



LOVATO ELECTRIC S.P.A.

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**BF160, BF195, BF230, BF265, BF330, BF400, BF420, BF500, BF630
BFL23000B230**



WARNING!

- This equipment is to be installed by qualified personnel, complying to current standards, to avoid damages or safety hazards.
- The manufacturer cannot be held responsible for electrical safety in case of improper use of the equipment.
- Products illustrated herein are subject to alteration and changes without prior notice. Technical data and descriptions in the documentation are accurate, to the best of our knowledge, but no liabilities for errors, omissions or contingencies arising there from are accepted.

ATTENTION !

- Ces appareils doivent être installés par un personnel qualifié, conformément aux normes en vigueur en matière d'installations, afin d'éviter de causer des dommages à des personnes ou choses.
- Le constructeur n'assume aucune responsabilité quant à la sécurité électrique en cas d'utilisation impropre du dispositif.
- Les produits décrits dans ce document sont susceptibles d'évoluer ou de subir des modifications à n'importe quel moment. Les descriptions et caractéristiques techniques du catalogue ne peuvent donc avoir aucune valeur contractuelle.

ACHTUNG!

- Zur Vermeidung von Personen- und Sachschäden dürfen diese Geräte nur von qualifiziertem Fachpersonal und unter Befolgung der einschlägigen Vorschriften installiert werden.
- Bei zweckwidrigem Gebrauch der Vorrichtung übernimmt der Hersteller keine Haftung für die elektrische Sicherheit.
- Die in dieser Broschüre beschriebenen Produkte können jederzeit weiterentwickelt und geändert werden. Die im Katalog enthaltenen Beschreibungen und Daten sind daher unverbindlich und ohne Gewähr.

ADVERTENCIA

- Este dispositivo debe ser instalado por personal cualificado conforme a la normativa de instalación vigente a fin de evitar daños personales o materiales.
- El fabricante no se responsabilizará de la seguridad eléctrica en caso de que el dispositivo no se utilice de forma adecuada.
- Los productos descritos en este documento se pueden actualizar o modificar en cualquier momento. Por consiguiente, las descripciones y los datos técnicos aquí contenidos no tienen valor contractual.

UPOZORNĚNÍ

- Tato zařízení smí instalovat kvalifikovaní pracovníci v souladu s platnými předpisy a normami pro předcházení úrazu osob či poškození věcí.
- Výrobce nenese odpovědnost za elektrickou bezpečnost v případě nevhodného používání regulátoru.
- Výrobky popsané v tomto dokumentu mohou kdykoli projit úpravami či dalším vývojem. Popisy a údaje uvedené v katalogu nemají proto žádnou smluvní hodnotu.

AVERTIZARE!

- Acest echipament va fi instalat de personal calificat, în conformitate cu standardele actuale, pentru a evita deteriorări sau pericolele.
- Producătorul nu poate fi considerat responsabil pentru siguranța electrică în caz de utilizare incorectă a echipamentului.
- Produsele ilustrate în prezentul sunt supuse modificărilor și schimbărilor fără notificare anterioară. Datele tehnice și descrierile din documentație sunt precise, în măsura cunoștințelor noastre, dar nu se acceptă nicio răspundere pentru erorile, omisiunile sau evenimentele neprevăzute care apar ca urmare a acestora.

ATTENZIONE!

- Questi apparecchi devono essere installati da personale qualificato, nel rispetto delle vigenti normative impiantistiche, allo scopo di evitare danni a persone o cose.
- Il costruttore non si assume responsabilità in merito alla sicurezza elettrica in caso di utilizzo improprio del dispositivo.
- I prodotti descritti in questo documento sono suscettibili in qualsiasi momento di evoluzioni o di modifiche. Le descrizioni ed i dati a catalogo non possono pertanto avere alcun valore contrattuale.

UWAGA!

- W celu uniknięcia obrażeń osób lub uszkodzenia mienia tego typu urządzenia muszą być instalowane przez wykwalifikowany personel, zgodnie z obowiązującymi przepisami.
- Producent nie przyjmuje na siebie odpowiedzialności za bezpieczeństwo elektryczne w przypadku niewłaściwego użytkowania urządzenia.
- Produkty opisane w niniejszym dokumencie mogą być w każdej chwili udoskonalone lub zmodyfikowane. Opisy oraz dane katalogowe nie mogą mieć w związku z tym żadnej wartości umownej.

警告!

- 本设备只能由合格人员根据现行标准进行安装，以避免造成损坏或安全危害。
- 制造商不负责因设备使用不当导致的电气安全问题。
- 此处说明的产品可能会有变更，恕不提前通知。我们竭力确保本文中技术数据和说明的准确性，但对于错误、遗漏或由此产生的意外事件概不负责。

ПРЕДУПРЕЖДЕНИЕ!

- Во избежание травм или материального ущерба монтаж должен осуществляться только квалифицированным персоналом в соответствии с действующими нормативами.
- Производитель не несет ответственность за обеспечение электробезопасности в случае ненадлежащего использования устройства.
- Изделия, описанные в настоящем документе, в любой момент могут подвергнуться изменениям или усовершенствованиям. Поэтому каталожные данные и описания не могут рассматриваться как действительные с точки зрения контрактов

DİKKAT!

