

Quickstart Guide | EN

CU81x0

Uninterruptible Power Supply

1 Quickstart

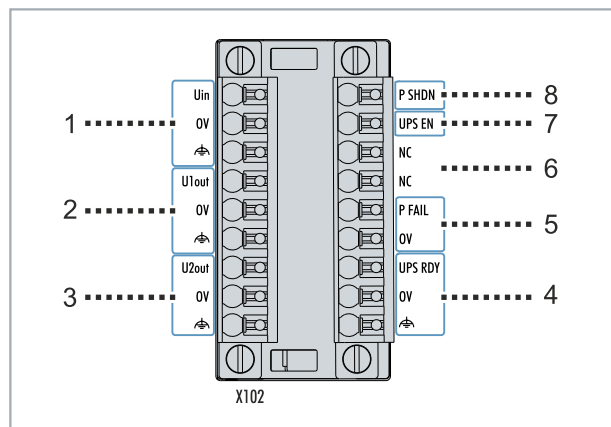
This manual describes the most important steps for commissioning the UPS with USB connection. Detailed documentation is available for download at: www.beckhoff.com

1.1 Connecting the Power Supply

An external power supply unit that provides a 24 V DC voltage (-15 % / +20 %). is required to supply power to the UPS. Connect the external power supply unit to the Uin input of the UPS.

Selecting the appropriate power supply unit

Dimension the power supply unit according to the maximum power consumption of the connected devices, including the current consumption when charging the UPS.



For the 9-pin connectors, cables with a cross-section of 0.5 mm² to 1.5 mm² or AWG20 to AWG16 are needed. A maximum of 1 mm² or AWG 17 with ferrules are permissible.

No.	Pin	Description
1	Uin, 0V, PE	+24 V DC input, power supply for UPS.
2	U1out, 0V, functional earth	+24 V DC UPS output with UPS-OCT support, interface for the device being supported.
3	U2out, 0V, functional earth	+24 V DC UPS output, interface for a second device being supported e.g. control panel (display).

1.2 Connecting the Industrial PC

If you sustain an additional device, the interfaces U1out and U2out combined must not exceed the maximum output current of the UPS.

1. Connect the Industrial PC to the U1out output.
2. Connect the Industrial PC to the USB interface of the UPS.

1.3 Installing the UPS Software

NOTICE

Older UPS software versions may cause errors during installation, since it may not be possible to update all files. First uninstall the existing UPS software.

The UPS software is compatible with Windows 7 or Windows 10 (32 and 64 bit). Latest installation file available under: <https://download.beckhoff.com/download/software/embPC-Control/Tools/CU81x0>

1.4 Configuring the Software

This step shows how to configure the UPS in the Beckhoff UPS software. Two of the most important settings that affect the behavior of the UPS in the event of a power failure are:

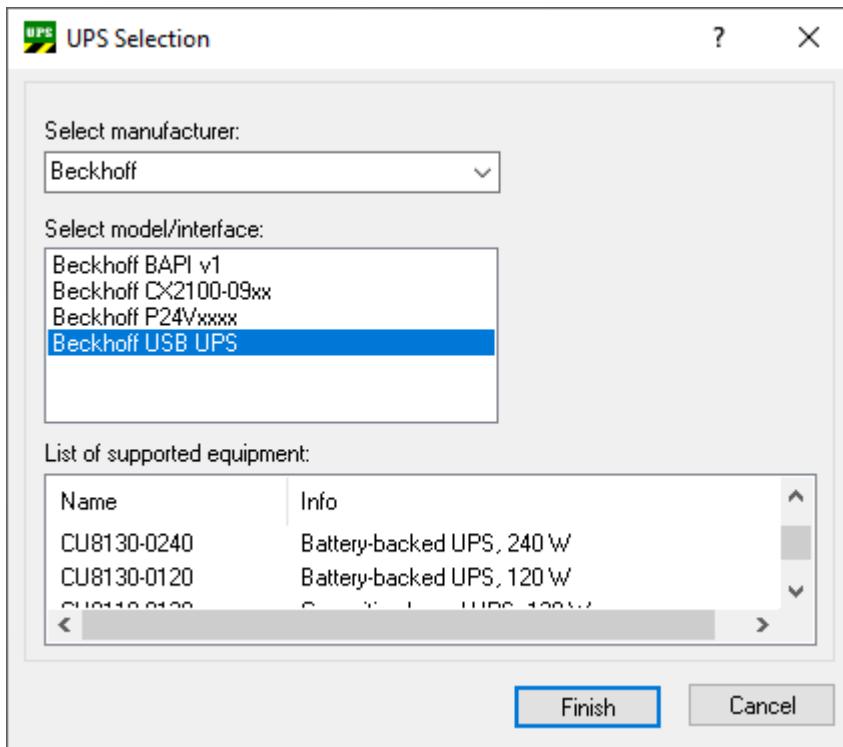
- Max. time on battery before critical alarm
- and Turn UPS off wait time.

