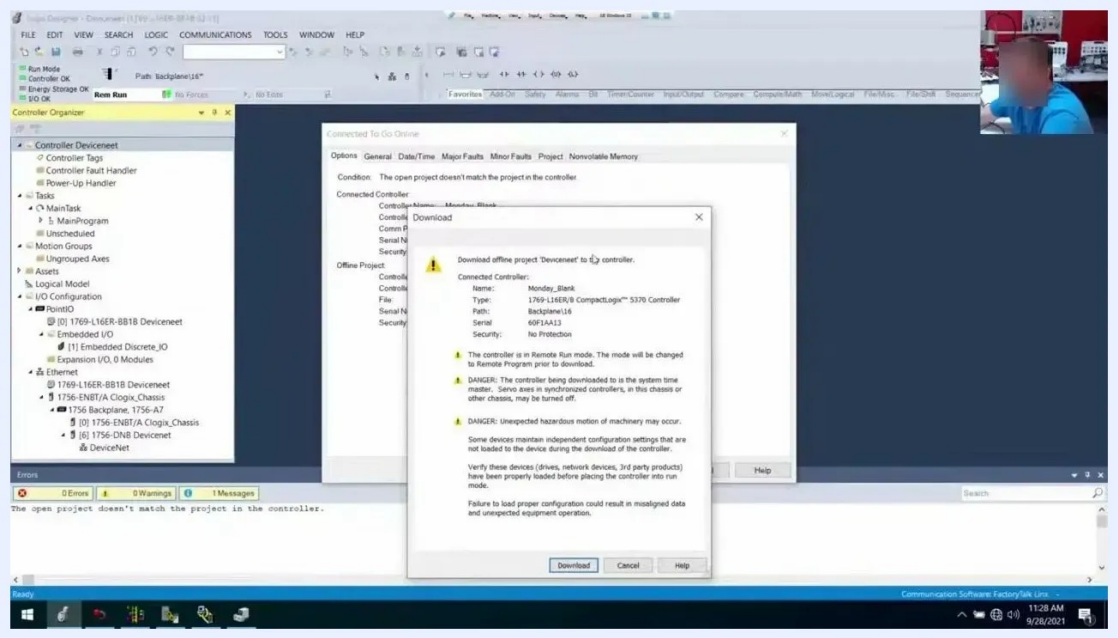
How to upload a PLC program in Studio 5000

This guide shows you how to upload a PLC program in Studio 5000 when you don't have a copy of the project file. You connect to the controller, check whether a project file you have matches it, and avoid an accidental download that overwrites the PLC's logic. If the file doesn't match, you cancel and save the program from the PLC to your computer.



Studio 5000 Download dialog with warnings, controller and project details, and Download/Cancel/Help buttons.

Prerequisites

- A PC with Studio 5000 and FactoryTalk Linx (or similar communication software).
- A connection to the PLC, such as USB or Ethernet.
- A folder on your PC where you can save the uploaded project, for example Documents.

Upload and download in PLC programming

In everyday use, "download" means moving files from the cloud to your device, and "upload" means sending files from your device to the cloud. In PLC programming, the terms are reversed:

- **Download:** Transfers a program from your PC to the PLC and overwrites the program currently in the PLC. There is no undo for this action.
- **Upload:** Retrieves the program from the PLC to your PC. Use it when you don't have a copy of the program file.

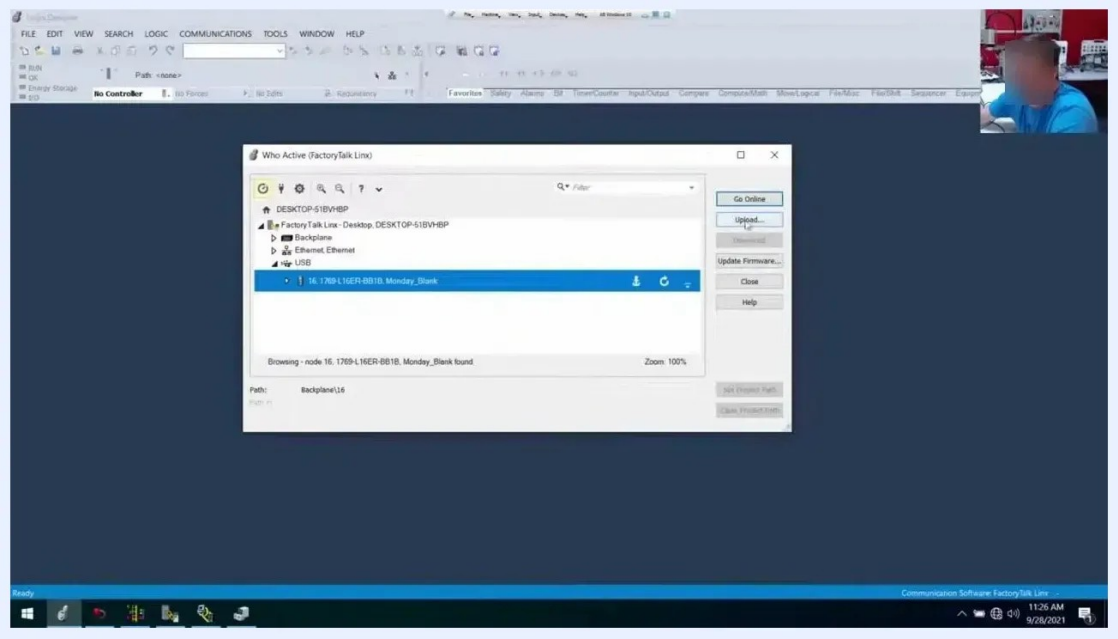
Step 1: Check the state of your programming software

