



# Datasheet

## DIO-430-R1 Module

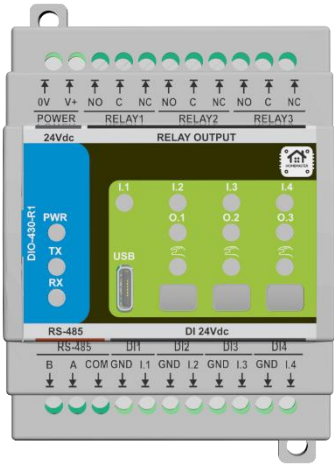
Part No. 0000004

### About the product

DIO-430-R1 is an advanced home automation solution built on the RP2350A, offering seamless integration with Home Assistant via MiniPLC/MicroPLC. With a variety of onboard hardware resources, it enables automation tasks such as pump and fan control, temperature regulation and monitoring, lighting control, and creation of lighting scenes. DIO-430-R1 functionality can be expanded with additional extension modules through a wired RS-485 Modbus system. Furthermore, it supports programming via the Arduino IDE using the USB interface, providing developers with extensive flexibility and customization options.

### Electrical Data

Power supply	24VDC, 120VDC - 370VDC, USB-C female (5V DC via USB-C) for programming
Power consumption	typ. 1.85W, max. 3W
Raspberry PI	RP2350A
Digital Inputs	4 isolated, surge protected digital sourcing inputs logic 0: 0 ... 9.2VDC undefined: 9.2 ... 15.8VDC logic 1: 15.8 ... 24VDC
Outputs	3 digital output (relay with optocoupler and varistor surge protection), dry contact 250VAC 16A at $\cos\varphi = 1$ , 250VAC 9A at $\cos\varphi = 0.4$ 30VDC 10A
RS-485	Half-duplex, data rate 115,2 kbps, short-circuit current limited and protected against excessive power dissipation, fail-safe for open circuit, surge protected
USB	USB type-C USB Specification 2.0 compliant, ESD protected, Silicon Labs CP2102N USB-to-UART bridge controller,



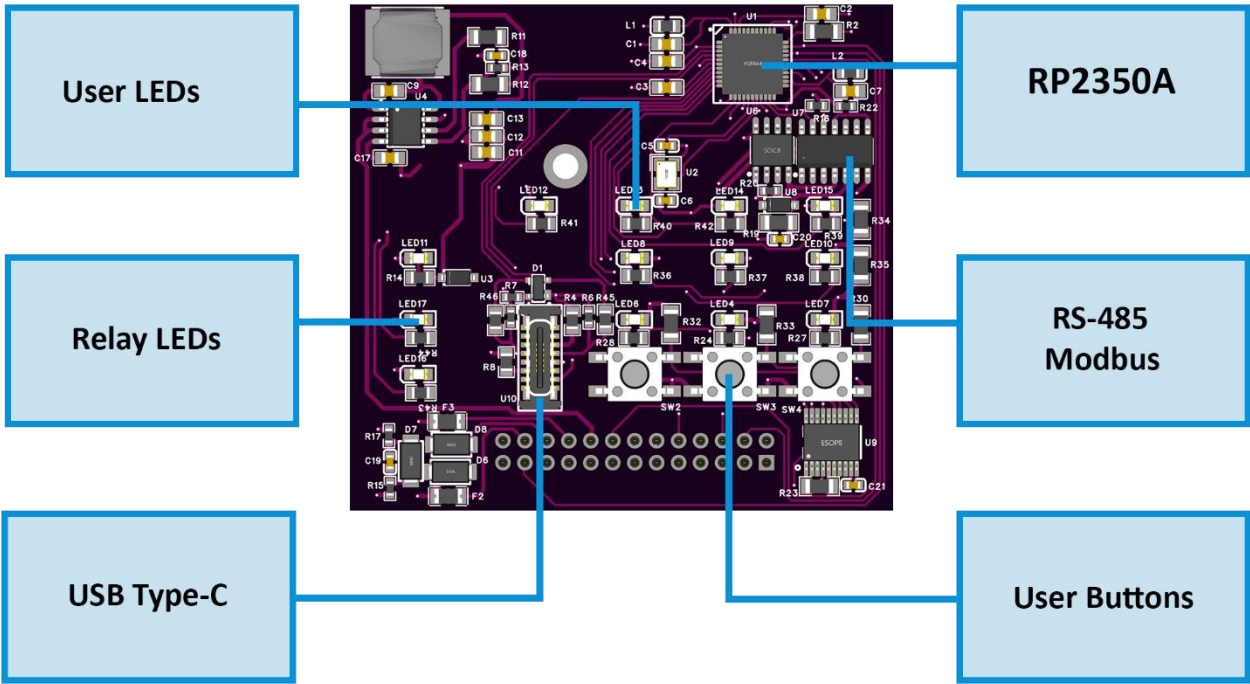
	Virtual COM Port Device Drivers, Works with existing COM port Applications, Supported on Windows, Mac, and Linux
Real-time clock	PCF8563
Buzzer	85dB Passive (external drive) Electromagnetic Type 2.7kHz
Ambient temperature	0 ... 40°C / 32 ... 104°F
Humidity	max. 95% r.H. (non condensing)

