**Terminal Blocks** 

# BN-W BNH-W Series



UL recognized, CSA certified, and TÜV compliant.

Screw-in and touch-down terminals available.











· See website for details on approvals and standards.

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

#### 1. Insert the Crimping Terminal



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

#### 2. Push the Screw Down



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

#### 3. Tighten the Screw



The screws can be tightened easily with a pneumatic screwdriver.

- 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/BNH30W)
- Screw and stud terminals available for large capacity terminal blocks.
- $\bullet$  Additional mounting and removal of terminals is easy. (BN $\square$ 10W to BN $\square$ 150W)
- Complies with JIS C 8201-7-1 and NECA C 2811.
- UL recognized, CSA certified, and EN compliant (TÜV approved). (Except common terminal)
- UL recognized for field wiring (FW2).

# **BN-W / BNH-W** Series Terminal Blocks

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



• Complies with JIS C 8201-7-1 and NECA C 2811.

## **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)

### 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)		

Ratings/Terminal Screw Tightening Torque

ilatiligo/ lollili	atings/reminal sciew rightening forque									
	Par	t No.	UL/CSA		EN Ra	tings (*1)	JIS Ra		Terminal	Tightening
Style	Screw-in	Touch-Down	Voltage/ Current	Wire Size (AWG)	Voltage/ Current	Wire Size [mm²/(AWG)]	Voltage/ Current	Wire Size (mm²)	Screw	Torque (N·m)
	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
Standard	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
	BN50W	BNH50W	600V/60A	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	BN150W BN150NW		16-1/0	660V/175A	60/(1/0)	1000V/175A	60	M8	10 10 13.3
	BN150NW	150NW		16-1/0	660V/175A	60/(1/0)	630V/175A	60	M8	10 to 13.5
Large Capacity	BN200BW□, E	$BN200BW\square$ , $BN200NW\square$		4/0	660V/240A	100/(4/0)	800V/240A	100	M10	21 to 28
	$BN300BW\square$ , $BN300NW\square$		600V/310A	300MCM	660V/310A	150/(300MCM)	800V/310A	150	M10	21 10 20
	BN400BW□, BN400NW□		600V/350A	400MCM	660V/370A	200/(400MCM)	800V/370A	200	M12	38 to 49
	BN500BW□, E	BN500NW□	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	03 10 110
With Disconnecting Switch	BNT20	_	_	_	_	_	600V/20A	5.5	M4	1.4 to 2.0
With Fuse	BNF10S	_	_	_	_	_	600V/10A	5.5	M4	1.4 to 2.0
Willi Fuse	BNF10N	_	_	_	_		600V/10A	5.5	M4	1.4 10 2.0
	BND15W	BNDH15W	600V/10A	22-14	660V/22A	2/(22-14)	800V/16A	1.25 (2) *2	M3	0.6 to 1.0
Double-Deck	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.

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

Specify the number of poles in place of  $\square$ .

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# **Terminal Blocks**

Те	erminal Style		Part No.	Applicable Wire (mm²)	Terminal Screw	Width (mm)	Quantity	Page
Standard								
		16A	BN10W	1.25	M3	7	50	
		TUA	BN15MW	1.25 (2) (Note)	M3	8	50	G-012
		21A	BN15LW	2	M3.5	10.5	50	
Screw-in	1-pole	ZIA	BN15MWT	2	M3.5	8	50	
		30A	BN15LWT	3.5	M4	10.5	50	G-013
		40A	BN30W	5.5	M4	12	50	
		70A	BN50W	14	M5	15.5	20	G-014
		164	BNH10W	1.25	M3	7	50	
		16A	BNH15MW	1.25 (2) (Note)	M3	8	50	G-012
		01.4	BNH15LW	2	M3.5	10.5	50	
Touch-Down	1-pole	21A	BNH15MWT	2	M3.5	8	50	
		30A	BNH15LWT	3.5	M4	10.5	50	G-013
		40A	BNH30W	5.5	M4	12	50	1
		70A	BNH50W	14	M5	15.5	20	G-014
Large Capacity (Rai	l Mount)							
		94A	BN75W	22	M6	20	10	0.015
	1	132A	BN100W	38	M8	26	5	G-015
	1-pole	1754	BN150W	60	M8	26	5	0.040
		175A	BN150NW	60	M8	26	5	G-016
	2-pole	240A	BN200BW2					
	3-pole		BN200BW3	100	M10	37	1	G-017
Screw	4-pole	]	BN200BW4					
	2-pole		BN300BW2			44		
	3-pole	310A	BN300BW3	150	M10		1	G-018
	4-pole		BN300BW4					
	2-pole		BN400BW2					
	3-pole	370A	BN400BW3	200	M12	57	1	G-019
	4-pole	1	BN400BW4					
	2-pole		BN200NW2					
	3-pole	240A	BN200NW3	100	M10	37	1	G-017
	4-pole	1	BN200NW4					
	2-pole		BN300NW2					
Stud	3-pole	310A	BN300NW3	150	M10	44	1	G-018
	4-pole	1	BN300NW4					
	2-pole		BN400NW2			57	1	
	3-pole	370A	BN400NW3	200	M12			G-019
	4-pole		BN400NW4					

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

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# **Terminal Blocks**

1	Terminal Style		Part No.	Applicable Wire (mm²)	Terminal Screw	Width (mm)	Quantity	Page
Large Capacity (Si	urface Mount)							
	2-pole		BN200BW2K					
	3-pole	240A	BN200BW3K	100	M10	37	1	G-017
	4-pole		BN200BW4K					
	2-pole		BN300BW2K					
	3-pole	310A	BN300BW3K	150	M10	44	1	G-018
Screw	4-pole		BN300BW4K					
Screw	2-pole		BN400BW2K				1	
	3-pole	370A	BN400BW3K	200	M12	57		G-019
	4-pole		BN400BW4K					
	2-pole	430A	BN500BW2K			57		
	3-pole		BN500BW3K	250	M16		1	G-020
	4-pole		BN500BW4K					
	2-pole		BN200NW2K	100				
	3-pole	240A	BN200NW3K		M10	37	1	G-017
	4-pole		BN200NW4K					
	2-pole		BN300NW2K		M10	44	1	
	3-pole	310A	BN300NW3K	150				G-018
	4-pole		BN300NW4K					
	2-pole		BN400NW2K					
Stud	3-pole	370A	BN400NW3K	200	M12	57	1	G-019
	4-pole		BN400NW4K					
	2-pole		BN500NW2K					
	3-pole	430A	BN500NW3K	250	M16	57	1	
	4-pole		BN500NW4K					
	2-pole		BN600NW2K					G-020
	3-pole	520A	BN600NW3K	325	M16	57	1	
	4-pole		BN600NW4K					

Terminal Style			Part No.	Applicable Wire (mm²)	Terminal Screw	Width (mm)	Quantity	Page		
With Disconnecting S	witch, Fuse									
Disconnecting Switch	20A	1-pole	BNT20	5.5	M4	15	20			
With Fuse	104	1 nolo	BNF10S-□	5.5	M4	15	20	G-021		
WIIII FUSE	10A	1-pole	BNF10N-□	5.5	1714	15				
Double-Deck Terminal Block										
Screw-in	16A	1 polo	BND15W	1.05 (0)	M3	8	25			
Touch-Down	IOA	1-pole	BNDH15W	1.25 (2)*	IVIO	·	23	G-022		
Screw-in	21A	1-pole	BND15LW	_ 2	M3.5	8	25	U-022		
Touch-Down	ZIA	i-pole	BNDH15LW		IVIO.5	0				
Screw-in	21A	1 nolo	BND15WT	_ 2	M3.5	12	25	G-023		
Touch-Down	ZIA	1-pole	BNDH15WT	2	IVIO.0	12	25	u-023		
Common Terminal										
0 : 101		4-pole	BN15MC4							
Screw-in 16A (Common Current)		8-pole	BN15MC8	1.25 (2)*	M3	8	10	G-024		
(John Horr Gurrent)		10-pole	BN15MC10							

<sup>\*</sup> The rated applicable wire size is 1.25 mm², but 2 mm² wires can also be connected. Specify the fuse rating in place of  $\Box$ . 1A: 1, 3A: 3, 5A: 5.

