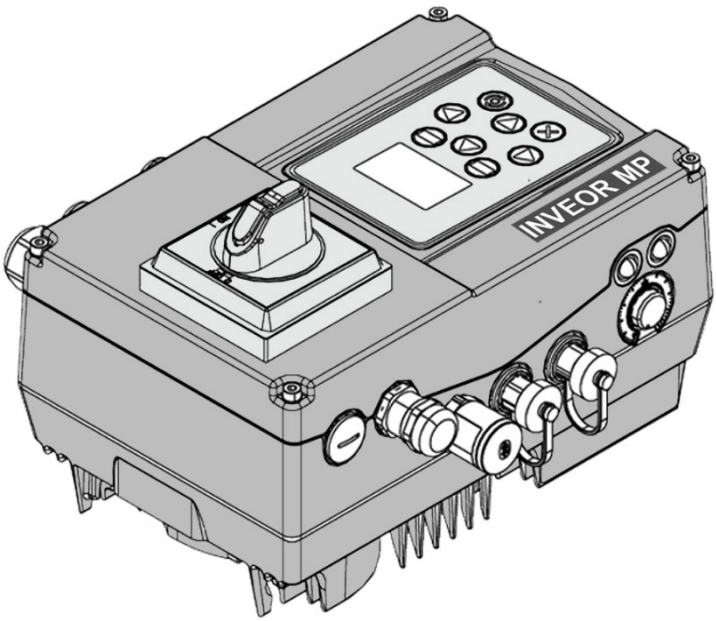
INDUSTRIE ELEKTRIK

KOSTAL



Kurzanleitung

INVEOR MP

DE/EN/IT/FR/ES/RU/TR

12062952-0005

KOSTAL

Legal notice

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Exclusion of liability

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General note on gender equality

KOSTAL Industrie Elektrik GmbH & Co KG is aware of the importance of language with regard to the equality of women and men and always makes an effort to reflect this in the documentation. Nevertheless, for the sake of readability we are unable to use non-gender-specific terms throughout and use the masculine form instead.

Informationen zum Antriebsregler

SCAN ME

Information about the drive controller

Direktlink Betriebsanleitung | Direct link operating manuals

DE
FULL
Operating manual

EN
FULL
Operating manual

IT
FULL
Operating manual

DOC02357236-0005

DE GEFAHR!

LEBENSGEFAHR DURCH STROMSCHLAG UND ELEKTRISCHE ENTLADUNG!
TOD ODER SCHWERE VERLETZUNGEN!

Im Antriebsregler liegen lebensgefährliche Spannungen an. Nur eine Elektrofachkraft darf das Gerät öffnen und daran arbeiten. Antriebsregler bei Montage, Wartung und Reparatur immer spannungsfrei schalten, warten bis der Motor stillsteht, Spannungsfreiheit feststellen und gegen Wiedereinschalten sichern.

Folgende Klemmen können auch bei Motorstillstand gefährliche Spannungen führen:

- Netzanschlussklemmen X1: L1, L2, L3
- Motoranschlussklemmen X2: U, V, W
- Anschlussklemmen X6, X7: Relaiskontakte Relais 1 und 2

Erden Sie das Gerät grundsätzlich nach DIN EN 61140; VDE 0140, NEC und sonstigen einschlägigen Normen. Der Antriebsregler muss vorschriftsmäßig zusammen mit dem Motor geerdet werden. Andernfalls können Tod oder schwerwiegende Verletzungen die Folge sein. Sollten bei Montage der Adapterplatte keine Federelemente verwendet werden, muss zur Herstellung einer korrekten Schutzleiterverbindung eine zusätzliche Verbindung zwischen Motor und Antriebsregler hergestellt werden. Nicht genutzte offene Kabelenden im Motoranschlusskasten müssen isoliert werden.

Verwenden Sie geeignete Leitungsschutzschalter mit dem vorgeschriebenen Nennstrom zwischen Netz und Antriebsregler. Schadhafte Teile oder Bauteile grundsätzlich nur durch Originalteile ersetzen!

GEFAHR DURCH STROMSCHLAG UND ELEKTRISCHE ENTLADUNG!
Nach dem Ausschalten zwei Minuten warten (Entladezeit der Kondensatoren)

VERBRENNUNGSGEFAHR DURCH HEISSE OBERFLÄCHEN!
SCHWERE VERBRENNUNGEN DER HAUT DURCH HEISSE OBERFLÄCHEN!
Lassen Sie den Kühlkörper des Antriebsreglers ausreichend abkühlen.

LEBENSGEFAHR DURCH WIEDER ANLAUFENDE MOTOREN UND UMLAUFENDE MECHANISCHE TEILE!
TOD ODER SCHWERE VERLETZUNGEN!
Das Nichtbeachten kann zum Tod, schweren Körperverletzungen oder erheblichem Sachschaden führen! Bestimmte Parametereinstellungen und das Ändern von Parametereinstellungen während des Betriebes können bewirken, dass der Antriebsregler INVEOR nach einem Ausfall der Versorgungs-spannung automatisch wieder anläuft, bzw. dass es zu unerwünschten Veränderungen des Betriebsverhaltens kommt.

EN DANGER!

RISK OF DEATH DUE TO ELECTRICAL SHOCK AND DISCHARGE!
DEATH OR SERIOUS INJURY!

Life-threatening voltages are present in the drive controller. Only a qualified electrician may open and perform work on the device. Always disconnect the drive controller from the power supply during installation, maintenance and repair, wait until the motor has come to a standstill, determine that no voltage is present and secure it against being switched on again.

