1	2	3	4	5
Inverse Time Circuit Breakers	Frame Rating	UL/ CSA Interrupting Ratings kA RMS SYM @		
	Amps	**240 VAC**	**480 VAC**	**600 VAC**
Thermal-Magnetic Trip **UL 489/CSA 22.2 No. 5.1; IEC/EN 60 947-2**				
 **NZM 6B-.../ZM 6A-...-NA**	**15 - 125**	**25**	**25**	**14**
NZMH 6-.../ZM6A-...-NA Fuseless Current Limiting	**15 - 125**	**100**	**65**	**25**
 **NZM 7A-...N-NA**[1]	**25 - 150**	**65**	**25**	**—**
 **NZM 9-.../ZM 9A-...-NA**	**70 - 250**	**30**	**25**	**18**
NZMH 9-.../ZM9A-...-NA Fuseless Current Limiting	**70 - 250**	**200**	**85**	**42**
Solid State Trip **UL 489/CSA 22.2 No. 5.1; IEC/EN 60 947-2**				
 **NZM 10-...N/ZM 10(A)-...-NA**	**200 - 600**	**65**	**42**	**35**
NZM 10-...S/ZM 10(A)-...-NA	**200 - 600**	**100**	**65**	**42**
NZM 10-...H/ZM 10(A)-...-NA Fuseless Current Limiting	**200 - 600**	**200**	**100**	**50**
With trip delay feature for selectivity in networks				
NZM 10-...N/ZM 10V(A)-...-NA	**200 - 600**	**65**	**42**	**35**
NZM 10-...S/ZM 10V(A)-...-NA	**200 - 600**	**100**	**65**	**42**
 **NZM 12-.../ZM 12(A)-...-NA**[2]	**300 - 1000**	**65**	**65**	**50**
With trip delay feature for selectivity in networks **NZM 12-.../ZM 12V-...-NA**[2]	**300 - 1000**	**65**	**65**	**50**

1) **Type NZM 7...** currently UL/CSA only. IEC 60 947-2 Conformity in preparation.
2) **Type NZM 12...** UL/CSA only.

All Inverse time Circuit Breakers are UL Listed and CSA Certified, in compliance with IEC/EN 60 947-2 (Circuit Breakers) and CE Marked.
Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

1	2	3	4	5
Instantaneous Trip Circuit Breakers	Frame Rating	UL/ CSA Interrupting Ratings kA RMS SYM @		
	Amps	**240 VAC**	**480 VAC**	**600 VAC**
Instantaneous Trip Type Circuit Breakers **UL 489/CSA 22.2 No. 5.1**				
NZMH 4-...-OBI-CNA	**2.1 - 18**	UL Recognized and CSA Certified Instantaneous Trip circuit breakers no longer carry interrupting ratings as stand-alone devices. Per the intent of NEC Article 430-52, an instantaneous trip circuit breaker shall be used only if part of a listed combination motor controller. Short circuit ratings are, therefore, established and valid only for the listed combination motor controller assembly and associated housing or enclosure. 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 NZM Instantaneous Trip Circuit Breakers.		
NZMH 4-...-OBI-Form CDN	**2.1 - 18**			
NZM 6B-.../ZM 6-...-OBI-CNA	**0.6 - 125**			
NZMH 6-.../ZM 6-...-OBI-CNA	**33 - 125**			
NZM 9-.../ZM 9-...-OBI-CNA	**63 - 250**			
NZMH 9-.../ZM 9-...-OBI-CNA	**63 - 250**			
NZM 10-...N/ZM-...-OBI-NA	**400 - 600**			
NZM 10-...H/ZM-...-OBI-NA	**400 - 600**			
Motor Disconnect Switches **UL 508/CSA 22.2 Nr. 14, IEC/EN 60 947-2, CE** HP rated, with adjustable thermal and magnetic trips		UL / CSA Short Circuit Ratings		
NZMH 4-...-CNA[1]	**4 - 80**	**100**	**25**	**25**
NZM 6B-.../ZM 6-...-CNA	**15 - 125**	**25**	**25**	**14**
NZMH 6-.../ZM 6-...-CNA	**15 - 125**	**100**	**65**	**25**
NZM 9-.../ZM 9-...-CNA	**63 - 250**	**30**	**25**	**18**
NZMH 9-.../ZM 9-...-CNA	**63 - 250**	**200**	**85**	**42**
Motor Disconnect Switches **UL 508/CSA 22.2 Nr. 14, IEC/EN 60 947-3, CE** HP rated, without trip elements				
N6-...-CNA	**150**	**10**	**10**	**10**
N9-...-CNA	**250**	**10**	**10**	**10**
N12-...-CNA [2]	**1200**	**42**	**42**	**42**
Molded Case Switches **UL 1087, CSA 22.2 Nr. 5.2, IEC/EN 60 947-3, CE** Without trip elements				
NZM 7-...-NA(-M8)	**200**	**25**	**25**	**18**
NZM 10-...N/B-NA	**600**	**25**	**25**	**25**

1) **NZMH 4-...-CNA** in the range 4 - 16 Amps, UL/CSA only.
2) **N12-...-CNA**, UL/CSA only.

Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

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

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								
 **NZMH 4-...-CNA** (80 Amps)	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**	
	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**	
	63 – 80	600 – 1000	25	30	**60**	75	**NZMH 4-80-CNA**	

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

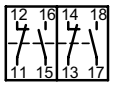
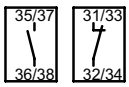
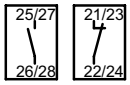
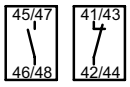
UL/CSA Short Circuit Current Rating RMS Sym Rating @

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.

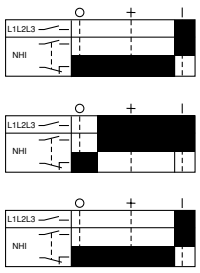
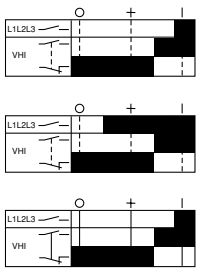
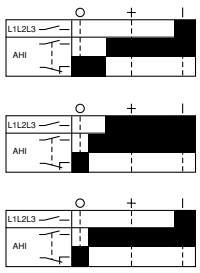
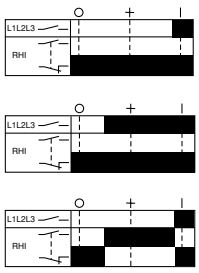
Ordering Information:
State type from Column 4. Example: **NZMH 4-25-CNA**

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.

1	2		3	4	5
	Contacts		**Type** To be ordered with device only. Add below suffix.	**Price**	Notes
	N.O.	N.C.		$	
Standard Auxiliary Contacts 	2	2	**+NHI 22-NZM 4/6-NA**	See Price List	Combination possibilities of auxiliary contacts: NHI ● ● — — VHI ● — ● — AHI ● — — ● RHI 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.
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	

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.

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)**.

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: **0FF** - **+** (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

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**

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** $
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.		**NZMH 4...**	**+ R-NZMH 4**	**—**	See Price List
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: 0FF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.	Gray	**NZMH 4** **NZM(H) 6(B)**	**—**	**H 6-R-NA**	See Price List
	Black	**NZMH 4** **NZM(H) 6(B)**	**—**	**H 6-R-SW-NA**	See Price List
	Red/ Yellow	**NZMH 4** **NZM(H) 6(B)**	**—**	**RH 6-R-NA**	See Price List
Legend Plate (for mounting with operating handle) Silver-colored, black lettering					
					
Specify desired text. Height of letters: 3.5, 5, and 7 mm		**NZMH 4** **NZM(H) 6(B)**	**—**	**ZSSOND-NZM 6**	See Price List
Blank (for engraving or printing)		**NZMH 4** **NZM(H) 6(B)**	**—**	**ZS60-NZM 6**	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)**	**—**	**ZS62-NZM 6**	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)			**—**	**ZS...-NZM 6**	See Price List

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.

1	2	3	4
		Type	**Price** $
Main Disconnect Switch Assembly Kits for CE marked control panels per IEC/EN 60 204-1 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. 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. 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.			
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.		**V-NZMH4**	See Price List
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		**EA-NZM 4**	See Price List
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.		**V-NZMH 4-SW**	See Price List
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.		**EA-NZM 4-SW**	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**

1	2	3
	Type	**Price** $
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.	**H-NZMH 4**	See Price List See Price List
Clip For mounting **NZMH 4...** devices on a DIN rail. (Rail conforming to the standard EN 50 022).	**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**

1	2	3	4	5			6	7
	Fixed Thermal Setting	Adjustable magnetic trip, supplied standard with the breaker	Adjustable magnetic trip, available as a substitute to standard ratings. Refer to ordering info below.	UL/CSA Interrupting ratings (AC, 60Hz) RMS Sym Amps @			**Type**	**Price**
			Amps					
	Amps	Amps		240 V	**480 V**	600 V	Standard	$
Standard Interrupting Rating **NZM 6B-.../ZM 6A-...-NA**								
 **(125A)**	15	160 – 320	100 – **200**	25kA	**25kA**	14kA	**NZM 6B-63/ZM 6A-15-NA**	See Price List
	20	160 – 320	100 – **200**				**NZM 6B-63/ZM 6A-20-NA**	See Price List
	25	160 – 320	100 – **200**				**NZM 6B-63/ZM 6A-25-NA**	See Price List
	30	260 – 500	100 – **200,** 160 – **320**				**NZM 6B-63/ZM 6A-30-NA**	See Price List
	35	260 – 500	100 – **200,** 160 – **320**				**NZM 6B-63/ZM 6A-35-NA**	See Price List
	40	400 – 800	160 – **320,** 260 – **500**				**NZM 6B-63/ZM 6A-40-NA**	See Price List
	50	400 – 800	160 – **320,** 260 – **500**				**NZM 6B-63/ZM 6A-50-NA**	See Price List
	60	400 – 800	160 – **320,** 260 – **500**				**NZM 6B-63/ZM 6A-60-NA**	See Price List
	70	600 – 1200	260 – **500,** 400 – **800**				**NZM 6B-100/ZM 6A-70-NA**	See Price List
	80	600 – 1200	260 – **500,** 400 – **800**				**NZM 6B-100/ZM 6A-80-NA**	See Price List
	90	600 – 1200	260 – **500,** 400 – **800**				**NZM 6B-100/ZM 6A-90-NA**	See Price List
	100	600 – 1200	260 – **500,** 400 – **800**				**NZM 6B-100/ZM 6A-100-NA**	See Price List
	125	600 – **1200**	400 – **800,** 1000 – 2000				**NZM 6B-160/ZM 6A-125-NA**	See Price List
High Interrupting Rating **NZMH6-.../ZM 6A-...-NA**, UL/CSA Current-Limiting circuit breaker								
 **(125A)**	15	160 – 320	100 – **200**	100kA	**65kA**	25kA	**NZMH 6-63/ZM 6A-15-NA**	See Price List
	20	160 – 320	100 – **200**				**NZMH 6-63/ZM 6A-20-NA**	See Price List
	25	160 – 320	100 – **200**				**NZMH 6-63/ZM 6A-25-NA**	See Price List
	30	260 – 500	100 – **200,** 160 – **320**				**NZMH 6-63/ZM 6A-30-NA**	See Price List
	35	260 – 500	100 – **200,** 160 – **320**				**NZMH 6-63/ZM 6A-35-NA**	See Price List
	40	400 – 800	160 – **320,** 260 – **500**				**NZMH 6-63/ZM 6A-40-NA**	See Price List
	50	400 – 800	160 – **320,** 260 – **500**				**NZMH 6-63/ZM 6A-50-NA**	See Price List
	60	400 – 800	160 – **320,** 260 – **500**				**NZMH 6-63/ZM 6A-60-NA**	See Price List
	70	600 – 1200	260 – **500,** 400 – **800**				**NZMH 6-100/ZM 6A-70-NA**	See Price List
	80	600 – 1200	260 – **500,** 400 – **800**				**NZMH 6-100/ZM 6A-80-NA**	See Price List
	90	600 – 1200	260 – **500,** 400 – **800**				**NZMH 6-100/ZM 6A-90-NA**	See Price List
	100	600 – 1200	260 – **500,** 400 – **800**				**NZMH 6-100/ZM 6A-100-NA**	See Price List
	125	600 – **1200**	400 – **800,** 1000 – 2000				**NZMH 6-160/ZM 6A-125-NA**	See Price List

Type **NZM 6B-.../ZM 6A-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, thermal-magnetic Circuit Breakers with a fixed thermal and adjustable magnetic trip function.
Type **NZMH 6-.../ZM 6A-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, thermal-magnetic Current Limiting Circuit Breakers with a fixed thermal and adjustable magnetic trip function.
Both types are CE Marked and in Conformity with IEC/EN 60 947-2 (Circuit Breakers), which also makes them suitable internationally as inverse time molded case circuit breakers. Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

Ordering Information:
State type from Column 6. Example: **NZM 6B-63/ZM6A-50-NA**. (Magnetic Trip range per Column 3).
Optional: Select a substitute magnetic trip range from column 4. Specify it in the Type number by including the number in bold.
Example: **NZM 6B-63/ZM6A-50-500-NA**

Note:
- Operating Handle supplied separately. Consult page **8**/18 for available handle types.
- Consult page **8**/16 - 21 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

1	2	3	4	5
Frame Rating	Continuous Current Rating	Adjustable Magnetic Trip Range	**Type**	**Price**
	Amps	Amps		$
Instantaneous Trip Circuit Breakers **Up to 600 V AC, UL/CSA**				
Standard Interrupting Ratings	33	100 - 200	**NZM 6B-63/ZM 6-33-200-OBI-CNA**	See Price List
	50	260 - 500	**NZM 6B-63/ZM 6-50-500-OBI-CNA**	See Price List
	60	400 - 800	**NZM 6B-63/ZM 6-60-800-OBI-CNA**	See Price List
	80	260 - 500	**NZM 6B-100/ZM 6-80-500-OBI-CNA**	See Price List
	100	600 - 1200	**NZM 6B-100/ZM 6-100-1200-OBI-CNA**	See Price List
	125	1000 - 2000	**NZM 6B-160/ZM 6-125-2000-OBI-CNA**	See Price List
High Fault Interrupting Ratings	33	100 - 200	**NZMH 6-63/ZM 6-33-200-OBI-CNA**	See Price List
	50	260 - 500	**NZMH 6-63/ZM 6-50-500-OBI-CNA**	See Price List
	60	400 - 800	**NZMH 6-63/ZM 6-60-800-OBI-CNA**	See Price List
	80	260 - 500	**NZMH 6-100/ZM 6-80-500-OBI-CNA**	See Price List
	100	600 - 1200	**NZMH 6-100/ZM 6-100-1200-OBI-CNA**	See Price List
	125	1000 - 2000	**NZMH 6-160/ZM 6-125-2000-OBI-CNA**	See Price List

NZM 6B-.../ZM6-...-OBI-CNA (125 Amps)

NZMH6-.../ZM6-...-OBI-CNA (125 Amps)

Type **NZM6B-.../ZM6-...-OBI...** and **NZMH6-.../ZM6-...-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 **NZMH6** instantaneous trip circuit breaker features a current limiting design contact assembly and can provide high fault short circuit current ratings of up to 65kA @ 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: **NZM6B-63/ZM6-33-200-OBI-CNA**

Note:
- Operating Handle supplied separately. Consult page **8**/18 for available handle types.
- Consult page **8**/16 - 21 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.
- Consult Moeller Electric for Type **NZM(H)6(B)** Instantaneous Breakers with lower continuous current ratings.

1	2	3	4				5	6
Frame Rating	Adjustable Thermal Range for motor overload protection	Adjustable Magnetic Trip Range	Maximum HP Rating 3 Phase @				**Type**	**Price**
	Amps	Amps	200 V HP	230 V HP	**460 V HP**	575 V HP	Standard	$
Standard Short Circuit Ratings **NZM 6B-.../ZM6-...-CNA**								
	15 - 25	160 – 320	5	7 1/2	**15**	20	**NZM 6B-63/ZM 6-25-CNA**	See Price List
	25 - 40	260 – 500	10	10	**30**	40	**NZM 6B-63/ZM 6-40-CNA**	See Price List
	40 - 63	400 – 800	20	20	**40**	60	**NZM 6B-63/ZM 6-63-CNA**	See Price List
	63 - 100	600 – 1200	30	30	**75**	100	**NZM 6B-100/ZM 6-100-CNA**	See Price List
	100 - 125	1000 – 2000	40	40	**100**	125	**NZM 6B-160/ZM 6-125-2000-CNA**	See Price List
	with optional lower magnetic trip values:							
(125 Amps)	15 - 25	100 – 200	5	7 1/2	**15**	20	**NZM 6B-63/ZM 6-25-200-CNA**	See Price List
	25 - 40	160 – 320	10	10	**30**	40	**NZM 6B-63/ZM 6-40-320-CNA**	See Price List
	40 - 63	260 – 500	20	20	**40**	60	**NZM 6B-63/ZM 6-63-500-CNA**	See Price List
	63 - 100	400 – 800	30	30	**75**	100	**NZM 6B-100/ZM 6-100-800-CNA**	See Price List
	100 - 125	600 – 1200	40	40	**100**	125	**NZM 6B-160/ZM 6-125-CNA**	See Price List
High Fault Short Circuit Ratings **NZMH6-.../ZM6-...-CNA**								
	15 - 25	160 – 320	5	7 1/2	**15**	20	**NZMH 6-63/ZM 6-25-CNA**	See Price List
	25 - 40	260 – 500	10	10	**30**	40	**NZMH 6-63/ZM 6-40-CNA**	See Price List
	40 - 63	400 – 800	20	20	**40**	60	**NZMH 6-63/ZM 6-63-CNA**	See Price List
	63 - 100	600 – 1200	30	30	**75**	100	**NZMH 6-100/ZM 6-100-CNA**	See Price List
	100 - 125	1000 – 2000	40	40	**100**	125	**NZMH 6-160/ZM 6-125-2000-CNA**	See Price List
	with optional lower magnetic trip values:							
(125 Amps)	15 - 25	100 – 200	5	7 1/2	**15**	20	**NZMH 6-63/ZM 6-25-200-CNA**	See Price List
	25 - 40	160 – 320	10	10	**30**	40	**NZMH 6-63/ZM 6-40-320-CNA**	See Price List
	40 - 63	260 – 500	20	20	**40**	60	**NZMH 6-63/ZM 6-63-500-CNA**	See Price List
	63 - 100	400 – 800	30	30	**75**	100	**NZMH6-100/ZM 6-100-800-CNA**	See Price List
	100 - 125	600 – 1200	40	40	**100**	125	**NZMH 6-160/ZM 6-125-CNA**	See Price List

Types **NZM6B-.../ZM6-...-CNA** and **NZMH6-.../ZM6-...-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. Per NEC, Branch Circuit Overcurrent protection devices must be provided separately.

Type	**UL/CSA Short Circuit Current Rating RMS Sym Rating @**		
	240VAC	**480VAC**	**600VAC**
NZM6B-.../ZM6-...-CNA	25 kA	25 kA	14 kA
NZMH6-.../ZM6-...-CNA	100 kA	65 kA	25 kA

Types **NZM6B-.../ZM6-...-CNA** and **NZMH6-.../ZM6-...-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 5. Example: **NZM6B-63/ZM6-40-CNA**

Note:
- Operating Handle supplied separately. Consult page **8**/18 for available handle types.
- Consult page **8**/16 - 21 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

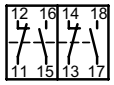
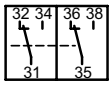
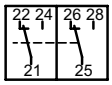
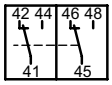
1	2	3				4	5
Frame Rating	Continuous Current Rating	Maximum HP Rating 3 Phase @				**Type**	**Price**
	Amps	200 V HP	230 V HP	**460 V HP**	575 V HP		$
Motor Disconnect Switches N6-...-CNA							
 **(150 Amps)**	63	20	25	**50**	60	**N 6-63-CNA**	See Price List
	100	30	40	**75**	100	**N 6-100-CNA**	See Price List
	150	40	60	**100**	125	**N 6-160-CNA**	See Price List

Type **N6...-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: 10 kA RMS Sym.

N6...-CNA Disconnect Switches are also CE Marked and in Conformity with IEC/EN 60 947-3 (Switch-Disconnectors), which makes them suitable internationally as Main Disconnect switches in a broad range of industrial applications.
Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

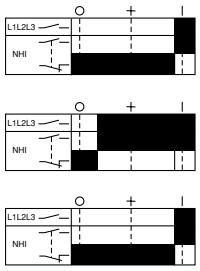
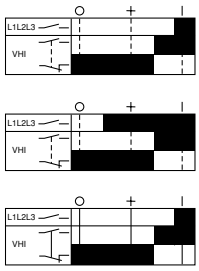
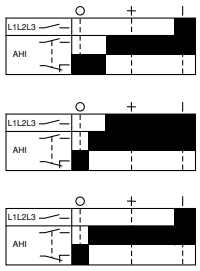
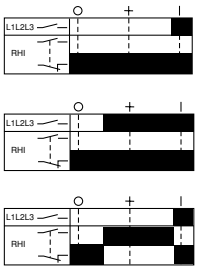
Ordering Information:
State type from Column 5. Example: **N 6-100-CNA**

Note:
- For direct-on-line switching of motors, use in combination with a listed magnetic contactor.
- Operating Handle supplied separately. Consult page **8**/18 for available handle types.
- Consult page **8**/16 – 21 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

1	2	3	5	5
	Contacts N.O. N.C.	**Type** To be ordered with device only. Add below suffix.	**Price** $	Notes
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 	2 Form C (Change over) Contacts	**+VHI 002-NZM 6-NA**	See Price List	Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.
Handle operated Early-Make Auxiliary Contacts 	2 Form C (Change over) Contacts	**+AHI 002-NZM 6-NA**	See Price List	
Trip Indicating Auxiliary Contacts 	2 Form C (Change over) Contacts	**+RHI 002-NZM 6-NA**	See Price List	

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 + ← |				

VHI and **AHI-NZM 6** operate in similar fashion during switching ON and OFF.

Ordering Information:
Auxiliary Contacts must be ordered with device. Add type from Column 3. Example: **+ VHI 002-NZM 6-NA**.

1	2	3	4	5	6
	Rated Control Voltage	V/Hz	**Type** To be ordered with device only. Add below suffix.	**Price** $	Notes
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 Continuous duty rating 	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)**.

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	**NZM(H)6(B)... N6....**	**H 6U**	See Price List
		Black	**NZM(H)6(B)... N6....**	**H 6U-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: 0FF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.		Gray	**NZMH 4 NZM(H) 6(B) N6....**	**H 6-NA**	See Price List
		Black	**NZMH 4 NZM(H) 6(B) N6....**	**H 6-SW-NA**	See Price List
		Red/ Yellow	**NZMH 4 NZM(H) 6(B) N6....**	**RH 6-NA**	See Price List
Extension shaft For mounting depths of 150 – 400 mm. Extends shaft length by 266 mm. Only one extension shaft possible. Can also be used with the mechanical interlock.			**NZMH 4 NZM(H) 6(B) N6....**	**A-NZM 6**	See Price List
Padlocking accessory Enables the device to be padlocked OFF when the panel door is open. Accommodates up to 3 padlocks (hasp size 1/4", 6 – 8mm). A limit switch (Type **AT0**) can also be installed for signalling or electrical interlocking purposes.			**NZM(H) 6(B) N6....**	**SVB-NZM 6**	See Price List
Switch position indicator Indicates position of switch when panel door is open.			**NZMH 4 NZM(H) 6(B) N6....**	**SA-NZM 6**	See Price List
Maintenance Handle To actuate the device when the panel door is open.			**NZM(H) 6(B) N6....**	**H6UZ**	See Price List
Mechanical Interlock For mechanical interlocking of two devices. Requires two handles, one for each switch. Order separately.			**NZM(H) 6(B) N6....**	**KV-2 NZM 6**	See Price List

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**

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** $
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-NA** rear operation handles. Factory installed only. Order with device.		**NZM(H) 6(B)...** **N6...**	**+ R-NZMH 6**	**—**	See Price List
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: 0FF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.	Gray	**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**H 6-R-NA**	See Price List
	Black	**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**H 6-R-SW-NA**	See Price List
	Red/ Yellow	**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**RH 6-R-NA**	See Price List
Legend Plate (for mounting with operating handle) Silver-colored, black lettering 					
Specify desired text. Height of letters: 3.5, 5, and 7 mm		**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**ZSSOND-NZM 6**	See Price List
Blank (for engraving or printing)		**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**ZS60-NZM 6**	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)** **N6...**	**—**	**ZS62-NZM 6**	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: **ZS61-NZM 6** (Inscription in German language)		**NZMH 4** **NZM(H) 6(B)** **N6...**	**—**	**ZS...-NZM 6**	See Price List

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.

1	2	3	4
		Type When ordered separately without device	**Price** $

Main Disconnect Switch Assembly Kits for CE marked control panels per IEC/EN 60 204-1

Type **NZM(H)6(B)-...** 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.
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.
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.