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	Accessories						Acce	essorie	es (×: l	Neces	sary)				
to t ×:	en ordering accessorie he table. Necessary Optional	End Plate	=	End Clip	Rail Mounting Clip	Dust Cover	Marking Strip	Marking Strip Fastener	Sliding Marking Strip	Jumper	moval Tool	rface Mount Clip	Connecting Rod	Connecting Nut	
Te	rminal	Part No.	ᇤ	Rail	ᇤ	- E	3	ğ	Ĕ	is	弓	Be	ns	පි	පි
	16A to 40A Screw-in	BN10W, BN15MW, BN15LW, BN15MWT, BN15LWT, BN30W	×	×	×	0	0	0	0	0	0	0	_	_	_
Standard	Touch-Down	BNH10W, BNH15MW, BNH15LW, BNH15MWT, BNH15LWT, BNH30W	×	×	×	0	0	0	0	_	0	O — — — — — — — — — — — — — — — — × *2	_	_	
St.	70A Screw-in Touch-Down	BN50W, BNH50W	×	×	×	0	0	0	0	_	0	_		_	_
	Rail Mount 1-Pole 94A to 175A	BN75W, BN100W, BN150W, BN150NW	×	×	×	0	0	0	0	_	_	_	-	_	_
Large Capacity	Rail Mount 240A to 370A	BN200BW□, BN300BW□, BN400BW□ BN200NW□, BN300NW□, BN400NW□	-	×	×	_	ed	ed	_	_	_	_		_	
Large	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	_	_	_	_		_	_
W	ith Disconnecting Swit	h BNT20	×	×	×	0	0	0	0	_	_	_	_	_	
W	ith Fuse	BNF10S-□A, BNF10N-□A	×	×	×	0	_	0	0	_	_	_	_	_	
		BND15W, BND15LW, BNDH15W, BNDH15LW, BND15WT, BNDH15WT	×	× *1	× *1	0	0	0	0	_	0	_	× *2	×	×
Co	mmon Terminal	BN15MC□	_	×	×	_	0	0	0	0	_	_	_	_	_
	•	ary for surface mounting.	G-	025		G-026			G-027	•	G-028		G-C	29	
	Accessory not necess ecify the number of po	,							Page						

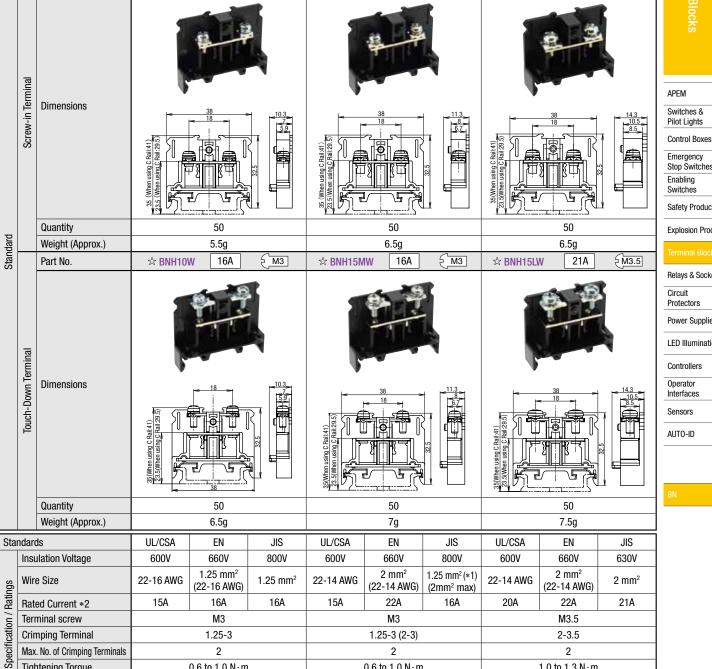
21A

☆ BN15LW

€ M3

16A

€ M3.5



0.6 to 1.0 N·m

BNE15W

**BNC230** 

PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/BNM725, BNM725-TK1700

BNM3

Aluminum: BAA1000, Steel: BNL6

Aluminum: BNCA1000, Steel: BNL7

Aluminum: BNJA1000, Steel: BNL6/BNL7

√ M3

☆ BN15MW

16A

☆ BN10W

- \*1: The rated applicable wire size is 1.25 mm<sup>2</sup>, but 2 mm<sup>2</sup> wires can also be connected.
- \*2: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

0.6 to 1.0 N·m

\*4: See G-025 for details on accessories.

**Tightening Torque** 

**Crimping Terminal** Dimensions (mm) \*3

End Plate

**Dust Cover** 

Marking Strip

Marking Strip Fastner

DIN + C Rail/End Clip

DIN Rail/End Clip

C Rail/End Clip

Part No.

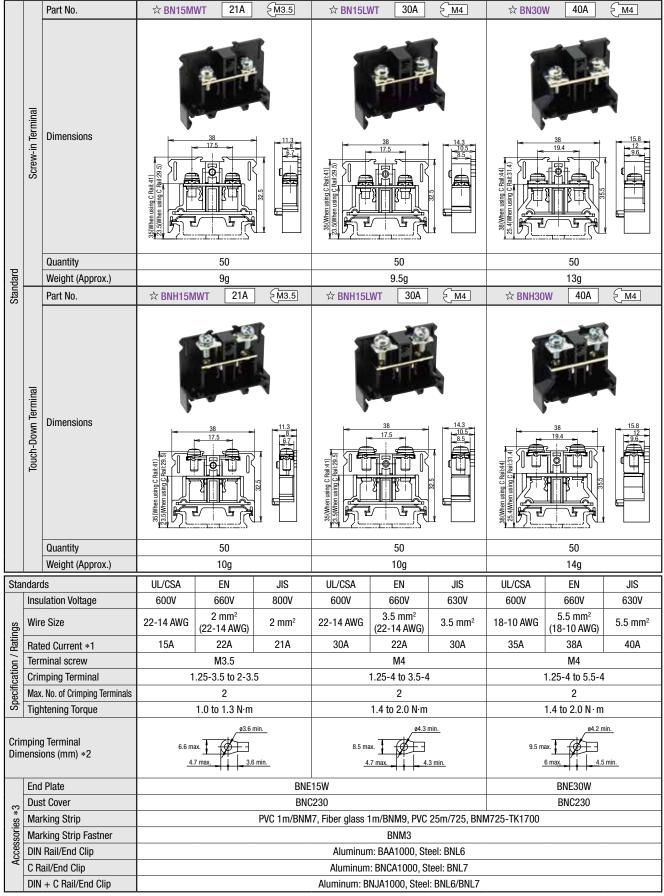
• Part No. with \$\sigma\$ is UL recognized for field wiring (FW2).

