




**Inverse Time Circuit Breakers, 1000 Amps
Solid State Trip, Type NZM 12...-NA**

UL/CSA

1	2	3	4	5	6	7
	Long Time Response Current Setting	Adjustable instantaneous Pick-up Setting	Adjustable Short Time Delay Pick-up setting for selectivity in networks Time delay Range: 0 – 1000 ms	UL/CSA Interrupting ratings (AC, 60Hz) RMS Sym Amps @	Type	Price
	Amps	Amps	Amps	240 V 480 V 600 V	Standard	\$
Fixed Long Time Response Setting Type NZM 12-.../ZM 12A-...-NA						
	400 500 600 700 800 1000	1200 – 12,000 1200 – 12,000 1200 – 12,000 1600 – 16,000 1600 – 16,000 2000 – 20,000	— — — — — —	65 kA 65 kA 50 kA	NZM 12-630/ZM 12A-400-NA NZM 12-630/ZM 12A-500-NA NZM 12-630/ZM 12A-600-NA NZM 12-800/ZM 12A-700-NA NZM 12-800/ZM 12A-800-NA NZM 12-1250/ZM 12A-1000-NA	See Price List See Price List See Price List See Price List See Price List See Price List
(1000 A)						
Adjustable Long Time Response Setting Type NZM 12-.../ZM 12-...-NA						
	300 – 600 400 – 800 500 – 1000	1200 – 12,000 1600 – 16,000 2000 – 20,000	— — —	65 kA 65 kA 50 kA	NZM 12-630/ZM 12-600-NA NZM 12-800/ZM 12-800-NA NZM 12-1250/ZM 12-1000-NA	See Price List See Price List See Price List
(1000 A)						
Adjustable Long Time response setting and Short-Time Delay pick-up for selectivity Type NZM 12-.../ZM 12 V-...-NA						
	300 – 600 400 – 800 500 – 1000	1200 – 12,000 1600 – 16,000 2000 – 20,000	600 – 7200 800 – 9600 1000 – 12,000	65 kA 65 kA 50 kA	NZM 12-630/ZM 12 V-600-NA NZM 12-800/ZM 12 V-800-NA NZM 12-1250/ZM 12 V-1000-NA	See Price List See Price List See Price List
(1000 A)						


Disconnect Switches, Molded Case Switches
Circuit Breakers



Type **NZM 12-.../ZM 12(A)-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, Solid State Trip Circuit Breakers with a fixed or adjustable Long Time Response and adjustable instantaneous pick-up range.
Type **NZM 12-.../ZM 12 V-...-NA** are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) and have an additional short time delay pick-up range for selectivity in energy distribution networks. The time delay response is adjustable from 0 to 1000 milliseconds.

Ordering Information:
State type from Column 6. Example: **NZM 12-1250/ZM 12A-1000-NA**.

- Note:
- Operating Handle supplied separately. Consult page 8/36 for available handle types.
 - Consult page 8/34 - 39 for additional accessories.
 - Line and Load field-wiring terminals for cable connection supplied as standard. Refer to technical data for range of suitable conductor cross-sections.

1	2	3				4	5
Frame Rating	Continuous Current Rating	Maximum HP Rating 3 Phase @				Type	Price
	Amps	200 V HP	230 V HP	460 V HP	575 V HP		\$
N12-...-CNA Motor Disconnect Switches							
	600	200	250	450	600	N 12-630-CNA	See Price List
	800	250	300	600	750	N 12-800-CNA	See Price List
	1000	250	300	600	750	N 12-1000-CNA	See Price List
	1200	300	450	1000	1000	N 12-1200-CNA ¹⁾	See Price List

Type **N 12...-CNA** Disconnect Switches are UL recognized (UL 508) and CSA certified (22.2 Nr. 14) as 3 pole, HP rated non-automatic manual motor disconnects without any overload or short circuit tripping elements. Their switching mechanism has 3 positions (OFF, ON, + "Tripped") and they can be equipped with voltage trip accessories such as shunt trip and undervoltage trip coils.
UL/CSA Short Circuit Rating @ 600VAC: 42 kA RMS Sym.

