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OPTIONS FOR ABB DRIVES

ACX-DCP-W Control Panel
User's manual

List of related manuals

Tool and maintenance manuals	Code (English)
Drive composer PC tool user's manual	3AUA0000094606

Option manuals and guides	
ACX-DCP-W control panel User's manual	3AXD50000515110
ACx-AP-x Assistant control panels User's manual	3AUA0000085685
Mobile Connect for Drives user guide	3AXD50000555512
CDPI-01 communication adapter module User's manual	3AXD50000009929
DPMP-01 mounting platform for ACP-AP control panel	3AUA0000100140
DPMP-02/03 mounting platform for ACP-AP control panel	3AUA0000136205

You can find manuals and other product documents in PDF format on the Internet. See section Document library on the Internet on the inside of the back cover. For manuals not available in the Document library, contact your local ABB representative.

You can download and install the Drivetune app by scanning the QR code below:

Android mobile (China)   Apple iOS mobile   Google play

User's manual

ACX-DCP-W Control Panel

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Introduction to the manual

What this manual contains

This manual describes how to use ABB Drive connectivity control panel to realize Condition monitoring for Drives and Mobile Connect for Drives functions for transmission.

ABB drive connectivity control panel is an intelligent wireless Drive HMI with cloud connectivity. With the built-in wireless communication module and data encryption, the operation data and events of the drive can be uploaded to the cloud in real time. Customers can monitor the operation status, events, historical data and other information of the drive at anytime and from anywhere by logging in the website, and get timely notifications in case of drive failure.

This control panel also enables remote assistance service - Mobile Connect for Drives, embedded in Drivetune App. Where user gets fast support from ABB drive experts. This helps customers to minimize the unplanned downtime and improve the overall operation efficiency of the machine.

This guide describes how to use ABB drive connectivity control panel to easily realize the Condition monitoring for Drives and remote assistance of the drive.

The chapter describes the product highlights, the applicability, compatibility, intended audience and the contents of this manual.

Product highlights

• Plug and play, connect and serve
• Support both of Condition monitoring for Drives and Remote assistance (Mobile Connect for Drives) digital services
• Data double encryption, network security
• Remote firmware uploading

Applicability

This manual applies to the following panel type and versions:

ABB Drive connectivity control panel	ACS-DCP-W
Hardware version	C or later
Software version	5.96 or later

You can also view panel details in the panel itself using either of the two methods:

- With panel still not powered, press and always hold ?⃞ (**help**) button, then power up the panel through drive.

or

- With panel powered up, go to **Menu → System info → Control panel**.

```
┌ Control panel ──────────────
│
│ Product type:        ACS-DCP-W
│ HW version:                  C
│ FW version:  GPAPRv5.95.200.5
│
│
```

```
Local◇        ↻ ACS580      ↕0.0 rpm
┌ Control panel ──────────
│ Product type:          ACS-DCP-W
│ HW version:                    C
│                       Flash MT256
│ FW version:     GPAPR v5.95.200.5
│                     SHA-1: 9473e8f6
│                  22.10.2019 05:24:58
│ Serial number:      C9280032WLL
Back            00:09
```

Note: The images and instructions in this manual are examples, each based on a specific control panel and drive type combination. The details may vary with different control panels or drive types.

Compatibility

The following drive(s) are compatible with ABB Drive connectivity control panel.

Note: This table may not be comprehensive. See the appropriate drive manual for more details.

Type		ACS880			ACX580		ACS530		
		INU Primary Control			ACS580		ACS530		
Drive	SW Version	AINL6 v2.51 or later	AINL6 v2.51 or later	AINL2 v2.51 or later	ASCK4 v2.04.0.4 or later	ASCK2 v2.04.0.4 or later	QCVD4 v2.07.0.0 or later (except v2.07.0.5)	QCVD2 v2.07.0.0 or later	QCVDA v2.07.02 or later
Panel	V5.96.0.1	√	√	√	√	√	-	-	-
	V5.97.0.1	√	√	√	√	√	√	√	√

Safety

Follow all safety instructions delivered with the drive.

Intended audience

This manual is intended for persons who use an ABB Drive connectivity control panel.

Contents of the manual

The information in the manual is organized in the following chapters:

- *Installation and start-up* describes the installation and start-up of the control panel.
- *Control panel overview* describes the main parts of the control panel and their functions.
- *Basic operation* describes the menu structure, views and basic functions of the control panel.
- *Functions in the main Menu* describes the functions in the main **Menu**.
- *Functions in the Options menu* describes the functions in the **Options** menu.
- *Fault tracing* describes how to identify different fault and warning messages and how to solve problem situations.
- *Service and maintenance* describes service-related functions and routine maintenance tasks.
- *Condition monitoring for Drives* describes the Condition monitoring for Drives function.
- *Mobile Connect for Drives* describes the Mobile Connect for Drives assistance function.
- *Technical data* describes the parts, dimensions and materials of the control panel, and other technical data about the control panel.

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Installation and start-up

What this chapter contains

The chapter describes how to install and start-up the ABB Drive connectivity control panel for the first time.

Installation

Attach the control panel directly to the drive or use a separate mounting kit (for example, for cabinet door mounting).

To attach the control panel,

1. Place its bottom end into the bottom of the slot in the drive (A).
2. Pivot the control panel and push the upper part (B) until you hear a click.

To detach the control panel,

1. Release the control panel by pressing the clip (B).
2. Pull the upper end of the control panel out of the slot in the drive.

Note:

*   Control panels can be replaced without shutting down the machine. Ensure that the parameter 49.05 **Communication loss action** is set to-> **No action** or **Warning** before replacing the control panel.

• Restore the needed original configuration of parameter 49.05 after replacement. As the control panel is an accessory of drive, it is recommended that this parameter be set to **Warning** unless required by application.
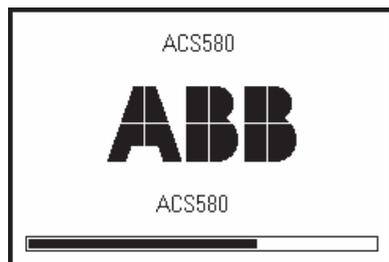
First start-up

To start-up the control panel for the first time, follow the instructions:

1. Obey all drive-specific safety precautions.

2. Install the control panel. See instructions in *Installation* (page *13*).
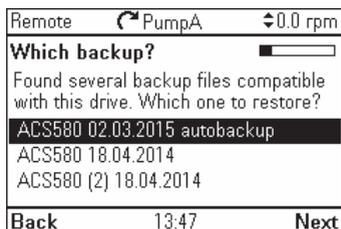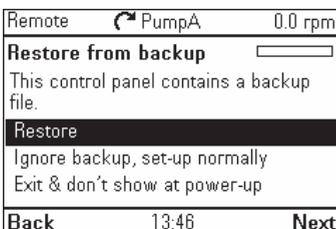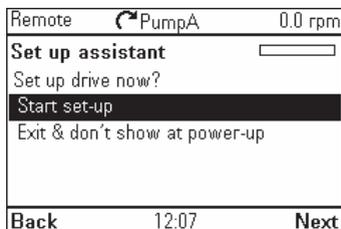
3. Power up the drive.

   The control panel start-up begins automatically. Wait until the control panel shows the language selection view.

4. Use ⏶ or ⏷ to select a language.

5. Press ↩ to confirm your selection.

   Wait until the control panel completes uploading the language file. Its progress is indicated by a progress bar.

```
Dansk
Deutsch
English (US)
Italiano
Suomi
Français
Russki
                              OK ▶
```

```
         ACS580

         ABB

         ACS580

[███████████████        ]
```

If there is a Basic set-up assistant in the drive, or if the control panel already contains a compatible backup (or backups) that could be copied to the drive, the control panel prompts a question.

```
Remote    ⟳PumpA      0.0 rpm
Set up assistant     ⌁
Set up drive now?
Start set-up
Exit & don't show at power-up


Back         12:07        Next
```

```
Remote    ⟳ PumpA      0.0 rpm
Restore from backup   ⌁
This control panel contains a backup
file.
Restore
Ignore backup, set-up normally
Exit & don't show at power-up

Back         13:46        Next
```

```
Remote    ⟳PumpA     ⬍0.0 rpm
Which backup?        ⌁
Found several backup files compatible
with this drive. Which one to restore?
ACS580 02.03.2015 autobackup
ACS580 18.04.2014
ACS580 (2) 18.04.2014
Back         13:47        Next
```

Once you are in the **Home** view, the control panel is ready for use.

```
Local          C  PumpA     1200.0 rpm
Motor speed used 1200.07
rpm
Motor current
A               0.83
Motor torque
%                6.0
Options        12:25          Menu
```

Start-up ABB drive cloud connection function

As the state requires the real name registration of the wireless IoT equipment, if this is the first time you or your company using ABB drive Condition monitoring for Drives service, please make sure that:

• Your company information, site information and drive information have been recorded by ABB.

• You need to log into the valid email address of the person who is responsible for drive Condition monitoring for Drives website, and register a free MyABB account.

■ Step 1: Registration of MyABB account

Please register and activate a free MyABB account by the following address.

https://myportal.abb.com/cn

Note: A valid MyABB account will be the only certificate to log into the website of ABB drive Condition monitoring for Drives and Mobile Connect for Drives.
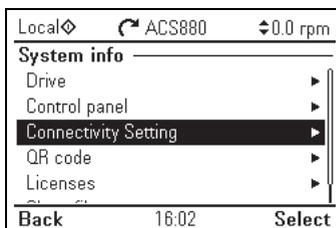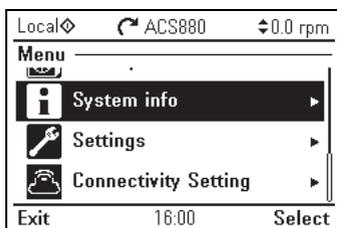
■ Step 2: Configuration of cloud connectivity

This section takes the ACS880 drive as example to instruct the users who need to commission the cloud connectivity configuration for the first time use of the panel. Apart from cloud connectivity, other functions are other functions are consistent with the ACS-AP-x assistant control panel of ABB drive.

Connectivity setting function

In the main menu view, press the ⊂⊃ **Menu** key, use ⊡ and ⊡ to move the cursor until the **System information** menu is highlighted, and press the ⊂⊃ Select key to enter the **System information** menu.
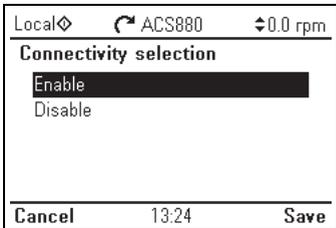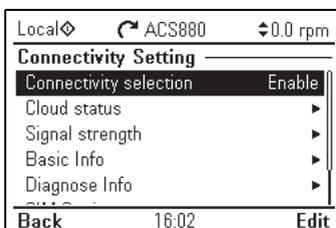
In the **System information** view, press the ⊂⊃ Select key to enter the **Connectivity setting** menu.

Local◇ ⟳ ACS880 ⬍0.0 rpm		Local◇ ⟳ ACS880 ⬍0.0 rpm	
Menu ——— .		System info ———	
ℹ️ **System info**	▶	Drive	▶
🔧 Settings	▶	Control panel	▶
☎ Connectivity Setting	▶	**Connectivity Setting**	▶
		QR code	▶
		Licenses	▶
Exit 16:00 Select		Back 16:02 Select	

Note: For ACS880, you can also directly enter the **Connectivity setting** menu under the main menu.
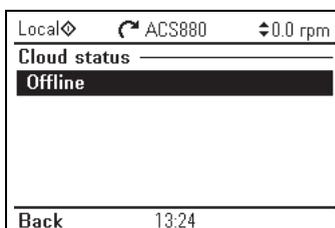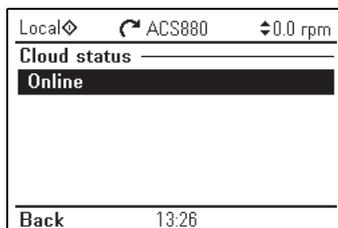
Connectivity selection

In the **Connectivity setting** view, select the **Connectivity selection**, press the ▭ **Edit** key to enter the **Connectivity selection** option, set Connection control to **Enable,** and press the ▭ Save key to enable the cloud connection.

Local◇ ⟳ ACS880 ⬍0.0 rpm		Local◇ ⟳ ACS880 ⬍0.0 rpm	
Connectivity Setting ———		Connectivity selection	
Connectivity selection	Enable	**Enable**	
Cloud status	▶	Disable	
Signal strength	▶		
Basic Info	▶		
Diagnose Info	▶		
Back 16:02 Edit		Cancel 13:24 Save	

Cloud status

Press the ▭ **Back** key to go back to the **Connectivity setting** view, and press the ▭ Select key to enter the **Cloud status** option to check the cloud status. If the status changes from **offline** to **online**, it indicates that the drive has been successfully connected to the cloud platform.
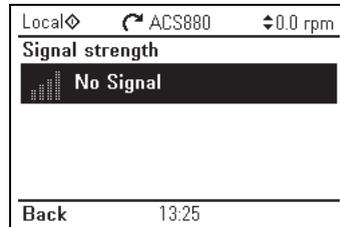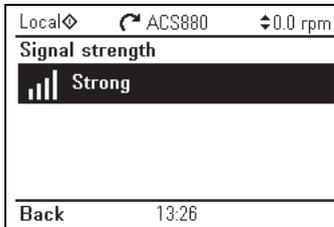
Note: During the first connection, it may take 1-3 minutes due to data exchange of device provision to cloud backend.

Local◇ ⟳ ACS880 ⬍0.0 rpm	Local◇ ⟳ ACS880 ⬍0.0 rpm
Cloud status ———	Cloud status ———
Online	**Offline**
Back 13:26	Back 13:24

Signal strength

Press the ⬭ **Back** key to go back to the **Connectivity setting** view, and press the ⬭ Select key to enter the **Signal strength** option to check the strength of the cloud connection signal.

There are four states: strong, weak, medium, and no signal.

