

SAFETY INSTRUCTIONS

**AF1350(T), AF1650(T), AF2050(T), AF1650N8**  
**Contactors/Auxiliary Contacts**

Doc.no. 1SFC101002M5501 W (03/23)

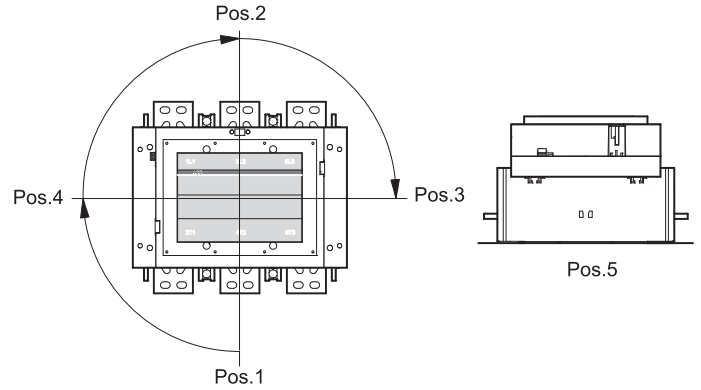
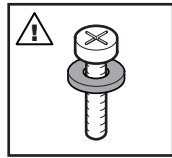
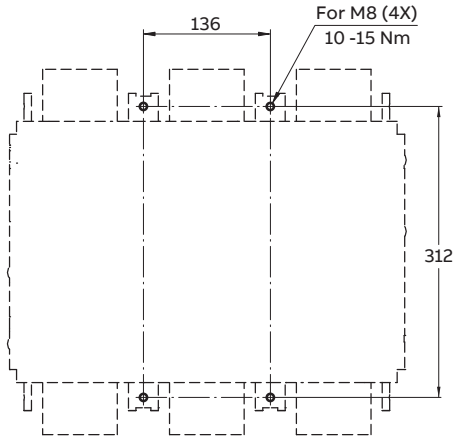
	<p>it <b>Attenzione: Tensione pericolosa! Fare riferimento alle istruzioni per l'uso.</b>          Prima di intervenire su questo dispositivo, scollegare e isolare tutte le fonti di alimentazione. <b>Attenzione!</b> L'installazione deve essere eseguita esclusivamente da un installatore qualificato.</p>
<p>ar <b>تحذير: جهد كهربائي خطري!</b>          راجع تعليمات التشغيل.          افصل الكهرباء وقم بتأمينها قبل العمل في هذا الجهاز.          تنبيه! يجب عدم التركيب إلا من خلال شخص على دراية بمجال التقنية الكهربائية.</p>	<p>lt <b>Įspėjimas: Pavojinga įtampa! Žr. naudojimo instrukcijas.</b> Atjunkite ir laikinai užblokuokite maitinimą prieš dirbdami su šiuo įrenginiu. <b>Dėmesio!</b> Įrengti gali tik asmuo, turintis elektrotechniko patirties.</p>
<p>bg <b>Предупреждение: Опасно напрежение! Вижте инструкциите за работа.</b>          Изключете и блокирайте захранването преди да работите с устройството. <b>Внимание!</b> Да се монтира само от експерт електротехник.</p>	<p>lv <b>Brīdinājums: Bīstams spriegums! Skatiet darba norādījumus.</b> Pirms sākat darbu ar šo ierīci, atvienojiet un bloķējiet strāvas padevi. Uzmanību! Uzstādīšanu drīkst veikt tikai persona ar zināšanām par elektrotehniku.</p>
<p>cs <b>Varování: Nebezpečné napětí! Viz návod k obsluze.</b> Před zahájením prací na tomto zařízení odpojte a uzamkněte napájení. <b>Pozor!</b> Toto zařízení smí instalovat pouze osoba s elektrotechnickou odborností.</p>	<p>nl <b>Waarschuwing: Gevaarlijke spanning! Raadpleeg de installatie-instructies.</b> Koppel dit apparaat los van de stroomvoorziening voordat u werkzaamheden uitvoert. <b>Let op!</b> Installatie mag alleen worden uitgevoerd door een monteur met elektrotechnische expertise.</p>
<p>da <b>Advarsel: Farlig elektrisk spænding! Se installationsinstruktioner.</b> Frakobl enheden, og afbryd strømforsyningen, før du arbejder med denne enhed. <b>Giv agt!</b> Installation må kun foretages af personer med elektroteknisk ekspertise.</p>	<p>no <b>Advarsel: Farlig spenning! Se i bruksanvisningen.</b> Koble fra og steng av strømmen før du arbeider på denne enheten. <b>Forsiktig!</b> Montering skal kun utføres av kvalifiserte personer med elektrokompetanse.</p>
<p>de <b>Warnung: Gefährliche Spannung! Siehe Installationsanleitung.</b> Vor dem Arbeiten Gerät ausschalten und von der Spannungsversorgung trennen. <b>Achtung!</b> Installation nur durch elektrotechnische Fachkraft.</p>	<p>pl <b>Ostrzeżenie: Niebezpieczne napięcie! Patrz: instrukcja instalacji.</b> Przed rozpoczęciem wykonywania pracy z tym urządzeniem odłącz i zablokuj zasilanie. <b>Uwaga!</b> Montaż może wykonywać wyłącznie osoba posiadająca doświadczenie elektrotechniczne.</p>
<p>el <b>Προειδοποίηση: Επικίνδυνη τάση! Ανατρέξτε στις οδηγίες λειτουργίας.</b> Αποσυνδέστε και απομονώστε την παροχή ισχύος προτού ξεκινήσετε τις εργασίες σε αυτήν τη συσκευή. <b>Προσοχή!</b> Η εγκατάσταση πρέπει να γίνεται μόνο από αδειούχο ηλεκτρολόγο εγκαταστάτη.</p>	<p>pt <b>Aviso: Tensão perigosa! Consulte as instruções de instalação.</b> Desconecte e desligue a energia elétrica antes de trabalhar nesse dispositivo. <b>Atenção!</b> A instalação deve ser feita apenas por uma pessoa com especialidade eletrotécnica.</p>
