



(en) Electric current! Danger to life!

Installation, commissioning and maintenance work must be carried out by qualified personnel only.

(de) Lebensgefahr durch elektrischen Strom!

Arbeiten bzw. Montage an diesem Produkt dürfen nur von Elektrofachkräften und elektrotechnisch unterwiesenen Personen ausgeführt werden.

(fr) Tension électrique dangereuse !

L'installation de l'appareil, ainsi que tous les travaux effectués sur celui-ci, doivent être réalisés par un électricien qualifié ou par un personnel spécialement formé.

(es) ¡Corriente eléctrica! ¡Peligro de muerte!

La instalación del dispositivo, así como todos los trabajos en él, deben ser realizados por un electricista calificado o por personal especialmente capacitado.

(it) Tensione elettrica: Pericolo di morte!

L'installazione e il lavoro sul dispositivo devono essere effettuati da un elettricista qualificato o da personale specializzato.

(zh) 触电危险!

設備的安裝，以及所有工作，必須由合格的電工或經過專門培訓的人員完成。

(ru) Электрический ток! Опасно для жизни!

Установка и эксплуатация устройства должны выполняться квалифицированным электриком или специально обученным персоналом.

(nl) Levensgevaar door elektrische stroom!

Installatie van het apparaat en alle werkzaamheden eraan, mogen uitsluitend door een gekwalificeerd elektricien of speciaal opgeleid vakpersoneel worden uitgevoerd.

(da) Livsfare på grund af elektrisk strøm!

Arbejde i forbindelse med installation, opstart og vedligehold må kun udføres af kvalificeret personale.

(el) Προσοχή, κίνδυνος ηλεκτροπληξίας!

Η εγκατάσταση, εκκίνηση και συντήρηση θα πρέπει να πραγματοποιείται μόνο από εξειδικευμένο προσωπικό.

(pt) Perigo de vida devido a corrente elétrica!

A instalação do dispositivo, bem como todos os trabalhos devem ser realizados por um electricista qualificado ou por pessoal especialmente formado.

(sv) Livsfara genom elektrisk ström!

Installation, idrifttagande och underhållsarbete får endast utföras av behörig personal.

(fi) Hengenvaarallinen jännite!

Laitteen asennus ja käyttö ainoastaan sähköasentajan tai siihen perehdytetyn henkilön toimesta.

(cs) Nebezpečí úrazu elektrickým proudem!

Instalace zařízení a veškeré práce na něm musí být provedeny kvalifikovaným elektrikářem nebo speciálně vyškoleným personálem.

(et) Eluohhtlik! Elektrilöögiht!

Paigaldus-, kasutus- ja hooldustööd peab läbi viima ainult kvalifitseeritud personal.

(hu) Életveszély az elektromos áram révén!

Az eszköz felszerelését, valamint az ehhez kapcsolódó összes munkát szakképzett villanyszerelővel vagy szakképzett személyzetnek kell elvégeznie.

(lv) Elektriskā strāva apdraud dzīvību!

Uzstādīšana, nodošana ekspluatācijā un apkopes darbi jāveic tikai kvalificētam personālam.

(lt) Pavojus gyvybei dėl elektros srovės!

Įrengimo, paleidimo ir techninės priežiūros darbus turi atlikti tik kvalifikuotas personalas.

(pl) Porażenie prądem elektrycznym stanowi zagrożenie dla życia!

Instalacja urządzeń, jak również prace nad nimi, muszą być wykonywane przez wykwalifikowanego elektryka lub specjalnie wyszkolony personel.

(sl) Življenjska nevarnost zaradi električnega toka!

Dela montaže, zagona in vzdrževanja morajo izvajati samo usposobljeno osebeje.

(sk) Nebezpečnost ohrozenia života elektrickým prúdom!

Inštalácia prístroja, ako aj všetky práce na ňom musia byť vykonané kvalifikovaným elektrotechnikom alebo špeciálne vyškoleným personálom.

(bg) Опасност за живота от електрически ток!

Инсталирането на устройството, както и всяка работа по него, трябва да бъде извършвано от квалифициран електротехник или от специално обучен персонал.

(ro) Atenție! Pericol electric!

Montajul și lucrul cu acest aparat trebuie făcute numai de un electrician calificat sau de personal tehnic specializat.

(hr) Opasnost po život uslijed električne struje!

Radove ugradnje, puštanja u pogon i održavanja mora vršiti samo kvalificirano osoblje.

(tr) Elektrik akımı! Hayati tehlike!

Bu ürünün çalıştırılması veya kurulumu sadece elektroteknik eğitimleri almış olan ehliyetli elektrikçiler ve kişiler tarafından yapılmalıdır.

(sr) Električna struja! Opasnost po život!

Instalaciju, puštanje u rad i održavanje sme da obavlja isključivo kvalifikovano osoblje.

(no) Elektrisk strøm! Livsfare!

Installasjon av enheten, samt arbeid på den, skal kun utføres av kvalifisert personell, eller av de som er spesielt opplært til dette arbeidet.

(uk) Електричний струм! Небезпечно для життя!

Встановлення пристрою, так само, як і робота з ним, повинні виконуватись кваліфікованим електриком або персоналом, що пройшов спеціальну підготовку.

(ar) تحذير! تيار كهربائي! خطر موت الشبيك والتكليف و أعمال الصيانة يجب أن تقام فقط من طرف الموظفين المؤهلين

NZMB(C)(N)(S)(H)(L)2(-4)-A(M)(S)...

NZMN(H)(L)2(-4)-VE(ME)...

(P)N2(-4)-...