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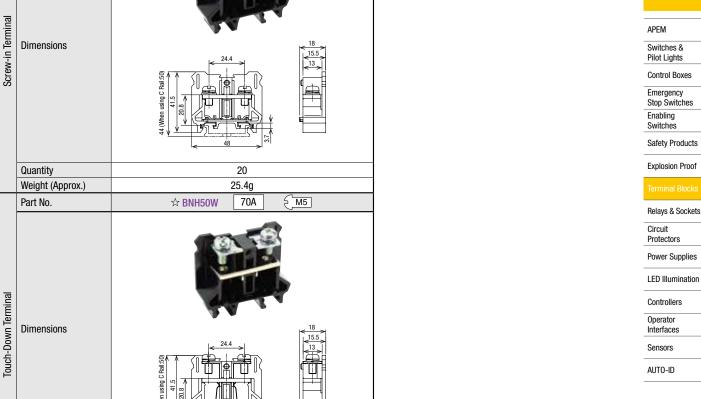
1.0 to 1.3 N·m

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- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*2: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
- \*3: See G-025 for details on accessories.



Sta	ndards	UL/CSA	EN	JIS			
	Insulation Voltage	600V	660V	800V			
Specification / Ratings	Wire Size	16-6 AWG	14 mm <sup>2</sup> (16-6 AWG)	14 mm²			
n/F	Rated Current *1	60A	67A	70A			
atic	Terminal screw		M5				
ĕ	Crimping Terminal		1.25-5 to 14-5				
Se	Max. No. of Crimping Terminals		2				
	Tightening Torque		2.6 to 3.7 N·m				
	mping Terminal nensions (mm) *2	1	95.2 min. 95.2 min. 6.5 max. 4.5 min.	_			
	End Plate	BNE50W					
<sub>0</sub>	Dust cover		BNC320				
Accessories *3	Marking Strip	PVC 1m/BNM7, Fiber glass 1m/BNM9, PVC 25m/725, BNM725-TK1700					
SSO	Marking Strip Fastner		BNM3				
၂၁	DIN Rail/End Clip	Alumi	num: BAA1000, Steel:	BNL8			
`	C Rail/End Clip	Alumir	num: BNCA1000, Steel	: BNL8			
	DIN + C Rail/End Clip	Alumir	num: BNJA1000, Steel	: BNL8			

\*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
\*2: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

20

29g

- \*3: See G-025 for details on accessories.

Quantity

Weight (Approx.)

Part No.

Standard

☆ BN50W

70A

€ M5

• Part No. with \$\sigma\$ is UL recognized for field wiring (FW2).

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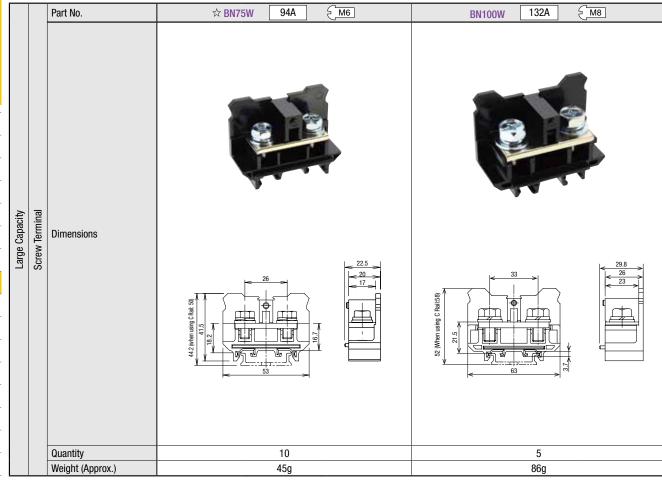
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Sta	indards	UL/CSA	EN	JIS	UL/CSA	EN	JIS		
	Insulation Voltage	600V	660V	1000V	600V	660V	1000V		
/ Ratings	Wire Size	16-4 AWG	22 mm <sup>2</sup> (8-4 AWG)	22 mm²	16-2 AWG	38 mm <sup>2</sup> (2AWG)	38 mm²		
/ Rai	Rated Current *1	80A	80A 94A 94A		100A	132A 132A			
ioi	Terminal screw *2		M6			M8			
ficat	Crimping Terminal		2-6 to 22-6			2-8 to 38-8			
Specification	Max. No. of Crimping Terminals		2			2			
S	Socket Wrench	12.7 mm squ	are drive hexagonal s	socket 10 (*4)	12.7 mm square drive hexagonal socket 13 (*2)				
	Tightening Torque		3.9 to 5.4 N·m			10 to 13.5 N⋅m			
	mping Terminal nensions (mm) *3	96.2 min. 16.8 max. 6 min.			08.5 min.  22.8 max. 10 min.				
	End Plate		BNE75W		BNE100W				
* 5	Dust Cover		BNC420			BNC520			
	Marking Strip		PVC 1m/BNM7,	Fiber glass 1m/BNM9,	), PVC 25m/BNM725, BNM725-TK1700				
Accessories	Marking Strip Fastner			BN	M3				
Seco	DIN Rail/End Clip			Aluminum: BAA1	.1000, Steel: BNL8				
ĕ	Type C Rail/End Clip			Aluminum: BNCA	A1000, Steel: BNL8				
	DIN+Type C Rail/End Clip			Aluminum: BNJA	1000, Steel: BNL8				

- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*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 to tighten screws.
- \*5: See G-025 for details on accessories.
- $\bullet$  Part No. with  $\leftrightarrows$  is UL recognized for field wiring (FW2).

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		Part No.	BN150	)W 175A	M8	BN150	NW 175A	M8		
Large Capacity	Screw Terminal	Dimensions		74 63 33	29.8 26 23		74 63 33	29.8		
			When using 35mm DNN Rati:52 When using C Hati:58 50.5			When using 35mm DIN Rail:52 When using 35mm DIN Rail:26 E 21.5 6 E 21.5	33 1	23		
		Quantity		5			5			
		Weight (Approx.)		88g			95g			
Stai	ndard	ls lation Voltage	UL/CSA 600V	EN 660V	JIS 1000V	_	_	JIS 630V		
sbı		e Size	16-1/0 AWG	60 mm <sup>2</sup> (1/0 AWG)	60 mm <sup>2</sup>	_	_	60 mm <sup>2</sup>		
Ratir	Rate	ed Current *1	150A	175A	175A	_	_	175A		
on /	Tern	ninal screw *2		M8			M8			
ification / Ratings	Crim	nping Terminal		2-8 to 60-8			2-8 to 60-8			
Specif	Max.	. No. of Crimping Terminals		2			2			
S		ket Wrench	12.7 mm squ	are drive hexagonal s	ocket 13 (*4)	12.7 mm s	quare drive hexagonal	socket 13		
	Tigh	tening Torque		10 to 13.5 N⋅m			10 to 13.5 N·m			
Crin Dim	nping nensio	Terminal ons (mm) *3			22.8 max. 11 max.	98.5 min. - 10 min.				
	End	Plate			BNE	150W				
	Dust	t Cover				0520				
s *5	Marl	king Strip	PVC 1m PVC 25i	/BNM7, Fiber glass 1r n/BNM725, BNM725-	m/BNM9 ·TK1700	PVC 1m PVC 25m/BN	/BNM7, Fiber glass 1n M725, BNM625, BNM	n/BNM9 725-TK1700		
sorie	Marl	king Strip Fastner			BN	IM3				
Accessories *5	DIN	Rail/End Clip			Aluminum BAA1	000, Steel: BNL8				
	Туре	e C Rail/End Clip			Aluminum: BNCA	1000, Steel: BNL8				
		Time C Deil/End Olin				1000 Charl DNI 0				

- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*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.