The following terminals may carry dangerous voltages even when the motor is not running:

- Supply terminals X1: L1, L2, L3
- Motor connection terminals X2: U, V, W
- Connecting terminals X6, X7: Relay contacts for relays 1 and 2

Always ground the device in accordance with DIN EN 61140; VDE 0140, NEC and other relevant standards.

The drive controller must be grounded with the motor according to relevant regulations. Non-compliance may result in death or serious injury. If spring elements are not used when assembling the adapter plate, there must be an extra connection between the motor and drive controller to produce a correct protective conductor connection. Unused open cable ends in the motor connection box must be insulated. Use suitable line circuit breakers with the prescribed nominal current between the mains and drive controller. Only ever replace damaged parts or components with original parts!

DANGER DUE TO ELECTRICAL SHOCK AND DISCHARGE!
Wait two minutes (discharge time of the capacitors) after shut-down

RISK OF BURNS FROM HOT SURFACES!
SERIOUS BURNS TO THE SKIN FROM HOT SURFACES!
Allow the drive controller's cooling elements to cool sufficiently.

RISK OF DEATH DUE TO RESTARTING MOTORS AND REVOLVING MECHANICAL PARTS!
DEATH OR SERIOUS INJURY!
Non-observance may result in death, serious injury or damage. Certain parameter settings and changing parameter settings during operation may result in the INVEOR drive controller restarting automtically after the supply voltage has failed, on in undesirable changes in the operating behhaviour.

IT PERICOLO!

PERICOLO DI MORTE PER SCOSSA E SCARICA ELETTRICA!
MORTE O GRAVI LESIONI

Nel regolatore di velocità ci sono tensioni mortali. Solo un elettricista specializzato può aprire il dispositivo e operare su di esso. Durante l'installazione, la manutenzione e la riparazione, scollegare sempre il controllore di azionamento dall'alimentazione, attendere che il motore si arresti, verificare l'assenza di tensione e assicurarlo contro una nuova accensione.

Le seguenti morsettiere possono condurre tensioni pericolose anche a motore spento:

- Morsettiere di alimentazione dalla rete X1: L1, L2, L3
- Morsettiere di connessione del motore X2: U, V, W
- Morsettiere di connessione X6, X7: Contatti dei relè 1 e 2

Collegare l'apparecchio a terra in base a DIN EN 61140; VDE 0140, NEC e alle altre norme pertinenti.

Il regolatore di velocità deve essere collegato a terra insieme al motore, secondo quanto prescritto. In caso contrario possono verificarsi gravi lesioni o la morte. Se durante l'installazione della piastra adattatrice non viene utilizzato alcun elemento a molla, per la realizzazione di un collegamento corretto del conduttore di protezione deve essere realizzato un collegamento supplementare tra motore e regolatore di velocità. Le estremità aperte, non utilizzate, dei cavi nelle cassette di connessione del motore devono essere isolate. Tra rete e regolatore di velocità, utilizzare interruttori automatici appropriati alla corrente nominale prescritta. Sostituire le parti o i componenti danneggiati soltanto con ricambi originali!

PERICOLO PER SCOSSA ELETTRICA E SCARICA ELETTRICA!
Dopo lo spegnimento, attendere due minuti (tempo di scarica dei condensatori)

PERICOLO DI USTIONI A CAUSA DI SUPERFICI ROVENTI!
GRAVI SCOTTATURE DELLA PELLE A CAUSA DI SUPERFICI ROVENTI!
Lasciare raffreddare sufficientemente il dissipatore di calore del regolatore di velocità.

PERICOLO DI MORTE PER MOTORI CHE SI RIAVVIANO E COMPONENTI MECCANICI IN MOVIMENTO!
MORTE O GRAVI LESIONI!
La mancata osservanza può causare la morte, gravi lesioni fisiche o consistenti danni materiali!
Determinate impostazioni di parametri e la modifica di impostazioni di parametri durante il funzionamento possono causare il riavvio automatico del regolatore di velocità INVEOR dopo un tempo di assenza della tensione di alimentazione, oppure si possono verificare variazioni indesiderate del comportamento nel funzionamento.

ES ¡PELIGRO!

¡PELIGRO DE MUERTE DEBIDO A ELECTROCUCIÓN Y DESCARGA ELÉCTRICA!
MUERTE O LESIONES GRAVES

En el regulador de accionamiento hay tensiones peligrosas. Está permitido abrir el equipo y realizar trabajos en el mismo únicamente a un electricista profesional. Durante la instalación, el mantenimiento y las reparaciones, desconecte siempre el regulador de accionamiento de la red eléctrica, espere hasta que el motor se haya parado, compruebe que no haya tensión y asegúrelo para que no se vuelva a conectar.

Los siguientes bornes también pueden conducir tensiones peligrosas durante la parada del motor:

- bornes de conexión de red X1: L1, L2, L3
- bornes de conexión del motor X2: U, V, W
- bornes de conexión X6, X7: contactos de relé relés 1 y 2

Conecte a tierra el aparato según DIN EN 61140; VDE 0140, NEC y otras normas pertinentes.

El regulador de accionamiento debe conectarse a tierra conforme a lo prescrito junto con el motor. De lo contrario, la consecuencia puede ser la muerte o lesiones graves. Si durante el montaje de la placa adaptadora no deben utilizarse elementos de resorte, para establecer una conexión correcta del conductor de protección debe establecerse una conexión adicional entre el motor y el regulador de accionamiento. Los extremos de cable abiertos no utilizados en la caja de conexión del motor deben aislarse. Utilice interruptores magnetotérmicos adecuados con la corriente nominal prescrita entre la red y el regulador de accionamiento.

