

Units with pedestal and busbars on the long side (+H354, bookshelf mounting)

Delivery check

Check that there are no signs of damage. Before attempting installation and operation, check the information on the type designation label of the drive to verify that the unit is of the correct type.

Item packages

The following tables show what each item package contains:


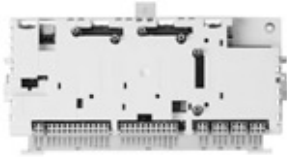
- parts
- part list code
- plus code
- assembling instruction.


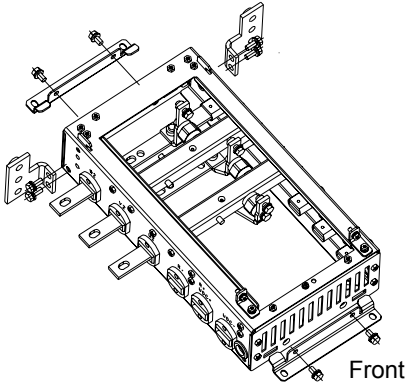
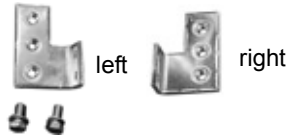
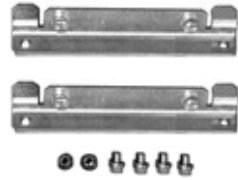


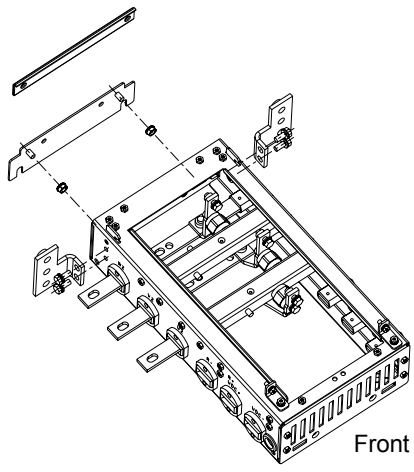
In the tables, the basic unit is described first, then the possible optional parts are listed. Choose the table and options of your delivery in the following sections:

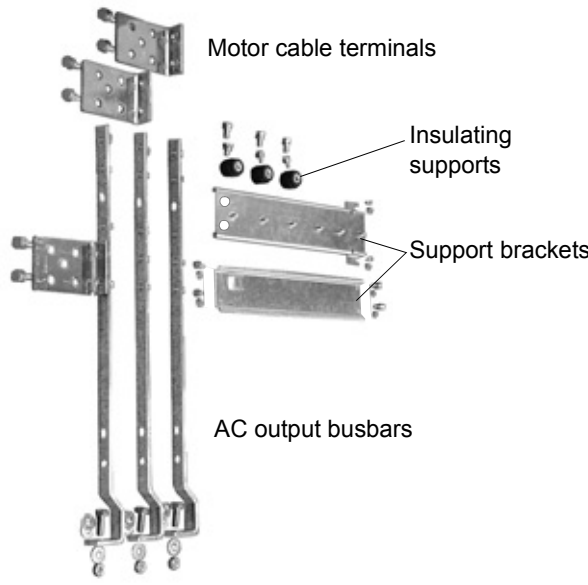
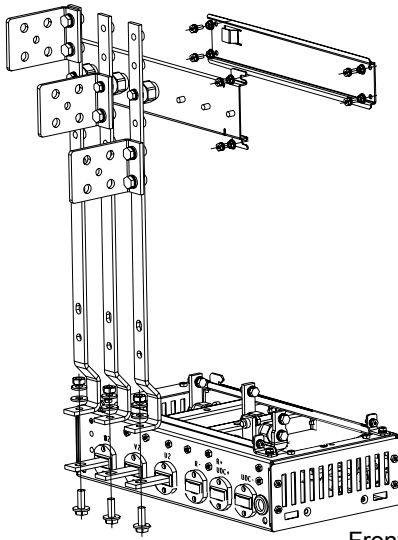

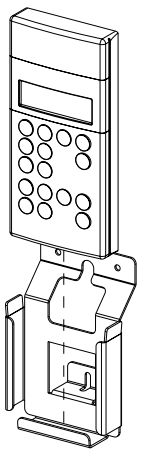
- *Item packages of frame size R7 with busbars on the long side on page 58.*
- *Item packages of frame size R8 with busbars on the long side on page 64.*


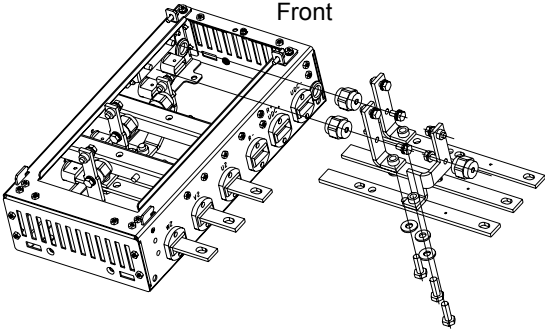
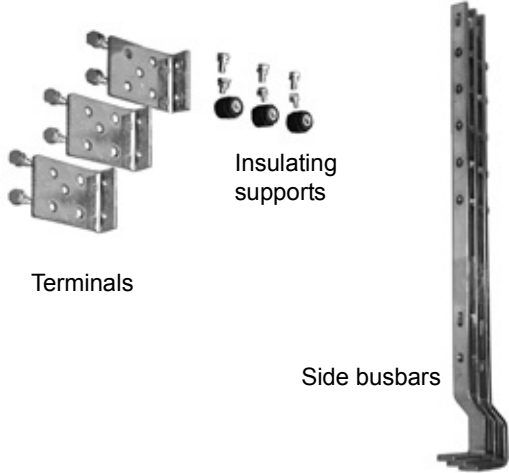
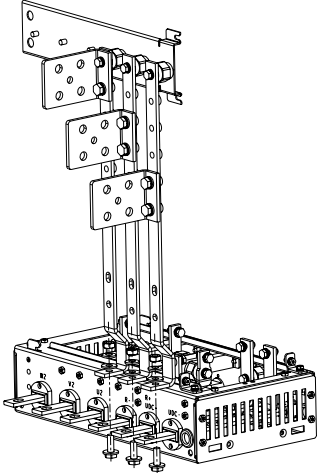
Note: The complete assembling instructions are represented under *Assembling procedure for units with busbars on the long side (+H354) on page 73.*

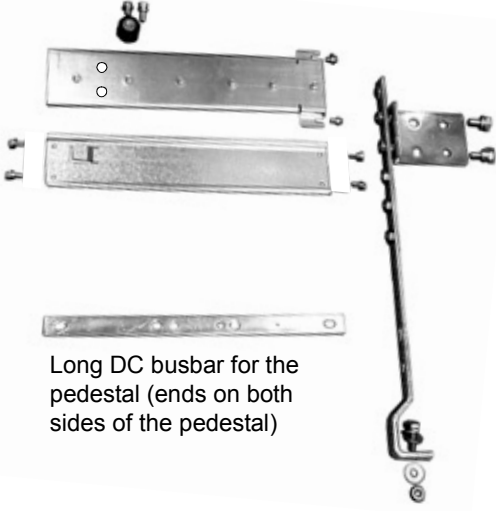
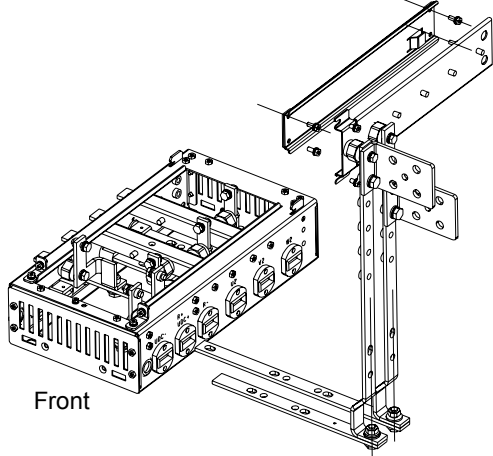
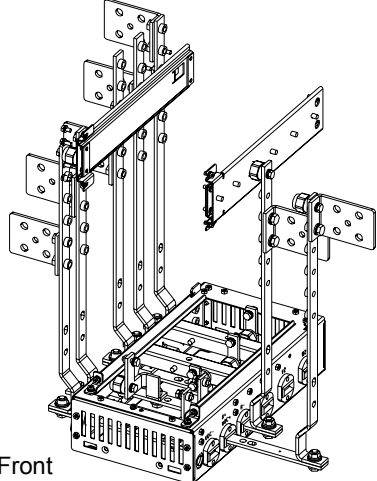
Item packages of frame size R7 with busbars on the long side

ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction ProE code 64770306 D
Basic unit (type code ACS800-0M4-XXXX-X+H354+H355)		
-	 <p>Drive module</p>	Refer to section <i>Assembling procedure for units with busbars on the long side (+H354)</i> on page 73.
Drive control unit (RDCU)	 <p>RDCU drive control unit</p>	See <i>RDCU Drive Control Unit Hardware Manual</i> [3AFE64636324 (English)].

