

EDKRBD180R
13053392

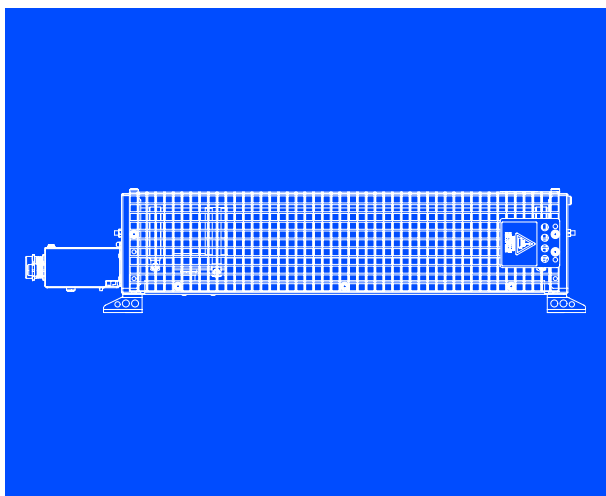


Montageanleitung

Mounting Instructions

Instructions de montage

Global Drive



ERBDxxxRxxxx

Bremswiderstand

Brake resistor

Résistance de freinage

Lenze



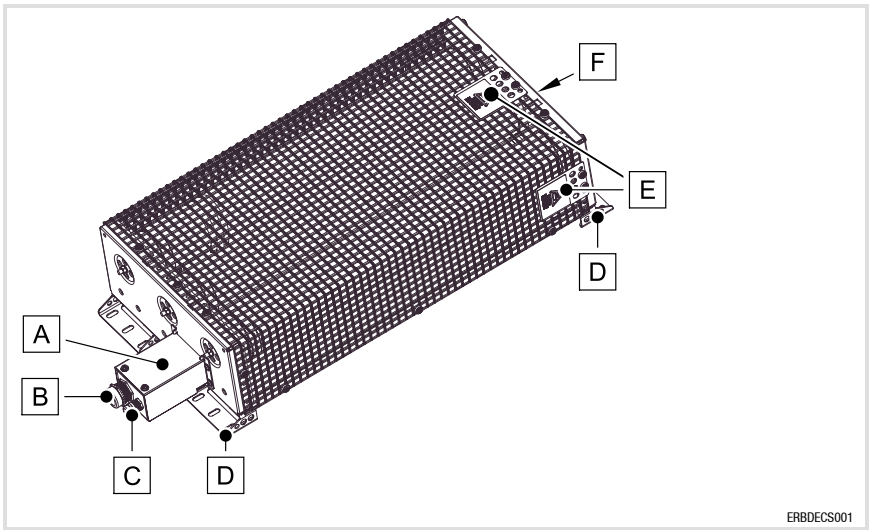
Lesen Sie zuerst diese Anleitung und die Dokumentation zum Grundgerät, bevor Sie mit den Arbeiten beginnen!
Beachten Sie die enthaltenen Sicherheitshinweise.



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



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.



Scope of supply

Pos.	Description
	Brake resistor ERBD....
	Mounting Instructions

Brake resistor elements

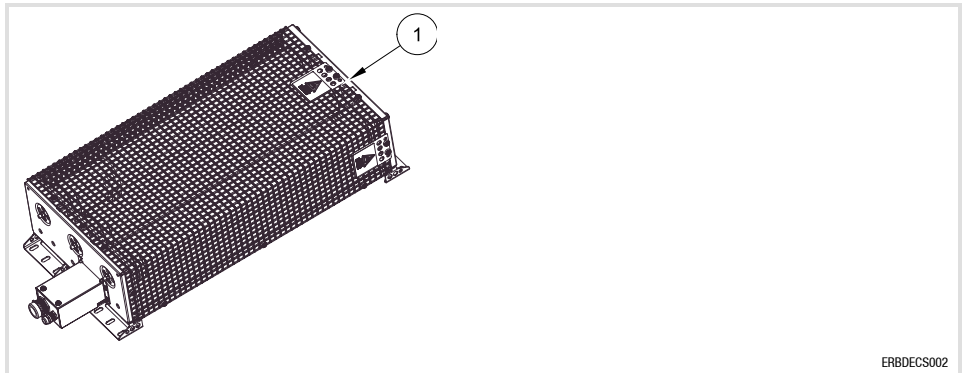
Pos.	Description
A	Terminal box
B	Cable gland for brake resistor cable
C	Cable gland for thermal contact cable
D	Fixing bracket
E	Warning note
F	Nameplate

Validity

These Instructions are valid for

- brake resistors ERBD....