Las piezas o los componentes defectuosos básicamente solo deben ser sustituidos por piezas originales!

PELIGRO DEBIDO A ELECTROCUTIÓN Y DESCARGA ELÉTRICA
Después de la desconexión es necesario esperar dos minutos (tiempo de descarga de los condensadores)

¡PELIGRO DE QUEMADURAS DEBIDO A SUPERFICIES CALIENTES!
¡QUEMADURAS GRAVES DE LA PIEL DEBIDO A SUPERFICIES CALIENTES!
Espere a que el elemento de refrigeración del regulador de accionamiento se haya enfriado lo suficiente.

¡PELIGRO DE MUERTE DEBIDO AL REARRANQUE DE MOTORES Y PIEZAS MECÁNICAS GIRATORIAS!
¡MUERTE O LESIONES GRAVES!
¡El incumplimiento puede provocar lesiones físicas graves o daños materiales considerables!
Algunos ajustes de parámetros concretos y la modificación de ajustes de parámetros durante el servicio pueden hacer que el regulador de accionamiento INVEOR vuelva a arrancar automáticamente tras una interrupción de la tensión de alimentación, y/o que se produzcan modificaciones no deseadas del estado de funcionamiento.

FR DANGER !

DANGER DE MORT PAR ÉLECTROCUTION ET DÉCHARGE ÉLECTRIQUE !
MORT OU BLESSURES GRAVES

Des tensions dangereuses sont présentes dans le variateur de vitesse. Seul un électricien est habilité à ouvrir l'appareil et à y effectuer des travaux. Toujours mettre le variateur hors tension lors du montage, de l'entretien et des réparations, attendre que le moteur s'arrête, constater l'absence de tension et le protéger contre toute remise en marche intempestive.

Les bornes suivantes sont susceptibles de transporter des tensions dangereuses même lorsque le moteur est à l'arrêt :

- Bornes de raccordement au réseau X1 : L1, L2, L3
- Bornes de raccordement au moteur X2 : U, V, W
- Bornes de raccordement X6, X7 : contacts des relais 1 et 2

Par principe, mettez l'appareil à la terre conformément à DIN EN 61140 ; VDE 0140, NEC et toute autre norme en vigueur. Le variateur de vitesse doit être mis à la terre conjointement avec le moteur, conformément aux prescriptions. Si ce point n'est pas respecté, cela pourrait entraîner la mort ou des blessures graves. Si des éléments à ressort ne sont pas utilisés lors du montage de la plaque d'adaptation, une connexion supplémentaire doit être établie entre le moteur et le variateur de vitesse pour que la connexion du conducteur de protection soit correcte. Les extrémités de câble non utilisées du boîtier de raccordement du moteur doivent être isolées. Utilisez des disjoncteurs de protection appropriés avec le courant nominal spécifié entre le réseau et le variateur de vitesse. Remplacez les pièces ou les composants défectueux uniquement par des pièces d'origine !

RISQUE D'ÉLECTROCUTION ET DE DÉCHARGE ÉLECTRIQUE
Attendre deux minutes après la mise à l'arrêt (durée de déchargement des condensateurs)

RISQUE DE BRÛLURE DÛ À DES SURFACES BRÛLANTES !
BRÛLURES GRAVES DE LA PEAU DUES À DES SURFACES BRÛLANTES !
Laissez le radiateur du variateur de vitesse refroidir suffisamment.

DANGER DE MORT EN RAISON DU REDÉMARRAGE DES MOTEURS ET DE PIÈCES MÉCANIQUES EN ROTATION !
MORT OU BLESSURES GRAVES !
Le non-respect des consignes peut provoquer la mort, des blessures graves ou des dommages matériels considérables ! Certains réglages de paramètres et la modification de certains réglages de paramètres pendant le service peuvent avoir pour effet le redémarrage automatique du variateur de vitesse INVEOR après une panne de l'alimentation en courant, ou des modifications non souhaitées du comportement en service.

RU ОПАСНОСТЬ!

ОПАСНОСТЬ ПОРАЖЕНИЯ ТОКОМ И ЭЛЕКТРИЧЕСКИМ РАЗРЯДОМ!
ТЯЖЕЛЫЕ ИЛИ СМЕРТЕЛЬНЫЕ ПОВРЕЖДЕНИЯ

Регулятор привода находится под опасным для жизни напряжением.
Только электротехнический персонал может открывать устройство и проводить работы над ним.

При монтаже, техническом обслуживании и ремонте всегда отключайте контроллер привода от сети питания, дождитесь остановки двигателя, определите отсутствие напряжения и заблокируйте его от повторного включения.

Указанные ниже клеммы могут находиться под напряжением и после остановки двигателя.

- Клеммы подключения к сети питания X1: L1, L2, L3
- Клеммы подключения двигателя X2: U, V, W
- Присоединительные клеммы X6, X7: релейные контакты реле 1 и 2

Заземлите устройство согласно DIN EN 61140, VDE 0140, NEC и другим соответствующим стандартам.
Регулятор привода должен быть заземлен вместе с двигателем согласно инструкции. В противном случае можно получить тяжелые или смертельные повреждения. Если при монтаже переходной пластины не используются пружинные элементы, необходимо установить дополнительное соединение между двигателем и регулятором привода для правильного соединения защитных проводов. Открытые концы неиспользуемых проводов в клеммной коробке двигателя необходимо изолировать. Используйте подходящий линейный защитный автомат с предписанным номинальным током между сетью и регулятором привода.
Поврежденные детали и компоненты заменяйте только на оригинальные

Опасность поражения током и электрическим разрядом.
После выключения подождите две минуты (время разрядки конденсаторов)

ОПАСНОСТЬ ПОЛУЧЕНИЯ ОЖОГА ПРИ КОНТАКТЕ С ГОРЯЧИМИ ПОВЕРХНОСТЯМИ!
ОПАСНОСТЬ ПОЛУЧЕНИЯ СЕРЬЕЗНЫХ ОЖОГОВ ПРИ КОНТАКТЕ С ГОРЯЧИМИ ПОВЕРХНОСТЯМИ!
Подождите, пока радиатор регулятора привода не остынет.