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.		**V-NZM 6**	See Price List
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		**EA-NZM 6**	See Price List
Kit includes: Same as V-NZM 6, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.		**V-NZM 6-SW**	See Price List
Kit includes: Same as EA-NZM 6, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.		**EA-NZM 6-SW**	See Price List

Ordering Information:
Specify Type from Column 3. Example: **V- NZM 6**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ V- NZM 6**

1	2	3	4
	Type To be ordered with device only. Add suffix shown below	**Type**	**Price** $
Control Circuit Tap-Off Terminals Supplementary terminals attached to main terminals. 3 connections top and bottom. Factory addition only, must be ordered with device.	**+ST-NA**	—	See Price List
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.	—	**H-NZM 6**	See Price List

Ordering Information:
Accessory in Column 2 can only be ordered with device. Specify Type suffix. Example: **+ ST-NA**
Specify Type from Column 3. Example: **H-NZM 6**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ H-NZM 6**

1	2	3	4	5			6	7
	Fixed Thermal Setting	Adjustable magnetic trip, supplied standard with the breaker	Adjustable magnetic trip, available as a substitute to standard ratings. Refer to ordering info below.	UL/CSA Interrupting ratings (AC, 60 Hz) RMS Sym Amps @			**Type**	**Price**
	Amps	Amps	Amps	240 V	**480 V**	600 V	Standard	$
Standard Interrupting Rating **NZM 9-.../ZM 9A-...-NA**								
 **(250A)**	70	600 – 1200	400 – **800**	30 kA	**25 kA**	18 kA	**NZM 9-250/ZM 9A-70-NA**	See Price List
	80	600 – 1200	400 – **800**				**NZM 9-250/ZM 9A-80-NA**	See Price List
	90	600 – 1200	400 – **800**				**NZM 9-250/ZM 9A-90-NA**	
	100	1000 – 2000	600 – **1200,** 400 – **800**				**NZM 9-250/ZM 9A-100-NA**	See Price List
	125	1000 – 2000	600 – **1200,** 400 – **800**				**NZM 9-250/ZM 9A-125-NA**	See Price List
	150	1000 – 2000	600 – **1200**				**NZM 9-250/ZM 9A-150-NA**	
	175	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZM 9-250/ZM 9A-175-NA**	See Price List
	200	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZM 9-250/ZM 9A-200-NA**	See Price List
	225	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZM 9-250/ZM 9A-225-NA**	
	250	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZM 9-250/ZM 9A-250-NA**	See Price List
High Interrupting Rating **NZMH9-.../ZM 9A-...-NA**, UL/CSA Current-Limiting circuit breaker								
 **(250A)**	70	600 – 1200	400 – **800**	200 kA	**85 kA**	42 kA	**NZMH 9-250/ZM 9A-70-NA**	See Price List
	80	600 – 1200	400 – **800**				**NZMH 9-250/ZM 9A-80-NA**	See Price List
	90	600 – 1200	400 – **800**				**NZMH 9-250/ZM 9A-90-NA**	
	100	1000 – 2000	600 – **1200,** 400 – **800**				**NZMH 9-250/ZM 9A-100-NA**	See Price List
	125	1000 – 2000	600 – **1200,** 400 – **800**				**NZMH 9-250/ZM 9A-125-NA**	See Price List
	150	1000 – 2000	600 – **1200**				**NZMH 9-250/ZM 9A-150-NA**	
	175	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZMH 9-250/ZM 9A-175-NA**	See Price List
	200	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZMH 9-250/ZM 9A-200-NA**	See Price List
	225	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZMH 9-250/ZM 9A-225-NA**	
	250	1600 – 2400	600 – **1200,** 1000 – **2000**				**NZMH 9-250/ZM 9A-250-NA**	See Price List

Type **NZM 9-.../ZM 9A-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, thermal-magnetic Circuit Breakers with a fixed thermal and adjustable magnetic trip function.
Type **NZMH 9-.../ZM 9A-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, thermal-magnetic Current Limiting Circuit Breakers with a fixed thermal and adjustable magnetic trip function.
Both types are CE Marked and in Conformity with IEC/EN 60 947-2 (Circuit Breakers), which also makes them suitable internationally as inverse time molded case circuit breakers.
Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

Ordering Information:
State type from Column 6. Example: **NZM 9-250/ZM9A-250-NA** (Magnetic Trip range per Column 3).
Optional: Select a substitute magnetic trip range from column 4. Specify it in the Type number by including the number in bold.
Example: **NZM 9-250/ZM9A-250-2000-NA**

Note:
- Operating Handle supplied separately. Consult page **8**/28 for available handle types.
- Consult page **8**/26 - 31 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

1	2	3	4	5
Frame Rating	Continuous Current Rating	Adjustable Magnetic Trip Range	**Type**	**Price**
	Amps	Amps		$
Instantaneous Trip Circuit Breakers **Up to 600 V AC, UL/CSA**				See Price List
Standard Interrupting Ratings				See Price List
	63	400 – 800	**NZM 9-250/ZM 9-63-800-OBI-CNA**	See Price List
	100	600 – 1200	**NZM 9-250/ZM 9-100-1200-OBI-CNA**	See Price List
	160	1000 – 2000	**NZM 9-250/ZM 9-160-2000-OBI-CNA**	See Price List
	200	1600 – 2400	**NZM 9-250/ZM 9-200-2400-OBI-CNA**	See Price List
	250	1600 – 2400	**NZM 9-250/ZM 9-250-2400-OBI-CNA**	See Price List
NZM 9-.../ZM9-...-OBI-CNA **(250 Amps)**				See Price List
High Fault Interrupting Ratings				See Price List
	63	400 – 800	**NZMH 9-250/ZM 9-63-800-OBI-CNA**	See Price List
	100	600 – 1200	**NZMH 9-250/ZM 9-100-1200-OBI-CNA**	See Price List
	160	1000 – 2000	**NZMH 9-250/ZM 9-160-2000-OBI-CNA**	See Price List
	200	1600 – 2400	**NZMH 9-250/ZM 9-200-2400-OBI-CNA**	See Price List
	250	1600 – 2400	**NZMH 9-250/ZM 9-250-2400-OBI-CNA**	See Price List
NZMH 9-.../ZM9-...-OBI-CNA **(250 Amps)**				See Price List

Type **NZM9-.../ZM9-...-OBI...** and **NZMH9-.../ZM9-...-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 9** instantaneous trip circuit breaker features a current limiting design contact assembly and can provide high fault short circuit current ratings of up to 85 kA @ 480 V AC.
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: **NZM 9-250/ZM9-250-2400-OBI-CNA**

Note:
- Operating Handle supplied separately. Consult page **8**/28 for available handle types.
- Consult page **8**/ 26 - 31 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	Maximum HP Rating 3 Phase @				**Type**	**Price**
	Amps	Amps	200 V HP	230 V HP	**460 V HP**	575 V HP	Standard	$
Standard Short Circuit Ratings								
NZM 9-.../ZM 9-...-CNA								
	63 – 100	600 – 1200	30	30	**75**	100	**NZM 9-250/ZM 9-100-CNA**	See Price List
	100 – 160	1000 – 2000	50	60	**125**	150	**NZM 9-250/ZM 9-160-CNA**	See Price List
	160 – 200	1600 – 2400	60	75	**150**	200	**NZM 9-250/ZM 9-200-CNA**	See Price List
	200 – 250	1600 – 2400	75	75	**150**	225	**NZM 9-250/ZM 9-250-CNA**	See Price List
	**with optional lower magnetic trip values:**							
	63 – 100	400 – 800	30	30	**75**	100	**NZM 9-250/ZM 9-100-800-CNA**	See Price List
(250A)	100 – 160	600 – 1200	50	60	**125**	150	**NZM 9-250/ZM 9-160-1200-CNA**	See Price List
	160 – 200	1000 – 2000	60	75	**150**	200	**NZM 9-250/ZM 9-200-2000-CNA**	See Price List
	200 – 250	1000 – 2000	75	75	**150**	225	**NZM 9-250/ZM 9-250-2000-CNA**	See Price List
High Fault Short Circuit Ratings								
NZMH 9-.../ZM 9-...-CNA								
	63 – 100	600 – 1200	30	30	**75**	100	**NZMH 9-250/ZM 9-100-CNA**	See Price List
	100 – 160	1000 – 2000	50	60	**125**	150	**NZMH 9-250/ZM 9-160-CNA**	See Price List
	160 – 200	1600 – 2400	60	75	**150**	200	**NZMH 9-250/ZM 9-200-CNA**	See Price List
	200 – 250	1600 – 2400	75	75	**150**	225	**NZMH 9-250/ZM 9-250-CNA**	See Price List
	**with optional lower magnetic trip values:**							
	63 – 100	400 – 800	30	30	**75**	100	**NZMH 9-250/ZM 9-100-800-CNA**	See Price List
(250A)	100 – 160	600 – 1200	50	60	**125**	150	**NZMH 9-250/ZM 9-160-1200-CNA**	See Price List
	160 – 200	1000 – 2000	60	75	**150**	200	**NZMH 9-250/ZM 9-200-2000-CNA**	See Price List
	200 – 250	1000 – 2000	75	75	**150**	225	**NZMH 9-250/ZM 9-250-2000-CNA**	See Price List

Types **NZM 9-.../ZM 9-...-CNA** and **NZMH 9-.../ZM 9-...-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. Per NEC, Branch Circuit Overcurrent protection devices must be provided separately.

Type	**UL/CSA Short Circuit Current Rating RMS Sym Rating @**		
	240 V AC	**480 V AC**	**600 V AC**
NZM 9-.../ZM9-...-CNA	30 kA	25 kA	18 kA
NZMH 9-.../ZM9-...-CNA	200 kA	85 kA	42 kA

Types **NZM 9-.../ZM 9-...-CNA** and **NZMH 9-.../ZM 9-...-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 5. Example: **NZM 9-250/ZM 9-200-CNA**
Note:
- For direct-on-line switching of motors, use in combination with a listed magnetic contactor.
- Operating Handle supplied separately. Consult page **8**/28 for available handle types.
- Consult page **8**/ 26 - 31 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

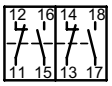
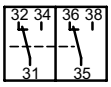
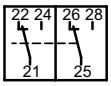
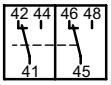
1	2	3				4	5
Frame Rating	Continuous Current Rating	Maximum HP Rating 3 Phase @				**Type**	**Price**
	Amps	200 V HP	230 V HP	**460 V HP**	575 V HP		$
N9-...-CNA Motor Disconnect Switches							
 **(250A)**	250	60	75	**150**	200	**N 9-250-CNA**	See Price List

Type **N9...-CNA** Disconnect Switches are UL recognized (UL 508) and CSA certified (22.2 Nr. 14) as 3 pole, HP rated nonautomatic 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 @ 600 V AC: 10 kA RMS Sym.

N9...-CNA Disconnect Switches are also CE Marked and in Conformity with IEC/EN 60 947-3 (Switch-Disconnectors), which makes them suitable internationally as Main Disconnect switches in a broad range of industrial applications.
Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

Ordering Information:
State type from Column 5: **N 9-250-CNA**

Note:
- For direct-on-line switching of motors, use in combination with a listed magnetic contactor.
- Operating Handle supplied separately. Consult page **8**/28 for available handle types.
- Consult page **8**/ 26 - 31 for additional accessories.
- Line and Load field-wiring terminals for cable connection supplied as standard.

1	2		3	4	5
	Contacts		**Type** To be ordered with device only. Add below suffix.	**Price**	Notes
	N.O.	N.C.		$	
Standard Auxiliary Contacts 	2	2	**+NHI 22-NZM 9**	See Price List	Combination possibilities of auxiliary contacts: **NHI** **VHI** **AHI** **RHI** I I — — I — I — I — — I
Early-Make Auxiliary Contacts 	2 Form C (Changeover) Contacts		**+VHI 002-NZM 9**	See Price List	Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.
Handle operated Early-Make Auxiliary Contacts 	2 Form C (Changeover) Contacts		**+AHI 002-NZM 9**	See Price List	
Trip Indicating Auxiliary Contacts 	2 Form C (Changeover) Contacts		**+RHI 002-NZM 9**	See Price List	

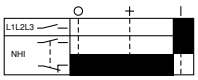
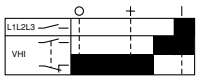
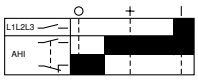
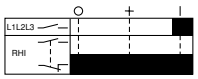
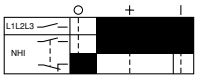
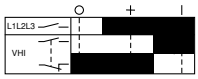
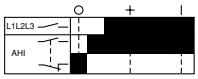
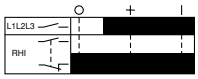
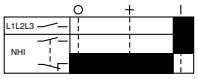
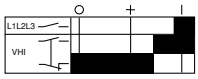
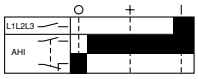
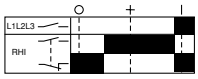
Type **NHI...** are standard auxiliary contacts. They operate simultaneously with the main contacts. They can be typically used for signalling or switching auxiliary circuits such as a control circuit.

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 ○ → I				
Switching OFF ○ ← I				
Tripped position + ← I				

Ordering Information:
Auxiliary Contacts must be ordered with device. Add type from Column 3.
Example: **+ VHI 002-NZM 9**.

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	120 V 60 Hz	**+A-NZM 9 (120V 60Hz)**	See Price List	Shunt Trips are typically used to electrically trip the device from a remote location. The **A-NZM 9...** 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	208 V 60 Hz	**+A-NZM 9 (208V 60Hz)**	See Price List	
	AC	240 V 60 Hz	**+A-NZM 9 (240V 60Hz)**	See Price List	
	AC	480 V 60 Hz	**+A-NZM 9 (480V 60Hz)**	See Price List	
	AC	600 V 60 Hz	**+A-NZM 9 (600V 60 Hz)**	See Price List	
	DC	24 V	**+A-NZM 9 (24V DC)**	See Price List	
Undervoltage Trips					
	AC	120 V 60 Hz	**+U-NZM 9 (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	208 V 60 Hz	**+U-NZM 9 (208V 60Hz)**	See Price List	
	AC	240 V 60 Hz	**+U-NZM 9 (240V 60Hz)**	See Price List	
	AC	480 V 60 Hz	**+U-NZM 9 (480V 60Hz)**	See Price List	
	AC	600 V 60 Hz	**+U-NZM 9 (600V 60Hz)**	See Price List	
	DC	24 V	**+U-NZM 9 (24VDC)**	See Price List	

Ordering Information:
Voltage trips must be ordered with device. Add type from Column 4. Example: **+ U-NZM 9 (480V, 60 Hz)**.

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	**NZM(H) 9... N 9...**	**H 9U**	See Price List
		Black	**NZM(H) 9... N 9...**	**H 9U-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: 0FF, + (tripped), ON Red -Yellow version for Emergency-Stop function.		Gray	**NZM(H) 9... N 9...**	**H 9-NA**	See Price List
		Black	**NZM(H) 9... N 9...**	**H 9-SW-NA**	See Price List
		Red/ Yellow	**NZM(H) 9... N 9...**	**RH 9-NA**	See Price List
Extension shaft For mounting depths of 190...400 mm. Extends shaft length by 223 mm. Only one extension shaft possible. Can also be used with the mechanical interlock.			**NZM(H) 9... N 9...**	**A-NZM 9**	See Price List
Padlocking accessory Enables the device to be padlocked OFF when the panel door is open. Accommodates up to 3 padlocks (hasp size 1/4", 6 – 8mm). A limit switch (Type **AT0**) can also be installed for signalling or electrical interlocking purposes.			**NZM(H) 9... N 9...**	**SVB-NZM 9**	See Price List
Switch position indicator Indicates position of switch when panel door is open.			**NZM(H) 9... N 9...**	**SA-NZM 9**	See Price List
Maintenance Handle To actuate the device when the panel door is open.			**NZM(H) 9... N 9...**	**H9UZ**	See Price List
Mechanical Interlock For mechanical interlocking of two devices. Requires two handles, one for each switch. Order separately.			**NZM(H) 9... N 9...**	**KV-2 NZM 9**	See Price List

Ordering Information:
Specify Type from Column 5. Example: **H9-SW-NA**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ H9-SW-NA**

1	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** $
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.		**NZM(H) 9...** **N 9...**	**+R-NZM 9**		See Price List
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).	Gray	**NZM(H) 9...** **N 9...**	—	**H 9-R-NA**	See Price List
No cover/door interlocking provisions. 3 distinct Handle positions: 0FF, + (tripped), ON Red -Yellow version for Emergency-Stop function.	Black	**NZM(H) 9...** **N 9...**	—	**H 9-R-SW-NA**	See Price List
	Red/ Yellow	**NZM(H) 9...** **N 9...**	—	**RH 9-R-NA**	See Price List
Legend Plate (for mounting with operating handle) Silver-colored, black lettering  Specify desired text. Height of letters: 3.5, 5, and 7 mm		**NZM(H) 9...** **N 9...**	—	**ZSSOND-NZM 9**	See Price List
Blank (for engraving or printing)		**NZM(H) 9...** **N 9...**	—	**ZS60-NZM 9**	See Price List
Main Disconnect Warning plates. English Inscription: "Main Switch- Open only in OFF position" Silver-colored, black lettering		**NZM(H) 9...** **N 9...**	—	**ZS62-NZM 9**	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: **ZS68-NZM 9** (Inscription in Italian language)		**NZM(H) 9...** **N 9...**	—	**ZS...-NZM 9**	See Price List

Ordering Information:
Specify Type from Column 5. Example: **H9-R-SW-NA**.
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ H9-R-SW-NA**
Note:
Items in Column 4 are factory installed and must be ordered with the device.

1	2	3	4
		Type	Price $

Main Disconnect Switch Assembly Kits

for CE marked control panels per IEC/EN 60 204-1

Type **NZM(H) 9-...** 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.
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.
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.

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.		**V-NZM 9**	See Price List
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		**EA-NZM 9**	See Price List
Kit includes: Same as **V-NZM 9**, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.		**V-NZM 9-SW**	See Price List
Kit includes: Same as **EA-NZM 9**, except that the Main Disconnect handle is black in color with silver backing plate for standard, non-Emergency-Stop function.		**EA-NZM 9-SW**	See Price List

Ordering Information:
Specify Type from Column 3. Example: **V- NZM 9**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ V- NZM 9**

1	2	3	4
	Type To be ordered with device. Add suffix shown below	**Type**	**Price** $
Control Circuit Tap-Off Terminals Supplementary terminals attached to main terminals. 3 connections top and bottom. Factory addition only, must be ordered with device.	**+ST**	—	See Price List
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.	—	**H-NZM 9**	See Price List

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 9**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ H-NZM 9**

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	1200 – 12,000	—	65 kA	**65 kA**	50 kA	**NZM 12-630/ZM 12A-400-NA**	See Price List
	500	1200 – 12,000	—				**NZM 12-630/ZM 12A-500-NA**	See Price List
	600	1200 – 12,000	—				**NZM 12-630/ZM 12A-600-NA**	See Price List
	700	1600 – 16,000	—				**NZM 12-800/ZM 12A-700-NA**	See Price List
	800	1600 – 16,000	—				**NZM 12-800/ZM 12A-800-NA**	See Price List
	1000	2000 – 20,000	—				**NZM 12-1250/ZM 12A-1000-NA**	See Price List
(1000 A)								
Adjustable Long Time Response Setting **Type NZM 12-.../ZM 12-...-NA**								
	300 – 600	1200 – 12,000	—	65 kA	**65 kA**	50 kA	**NZM 12-630/ZM 12-600-NA**	See Price List
	400 – 800	1600 – 16,000	—				**NZM 12-800/ZM 12-800-NA**	See Price List
	500 – 1000	2000 – 20,000	—				**NZM 12-1250/ZM 12-1000-NA**	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	1200 – 12,000	600 – 7200	65 kA	**65 kA**	50 kA		
	400 – 800	1600 – 16,000	800 – 9600				**NZM 12-630/ZM 12 V-600-NA**	See Price List
	500 – 1000	2000 – 20,000	1000 – 12,000				**NZM 12-800/ZM 12 V-800-NA**	See Price List
							NZM 12-1250/ZM 12 V-1000-NA	See Price List
(1000 A)								

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

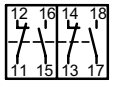
Type **N 12...-CNA** Disconnect Switches are UL recognized (UL 508) and CSA certified (22.2 Nr. 14) as 3 pole, HP rated non-automatic manual motor disconnects without any overload or short circuit tripping elements.
Their switching mechanism has 3 positions (OFF, ON, + "Tripped") and they can be equipped 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.

Auxiliary Contacts for NZM 12...

1	2 Contacts N.O.	N.C.	3 **Type** To be ordered with device only. Add below suffix.	4 **Price** $	5 Notes
Standard Auxiliary Contacts [1] 	2	2	**+NHI 22-NZM 12**	See Price List	Combination possibilities of auxiliary contacts:
Early-Make Auxiliary Contacts 	2	1	**+VHI 21-NZM 12**	See Price List	Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.
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	

NHI	VHI	AHI	RHI
●	●	—	●
●	—	●	●

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.

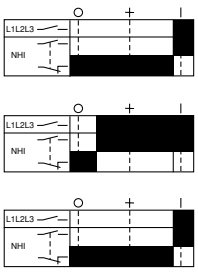
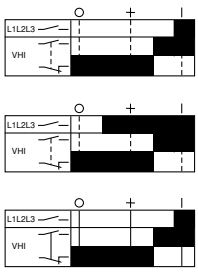
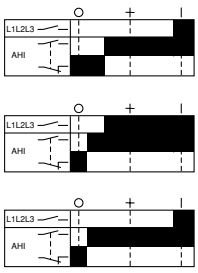
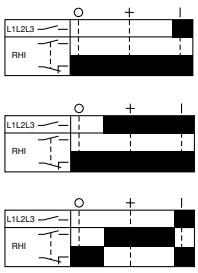
Type **NHI...** are standard auxiliary contacts. They operate simultaneously with the main contacts. They can be typically used for signalling or switching auxiliary circuits such as a control circuit.

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:

Position of auxiliary contacts →	**NHI**	**VHI**	**AHI**	**RHI**
	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**.

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**				See Price List	
	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				See Price List	
	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)**

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: 0FF - + (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

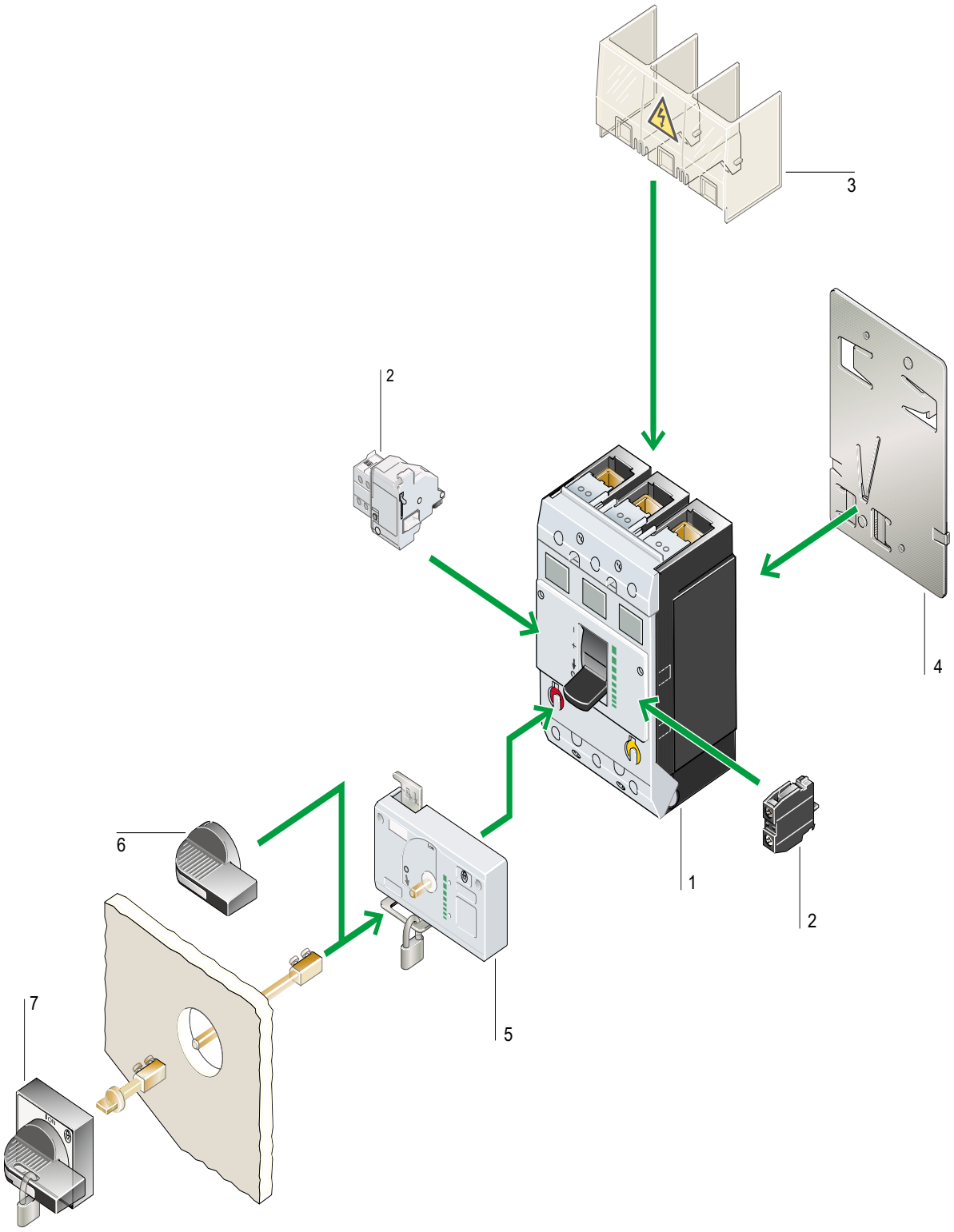
Ordering Information:
Specify Type from Column 5. Example: **H 12-SW-NA**
If ordering with device, just add a "**+**" in front of the Type number. Example: **+ H 12-SW-NA**

1	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** $
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.		**N(ZM) 12...**	**+R-NZM 12**		See Price List
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: 0FF - + (tripped) - ON Red -Yellow version for Emergency-Stop function.	Gray	**N(ZM) 12...**	—	**H 12-R-NA**	See Price List
	Black	**N(ZM) 12...**	—	**H 12-R-SW-NA**	See Price List
	Red/ Yellow	**N(ZM) 12...**	—	**RH 12-R-NA**	See Price List
Legend Plate (for mounting with operating handle) Silver-colored, black lettering  Specify desired text. Height of letters: 3.5, 5, and 7 mm		**N(ZM) 12...**	—	**ZSSOND-NZM 12**	See Price List
Blank (for engraving or printing)		**N(ZM) 12...**	—	**ZS60-NZM 12**	See Price List
Main Disconnect Warning plates. English Inscription: "Main Switch- Open only in OFF position" Silver-colored, black lettering		**N(ZM) 12...**	—	**ZS62-NZM 12**	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: **ZS63-NZM 12** (Inscription in French language)		**N(ZM) 12...**	—	**ZS...-NZM 12**	See Price List

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.

