

SFAR-1M-1TI1DO

SFAR-1M-1TI1DO has 1x TI (Temperature Input) and 1x DO (Digital Output). Temperature Input can work with the most popular temperature sensors: PT100, PT500, PT1000, NI100, KTY81-110. Besides Temperature Input supports also a wide range of thermocouples types: J, K, T, N, S, R, B. Digital Output is NPN type open collector with maximum load max. 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 Temperature Input
- 1x 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)

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

- 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
- ADC processing time:150 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

- 12-24 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