- Bu aparatlar kişilere veya nesnelere zarar verme ihtimaline karşı yürürlükte olan sistem kurma normlarına göre kalifiye personel tarafından monte edilmelidir.
- Üretici aparatın hatalı kullanımından kaynaklanan elektriksel güvenliğe ait sorumluluk kabul etmez.
- Bu dokümanda tarif edilen ürünler her an evrimlere veya değişimlere açıktır. Bu sebeple katalogdaki tarif ve değerler herhangi bir bağlayıcı değeri haiz değildir.

UPOZORENJE!

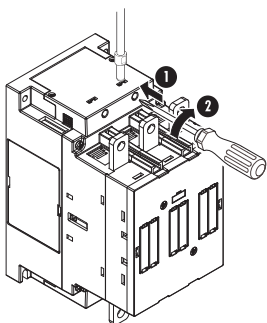
- Ovaj uređaj mora instalirati, u skladu s važećim normama, obučena osoba kako bi se izbjegle štete ili sigurnosne opasnosti.
- Proizvođač ne snosi odgovornost za električnu sigurnost u slučaju nepravilnog korištenja opreme.
- Ovdje prikazan uređaj predmet je stalnog usavršavanja i promjena bez prethodne najave. Tehnički podaci i opisi u ovim uputama su točni, ali ne preuzimamo odgovornost za možebitne nenamjerne greške.

3P

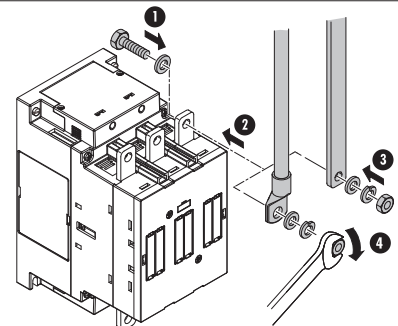
	A	B	C
BF160, BF195, BF230	93mm	177mm	M5 x 25mm
BF265, BF330, BF400	125mm	216mm	M6 x 25mm
BF420, BF500, BF630	158mm	273mm	M8 x 25mm

4P

	A	B	C
BF160, BF195, BF230	128mm	177mm	M5 x 25mm
BF265, BF330, BF400	170mm	216mm	M6 x 25mm
BF420, BF500, BF630	223mm	273mm	M8 x 25mm

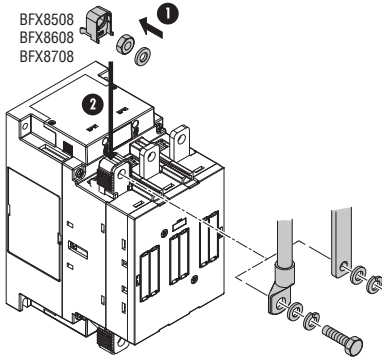


	Phillips 2
	Ø 5mm
	1x1...2.5mm² 1x1...2.5mm²
	1x1...2.5mm² 2x1...2.5mm²
AWG	1x18...14 2x18...14
T	0.8...1Nm 7...9lb.in

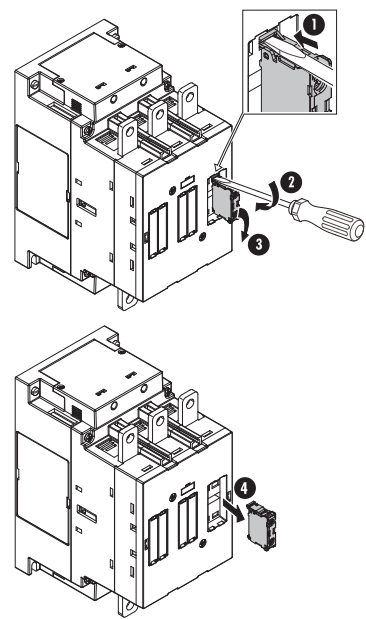
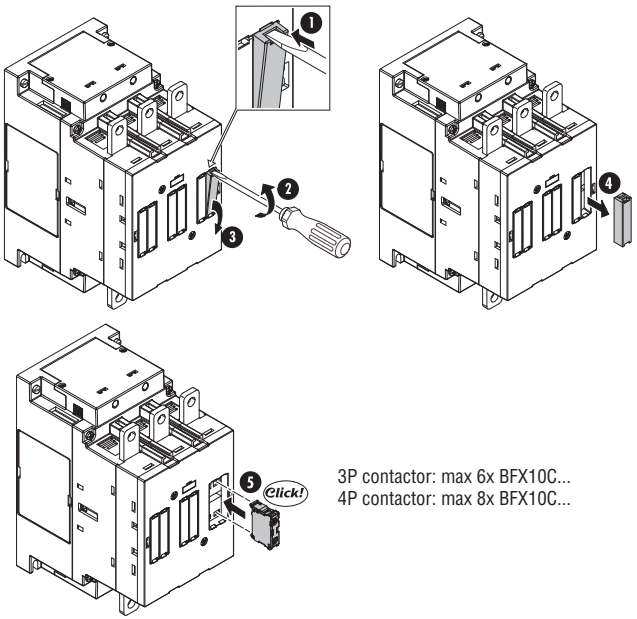