<table>
<tr>
<td>
Local◇   ↻ ACS880   ⇕0.0 rpm
Signal strength
  ▮▮▮   Strong

Back   13:26
</td>
<td>
Local◇   ↻ ACS880   ⇕0.0 rpm
Signal strength
  ▫▫▫   No Signal

Back   13:25
</td>
</tr>
</table>

Record serial number

In the **Menu** view, press the ⬭ Select key to enter the **System information** menu. In the **System information** view, press the ⬭ Select key to enter the **Drive** menu, read and record the serial number for *Adding drives* in ABB Ability™ Powertrain platform.

```
本地◇      ↻ ACS880      ⇕2.0 rpm
变频器
控制盘总线id:                      1
序列号:                  B4390400VS
产品名称:                    ACS880
产品型号:                    ACS880
固件版本:                 AINF7 v2.90
LP 版本:                 AINL7 v2.90
备份版本:                00.01.00.00
返回            16:19
```

After completing steps above, the drive has been successfully connected to the ABB Ability^{TM} drive Condition monitoring for Drives platform.
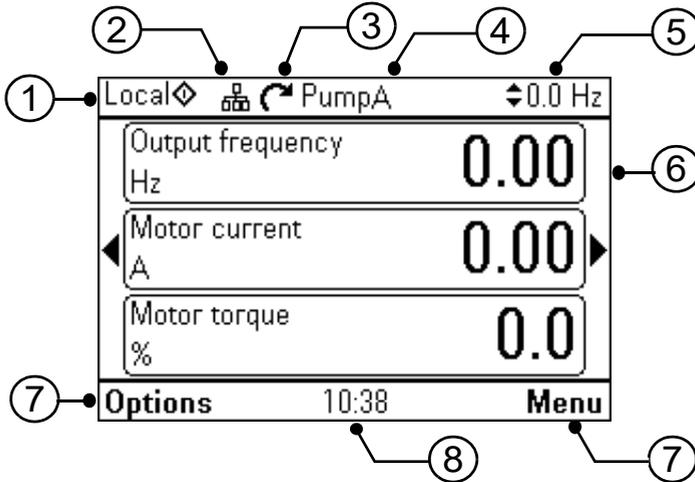
3

Control panel overview

What this chapter contains

The chapter describes the display, keys and main parts of the ABB drive connectivity control panel.

Display, keys and parts

1	*Display*		10	Clip
2	*Left softkey*		11	*RJ-45 connector*
3	*Right softkey*		12	*Type code label on the panel*
4	*Status LED*			
5	*Help*			
6	*Arrow keys*			
7	Stop (see *Start and Stop*)			
8	Start (see *Start and Stop*)			
9	Local/Remote (see *Loc/Rem*)			

■ **Display**

In most views, the following control panel elements are shown on the display:

No.	Panel element	Function
1	Control location and related icons	Indicates how the drive is controlled: **No text**: The drive is in local control, but controlled from another device. The icons in the top pane indicate which actions are allowed. **Local**: The drive is in local control, that is, controlled from the control panel. **Remote**: The drive is in remote control, that is, controlled through I/O or fieldbus.
2	Panel bus	Indicates that there are more than one drive connected to this panel. To switch to another drive, go to **Options** → **Select drive**.

No.	Panel element	Function
3	Status icon	Indicates the status of the drive and the motor. The direction of the arrow indicates forward (clockwise) or reverse (counter-clockwise) active reference direction. **Note:** For non-rotating driven equipment, the numbers 1 and 0 are used to indicate that the drive is running or stopped, respectively.

Status icon	Animation	Drive status
↻	-	Stopped
↘	-	Stopped, start inhibited
↻↔↘	Blinking	Stopped, start command given but start inhibited
↘↔✕	Blinking	Faulted
↻↔	Blinking	Running, at reference, but the reference value is 0
↻↔↻	Rotating	Running, not at reference
↻↔↻	Rotating	Running, at reference

No.	Panel element	Function
4	Drive name	If a name is given, it is displayed at the top pane. By default, it is blank. You can change the name in the *Primary settings* (page *49*) or *Settings* menu (page *48*).
5	Reference value	Speed, frequency and so on, are shown with its unit. For information on changing the reference value, see *Setting the reference* (page *54*).
6	Content area	Displays the actual content of the view in this area. The content varies from view to view. The example view above is the main view of the control panel which is called the Home view.
7	Softkey selections	Displays the functions of the softkeys (⬓ and ⬒) in a given context.
8	Clock	Displays the current time. The time can be changed through the *Primary settings* (page *49*) or *Settings* menu (page *48*).

You can adjust the display contrast and backlight functionality in the *Primary settings* (page *49*) or *Settings* menu (page *48*).

■ Keys

The keys of the control panel are described below.

Left softkey

The left softkey (⬓) is usually used for exiting and canceling. Its function in a given situation is shown by the softkey selection in the bottom left corner of the display.

Holding ⬓ down exits each view in turn until you are back in the Home view. This function does not work in special screens.

Right softkey

The right softkey (⌣) is usually used for selecting, accepting and confirming. The function of the right softkey in a given situation is shown by the softkey selection in the bottom right corner of the display.

Arrow keys

The up and down arrow keys (▲ and ▼) are used to highlight selections in menus and selection lists, to scroll up and down on text pages, and to adjust values when, for example, setting the time, entering a passcode or changing a parameter value.

The left and right arrow keys (◄ and ►) are used to move the cursor left and right in parameter editing and to move forward and backward in assistants. In menus, ◄ and ► function the same way as ⌣ and ⌣, respectively.

Help

The help key (?) opens a help page. The help page is context-sensitive, in other words, the content of the page is relevant to the menu or view in question. See *Help* (page *30*) for more information on the help page.

Start and Stop

In local control, the start key (◇) and the stop key (◎) start and stop the drive, respectively.

Off

In Hand and Auto control, the Off key (⊘ Off) is used to stop the drive.

Hand

The Hand key (◇ Hand) is used to start the drive in local mode. When the drive is running, if you switch to Auto mode, the drive changes the control location to Remote mode and the drive may stop.

Auto

The Auto key (Auto) is used to run the drive automatically. The control is selected from primary or secondary or any DI. You can give the reference inputs in **Menu** -> **Primary settings** -> **Drive** or by setting the values in parameter groups 19 and 20.

Loc/Rem

The location key (Loc/Rem) is used to switch the control between the control panel (Local) and remote connections (Remote). When switching from Remote to Local while the drive is running, the drive keeps running at the same speed. When switching from Local to Remote, the status of the remote location is adopted. See the drive-specific firmware manual for more details.

Key shortcuts

The table below lists key shortcuts and combinations. Simultaneous key presses are indicated by the plus sign (+).

Shortcut	Available in...	Effect
⊖ + ▲, ⊖ + ▼	any view	Adjust backlight brightness.
⊖ + ▲, ⊖ + ▼	any view	Adjust display contrast.
▲ or ▼	Home view	Adjust reference.
▲ + ▼	parameter edit views	Revert an editable parameter to its default value.
◀ + ▶	any view	Show/hide parameter index and parameter group numbers.
⊖ (keep down)	any view	Return to Home view by pressing down the key until Home view is shown.

■ Status LED

The control panel has a status LED that indicates if there are any faults or warnings present. The table below shows the meaning of the LED indications.

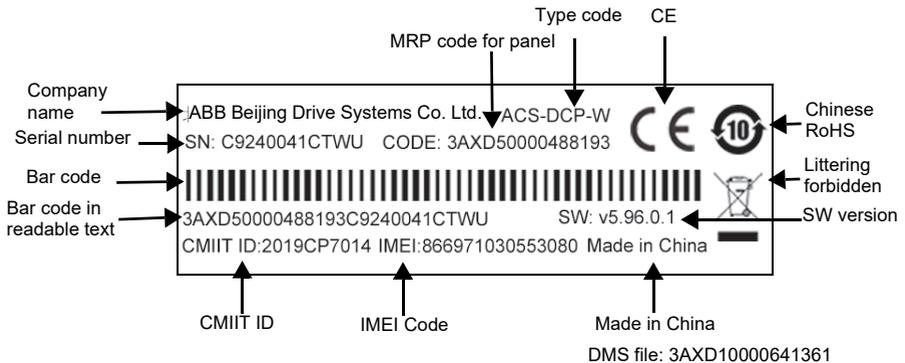| Disable cloud connection		
Green, continuous	🟩	The drive is functioning normally.
Green, blinking	🟩	There is an active warning in the drive.
Red, continuous	🟥	There is an active fault in the drive.
Blue, blinking	🟦	Bluetooth interface is enabled.It is in discoverable mode and ready for pairing.
Blue, flickering	🟦	Data is transfered through the Bluetooth interface of the control panel.
Enable cloud connection		
Green, continuous + Blue, blinking	🟩 🟦	The connection between drive and cloud is normal.
Green, flickering + Blue, blinking	🟩 🟦	There is an active warning in the drive, and cloud connection is normal.
Red, continuous + Blue, blinking	🟥 🟦	There is an active fault in the drive, and cloud connection is normal.
Green, continuous + Yellow, blinking	🟩 🟨	The drive is functioning normally, and cloud connection has fault.
Yellow and Green blinking alternately	🟩 🟨	The drive is functioning normally, and cloud connection are uploading firmware.

For further information on fault and warning indications, see *Identifying error and warning messages* (page *57*).

■ RJ-45 connector

The RJ-45 connector is used to electrically connect the control panel to the drive. Mechanical connection is achieved with the clip on the top.
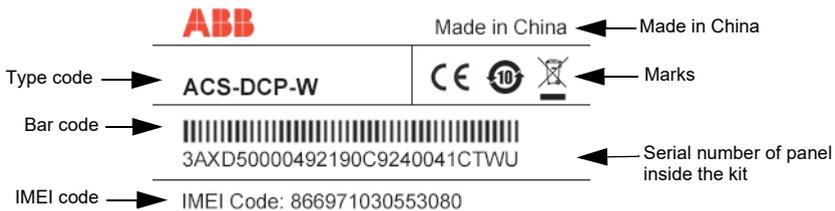
■ Type code label on the panel

The type code label on the panel contains revision information, CMIIT ID, etc. See an example label below.

Type code   CE
MRP code for panel

Company name → ABB Beijing Drive Systems Co. Ltd. ACS-DCP-W   Chinese RoHS
Serial number → SN: C9240041CTWU   CODE: 3AXD50000488193
Bar code →   Littering forbidden
Bar code in readable text → 3AXD50000488193C9240041CTWU   SW: v5.96.0.1   ← SW version
CMIIT ID:2019CP7014 IMEI:866971030553080 Made in China

CMIIT ID   IMEI Code   Made in China
DMS file: 3AXD10000641361

■ Type code label on the panel package

The type code label on the panel package contains revision information. See an example below.

ABB   Made in China ← Made in China
Type code → ACS-DCP-W   CE ⑩ ⊠ ← Marks
Bar code →
3AXD50000492190C9240041CTWU ← Serial number of panel inside the kit
IMEI code → IMEI Code: 866971030553080

DMS document: 3AXD10000641361

■ Wireless interface

The ACS-DCP-W Assistant control panels with Bluetooth interface and NB-IoT function enable wireless interface for ABB drives. The wireless panels are also embedded with powerful processor and memory that enables faster communication.

For Bluetooth and basic functions, ACS-DCP-W are same with ACS-AP-W panel.

For more information, please refer to the chapter *Technical data*.
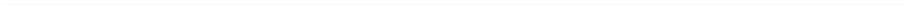
4

Basic operation

What this chapter contains

The chapter describes the basic operations and components of the user interface. It also lists the common user tasks and provides instructions to complete the task.
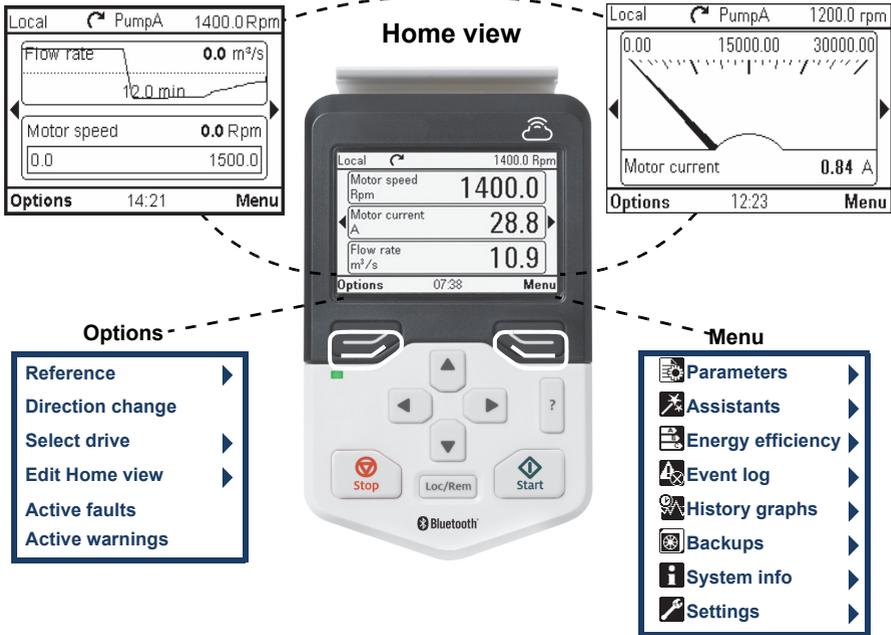
User interface overview

The user interface has the following main components:

Component	Description
Home view	Used to monitor signals. See *Home view* (page *22*).
Menu	Access to most functions of the control panel. See the detailed description in chapter *Functions in the main Menu* (page *31*).
Options	Used to set a reference, change the motor direction, select the drive, edit Home view pages, and see the fault and warning status. See the detailed description in chapter *Functions in the Options menu* (page *27*).
Help	Provides information on the current view or menu or on possible problems associated with it. See *Help* (page *22*).
Faults and warnings	View faults and warnings when the drive or control panel experiences an error. See *Fault tracing* (page *57*).

Control panel navigation

Use the arrow keys and softkeys for navigation. Follow the choices on the screen.

Home view

Options

Reference	▶
Direction change	▶
Select drive	▶
Edit Home view	▶
Active faults	
Active warnings	

Menu

Parameters	▶
Assistants	▶
Energy efficiency	▶
Event log	▶
History graphs	▶
Backups	▶
System info	▶
Settings	▶

Note: The menu shown is an example only. The Menu varies based on the drive/device to which the panel is connected.

■ Navigation memory

The Assistant control panel has a navigation memory that allows you to backtrack your steps through the user interface with the arrow keys ◀ and ▶. The path you have last accessed remains in the memory for 10 minutes.

