

Typennummer / Identification

| | | | | | |
|----------|----------|----------------------------|------------|---------------|------------------------|
| Standard | Standard | LR3-AD/AE XXX-404-0 | Drosselart | Type of choke | 3~ Line Reactor |
| | | | Baureihe | Model Family | LR3-A |








Technische Daten / Technical Data

| | | | | |
|---------------------|-----------------------|--------|--|---------------------------|
| Phasenzahl | No. of phase | | | 3 |
| Schutzklasse | Protection class | | | III0 |
| Bemessungsspannung | Rated voltage | [V] | | 690 AC (UL = max. 600V) |
| Bemessungsfrequenz | Rated frequency | [Hz] | | 50 – 60 |
| Kurzschlussspannung | Short circuit voltage | [%] | | 4 @ 400V |
| | | | | 9.2 @ 50 Hz |
| Spannungsabfall | Voltage drop | [V] | | 11.0 @ 60 Hz |
| L Toleranz | L tolerance | [%] | | ± 10 |
| Prüfspannung | Test voltage | [kV] | | 4.0 2 sec |

Betriebsbedingungen / Operating conditions

| | | | | |
|------------------------|-----------------------|--------|--|---|
| Schutzart | Protection index | | | IP 00 |
| Umgebungstemperatur | Ambient temperature | [°C] | | -30.... +40 |
| Lagertemperatur | Storage temperature | [°C] | | -30 +70 (EN 60721-3-1 ; 1K3) |
| Transporttemperatur | Transport temperature | [°C] | | -40 +85 (EN 60721-3-2 ; 2K3) |
| Überlastbarkeit | Overload capability | | | 1.5-facher Nennstrom für 1 Minute pro Stunde / 1.5 times rated current for 1 minute per hour |
| Klimaklasse | Climatic category | | | 30/100/21 (EN 60068-1) |
| | | | | (Ohne Betauung, mittlere relative Feuchte 85%) |
| Luftfeuchtigkeit | Humidity | | | 3K3 (Without condensation, medium relative humidity 85%) |
| Entflammbarkeitsklasse | Class of flammability | | | UL 94V-2 oder besser / UL 94V-2 or better |
| Temperaturklasse VDE | Class ISO °C VDE | | | H (180°C) |
| Temperaturklasse UL | Class ISO °C UL | | | Class 180 |
| Kühlungsart | Type of cooling | | | AN |
| Betriebsart | Operating conditions | | | DB |
| Parallelschaltung | Parallel connection | | | Ja / yes (90% Einzelbelastung) / (90% Single load) |
| Überspannungskategorie | Overvoltage category | | | 3 >2000m = 2 (EN 61800-5-1) |
| Rüttelfestigkeit | Vibration resistance | | | Transport 2M2 (IEC/EN 60721-3-2) |
| Verschmutzungsgrad | Degree of pollution | | | 2 (EN 61800-5-1) |
| MTBF | MTBF | [h] | | > 600.000 @ 40°C / 400V |

Ausführung / Standards

| Typ / Type: | Datum / Date | Zeichen / Signs |
|--|----------------------------|---|
| EN 61558-1 +AC+A1 EN 61558-2-20 | 2005 + 2006 + 2009 2011 |   |
| BS EN 61558-2-20 | 2011 |  |
| UL 5085-1-2 (E 103521) CSA 22.2 No. 6.6 | 2006, Edition 1 |  LR3-AD004-404-0 ... LR3-AD080-404-0 |
| UL 508 (E 219022) CSA 22.2 No. 14 | 2018, Edition 18 |  IND. CONT.EQ. 1HD1 LR3-AE063-404-0 ... LR3-AE900-404-0 |
| EAC | 2015 |  |
| SJ/T 11363-2006 (China-RoHS) | 2006 |  |
| RoHS 2011/65/EU RoHS 2015/863/EU | 2011 2015 | |