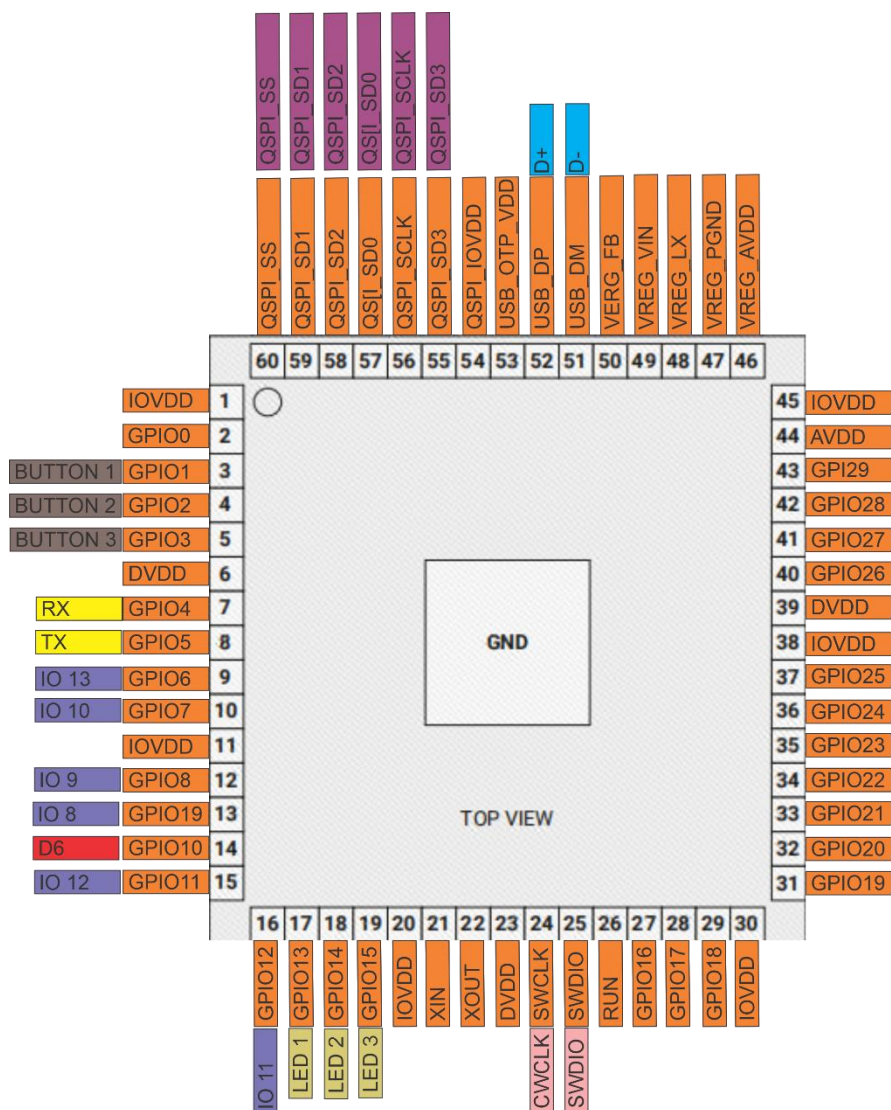