1	2	3	4
	Type To be ordered with device only. Add suffix shown below	**Type**	**Price** $
Control Circuit Tap-Off Terminals Supplementary terminals attached to main terminals. 3 connections top and bottom. Factory addition only, must be ordered with device.	**+ST**	**—**	See Price List
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.	**—**	**H-NZM 12**	See Price List
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-NZM**	See Price List

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**



1 **Molded Case Breaker** – Page 8/44
480 V AC, 150 Amp rating
25 kA @ 480 VAC Interrupting rating
Field installable accessories
Supplied with terminals for cable hookup or bolt-on connection.
UL Listed (UL 489), CSA certified (C 22.2 # 5.1)
Conformity with (Circuit Breakers) IEC/EN 60 947-2 (pending)

1 **Molded Case Switch** – Page 8/45
600 VAC, 200 Amp rating
Field installable accessories
UL Listed (UL 1087), CSA certified (C 22.2 # 5.2)
Conformity with IEC/EN 60 947-3 (Switch-Disconnectors)

2 **Auxiliary Contacts** – Page 8/46
(Pictured right of toggle switch)
Type **NHI...** standard auxiliary contact:
For signalling ON and OFF positions
Type **RHI**... trip-indicating auxiliary contact:
For signalling the Tripped ("+") position

2 **Auxiliary Contacts & Voltage Trips** – Page 8/47...49
(Pictured left of toggle switch)
Type **VHI**... Early-Make auxiliary contact:
For interlocking and load shedding purposes.
To power up the undervoltage trip prior to main contact closing
Shunt Trips
AC & DC versions
With and without Early-Make auxiliary contacts
Undervoltage Trips
AC & DC versions
With and without Early-Make auxiliary contacts

3 **Terminal Cover** – Page 8/53
Provides shock hazard protection against accidental contact with live terminals.
Mandatory use in Main Disconnect switch applications for CE panels in conformity with IEC/EN 60 204-1

4 **Clip Plate**– Page 8/52
Enables mounting of the NZM 7 on a DIN rail conforming to EN 50 022 specifications.

5 **Rotary Drive Mechanism** – Page 8/50
Converts toggle switch operation of the switch into a rotary movement suitable for rotary style operators.
Lockable in the OFF position. (Optional)

6 **Rotary Handle** – Page 8/50
To operate switch equipped with rotary drive mechanism.

7 **Door/Cover Interlocking Rotary Handle** – Page 8/50
For cover or door mounting.
Interlocking feature to prevent opening of door or cover with the switch in the ON position.
Padlockable in the OFF or ON position with up to 3 padlocks (hasp size: 1/4", 4 – 8mm). (Optional. Also comes without padlockable feature.)
Standard color: Black. Also available in red-yellow for Emergency-Stop function per CE and IEC/EN 60 204-1 specifications.
Degree of protection: UL/NEMA 12, IEC/EN: IP 55.

Auxiliary contacts

(**NHI...**: Standard)
(**RHI...**: Trip Indicating)
(**VHI...**: Early-Make)

Voltage Trips

(**A...**: Shunt Trip)
(**AVHI...**: Shunt Trip with Early-Make Auxiliary Contact)
(**U...**: Undervoltage Trip)
(**UHI...**: Undervoltage Trip with Early-Make Auxiliary Contact)




	EK... (NHI)	EK... (RHI)	VHI-NZM 7		A-NZM 7		AVHI-NZM 7		U-NZM 7		UHI NZM 7
Molded Case Circuit Breakers NZM 7(A)...N-NA	●	●	●	or	●	or	●	or	●	or	●
Molded Case Switches NZM 7...-NA	●	●	●	or	●	or	●	or	●	or	●
Molded Case Circuit Breakers + Remote Control Drive NZM 7(A)...N-NA + R-NZM 7	●	●	—		●		—	or	●		—
Molded Case Switches + Remote Control Drive NZM 7...-NA + R-NZM 7	●	●	—		●		—	or	●		—

● Dots in each row represent the accessories which can be combined together in the types shown at left.

○ Circles indicate supplied as standard.

— Dashes indicate incompatibility.

All accessories can be field or factory installed.

Remote Control Drive	Handle Operators				Connection systems	
	Rotary Drive Mechanism	Rotary handle	Cover/Door Interlocking Rotary handle NEMA/UL Type 12; IP 55		Cable Terminals (included as standard)	Bolt-on Connection (Optional)
						
R-NZM 7	**DA(OV)-NZM 7**	**HU(Z)-NZM 7**	**(R)H-NZM 7**	**HOV-NZM 7**		NZM 7(A)...N-NA-**M8** NZM 7 ...-NA-**M8**
● or	●	● or	● or	●	○	●
● or	●	● or	● or	●	○	●
○	–	–	–	–	○	●
○	–	–	–	–	○	●

1	2	3	4	5	6			7	8
	Continuous Current Rating I_u	Fixed Thermal Setting	Adjustable Thermal Setting	Magnetic Trip Setting for Instantaneous Response	UL/CSA Interrupting ratings (AC, 60Hz) RMS Sym Amps @			**Type**	**Price**
	Amps	Amps	Amps	Amps	240V	**480V**	600V		$
Pressure-wire terminals and fixed thermal setting Type NZM 7A-...S-NA									
 (150A)	40	25	—	Fixed: 9.5 x I_u	100kA	**50kA**	22kA	**NZM 7A-25S-NA**	See Price List
		30	—					**NZM 7A-30S-NA**	
		35	—					**NZM 7A-35S-NA**	
		40	—					**NZM 7A-40S-NA**	
	60	50	—	Adjustable Range:				**NZM 7A-50S-NA**	
		60	—	6 – 12 x I_u				**NZM 7A-60S-NA**	
	80	70	—					**NZM 7A-70S-NA**	
		80	—					**NZM 7A-80S-NA**	
	100	90	—					**NZM 7A-90S-NA**	
		100	—					**NZM 7A-100S-NA**	
	125	125	—					**NZM 7A-125S-NA**	
	150	150	—					**NZM 7A-150S-NA**	
Pressure-wire terminals and adjustable thermal setting Type NZM 7A-...S-NA									
	40	—	25 – 40	9.5 x I_u	100kA	**50kA**	22kA	**NZM 7-40S-NA**	See Price List
	60	—	40 – 60	6 – 12 x I_u				**NZM 7-63S-NA**	
	80	—	60 – 80					**NZM 7-80S-NA**	
	100	—	80 – 100					**NZM 7-100S-NA**	
	125	—	100 – 125					**NZM 7-125S-NA**	
	150	—	125 – 150					**NZM 7-150S-NA**	
Fixed thermal setting and provisions for bolt-on connection Type NZM 7A-...S-NA									
	40	25	—	Fixed:	100kA	**50kA**	22kA	**NZM 7A-25S-NA-M8**	See Price List
		30	—	9.5 x I_u				**NZM 7A-30S-NA-M8**	
		35	—					**NZM 7A-35S-NA-M8**	
		40	—					**NZM 7A-40S-NA-M8**	
	60	50	—	Adjustable Range:				**NZM 7A-50S-NA-M8**	
		60	—	6 – 12 x I_u				**NZM 7A-60S-NA-M8**	
	80	70	—					**NZM 7A-70S-NA-M8**	
		80	—					**NZM 7A-80S-NA-M8**	
	100	90	—					**NZM 7A-90S-NA-M8**	
		100	—					**NZM 7A-100S-NA-M8**	
	125	125	—					**NZM 7A-125S-NA-M8**	
	150	150	—					**NZM 7A-150S-NA-M8**	
Adjustable thermal setting and provisions for bolt-on connection Type NZM 7-...S-NA									
	40	—	25 – 40	9.5 x I_u	100kA	**50kA**	22kA	**NZM 7-40S-NA-M8**	See Price List
	60	—	40 – 60	6 – 12 x I_u				**NZM 7-63S-NA-M8**	
	80	—	60 – 80					**NZM 7-80S-NA-M8**	
	100	—	80 – 100					**NZM 7-100S-NA-M8**	
	125	—	100 – 125					**NZM 7-125S-NA-M8**	
	150	—	125 – 150					**NZM 7-150S-NA-M8**	

Ordering Information: Specify Type from Column 7.
Example: **NZM 7A-25S-NA**

For accessories see pages **8**/46 - 53 in the Main Catalog USA 2000 / 2001

1) Conformity with IEC/EN 60 947-2 pending.

1	2	3	4	5	6		7	8
	Continuous Current Rating	Fixed Thermal Setting	Adjustable Thermal Setting	Magnetic Trip Setting for Instantaneous Response	UL/CSA Interrupting ratings (AC, 60Hz) RMS Sym Amps @		**Type**	**Price**
	I_u							
	Amps	Amps	Amps	Amps	240 V	**480 V**		$
Pressure-wire terminals and fixed thermal setting Type NZM 7A-...N-NA								
 **(150A)**	40	25	—	Fixed: 9.5 x I_u	65 kA	**25 kA**	**NZM 7A-25N-NA**	See Price List
		30	—				**NZM 7A-30N-NA**	See Price List
		35	—				**NZM 7A-35N-NA**	See Price List
		40	—				**NZM 7A-40N-NA**	See Price List
	60	50	—	Adjustable Range:			**NZM 7A-50N-NA**	See Price List
		60	—	6 – 12 x I_u			**NZM 7A-60N-NA**	See Price List
	80	70	—				**NZM 7A-70N-NA**	See Price List
		80	—				**NZM 7A-80N-NA**	See Price List
	100	90	—				**NZM 7A-90N-NA**	See Price List
		100	—				**NZM 7A-100N-NA**	See Price List
	125	125	—				**NZM 7A-125N-NA**	See Price List
	150	150	—				**NZM 7A-150N-NA**	See Price List
Pressure-wire terminals and adjustable thermal setting Type NZM 7A-...N-NA								
	40	—	25 – 40	9.5 x I_u	65 kA	**25 kA**	**NZM 7-40N-NA**	See Price List
	60	—	40 – 60	6 – 12 x I_u			**NZM 7-63N-NA**	See Price List
	80	—	60 – 80				**NZM 7-80N-NA**	See Price List
	100	—	80 – 100				**NZM 7-100N-NA**	See Price List
	125	—	100 – 125				**NZM 7-125N-NA**	See Price List
	150	—	125 – 150				**NZM 7-150N-NA**	See Price List
Fixed thermal setting and provisions for bolt-on connection Type NZM 7A-...N-NA								
	40	25	—	Fixed:	65 kA	**25 kA**	**NZM 7A-25N-NA-M8**	See Price List
		30	—	9.5 x I_u			**NZM 7A-30N-NA-M8**	See Price List
		35	—				**NZM 7A-35N-NA-M8**	See Price List
		40	—				**NZM 7A-40N-NA-M8**	See Price List
	60	50	—	Adjustable Range:			**NZM 7A-50N-NA-M8**	See Price List
		60	—	6 – 12 x I_u			**NZM 7A-60N-NA-M8**	See Price List
	80	70	—				**NZM 7A-70N-NA-M8**	See Price List
		80	—				**NZM 7A-80N-NA-M8**	See Price List
	100	90	—				**NZM 7A-90N-NA-M8**	See Price List
		100	—				**NZM 7A-100N-NA-M8**	See Price List
	125	125	—				**NZM 7A-125N-NA-M8**	See Price List
	150	150	—				**NZM 7A-150N-NA-M8**	See Price List
Adjustable thermal setting and provisions for bolt-on connection Type NZM 7-...N-NA								
	40	—	25 – 40	9.5 x I_u	65 kA	**25 kA**	**NZM 7-40N-NA-M8**	See Price List
	60	—	40 – 60	6 – 12 x I_u			**NZM 7-63N-NA-M8**	See Price List
	80	—	60 – 80				**NZM 7-80N-NA-M8**	See Price List
	100	—	80 – 100				**NZM 7-100N-NA-M8**	See Price List
	125	—	100 – 125				**NZM 7-125N-NA-M8**	See Price List
	150	—	125 – 150				**NZM 7-150N-NA-M8**	See Price List

Ordering Information: Specify Type from Column 7.
Example: **NZM 7A-25N-NA**.

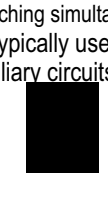
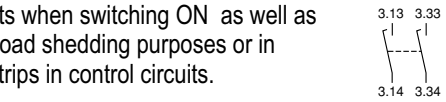
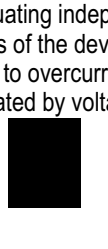
1) Conformity with IEC/EN 60 947-2 pending. Consult the technical data at the back of this section and Moeller Electric for IEC/EN ratings.

1	2	3	4	5
	Ampere Rating Amps	**Type**	**Price**	Notes
Molded Case Switches **With pressure wire terminals for cable connection**				UL/CSA Short Circuit Current Rating: With 225 A Fuse Backup: - 50 kA RMS Sym @ 600 VAC With 250 A Circuit-Breaker Backup: - 25 kA RMS Sym @ 480 VAC - 18 kA RMS Sym @ 600 VAC
	60	**NZM 7-60-NA**	See Price List	
	100	**NZM 7-100-NA**	See Price List	
	125	**NZM 7-125-NA**	See Price List	
	150	**NZM 7-150-NA**	See Price List	
	200	**NZM 7-200-NA**	See Price List	
Molded Case Switches **With provisions for bolt-on connection**				
	60	**NZM 7-60-NA-M8**	See Price List	
	100	**NZM 7-100-NA-M8**	See Price List	
	125	**NZM 7-125-NA-M8**	See Price List	
	150	**NZM 7-150-NA-M8**	See Price List	
	200	**NZM 7-200-NA-M8**	See Price List	

Type **NZM 7(A)-...-NA(M8)** Molded Case Circuit Breakers (opposite page) are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Inverse Time, 150A Thermal-Magnetic Circuit Breakers that are available with either a fixed or adjustable thermal trip feature and an adjustable magnetic trip function. (In Breakers rated 25 to 40 Amp, the magnetic trip function is fixed at 9.5 x 40A (Iu) i.e. 385A).
Type **NZM 7-...-NA(-M8)** Molded Case Switches (shown above) are virtually identical in construction to the Molded Case Circuit Breakers except that they are manual, non-automatic switches without any overload or overcurrent protective features, and are rated up to 200Amps.
All Molded Case Switches are UL Listed (UL 1087) and CSA certified (C 22.2 Nr. 5.2). They also are in Conformity with IEC/EN 60 947-3 (Switch-Disconnectors) and are CE marked. (Consult the Technical Data at the end of this section and Moeller Electric for IEC/EN ratings.)
Molded Case Switches are tested to determine their acceptability for continuous operation at their marked rated load. In addition, they are tested at six times their full ampere rating to cover motor circuit applications and are suitable for use as motor circuit disconnects per Section 430-109 of the National Electrical Code.

Both breakers and switches are supplied as standard with pressure wire terminals to accept cable connection, but are also suitable for bolt-on connections using crimped lugs or straight lengths of Cu busbar (Type suffix "**-M8**").
Accessories such as voltage trips, auxiliary contacts, rotary handles etc... are common to all **NZM 7** circuit breakers and molded case switches and are UL listed and CSA certified for field installation.

Ordering Information:
Specify Type from Column 3. Example: **NZM 7-60-NA**.

1	2	3 Contact sequence		4 Type	5 Price $	6 Notes
NHI **Standard auxiliary contacts** Switching simultaneously with the main contacts. They can be typically used for signalling, interlocking or switching auxiliary circuits such as a control circuit.			**N.O.** **N.C.**	**EK 10** **EK 01**	See Price List	Two **EK... NHI** type contacts can be snap fitted into the Circuit Breaker or Molded Case Switch.
VHI **Early-Make auxiliary contacts** Leading the main contacts when switching ON as well as switching OFF. Ideal for load shedding purposes or in conjunction with voltage trips in control circuits.			**2 X E.M.**	**VHI-NZM 7**	See Price List	One **VHI...**Type contact module per Circuit Breaker or Molded Case Switch. Cannot be used in conjunction with the **R-NZM 7** Remote Control Drive.
RHI **Trip-indicating auxiliary contacts** Actuating independently of the normal ON and OFF operations of the device, switching only when the device has tripped due to overcurrents or other tripping causes such as those initiated by voltage trips.			**N.O.** **N.C.**	**EK 10** **EK 01**	See Price List	One **EK... RHI** type contact (either N.O. or N.C.) can be snap fitted into the Circuit Breaker or Molded Case Switch for trip indication.

Auxiliary Contacts are field installable.

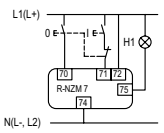
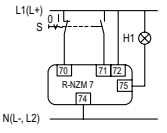
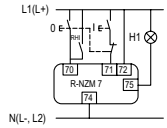
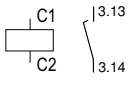
Ordering information:
Specify Type from column 4.
Example: **EK 10**

If ordering with device, just specify a "**+**" in front of the Type number. Example: **+ EK 10**

Auxiliary Contacts and Voltage Trips can be combined as follows:

NHI 2 x **EK...**	**RHI** 1 x **EK...**	**VHI**	**A**	**AVHI**	**U**	**U(V)HI**
●	●	●	–	–	–	–
●	●	–	●	–	–	–
●	●	–	–	●	–	–
●	●	–	–	–	●	–
●	●	–	–	–	–	●

Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.

1	2		3	4	5
	Rated Actuating Voltage (U_S)		**Type**	**Price** $	**Notes**
Remote Control Drive					
Operates the **NZM 7** Circuit Breaker or Molded Case Switch electrically from a remote location. Switching Times: ON 100ms, OFF 100ms Local manual operation of the switch possible. Field installable.	AC/DC	110...120	**R-NZM 7 (110-120V)**	See Price List	 3-wire control
	AC/DC	220...240	**R-NZM 7 (220-240V)**	See Price List	
	DC	24	**R-NZM 7 (24V)**	See Price List	 2-wire control
	DC	48...60	**R-NZM 7 (48-60V)**	See Price List	 3-wire control with automatic reset to the OFF position after the circuit-breaker has tripped
Shunt Trips					
Shunt Trips are typically used to electrically trip the device from a remote location. The **A...- NZM 7** series is rated for 100% continuous duty. Shunt Trips cannot be mounted together with Undervoltage Trips.					
Shunt Trips without Auxiliary Contacts  	AC/DC[1]	12	**A-NZM 7 (12V)**	See Price List	Field installable and suitable for mounting into **NZM 7** Circuit Breakers and Molded Case Switches. Shunt Trips are rated for both AC and DC voltages and can accommodate a frequency range between 0 and 400 Hz.
		24	**A-NZM 7 (24V)**	See Price List	
		48	**A-NZM 7 (48V)**	See Price List	
		60	**A-NZM 7 (60V)**	See Price List	
		110-120	**A-NZM 7 (110-120V)**	See Price List	
		125-130	**A-NZM 7 (125-130V)**	See Price List	
		208-215	**A-NZM 7 (208-215V)**	See Price List	
		220-240	**A-NZM 7 (220-240V)**	See Price List	
		380-415	**A-NZM 7 (380-415V)**	See Price List	
		440-480	**A-NZM 7 (440-480V)**	See Price List	
Shunt Trips with Early-Make auxiliary contacts  	AC/DC[1]	12	**AVHI-NZM 7 (12V)**	See Price List	Field installable and suitable for mounting into **NZM 7** Circuit Breakers and Molded Case Switches. Shunt Trips are rated for both AC and DC voltages and can accommodate a frequency range between 0 and 400 Hz. The Shunt Trip and Early-Make contacts operate independently of one another. Note: The Early-Make feature of the contact is not effective when it is combined with the **R-NZM 7** Remote Control Drive.
		24	**AVHI-NZM 7 (24V)**	See Price List	
		48	**AVHI-NZM 7 (48V)**	See Price List	
		60	**AVHI-NZM 7 (60V)**	See Price List	
		110-120	**AVHI-NZM 7 (110-120V)**	See Price List	
		125-130	**AVHI-NZM 7 (125-130V)**	See Price List	
		208-215	**AVHI-NZM 7 (208-215V)**	See Price List	
		220-240	**AVHI-NZM 7 (220-240V)**	See Price List	
		380-415	**AVHI-NZM 7 (380-415V)**	See Price List	
		440-480	**AVHI-NZM 7 (440-480V)**	See Price List	

Accessories are field installable.

Ordering information:
Specify Type from column 3.
Example: **A-NZM 7 (110-120V)**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ A-NZM 7 (110-120V)**

Auxiliary Contacts and Voltage Trips can be combined as follows:

NHI 2 x **EK...**	**RHI** 1 x **EK...**	**VHI**	**A**	**AVHI**	**U**	**U(V)HI**
●	●	●	—	—	—	—
●	●	—	●	—	—	—
●	●	—	—	●	—	—
●	●	—	—	—	●	—
●	●	—	—	—	—	●

Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.

1) Maximum UL/CSA DC voltage is 125 VDC.

1	2		3	4
	Rated Actuating Voltage (U_S)		**Type suffix**	**Price** $
Undervoltage Trips				
Undelayed response				
Undervoltage Trips will electrically trip the device open under power loss (when supply voltage drops below 35 – 70% of rated trip coil value) 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.				
Undervoltage Trips cannot be mounted together with Shunt Trips.				
Undervoltage Trips without Auxiliary Contacts				
 	AC	24	**U-NZM 7 (24V AC)**	See Price List
		48	**U-NZM 7 (48V AC)**	See Price List
		60	**U-NZM 7 (60V AC)**	See Price List
		110 – 120	**U-NZM 7 (110-120V AC)**	See Price List
		125 – 130	**U-NZM 7 (125-130V AC)**	See Price List
		208 – 215	**U-NZM 7 (208-215V AC)**	See Price List
		220 – 240	**U-NZM 7 (220-240V AC)**	See Price List
		380 – 415	**U-NZM 7 (380-415V AC)**	See Price List
		440 – 480	**U-NZM 7 (440-480V AC)**	See Price List
	DC	24	**U-NZM 7 (24V DC)**	See Price List
		48	**U-NZM 7 (48V DC)**	See Price List
		60	**U-NZM 7 (60V DC)**	See Price List
		110 – 120	**U-NZM 7 (110-120V DC)**	See Price List
		125	**U-NZM 7 (125-130V DC)**	See Price List

Undervoltage Trips are field installable.

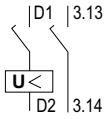
Ordering information:
Specify Type from column 3.
Example: **U-NZM 7 (110-120V AC)**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ U-NZM 7 (110-120V AC)**

Auxiliary Contacts and Voltage Trips can be combined as follows:

NHI 2 x **EK...**	**RHI** 1 x **EK...**	**VHI**	**A**	**AVHI**	**U**	**U(V)HI**
●	●	●	–	–	–	–
●	●	–	●	–	–	–
●	●	–	–	●	–	–
●	●	–	–	–	●	–
●	●	–	–	–	–	●

Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.

1	2		3	4
	Rated Actuating Voltage (U_S)		**Type suffix**	**Price** $
Undervoltage Trips				
Undelayed response				
Undervoltage Trips will electrically trip the device open under power loss (when supply voltage drops below 35 – 70% of rated trip coil value) 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.				
Undervoltage Trips cannot be mounted together with Shunt Trips.				
Undervoltage Trips with Early-Make Auxiliary [1]				
 	AC	24	**UHI-NZM 7 (24V AC)**	See Price List
		48	**UHI-NZM 7 (48V AC)**	See Price List
		60	**UHI-NZM 7 (60V AC)**	
		110 – 120	**UHI-NZM 7 (110-120V AC)**	
		125 – 130	**UHI-NZM 7 (125-130V AC)**	
		208 – 215	**UHI-NZM 7 (208-215V AC)**	
		220 – 240	**UHI-NZM 7 (220-240V AC)**	
		380 – 415	**UHI-NZM 7 (380-415V AC)**	
		440 – 480	**UHI-NZM 7 (440-480V AC)**	
	DC	24	**UHI-NZM 7 (24V DC)**	
		48	**UHI-NZM 7 (48V DC)**	
		60	**UHI-NZM 7 (60V DC)**	
		110 – 120	**UHI-NZM 7 (110-120V DC)**	
		125	**UHI-NZM 7 (125-130V DC)**	

Undervoltage Trips are field installable.

Ordering information:
Specify Type from column 3.
Example: **UHI-NZM 7 (110-120V AC)**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ UHI-NZM 7 (110-120V AC)**

Auxiliary Contacts and Voltage Trips can be combined as follows:

NHI 2 x **EK...**	**RHI** 1 x **EK...**	**VHI**	**A**	**AVHI**	**U**	**U(V)HI**
●	●	●	–	–	–	–
●	●	–	●	–	–	–
●	●	–	–	●	–	–
●	●	–	–	–	●	–
●	●	–	–	–	–	●

Dots in each row represent the types which can be combined together. Dashes indicate incompatibility.

1) Cannot be used in conjunction with **R-NZM 7** Remote Control Drive.

