

INSTALLATION INSTRUCTION

RCM300-2424 Series DC-DC Converter

READ THIS CAREFULLY BEFORE INSTALLATION!	Vor der Installation bitte folgende Sicherheitshinweise beachten!	LEGGERE ATTENTAMENTE PRIMA DELL'INSTALLAZIONE!	A LIRE ATTENTIVEMENT AVANT L'INSTALLATION!
Before operating, read this document thoroughly and retain it for future reference. Non-respect of these instructions may reduce performances and safety of the devices and cause danger for people and property. The products must be installed, operated, serviced and maintained by qualified personnel in compliance with applicable standards and regulations. Do not open the device, it does not contain replaceable components, the tripping of the internal fuse (if included) is caused by an internal failure. Do not repair or modify the device, if malfunction or failure should occur during operation, send unit to the factory for inspection. No responsibility is assumed by Bel Power Solutions for any consequences deriving from the use of this material.	Lesen Sie dieses Dokument vor der Inbetriebnahme sorgfältig durch und bewahren Sie es zum späteren Nachschlagen auf. Die Nichtbeachtung dieser Anweisungen kann die Funktion und Sicherheit der Geräte beeinträchtigen und birgt Gefahren für Personen und Eigentum. Die Geräte müssen von qualifiziertem Personal unter Einhaltung der geltenden Normen und Vorschriften installiert, betrieben, gewartet und instand gehalten werden. Öffnen Sie das Gerät nicht, es enthält keine austauschbaren Komponenten, das Auslösen der internen Sicherung (falls vorhanden) ist stets auf tiefergehende Fehler im Schaltkreis zurück zu führen. Reparieren oder modifizieren Sie das Gerät nicht. Sollte während des Betriebs eine Fehlfunktion oder ein Defekt auftreten, schicken Sie das Gerät zur Überprüfung ins Werk. Bel Power Solutions übernimmt keine Haftung für die Folgen, die sich aus dem Einsatz dieses Gerätes ergeben.	Prima dell'installazione, leggere attentamente questo documento istruzioni e conservarle per future consultazioni. L'inosservanza delle presenti istruzioni può compromettere le caratteristiche e la sicurezza dell'apparecchio e causare pericolo per le persone e le cose. Il prodotto deve essere installato, utilizzato e riparato da personale qualificato e nel rispetto delle normative vigenti. Non aprire il prodotto, esso non contiene componenti sostituibili, il guasto del fusibile interno (se previsto) è causato da un guasto interno. Non tentare di riparare o modificare il prodotto, se durante il funzionamento si verificano guasti o anomalie, inviarlo al produttore per il controllo. Bel Power Solutions non si assume nessuna responsabilità per qualunque conseguenza derivante dall'uso di questo materiale.	Lire ces instructions avant l'installation, conserver ce manuel pour référence future. Défaut de se conformer à ces instructions peut affecter les caractéristiques et la sécurité du dispositif, et causer du danger aux personnes ou aux biens. Les produits doivent être installés, exploités et entretenus par du personnel qualifié et en conformité avec les règlements. N'ouvrez pas le produit, il ne contient aucune pièce réparable, le déclenchement du fusible interne (le cas échéant) est causé par un défaut interne. Ne pas essayer de réparer ou modifier le produit ; si des défaillances se produisent pendant le fonctionnement, retourner le produit au fabricant pour inspection. Bel Power Solutions n'assume aucune responsabilité des conséquences éventuelles découlant de l'utilisation des produits.
CAUTION	ACHTUNG	ATTENZIONE	AVVERTISSEMENT
