



# L-force Drives

Montageanleitung

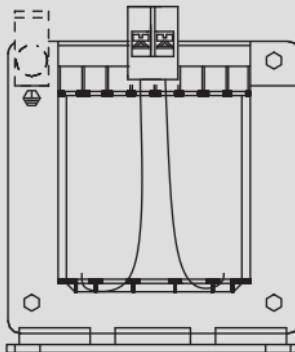
Mounting Instructions

Instructions de montage

Instrucciones para el montaje

Istruzioni per il montaggio

## ELN 5 ... 18 A



ELN1-0900H005, ELN1-0500H009, ELN1-0250H018

Netzdrossel

*mains choke*

self réseau

*reactancia de red*

induttanza di rete



Lesen Sie zuerst diese Anleitung und die Dokumentation zum Grundgerät, bevor Sie mit den Arbeiten beginnen!  
Beachten Sie die enthaltenen Sicherheitshinweise.

## Restgefahren



### Gefahr!

#### Gefährliche elektrische Spannung

Alle Leistungsanschlüsse führen bis zu 3 Minuten nach Netz-Ausschalten gefährliche elektrische Spannung.

#### Mögliche Folgen:

- ▶ Tod oder schwere Verletzungen beim Berühren der Leistungsanschlüsse.

#### Schutzmaßnahmen:

- ▶ Vor Arbeiten an den Leistungsanschlüssen Netz abschalten und mindestens 3 Minuten warten.
- ▶ Prüfen, ob alle Leistungsanschlüsse spannungsfrei sind.



## Warnings!

#### Conditions of Acceptability:

- ▶ These devices shall be used within their Recognized ratings as described in the ratings section.
- ▶ The suitability of the mounting means is to be determined in the end use application.
- ▶ These devices have been evaluated for factory wiring only.
- ▶ These devices have been investigated for use in a Pollution Degree 2 environment.
- ▶ These devices are to be installed in a suitable end-product enclosure.

## Konformität und Approbation

### Approbation

|     |                                    |  |   |
|-----|------------------------------------|--|---|
| UR  | UL506                              | Industrial Control Equipment, Underwriter Laboratories (File-No. E103521 for USA and Canada) |   |
| EAC | TP TC 020/2011<br>(TR ZU 020/2011) | Elektromagnetische Verträglichkeit von technischen Erzeugnissen                              | Eurasische Konformität<br>TR ZU: Technische Regulierung der Zollunion |
| EAC | TP TC 004/2011<br>(TR ZU 004/2011) | Über die Sicherheit von Niederspannungsausrüstung  | Eurasische Konformität<br>TR ZU: Technische Regulierung der Zollunion |

### Technische Daten

|   |  |  |  |
|---|--|--|--|
| Schutzart                               | EN 60529<br>NEMA 250   | IP 00<br>Berührschutz nach Typ 1   |  |
| Isolationsfestigkeit                    | EN 61800-5-1   | Überspannungskategorie III<br>Reduzierung ab 2000 m: Überspannungskategorie II |  |
| <b>Temperatur</b>                       |  |  |  |
| Lagerung                                |  | -25 ... +60 °C   |  |
| Transport                               |  | -25 ... +70 °C   |  |
| Betrieb                                 |  | -10 ... +55 °C<br>Stromreduzierung von +45 ... +55 °C: 2.5 %/°C                |  |
| Verschmutzung                           | EN 61800-5-1   | Verschmutzungsgrad 2   |  |
| Rüttelfestigkeit                        | EN50178;<br>IEC61800-5-1;<br>Germanischer Loyd, allgemeine Bedingungen   | Beschleunigungsfest bis 1 g  |  |
| Montageort, Einbaulage                  | Im Schaltschrank, empfohlen: hängend mit horizontaler Ausrichtung, Bild 12<br>(bei größeren Massen auch stehend möglich) |  |  |
| Bemessungsdaten,<br>Konformität/Approb. | Siehe Typenschild  |  |  |



Please read these instructions and the documentation of the standard device before you start working!  
Observe the safety instructions given therein!

## Residual hazards



### Danger!

#### Dangerous electrical voltage

All power terminals remain live for up to three minutes after mains disconnection.

#### Possible consequences:

- ▶ Death or severe injuries when touching the power terminals.

#### Protective measures:

- ▶ Switch off the power supply and wait for at least three minutes before working on the power terminals.
- ▶ Make sure that all power terminals are deenergised.



