

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

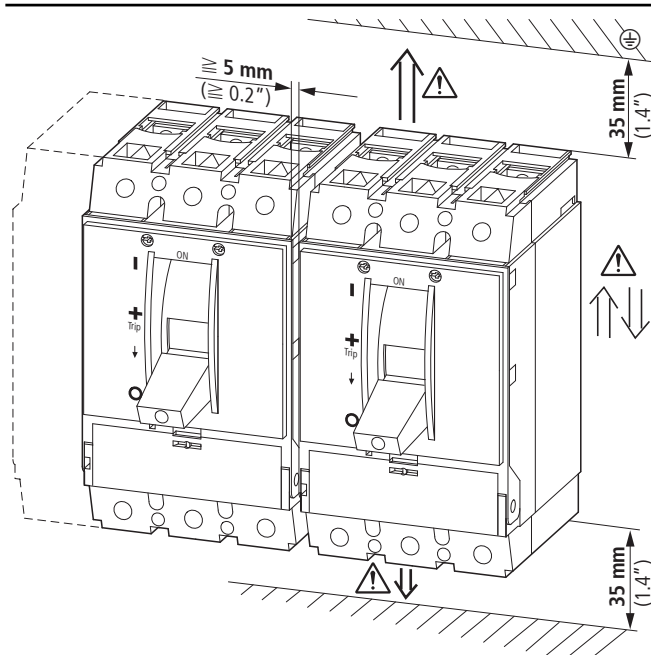
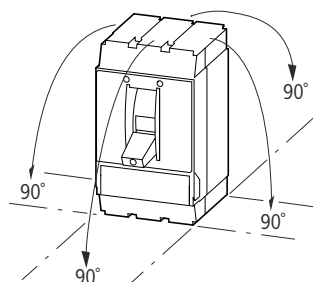
NZMN(H)(L)2-VE...(-BT)-NA

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

Blowout direction in case of a short-circuit
Ausblasrichtung im Kurzschlussfall
Dégagement gazeux en cas de court-circuit
Dirección de salida de los gases en caso de cortocircuito
Direzione di estinzione in caso di corto circuito
短路时的排空方向

Направление продувки в случае короткого замыкания



(en) Electric current! Danger to life!

Only skilled or instructed persons may carry out the following operations.

(de) Lebensgefahr durch elektrischen Strom!

Nur Elektrofachkräfte und elektrotechnisch unterwiesene Personen dürfen die im Folgenden beschriebenen Arbeiten ausführen.

(fr) Tension électrique dangereuse !

Seules les personnes qualifiées et averties doivent exécuter les travaux ci-après.

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

El trabajo a continuación descrito debe ser realizado por personas cualificadas y advertidas.

(it) Tensione elettrica: Pericolo di morte!

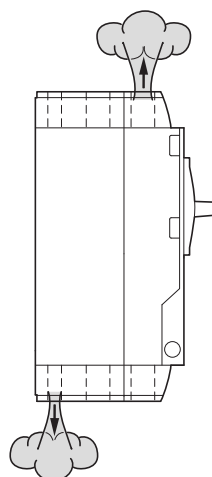
Solo persone abilitate e qualificate possono eseguire le operazioni di seguito riportate.

(zh) 触电危险 !

只允许专业人员和受过专业训练的人员进行下列工作。

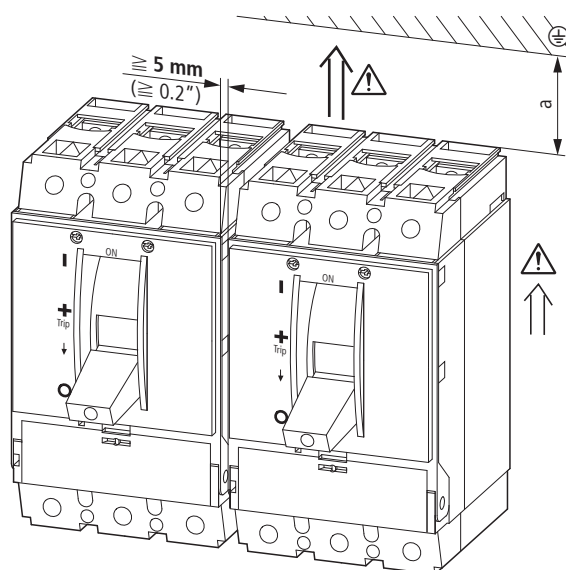
(ru) Электрический ток! Опасно для жизни!

Только специалисты или проинструктированные лица могут выполнять следующие операции.



NZMB(C)2-A... ≤ 250 A

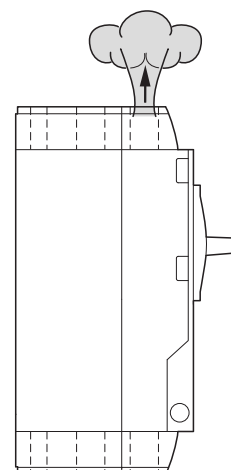
(P)N2(-4)-...



