

Fused

Type NB Tri-Pac Thermal-Magnetic Circuit Breakers — Fused



Type Tri-Pac NB Breaker

Product Description

- 300 to 800 amperes, 600V AC, 250V DC
Note: DC rating applies to 350 amperes maximum thermal or to magnetic only breakers.
- 2-, 3-Pole, interchangeable trip, replaceable current limiters

Standards and Certifications

- Listed with Underwriters Laboratories except as noted
- Tri-Pac NB breakers meet the requirements for Class 16b, 17a and 26a circuit breakers as defined in Federal Specification W-C-375b

Technical Data and Specifications

Interrupting Capacity Ratings

- Underwriters Laboratories listed
- 600V AC maximum: 200,000 amperes symmetrical

Based on NEMA Test Procedures

- 250V DC maximum: 100,000 amperes
Note: DC rating applies to 350 amperes maximum thermal or to magnetic only breakers.
- On all 3-phase Delta, grounded B phase applications, refer to Cutler-Hammer

Dimensions/Weights

Table 12-227. Dimensions in Inches (mm)

Number of Poles	Width	Height	Depth
2 – 3	8.25 (209.56)	22 (558.80)	5.5 (139.70)

Table 12-228. Approximate Shipping Weight, Lbs.

Breaker	Complete Breaker		Frame Only		Trip Unit	
	2-Pole	3-Pole	2-Pole	3-Pole	2-Pole	3-Pole
Tri-Pac NB	62	75	58	65	3.5	4

Product Selection

Table 12-229. Type NB Circuit Breakers

Cont. Amp Rating @40°C	Magnetic Trip Setting Amperes ③		Complete Breaker		Shipped as Frame, Trip Units, Limiters and Terminals					
			Includes Pressure Type Copper Terminals		Frame Only		Trip Unit Only		Current Limiter 1 Required per Pole	
	Low	High	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$	Catalog Number	Price U.S. \$

2 Poles, 600V AC, 250V DC ①②

300	1500	3000	NB2300P	8,080.	NB2800PF	5,050.	NB2300PT	1,395.	500NBP12	725.
350	1750	3500	NB2350P	8,080.	NB2800PF	5,050.	NB2350PT	1,395.	500NBP12	725.
400 ③	2000	4000	NB2400P	8,080.	NB2800PF	5,050.	NB2400PT	1,395.	500NBP12	725.
500 ③	2500	5000	NB2500P	8,080.	NB2800PF	5,050.	NB2500PT	1,395.	500NBP12	725.
600 ③	3000	6000	NB2600P	8,080.	NB2800PF	5,050.	NB2600PT	1,395.	800NBP20	725.
700 ③	3000	6000	NB2700P	9,010.	NB2800PF	5,050.	NB2700PT	2,325.	800NBP20	725.
800 ③	3000	6000	NB2800P	9,200.	NB2800PF	5,050.	NB2800PT	2,325.	800NBP20	725.

3 Poles, 600V AC Only

300	1500	3000	NB3300P	8,770.	NB3800PF	5,660.	NB3300PT	1,690.	500NBP12	725.
350	1750	3500	NB3350P	8,810.	NB3800PF	5,660.	NB3350PT	1,690.	500NBP12	725.
400 ③	2000	4000	NB3400P	8,770.	NB3800PF	5,660.	NB3400PT	1,690.	500NBP12	725.
500 ③	2500	5000	NB3500P	9,800.	NB3800PF	5,660.	NB3500PT	1,690.	500NBP12	725.
600 ③	3000	6000	NB3600P	9,800.	NB3800PF	5,660.	NB3600PT	1,690.	800NBP20	725.
700 ③	3000	6000	NB3700P	10,060.	NB3800PF	5,660.	NB3700PT	3,120.	800NBP20	725.
800 ③	3000	6000	NB3800P	11,240.	NB3800PF	5,660.	NB3800PT	3,120.	800NBP20	725.

① DC rating applies to 350 amperes maximum thermal or to magnetic only breakers.

② 2-pole breakers or trips are supplied in 3-pole frames with current carrying parts omitted from the center pole.

③ 60 Hz AC only.

Note: Instruction Leaflet/FRED Number 13771 for Trip Unit and Fuse

Discount Symbol CB-2

Product Line Description

Cutler-Hammer Molded Case Circuit Breakers are designed to provide circuit protection for low voltage distribution systems. They are described by NEMA as, "... a device for closing and interrupting a circuit between separable contacts under both normal and abnormal conditions," and furthermore as, "... a breaker assembled as an integral unit in a supporting and enclosing housing of insulating material." The NEC describes them as, "A device designed to open and close a circuit by non-automatic means, and to open the circuit automatically on a predetermined overload of current, without injury to itself when properly applied within its rating."

So designed, Cutler-Hammer circuit breakers protect conductors against overloads and conductors and connected apparatus, such as motors and motor starters, against short circuits.

In low voltage distribution systems, there are many varied applications of molded case circuit breakers. Cutler-Hammer offers the most comprehensive family of molded case circuit breakers in the industry.

