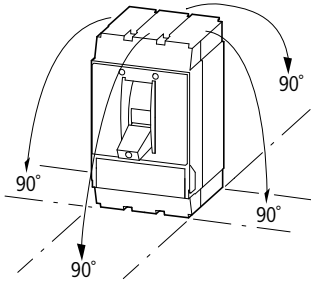




11/15 IL01206006Z  
(AWA1230-1916, AWA1230-2538)

**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-VEF...(-BT)-NA  
NZMN(H)(L)2-SE...(-BT)-CNA  
NZMN(H)2-ME...(-BT)-NA  
N(S)2-...(-BT)-NA**

**Instruction Leaflet  
Montageanweisung  
Notice d'installation  
Instrucciones de montaje  
Istruzioni per il montaggio  
安装说明  
Инструкция по монтажу**

**⚠️ 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.

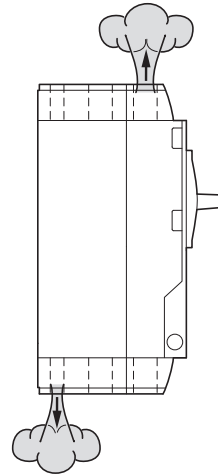
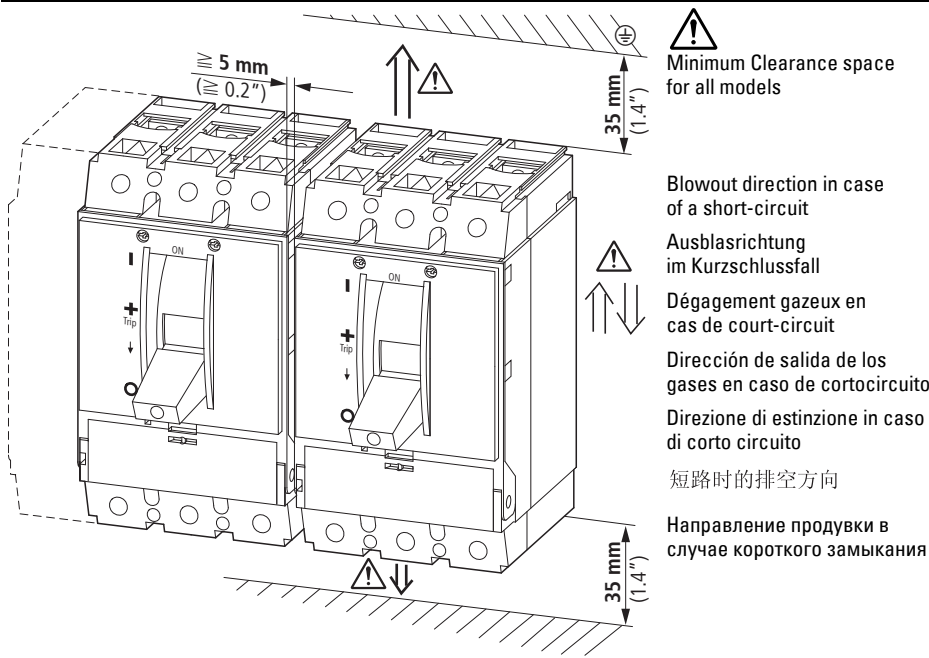
**Ⓝ fr Tension électrique dangereuse !**  
Seules les personnes qualifiées et averties doivent exécuter les travaux ci-après.

**Ⓝ es ¡Corriente eléctrica! ¡Peligro de muerte!**  
El trabajo a continuación descrito debe ser realizado por personas cualificadas y advertidas.

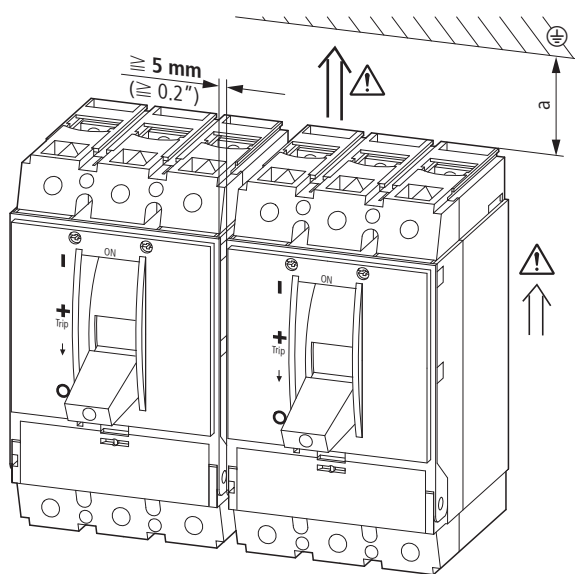
**Ⓝ it Tensione elettrica: Pericolo di morte!**  
Solo persone abilitate e qualificate possono eseguire le operazioni di seguito riportate.

