

ACH580-01 PxR, UL Type 1/12 Frame R2/R3/R4

Base drive replacement instructions

Purpose or Scope

The following are the instructions for replacing an ACH580-01 UL Type 1 & 12 (Frames R2, R3 & R4) drive in PxR enclosures.

Equipment required*:

- Replacement drive (see note below)
- T20 bit
- T25 bit
- T30 bit
- PZ2 bit
- PZ3 bit
- Torque wrench
- Zip ties

Basic overview of steps

- Back-up drive parameters (if you can)
- Remove power and verify after 5 minutes
- Open enclosure
- Disconnect all wiring
- Remove flange plate
- Remove drive
- Prepare replacement drive
- Remove conduit assembly
- Install in reverse order
- Check connections
- Power drive
- Reprogram and test

Notes and cautions






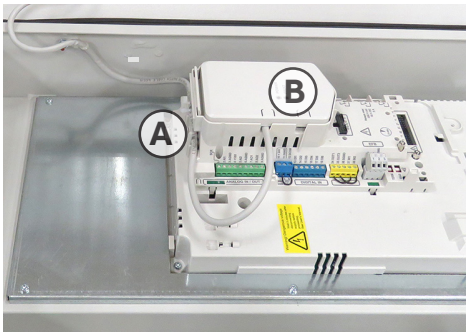
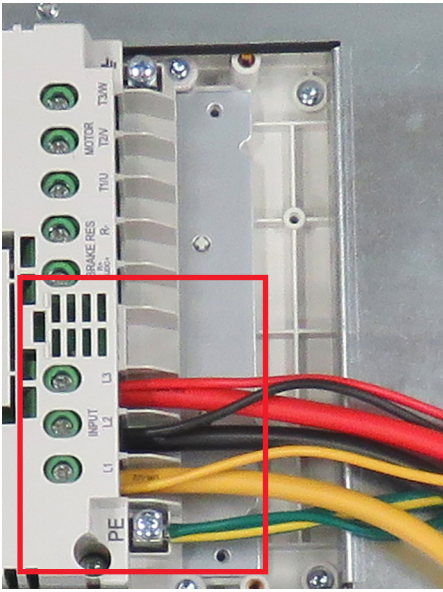
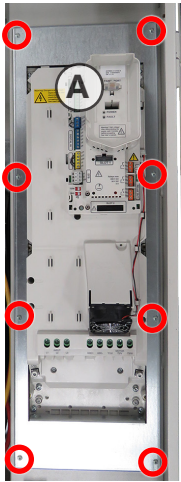
CAUTION! Review complete safety and electrical considerations prior to replacing the drive. See ACH580 IOM (3AXD50000049127).

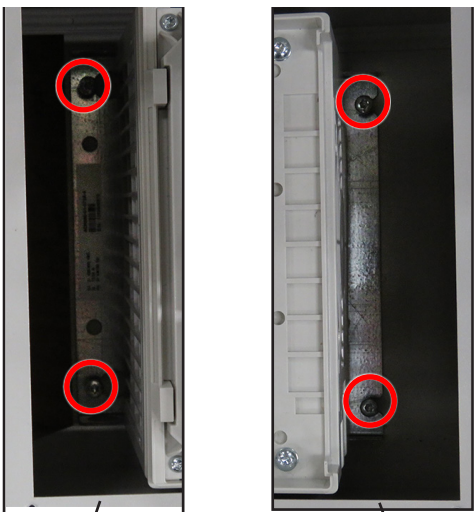
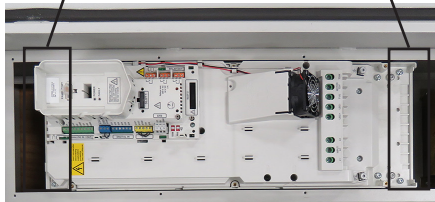

CAUTION! Two people are recommended for this job. The drive is heavy and can fall, causing property damage and injury.