<p>en <b>Warning: Hazardous voltage! Refer to installation instructions.</b> Disconnect and lock out power before working on this device. <b>Attention!</b> Installation by person with electrotechnical expertise only.</p>	<p>ro <b>Avertisment: Tensiune electrică periculoasă! Consultați instrucțiunile de utilizare.</b> Deconectați și închideți sursa de energie înainte de a lucra cu acest dispozitiv. <b>Atenție!</b> Instalarea trebuie realizată doar de către o persoană cu expertiză electrotehnică.</p>
<p>es <b>Advertencia: ¡Tensión peligrosa! Consulte las instrucciones de instalación.</b> Antes de trabajar con este dispositivo, desconecte y bloquee la corriente. <b>¡Atención!</b> La instalación debe ser realizada únicamente por un técnico electricista.</p>	<p>ru <b>Предупреждение: Опасное электрическое напряжение! Обратитесь к инструкциям по монтажу.</b> Отключите электропитание и обеспечьте безопасность перед началом работ. <b>Внимание!</b> Монтаж должен выполняться только специалистом по электротехническим работам.</p>
<p>et <b>Hoiatus: Elektildõugi oht!</b> Lisateavet vaadake kasutusjuhendist. Enne selle seadmega töötamist ühendage lahti ja lukustage toide. Tähelepanu! Seadet tohib paigaldada ainult elektrotehnilise kogemusega isik.</p>	<p>sk <b>Výstraha: Nebezpečné napätie! Pozrite si návod na použitie.</b> Pred začatím prác na tomto zariadení odpojte a zablokujte napájanie. <b>Pozor!</b> Inštaláciu smie vykonávať len osoba s odbornými znalosťami v oblasti elektrotechniky.</p>
<p>fi <b>Varoitus: Vaarallinen jännite! Katso asennusohje.</b> atkaise virta ja estä virran kytkeminen lukituksella ennen töiden aloittamista. <b>Huomio!</b> Asennuksen saa suorittaa vain henkilö, jolla on kokemusta sähkötekniikasta.</p>	<p>sl <b>Opozorilo: Nevarna napetost! Glejte navodila za uporabo.</b> Pred delom na tej napravi izklopite in zaklenite električno napajanje. <b>Pozor!</b> Namestitve sme izvesti samo elektrotehnični strokovnjak.</p>
<p>fr <b>Avertissement: Tension dangereuse! Consultez les consignes d'installation.</b> Débranchez et verrouillez l'alimentation électrique avant d'entreprendre des travaux sur cet appareil. <b>Attention!</b> L'installation doit être effectuée uniquement par une personne ayant une expertise en électrotechnique.</p>	<p>sv <b>Varning: Livsfarlig spänning! Se i bruksanvisningen.</b> Frånkoppla och blockera anläggning eller en anläggningsdel innan arbete utförs. <b>Obs!</b> Får endast installeras av behörig elektriker.</p>
<p>hr <b>Upozorenje: Opasan napon! Pogledajte upute za ugradnju.</b> Odspojite i isključite struju prije rada na ovom uređaju. <b>Pažnja!</b> Ugradnja je dopuštena samo osobama stručnim u području elektrotehnike.</p>	<p>tr <b>Uyarı: Tehlikeli gerilim! Montaj talimatlarına bakın.</b> Bu cihaz üzerinde çalışmadan önce elektriği kesin ve kilitleyin. <b>Dikkat!</b> Yalnızca elektroteknik uzmanlığı sahip kişiler tarafından kurulabilir.</p>
<p>hu <b>Figyelmeztetés: Veszélyes feszültség! Lásd a használati utasítást.</b> Válassza le és zárja ki az áramellátást, mielőtt a berendezésen dolgozni kezd. <b>Figyelem!</b> Az üzembe helyezés csak elektrotechnikai szakértelemmel rendelkező személy végezheti el.</p>	<p>zh <b>警告: 高压危险! 请参见操作手册。</b> 操作本设备前请断开并锁定电源。 <b>注意!</b> 安装仅限专业电工人员。</p>