NZMB(N)(H)(L)2-A(AF)...(-BT)-NA

NZMB(N)(H)(L)2-S...(-BT)-CNA

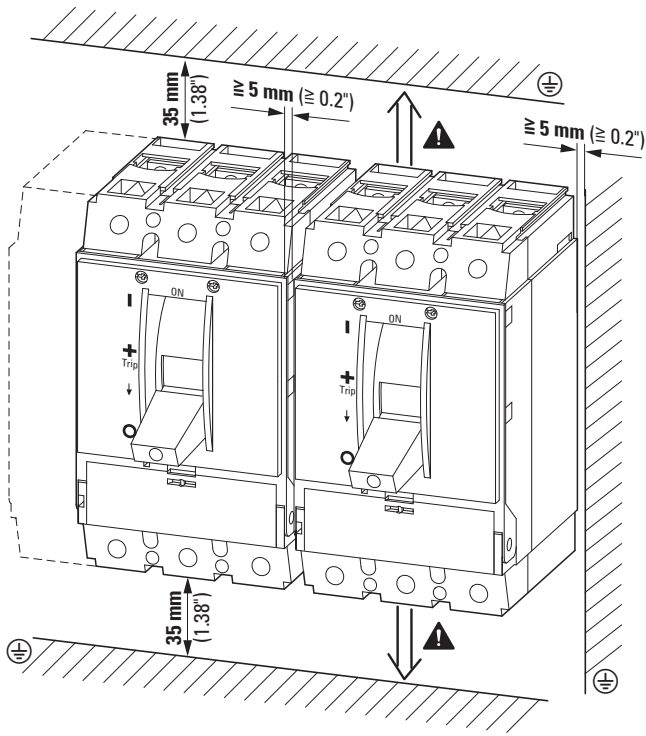
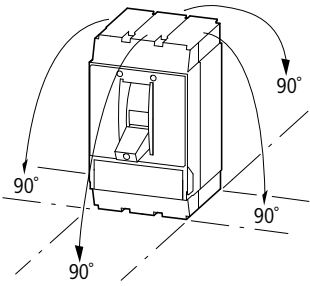
NZMN(H)(L)2-VE...(-BT)-NA

NZMN(H)(L)2-VEF...(-BT)-NA

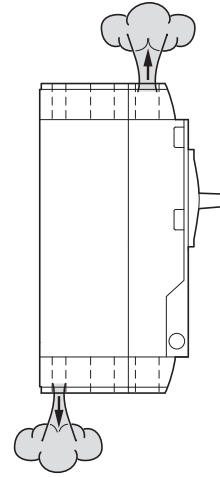
NZMN(H)(L)2-SE...(-BT)-CNA

NZMN(H)2-ME...(-BT)-NA

N(S)2-...(-BT)-NA

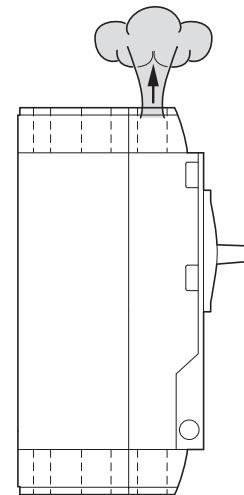
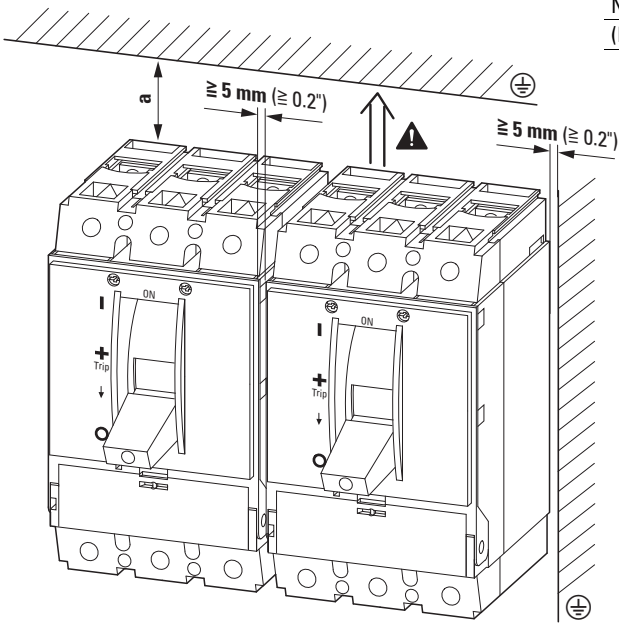


Minimum Clearance space
for all models

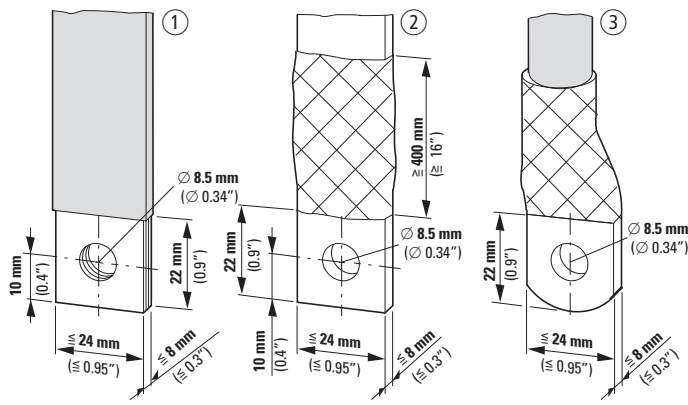


NZMB(C)2-A... ≥ 250 A
(P)N2(-4)-...