Blowout direction in case of a short-circuit
Ausblasrichtung im Kurzschlussfall
Dégagement gazeux en cas de court-circuit
Dirección de salida de los gases en caso de cortocircuito
Direzione di estinzione in caso di corto circuito
短路时的排空方向

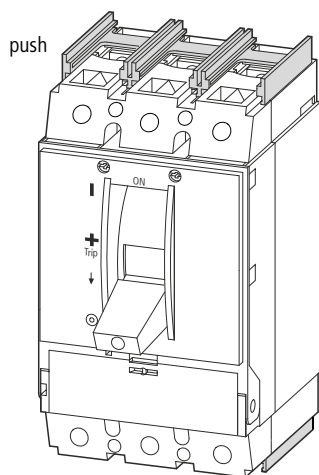
Направление продувки в случае короткого замыкания

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



-NA
-CNA
(UL/CSA models)

Above 480 V, use of insulating plate Cat. No. IPXXX, to be mounted under the breaker or switch, is required.



(en) Caution!

The removal or exchange of parts during mounting may become necessary. Refer to installation instructions for proper assembly and to maintain electrical clearances.

(de) Vorsicht!

Für die Durchführung der beschriebenen Arbeiten kann das Entfernen oder der Austausch von Teilen notwendig sein. Bitte alle Installations-Anweisungen beachten, um die erforderlichen Luft- und Kriechstrecken nach dem Zusammenbau zu gewährleisten.

(fr) Attention !

L'enlèvement ou l'échange de certaines pièces pendant le montage est parfois nécessaire. Consultez l'instruction d'assemblage pour assurer une installation conforme aux normes.

(es) Atención!

Con el fin de llevar a cabo los trabajos descritos, puede ser necesario eliminar o cambiar alguna pieza. Le rogamos tenga en cuenta todas las instrucciones de instalación para así garantizar las líneas de fuga y efluvio necesarias tras el montaje.

(it) Attenzione!

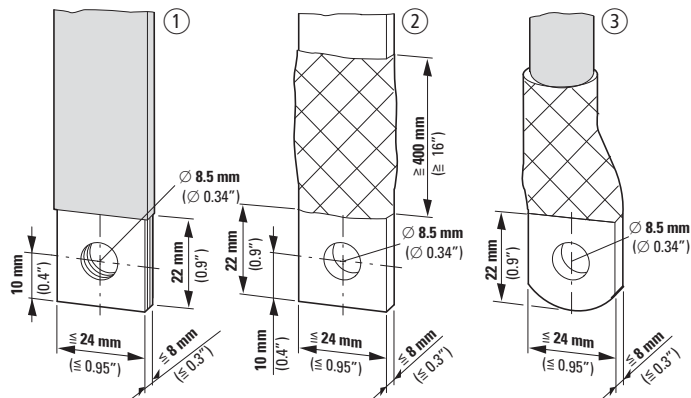
Per l'esecuzione degli interventi descritti potrebbe essere necessaria la rimozione o sostituzione di alcuni pezzi. Attenersi alle istruzioni d'installazione per garantire dopo l'assemblaggio le vie di dispersione necessarie.

(zh) 小心!

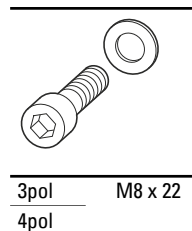
执行所描述的操作时可能需要拆除或更换零部件。请遵守所有相关的安装说明，以确保在组装后能获得需要的空间距离或爬电距离。

(ru) Осторожно!

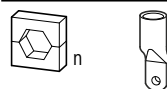
При проведении описанных процедур может возникнуть необходимость демонтировать или заменить детали. Для обеспечения надлежащих зазоров и вывода тока утечки, соблюдайте все инструкции по монтажу.



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



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

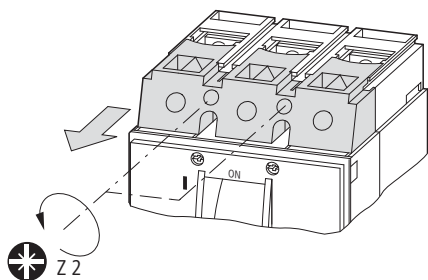


n

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

n = Number of crimps
n = Anzahl der Pressungen
n = Nombre de sertissages
n = Número de compresiones
n = Numero delle crimpature
n = 压制数量
n = Число прессований

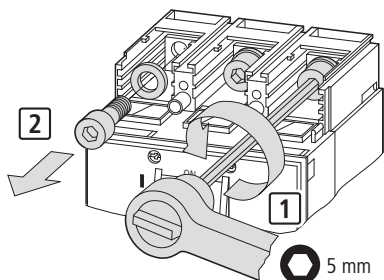
1



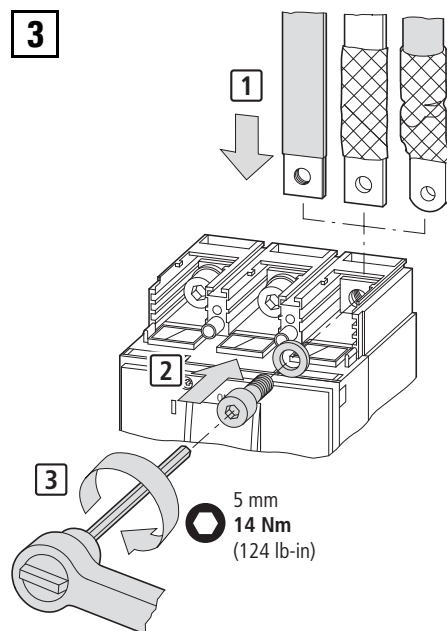
UL/CSA models:

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).