BF160, BF195, BF230	M8	13mm	18Nm / 159lb.in
BF265, BF330, BF400	M10	17mm	35Nm / 310lb.in
BF420, BF500, BF630	M12	19mm	55Nm / 586lb.in

BFX8508 (BF160, BF195, BF230)
BFX8608 (BF265, BF330, BF400)
BFX8708 (BF420, BF500, BF630)

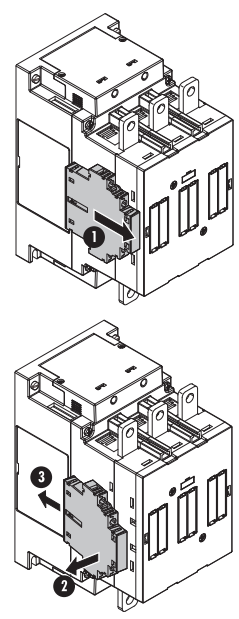
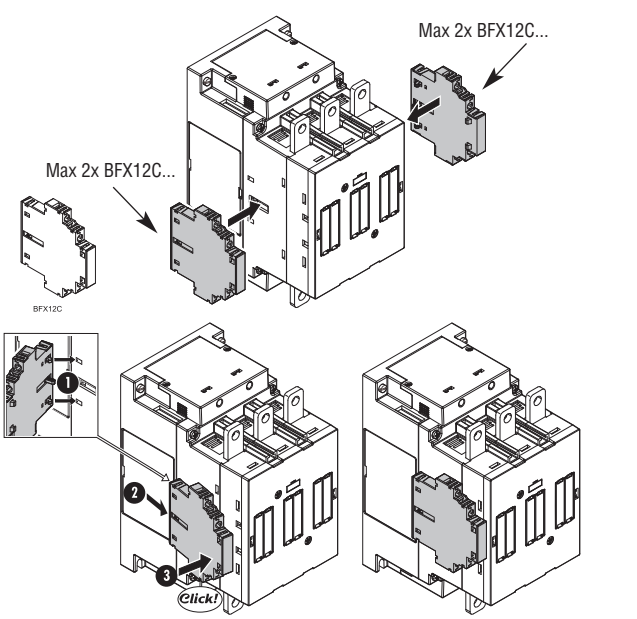


BFX10C...



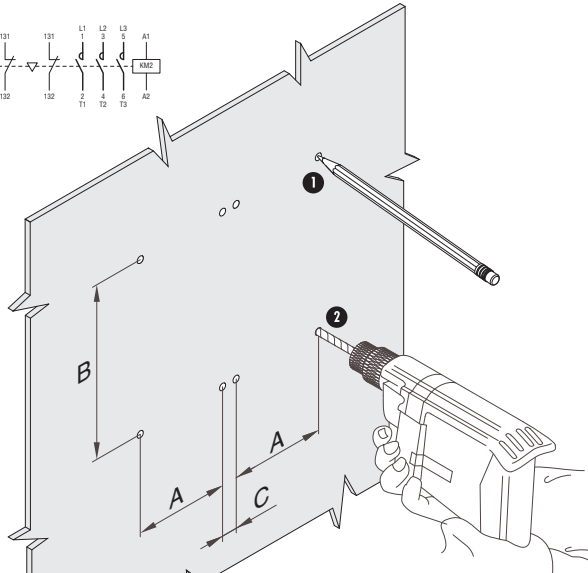
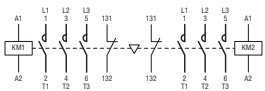
BFX10C...	
	Phillips 2
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AWG	1x18...14 2x18...14
T	0.8...1Nm 7...9lb.in

BFX12C...



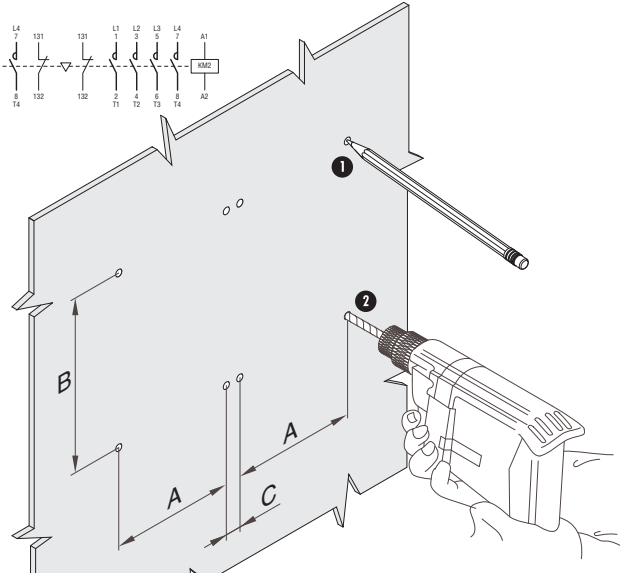
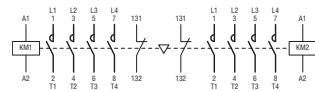
BFX12C...	
	Phillips 2
	Ø 5mm
	1x1...2.5mm ²
	1x1...2.5mm ² 2x1...2.5mm ²
AWG	1x18...14 2x18...14
T	0.8...1Nm 7...9lb.in