ОПАСНОСТЬ ДЛЯ ЖИЗНИ ПРИ ВНЕЗАПНОМ ЗАПУСКЕ ДВИГАТЕЛЕЙ И ИЗ-ЗА ВРАЩАЮЩИХСЯ МЕХАНИЧЕСКИХ ДЕТАЛЕЙ!
ТЯЖЕЛЫЕ ИЛИ СМЕРТЕЛЬНЫЕ ПОВРЕЖДЕНИЯ!
Несоблюдение требований может привести к тяжелым повреждениям, летальному исходу или существенному материальному ущербу!
Определенные настройки параметров и изменение настроек параметров во время работы могут привести к тому, что после сбоя электропитания регулятор привода INVEOR снова автоматически запустится или возникнут нежелательные изменения в режиме его работы.

TR TEHLİKE!

ELEKTRİK ÇARPMASI VE ELEKTRİKSEL DEŞARJ NEDENİYLE ÖLÜM TEHLİKESİ!
ÖLÜM VEYA AĞIR YARALANMALAR

Sürücü denetleyici içerisinde ölümcül gerilimler bulunur. Sadece bir uzman elektrikçi cihazı açabilir ve cihazda çalışabilir. Kurulum, bakım ve onarım sırasında sürücü kontrol cihazını daima güç kaynağından ayırın, motor durana kadar bekleyin, voltaj olmadığını belirleyin ve tekrar açılmaya karşı emniyete alın. Aşağıdaki terminallerde, motor durur haldeyken bile tehlikeli gerilimler bulunabilir:

- X1 şebeke bağlantı terminalleri: L1, L2, L3
- X2 motor bağlantı terminalleri: U, V, W
- X6, X7 bağlantı terminalleri: Röle 1 ve 2 röle kontakları

Cihazı temel olarak DIN EN 61140; VDE 0140, NEC ve diğer ilgili standartlara göre topraklayın.

Sürücü denetleyici, kurallara göre motorla birlikte topraklanmalıdır. Aksi takdirde, ölüm veya ağır yaralanmalara neden olan sonuçlar ortaya çıkabilir. Adaptör plakasının montajı sırasında yay elemanları kullanılmaması durumunda, doğru bir koruyucu iletken bağlantısı oluşturmak için, motor ile sürücü denetleyici arasında ilave bir bağlantı oluşturulmalıdır. Motor bağlantı kutusundaki kullanılmayan açık kablo uçları, izole edilmelidir. Şebeke ile sürücü denetleyici arasında, belirtilen nominal akıma sahip uygun devre kesici kullanın. Hasarlı parçaları veya bileşenleri prensip olarak sadece orijinal parçalarla değiştirin

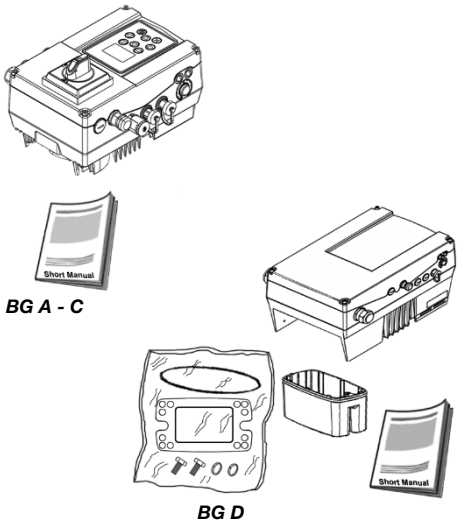
Elektrik çarpması ve elektrik deşarjı nedeniyle tehlike.
Cihazı kapattıktan sonra iki dakika bekleyin (kondansatörlerin deşarj süresi)

SICAK YÜZEYLER NEDENİYLE YANIK TEHLİKESİ!
SICAK YÜZEYLER NEDENİYLE CİLTTE AĞIR YANIKLAR MEYDANA GELEBİLİR!
Sürücü denetleyicinin soğutma elemanını yeterince soğumaya bırakın.

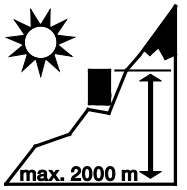
YENİDEN ÇALIŞMAYA BAŞLAYAN MOTORLAR VE DÖNEN MEKANİK PARÇALAR NEDENİYLE ÖLÜM TEHLİKESİ!
ÖLÜM VEYA AĞIR YARALANMALAR!
Bu uyarının dikkate alınmaması, ölüme, ağır yaralanmalara veya ciddi maddi hasarlara neden olabilir!
Belirli parametre ayarları ve işletim sırasında parametre ayarlarının değiştirilmesi, besleme geriliminde meydana gelen bir kesintiden sonra sürücü denetleyici INVEOR'un otomatik olarak yeniden çalışmaya başlamasına veya işletim karakteristiğine istenmeyen değişiklikler oluşmasına yol açabilir.