If no file is open in your PLC programming software, the **Download** button may still be enabled. The available actions may be **Upload**, **Go Online**, and **Update Firmware**.

The software may not hide the **Download** button even when you shouldn't use it. Don't click it unless you are certain.

Step 2: Select your PLC in the Who Active dialog

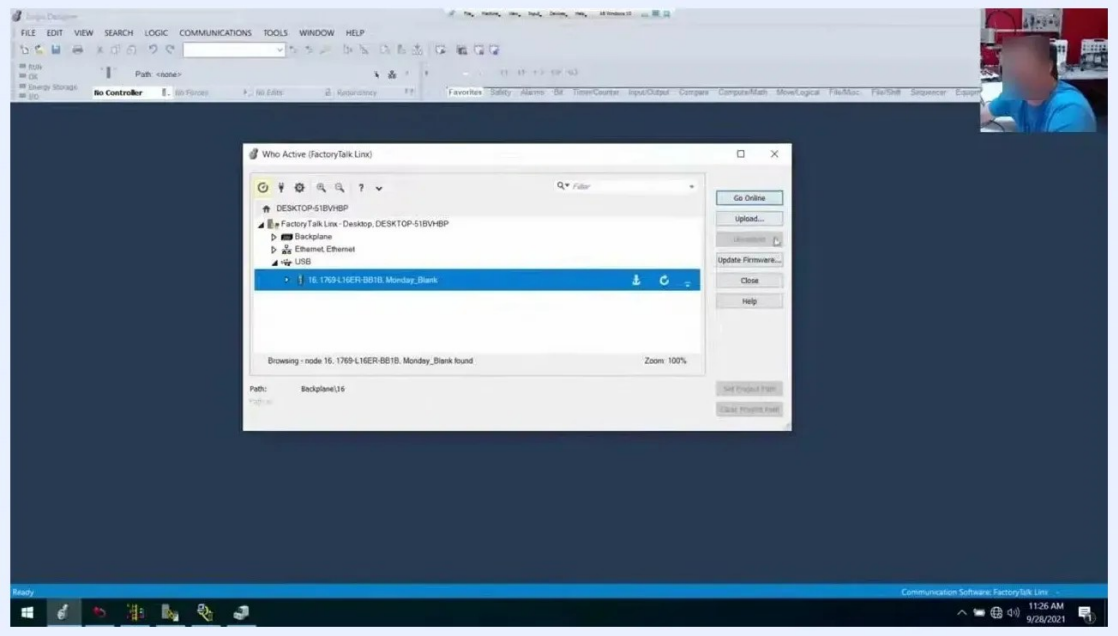
1. Open the **Who Active** dialog in FactoryTalk Linx (or similar software).
2. Locate your PLC under the appropriate communication path, such as USB or Ethernet.
3. Select the PLC node, for example "16.1769-L16ER-BB1B, Monday_Blank".
4. Choose the action that fits your situation.



PLC programming software with no file open, showing the Upload, Go Online, and Update Firmware actions, with the Download button visible

The actions are:

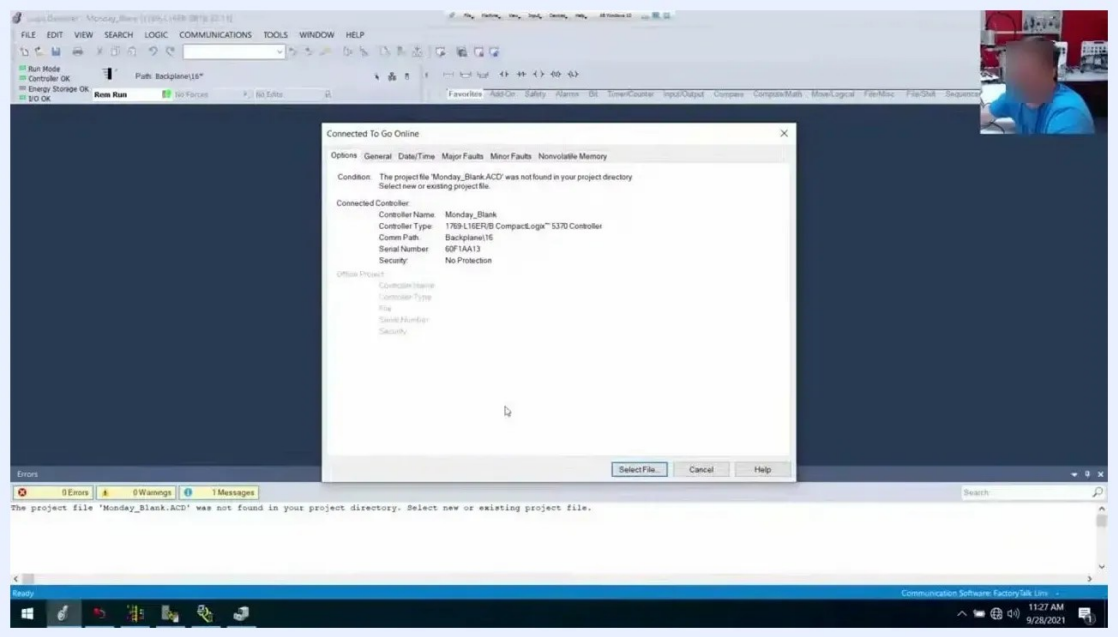
- **Go Online:** Use this if you have the correct file and want to monitor or edit the program.
- **Upload:** Use this if you need to retrieve the program from the PLC.
- **Update Firmware:** Use this only if you intend to update the PLC's firmware.



FactoryTalk Linx Who Active dialog with a PLC node selected and the Go Online, Upload, and Update Firmware actions available

Step 3: Click Go Online to test your project file

If you believe you have the correct project file for the controller, click **Go Online** in the **Who Active** dialog. The software then tries to match your project file with the program running on the PLC.



Who Active dialog with the Go Online button highlighted and the PLC node selected

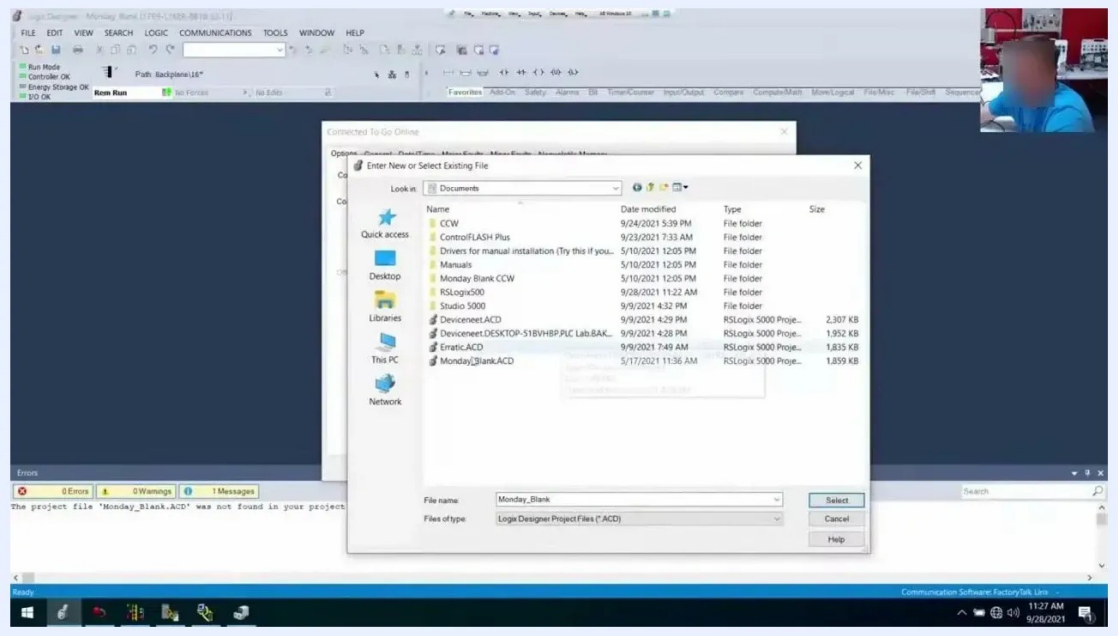
Step 4: Review the Connected To Go Online dialog

If the correct project file isn't open, the **Connected To Go Online** dialog shows this message: "The project file 'Monday_Blank.ACD' was not found in your project directory. Select new or existing project file."

