ABB drives for HVAC

Quick start-up guide
ACH580 drives with HVAC control program

English 3

EN

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EN – Quick start-up guide

This guide describes how to start-up the drive using the First start assistant on the Hand-Off-Auto control panel. For complete information on start-up, see *ACH580 firmware manual* (3AXD50000027537 [English]).

Note:
Automatic selection of supply voltage is not supported in ACH580-31. You must select the supply voltage manually using parameter *95.01*. See steps for Commissioning with parameters on page 9.

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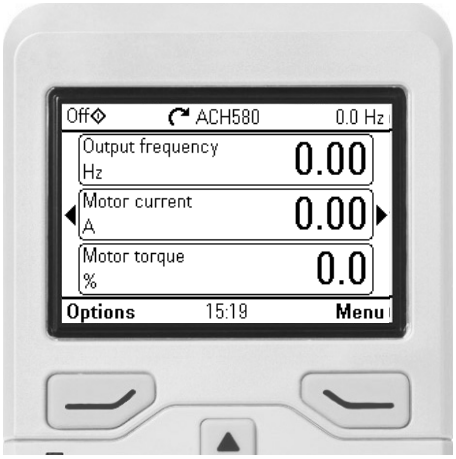
Start-up with the First start assistant on an Hand-Off-Auto control panel

Safety	
WARNING! Do not start-up the drive unless you are a qualified electrician. Read and obey the instructions in chapter *Safety instructions* at the beginning of the Hardware manual of the drive. Ignoring the instructions can cause physical injury or death, or damage to the equipment.	
☐	Check the installation. See chapter *Installation checklist* in the Hardware manual of the drive.
☐	**WARNING!** The drive will start up automatically at power-up if the external run command is on and the drive is in the external control mode. Check that the starting of the motor does not cause any danger. **De-couple the driven machine if** • there is a risk of damage in case of an incorrect direction of rotation, or • a **Normal** ID run is required during the drive start-up, when the load torque is higher than 20% or the machinery is not able to withstand the nominal torque transient during the ID run.
Hints on using the assistant control panel	
	The two commands at the bottom of the display (**Options** and **Menu** in the figure on the right), show the functions of the two softkeys and located below the display. The commands assigned to the softkeys vary depending on the context. Use keys , , and to move the cursor and/or change values depending on the active view. Key shows a context-sensitive help page. For more information, see *ACS-AP-x assistant control panels user's manual* (3AUA0000085685 [English]).



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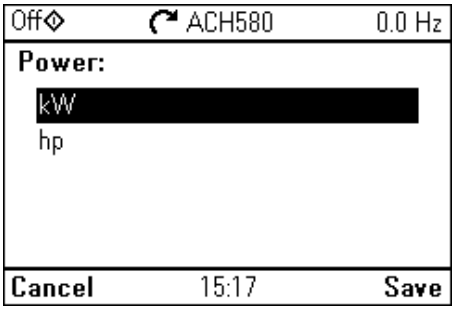
1 – First start assistant guided settings: Language, date and time, and motor nominal values		
☐	Have the motor name plate data at hand. Power up the drive.	
☐	The First start assistant guides you through the first start-up. The assistant begins automatically. Wait until the control panel enters the view shown on the right. Select the language you want to use by highlighting it (if not already highlighted) and pressing (**OK**). **Note:** After you have selected the language, it takes a few minutes to download the language file to the control panel.	English Deutsch Suomi Français Italiano Nederlands Svenska OK ▸
☐	ACH580-31 drives: Select the supply voltage with parameter *95.01*.	
☐	Select **Commission the ACH580** and press (**Next**).	Off ACH580 0.0 Hz **First start assistant** Set-up drive now? Spin the motor mode Commission the ACH580 Exit & don't show at power-up Exit 15:16 **Next**
☐	Select the localization you want to use and press (**Next**).	Off ACH580 0.0 Hz **Localization** Unit defaults: International (SI) US standard (Imperial) **Back** 15:16 **Next**
☐	Change the units shown on the panel if needed. • Go to the edit view of a selected row by pressing ▸. • Scroll the view with ▲ and ▼. Go to the next view by pressing (**Next**).	Off ACH580 0.0 Hz **Units** Change the display units if needed. Power: kW ▸ Temperature: °C ▸ Torque: Nm ▸ Currency: € ▸ **Back** 15:17 **Next**

☐ To select a value in an edit view:

- Use ▲ and ▼ to select the value.