RISK OF BURNS, EXPLOSION, FIRE, ELECTRICAL SHOCK, PERSONAL INJURY. Never carry out work on live parts! Danger of fatal injury! The product's enclosure may be hot, allow time for cooling product before touching it. Do not allow liquids or foreign objects to enter into the products. To avoid sparks, do not connect or disconnect the device before having previously turned-off input power and wait for internal capacitors discharge (minimum 2 minutes).	GEFAHR VON VERBRENNUNGEN, EXPLOSIONEN, FEUER, STROMSCHLAG, PERSONENSCHÄDEN. Führen Sie niemals Arbeiten an spannungsführenden Teilen durch! Gefahr von tödlichen Verletzungen! Das Gehäuse des Gerätes kann heiß sein, lassen Sie Zeit zum Abkühlen des Gerätes, bevor Sie es berühren. Lassen Sie keine Flüssigkeiten oder Fremdkörper in die Geräte eindringen. Um Überschläge zu vermeiden, schließen Sie das Gerät nicht an oder trennen Sie es nicht ohne vorher die Eingangsspannung abgeschaltet zu haben, und warten Sie die Entladung der internen Kondensatoren ab (mindestens 2 Minuten).	RISCHIO USTIONI, ESPLOSIONE, INCENDIO, SCOSSA, LESIONI GRAVI. Non effettuare mai operazioni sulle parti sotto tensione! Pericolo di lesioni letali! Il contenitore può scottare, lasciar quindi raffreddare il dispositivo prima di toccarlo. Non far entrare liquidi o oggetti estranei nel dispositivo. Per evitare scintille, non collegare o scollegare l'apparecchiatura prima di avere tolto tensione di ingresso e prima che sia avvenuta la scarica dei condensatori interni (min. 2 minuti).	RISQUE DE BRULURES, EXPLOSION, INCENDIE, ELECTROCUTION, DOMMAGE AUX PERSONNES. Ne jamais effectuer des opérations sur les parties sous tension! Danger de mort! Le boîtier peut produire des brûlures, le laisser refroidir avant de toucher l'appareil. Ne faire pas pénétrer des liquides ou des corps étrangers dans l'appareil. Pour éviter des étincelles, ne pas connecter ou déconnecter l'équipement jusqu'à ce que la tension d'entrée a été supprimée et avant qu'il n'ait eut lieu la décharge des condensateurs internes (minimum 2 minutes).
INTENDED USE	BESTIMMUNGSGEMÄßER BETRIEB	USO PREVISTO	UTILISATION
These are isolated devices suitable for ES1 and ES2 circuitry and are designed to be mounted internally within a system. They are intended for general use such as in industrial control, communication, medical and instrumentation equipment. Do not use these devices in applications where malfunction may cause injury or death. Please see full spec of unit for further details.	Es handelt sich um galvanisch getrennte Geräte, die für ES1- und ES2-Anwendungen geeignet sind und für die Montage auf DIN-Schienen und die Installation in einem Schutzgehäuse konzipiert sind. Sie sind für den allgemeinen Gebrauch wie z.B. in industriellen Steuer-, Kommunikations- und Automatisierung-Anwendungen vorgesehen. Verwenden Sie diese Geräte nicht in Anwendungen, bei denen eine Fehlfunktion zu Verletzungen oder zum Tod führen kann.	I dispositivi sono isolati, adatti per applicazioni ES1 e ES2, sono dotati di aggancio per il montaggio su guida DIN all'interno di quadri elettrici o contenitori di protezione, per l'utilizzo con controllori industriali, unità di comunicazione o apparecchi di misura. Non utilizzare in applicazioni in cui un eventuale guasto può comportare rischio di lesioni o di morte.	Les produits sont isolés, appropriés pour les circuits ES1 et ES2 et sont équipés d'un crochet pour montage sur rail DIN dans des armoires ou conteneurs de protection, pour utilisation avec les contrôleurs industriels, des modules de communication ou des unités de mesure. Ne pas utiliser ces dispositifs dans une application où un dysfonctionnement pourrait entraîner le risque des blessures ou de mort.
ENVIRONMENTAL CHARACTERISTICS	UMGEBUNGSBEDINGUNGEN	CARATTERISTICHE AMBIENTALI	CARACTÉRISTIQUES ENVIRONNEMENTALES
Installation in a Pollution Degree 2 environment. Do not use in wet area or subject to moisture. Carefully recycle the product and related batteries according to local regulations.	Installation in einer Umgebung mit Verschmutzungsgrad 2. Nicht in nassen Bereichen oder unter Feuchtigkeit verwenden. Das Gerät und die zugehörigen Batterien sind entsprechend den lokalen Vorschriften zu recyceln bzw. zu entsorgen.	Usare in ambienti con Grado di Inquinamento 2. Non far funzionare l'apparecchio in un ambiente umido o soggetto a formazione di condensa. Riciclare il prodotto e le batterie collegate, nel rispetto delle normative locali vigenti.	Utiliser les produits dans des environnements avec degré de pollution 2. Ne pas employer l'appareil dans un environnement humide ou soumis à la condensation. Recycler les produits et les batteries, conformément à la réglementation locale.