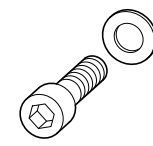
	a
NZMB(C)2-A...	60 mm (2.4")
(P)N2(-4)-...	35 mm (1.4")



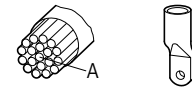
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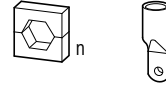
①	②	③
$\cong 2 \times 9 \times 0.8 \text{ mm}$ ($\cong 2 \times 0.35" \times 0.03"$)	$\cong 16 \times 5 \text{ mm}$ ($\cong 0.63" \times 0.2"$)	$1 \times 4 - 185 \text{ mm}^2$
$\cong 10 \times 16 \times 0.8 \text{ mm}$ ($\cong 10 \times 0.63" \times 0.03"$)	$\cong 20 \times 5 \text{ mm}$ ($\cong 0.8 \times 0.2"$)	$2 \times 4 - 70 \text{ mm}^2$
$\cong 6 \times 24 \times 0.5 \text{ mm}$ ($\cong 6 \times 0.95" \times 0.02"$)		



3pol M8 x 22
4pol

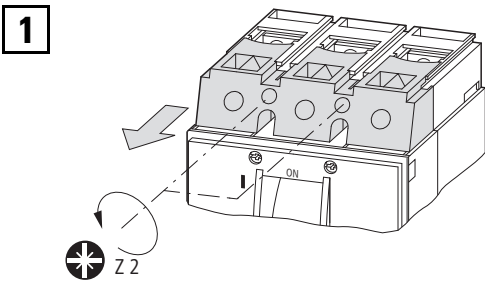


A = 95 mm ²	KS95-NZM7
A = 120 mm ²	KS120-NZM7
A = 150 mm ²	KS150-NZM7
A = 185 mm ²	NZM2-XKS185

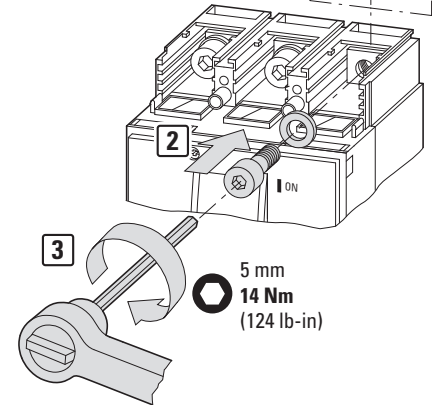
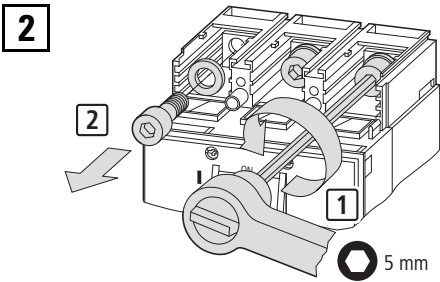
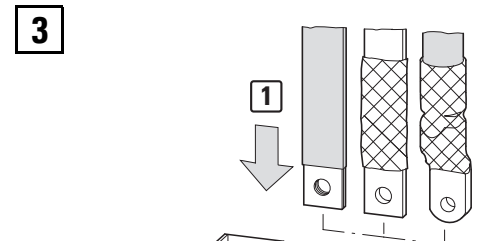


n n = Number of crimps

2	KS95-NZM7
2	KS120-NZM7
2	KS150-NZM7
2	NZM2-XKS185

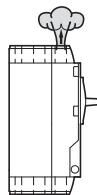


UL/CSA models:
Follow diagrams below when making connections using XKS screw terminations for compression crimp lugs:
– Always use terminal cover XKSA when making connections with bare bus or non-insulated crimp lugs, or when two wires per phase are connected.
To mount terminal cover XKSA, refer to instruction sheet **IL01206007Z** (AWA1230-2047).

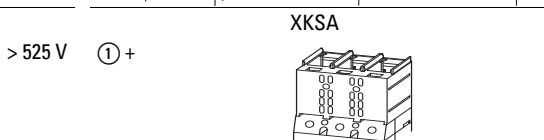
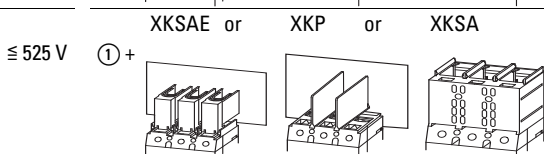
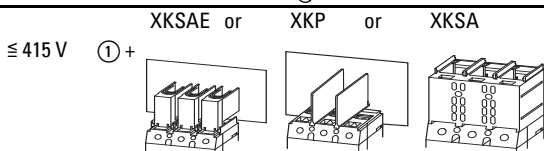
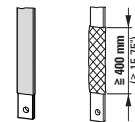
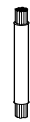
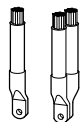


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NZMB(C)2(-4)-A160(250)

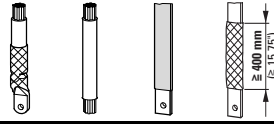
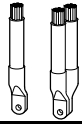
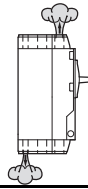


① Basic device
+ Combination options



NZM2(-4)-...300

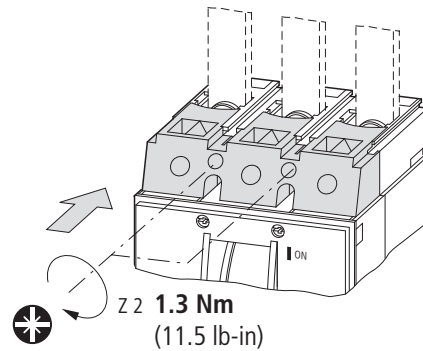
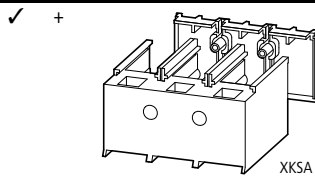
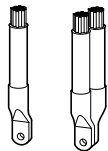
① Basic device
+ Combination options



$\le 415 \text{ V}$	① +	XKSAE or XKP or XKSA	①	①
$\le 525 \text{ V}$	① +	XKSAE or XKP or XKSA	①	① +
$\le 690 \text{ V}$	① +	XKSA	① +	XKP or XKSA
$> 690 \text{ V}$	① +	XKSA	XKSA	XKSA

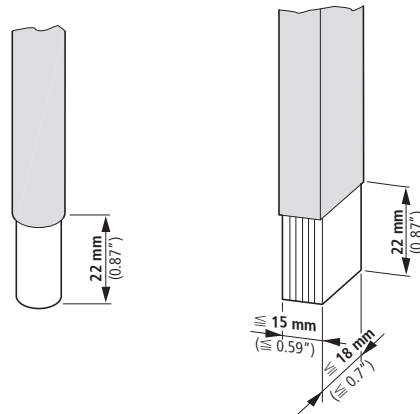
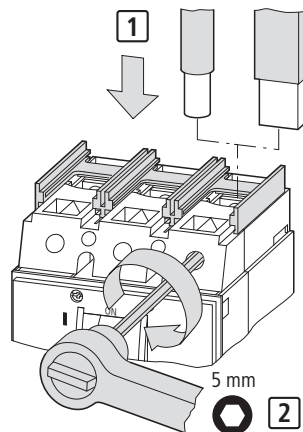
NZMB(C)2-A... $\le 300 \text{ A}$
(P)N2(-4)-...