**Ⓝ 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.

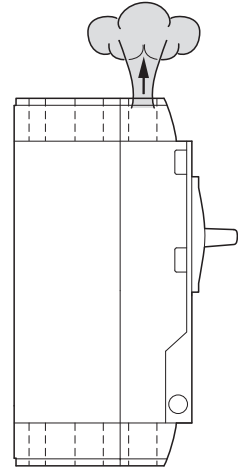


**NZMB(C)2-A... ≤ 250 A  
(P)N2(-4)-...**



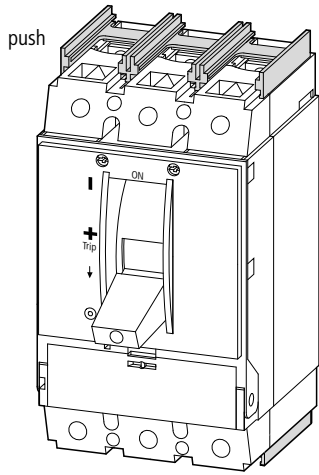
	a	
	mm	inch
NZMB(C)2-A...	60	2.4
(P)N2(-4)-...	35	1.4

**⚠️ 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



**-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.



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

**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.

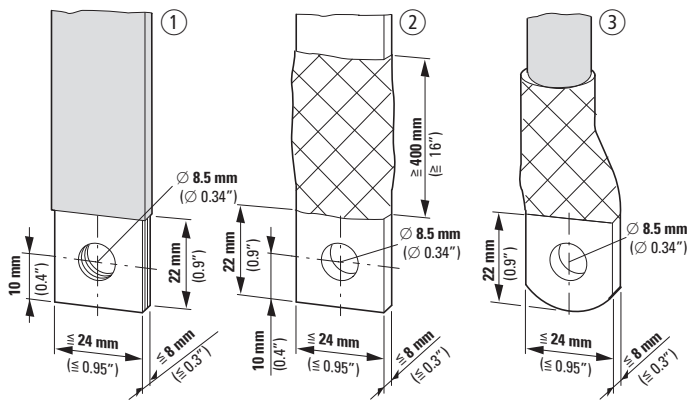
**Attention!**  
L'enlèvement ou l'échange de certaines pièces pendant le montage est parfois nécessaire. Consultez l'instruction d'assemblage pour assurer une installation conforme aux normes.

**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 eflujo necesarias tras el montaje.

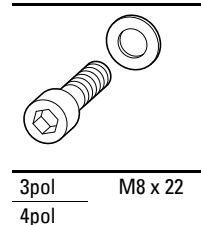
**Attenzione!**  
Per l'esecuzione degli interventi descritti potrebbe essere necessaria la rimozione o sostituzione di alcuni pezzi. Attenersi alle istruzioni di installazione per garantire dopo l'assemblaggio le vie di dispersione necessarie.

**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。

**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.



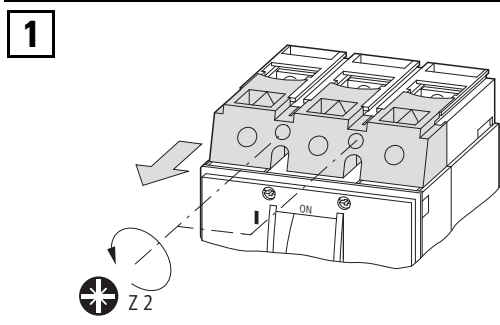
①	②	③
≅ 2 x 9 x 0.8 mm	≅ 16 x 5 mm	1 x 4 – 185 mm <sup>2</sup>
≅ 2 x 0.35" x 0.03"	≅ 0.63" x 0.2"	
≅ 10 x 16 x 0.8 mm	≅ 20 x 5 mm	2 x 4 – 70 mm <sup>2</sup>
≅ 10 x 0.63" x 0.03"	≅ 0.8 x 0.2"	
≅ 6 x 24 x 0.5 mm		
≅ 6 x 0.95" x 0.02"		