Bemerkung / Notes

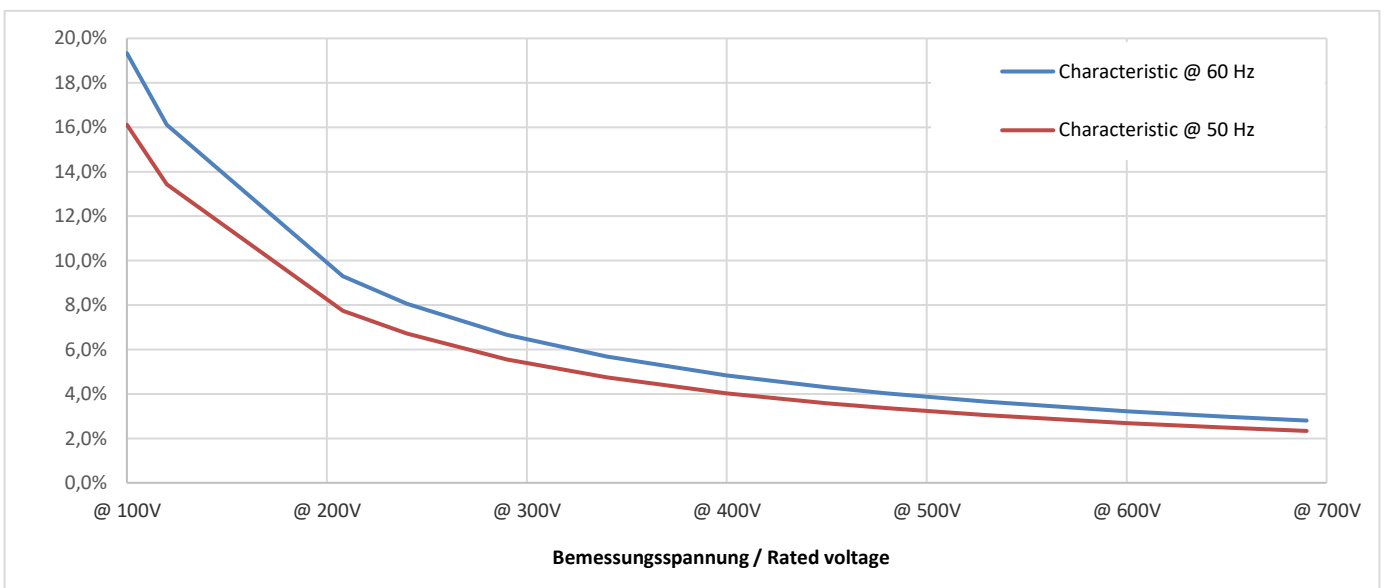
Die angegebenen technischen Daten sind typisch.
Material- und fertigungsbedingt können Abweichungen auftreten.

Technical specifications are typical.
They can vary due to material and production tolerances.

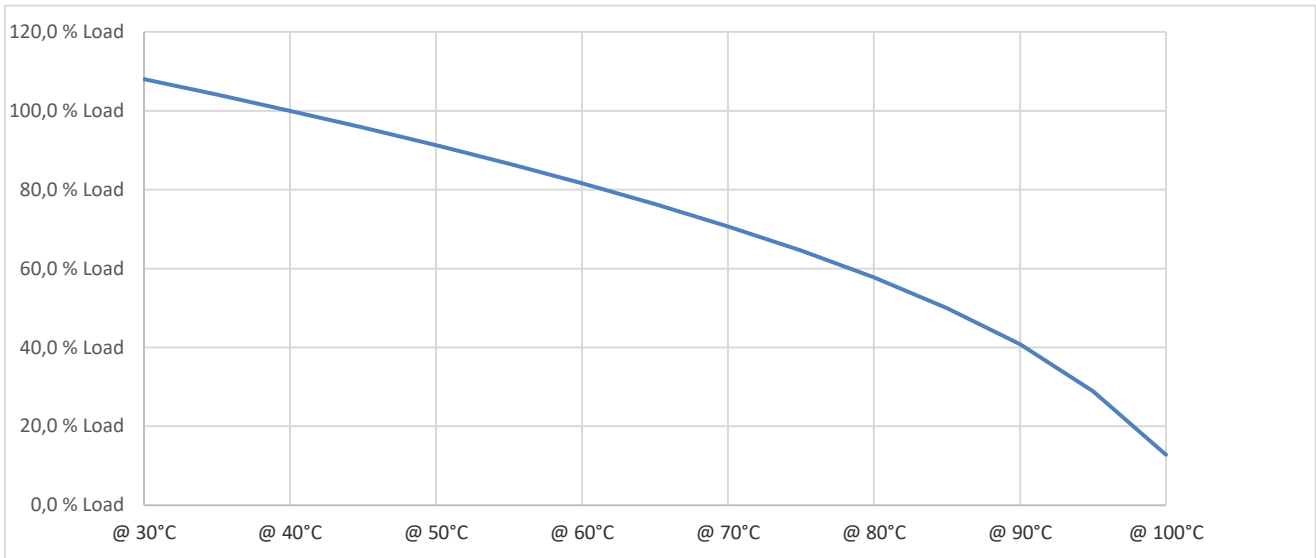
Weitere Technische Daten / Other Technical Data