4



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NZMB(N)(H)(L)2-A(AF)...(-BT)-NA
NZMB(N)(H)(L)2-S...(-BT)-CNA
NZMN(H)(L)2-VE...(-BT)-NA
NZMN(H)(L)2-VEF...(-BT)-NA
NZMN(H)(L)2-SE...(-BT)-CNA
NZMN(H)2-ME...(-BT)-NA
N(S)2-...(-BT)-NA



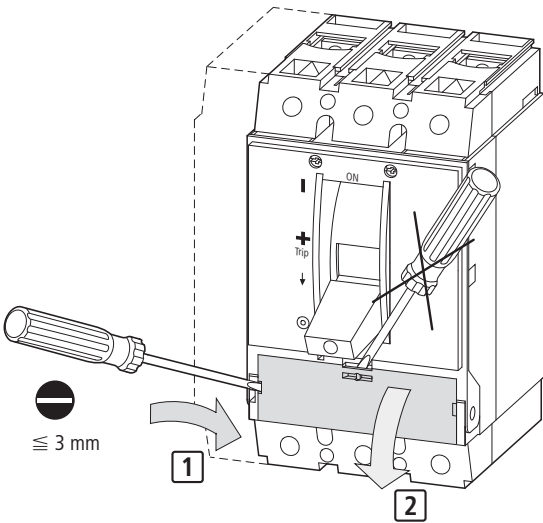
14 Nm (124 lb-in)	> 10 mm² (> AWG8)
5 Nm (44 lb-in)	$\le 10 \text{ mm}^2$ (\le AWG8)

1 x 4 - 185 mm ²	$\ge 2 \times 9 \times 0.8 \text{ mm}$ ($\ge 2 \times 0.35'' \times 0.03''$)
2 x 4 - 70 mm ²	
1 x AWG12 - 350 kcmil	

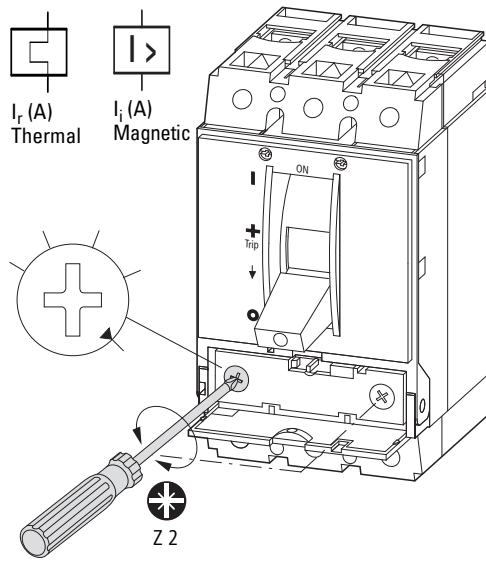
UL/CSA = CU only, Ampacity per 75° C Table.

Settings

1 NZMB(C)(N)(H)(L)2(-4)-A(M)(S)...
 NZM...2-A(AF)...-NA
 NZM...2-S...-CNA



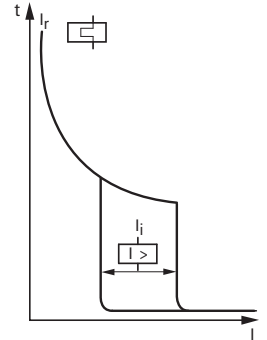
2 NZMB(C)(N)(H)(L)2(-4)-A(M)(S)...
 NZM...2-A(AF)...-NA
 NZM...2-S...-CNA



Setting I_i with DC = setting I_i AC/1.35

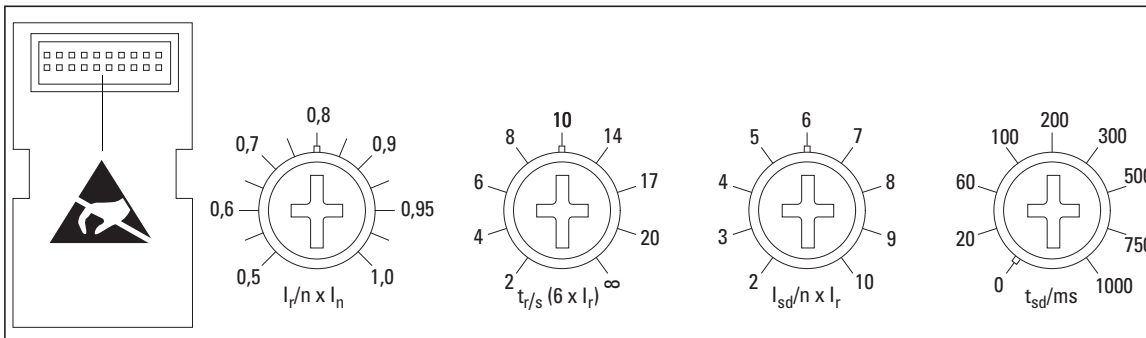


Note: On certain models with UL/CSA labeling the thermal trip setting is fixed and only the magnetic trip (instantaneous) setting is adjustable.