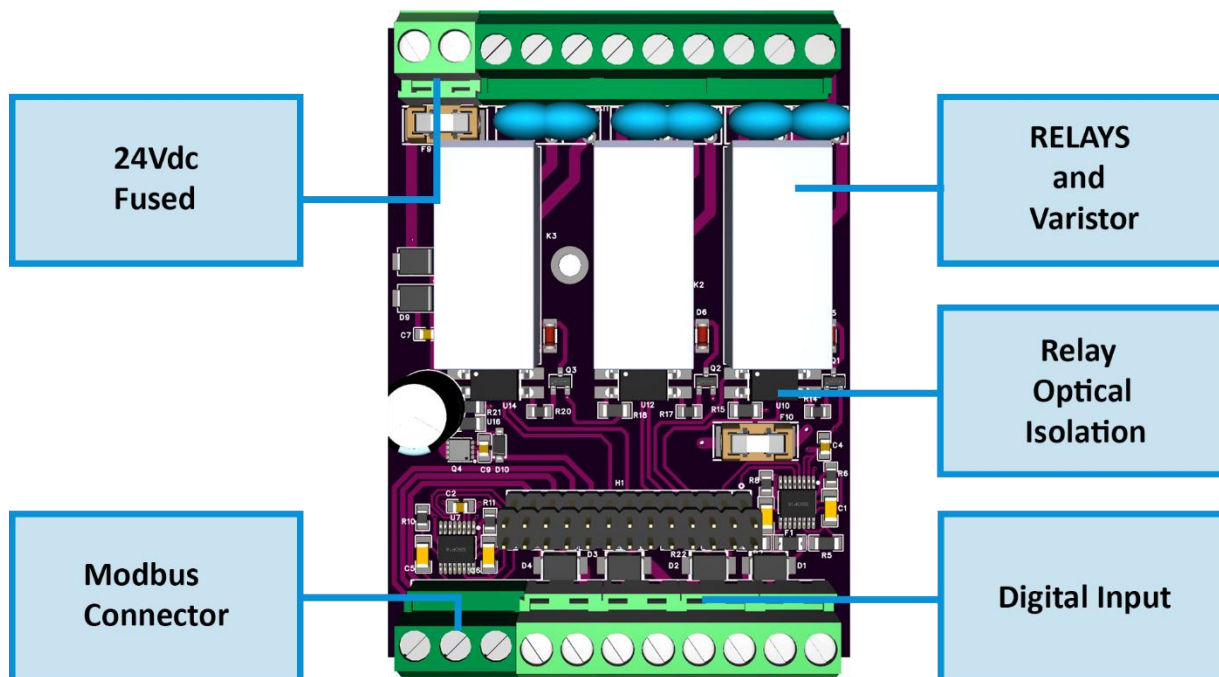
Information: \*