The **Select File...** button is enabled, and the **Go Online** option isn't available. The dialog also lists the connected controller's details:

- Controller Name: Monday_Blank
- Controller Type: 1769-L16ER-BB1B CompactLogix 5370 Controller
- Comm Path: Backplane\16
- Serial Number: 60F1AA13

- Security: No Protection



Connected To Go Online dialog showing the missing project file message, the controller details, and the Select File button enabled

Step 5: Browse for a project file

Click **Select File...** to open a file browser. Navigate to your project files and look for a file that matches the controller or project you are working with.

In this example, the file "Devicenet.ACD" (the name is misspelled) is the one being considered.

Step 6: Select the file you think matches

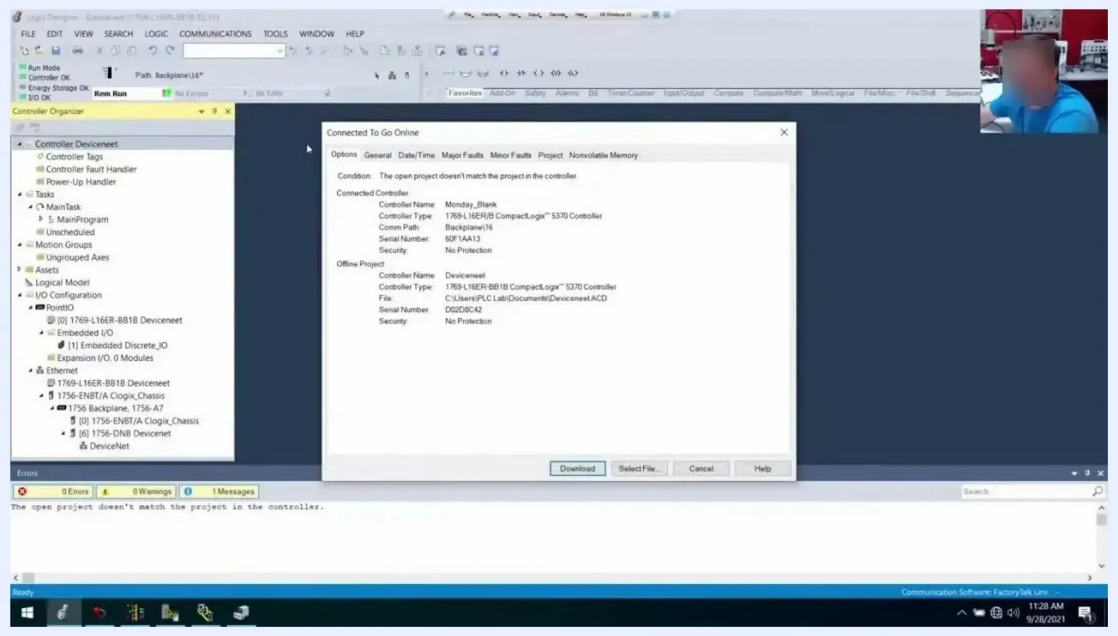
Select the project file you believe matches the controller, then click **Select**. The software tries to open the file and match it to the controller.

Step 7: Check whether the project matches the controller

If the selected file doesn't match the program in the controller, the dialog shows this warning: "The open project doesn't match the project in the controller."

The dialog compares the connected controller with the offline project:

- Connected controller: Name Monday_Blank, Type 1769-L16ER-BB1B CompactLogix 5370 Controller, Serial Number 60F1AA13.
- Offline project: Name Devicenet, Type 1769-L16ER-BB1B CompactLogix 5370 Controller, Serial Number D02D8242.



File browser open to the Documents folder, listing .ACD project files with Devicenet.ACD highlighted

The only prominent action now is the **Download** button.

