

# finder 8A.04 Arduino Pro Relay Instructions

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finder 8A.04 Arduino Pro Relay



### **Product Information**

The product is a Class 2 source with a maximum current of 200 mA and torque of 0.8 Nm. It has 4 normally open (SPST) outputs with a rating of 10 A at 250 V AC1 and 4 A at 24 V DC1. The product has 8 digital/analog (0...10 V) inputs and has a 1M~ impedance. It has a rail-mounting system and is an open type with an extended humidity range of 5-95 RH% and an altitude of up to 2000 m. The product has an IP20 rating and comes in three versions: Lite, Plus, and Advanced.

The product is powered by an STM32H747XI Dual ARM R Cortex R M7/ M4 IC with one ARM R Cortex R -M7 core up to 480 MHz and one ARM R Cortex R -M4 core up to 240 MHz. It has a USB Type C 10/100 Ethernet port and comes with Wi-Fi + BLE (8A-8320) and RS485 (8A-8310 + 8A-8320) connectivity options. It also has a secure element integrated into it. The product has a dimension of 9mm and accepts wires of  $(1 \times 6/2 \times 4)$  mm2  $(1 \times 10/2 \times 12)$  AWG. It has a power rating of 1/2 HP at 240 V AC and 1/4 HP at 120 V AC.

## **Product Usage Instructions**

The product is designed to be mounted on an EN 60715 rail. It can be connected to up to 8 digital/analog (0...10 V) inputs using wires of  $(1\times6/2\times4)$  mm2  $(1\times10/2\times12)$  AWG. The product has 4 normally open (SPST) outputs with a rating of 10 A at 250 V AC1 and 4 A at 24 V DC1. The product can be controlled using the inputs and outputs and is powered by an STM32H747XI Dual ARM R Cortex R M7/ M4 IC with Wi-Fi + BLE (8A-8320) and RS485 (8A-8310 + 8A-8320) connectivity options. The product has a secure element integrated into it and is rated IP20. It has an extended humidity range of 5-95 RH% and an altitude of up to 2000 m. The product comes in three versions: Lite, Plus, and Advanced.

## **Features**

8A.04.9.024.83xx

<b>中</b>	UN (1224) V DC +-15% Class 2 source I < 200 mA
OUTPUT	4 NO (SPST)  10 A, 250 V AC1  4 A, 24 V DC1  M 1/2 HP 240 V AC  1~ 1/4 HP 120 V AC
INPUT	8 digital/ analog (010 V)
	STM32H747XI Dual ARM R Cortex R  M7/ M4 IC:  1x ARM R Cortex R -M7 core up to 480 MHz 1x ARM R Cortex R -M4 core up to 240 MHz
*	USB Type C  10 /100 Ethernet  RS485 (8A-8310 + 8A-8320) Wi-Fi + BLE (8A-8320)

(a)	Secure element integrated	
	(−20…+50)°C	
Open type, EN 60715 rail mounting Environmental Conditions: Extended Humidity 5-95 RH% Altitude 2000 m IP20		

## **FCC STATEMENT**

#### **FCC and RED CAUTIONS**

(MODEL: 8A.04.9.024.8320)

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

- 1. This device may not cause harmful interference.
- 2. This device must accept any interference received, including interference that may cause undesired operation.

## **FCC RF Radiation Exposure Statement**

- this Transmitter must not be co-located or operating in conjunction with any other antenna or transmitter
- this equipment complies with RF radiation exposure limits set forth for an uncontrolled environment
- this equipment should be installed and operated with a minimum distance 20 cm between the radiator& your body

## **NOTE**

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

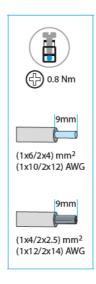
## **RED**

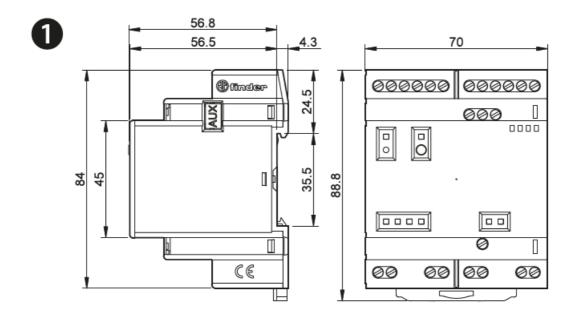
- The product is in compliance with essential requirements and other relevant provisions of Directive 2014/53/EU.
- This product is allowed to be used in all EU member states.