1	2	3	4	5
		Type	**Price** $	Notes
Insulating frame for door cutout (IP 40) Fits around the cutout area of the panel door through which the toggle mechanism on the front part of the switch protrudes.		**RT-NZM 7**	See Price List	Fastened from the back using screws. Can be inscribed.
Rotary Drive Mechanism Converts ON and OFF switching from a toggle motion to a rotary motion				
Without padlocking feature		**DAOV-NZM 7**	See Price List	
With additional padlocking feature		**DA-NZM 7**	See Price List	Can be locked in the OFF position with up to 3 padlocks. Hasp thickness 4 – 8 mm.
Rotary handle for open or panel mounted switches Black color. Rotary Drive Mechanism required. Fastens to shaft, not padlockable		**HU-NZM 7**	See Price List	
Handle for Cover/Door Interlocking Degree of protection UL/NEMA 12; IEC IP 55 Door coupling rotary handle. For front mounting in doors and covers. Door/cover interlocking supplied standard set in OFF position. 3 distinct Handle positions: **0FF** - **+** (tripped) - **ON.**			See Price List	Note: Rotary Drive Mechanism required.
Black color (Standard)		**H-NZM 7-NA**	See Price List	Handles can be locked in the OFF or ON position with up to 3 padlocks. Hasp thickness 4 – 8 mm. Handle position is fixed when door or cover is open.
Red-yellow For use as an Emergency-Stop Main Disconnect switch per IEC/EN 60204-1 (CE, Machinery Directive)		**RH-NZM 7-NA**	See Price List	
Black, without padlocking feature		**HOV-NZM 7-NA**	See Price List	Same features as the H-NZM 7-NA except that the padlocking feature is omitted.
Extension shaft Can be cut to required length			See Price List	
For mounting depths in the range of 175 – 400 mm		**A400-NZM 7**		
For mounting depths in the range of 260 – 600 mm		**A600-NZM 7**		

Ordering information
Specify Type from column 3. Example: **H-NZM 7-NA**
If ordering with device, just specify a "**+**" in front of the Type number. Example: **+ H-NZM 7-NA**.

1	2	3	4	5
		Type	**Price** $	Notes
Side wall operator Enables actuation of the switch from its left or right side as opposed to the front.			See Price List	The **SWA** shifts the rotary movement of the switch by 90° and permits the rotary handle to mount and actuate the switch from the side of the control panel enclosure. The **SWA...** mechanism mounts directly on top of the DA(OV) Rotary Drive Mechanism. An extension shaft (280 mm) with a special coupling piece is supplied with the unit.
For operation on the left		**SWA-NZM 7-L**		
For operation on the right		**SWA-NZM 7-R**		
Mounting bracket for side-panel mounting		**MSWA-NZM 7**	See Price List	For mounting the switch directly into the side panel of the enclosure. For use only with **SWA...** side wall operator equipped switches.
Main Disconnect Switch Assembly Kits **for CE marked control panels per IEC/EN 60 204-1 (Machinery Directive)**			See Price List	These kits provide the necessary accessories to fulfill the Main Disconnect switch function per the Machinery Directive standard IEC 60 204-1. 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. **V...** Kits contain: • Door interlocking rotary handle • DAOV rotary drive • Extension shaft for 400 mm mounting depth • External warning plate • Black lightning symbol
With door interlocking rotary handle. Color: Black for standard Main Disconnect function		**V-NZM 7-SW**		
With door interlocking rotary handle. Color: Red-Yellow for Main Disconnect switches fulfilling the Emergency-Stop function.		**V-NZM 7**		
For side wall installation			See Price List	**EA...** Kits contain: • Door coupling rotary handle • DAOV rotary drive • Side wall operator with extension shaft • Mounting brackets • External warning plate • Black lightning symbol
With black rotary handle				
For operation on the left		**EA-NZM 7-L**		
For operation on the right		**EA-NZM 7-R**		
With red-yellow rotary handle for use as Emergency-Stop devices to IEC/EN 60204-1				
For operation on the left		**EA-RT-NZM 7-L**		
For operation on the right		**EA-RT-NZM 7-R**		
External warning plate			See Price List	External warning plates available in: 61 German, 72 Portuguese 63 French, 73 Romanian 64 Bulgarian, 74 Russian 65 Danish, 75 Swedish 66 Finnish, 76 Serbo-Croatia 67 Dutch, 77 Spanish 68 Italian, 78 Czech 69 Greek, 79 Turkish 70 Norwegian, 80 Hungarian 71 Polish, 81 Afrikaans To obtain warning plates in other languages, insert the language code number into the type reference. Example: External warning plate in French would be, **ZFS 63-NZM 7**
English text Inscription: "Main Switch – Open only in OFF position"		**ZFS 62-NZM 7**		
Blank		**ZFS 60-NZM 7**		
Other Languages		**ZFS...-NZM 7**		

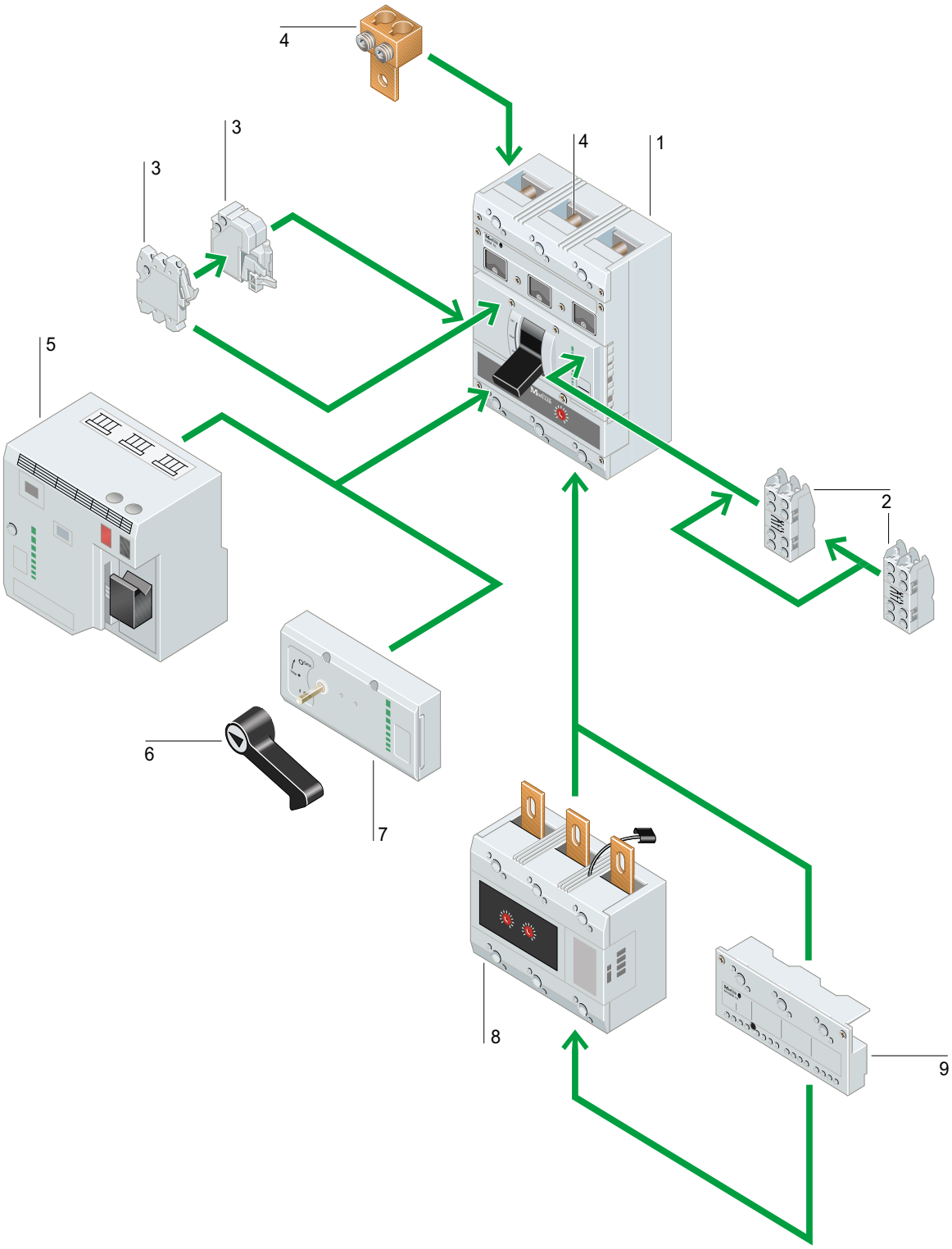
Ordering information:
Specify Type from column 3. Example: **SWA-NZM 7- L**
If ordering with device, just specify a "**+**" in front of the Type number. Example: **+ SWA-NZM 7- L**

1	2	3	4	5
		Type	**Price** $	
Mechanical interlock		**KV 2-NZM 7**	See Price List	For interlocking two Type **NZM 7...** Circuit Breakers or Molded Case Switches
Clip plate		**C-NZM 7**	See Price List	For mounting two Type **NZM 7...** Circuit Breakers or Molded Case Switches onto a DIN rail conforming to EN 50 022. Clip plate not suitable for switches equipped with **R-NZM 7** Remote Control Drives.

Ordering information:
Specify Type from column 3. Example: **KV 2-NZM 7**
If ordering with device, just specify a "**+**" in front of the Type number. Example: **+ KV 2-NZM 7**

1	2	3	4	5	6
	Type Ordered with device **-O** = Mounted on the top **-U** = Mounted on the bottom	**Price** $	**Type** Ordered separately	**Price** $	Notes
Control circuit Tap-off terminals Installed onto the upper and lower field-wiring terminals of Circuit Breakers and Molded Case Switches.		See Price List		See Price List	
Control Circuit 	**+ST 250-NZM 7-O**	See Price List	—	See Price List	2 Terminals per set. Control Circuit Wire Range: AWG 14 – 18 Cu only.
	+ST 250-NZM 7-U	See Price List	—	See Price List	
For Circuit Breakers and Molded Case Switches with bolt-on connection terminals.	**+ST M8-NZM 7-O**	See Price List	—	See Price List	
	+ST M8-NZM 7-U	See Price List	—	See Price List	
Terminal Cover For additional protection against shock hazard. Recommended on the supply side of Circuit Breakers and Disconnect Switches. Finger proof to IEC 536 	**+KA 250-NZM 7**	See Price List	**KA 250-NZM 7**	See Price List	One piece cover. Fits over three terminals, top or bottom.

Ordering information:
Specify Type from column 2 or 4.
Example: **+ ST-250-NZM 7-U**



NZM 10

1 Molded Case Breaker – Page 8/58 – 60
600 VAC, 600 Amp rating
Up to 100 kA @ 480 VAC Interrupting rating
Standard and fuseless current limiting versions
Solid State Trip
Field installable accessories
Supplied with terminals for cable hookup or bolt-on connection
UL Listed (UL 489), CSA certified (C 22.2 # 5.1)
Conformity with IEC/EN 60 947-2 (Circuit Breakers)

1 Molded Case Switch – Page 8/61
600 VAC, 600 Amp rating
Field installable accessories
UL Listed (UL 1087), CSA certified (C 22.2 # 5.2)
Conformity with IEC/EN 60 947-3 (Switch-Disconnectors)

2 Auxiliary Contacts – Page 8/64

Type **NHI...** standard auxiliary contact:
For signalling ON and OFF positions
Type **RHI**... trip-indicating auxiliary contact:
For signalling the Tripped ("+") position

3 Auxiliary Contacts & Voltage Trips – Page 8/64 – 66

Type **VHI**... Early-Make auxiliary contact:
For interlocking and load shedding purposes.
To power up the undervoltage trip prior to main contact closing
Voltage Trips:
Shunt Trips
AC & DC versions
Undervoltage Trips
AC & DC versions

4 Terminal Connections – Page 8/
Pressure wire terminations for cable connection.
Bolt-on connection for crimped lug or busbar.
Terminal covers for additional protection against shock hazards.

5 Remote Control Drive – Page 8/67
Electrical operation of the circuit breaker from a remote location:
Remote ON/OFF
Remote Reset after Trip
Local manual operation possible
Padlockable OFF position

6 Rotary Handle – Page 8/68
To operate switch equipped with rotary drive mechanism.

7 Rotary Drive Mechanism – Page 8/68
Converts toggle switch operation of the switch into a rotary movement suitable for rotary style operators.
Lockable in the OFF position.

8 Ground Fault Trip Module – Page 8/67
Plugs directly into the breaker or mounts separately.
Not fed from separate power source.
Adjustable ground fault trip and time delay settings.
Automatic Reset.

9 Signalling Block – Page 8/64
Differentiated fault indication
Overload early warning signal for load shedding purposes
Local or remote signalling of breaker status
Local, remote or automatic reset.

Type	Solid State Trip Modules				Solid State Trip Modules with pick-up delay for selectivity				Auxiliary contacts (**NHI...**: Standard) (**RHI...**: Trip Indicating) (**VHI...**: Early-Make)			Signalling Block
												
	ZM(A)-...-NA				**ZMV(A)-...-NA**				**NHI-NZM 10**	**RHI-NZM 10**	**VHI-NZM 10** Not in conjunction with **R-NZM 10**	**M-NZM 10**
	250	**400**	**600**		**250**	**400**	**600**					
Molded Case Circuit Breakers												
 **NZM 10-...(N)(S)/ZM(V)(A)...-NA**	○	○	○	or	○	○	○		●	●	●	●
NZM 10-...H/ZM(A)...-NA	○	○	○		—	—	—		●	●	●	●
Molded Case Switches												
 **NZM 10-...N/B-NA**	—	—	—		—	—	—		●	●	●	—
Circuit Breakers equipped with Remote Control Drive												
 **NZM 10-...(N)(S)/ZM(V)(A)...-NA +R-NZM 10**	○	○	○	or	○	○	○		●	●	—	●
NZM 10-...H/ZM(A)...-NA + R-NZM 10	○	○	○		—	—	—		●	●	—	●
Molded Case Switches equipped with Remote Control Drive												
 **NZM 10-...N/B-NA +R-NZM 10**	—	—	—		—	—	—		●	●	—	—
Circuit Breaker Switch blocks without Trip Modules												With **ZM(V)**
 **NZM 10-400N-NA**	●	●	—		●	●	—		●	●	●	●
NZM 10-400S-NA	●	●	—		●	●	—		●	●	●	●
NZM 10-400H-NA	●	●	—		—	—	—		●	●	●	●
NZM 10-600N-NA	●	●	●		●	●	●		●	●	●	●
NZM 10-600S-NA	●	●	●		●	●	●		●	●	●	●
NZM 10-600H-NA	●	●	●		—	—	—		●	●	●	●

● **Options for combination**
○ **Included as standard**

Voltage Trips
(**A...**: Shunt Trip)
(**U...**: Undervoltage Trip)

Ground-Fault Trip Drive

Remote Control Door coupling rotary handle

Rotary Drive Mechanism Rotary Handle

Terminals
Bolt connection included as standard









A- NZM 10	U- NZM 10	TV- NZM 10	R- NZM 10	D- NZM 10	H 10U- NZM 10	(R)H 10- NZM 10	Bolt-on connection	Cable Terminals
● or	●	●	● or	●	● or	●	● or	●
● or	●	●	● or	●	● or	●	● or	●
● or	●	—	● or	●	● or	●	● or	●
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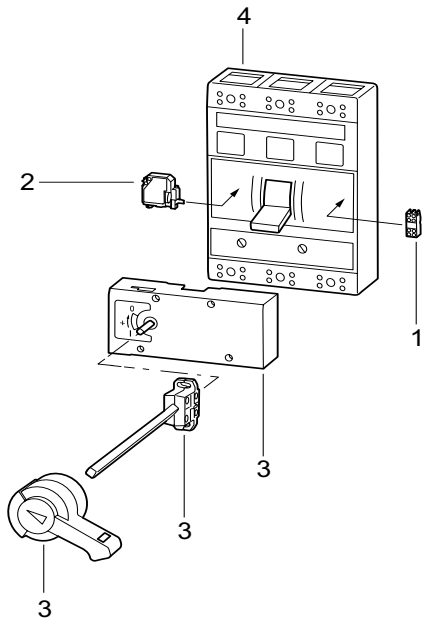
1	2	3	4	5	6
	Long Time Response Current Setting (I_r) Amps	Adjustable instantaneous Pick-up Setting Amps	Adjustable Short Time Delay Pick-up setting for selectivity in networks Time delay Range: 0 – 1000 ms Amps	**Type** (**N**) Normal Level Interrupting: 42 kA @ 480 VAC	**Price** $
Fixed Long Time response settings for Type **NZM 10-... N/ZMA-...-NA**					
 **(600A)**	200	400 – 2400	—	**NZM 10-400 N/ZMA-200-NA**	See Price List
	225	450 – 2700	—	**NZM 10-400 N/ZMA-225-NA**	See Price List
	250	500 – 3000	—	**NZM 10-400 N/ZMA-250-NA**	See Price List
	300	600 – 3600	–	**NZM 10-400 N/ZMA-300-NA**	See Price List
	350	700 – 4200	—	**NZM 10-400 N/ZMA-350-NA**	See Price List
	400	800 – 4800	—	**NZM 10-400 N/ZMA-400-NA**	See Price List
	500	1000 – 6000	—	**NZM 10-600 N/ZMA-500-NA**	See Price List
	600	1200 – 7200	—	**NZM 10-600 N/ZMA-600-NA**	See Price List
Adjustable Long Time response settings for Type **NZM 10-... N/ZM-...-NA**					
	200 – 400	400 – 4800	—	**NZM 10-400 N/ZM-400-NA**	See Price List
	300 – 600	600 – 7200	—	**NZM 10-600 N/ZM-600-NA**	See Price List
Fixed Long Time response settings for Type **NZM 10-.../ZMVA-...-NA** with Short-Time Delay pick-up for Selectivity					
	200	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-200-NA**	See Price List
	225	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-225-NA**	See Price List
	250	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-250-NA**	See Price List
	300	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-300-NA**	See Price List
	350	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-350-NA**	See Price List
	400	1000 – 9000	2 – 12 x I_r	**NZM 10-400 N/ZMVA-400-NA**	See Price List
	500	1000 – 9000	2 – 12 x I_r	**NZM 10-600 N/ZMVA-500-NA**	See Price List
	600	1000 – 9000	2 – 12 x I_r	**NZM 10-600 N/ZMVA-600-NA**	See Price List
Adjustable Long Time response settings for **Type NZM 10-.../ZMV-...-NA** with Short-Time Delay pick-up for Selectivity					
	200 – 400	1000 – 9000	400 – 4800	**NZM 10-400 N/ZMV-400-NA**	See Price List
	300 – 600	1000 – 9000	600 – 7200	**NZM 10-600 N/ZMV-600-NA**	See Price List

Type **NZM 10-...(N)(S)/ZM(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 10-...(N)(S)/ZMV(A)-...-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.
Type **NZM 10-...H/ZM(A)-...-NA** Molded Case Circuit Breakers are UL Listed (UL 489) and CSA Certified (22.2 Nr. 5.1) Current Limiting Inverse Time, Solid State Trip Circuit Breakers with a fixed or adjustable Long Time Response and adjustable instantaneous pick-up range.

Ordering Information:
State type from Column 5, 7 or 9. Example: **NZM 10-600 H/ZMA-500-NA**.

Note:
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied with toggle operator. Consult page **8**/68 for additional handle types.
- Consult pages **8**/62 – 71 for additional accessories.
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied standard with bolt-on connection. For Line and Load field-wiring terminals for cable connection, refer to page **8**/70 – 71 for details on available terminals.

7	8	9	10	11
Type (**S**) Super Level Interrupting: 65 kA @ 480 VAC	**Price** $	**Type** (**H**) Highest Level Interrupting: Fuseless Current Limiting Circuit Breaker 100 kA @ 480 VAC	**Price** $	
NZM 10-400 S/ZMA-200-NA	See Price List	**NZM 10-400 H/ZMA-200-NA**	See Price List	
NZM 10-400 S/ZMA-225-NA	See Price List	**NZM 10-400 H/ZMA-225-NA**	See Price List	
NZM 10-400 S/ZMA-250-NA	See Price List	**NZM 10-400 H/ZMA-250-NA**	See Price List	
NZM 10-400 S/ZMA-300-NA	See Price List	**NZM 10-400 H/ZMA-300-NA**	See Price List	
NZM 10-400 S/ZMA-350-NA	See Price List	**NZM 10-400 H/ZMA-350-NA**	See Price List	
NZM 10-400 S/ZMA-400-NA	See Price List	**NZM 10-400 H/ZMA-400-NA**	See Price List	
NZM 10-600 S/ZMA-500-NA	See Price List	**NZM 10-600 H/ZMA-500-NA**	See Price List	
NZM 10-600 S/ZMA-600-NA	See Price List	**NZM 10-600 H/ZMA-600-NA**	See Price List	
NZM 10-400 S/ZM-400-NA	See Price List	**NZM 10-400 H/ZM-400-NA**	See Price List	
NZM 10-600 S/ZM-600-NA	See Price List	**NZM 10-600 H/ZM-600-NA**	See Price List	
NZM 10-400 S/ZMVA-200-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMVA-225-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMVA-250-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMVA-300-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMVA-350-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMVA-400-NA	See Price List	—	See Price List	
NZM 10-600 S/ZMVA-500-NA	See Price List	—	See Price List	
NZM 10-600 S/ZMVA-600-NA	See Price List	—	See Price List	
NZM 10-400 S/ZMV-400-NA	See Price List	—	See Price List	
NZM 10-600 S/ZMV-600-NA	See Price List	—	See Price List	



Accessories		Page
1	Auxiliary contacts	**8**/64
2	Voltage Trips	**8**/65, 66
3	Handles and operators	**8**/69
4	Terminals	**8**/71

UL/CSA Interrupting ratings (AC, 60Hz)

	RMS Sym kAmps @		
Type	240 V	**480 V**	600 V
NZM 10-... N/ ZM(V)(A)-...-NA	65	**42**	35
NZM 10-... S/ ZM(V)(A)-...-NA	100	**65**	42
NZM 10-... H/ ZM(A)-...-NA	200	**100**	50

Features of ZMV(A)...Trip Modules used for Selectivity:

Fixed (**ZMVA...**) or adjustable (**ZMV...**) long time response current.
Adjustable time delay (2 – 20 sec.) for current levels at 6 x the long time response current (I_r).
Long time response current can be disconnected.
Adjustable time delay (0 – 1000 ms) pick-up setting.
Adjustable instantaneous pick-up response.

Molded Case Circuit Breakers - Instantaneous Trip type, 600 Amp
NZM 10-.../ZM-...-OBI...-CNA

1	2	3	4	5
Frame Rating	Continuous Current Rating	Adjustable Instantaneous Trip Response Range	**Type**	**Price**
	Amps	Amps		$
Solid State Instantaneous Trip Circuit Breakers 600 V AC, UL/CSA (**N**) Normal Level Short circuit Rating				
 **NZM 10-...N/ZM-...-OBI-CNA** **(600 Amps)**	400	800...4800	**NZM 10-400 N/ZM -400-OBI-CNA**	See Price List
	600	1200...7200	**NZM 10-600 N/ZM -600-OBI-CNA**	See Price List
Solid State Instantaneous Trip Circuit Breakers 600 V AC, UL/CSA (**H**) High Level Short circuit Rating				
 **NZM 10-...N/ZM-...-OBI-CNA** **(600 Amps)**	400	800...4800	**NZM 10-400 H/ZM -400-OBI-CNA**	See Price List
	600	1200...7200	**NZM 10-600 H/ZM -600-OBI-CNA**	See Price List

Type **NZM10-...N/ZM-...-OBI...-CNA** and **NZM10-...H/ZM-...-OBI...-CNA** 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 instantaneous 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 **NZM 10...H** instantaneous trip circuit breaker features a current limiting design contact assembly and can provide high fault short circuit current ratings for motor starters of up to 65kA @ 480VAC.

Consult Moeller Electric for Combination Motor Controller high fault short circuit ratings as Motor Control Center unit starters featuring Type **NZM10...N** and **NZM10...H** Instantaneous Trip Circuit Breakers.

Ordering Information:
State type from Column 4. Example: **NZM 10-600 H/ZM-600-OBI-CNA**

Note:
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied with toggle operator. Consult page **8**/69 for additional handle types.
- Consult page **8**/67 for additional accessories.
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied standard with bolt-on connection. For Line and Load field-wiring terminals for cable connection, refer to page **8**/71 for details on available terminals.

1	2	3	4	5
	Ampere Rating Amps	**Type**	**Price** $	Notes
Molded Case Switches **With provisions for bolt-on connection**				
	400	**NZM 10-400 N/B-NA**	See Price List	UL/CSA Short Circuit Current Rating: 25 kA RMS Sym @ 600 VAC
	600	**NZM 10-600 N/B-NA**	See Price List	

Type **NZM 10-...N/B-NA** Molded Case Switches are virtually identical in construction to **NZM 10** Molded Case Circuit Breakers except that they are manual, non-automatic switches without any overload or overcurrent protective features. They are equally rated up to 600 Amps.
All Molded Case Switches are UL Listed (UL 1087)/ CSA certified (C 22.2 Nr. 5.2), in conformity with IEC/EN 60 947-3 (Switch-Disconnectors) and CE marked.

Molded Case Switches are tested to determine their acceptability for continuous operation at their marked rated load. In addition, they are tested at six times their full ampere rating to cover motor circuit applications and are suitable for use as motor circuit disconnects per Section 430-109 of the National Electrical Code.

Accessories such as voltage trips, auxiliary contacts, rotary handles etc. are common to all NZM 10 circuit breakers and molded case switches and are UL listed and CSA certified for field installation.

Ordering Information:
Specify Type from Column 3. Example: **NZM 10-400 N/B-NA**.