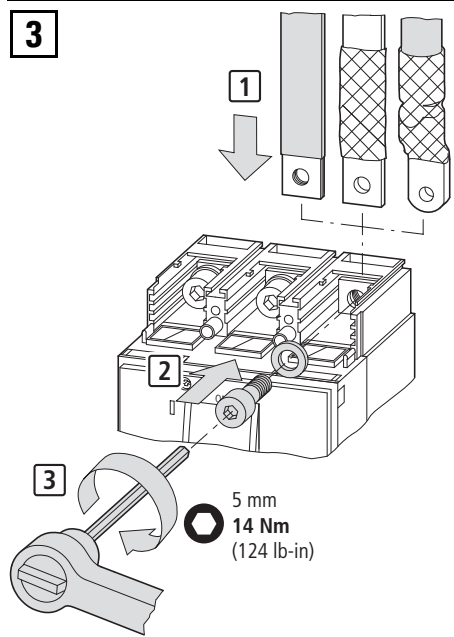
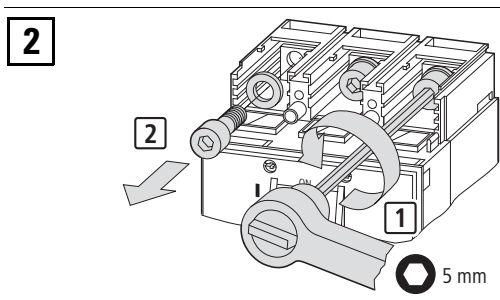
A	Terminal
A = 95 mm <sup>2</sup>	KS95-NZM7
A = 120 mm <sup>2</sup>	KS120-NZM7
A = 150 mm <sup>2</sup>	KS150-NZM7
A = 185 mm <sup>2</sup>	NZM2-XKS185

n	Terminal
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

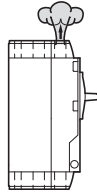


**UL/CSA models:**  
Follow diagrams below when making connections using XKS screw terminations for compression crimp lugs:  
– Always use terminal cover XKSA when making connections with bare bus or non-insulated crimp lugs, or when two wires per phase are connected.  
To mount terminal cover XKSA,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



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

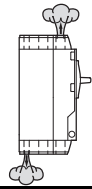


$\leq 415$ V	<p>XKSAB oder* XKSAC oder* XKSAE oder* XKSAF</p> <p>① + </p> <p>① </p> <p>① </p>
$\leq 525$ V	<p>XKSAB oder* XKSAC oder* XKSAE oder* XKSAF</p> <p>① + </p> <p>① </p> <p>① </p>
$> 525$ V	<p>XKSA</p> <p>① + </p> <p>① </p> <p>① </p>

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

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**NZM2(-4)-...300**

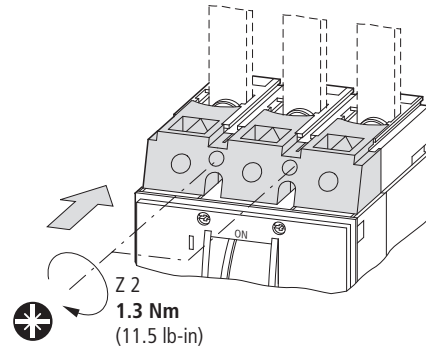
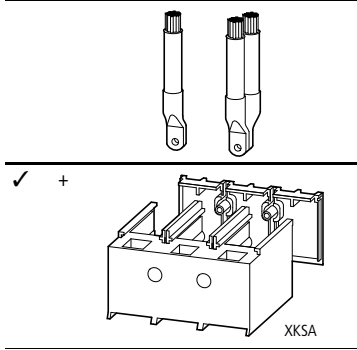


$\leq 415$ V	<p>XKSAB oder* XKSAC oder* XKSAE oder* XKSAF</p> <p>① + </p> <p>① </p> <p>① </p>
$\leq 525$ V	<p>XKSAB oder* XKSAC oder* XKSAE oder* XKSAF</p> <p>① + </p> <p>① </p> <p>① + </p>
$\leq 690$ V	<p>XKSA</p> <p>① + </p> <p>① + </p> <p>① + </p>
$> 690$ V	<p>XKSA</p> <p>① + </p> <p>① + </p> <p>① + </p>

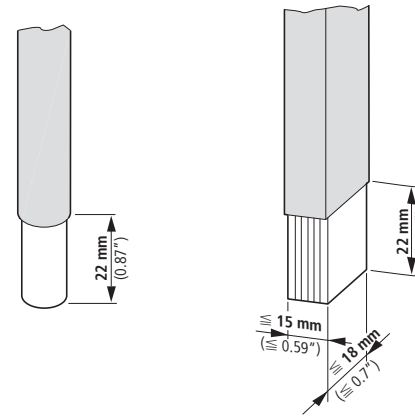
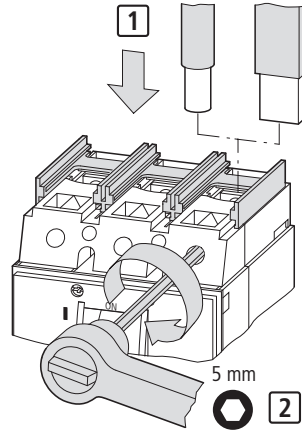
① Basic device – Grundgerät – Appareil de base – Aparato base – Apparecchio base – 基础设备 – Основное устройство  
 + Combination options – Kombinationsmöglichkeiten – Combinaisons possibles – Combinaciones posibles – Combinazioni possibili  
 组合方法 – Комбинационные возможности  
 \* or – oder – ou – ó – 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 <sup>2</sup> , > AWG8	123	AWG 8
5	≤ 10 mm <sup>2</sup> , ≤ AWG8	44	AWG 8