Identification



ERBDECS002

	①			
Type code	ERBD	xxx	R	xxxx
Product series				
Resistance R_B [Ω]				
Continuous power P_d [W]/[kW]				
e.g. 600W = 600 W				
01k2 = 1.2 kW				

1 Safety instructions

1 Safety instructions



Danger!

- ▶ The brake resistor can reach a surface temperature of 250 °C.
 - Skin contact can cause burns.
 - A fire hazard exists if flammable objects/materials are placed on the brake resistor or in its vicinity.
 - The specified mounting position (vertically suspended with terminal box at the bottom) as well as the mounting clearances are to be observed.



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

1.1 Definition of notes used

The following signal words and symbols are used in this documentation to indicate dangers and important information:

Safety instructions

Structure of safety instructions:



Danger!

(characterises the type and severity of danger)

Note



(describes the danger and gives information about how to prevent dangerous situations)

Pictograph and signal word	Meaning
Danger!	Danger of personal injury through dangerous electrical voltage. Reference to an imminent danger that may result in death or serious personal injury if the corresponding measures are not taken.
Danger!	Danger of personal injury through a general source of danger. Reference to an imminent danger that may result in death or serious personal injury if the corresponding measures are not taken.
Stop!	Danger of property damage. Reference to a possible danger that may result in property damage if the corresponding measures are not taken.

Application notes

Pictograph and signal word	Meaning
Note!	Important note to ensure trouble-free operation
Tip!	Useful tip for simple handling
	Reference to another documentation

Special safety instructions and application notes for UL and UR

Pictograph and signal word	Meaning
 Warnings!	Safety or application note for the operation of a UL-approved device in UL-approved systems. Possibly the drive system is not operated in compliance with UL if the corresponding measures are not taken.
 Warnings!	Safety or application note for the operation of a UR-approved device in UL-approved systems. Possibly the drive system is not operated in compliance with UL if the corresponding measures are not taken.

2 Technical data

Standards

Conformity	CE	Low-Voltage Directive
Approvals	UL	UL508, Industrial Control Equipment, Underwriter Laboratories (File-No. E208678) for USA and Canada

Operating conditions

Permissible ambient operating temperature	-10 °C ... +55 °C Above 40 °C the continuous power P_d is to be reduced by 2.5 %/°C
Permissible site altitude	0 ... 4000 m amsl Above 1000 m the continuous power P_d is to be reduced by 5 %/1000 m
Type of protection	IP20 (NEMA 250 type 1)
Mounting position	Vertically suspended with terminal box at the bottom
Operating conditions	<ul style="list-style-type: none"> • Mean value of regenerative power < permanent power of brake resistor • Regenerative power during braking time < thermal capacity of brake resistor • Braking time < 10 % of cycle time (braking time + recovery time)

Rated data

Type	Resistance	Continuous power	Thermal capacity	Operating voltage	Mass
	R_B [Ω]	P_d [W]	C_B [kWs]	U_{max} [V _{DC}]	m [kg]
ERBD180R300W	180	300	45	800	2.0
ERBD100R600W	100	600	83	800	3.1
ERBD082R600W	82	600	87	800	3.1
ERBD068R800W	68	800	120	800	4.3
ERBD047R01K2	47	1200	174	800	4.9
ERBD033R02K0	33	2000	240	800	7.1
ERBD022R03K0	22	3000	375	800	10.6
ERBD018R01K6	18	1600	240	800	6.8
ERBD018R03K0	18	3000	375	800	10.6
ERBD015R04K0	15	4000	547	900	12.4
ERBD018R06K0	18	6000	900	800	22.6