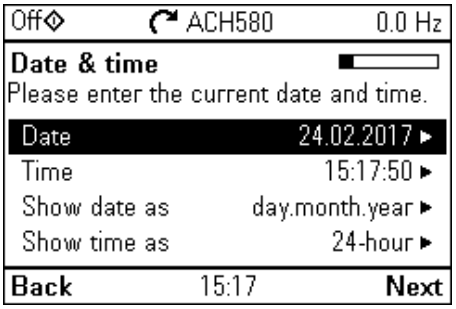
Press (**Save**) to accept the new setting, or press (**Cancel**) to go back to the previous view without making changes.



☐ Set the date and time as well as date and time display formats.

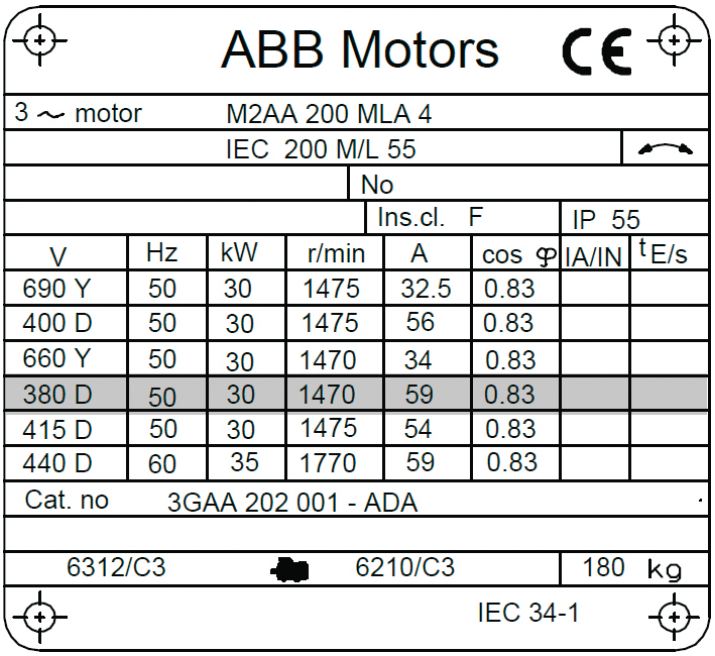
- Go to the edit view of a selected row by pressing ▶.
- Scroll the view with ▲ and ▼.

Go to the next view by pressing (**Next**).



Refer to the motor nameplate for the following nominal value settings of the motor. Enter the values exactly as shown on the motor nameplate.

Example of a nameplate of an induction (asynchronous) motor:



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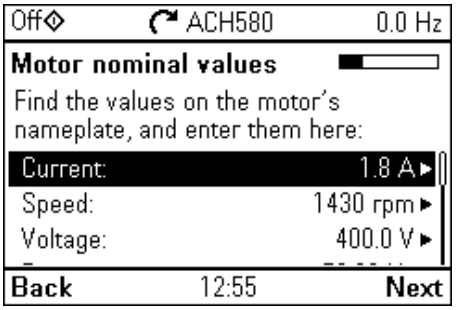
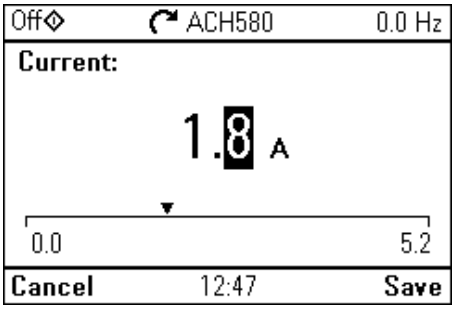
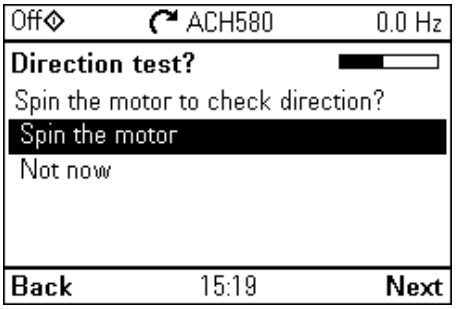
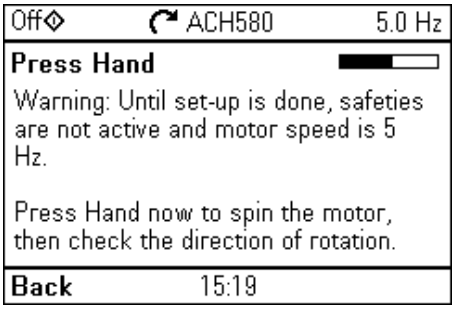
☐	Check that the motor data is correct. Values are predefined on the basis of the drive size but you should verify that they correspond to the motor. Start with the motor type. • Go to the edit view of a selected row by pressing ▶ • Scroll the view with ▲ and ▼. Motor nominal cos Φ and nominal torque are optional. Press (**Next**) to continue.	
☐	To change a value in an edit view: • Use ◀ and ▶ to move the cursor left and right. • Use ▲ and ▼ to change the value. Press (**Save**) to accept the new setting, or press (**Cancel**) to go back to the previous view without making changes.	
☐	This step is optional, and requires rotating the motor. Do not do this if it could cause any risk, or if the mechanical set-up does not allow it. To do the direction test, select **Spin the motor** and press (**Next**).	
☐	Press the Hand key (Hand) on the panel to start the drive.	

