

F U m \ \ Y a ' 9 f X i b [g \ / c l Y b ' z i f ' 7 f c g g \ / c b X] b [' i b X ' G \ \] f a h f Y b b i b [



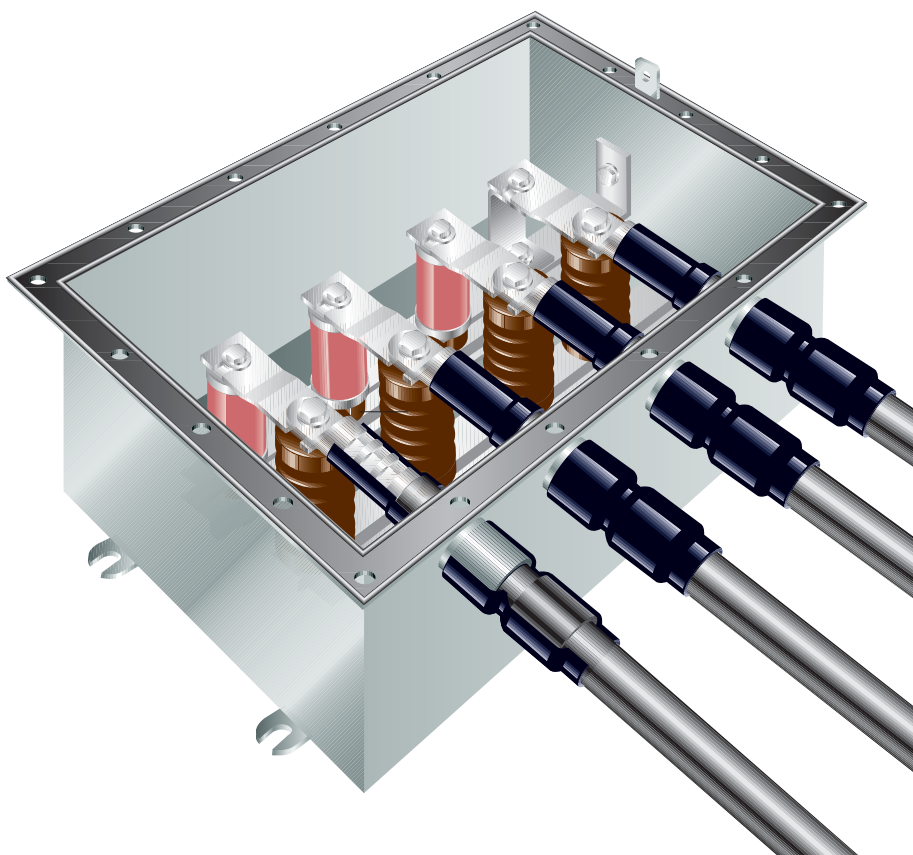
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AUTHORIZED DISTRIBUTOR

Erdungsboxen für Crossbonding und Schirmtrennung



Anwendung

- Starre Erdung
- Erdung mit Überspannungsableitern
- Auskreuzung

Leistungsmerkmale

- Kompakte Bauweise
- Edelstahl
- Hermetisch abgedichtet
- 1-Phasen- und 3-Phasen-Ausführung
- Überspannungsableiter (SVL)
- IP65 / IP 68
- Für Koaxialkabel oder Einleiterkabel
- Spannungsfestigkeit nach IEC 60840, Anhang H



Erdungsboxen zur Erdanbindung der leitenden Kabelschichten mit Möglichkeiten des Auskrenzens

Erdungsboxen werden zusammen mit Kabelmuffen und Endverschlüssen verwendet, um für Tests einen einfachen Zugang zu dem Schirm von Hochspannungskabeln zu gewähren und induzierte Spannungen, die sich infolge von Last- und Kurzschlussströmen am Mantel aufbauen, zu verringern.