OPERATION RANGE

Refer to product rating label for input and output ratings.

INSTALLATION

Connection to the system with cables or with mating connectors defined in product datasheet (option K). Other installation methods may not meet the safety requirements.

Do not open the converters, or the warranty will be invalidated.

CLEANING LIQUIDS AND PROTECTION DEGREE

This converter is not hermetically sealed. To avoid possible damage, any penetration of liquids shall be avoided.

This converter corresponds to protection degree IP 30.

CAUTIONS

This converter is a component, intended exclusively for inclusion by an industrial assembly process or by a professionally competent person. Installation must strictly follow the national safety regulations in respect of the enclosure, mounting, creepage distances, clearances, markings, and segregation requirements of the end-use application.



CAUTION – Hot Surfaces: The surface of the power supply can achieve high temperatures ($T > +70^{\circ}\text{C}$).

ATTENTION – Surfaces chaudes : La surface de notre alimentation embarquée peut atteindre des températures très élevées ($T > +70^{\circ}\text{C}$). Le client final doit installer l'alimentation embarquée de sorte à garantir un fonctionnement en toute sécurité

PROTECTIVE EARTHING

There's a protective earth (PE) pin available on the input connector. Pin (PE) on input connector is reliably connected to the case. For safety reasons it is essential to connect this pin to the protective earth.

FUSING

The railway standard EN 50155 does not allow fuses in the converters. Consequently, the installer must add an external fuse listed in the table below or corresponding type of circuit breaker. However, when this is not possible, an incorporated fuse is available (option F). This fuse is not accessible and will not trip, except if the converter is defect.

Recommended external fuses:

Converter	Manufacturer	Fuse Type	Rating
24RCM300-2424	BEL FUSE	BEL 0ADE (P) 9300	30A, fast acting
110RCM300-2424	BEL FUSE	BEL 0ADE (P) 9100	10A, fast acting

SERVICING

The product(s) must be returned to the Authorized Bel Service Center for repair with a pre-assigned RMA number.

LIMITED WARRANTY

The company warrants each power supply of its manufacture for a period of 5 years from the date of original shipment. This warranty applies to defects in materials and workmanship that result in non-performance to published specification. The product(s) must be returned to the Authorized Service Center for repair with a pre-assigned RMA number.

