MyDrive Insight for iC7

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Contents

1 Introduction to Application Guide

1.1 Version History

This guide is regularly reviewed and updated. All suggestions for improvement are welcome.

The original language of this guide is in English.

Version	Remarks	Software Version
M00427, document version 02	Contents reviewed and updated.	2.20.0

2 PC Control

2.1 Introduction to MyDrive® Insight

MyDrive® Insight is a software tool that supports the commissioning, engineering, and monitoring of the iC7 series.

NOTE: The guide is documented for MyDrive® Insight version 2.20.0 or above. To utilize the latest MyDrive® Insight functions, make sure to uninstall older versions of MyDrive® Insight from the workstation.

2.2 Getting Started with MyDrive® Insight

As a prerequisite, ensure that MyDrive® Insight is installed on the device (PC or laptop). MyDrive® Insight can be downloaded and installed from MyDrive® Suite, available here: https://suite.mydrive.danfoss.com/

1. To establish a point-to-point connection between the drive and the device, use the communication interface X0 and the RJ45 Ethernet port on the device by using a standard Ethernet cable.

   If the device does not have an RJ45 Ethernet port or it is already in use, then a conventional adapter from USB to RJ45 can be used. To connect several drives at the same time, use an Ethernet switch between the PC and the control unit.

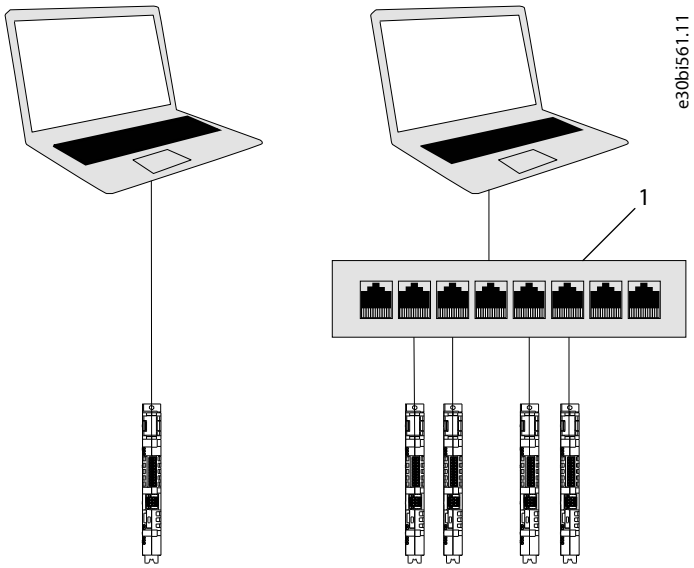


Figure 1: Connection to the PC

1	Ethernet switch

2. When the drive is powered up and in *Ready* state, open MyDrive® Insight on the device and the drive is recognized.
3. To establish the connection, select the drive from the list of live devices.

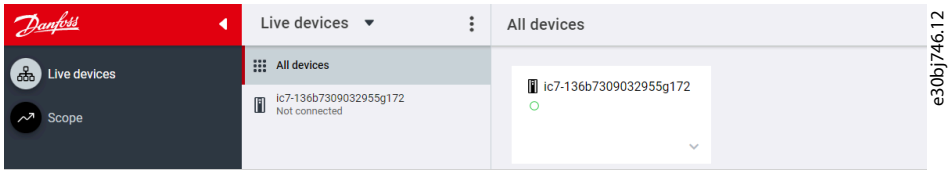


Figure 2: Establish Connection

Once the connection is established, the drive is marked with a green connection symbol in MyDrive® Insight.

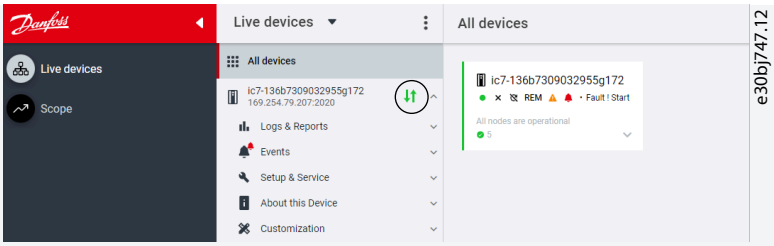


Figure 3: Connection Established

4. To interact with the drive, navigate to the required screen in MyDrive® Insight. The example picture shows the *Device Info* screen.

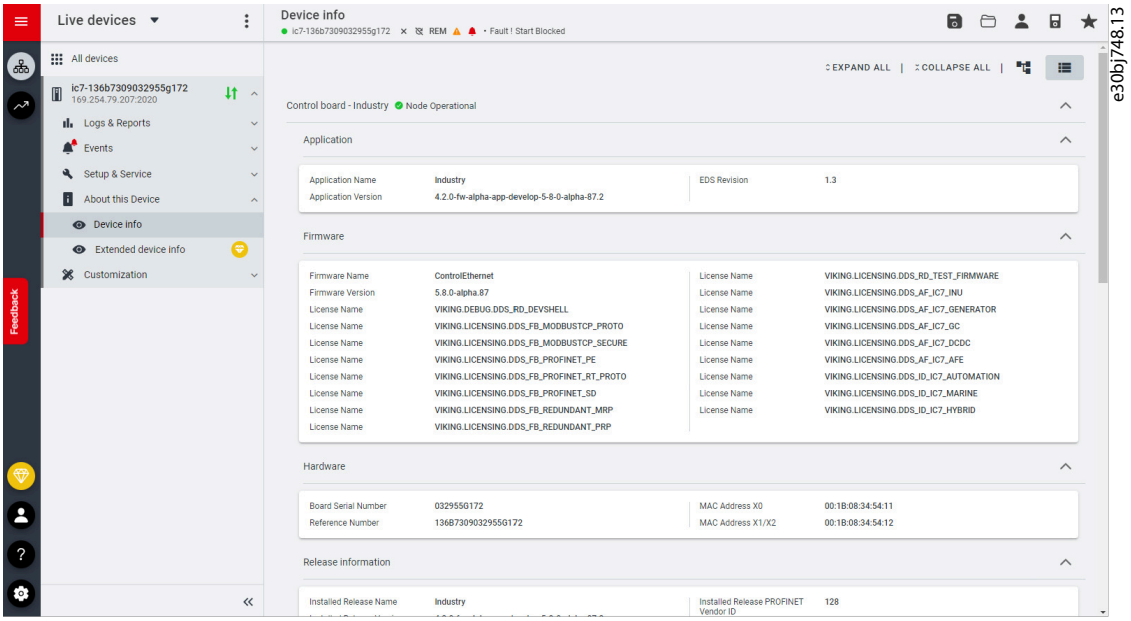
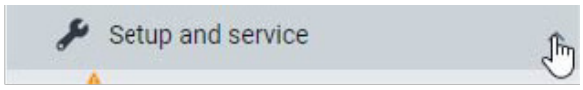


Figure 4: Device Info

2.3 Accessing Parameters and Understanding Parameter Screens in MyDrive® Insight

1. To access the parameters of the connected drive, click *Setup and Service*.
2. Click *Parameters* > *Live*.

1



2

e30bj749.12

Figure 5: Setup and Service

The Parameters (Live) screen opens.