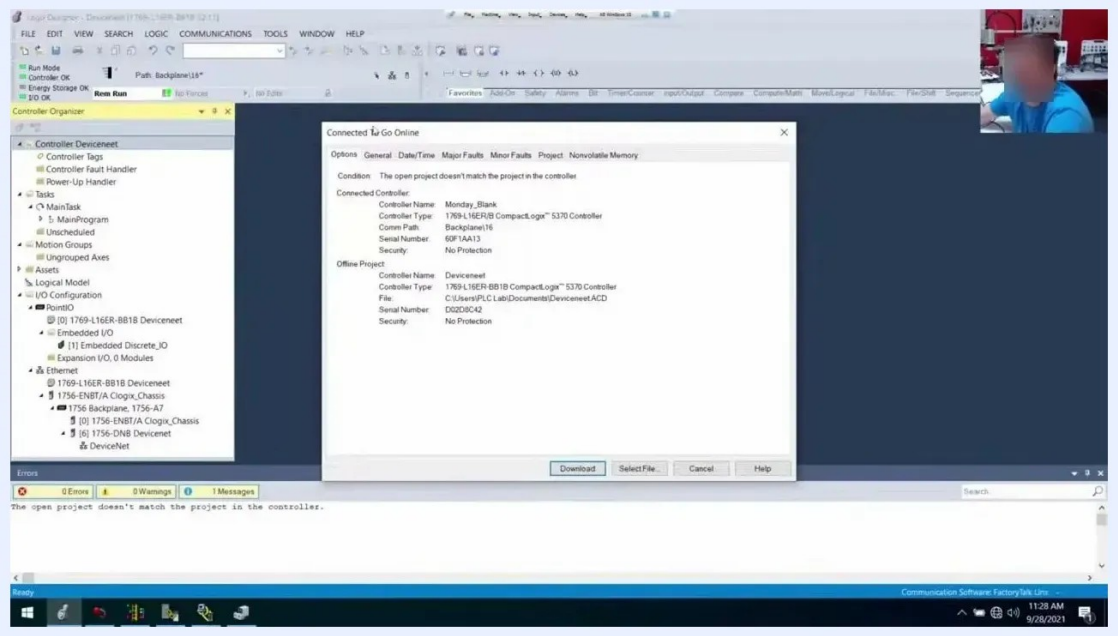
Step 8: Read the download warning

If the **Download** dialog appears, you are about to write a project to the controller. It shows a prominent warning: "Download offline project 'Devicenet' to controller."

Review every warning in the dialog. The warnings may include:

- The controller is in Remote Run mode and will be changed to Remote Program mode before the download.
- The controller is the system time master, and servo axes may be turned off.
- Unexpected hazardous motion of machinery may occur.
- Some devices keep independent configurations that the download doesn't load.

- Failing to load the proper configuration could cause misaligned data and unexpected equipment operation.

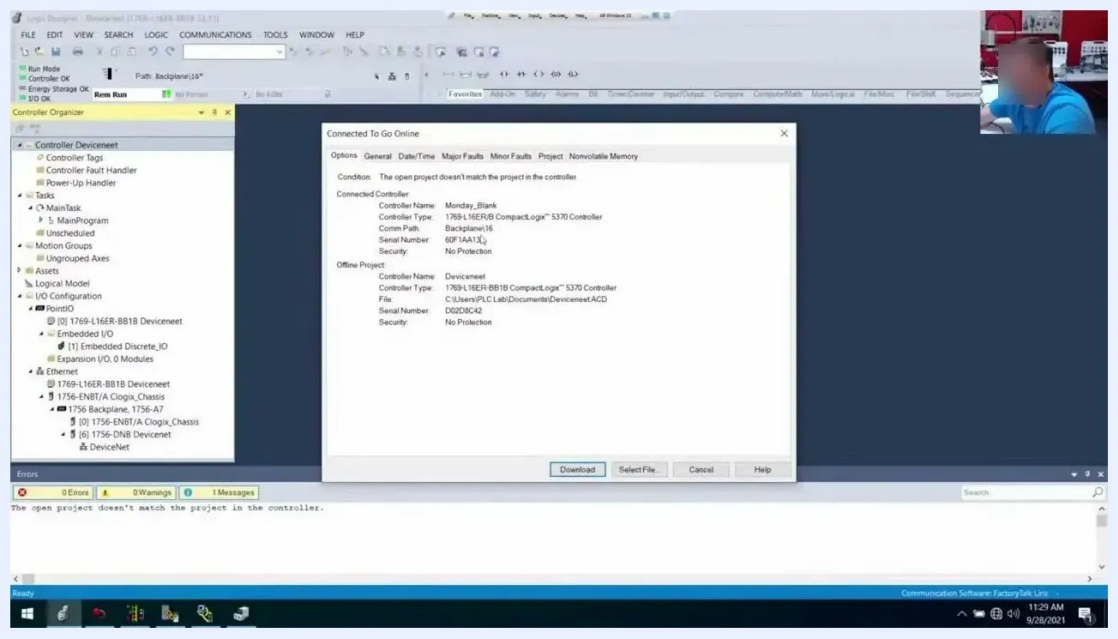


Connected To Go Online dialog showing a mismatch between the controller and the offline project, with the Download button highlighted

Don't proceed unless you fully understand the consequences.

Step 9: Compare the serial numbers

Every controller has a unique serial number. Compare the **Serial Number** of the connected controller (for example, 60F1AA13) with the **Serial Number** of the offline project (for example, D02D8242).



Connected To Go Online dialog with the controller and offline project serial numbers highlighted, showing a mismatch

If they don't match, you have the wrong file. You can't safely download or go online with it, so don't proceed.