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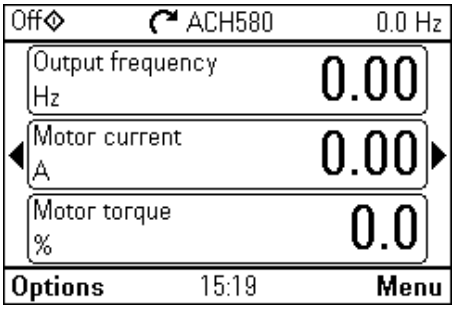
☐	Check the direction of the motor. If it is forward, select **Yes, motor is spinning forward** and press (**Next**) to continue. If the direction is not forward, select **No, fix direction** and press (**Next**) to continue.	
☐	The first start is now complete and the drive is ready for use. Press (**Done**) to enter the Home view.	
☐	The Home view monitoring the values of the selected signals is shown on the panel.	

2 – Completion of commissioning

You can complete the commissioning in five different ways:

- **Start using the drive with no further adjustment**:
  Press the Hand key on the panel to start the motor, and set the reference on the panel.
- **Assistant commissioning**:
  Go to **Menu** → **Primary settings** → **Start, stop reference** and complete the two assistants. For more details see the Firmware manual.
- **HVAC quick commissioning**:
  Go to **Menu** → **Primary settings** → **HVAC quick setup**. Go through the items on the menu. This option is instructed in the rows below.
- **Commissioning with Primary settings**:
  Go to **Menu** → **Primary settings**. Set the start/stop and reference, motor data, ramps and limits. You can continue with further adjustment. See in the Firmware manual or press the ? information on Primary settings menu items.
- **Commissioning with parameters (advanced users only.)**:
  Go to **Menu** → **Parameters** → **Complete list**. See chapter *Parameters* in the Firmware manual.