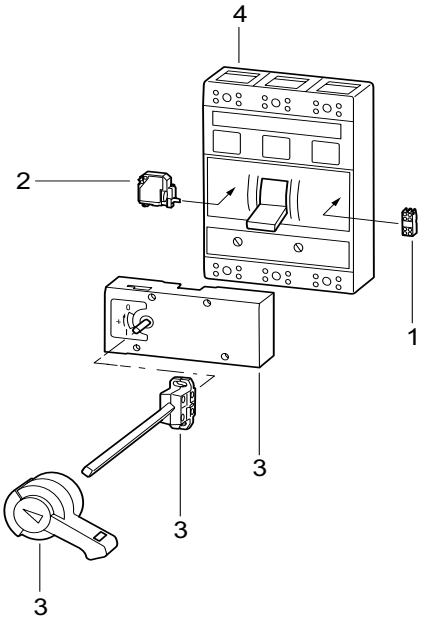
Note:
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied with toggle operator. Consult page **8**/69 for additional handle types.
- Consult page **8**/67 for additional accessories.
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied standard with bolt-on connection. For Line and Load field-wiring terminals for cable connection, refer to page **8**/71 for details on available terminals.

1	2	3	4	5	6	
The NZM 10 Inverse Time Molded Case Breaker is made up of a Switch Block and a protective Trip Module. Switch Blocks and Trip Modules can be ordered separately and combined per the charts and columns shown here to suit any particular application. Refer to chart at bottom of page for resultant interrupting ratings.	Switch Block Ratings Continuous Current (I_u)	Trip Module Ratings Long Time Response Current Setting (I_r)	Adjustable instantaneous Pick-up Setting	Adjustable Short Time Delay Pick-up setting for selectivity in networks Time delay range: 0 – 1000 ms	Compatibility of Switch Block with Trip Module Dots (●) in each row indicate which Trip Module (Refer to column 7) can be used with the Switch Block type shown below. Dashes (—)indicate incompatibility.	
	Amps	Amps	Amps	Amps	**NZM10-400...**	**NZM10-600...**
Switch Blocks, Suitable for insertion of Trip Modules						
	400					
	400					
	400					
	600					
	600					
	600					
Solid State Trip Modules						
	Fixed Long Time Response	200	400 – 2400	—	●	●
		225	450 – 2700	—	●	●
		250	500 – 3000	—	●	●
		300	600 – 3600	—	●	●
		350	700 – 4200	—	●	●
		400	800 – 4800	—	●	●
		500	1000 – 6000	—	—	●
		600	1200 – 7200	—	—	●
	Adjustable Long Time Response	200 – 400	400 – 4800	—	●	●
		300 – 600	600 – 7200	—	—	●
Solid State Trip Modules for Selectivity in networks						
	Fixed Long Time Response	200	1000 – 9000	2 – 12 x I_r	●	●
		225	1000 – 9000	2 – 12 x I_r	●	●
		250	1000 – 9000	2 – 12 x I_r	●	●
		300	1000 – 9000	2 – 12 x I_r	●	●
		350	1000 – 9000	2 – 12 x I_r	●	●
		400	1000 – 9000	2 – 12 x I_r	●	●
		500	1000 – 9000	2 – 12 x I_r	—	●
		600	1000 – 9000	2 – 12 x I_r	—	●
	Adjustable Long Time Response	200...400	1000...9000	400...4800	●	●
		300...600	1000...9000	600...7200	—	●

UL/CSA Interrupting ratings (AC, 60Hz)

Type	RMS Sym kA @ 240 V	**480 V**	600 V
NZM 10-... N/ ZM(V)(A)-...-NA	65	**42**	35
NZM 10-... S/ ZM(V)(A)-...-NA	100	**65**	42
NZM 10-... H/ ZM(A)-...-NA	200	**100**	50

Type **NZM 10...** Molded Case Circuit Breakers can be ordered complete (consult p. **8**/58,59), or assembled from components by combining Switch Blocks and protective Trip Modules.
Example: **NZM10-600N-NA (Switch** Block) **+ZMA-500-NZM 10-NA** (Trip Module) = **NZM 10-600 N/ZMA-500-NA** Molded Case Circuit Breaker

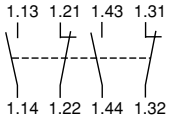
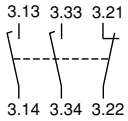
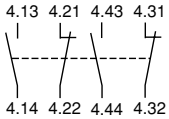
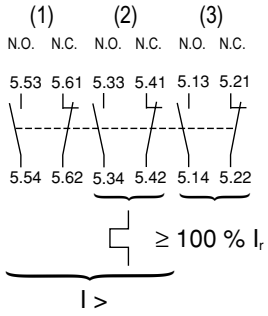
7	8	9	10
Type	**Price** $	Notes	
NZM 10-400N-NA **NZM 10-400S-NA** **NZM 10-400H-NA** **NZM 10-600N-NA** **NZM 10-600S-NA** **NZM 10-600H-NA**	See Price List	**NZM 10** Switch Blocks make up a complete breaker minus the protective Trip Module. Add a Trip Module from below to complete the breaker assembly. Refer to Column 6 for compatibility information on Switch Blocks and Trip Modules. Refer to chart at bottom of opposite page for resultant circuit breaker interrupting ratings.	
ZMA-200-NZM 10-NA **ZMA-225-NZM 10-NA** **ZMA-250-NZM 10-NA** **ZMA-300-NZM 10-NA** **ZMA-350-NZM 10-NA** **ZMA-400-NZM 10-NA** **ZMA-500-NZM 10-NA** **ZMA-600-NZM 10-NA**	See Price List	ZMA solid state trip modules have a fixed long time response and an adjustable instantaneous pick-up range.	
ZM-400-NZM 10-NA **ZM-600-NZM 10-NA**	See Price List	ZM solid state trip modules have an adjustable long time response and an adjustable instantaneous pick-up range.	
ZMVA-200-NZM 10-NA **ZMVA-225-NZM 10-NA** **ZMVA-250-NZM 10-NA** **ZMVA-300-NZM 10-NA** **ZMVA-350-NZM 10-NA** **ZMVA-400-NZM 10-NA** **ZMVA-500-NZM 10-NA** **ZMVA-600-NZM 10-NA**	See Price List	Features of **ZMV(A)...** Trip Modules used for Selectivity: Fixed (**ZMVA...**) or adjustable (**ZMV...**) long time response current. Adjustable time delay (2 – 20 sec.) for current levels at 6 x the long time response current (I_r). Long time response current can be disconnected. Adjustable time delay (0 – 1000 ms) pick-up setting. Adjustable instantaneous pick-up response.	
ZMV-400-NZM 10-NA **ZMV-600-NZM 10-NA**	See Price List	Note: **ZMVA...** and **ZMV** Trip Modules cannot be combined with **NZM 10-400 H-NA** and **NZM 10-600 H-NA** Switch Blocks.	

Accessories		**Page**
1	Auxiliary contacts	**8**/64
2	Voltage Trips	**8**/65, 66
3	Handles and operators	**8**/69
4	Terminals	**8**/71

Ordering Information: Specify Type from column 7. Example: **NZM 10-600 N-NA**

Note:

- Compatible Trip Modules will easily fit into the front part of the switch block. Incompatible Trip Modules and Switch Block combinations are mechanically blocked to prevent creation of improper combinations. (Refer to columns 6 & 7)
- **NZM 10** Switch Blocks are supplied with toggle operator. Consult page **8**/69 for additional handle types.
- Consult page **8**/67 for additional accessories.
- **NZM 10** Circuit Breakers and Molded Case Switches are supplied standard with bolt-on connection. For Line and Load field-wiring terminals for cable connection, refer to page **8**/71 for details on available terminals.

1	2	3	4
	Contact sequence	**Type**	**Price** $
Auxiliary Contacts **NHI standard auxiliary contacts** Switching simultaneously with the main contacts. They can be typically used for signalling, interlocking or switching auxiliary circuits such as a control circuit. 		**NHI-NZM 10**	See Price List
VHI Early-Make auxiliary contacts Typically used for powering up the undervoltage trip prior to closing of main contacts and for control circuit interlocking tasks. Cannot be used in conjunction with **R-NZM 10** Remote Control Drive 		**VHI-NZM 10**	See Price List
RHI trip-indicating auxiliary contacts Actuating independently of the normal ON and OFF operations of the device, switching only when the device has tripped due to overcurrents or other tripping causes such as those initiated by voltage trips. 		**RHI-NZM 10**	See Price List
Signalling Block Differential fault indication and visual display of breaker operating states (1) Tripping due to short-circuit. (2) Tripping due to overload and general trip condition. (3) Overload early warning signal in the event that the long time response setting is about to be exceeded (i.e. useful for load shedding purposes) Each function signals via a pair of contacts (1 N.O. & 1 N.C.) Mounts directly onto lower portion of circuit-breaker Supply voltage necessary: 24 – 230 V, AC or DC 		**M-NZM 10**	See Price List

Auxiliary Contacts and Signalling Blocks are field installable.

Ordering information:
Specify Type from column 3.
Example: **NHI-NZM 10**

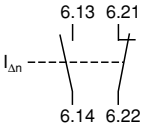
If ordering with device, just specify a "**+**" in front of the Type number. Example: **+ NHI-NZM 10**

1	2		3	4	5
	Rated Actuating Voltage (U_S)		**Type**	**Price** $ each	
Shunt Trips Shunt Trips are typically used to electrically trip the device from a remote location. The **A...- NZM 10** series is rated for 100% continuous duty. Shunt Trips cannot be mounted together with Undervoltage Trips.  	AC/DC	24	**A-NZM 10 (24V)**	See Price List	Field installable and suitable for mounting into **NZM 10** Molded Case Circuit Breakers and Switches. Shunt Trips are rated for both AC and DC voltages and can accommodate a frequency range between 0 and 400 Hz.
		48	**A-NZM 10 (48V)**	See Price List	
		60	**A-NZM 10 (60V)**	See Price List	
		110 – 120	**A-NZM 10 (110-120V)**	See Price List	
		125 – 130	**A-NZM 10 (125-130V)**	See Price List	
		208 – 215	**A-NZM 10 (208-215V)**	See Price List	
		220 – 240	**A-NZM 10 (220-240V)**	See Price List	
		380 – 415	**A-NZM 10 (380-415V)**	See Price List	
		440 – 480	**A-NZM 10 (440-480V)**	See Price List	
		500	**A-NZM 10 (500V)**	See Price List	
		600	**A-NZM 10 (600V)**	See Price List	

Shunt trips are field installable.

Ordering information:
Specify Type from column 3.
Example: **A-NZM 10 (110-120V)**

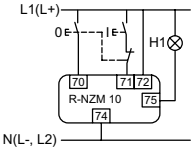
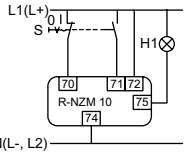
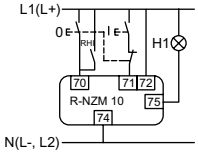
If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ A-NZM 10 (110-120V)**

1	2		3	4
	Rated Actuating Voltage (U_S)		**Type**	**Price** $
Undervoltage Trips				
Undelayed response				
Undervoltage Trips will electrically trip the device open under power loss (when supply voltage drops below 35 – 70% of rated trip coil value) 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**. Undervoltage Trips cannot be mounted together with Shunt Trips.				
 	AC	24	**U-NZM 10 (24V AC)**	
		48	**U-NZM 10 (48V AC)**	
		60	**U-NZM 10 (60V AC)**	
		110 – 120	**U-NZM 10 (110-120V AC)**	
		125 – 130	**U-NZM 10 (125-130V AC)**	
		208 – 215	**U-NZM 10 (208-215V AC)**	
		220 – 240	**U-NZM 10 (220-240V AC)**	
		380 – 415	**U-NZM 10 (380-415V AC)**	
		440 – 480	**U-NZM 10 (440-480V AC)**	
		500	**U-NZM 10 (500V AC)**	
		600	**U-NZM 10 (600V AC)**	
	DC	24	**U-NZM 10 (24V DC)**	
		48	**U-NZM 10 (48V DC)**	
		60	**U-NZM 10 (60V DC)**	
		110 – 120	**U-NZM 10 (110-120V DC)**	
		125 – 130	**U-NZM 10 (125-130V DC)**	
		208 – 215	**U-NZM 10 (208-215V DC)**	
		220 – 240	**U-NZM 10 (220-240V DC)**	
Ground Fault Trip Module				
Attached directly to the breaker or mounted separately				
No outside power source necessary, ground fault trip current adjustable in steps: $I_{\Delta n}$ = 80, 100,130, 160, 200, 240, 280, 320, 360, 400 A With an adjustable delay time: t_v = 0, 60, 150, 200, 300, 500, 750, 1000 ms				
 				
Ground Fault Trip Module is attached to the circuit-breaker: Ground fault trip current is signalled directly to the breaker electronic circuitry.			**TV-NZM 10**	
Ground Fault Trip Module is mounted separately: Ground fault trip current is signalled directly to a shunt or undervoltage trip via auxiliary contacts 6.13 – 6.14 or 6.21 – 6.22			**TV-NZM 10/E**	

Accessories are field installable.

Ordering information:
Specify Type from column 3.
Example: **U-NZM 10 (110-120V)**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ U-NZM 10 (110-120V)**

1	2	3	4	5
	Contact diagram	Rated Actuating Voltage (U_s) 50/60 Hz	**Type**	**Price** $
Remote Control Drive For both Circuit Breakers and Molded Case Switches Switching times: ON 60 ms, OFF 30 ms Manual switching possible				
 Mounts on top of NZM 10 Circuit Breakers and Molded Case Switches	 3-wire control			
	 2-wire control			
	 3-wire control with automatic reset to the OFF position after the switch has tripped.	110 – 120 AC	**R-NZM 10 (110-120V AC)**	See Price List
		220 – 240 AC	**R-NZM 10 (220-240V AC)**	See Price List
		380 – 415 AC	**R-NZM 10 (380-415V AC)**	See Price List
		24 DC	**R-NZM 10 (24V DC)**	See Price List
		48 – 60 DC	**R-NZM 10 (48-60V DC)**	See Price List
		100 – 130 DC	**R-NZM 10 (100-130V DC)**	See Price List
		220 – 240 DC	**R-NZM 10 (220-240V DC)**	See Price List
Pushbutton operator For manual ON-OFF switching of encapsulated **NZM 10** breakers and switches equipped with a remote control drive. Not for use in conjunction with **KVR2-NZM 10** mechanical interlock.				
	Mounting depth 250 – 285 mm		**MD-NZM 10**	See Price List
	Mounting depth 285 – 400 mm		**MDV-NZM 10**	See Price List
IP 54 Protective cover for door cutout area Transparent cover to provide a panel cutout area with IP 54 protection For use where the Remote Control Drive protrudes from the cutout area of the enclosure door.			**RTR-NZM 10**	See Price List
				
Sealing plate To block off manual switching access of the remote control drive at the device. Electrical switching from a remote location and manual tripping of the circuit breaker (push to trip feature) are not affected.			**PL-NZM 10**	See Price List
				

Ordering information: Specify Type from column 4. Example: **R-NZM 10 (110-120V AC)**
If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ R-NZM 10 (110-120V AC)**

1	2	3	4
	Type	**Price** $	Notes
Toggle switch interlock			
	**SVB-NZM 10**	See Price List	Permits the OFF position of the toggle operator to be locked with up to 3 padlocks (hasp thickness 6 – 8 mm)
Insulating cutout frame			
	**RT-NZM 10**	See Price List	For use where the toggle switch protrudes from the enclosure. Provides degree of protection IP 40. Affixed from the rear with screws. Can be inscribed.
Rotary Drive Mechanism			
	**D-NZM 10**	See Price List	Converts ON and OFF switching from a vertical toggle movement to a rotary motion. Required for the use of rotary and door coupling/interlocking rotary handles. Can be locked in the OFF position with up to 3 padlocks. Hasp thickness, 4 – 8 mm.
Rotary Handle, for open or panel mounted devices			
	**H10U-SW**	See Price List	Black color. Suitable for open mount switches. No door interlocking or padlocking provisions. Requires Rotary Drive mechanism.
Extension shaft			
 For mounting depths 175 – 400 mm	**A-NZM 10**	See Price List	Can be cut to required length.
For mounting depths 260 – 600 mm	**A600-NZM 10**	See Price List	
Maintenance Handle To actuate the device when the panel door is open.			
 For **Type A-NZM 10 Extension shafts**	**H10UZ**	See Price List	For panel mounted switches Push-fits onto the extension shaft
For **Type A600-NZM 10 Extension shafts**	**H12UZ**	See Price List	

Ordering information:
Specify Type from column 2. Example: **D-NZM 10**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ D-NZM 10**

1	2	3	4
		Type	Price $
Handle for Cover/Door Interlocking Degree of protection UL/NEMA 3R/12; IEC IP 55 With cover interlocking and padlocking feature Rotary Drive Mechanism required. Can be locked in the OFF or ON position with up to 3 padlocks 3 distinct Handle positions: OFF- +(tripped)- ON			See Price List
Black color: For standard Main Disconnect Switch applications		**H 10-SW-NA**	See Price List
Red-yellow color: Enables the switch to be used as the Emergency-Stop Disconnect		**RH 10-NA**	See Price List
Switch position indicator Indicates position of switch (OFF, tripped or ON) when panel door is open.		**SA-NZM 10**	See Price List
Main Disconnect Switch Assembly Kits **for CE marked control panels per IEC/EN 60 204-1** Type **NZM 10-...-NA** breakers and switches have dual UL/CSA and IEC/EN ratings. They 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. Kit includes: • Door interlocking rotary handle, color Black • Rotary Drive Mechanism • Extension shaft for 400 mm mounting depth • External warning plate • Black lightning symbol		**V-NZM 10-SW**	See Price List
Same as above, but with red-yellow door interlocking rotary handle. For use when Main Disconnect also fulfills Emergency-Stop function per IEC/EN 60204-1		**V-NZM 10**	See Price List
Main Disconnect Warning plates English Inscription: "Main Switch – Open only in OFF position" Warning plates also available in other languages: 61 German, 63 French, 64 Bulgarian, 65 Danish, 66 Finnish, 67 Dutch, 68 Italian, 69 Greek, 70 Norwegian, 71 Polish, 72 Portuguese, 73 Romanian, 74 Russian, 75 Swedish, 76 Serbo-Croatia, 77 Spanish, 78 Czech, 79 Turkish, 80 Hungarian, 81 Afrikaans		**ZS 62-NZM 10**	See Price List
To obtain warning plates in other languages, insert the language code number into the type reference. Example: External warning plate in Spanish would be: **ZS 77-NZM 10**		**ZS..-NZM 10**	See List Price
Blank plate (for engraving or printing)		**ZS 60-NZM 10**	See Price List

Ordering information:
Specify Type from column 3.
Example: **H 10-SW-NA**

If ordering with device, just specify a "**+**" in front of the Type number.
Example: **+ H 10-SW-NA**

1	2	3	4
		Type	Price $

Mechanical interlocks

For mechanically interlocking two **NZM 10** Circuit Breakers or Molded Case Switches mounted in a panel.
Fits toggle operators or rotary drive mechanisms

For two circuit breakers

For two circuit-breakers equipped with **R-NZM 10** Remote Control Drives. (**R-NZM 10** must be electrically interlocked at the same time)

KV2-NZM 10

KVR2-NZM 10

For mechanically interlocking three **NZM 10** Circuit Breakers or Molded Case Switches mounted in a panel.
Fits toggle operators or rotary drive mechanisms

KV3-NZM 10

For emergency power supplies:
Mechanically interlocking two incoming supply circuit breakers with one emergency supply breaker. Fits toggle operators or rotary drive mechanisms.

Possible switching positions:

Incomer 1	Emergency	Incomer 2
0	0	0
1	V	0
1	V	1
0	V	1
V	1	V

KVA3-NZM 10

0 = OFF
V = Interlocked
1 = ON

See Price List

Ordering information:
Specify Type from column 3.
Example: **KV2-NZM 10**

1 General info		2 Maximum Rated Current Amps	3 Conductor Cross-section Range and Material	4 **Type suffix**[1] Sets of three terminals ordered with breaker or molded case switch: **O** = Mounted on Top **U** = Mounted on Bottom	5 **Price** $	6 **Type** Individual terminals supplied separately for field mounting	7 **Price** $
Terminals					See Price List		See Price List
Supplied with 3 terminal covers (Type **H-NZM 10**) and an insulating plate onto which the circuit breaker is mounted.		600	2 x AWG 2 – 500 kcmil Cu/Al	**+ K2X240IP-NZM 10-O** **+ K2X240IP-NZM 10-U**	See Price List	— —	See Price List
Supplied with 1 terminal cover (Type **H-NZM 10**) and an insulating plate onto which the circuit breaker is mounted.		600	2 x AWG 2 – 500 kcmil Cu/Al	—	See List Price	**K2X240IP-NZM 10**[2]	See List Price
Supplied with 1 terminal cover (Type **H-NZM 10**)		600	2 x AWG 2 – 500 kcmil Cu/Al	—	See Price List	**K2X240-NZM 10**[2]	See Price List
Single cable clamp terminal. Not supplied with terminal cover. Suitable terminal cover is Type **HH-NZM 10**		350	250 – 500 kcmil Cu only	**+ K300-NZM 10-O** **+ K300-NZM 10-U**	See Price List	**K300-NZM 10**	See Price List
Double cable clamp terminal. Not supplied with cover. Suitable terminal cover is Type **HH-NZM 10**		500	2 x AWG 3/0 – 250 kcmil Cu only	**+K2x120-NZM 10-O** **+K2x120-NZM 10-U**	See Price List	**K2x120-NZM 10**	See Price List
Terminal Covers					See Price List		See Price List
Single pole terminal cover. Supplied standard with Type **K2x240(IP)** terminals. Can be used for bolt-on or cable lug connection.				**+H-NZM 10-O** **+H-NZM 10-U**	See Price List	**H-NZM 10**	See Price List
One piece, 3 pole terminal cover. Suitable for use with Type **K300** or **K2x120** terminals.				**+HH-NZM 10-O** **+HH-NZM 10-U**	See Price List	**HH-NZM 10**	See Price List

NZM 10 Circuit Breakers and Molded Case Switches are supplied standard with bolt-on connection. For Line and Load field-wiring terminals for cable connection, select from information specified above.
All terminals can be ordered factory installed with the device (Column 4) or separately for field installation (Column 6).

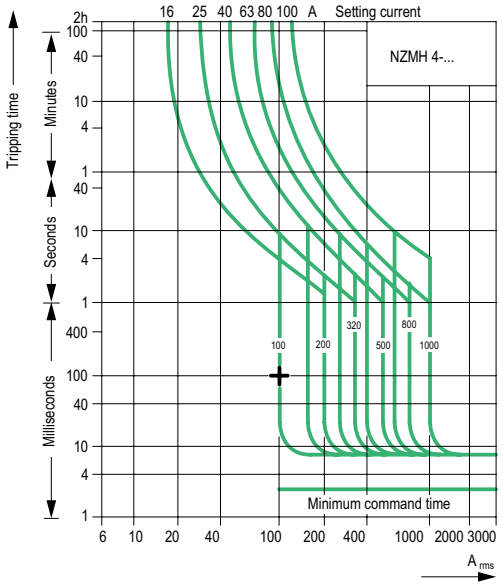
Ordering information:
Specify Type from Columns 4 or 6. Example: **+ K2 x 240IP-NZM 10-O**

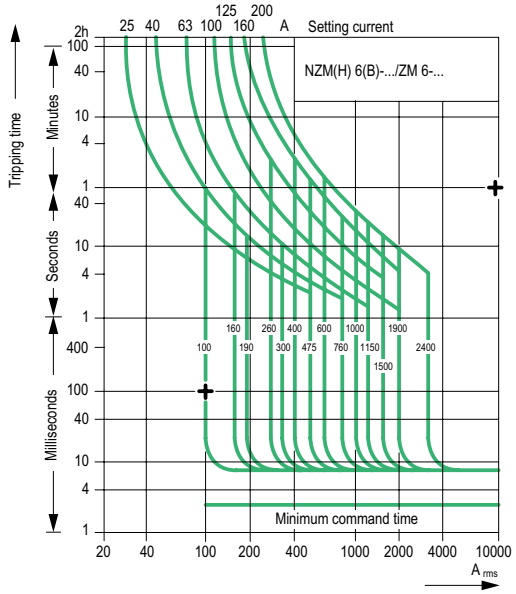
1) When ordering with the device (Column 4), the Type suffix specifies which side should be equipped with terminals:
Suffix **O** - Denotes a set of three terminals and covers mounted on the top.
Suffix **U** - Denotes a set of three terminals and covers mounted on the bottom.
Note: All Moeller Electric Molded Case Circuit Breakers, including the **NZM 10**, are UL listed and CSA certified for reverse feed connection and can therefore be fed optionally from top or bottom.

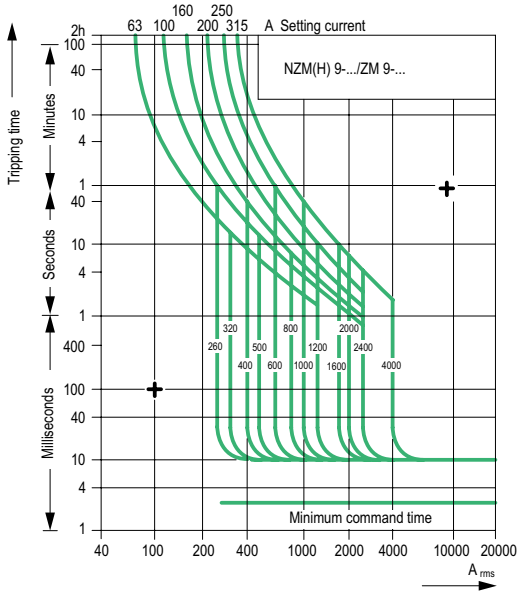
2) Complete set of three (for top or bottom) Type **K2x240(IP)** terminals for field installation (column 6) consists of the following:
- Qty. of one **K2x240IP** terminal, which is supplied with one **H-NZM 10** terminal cover and one insulating plate.
- Qty. of two **K2x240** terminals, which are supplied each with one **H-NZM 10** terminal cover.