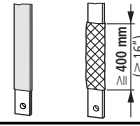
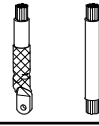
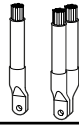
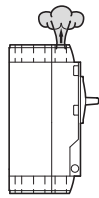
2



3

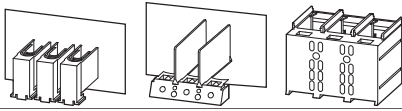


NZMB(C)2(-4)-A160(250)



XKSAE oder* XKP oder* XKSA

≤ 415 V ① +

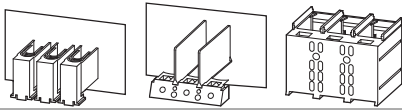


①

①

XKSAE oder* XKP oder* XKSA

≤ 525 V ① +

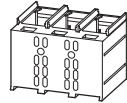


①

①

XKSA

> 525 V ① +



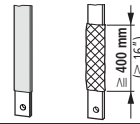
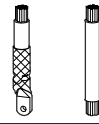
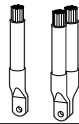
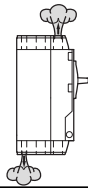
①

①

① Basic device – Grundgerät – Appareil de base – Aparato base – Apparecchio base – 基础设备 – Основное устройство
+ Combination options – Kombinationsmöglichkeiten – Combinaisons possibles – Combinaciones posibles – Combinazioni possibili
组合方法 – Комбинационные возможности

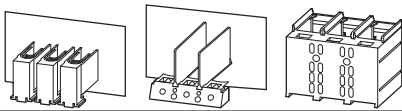
* or – oder – ou – ó – oppure – 或者 – или

NZM2(-4)-...300



XKSAE oder* XKP oder* XKSA

≤ 415 V ① +

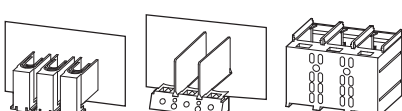


①

①

XKSAE oder* XKP oder* XKSA

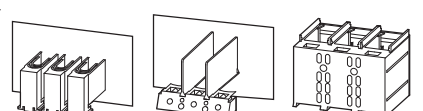
≤ 525 V ① +



①

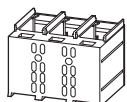
XKSAE oder* XKP oder* XKSA

① +



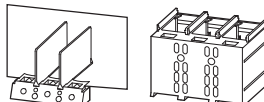
XKSA

≤ 690 V ① +



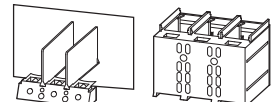
XKP oder* XKSA

① +



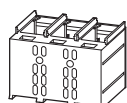
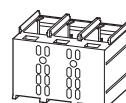
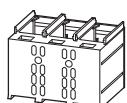
XKSA

① +



XKSA

> 690 V ① +

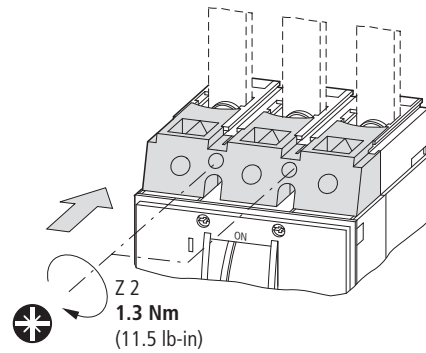
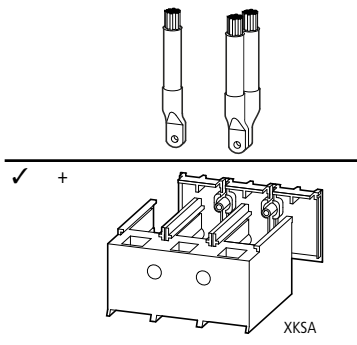


① Basic device – Grundgerät – Appareil de base – Aparato base – Apparecchio base – 基础设备 – Основное устройство
+ Combination options – Kombinationsmöglichkeiten – Combinaisons possibles – Combinaciones posibles – Combinazioni possibili
组合方法 – Комбинационные возможности

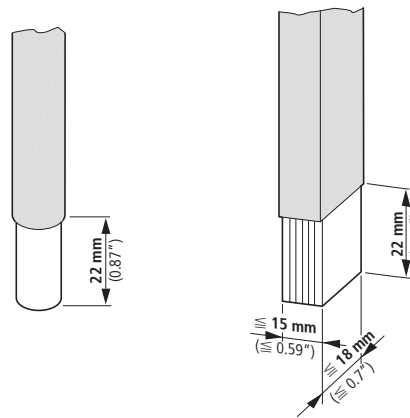
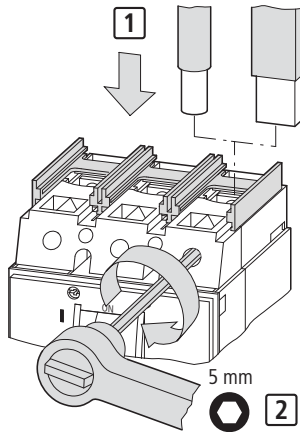
* or – oder – ou – ó – oppure – 或者 – или

NZMB(C)2-A... ≤ 300 A
(P)N2(-4)-...