| Artikelnummer | Bemessungsstrom | Linear bis Spitzenstrom | Induktivität L | Typ. Wicklungswiderstand | Verlustleistung |
|-----------------|-----------------|-------------------------|----------------|--------------------------|-----------------|
| Part number | Rated current | Linear up to | Inductance L | Typ. Winding resistance | Power Loss |
| | [A] | [A] | [mH] | [mΩ] | [W] |
| LR3-AD004-404-0 | 4 | 6 | 7.35 | 449 | 50 |
| LR3-AD006-404-0 | 6 | 9 | 4.9 | 233 | 55 |
| LR3-AD008-404-0 | 8 | 12 | 3.68 | 152 | 75 |
| LR3-AD010-404-0 | 10 | 15 | 2.94 | 110 | 80 |
| LR3-AD016-404-0 | 16 | 24 | 1.84 | 64 | 100 |
| LR3-AD020-404-0 | 20 | 30 | 1.47 | 43.3 | 105 |
| LR3-AD025-404-0 | 25 | 37.5 | 1.18 | 25 | 110 |
| LR3-AD030-404-0 | 30 | 45 | 0.98 | 21 | 115 |
| LR3-AD035-404-0 | 35 | 52.5 | 0.84 | 15.3 | 120 |
| LR3-AD040-404-0 | 40 | 60 | 0.73 | 12.6 | 150 |
| LR3-AD045-404-0 | 45 | 67.5 | 0.65 | 10.5 | 160 |
| LR3-AD050-404-0 | 50 | 75 | 0.59 | 8.9 | 165 |
| LR3-AD063-404-0 | 63 | 94.5 | 0.47 | 6.2 | 190 |
| LR3-AE063-404-0 | 63 | 94.5 | 0.47 | 10.1 | 235 |
| LR3-AD080-404-0 | 80 | 120 | 0.37 | 4.1 | 200 |
| LR3-AE080-404-0 | 80 | 120 | 0.37 | 6.1 | 245 |
| LR3-AE100-404-0 | 100 | 150 | 0.30 | 4.2 | 310 |
| LR3-AE125-404-0 | 125 | 187.5 | 0.235 | 2.8 | 300 |
| LR3-AE160-404-0 | 160 | 240 | 0.185 | 1.9 | 440 |
| LR3-AE200-404-0 | 200 | 300 | 0.145 | 1.94 | 520 |
| LR3-AE250-404-0 | 250 | 375 | 0.118 | 1.6 | 670 |
| LR3-AE315-404-0 | 315 | 472 | 0.092 | 0.74 | 750 |
| LR3-AE400-404-0 | 400 | 600 | 0.074 | 0.65 | 840 |
| LR3-AE500-404-0 | 500 | 750 | 0.059 | 0.57 | 920 |
| LR3-AE630-404-0 | 630 | 945 | 0.047 | 0.38 | 1000 |
| LR3-AE710-404-0 | 710 | 1065 | 0.041 | 0.32 | 1100 |
| LR3-AE900-404-0 | 900 | 1350 | 0.032 | 0.033 | 1200 |

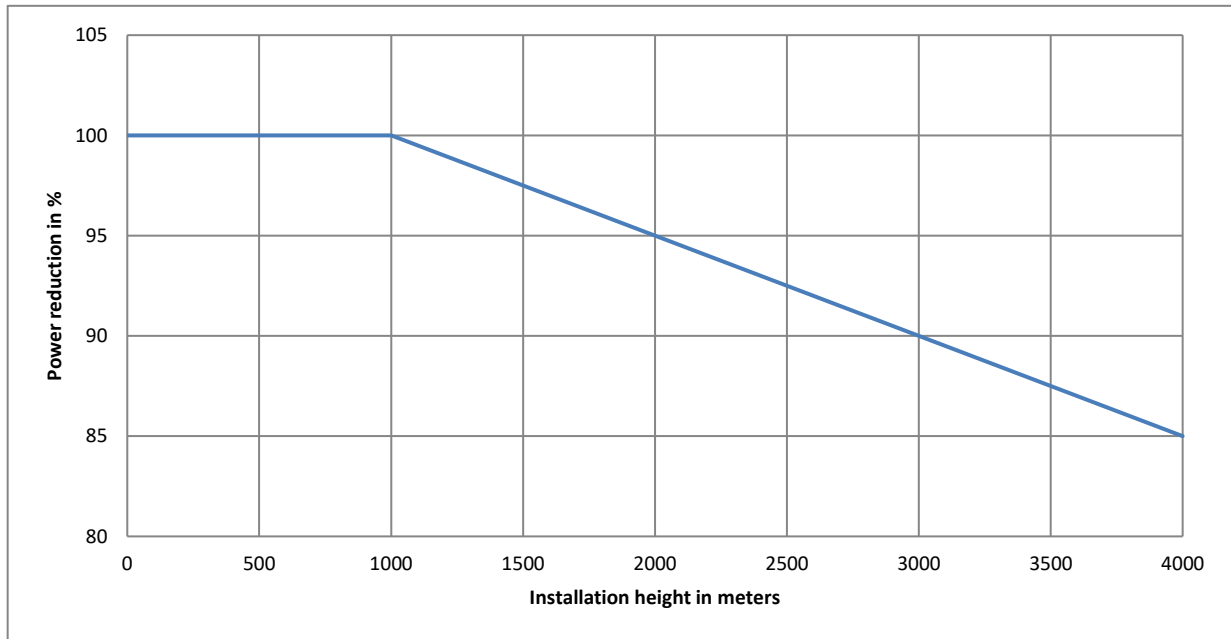
Netzqualität uk Bewertung / Power Quality uk rating