BFX5500
3P

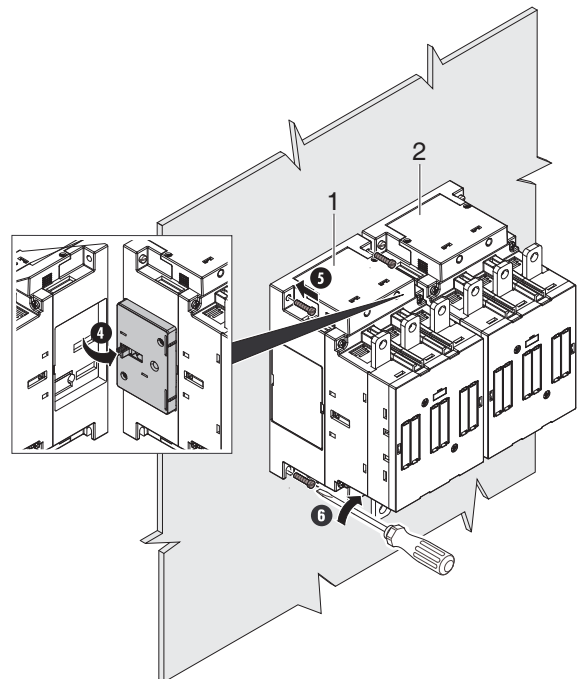
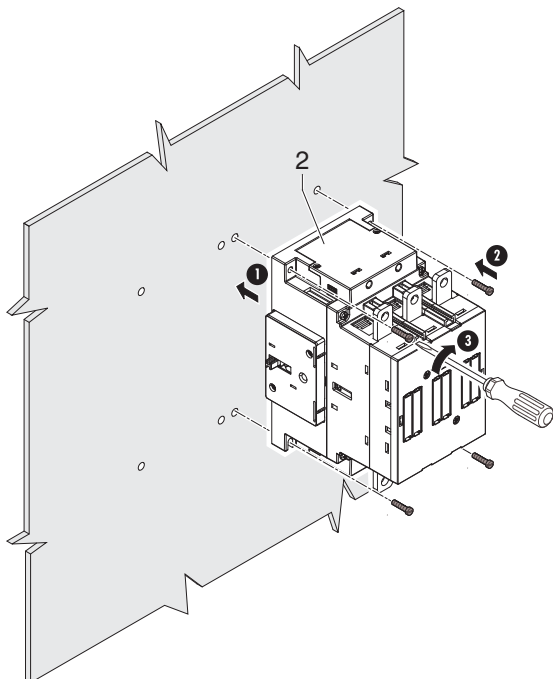
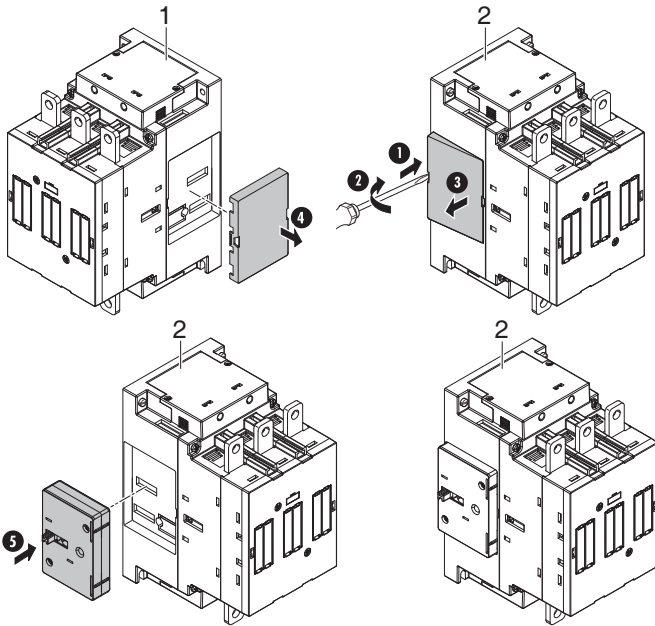


	A	B	C
BF160, BF195, BF230	93mm	177mm	12mm
BF265, BF330, BF400	125mm	216mm	15mm
BF420, BF500, BF630	158mm	273mm	32mm