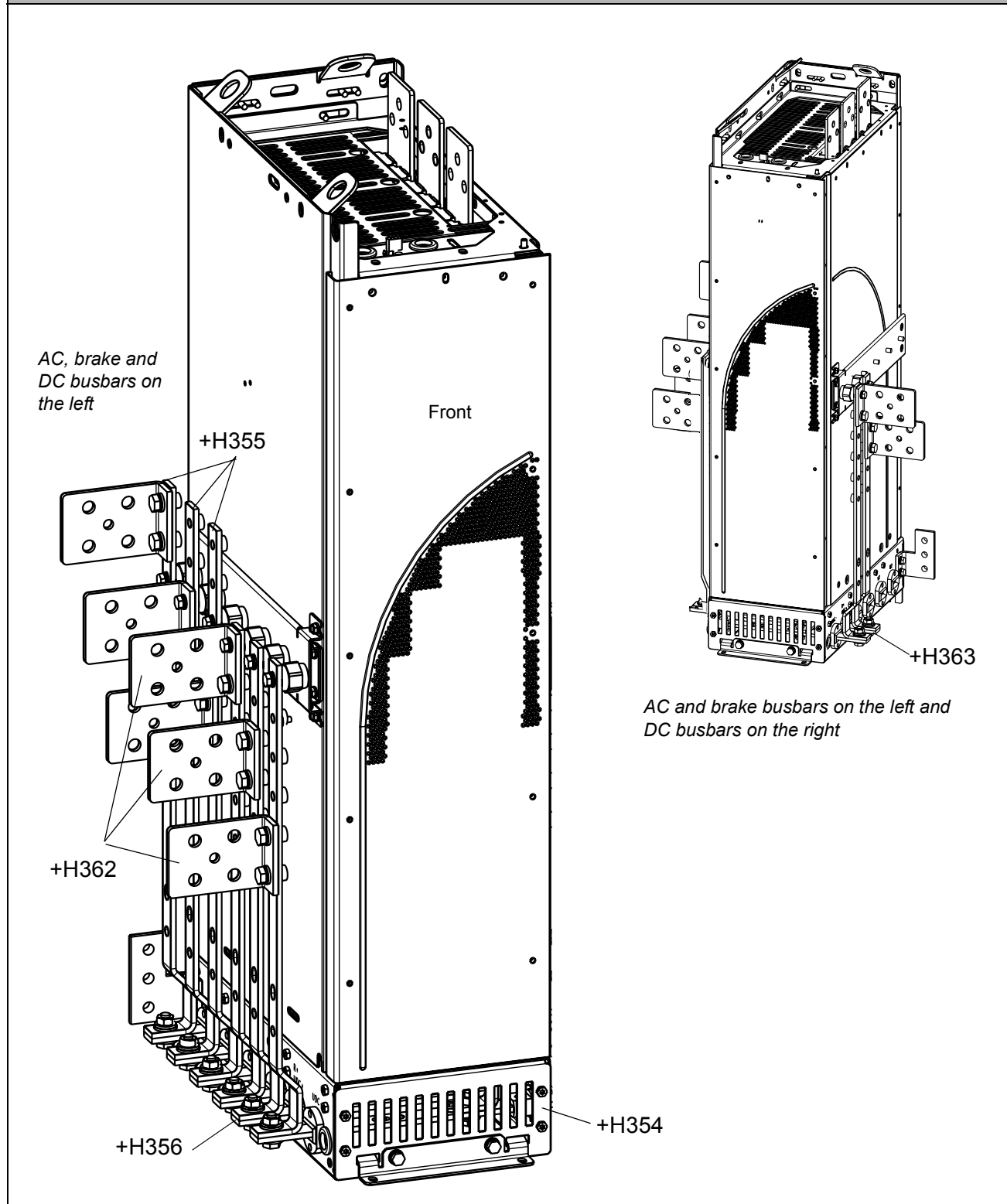
ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction ProE code 64770306 D
Pedestal R7 +H354	<p>64754416</p>  <p>Pedestal</p>	<p>Base mounting from outside:</p>  <p>Front</p>
Mounting bracket and grounding terminal kit R7 +H354	<p>64743309</p>  <p>PE terminals left right</p>  <p>Base mounting brackets</p>  <p>Wall mounting bracket</p>  <p>Spacer for wall mounting</p>	<p>Wall mounting:</p>  <p>Front</p>

ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction ProE code 64770306 D
Motor output busbar kit R7 +H355	<p>64743180</p>  <p>Motor cable terminals</p> <p>Insulating supports</p> <p>Support brackets</p> <p>AC output busbars</p>	 <p>Front</p>
Optional selection +J413: Control Panel Holder RPMP-21		
Control panel holder +J413	<p>68394961</p>  <p>Control panel holder</p>	

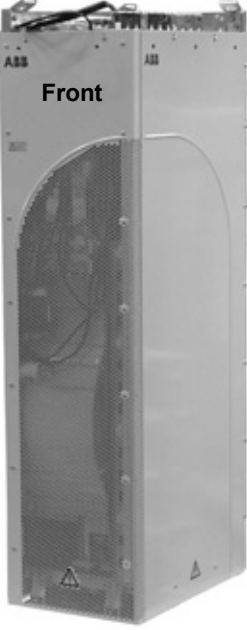
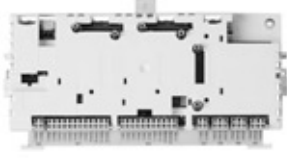
ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction ProE code 64770306 D
Optional selection +H354+H356+H362: DC/brake busbars		
Pedestal DC busbar kit R7 +H356	64769341  <p>Pedestal busbars</p>	 <p>Front</p>
DC output busbar kit R7 +H362	64744747  <p>Terminals</p> <p>Insulating supports</p> <p>Side busbars</p>	 <p>Front</p>

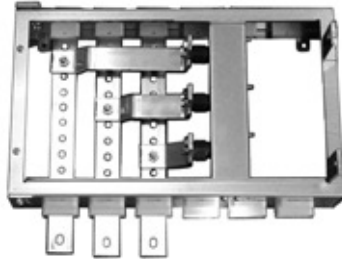
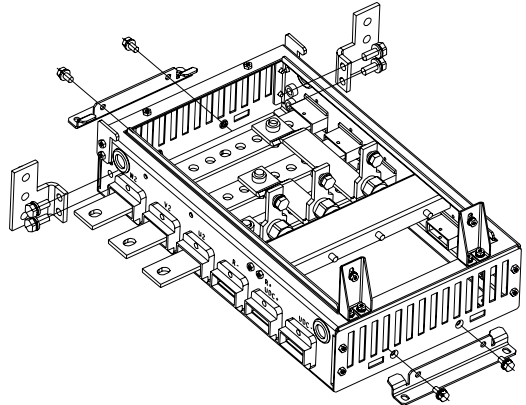
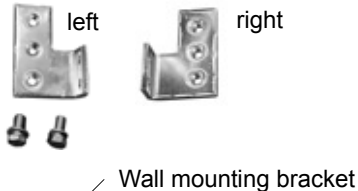
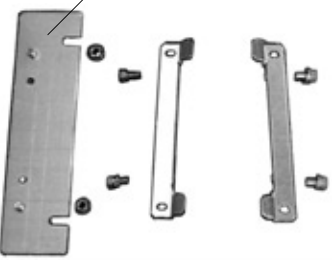
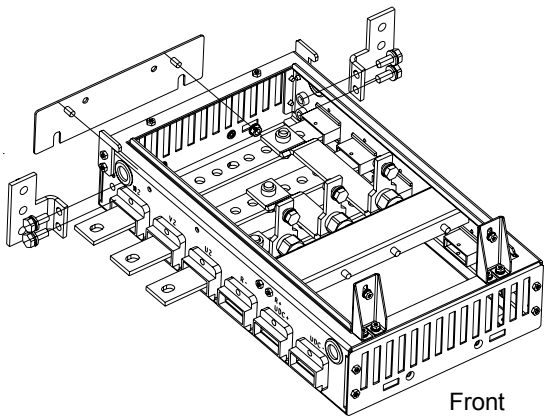
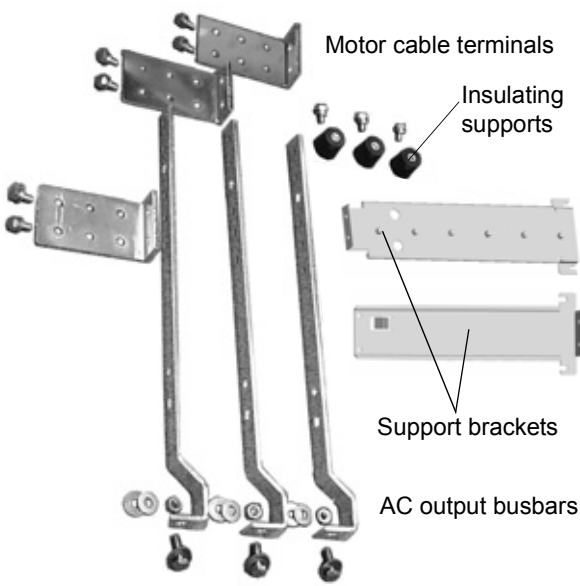
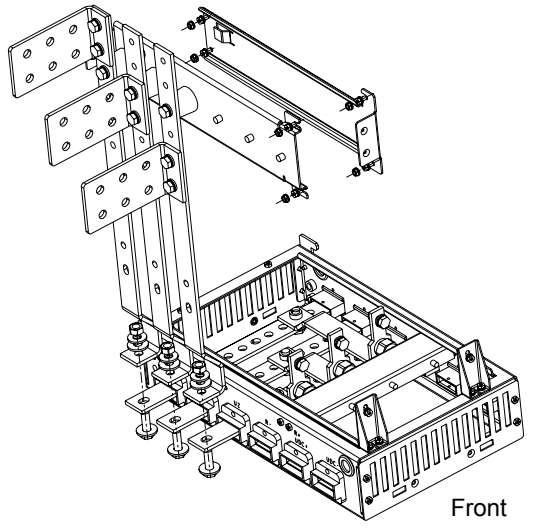
ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction ProE code 64770306 D
Optional selection +H354+H356+H362+H363: DC and brake busbars on opposite sides		
Bilateral DC output busbar kit R7 +H363	64744895  <p>Long DC busbar for the pedestal (ends on both sides of the pedestal)</p>	<p>DC busbars on the right side:</p>  <p>Front</p> <p>DC busbars on the left side and brake busbars on the right side:</p>  <p>Front</p>



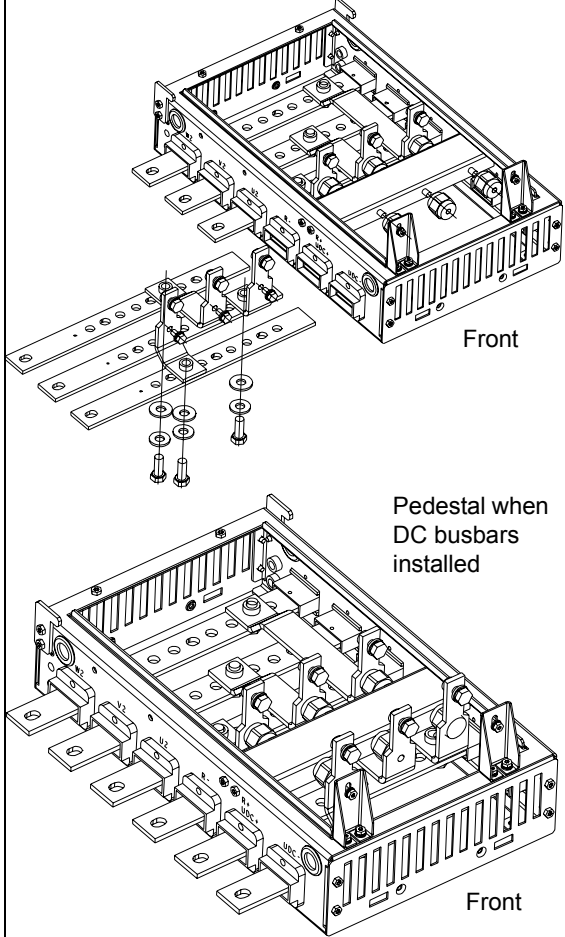
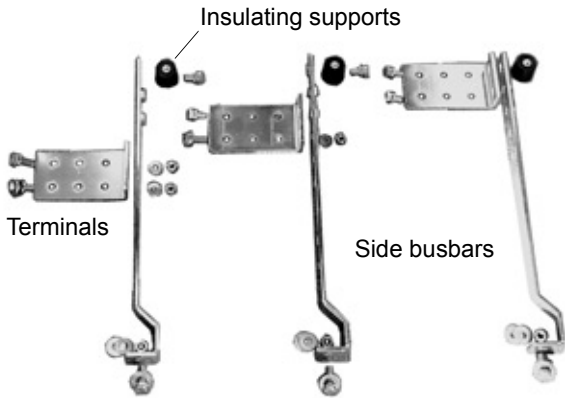
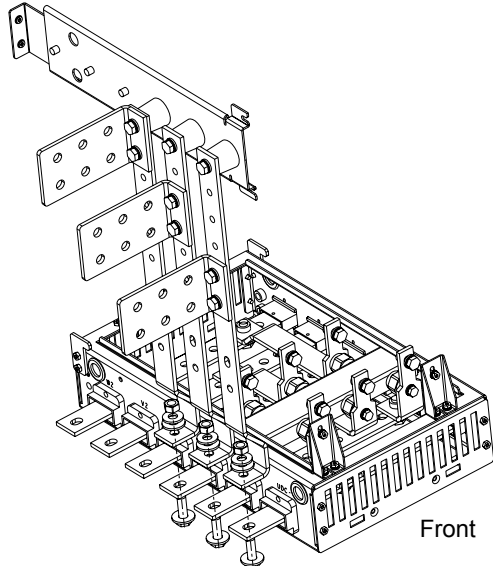
ACS800-04M of frame size R7 with busbars on the long side		
Package	Parts	Assembling drawing / reference to instruction
		ProE code 64770306 D
Example assembly (+H354+H355+H356+H362+H363 included)		