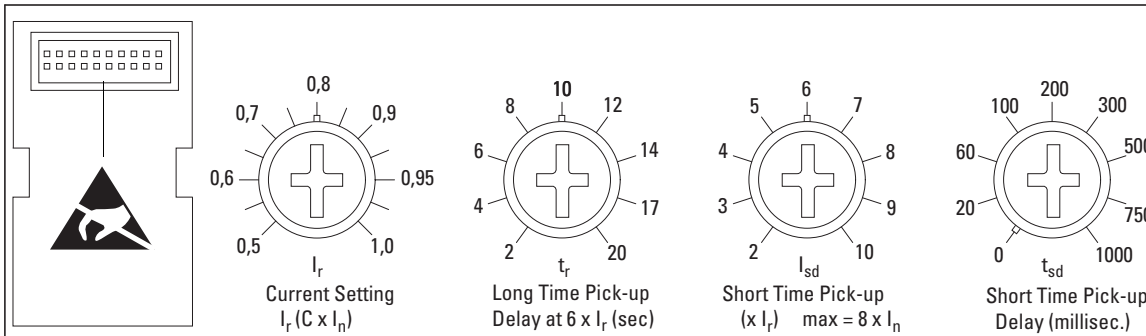


NZMN(H)(L)2(-4)-VE(ME)...

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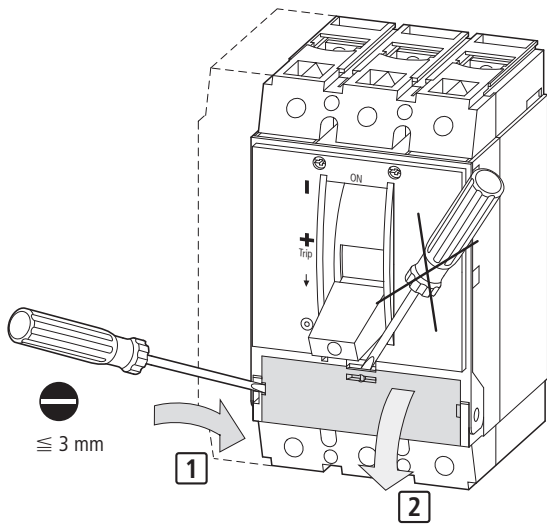
-NA, -CNA UL/CSA Electronic Trip Circuit Breakers



NZM2-VE...-NA	x	x	x	x
NZM2-VEF...-NA	-	x	x	x
NZM2-SE...-CNA	-	-	x	-

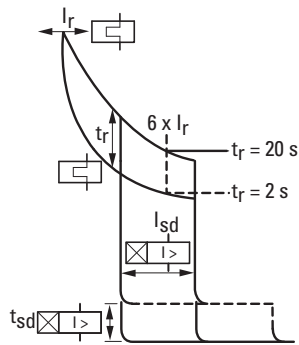
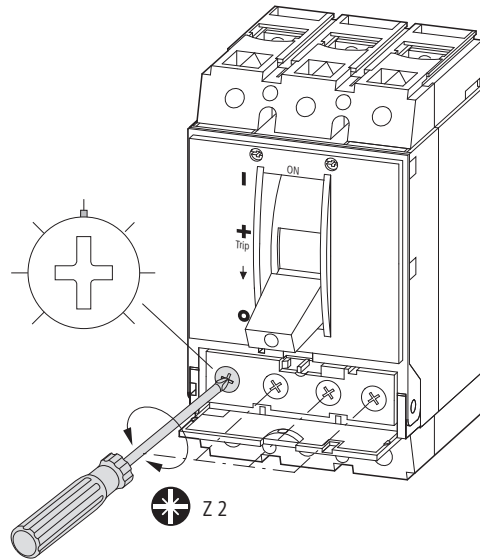
Settings

1



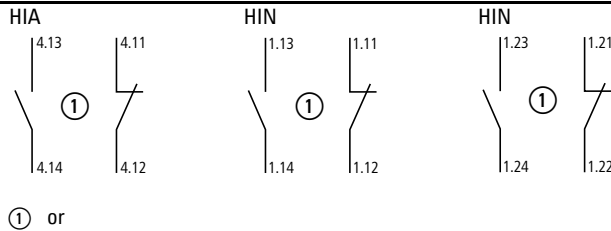
2

I_r [A], t_r [s], I_{sd} [A], t_{sd} [ms] Electronic Trip Circuit Breaker Adjustable settings



(I_n = Max. current rating)
 I_r = Adjustable current setting (0.5 - 1.0 x I_n) for Long Time Pick-up.
 t_r = Adjustable Long Time Pick-up Delay (2 - 20 sec.) factory set at 10 seconds.
 I_{sd} = Adjustable Short Time Pick-up (2 - 10 x I_r) factory set at 6 x I_r .
 t_{sd} = Short Time Pick-up Delay (0 - 1000 ms) factory set at 0 ms.
 Note: Instantaneous Pick-up fixed at 12 x I_n .

M22-K10 M22-K01 M22-CK10 M22-CK01 Auxiliary Switches



① or

-NA
-CNA
(UL/CSA)



$I_{th} = I_e$

U_e (V)	I_e (A)
600 AC	5 A
250 DC	1 A

Pilot Duty Ratings:
 B 600, Q 300
 Above 300 V AC
 Same polarity

Notes on mounting and wiring Auxiliary Switches for UL/CSA labeled models:

- M22-K(10)(01) have screw terminals. M22-CK(10)(01) have clamp terminals.
- Switch modules are snapped into place at the locations shown in the diagrams that follow.
- Switches will function as either „standard“ or „trip/alarm“ contacts depending on their mounting location.
- Location „HIN“ refers to standard operation. Location „HIA“ refers to „trip/alarm“ operation.
- Follow the numbering and wiring scheme provided above depending on the contact location and function. (N.O. or N.C.)
- Permissible contact configuration: 1 HIA and/or 2 HIN.