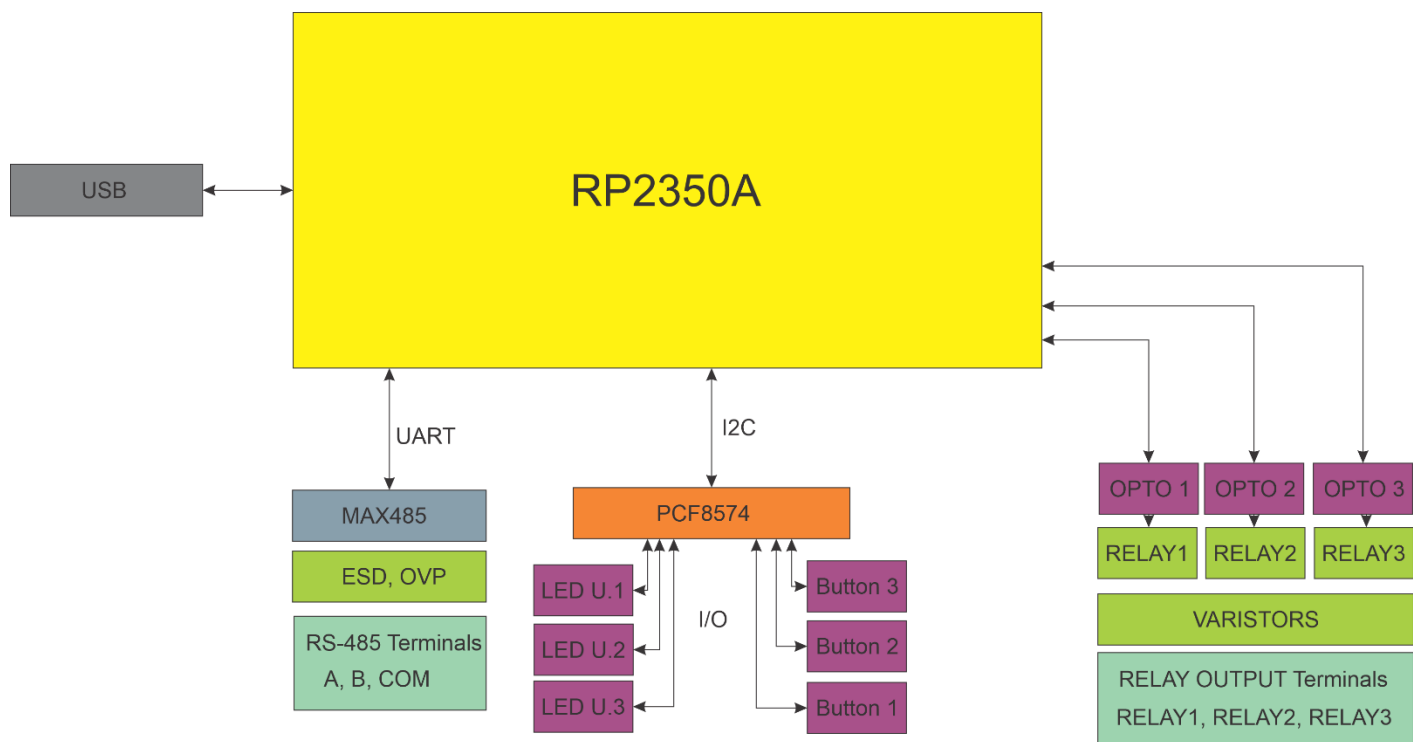
High loads at the digital outputs result in heat development, which can influence the lifetime in the long run. We recommend using coupling relays with loads greater than 5A.