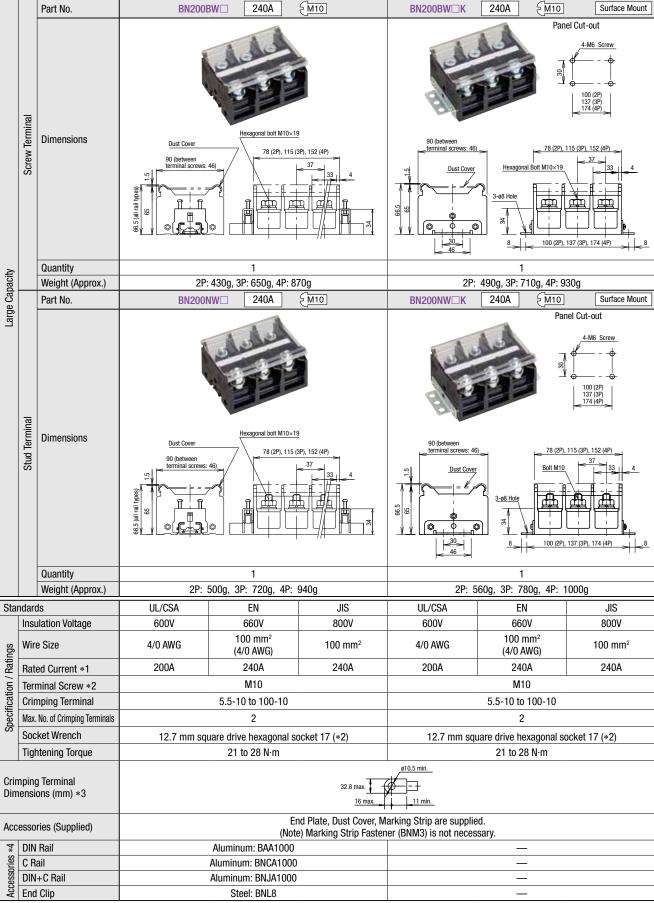
Aluminum: BNJA1000, Steel: BNL8

- \*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.
- \*5: See G-025 for details on accessories.

DIN+Type C Rail/End Clip

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BN



- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*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: See G-025 for details on accessories.

Specify the number of poles in place of  $\square$ . 2-pole: 2, 3-pole: 3, 4-pole: 4.

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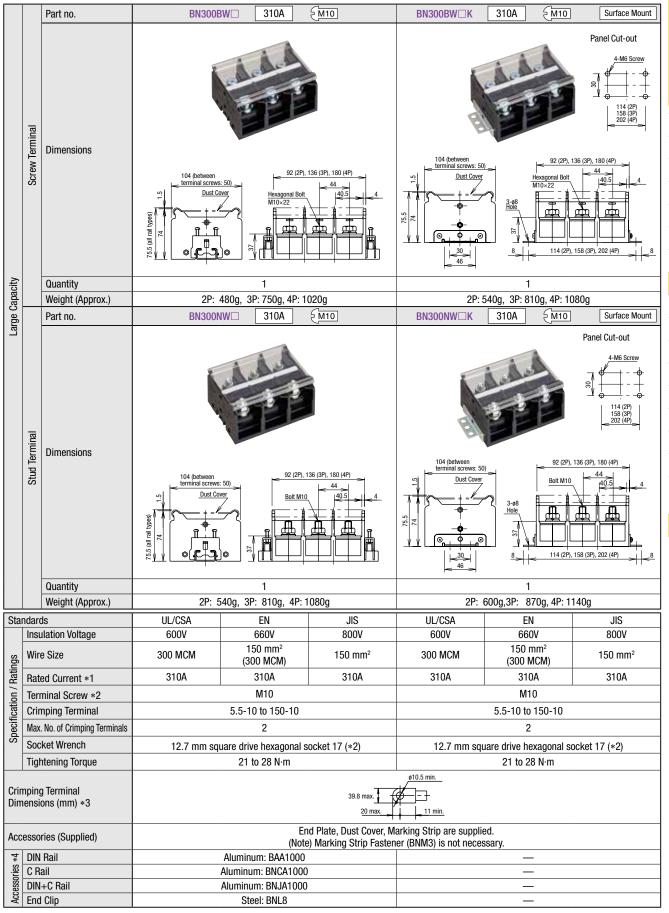
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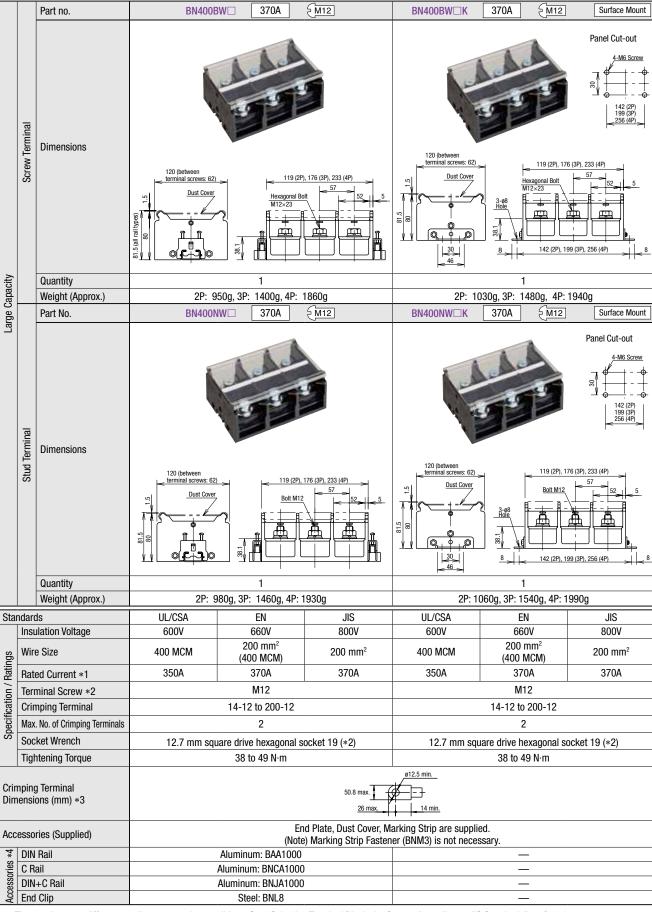


- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006
- \*2: The grooves on the head of the hex bolt are for temporary tightening. For proper tightening, use an applicable socket wrench and tighten within the range of the recommended tightening torque.
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- \*4: See G-025 for details on accessories.

Specify the number of poles in place of  $\square$ . 2-pole: 2, 3-pole: 3, 4-pole: 4.