Step 10: Cancel instead of downloading

When the project file doesn't match, Studio 5000 enables only the **Download** button. Clicking it overwrites the program running in the PLC with the selected offline project file. There is no undo.

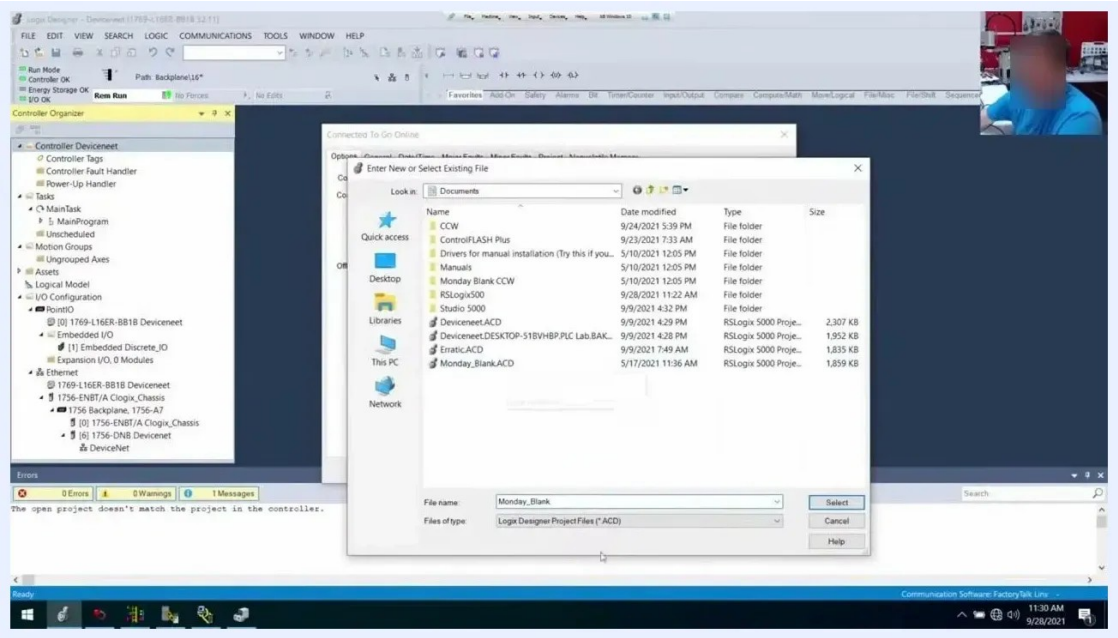
This dialog has no **Upload** button. This is a limitation in Studio 5000, unlike RSLogix 500, which offered the option. Don't click **Download** if you are unsure about the project file.

If you can't find the correct file, or the details don't match, click **Cancel**. Then use the Upload function from the main menu to retrieve the current program from the controller before you make any changes.

Step 11: Choose where to save the uploaded program

To upload the program from the PLC, select **Select File** to specify where to save the uploaded project. The **Enter New or Select Existing File** dialog opens.

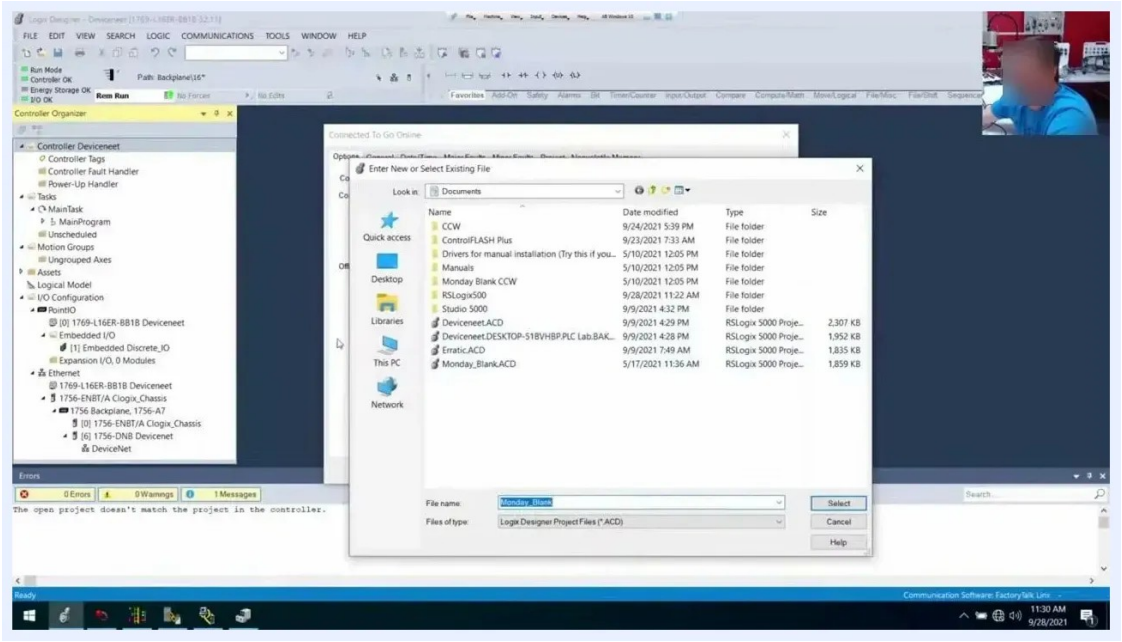
1. Navigate to the folder you want, for example Documents.
2. Enter a file name that doesn't already exist, for example "Monday_Blank".
3. Make sure the file type is **Logix Designer Project Files (*.ACD)**.