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



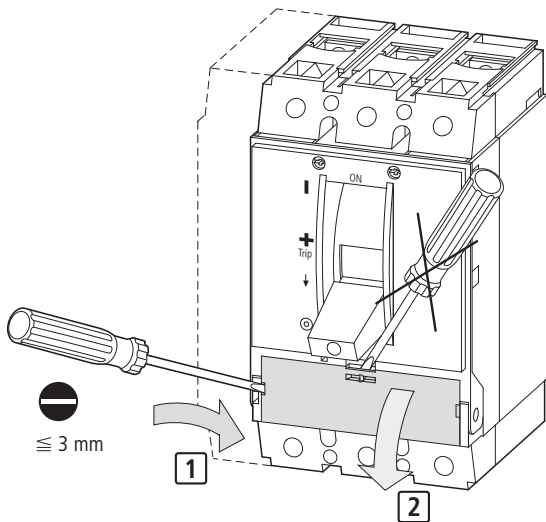
Nm	lb-in
14	> 10 mm ² , > AWG8
5	≤ 10 mm ² , $\leq$ AWG8
123	AWG 8
44	AWG 8

1 x 4 – 185 mm ²	$\geq 2 \times 9 \times 0.8$ mm
2 x 4 – 70 mm ²	$\geq 2 \times 0.35" \times 0.03"$
1 x AWG12 – 350 kcmil	

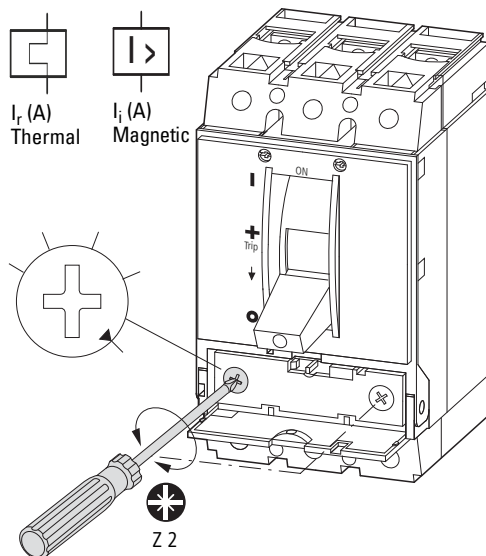
UL/CSA = CU only, Ampacity per 75° C Table.

Settings – Einstellung – Réglages – Parámetros – Regolazione – 设置 – Настройка

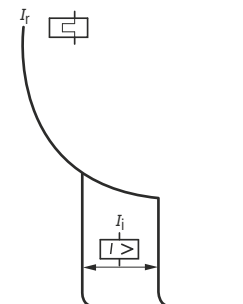
1 NZMB(C)(N)(H)(L)2(-4)-A(M)(S)...
NZM...2-A(AF)...-NA
NZM...2-S...-CNA



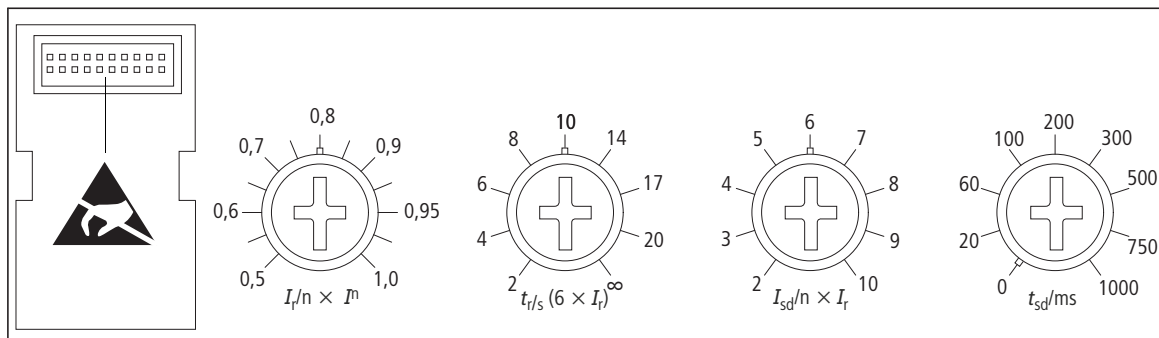
2 NZMB(C)(N)(H)(L)2(-4)-A(M)(S)...
NZM...2-A(AF)...-NA
NZM...2-S...-CNA



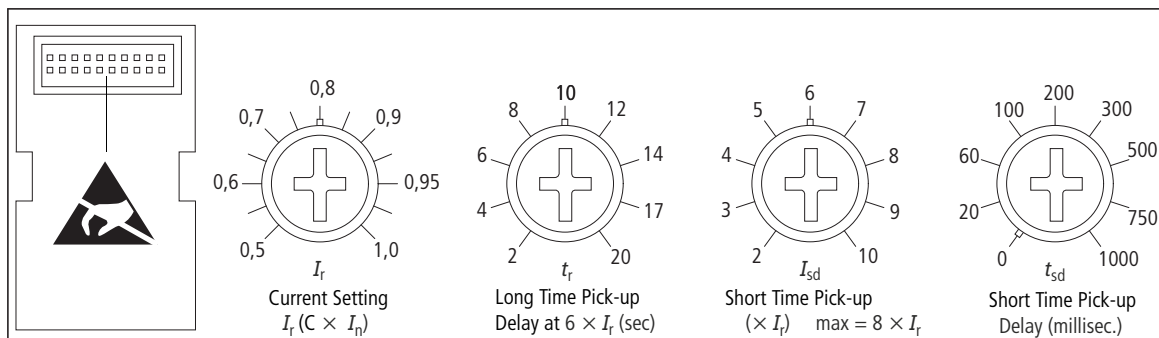
Note: On certain models with UL/CSA labeling the thermal trip setting is fixed and only the magnetic trip (instantaneous) setting is adjustable.