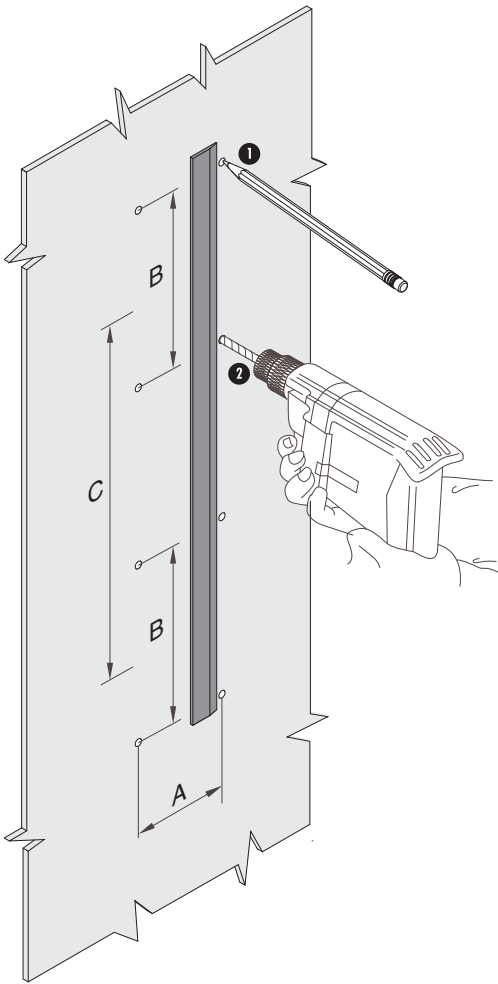
4P



	A	B	C
BF160, BF195, BF230	128mm	177mm	12mm
BF265, BF330, BF400	170mm	216mm	15mm
BF420, BF500, BF630	223mm	273mm	32mm



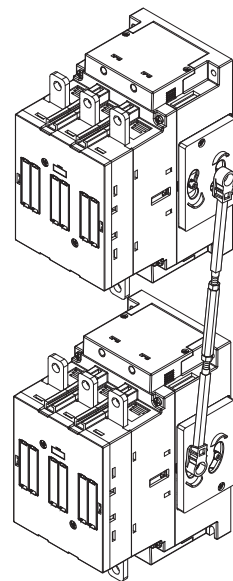
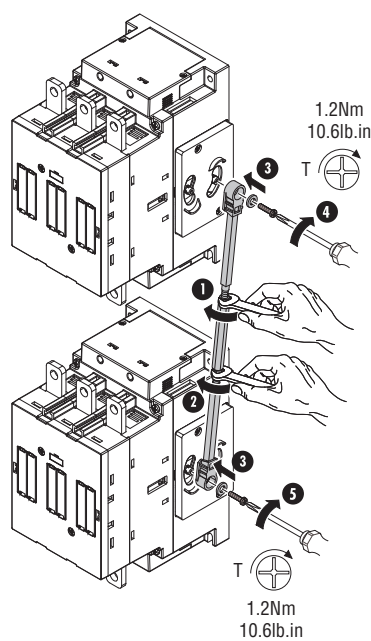
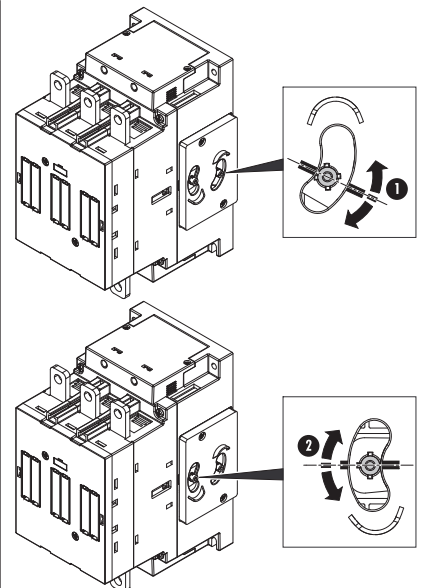
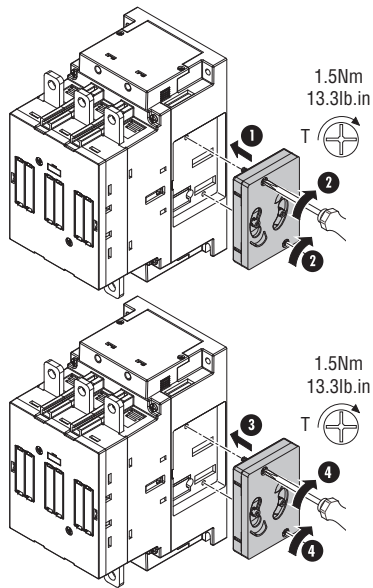
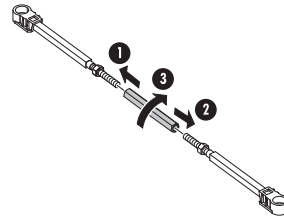
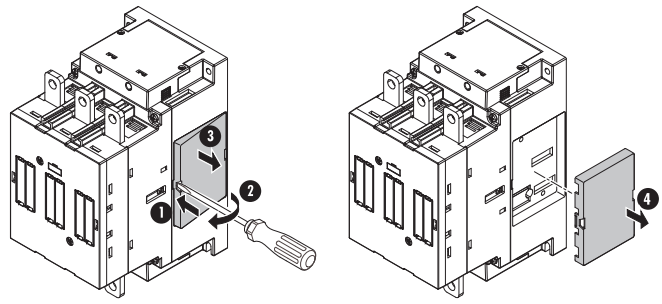
BFX5503 - BFX5504 - BFX 5505