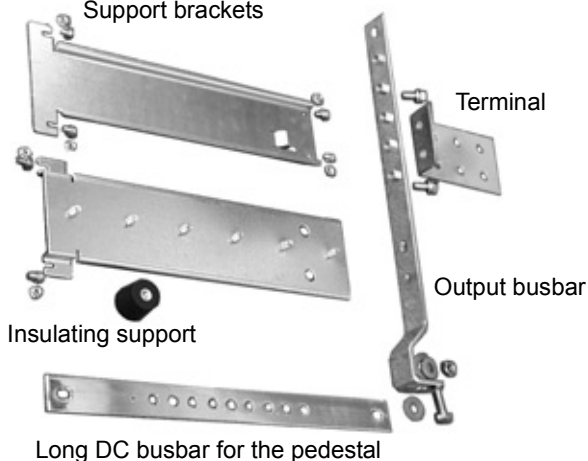
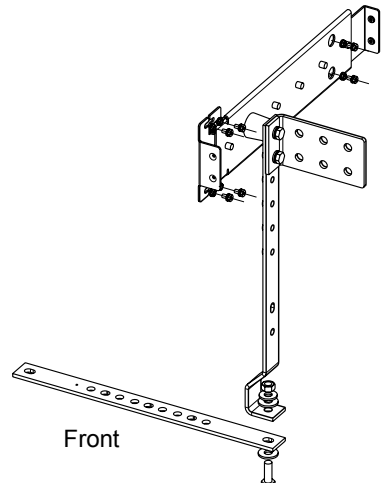
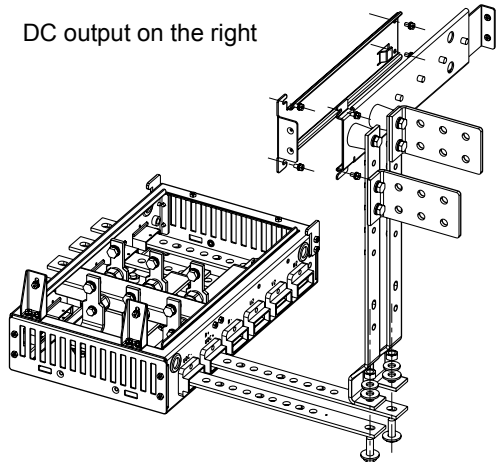
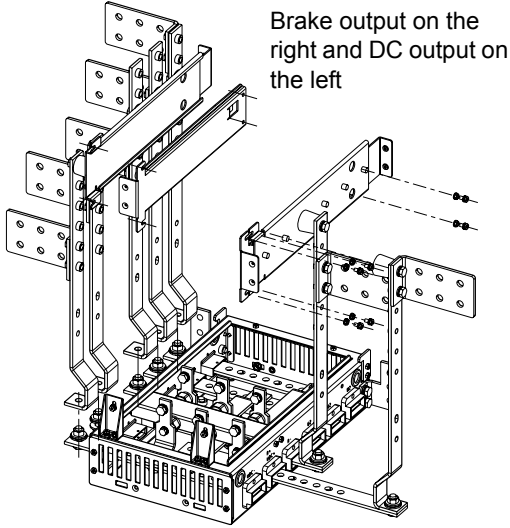



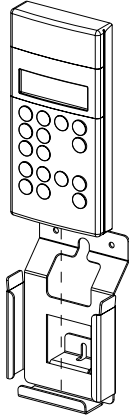
Item packages of frame size R8 with busbars on the long side

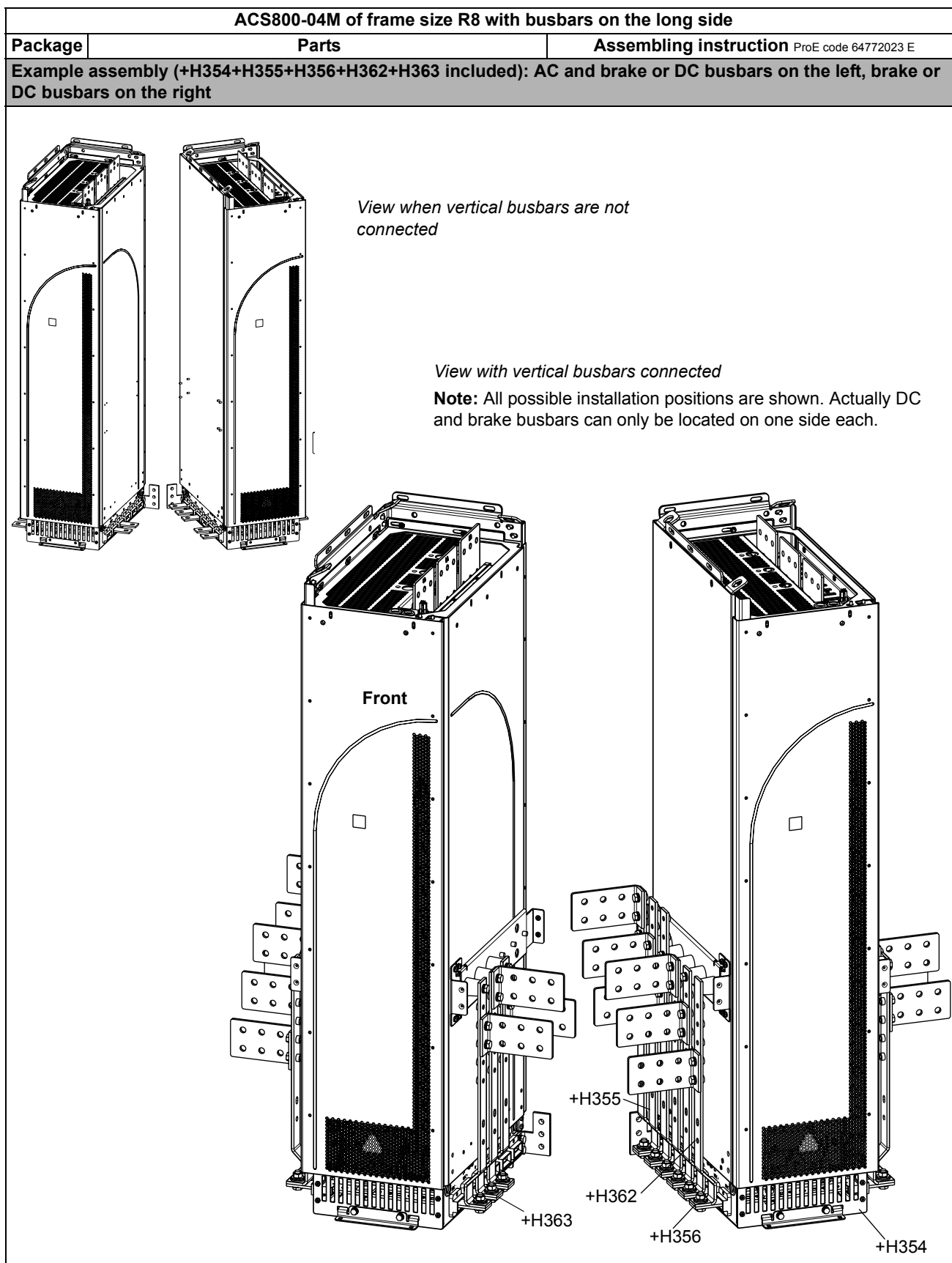
ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Basic unit (type code ACS800-04M-xxxx-x+H354+H355)		
-	 <p>Drive module</p>	Refer to section <i>Assembling procedure for units with busbars on the long side (+H354)</i> on page 73.
Drive control unit (RDCU)	 <p>RDCU drive control unit</p>	See <i>RDCU Drive Control Unit Hardware Manual</i> [3AFE64636324 (English)].


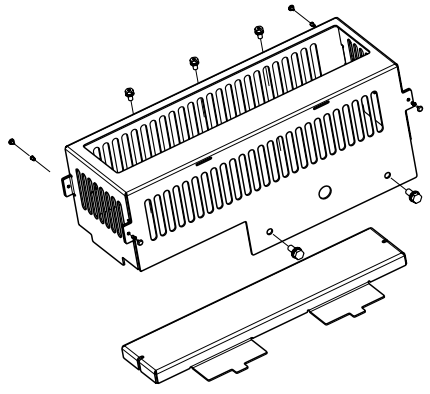
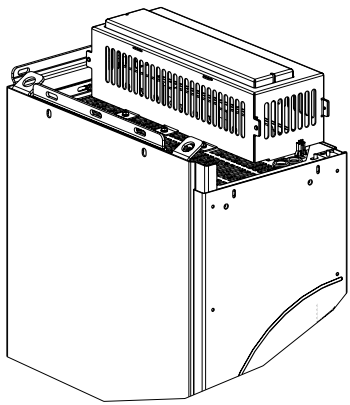
ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Pedestal R8 +H354	<p>64754424</p>  <p>Pedestal</p>	<p>Base mounting from outside:</p>  <p>Front</p>
Mounting bracket and grounding terminal kit R8 (+H354)	<p>64744330</p>  <p>left right PE terminals</p>  <p>Wall mounting bracket</p> <p>Base mounting brackets</p>	<p>Wall mounting:</p>  <p>Front</p>
Motor output busbar kit R8 +H355	<p>64743295</p>  <p>Motor cable terminals</p> <p>Insulating supports</p> <p>Support brackets</p> <p>AC output busbars</p>	 <p>Front</p>