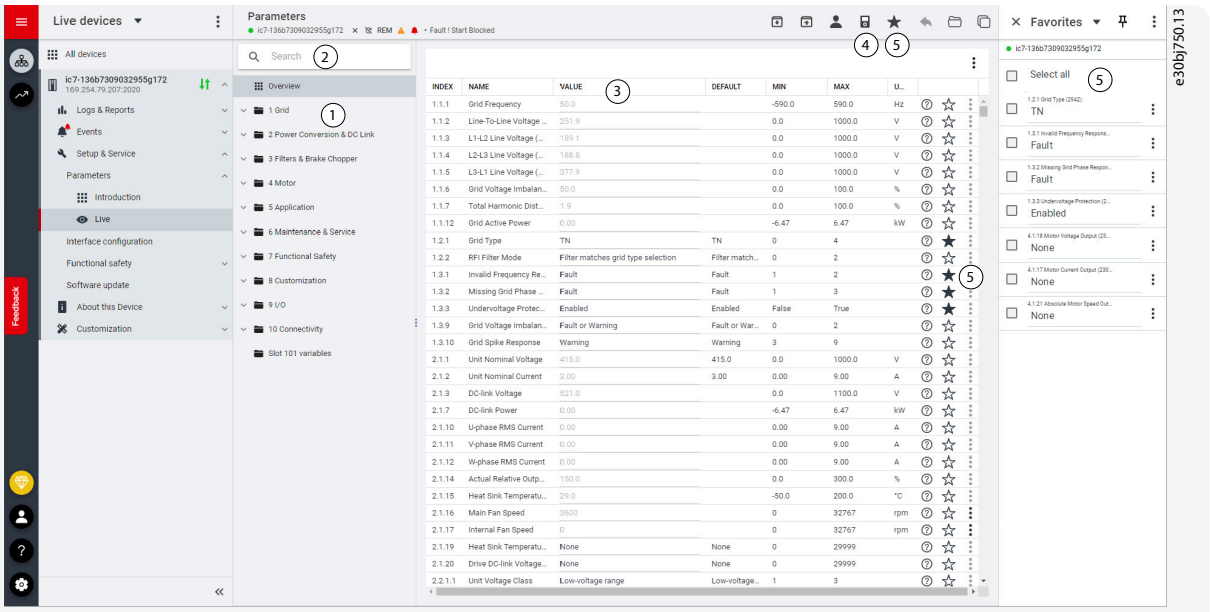


Figure 6: Parameters (Live)

1	Parameter group: Navigate through the different parameter groups in the drive.	2	Search field: Use the search function to find a specific parameter from the currently selected group.
3	Value field: View and change a parameter value or selection. All the parameters for the drive are shown on the Live screen.	4	*PC Control* button: Switch to PC control to start or stop the drive using MyDrive® Insight.
5	Favorites: Select a parameter as a favorite by clicking the star in its row. Open the favorites panel on the right side of the screen by clicking the star at the top of the page.		

3. Navigate through the parameter groups.
   a. Click the parameter group (1) from the Live pane.
   b. Click the parameter subgroup (2).
   c. Repeat step b. until the right level of parameter sub group (3) is reached to find the specific parameters (4).

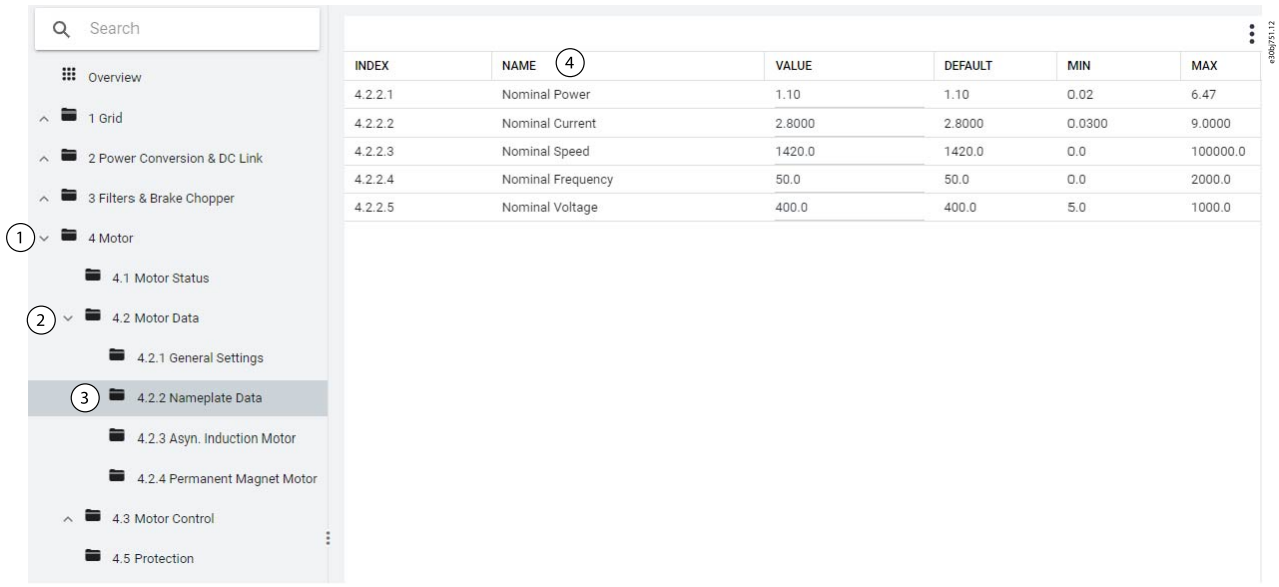


Figure 7: Navigating the Parameter Groups

NOTE: When in a specific parameter group, only parameters in that parameter group and any subgroups can be accessed.

Searching for a specific parameter

Type the search term in the *Search* field. The search returns all parameters in the selected group and subgroups that have the search term in the name.

In the following example, all parameters with *DC-Link* in the name are listed in the search results.

NOTE: When in a specific parameter group, the search is limited to the parameters in that group and subgroups. When in Overview, the search is performed on all parameters.