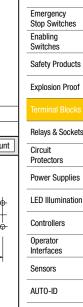
IDEC

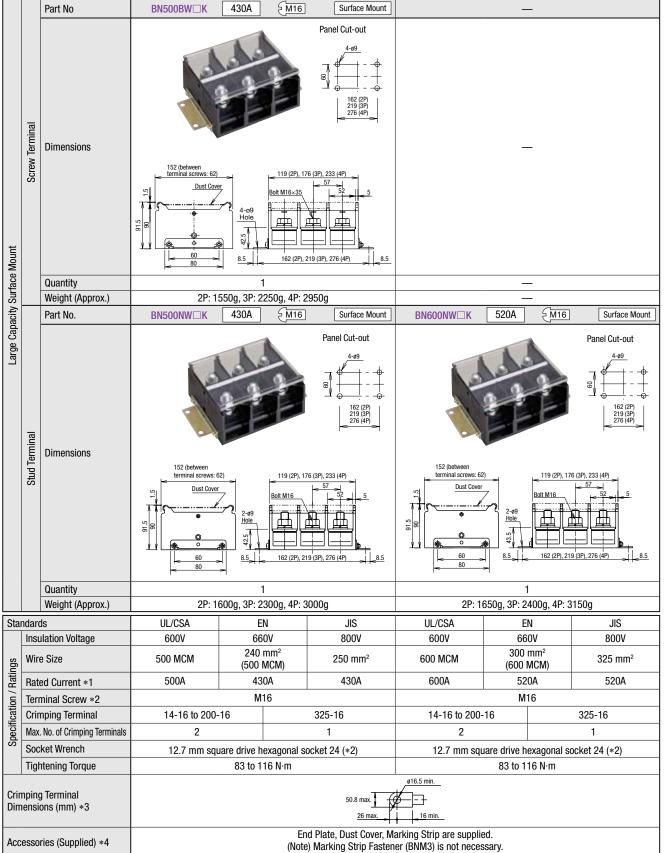
BN



- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*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: See G-025 for details on accessories.

Specify the number of poles in place of  $\square$ . 2-pole: 2, 3-pole: 3, 4-pole: 4.





- \*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.
- \*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.
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- \*4: See G-025 for details on accessories.

Specify the number of poles in place of  $\square$ . 2-pole: 2, 3-pole: 3, 4-pole: 4.

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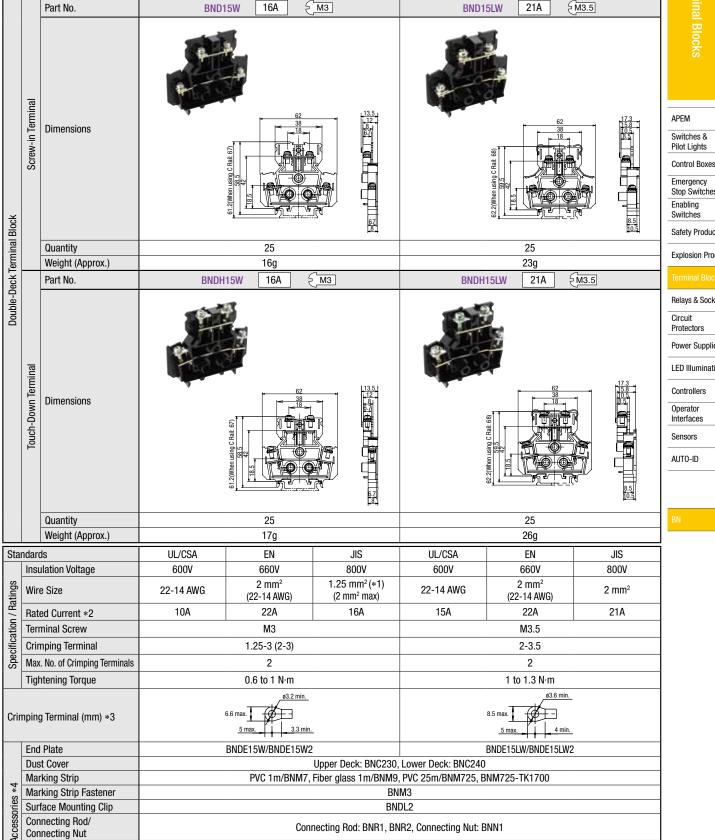
Interfaces

BNF10S-□A 10A € M4 BNF10N-□A (With Lamp) 10A € M4 BNT20 20A € <u>M4</u> When using 35mm DIN Rail: 53.5 Screw-in Terminal with Disconnecting Switch Screw-in Terminal with Fuse Internal Connection **Fuse Ratings**  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 • Part No.: BNF10S-1A, BNF10S-3A, BNF10S-5A Notes: Neon lamp turns on when the fuse blows. Cartridge used: FGB1 by FUJI Terminal • Rated Current: 20A For the neon lamp to turn on, the volt-Industry Co., Ltd. • This terminal block cannot be used as a ages must be from 100 to 250V AC. **Fuse Ratings** disconnect switch. Notes: UL/CSA approved products shown · Rated Voltage: 250V When switching on/off, make sure that below are not supplied with fuses. • Rated Current: 1, 3, 5A voltage is not applied. When UL/CSA approval is required for fuse JIS C 6575-2 Cartridge Fuse: ON 0FF terminal blocks, use UL/CSA-rated fuses. Terminal Screw 6.35×31.8mm or 6.40×30.0mm • Part No.: BNF10SW • Part No.: BNF10N-1A, BNF10N-3A, BNF10N-5A • Rated Insulation Voltage: 600V Note: 6.4×30.0mm fuse can also be used. Terminal Screw • Rated Current: 10A Notes: UL/CSA approved products shown • Applicable Wire: 18-10 AWG below are not supplied with fuses. • UL File No.: E78117 When UL/CSA approval is required for fuse • CSA File No.: LR64803 terminal blocks, use UL/CSA-rated fuses. Part No.: BNF10NW Rated Insulation Voltage: 300V Rated Current: 10A Applicable Wire: 18-10 AWG UL File No.: E78117 CSA File No.: LR64803 20 20 Quantity 20 Quantity Weight Weight 34g 34g 36g (Approx.) (Approx.) Standards JIS JIS Insulation Voltage 600V 600V Wire Size 5.5 mm<sup>2</sup> 5.5 mm<sup>2</sup> Specification Rated Current 10A max. (depends on fuse rating) 20A Ratings **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 ø4.2 min. Crimping Terminal Dimensions (mm) **End Plate** BNE20 **Dust Cover BNC520** Accessories PVC 1m/BNM7, Fiber glass 1m/BNM9 Marking Strip PVC 25m/BNM725, BNM725-TK1700 DIN Rail/End Clip Aluminum: BAA1000, Steel: BNL6 C Rail/End Clip Aluminum: BNCA1000, Steel: BNL7 Aluminum: BNJA1000, Steel: BNL6/BNL7 DIN+C Rail/End Clip \*1: See G-025 for details on accessories.



Switches & Pilot Lights

Stop Switches



- \*1: The rated applicable wire size is 1.25 mm<sup>2</sup>, but 2 mm<sup>2</sup> wires can also be connected.
- \*2: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.

Aluminum: BAA1000, Steel: BNL6

Aluminum: BNCA1000, Steel: BNL7

Aluminum: BNJA1000, Steel: BNL6/BNL7

\*3: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.

DIN Rail/End Clip

DIN+C Rail/End Clip

C Rail/End Clip

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<sup>\*4:</sup> See G-025 for details on accessories.

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BNI

		Part No.	BN	D15WT 21A	3.5							
Double-Deck Terminal Block	Screw-in Terminal	Dimensions		61.2/When using C Rall 67.								
ninal		Quantity										
Tern		Weight (Approx.)		17g								
eck		Part No.	BNI	DH15WT 21A	3.5							
Double-D	Touch-Down Terminal	Dimensions	When using DW half. 61  28.5									
		Quantity	25									
		Weight (Approx.)		17g								
Star	ndard		UL/CSA	EN	JIS							
	Insu	llation Voltage	600V	660V	800V							
Ratings		e Size	22-14 AWG	2mm <sup>2</sup> (22-14 AWG)	2 mm²							
l / uc		ed Current *1	15A	22A	21A							
Specification / Rati		minal Screw		M3								
)ecif.		nping Terminal		1.25-3.5 to 2-3.5								
SF		. No. of Crimping Terminals		2 1 0 to 1 2 N m								
		g Terminal (mm) *2		1.0 to 1.3 N·m  93.6 min.  4.7 max. 3.6 min.								
		Plate		BNDE15W/BNDE15W2	DN0040							
		t Cover		Deck: BNC230, Lower Deck:								
က္ပ	war	king Strip	PVC 1m/BNM/, Fiber gla	ass 1m/BNM9, PVC 25m/BNI	W1/25, BNW1/25-1K1/00							

\*1: The rated current differs according to operating conditions. See "Selecting Terminal Blocks by Current According to JIS Standards" on G-006.