BFX5503		A	B	C
BF160, BF195, BF230	3P	93mm	177mm	305...345mm
BF160, BF195, BF230	4P	125mm	177mm	305...345mm

BFX5504		A	B	C
BF160, BF195, BF230	3P	93mm	177mm	345...385mm
BF160, BF195, BF230	4P	125mm	177mm	345...385mm
BF265, BF330, BF400	3P	125mm	216mm	345...385mm
BF265, BF330, BF400	4P	170mm	216mm	345...385mm
BF420, BF500, BF630	3P	158mm	273mm	345...385mm
BF420, BF500, BF630	4P	223mm	273mm	345...385mm

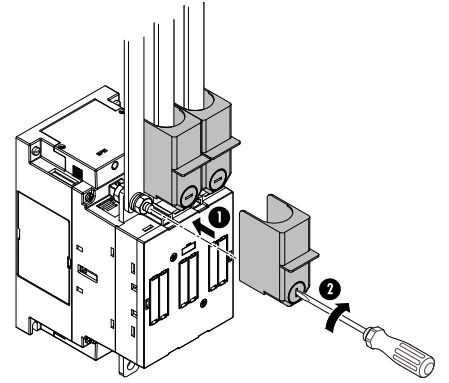
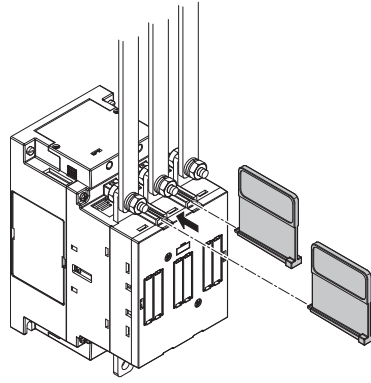
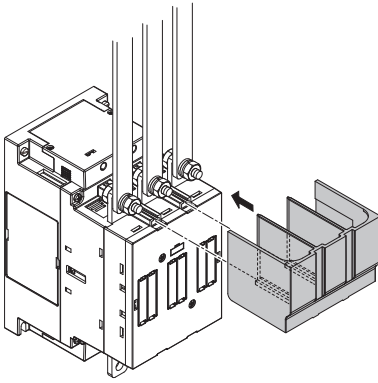
BFX5505		A	B	C
BF160, BF195, BF230	3P	93mm	177mm	385...425mm
BF160, BF195, BF230	4P	125mm	177mm	385...425mm
BF265, BF330, BF400	3P	125mm	216mm	385...425mm
BF265, BF330, BF400	4P	170mm	216mm	385...425mm
BF420, BF500, BF630	3P	158mm	273mm	385...425mm
BF420, BF500, BF630	4P	223mm	273mm	385...425mm



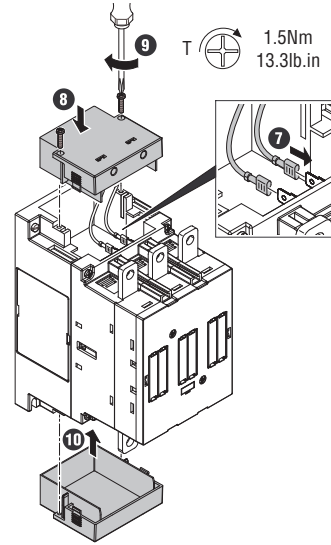
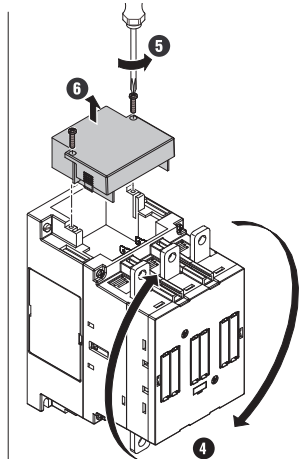
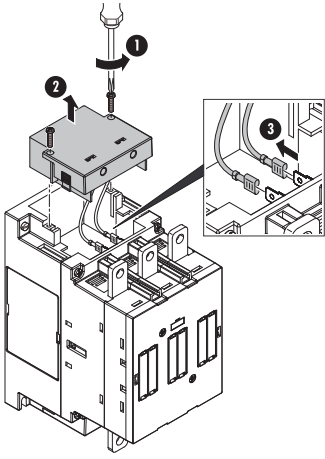
BFX835 - BFX845
BFX836 - BFX846
BFX837 - BFX847