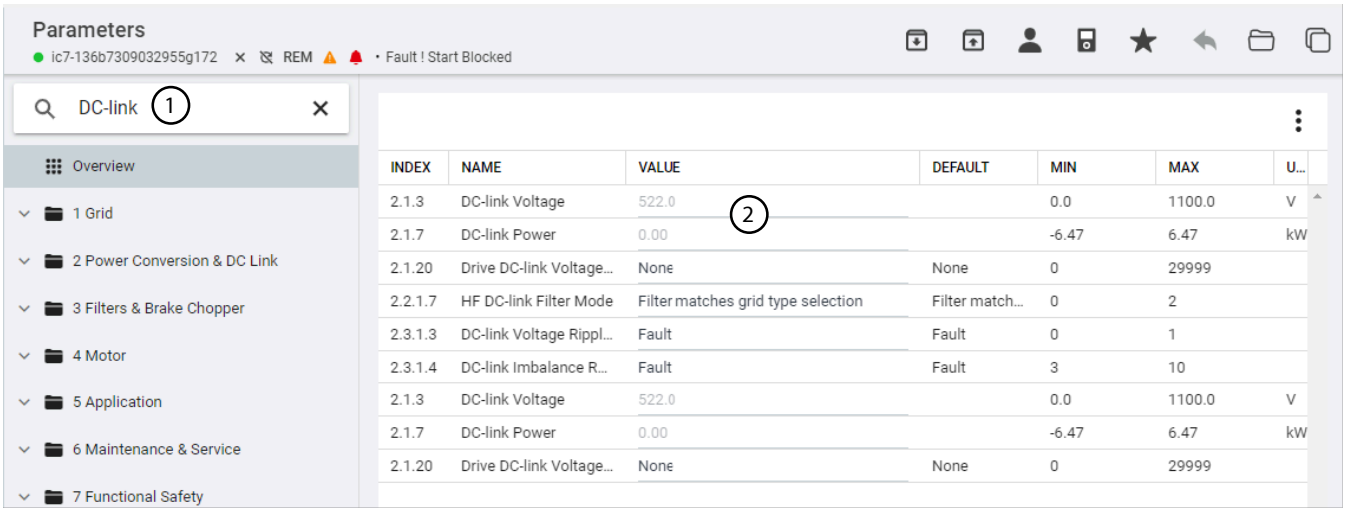


Figure 8: Search Function

1	Search term	2	Search results

2.4 Viewing and Changing Parameter Settings

When in a specific parameter group, all parameters related to the parameter group are shown. Depending on the access type of the parameter, there is a possibility to view the parameter setting or change the current selection or value of the parameter.

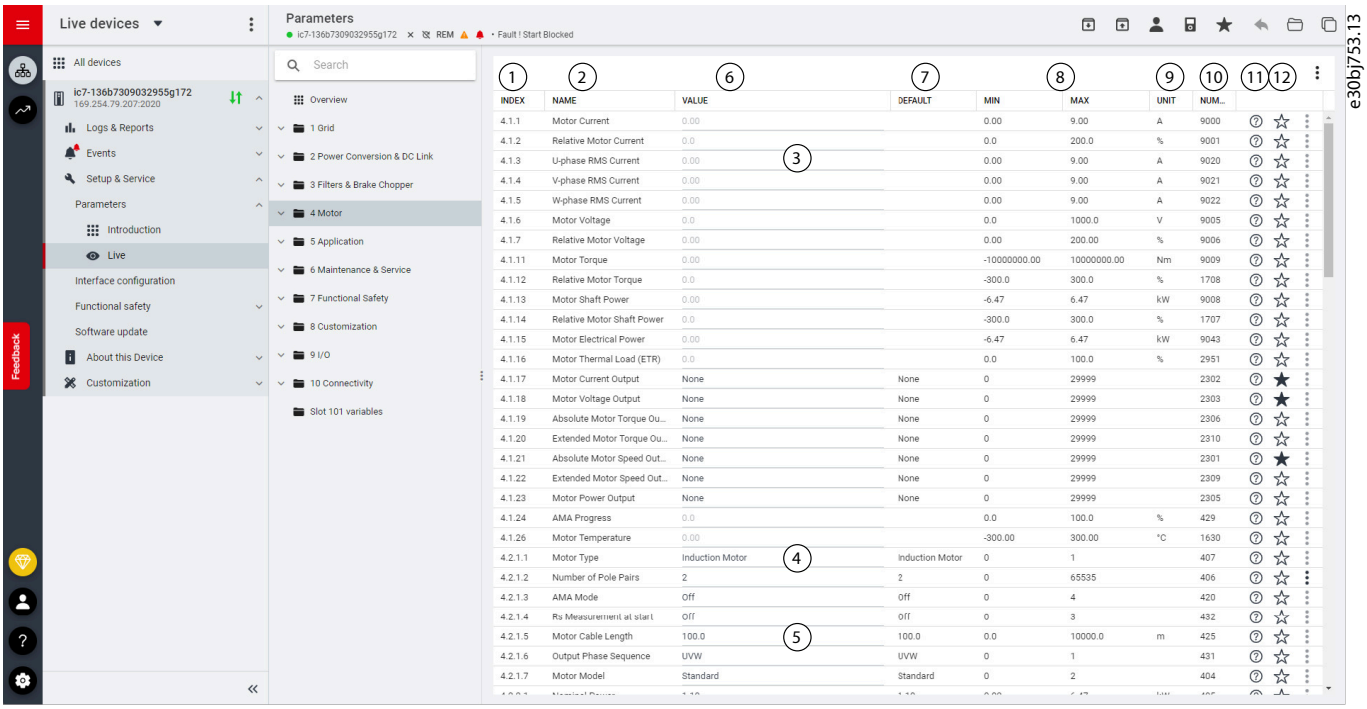


Figure 9: Parameter Overview

Table 1: Legend Table

Legend	Description	Further information
1	*Index*	Based on the parameter group structure, the index defines the location of the parameter. The index is not used as a unique identifier of a parameter.
2	*Name*	Name of the parameter.
3	Status parameters and parameters with no write permission	The current status or value of a parameter. The parameter value is shown in a light gray color and cannot be changed.
4	Selection parameters	To see all selections available for the parameter, click the value in the *Value* field.
5	Range parameters	The parameter value can be modified within the defined range (maximum and minimum values).
6	*Value*	The current value of the parameter.
7	*Default*	The factory setting (default value) of the parameter.
8	*Min* and *Max*	When applicable, the minimum and maximum values of the parameter are shown in the *Min* and *Max*.

Table 1: Legend Table - (continued)

Legend	Description	Further information
9	*Unit*	When applicable, the unit of the parameter is shown in the *Unit* field.
10	*Number*	The identifier for each parameter. The identifier is independent and decoupled from the parameter index values, and is unique per option.
11	*Help*	Click the *?* button to see a description about the parameter.
12	*Favorites (star)*	Clicking the *Favorites* icon adds the parameter to Favorites.

2.5 PC Control: Operating the Drive Using MyDrive® Insight

To operate the drive using PC control, click the *Control Panel* button in MyDrive® Insight. The following illustration shows the required steps to operate the drive via MyDrive® Insight.