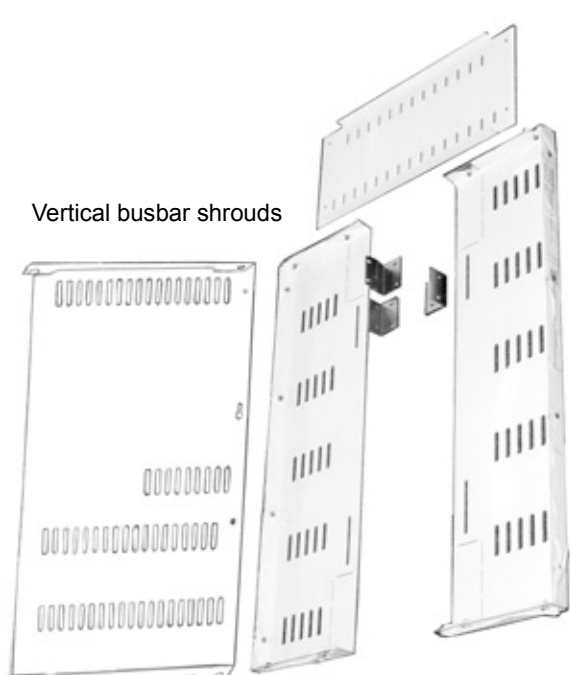
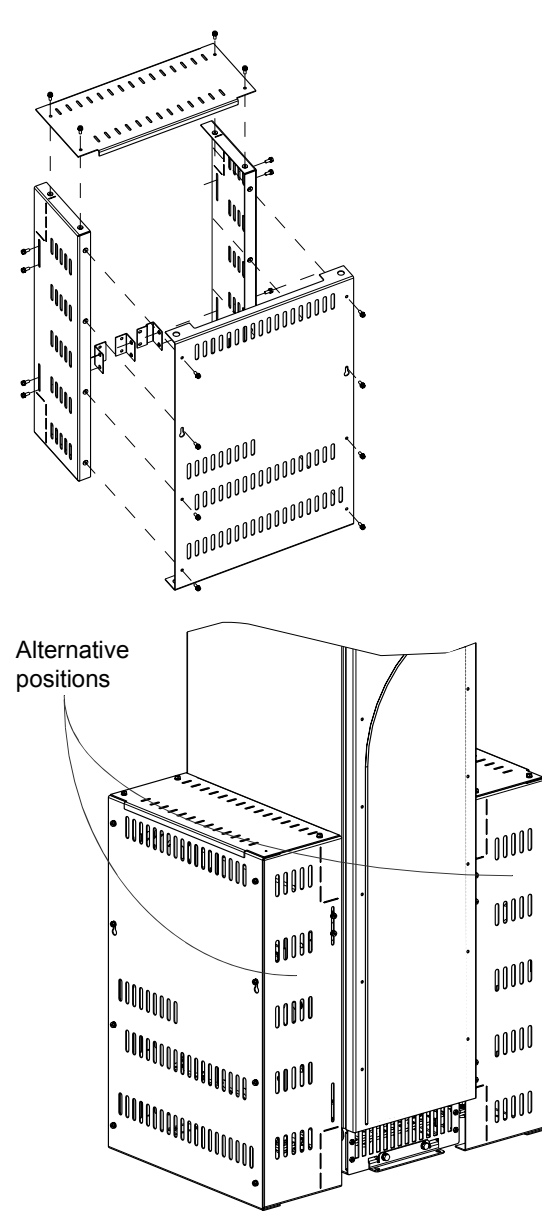
ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Optional selection +H354+H356+H362: DC/brake busbars		
Pedestal DC busbar kit R8 H356	<p>64769359</p>  <p>Insulating supports and connecting busbars</p>  <p>Pedestal DC busbars</p>	 <p>Front</p> <p>Pedestal when DC busbars installed</p> <p>Front</p>
DC output busbar kit R8 H362	 <p>Insulating supports</p> <p>Terminals</p> <p>Side busbars</p>	 <p>Front</p>

ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Optional selection +H354+H356+H363: DC and brake busbars on opposite sides		
<p>Bilateral DC output busbar kit R8 +H363</p>	<p>64744798</p>  <p>Support brackets</p> <p>Terminal</p> <p>Output busbar</p> <p>Insulating support</p> <p>Long DC busbar for the pedestal</p>	<p>DC output on the right side:</p>  <p>Front</p> <p>DC output on the right</p>  <p>Brake output on the right and DC output on the left</p> 

ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Optional selection +J413: Control Panel Holder RPMP-21		
Control panel holder +J413	<p>68394961</p>  <p>Control panel holder</p>	



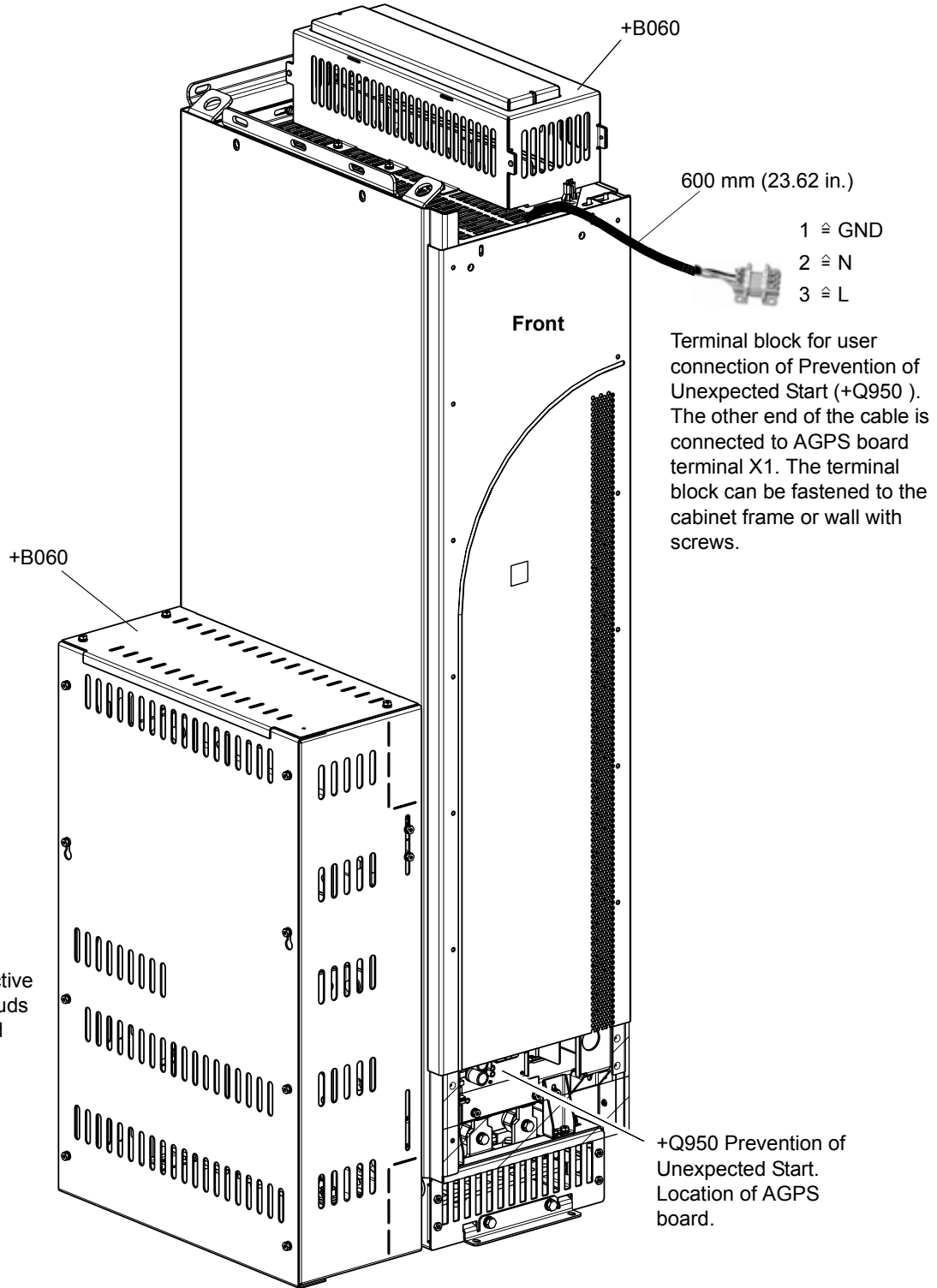
ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Optional selection +B060: shrouds for vertical busbars and input terminals		
Top entry busbar shroud kit +B060	68341493  Top entry busbar shroud Fastening screws included	 

ACS800-04M of frame size R8 with busbars on the long side		
Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
Vertical busbar shroud kit +B060	68329639  <p>Vertical busbar shrouds</p> <p>Fastening screws included</p>	 <p>Alternative positions</p>

ACS800-04M of frame size R8 with busbars on the long side

Package	Parts	Assembling instruction <small>ProE code 64772023 E</small>
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Example assembly (+H354+H355+H356+H362+B060+Q950 included): top entry busbar shroud, vertical busbar shroud and Prevention of Unexpected Start



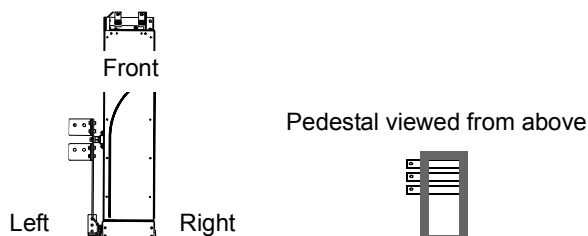
Note: The protective films on the shrouds must be removed before installing.

+Q950 Prevention of Unexpected Start. Location of AGPS board.

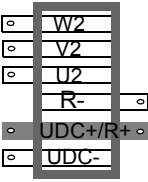
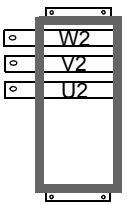
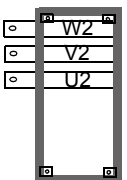
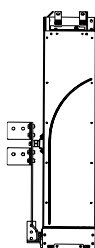
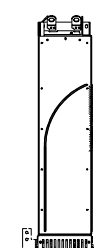
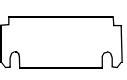
Assembling procedure for units with busbars on the long side (+H354)

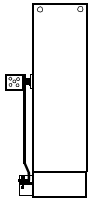
Working order

References to instructions in this chapter are printed in *italic* in the table below. The pictures represent frame size R7 with the following orientations.



Step	If	Instruction	
1 Preparing the pedestal		AC busbars on the left side	Go to step 2.
		AC busbars on the right side	1. See <i>Swapping the busbars of the pedestal to the other side</i> on page 78. 2. Go to step 2.
		AC busbars, R-, R+/UDC+ and UDC- busbars on the left side (+H356 required)	1. See <i>Connecting the DC busbars to the pedestal (+H356 and +H363 only)</i> on page 76. 2. Go to step 2.
		AC busbars, R-, R+/UDC+ and UDC- busbars on the right side (+H356 required)	1. See <i>Swapping the busbars of the pedestal to the other side</i> on page 78. 2. See <i>Connecting the DC busbars to the pedestal (+H356 and +H363 only)</i> on page 76. 3. Go to step 2.
		AC busbars and R-, R+/UDC+ busbars on the left side and UDC+ and UDC- busbars on the right side (+H356 and +H363 required)	1. See <i>Swapping the busbars of the pedestal to the other side</i> on page 78 and <i>Optional selection +H363</i> on page 79. 2. See <i>Connecting the DC busbars to the pedestal (+H356 and +H363 only)</i> on page 76. 3. Go to step 2.