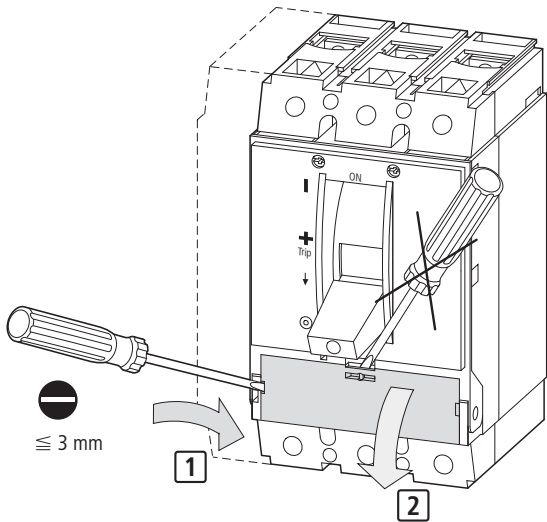
1 x 4 – 185 mm <sup>2</sup>	≈ 2 x 9 x 0.8mm ≈ 2 x 0.35" x 0.03"
2 x 4 – 70 mm <sup>2</sup>	
1 x AWG12 – 350 kcmil	

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

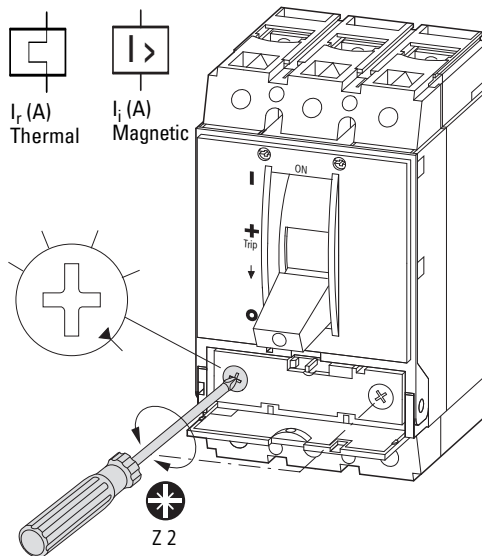
11/15 IL01206006Z

**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**



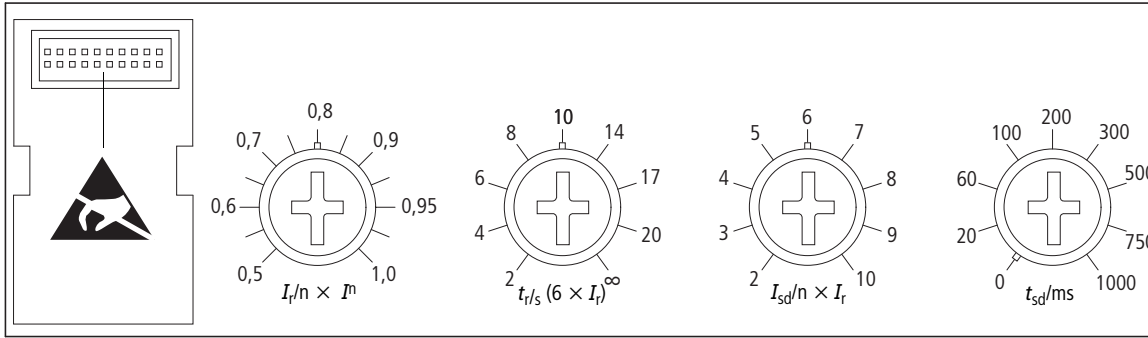
**2 NZMB(C)(N)(H)(L)2(-4)-A(M)(S)...  
NZM...2-A(AF)...-NA  
NZM...2-S...-CNA**



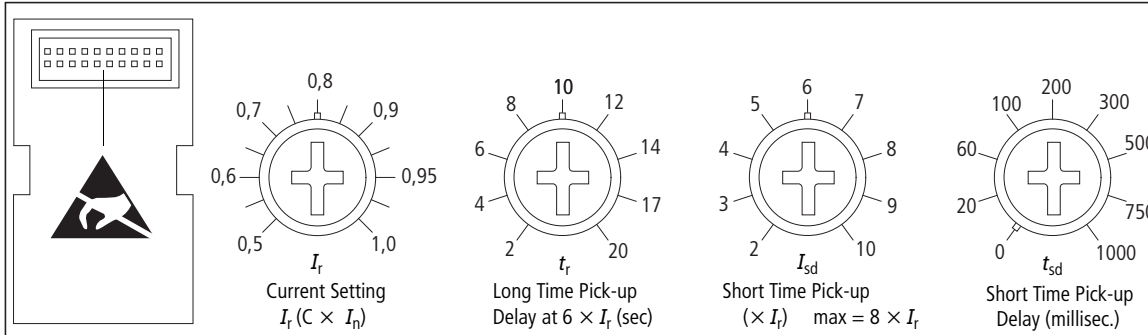
**Note:** On certain models with UL/CSA labeling the thermal trip setting is fixed and only the magnetic trip (instantaneous) setting is adjustable.