Temperaturreduzierung / Derating

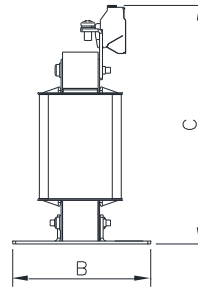
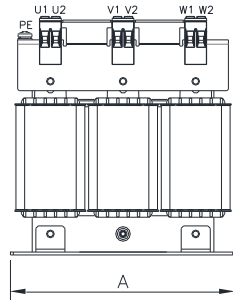


Leistungsreduzierung / Power reduction



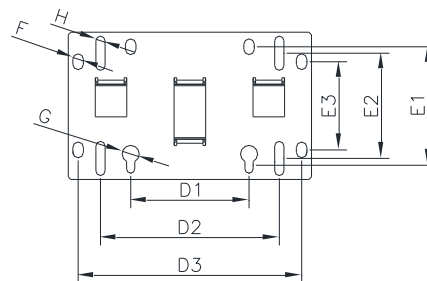
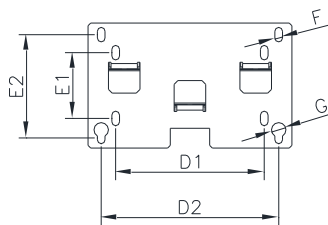
Aufbauskizze / Construction drawing

1

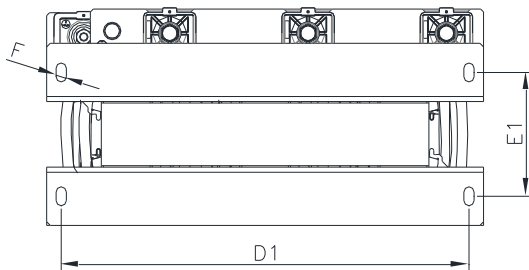
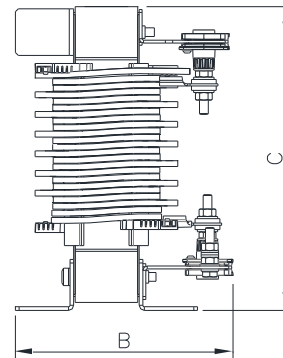
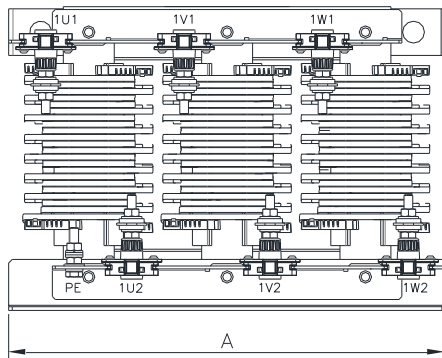