Note:
 After mounting of the M22... switch is complete, check off the appropriate box on the auxiliary switch label provided on the side of the breaker or switch.

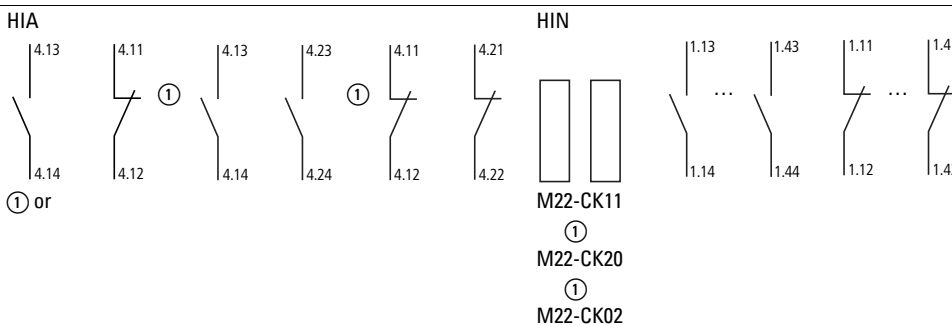


IEC

$I_{th} = I_e$

	U_e (V)	I_e (A)
AC-15	115	4
	230	4
	400	2
	500	1
DC-13	24	3
	42	1.7
	60	1.2
	110	0.6
	220	0.3

M22-K11 M22-CK20 M22-CK02



① or

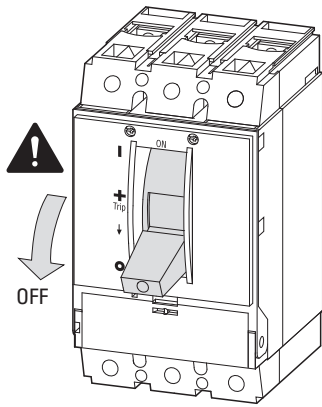
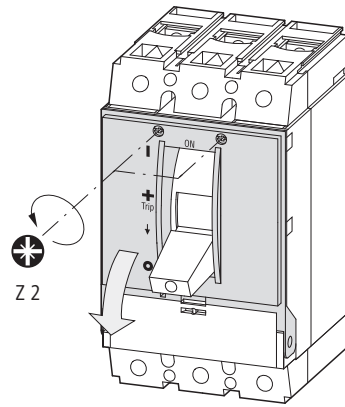
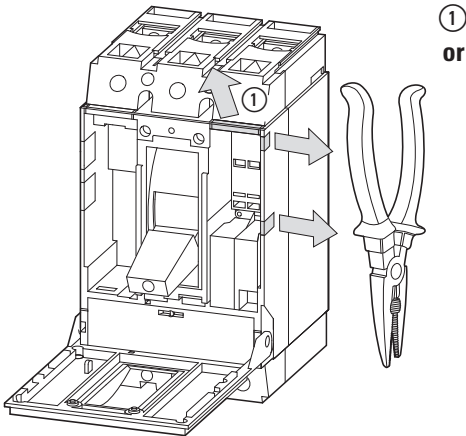
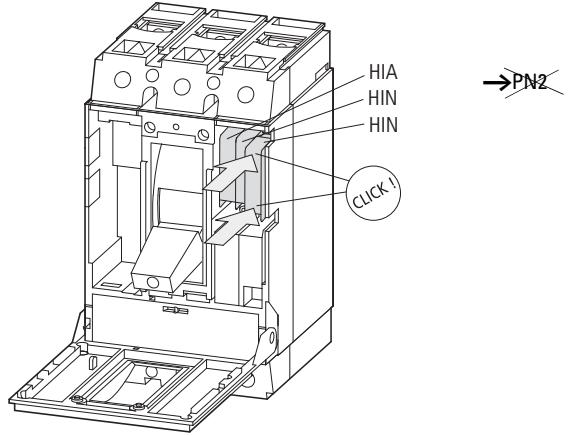
M22-CK11
 ①
 M22-CK20
 ①
 M22-CK02



IEC
 $I_{th} = I_e$

	U_e (V)	I_e (A)
AC-15	115	4
	230	4
	400	2
DC-13	24	3
	42	1
	60	0.8
	110	0.5
	220	0.2

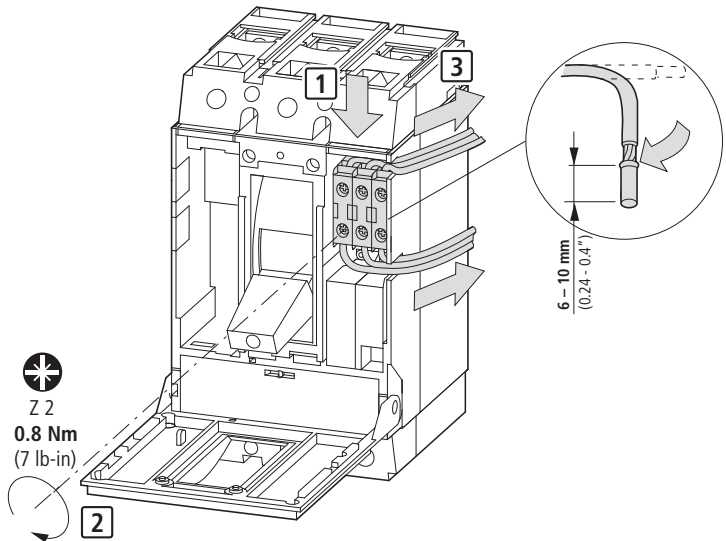
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1**2****3****4****5a**

M22-K10, M22-K01 (Screw Terminals)