BNM3

BNDL2

Connecting Rod: BNR1, BNR2, Connecting Nut: BNN

Aluminum: BAA1000, Steel: BNL6

Aluminum: BNCA1000, Steel: BNL7

Aluminum: BNJA1000, Steel: BNL6/BNL7

- \*2: Use a CSA certified crimping terminal when using the terminal block as a CSA certified product.
- \*3: See G-025 for details on accessories.

Marking Strip Fastener

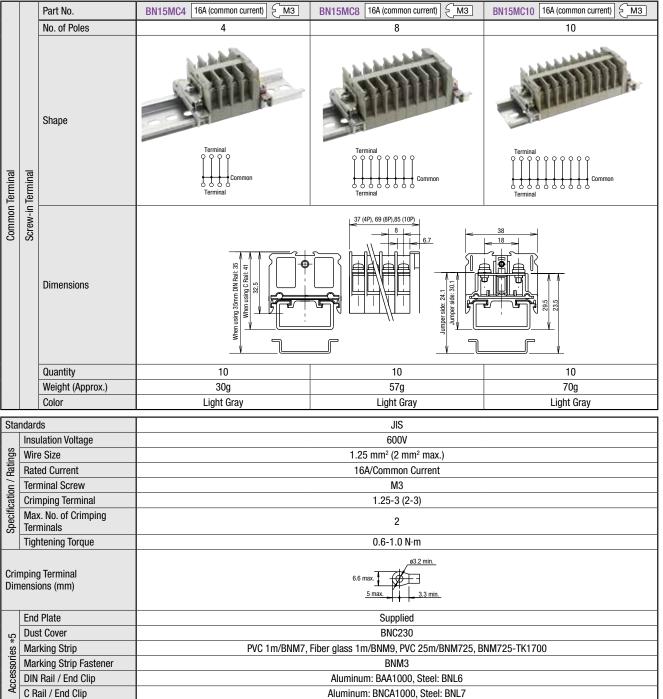
Surface Mounting Clip

Connecting Rod/

Connecting Nut

DIN Rail/End Clip
C Rail/End Clip

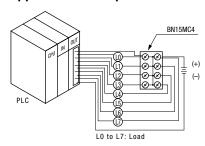
DIN+C Rail/End Clip



- \*1: The rated applicable wire size is 1.25 mm<sup>2</sup>, but 2 mm<sup>2</sup> wires can also be connected.
- \*2: Do not remove the built-in common jumper. Common terminal type terminal blocks cannot be disassembled.
- \*3: Make sure that all terminal screws are tightened to an appropriate tightening torque before power is applied.
- $\ast 4$ : Specifications are in compliance with JIS C 8201-7-1.
- \*5: See G-025 for details on accessories.

### **Application Example**

DIN+C Rail / End Clip



#### **Features**

- All terminals are short-circuted by a built-in common jumper. External jumpers are not required.
- · Accessories (marking strip, cover, and rails) are compatible with standard types.

Aluminum: BNJA1000, Steel: BNL6/BNL7

- 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

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## Accessories (End Plate / Rail)

### **End Plates**

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



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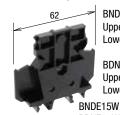
Controllers Operator

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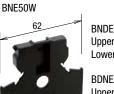
38 63 5 BNE15W 3 BNE20





BNDE15W Upper deck: 5 mm Lower deck: 9 mm

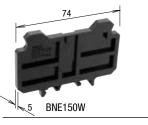
BDNE15LW Upper deck: 5 mm Lower deck: 10.25 mm BNDE15W BDNE15LW



BNDE15W2 Upper deck: 5.5 mm Lower deck: 1.5 mm

BDNE15LW2 Upper deck: 6.8 mm Lower deck: 1.5 mm

BNDE15W2 BNDE15LW2



BNE75W

53

Securing a marking strip with the end plate

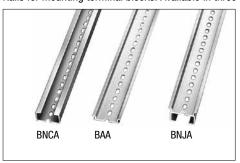


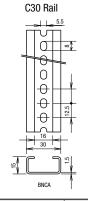
	Part No.	Applicable	Thickness (mm)	Weight	Quantity
		Terminal Blocks	,	(Approx.)	
		BN10W, BNH10W			
		BN15MW, BNH15MW			
	BNE15W	BN15LW, BNH15LW	5.0	4g	
		BN15MWT, BNH15MWT			
		BN15LWT, BNH15LWT			
	BNE20	BNT20, BNF10S, BNF10N	3.0	8g	
End Plate	BNE30W	BN30W, BNH30W	5.0	4g	
	BNE50W	BN50W, BNH50W	5.0	6g	
	BNE75W	BN75W	5.0	6g	
	BNE100W	BN100W	5.0	9g	10
	BNE150W	BN150W, BN150NW	5.0	10g	
	BNDE15W	BND15W, BND15WT,	Upper deck: 5.0	5.5g	
	DINDETOW	BNDH15W, BNDH15WT	Lower deck: 9.0	5.5g	
	BNDE15LW	BND15LW, BNDH15LW	Upper deck: 5.0	6g	
	DINDETSEN	DIND I DEVV, DINDITI DEVV	Lower deck: 10.25	og	
End Plate for Securing End Plate	BNDE15W2	BND15W, BND15WT,	Upper deck: 5.5	5.5q	
	DINDETOWZ	BNDH15W, BNDH15WT	Lower deck: 1.5	J.39	
	DNDE151W2	DND151W DNDU151W	Upper deck: 6.8	60	1
	BNDE15LW2	BND15LW, BNDH15LW	Lower deck: 1.5	6g	

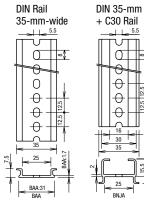
Note: BNDE15W2 and BNDE15LW2 are end plates used for securing marking strips at the end of double deck terminal blocks.

#### Rails

Rails for mounting terminal blocks. Available in three styles.







Approvals:
IEC60715
JIS C 2812

Length	Part No.	Material	Weight (Approx.)	Quantity
	BNCA1000	Aluminum	260g	10
1000 mm	BAA1000	Aluminum	200g	10
	BNJA1000	Aluminum	340g	10

# 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) (\*3)

Material: Steel

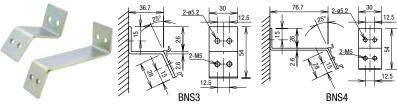
• Plating: Trivalent zinc chromate

Part 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.)	Quantity
BNL6	BAA	х	× (*2)	_	15.2g	10
BNL7	BNCA, BNCP, BNJA	х	× (*2)	_	16g	10
BNL8	BAA, BNCA, BNCP, BNJA	— (*1)	×	×	56g	10

- \*1: Do not use BNL8 because the insulation distance will be insufficeient if used.
- \*2: We recommend you to use BNL8 for secure hold.
- \*3: Slide the end clip onto the DIN rail.

### **Rail Mounting Clips**

Used to raise the DIN rail from the panel surface.