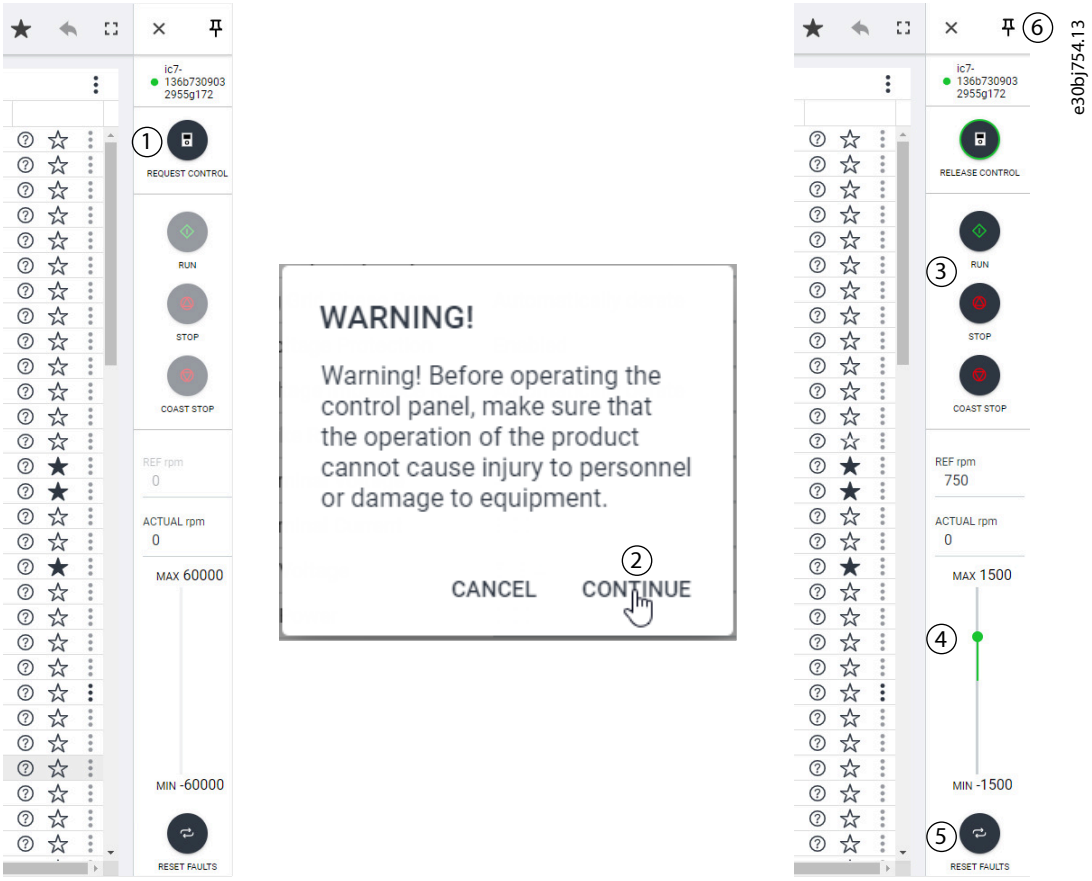


Figure 10: Operate the Drive Using MyDrive® Insight

1. Click the *REQUEST CONTROL* button (1).
2. To confirm secure operational conditions while controlling the drive using MyDrive® Insight, click *Continue* (2).
3. Use the *START*, *STOP*, and *COAST STOP* buttons (3) to perform drive operations. Use the sliders (4) to increase or decrease the reference speed.
4. To reset active faults whose triggering conditions have been removed, click *RESET FAULTS* (5).

NOTE: For protected faults, a reset requires power cycling the drive.

5. For ease of access, click the Pin button (6) to make the control panel be constantly visible on the screen.

2.6 Datalogger

The Datalogger feature in MyDrive® Insight enables the monitoring and recording of various signals and related data for selected drives.

1. Open Datalogger.
   a. Select the drive (1).
   b. Navigate to *Logs & Reports* > *Datalogger* > *Parameter datalogger* (2).

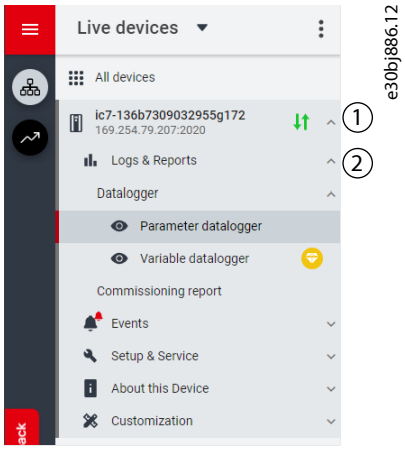


Figure 11: Navigating to Datalogger

The following image shows the Datalogger main controls:

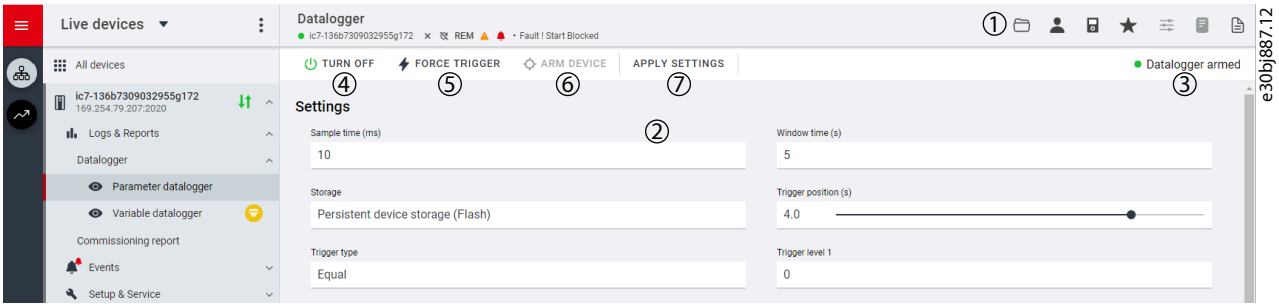


Figure 12: Datalogger Screen

1	Open the window to select available Datalogger files for viewing.	2	The list of Datalogger settings.
3	Datalogger status.	4	Enable or disable Datalogger. When disabled, all Datalogger configuration settings are inactive. When enabled, Datalogger is active and operates based on the configuration settings.
5	Force the trigger. This button triggers Datalogger manually.	6	Arm Datalogger. After clicking this button, Datalogger is ready for triggering.
7	Apply any changed settings.		

2. Select signals to monitor.

Click the *Add signal* button under the *Signals* heading. A *Signal* field appears. Click the *Signal* field to select the signals that are logged. The signal list opens in a new window:

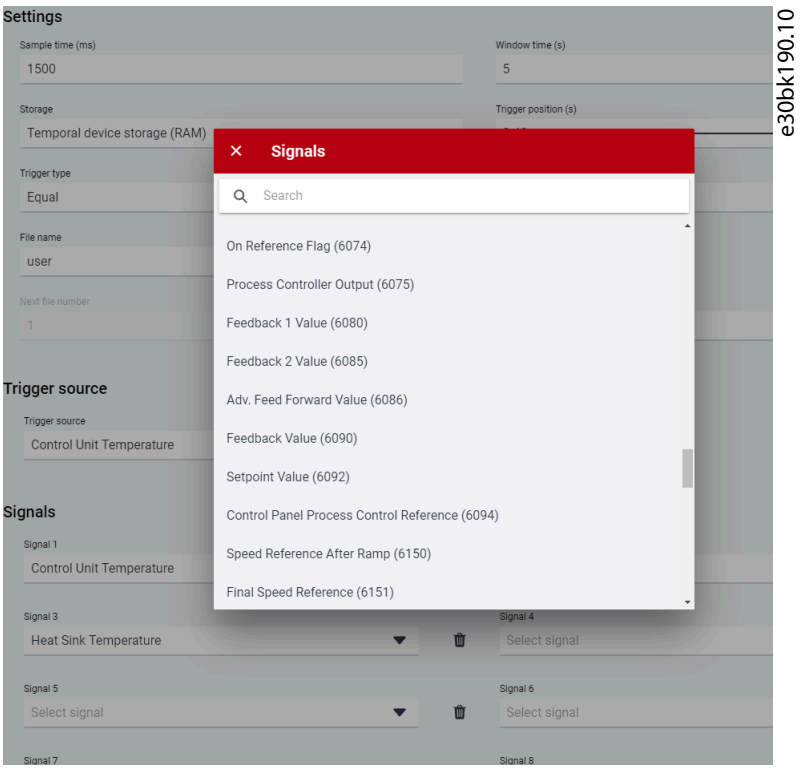


Figure 13: Signals List

3. Enter the required settings.

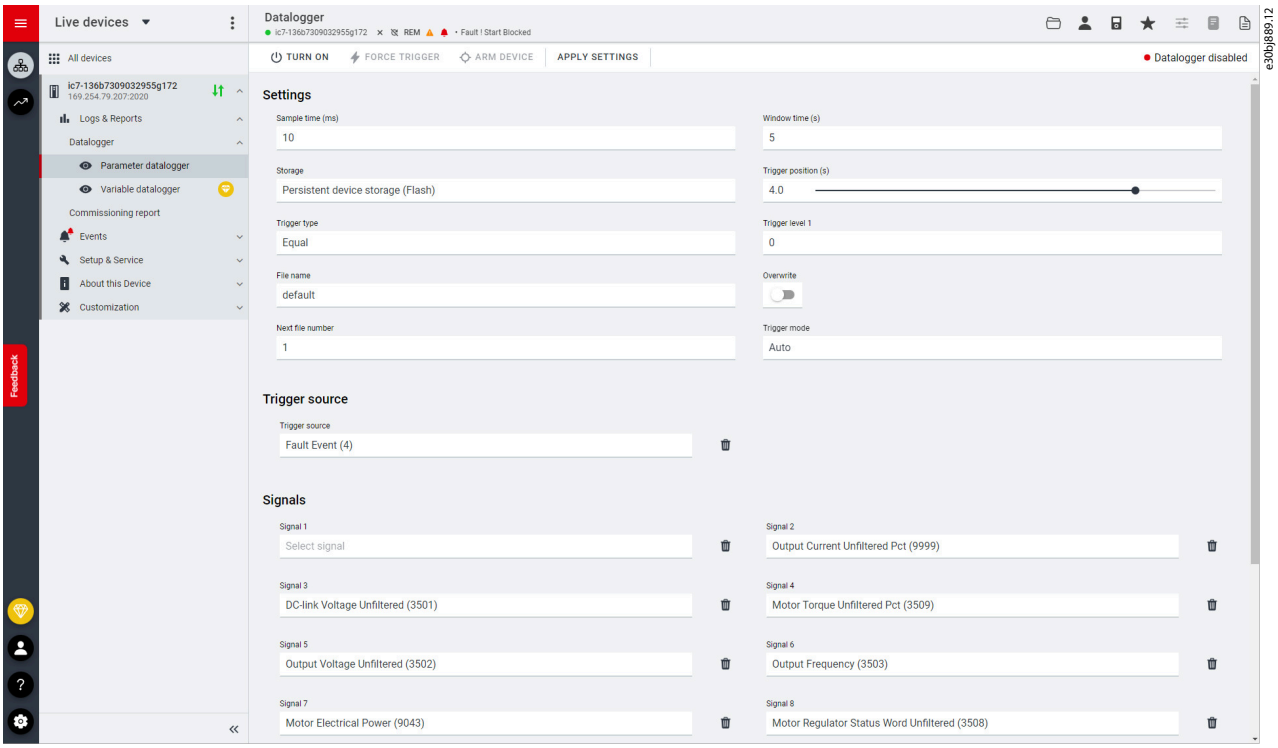


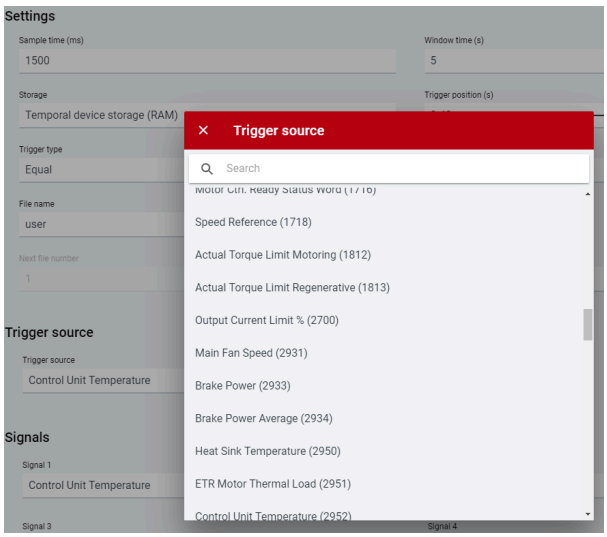
Figure 14: Datalogger Settings

The following table describes the Datalogger settings:

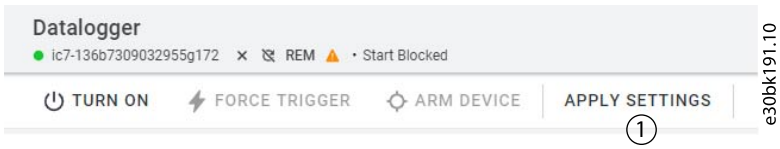
Table 2: Datalogger Settings Fields

Field name	Field description
Sample time (ms)	Set the frequency of the datalogger captures. Enter a sample time in ms.
Window time (s)	Define the length of a capture, or the size of the capture window. Enter the window time in seconds. High sample rates and large capture times that result in large capture files may be rejected when the configuration is applied.
Storage	Select the location to which datalogger capture files are stored. Available selections are: • **RAM**: Files are stored to the RAM of the drive. • **Flash**: Files are stored to the flash of the drive.
Trigger position (s)	Adjust the slider to set the position of the trigger in the capture window. Setting the trigger position to 0 means the datalogger capture starts at the time of the trigger. Setting a larger value means that the datalogger capture starts before the trigger has occurred.
Trigger type	Following are the trigger types: • **No trigger**(manual trigger only). • **Equal**triggers when the value of the trigger source variable is equal to trigger level 1. • **Not equal** triggers when the value of the trigger source variable is not equal to trigger level 1. • **Greater than**triggers when the value of the trigger source variable is greater than trigger level 1. • **Greater than or equal to** triggers when the value of the trigger source variable is greater than or equal to trigger level 1. • **Less than**triggers when the value of the trigger source variable is less than trigger level 1. • **Less than or equal to** triggers when the value of the trigger source variable is less than or equal to trigger level 1. • **Rising edge**triggers when the value of the trigger source variable rises above trigger level 1. If the trigger source is already above trigger level 1, the trigger must first drop below the trigger level. • **Falling edge**triggers when the value of the trigger source variable falls below trigger level 1. If the trigger source is already below trigger level 1, the trigger must first rise above the trigger level.
Trigger level 1	Defines the trigger level associated with the defined trigger type.
File name	Name of the file for datalogger capture.