Step	If	Instruction
		AC busbars and UDC+ and UDC- busbars on the left side and R-, R+/UDC+ busbars on the right side (+H356 and +H363 required)
2 Fastening the pedestal by the base (not performed for wall-mounted units)		Base mounting from outside 1. See <i>Clamping the pedestal with the outside brackets</i> on page 80. 2. Go to step 3.
		Base mounting from inside 1. See <i>Fastening the pedestal through the holes inside the pedestal</i> on page 80. 2. Go to step 3.
3 Fastening the busbars and module to the pedestal		Units with vertical busbars 1. See <i>Fastening the output busbars and PE terminal and sliding the module in</i> on page 86. 2. See <i>Fastening the drive module to the pedestal</i> on page 89. 3. Go to step 4.
		Units with no vertical busbars 1. See <i>Fastening the drive module to the pedestal</i> on page 89. 2. Go to step 4 (wall-mounted units) or 5 (base-mounted units).
4 Wall mounting		wall-mounted unit See <i>Fastening the drive module to wall (wall-mounted units only, not for base-mounted units)</i> on page 81.

Step		If	Instruction
5 Fastening by top		base-mounted unit	See <i>Fastening the drive module by top to the cabinet frame</i> on page 81.
6 Fastening shrouds		if included	<u>Frame size R7</u> See <i>Top entry busbar shroud</i> in section <i>Fastening the top entry busbar and bottom exit shrouds (+B060)</i> on page 55. <u>Frame size R8</u> See <i>Fastening the shrouds in frame size R8</i> on page 90.

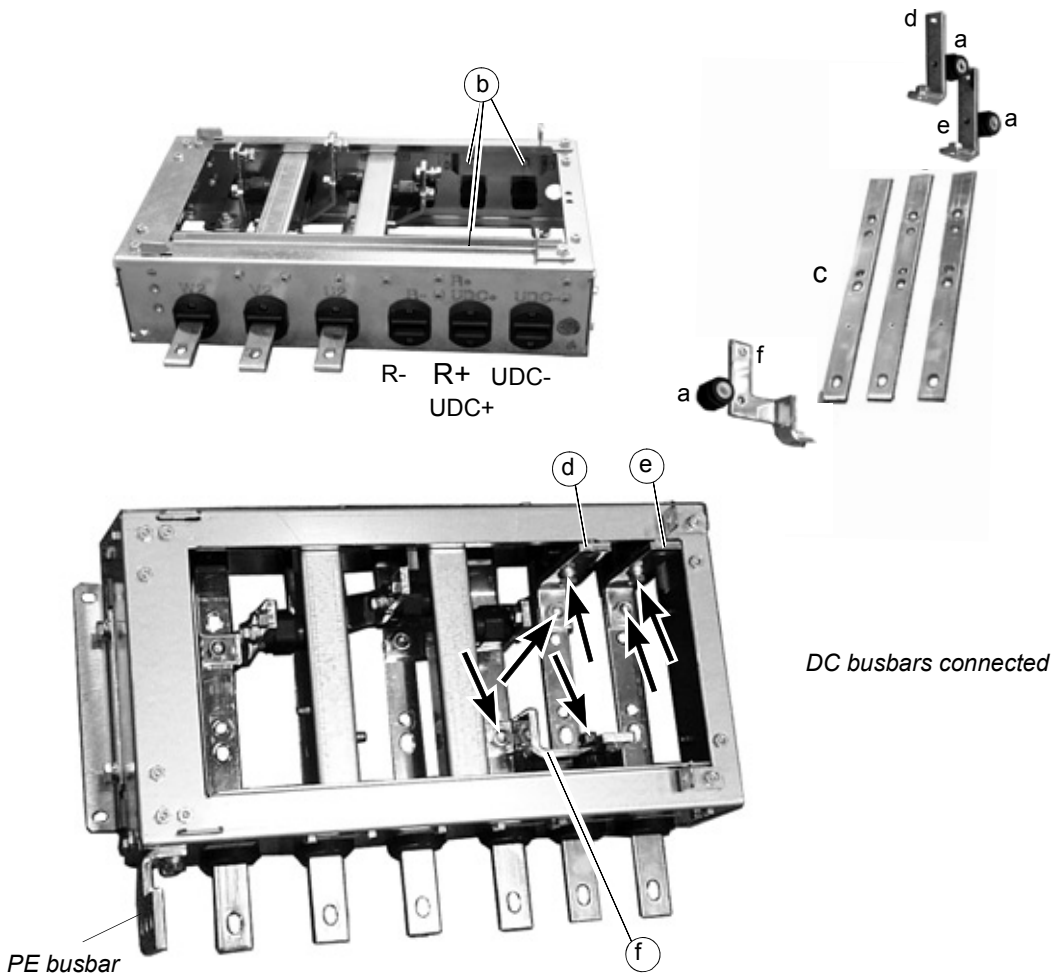
Connecting the DC busbars to the pedestal (+H356 and +H363 only)

Procedure

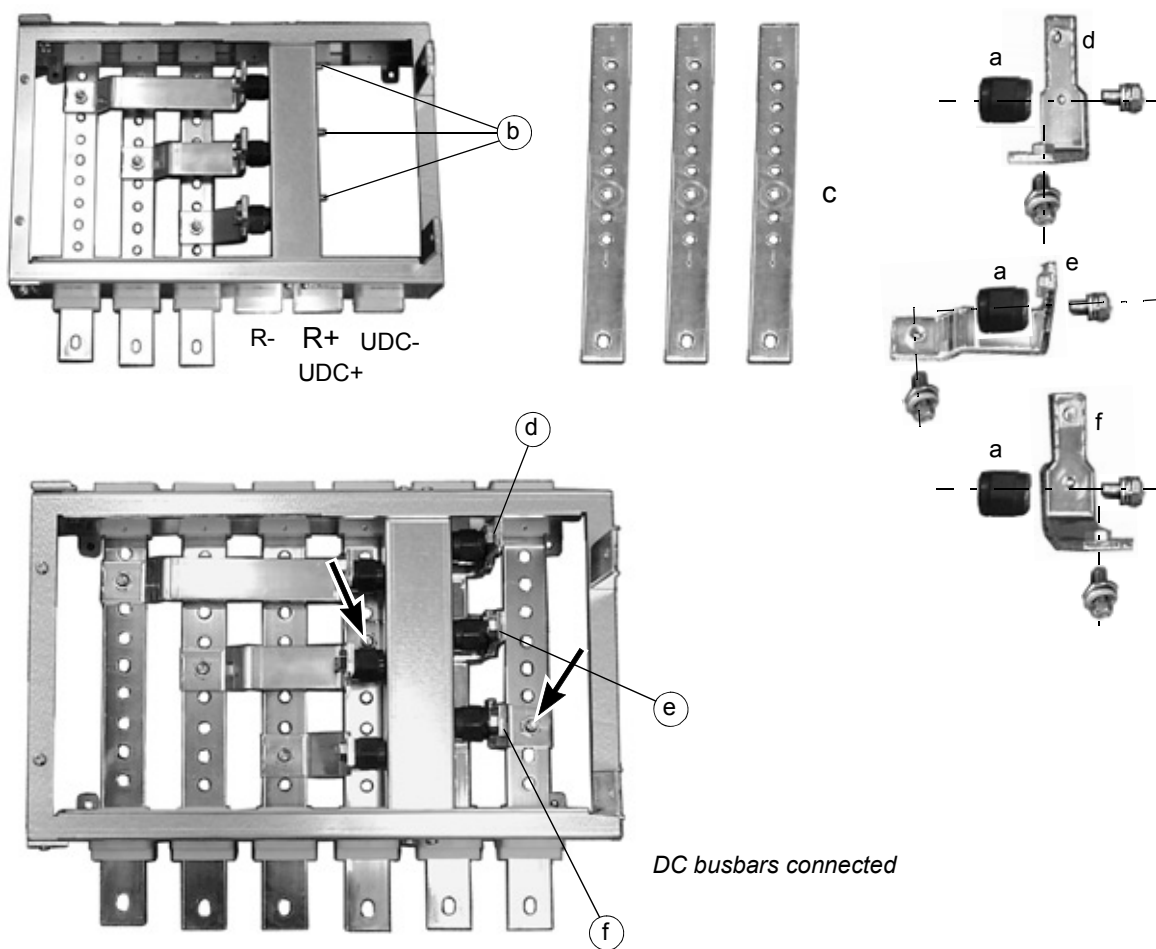
1. Screw insulating supports (“a” below) onto the free pins (“b” below) on the inner sides of the pedestal.
2. Push busbars (c) through the R-, R+/UDC+ and UDC- lead-through insulators as the W2, V2 and U2 busbars.
3. Connect the connecting busbars (d, e, f) to the insulating supports and to the R-, R+/UDC+ and UDC busbars as shown below.

For +H363, see also *Optional selection +H363* on page 79.

Photos of frame size R7



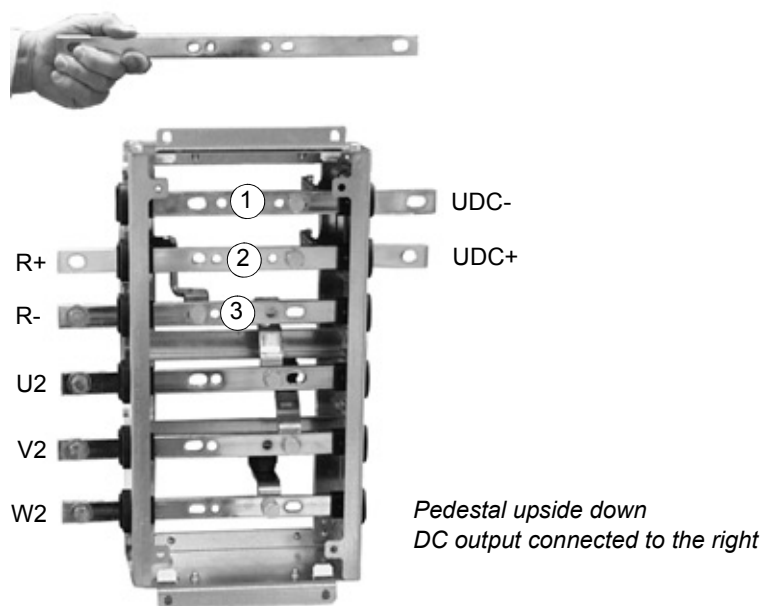
Photos of frame size R8



Optional selection +H363

This selection enables the connection of the DC output and the brake resistor output to the opposite sides of the pedestal. The installation below requires also optional selection +H356. The UDC- busbar and R- busbar are taken from the +H356 parts, the R+/UDC+ busbar from the +H363 parts. For instruction on how to connect the busbars to the pedestal frame, see *Connecting the DC busbars to the pedestal (+H356 and +H363 only) on page 76*.