INSTALLATION

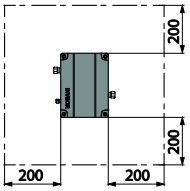
Lieferumfang | Scope of delivery



Montageort | Installation site



≤ 96 %

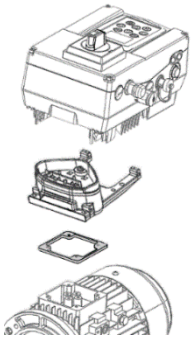


- 40...+ 50 °C
- 40...+ 122 °F

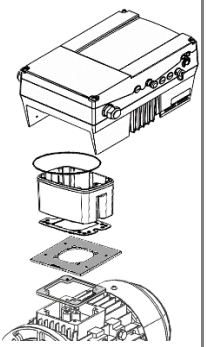
Antriebsregler Montieren | Installing drive controller

Motormontiert | Engine mounting

BG A-C | Sizes A-C

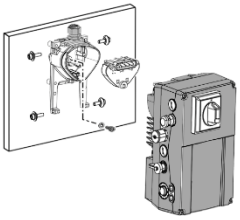


BG D | Size D

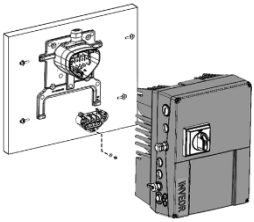


Wandmontage | Wall monting

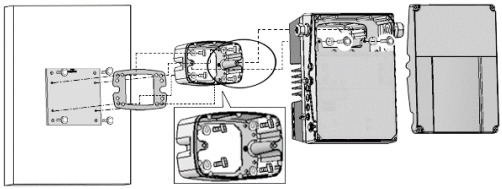
BG A | Size A



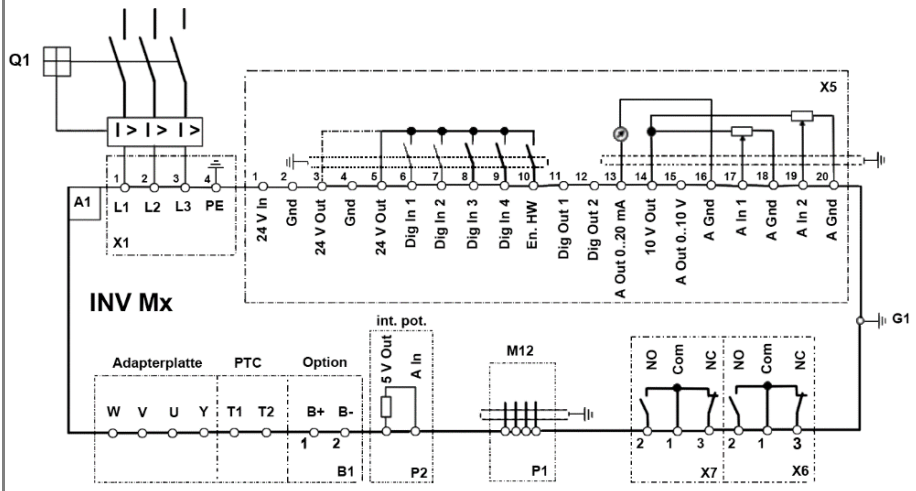
BG B-C | Sizes B-C



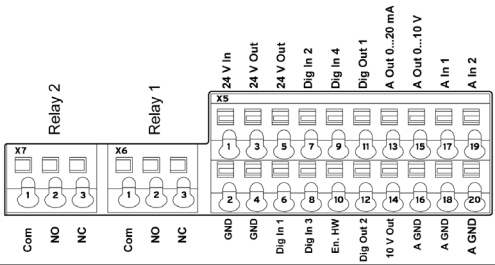
BG D | Size D



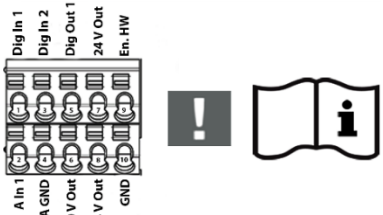
Anschlussplan | Connection diagramm



Steueranschlüsse | Control connections

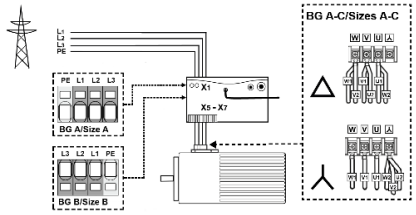


Steueranschlüsse Basic Applikationskarte | Control connections of the basic application board