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## Conformity and approval

### Approval

|     |                                    |  |   |
|-----|------------------------------------|--|---|
| UR  | UL506                              | Industrial Control Equipment, Underwriter Laboratories (File-No. E103521 for USA and Canada) |   |
| EAC | TP TC 020/2011<br>(TR CU 020/2011) | Electromagnetic compatibility of technical means   | Eurasian Conformity<br>TR CU: Technical Regulation of Customs Union |
| EAC | TP TC 004/2011<br>(TR CU 004/2011) | On safety of low voltage equipment   | Eurasian Conformity<br>TR CU: Technical Regulation of Customs Union |

### Technical data

|   |   |  |  |  |  |
|---|---|--|--|--|--|
| Enclosure                               | EN 60529  | IP 00  |  |  |  |
|   | NEMA 250  | Protection against accidental contact according to type 1        |  |  |  |
| Insulation resistance                   | EN 61800-5-1  | Overvoltage category III<br>> 2000 m: Overvoltage category II    |  |  |  |
| <b>Temperature</b>                      |   |  |  |  |  |
| Storage                                 |   | -25 ... +60 °C   |  |  |  |
| Transport                               |   | -25 ... +70 °C   |  |  |  |
| Operation                               |   | -10 ... +55 °C<br>Current derating from +45 ... +55 °C: 2.5 %/°C |  |  |  |
| Pollution                               | EN 61800-5-1  | Pollution degree 2   |  |  |  |
| Vibration resistance                    | EN 50178; IEC 61800-5-1;<br>Germanischer Lloyd, general conditions  | Acceleration-resistant up to 1 g                                 |  |  |  |
| Mounting location,<br>mounting position | In the control cabinet, recommended: Suspended with horizontal alignment,  12 (with greater masses, standing is also an option) |  |  |  |  |
| Rated data,<br>conformity/approval      | See nameplate   |  |  |  |  |



Lire le présent fascicule et la documentation relative à l'appareil de base avant toute manipulation de l'équipement !  
Respecter les consignes de sécurité fournies.

## Dangers résiduels



### Danger !

#### Tension électrique dangereuse

Les raccordements de puissance sont encore sous tension jusqu'à 3 minutes après la coupure réseau.

#### Risques encourus :

- ▶ Mort ou blessures graves en cas de contact accidentel avec les raccordements de puissance.

#### Mesures de protection :

- ▶ Avant toute intervention au niveau des raccordements de puissance, couper l'alimentation et attendre au moins 3 minutes.
- ▶ S'assurer que tous les raccordements de puissance sont hors tension.



## Avertissements !

#### Conditions d'acceptabilité :

- ▶ Ces équipements doivent être utilisés conformément aux caractéristiques assignées décrites dans la section dédiée.
- ▶ L'adéquation des dispositifs montage est à établir dans les conditions d'application finales.
- ▶ Ces équipements ont été évalués exclusivement pour un câblage en usine.
- ▶ Ils ont été évalués en vue d'une utilisation dans un environnement caractérisé par le degré de pollution 2.
- ▶ Ils doivent être intégrés dans un coffret de protection adapté.

## Conformité et homologation

### Homologation

|     |                                    |  |   |
|-----|------------------------------------|--|---|
| UR  | UL506                              | Industrial Control Equipment, Underwriter Laboratories (File-No. E103521 for USA and Canada) |   |
| EAC | TP TC 020/2011<br>(RT UD 020/2011) | Compatibilité électromagnétique des équipements  | Conformité eurasienne<br>RT UD : Règlement technique de l'Union Douanière |
| EAC | TP TC 004/2011<br>(RT UD 004/2011) | Sécurité des équipements à basse tension   | Conformité eurasienne<br>RT UD : Règlement technique de l'Union Douanière |

### Spécifications techniques

|                        |              |  |  |
|------------------------|--------------|--|--|
| Indice de protection   | EN 60529     | IP 00  |  |
|                        | NEMA 250     | Protection contre contacts accidentels selon type 1                                      |  |
| Résistance d'isolation | EN 61800-5-1 | Catégorie de surtension III<br>Réduction à partir de 2000 m : catégorie de surtension II |  |

### Température

|   |   |  |
|---|---|--|
| Stockage                                      |   | -25 ... +60 °C   |
| Transport                                     |   | -25 ... +70 °C   |
| Fonctionnement                                |   | -10 ... +55 °C<br>Réduction du courant dans la plage +45 ... +55 °C : 2.5 %/°C |
| Pollution ambiante admissible                 | EN 61800-5-1  | Degré de pollution 2   |
| Résistance aux chocs                          | EN50178 ; IEC61800-5-1 ; Germanischer Loyd, conditions générales  | Résistance à l'accélération jusqu'à 1 g  |
| Emplacement de montage, position de montage   | Dans l'armoire électrique, position recommandée : fixation suspendue en sens horizontal, □12<br>(si poids plus élevé, la position verticale est également possible) |  |
| Données assignées, conformité / homologations | Voir plaque signalétique  |  |



Lea estas instrucciones y la documentación del equipo básico antes de empezar a trabajar.