INSTALLATION INSTRUCTIONS

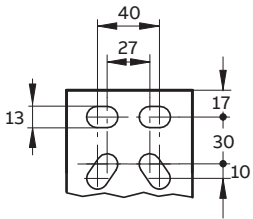
**AF1350(T), AF1650(T), AF2050(T), AF1650N8**

**Contactors/Auxiliary Contacts**

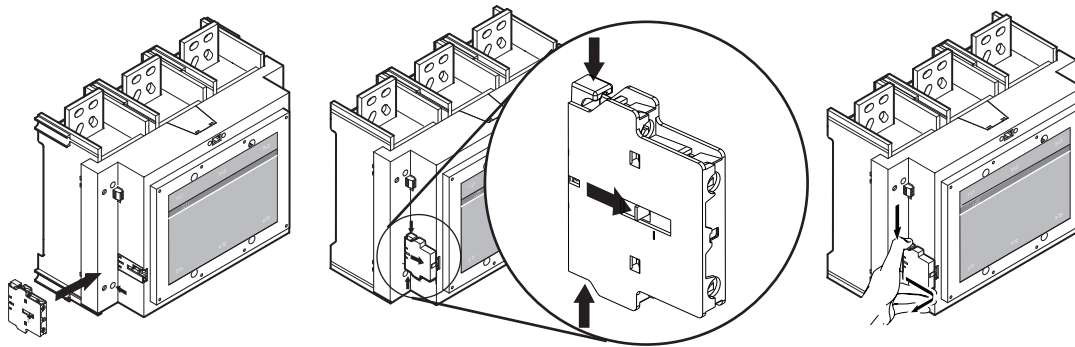
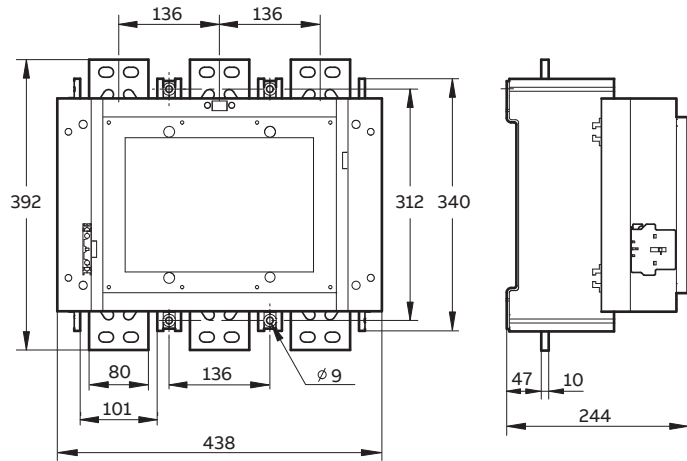
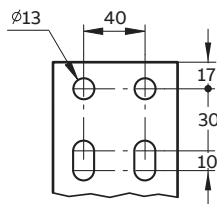
	 A1 A2	 M 3,5 1 Nm - 9 lb.in	 ø 5,0 Pozidriv N° 2	 Solid / Stranded 2 x 1 ... 2,5 mm <sup>2</sup> Cu 75° C Flexible 2 x 0,75 ... 2,5 mm <sup>2</sup>	 Lugs l > 3,5 mm L < 8 mm	 100 mm
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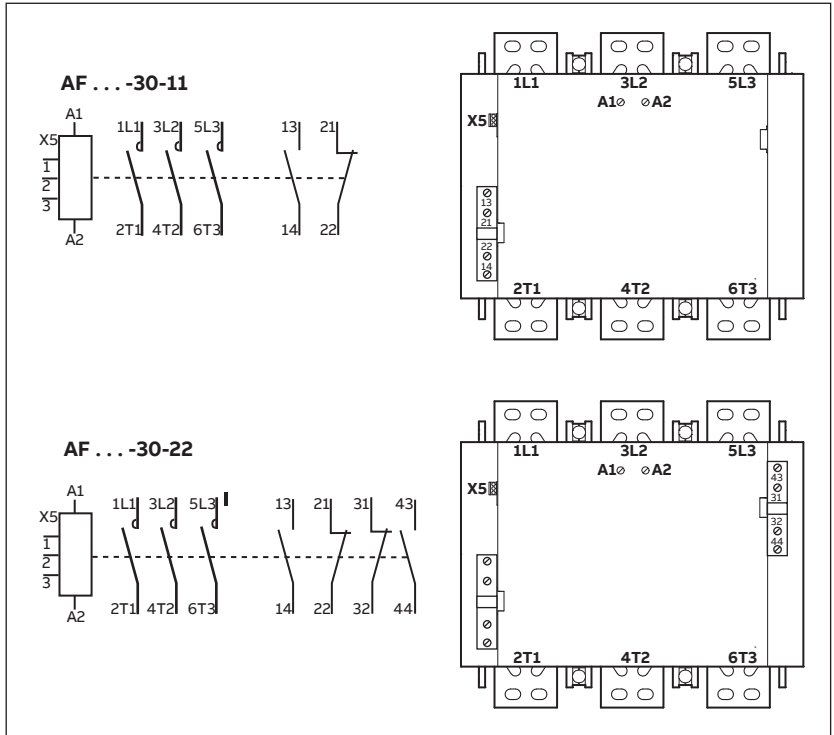
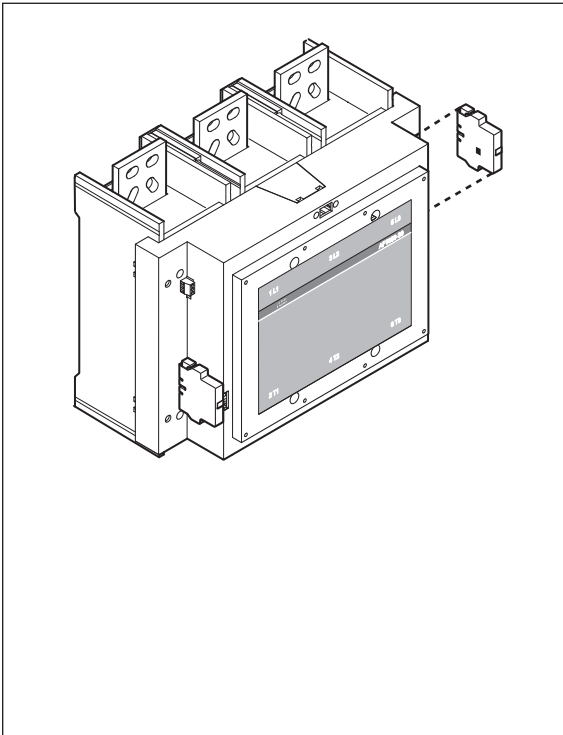
**AF 1350(T), AF 1650(T)**



**AF 2050(T)**



	 M12 45 N.m - 398 lb.in	 max 100 mm (4 inch)	<p><b>According to UL 60947-4-1</b></p> <p><b>AF1350, AF1650:</b> Use terminal kit ABB ATK1350/4, T&amp;B RB771350, wire 4/0 AWG - 500 kcmil, Cu 75°C only, 375 in - lb.</p> <p><b>AF2050:</b> 2100A 600V AC, use copper bars each of minimum four busbars per terminal 2 1/2 inches (width) by 1/4 inch (thickness). Three poles connected in series. At 1900A 600V DC, use copper bars each of minimum two busbars per terminal 4 inches (width) by 1/4 inch (thickness). Three poles connected in series.</p> <p><b>AF1350, AF1650 and AF2050:</b> Enclosure with three latches and with min. dimension 79 by 32 by 20 inches should be used.</p> <p><b>All contactors:</b> * Designed for max 40°C ambient temperature.</p>
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**Notice.** This product has been designed for environment A. Use of this product in environment B may cause unwanted electromagnetic disturbances in which case the user may be required to take adequate mitigation measures.

