



Molded Case Circuit Breakers - Instantaneous Trip Type NZMH 4-...-OBI...

UL/CSA

| 1 | 2 | 3 | 4 | 5 |
|---|---|--------------------------------|-----------------------------|---|
| Frame Rating | Continuous Current Rating | Adjustable Magnetic Trip Range | Type | Price |
| | Amps | Amps | | \$ |
| Instantaneous Trip Circuit Breakers Up to 480 V AC, UL/CSA | | | | |
|  | 2.1 | 6...12 | NZMH 4-2, 1-12-OBI-CNA | See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List |
| | 3.7 | 11...20 | NZMH 4-3, 7-20-OBI-CNA | |
| | 6.6 | 18 ...32 | NZMH 4-6, 6-32-OBI-CNA | |
| | 10 | 28 ...50 | NZMH 4-10, 50-OBI-CNA | |
| | 12 | 42 ...80 | NZMH 4-12, 80-OBI-CNA | |
| | 15 | 64 ...120 | NZMH 4-15, 120-OBI-CNA | |
| | 18 | 100... 200 | NZMH 4-18, 200-OBI-CNA | |
| | NZMH 4-...-OBI-CNA (18 Amps) | | | |
| Instantaneous Trip Circuit Breakers Up to 600Y/347 V AC, CSA Certified only | | | | |
|  | 2.1 | 6...12 | NZMH 4-2, 1-12-OBI-FORM CDN | See Price List See Price List See Price List See Price List See Price List See Price List See Price List See Price List |
| | 3.7 | 11...20 | NZMH 4-3, 7-20-OBI-FORM CDN | |
| | 6.6 | 18 ...32 | NZMH 4-6, 6-32-OBI-FORM CDN | |
| | 10 | 28 ...50 | NZMH 4-10, 50-OBI-FORM CDN | |
| | 12 | 42 ...80 | NZMH 4-12, 80-OBI-FORM CDN | |
| | 15 | 64 ...120 | NZMH 4-15, 120-OBI-FORM CDN | |
| | 18 | 100... 200 | NZMH 4-18, 200-OBI-FORM CDN | |
| | NZMH 4-...-OBI-Form CDN (18 Amps) | | | |

Disconnect Switches, Molded Case Switches
Circuit Breakers



Type **NZMH 4-...-OBI...** Molded Case Circuit Breakers are UL Recognized (UL 489) and CSA Certified (22.2 Nr. 5.1) Instantaneous Trip type Circuit Breakers with an adjustable magnetic trip function.

Per NEC, they provide motor short circuit protection as part of a listed combination motor controller that includes coordinated motor overload protection.

Short circuit interrupting ratings are, therefore, established and valid only for the listed combination motor controller assembly and associated housing or enclosure.


The **NZMH 4** instantaneous trip circuit breaker features a current limiting design contact assembly and can provide high fault short circuit current ratings of up to 100kA @ 480VAC.

Consult Section 3 of this catalog for Combination Motor Controller short circuit ratings as standard starters featuring Type **NZM** Instantaneous Trip Circuit Breakers.

Consult Moeller Electric for Combination Motor Controller high fault short circuit ratings as Motor Control Center unit starters featuring Type **NZMH** Instantaneous Trip Circuit Breakers.

Ordering Information:
State type from Column 4. Example: **NZMH 4-18-200-OBI-CNA**

- Note:
- Operating Handle supplied separately. Consult page 8/8 for available handle types.
 - Consult page 8/6-11 for additional accessories.
 - Line and Load field-wiring terminals for cable connection supplied as standard.

| 1 | 2 | 3 | 4 | | | | 5 | 6 |
|--|--|--------------------------------|--------------|----------|-----------|----------|----------------------|----------------|
| Frame Rating | Adjustable Thermal Range for motor overload protection | Adjustable Magnetic Trip Range | Motor rating | | | | Type | Price |
| | Amps | Amps | 200 V HP | 230 V HP | 460 V HP | 575 V HP | | \$ |
| NZMH 4-...-CNA Motor Disconnect Switch | | | | | | | | |
|  <p>NZMH 4-...-CNA (80 Amps)</p> | 4 – 6 | 40 – 80 | 1 1/2 | 1 1/2 | 3 | 5 | NZMH 4-6-CNA | See Price List |
| | 6 – 10 | 60 – 120 | 2 | 3 | 5 | 7 1/2 | NZMH 4-10-CNA | See Price List |
| | 10 – 16 | 100 – 200 | 3 | 5 | 10 | 10 | NZMH 4-16-CNA | See Price List |
| | 16 – 25 | 160 – 320 | 5 | 7 1/2 | 15 | 20 | NZMH 4-25-CNA | See Price List |
| | 25 – 40 | 260 – 500 | 10 | 10 | 30 | 40 | NZMH 4-40-CNA | See Price List |
| | 40 – 63 | 400 – 800 | 20 | 20 | 40 | 60 | NZMH 4-63-CNA | See Price List |
| | 63 – 80 | 600 – 1000 | 25 | 30 | 60 | 75 | NZMH 4-80-CNA | See Price List |

Type **NZMH 4-...-CNA** Disconnect Switches are UL recognized (UL 508) and CSA certified (22.2 Nr. 14) as 3 pole, HP rated manual motor disconnects with built-in thermal trips for motor overload protection. An adjustable dial on the front of the switch (refer to column 2) can be set to the Motor Full Load Current.