BFX805
BFX806
BFX807

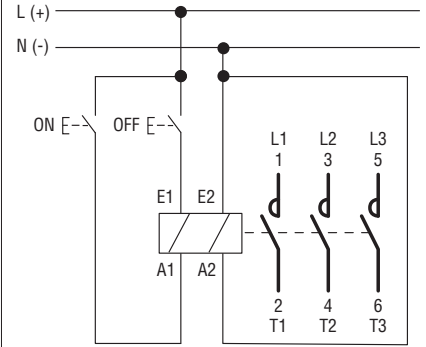
BFX815
BFX816
BFX817



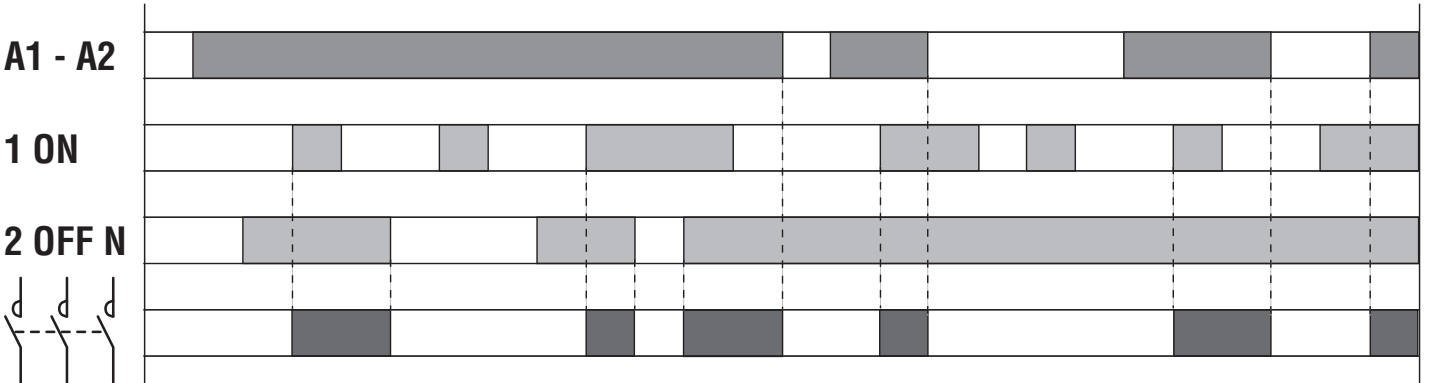
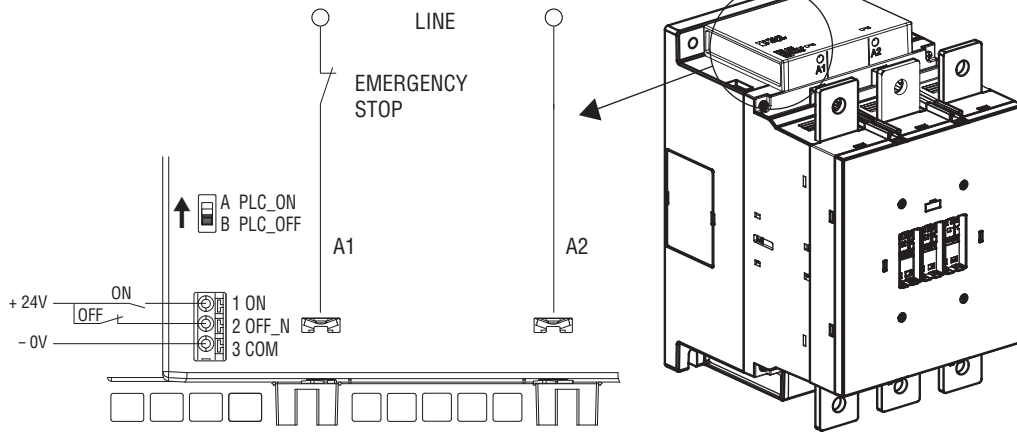
BF160, BF195, BF230

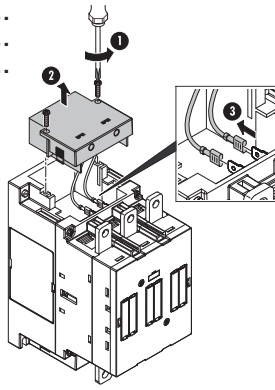


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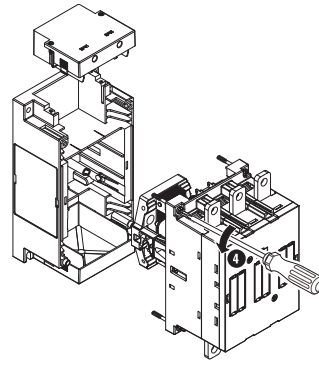


BF420, BF500, BF630
 Control via PLC

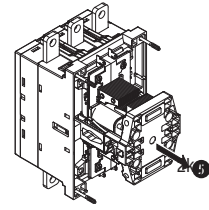




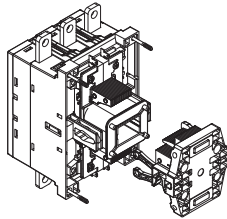
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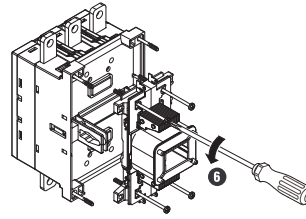
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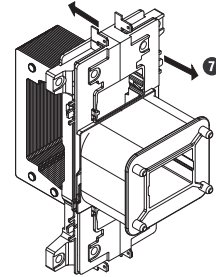
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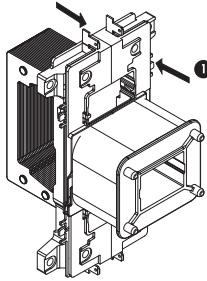
4