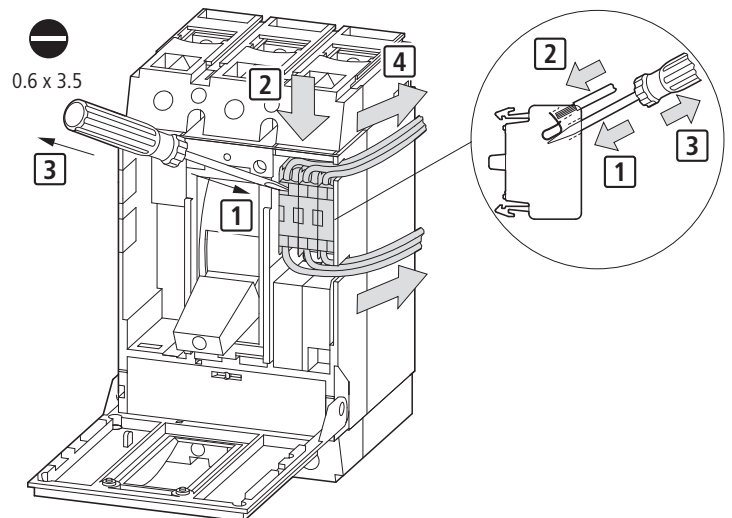
...K10: N. O. Contact
...K01: N. C. Contact

	2 x 0.75 - 2.5 mm ²
	2 x AWG 18 - AWG 14
UL/CSA = Cu only	

**5b**

M22-CK10, M22-CK01 (Clamp Terminals)

	2 x 0.75 - 2.5 mm ²
	2 x AWG 18 - AWG 14
UL/CSA = Cu only	

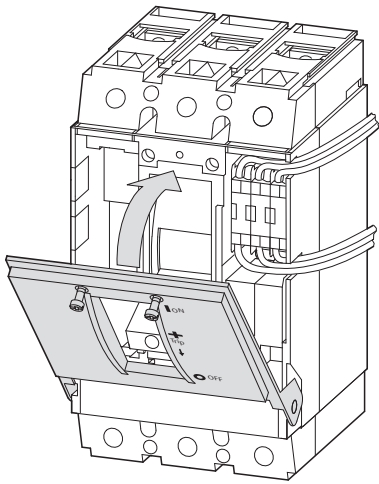
**5c**

M22-CK11, M22-CK20, M22-CK02 (Clamp Terminals)

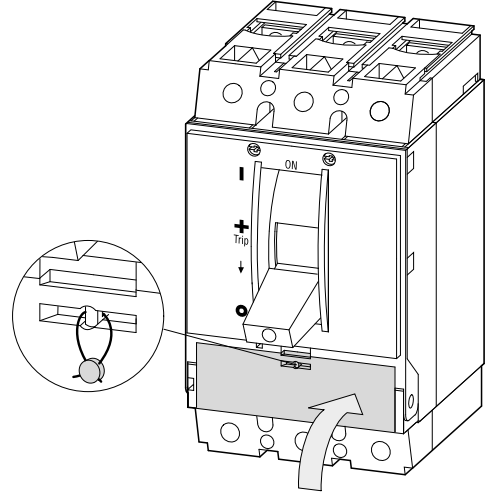
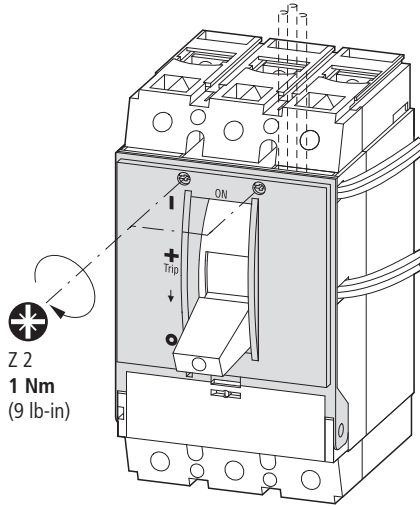
	a = 8 mm (a = 0.3")
	1 x 0.5 - 1.5 mm ²
	1 x AWG20 - AWG16
	2 x 0.5 - 0.75 mm ²
	2 x AWG20 - AWG18

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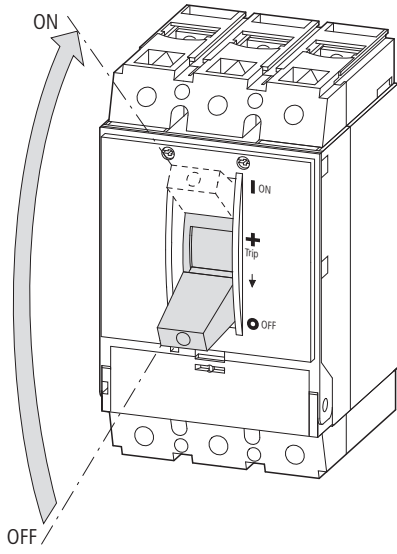
6