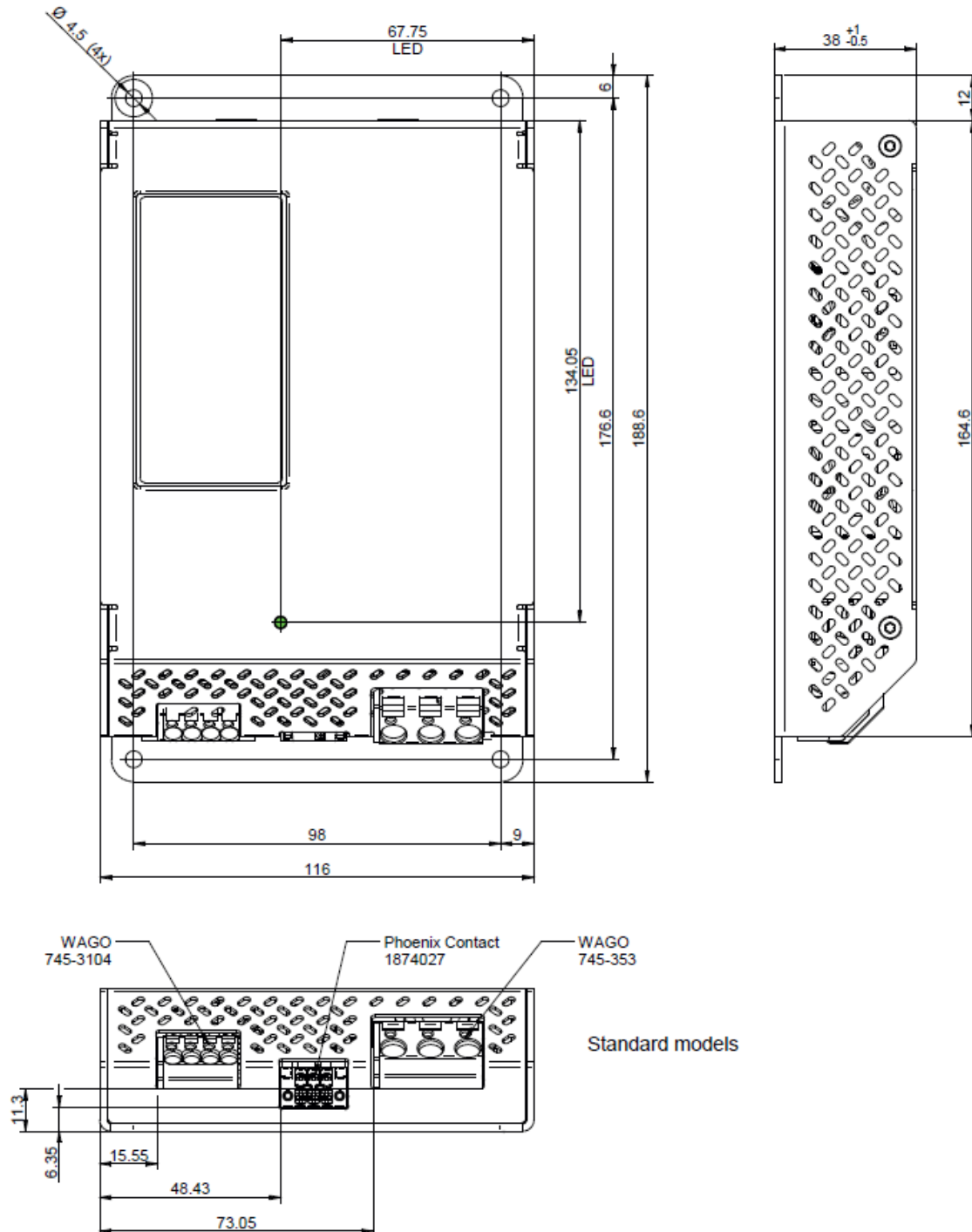
The company assumes no liabilities for consequential damages of any kind through the use or misuse of its products by any user. No other obligations are expressed or implied.

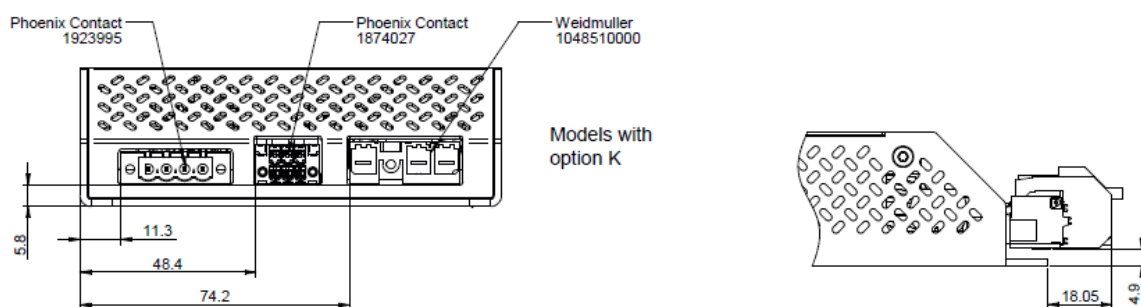
Please note that the specifications, terms, and conditions stated are subject to change without notice.

INPUT AND OUTPUT CONNECTOR DETAILS

Refer to the product datasheet at [belfuse.com/power-solutions](https://www.belfuse.com/power-solutions)

MECHANICAL DIMENSIONS AND MOUNTING REQUIREMENTS





ALLOWED MOUNTING POSITION

Make sure that there is sufficient airflow available for convection cooling and that the temperature of the bottom plate is within the specified range. This should be verified by measuring the case temperature at the specified measuring point when the converter is operated in the end-use application. T_c max defined in datasheet should not be exceeded. Ensure that a failure of the converter does not result in a hazardous condition.

NUCLEAR AND MEDICAL APPLICATIONS

This product is not designed or intended for use as critical component in life support systems, equipment used in hazardous environments, or nuclear control systems.

TECHNICAL REVISIONS

The appearance of products, including safety agency certifications pictured on labels, may change depending on the date manufactured. Specifications are subject to change without notice.