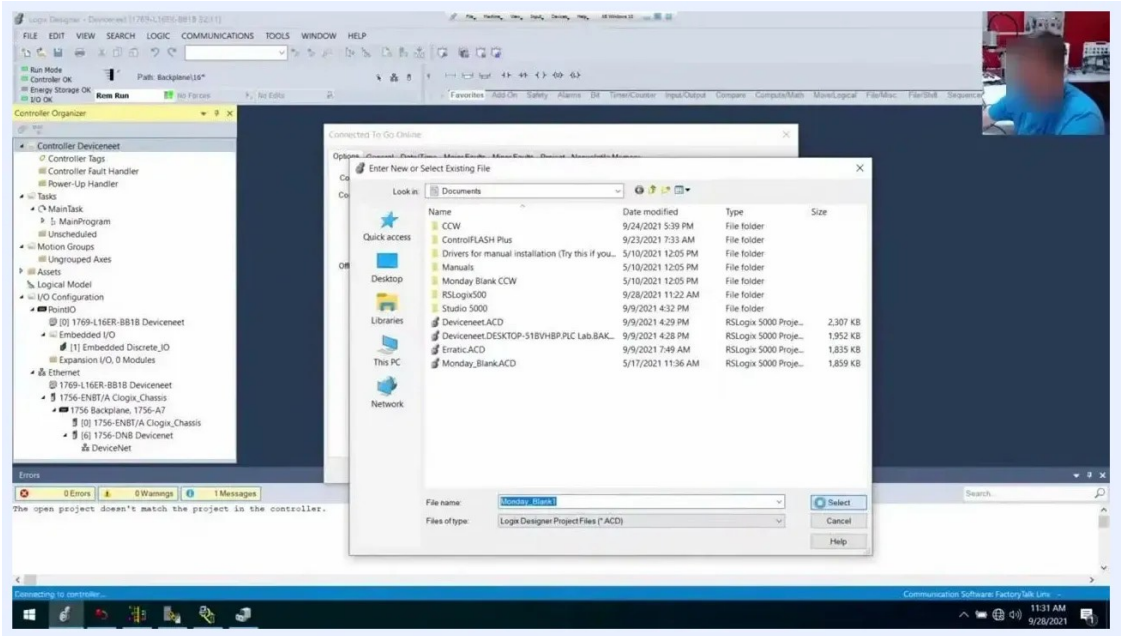
File dialog showing Monday_Blank as the file name, ready to be saved

Step 12: Avoid overwriting an existing file

If a file with the same name already exists, change the name so you don't overwrite it. For example, if "Monday_Blank" already exists, you might use "Monday_Blank1" or another unique name. Confirm the file name in the dialog before you continue.