Table 2: Datalogger Settings Fields - (continued)

Field name	Field description
Overwrite	To turn the overwrite function on or off, click the *Overwrite*-toggle button. • **On**: A file number is not appended to the data log file. Instead, the datalogger overwrites the previous datalog file. • **Off**: A file number is appended to the log file. For each logging, the datalog file is incremented and the previous datalog file is not overwritten.
Next file number	The number entered in this field is appended to the initial capture file. Entry in the field is useful when there are earlier capture files in the drive. The number is automatically incremented for each new capture file.
Trigger mode	Select 1 of the following trigger modes: • **Single:** After a datalog capture, the datalogger must be rearmed before another capture can be triggered. • **Auto:** After a datalog capture, the datalogger automatically rearms and can be triggered. Datalogger must be armed before the first capture.
Trigger source	Click the *Trigger source*field to select the signal source which is used for triggering the datalogger capture. The trigger can be a warning or fault event, for example. The trigger source list opens in a new window:  e30bk189.10 **Figure 15: Trigger Source List**

4. Click *Apply Settings*.



e30bk191.10

Figure 16: Apply settings

5. Click *Arm Device* to arm the datalogger.

Datalogger is now ready to capture the selected signals according to the settings.

To view recent captured datalog files, click the *Captures* button (1). The most recent files are shown in the *Captures* pane (2).

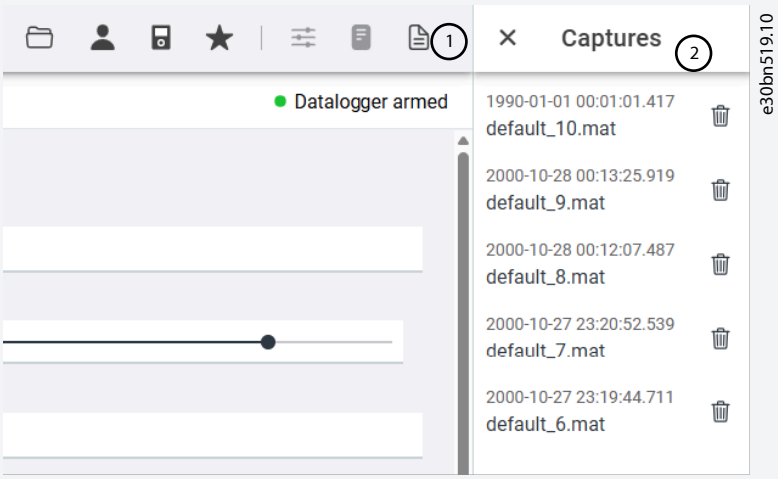


Figure 17: Captures

Alternatively, to view a captured datalog file, click the *Select Record* button shown in the following figure.

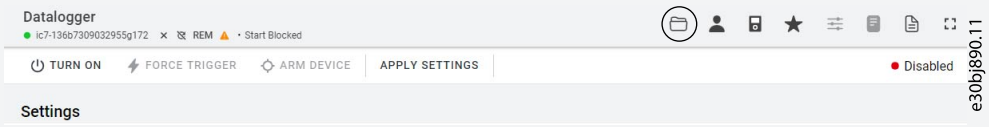


Figure 18: Select Record Button

2.7 Backup and Restore

2.7.1 MyDrive® Insight Backup

The Backup feature in MyDrive® Insight allows storing the parameter settings of the drive into a MyDrive® Insight project file or into storage on the drive (control panel, control card Flash memory, or an optional microSD card).

To use the microSD card as a storage device, the microSD card must be inserted in the slot on the interface module located behind the control panel, as shown in the following illustration.

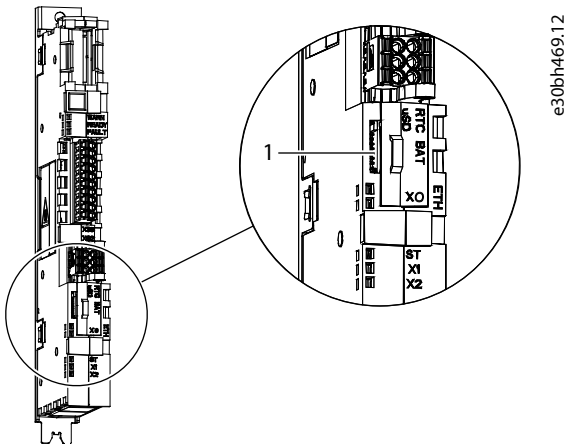


Figure 19: MicroSD Card Slot

1	The microSD card slot

The following are the types of microSD card supported by the interface module. The card must be formatted for the file system FAT32.

- Secure Digital (SD) card
- Secure Digital High Capacity (SDHC)
- Secure Digital Extended Capacity (SDXC)

NOTE: SDHC cards are recommended as they are delivered preformatted to FAT32.

2.7.2 Backing up the Drive

1. To back up a drive, select the drive and navegate to *Setup & Service* > *Parameters* > *Live*.
2. Click the *Create Backup* icon shown in the following figure.

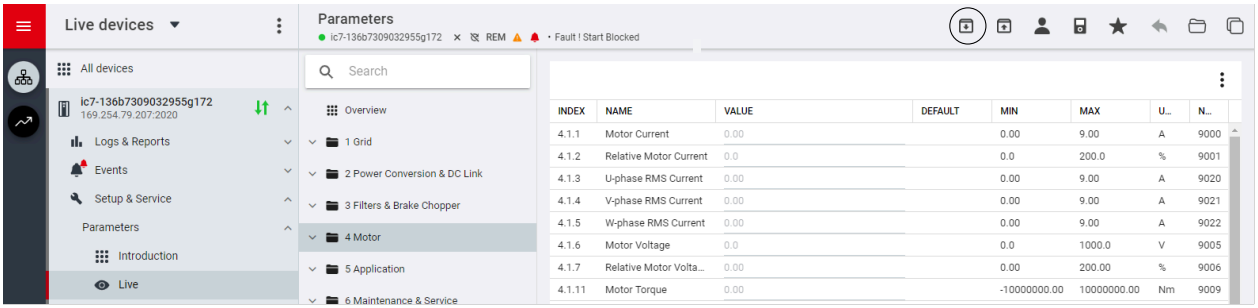


Figure 20: Create Backup icon

A screen to select the backup destination opens. The destinations for creting a backup file are:

- **Project:** Back up into an existing project or a new project.
- **Device file system:** Create a backup to 1 of the available memory devices of the drive.

3. Click *Next*.
4. This step depends on the backup destination selection:
   a. If *Project* was selected, give the backup file a name and description.
   b. If *Device file system* was selected, select where to save the backup. The selections are control panel, flash, RAM, or an (optional) microSD card. It is possible to specify a name for the backup file as well.
5. Click *Backup*.

Once backup is completed, a notification screen about it appears. If a *Project* backup was created, the backup is shown in the project menu under *Parameters*.