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

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



**-NA, -CNAUL/CSA Electronic Trip Circuit Breakers**

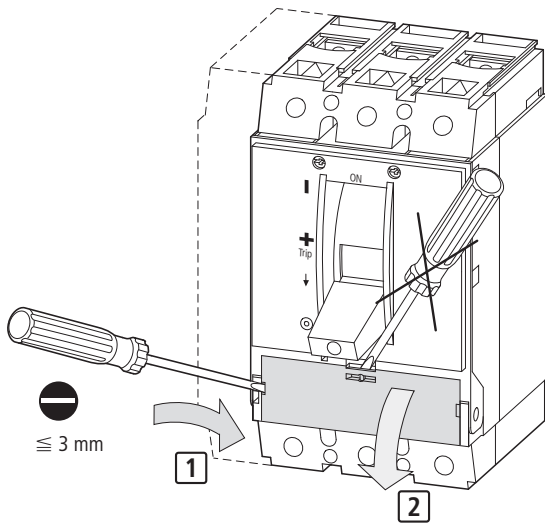


NZM2-VE...-NA	x	x	x	x
NZM2-VEF...-NA	-	x	x	x
NZM2-SE...-CNA	-	-	x	-

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

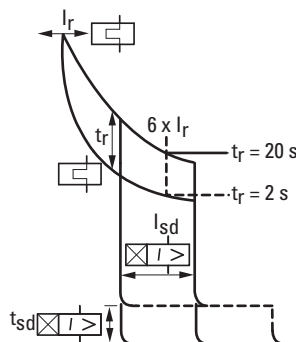
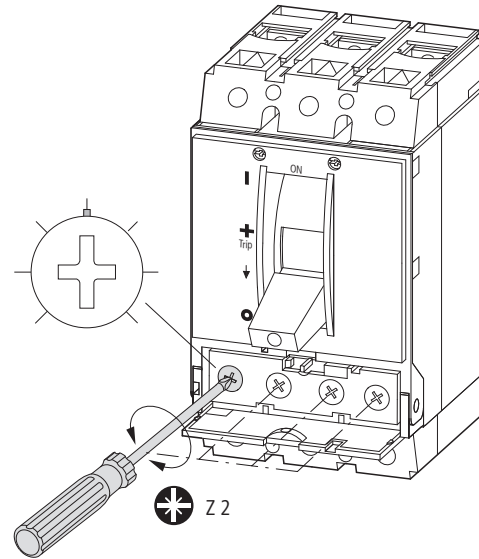
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**1**



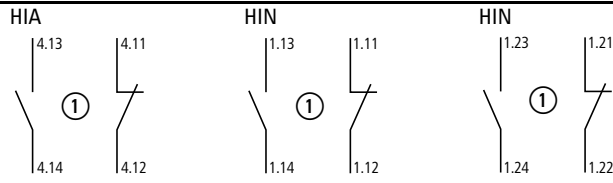
**2**

**$I_r$  [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 – 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.



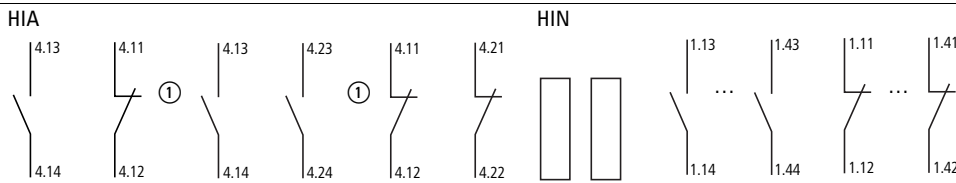
**Note:**

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**



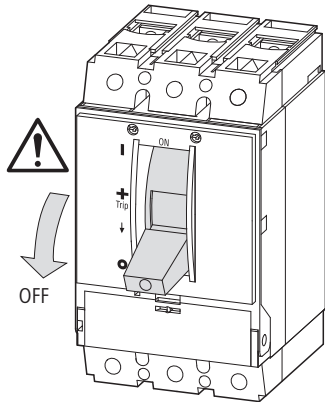
① or – oder – ou – ó – oppure – 或者 – или

