

SFAR-S-8AI2DO

SFAR-S-8AI2DO has 8x AI (Analog Inputs) and 2x DO (Digital Outputs). Analog Inputs can work in 7 modes as voltage or current input. Digital Output is an NPN type open collector output with maximum load 500 mA, 55 V DC. All inputs and outputs are isolated from RS485 and power supply with use of optical isolators.

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.

To simplify installation the modules have been equipped with Quick Connector system. Using dedicated SFAR-S-LINK cable allows to connect up to 15 modules which provide both RS485 communication and power supply.

Key Features

- 8x Analog Input with 14-bit resolution
- 2x Digital Output
- Support for voltage and current input ranges
- 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
- Dedicated TCP/IP to Modbus RTU/ASCII gateway device SFAR-S-ETH
- Built-in mini USB type B port for configuration
- Fast and easy connection with SFAR-S-LINK
- Space-saving housing, DIN rail mount



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Specification

Analog Inputs (AI)

All Analog Inputs have 14-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: 20 mA, resolution 3,75 μ A
- Current input: -20-20 mA, resolution 3,75 μ A
- Voltage measurement accuracy $\pm 0.1\%$
- Current measurement accuracy $\pm 0.1\%$
- ADC processing time: 16 ms/channel

Digital Outputs (DO)

- Open collector output (NPN) max. 500 mA, 55 V DC

Platform

- ARM Cortex-M3

Dimensions

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

- 12-24 V DC $\pm 20\%$

Housing

- Dimension WxHxD: 22.7x110.9x119.1 mm (0.894x4.366x4.689 in)
- 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 (14°F to 122°F)
- Storage temperature: -40°C to 85°C (-40°F to 185°F)
- Relative humidity: 5% to 95%, no condensation
- Ingress Protection Rating: IP40 – for indoor installation