This family of circuit breakers includes:

- Thermal Magnetic Trip Breakers
- Electronic rms Trip Breakers
- Molded Case Switches
- Motor Circuit Protectors
- Current Limiting Breakers
- Special Application Breakers
- World Breakers

Special Calibration

Special non-UL-listed calibrations are available for certain ambient temperatures other than 40°C and for frequencies other than 50/60 Hz or DC. Reduced interrupting ratings will apply for 400 Hz applications. Maximum thermal calibration is limited to 135A at 400 Hz.

Suffix H01 400 Hz	20% Adder
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50°C Calibration

Add suffix **V** to Catalog Number for complete breaker, listed above, when ordering listed ampere ratings for breakers to be used in 50°C ambients.

Moisture-Fungus Treatment

All circuit breaker cases are molded from glass-polyester which does not support the growth of fungus. Any parts which are susceptible to the growth of fungus will require special treatment.

Suffix J01 Fungus Treated	\$325. + 20% Adder
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Freeze-Tested Circuit Breakers

The circuit breakers may be ordered with freeze testing. This option uses special lubrication and mechanical operation is verified at -40°C.

Suffix F01 Freeze Tested	20% Adder
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Marine Applications

F-Frame circuit breakers can be supplied to meet the following marine specifications:

- U.S. Coast Guard CFR 46 ABS — American Bureau of Shipping IEEE 45

These specifications generally require molded case circuit breakers to be supplied with 50°C ambient calibration, special nameplating, and plug-in adapter kits. When plug-in adapter kits are used, no terminals need be supplied.

Circuit breakers can also be supplied to meet UL489 Supplement SA (Marine Use) and UL489 Supplement SB (Naval Use).

UL489 Supplement SA applies to vessels over 65 feet in length. Requirements include 40°C ambient calibration, special labeling, and no use of aluminum conductors or terminals.

Suffix H08 "Marine"	10% Adder
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UL 489 Supplement SB requires 50°C ambient calibration, vibration testings, special nameplating and no use of aluminum conductors or terminals.

Suffix H09 "Naval"	10% Adder
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Standards and Certifications

Molded case circuit breakers are designed to conform with the following standards:

- Underwriters Laboratories, Inc., Standard UL489, Molded Case Circuit Breakers and Circuit Breaker Enclosures
- National Electrical Manufacturers Association Standards Publication No. AB1-1993, Molded Case Circuit Breakers
- Australian Standard AS 2184, Molded Case Circuit Breakers
- British Standards Institution Standard BS 4752: Part 1, Switchgear and Control Gear Part 1: Circuit Breakers
- Canadian Standards Association Standard C22.2 No. 5, Service Entrance and Branch Circuit Breakers
- International Electrotechnical Commission Recommendations IEC 157-1, Circuit Breakers
- Japanese T-Mark Standard Molded Case Circuit Breakers
- South African Bureau of Standards, Standard SABS 156, Standard Specification for Molded Case Circuit Breakers
- Swiss Electro-Technical Association Standard SEV 157-1, Safety Regulations for Circuit Breakers
- Union Technique de l'Electricite Standard NF C 63-120, Low Voltage Switchgear and Control Gear Circuit Breaker Requirements
- Verband Deutscher Elektrotechniker (Association of German Electrical Engineers) Standard VDE 0660, Low Voltage Switchgear and Control Gear, Circuit Breakers

Conformance with these standards satisfies most local and international codes, assuming user acceptability and simplified application.

Molded case circuit breakers equal or exceed Federal Specification Classification W-C-375b requirements for the particular class associated with the circuit breaker frame being considered.

Note: For further information, see Circuit Breaker, CD-ROM SA.74A.01.T.E.

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Current Limiters

Included with breaker, one required per pole.

Table 12-230. Current Limiters

Application	Catalog Number	Price U.S. \$
Supplied as standard on ratings through 500 amperes.	500NBP12	725.00
Supplied as standard on 600 – 800 ampere ratings, optional on lower ratings when a higher “cross-over point” is desired.	800NBP20	725.00
Above two limiters replace 1000NBP14 formerly supplied on ratings up to 600 amperes, 1500NBP20 supplied on 700 amperes, and 2500NBP25 supplied on 800 amperes.		

Terminals (Order Separately)

Two terminals are required per pole. Terminals are Underwriters Laboratories listed for wire size and type listed below. When used with aluminum conductors, use joint compound. To order optional aluminum terminals, add Suffix **Z** to complete breaker Catalog Number.

Note: Shipped separately from breaker.

Table 12-231. Terminals

Max. Amp Rating	Wire Range, Type, Number of Cables	Terminal Catalog Number	Price U.S. \$
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Standard Copper Pressure Terminals

350	(1) 1 AWG – 600 kcmil Cu	T350NB	46.00
700	(2) 2/0 – 500 kcmil Cu	T700NB1	46.00
800	(3) 3/0 – 500 kcmil Cu	T1000NB1	93.00

Optional Al/Cu Pressure Terminals

700	(2) 1 AWG – 500 kcmil Al/Cu	TA700NB1	44.75
800	(3) 3/0 – 400 kcmil Al/Cu	TA1000NB1	60.00
800	(3) 500 – 750 kcmil Al/Cu	TA1201NB1	90.00