3 Mechanical installation

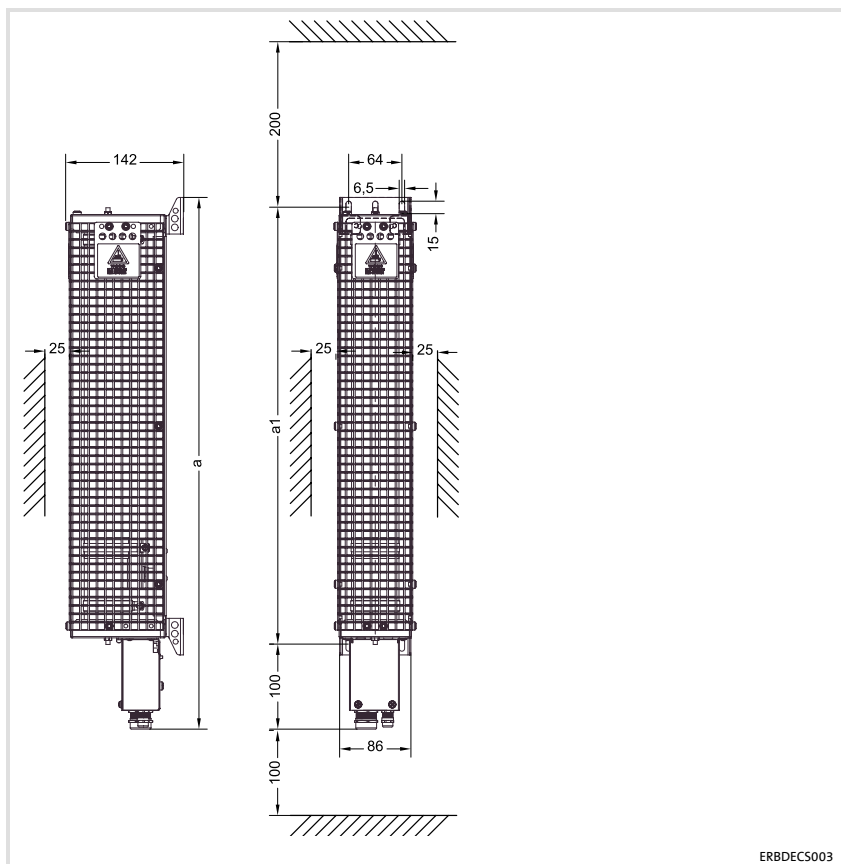
3 Mechanical installation



Danger!