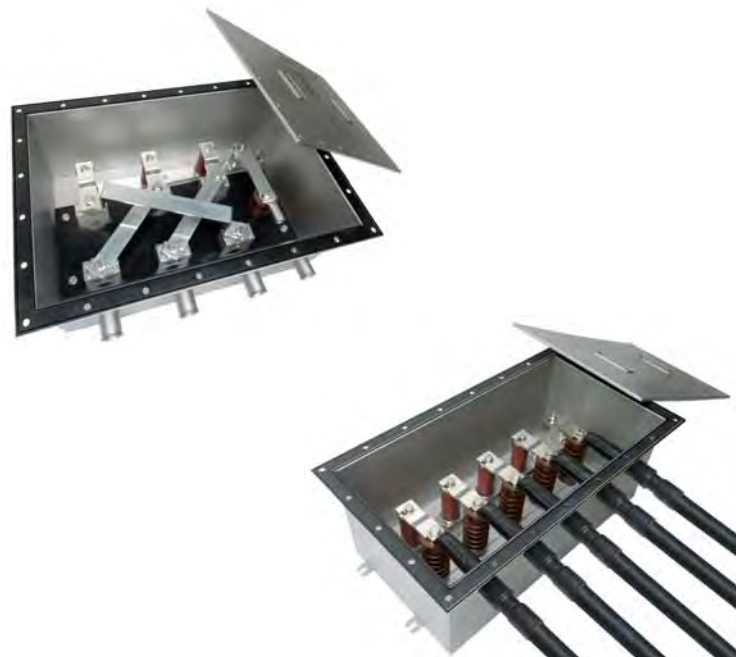
Blitz und Schaltoperationen können transiente Überspannungen auf dem Kabelschirm verursachen. Um diese zu begrenzen, ist es möglich Mantelspannungsbegrenzer (Überspannungsableiter) in die Erdungsboxen zu integrieren.

Je nach Anwendung sind unterschiedliche Erdungsboxen erhältlich.



Mechanischer Aufbau

- Aus Edelstahl hergestellt
- 1-Phasen- und 3-Phasen-Erdungsboxen
- Mit und ohne Überspannungsableiter
- Einführung für Koaxialkabel oder Einleiterkabel
- Verbindungen können entfernt werden
- Kompakte Bauweise erhältlich (ohne entfernbare Verbindungen)
- Hermetisch abgedichtet – dicht bis zu einer Wassertiefe von 5 m
 - Kabelschuhe und Anschlusskabel sind innerhalb und außerhalb der Erdungsbox mit Wärmeschumpfschläuchen abgedichtet.
- Geeignet für:
 - Starre Erdung
 - Erdung mit Überspannungsableitern
 - Auskrenzung



Elektrischer Aufbau

- Querschnitt der Verbindungen bis zu 300 mm²
- Uc = Überspannungsableiter von 3 kV bis 6 kV
- Kurzschlussstromfestigkeit 1 s / 31,5 kA
- BIL-Phase zu Erde / Phase zu Phase 40 kV

Anwendung

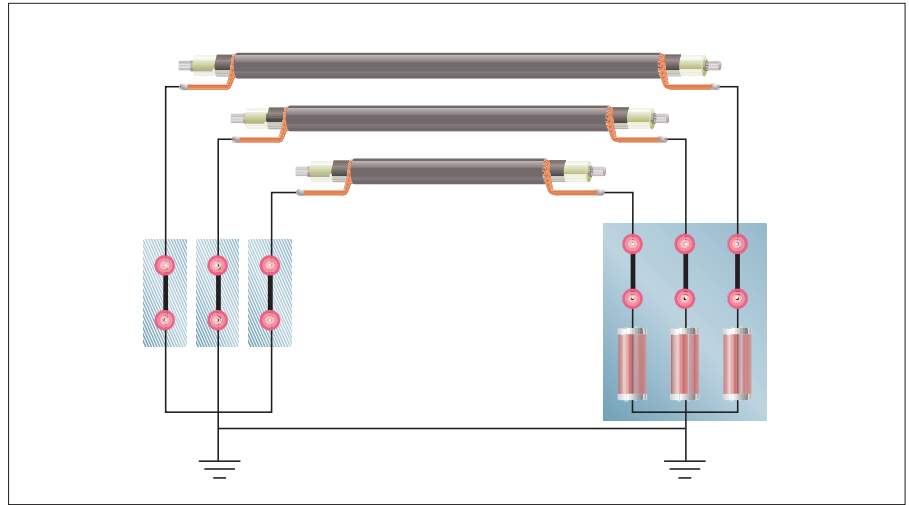
Installation in Gruben oder Kabelschächten sowie an Baukonstruktionen oder Masten



Most popular cable sheath grounding options:

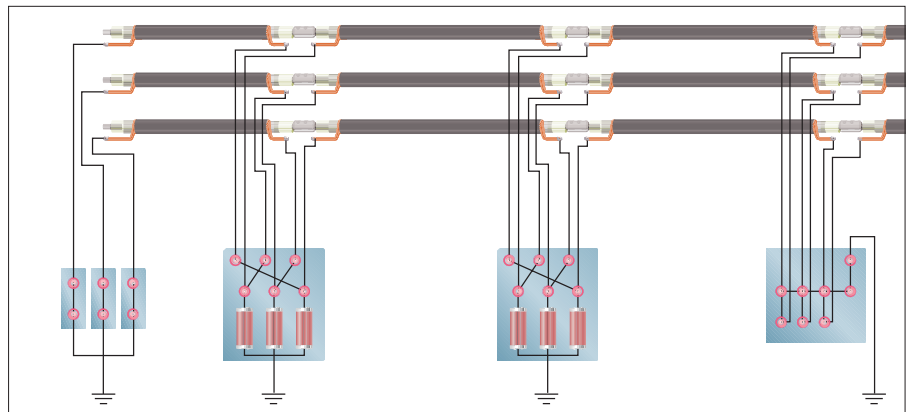
Single point earthing

On relatively short cable sections the cable sheaths are solidly bonded together and earthed at one position. The sheaths of the three cable sections are connected and grounded at one point only. At all other points, there will be a voltage between sheath and ground that will be at its maximum at the farthest point from the ground bond. Since there is no closed sheath circuit, current does not flow along the sheaths and no sheath circulation current loss occurs.



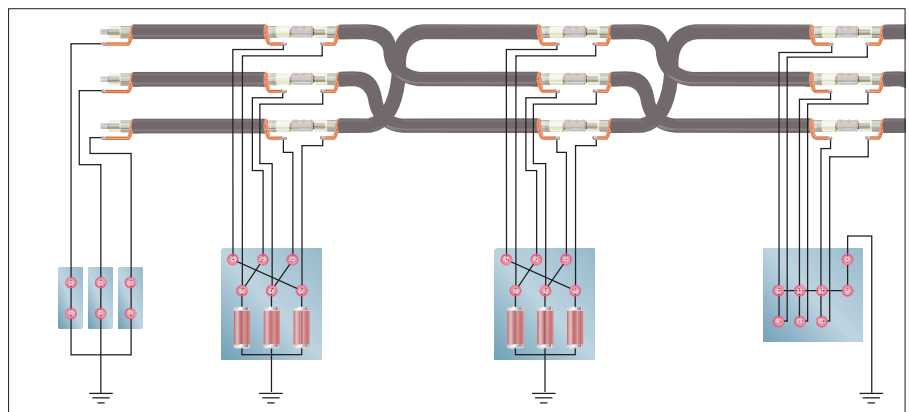
Cross bonding

The cable route is sectionalized into equal lengths. The sections are cross connected to neutralize the induced voltages. The phase sum of the introduced voltages will be zero and hence there will be no circulating currents when the cable laying is symmetrical.

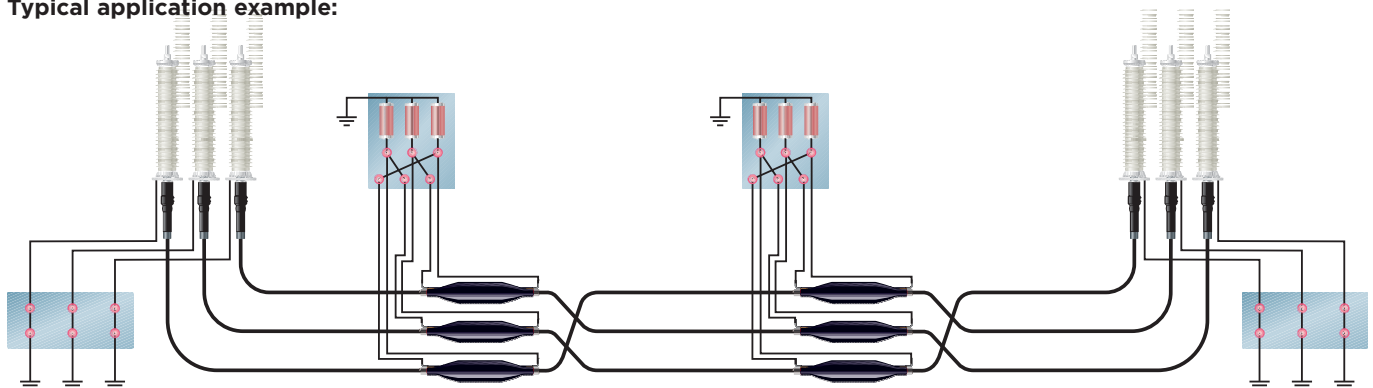


Cross bonding and transposition

For cable laying in unsymmetrical formations the induced voltages are not equal at each phase and therefore the phase sum of the voltages are not zero despite cross bonding. The cables are transposed at each joint position and the cable sheaths are cross connected, each cable occupies the same relative position in the cable formation. By this means the phase sum of the induced voltage sheaths is over three sections the same.