LR3-AD004-404-0
-
LR3-AD035-404-0

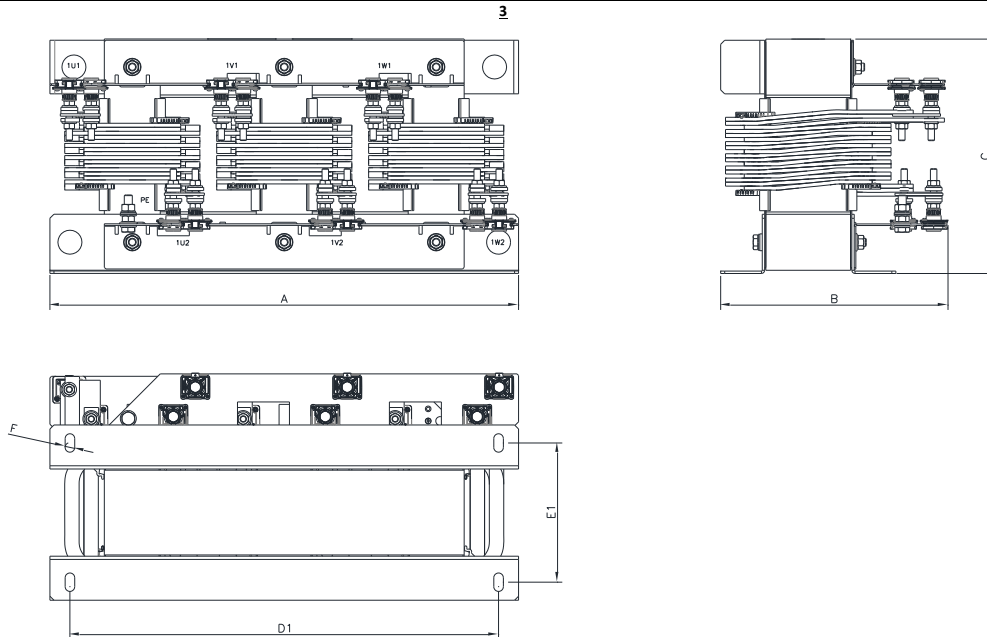
LR3-AD040-404-0
-
LR3-AD080-404-0



2



Aufbauskizze / Construction drawing

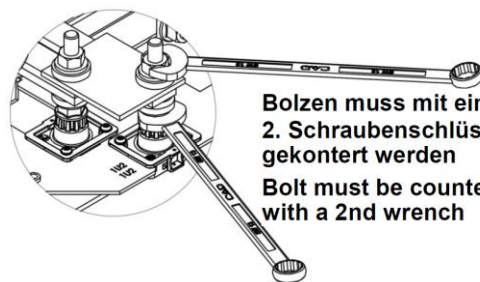


Abmessungen / Dimensions

| Artikelnummer Part number | Aufbauskizze Construction drawing | A | B | C | D1 x E1 | D2 x E2 | D3 x E3 | F | G | H |
|------------------------------|--------------------------------------|--------|--------|--------|-------------|----------|----------|-------|-------|-------|
| | | [mm] | [mm] | [mm] | [mm] | [mm] | [mm] | [Ø] | [Ø] | [Ø] |
| LR3-AD004-404-0 | 1 | 96 | 60 | 117 | 56 x 38 | 71 x 45 | -- | 4.8 | -- | -- |
| LR3-AD006-404-0 | 1 | 96 | 69 | 117 | 56 x 47 | 71 x 54 | -- | 4.8 | -- | -- |
| LR3-AD008-404-0 | 1 | 120 | 85 | 137 | 90 x 39 | 105 x 70 | -- | 4.8 | 10 | -- |
| LR3-AD010-404-0 | 1 | 120 | 85 | 137 | 90 x 39 | 105 x 70 | -- | 4.8 | 10 | -- |
| LR3-AD016-404-0 | 1 | 150 | 95 | 165 | 113 x 50 | 135 x 80 | -- | 5.8 | 11 | -- |
| LR3-AD020-404-0 | 1 | 150 | 95 | 165 | 113 x 50 | 135 x 80 | -- | 5.8 | 11 | -- |
| LR3-AD025-404-0 | 1 | 155 | 110 | 165 | 113 x 65 | 135 x 95 | -- | 5.8 | 11 | -- |
| LR3-AD030-404-0 | 1 | 155 | 110 | 170 | 113 x 65 | 135 x 95 | -- | 5.8 | 11 | -- |
| LR3-AD035-404-0 | 1 | 155 | 110 | 170 | 113 x 65 | 135 x 95 | -- | 5.8 | 11 | -- |
| LR3-AD040-404-0 | 1 | 185 | 102 | 198 | 90 x 83 | 136 x 70 | 170 x 57 | 8 | 13 | 7 |
| LR3-AD045-404-0 | 1 | 185 | 112 | 198 | 90 x 83 | 136 x 70 | 170 x 57 | 8 | 13 | 7 |
| LR3-AD050-404-0 | 1 | 185 | 112 | 198 | 90 x 83 | 136 x 70 | 170 x 57 | 8 | 13 | 7 |
| LR3-AD063-404-0 | 1 | 210 | 117 | 235 | 105 x 98 | 156 x 85 | 175 x 77 | 8 | 13 | 7 |
| LR3-AD080-404-0 | 1 | 210 | 125 | 240 | 105 x 106 | 156 x 93 | 175 x 85 | 8 | 13 | 7 |
| LR3-AE063-404-0 | 2 | 300 | 142 | 205 | 280 x 77.5 | -- | -- | 7 | -- | -- |
| LR3-AE080-404-0 | 2 | 300 | 149.5 | 210 | 280 x 85 | -- | -- | 7 | -- | -- |
| LR3-AE100-404-0 | 2 | 300 | 168 | 198 | 280 x 103.5 | -- | -- | 7 | -- | -- |
| LR3-AE125-404-0 | 2 | 405 | 189 | 182 | 360 x 125 | -- | -- | 7 | -- | -- |
| LR3-AE160-404-0 | 2 | 420 | 205.5 | 187.5 | 375 x 125 | -- | -- | 7 | -- | -- |
| LR3-AE200-404-0 | 2 | 480 | 205 | 198 | 440 x 111 | -- | -- | 12 | -- | -- |
| LR3-AE250-404-0 | 2 | 480 | 220 | 210 | 440 x 126 | -- | -- | 12 | -- | -- |
| LR3-AE315-404-0 | 2 | 480 | 230 | 262 | 440 x 136 | -- | -- | 12 | -- | -- |
| LR3-AE400-404-0 | 2 | 480 | 245.5 | 262 | 440 x 151.5 | -- | -- | 12 | -- | -- |
| LR3-AE500-404-0 | 3 | 510 | 280 | 260.5 | 440 x 160 | -- | -- | 12 | -- | -- |
| LR3-AE630-404-0 | 3 | 500 | 282.5 | 251 | 440 x 163 | -- | -- | 12 | -- | -- |
| LR3-AE710-404-0 | 3 | 586 | 284 | 293 | 536 x 174 | -- | -- | 12 | -- | -- |
| LR3-AE900-404-0 | 3 | 586 | 307.5 | 322 | 536 x 197.5 | -- | -- | 12 | -- | -- |

