

SfAR-1M-1TI1DO

SfAR-1M-1TI1DO is designed for controlling ON/OFF heaters in accordance with temperature measurement.

The module has 1 **temperature input** (TI) and 1 **digital output** (DO). Temperature input can work with the most popular resistance temperature sensors and a wide range of thermocouples. Digital output is an **NPN** transistor output. All inputs and outputs are isolated from the logic with opto-isolators.

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 to perform a primary configuration of the unit without additional power supply.

Key Features

- 1 temperature input
- 1 digital output
- Support for the most popular sensor types: PT100, PT500, PT1000, NI100, KTY81-110 (2 and 3- wire) and the most popular thermocouples types: J, K, T, N, S, R, B
- Measurement resolution 0.1°C
- 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

Temperature Input (TI)

- Resistance temperature sensors input: PT100, PT500, PT1000, NI100, KTY81-110 (2- and 3- wire), resolution 0,1 °C
- Thermocouples sensors input: J, K, T, N, S, R, B, resolution 0,1°C, cold junction temperature measurement
- Resistive input: 0-8000 Ω , resolution 1 Ω
- Voltage input: 0-256 mV, resolution 10 μ V
- Voltage input: 0-2048 mV, resolution 100 μ V
- 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
- Built-in LED indicators
- Free software: SfAR Configurator

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