- The left arrow key (◀) moves you backwards in the menu structure.
  If you press ◀ repeatedly, you return back to the Home view.
- The right arrow key (▶) moves you forward in the menu structure.
  If you press ▶ repeatedly, you move forward along the path in the menu structure you had previously accessed.

Home view

The main view of the control panel is called the **Home** view. In the **Home** view, you can monitor the status of the drive, such as its speed, torque or power. The **Home** view has one or more pages, each of which can display up to three signals.

The number of pages and the signals shown on each page are customizable, and the Home view configuration is saved to the drive whenever you change it. The maximum total number of signals displayed varies from 9 to 21, depending on the drive. In the example below, three Home view pages are used, showing different display formats.
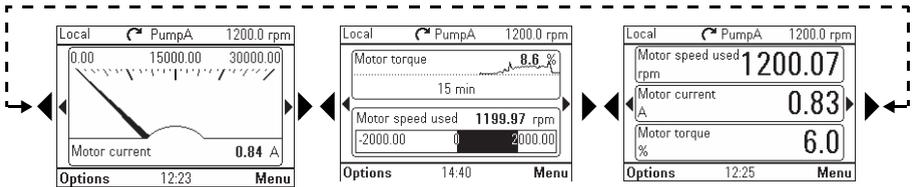
Each application macro and user set has a default Home view configuration. When you select an application macro or restore a user set, the Home view configuration changes accordingly. There is a default Home view configuration in each drive, which can be restored in the *Primary settings* (page *49*) or *Settings* (page *48*) menu.

Note: The Menu varies based on the drive/device to which the panel is connected.

The **Home** view opens automatically when you power up the drive. The **Home** view is also displayed from the **Options** menu or the main **Menu** if no key is pressed for 10 minutes.

Tip: You can return to the **Home** view from any view except special screens by holding down the left softkey ⬭**.**

▪ Navigating in the Home view

- Use ◀ and ▶ to move between the different pages of the **Home** view. The page numbers are shown while you scroll between pages.
- Use ▲ or ▼ to adjust the reference (visible in the top right corner). See also *Setting the reference* (page *27)*.
- Press ⬭ (**Menu**) to open the main **Menu** (see *Functions in the main Menu* on page *31*).
- Press ⬭ (**Options**) to open the **Options** menu (see *Functions in the Options menu* on page *27*).

Help

You can open a context-sensitive help page in all menus and views by pressing [?] .
The help page provides information on the use of the current view or menu, or on
possible problems associated with it.

On the help page, you can press [?] again or press ⬭ (**Exit**) to exit.

Using [?] , you can also view details of control panel type and version in the panel
itself. See instructions in section *Applicability* (page *10*).

Common user tasks

The following tables list common user tasks and describes how to complete the task. See chapters *Functions in the main Menu* (page *35*) and *Functions in the Options menu* (page *53*) for detailed descriptions of functions in the menus.

Note: The Menu options varies based on the drive/device to which the control panel is connected.

■ Basic operation of the drive

Task	Actions
Start and stop the drive.	In local control, press ⬡ to start the drive and ⬡ to stop the drive.
Set the reference (for example, speed) in the **Home** view.	In local control, go to **Options > Reference**. Set the reference with the arrow keys. For detailed instructions, see *Setting the reference* (page *54*).
Switch between local and remote control.	Press ⬡ Loc/Rem .
Change the direction of motor rotation.	In local control, go to **Home** view, press ⬡ (**Options**) to open the **Options** menu and select **Direction change**.

■ Parameters

Task	Actions
Choose parameters displayed on the Favorites list.	Go to **Menu → Parameters → Favorites → Edit**. See also *Editing the list of favorites* (page *37*).
View/edit parameters.	Go to **Menu → Parameters → Complete list** to view parameters. See *Editing parameters* (page *37*) for instructions on editing parameters.
Add parameters to the Home view.	See *Editing the contents of the Home view* (page *54*).
Show/hide parameter index and group numbers.	Press ◀ + ▶.
Restore parameter default value.	In the editing mode, press ▲ + ▼. To save the default value, press ⬡ (**Save**).
View parameters that differ from Application Macro defaults.	Go to **Menu → Parameters → Modified**.

■ System information and help

Task	Actions
How to get help.	Press ? to open the context-sensitive help.
To view drive information.	Go to **Menu → System info → Drive**.
To view control panel version.	Go to **Menu → System info → Control panel**.
To view application program license.	Go to **Menu → System info → Licenses**.
To view Product application information.	Go to **Menu → System info → Product application**.
To view Connectivity setting.	Go to **Menu → System info →Connectivity setting**.
To view the cloud digital twin ID number (GUID) and built-in SIM ID information corresponding to the drive	Go to **Menu → System info →Connectivity setting →Basic information**.
To view diagnose information of Connectivity setting.	Go to **Menu → System info →Connectivity setting →Diagnose information**.
To set time zone of Connectivity setting.	Go to **Menu → System info →Connectivity setting →SIM Setting→Time Zone**.

■ Faults and warnings

See *Fault tracing (page 57)* for detailed information on faults and warnings.

Task	Actions
Hide/view an active fault.	Faults are automatically displayed. If you hide a fault by pressing ⊘ (**Hide**), it automatically reappears after 60 seconds of no key presses. You can also view the fault through **Options > Active faults**.
Open help page on a fault.	Press ? to view the help page.
Reset an active fault.	Press ⌐ (**Reset**) to reset an active fault.
View tripping faults.	Go to **Menu → Event log → Faults**.
Hide/view an active warning.	Warnings are automatically displayed. If you hide a warning by pressing ⊘ (**Hide**), it automatically reappears if the warning is still active after 60 seconds of no key presses.
Open help page on a warning.	Press ⌐ (**How to fix**) or ? to view the help page.
Reset an active warning.	Warnings disappear automatically once the condition that has triggered it goes away.
View past warnings and faults.	Go to **Menu → Event log → Other events**.

■ **Basic settings and assistants**

Task	*Actions*
Adjust backlight brightness.	Press and hold ⬜, and press ▲ or ▼.
Adjust display contrast.	Press and hold ⬜, and press ▲ or ▼.
Change language.	Go to **Menu** → **Settings** → **Language**.
Change time and date, and related settings.	Go to **Menu** → **Settings** → **Date & time**.
Launch an assistant.	Go to **Menu** → **Assistants** and select an assistant to launch.

■ **Backups**

Task	*Actions*
Create a backup.	See *Creating a parameter backup* (page *44*).
Restore a backup.	See *Restoring a parameter backup* (page *45*).

■ **Firmware upgrade (control panel)**

| *Task*	*Actions*
Download firmware	Go to **Menu** → **System info** → **Connectivity Setting**→ **Firmware upgrade**→ **Download new firmware**. On the **Download Firmware** page, **Start** option means to download the firmware immediately; **Auto Start** option means the control panel will automatically go to the cloud to check if there is any new firmware every month, if yes, it will automatically download it. **Stop** option can stop the download operation in progress immediately. **Note:** Downloading firmware only downloads the latest firmware and does not install it.
Download and install new firmware	Go to **Menu** → **System info** → **Connectivity Setting**→ **Firmware upgrade**→ **Install and upload new firmware**. **Note:** Start the installation immediately after the new firmware is downloaded successfully.
Install firmware	Go to **Menu** → **System info** → **Connectivity Setting**→ **Firmware upgrade**→ **Install new firmware**.

5

Functions in the main Menu

What this chapter contains

The chapter describes the functions in the main **Menu**.

Menu

All functions of the control panel are accessed through the **Menu** which is the main menu of the user interface. The sub-menus of the **Menu** are listed below and they are described in more detail in the subsequent sections. The sub-menus depend on the product that is controlled with the control panel.
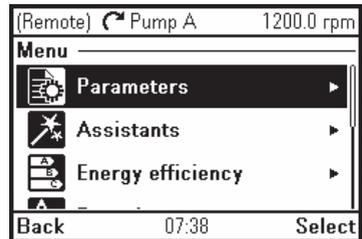
The following sub-menus varies based on the drive/device to which the panel is connected:

Sub-menu	Function	See page...
Parameters	View and edit parameters.	*36*
Assistants	Launch an assistant.	*36*
Energy efficiency	Use energy-saving features.	*42*
Event log	View information on faults and warnings.	*42*
History graphs	View the load profile.	*43*
Backups	Save settings in the control panel memory and restore them to the drive.	*43*
System info	View information on the drive and options.	*46*
Settings	View and change time and date settings, language, display and other settings, and edit texts.	*46*

Sub-menu	Function	See page...
Primary settings	View and change settings related to motor, PID, fieldbus, advanced functions, clock, region, and display.	*49*
I/O	Provides terminal name, number, electrical status and logical meaning of the drive.	*50*
Diagnostics	Provides faults and warnings information and helps to resolve potential problems.	*50*

■ **Navigating in the Menu**

- Use ⏶ or ⏷ to select a menu item.
- Use ◀ or ⏋ (**Exit**) to go back to the **Home** view.
- Use ▶ or ⏌ (**Select**) to enter the selected sub-menu.

⚙ Parameters

In the **Parameters** menu, you can view and edit parameters. There are four sub-menus through which you can access the parameters. In each sub-menu, the grouping principle of the parameters is different.

In each sub-menu, you can edit a parameter by highlighting it and pressing ⏌ (**Edit**). Counter parameters and certain number, text and bit field parameters are read-only and can be viewed by pressing ⏌ (**View**).

```
Remote      C  PumpA       0.0 rpm
Parameters
Complete list                     ►
By function                       ►
Favorites                         ►
Modified                          ►

Back            14:30        Select
```

■ **Complete list**

In the **Complete list** sub-menu, all parameter groups are listed in numerical order. If you select a parameter group, all parameters in that group are listed and you can view and edit the parameters. Parameter numbers are always displayed in this sub-menu.

```
Remote      C  PumpA       0.0 rpm
Complete list
01 Actual values                  ►
03 Input references               ►
04 Warnings and faults            ►
05 Diagnostics                    ►
06 Control and status words       ►

Back            14:35        Select
```
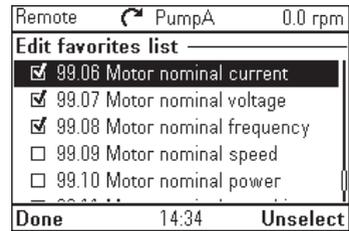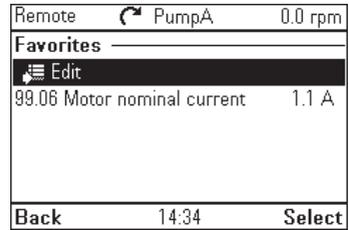
■ **By function**

This functionality is available in a future release.

■ **Favorites**

In the **Favorites** sub-menu, only user-selected parameters are listed. The order is determined by the parameter number.
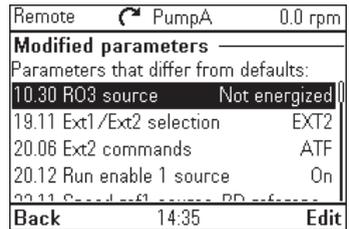
```
Remote      C  PumpA        0.0 rpm
Favorites
▐ Edit
99.06 Motor nominal current     1.1 A



Back          14:34          Select
```

Editing the list of favorites

1. Select **Edit**.
2. Check parameters you want to show on the list by pressing ⌄ (**Select**).
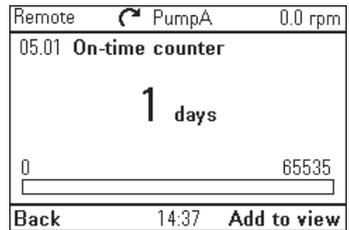3. Press ⌷ (**Done**) to exit and save changes.

```
Remote      C  PumpA        0.0 rpm
Edit favorites list
☑ 99.06 Motor nominal current
☑ 99.07 Motor nominal voltage
☑ 99.08 Motor nominal frequency
☐ 99.09 Motor nominal speed
☐ 99.10 Motor nominal power
Done          14:34         Unselect
```

■ **Modified**

In the **Modified** sub-menu, only the parameters whose values differ from the Application Macro defaults are listed. The order is determined by the parameter number.

```
Remote      C  PumpA        0.0 rpm
Modified parameters
Parameters that differ from defaults:
10.30 RO3 source       Not energized
19.11 Ext1/Ext2 selection      EXT2
20.06 Ext2 commands            ATF
20.12 Run enable 1 source       On
22.11 Speed ref1 source  PID reference
Back          14:35            Edit
```

■ **Adding parameters to the Home view**

When you view a read-only parameter in the **Parameters** menu, you can add the parameter to the **Home** view.

- Press ⌄ (**Add to view**) to open the Home view in the editing mode then you can add the parameter to an empty display slot or replace an existing parameter with it.
- Press ⌷ (**Back**) to go back to the parameter view.

```
Remote      C  PumpA        0.0 rpm
05.01 On-time counter

       1 days

0                          65535

Back          14:37       Add to view
```

Editing the **Home** view functions are described in more detail in *Editing the contents of the Home view* (page *54*).

■ **Editing parameters**

You can edit parameter values with the arrow keys.

1. Press ⌄ (**Select**) to select the desired parameter from the list.
2. Press ⌄ (**Edit)**.
3. Use ▲ and ▼ to change the value.
4. Press ⌄ (**Save**) to save the value, or press ⌷ (**Cancel**) to exit the parameter view and discard any changes.

5. Press ⊡ + ⊡ to restore the default value of the parameter (this does not save it).

See the sections below for more information on editing specific parameter types.

◼ Editing numeric parameters

Numeric parameters include parameters with linear numeric values, passcodes, time and date parameters, durations and exception dates. For numeric parameters with linear values, the minimum and maximum values are displayed in the bottom left and right corners of the content area, respectively.

*   Use ⊡ and ⊡ to highlight digits.
*   Use ⊡ and ⊡ to change the value.
*   Press ⌫ (**Save**) to save the value and exit the view.
*   To cancel and exit, press ⌫ (**Cancel**).

Local	PumpA	1200.0 rpm
25.03 Speed integration time		
	0002.50 s	
0.00		1000.00
Cancel	12:35	Save

Local	Pump A	1200.0 rpm
Date		
	day Month Year	
	13.03.2015	
	Friday	
Cancel	12:29	Save

Local	PumpA	1200.0 rpm
Time		
	h min sec	
	12:33:37	
Cancel	12:33	Save

◼ Editing selection list parameters

A selection list consists of mutually exclusive options, such as the language selection list.