1. Connect the UDC- busbar.
2. Connect the R+/UDC+ busbar.
3. Connect the R- busbar.



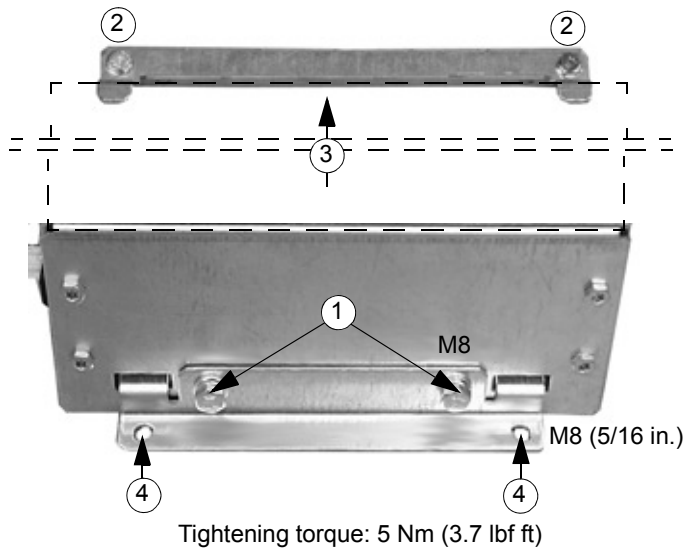
Fastening the pedestal to the cabinet base (not for wall-mounted units)

Fasten the pedestal to the base of the cabinet either with the outside fastening brackets or by using the fastening holes inside the pedestal.

Note: Place the module on a solid base. The fastening brackets are not strong enough to carry the weight of the module on their own.

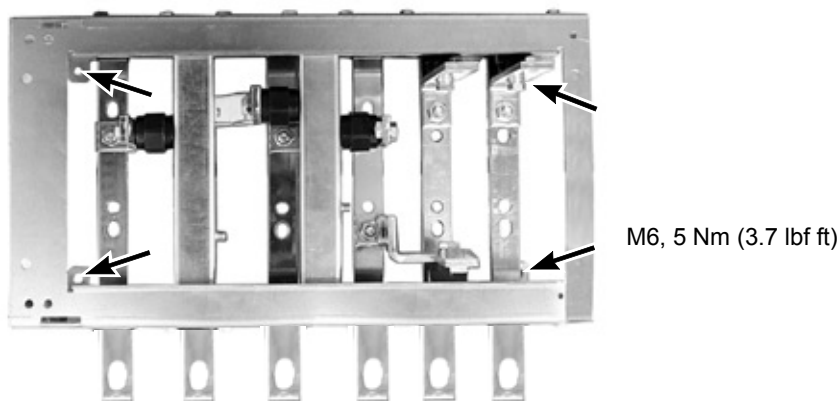
Clamping the pedestal with the outside brackets

1. Fasten the front bracket to the pedestal with two screws.
2. Fasten the back fastening bracket onto the cabinet floor with two screws.
3. Place the pedestal on the cabinet floor and push it so that the tabs of the fastening bracket enter the slots in the pedestal.
4. Fasten the front bracket to the base with two screws.



Fastening the pedestal through the holes inside the pedestal

Fasten the pedestal to the base of the cabinet with four screws through the inside fastening points.



Fastening the drive module by top to the cabinet frame

In addition to the base fastening, it is recommended to fasten the module to the cabinet also from the fastening points at the top. Refer to *Dimensional drawings* for the vertical fastening points.

If the module is not fastened from the back top to the cabinet frame, it must be fastened from the front top fastening points during transportation or in case of vibration.

Fastening the drive module to wall (wall-mounted units only, not for base-mounted units)*Requirements for protection*

The drive module must be protected against contact, dust and humidity (see chapter *Technical data* in *ACS800-04/04M/U4 Hardware Manual* [64671006 (English)]).

Requirements for the wall

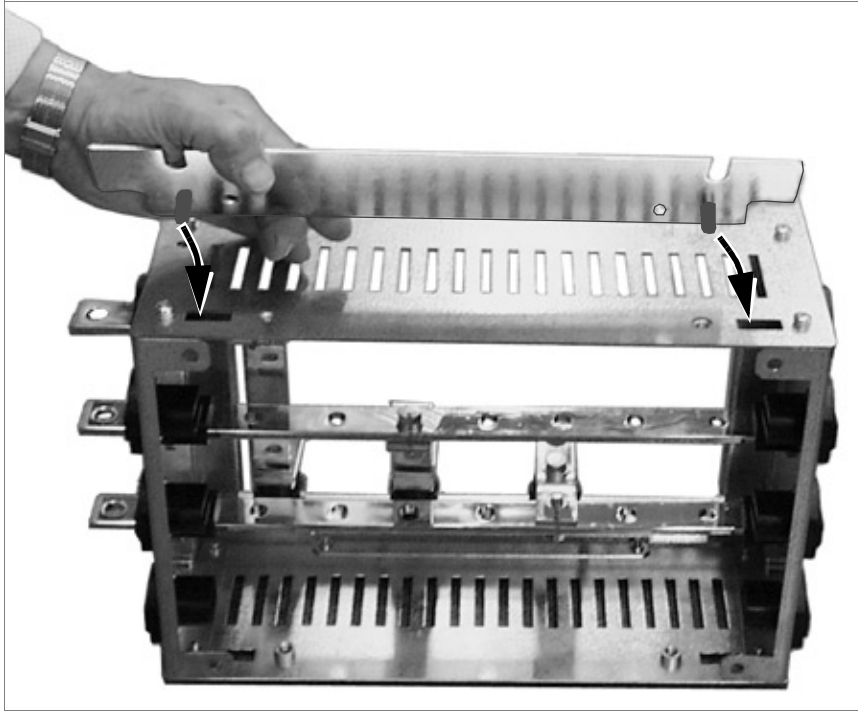
The wall must be as close to vertical as possible, of non-flammable material and strong enough to carry the weight of the unit. Check that there is nothing on the wall to inhibit the installation.

Floor

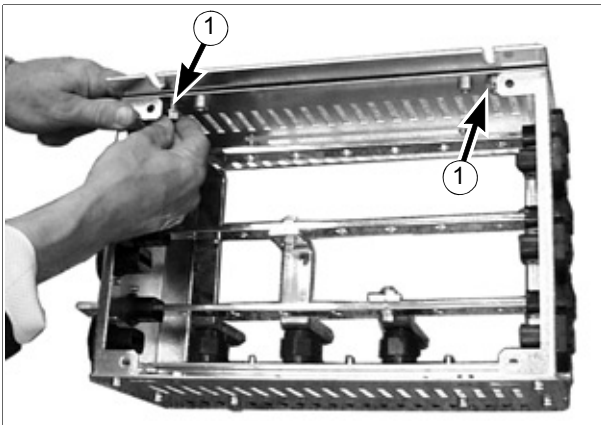
The floor/material below the installation must be non-flammable.

Procedure

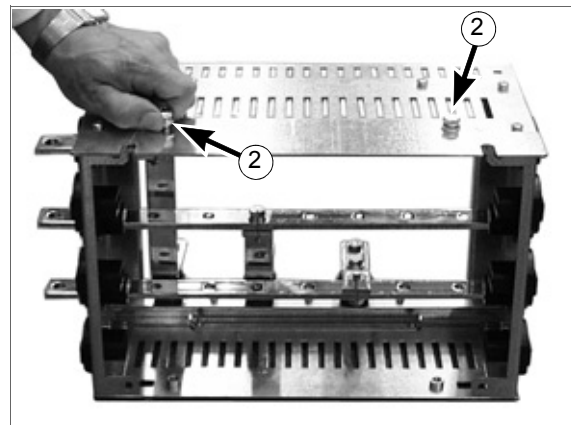
- Place the wall mounting bracket onto the pedestal so that its pins enter the slots of the pedestal.
- Fasten the pins with nuts (1) from inside or fasten the bracket with screws from outside (2). The nuts and screws are included in the mounting bracket package.



Inserting the wall mounting bracket into the slots in the pedestal



The pins of the wall mounting bracket are fastened with nuts from inside



Fastening the wall mounting bracket with screws from outside (alternative to pin fastening from inside)

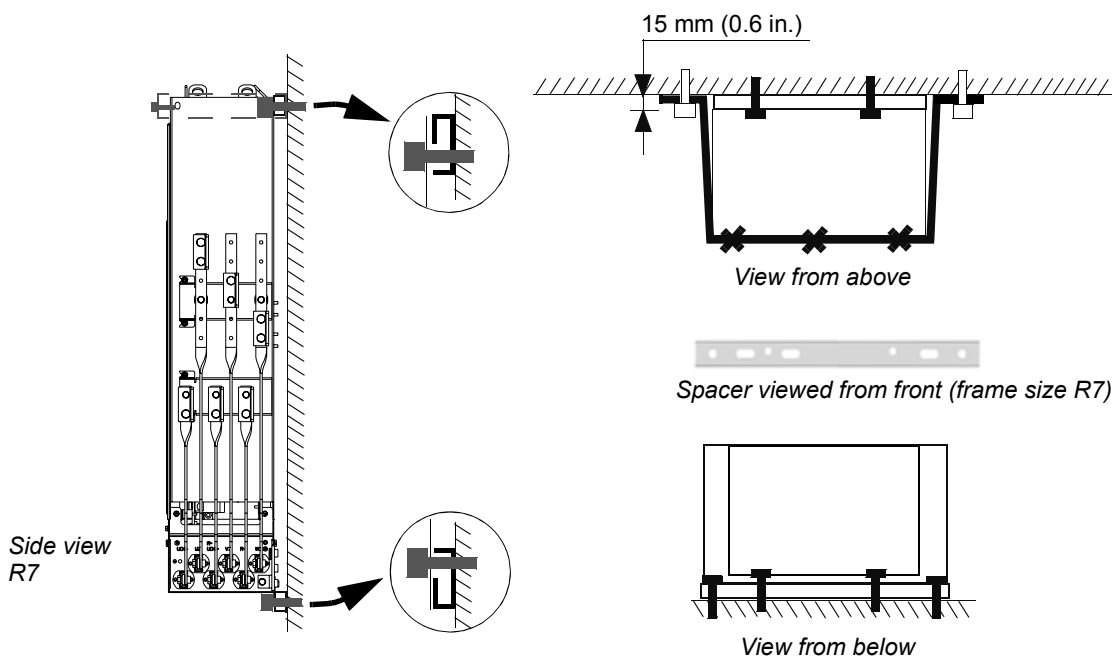
- See *Dimensional drawings* for locations of the fastening points at the top of the module.
- Use a pallet truck or a lifter to move the unit to the final mounting place.