NOTE: UL Type 12 drives require a UL Type 12 replacement drive, UL Type 1 drives are not allowed as substitutes for UL Type 12.


* Not all of these tools are needed for each frame size.

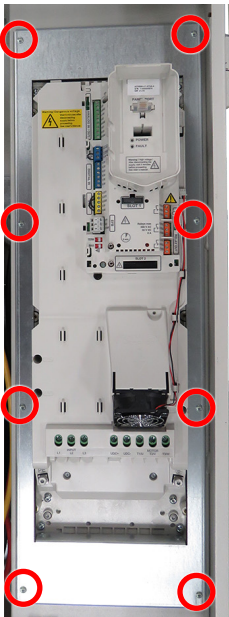
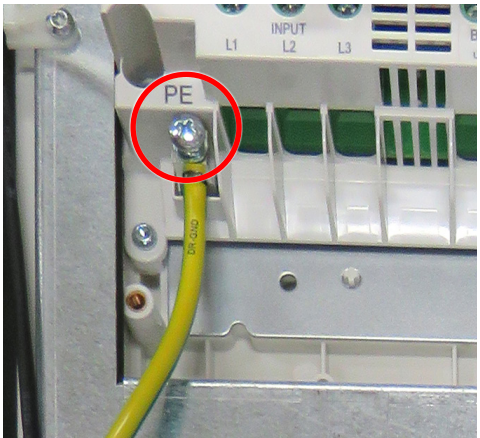
Step	Instruction	Diagram
1	<p>NOTE: If needed, back-up parameters prior to disconnecting power.</p> <p>Turn off source power and wait 5 minutes for the DC bus capacitors to discharge.</p> <p>Turn handle to the off position.</p>	 A photograph of the front panel of an ABB electrical enclosure. The panel is light gray with the ABB logo in red at the top left. In the center, there is a digital display unit. Below the display, a black handle with a red vertical bar is circled in red. Two small black circular latches are visible on the left side of the panel.
2	Rotate latches clockwise and open the enclosure door.	 A photograph of the front panel of the ABB enclosure, similar to the first diagram. Two red arrows point horizontally to the left towards the two small black circular latches on the left side of the panel. The handle is now in the 'off' position, with the red bar pointing downwards.
3	<p>Perform voltage check to confirm no voltage is present.</p> <p>NOTE: If you have control wiring connected to the control unit, disconnect at this time.</p>	 A standard electrical warning symbol consisting of a yellow equilateral triangle with a thick black border. Inside the triangle is a black lightning bolt pointing downwards.

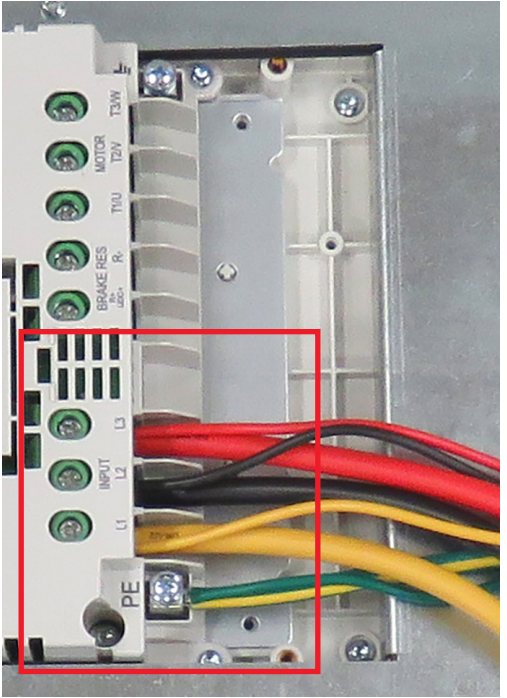
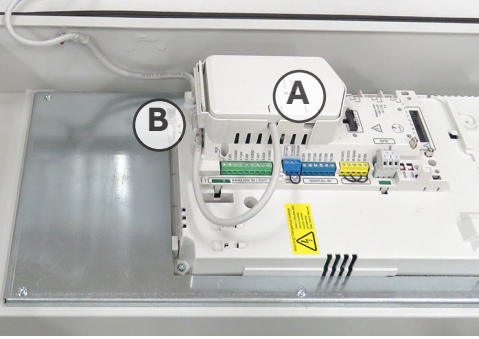