Setting I_i with DC = setting I_i AC/1.35
Einstellwert I_i bei DC = Einstellwert I_i AC/1,35
Valeur de réglage I_i avec DC = valeur de réglage I_i AC/1,35
Valor de respuesta I_i con DC = valor de respuesta I_i AC/1,35
Valore di regolazione I_i con DC = valore di regolazione I_i AC/1,35
DC 的设置值 I_i = AC/1.45 的设置值 I_i
Значение I_i при постоянном токе = I_i при переменном токе /1.35



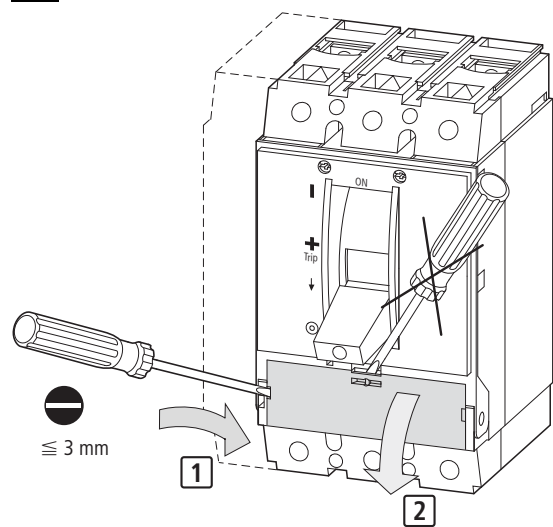
-NA, -CNAUL/CSA Electronic Trip Circuit Breakers



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

Settings – Einstellung – Réglages – Parámetros – Regolazione – 设置 – Настройка

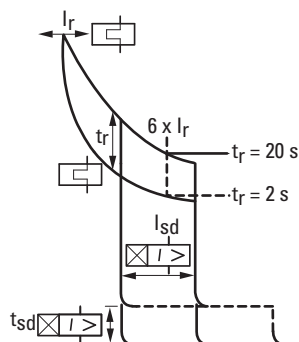
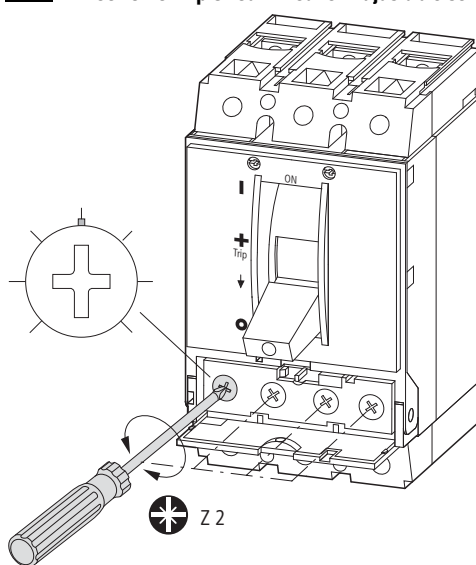
1



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 $\times I_n$) for Long Time Pick-up.

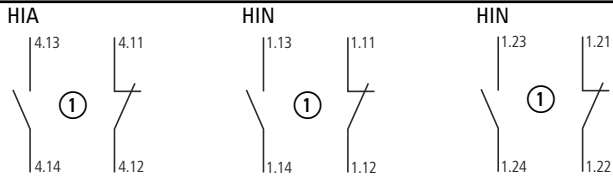
t_r = Adjustable Long Time Pick-up Delay (2 – 20 sec.) factory set at 10 seconds.

I_{sd} = Adjustable Short Time Pick-up (2 – 10 $\times I_r$) factory set at $6 \times I_r$.

t_{sd} = Short Time Pick-up Delay (0 – 1000 ms) factory set at 0 ms.

Note: Instantaneous Pick-up fixed at $12 \times I_n$.