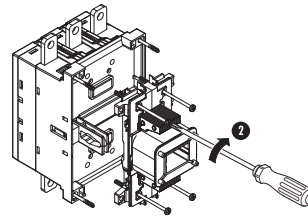
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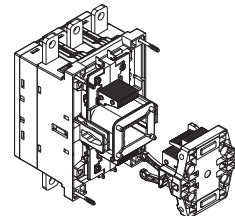
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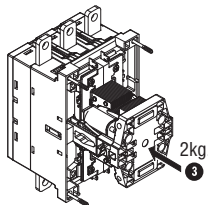
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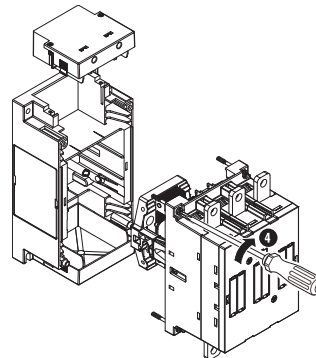
8



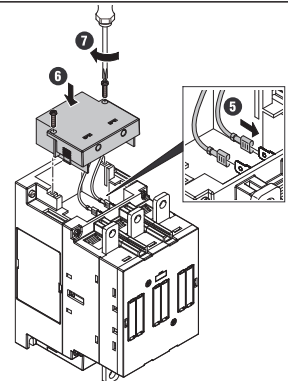
9



10



11



12



Use Lugs according table below. Alternatively to the Lugs indicated in the table, connection can be provided with Listed (ZMVV/7) Wire Connectors (eyelet type, not insulated, maximum width 18mm), crimped with specific factory crimp tool.

Model	Wire Range	Max °C	Torque, lb.in	For General Purpose ratings use with	For HP ratings use with
GMX500 ①③	14-2/0 AWG	75	120	BF160, BF195, BF230	BF160, BF195, BF230
GMX501 ②	4 AWG - 300 KCMIL	75	200	BF160, BF195	BF160, BF195, BF230
GLX500/GLX501	6 AWG - 250 KCMIL	75	310	BF160	BF160, BF195
GMX503/GLX504/GLX505	2x 6 AWG - 300 KCMIL	75	200	BF160, BF195, BF230	BF160, BF195, BF230
GLX506, GLX507	2 AWG - 300 KCMIL	75	375	BF160, BF195	BF160, BF195, BF230
	6 AWG - 2 AWG		275		
GMX502	2 AWG - 600 KCMIL	75	375	BF265, BF330, BF400 ④	BF265, BF330, BF400 ④
GMX503	2x 6 AWG - 300 KCMIL	75	200	BF265, BF330, BF400	BF265, BF330, BF400
EXA01	6 AWG - 250 KCMIL	75	310	BF265, BF330, BF400	BF265, BF330, BF400
GMX504	2x 2 AWG - 600 KCMIL	75	500	BF420, BF500, BF630	BF420, BF500, BF630

① Double for each bar admitted, one above and one below the bar.

② Use only with BFX3583 (3P) / BFX3584 (4P) Phase enlarger.

③ When provided double.

④ Accessories required: BFX3683 for 3 pole contactors, BFX3684 for 4 pole contactors.

Lugs shall be connected parallel to contactor bars; torque 18Nm - 159lb.in for BF160, BF195, BF230; 35Nm - 310lb.in for BF265, BF330, BF400.

When two contactors are mounted adjacent only one can be provided with phase enlarger and the other can be provided only with the Lugs code GMX500 for BF160, BF195, BF230.

For BF265, BF330, BF400, when a contactor is provided of phase enlarger and Lugs GMX502, the other contactor cannot be provided with the Lugs code GMX503.

Terminals Coils - 60°C/75°C, CU Wire only, solid or stranded, 2x 16±10AWG, 13±16lb.in.

Maximum cycles per hour: 1000.

Coil Uimp: BF...E024 0.8kV; BF...E110 2.5kV; BF...E230 and BF...E400 4kV.

Enclosure minimum dimensions: BF160, BF195, BF230 - 600x400x200mm; BF265, BF330, BF400 - 1000x800x300mm; BF420, BF500, BF630 - 1200x800x400mm.

WARNING - The opening of the branch-circuit protective device may be an indication that a fault current has been interrupted. To reduce the risk of fire or electric shock, current-carrying parts and other components of the controller shall be examined and replaced if damaged.

AVERTISSEMENT - Le déclenchement du dispositif de protection de la dérivation peut ignifier qu'un courant de fuite a été interrompu. Pour réduire les risques d'incendie et de choc électrique, les pièces porteuses de courant et autres pièces de la commande doivent être examinées et remplacées au besoin.