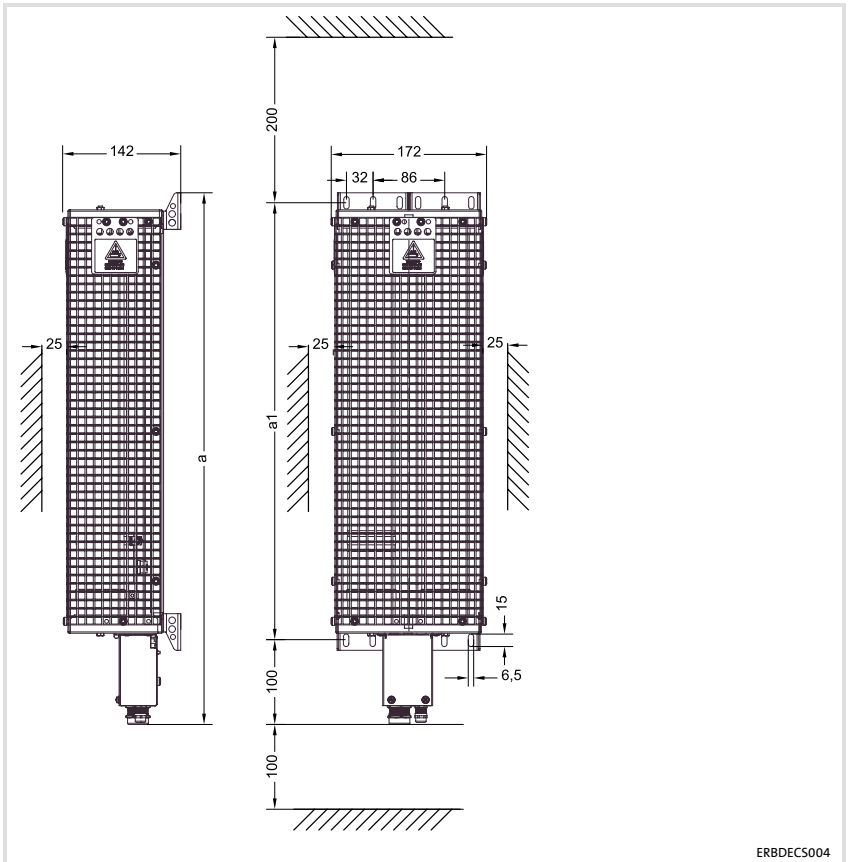
- ▶ The brake resistor can reach a surface temperature of 250 °C.
 - Skin contact can cause burns.
 - A fire hazard exists if flammable objects/materials are placed on the brake resistor or in its vicinity.
 - The specified mounting position (vertically suspended with terminal box at the bottom) as well as the mounting clearances are to be observed.

3.1 Dimensions



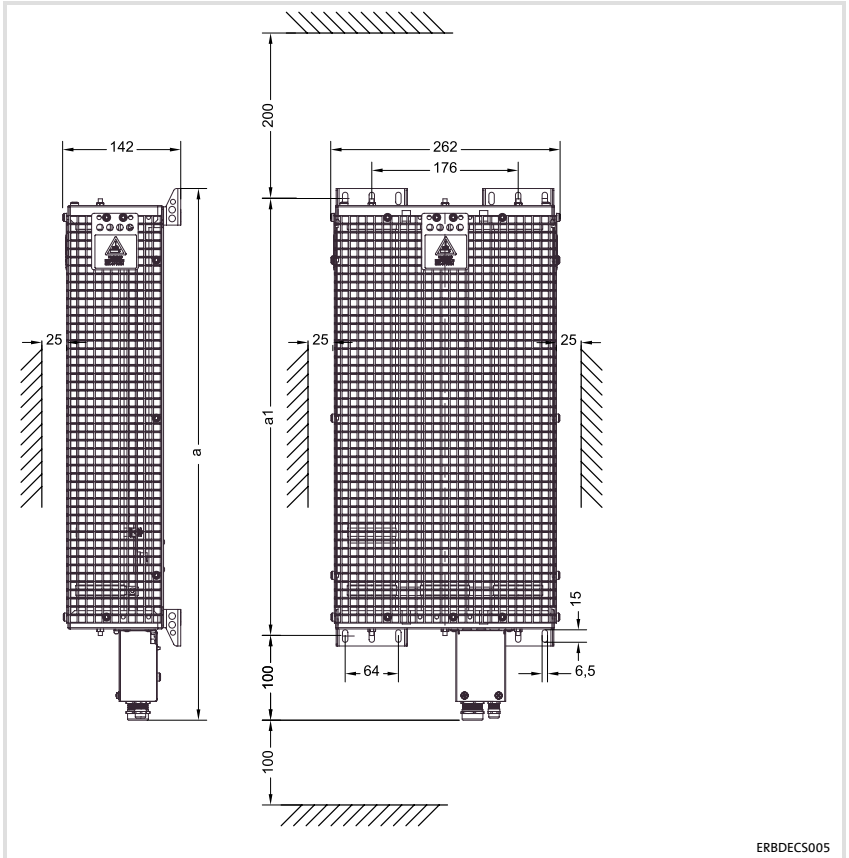
All dimensions in millimetres

Type	a	a1
	[mm]	
ERBD180R300W	439 ±3	326
ERBD100R600W	639 ±3	526
ERBD082R600W	639 ±3	526