Zusätzliche Informationen / Additional Information

| Artikelnummer Part number | Anschlüsse / Terminals | | | Anzugsmomente / Torque | | | - | |
|------------------------------|---------------------------------|------------------------------------|-----------------------------|---------------------------------|------------------------------------|-----------------------------|-------------------------------------|------------------------------------|
| | Schraubklemme Screw terminal | Bolzenanschluss Bolt connection | PE-Anschluss PE Terminal | Schraubklemme Screw terminal | Bolzenanschluss Bolt connection | PE-Anschluss PE Terminal | Gewicht (Netto) Weight (net) | Wickelmaterial Winding material |
| | [mm ²] | - | - | [Nm] | [Nm] | [Nm] | [kg] | - |
| LR3-AD004-404-0 | 4 | -- | 6.3 x 0.8 | 0.5 – 1.0 | - | - | 1.3 | AL |
| LR3-AD006-404-0 | 4 | -- | 6.3 x 0.8 | 0.5 – 1.0 | - | - | 1.5 | AL |
| LR3-AD008-404-0 | 4 | -- | M5 | 0.5 – 1.0 | - | 3.0 | 1.9 | AL |
| LR3-AD010-404-0 | 4 | -- | M5 | 0.5 – 1.0 | - | 3.0 | 2.0 | AL |
| LR3-AD016-404-0 | 4 | -- | M5 | 0.5 – 1.0 | - | 3.0 | 3.5 | AL |
| LR3-AD020-404-0 | 4 | -- | M5 | 0.5 – 1.0 | - | 3.0 | 3.8 | AL |
| LR3-AD025-404-0 | 4 | -- | M5 | 0.5 – 1.0 | - | 3.0 | 5.7 | AL |
| LR3-AD030-404-0 | 10 | -- | M5 | 1.2 – 2.0 | - | 3.0 | 5.9 | AL |
| LR3-AD035-404-0 | 10 | -- | M5 | 1.2 – 2.0 | - | 3.0 | 6.0 | AL |
| LR3-AD040-404-0 | 10 | -- | M5 | 1.2 – 2.0 | - | 3.0 | 6.8 | AL |
| LR3-AD045-404-0 | 10 | -- | M5 | 1.2 – 2.0 | - | 3.0 | 8.2 | AL |
| LR3-AD050-404-0 | 10 | -- | M5 | 1.2 – 2.0 | - | 3.0 | 8.4 | AL |
| LR3-AD063-404-0 | 16 | -- | M5 | 2.0 – 4.0 | - | 3.0 | 9.7 | AL |
| LR3-AD080-404-0 | 16 | -- | M5 | 2.0 – 4.0 | - | 3.0 | 12.0 | AL |
| LR3-AE063-404-0 | -- | M6 | M6 | - | 4.0 | 6.0 | 11.0 | AL |
| LR3-AE080-404-0 | -- | M6 | M6 | - | 4.0 | 6.0 | 13.0 | AL |
| LR3-AE100-404-0 | -- | M6 | M6 | - | 4.0 | 6.0 | 18.0 | AL |
| LR3-AE125-404-0 | -- | M6 | M10 | - | 4.0 | 20.0 | 21.0 | AL |
| LR3-AE160-404-0 | -- | M6 | M10 | - | 4.0 | 20.0 | 25.0 | AL |
| LR3-AE200-404-0 | -- | M8 | M10 | - | 4.5 | 20.0 | 27.0 | AL |
| LR3-AE250-404-0 | -- | M8 | M10 | - | 4.5 | 20.0 | 34.0 | AL |
| LR3-AE315-404-0 | -- | M8 | M10 | - | 4.5 | 20.0 | 44.0 | AL |
| LR3-AE400-404-0 | -- | M8 | M10 | - | 4.5 | 20.0 | 51.0 | AL |
| LR3-AE500-404-0 | -- | 2x M8 | M10 | - | 4.5 | 20.0 | 56.0 | AL |
| LR3-AE630-404-0 | -- | 2x M8 | M10 | - | 4.5 | 20.0 | 62.0 | AL |
| LR3-AE710-404-0 | -- | 2x M8 | M10 | - | 4.5 | 20.0 | 90.0 | AL |
| LR3-AE900-404-0 | -- | 2x M8 | M10 | - | 4.5 | 20.0 | 116.0 | AL |