They also feature an adjustable magnetic trip to provide additional protection in case of short circuits. In addition they are suitable for group applications per the intent of NEC 430-53 and CEC part 1, Rule 28-206.

NEC/CEC Group Application ratings:

Maximum Group Fuse or Circuit Breaker

| | |
|---------------------------------------|--|
| Listed Branch Circuit Protective Fuse | Listed Branch Circuit Protective Breaker |
| Amps | Amps |
| 600 | 600 |

**UL/CSA Short Circuit Current Rating
RMS Sym Rating @**

| | | |
|--------|--------|--------|
| 240VAC | 480VAC | 600VAC |
| 100 kA | 25 kA | 25 kA |

Types **NZMH 4-25-CNA**, **NZMH 4-40-CNA**, **NZMH 4-63-CNA** and **NZMH 4-80-CNA** Disconnect Switches are CE Marked and in Conformity with IEC/EN 60 947-2 (Circuit Breakers), which makes them suitable internationally as inverse time molded case circuit breakers with adjustable thermal and magnetic trips. Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

Ordering Information:
State type from Column 4. Example: **NZMH 4-25-CNA**

- Note:
- Operating Handle supplied separately. Consult page 8/8 for available handle types.
 - Consult page 8/6 - 11 for additional accessories.
 - Line and Load field-wiring terminals for cable connection supplied as standard.

Molded Case Circuit Breakers and Disconnect Switches Auxiliary Contacts and Accessories for NZMH 4...

| 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 | 2 2 | +NHI 22-NZM 4/6-NA | See Price List | Combination possibilities of auxiliary contacts: NHI VHI AHI RHI ● ● — — ● — ● — ● — — ● |
| Early-Make Auxiliary Contacts | 1 1 | +VHI-NZMH 4-NA | See Price List | |
| Handle operated Early-Make Auxiliary Contacts | 1 1 | +AHI-NZMH 4-NA | See Price List | |
| Trip Indicating Auxiliary Contacts | 1 1 | +RHI-NZMH 4-NA | See Price List | |
| Dots in each row represent the types which can be combined together. Dashes indicate incompatibility. VHI, AHI and RHI are supplied as 1 N.O. and 1 N.C. contact set but can be field modified as 2 N.O. or 2 N.C. contacts. | | | | |

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-NZMH 4-NA.

Note:
 Field mounting of contacts is allowed with use of kits. Consult Moeller Electric for information.







Molded Case Circuit Breakers and Disconnect Switches Voltage Trips for the NZMH 4...

| 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 Short-time duty rating | | | | | |
|  | AC | 120V 60Hz | +A-NZM 4/6 (120V 60Hz) | See Price List | Shunt Trips are typically used to electrically trip the device from a remote location. They are rated for short time duty only. Short time actuation can be achieved by using the NHI auxiliary contact ahead in series with the shunt trip coil. Shunt Trips cannot be mounted together with Undervoltage Trips. |
| | AC | 208V 60Hz | +A-NZM 4/6 (208V 60Hz) | See Price List | |
| | AC | 240V 60Hz | +A-NZM 4/6 (240V 60Hz) | See Price List | |
| | AC | 480V 60Hz | +A-NZM 4/6 (480V 60Hz) | See Price List | |
| | AC | 600V 60Hz | +A-NZM 4/6 (600V 60Hz) | See Price List | |
| | DC | 24V | +A-NZM 4/6 (24VDC) | See Price List | |
| Undervoltage Trips Non-delayed | | | | | |
|  | AC | 120V 60Hz | +U-NZM 4/6 (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 4/6 (208V 60Hz) | See Price List | |
| | AC | 240V 60Hz | +U-NZM 4/6 (240V 60Hz) | See Price List | |
| | AC | 480V 60Hz | +U-NZM 4/6 (480V 60Hz) | See Price List | |
| | AC | 600V 60Hz | +U-NZM 4/6 (600V 60Hz) | See Price List | |
| | DC | 24V | +U-NZM 4/6 (24VDC) | See Price List | |

Ordering Information:

Voltage trips must be ordered with device. Add type from Column 4. Example: **+ U-NZM 4/6(480V, 60Hz)**.