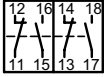



Ordering Information:
State type from Column 4. Example: **N 12-800-CNA**

- Note:
- For direct-on-line switching of motors, use in combination with a listed magnetic contactor.
 - Operating Handle supplied separately. Consult page 8/36 for available handle types.
 - Consult page 8/34 - 39 for additional accessories.
 - Line and Load field-wiring terminals for cable connection supplied as standard.

1) **N 12-1200-CNA** is supplied standard with bolt-on connection only. Field-wiring terminals for conductor hook-up (up to 4 x 500 kcmil, Cu or Al) can be supplied but must be ordered with the device. Add the following suffixes to the Type number.
Example: **N 12-1200-CNA**
+ **K 240AL-NZM 12-O** (for top mounted terminals, set of three)
+ **K 240AL-NZM 12-U** (for bottom mounted terminals, set of three)
See price list for adder.



Molded Case Circuit Breakers and Disconnect Switches Auxiliary Contacts for NZM 12...

1	2	3	4	5												
	Contacts	Type	Price	Notes												
	N.O. N.C.	To be ordered with device only. Add below suffix.	\$													
Standard Auxiliary Contacts ¹⁾	 2 2	+NHI 22-NZM 12	See Price List	Combination possibilities of auxiliary contacts: <table border="0"> <tr> <td>NHI</td> <td>VHI</td> <td>AHI</td> <td>RHI</td> </tr> <tr> <td>●</td> <td>●</td> <td>—</td> <td>●</td> </tr> <tr> <td>●</td> <td>—</td> <td>●</td> <td>●</td> </tr> </table> Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.	NHI	VHI	AHI	RHI	●	●	—	●	●	—	●	●
NHI	VHI	AHI	RHI													
●	●	—	●													
●	—	●	●													
Early-Make Auxiliary Contacts	 2 1	+VHI 21-NZM 12	See Price List													
Handle operated Early-Make Auxiliary Contacts	 2 1	+AHI 21-NZM 12	See Price List													
Trip Indicating Auxiliary Contacts	 2 1	+RHI 21-NZM 12	See Price List													

1) The **NHI 22-NZM 12** auxiliary contact comes standard with all versions of the **NZM 12.../ZM 12...-NA** Molded Case Circuit Breakers. It is an optional accessory only for the non-automatic **N 12...-CNA** disconnect switches and must be ordered with the device if desired.

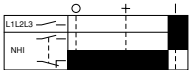
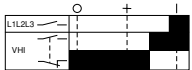
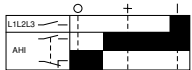
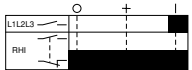
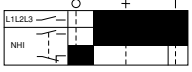
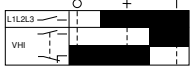
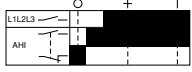
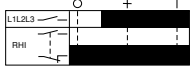
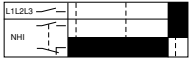

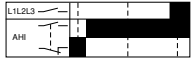

Type **NHI...** are standard auxiliary contacts. They operate simultaneously with the main contacts. They can be typically used for signalling or switching auxiliary circuits such as a control circuit.

Type **VHI...** are Early Make auxiliary contacts and lead the main contacts when switching ON as well as switching OFF. This makes them ideal for load shedding purposes or in conjunction with voltage trips in control circuits.

Type **AHI...** are handle operated Early Make auxiliary contacts. They operate in advance of the main contacts, shortly after the handle has left the OFF position. They can be typically used to convert the manual actuation of the switch into a control function for circuit interlocking purposes.



Type **RHI...** are trip indicating auxiliary contacts. They work independently of the normal ON and OFF operations of the device, switching only when the device has tripped due to overloads, overcurrents or other tripping functions such as voltage trips.

Refer to diagrams below for further details:

	NHI	VHI	AHI	RHI
Position of auxiliary contacts →	Same as main contacts	Same contact position in both OFF and Tripped position of the device.	Same contact position in both ON and Tripped position of the device.	Operates only when device is tripped (overload, short-circuit, shunt or undervoltage trips.)
Main Contacts: ■ Closed □ Open				
Switching ON ○ →				
Switching OFF ○ ←				
Tripped position + ←				






Ordering Information:
Auxiliary Contacts must be ordered with device. Add type from Column 3.
Example: **+ VHI 21-NZM 12**.

Molded Case Circuit Breakers and Disconnect Switches Voltage Trips for NZM 12...