*   Use ⊡ and ⊡ to move the cursor.
*   Press ⌫ (**Save**) to select and save the highlighted option.
*   To cancel and exit, press ⌫ (**Cancel**).

Remote	PumpA	0.0 rpm
Language		
Language changes take some time.		
Not selected		
English		
Deutsch		
Italiano		
Exit	14:47	Next

Some selection list parameters allow you to choose another parameter as its value. In addition to a preset list of options, you can select a parameter freely, represented by the selection **Other** in the list.

To select a parameter, follow the instructions:

1. Select **Other** to move to a list of parameter groups.

2. Select a parameter group to move to a list of parameters.

3. Depending on the parameter you are editing, you must select a parameter or an individual bit, or you may choose either of the two.

   • If the right softkey label is **Select**, you must select an individual bit as the value of the parameter you are editing. Press ⊖ (**Select**) to move to a bit selection list.

   • If the right softkey label is **Save**, you can select that parameter as the value of the parameter you are editing. Press ⊖ (**Save**) to save the selection.

   • If the right softkey label is **Save** and there is also an arrow on the right hand side of the selection, you can choose an individual bit or all the bits in that parameter. Press ▶ to move to a bit selection list. If you want select all the bits in the parameter, press ⊖ (**Save**) instead.

4. Select a bit if applicable (see the previous step). Press ▶ to invert the selected bit and press ⊖ (**Save**) to save the selection.

The parameter or bit is now selected as the parameter value.

Remote	PumpA	0.0 rpm
44.12 **Brake close request**		
[6] DI5		
[7] DI6		
[10] DIO1		
[11] DIO2		
Other		▶
Cancel	14:48	Edit

Remote	PumpA	0.0 rpm
44.12 **Brake close request**		
07 System info		
10 Standard DI, RO		▶
11 Standard DIO, FI, FO		▶
12 Standard AI		▶
[11 00.00]		
Back	14:50	Select

Remote	PumpA	0.0 rpm
44.12 **Brake close request**		
11.01 DIO status		
11.02 DIO delayed status		▶
11.05 DIO1 function		▶
11.06 DIO1 output source		▶
[11.02 00]		
Back	14:50	Select

Remote	PumpA	0.0 rpm
44.12 **Brake close request**		
0 **o** DIO1		Invert ▶
1 **o** DIO2		
[11.02.00]		
Back	14:50	Save

Remote	PumpA	0.0 rpm
44 **Mechanical brake control**		
44.08 Brake open delay		0.00 s
44.09 Brake open torqu...	Brake open ...	
44.10 Brake open torque		0.0 %
44.11 Keep brake closed	Not selected	
44.12 Brake close request		44.12.00
Back	14:51	Edit

■ Editing bit-field parameters

A bit-field parameter is a bit word whose individual bits can be edited. The labels describe the function of each bit, and the current state of the bit is shown as 1 or 0.
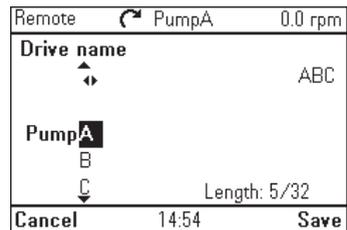
```
Local◇        ☾ Pump1        ⇕0.0 Hz
21.08 DC current control
 0  O  DC hold          =Disable
 1◀1▶Post magnetization
                         =Enable


Cancel         11:35          Save
```

- Use ▲ and ▼ to select a bit.
- To change a bit value, press ◀ or ▶.
- To save the bit values and exit, press ⌐ (**Save**).
- To cancel and exit, press ⌐ (**Cancel**).
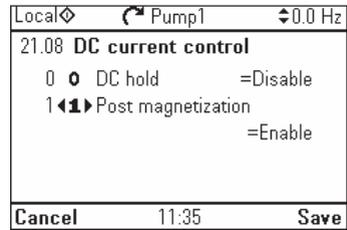
■ Editing texts

Texts that you can edit with the control panel include parameter display names in the Home view and their units, drive names, fault and warning names, and other customizable notes or names.

```
Remote      ☾ PumpA        0.0 rpm
Drive name
     ▲
     ◆▶                        ABC

PumpA
    B
    C              Length: 5/32
Cancel         14:54          Save
```

- To select the character mode ((lower case / upper case / numbers / special characters), press ▲ unit symbol ◀▶ is highlighted and then select the mode with ◀ and ▶. Now you can start adding characters. The mode remains selected until you select another one.
- To add a character, highlight it with ▲ ▼and then press ▶.
- To remove a letter, press ◀.
- Press ⌐ (Save) to accept the new setting, or press ⌐ (Cancel) to go back to the previous view without making changes.

```
Local      ☾ PumpA        0.0 rpm
Drive name
     ▲
     Y          abc ABC 123 .!?
     Z
PumpA◀▶

     ▲
     A              Length: 5/52
Cancel         10:29          Save
```
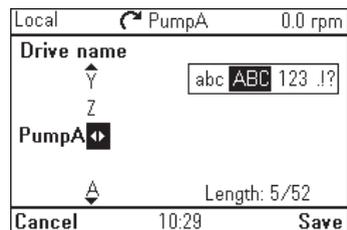
Note: The current software version supports only the English character set (a...z).

■ Resetting counters

Counters are parameters that measure incremental quantities associated with the use of the drive such as runtime or energy consumption. Counters are updated automatically and cannot be edited, but it is possible to reset a counter to zero by pressing down ⌐ (**Reset**) for three seconds.

Note: If a trigger value is defined for the counter, the counter's progress from zero to the trigger value is shown as a bar graph.

⚡ Assistants

In the **Assistants** menu, you can launch an assistant, which is a sequence of steps that help you to complete a task, such as setting up the control panel to use with the drive and the motor, or fixing a fault. You can also generate a QR code, which is an optical code containing information of the drive. The code can be read with ABB application and mobile device.

■ Launching an assistant

1. Use ⏶ and ⏷ to highlight the desired assistant.
2. Press ◡ (**Select**).
3. Follow the instructions on the screen to complete the task defined by the assistant:
   - Use ⏶ and ⏷ to select settings.
   - To edit a setting, press ◡ (**Edit** or **Select**).
   - Use ▶ and ◀ to move between the pages of the assistant. The progress bar on the upper right corner of the screen indicates the progress.
   - To exit the assistant, press ◡ (**Exit**).

```
Local          ↻ PumpA      1200.0 rpm
Assistants ──────────────────────────
 Basic setup
 QR code



Back           15:03            Select
```
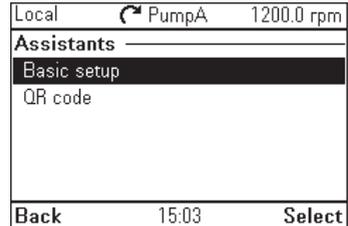
Most settings accessed in assistant steps can also be accessed through the main **Menu** or the **Parameters** menu, but the steps the assistants are more user-friendly.

Note: If you used the **Assistants** menu, complete all steps to save the changes, otherwise the changes are canceled.

■ Generating a QR code

1. In the Assistants menu, select QR code using ⏶ and ⏷ and press ◡ (**Select**).

```
Remote     ↻ ACS880       0.0 rpm
Assistants ──────────────────────
 Basic setup
 QR code




Back        15:23          Select
```

```
Remote     ↻ ACS880       0.0 rpm
QR code ──────────────────────────
The assistant displays an optical code
containing information about the drive.
The code can be read with the ABB
application and mobile device.


Exit        15:23        Continue
```
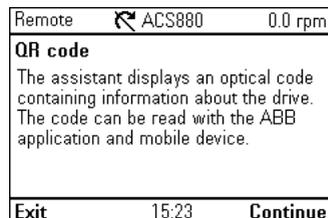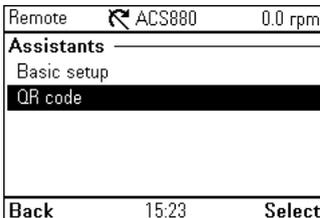
2. Press ◡ (**Continue**).

The control panel collects data and generates the code.
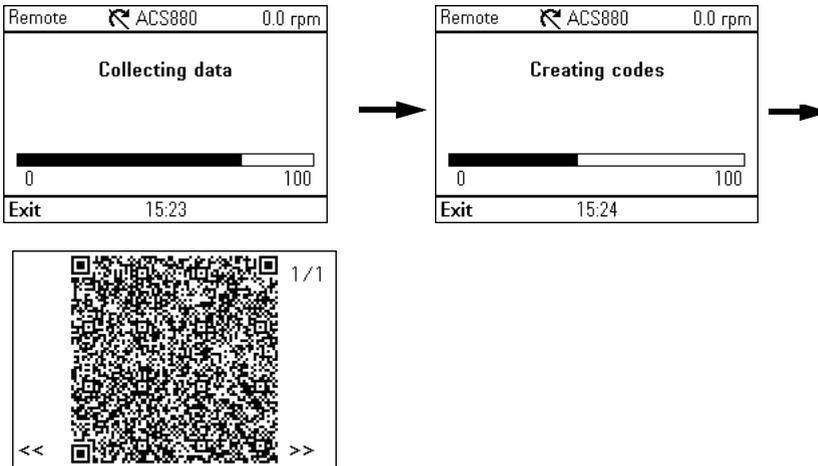
Press << or >> to navigate to the next screen.

You can also generate QR code from **Menu** → **System info** → **QR code**.

⊟ **Energy efficiency**

In the Energy efficiency menu, you can view and configure parameters related to energy savings, such as kWh counters.

⚠ **Event log**

In the **Event log** menu, you can view information collected on faults and warnings. Events are automatically logged. See *Fault tracing* (page *57*) for more information on faults and warnings.

- **Faults** sub-menu displays the faults that are tripped the drive.

- **Other events** sub-menu displays all other faults, and warnings and their details.

- **Active faults** and **Active warnings** sub-menu displays the faults and warnings which are active.

■ **Uploading event automatically**

If the user's drive Condition monitoring for Drives service is available within the validity period, and the control panel cloud connectivity is on, the triggered fault and warning message will be sent to the Smart PowerTrain platform in real time, so that the user can view remotely and be informed in real time.

History graphs

The History graphs menu contains Trends and Load profile sub-menu.

```
Remote      ⟳ PumpA      0.0 rpm
History graphs ─────────────
 Trends                       ▶
 Load profile                 ▶


Back          15:00      Select
```

■ **Trends**

This functionality is available in a future release.

■ **Load profile**

In the **Load profile** submenu, you can view and configure load profiles. The menu contains the following sub-menus:

```
Remote      ⟳ PumpA      0.0 rpm
Load profile ─────────────
 Amplitude logger 1          ▶
 Amplitude logger 2          ▶
 Load profile configuration  ▶
 Peak value logger           ▶
```

- **Amplitude logger 1**: Opens a Histogram view, which displays the motor current as a distribution histogram. This logger cannot be reset.

- **Amplitude logger 2**: Opens a Histogram view, which displays the contents of an amplitude logger as a distribution histogram. You can select the signal to be monitored.

```
Remote      ⟳ PumpA    663.2 rpm
Amplitude logger 2 ──────────
100 %                  16 min
 75
 50
 25
  0
   0 10 20 30 40 50 60 70 80 90 100
Back          09:25
```

- **Load profile configuration**: Select the signal to be monitored in Amplitude logger 2.

- **Peak value logger**: Select a signal to be monitored by a peak value logger.
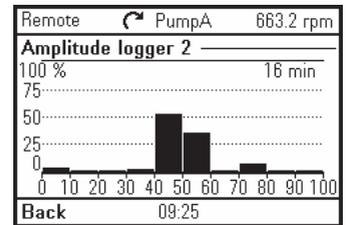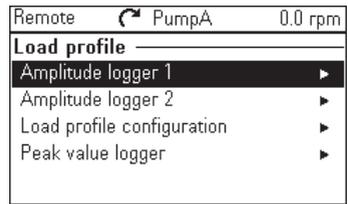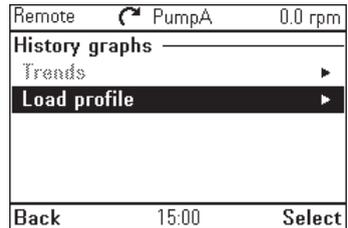
For more information on load profiles, see the appropriate firmware manual.

Backups

In the **Backups** menu, you can save parameter settings in the control panel memory and restore parameter settings from a backup to the drive. You can store up to two backup files on the control panel.

```
Local       ⟳ PumpA      0.0 rpm
Menu ─────────────
   ⌁
 ⟳  History graphs           ▶
 ⊛  Backups                  ▶
 ⓘ  System info              ▶
Exit          10:53      Select
```

The assistant panel has a dedicated space for one automatic backup. An automatic backup is created two hours after the last parameter change. After completing the backup, the panel
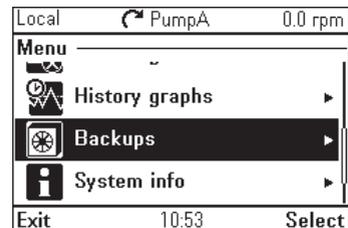
waits for 24 hours before checking if there are additional parameter changes. If there are, it creates a new backup overwriting the previous one.

If the user's drive Condition monitoring for Drives service is available within the validity period, and the control panel cloud connectivity is on, panel will upload parameter backup files to the Smart Powertrain platform when parameter backup created in the panel. Parameter backup files can be checked from Smart Powertrain platform.

In addition, you can copy backup files to and from a PC with the help of Drivetune mobile phone application.

Some of the Backup icons are listed below:

Backup	Icon
Automatic backup	🅰
Compatible backup	🗋
Incompatible backup	🚫
Partly compatible	🗋

■ Uploading backup automatically

If the user's drive Condition monitoring for Drives service is available within the validity period, and the control panel cloud connectivity is on, any new backup will be automatically uploaded to the Smart PowerTrain platform. Users can view the backup remotely and return it to control panel, so that the backup can restored to the drive when necessary.

Note: At present, backup from cloud back to control panel is not supported.

■ Creating a parameter backup

1. In the **Backups** menu, select **Create backup**.

   If there is a free backup slot in the control panel, the following step is skipped.