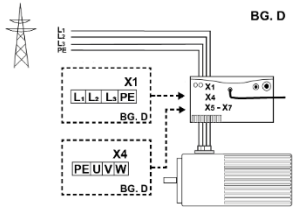


Anschlussplan | Connection diagram

BG. A-C | Sizes A-C

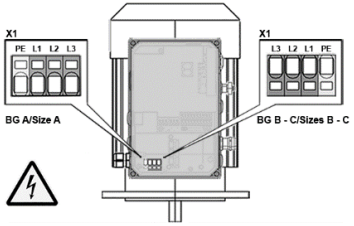


BG. D | Size D

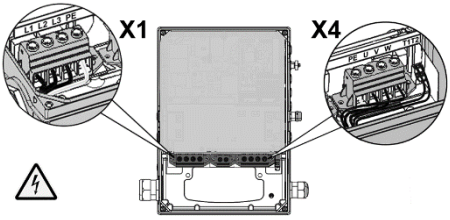


Leistungsanschlüsse | Power connections

BG. A-C | Sizes A-C

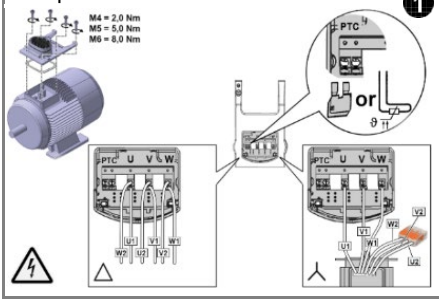


BG. D | Size D

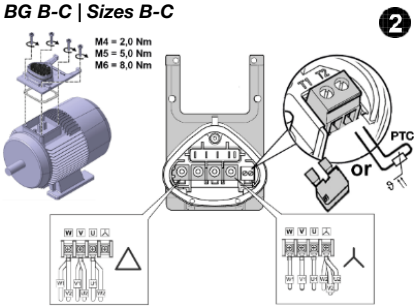


Gerät anschließen Motormontage | Connecting drive, Motor mounting

BG A | Size A

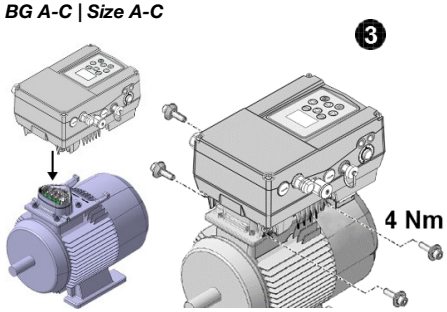


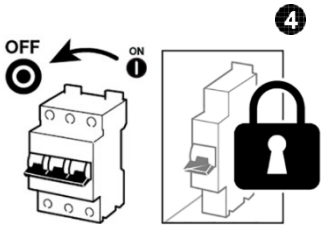
BG B-C | Sizes B-C

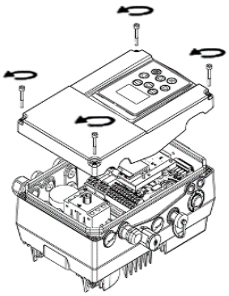


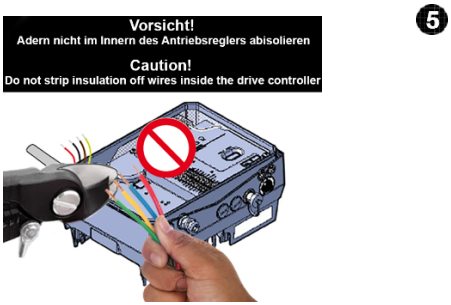
Anschließen Motormontage | Connecting drive, Motor mounting

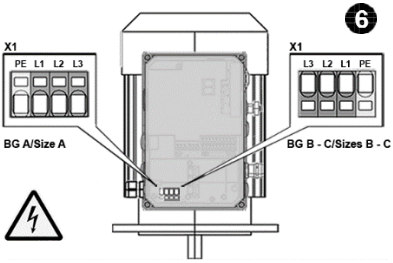
BG A-C | Size A-C

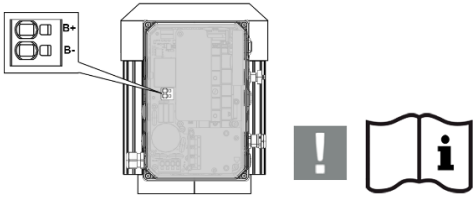




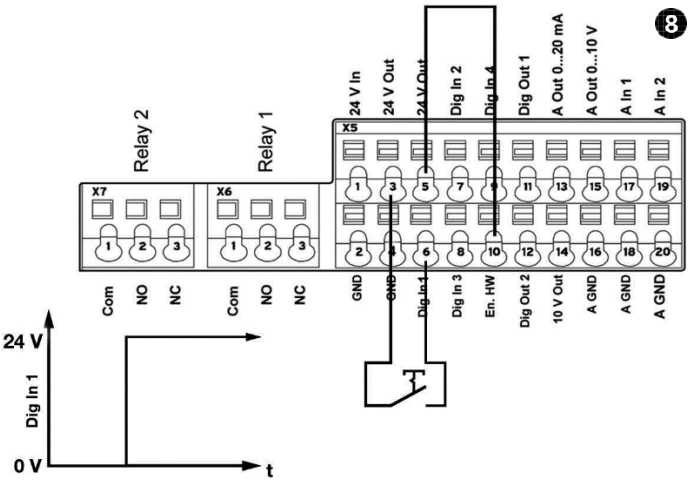


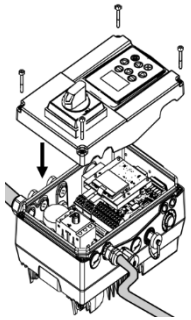


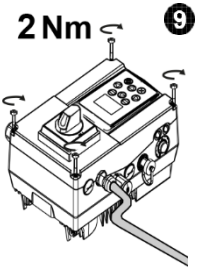


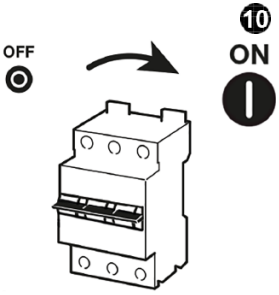


Hardwarefreigabe (BG A-C) | Hardware enable (Sizes A-C)