M22-CK11  
 ①  
 M22-CK20  
 ①  
 M22-CK02

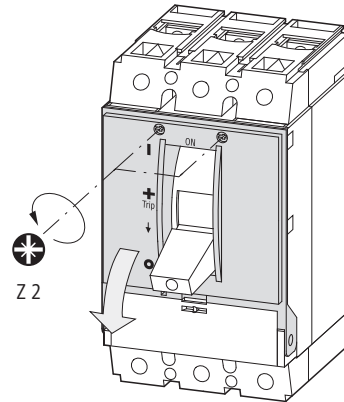
**IEC**

$I_{th} = I_e$		
$U_e$ (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

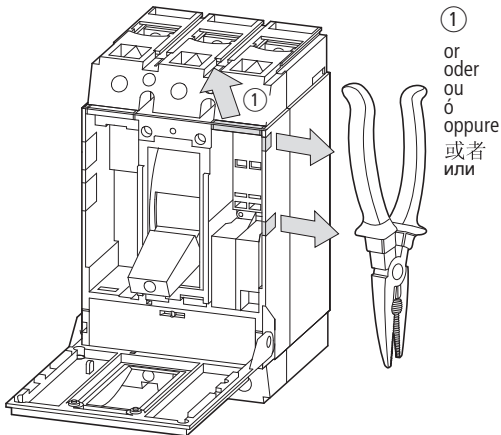
**1**



**2**

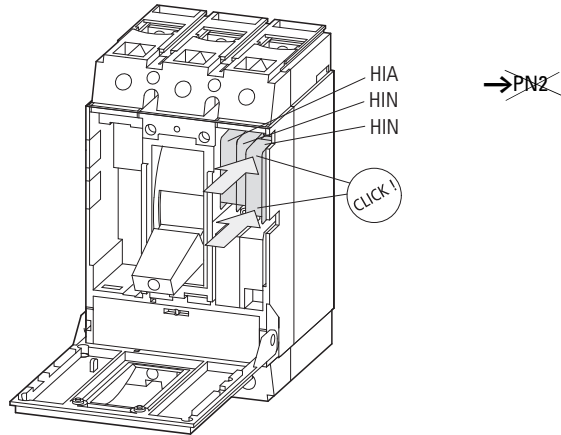


**3**



①  
 or  
 oder  
 ou  
 ó  
 oppure  
 或者  
 или



**4**

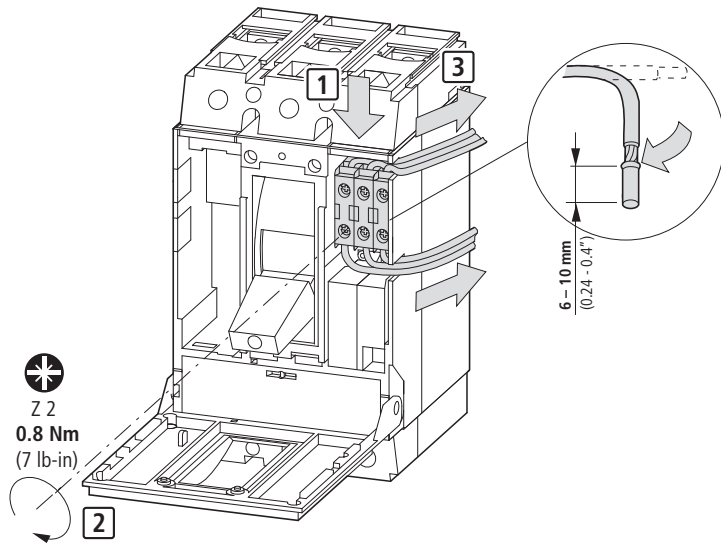


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**5a** M22-K10, M22-K01  
(Screw Terminals)

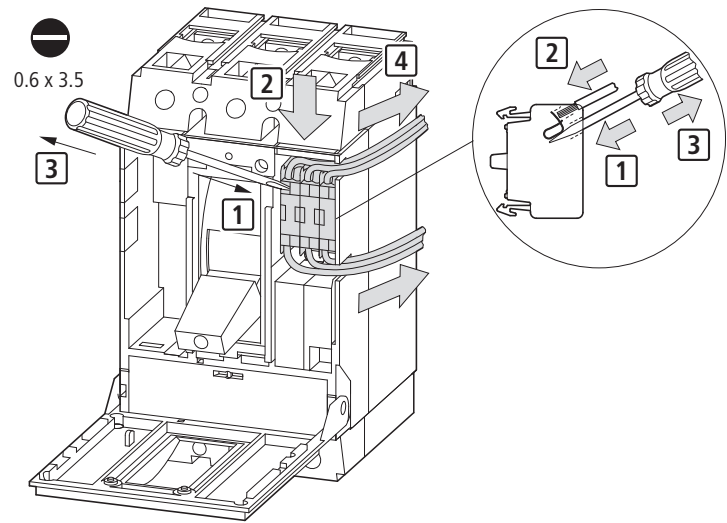
...K10: N. O. Contact  
...K01: N. C. Contact