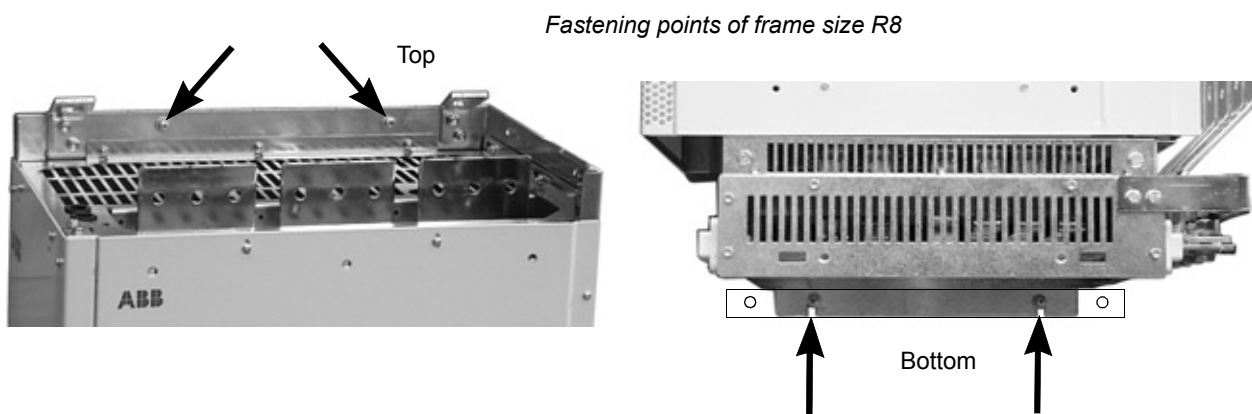
WARNING! Secure the unit to eliminate the danger of overturning and falling during the fastening procedure.

- Fasten the module through the slots in the wall mounting bracket and the fastening holes at the top of the module using spacers between the module and the wall.
Note: In flat mounting, the spacers (at the top and bottom) provide a clearance of 15 mm (0.6 in.) between the drive module and the wall so that the protruding studs of the module will not press against the wall. In bookshelf mounting, the spacer removes a 4 mm (0.16 in.) gap between the drive module top and the wall so that the module will hang in an upright position.
- Fasten the module also by top front with a wall-fastened support bracket.

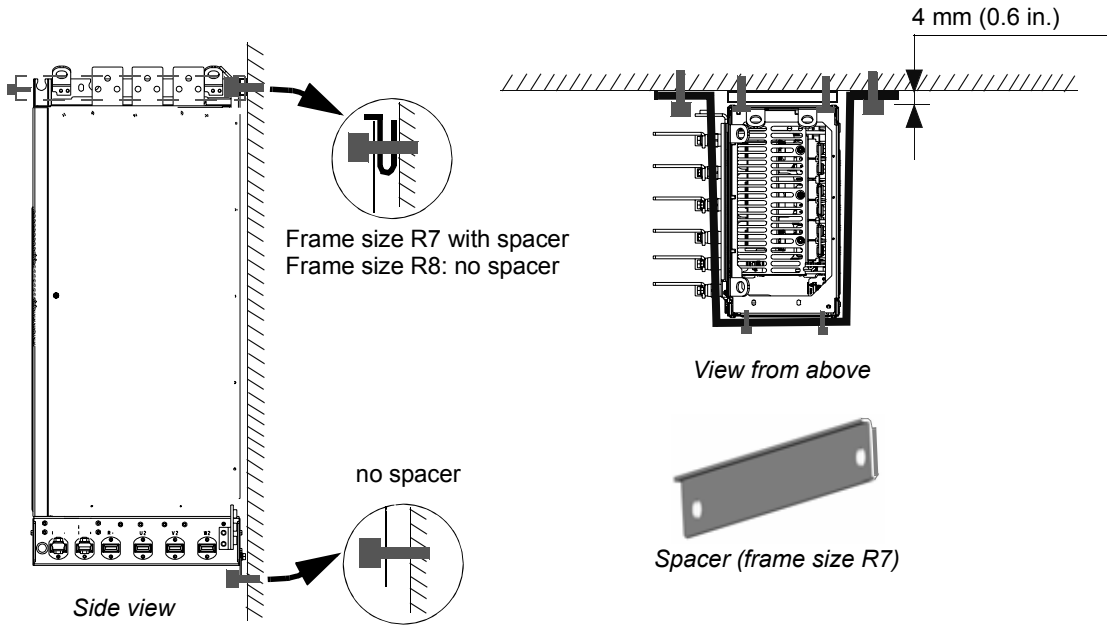
Units with busbars on the short sides (flat mounting, frame sizes R7 and R8)



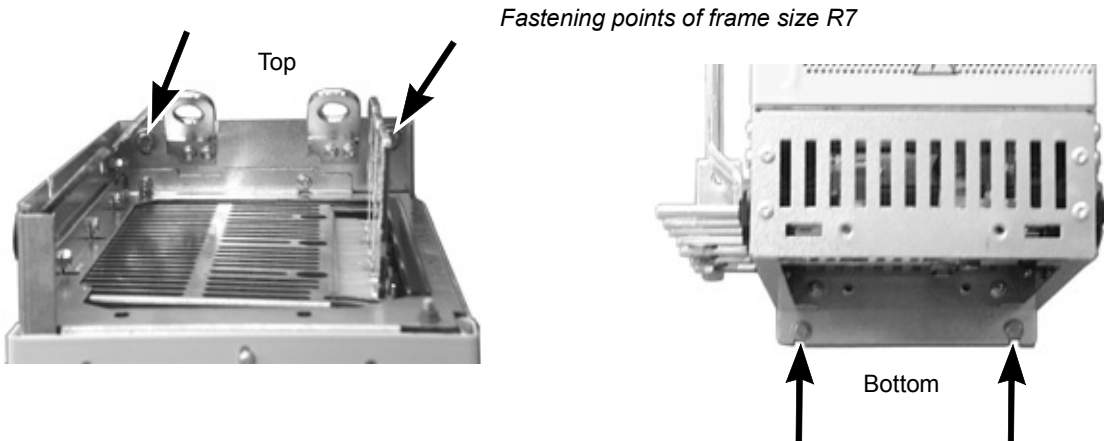
Screw size: M10 for frame sizes R7 and R8



Units with busbars on the long side (bookshelf mounting, frame sizes R7 and R8)



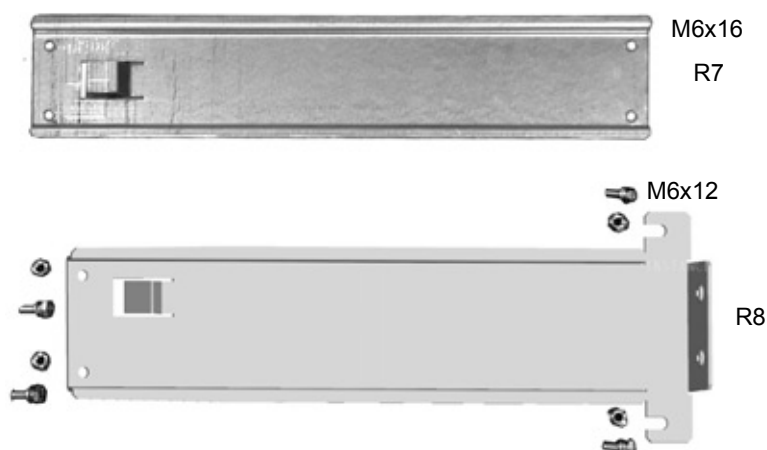
Screw size: M10 for frame sizes R7 and R8



Fastening the output busbars and PE terminal and sliding the module in

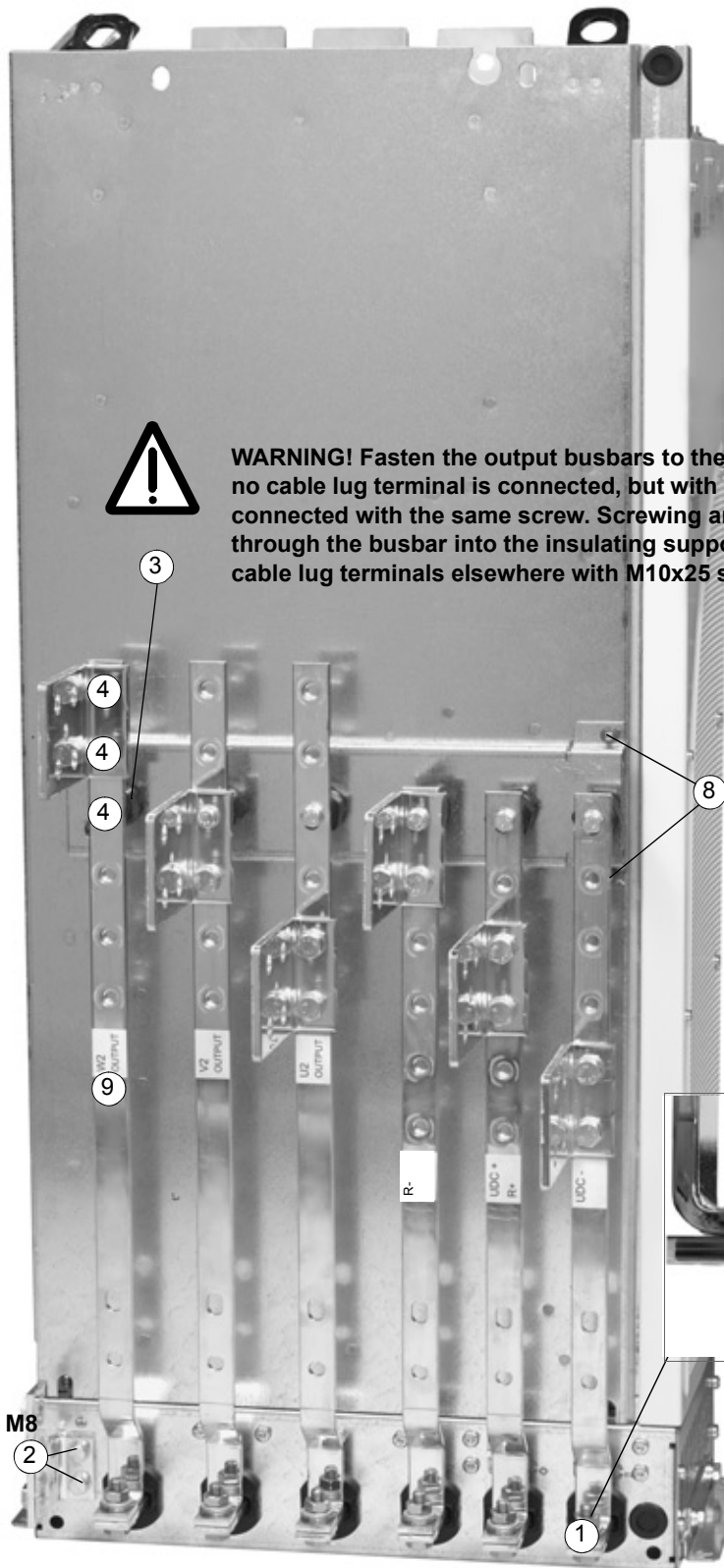
The steps of this installation procedure are shown in the photos on the next pages.

1. Connect the output busbars to the pedestal.
2. Fasten the PE terminal.
3. Screw the insulating supports onto the pins on the outer support bracket.
4. Fasten the output busbars and terminals to the insulating supports on the outer support bracket.
5. Fasten the inner support bracket to the drive module.