HVAC quick commissioning

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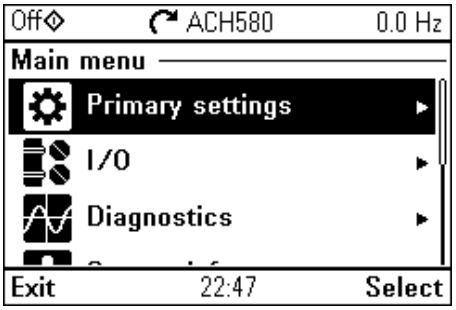
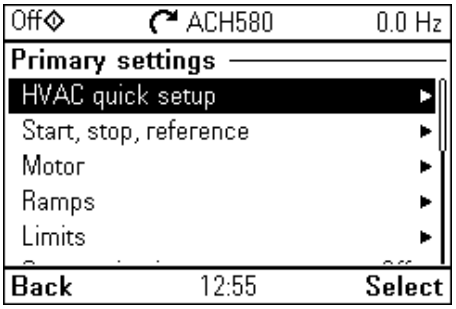
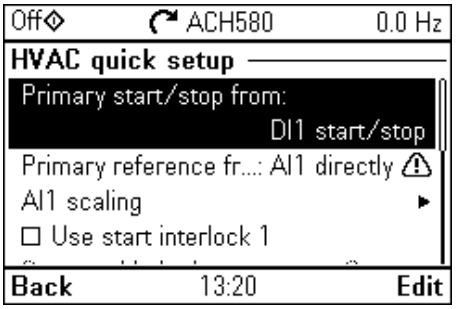
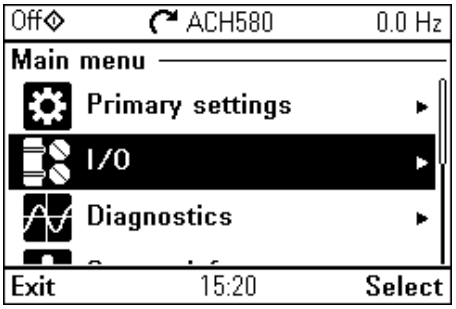
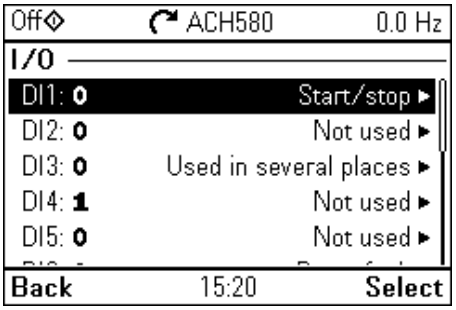
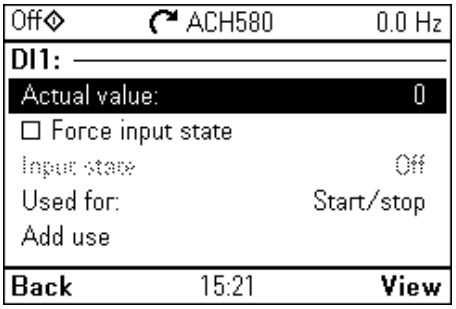
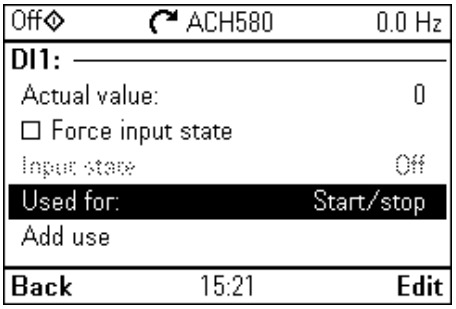
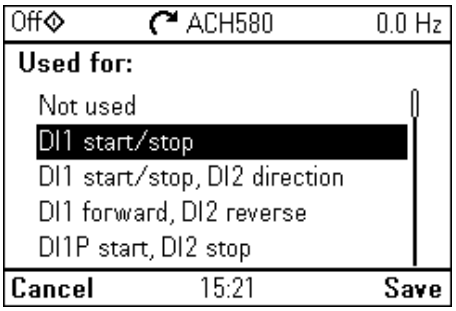
☐	In the **Main** menu, select **Primary settings** and press (**Select**) to enter the **Primary settings** menu.	
☐	Select **HVAC quick setup** and press (**Select**) (or).	
☐	Go through the items on the menu. To adjust the value of a parameter, press (**Edit**), adjust the value using , , and keys and press (**Save**). Note that the actual wiring must match the new value. Go back to the **Main** menu by pressing (**Back**) repeatedly.	
3 – Additional settings in the Primary settings menu - I/O menu		
☐	Make sure that the actual I/O wiring matches the I/O used in the control program. In the **Main** menu, select a **I/O** and press (**Select**) to enter the **I/O** menu.	

☐	Select a connection you want to check and press (**Select**) (or ▶).	
☐	To view the details of a parameter that cannot be adjusted via the **I/O** menu, press (**View**).	
☐	To adjust the value of a parameter, press (**Edit**), adjust the value using ▲, ▼, ◀ and ▶ keys and press (**Save**). Note that the actual wiring must match the new value. Go back to the **Main** menu by pressing (**Back**) repeatedly.	 

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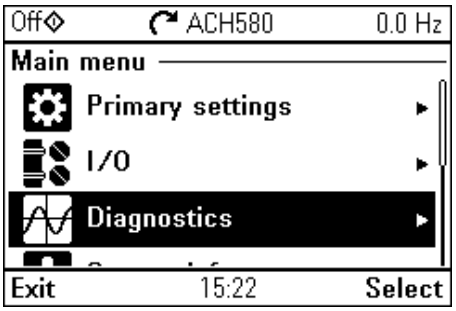
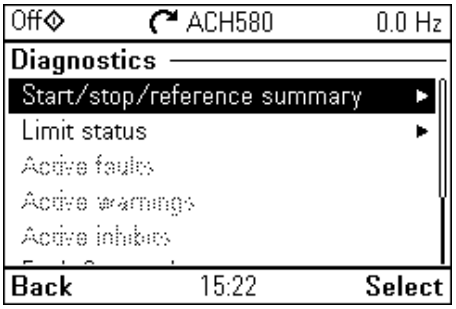
4 – Diagnostics menu		
☐	Use the **Diagnostics** menu to make sure that the setup is functioning correctly. In the **Main** menu, select **Diagnostics** and press (**Select**) (or).	
☐	Select the diagnostics item you want to view and press (**Select**). Return to the **Diagnostics** menu by pressing (**Back**).	

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