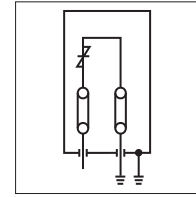
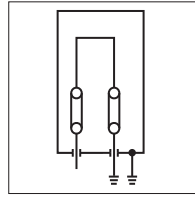


Typical application example:



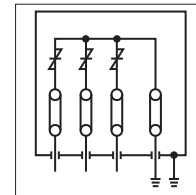
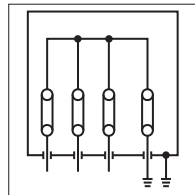
Selection tables for Raychem Link Boxes

Link Diagram



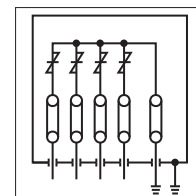
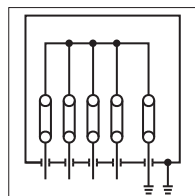
Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	496x322x451	496x322x451
Material	stainless steel	stainless steel
Total weight	Approx. 35 kg	Approx. 35 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	55	55
AC withstand voltage (kV)	-	-
DC withstand voltage (kV)	25	25
Short circuit current (kA/1s)	40	40
Description	HVLB-E-S-0-1-2-U-IP68	HVLB-E-S-x*-1-2-U-IP68

Link Diagram



Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	496x322x725	496x322x725
Material	stainless steel	stainless steel
Total weight	Approx. 65 kg	Approx. 65 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	55	55
AC withstand voltage (kV)	-	-
DC withstand voltage (kV)	25	25
Short circuit current (kA/1s)	40	40
Description	HVLB-E-S-0-3-2-U-IP68	HVLB-E-S-x*-3-2-U-IP68

Link Diagram

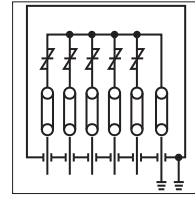
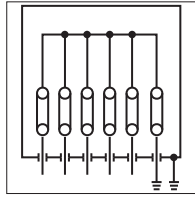


Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	496x322x862	496x322x862
Material	stainless steel	stainless steel
Total weight	Approx. 75 kg	Approx. 75 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	55	55
AC withstand voltage (kV)	-	-
DC withstand voltage (kV)	25	25
Short circuit current (kA/1s)	40	40
Description	HVLB-E-S-0-4-2-U-IP68	HVLB-E-S-x*-4-2-U-IP68

* indicates voltage class of sheath voltage limiter (SVL)

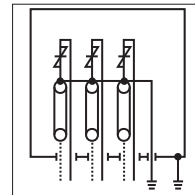
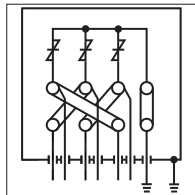
Selection tables for Raychem Link Boxes

Link Diagram



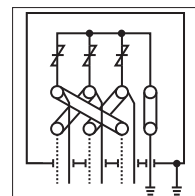
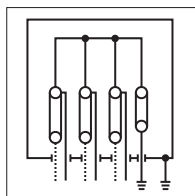
Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	496x322x995	496x322x995
Material	stainless steel	stainless steel
Total weight	Approx. 85 kg	Approx. 85 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	55	55
AC withstand voltage (kV)	-	-
DC withstand voltage (kV)	25	25
Short circuit current (kA/1s)	40	40
Description	HVLB-E-S-0-5-2-U-IP68	HVLB-E-S-x*-5-2-U-IP68

Link Diagram



Bonding lead (type)	Single-core	Concentric (coaxial)
Bonding lead (mm ²)	95 - 300	95+95 - 300+300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	1 kV-6 kV	1 kV-6 kV
Box size (LxHxW) (mm)	665x395x665	665x395x665
Material	stainless steel	stainless steel
Total weight	Approx. 68 kg	Approx. 68 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Clamping ring	Clamping ring
Impulse withstand voltage (kV)	60	60
AC withstand voltage (kV)	15	15
DC withstand voltage (kV)	-	-
Short circuit current (kA/1s)	40	40
Description	HVLB-C-S-x*-3-2-U-IP68	HVLB-E-C-x*-3-2-U-IP68