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



① or – oder – ou – ó – oppure – 或者 – или

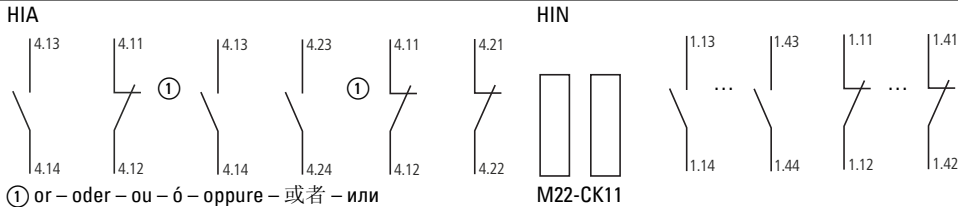
-NA -CNA (UL/CSA)	
$I_{th} = I_e$ U_e (V)	I_e (A)
600 AC	5 A
250 DC	1 A
Pilot Duty Ratings: B 600, Q 300 Above 300 V AC Same polarity	

- 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

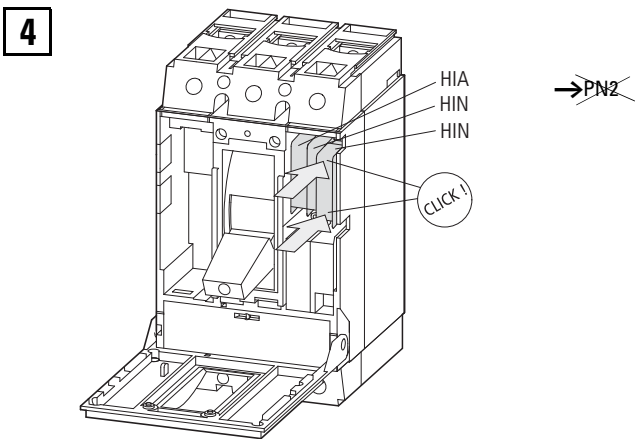
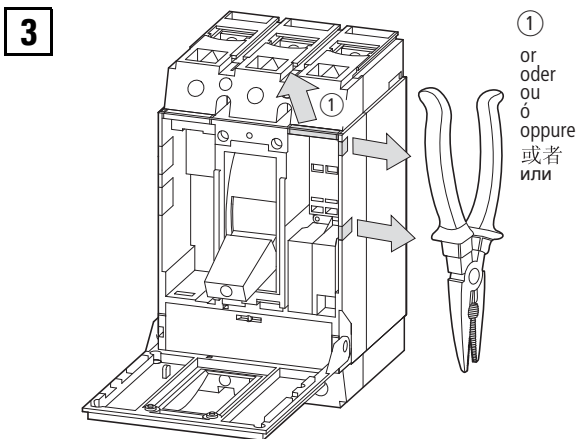
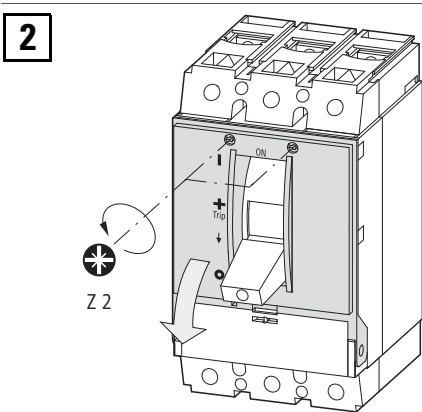
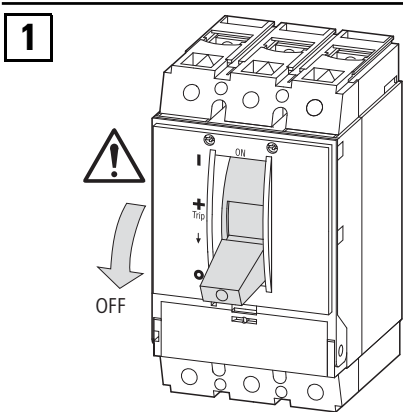
M22-K11
M22-CK20
M22-CK02



① or – oder – ou – ó – oppure – 或者 – или

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
DC-13	24 3
	42 1
	60 0.8
	110 0.5
	220 0.2

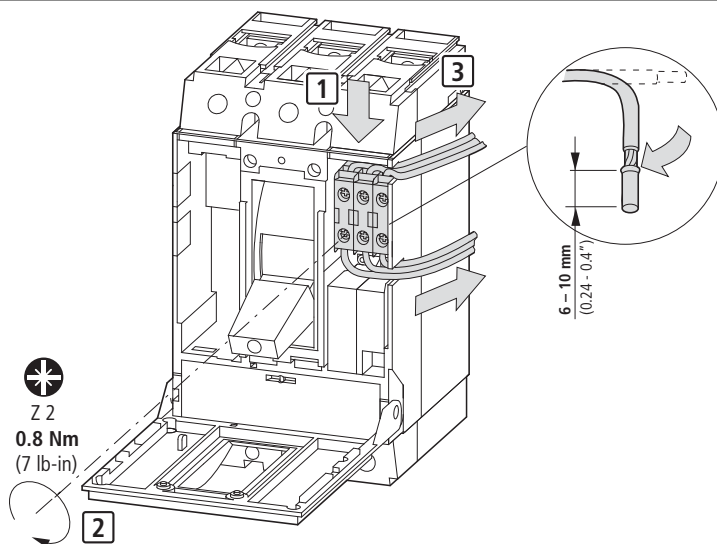


5a M22-K10, M22-K01 (Screw Terminals)