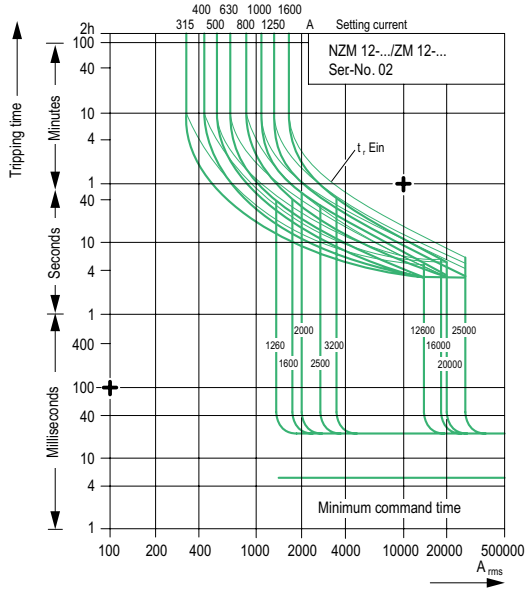
Tripping characteristics

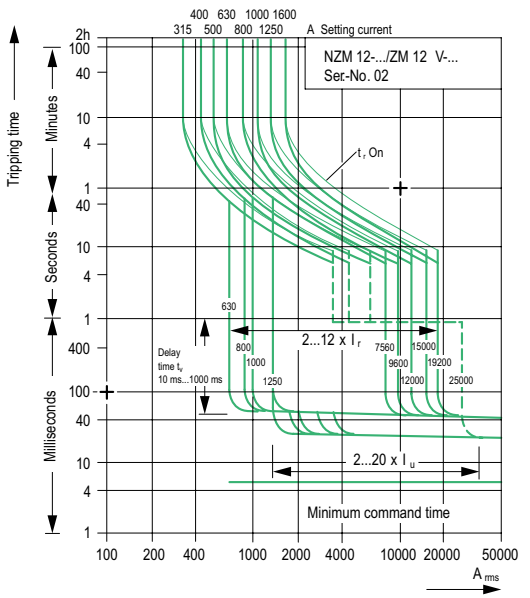
The tripping characteristics show the tripping time of the breakers in relation to the response current.
The mean values of the tolerance bands are indicated at an ambient temperature of 20˚C, starting from cold.
The tripping time of overload releases at operational temperature reduces to approximately $^1/_4$ of that shown.



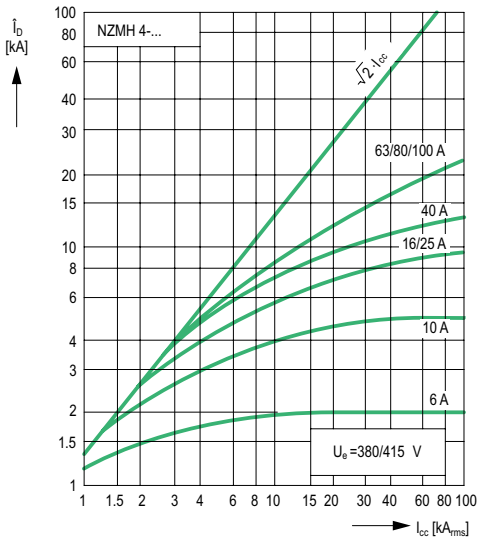


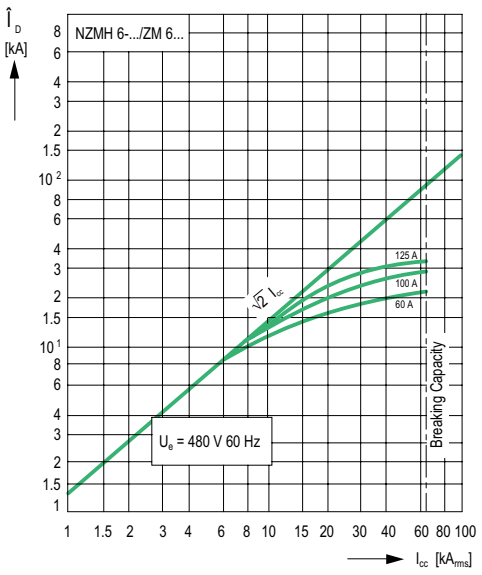


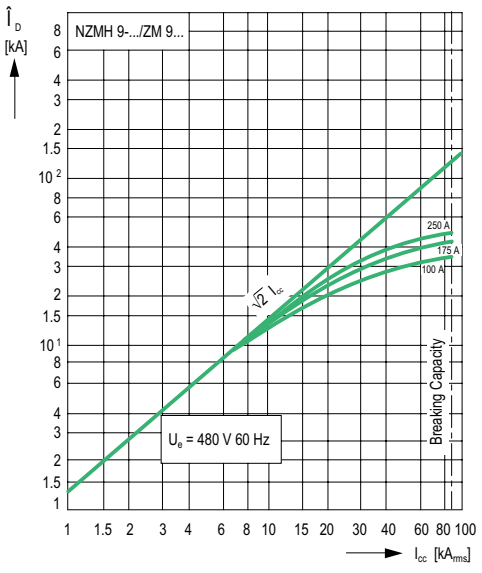




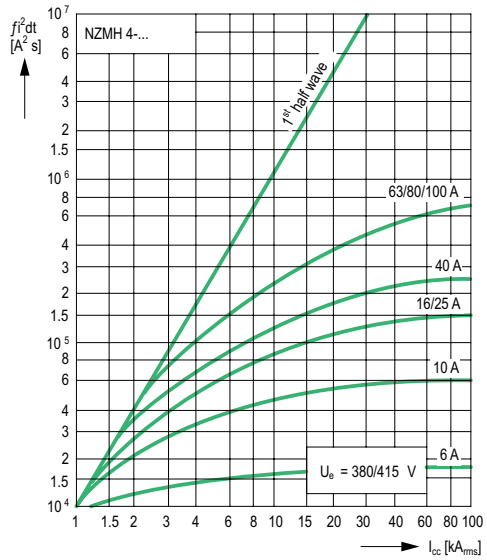
Let-through current $\hat{I}_D$

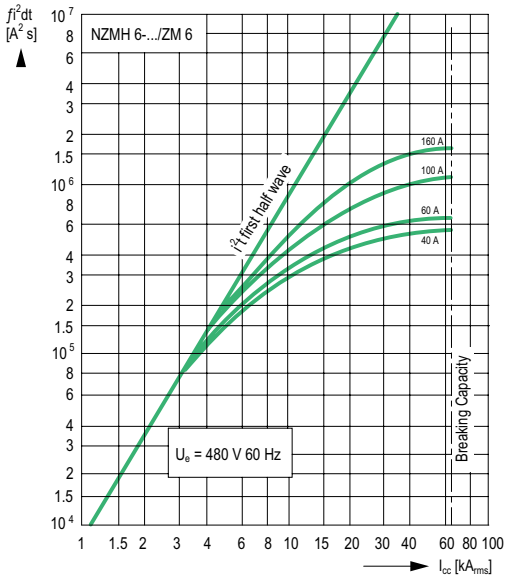


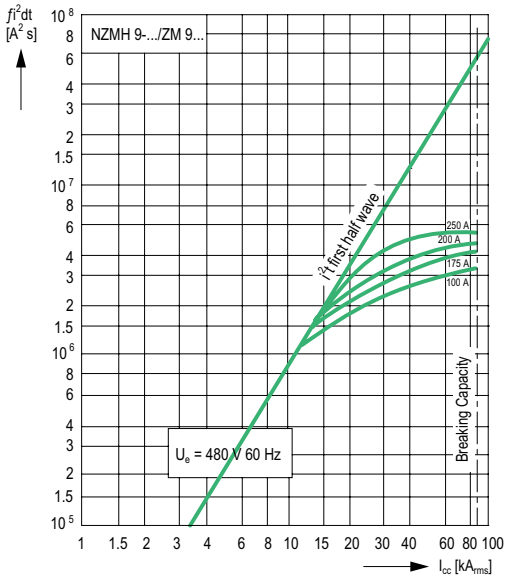




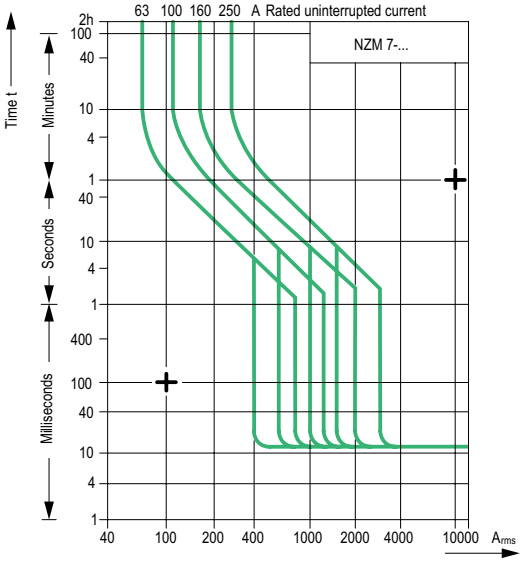
Let-through energy I^2t

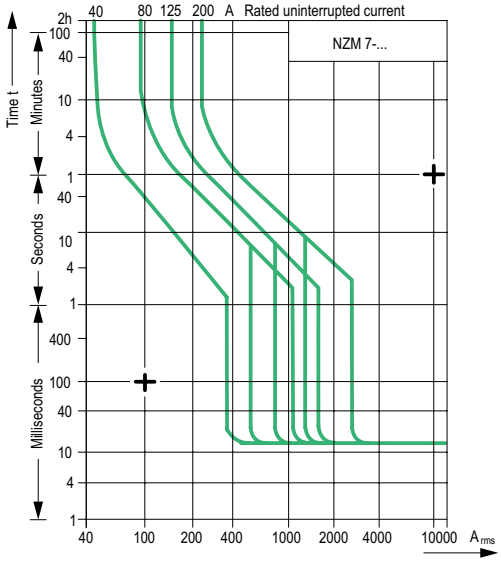




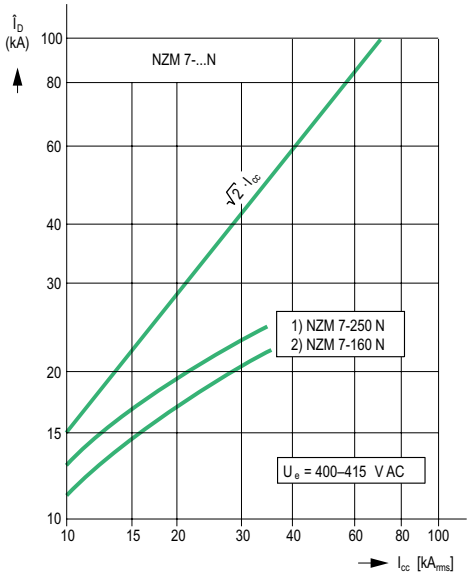


Tripping characteristics, System protection

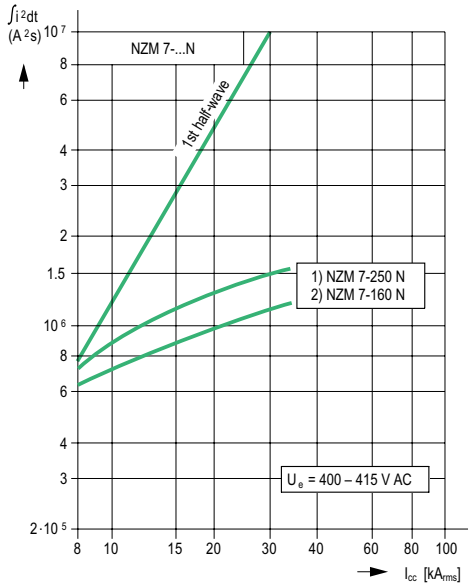




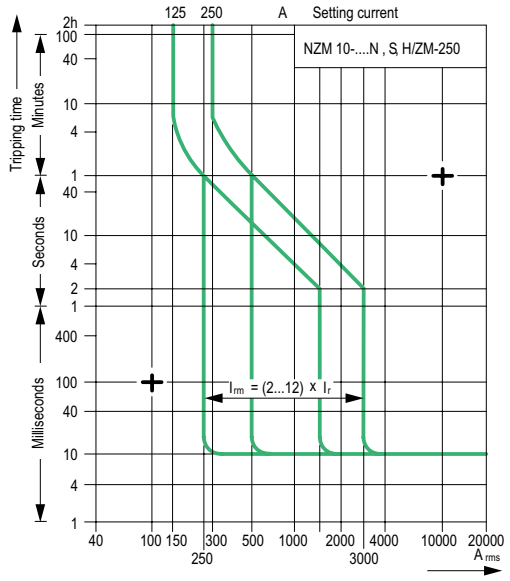
Let-through current $\hat{I}_D$

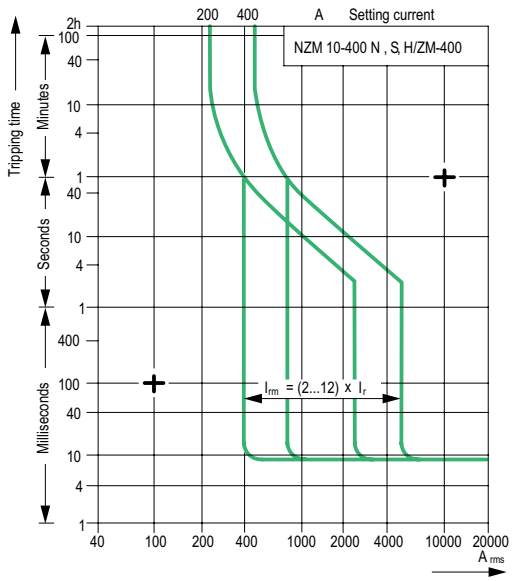


Let-through energy I^2t

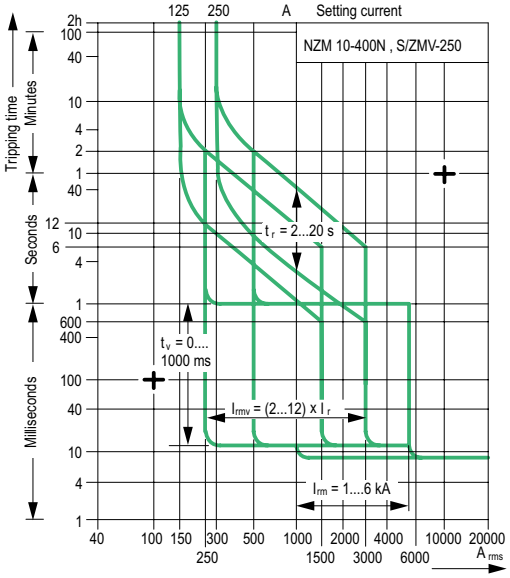


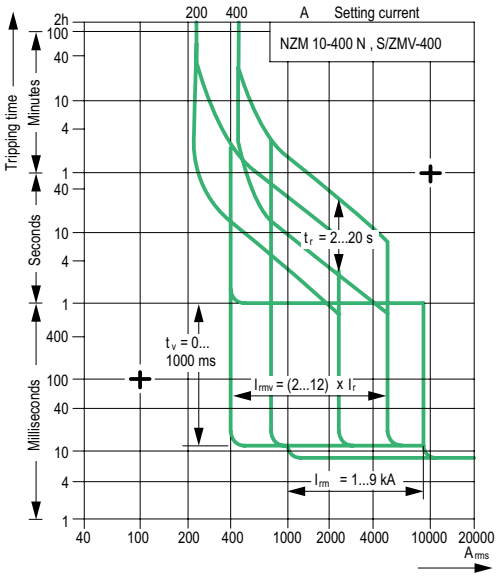
Inverse time and Instantaneous response



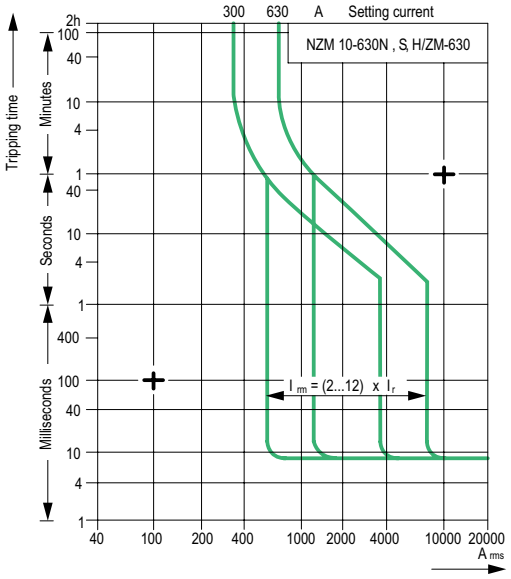


With selectivity settings

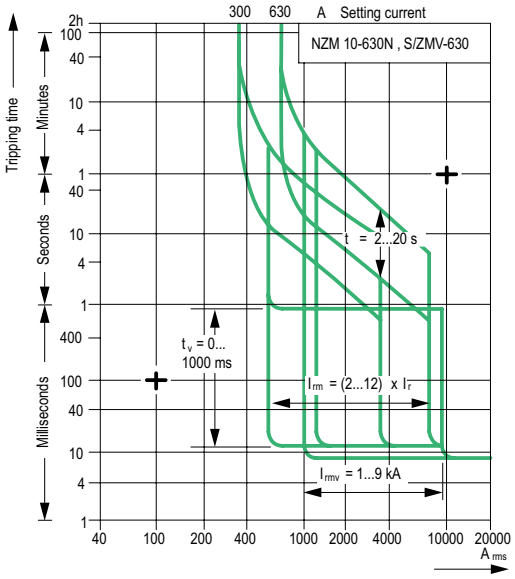




Inverse time and Instantaneous response

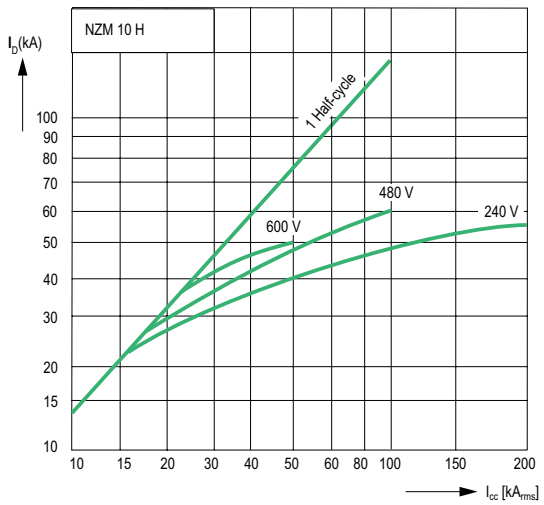


With selectivity settings

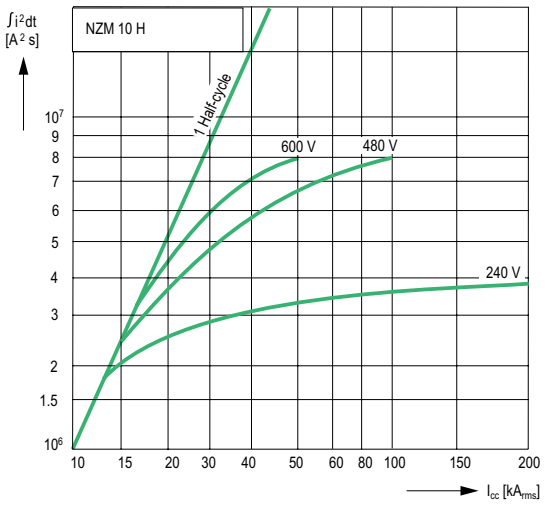


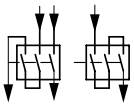
The tripping characteristics show the tripping time of the breakers in relation to the response current.
The mean values of the tolerance bands are indicated at an ambient temperature of 20˚C, starting from cold.

Let-through current $\hat{I}_D$



Let-through energy I^2t

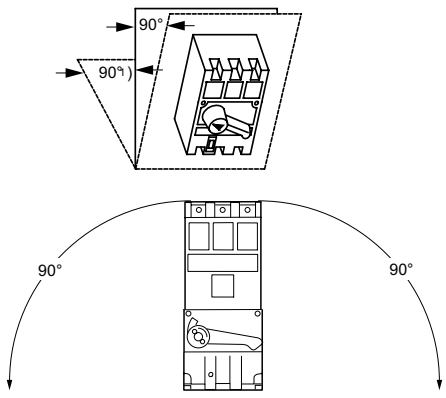


1		2	3	4	5	6	7	8
Molded Case Circuit Breakers		**3-pole**	**NZMH 4[1] ...-CNA**	**NZM 6B... /ZM6A...NA**	**NZM H6... /ZM6A...NA**	**NZM 9... /ZM9A...NA**	**NZMH 9... /ZM9A...NA**	**NZM 12...[2] /ZM(A)...NA**
Frame Size		A	80	125	125	250	250	1000
IEC 60 947-2 Circuit Breaker Electrical Ratings								
Rated impulse withstand voltage U_{imp}		V	8000	8000	8000	8000	8000	—
Rated operational voltage U_e 50/60 Hz		V	500	690	690	690	690	—
Rated short-circuit making capacity I_{cm}		kA	220	275	275	73	220	—
Short Circuit Interrupting Ratings:								
I_{cu} IEC/EN 60 947 Test cycle O-t-CO								
I_{cs} IEC/EN 60 947 Test cycle O-t-CO-t-CO								
220 – 240 V 50/60 Hz	I_{cu}	kA	100	125	125	35	100	—
		cos ø	0.2	0.2	0.2	0.25	0.2	
	I_{cu}	kA	75	95	95	18	75	—
		cos ø	0.2	0.2	0.2	0.3	0.2	
380-400/415 V 50/60 Hz	I_{cu}	kA	100/65	100/90	100/90	35	100/90	—
		cos ø	0.2	0.2	0.2	0.25	0.2	
	I_{cs}	kA	50/33	50/45	50/45	18	75/68	—
		cos ø	0.25	0.25	0.25	0.3	0.2	
500 V 50/60 Hz	I_{cu}	kA	20	35	35	25	65	—
		cos ø	0.3	0.25	0.25	0.25	0.2	
	I_{cs}	kA	10	18	18	13	33	—
		cos ø	0.5	0.3	0.3	0.3	0.25	
660/690 V 50/60 Hz	I_{cu}	kA	—	20	20	10	28	—
		cos ø	—	0.3	0.3	0.5	0.25	
	I_{cs}	kA	—	5	5	10	14	—
		cos ø	—	0.7	0.7	0.5	0.3	
DC voltage T ≤ 15 ms								
110 V DC		kA	30	30	30	25	35	—
250 V DC		kA	20	20	20	20	30	—
440 V DC		kA	12	12	12	15	25	—
UL 489/CSA 5 Short Circuit Interrupting Ratings								
240 V 60 Hz		kA	—	25	100	30	200	65
480 V 60 Hz		kA	—	25	65	25	85	65
600 V 60 Hz		kA	—	14	25	18	42	50

General technical data

Standards	UL 489, CSA 22.2 # 5.1 IEC/EN 60 947-2, VDE 0660
Climatic proofing	Damp heat, constant, to IEC 60 068-2-3 Damp heat, cyclic, to IEC 60 068-2-30
Ambient temperature, min./max. ˚C	
Open	–25/+55 (Lower temperatures on request)
Enclosed	–25/+40 (Lower temperatures on request)
Mechanical shock resistance	25 g (shock duration 20 ms)

Mounting position



1) Type **NZMH 4-...-CNA** Thermal-Magnetic devices (16 – 80 Amps) are rated as circuit breakers per IEC/EN 60 947-2 only. Consult page **8**/ 5 for further info.
2) Type **NZM 12-...- NA** circuit breakers are UL/CSA only. Consult Moeller Electric for IEC/EN rated versions.