Link Diagram

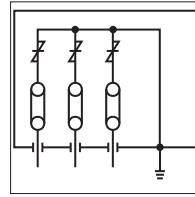
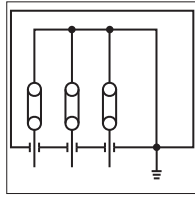


Bonding lead (type)	Concentric (coaxial)	Concentric (coaxial)
Bonding lead (mm ²)	95+95 - 300+300	95+95 - 300+300
Protection class	IP 68	IP 68
Application	Buried	Buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	621x356x883	621x356x883
Material	stainless steel	stainless steel
Total weight	Approx. 100 kg	Approx. 100 kg
Connection links	Removable tinned copper 300 mm ²	Removable tinned copper 300 mm ²
Cable connection	Clamping ring	Clamping ring
Impulse withstand voltage (kV)	55	55
AC withstand voltage (kV)	-	-
DC withstand voltage (kV)	25	25
Short circuit current (kA/1s)	40	40
Description	HVLB-E-C-0-3-2-68	HVLB-C-C-x*-3-2-68

* indicates voltage class of the sheath voltage limiter (SVL)

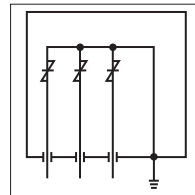
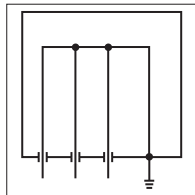
Selection tables for Raychem Link Boxes

Link Diagram



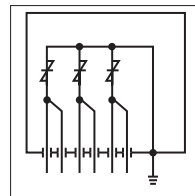
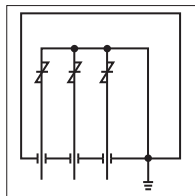
Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 56	IP 56
Application	Non buried	Non buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	310x255x310	310x255x310
Material	stainless steel	stainless steel
Total weight	Approx. 16 kg	Approx. 16 kg
Connection links	Removable copper 240 mm ²	Removable copper 240 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	35	35
AC withstand voltage (kV)	24	24
DC withstand voltage (kV)	40	40
Short circuit current (kA/1s)	-	-
Description	HVLB-GND-0-3	HVLB-GND-x*-3

Link Diagram



Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 56	IP 56
Application	Non buried	Non buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	310x255x310	310x255x310
Material	stainless steel	stainless steel
Total weight	Approx. 16 kg	Approx. 16 kg
Connection links	Copper 240 mm ²	Copper 120 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	35	35
AC withstand voltage (kV)	24	24
DC withstand voltage (kV)	40	40
Short circuit current (kA/1s)	-	-
Description	EPPA-055-0-3	EPPA-055-x*-3

Link Diagram

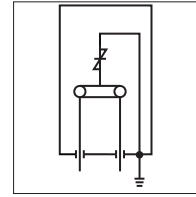
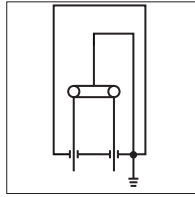


Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 68	IP 56
Application	Non buried	Non buried
Sheath voltage limiters	1 kV-6 kV	1 kV-6 kV
Box size (LxHxW) (mm)	310x255x310	310x255x310
Material	stainless steel	stainless steel
Total weight	Approx. 16 kg	Approx. 16 kg
Connection links	Copper 120 mm ²	Copper 120 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	35	35
AC withstand voltage (kV)	24	24
DC withstand voltage (kV)	40	40
Short circuit current (kA/1s)	-	-
Description	EPPA-055-x*-3-xx-IP68	EPPA-055-x*-3

* indicates voltage class of the sheath voltage limiter (SVL)

Selection tables for Raychem Link Boxes

Link Diagram



Bonding lead (type)	Single-core	Single-core
Bonding lead (mm ²)	95 - 300	95 - 300
Protection class	IP 56	IP 56
Application	Non buried	Non buried
Sheath voltage limiters	N/A	1 kV-6 kV
Box size (LxHxW) (mm)	300x165x190	300x165x190
Material	stainless steel	stainless steel
Total weight	Approx. 10 kg	Approx. 11 kg
Connection links	Removable copper 120 mm ²	Removable copper 120 mm ²
Cable connection	Compression lug	Compression lug
Impulse withstand voltage (kV)	35	35
AC withstand voltage (kV)	24	24
DC withstand voltage (kV)	40	40
Short circuit current (kA/1s)	-	-
Description	EPPA-055-0-1	EPPA-055-x*-1

Raychem



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