2. Use ▲ and ▼ to select one of the existing backup files, and press **Replace**.

3. Wait until the backup is completed. An animation is shown on the control panel during the backup process. The control panel automatically returns to the **Backups** menu.
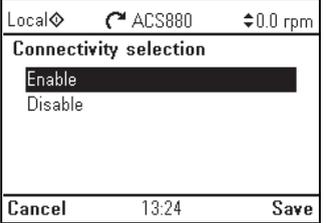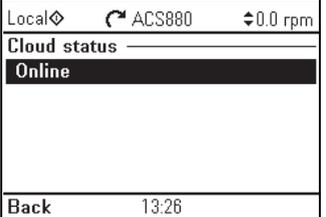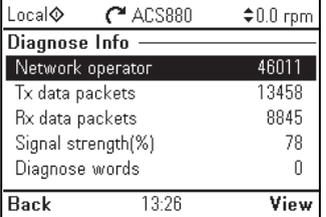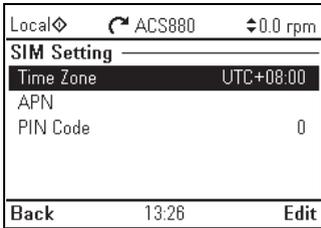
Note: If the backup process is canceled or interrupted, the previously saved backup file is not deleted or damaged. Thus, if you accidentally start a backup process, you can safely cancel it before its completion.
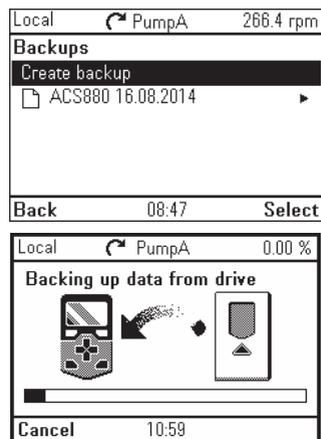
■ **Restoring a parameter backup**

1. In the **Backups** menu, select the backup file you want to restore.

2. Select **View backup contents** and check that it is the correct backup file and that it is suitable for restoring.

   Note: This functionality is available in a future release.

3. Select one of the restore options:

   • To restore all settings, select **Restore all parameters**.

   • To restore a set of parameters, select **Select par restore group** and select the desired parameters from the list, and then select **Restore**.

   • To select application parameters, select **Select application items** and select the desired parameters from the list and then select **Restore**.

   • To select user parameters sets, select **Select user sets** and select the desired user set from the list and then select restore.

   • To select production data items, select **Select prod. data items** and select the desired production data and then select restore.
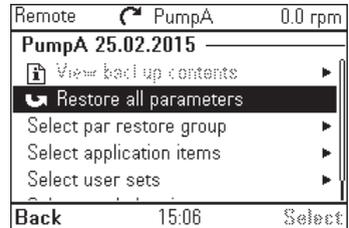
4. Wait until the restore is completed. An animation is shown on the control panel during the restoring process.The control panel automatically returns to the **Backups** menu.
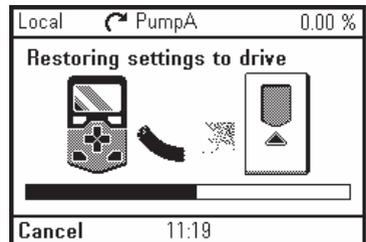
ℹ System info

In the **System info** menu, you can view information about the drive, control panel, fieldbus and any installed option modules. You can also generate a QR code that contains the drive information.

```
Remote      ↰ ACS480      -1.5 rpm
System info ─────────────────
Drive                          ▶
Control panel                  ▶
QR code                        ▶


Back        12:02        Select
```

Sub-menu	Function	
Drive	Shows information on the selected component, such as firmware version, serial number, type code, device ID number or date of manufacture. **Note**: The content of the view varies between different drive types.	``` Remote ↰ ACS480 -1.5 rpm Drive ───────────────────── Panel bus id: 1 Product name: ACS480 Product type: ACS480 FW version: ASDKA v2.05.0.0 LP version: ASDDA v2.05.0.0 Backup version: 00.01.00.00 Back 12:01 ```
Control panel	Shows information on the hardware and software version of the control panel.	``` Remote ↰ ACS480 -1.5 rpm Control panel ───────────── Product type: ACS-AP-S HW version: H Flash AT32/E FW version: GPAPS v5.20 Serial number: H6341498WU Manufacturing date: 19.08.2016 Back 12:02 ```
Connectivity setting function	Shows connectivity selection, Cloud status, Signal strength, Basic information, Diagnose information and SIM Setting.	``` Local◇ ↱ ACS880 ↕0.0 rpm Connectivity Setting ────── Connectivity selection Enable Cloud status ▶ Signal strength ▶ Basic Info ▶ Diagnose Info ▶ Back 16:02 Edit ```

Sub-menu	Function	
Connectivity selection	Set the cloud connectivity selection to enable or disable.	Local◇ ⌒ACS880 ↕0.0 rpm **Connectivity selection** Enable Disable Cancel 13:24 Save
Cloud status	Show the status of cloud connectivity: online or offline.	Local◇ ⌒ACS880 ↕0.0 rpm **Cloud status** ——— Online Back 13:26
Signal strength	Show the signal strength of cloud connectivity. There are four states: strong, weak, medium and no signal.	Local◇ ⌒ACS880 ↕0.0 rpm **Signal strength** ▁▃▅ Strong Back 13:26
Basic information	Show the cloud digital twin ID number (GUID) and built-in SIM ID information corresponding to the drive.	Local◇ ⌒ACS880 ↕0.0 rpm **Basic Info** ——— Drive Cloud Identifier F6288DDA-5539-4B42-8360-8EE16F2 SIM Card CCID 89861118213000522... Back 13:26 View
Diagnose information	Show the specific conditions of cloud connectivity, including network operator, total transmitted / received packets, signal strength (%) and diagnose words in case of cloud connectivity failure.	Local◇ ⌒ACS880 ↕0.0 rpm **Diagnose Info** ——— Network operator 46011 Tx data packets 13458 Rx data packets 8845 Signal strength(%) 78 Diagnose words 0 Back 13:26 View

Sub-menu	Function
SIM Setting	Set time zone, APN and PIN code. Local◇ ☎ ACS880 ‡0.0 rpm SIM Setting Time Zone UTC+08:00 APN PIN Code 0 Back 13:26 Edit
QR code	Shows an optical code containing information of the drive. The code can be read with ABB application and mobile device. To generate the QR code, press ⌐⌐⌐ (**Continue**). The control panel collects data and creates the code. Remote ↻ ACS480 -1.5 rpm QR code The assistant displays an optical code containing information about the drive. The code can be read with the ABB application and mobile device. Exit 12:02 Continue Remote ↻ ACS480 -1.5 rpm Collecting data 0 100 Exit 12:03 1/1 << >>
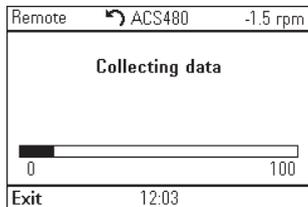
⚙ Settings

The **Settings** menu has the following sub-menus:

Local   ☎ Pump1   0.0 rpm
Settings
Language   ▶
Date & time   ▶
Edit texts   ▶
Display settings   ▶
Reset to defaults   ▶
Back   12:05   Select

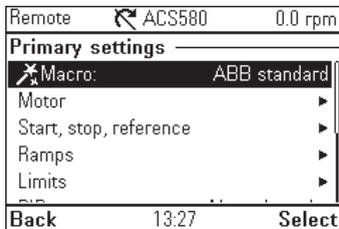| Sub-menu	Function
Language	Select different language in the control panel.
Date & time	Set date and time, and select their display settings and whether the control panel automatically adjusts the time for daylight savings changes. The time and date display setting determines how time stamps are formatted.
Edit texts	Customize editable user interface texts, such as the drive name.
Display settings	Set backlight power save on/off and adjust display contrast and brightness.

Sub-menu	Function
Reset to defaults	Reset settings to their default values. **Erase fault log:** This functionality is available in a future release. **Reset Home view layout:** Default Home view settings are restored. **Reset all parameters:** This functionality is available in a future release.
Show in lists	Show or hide the numeric IDs of: • parameters and groups • option list items • bits • devices in **Options → Select drive**.
Pass code	Enter pass codes into this parameter to activate further access levels (for example additional parameters).
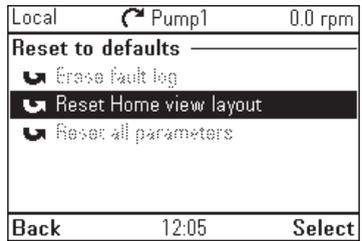
⚙ Primary settings

The **Primary settings** menu has the following sub-menus.

Note: The contents displayed may vary based on the drive/device to which the panel is connected. The menu shown is only an example.
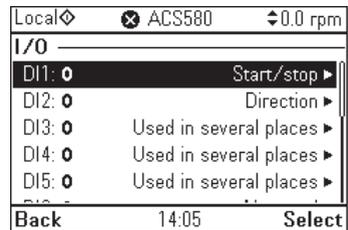
Sub-menu	Function
Macro	Set up drive control and reference source by selecting from a set of predefined wiring configurations.
Drive	Adjust drive related settings, such as control location, run permissions, ramps, limits, constants speeds, flying starts references.
Motor	Adjust motor-related settings, such as control mode, nominal values, ID run or thermal protection. Note that the settings that are visible depend on other selections, for example vector or scalar control mode, used motor type or selected start mode.
Loop controller	Set up loop controller settings and actual values. Loop controller is only used in remote control.
Pump and fan control	Controls one motor connected to the drive and up to 3 auxiliary motors.

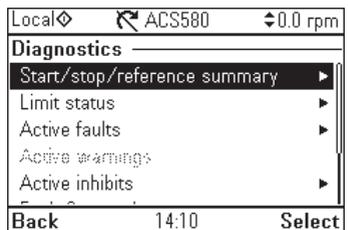| Sub-menu	Function
Communication	Use the drive with a fieldbus.
Start, stop, reference	Set up start/stop commands, reference, and related features, such as constant speeds or run permissions.
Ramps	Set up acceleration and deceleration settings.
Limits	Set the allowed operating range. This function is intended to protect the motor, connected hardware and mechanics. The drive stays within these limits, no matter what reference value it gets.
PID	Set up the settings and actual values for the process PID controller. PID is only used in remote control.
Fieldbus	To make the protocol configurations easier.
Advanced options/ functions	Contains settings for advanced functions, such as triggering or resetting faults through I/O, or switching between entire set of settings.
Clock, region, display	Contains settings for language, date and time, display (such as brightness) and settings for changing how information is displayed on screen.
Reset to defaults	Enables you to reset the Home view to its original factory state.

I/O

In the **I/O** menu, each row provides terminal name, number, electrical status and logical meaning of the drive. Each row also provides a sub-menu that provides further information on the menu item and allow you to make changes to the I/O connections.

```
Local◇      ❷ ACS580      ⬍0.0 rpm
I/O ─────────────────────────
DI1: O                    Start/stop ▸
DI2: O                    Direction ▸
DI3: O          Used in several places ▸
DI4: O          Used in several places ▸
DI5: O          Used in several places ▸
Back            14:05          Select
```

Diagnostics

The **Diagnostics** menu provides diagnostic information, such as faults and warnings and helps you to resolve potential problems. Use the menu to make sure that the drive setup is functioning correctly.

Note: The contents displayed may vary based on the drive/device to which the panel is connected, and the menu shown is only an example.

```
Local◇      ↻ ACS580      ⬍0.0 rpm
Diagnostics ─────────────────
Start/stop/reference summary    ▸
Limit status                    ▸
Active faults                   ▸
Active warnings
Active inhibits                 ▸
Back            14:10          Select
```

Sub-menu	Function
Start, stop, reference, summary	Shows where the drive is currently taking its start, stop commands and reference. The view is updated in real time. If the drive is not starting or stopping as expected, or runs at undesired speed, use this view to find out where the control comes from.
Limit status	Describes any limits currently affecting operation. If the drive is running at undesired speed, use this view to find out if any limitations are active.

Sub-menu	Function
Active faults	Shows the currently active faults and provides instructions on how to fix and reset.
Active warnings	Shows the currently active warnings and provides instructions on how to fix and reset.
Active inhibits	Shows the currently active inhibits. The drive cannot start. Drive is not parameterized correctly.
Fault & event log	Lists the faults, warnings and other events that have occurred in the drive.
Fieldbus	Provides status information and sent and received data from fieldbus for troubleshooting.
Load profile	Provides status information of load distribution (that is, drive running time spent on each load level) and peak load levels.

6

Functions in the Options menu

What this chapter contains

The chapter describes functions in the **Options** menu.

Options menu

In the **Options** menu, you can control the settings related to the **Home** view.

Note: The contents displayed may vary based on the drive/device to which the panel is connected. The menu shown is only an example.
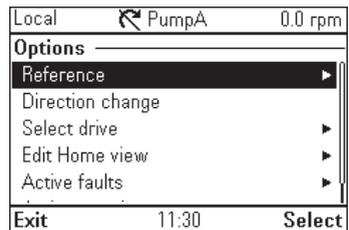
The **Options** menu has the following sub-menus:

Local	PumpA	0.0 rpm
Options		
Reference		►
Direction change		
Select drive		►
Edit Home view		►
Active faults		►
Exit	11:30	Select

Sub-menu	Function
Reference	Set the reference value by using ▲ and ▼. The changes take place when you save them with a key press ⬡. See *Setting the reference* (page *54*).
Direction change	Change the direction of the motor rotation in local control mode.
Select drive	Enable or disable the panel bus. If enabled, view the status of drives in the panel bus and select which drive to control with the control panel.
Edit Home view	Edit the contents of the **Home** view. See *Editing the contents of the Home view* (page *54*).
Active faults	View an active faults. See chapter *Fault tracing* (page *57*).
Active warnings	View an active warnings. See chapter *Fault tracing* (page *57*).

Setting the reference

You can change the reference when the drive is in the local control mode. You can also change the reference in remote control mode if the drive configuration permits it. Changes take effect when saved with a key press.

1. Press ⌈Loc/Rem⌉ to switch to the local control mode, if the text in the top left corner of the display reads **Remote**.

2. In the **Options** menu, select **Reference**.

3. Change the reference by using the following keys:

    *   Use ◀ or ▶ to select a digit to edit.

    *   Use ▲ and ▼ to change the value of the selected digit.