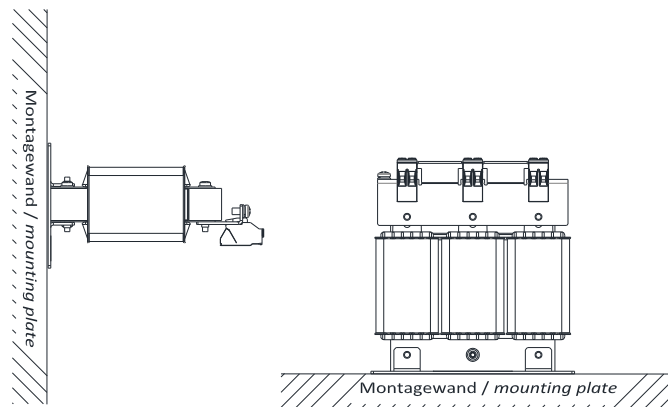


Bolzen muss mit einem 2. Schraubenschlüssel gekontert werden
Bolt must be countered with a 2nd wrench

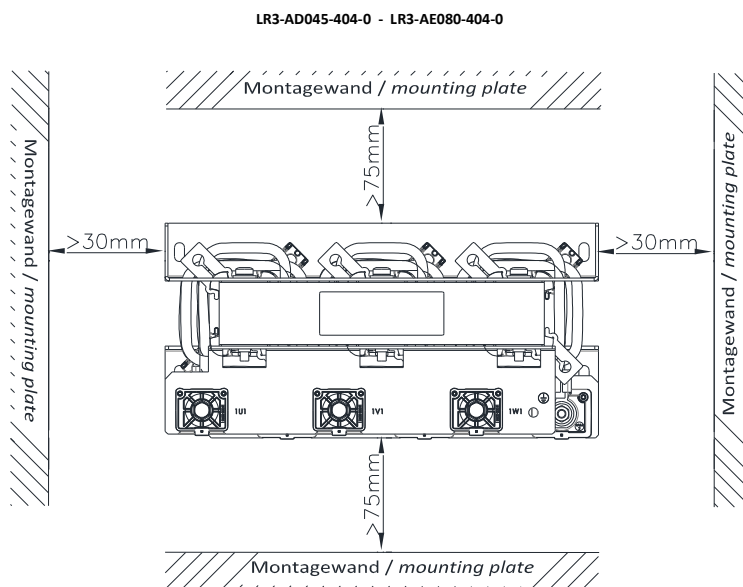
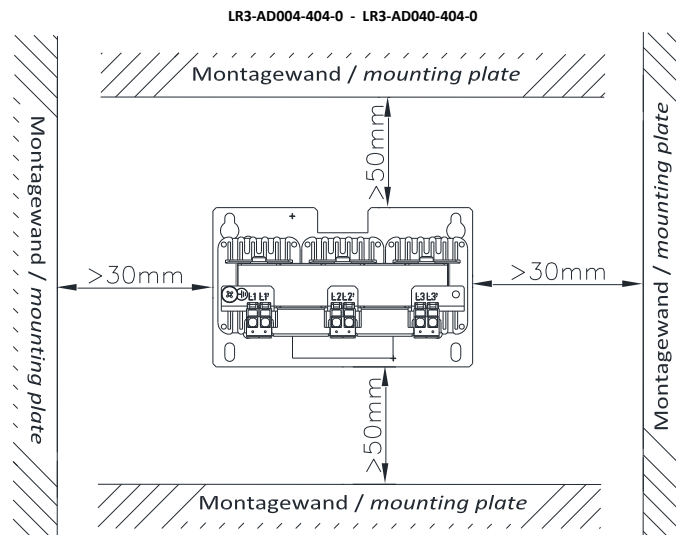
Zusatzinformationen Klemmen / Additional Information Terminals

| Klemme | Terminal | [mm ²] | 4 | 10 | 16 | Schraubklemme / Screw Terminal |
|--------------------|-----------------|---------------------|--------------------------|-------------------|-------------------|--|
| Eingang Ausgang | Input Output | [mm ²] | 0.2 – 6.0 | 0.2 – 16 | 2.5 – 25 | Eindrätzig (starr) / Mehrdrätzig (flexibel) Single wire (solid) / stranded (flexible) |
| | | [mm ²] | 0.2 – 6.0 / 0.2 – 4.0 | 0.2 – 10 | 2.5 – 16 | Feindrätzig / Feindrätzig mit Aderendhülse Finely-stranded / Finely-stranded with cable and sleeves |
| | | AWG | 22 – 10 | 8 | 10 – 6 | |
| | | [mm] | 9 | 14 | 15 | Abisolierlänge / Stripping length |
| | | - | Schlitz / Slotted | Schlitz / Slotted | Schlitz / Slotted | Schraubenkopf / Screw head |
| | | - | M3 | M4 | M5 | Schraubengewinde / Screw threading |

