

PLC Starter Kit

SKU - AKX00051

Barcode - 7630049204676

Plug into the future of industrial automation with the PLC Starter Kit, designed to bridge between theory and practice, closing the gap in current PLC education and preparing students for real-world challenges.

Overview

Programmable Logic Controller (PLC) technology is vital for industrial automation, but gaps still exist between current PLC education and industry. To cultivate a robust industrial workforce, Arduino introduces a dedicated educational kit - Arduino PLC Starter Kit.

With this kit, you get 20+ hours of lessons with the Explore PLC course. Students can learn about Programmable Logic Controllers, Modbus RS-485 communications, and integration with industrial simulated systems, among other comprehensive topics.

There's also support for five PLC programming languages, which means you can program the kit effortlessly using the Arduino PLC IDE. This user-friendly environment simplifies PLC programming for both you and your students. Choose from any of the five programming languages defined by the IEC 61131-3 standard (Ladder, Functional Block Diagram, Structured Text, Sequential Function Chart, or Instruction List) to swiftly code PLC applications or port existing ones to Arduino Opta.

Additionally, the Arduino Opta WiFi can be programmed and integrated into an industrial automation system with our powerful IDE 2. The Arduino IDE 2 is a huge improvement on our classic IDE, with increased performance, improved user interface, and many new features, such as autocompletion, a built-in debugger and syncing sketches with Cloud.

Cloud-ready hardware

The PLC Starter Kit integrates seamlessly with Arduino Cloud services for IoT projects, enabling remote control functionalities for both classroom and real-world scenarios. This is our simplest and low-code way to get started with connected projects.

All hardware provided with the kit is fully documented in the [Arduino Docs](#) website, where hundreds of tutorials, datasheets, guides and technical documentation are published.

Key benefits include:

- Pro industrial automation with **reliability and power for complex projects**
- Learning content that **aligns with the industrial automation curriculum**
- Programming that is **easy, approachable, and efficient**
- **Dive straight into practical applications** with Arduino's signature ease-of-use, flexibility, and a vast library of software

PLC Starter Kit Course

With 20 hours of projects and many more tutorials, you have everything you need to teach programmable logic control in your classroom.

Projects include getting started, an introduction to the software, PLC history, communication protocols, digital input simulator learning, networks, and counting - all accessed through one easy-to-use portal connected to the Arduino Cloud.

[Free course: Explore PLC](#)

Need help?

Check the Arduino Forum for questions about the [Arduino Language](#), or how to make your own [Projects with Arduino](#). You can also find out more about [Arduino Cloud for Schools here](#).

If you need any help with your product, please get in touch with the official Arduino User Support as explained in our [Contact Us](#) page.

Tech specs

- Hardware:
 - Arduino Opta WiFi
 - STM32H747XI Dual Arm® Cortex® processor
 - 8x configurable digital / analog (0-10 V) input
 - 4x relays (250 V AC - 10A) output
 - Support 10/100 Ethernet (TCP/IP or Modbus TCP)
 - USB-C®
 - Wi-Fi® + Bluetooth® Low Energy
 - RS485 half duplex
 - Arduino DIN SIMUL8
 - 8 SPDT Toggle Switches
 - 8 signal lines
 - Barrel Plug for power supply
 - DIN bar mount
 - Arduino DIN CELSIUS
 - TMP236A2DBZR Temperature Sensor
 - 24 V power lines for the 2 independent heater arrays
 - DIN bar mount
 - Other:
 - 20 cm double-ended cable - white
 - 20 cm double-ended cable - black
 - 20 cm double-ended cable - red
 - USB-C® Cable
 - 24 V 2A Power Supply
 - Programming languages
 - Arduino programming language via any IDE
 - IEC-61131-3:
 - Ladder Diagram (LD)
 - Function Block Diagram (FBD)
 - Sequential Function Chart (SFC)
 - Structured Text (ST)
 - Instruction List (IL)

Documentation

Arduino Opta WiFi

- Pinout in .pdf - <https://content.arduino.cc/assets/AFX00002-full-pinout.pdf>
- Datasheet in .pdf - <https://docs.arduino.cc/resources/datasheets/AFX00001-AFX00002-AFX00003-datasheet.pdf>

Arduino DIN SIMUL8

- Pinout in .pdf -
- Datasheet in .pdf -

Arduino DIN CELSIUS

- Pinout in .pdf -
- Datasheet in .pdf -