



# PROGRAMMABLE LOGIC RELAYS

The unique new 8A Series of PLRs from Finder and Arduino







## **ABOUT US**

**Finder** was founded in Italy in 1954. Since then it it has been designing and manufacturing a wide range of electromechanical and electronic components for both the residential and industrial sectors.

Today, thanks to its global vision, Finder now distributes its products around the world through a network of 29 company-owned subsidiaries and more than 80 trade partnerships.

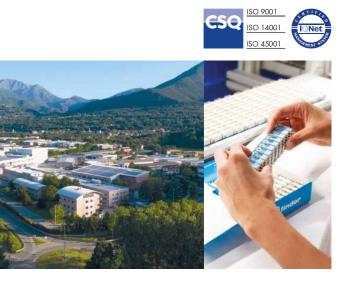
Finder is an international family made up of more than 1300 individuals, all united by the same values and passion for our products.

## 14 500

Different products to satisfy a myriad of applications. From products at the heart of automation to the control of machines, power, time, temperature, liquid level, light and much more.

FINDER IS AN ITALIAN BRAND WITH A WORLDWIDE PRESENCE





### OUR PRODUCTS CARRY MORE CERTIFICATIONS THAN ANY OTHER RELAY MANUFACTURER





## WHAT IS FINDER OPTA?





### PROGRAMMABLE LOGIC RELAYS 8A Series

A range of simple and self contained **PROGRAMMABLE LOGIC RELAYS** perfect to create simple applications in industrial automation, OEM and building automation sectors.

Programmable both with a traditional language IEC 61131-3 (Ladder) as well as with an innovative and open source language (IDE / ARDUINO).

Made in ITALY by Finder, it combines Finder's industrial experience with ARDUINO's technological innovation, for a truly **unique product**.



WITCH TO THE EUTUR





FINDER OPTA is the first ever PROGRAMMABLE LOGIC RELAY.

Drawing on Finder's world class manufacturing capability and the ARDUINO innovative platform has resulted in a truly unique range of products.





# MADE IN ITALY

Created in partnership with ARDUINO, the OPTA range was designed and is manufactured and tested in Finder's Headquarters in Almese, ITALY.

### FROM THE IDEA TO THE FINISHED PRODUCT.











### Millions of users and thousands of companies use Arduino as an innovation platform

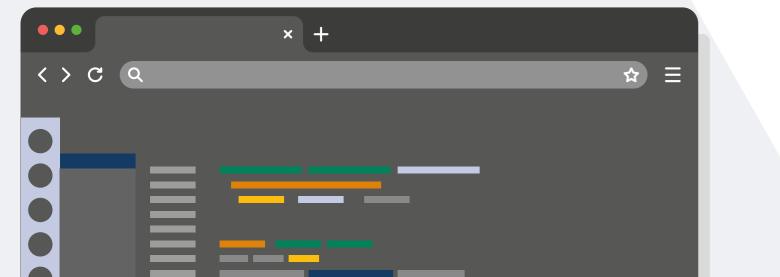
Arduino has drawn on their experience in frictionless design to enable enterprises to quickly and securely connect remote devices to business logic within one simple IoT application development platform.

# THE ARDUINO PLATFORM OFFERING





+39 million downloads per year.





+4,000 official libraries available on the platform, for all kinds of applications.



+1 million active users on the Arduino forum and community.





OPEN SOURCE and LICENSE FREE for all.





## OPT **PROGRAMMABLE LOGIC RELAYS 8A Series**

# **COMMUNICATION PROTOCOLS**





8 inputs and 4 outputs

8



Ethernet



USB (type C port)





### **POWERFUL**

The powerful dual-core Cortex<sup>®</sup> M7+M4 chip allows a large number of computing operations in real time. Ideal for predictive maintenance applications.



### CONNECTED

Thanks to the RJ45 port, the USB (type C port), RS485 and WiFi/BLE integrated module.



### SECURE

Thanks to an high end integrated secure element chip to manage encryption and data keys in all kinds of applications.



Programmable with OPEN SOURCE, LICENCE FREE software (IDE ARDUINO) as well as IEC 61131-3 languages (LADDER, FBD).



## EASY

Designed to simplify the interaction between electronic devices and the physical world, empowering all your projects.