4. Press ◁⎯ (**Save**) to save the reference value, or ⎯▷ (**Cancel**) to discard the changes. The control panel returns to the **Home** view.

Tip: To adjust the reference from the **Home** view, press ▲ or ▼ and the reference changes immediately. The reference value is highlighted when you are changing it. If you hold down the arrow key, the rate at which the value changes accelerates.

Editing the contents of the Home view

1. In the **Options** menu, select **Edit Home view**. This opens the **Home** view in the editing mode.

2. In the editing mode, you can add, edit and delete the displayed parameters.

    After editing the contents, press ⎯▷ (**Done**) to confirm the changes and to exit the editing mode and return to the **Home** view.

Two-signal page in editing mode   *Empty page in editing mode*
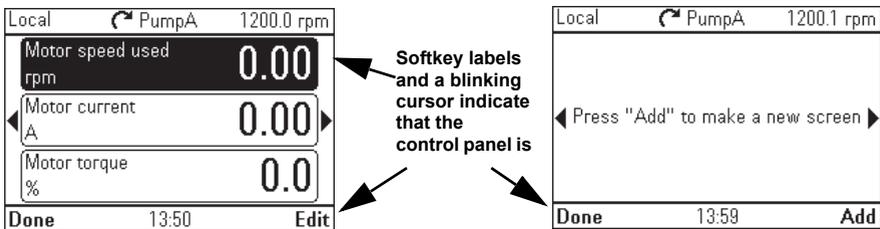

3. In the editing mode, use ◀ and ▶ to move between the different pages of the **Home** view.

    *   To add a new page, navigate to the page that reads Press **Add** to make a new screen.

    *   To edit, add or delete parameters on an existing page, navigate to that page.

4. Use ⬆ and ⬇ to move the cursor highlight.

   • To add a new parameter to an existing page, highlight an area above, between or below an existing parameter.

   • To edit or remove an existing parameter, highlight that parameter.
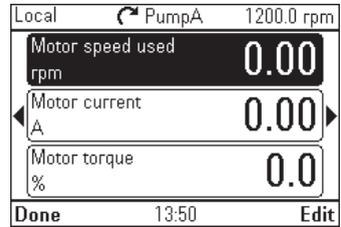
5. Press ⬕ (**Edit**) to open the **Display Slot** menu.

6. Choose a parameter, its display settings and scaling.
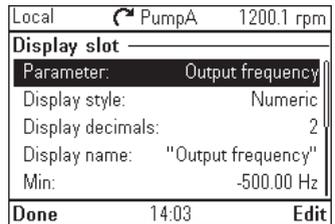
   Note: Parameters whose values have textual representations (such as the names of bit states) or contain characters other than numbers (such as dates or durations) are automatically displayed as text. For these parameters, Display style and selections pertaining to numeric parameters are not available.

• **Parameter**: Select the parameter to show in the selected slot. The most commonly used parameters are listed as presets.

   For bit field parameters, you can select either a single bit or the full bit field to add to the **Home** view. With individual bits, the bit state is displayed. Full bit fields are shown in either hexadecimal or binary format.

   Note: If **Empty** is selected, the parameter is removed from the **Home** view.

• **Display style**: Select how the signal values are displayed. It is possible to use different display types on the same page.

   • **Numeric**: The parameter values are displayed as numbers (see figure 1 below). If there is only one parameter on the page, a bar graph is also displayed.

   • **Gauge/bar**: When there is one parameter on the page, the parameter value is shown as a dial gauge (see picture 3 below). When there are two or three parameters on the same page, the value is displayed as a bar graph (see the slots in figure 2 below).

   • **Graph** 15 minutes, 30 minutes, 1 hour or 24 hours: The parameter value is displayed as a graph within the selected time frame (see the bottom slot in picture 2).
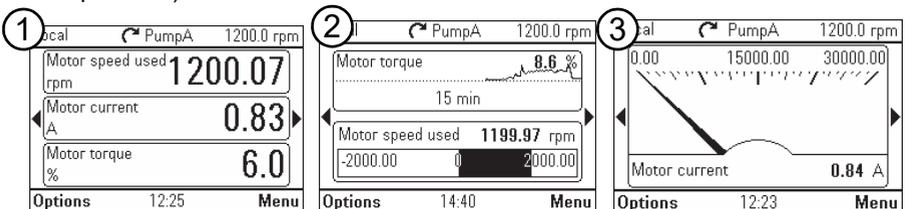
Note: The data shown in the graph is not stored in the drive memory, that is, if you remove or restart the control panel, the data is lost.

- **Display decimals**: Specifies how many decimals are shown.
- **Display name**: Enter a custom label to show in the **Home** view instead of the parameter name.
- **Min** and **Max**: This function depends whether **Scale value range** is selected or not:
    - **Scale value range** not selected: Select the minimum and maximum signal values that are shown on graph displays.
    - **Scale value range** selected: Select the actual values of the parameter that correspond to **Display min as** and **Display max as** (see below).
- **Scale value range:** Select if you want to specify the value range.
    - **Display min as** and **Display max as:** Select the minimum and maximum values shown in the **Home** view.

        This feature allows application-specific scaling to be applied.

        If the parameter value is below the minimum or above the maximum, the text *Off the scale* is displayed. In the graph format, small arrows are shown instead to indicate values off the scale.

Scaling with Display signal min/max as and Signal min/max
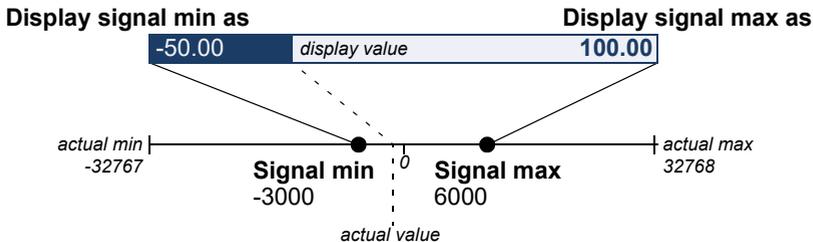
- **Display unit:** Customize the unit shown in **Home** view when scaling is used.

7

Fault tracing

What this chapter contains

This chapter describes how to identify different fault and warning messages that are shown on the control panel and how to solve problem situations.

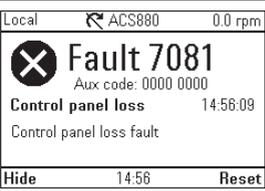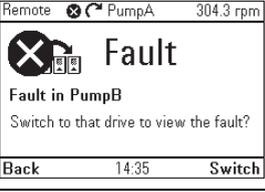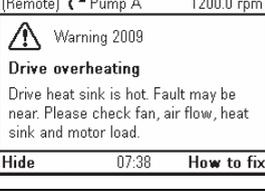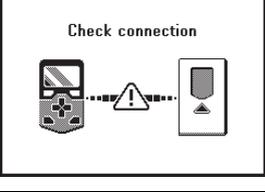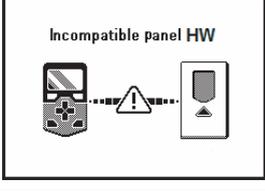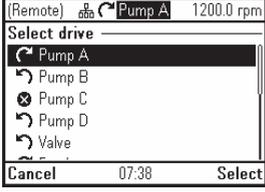## Identifying error and warning messages

Faults and warnings are drive states that occur when the drive detects a problem in its operation. The display message, backlight and LED indications help you to identify the problem.

Some of the fault and warning icons and their descriptions are mentioned below.

Event	Icon
Fault activate	⊗
Fault reset	⊗
Warning activate	⚠
Warning deactivate	⚠
Pure event activate	ⓘ
Pure event deactivate	ⓘ

■ Faults and warnings when disable cloud connection

Refer to the table below to identify faults and warnings.

Display	LED	Type
Local ⚡ ACS880 0.0 rpm **❌ Fault 7081** Aux code: 0000 0000 **Control panel loss** 14:56:09 Control panel loss fault Hide 14:56 Reset	continuous red 🟥	See *Faults* (page *60*).
	blinking red 🟥	Faults of this type require stopping and restarting the drive before it continues to function normally. See *Faults* (page *60*).
Remote ❌ ↻ PumpA 304.3 rpm **❌ Fault** **Fault in PumpB** Switch to that drive to view the fault? Back 14:35 Switch	continuous red 🟥	A fault has occurred in another drive in the panel bus.
(Remote) ↻ Pump A 1200.0 rpm ⚠ Warning 2009 **Drive overheating** Drive heat sink is hot. Fault may be near. Please check fan, air flow, heat sink and motor load. Hide 07:38 How to fix	blinking green 🟩	See *Warnings* (page *61*).
Check connection	continuous green 🟩	The connection between the control panel and the drive is faulty. Check that the connection cable is properly attached.
Incompatible panel HW	continuous green 🟩	The control panel type is not compatible with the drive you attempt to use it with. See *Compatibility* (page *10*).
(Remote) ↻ Pump A 1200.0 rpm Select drive ↻ Pump A ↻ Pump B ❌ Pump C ↻ Pump D ↻ Valve Cancel 07:38 Select	continuous green 🟩	The connection between the control panel and the drive has been lost. Check the control panel network connections. Select another drive.

■ Faults and warnings when enable cloud connection

Refer to the table below to identify faults and warnings.

Display	LED	Type
 Local ⚡ACS880 0.0 rpm ❌ **Fault 7081** Aux code: 0000 0000 **Control panel loss** 14:56:09 Control panel loss fault Hide 14:56 Reset	continuous red + blinking blue 🟥 🔵	There is an active fault in the drive, and cloud connection is normal. See *Faults* (page *60*).
(Remote) ↻ Pump A 1200.0 rpm ⚠ Warning 2009 **Drive overheating** Drive heat sink is hot. Fault may be near. Please check fan, air flow, heat sink and motor load. Hide 07:38 How to fix	flickering green + blinking blue 🟢 🔵	There is an active warning in the drive, and cloud connection is normal. See *Warnings* (page *61*).
Local◇ ↻ ACS580 ⬍0.0 Hz Diagnose Info Network operator ABB NW CN-L-7... Tx data packets 1849 Rx data packets 3224 Signal strength(%) 5 Diagnose words 1101 hex Back 11:53 Edit	continuous green + blinking yellow 🟢 🟡	The drive is functioning normally, and cloud connection has fault. When the cloud connection has fault, go to **System info → Connectivity setting→Diagnose info → Diagnose words** to find the fault code。 Fault code and reason, see *ABB Drive connectivity control panel warning messages* (page *60*).

■ ABB Drive connectivity control panel warning messages

Code (hex)	Fault	Cause	What to do
1101	Simcard Fault	Simcard fault	Contact your local ABB representative.
2101	Operator network Fault	Registration network denied	Contact your local ABB representative.
2102	Operator network Fault	Registration network timeout	Contact your local ABB representative.
3101	Modem Fault	No signal/weak signal	Contact your local ABB representative.
3102	Modem Fault	FW version error	Contact your local ABB representative.
4101	Server Fault	Not supported drive type	Contact your local ABB representative.
4102	Server Fault	TCP connection fault, DNS or server shutdown	Contact your local ABB representative.
4103	Server Fault	DPS server problem	Contact your local ABB representative.
4104	Server Fault	IOT hub server problem	Contact your local ABB representative.
4105	Server Fault	ABBA server problem	Contact your local ABB representative.
4201	Server Fault	Panel certificate expired	Contact your local ABB representative.
4202	Server Fault	Panel certificate broken	Contact your local ABB representative.
4203	Server Fault	Panel certificate invalid	Contact your local ABB representative.
4204	Server Fault	Digital server problem	Contact your local ABB representative.

Faults

Faults are problems that require your attention before you start the drive again.

Refer the following steps to solve the fault situation:

1. Identify and eliminate the cause of the fault. In the **Fault** view, you can see the fault code. Refer to the relevant firmware manual for more information on the fault.
2. Reset the fault by pressing ⌐ (**Reset**) in the **Fault** view.

In the **Fault** view, the keys have the following functions:

- Press ⌐ (**Hide**) or any of the arrow keys to temporarily hide the fault and go back to the previous view. If there is also an active warning, it is displayed instead. The fault view reappears after 60 seconds if no keys have been pressed.
- Press ⌐ (**Reset**) to reset the fault and return to the previous view.
- Press the ⍰ key to open the context-sensitive help. The help page has a shortcut to the Fault Diagnostics Assistant which helps you solve the fault situation.

Warnings

Warnings mean that a possible problem has been detected and may need attention, and the drive can still run. A warning message disappears once the condition that triggered it goes away.

- Press ⬯ (**Hide**) to hide the warning message and go back to the previous view. If the warning is still active after 60 seconds of no key presses, the **Warning** view reappears automatically.
- Press the ⬚?⬚ key to open the context-sensitive help.

Note: If multiple warnings are active, the total number of active warnings is displayed. Use ⬆ and ⬇ to scroll through the warnings.

8

Service and maintenance

What this chapter contains

This chapter describes the service and maintenance tasks of the ABB Drive connectivity control panel.

Removing the control panel cover

It is possible to remove the control panel cover to clean any dust inside the cover or to change the cover to customize the control panel.

The cover consists of two parts, both of which can be removed. You do not need tools to remove the covers.

1. Remove the lower part of the control panel cover.
2. Remove the upper part of the cover.

Reinstall the covers in the reverse order.

Cleaning the control panel

Use a soft damp cloth to clean the control panel. Avoid harsh cleaners which could scratch the display window.

Cleaning the connectors

Control panel has two connectors, RJ-45 connector (panel back side). Clean outside/around the connectors using suitable cleaning solution (for example, Isopropyl Alcohol (IPA) solution). Do not use the cleaning solution to clean inside the connectors.

Control panel software updates

If the control panel software needs to be updated, please refer to *Firmware upgrade (control panel)* on page *33*.

Recycling instructions and environmental information

See the drive related Recycling instructions and environmental information.

9

Condition monitoring for Drives

What this chapter contains

The chapter describes the Condition monitoring for Drives function supported by ABB Drive connectivity control panel.

After completing the configuration of cloud connectivity, you can log into ABB Ability™ Smart Powertrain system on the computer or mobile terminal by using the mobile phone, self-service register account and add equipment. After adding the equipment, you can see the real-time status of the drive, the trend chart of the key parameters and the event record of the drive.

