SfAR-S-6TI

SfAR-S-6TI is designed to be applied wherever multiple points of temperature measurements are required. Supporting a wide range of temperature sensors and thermocouples makes it a perfect choice for, for example, the chemical or power industry. Thanks to 2x digital outputs and built-in logic in the module, it can be used as a PLC I/O extension and as a standalone application controller.

The module has 6 **temperature inputs** (TI) and 2 **digital outputs** (O). Temperature inputs can work with the most popular resistance temperature sensors and a wide range of thermocouples. 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 the unit to perform a primary configuration 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 for connection of up to 10 modules, which provide both RS485 communication and external power supply.

Key Features

- 6 temperature inputs
- 2 digital outputs
- 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
- DIP switch for configuration
- Quick Connector for grouping modules and providing power and communication

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Specification

Temperature Inputs (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 0.1 mV
- Voltage input: 0-2048 mV, resolution 0.01mV
- 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

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

Platform

- ARM Cortex-M3

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