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








**5b** M22-CK10, M22-CK01  
(Clamp Terminals)

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

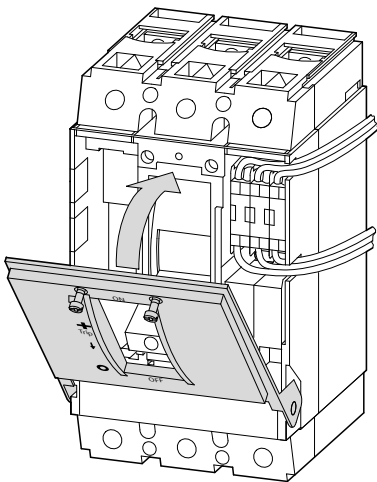


**5c** M22-CK11, M22-CK20, M22-CK02  
(Clamp Terminals)

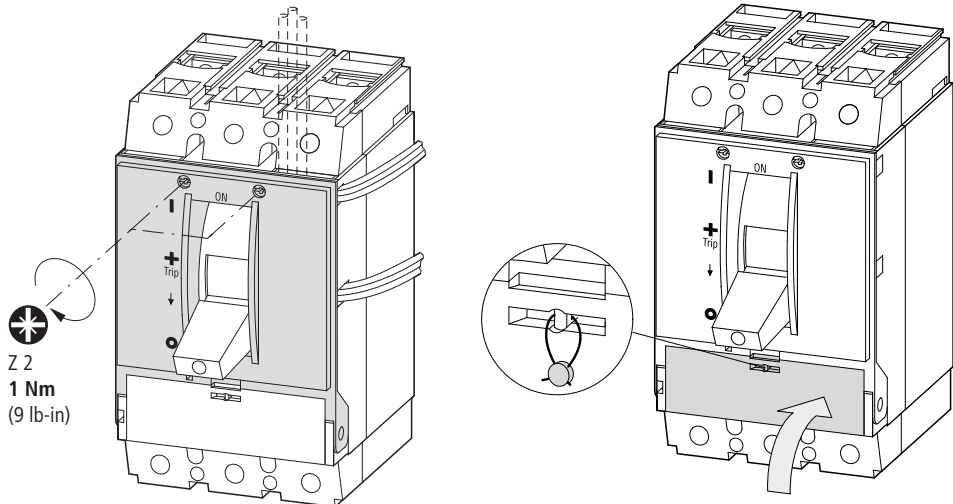
	<b>a = 8 mm</b> (a = 0.3")
	1 x 0.5 – 1.5 mm <sup>2</sup>
	1 x AWG20 – AWG16
	2 x 0.5 – 0.75 mm <sup>2</sup>
	2 x AWG20 – AWG18

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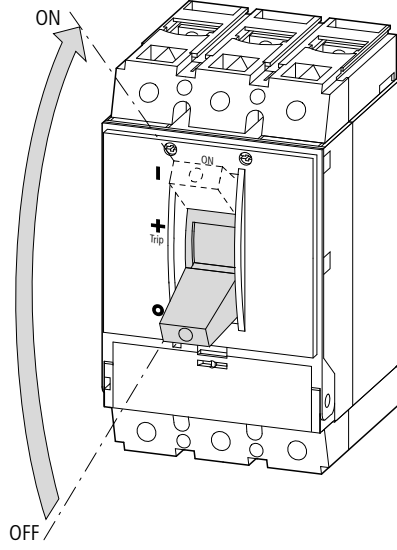
**6**