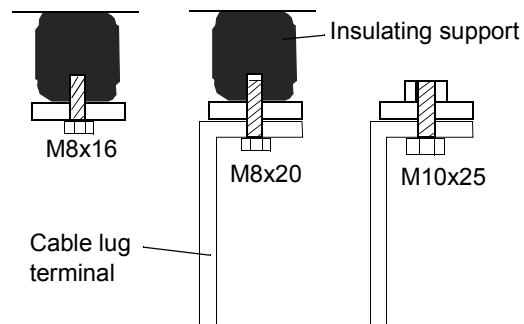


6. Remove the fastening brackets (screws “b” on photos under *Fastening the drive module to the pedestal* on page 89) from the pedestal.
7. Slide the module onto the pedestal so that the inner support bracket enters inside the outer support bracket.
8. Fasten the outer support bracket to the drive module.
9. Fasten the stickers to the output busbars.

View of output busbar connections of frame size R7 (DC and brake busbars included)

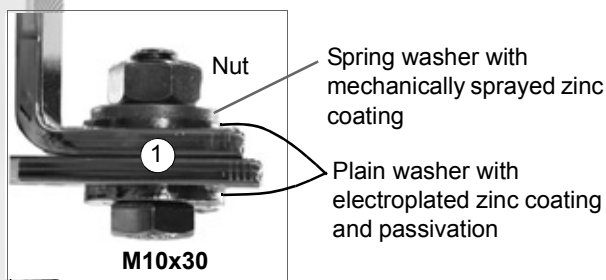


Top view of insulating support and cable lug terminal connections



WARNING! Fasten the output busbars to the insulating supports with M8x16 screws when no cable lug terminal is connected, but with M8x20 screws when a cable lug terminal is also connected with the same screw. Screwing an M8x20 screw without a cable lug terminal through the busbar into the insulating support will break the insulating support. Fasten the cable lug terminals elsewhere with M10x25 screws.

Tightening torque
 M8: 15...22 Nm (3.7 lbf ft)
 M10: 30...44 Nm (22...32 lbf ft)

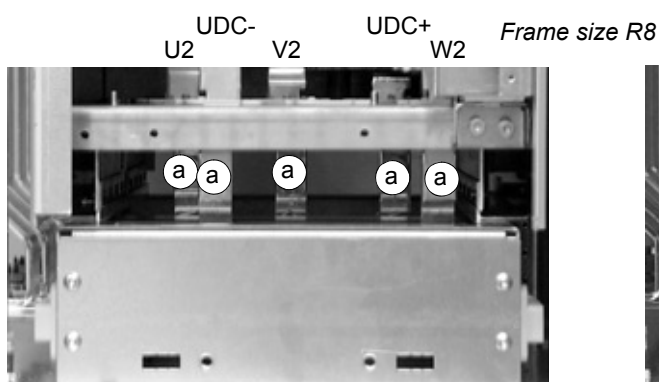
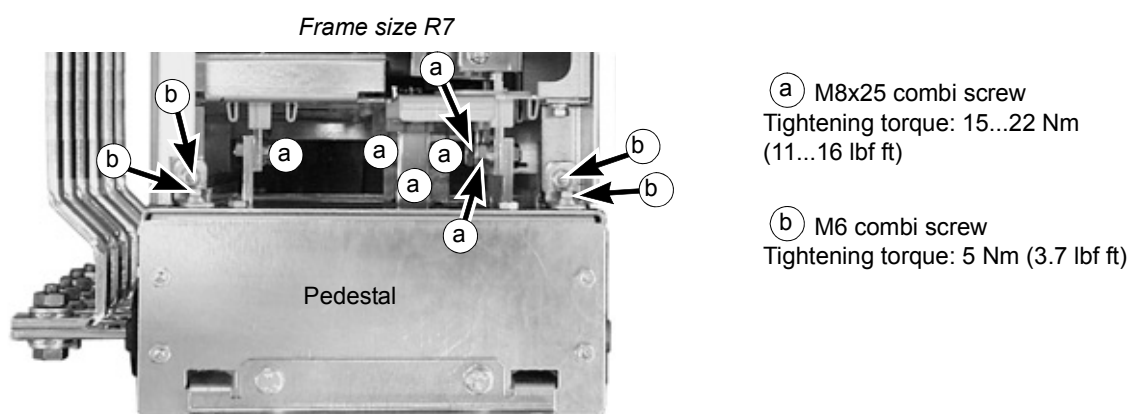


Fastening the drive module to the pedestal

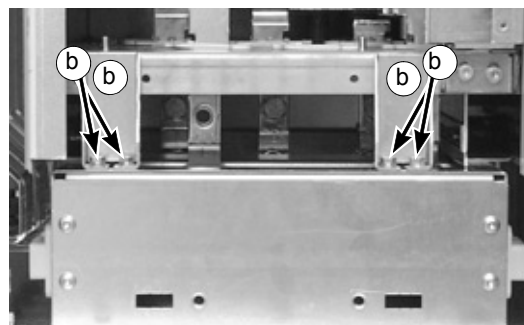
- Remove the front cover of the module.
- Connect the busbars with screws [3 to 6 pcs (a)] using a torque wrench with an extension bar.
- Fasten the module to the pedestal with screws (b).



WARNING! Fastening of screws (b) is important because the screws are required for the grounding of the drive.

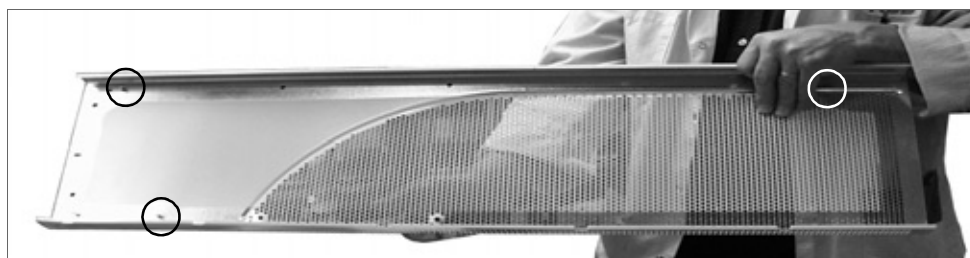


(a) M10x25 combi screws
 Tightening torque: 30...44 Nm (22...32 lbf ft)



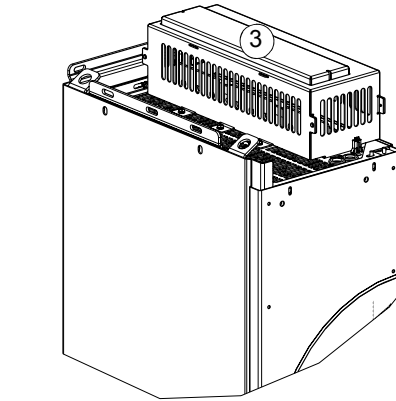
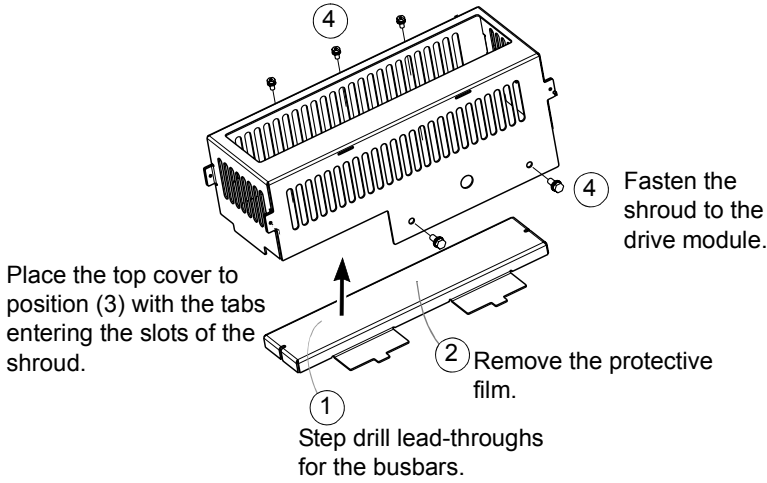
(b) M6x16 combi screws
 Tightening torque: 5 Nm (3.7 lbf ft)

- Match the three guide pins on the cover with the counter holes. Fasten the front cover to the module with screws.



Fastening the shrouds in frame size R8

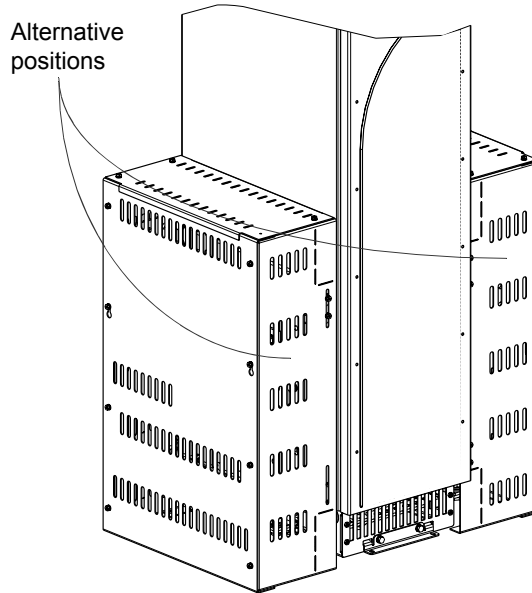
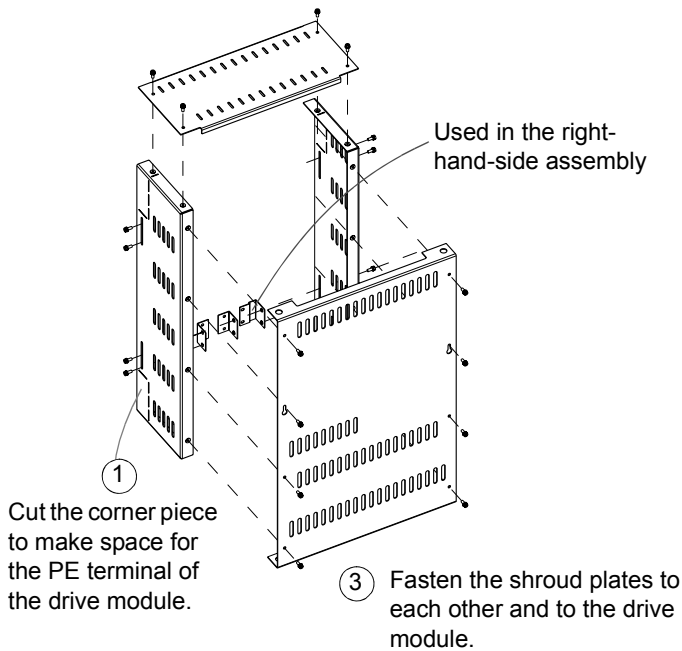
Top entry busbar shroud



Top entry busbar shroud fastened

Vertical busbar shroud

- 2 Remove the protective film from the shroud surfaces.



Vertical busbar shroud fastened

Note: When connecting the power cables, remove the front (and top and side) shroud by undoing the fastening screws.