Note: The service of Condition monitoring for Drives needs to be purchased, please visit:

https://new.abb.com/drives/services/advanced-services/condition-monitoring

Diagram of Condition monitoring for Drives:
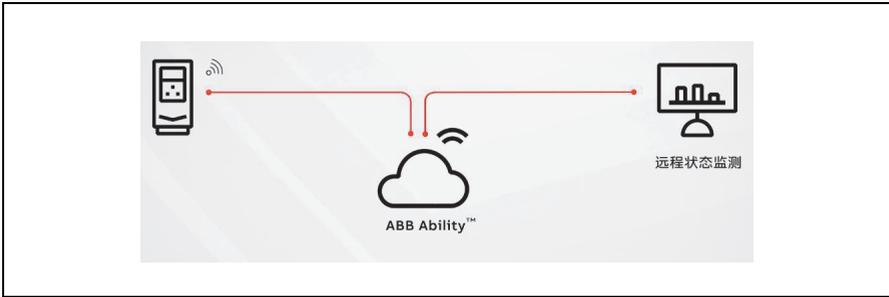
Registering account

Website of ABB Ability™ Smart Powertrain platform:

China: https://remotemonitoring.drives.abb.com.cn

Other countries: https://remotemonitoring.drives.abb.com

Users who use this website for the first time need to register the website account and log into the website after registration.

Creating or joining a group

• If you want to join an existing group, please tell your group administrator your registered mobile phone number and wait for you to join the group;

• If you want to create a new group and add drives as an group administrator, please create a new group. The steps to create an group are as follows: "Group management / Group information / Create group".

Note: One user can only exist in one group, and one drive can only exist in one group.
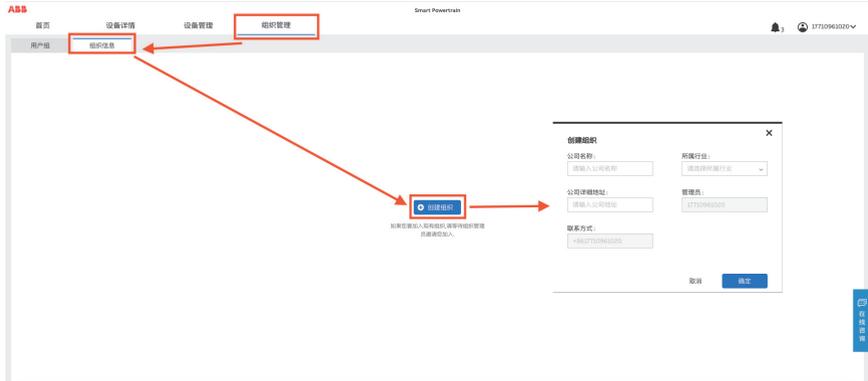
Creating drive group

The steps are as follows: "Drives management / Drives list / Add drives group".
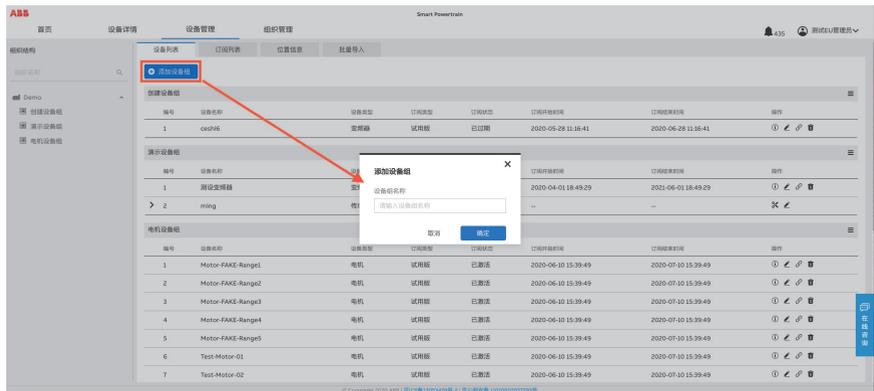
Adding drives

The steps are as follows: "Drives management / Drives list / Add drives".
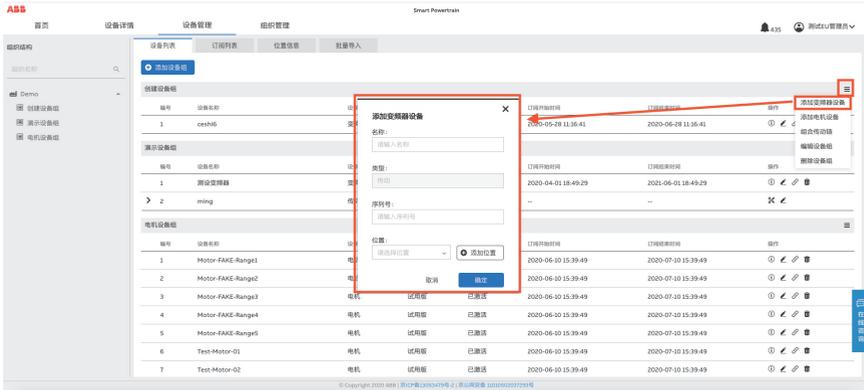
Note: The serial number needs to be read from the menu of the control panel. For the reading method, please refer to *Record serial number* in the section *Step 2: Configuration of cloud connectivity*. If the control panel does not display the serial number, please contact ABB hotline.

Binding subscription

After the drive is added, it will automatically enter the trial state. You need to bind the subscription code within 30 days to activate the corresponding service period.
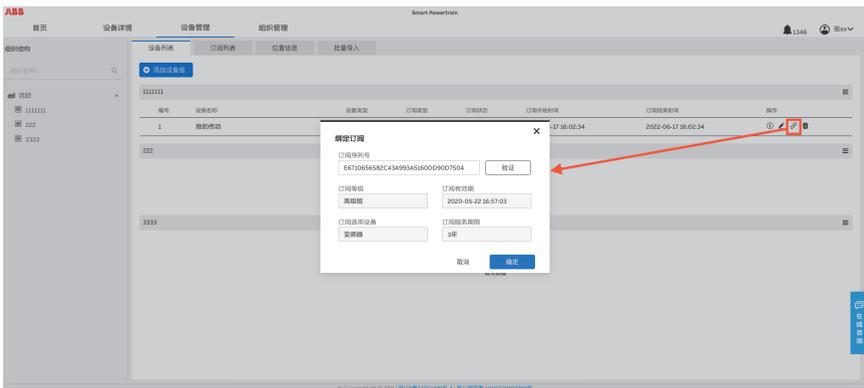
Note: The subscription activation code information is pasted on the back of the control panel.

View overall condition

After logging in, the donut charts on the home page clearly show the overall condition of all drives connected by the account.
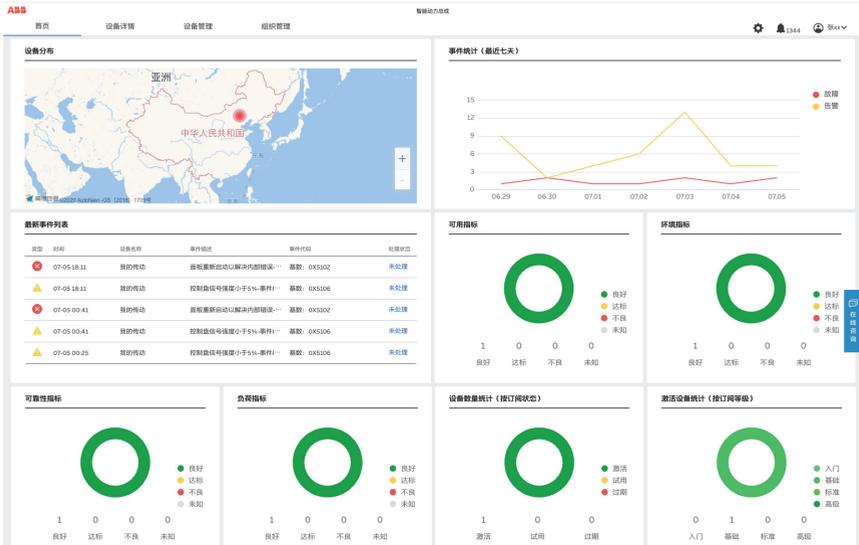
View details by index

In the details by index page, the organization structure and drives list on the left can help you quickly locate a drive. You can view more detailed information of the drive, including four KPI index: Availability, Environment, Reliability and

Stress. You can also click on the different status colors in the donut chart to review the detailed information of the drive list.
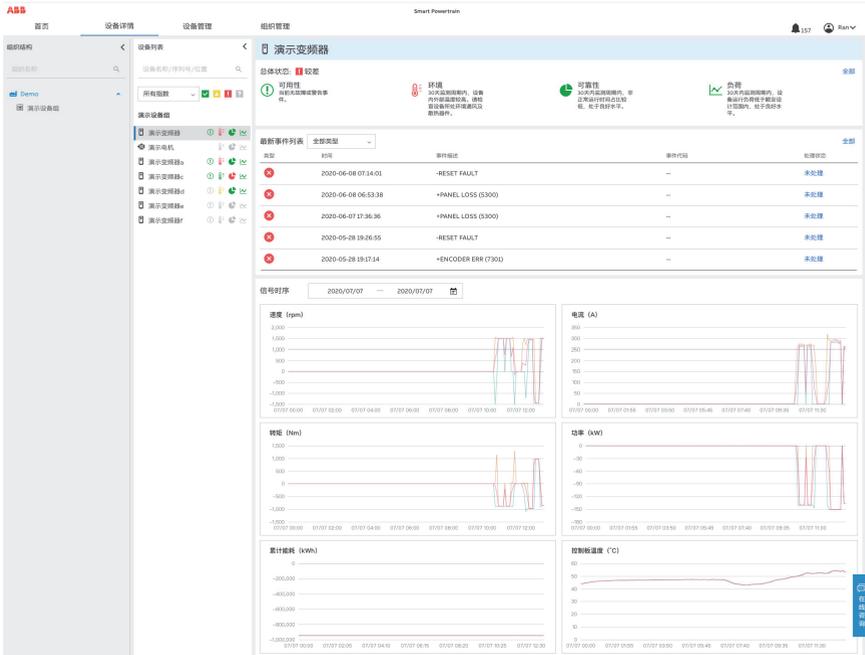
You can also view more information and obtain more product services through ABB Ability™ Powertrain system. For example: import the motor equipment that has been monitored by ABB smart sensor products, and monitor the drive chain which constituted by drive and motor in the same system.

For more information, please refer to the quick start guide:

https://digital.motion.abb.com.cn/quick_start.pdf

10

Mobile Connect for Drives

What this chapter contains

The chapter describes the Mobile Connect for Drives assistance function supported by ABB Drive connectivity control panel.

ABB Ability^{TM} Mobile Connect for Drives is a remote assistance tool for drives. It is integrated into the Drivetune mobile application.

It can provide users with:

- Remote commissioning assistance
- Remote fault diagnosis
- Equipment performance analysis and optimization

To use this service, please download Drivetune mobile app and activate the Bluetooth interface of the ABB drive connectivity control panel.

Diagram of Mobile Connect for Drives
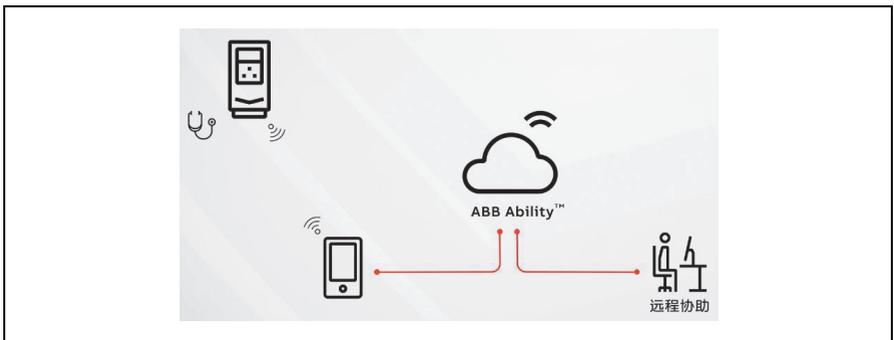
How to get the remote assistance from ABB drive experts

■ Step 1: Install Drivetune mobile app

You can download and install the Drivetune app by scanning the QR code below:

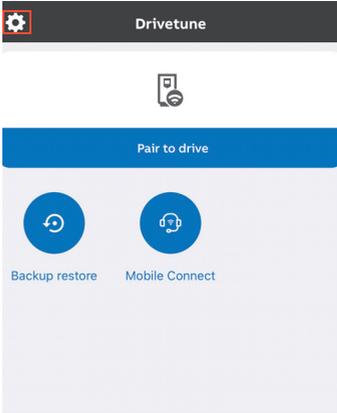| Android mobile (China)	Apple iOS mobile	Google play

Mobile OS compatibility

Operating system	Version
Android	Android 6.0 and later
Apple	iOS 13 and later

■ Step 2: Log in Drivetune and pair drive

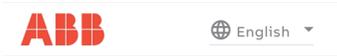1. Turn on the Bluetooth function of the control panel (set the Connectivity selection option to off).

```
Local◇        ↻ ACS880      ⬍0.0 rpm
Connectivity selection
  Enable
  Disable

Cancel         13:24          Save
```
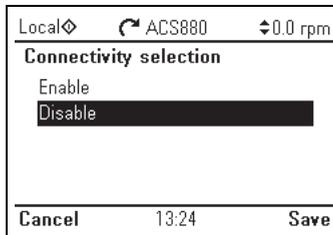
2. Run Drivetune on mobile, and log in with MyABB account.
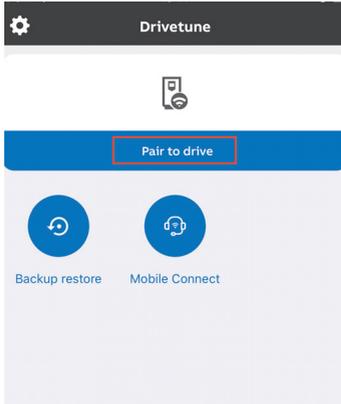

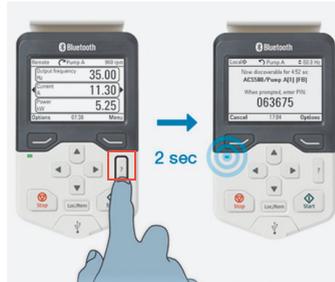a) Click the menu on the top left corner
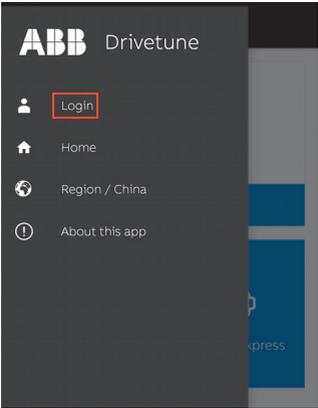
b) Click "log in"

c) Input MyABB account

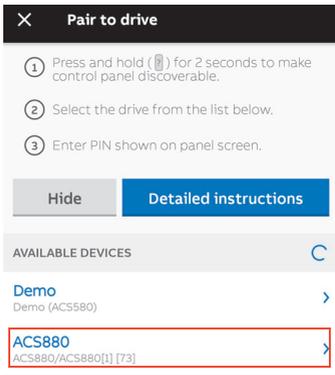3. Connect the mobile phone to the drive via Bluetooth
    • Ensure that Bluetooth is turned on from the mobile phone.
    • Pair with the Bluetooth of the drive. For details, see the instructions in the APP as shown below.