Step	Instruction	Diagram
4	<p>Cut zip tie (A) and remove the CDPI (B) from drive. Set aside.</p> <p>NOTE: Remove any additional drive I/O wiring.</p>	
5	<p>Using a PZ2 bit, loosen and remove wires from the input terminals of the drive.</p> <p>Using a PZ3 bit, loosen and remove ground wire from the drive.</p>	
6	<p>Using a T20 bit, loosen and remove screws securing the flange plate (A).</p> <p>Save hardware.</p>	

Step	Instruction	Diagram
7	<p>Using a T30 bit, loosen the four (4) M6 screws securing the drive, four (4) turns of the screw.</p> <p>NOTE: Do not remove the screws completely. Only loosen enough to be able to lift the drive off the screws.</p>	
8	<p>Carefully push the drive up, lift the drive off the screws and out of enclosure.</p>	
9	<p>Unpack the replacement drive.</p> <p>UL Type 12: UL Type 12 drives require a UL Type 12 replacement drive, UL Type 1 are not allowed as substitutes for UL Type 12.</p> <p>Using a T20 bit, loosen and remove screws securing the cover.</p> <p>Recycle drive cover.</p> <p>UL Type 12: Recycle the hood that was included in the box and the drive cover that was removed.</p>	

Step	Instruction	Diagram
10	<p>R2 Frame: Using a T20 bit, loosen and remove two (2) M4x8 screws. Remove conduit assembly.</p> <p>R3 Frame: Using a T20 bit, loosen and remove two (2) M4x16 screws. Remove conduit assembly.</p> <p>R4 Frame: Using a T25 bit, loosen and remove four (4) M5x25 screws. Remove conduit assembly.</p> <p>Recycle the conduit assembly and hardware.</p>	

11	<p> CAUTION! Use two people to install the drive.</p> <p>Slide the drive mounting holes over the four (4) screws and slide drive in place.</p> <p>Torque all four (4) mounting screws to 27 in-lb (3 Nm).</p>	
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Step	Instruction	Diagram
12	<p>Place collar around drive. Using a T20 bit, secure the drive using the M4x20 screws that were removed earlier.</p> <p>Using a T20 bit, torque to 14 in-lb (1.5 Nm).</p>	
13	<p>Secure the ground wire to the drive.</p> <p>R2 & R3 Frame: Using a PZ3 bit, torque to 14 in-lb (1.5 Nm).</p> <p>R4 Frame: Using a PZ3 bit, torque to 26 in-lb (2.9 Nm).</p>	

Step	Instruction	Diagram
14	<p>Connect the input wires (from fuse block) to the input terminals of the drive.</p> <p>Yellow U1 to L1 Black V1 to L2 Red W1 to L3</p> <p>R2 Frame: Using a PZ2 bit, torque to 14 in-lb (1.5 Nm). F3 Frame: Using a PZ2 bit, torque to 31 in-lb (3.5 Nm). R4 Frame: Using a T20 bit, torque to 35 in-lb (4 Nm).</p>	
15	<p>Re-install the CDPI (A) into control unit and secure with two zip ties (B).</p> <p>Reconnect any control wiring removed in steps 3 and 4.</p>	
16	<p>Close the door and rotate latches counterclockwise.</p>	

Step	Instruction	Diagram
17	Power and reprogram the drive.	
18	Test and verify drive operation and motor direction.	
19	Back-up and save parameters to the keypad prior to putting the drive back into service.	