Frequency bands	Maximum output power (EIRP)
2412 – 2472 MHz (2.4G WiFi)	5,42 dBm
2402 – 2480 MHz (BLE)	2,41 dBm
2402 – 2480 MHz (EDR)	−6,27 dBm

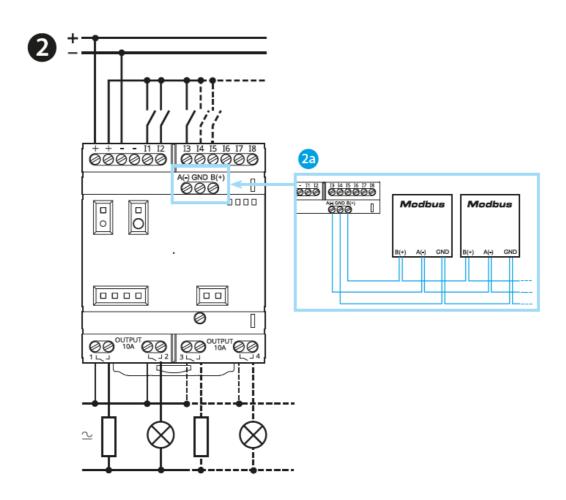
- 8A.04.9.024.8300 Lite Version
- 8A.04.9.024.8310 Plus Version
- 8A.04.9.024.8320 Advanced Version

# **DIMENSIONS**



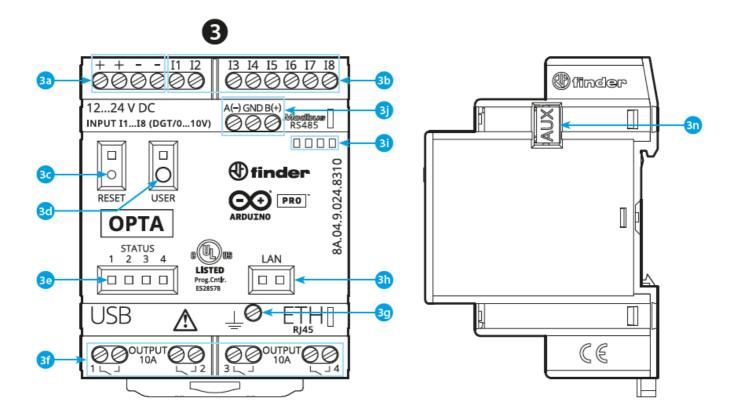


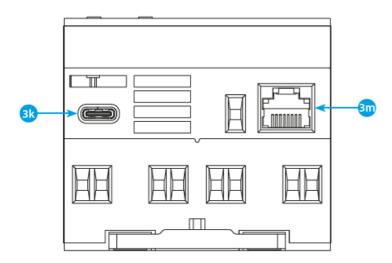
# **WIRING DIAGRAM**



• 2a Only for 8A.04-8310 and 8A.04-8320

# **FRONT VIEW**





- 3a Power supply terminals 12...24 V DC
- 3b I1....I8 digital/analog input terminals (0...10 V) configurable via IDE
  - **3c Reset button:** puts the device in bootloader mode.
    - Pressing it twice will restart the device. (Press with pointed tool isolated)
- 3d User programmable button
- 3e Contact status LED 1...4
- 3f Relay output terminals 1...4, NO contact (SPST) 10 A 250 V AC
- 3g Functional Earth
- 3h Ethernet port status LED
- 3i Label holder 060.48
- 3j Terminals for MODBUS RS485 connection
  - (only for versions 8A.04-8310/8320)
- 3k USB Type C for programming and data logging
- 3m Ethernet port

• 3n Port for communication and connection of auxiliary modules

## **GETTING STARTED GUIDE**

## Getting started - IDE

- If you want to program your 8A.04 while offline you need to install the Arduino Desktop IDE.
- To connect the 8A.04 to your computer, you'll need a Type C USB cable.
- This also provides power to the board, as indicated by the LED.
- https://www.arduino.cc/en/Main/Software

#### **GETTING STARTED – ARDUINO WEB EDITOR**

- All Arduino boards, including this one, work out of the box on the Arduino
- Web Editor, by just installing a simple plugin.
- The Arduino Web Editor is hosted online, therefore it will always be up-to-date with the latest features and support for all boards.
- Follow to start coding on the browser and upload your sketches onto your board.
- https://create.arduino.cc/editor
- https://create.arduino.cc/projecthub/Arduino\_Genuino/getting-startedwith-arduino-web-editor-4b3e4a

### **GETTING STARTED – ARDUINO IOT CLOUD**

All Arduino IoT enabled products are supported on Arduino IoT Cloud which allows you to Log, graph and analyze sensor data, trigger events, and automate your home or business.

**NOTE:** If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.

**Utility Model:** IB8A04VXX

## Finder S.p.A.

• con unico socio - 10040 ALMESE (TO) ITALY



## **Documents / Resources**



finder 8A.04 Arduino Pro Relay [pdf] Instructions

8A.04.9.024.83xx, 8A-8310, 8A-8320, 8A.04 Arduino Pro Relay, 8A.04, 8A.04 Relay, Arduino Pro Relay, Relay

- Arduino Cloud
- S Arduino Project Hub
- Arduino Project Hub
- Software | Arduino

Manuals+,