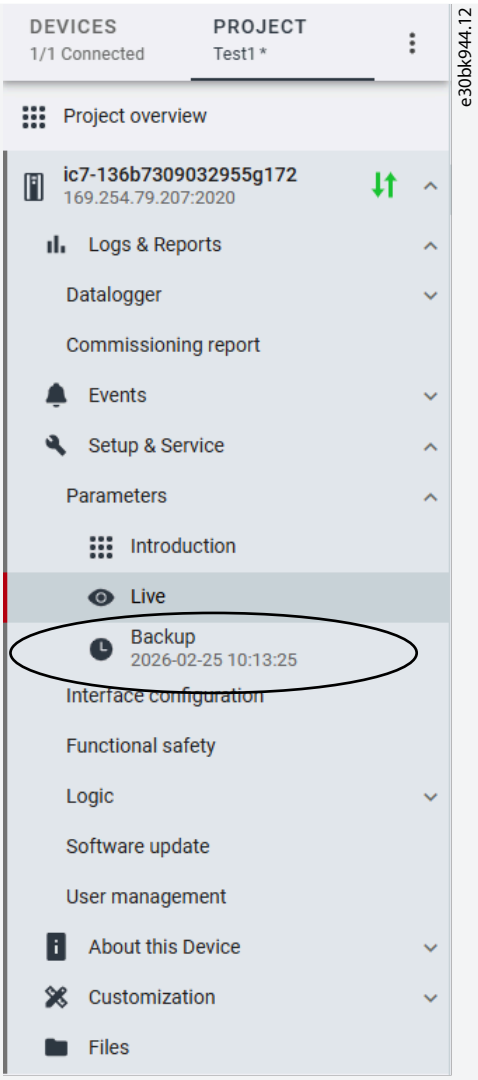


Figure 21: Backup File in the Menu

2.7.3 Restoring the Backup to the Drive

1. To restore backed-up data to a drive, select the drive and navigate to *Setup & Service* > *Parameters* > *Live*.
2. Click the *Restore* icon shown in the following image.

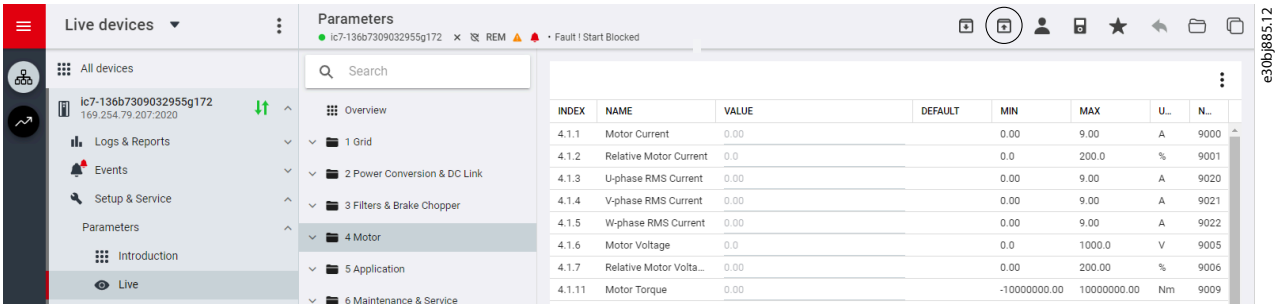


Figure 22: Restore Data Icon

3. Select the source of the backup which is to be restored to the drive.

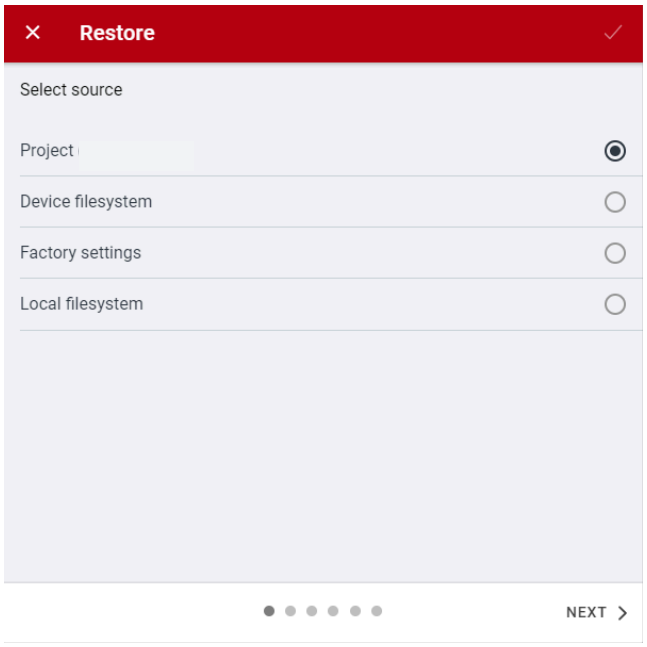


Figure 23: Source of Backup to Restore

4. If *Project* is the restore source, select the backup source device and view the available backup files.

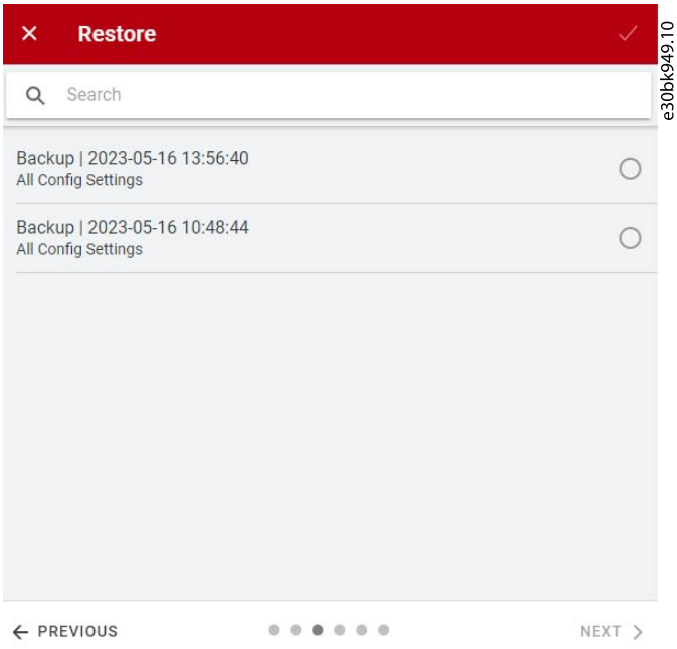


Figure 24: Select the Backup

5. Select the correct backup to restore.
6. The system shows a summary of the project to be restored and the device it will be restored to. Click *Compare* to compare contents of the backup to the current data on the target device.

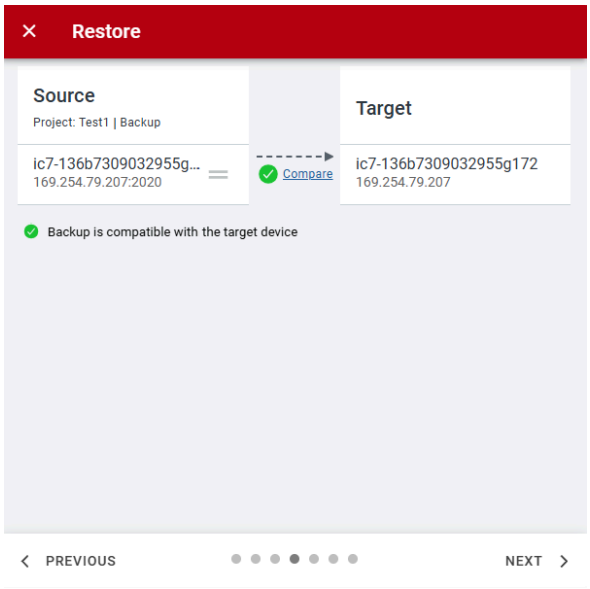


Figure 25: Restore summary

Click *Next* to proceed.

