

# SfAR-S-8AI2DO

**SfAR-S-8AI2DO** is designed to be applied wherever multiple sensors are used. Thanks to 2x digital outputs and logic pre-installed in the module, it can be used as a PLC I/O extension and as a standalone application controller.

The module has 8 **analog inputs** (AI) and 2 **digital outputs** (DO). Analog inputs can work in 7 modes as voltage or current inputs. Digital outputs are **NPN** transistor outputs. All inputs and outputs are isolated from the logic with optoisolators.

A built-in **RS485** interface allows easy connection over the **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.

The modules have been equipped with the Quick Connector system to simplify installation. Using a dedicated SfAR-S-LINK cable allows connecting of up to 10 modules, which provide both RS485 communication and external power supply.

## Key Features

- 8 analog inputs with 14-bit resolution
- 2 digital outputs
- 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
- Built-in mini USB type B port for configuration
- Space-saving housing, DIN rail mount
- DIP switch for configuration
- Quick Connector for grouping modules and providing power and communication



# SfAR-S-8AI2DO

## Specification

### Analog Inputs (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  $\mu$ A
- Current input: 20 mA, resolution 3,75  $\mu$ A
- Current input: -20-20 mA, resolution 3,75  $\mu$ A
- Opto-isolated from RS485 and power supply

### Digital Outputs (DO)

- Open collector output (NPN) max. 500 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
- Quick Connector system
- Built-in LED indicators
- Free software: SfAR Configurator

### Power Supply

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

### Housing

- Dimensions 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

## Dimensions