**Hinweise.** Dies ist ein Produkt für Umgebung A. In Haushaltsumgebung kann dieses Gerät unerwünschte Funkstörungen verursachen; in diesem Fall kann der Anwender verpflichtet sein, angemessene Maßnahmen durchzuführen.

**Notice.** Ce produit a été conçu pour environnement A. L'utilisation de ce produit dans environnement B peut causer de perturbations électromagnétiques non désirées qui, dans ce cas, peuvent obliger l'utilisateur à prendre des mesures d'atténuation appropriées.

**Obs.** Den här produkten har konstruerats för miljöklass A. Användning av produkten i miljöklass B kan förorsaka oönskade elektromagnetiska störningar och i så fall krävs att användaren vidtar nödvändiga åtgärder.

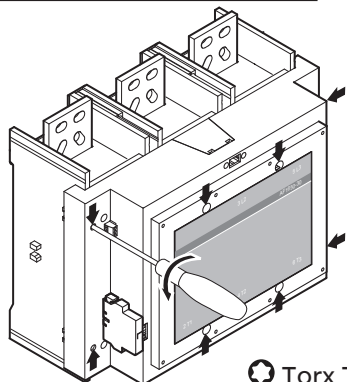
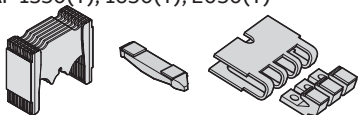
**Avvertenza.** Questo prodotto è stato progettato per l'ambiente A. L'uso di questo prodotto nell'ambiente B può provocare disturbi elettromagnetici indesiderati, nel qual caso l'utilizzatore può dover prendere adeguate misure per loro attenuazione.

**Nota.** Este producto ha sido diseñado para ambientes A. El uso de este producto en ambientes B puede causar perturbaciones electromagnéticas no deseadas, en tal caso usuario tendrá que tomar las medidas de mitigación adecuadas.

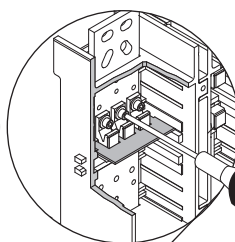
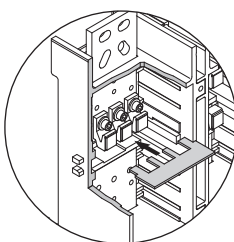
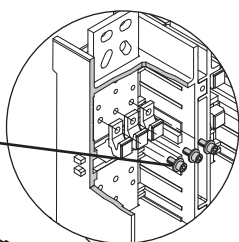
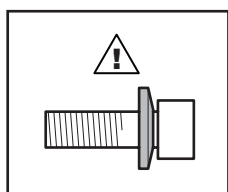
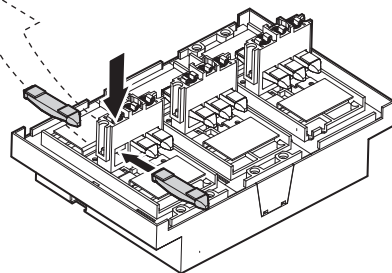
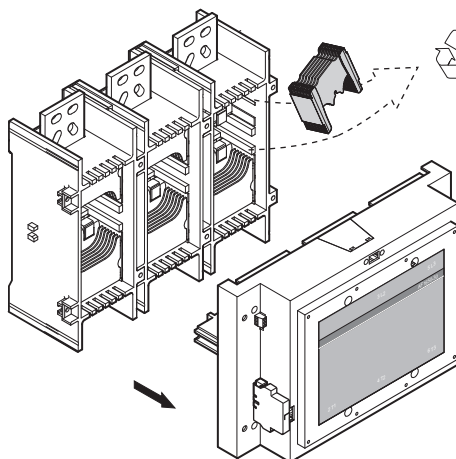
**警告!** 本产品适用于环境 A, 在环境 B 中使用本产品会产生有害电磁干扰, 在此情况下用户需采取适当防护措施.

**Замечание.** Устройство разработано для применения в средах категории А. Применение в средах категории В может привести к возникновению нежелательных электромагнитных помех. В этом случае могут потребоваться дополнительные меры защиты от помех.

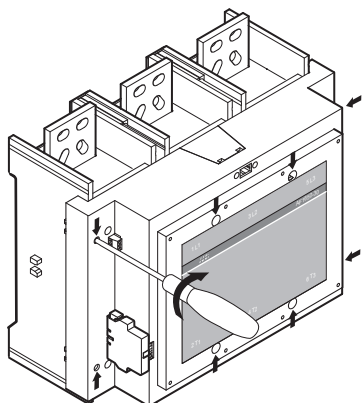
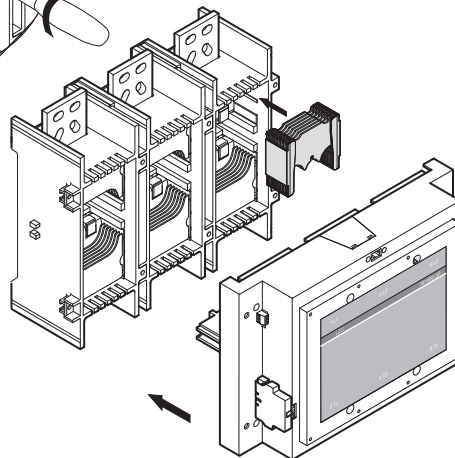
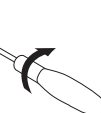
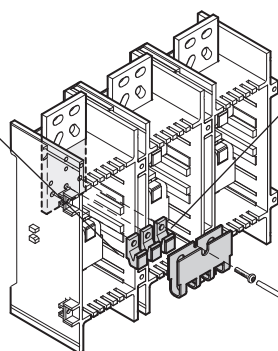
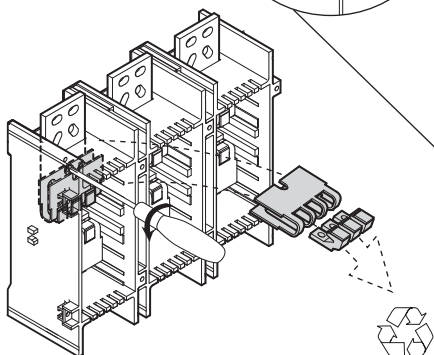
AF 1350(T), 1650(T), 2050(T)



