

# SFAR-S-6TI

SFAR-S-6TE has **6x TI** (Temperature Inputs) and **2x DO** (Digital Outputs). Temperature Inputs can work with the most popular resistance temperature sensors: **PT100, PT500, PT1000, NI100, KTY81-110**. Besides Temperature Input supports also wide range of thermocouples types: **J, K, T, N, S, R, B**. Digital Output is **NPN** type open collector with maximum load max. 500 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.

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

- 6x Temperature Input
- 2x 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
- 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



# SFAR-S-6TI

## Specification

### Temperature Inputs (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  $\Omega$ , resolution 1  $\Omega$
- Voltage input: 0-256 mV, resolution 10  $\mu$ V
- Voltage input: 0-2048 mV, resolution 100  $\mu$ V
- ADC processing time: 150 ms/channel

### Digital Outputs (DO)

- Open collector output (NPN) max. 500 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: 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

