

SFAR-1M-1AI1DO

SFAR-1M-1AI1DO has 1x AI (Analog Input) and 1x DO (Digital Output). Analog Input can work in 7 modes as voltage or current input. Digital Output is a NPN type open collector output with maximum load 250 mA, 55 V DC. Built-in **RS485** interface allows to easy connection over **Modbus RTU/ASCII** protocol with a PLC makes the modules an external I/O. The use of **32-bit ARM** core processor provides fast processing and communication with the baud rate from 2400 to 115200 bps. The module is equipped with a set of **LEDs** used to indicate the status of inputs, outputs, power supply and RS485 communication. This feature is useful for diagnostic purposes and helping to find errors.

Built-in mini **USB** allows for initial configuration of the unit without power supply.

Key Features

- 1x Analog Input with 16-bit resolution and support for current and voltage ranges
- 1x Digital Output which can be set when analogue 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)

All Analog Inputs have 16-bit ADC resolution which support the following types of inputs:

- Voltage input: 0-1 V DC, resolution 0,1875 mV
- Voltage input: -1-1 V DC, resolution 0,1875 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 μ A
- Current input: -4-20 mA, resolution 3,75 μ A
- Current input: -20-20 mA, resolution 3,75 μ A
- Voltage measurement accuracy $\pm 0,2\%$
- Current measurement accuracy $\pm 0,1\%$
- ADC processing time: 70 ms/channel

Digital Output (DO)

- Open collector output (NPN) max. 250 mA, 55 V DC

Platform

- ARM Cortex-M3

Communication

- Interface RS485 half-duplex
- Up to 128 devices on the bus
- Protocol: Modbus RTU/ASCII
- Baud rate: 2400 to 115200 bps
- Interface mini USB type B

Power supply

- 10-36 V DC $\pm 20\%$

Housing

- Dimension 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