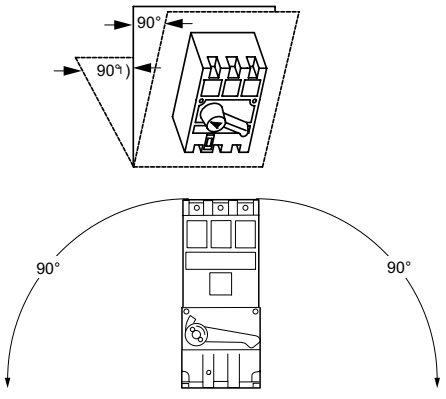
1		2	3	4	5	6	7	8
Molded Case Circuit Breakers			**NZMH4...-CNA**[1]	**NZM 6B.../ZM6A...NA**	**NZM H6.../ZM6A...NA**	**NZM 9.../ZM9A...NA**	**NZMH 9.../ZM9A...NA**	**NZM 12.../ZM(A)...NA**[2]
Frame Size		Amps	80	125	125	250	250	1000
Overload Trips								
Bimetal Type (directly heated)		Amps	4 – 80	15 – 125	15 – 125	63 – 250	63 – 250	—
Solid State Type		Amps	—	—	—	—	—	300 – 1000
Temperature compensation residual error in the range –25/+55 ˚C (reference 20 ˚C)		%/K	0.3	0.7	0.7	0.3	0.3	—
Undervoltage Trips								
Pull-in Voltage range		$\%U_s$	85 – 110	85 – 110	85 – 110	85 – 110	85 – 110	85 – 110
Dropout voltage range		$\%U_s$	70 – 35	70 – 35	70 – 35	70 – 35	70 – 35	70 – 35
Minimum command time		ms	10 – 15	10 – 15	10 – 15	10 – 15	10 – 15	10 – 15
Inrush Rating AC		VA	6.5	6.5	6.5	40	40	100
Sealing AC		VA	3.5	3.5	3.5	7	7	12
Inrush Rating DC		W	2.8	2.8	2.8	1.9	1.9	160
Sealing DC		W	2.8	2.8	2.8	1.9	1.9	3.6
Shunt Trips								
Pull-in Voltage range		$\%\ U_s$	70 – 110	70 – 110	70 – 110	70 – 110	70 – 110	70 – 110
Minimum command time		ms	10 – 15	10 – 15	10 – 15	10 – 15	10 – 15	10 – 15
Inrush Rating AC		VA	50	50	50	150	150	350
Sealing AC		VA	—	—	—	15	15	20
Inrush Rating DC (intermittent duty operation)		W	40	40	40	120	120	200
Switching times								
Tripping in the event of a short-circuit								
Minimum command time		ms	2	3	3	4	4	6
Opening delay		ms	0.3	0.3	0.3	6	0.3	12
Total opening delay		ms	5	6	6	20	6	25
Opening delay with:								
Shunt Trips (100% of rated coil voltage)		ms	10 – 20	10 – 20	10 – 20	10 – 20	10 – 20	15 – 25
Undervoltage Trips		ms	15 – 20	15 – 20	15 – 20	15 – 20	15 – 20	20 – 25
NHI, VHI, AHI, RHI auxiliary contacts [3]								
IEC/EN 60 947 Ratings								
Rated operational current I_e								
AC-15	115 V 50 Hz	A	6	6 (1)	6 (1)	6 (1)	6 (1)	6
	230 V 50 Hz	A	6	6 (1)	6 (1)	6 (1)	6 (1)	6
	400 V 50 Hz	A	4	4 (1)	4 (1)	4 (1)	4 (1)	4
DC-13 (L/R ≤ 200 ms)	24 V DC	A	1	1 (1)	1 (1)	1 (1)	1 (1)	1
	60 V DC	A	0.8	0.8 (0.4)	0.8 (0.4)	0.8 (0.4)	0.8 (0.4)	0.8
	110 V DC	A	0.7	0.7 (0.2)	0.7 (0.2)	0.7 (0.2)	0.7 (0.2)	0.7
	220 V DC	A	0.3	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)	0.3 (0.1)	0.3
Lifespan, electrical								
to AC-15		Ops.	20000	20000	20000	20000	20000	10000
to DC-13		Ops.	5000	5000	5000	7500	7500	2500
Short-circuit rating without welding (contacts closed)								
Fuseless			**PKZM 0–2.5**	**PKZM 0–2.5**	**PKZM 0–2.5**	**PKZM 0–2.5**	**PKZM 0–2.5**	**PKZM 0–2.5**
Fuses		A gL	10	10	10	10	10	10
UL/CSA Pilot Duty Ratings								
Type NHI		Pilot Duty	A 600/P 600	A 600/P 600	A 600/P 600	A 600/P 600	A 600/P 600	A 600
Type VHI, AHI, RHI			C 300	C 300		C 300	C 300	A 600

1) Type **NZMH 4-...-CNA** Thermal-Magnetic devices (16 – 80 Amps) are rated as circuit breakers per IEC/EN 60 947-2 only. Consult page **8**/5 for further info.
2) Type **NZM 12-...- NA** circuit breakers are UL/CSA only. Consult Moeller Electric for IEC/EN rated versions.
3) For IEC/EN 60 947 ratings, values which appear in parenthesis apply to **VHI, AHI,** and **RHI** contacts. Otherwise, values apply to all contacts.

1	2	3	4	5
UL/CSA Motor Disconnect Switches with adjustable thermal and magnetic trips IEC/EN Molded Case Circuit Breakers	**3-pole**	**NZMH 4-...-CNA**	**NZM(H)6(B)/ZM6-..CNA**	**NZM(H)9/ZM 9-...CNA**
Frame Size	Amps	80	125	250
Motor Disconnect Switches with adjustable thermal and magnetic trips				
General Technical Data		Page **8**/77	Page **8**/77	Page **8**/77
IEC/EN 60 947-2 Circuit Breaker Ratings		Page **8**/77, 78	Page **8**/77, 78	Page **8**/77, 78
UL 508/CSA 22.2 # 14 Motor Disconnect switches				
Adjustable range of thermal overload trips	Amps	4 – 80	15 – 125	63 – 250
HP Ratings	HP	Page **8**/5	Page **8**/14	Page **8**/24
Auxiliary Contacts, Voltage Trips		Page **8**/78	Page **8**/78	Page **8**/78

UL/CSA Motor Disconnect Switches without adjustable thermal and magnetic trips IEC/EN Switch-Disconnectors	**3-pole**	**N 6-..CNA**	**N 9-...CNA**	**N 12-...CNA**
Frame Size	Amps	150	250	1200
Motor Disconnect Switches without adjustable thermal and magnetic trips				
General Technical Data		Page **8**/77	Page **8**/77	Page **8**/77
IEC/EN 60 947-3 Switch Disconnector Ratings:				
Rated Impulse Withstand Voltage	V	8000	8000	8000
Rated short-time withstand current I_{cw} (1 s current)	kA	3	7	20
Lifespan, mechanical	Ops.	20000	20000	30000
Maximum operating frequency	Ops./h	60	60	60
Lifespan, electrical AC-1	Ops. x 10^3	10	10	10
AC-2, AC-3	Ops. x 10^3	5	5	5
DC-2, DC-5	Ops. x 10^3	1	0.5	0.5
UL 508/CSA 22.2 # 14 Motor Disconnect switches				
HP Ratings		Page **8**/15	Page **8**/25	Page **8**/33
Auxiliary Contacts, Voltage Trips		Page **8**/78	Page **8**/78	Page **8**/78

Mounting Position



Type		NZMH 4-...-OBI-CNA	NZMH 4-...-CNA	NZM(H)6(B).../ZM 6(A)...-(C)NA NZM(H)6(B).../ZM 6...-OBI-CNA	NZM(H)6(B)-160/ZM 6(A)-125-(C)NA NZM(H)6(B)-160/ZM 6-125-OBI-CNA
Maximum continuous current	A	18	80	100	125
Field Wiring Terminals Conductor Cross-Section		1 Conductor: AWG 14 – 3 Cu Only	1 Conductor: AWG 14 – 3 Cu Only	1 Conductor: AWG 14 – 1/0 Cu Only Up to 90A, 60/75˚C Cable 100A, 60˚C Cable	1 Conductor: AWG 4 – 3/0 Cu Only 125A, 60˚C Cable
Terminal Torque Rating	Nm	4	4	10	15

Type		NZM(H) 9.../ZM 9(A)...-(C)NA NZM(H) 9.../ZM 9...-OBI-CNA	NZM12-..../ZM 12(V)(A)-....-NA	
Maximum continuous current	A	250	800	1000
Field Wiring Terminals Conductor Cross-Section		1 Conductor: AWG 8 – Kcmil 300 Cu only	1 Conductor: Kcmil 250 – 600 2 Conductors: AWG 3/0 – Kcmil 500 3 Conductors: Kcmil 250 – 400 Cu + Al	4 Conductors: AWG 2 – Kcmil 500 Cu + Al
Terminal Torque Rating	Nm	40	50	50

Type		N 6-...-CNA		N 9-...-CNA	N 12-...-CNA		
Maximum continuous current	A	100	150	250	800	1000	1200
Field Wiring Terminals Conductor Cross-Section		1 Conductor: AWG 14 – 1/0 Cu Only 75˚C Cable	1 Conductor: AWG 4 – 3/0 Cu Only 75˚C Cable	1 Conductor: AWG 8 – Kcmil 300 Cu Only	1 Conductor: Kcmil 250 – 600 2 Conductors: AWG 3/0 – Kcmil 500 3 Conductors: Kcmil 250 – 400 Cu + Al	4 Conductors: AWG 2 – Kcmil 500 Cu + Al	4 Conductors: AWG 2 – Kcmil 500 Cu + Al
Terminal Torque Rating	Nm	10	15	40	50	50	50

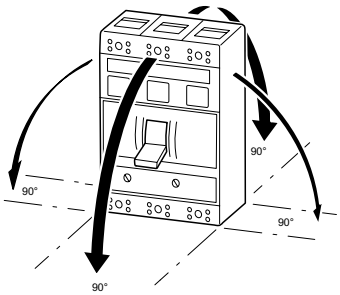
Note:
All devices shown above except Types **NZM 12-...** are dual rated UL/CSA and IEC/EN.
Consult Moeller Electric for IEC/EN Conductor Cross-section information.

1		2	3	4	5	6
Molded Case Circuit Breakers			**NZM 7(A)...N-NA**[1]	**NZM 10-...N-NA**	**NZM 10-...S-NA**	**NZM 10-...H-NA**
Frame Size		Amps	150	600	600	600
IEC 60 947-2 Circuit Breaker Electrical Ratings						
Rated impulse withstand voltage U_{imp}		V	8000	8000	8000	8000
Rated operational voltage U_e 50/60 Hz		V	690	690	690	690
Overvoltage category/pollution degree			III/3	III/3	III/3	III/3
Short Circuit Interrupting Ratings:						
Rated short-circuit making capacity I_{cm}		kA	94.5	143	220	440
Rated short-circuit breaking capacity I_{cn}						
I_{cu} IEC/EN 60 947 Test cycle O-t-CO						
I_{cs} IEC/EN 60 947 Test cycle O-t-CO-t-CO						
230 V AC	I_{cu}	kA	45	65	100	200
	I_{cs}	kA	45	33	50	100
400/415 V AC	I_{cu}	kA	35	45	65	100
	I_{cs}	kA	35	23	33	50
440 V AC	I_{cu}	kA	25	45	55	85
	I_{cs}	kA	19	23	28	43
500 V AC	I_{cu}	kA	12	30	42	65
	I_{cs}	kA	9	15	21	33
690 V AC	I_{cu}	kA	6	20	25	30
	I_{cs}	kA	6	10	13	15
UL 489/CSA 5 Short Circuit Interrupting Ratings						
	240 V 60 Hz	kA	65	65	100	200
	480 V 60 Hz	kA	25	42	65	100
	600 V 60 Hz	kA	—	35	42	50

General technical data

Standards	UL 489, CSA 22.2 # 5.1 IEC/EN 60 947-2, VDE 0660
Shock Hazard Protection	Finger-Safe, Back of Hand safe
Climatic proofing	Damp heat, constant, to IEC 60 068-2-3 Damp heat, cyclic, to IEC 60 068-2-30
Ambient temperature Min/Max ˚C	–25/+40 (At 100% loading)
Mechanical shock resistance	20 g (shock duration 20 ms)

Mounting From a vertical position, up to 90˚ in any direction



1) Type **NZM 7(A)-...-N-NA** molded case circuit breaker UL/CSA only. Conformity with data shown per IEC/EN 60 947-2 pending. Consult Moeller Electric for IEC/EN version.

1	2	3	4	5	6
Molded Case Circuit Breakers	AC = 50/60 Hz		**NZM 7...**		**NZM 10...**
Auxiliary contact types			**EK...(NHI/RHI)**	**VHI**	**NHI/RHI/VHI**
IEC/EN 60 947 Electrical Ratings					
Rated operational current I_e					
AC-15	115 V	A	6	4	6
	230 V	A	6	4	6
	400 V	A	4	2	3
	500 V	A	2	1	1.5
DC-13	24 V	A	6	3	1
	60 V	A	3	1.5	0.8
	110 V	A	1	0.5	0.7
	220 V	A	0.5	0.2	0.3
Short-circuit protection: Max. Fuse, IEC Type		A	10	10	6
Max. Miniature Circuit Breaker		A	10	6	6
Terminal capacity: IEC/EN: 1 or 2 conductors, solid or stranded		mm^2	0.75 – 2.5	0.75 – 2.5	0.5 – 2.5
UL/CSA		AWG	18 – 14	18 – 14	18 – 14
UL/ CSA Electrical Ratings					
Pilot Duty Ratings AC/DC			A 600/ P 300	C 300/ Q 300	—
Current Ratings			—	—	10A @ 600 VAC .5A @ 125 VDC .25A @ 250 VDC[1)]
Voltage Trips					
Shunt Trip					
Operational voltage rating U_e		V AC	12 – 480		24 – 600
		V DC	12 – 125		24 – 600
Operating range (U_s = Rated Control Voltage)		AC	0.7 – 1.1 x U_s		0.7 – 1.1 x U_s
		DC	0.7 – 1.1 x U_s		0.85 – 1.1 x U_s
Rating					
Pull-in	AC/DC	VA/W	2/2		5/3
Sealing	AC/DC	VA/W	—		3/3
Undervoltage Trips					
Operational voltage rating U_e		V AC	24– 480		24 – 600
		V DC	24 – 125		24 – 600
Operating range: Dropout	AC/DC		0.7 – 0.35 x U_s		0.7 – 0.35 x U_s
Pickup	DC/DC		0.85 – 1.1 x U_s		0.85 – 1.1 x U_s
Rating: Pull-in	AC/DC	VA/W	2/2		5/3
Sealing	AC/DC	VA/W	2/2		5/3
Terminal capacity					
IEC/EN: 1 or 2 conductors, solid or stranded		mm^2	0.75 – 2.5		0.5 – 2.5
UL/CSA		AWG	18 – 14		18 – 14
Remote Control Drives					
Rated Control Voltage U_s		V AC	48 – 240		110 – 415
		V DC	24 – 240		24 – 240
Operating range	AC		0.85 – 1.1 x U_s		0.8 – 1.1 x U_s
	DC		0.85 – 1.1 x U_s		0.85 – 1.1 x U_s
Power Draw	110/120 V AC	VA	400		240
	220/240 V AC	VA	400		320
	380/415 V AC	VA	1000		440
	24 V DC	W	350		240
	48/60 V DC	W	400		240
	100/130 V DC	W	—		240
	110/120 V DC	W	400		—
	220/240 V DC	W	400		240
Total closing/opening time		ms	100		60/30
Lifespan, mechanical	Operations	Ops.	20000		10000
Maximum operating frequency		Ops./h	20		20
Terminal capacity: IEC/EN: 1 or 2 conductors, solid or stranded		mm^2	0.75 – 2.5		0.5 – 2.5
UL/CSA		AWG	18 – 14		18 – 14

1) Above 150 VDC, same polarity

1	2	3	4
UL/CSA Molded Case Switches **IEC/EN Switch-Disconnectors**		**NZM 7-...-NA**	**NZM 10...N/B-NA**
Frame Size	A	200	600
General Technical Data			
UL 1087/ CSA 22.2 # 5.2 Molded Case Switches		Refer to p. **8**/45	Refer to p. **8**/61
IEC/EN 60 947-3 Switch Disconnector Ratings:			
Rated Impulse Withstand Voltage	V	8000	8000
Rated short-time withstand current I_{cw} (1 s current)	kA	3.5	8
Overvoltage category/pollution degree		III/3	III/3
Lifespan, mechanical	Ops.	20000	20000
Maximum operating frequency	Ops./h	120	60
Lifespan, electrical			
AC-1 400 V/690 V	Ops.	3000/2000	10000

Terminal Capacity

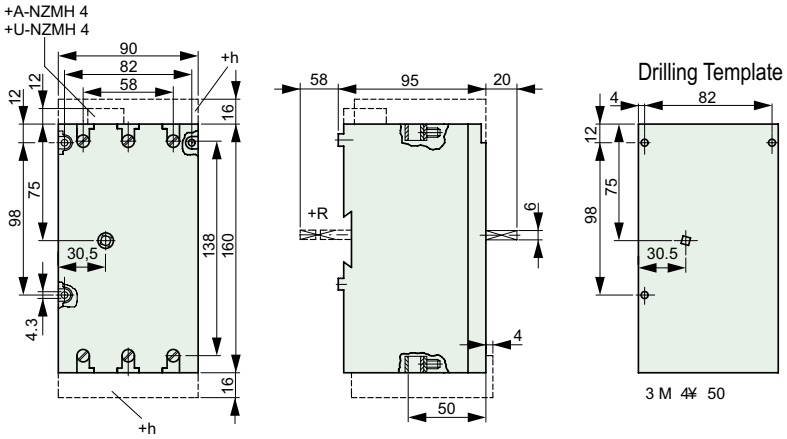
1	2	3	4
Type	**NZM 7(A)-...N-NA** Molded Case Circuit Breaker	**NZM 7-...-NA** Molded Case Switch	**NZM 10...-NA** Molded Case Circuit Breakers and Switches
Maximum continuous current A	150	200	
Field Wiring Terminals Conductor Cross-Section	1 Conductor: AWG 14...250 kcmil Cu Only	1 Conductor: AWG 14...250 kcmil Cu Only	Refer to Page **8**/71
Terminal Torque Rating Nm	14	14	
	NZM 7(A)-...N-NA-M8 Molded Case Circuit Breaker	**NZM 7-...-NA-M8** Molded Case Switch	
Bolt-on Connection size	M8	M8	

Let-Through Values for UL/CSA Fuseless Current Limiting Circuit Breakers

1	2			3			4		
Type	**NZMH 6-.../ZM 6A-...-NA**			**NZMH 9-.../ZM 9A-...-NA**			**NZM 10H-.../ZM 10(A)-...-NA**		
Maximum continuous current A	125			250			600		
Current Limiting Values @	240V	480V	600V	240V	480V	600V	240V	480V	600V
Threshold Current									
RMS Sym kA	7.5	7.5	7.5	16.25	16.25	16.25	39	39	39
Peak kA	9	10	10.6	18	21	23	34	42	40
$I^2t \times 10^3$ A^2s	350	430	468	1500	2000	2204	2800	5500	5500
Intermediate Current									
RMS Sym kA	50	42	14	100	50	30	125	65	42
Peak kA	22	26	16	36	38	32	50	52	45
$I^2t \times 10^3$ A^2s	800	1300	1000	1800	5000	5000	3500	6600	7200
High Interrupting Capacity									
RMS Sym kA	100	65	25	200	85	42	200	100	50
Peak kA	30	35	21	42	48	39	55	61	48
$I^2t \times 10^3$ A^2s	1000	2100	1590	3200	6000	6300	4000	8000	8000

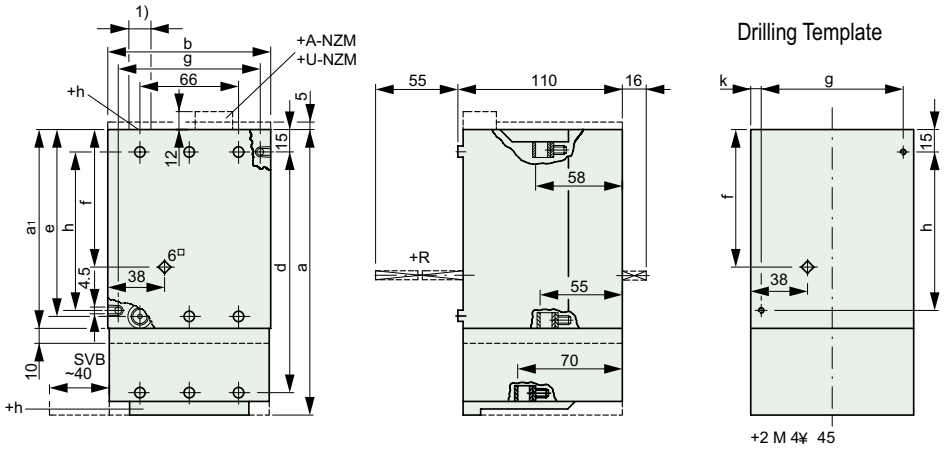
Circuit-breakers

NZMH 4-...-OBI-CNA
NZMH 4-...-CNA

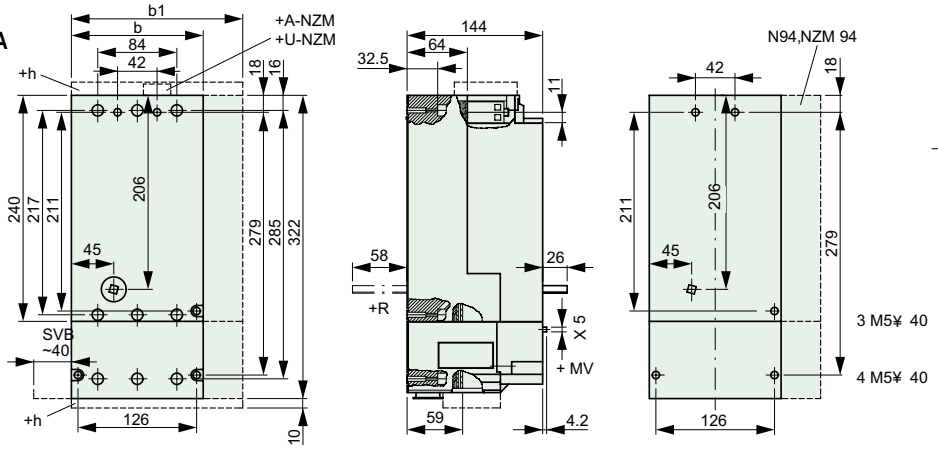


N6-...-CNA
NZMH 6/ZM 6(A)-(C)NA
NZM 6B/ZM 6(A)-(C)NA
NZM(H)6B/ZM 6-OBI-CNA

Type	a	a_1	b	d	e	f	g	h	k
N 6-...-CNA	—	133	109	—	125	92	95	106	7
NZMH 6/ZM 6(A)-(C)NA	210	—	109	180	—	112	95	126	7
NZM 6 B/ZM 6(A)-(C)NA	210	—	109	180	—	112	95	126	7



N 9-...-CNA
NZM 9/ZM 9(A)-...(C)NA
NZMH 9/ZM 9(A)-...(C)NA
NZMH 9/ZM 9-OBI-CNA



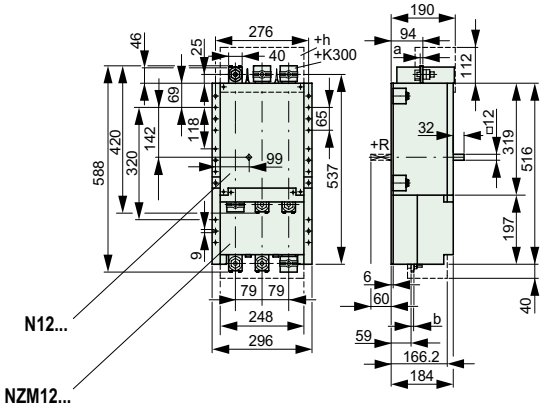
Type	b	b_1
N 9-...CNA	140	—
NZM 9/ZM9...-NA	140	—
NZMH 9/ZM9.-NA	140	—

Notes: Safety vertical clearance between upper edge of **NZM** circuit-breakers and conductive materials with a different potential:

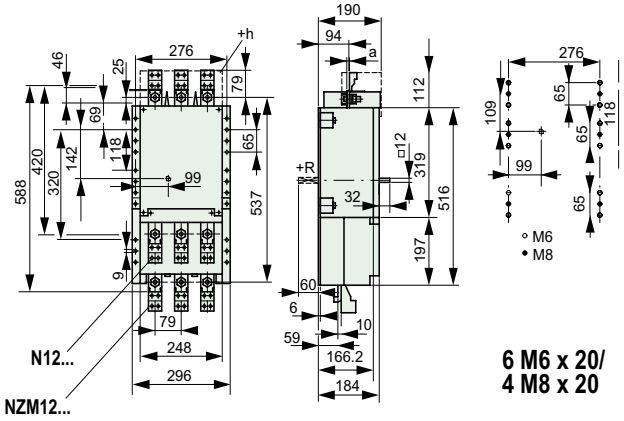
Type	
NZM 4	40 mm
NZM 6	60 mm
NZM 9	100 mm

+R: When switch shaft extended to the rear: provide 20 mm diameter hole in mounting plate for switch shaft. Front switch shaft is then omitted except for frame sizes 4 and 6.