...K10: N. O. Contact

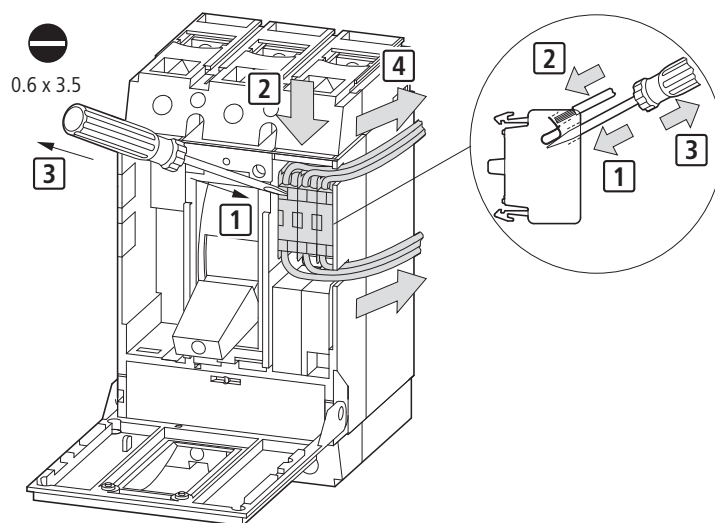
...K01: N. C. Contact

	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)

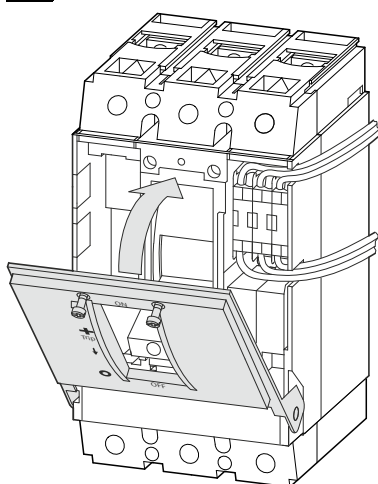
	2 x 0.75 – 2.5 mm ²
	2 x AWG 18 – AWG 14
	
UL/CSA = Cu only	



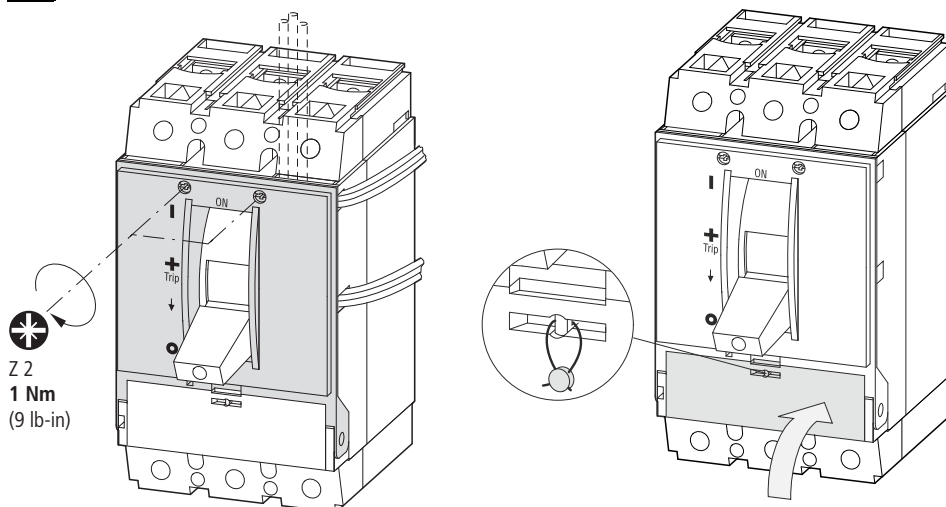
5c M22-CK11, M22-CK20, M22-CK02 (Clamp Terminals)