All dimensions in millimetres

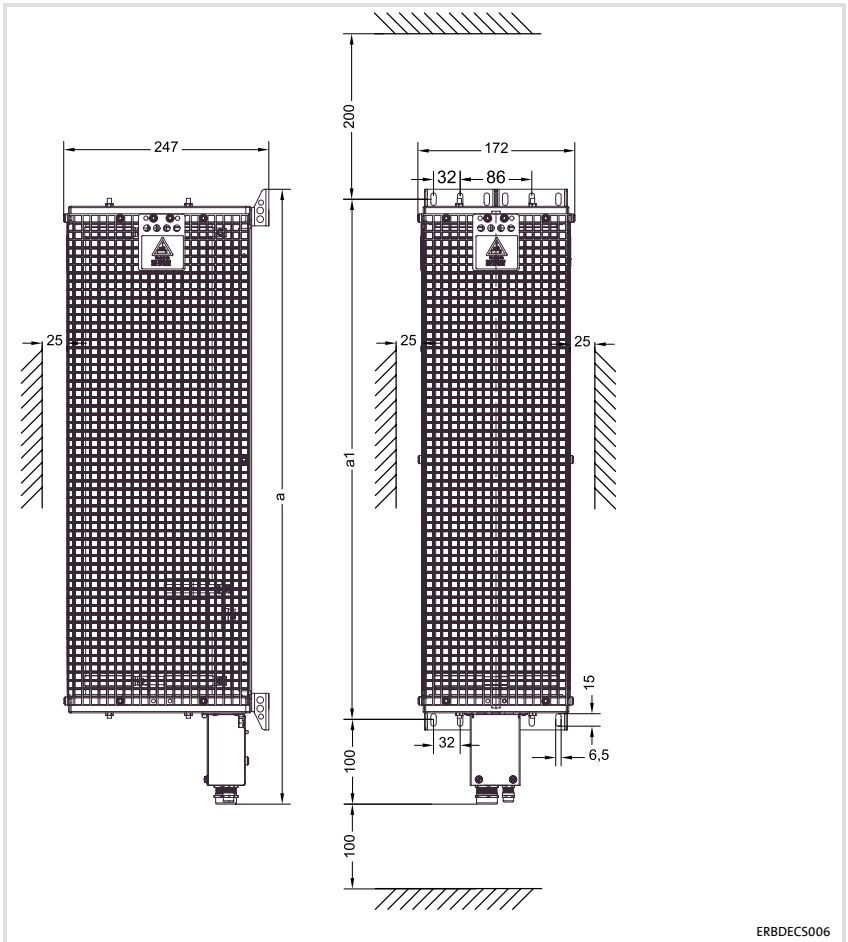
Type	a	a1
	[mm]	
ERBD068R800W	539 ±3	426
ERBD047R01K2	639 ±3	526
ERBD018R01K6	639 ±3	526