**7**

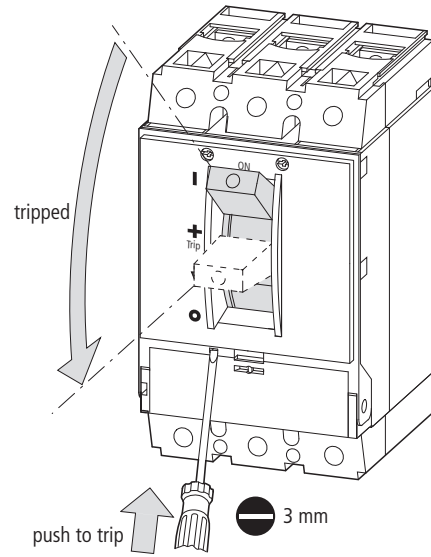


**TEST 1**



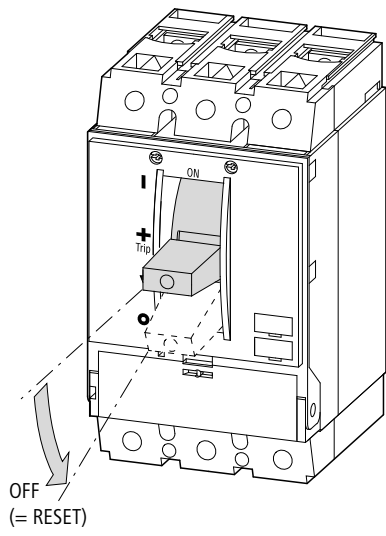
**TEST 2**

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



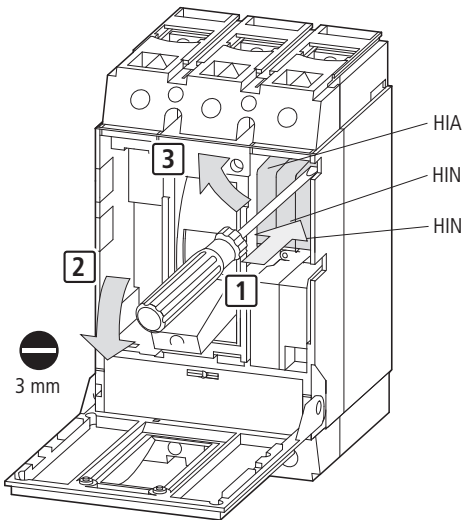
**TEST 3**

~~PN2...~~



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

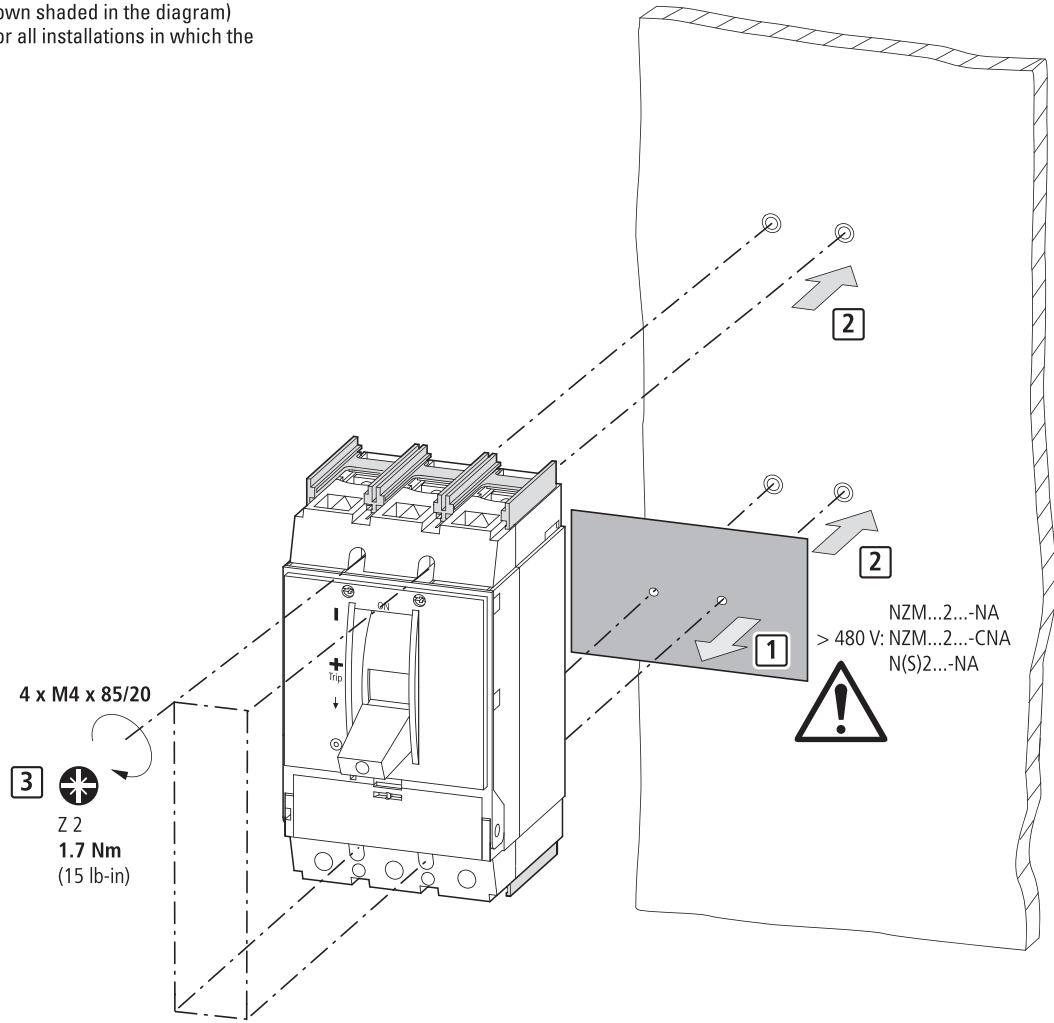




**Mounting – Montage – Montage – Montaje – Montaggio – 安装 – Монтаж**

**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.



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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.