	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

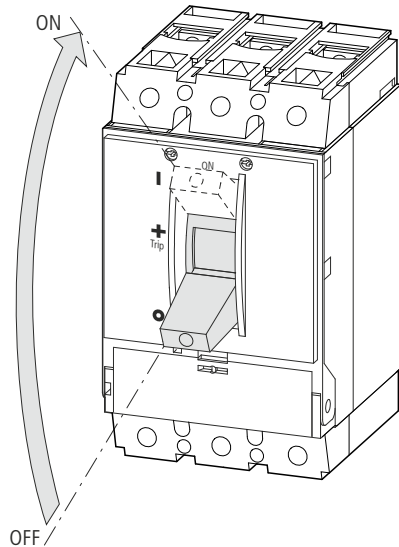
6



7

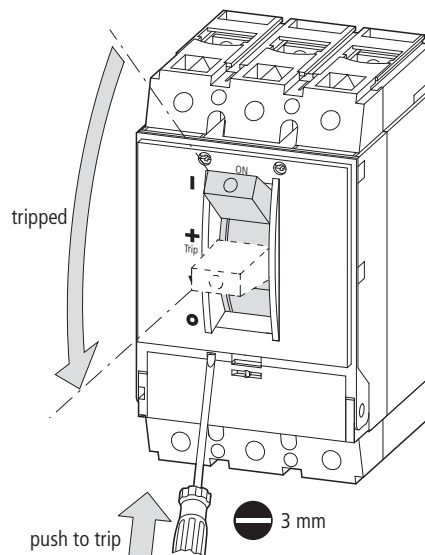


TEST 1



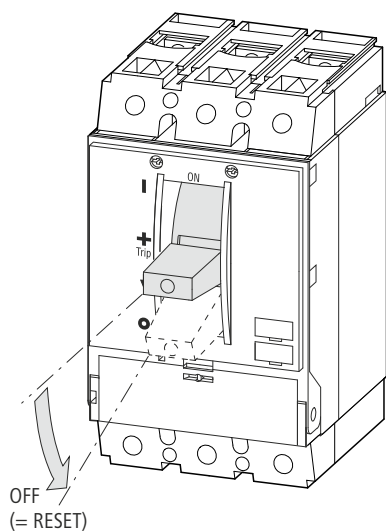
TEST 2

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

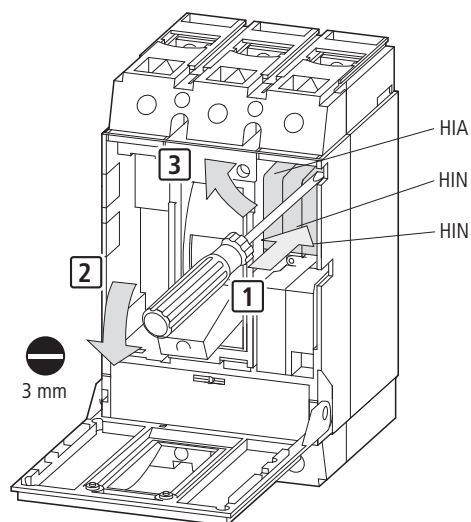


TEST 3

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



Dismounting – Demontage – Démontage – Desmontaje – Smontaggio – 拆卸 – Демонтаж

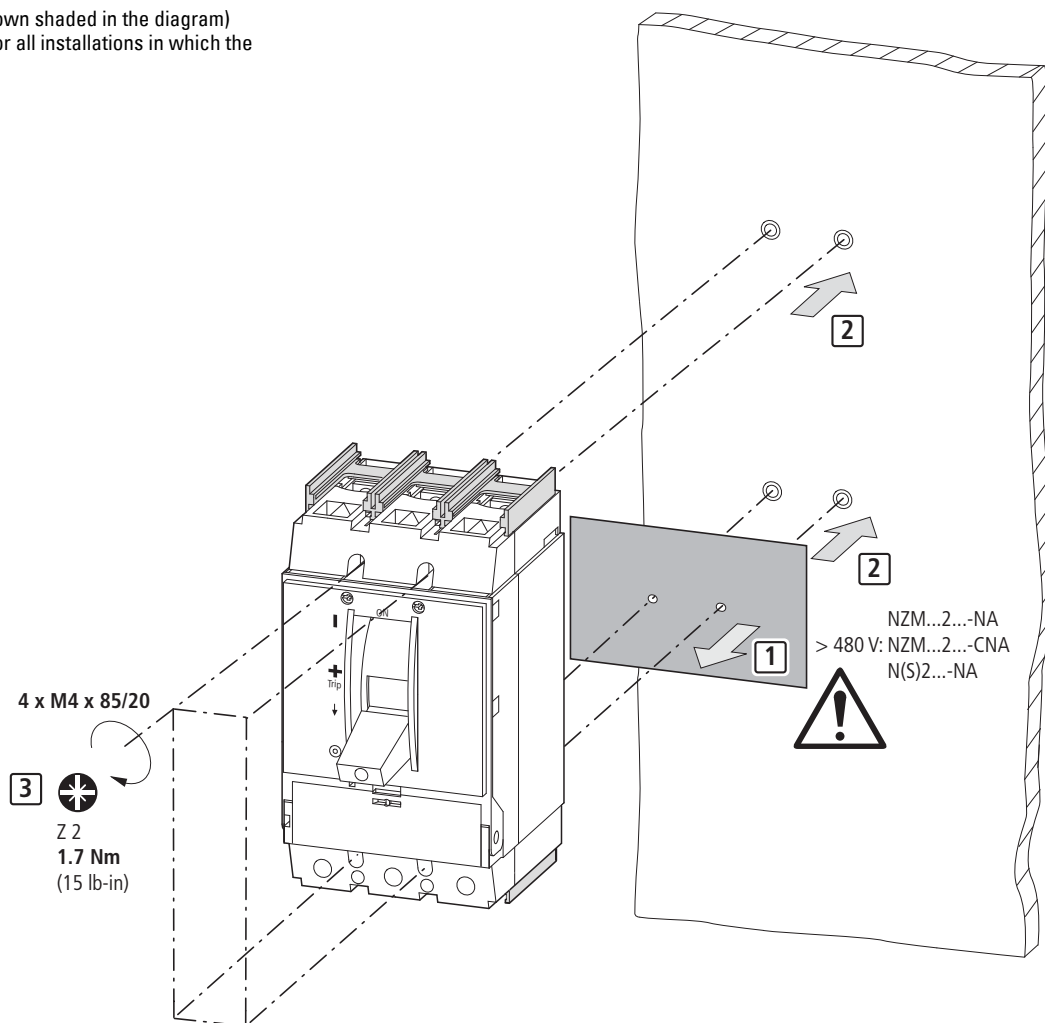


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Mounting – Montage – Montage – Montaje – Montaggio – 安装 – Монтаж

Insulating plate, Cat. No. IPXXX

Mounting of insulating plate IPXXX, (shown shaded in the diagram) is required on UL/CSA labeled models for all installations in which the Line Voltage exceeds 480 V.
Mount as shown in diagram.



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.