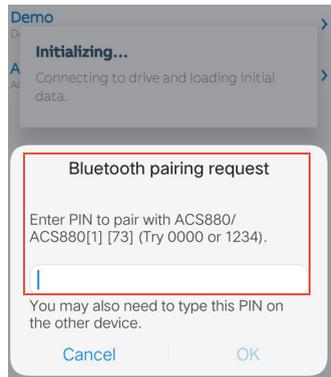

a) Click "Connect to drive"

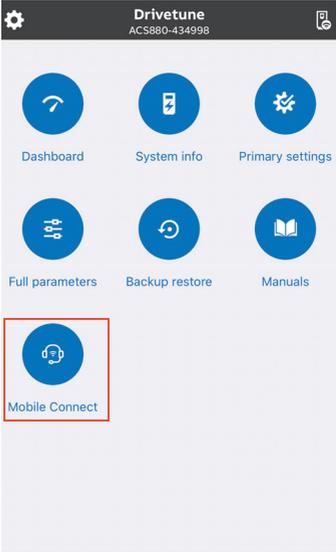b) Press and hold the 'Help' button to bring up the paring code

c) Select the correct drive to connect from the list
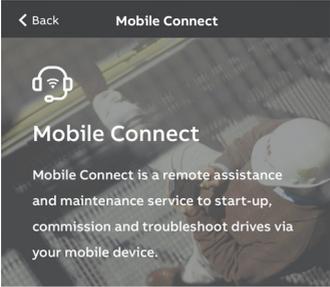

d) Input the paring password

4. Contact the drive support personnel to obtain the support case ID, and input the support case ID in Mobile Connect for Drives.


a) Click "Mobile Connect for Drives"   b) Input the case ID

■ Step 3: Interact with support personnel

After entering the support ticket, you can start to communicate with the drive expert for fault diagnosis, including:

- Provide the feedback, problem and its phenomena on site by sending messages such as text, voice, picture and video
- Back up the drive support package or technical support package and share it with the drive expert
- Authorize the drive expert to access the drive equipment
- Review, approve or reject the drive parameters modification suggestions from the drive expert
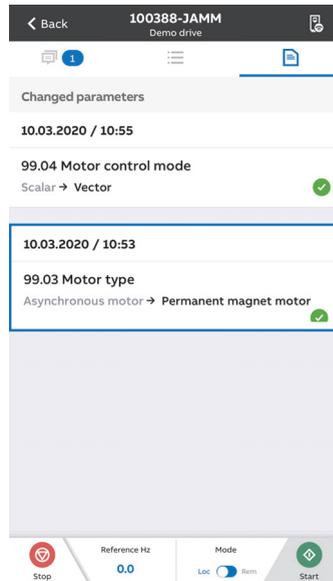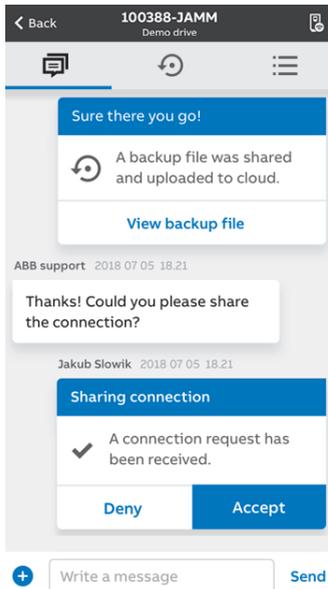
For more information about the Mobile Connect for Drives assistance service for drives, see the *Mobile Connect for Drives user guide* (3AXD50000555512 [Chinese]).

■ Step 4: Restore cloud connectivity

After remote assistance, set the Connectivity selection option to on, see section *Step 2: Configuration of cloud connectivity* in chapter *Installation and start-up*.

11

Technical data

What this chapter contains

This chapter contains the technical details of the ABB Drive connectivity control panel.

Connectors

The control panel has the following connectors:

Connector	Purpose
RJ-45 female connector	Used for connecting the panel to drive. • If cable is used, then maximum length should be 100 meters (328 ft.). • On a panel bus, the combined maximum length of the panel bus cables should be 100 meters (328 ft.). • The cable should be more than standard of CAT3

Display

The control panel has a monochrome, 240 x 160 pixel resolution LCD display with adjustable backlight and display contrast.

See *Basic settings and assistants* (page *33*).

Dimensions and weight

Weight	124 g
Height, width and depth mm [in.]	

Degrees of protection

Degree of protection, attached to a drive	IP55
Separately	IP20
When control panels are connected in stand-alone to RJ-45 cable	IP20
Control panel mounted to DPMP-01	IP55
Control panel mounted to DPMP-02 or 03	IP65
When Control panel is not mounted to DPMP-01 or 02 or 03 holder	IP20

Control panel mounted to a drive provides the same protection class as the drive unit itself. For more information, see hardware manual of the drive product.

Materials

Enclosure	PC/ABS
Packaging	Cardboard
Screen	Polycarbonate
Disposal	Do not dispose the control panel with municipal waste.
	Check the local regulations for disposal of electronic products.
	See also, drive related Recycling instructions and environmental information.

LCD specification

LCD type	FSTN
Operating temperature	-20°C to +70°C (-4 °F to 158 °F)
Storage temperature	-40°C to +80°C (-40 °F to 176 °F)
Transportation temperature	-40°C to +80°C (-40 °F to 176 °F)
Drive IC	UC1698U
RoHS	Compliant

Note: Response time of LCD display is slow at/below 0 °C (32 °F).

Environmental limits

	Operation	*Storage*	*Transportation*
Installation site altitude	4000 m (13123 ft.)	-	-
Air temperature	-20 °C to +55 °C (-4 °F to 131 °F)	-40 °C to +70 °C (-40 °F to 158 °F)	-40 °C to +70 °C (-40 °F to 158 °F)
Relative humidity	95% (non-condensing)		
Temperature inside the panel	-20 °C to +70 °C (-4 °F to 158 °F)	-25 °C to +70 °C (-13 °F to 158 °F)	-

Note: The accuracy of the real-time clock affected by the working environment temperature is as follows:

$acc = K \times (T-T0)^2$, where:

- T0 = 25°C ± 5°C
- K = -0.032 ppm/°C^2

Compliance in China

Item	*Operation*	*Transportation*
Network safety	YD/T 3230-2017 YD/T 2408-2013 YD/T 3228-2017	

EMC	YD/T 3230-2017 YD/T 1483-2016 GB/T 12572	
Radio Frequency	RSE refers to the Ministry of information technology wireless [2002]353 standard. RSE (Radiated Spurious Emission)：YD/T2583.14-2013(YD/T 1483-2016)	
SAR (Specific Absorption Rate)	YD/T 1644.1/2 method GB 21288 Limit	
Contamination levels	Follow IEC 60721-3-3, IEC 60721-3-2 and IEC 60721-3-1. Degree 3C3	
Sinusoidal vibration	IEC61800-5-1，Edition 2.0, 2016-08, 10-57Hz, 57-150Hz, 1g, 10 sweeps, 0.075 mm.	IEC61800-5-1，Edition 2.0, 2016-08, 10-57Hz, 57-150Hz, 1g, 10 sweeps, 0.075 mm.
Shock vibration	IEC61800-5-2，Edition 2.0, 2016-04, 5g, 30ms, 3 times per axis	IEC 60721-3-2, Edition 3.0, 2018-02, 2M4
Random vibration	IEC 60721-3-3, Edition 3.0, 2019-05, 3M11	IEC 60721-3-2, Edition 3.0, 2018-02, 2M4
Free fall	IEC-60068-2-31, Edition 2.0, 2008-05, height 1 m(3.3 ft.).	

DMS documents: 3AXD10000922142

Compliance in Europe

Item	Operation	Transportation
Radio Frequency	ETSI EN 300 328 V2.1.1 ETSI EN 301 908-1 V13.1.1 ETSI EN 301 908-13 V13.1.1	
EMC	Draft ETSI EN 301 489-17 V3.2.2 Draft ETSI EN 301 489-52 V1.1.0	
Health	EN 50566:2017 EN 62209-2:2010 EN 62479:2010 EN 50663:2017 EN 62311:2008	
Safety	EN 62368-1:2014 + A11:2017	

DMS documents: 3AXD10000922142

Bluetooth interface

Bluetooth standard	Bluetooth 4.0 Dual mode: Bluetooth Classic BLE mode (Bluetooth low energy)
Antenna type	Internal inverted –F on PCB
Operating frequency	2400MHz to 2483.5MHz
Antenna Gain	Maximum 3.6dBi
Antenna efficiency	>=50%

DMS document: 3AXD10000922142

NB-IoT interface

3GPP Standard	LTE CAT-NB1
Work mode	CAT-NB1 single mode
Data speed	Single-Tone: Upload: 16.7kbps, download: 25.5kbps Multi-Tone: Upload: 62.5kbps, download: 25.5kbps
FW upgrade	*DFOTA (Differential FW Over The Air)
Band support	China market: Band3, Band5, Band8
Business operator support	China Unicom, China Telecom
Antenna type	LDS Loop antenna on carrier
Antenna Gain	Maximum 2.2dBi
Antenna efficiency	>=55% from 824MHz to 960MHz; >=25% from 1710MHz to 2170MHz
RF output power	Maximum 23dBm ± 2dB

Note: * represent as "Under developing"3AXD10000922142

DMS documents: 3AXD10000922142

Working frequency / band

	Panel working frequency / band
China	1735MHz-1780MHz / band3; 825MHz-835MHz / band5; 890MHz-915MHz / band8
	Maximum transmitting power: 23dBm±2.7dB ≤20dBm(EIRP)
Bluetooth	2402 MHz to 2480 MHz: <10dBm

DMS documents: 3AXD10000922142

Certification and marking

	The identification requirements for hazardous substances in electronic and electrical products are specified in the Electronic Industry Standard of the People's Republic of China (SJ / T 11364-2014). The product is labeled with RoHS China environmental protection service life and displayed on the back of the product – barcode label. This mark indicates that under normal use, the environmental protection service life of the product is 10 years.
IMEI (International Mobile Equipment Identity) number	IMEI number is shown on panel's back – cover on bar-code label.
CMIIT ID (Model approval code of radio transmitting equipment)	The product has passed the test and certification of the Ministry of industry and information technology of the people's Republic of China. Model approval code: 2019CP7014 The products meet the requirements of YD/T3338-2018 (3GPP TS 36.521-1), YD/T2583.14-2013(YD/T 1483-2016), and the Ministry of information technology wireless [2002] No. 353 standard.
NAL(Network Access License)	The product has passed the test and certification of the Ministry of industry and information technology of the people's Republic of China, and obtained the use license for accessing the public telecommunication network. The network access license label is attached in the product package (blue label). The products meet the requirements of YD/T 3230-2017，YD/T 3228-2017，YD/T 2408-2013 standard.
	The Bluetooth mark is displayed on the lower front of the product, indicating that the product has passed the certification of the Bluetooth Technology Alliance (SIG). Declaration ID：D048042

CE	[ABB Beijing Drive Systems Co., Ltd] declares that the radio equipment type [Cellular Narrow Band Internet of Things (NB-IoT)/Bluetooth terminal, ACS-DCP-W] is in compliance with Directive 2014/53/EU.
	The full text of the EU declaration of conformity is available at the following internet address:
	http://abbdrive.yangben.io/#!/material/4eae603357684463a79d5af01b3ff40b
	Body-worn SAR testing has been carried out at a separation distance of 5 mm. To meet RF exposure guidelines during body-worn operation, the device should be positioned at least this distance away from the body. • SAR 10g Limit: 2.0 W/Kg, • Body SAR Value: 0.355 W/Kg (Max. 5 mm distance)
(crossed-out wheelie bin symbol)	The waste and recycling marks of electrical and electronic equipment are displayed on the bar code label on the back of the product, indicating that the equipment complies with EU WEEE specification. WEEE specification regulate the treatment and recycling of waste electrical and electronic equipment.

DMS document: 3AXD10000922142

Disciaimers

◼ Generic disclaimer

The manufacturer shall have no obligation hereunder with respect to any product which (i) has been improperly repaired or altered; (ii) has been subjected to misuse, negligence or accident; (iii) has been used in a manner contrary to the Manufacturer's instructions; or (iv) has failed as a result of ordinary wear and tear.

◼ Cybersecurity disclaimer

This product is designed to communicate information and data through the authorized band network of mobile operator. Mobile operator shall protect its network, system and the interface through any appropriate measures to prevent any kind of security breaches, unauthorized access, interference, intrusion, leakage and/or theft of data or information. ABB and its affiliates are not liable for damages and/or losses related to such security breaches, any unauthorized access, interference, intrusion, leakage and/or theft of data or information.

— Further information

Product and service inquiries

Address any inquiries about the product to your local ABB representative, quoting the type designation and serial number of the unit in question. A listing of ABB sales, support and service contacts can be found by navigating to abb.com/searchchannels.

Product training

For information on ABB product training, navigate to new.abb.com/service/training.

Providing feedback on ABB Drives manuals

Your comments on our manuals are welcome. Navigate to new.abb.com/drives/manuals-feedback-form.

Document library on the Internet

You can find manuals and other product documents in PDF format on the Internet at abb.com/drives/documents.

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abb.com/drivespartners