7

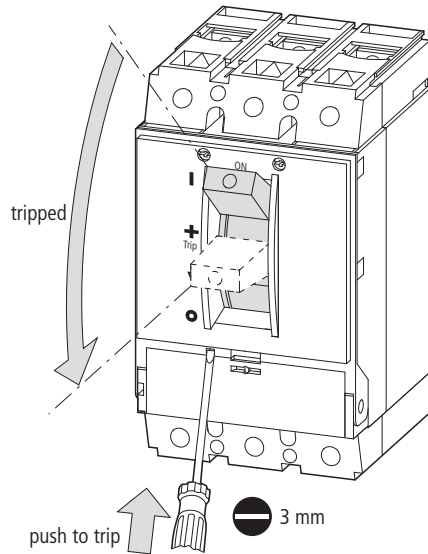


TEST 1



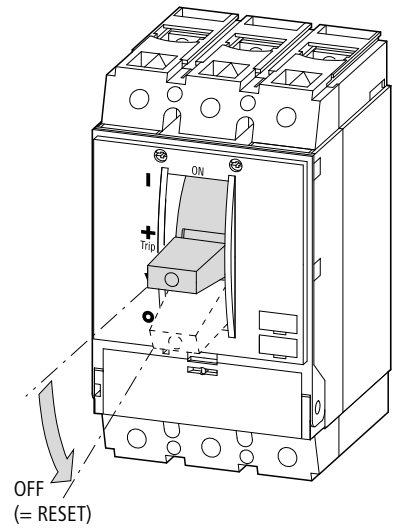
TEST 2

~~PN2...(-AP)~~

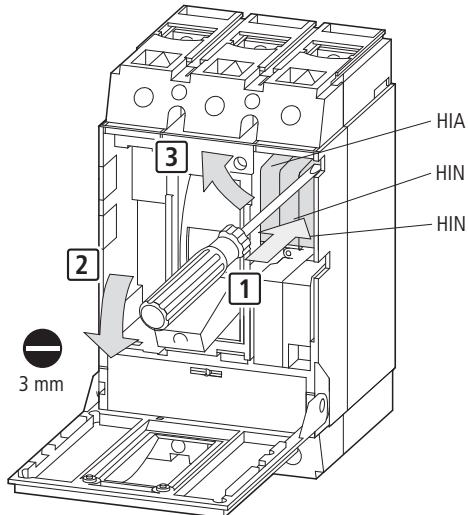


TEST 3

~~PN2...~~



Dismounting

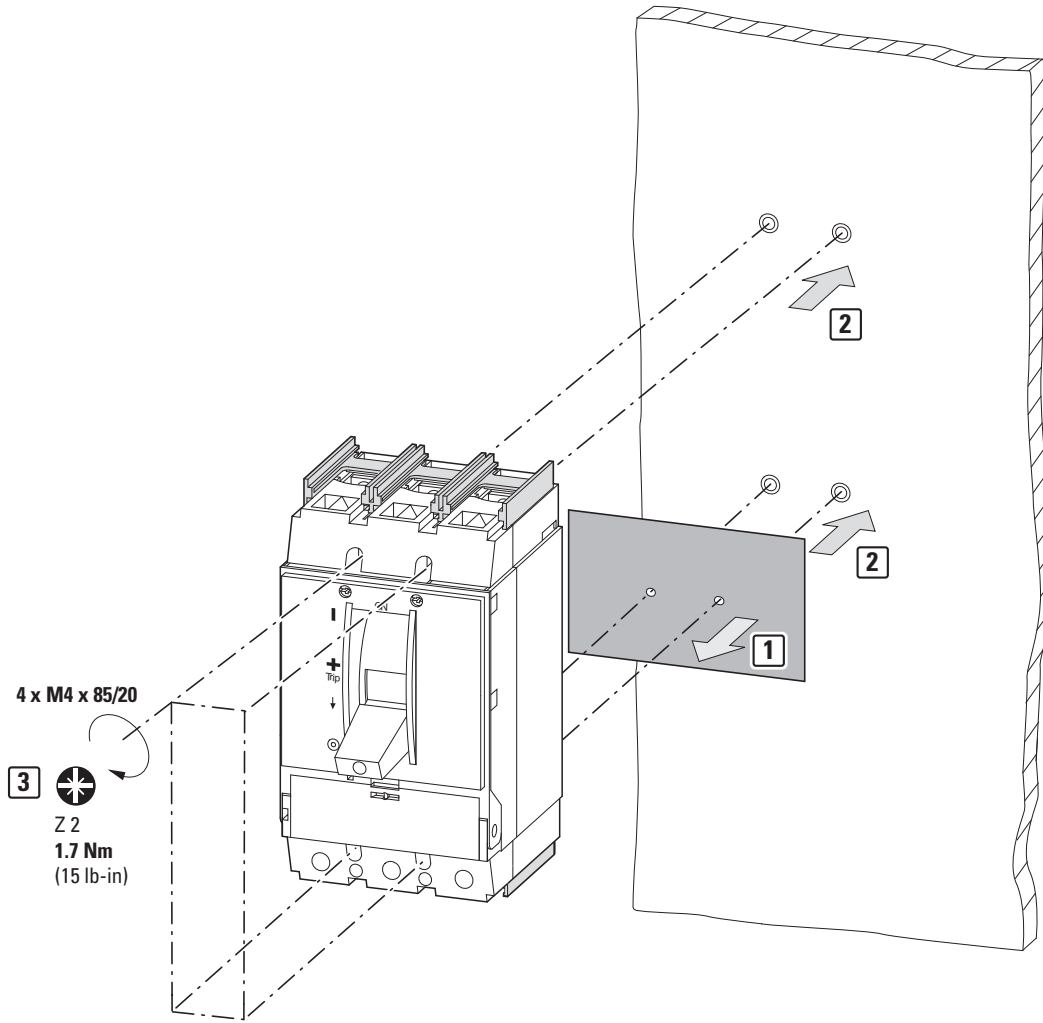


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Mounting

Insulating plate

Mounting of insulating plate (shown shaded in the diagram) is required on UL/CSA labeled models for all installations. Mount as shown in diagram.



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Wiring terminations circuit breaker type NZM...2...-NA (CNA) Wiring terminations molded case switch type N(S)2...-NA

Connector Type	Wire size	Wire 75° C	Max. A-Rating	Tightening-Torque
NZM4-XKC	1 x AWG 12 - 350 kcmil	Cu only	250	14 Nm (124 lb-in) 5 Nm (44 lb-in) (AWG10)
NZM4-XKA	1 x AWG 6 - 350 kcmil	Cu only	250	30 Nm (265 lb-in)
1) NZM4-XKS	1 x AWG 12 - 350 kcmil	Cu only	250	14 Nm (124 lb-in)
2) Integrated Auxiliary Terminal	1 x AWG 12 - 18	Cu only		1.2 Nm (11 lb-in)

- 1) Connector Pads Type NZM2-XKS for Compression Crimp lugs supplied standard on all NZM2 circuit breakers and switches.
- 2) Integrated Auxiliary Terminal on Barrel (Tunnel) Mechanical lug Connector Type NZM2-XKA only.