N12...-CNA (630, 800)
NZM 12-.../ZM 12 (A)(V)-...-NA (630, 800)



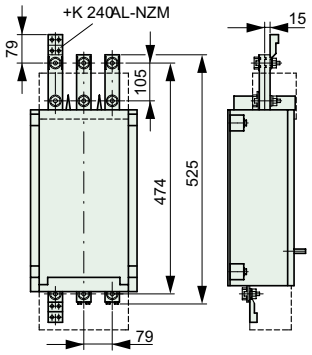
N 12-1000-CNA
NZM 12-1250/ZM (V)-1000-NA



Terminal bolts
M16 x 50

Type		630 1000	800	1250
NZM 12	a	8	10	10
	b	8.5	8.5	8.5
ZM 12	b	10	10	15

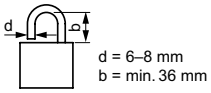
N 12-1200-CNA



Notes: Safety vertical clearance between upper edge of **NZM** circuit-breakers and conductive materials with a different potential:

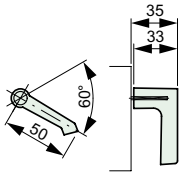
Type	
NZM 12	180 mm

Standard handle | **Door coupling rotary handle** | **Handle for switch shaft extended to rear**

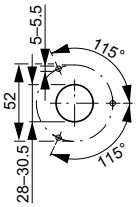


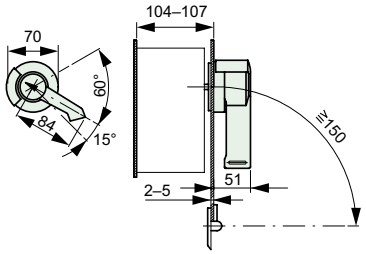
For **NZM 4**

H 4 U



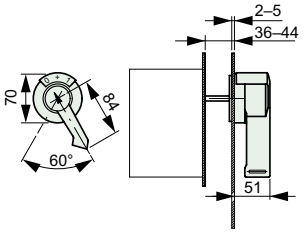
H 6(-NA)





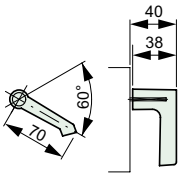
H 6 R(-NA)

Mounting opening as on left, but turned clockwise through 90˚

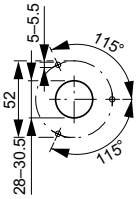


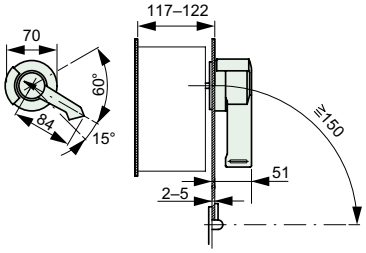
For **NZM 6**

H 6 U



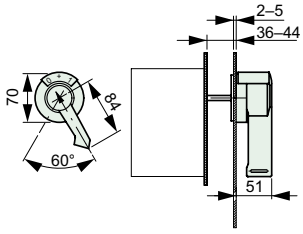
H 6(-NA)





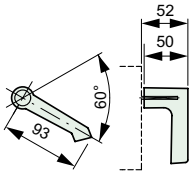
H 6 R(-NA)

Mounting opening as on left, but turned clockwise through 90˚

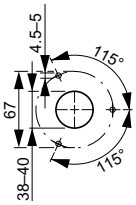


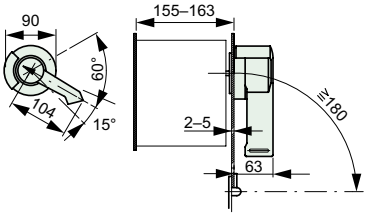
For **NZM 9**

H 9 U

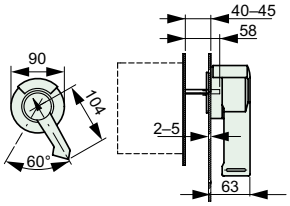


H 9(-NA)



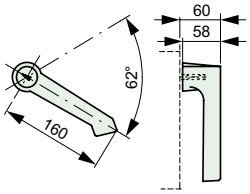


H 9 R(-NA)

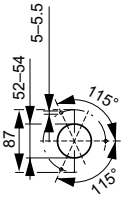


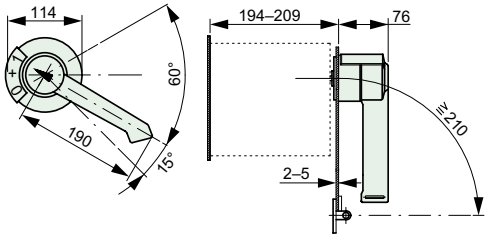
For **NZM 12**

H 12 U

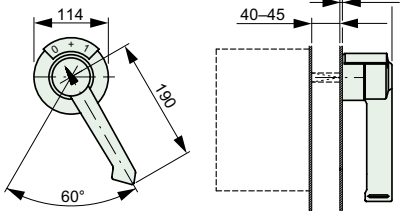


H 12(-NA)



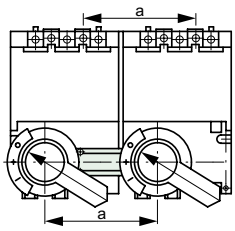


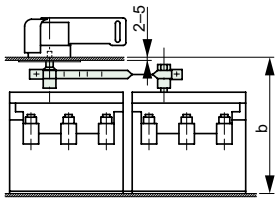
H 12 R(-NA)

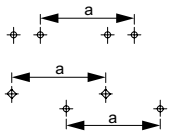


K(V), KU coupling kits

KV-2 NZM



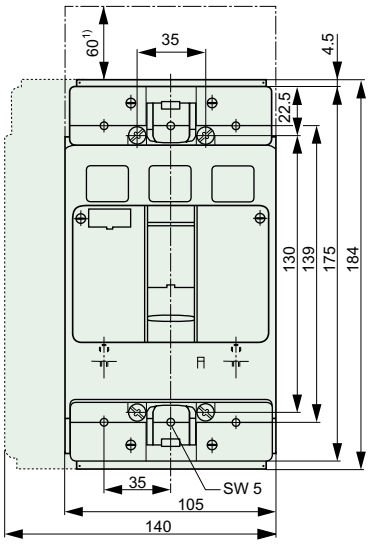


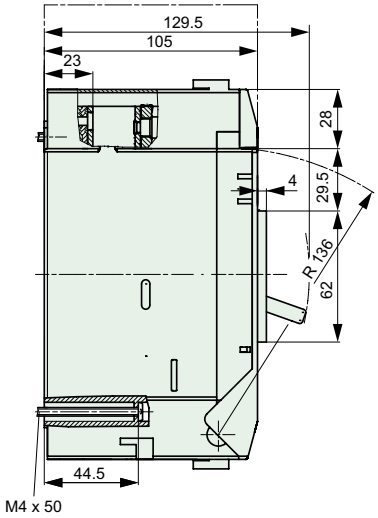


Type	a	b
NZM 4	125	145–185
NZM 6	125	150–190
NZM 9	150	190–240
NZM 12	300	240–300

Circuit Breakers, Molded Case Switches

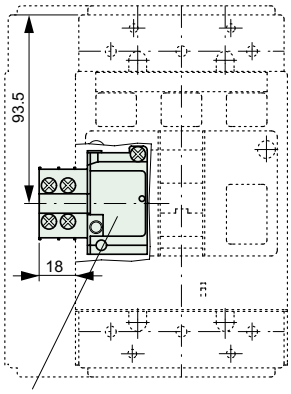
NZM 7.....-NA

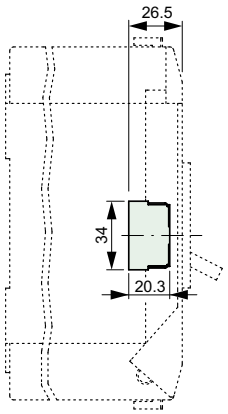




Shunt Trips, undervoltage Trips and Early-Make auxiliary contacts

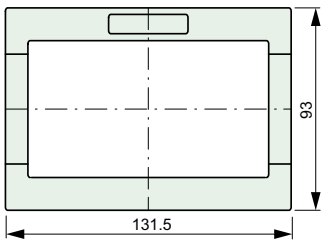
A-, U-, VHI-NZM 7

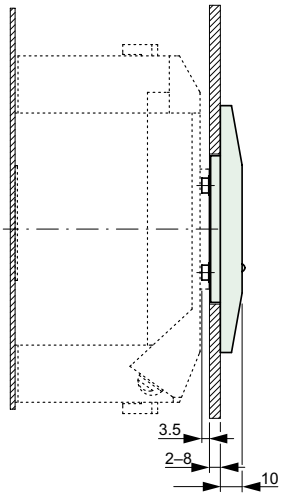




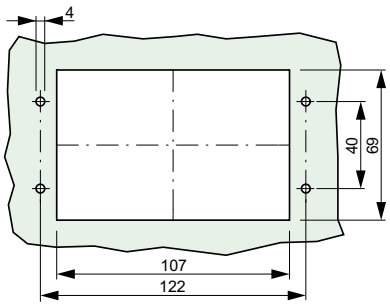
Insulating frame

RT-NZM 7



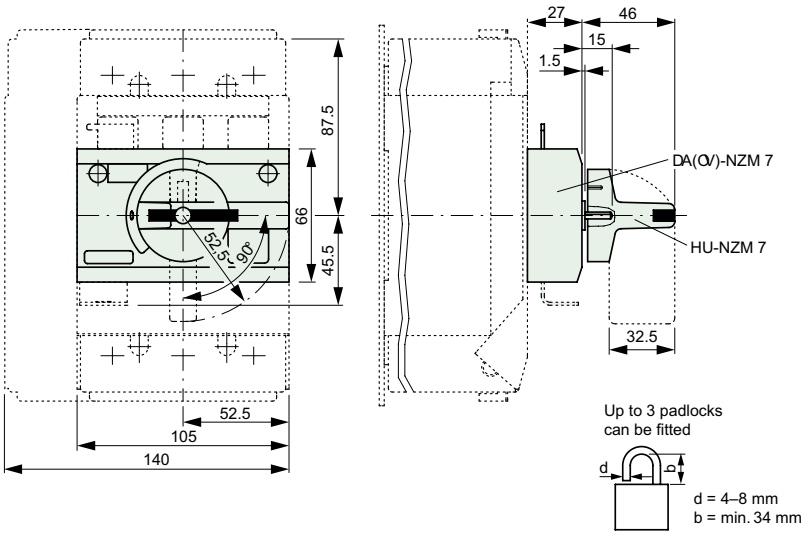


Mounting opening for insulating frame

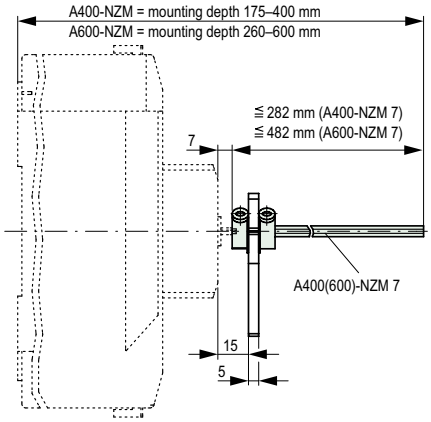


Rotary drive/rotary handle for open mounted breakers and switches

DA(OV)-NZM 7 HU-NZM 7

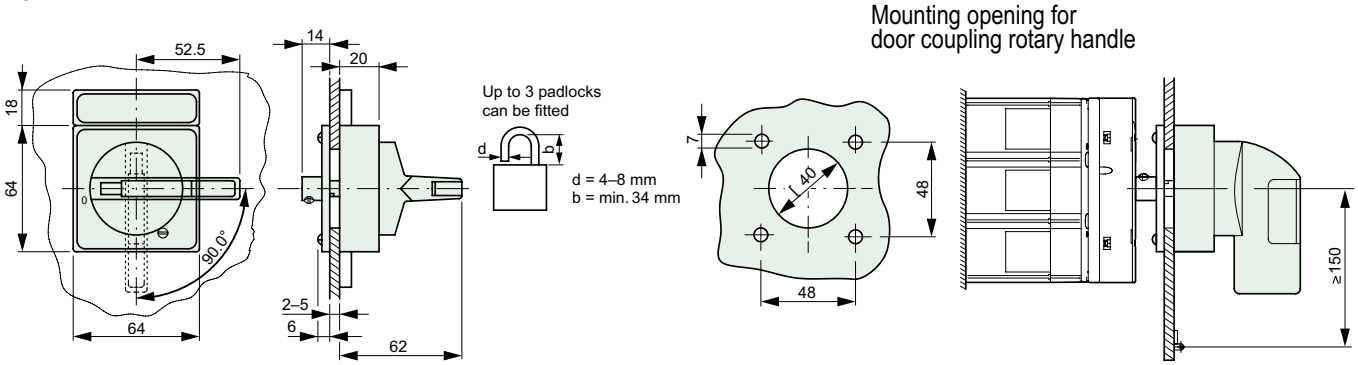


Extension shaft



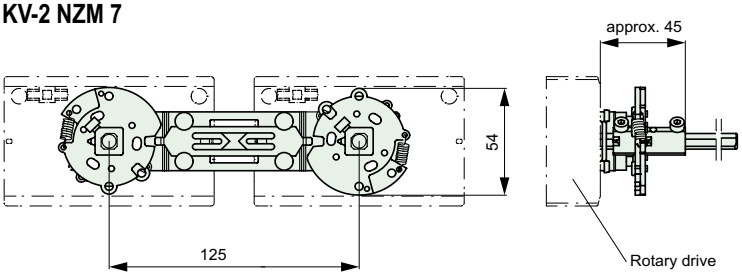
Door interlocking handle for base mounted breakers and switches

(R)H-NZM 7
HOV-NZM 7



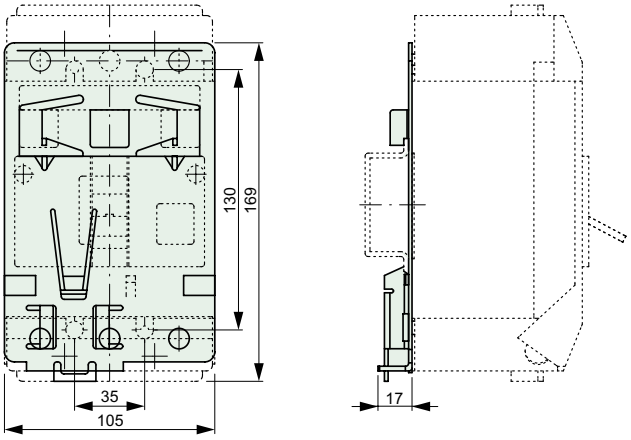
Mechanical interlock

KV-2 NZM 7

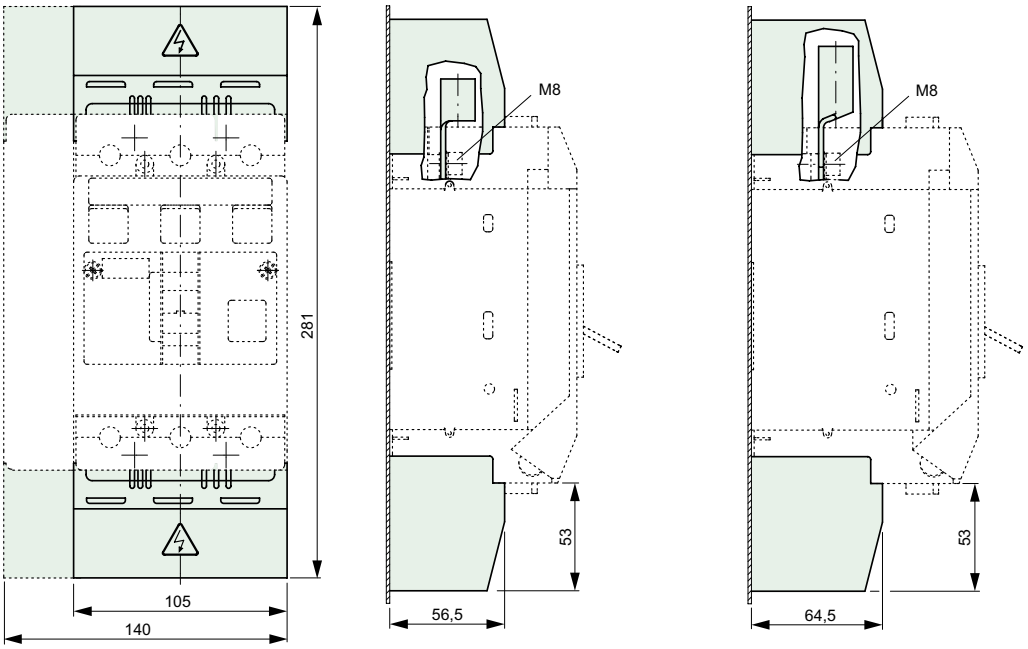


Clip plate

C-NZM 7

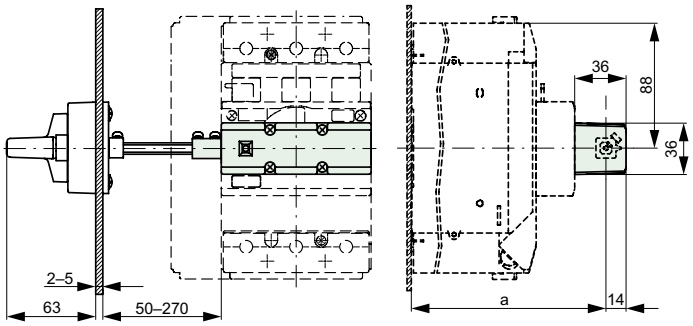


Cable lug/cable lug cover KA 250-NZM 7



Side wall operator

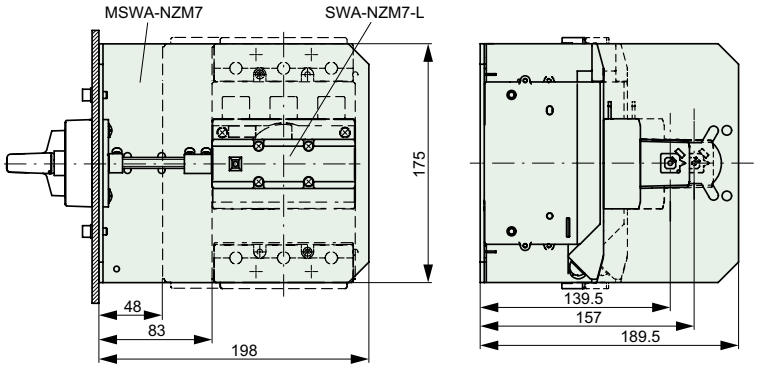
SWA-NZM 7



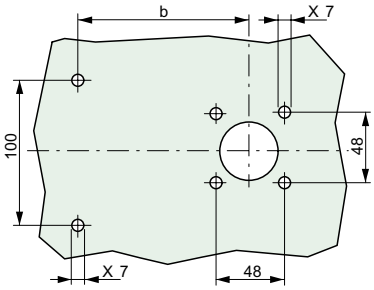
Type	NZM 7-...-NA
a	154
b	134

Mounting bracket for side wall operator

MSWA-NZM 7



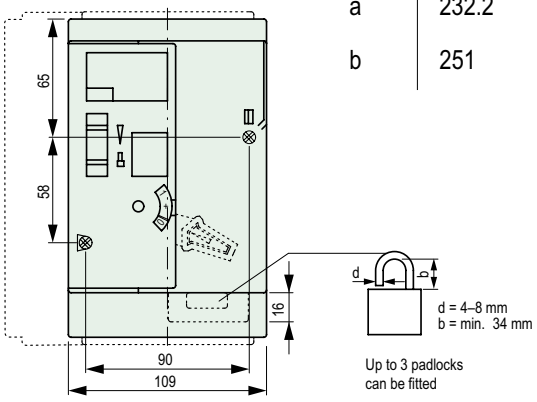
Mounting aperture for rotary handle

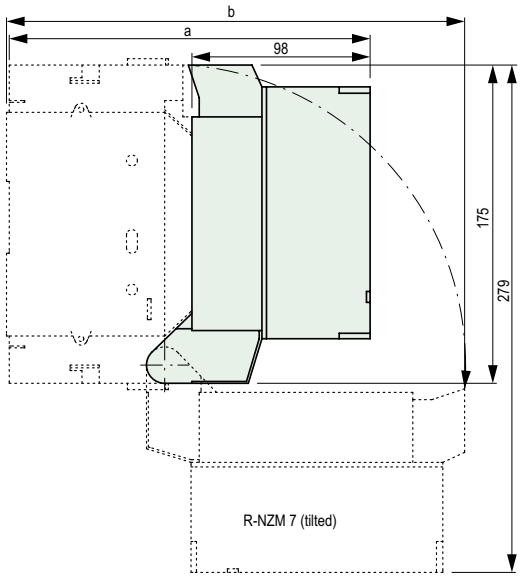


Remote Control Drive

R-NZM 7

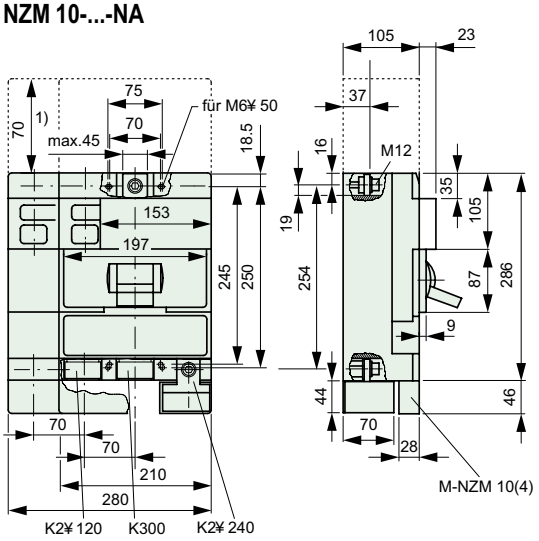
Type	NZM 7(A)-...N-NA NZM 7-...-NA
a	232.2
b	251





Circuit Breakers, Molded Case Switches

NZM 10-...-NA

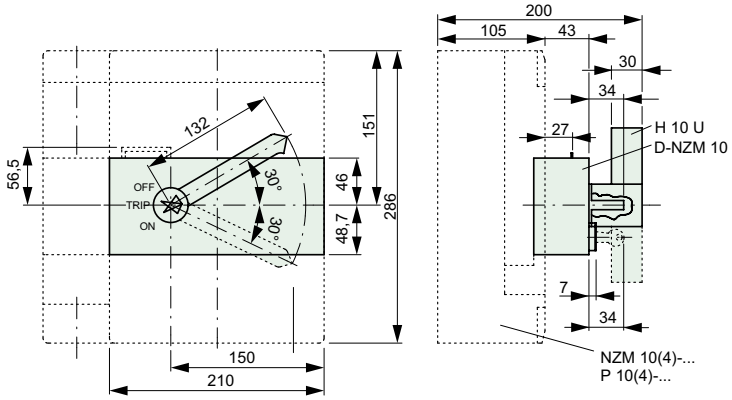


When mounting devices side by side, 15mm clearance is required between them.

1) Safety clearance is required to conductive materials having a different potential; does not apply to connected stripped conductors.

Rotary drive

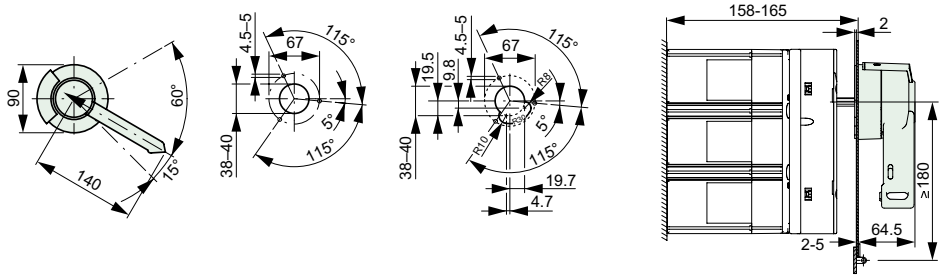
D-NZM 10



Door Interlocking handle

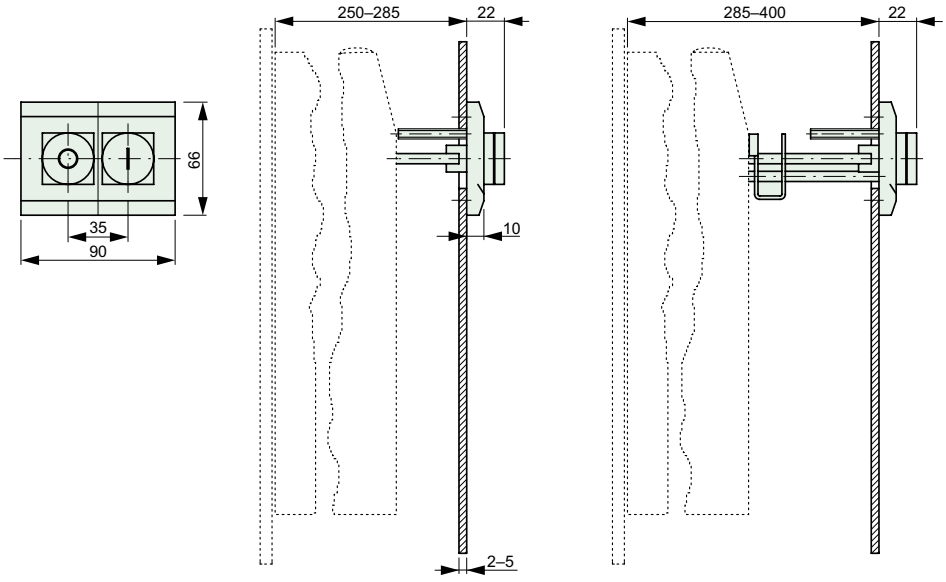
(R)H 10-NA

Drilling template (R)H 10-NA

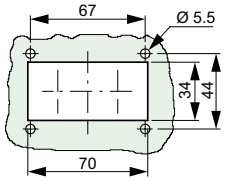


Pushbuttons for enclosed breakers/switches operated with a remote control drive

MD-NZM 10
MDV-NZM 10

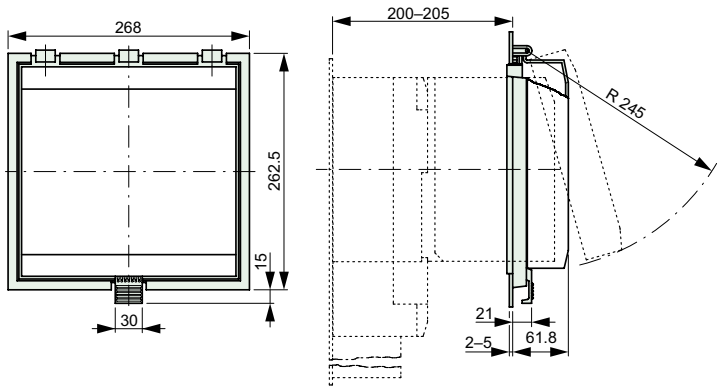


Mounting opening for pushbuttons

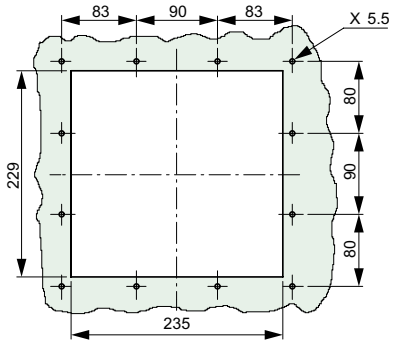


Protective cover for door cutout

RTR-NZM 10



Mounting opening



Ground Fault Trip Unit

TV-NZM 10