Torx T25



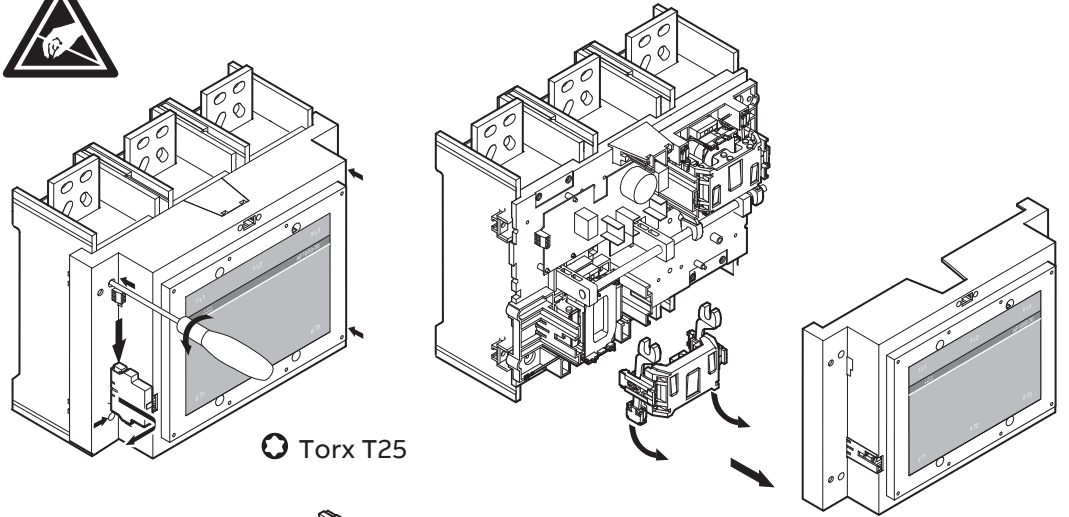
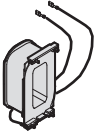
M8  
22 Nm