Molded Case Circuit Breakers and Disconnect Switches Accessories for NZMH 4...

| 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 | NZMH 4... | H 4U | See Price List |
| | | Black | NZMH 4... | H 4U-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 | NZMH 4... NZM(H) 6(B)... | H 6-NA | See Price List |
| | | Black | NZMH 4... NZM(H) 6(B)... | H 6-SW-NA | See Price List |
| | | Red/ Yellow | NZMH 4... NZM(H) 6(B)... | RH 6-NA | See Price List |
| Extension shaft | | | | | |
| For mounting depths of 150...400 mm. Extends shaft length by 266 mm. | | | | | |
| |  | | NZMH 4... NZM(H) 6(B)... | A-NZM 6 | See Price List |
| Switch position indicator | | | | | |
| Indicates position of switch when panel door is open. | | | | | |
| | | | NZMH 4... NZM(H) 6(B)... | SA-NZM 6 | See Price List |
| Mechanical Interlock | | | | | |
| For mechanical interlocking of two devices. Requires two handles, one for each switch. Order separately. | | | | | |
| |  | | NZMH 4... | KV-2 NZM 4 | See Price List |


Disconnect Switches, Molded Case Switches

Circuit Breakers



Ordering Information:
Specify Type from Column 5. Example: **H6-SW-NA**
If ordering with device, just add a "+" in front of the Type number. Example: **+ H6-SW-NA**





Molded Case Circuit Breakers and Disconnect Switches Accessories for NZMH 4...

| 1 | 2 | 3 | 4 | 5 | 6 |
|--|-----------------|-------------------------------|---|---------------------|----------------------------------|
| | Color of handle | Can be used with | 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> | | NZMH 4... | + R-NZMH 4 | — | 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 | NZMH 4 NZM(H) 6(B) | — | H 6-R-NA | See Price List See Price List |
| | Black | NZMH 4 NZM(H) 6(B) | — | H 6-R-SW-NA | See Price List See Price List |
| | Red/ Yellow | NZMH 4 NZM(H) 6(B) | — | RH 6-R-NA | See Price List See Price List |
| <p>Legend Plate (for mounting with operating handle) Silver-colored, black lettering</p>  | | NZMH 4 NZM(H) 6(B) | — | ZSSOND-NZM 6 | See Price List See Price List |
| Specify desired text. Height of letters: 3.5, 5, and 7 mm | | NZMH 4 NZM(H) 6(B) | — | ZS60-NZM 6 | See Price List See Price List |
| Blank (for engraving or printing) | | NZMH 4 NZM(H) 6(B) | — | ZS62-NZM 6 | See Price List See Price List |
| Main Disconnect Warning plates. English Inscription: "Main Switch- Open only in OFF position" Silver-colored, black lettering | | NZMH 4 NZM(H) 6(B) | — | ZS...-NZM 6 | See Price List See Price List |
| Also available in other languages: | | | — | | |
| 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) | | | | | |
| Insert key number into Type. Example: ZS 68-NZM 6 (Inscription in Italian language) | | | | | |

Ordering Information:
Specify Type from Column 5. Example: **H6-R-SW-NA**.
If ordering with device, just add a "+" in front of the Type number. Example: **+ H6-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 NZMH 4...

| 1 | 2 | 3 | 4 | |
|---|---|---|---------------------------|-----------------------|
| | | Type | Price | |
| | | | \$ | |
| <p>Main Disconnect Switch Assembly Kits for CE marked control panels per IEC/EN 60 204-1</p> | | | | |
| <p>Type NZMH 4... switches with dual UL/CSA and IEC/EN ratings are suitable for use as Main Disconnect switches in control panels that must be CE marked and designed to comply with the Machinery Directive standard EN 60 204-1.</p> | | | | |
| <p>The kits shown below, ordered with the device or separately, will provide the necessary accessories to fulfill the Main Disconnect switch function for these applications.</p> | | | | |
| <p>Note: In cases where the Main Disconnect switch also fulfills the Emergency-Stop function, please specify kits containing red handle and yellow backing plate assemblies.</p> | | | | |
| <p>Kit includes: Main Disconnect handle with door/cover interlock for front mounting, red color handle with yellow backing plate for Emergency-Stop function, terminal cover and Main Switch marking plate.</p> | |  | <p>V-NZMH4</p> | <p>See Price List</p> |
| <p>Kit includes: Main Disconnect handle for rear operated switches, red in color with yellow backing plate for Emergency-Stop function, supplied with a steel plate for panel side-mounting, terminal cover and Main Switch marking plate</p> | |  | <p>EA-NZM 4</p> | <p>See Price List</p> |
| <p>Kit includes: Same as V-NZMH 4, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.</p> | |  | <p>V-NZMH 4-SW</p> | <p>See Price List</p> |
| <p>Kit includes: Same as EA-NZMH 4, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.</p> | |  | <p>EA-NZM 4-SW</p> | <p>See Price List</p> |

Disconnect Switches, Molded Case Switches

Circuit Breakers



Ordering Information:
Specify Type from Column 3. Example: **V- NZMH 4**
If ordering with device, just add a "+" in front of the Type number. Example: **+ V- NZMH 4**

Molded Case Circuit Breakers and Disconnect Switches Accessories for NZMH 4...

| 1 | 2 | 3 |
|---|-----------------|----------------------------------|
| | Type | Price |
| | | \$ |
| <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> | H-NZMH 4 | See Price List See Price List |
| <p>Clip For mounting NZMH 4... devices on a DIN rail. (Rail conforming to the standard EN 50 022).</p> | C-NZMH 4 | See Price List See Price List |

Ordering Information:
Specify Type from Column 3. Example: **V- NZMH 4**
If ordering with device, just add a "+" in front of the Type number. Example: **+ V- NZMH 4**