Observe las instrucciones de seguridad indicadas.

## Peligros residuales



### ¡Peligro!

#### Tensión eléctrica peligrosa

Todas las conexiones de potencia conducen una tensión eléctrica peligrosa tras la desconexión de la red durante 3 minutos.

#### Posibles consecuencias:

- ▶ Muerte o lesiones peligrosas al entrar en contacto con las conexiones de potencia.

#### Medidas de protección:

- ▶ Antes de realizar cualquier trabajo en las conexiones de potencia, desconecte la red y espere como mínimo 3 minutos.
- ▶ Compruebe si las conexiones de red están libres de tensión.



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## Conformidad y aprobaciones

### Approbación

|     |                                    |  |   |
|-----|------------------------------------|--|---|
| UR  | UL506                              | Industrial Control Equipment, Underwriter Laboratories (File-No. E103521 for USA and Canada) |   |
| EAC | TP TC 020/2011<br>(TR TS 020/2011) | Compatibilidad electromagnética de productos técnicos  | Conformidad Europea<br>TR TS: Reglamento Técnico de la Unión Aduanera |
| EAC | TP TC 004/2011<br>(TR TS 004/2011) | Acerca de la seguridad de equipos de bajo voltaje  | Conformidad Europea<br>TR TS: Reglamento Técnico de la Unión Aduanera |

### Datos técnicos

|   |   |   |  |  |  |
|---|---|---|--|--|--|
| Tipo de protección                        | EN 60529  | IP 00   |  |  |  |
|   | NEMA 250  | Protección contra el contacto según el tipo 1   |  |  |  |
| Resistencia al aislamiento                | EN 61800-5-1  | Categoría de sobrevoltaje III<br>Reducción a partir de 2000 m: categoría de sobrevoltaje II |  |  |  |
| <b>Temperatura</b>                        |   |   |  |  |  |
| Almacenaje                                |   | -25 ... +60 °C  |  |  |  |
| Transporte                                |   | -25 ... +70 °C  |  |  |  |
| Funcionamiento                            |   | -10 ... +55 °C<br>Reducción de corriente de +45 ... +55 °C: 2.5 %/°C                        |  |  |  |
| Polución                                  | EN 61800-5-1  | Grado de polución 2   |  |  |  |
| Resistencia a sacudidas                   | EN50178;<br>IEC61800-5-1;<br>Germanischer Loyd, condiciones generales   | Resistente a la aceleración hasta 1 g   |  |  |  |
| Lugar de montaje, posición de montaje     | En armario eléctrico, recomendado: colgado con orientación horizontal,  (si se trata de grandes masas, también se puede colocar de pie) |   |  |  |  |
| Datos nominales, conformidad / aprobación | Véase placa de características  |   |  |  |  |



Prima di iniziare qualsiasi intervento, leggere le presenti istruzioni e la documentazione relativa al dispositivo di base.  
Osservare le note di sicurezza.

## Altri pericoli



### Pericolo!

#### Tensione elettrica pericolosa

Tutti i collegamenti di potenza presentano una tensione elettrica pericolosa fino a 3 minuti dopo la disinserzione dalla rete.

#### Possibili conseguenze:

- ▶ Morte o gravi lesioni in caso di contatto con i collegamenti di potenza.

#### Misure di protezione:

- ▶ Attendere almeno 3 minuti prima di eseguire qualsiasi intervento sui collegamenti di potenza.
- ▶ Controllare tutti i collegamenti di potenza per accettare l'assenza di tensione.



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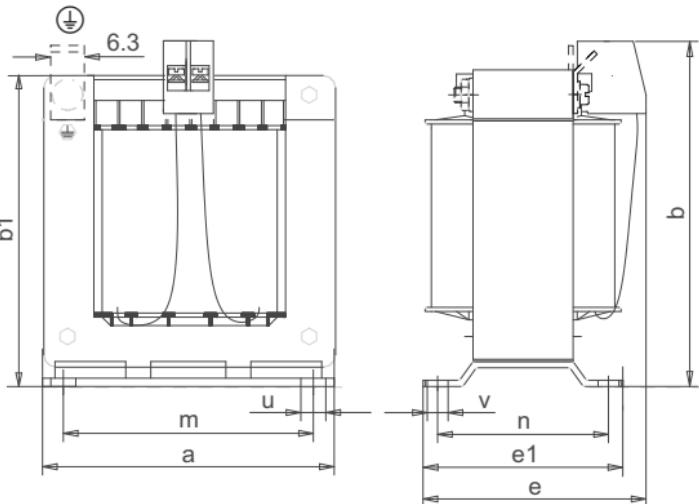
## Conformità e omologazione