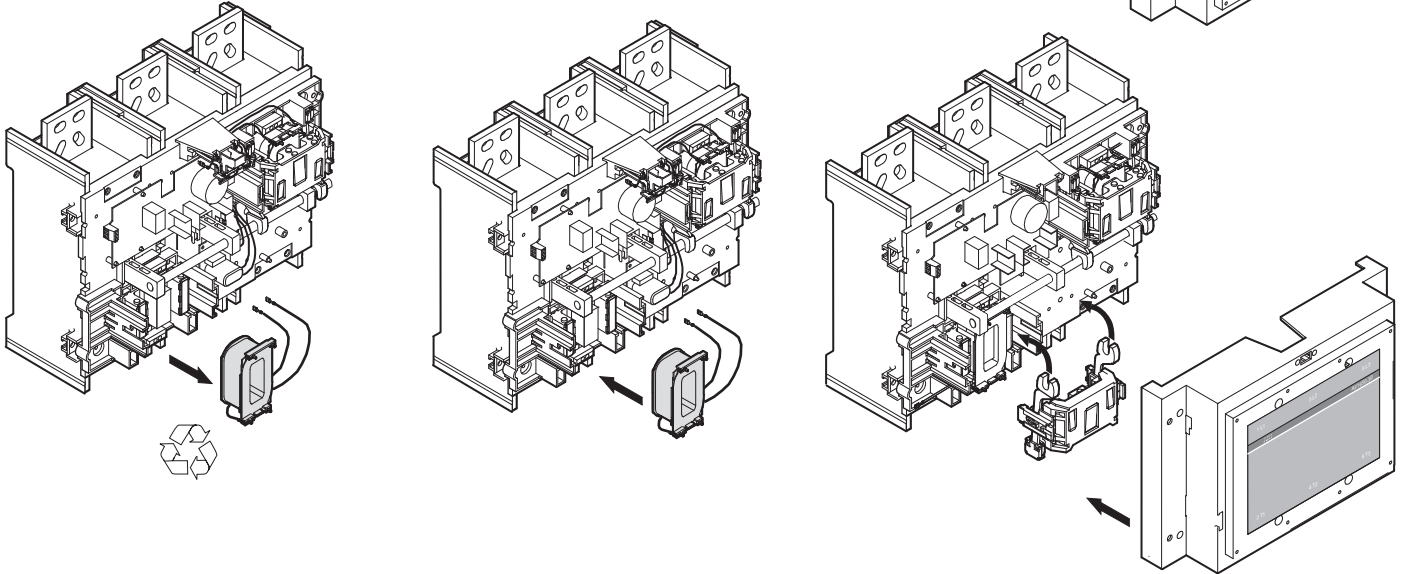
Torx T25

M6  
4 Nm

AF 1350, 1650, 2050  
AF 1350T, 1650T, 2050T

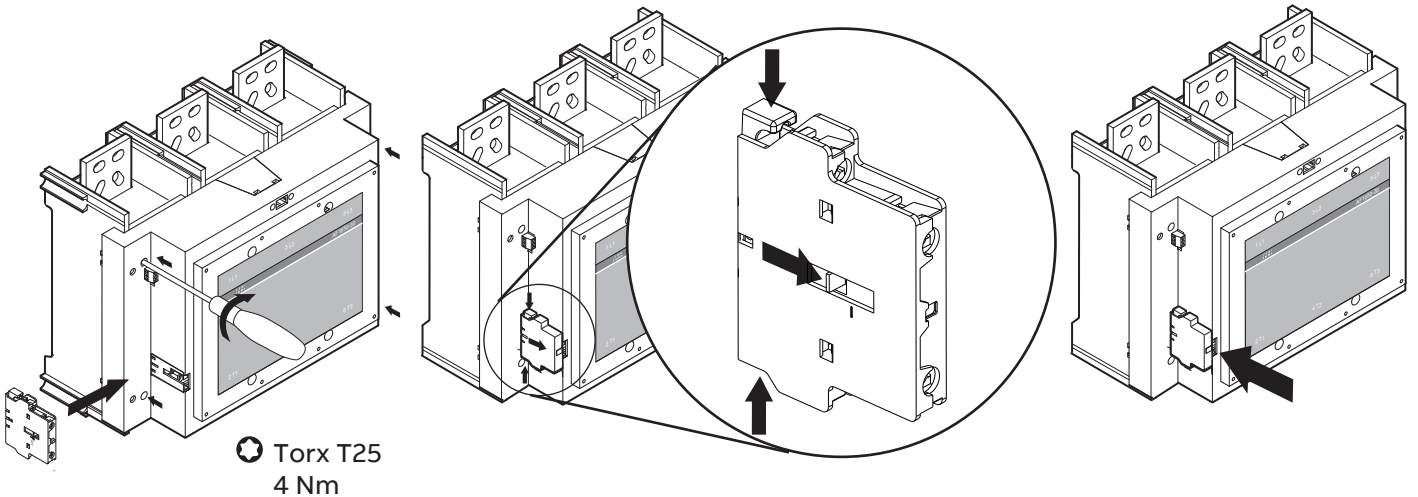
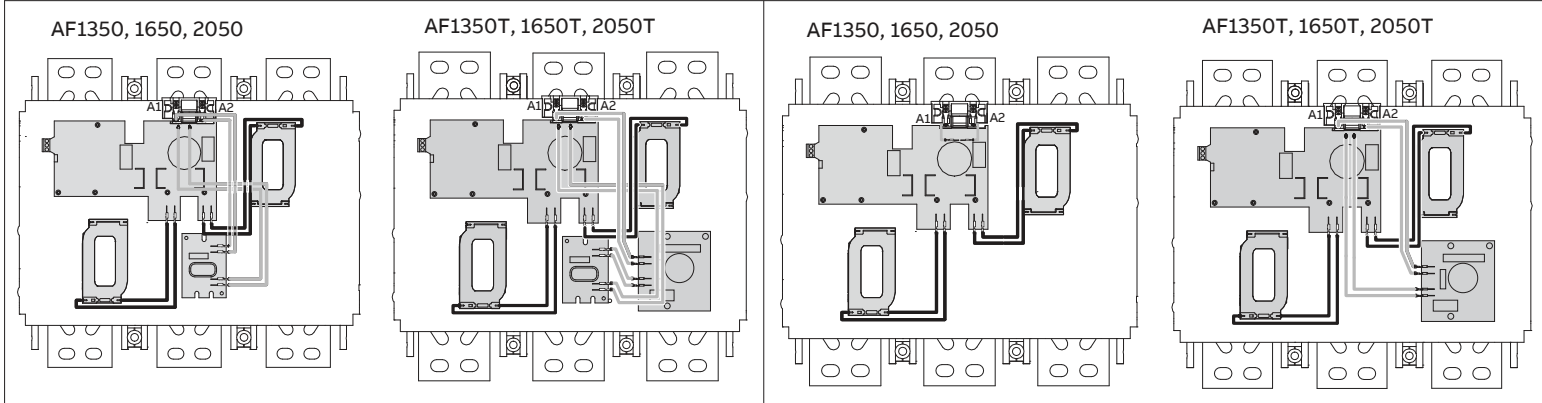


Torx T25



Wiring diagram for contactors with serial numbers up to 1S160100517121223.

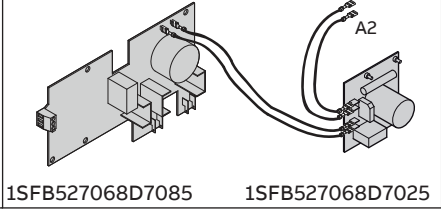
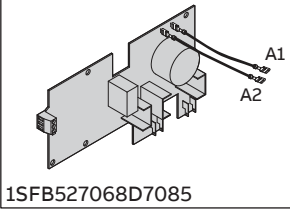
Wiring diagram for contactors with serial numbers up to 1S160100517121224.