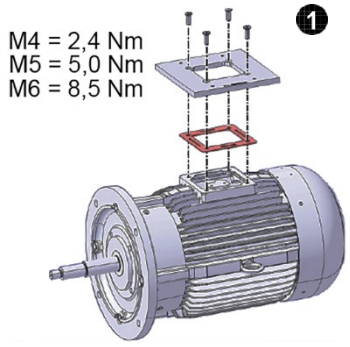


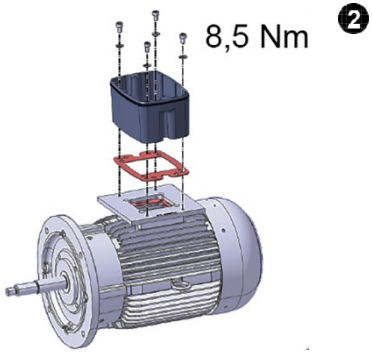




Anschließen Motormontage BG D | Connecting drive, Motor mounting Size D

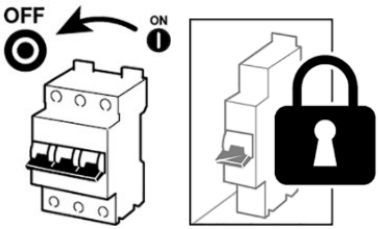
BG D | Size D





Anschließen Motormontage BG D | Connecting drive, Motor mounting Size D

3



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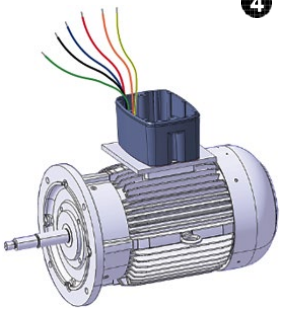

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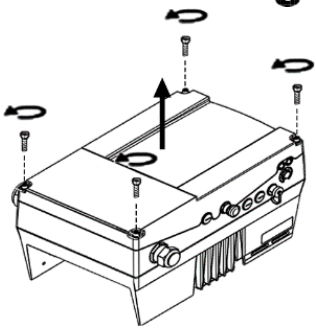

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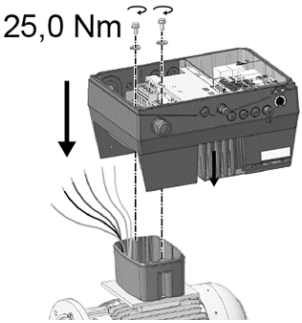
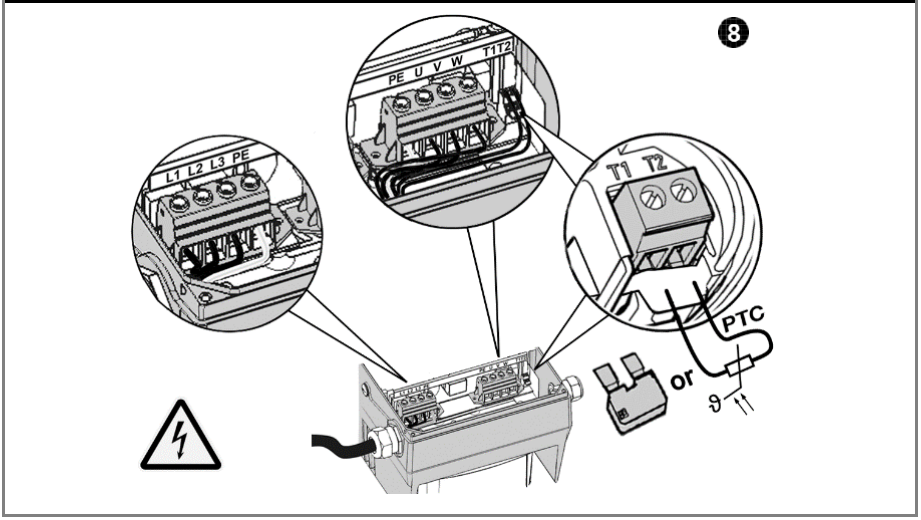


7

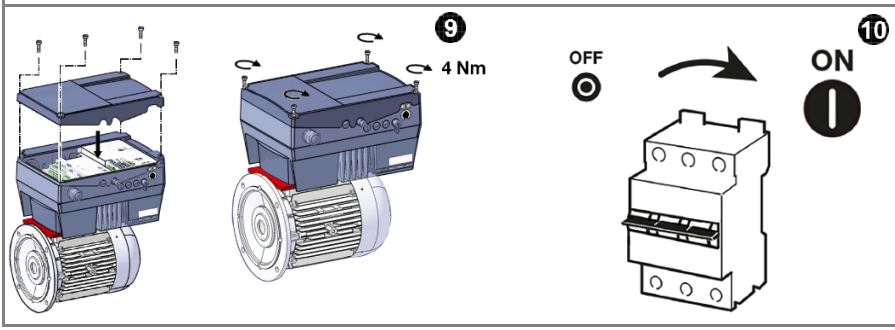
Anschließen Motormontage BG D | Connecting drive, Motor mounting Size D



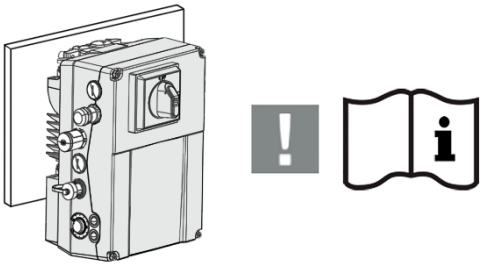
Hardwarefreigabe (BG D) | Hardware enable (Size D)

(siehe bildliche Darstellung 8 [Seite 8] „Hardwarefreigabe BG A-C“)

