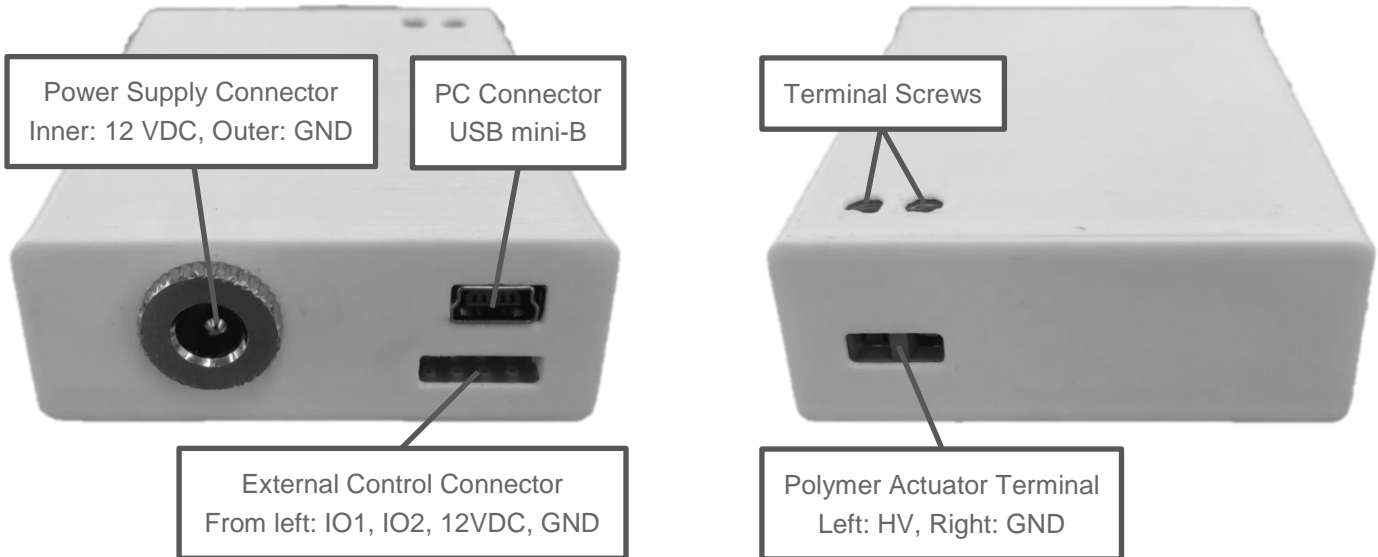


Manual CTcontrol1200.2 Polymer Actuator Controller

Overview



Safety

Always completely discharge the Polymer Actuator and disconnect all connectors from the controller, before you do any handling to the Polymer Actuator, cables or terminal.

Polymer Actuator

Connect the Polymer Actuator cables to the terminal referring the image above.

Power Source

The controller can be powered by PC, power supply or external control connector. Do not use the power supply and a power source via external control connector at the same time. If only the PC is used as power source, the controller runs with reduced power which leads to longer charging times of the Polymer Actuator.

PC Control

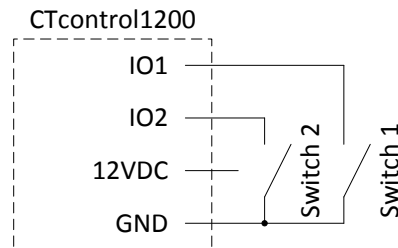
Use CTinterface to control and set up the controller by PC via USB cable. CTinterface can be downloaded from the CTsystems webpage.

External Control

Digital Mode

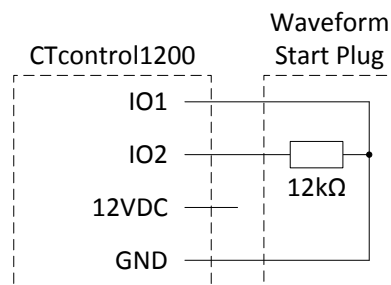
The digital mode allows to control the voltage or waveform execution by switching the digital IO's. The controller reacts after the IO has been grounded for at least 100ms and then released again. The actions are:

IO	Action
1	Voltage decreases by one voltage step (stops waveform execution)
2	Voltage increases by one voltage step (stops waveform execution)
1+2	Waveform execution starts



Use CTinterface to switch the controller to digital mode and to set the number of voltage steps. Close CTinterface and power off the controller to apply changes.

To automatically start the waveform execution when the controller is powered on, connect a waveform start plug to the external control connector. Make sure that the 12VDC pin remains free.



Bus Mode

The bus mode allows control of all functions of the polymer actuator controller via I2C bus. Both USB and I2C communication can be used simultaneously. The communication protocol of the I2C bus is identical to the protocol of serial communication via USB. The protocol documentation can be downloaded from the CTsystems website.

The CTcontrol1200 uses 5V TTL logic levels. If a bus master with different logic levels is used, a bidirectional logic level converter should be used to translate the logic levels.

Use CTinterface to switch the controller to bus mode and set the device number (I2C address). Close CTinterface and power off the controller to apply changes.