1	2	3	4	5	6
	Rated Control Voltage		Type To be ordered with device only. Add below suffix.	Price	Notes
		V/Hz		\$	
Shunt Trips 100% Continuous duty rating					
	AC	120V 60Hz	+A-NZM 12 (120V 60Hz)	See Price List	Shunt Trips are typically used to electrically trip the device from a remote location. The A-NZM 12... series is rated for 100% continuous duty. If desired, automatic disconnection of the shunt trip coil can be achieved by using the NHI auxiliary contact in series with the coil. Shunt Trips cannot be mounted together with Undervoltage Trips.
	AC	208V 60Hz	+A-NZM 12 (208V 60Hz)	See Price List	
	AC	240V 60Hz	+A-NZM 12 (240V 60Hz)	See Price List	
	AC	480V 60Hz	+A-NZM 12 (480V 60Hz)	See Price List	
	AC	600V 60Hz	+A-NZM 12 (600V 60Hz)	See Price List	
	DC	24 V	+A-NZM 12 (24V DC)	See Price List	
Undervoltage Trips					
	AC	120V 60Hz	+U-NZM 12 (120V 60Hz)	See Price List	Undervoltage Trips will electrically trip the device open under power loss and can be used for control interlocking purposes e.g. to disconnect the main switch in Emergency-Stop circuits. They are rated for continuous duty. Power can be applied to the undervoltage trip using VHI early-make auxiliary contacts in series with the undervoltage trip coil. Undervoltage Trips cannot be mounted together with Shunt Trips.
	AC	208V 60Hz	+U-NZM 12 (208V 60Hz)	See Price List	
	AC	240V 60Hz	+U-NZM 12 (240V 60Hz)	See Price List	
	AC	480V 60Hz	+U-NZM 12 (480V 60Hz)	See Price List	
	AC	600V 60Hz	+U-NZM 12 (600V 60Hz)	See Price List	
	DC	24V	+U-NZM 12 (24VDC)	See Price List	

Ordering Information:
Voltage trips must be ordered with device. Add type from Column 4.
Example: **+ U-NZM 12 (480V, 60Hz)**

Molded Case Circuit Breakers and Disconnect Switches Accessories for NZM 12...

1	2	3	4	5	6
		Color of handle	Can be used with all devices of Type number	Type	Price
					\$
Handle for open or panel mounted devices					
Fastens to shaft, not padlockable					
		Gray	N(ZM)12...	H 12U	See Price List
		Black	N(ZM)12...	H 12U-SW	See Price List
Handle for Cover/Door Interlocking					
Degree of protection UL/NEMA 3R, 12; IEC IP 55 Door coupling rotary handle. For front mounting in doors and covers. Can be locked in the OFF position with up to three padlocks (hasp thickness 6 – 8 mm). Door/cover interlocking supplied standard set in OFF position. Can be field modified for setting in ON position. 3 distinct Handle positions: OFF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.					
		Gray	N(ZM)12...	H 12-NA	See Price List
		Black	N(ZM)12...	H 12-SW-NA	See Price List
		Red/ Yellow	N(ZM)12...	RH 12-NA	See Price List
Extension shaft					
For mounting depths of 240 – 400 mm. Extends shaft length by 183 mm. Only one extension shaft possible. Can also be used with the mechanical interlock.					
			N(ZM)12...	A-NZM 12	See Price List
Switch position indicator					
Indicates position of switch when panel door is open.					
			N(ZM)12...	SA-NZM 12	See Price List
Maintenance Handle					
To actuate the device when the panel door is open.					
			N(ZM)12...	H 12UZ	See Price List
Mechanical Interlock					
For mechanical interlocking of two devices mounted side by side. Requires two handles, one for each switch. Order separately.					
			N(ZM)12...	KV-2 NZM 12	See Price List
For mechanical interlocking of two devices not mounted side by side. Requires two handles, one for each switch. Order separately.					
			N(ZM)12...	KVA-2 NZM 12	See Price List
For mechanically interlocking two main incomers with one emergency-supply device e.g. in emergency power supply systems. Handles ordered separately.					
			N(ZM)12...	KVA-3 NZM 12	See Price List

Ordering Information:
Specify Type from Column 5. Example: **H 12-SW-NA**
If ordering with device, just add a "+" in front of the Type number. Example: **+ H 12-SW-NA**

Disconnect Switches, Molded Case Switches

Circuit Breakers



Molded Case Circuit Breakers and Disconnect Switches Accessories for NZM 12...