Connections

Terminals	300V 20A 26-12 AWG 2.5mm2, Torque of terminal blocks 0.5 ... 0.6Nm /0.37 ... 0.44 lbf ft, Pitch: 5.08mm(.200")
USB	USB type-C





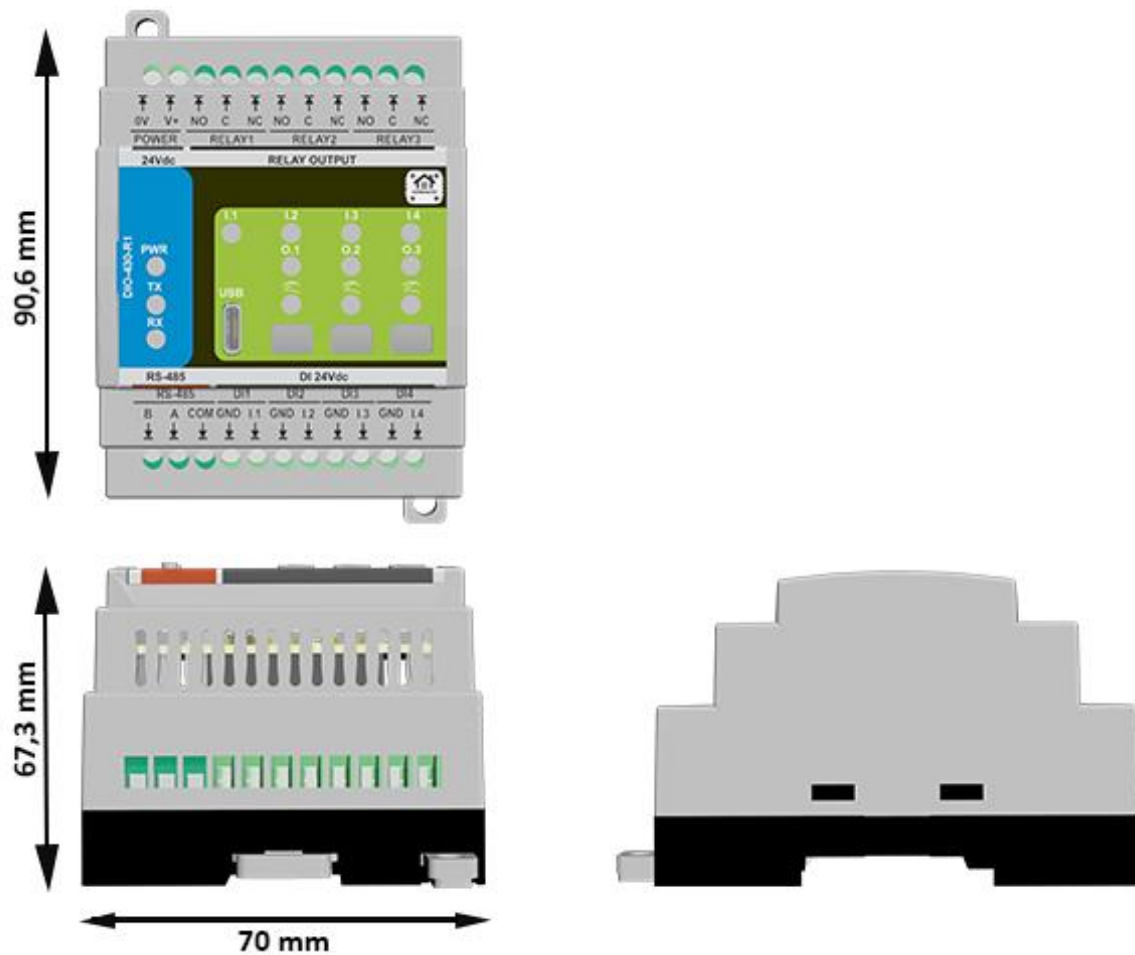


## Product Characteristics

Mounting type	DIN rail according to EN50022, 35mm
Colors	Light Gray/Black, Smoke Panel
Material	PC/ABS/V0
Finish	Matte

## Weight & Dimensions

Net weight	000g
Total weight	000g
Product dimensions	52.5 x 90 x 59 mm (2.07 x 3.54 x 2.32 in) (LxWxH), 1 division units
Pack size	000x0x0mm (0 x 0 x 0 in) (LxWxH),



## Certifications & Standards

Safety rating	IP20
Operation	Type 1 (UL60730-1, CSA E60730-1)
Rated impulse voltage for digital output	2.5kV (UL60730-1, max. Altitude 2000m)
Degree of pollution	2
Certifications	CE, UL60730-1, CSA E60730-1

The DIO-430-R1 enables a variety of connected devices to work with HOMEMASTER technology.

See <https://www.home-master.eu> for more details.

Communication between iPhone, iPad, Apple Watch, HomePod, or Mac and the HomeKit- enabled DIO-430-R1 is secured by ESPHome and Home Assistant technology.

Installation must be carried out by a qualified electrician in accordance with the relevant regulations.

**Published by**

**ISYSTEMS AUTOMATION S.R.L.**

Diligentei, Nr. 18,

Ploiesti,

Prahova,

Romania

Tel: +40721389963

<https://www.home-master.eu>