7. Select the files for restoring data into the drive, as shown in the following image, and click *Next*.

   It is possible to include or exclude Ethernet port settings when restoring the data. It is also possible to restore customizations, such as Modbus interface mappings.

> NOTE: To restore functional safety related values, log in as a Safety Admin user.

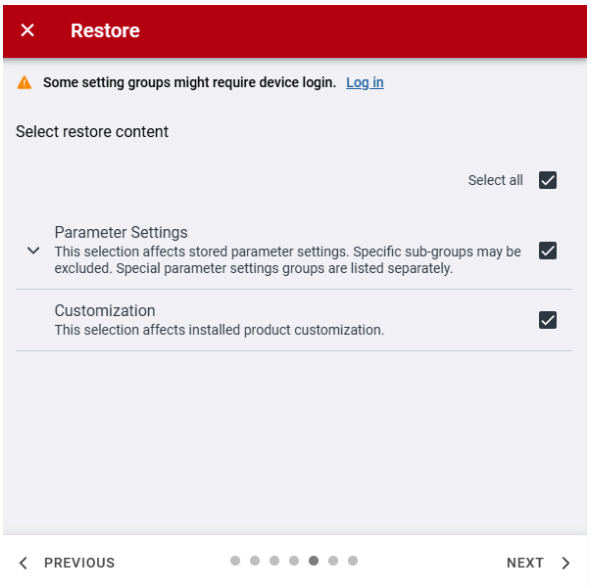


Figure 26: Restore Data

8. To confirm the restore action, click *Restore*.

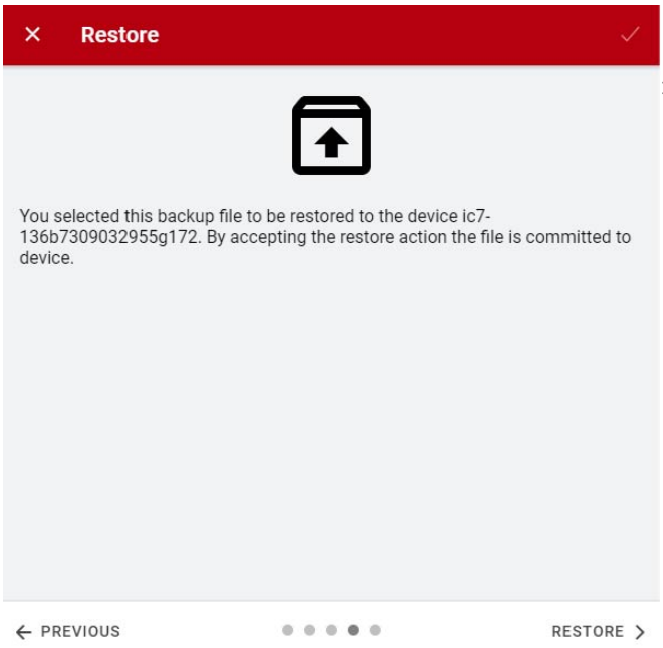


Figure 27: Confirm the Restore

After the data restore is successful, the system shows a summary of the results. The restore operation can be successful even if all the data was not restored.

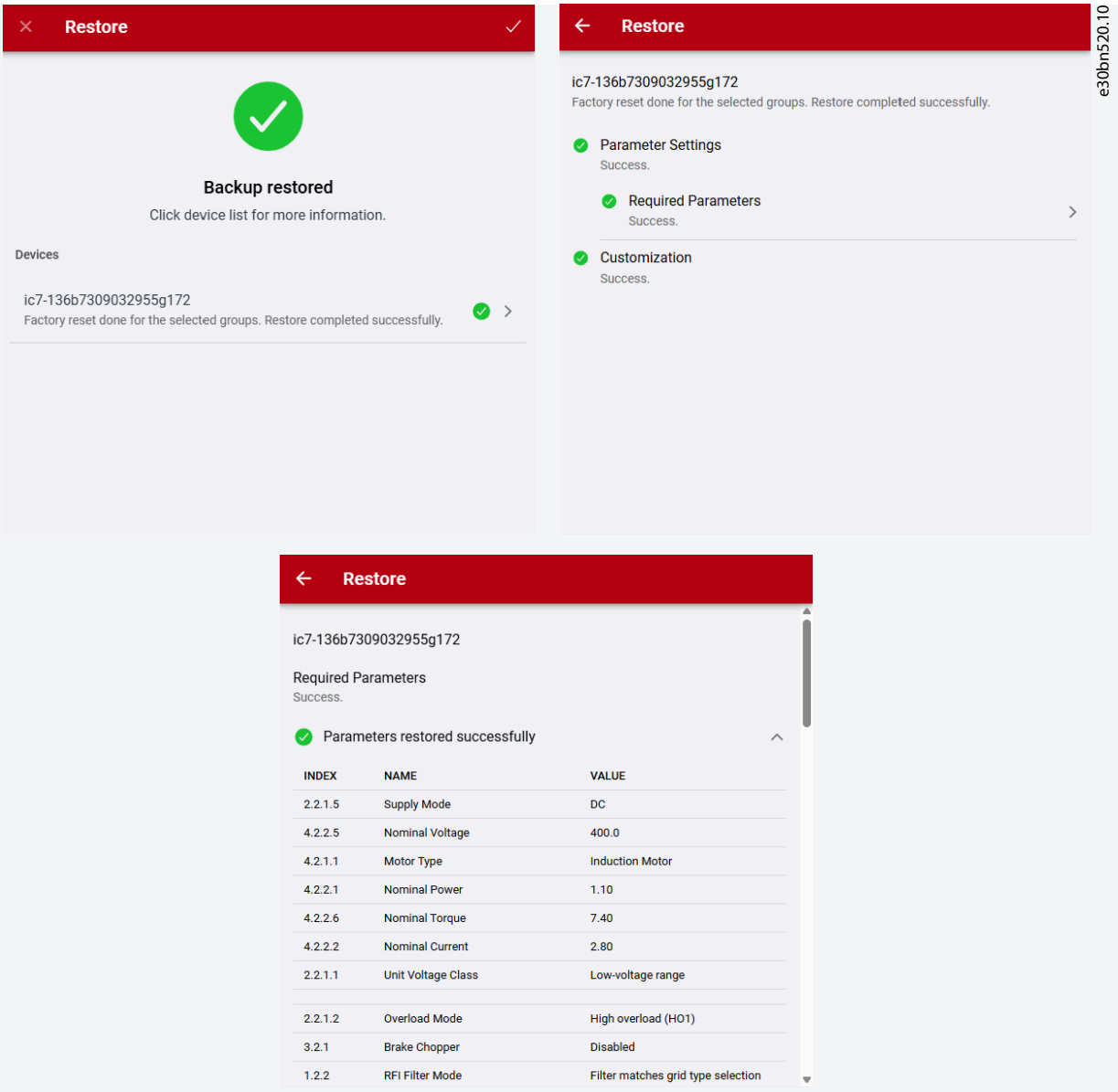


Figure 28: Data Restore Results

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