# WHY IS IT UNIQUE?

- Ultra secure connectivity at the hardware level thanks to onboard secure element chip
- Perform secure OTA (Over-The-Air) firmware updates
- Reliable and durable by design, thanks to Finder's 65+ years industrial expertise in relay manufacturing
- Leverage of a vast availability of ready-to-use software libraries and Arduino sketches
- Support of standard according to IEC 61131-3 PLC languages (LD - Ladder Logic Diagram and FBD - Function Block Diagram, among others)
- Modbus TCP connectivity via Ethernet or Modbus RTU via dedicated RS485 terminal
- Onboard smart connectivity options (Ethernet/Wi-Fi/Bluetooth<sup>®</sup> Low Energy)
- Real-time remote monitoring via intuitive Arduino IoT • Cloud dashboards (or third-party services)





# **ALL THE PROGRAMMING** LANGUAGES YOU NEED

FREE – WITHOUT LICENCES

Using ARDUINO IDE, the Open-Source Arduino Software

### LICENSED - TRADITIONAL

Using LADDER, FBD or other traditional IEC 61131-3 languages

designed

for cyber

security

# **A SUPER POWERFUL** PROCESSOR

Super fast real time processing to manage calculations for predictive maintenance and updates OTA (Over-The-Air)



10

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E sketch_Test O	7 - Project: {Project} 8 9 Describe your project
Finder_Opta_Things_oct05a	10 11 Step 1: Installation 12 Please describe the steps to install this project.
MKR_oct05a	13 14 For example: 15
Untitled_2_oct05a	<ol> <li>10 1. Open this file</li> <li>17 2. Edit as you like</li> <li>18 3. Release to the World!</li> <li>19</li> </ol>
	20 Step 2: Assemble the circuit
	22 Assemble the circuit following the diagram layout.png attached to the si 23
	24 Step 3: Load the code 25
	26 Upload the code contained in this sketch on to your board

### PROCESSOR ST dual-core Cortex<sup>®</sup> M7+M4

### **CRYPTO CHIP**

Enhanced IoT security thanks to onboard secure element chip



















# THE RANGE

### Type 8A.04.9.024.8300

- Supply 12...24 V DC - 8 Digital/Analog (0-10V) input - 4 NO relay output contacts, rated 10 A - USB (type C) High Speed port for:

- Programming
- Data logging (via memory stick)

- RJ45 for Ethernet connections or MODBUS TCP/IP

### Type 8A.04.9.024.8310

- Supply 12...24 V DC

- 8 Digital/Analog (0-10V) input
- 4 NO relay output contacts, rated 10 A
- USB (type C) High Speed port for:
  - Programming
  - Data logging (via memory stick)

- RJ45 for Ethernet connections or MODBUS TCP/IP - RS485 Port for MODUS RTU connection

### Type 8A.04.9.024.8320

- Supply 12...24 V DC - 8 Digital/Analog (0-10V) input - 4 NO relay output contacts, rated 10 A - USB (type C) High Speed port for: • Programming and Power delivery • Data logging (via memory stick)

- RJ45 for Ethernet connections or MODBUS TCP/IP

- RS485 Port for MODUS RTU connection

- WIFI/BLE integrated module



## A WIDE RANGE OF APPLICATIONS

ΟΡΤΑ

PROGRAMMABLE LOGIC RELAYS

8A Series

Customer need	Target	Benefits
Boost Production Automation through secure Industry 4.0 control system	<ul> <li>Manufacturing plants</li> <li>Machinery operations</li> <li>Industrial automation</li> <li>Utilities</li> <li>Logistic hubs</li> </ul>	<ul> <li>Remote programming and operation</li> <li>Productivity improvement</li> <li>Arduino Implementation easiness and code portability</li> <li>Updating to Industry 4.0 capability for industrial equipment</li> <li>Process and cycle time optimization with minimised field returns</li> <li>KPI tracking, accurate data logging</li> <li>Enforce security through X.509 certificates</li> <li>Retrofit existing installations with minimal effort</li> </ul>
Smart and reliable management of electrical loads	<ul> <li>Airports</li> <li>Shopping malls</li> <li>Exhibitions</li> <li>Underground city parkings</li> <li>Facilities management professionals</li> <li>Smart Cities infrastructure providers</li> <li>Smart parking</li> <li>Corporations</li> </ul>	<ul> <li>Intelligent optimisation of energy management and power consumption</li> <li>Automated security lighting</li> <li>Improved user experience</li> <li>Enhanced security by adding access control</li> <li>Speedier access authorisation process</li> </ul>
Improved comfort and quality of life in the home and industrial buildings	<ul> <li>HVAC systems</li> <li>Industrial air conditioning/chilling</li> <li>Home automation</li> <li>Smart buildings</li> </ul>	<ul> <li>Ease of initial implementation and of ongoing upgrades</li> <li>Attractive dashboard design</li> <li>Alarms setting</li> </ul>

# **A WIDE RANGE OF APPLICATIONS**















**C**→<sup>®</sup> **ARDUINO** PRO<sup>™</sup>







**G ARDUINO** PRO™



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