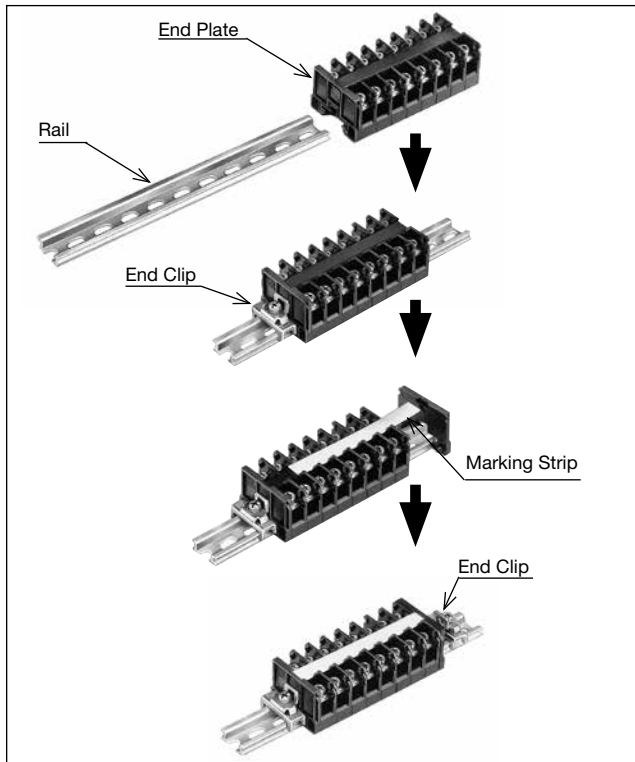
Note: This formula is for calculating the maximum rail length including tolerance. Depending on the combination of terminal blocks, the required rail length may be shorter than the calculated value, particularly when many terminal blocks are combined.



BD Series Terminal Blocks

Instructions

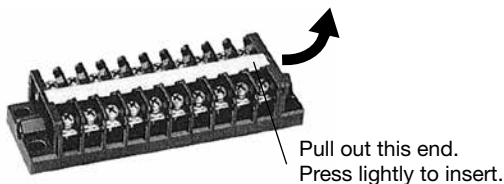
Installation of Rail Mount Terminal Blocks



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.

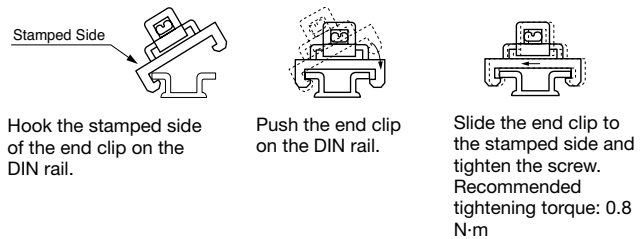
To install, insert the marking strip into the terminal block from one end and press in the other end of the marking strip.



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 an end clip (BDL11) so that the terminal blocks are mounted in the center of the DIN rail. See "Installing the end clip" below.
4. Insert the marking strip and fasten with another end plate.
5. Install the end clip (BDL11) on the other end of the terminal block
6. Cover the terminal block with the dust cover.

Installing the end clip



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 49 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	

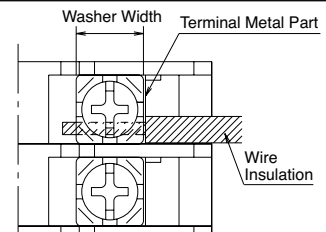
Notes on Wiring

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.



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