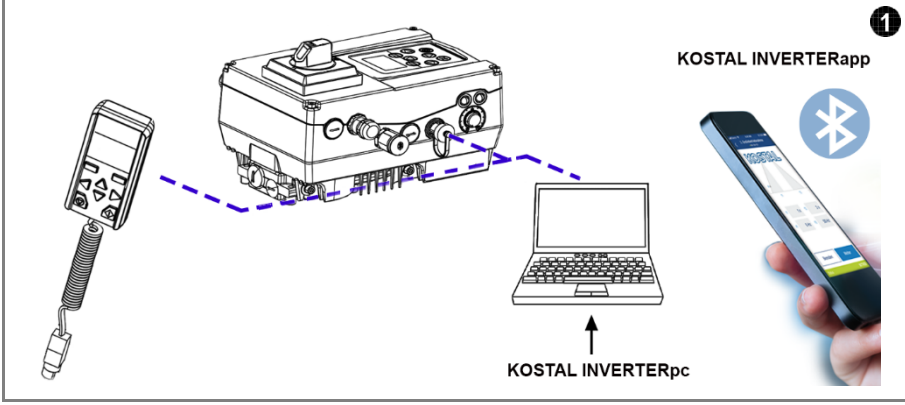
(see diagramm 8 [Page 8] „Hardware enable, sizes A-C“)



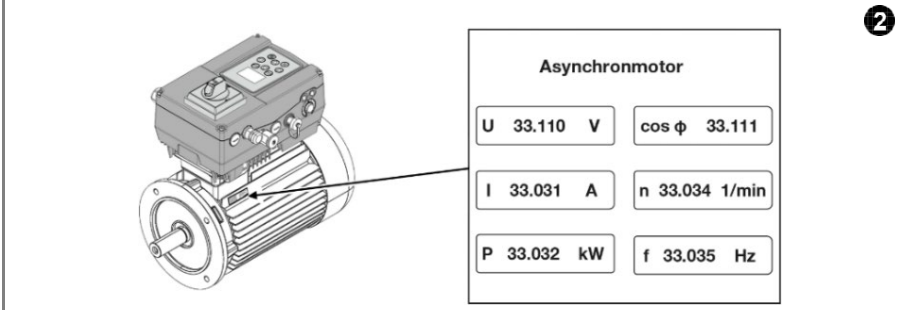
Gerät anschließen Wandmontage | Connecting device, Wall mounting



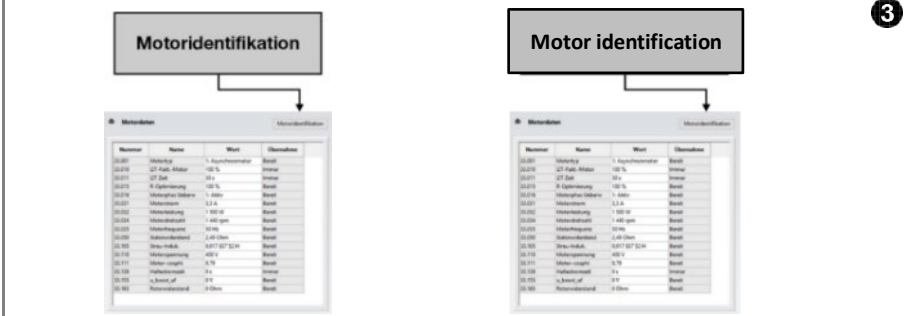
Schnellinbetriebnahme ASM | Quickstart guide, ASM



Parameter / Motordaten | Parameters / motor data

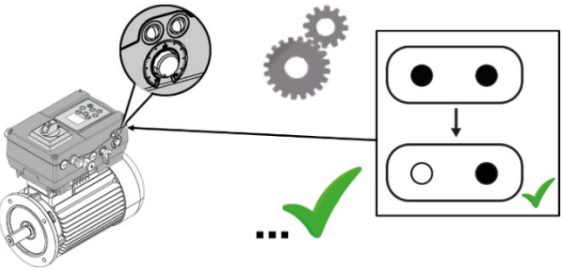


Motoridentifikation | Motor identification



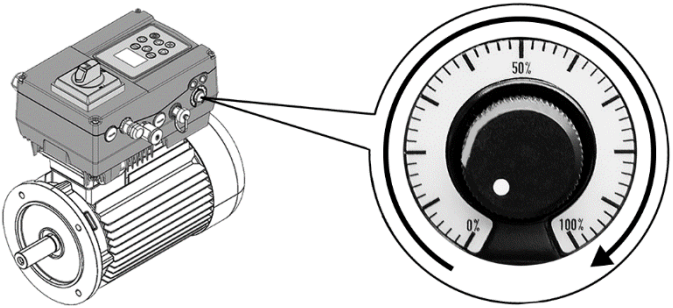
Motordaten werden berechnet | Motor data is being calculated

4

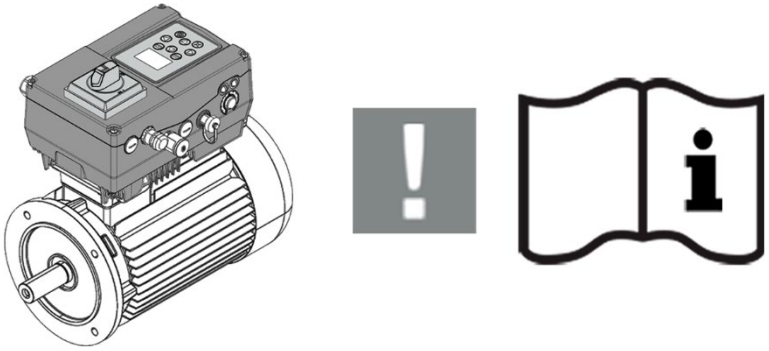


Drehzahleinstellung über Potentiometer | Speed setting via potentiometer

5



Schnellinbetriebnahme PMSM | Quickstart guide, PMSM



Notizen | Notes

KOSTAL

Technische Änderungen und Irrtümer vorbehalten!

Subject to technical changes, error accepted!