	2	3	4	5	6
	Color of handle	Can be used with all devices of Type number	Type To be ordered with device only. Add below suffix	Type	Price
					\$
<p>Rear operation shafts For side panel mounting where device is only accessible from the rear (e.g. sides of enclosure panels). Must be combined with Type H...R rear operation handles. Factory installed only. Order with device.</p>		N(ZM) 12...	+R-NZM 12		See Price List See Price List
<p>Operating Handle for rear operation Used with rear operation shaft. Degree of protection: UL/NEMA 3R, 12; IEC IP 55 Can be locked in the OFF position with up to three padlocks (hasp thickness 6 – 8 mm). No cover/door interlocking provisions. 3 distinct Handle positions: OFF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.</p>	Gray	N(ZM) 12...	—	H 12-R-NA	See Price List See Price List
	Black	N(ZM) 12...	—	H 12-R-SW-NA	See Price List See Price List
	Red/ Yellow	N(ZM) 12...	—	RH 12-R-NA	See Price List See Price List
<p>Legend Plate (for mounting with operating handle) Silver-colored, black lettering</p>					
<p>Specify desired text. Height of letters: 3.5, 5, and 7 mm</p>		N(ZM) 12...	—	ZSSOND-NZM 12	See Price List See Price List
Blank (for engraving or printing)		N(ZM) 12...	—	ZS60-NZM 12	See Price List See Price List
<p>Main Disconnect Warning plates. English Inscription: "Main Switch- Open only in OFF position" Silver-colored, black lettering</p>		N(ZM) 12...	—	ZS62-NZM 12	See Price List See Price List
<p>Also available in other languages:</p>		N(ZM) 12...	—	ZS...-NZM 12	See Price List See Price List
<p>Afrikaans (81) Bulgarian (64) Czech (78) Danish (65) Dutch (67) Finnish (66) French (63) German (61) Greek (69) Hungarian (80) Italian (68) Norwegian (70) Polish (71) Portuguese (72) Romanian (73) Russian (74) Serbo-Croatian (76) Spanish (77) Swedish (75) Turkish (79)</p>					
<p>Insert key number into Type. Example: ZS63-NZM 12 (Inscription in French language)</p>					

Ordering Information:
Specify Type from Column 5. Example: **H 12-R-SW-NA**.
If ordering with device, just add a "+" in front of the Type number. Example: **+ H 12-R-SW-NA**
Note:
Items in Column 4 are factory installed and must be ordered with the device.

Molded Case Circuit Breakers and Disconnect Switches Accessories for NZM 12...

1	2 Type To be ordered with device only. Add suffix shown below	3 Type	4 Price \$
<p>Control Circuit Tap-Off Terminals Supplementary terminals attached to main terminals. 3 connections top and bottom. Factory addition only, must be ordered with device.</p> <p>Terminal Cover Provides shock hazard protection in the area of the field wiring power terminals. Can be used at top or bottom, one cover per side. Mandatory requirement on the supply side of Main Disconnect switches to provide protection against accidental contact with line side feed.</p> <p>Test Unit for NZM 12 Circuit-Breakers Supply terminal voltage can be selected from 120/220/240 V, 50/60 Hz. The portable test unit can be used to verify that the long time, instantaneous and short-time delayed tripping characteristics of the circuit-breaker are operating per preset values. Various test voltages simulate a short-circuit or an overload condition which would cause the circuit-breaker to trip out. All measuring and connection leads, as well as operating instructions, are supplied with the unit.</p>	<p>+ST</p> <p>—</p> <p>—</p>	<p>—</p> <p>H-NZM 12</p> <p>P-NZM</p>	<p>See Price List</p> <p>See Price List</p> <p>See Price List</p> <p>See Price List</p> <p>See Price List</p> <p>See Price List</p>

Disconnect Switches, Molded Case Switches

Circuit Breakers



Ordering Information:
 Accessory in Column 2 can only be ordered with device. Specify Type suffix. Example: **+ ST**
 Specify Type from Column 3. Example: **H-NZM 12**
 If ordering with device, just add a "+" in front of the Type number. Example: **+ H-NZM 12**