SfAR-1M-1AI1DO

SfAR-1M-1AI1DO can be used not only as a controller's I/O extension but also as a standalone application controller. It is perfect for controlling lights level according to light measurement and other similar applications.

The module has 1 **analog input** (AI) and 1 **digital output** (DO). Analog input can work in 7 modes as a voltage or current input. The digital output is an **NPN** transistor output. All inputs and outputs are isolated from the logic with optoisolators.

A built-in **RS485** interface allows easy connection over **Modbus RTU/ASCII** protocol. A 32-bit ARM core processor provides fast processing and communication.

The module is equipped with a set of **LEDs** used to indicate the status of I/O, power supply, and RS485 communication.

Configuration of the modules is carried out with our free software, the **SfAR Configurator**. A built-in mini **USB** allows performing a primary configuration of the unit without an additional power supply.

Key Features

- 1 analog input with 16-bit resolution and support for current and voltage ranges
- 1 digital output which can be set when analog alarm limits are exceeded
- ADC processing time: 16 ms/channel
- Built-in LEDs for device status indication
- Modbus RTU/ASCII communication
- Baud rate: 2400 bps to 115200 bps
- Up to 128 modules on the bus
- Built-in mini USB type B port for configuration
- Space-saving housing, DIN rail mount

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Specification

Analog Input (AI)

- Voltage input: 0-1 V DC, resolution 1 mV
- Voltage input: -1-1 V DC, resolution 1 mV
- Voltage input: 0-10 V DC, resolution 1,5 mV
- Voltage input: -10-10 V DC, resolution 1,5 mV
- Current input: 0-20 mA, resolution 3,75 μA
- Current input: 4-20 mA, resolution 3,75 μA
- Current input: -20-20 mA, resolution 3,75 μA
- Opto-isolated from RS485 and power supply

Digital Output (DO)

- Open collector output (NPN) max. 250 mA, 55 V DC
- Opto-isolated from RS485 and power supply

Platform

- ARM Cortex-M3

Communication

- RS485 interface
- Up to 128 devices on the bus
- Modbus RTU/ASCII
- Baud rate: 2400 to 115200 bps
- Mini USB type B

Power Supply

- 10-38 V DC; 10-28 V AC

Housing

- Dimensions WxHxD: 17x90x56 mm
- Construction: UL approved, self-extinguishing plastic (PC/ABS)
- DIN rail mounting DIN (DIN EN 50022 norm)
- Cooling: internal air circulation

Environment

- Operating temperature: -10°C to 50°C
- Storage temperature: -40°C to 85°C
- Relative humidity: 5% to 95%, no condensation
- Ingress protection rating: IP40 – for indoor installation

Dimensions