In the software, set the time after which the critical alarm should be triggered and the Industrial PC should be shut down in the event of a power failure.

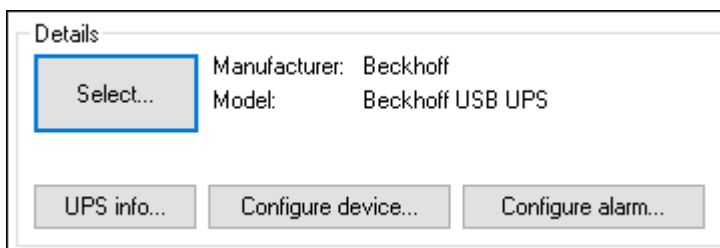
In the next step, define the time after which the ups should switch off its supply outputs. Note that the industrial PC must be shut down properly within this period. Make sure that you do not set a value that is too low and that the set time covers the entire shutdown process.

Proceed as follows:

1. Start the UPS software and click **Select**.
2. Select **Beckhoff USB UPS** to configure the communication to the Industrial PC via USB.



3. Click **Finish** and in the main menu click **Apply** to start the UPS service.
4. The UPS service is running if the manufacturer and the communication type are displayed in the main menu.



5. Click on the Configure alarm button and define under **Max. time on battery before critical alarm**, after which the critical alarm should be triggered in the event of a power failure. The critical alarm is not triggered if the power supply returns within the set time.

The screenshot shows the 'Configure Alarm' dialog box. The 'Critical alarm' section is highlighted with a red box. It contains the following settings:

- ☐ Enable all notifications.
- Seconds between power failure and first notification: 5
- Seconds between subsequent power fail notifications: 20
- Critical alarm:**
 - ☒ Max. time on battery before critical alarm: 2 minutes
 - ☐ When the alarm occurs, run this program (task):
 - ☐ Task Scheduler v1.0 (not recommended) [New... Edit... Run]
 - ☒ Finally, turn off the UPS
 - Turn UPS off wait time [s]: 180

Buttons at the bottom: Advanced..., Factory Defaults, OK, Cancel.

6. Under **Turn UPS off wait time**, determine the time after which the UPS should switch off its outputs. Define a time period in which the industrial PC has sufficient time to shut down properly. Always plan for a sufficient headroom.

The screenshot shows the 'Configure Alarm' dialog box. The 'Finally, turn off the UPS' section is highlighted with a red box. It contains the following settings:

- ☐ Enable all notifications.
- Seconds between power failure and first notification: 5
- Seconds between subsequent power fail notifications: 20
- Critical alarm:**
 - ☒ Max. time on battery before critical alarm: 2 minutes
 - ☐ When the alarm occurs, run this program (task):
 - ☐ Task Scheduler v1.0 (not recommended) [New... Edit... Run]
 - ☒ Finally, turn off the UPS
 - Turn UPS off wait time [s]: 180

Buttons at the bottom: Advanced..., Factory Defaults, OK, Cancel.

The outputs of the UPS are irrevocably switched off after the delay time has elapsed, even if the power supply returns.

- ⇒ In this example, in the event of a power failure, the critical alarm is triggered after two minutes and thereafter the Industrial PC is shutting down. As soon as the critical alarm is triggered, the set countdown of 180 seconds is started. The shutdown of the Industrial PC must be successfully completed within this time (180 seconds), since the outputs of the UPS are switched off directly after the 180 seconds have elapsed.

More Information:
www.beckhoff.com/CU81xx

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