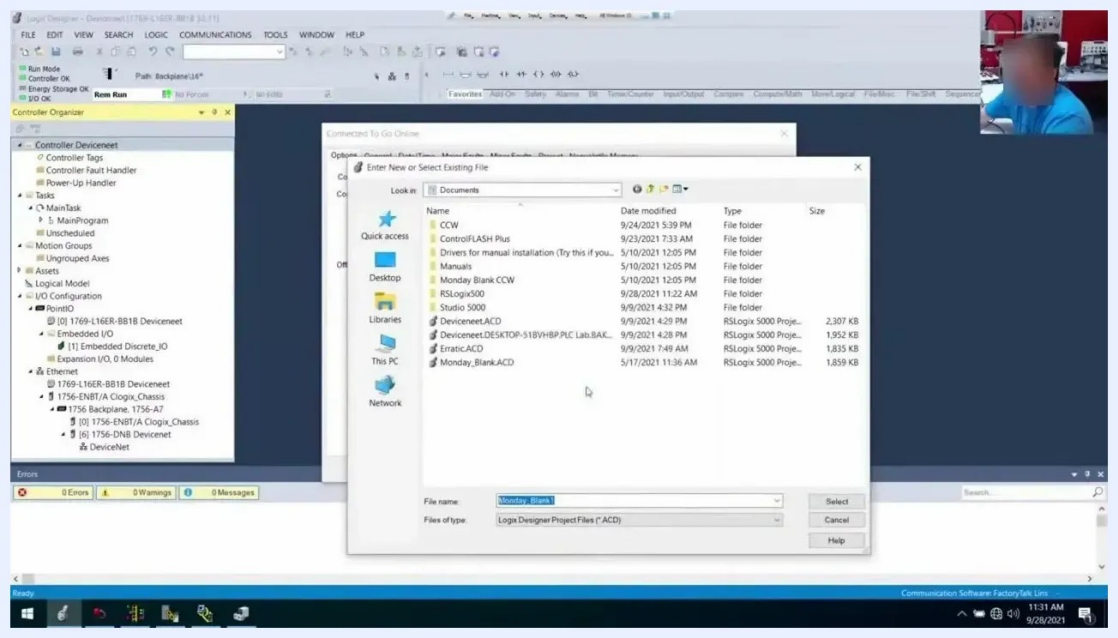
File dialog open to the Documents folder with Monday_Blank entered as the file name and Logix Designer Project Files selected as the file type



File dialog with Monday_Blank as the file name and the Select button highlighted, just before the upload begins

Step 13: Click Select to upload the program

Click **Select** to confirm your file name and location. The software begins uploading the project from the PLC to your file. A progress indicator or a brief delay may appear while the upload completes.



File dialog still open while the upload finishes and the file is created

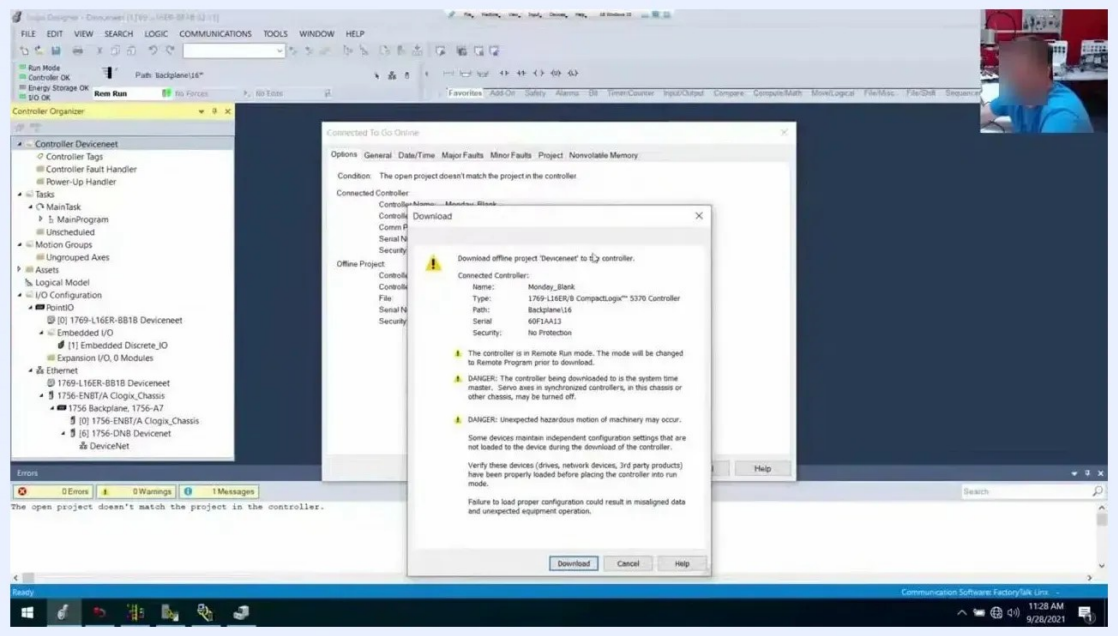
Step 14: Confirm the upload is finished

When the upload completes, the project file is saved in the location you chose. You now have a copy of the PLC program on your computer for editing or backup.

Summary

- Verify that your offline project file matches the controller before you go online.
- Check the file name, controller type, and serial number when the software prompts you to select a file.
- Make sure the serial numbers are identical.
- Read and understand every warning before you download.
- If only **Download** is offered after a mismatch, stop and reassess. An accidental download can erase the current PLC program.

- If you are unsure or don't have the correct project file, cancel and upload the program from the PLC.



Download dialog with detailed warnings about overwriting the controller, the controller and project details, and the Download, Cancel, and Help buttons

What's next

If you are not certain about your project file, cancel the operation and use the Upload function to retrieve the current program from the PLC before you make any changes. After the upload, you can open the saved .ACD file for editing or keep it as a backup.