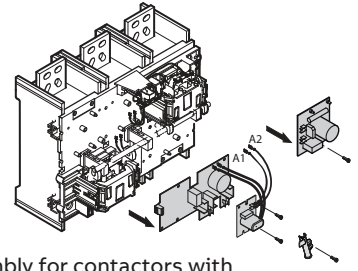
Torx T25  
4 Nm

AF1350, 1650, 2050

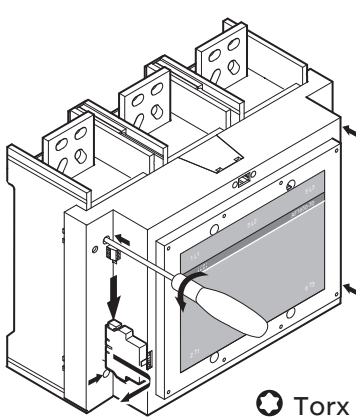
AF1350T, 1650T, 2050T



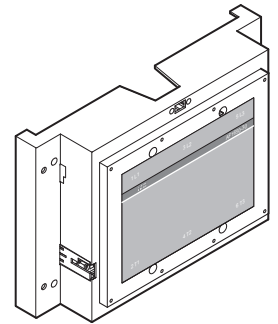
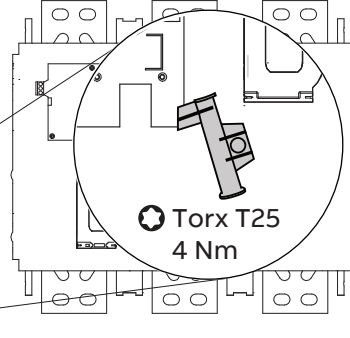
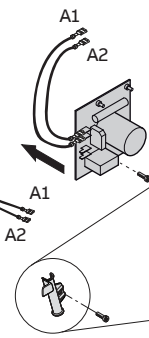
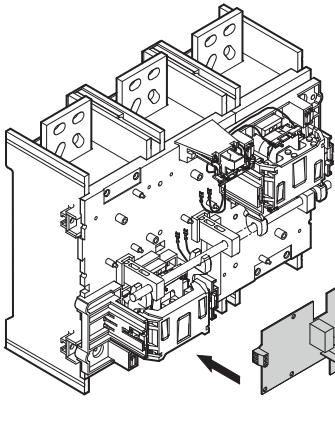
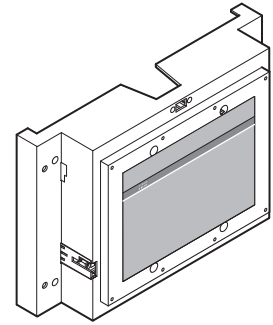
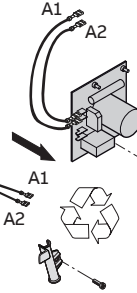
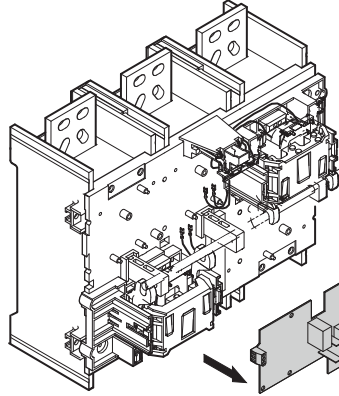
PCBAs 1SFB527068D7005 and 1SFB527068D7015 is replaced by 1SFB527068D7085. This applies for contactors from serial number 1S160100517121224.



PCBA assembly for contactors with serial number up to 1S160100517121223.

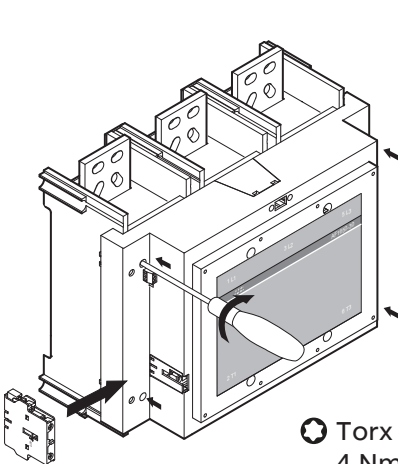
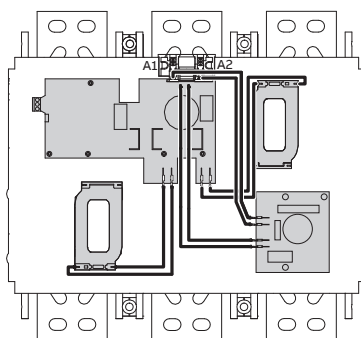
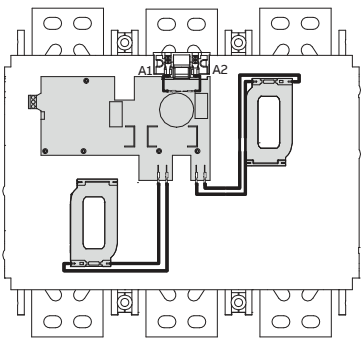


Torx T25

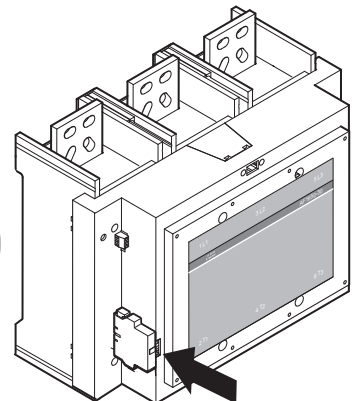
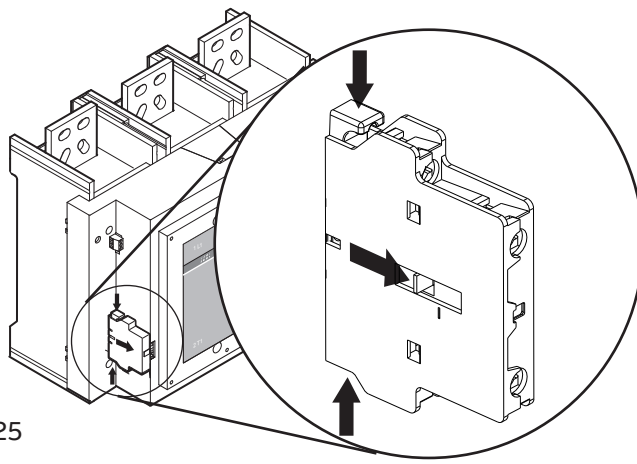