ERBDECS005

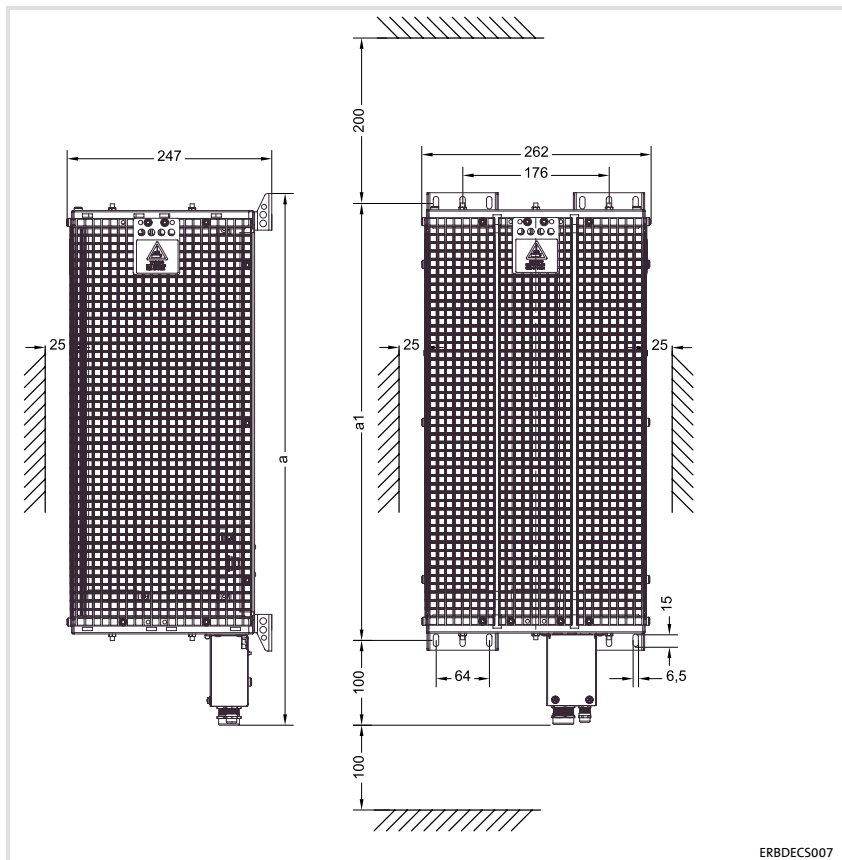
All dimensions in millimetres

Type	a	a1
ERBD033R02K0	639 ±3	526



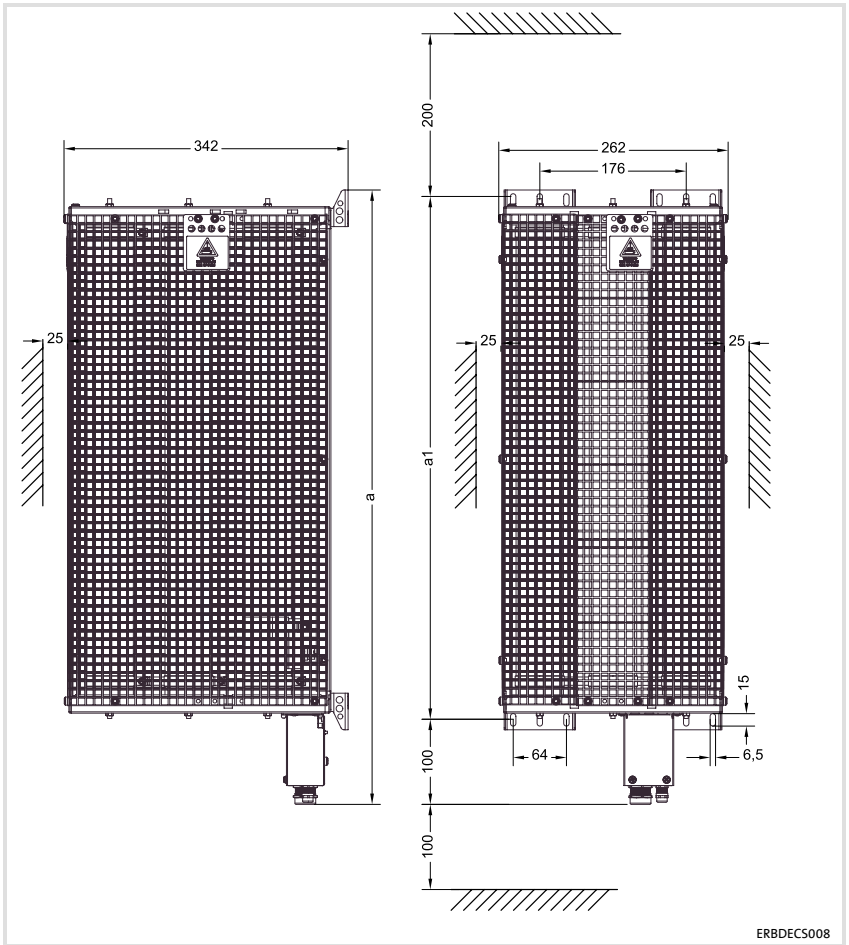
All dimensions in millimetres

Type	a	a1
	[mm]	
ERBD018R03K0	739 ±3	626
ERBD022R03K0	739 ±3	626



All dimensions in millimetres

Type	a	a1
	[mm]	
ERBD015R04K0	639 ±3	526



All dimensions in millimetres

Type	a	a1
		[mm]
ERBD018R06K0	739 ±3	625

3.2 Mounting steps

How to mount the brake resistor:

1. Select a suitable mounting location.
 - Mounting position vertically suspended with terminal box at the bottom
 - Observe mounting clearances!
 - Flammable materials may not be placed in the vicinity of the brake resistor.
 - Ensure unimpeded air circulation for heat dissipation.
 - Heat dissipation may not be impaired through soiling. (When cleaning, do not use cleaning agents of any kind.)
2. Install the fixing bracket of the brake resistor at the mounting location.
 - The mounting location and the mounting material must ensure a permanent mechanical connection.
 - ERBD018R06K0: Use at least two screws per fixing bracket.
 - All other types: Use at least one screw per fixing bracket.

4 Electrical installation

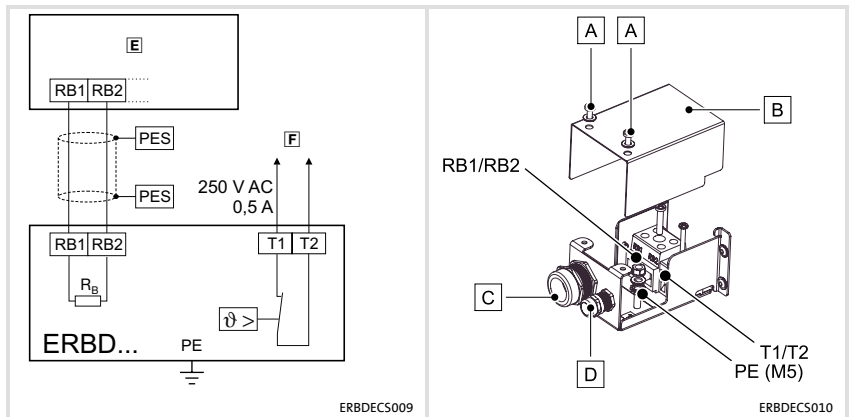
Connection data

4 Electrical installation

4.1 Connection data

	Cable gland	Connection cross-sections		Tightening torque	
		[mm ²]	[AWG]	[Nm]	[lb-in]
T1, T2 (thermal contact)	M12	0.25 ... 4	24 ... 12	0.6 ... 0.8	5.3 ... 7.1
RB1, RB2 (brake resistor)	M25	0.5 ... 10	20 ... 6	1.5 ... 1.8	13.3 ... 15.9
PE (protective conductor)				3.0 ... 3.7	26.6 ... 32.7

4.2 Mounting steps



How to connect the brake resistor:

1. Undo the two screws **A** at the terminal box and remove cover **B**.
2. Connect brake resistor cable:
 - Use shielded cables (2 cores + PE; the PE connection must comply with EN 50178).
 - Pass the cable through M25 cable gland **C**.
 - The shield must be tightly connected to the cable gland.
 - Connect the cores to the terminals RB1, RB2 and PE of the brake resistor observing the tightening torque.
 - Connect cores and shield to the basic device **E** observing the documentation on the basic device.
 - Tighten the cable gland **C**.
3. Connect temperature sensor cables:
 - Pass the cable through M12 cable gland **D** (2 cores).
 - Connect the cores to terminals T1 and T2 of the brake resistor observing the tightening torque.
 - Switching capacity: 250 V AC/0.5 A
 - Integrate the thermal contact into the controller enable chain **F** of the basic device.
 - Tighten the cable gland **D**.
4. Place cover **B** on the terminal box and fasten with 2 screws / 2 washers **A**.