Part No.	Weight (Approx.)	Quantity	
BNS3	51.3g	10	
BNS4	76.2g	10	

• Material: Steel

• Plating: Trivalent zinc chromate

-	BIN23	BN54	
Dust Cover	Material: Polycarbonate		

BNC230

BNC320

BNC420

BNC520

0

BAC820

BNC1000

BNC930

930 BNC240

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

## **Dust Covers for Double Deck Terminal Blocks**

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

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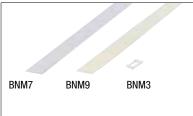
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# Accessories (Marking Strips / Marking Strip Fastener / Slide Marking Strip)

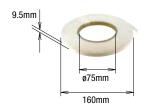
# Marking Strips, Marking Strip Fastener

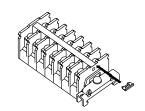


Item	Part No.	Weight (approx.)	Quantity	Specification
Marking Strip	BNM7	7.2g	10	PVC (glossy surface) 1000 mm × 9.5 mm × 0.5 mm
	BNM9	6.4g	10	Fiber glass (matte surface) 1000 mm $\times$ 9.5 mm $\times$ 0.5 mm
	BNM725-TK1700	_	1	PVC (glossy surface) 25 m × 9.5 mm × 0.5 mm
	BNM725	_	1	PVC (matte surface) 25 m $\times$ 9.5 mm $\times$ 0.5 mm
Marking Strip Fastener	BNM3	0.1g	50	

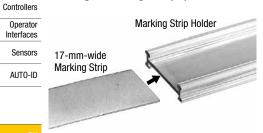
Note: BNM7, BNM725-TK1700 (slick surface) recommended when printing using printers.

To install the marking strip fastener



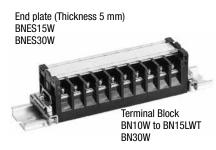


## Sliding Marking Strip (BN10W to BN30W)



17-mm-wide marking strip

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

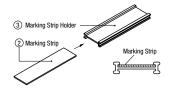


Item	Item Part No.		Specification	Quantity
① End Plate	BNES15W	BN10W to BN15LWT	For sliding marking strip	10
	BNES30W	BN30W	For sliding marking strip	10
② Marking Strip	② Marking Strip BNM5		PVC (Note)	10
③ Marking Strip Holder	BNMH1	BN10W to BN15LWT BN30W	1m	10
④ Dust Cover	BNCS230	DIVOOV	1m	10

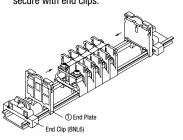
Note: Length 1000 mm  $\times$  Width 9.5 mm  $\times$  Thickness 0.5 mm

#### Installing the Sliding Marking Strip

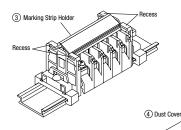
1. Insert the marking strip into the groove of the top of the marking strip holder.



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



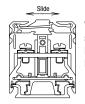
3. Insert the marking strip holder into the recess of the end plate.



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

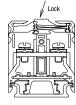
#### Movement

• Sliding movement of the marking strip holder



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

• To lock the marking strip holder



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



# **Accessories (Jumper)**

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

Part No.	Terminal Centers	Insulation	Dimensions	Current (Note 1, 2)	Applicable Terminal Block	Weight (Approx.)	Quantity
BNJ16		Without	Ring Terminal 35 (6-pole) 1.4 1.8 2.2 1.4 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8 1.8			2.8g	10
BNJ16B	7	With		104	BN10W		10
BNJ16F	- 7 mm	Without	Fork Terminal 35 (6-pole) 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4 1/4	10A	BNH10W	0.7-	10
BNJ16FB		With	nsulation			2.7g	10
BNJ26W		Without	Ring Terminal 40 (6-pole)		BN15MW	2.10	10
BNJ26WB	0 mm	With	- Insulation	20A	BNH15MW BN15MWT BNH15MWT	3.1g	10
BNJ26FW	- 8 mm	Without	Fork Terminal  40 (6-pole)	ZUA	BND15W BNDH15W BND15WT BNDH15WT	3.1g	10
BNJ26FWB		With					10
BNJ46		Without	Fork Terminal 52.5 (6-pole)  52.5 (6-pole)  52.5 (6-pole)  1.4  0.8  1.4  0.8	- 20A	BN15LW BNH15LW BN15LWT BNH15LWT BND15LW BNDH15LW	4.6g	10
BNJ46B	10.5 mm	With					10
BNJ46F	10.5 111111	Without				3.0g	10
BNJ46FB		With	E H H H H H H H H H H H H H H H H H H H				10
BNJ56		Without	Ring Terminal  60 (6-pole)  1.4  0.8  Insulation		BN30W BNH30W	3.2g	10
BNJ56B	10.	With		30A			10
BNJ56F	12 mm	Without	Fork Terminal 60 (6-pole) 1.4 1.4 1.5 1.4 1.4 1.5 1.4 1.4 1.5 1.4 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.4 1.5 1.5 1.4 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5 1.5	JUA			10
BNJ56FB		With				4.5g	10

• Insulation color: Black, Insulation material: 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.

#### Jumper for 2 poles

Part No.	Terminal Centers	Insulation	Dimensions	Current (Note 1, 2)	Applicable Terminal Block	Quantity
BNJ62	14.5 mm	Without	Ring Terminal	904	BN50W	10
BNJ62B	14.5 111111	With	206	80A	BNH50W	10

• 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.

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## **Accessories (Removal Tool)**

23 20 13 8 24

A tool for removing terminal blocks from the DIN rail.

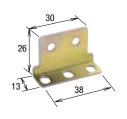
Part No.	Weight (Approx.)	Quantity		
BND2	8.6g	1		

Material: SteelPlating: Zinc

Note: Cannot be used for terminal blocks other than BN10W,BNH10W, BN15MW,BNH15MWT,BN15LW,BNH15LW,BN15LWT,BNH15LWT,BN30W,and BNH30W.

# **Accessories for BND Double-Deck Terminal Blocks**

# **Surface Mounting Clip**



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

Material: SteelPlating: Zinc

# **Connecting Rods**



Part No.	Part No. Applicable Terminal Block		Dimensions (mm)	Quantity	
BNR1	BND15W, BNDH15W	21g	265 mm (M4×0.7)	10	
BNR2	BND15WT, BNDH15WT BND15LW, BNDH15LW	43g	500 mm (M4×0.7)	10	

Material: SteelPlating: Zinc

# **Connecting Nuts**





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

Material: SteelPlating: Zinc

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# **Calculating Rail Lengths and Mounting Centers**

• BNCA, BAA, 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)

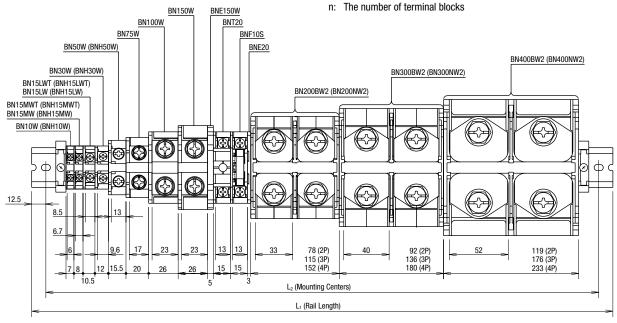
$$M = \frac{(A + 0.1) n + B + C}{12.5}$$

- A: Thickness of each terminal block
- B: Thickness of end plate
- C: Thickness of end clip when using 2 pieces of:

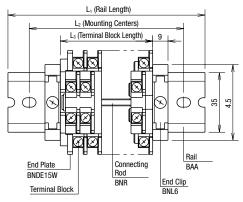
BNL6 = 56.0 mm BNL7 = 62.5 mm

BNL8 = 67.0 mm

The number of terminal blocks



# Rail Length (Double-Deck)



#### Calculating the length (mm)

Part No.	BND15W BNDH15W BND15WT	BND15LW BNDH15LW		
L1 (*1)	12.5 × N			
L2 (*1)	L <sub>1</sub> – 25			
L3 (*1, *2)	8 × n + 9	10.5 × n + 10.3		
Connecting Rod Length (*1, *2)	8 × n + 8.7	10.5 × n + 10		

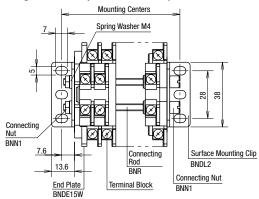
N: Rounded up numerical number from the calculated value of M. (Example: N for 19.1 is 20)

For BND15W, BNDH15W, BND15WT

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

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

# **Mounting Centers (Double-Deck)**



Calculating the length (mm)

Part No.	BND15W BNDH15W BND15WT	BND15LW BND15HLW		
Mounting Centers (*1, *2)	$8 \times n + 24.2$	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

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

<sup>\*2:</sup> The length will be 1.5 mm longer when end plates BNDE15W2 and BNDE15LW2 are used.

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#### **How to Use Touch-Down Terminals**









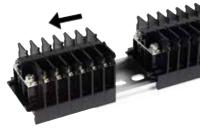
With the terminal screws in the up position, insert a ring crimping 2. Push down the head of the screw lightly to hold the crimping terminal.

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

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

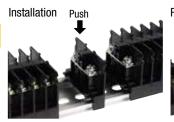
# terminal.

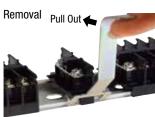
# Installation and Removal on Rails





# Additional Installation and Removal (on DIN Rail)

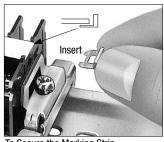


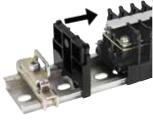


The following terminal blocks can be added or removed: BN10W, BNH10W, BN15MW, BNH15MW, BN15LW, BNH15LW, BN30W, BNH30W, BN15MWT, BNH15MWT, BN15LWT, BNH15LWT

### Securing the Ends of the Marking Strip

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





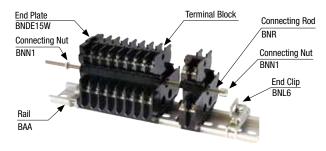
To Secure the Marking Strip

Installing End Plate

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

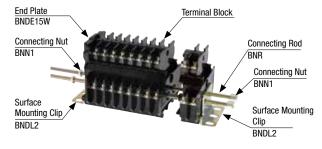
### Installation of Double-Deck Terminal Blocks (BND)

Rail Mount (photo: when using BND15W, BNDH15W, BNDE15W)



- 1. Install end plate. Then mount the terminal blocks onto the DIN rail.
- 2. Insert connecting rod (BNR) through each hole of the terminal
- 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 (photo: when using BND15W, BNDH15W, BNDE15W)

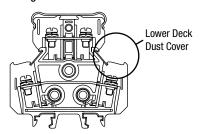


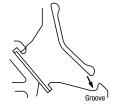
- 1. Assemble a row of terminal blocks with end plates on exposed ends.
- 2. Use BNDL2 mounting clips at both ends of a row.
- 3. With the two holes of the mounting clip (BNDL2) aligned with the terminal block holes, insert a connecting rod (BNR) through each
- 4. Secure the ends of the connecting rods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

#### Instructions

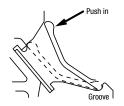
### **Dust Covers on the Lower Deck Terminal of Double-Deck Terminal Blocks**

**Installing Dust Covers on Lower Deck Terminals** 





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



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

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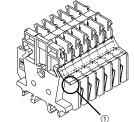
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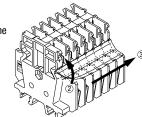
# Removing Dust Covers from Lower Deck Terminals

Turn the power off before removing the dust cover.

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



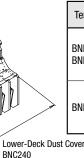
- 2. Lift up in the direction of the arrow.
- If the dust cover cannot be removed all at once, place fingers between the terminal block and dust cover, and slowly remove the dust cover.



### **Length of Double-Deck Dust Covers**

Upper-Deck Dust Cover BNC230

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

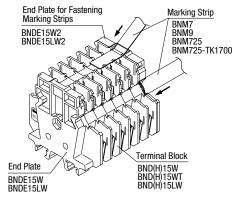


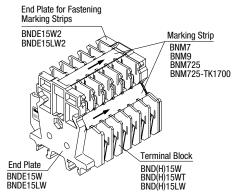
Terminal Block	Dust Cover	1-pole	2-pole	3-pole	4-pole	5-pole	6-pole	7-pole	8-pole	n-pole
BND(H)15W	Upper Deck	12	20	28	36	44	52	60	68	8 (n+1) – 4
BND(H)15WT	Lower Deck	16	24	32	32	48	56	64	72	8 (n+1)
BND(H)15LW	Upper Deck	16	26.5	37	47.5	58	68.5	79	89.5	10.5 (n+1) – 5
DIND(II) IOLW	Lower Deck	21	31.5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





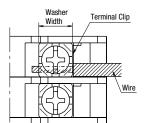
# **Notes on Wiring**

#### **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.



SAPEN01A\_G TB September 2025

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- (1) Rated values, performance values, and specification values of IDEC products listed in this Catalog are values acquired under respective conditions in independent testing, and do not guarantee values gained in combined
  - Also, durability varies depending on the usage environment and usage
- (2) Reference data and reference values listed in Catalogs are for reference purposes only, and do not guarantee that the product will always operate appropriately in that range.
- (3) The specifications / appearance and accessories of IDEC products listed in Catalogs are subject to change or termination of sales without notice, for improvement or other reasons.
- (4) The content of Catalogs is subject to change without notice.

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#### 3. Inspections

We ask that you implement inspections for IDEC products you purchase without delay, as well as thoroughly keep in mind management/maintenance regarding handling of the product before and during the inspection.

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Should a failure occur in an IDEC product during the above warranty period for reasons attributable to IDEC, then IDEC shall replace or repair that product, free of charge, at the purchase location / delivery location of the product, or an IDEC service base. However, failures caused by the following reasons shall be deemed outside the scope of this warranty.

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- The failure was caused by reasons other than an IDEC product
- Modification or repair was performed by a party other than IDEC
- The failure was caused by a software program of a party other than IDFC
- The product was used outside of its original purpose
- Replacement of maintenance parts, installation of accessories, or the like was not performed properly in accordance with the user's manual and
- vii. The failure could not have been predicted with the scientific and technical standards at the time when the product was shipped from
- viii. The failure was due to other causes not attributable to IDEC (including cases of force majeure such as natural disasters and other disasters) Furthermore, the warranty described here refers to a warranty on the IDEC product as a unit, and damages induced by the failure of an IDEC product are excluded from this warranty.

#### 5. Limitation of liability

The warranty listed in this Agreement is the full and complete warranty for IDEC products, and IDEC shall bear no liability whatsoever regarding special damages, indirect damages, incidental damages, or passive damages that occurred due to an IDEC product.

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The prices of IDEC products do not include the cost of services, such as dispatching technicians. Therefore, separate fees are required in the following cases.

- (1) Instructions for installation / adjustment and accompaniment at test operation (including creating application software and testing operation, etc.)
- (2) Maintenance inspections, adjustments, and repairs
- (3) Technical instructions and technical training
- (4) Product tests or inspections specified by you

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