AF1350, 1650, 2050

AF1350T, 1650T, 2050T



Torx T25  
4 Nm



## General

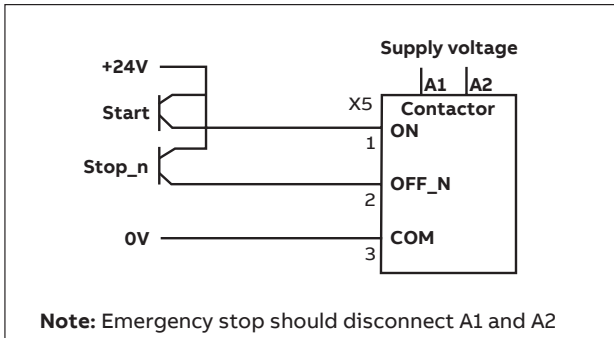
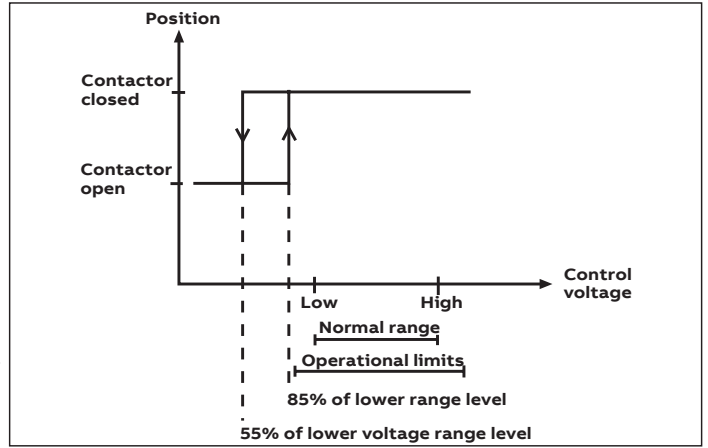
AF-Contactors are fitted with an electronic coil interface. For a given coil, this interface allows the contactor to accept a very wide voltage range. The contactor can also be controlled by separate logic control signals from for instance a PLC. Selection of control methods is done with switch S1. Control by switching voltage on A1 and A2 requires the switch in position B while control with logic signals requires the switch in position A. Use of the logic control signals also requires a steady supply voltage on A1 and A2 within the rated voltage range.

### Control by switching voltage on A1 and A2 (Switch S1 in position B, default factory setting).

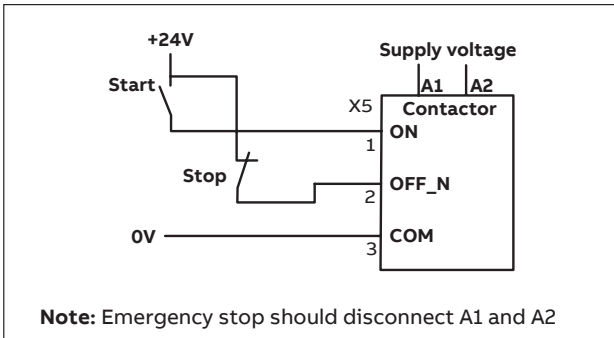
Operation of AF-Contactors can be done as with conventional contactors by applying and removing voltage on A1 and A2. In T-version the drop out time is delayed.

### Control with logic control signals (switch S1 in position A)

Use of the logic control signals also requires a steady voltage on terminals A1 and A2 within the operational limits. Minimum pulse length for opening and closing: 7 ms. The function of the logic control signals will no longer be guaranteed when the voltage on A1 and A2 is removed. The logic control signals operate with 24 V DC and consists of two control signals (ON and OFF\_N) and a common reference (COM). In T-version the drop out delay is deactivated.

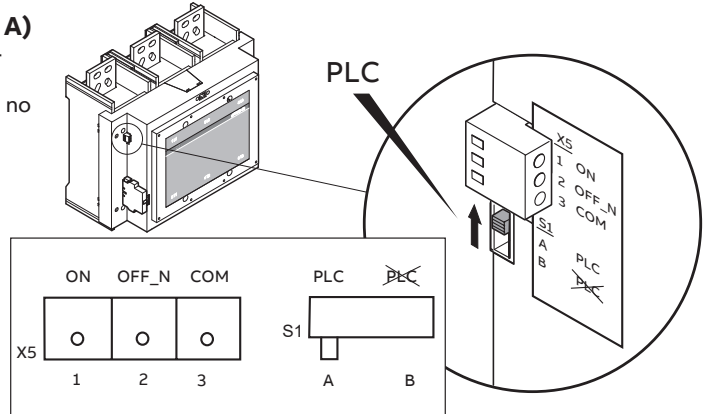


When used with transistor outputs the wiring can be done according to the following diagram.



When used with switches the wiring can be done according to the following diagram.

The functions are described with following diagram. "1" means 24 V DC between the control signals and COM, "0" means no voltage between the control signal and COM. The function is made so that ON and OFF\_N can be connected in parallel for a common ON/OFF signal. In addition to these signals the function limits for the supply voltage are still valid (closing at 85% and opening at 55%), which is indicated in the diagram by high and low voltage.



Wire dimensions for PLC interface. Wire strip length  
 3 x 0.2...2 mm<sup>2</sup>  
 3 x AWG 22 ... 14  
 5-6 mm (0.2-0.24 in)

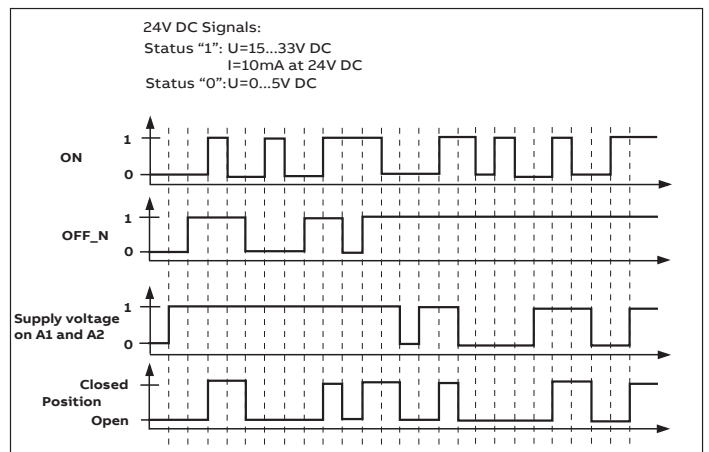
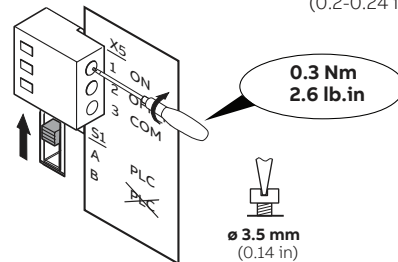


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Further information:



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