Einbaulage / Mounting directions

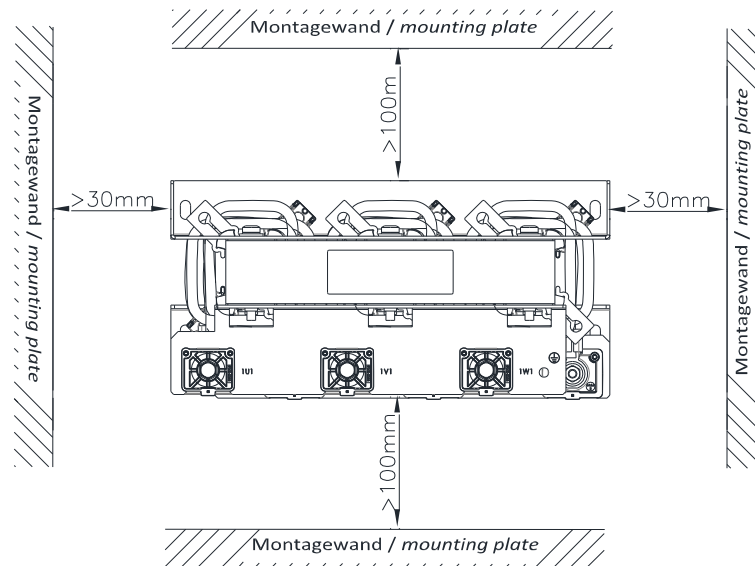


Freiräume / Free spaces



Freiräume / Free spaces

LR3-AE100-404-0 – LR3-AE900-404-0



Sicherheitshinweise / Notes

Bitte lesen Sie diese Warnungen und Sicherheitshinweise sorgfältig durch, bevor Sie das Gerät in Betrieb nehmen. Das Gerät darf nur durch fachkundiges und qualifiziertes Personal installiert werden. Bei Funktionsstörungen oder Beschädigungen schalten Sie sofort die Versorgungsspannung ab und senden das Gerät zur Überprüfung ins Werk. Das Gerät beinhaltet keine Servicebauteile. Bei Auslösen einer internen Sicherung liegt höchstwahrscheinlich ein interner Defekt am Gerät vor. Die angegebenen Daten dienen allein der Produktbeschreibung und sind nicht als zugesicherte Eigenschaften im Rechtsinne aufzufassen.

Bestimmungsgemäßer Gebrauch

Dieses Gerät ist für den Einbau in ein Gehäuse konzipiert und zur Verwendung für allgemeine elektronische Geräte, wie z.B. Industriesteuerungen, Bürogeräte, Kommunikationsgeräte oder Messgeräte geeignet. Benutzen Sie dieses Gerät nicht in Steuerungsanlagen von Flugzeugen, Zügen oder nuklearen Einrichtungen, in denen eine Funktionsstörung zu schweren Verletzungen führen oder Lebensgefahr bedeuten kann.

Installation

Die Installation ist entsprechend den örtlichen Gegebenheiten, einschlägigen Vorschriften, nationalen Unfallverhütungsvorschriften und den anerkannten Regeln der Technik durchzuführen. Dieses elektrische Betriebsmittel ist eine Komponente, die zum Einbau in elektrische Anlagen oder Maschinen bestimmt ist und erfüllt die Anforderungen der Niederspannungsrichtlinie (2014/35/EU). Der geforderte Mindestabstand zu benachbarten Teilen ist einzuhalten, um die Kühlung nicht zu behindern!

Please read these warnings and safety notices carefully before operating the device. Installation of the device is reserved for competent and qualified personnel. In the event of malfunctions or damage to the device, switch off the supply voltage immediately and send to the production plant for inspection. The device does not contain any service parts. The specified data serve the product description alone and are not understood as warranted characteristics in the legal sense.

Proper use

This device is designed for installation in a wiring cabinet and for general use with a frequency inverter such as industrial control systems, machine tools, wind turbines and elevators for example. Do not use this device in the control systems of aircraft, trains, or nuclear facilities where malfunction may result in severe injury or death.

Installation

Installation should be performed in accordance with local conditions, relevant provisions, national accident prevention regulations and the accepted rules of engineering. This electrical equipment is a component designed for installation in electrical systems or machines and it satisfies the requirements of the Low Voltage Directive (2014/35/EU). The required minimum distance from the adjacent parts must be maintained in order to prevent the cooling system from being impeded!

Bemerkung / Notes

Einzelheiten der Darstellung in der Aufbauskinne sind unverbindlich.
Allgemeintoleranzen DIN 2768-m.
Änderungen vorbehalten.

Technical specifications in the drawing are not binding.
General tolerance to DIN 2768-m.
Subject to change.