### Omologazione

|     |                                    |  |  |
|-----|------------------------------------|--|--|
| UR  | UL506                              | Industrial Control Equipment, Underwriter Laboratories (File-No. E103521 for USA and Canada) |  |
| EAC | TP TC 020/2011<br>(TR ZU 020/2011) | Compatibilità elettromagnetica degli apparecchi tecnici                                      | Conformità euroasiatica<br>TR ZU: Regolamento tecnico dell'unione doganale |
| EAC | TP TC 004/2011<br>(TR ZU 004/2011) | Informazioni sulla sicurezza dei dispositivi a bassa tensione                                | Conformità euroasiatica<br>TR ZU: Regolamento tecnico dell'unione doganale |

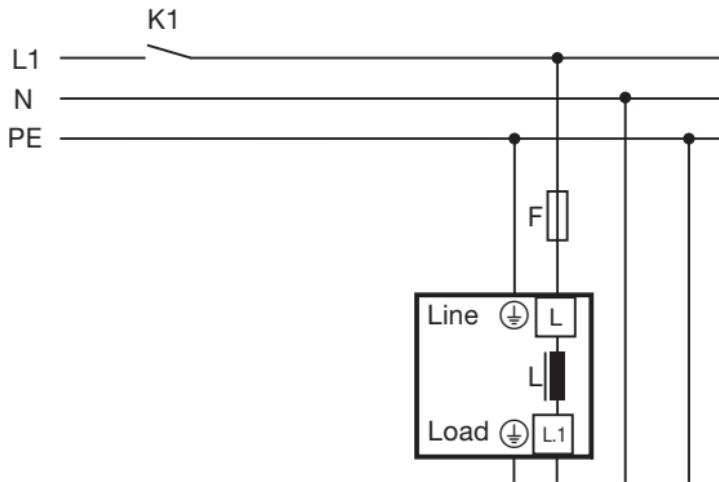
### Dati tecnici

|                                     |   |  |  |  |  |
|-------------------------------------|---|--|--|--|--|
| Grado di protezione                 | EN 60529  | IP 00  |  |  |  |
|                                     | NEMA 250  | Protezione da contatto secondo Tipo 1  |  |  |  |
| Resistenza di isolamento            | EN 61800-5-1  | Categoria di sovratensione III<br>Riduzione a partire da 2000 m: Categoria di sovratensione II |  |  |  |
| <b>Temperatura</b>                  |   |  |  |  |  |
| Stoccaggio                          |   | -25 ... +60 °C   |  |  |  |
| Trasporto                           |   | -25 ... +70 °C   |  |  |  |
| Funzionamento                       |   | -10 ... +55 °C<br>Riduzione di corrente da +45 a +55 °C: 2.5 %/°C                              |  |  |  |
| Inquinamento                        | EN 61800-5-1  | Grado di inquinamento 2  |  |  |  |
| Resistenza alle vibrazioni          | EN50178;<br>IEC61800-5-1;<br>Germanischer Loyd, condizioni generali   | Resistente all'accelerazione fino a 1 g  |  |  |  |
| Luogo e posizione di montaggio      | Nel quadro elettrico; si raccomanda di montare le unità a parete, con allineamento orizzontale,  12 (in caso di peso elevato, è possibile anche il montaggio in verticale a pavimento) |  |  |  |  |
| Dati nominali, conformità/omologaz. | Vedere targhetta  |  |  |  |  |



ELN3-601

|               | <b>a</b> | <b>b</b> | <b>b1</b> | <b>e</b> | <b>e1</b> | <b>m</b> | <b>n</b> | <b>u</b> | <b>v</b> | [kg] |
|---------------|----------|----------|-----------|----------|-----------|----------|----------|----------|----------|------|
| ELN1-0900H005 | 66       | 75       | 61        | 82       | 67        | 50       | 53       | 4.8      | 9        | 1.1  |
| ELN1-0500H009 |          |          |           |          |           |          |          |          |          |      |
| ELN1-0250H018 | 96       | 96       | 87        | 90       | 77        | 84       | 61       | 5.3      | 9        | 2.1  |



ELN3-1PH

|               | L, L.1                      | $\oplus$        |      |
|---------------|-----------------------------|-----------------|------|
|               |                             |                 |      |
|               | [mm <sup>2</sup> ]<br>[AWG] | [Nm]<br>[lb-in] | [mm] |
| ELN1-0900H005 | 2.5                         | 0.6             |      |
| ELN1-0500H009 | 12                          | 5.3             | 6.3  |
| ELN1-0250H018 | 4<br>10                     | 0.6<br>5.3      |      |



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