

SfAR-S-6TI



Modbus I/O Module

MODEL	DESCRIPTION
SfAR-S-6TI	Modbus I/O module with 6 temperature inputs



APPLICATION AND USE

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, a chemical or power industry. Thanks to 2 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 an 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/Os, power supply, and RS485 communication. Configuration of the module is carried out with our free software, the SfAR Configurator. A built-in mini USB allows for performing a primary configuration without an additional power supply. The module has been equipped with the Quick Connector system to simplify installation. Using a dedicated SfAR-S-LINK cable allows for connecting up to 10 modules, which provide both RS485 communication and external power supply.

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: 2400-115200 bps
- Up to 128 modules on the bus
- Built-in mini USB type B port for configuration
- Space-saving housing
- DIN rail mounting
- DIP switch for configuration
- Quick Connector for grouping modules and providing power and communication

TECHNICAL SPECIFICATION

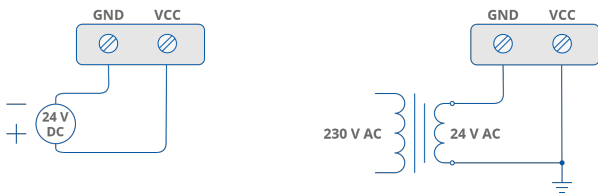
DESCRIPTION		SfAR-S-6TI
Power supply	Voltage	10-38 V DC; 10-28 V AC
Temperature input	Number of inputs	1
	Voltage input	0 to 2048 mV (0.1 mV resolution) 0 to 256 mV (0.01 mV resolution)
	Resistance input	0-8000 Ω , resolution 1 Ω Resistance measuring current \sim 250 μ A
	Resistance temperature sensors input	PT100, PT500, PT1000, NI100, KTY81-110 (2- and 3- wire), resolution 0.1 $^{\circ}$ C

The performances stated in this sheet can be modified without any prior notice.

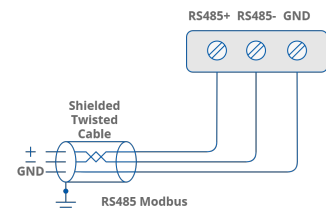
DESCRIPTION		SfAR-S-6TI
Temperature input	Thermocouples sensors input	J, K, T, N, S, R, B, resolution 0.1°C, Cold junction temperature measurement -55°C to +100°C (measurement error ±1°C)
	Processing time	150 ms
Digital output	Number of outputs	2
	Type	Open collector output (NPN)
	Maximum current load	500 mA
	Maximum voltage load	55 V DC
TX	RS485 interface	Up to 128 devices
	Communication protocol	Modbus RTU/ASCII
	Ports	3-pin screw connector
	Baud rate	2400-115200 bps
USB	mini USB	Type B, for configuration
Ingress protection	IP rating	IP 40 for indoor installation
Temperature	Storage	-40°C to +85°C (-40°F to +185°F)
	Operating	-10°C to +50°C (14°F to 122°F)
Humidity	Relative	5 to 95% RH (without condensation)
Screw connectors	Type	2-pin (power supply), 3-pin (RS485), 10-pin (I/O)
	Maximum cable size	2.5 mm ² (18...12 AWG)
Housing	Material	Self-extinguishing plastic (PC/ABS)
	Cooling	Internal air circulation
	Mounting	DIN (DIN EN 50022 norm)
Dimensions	Width	119.10 mm/4.69 in
	Length	101.00 mm/3.98 in
	Height	22.70 mm/0.89 in

WIRING DIAGRAMS

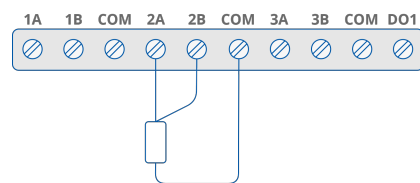
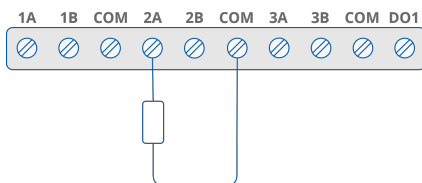
Power Supply



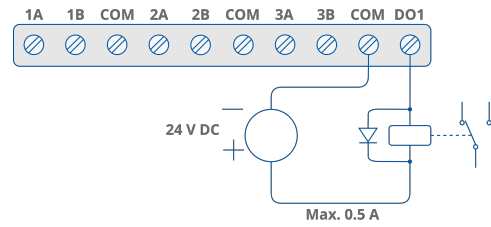
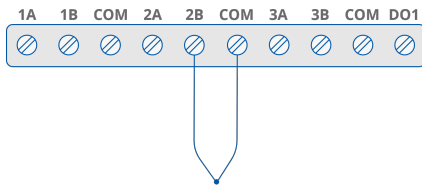
Communication



Temperature Input



Digital Output



DEDICATED SOFTWARE

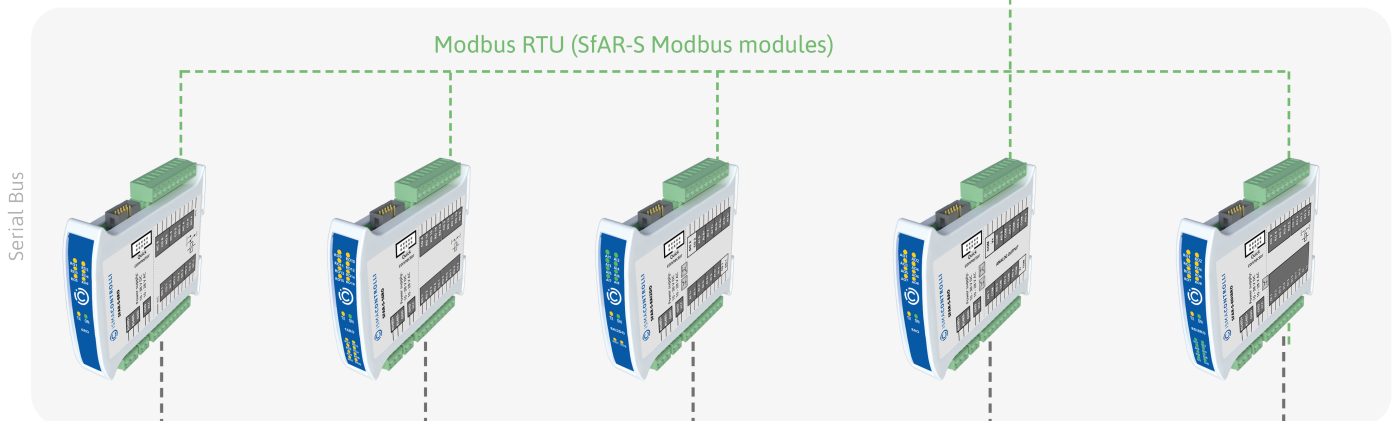
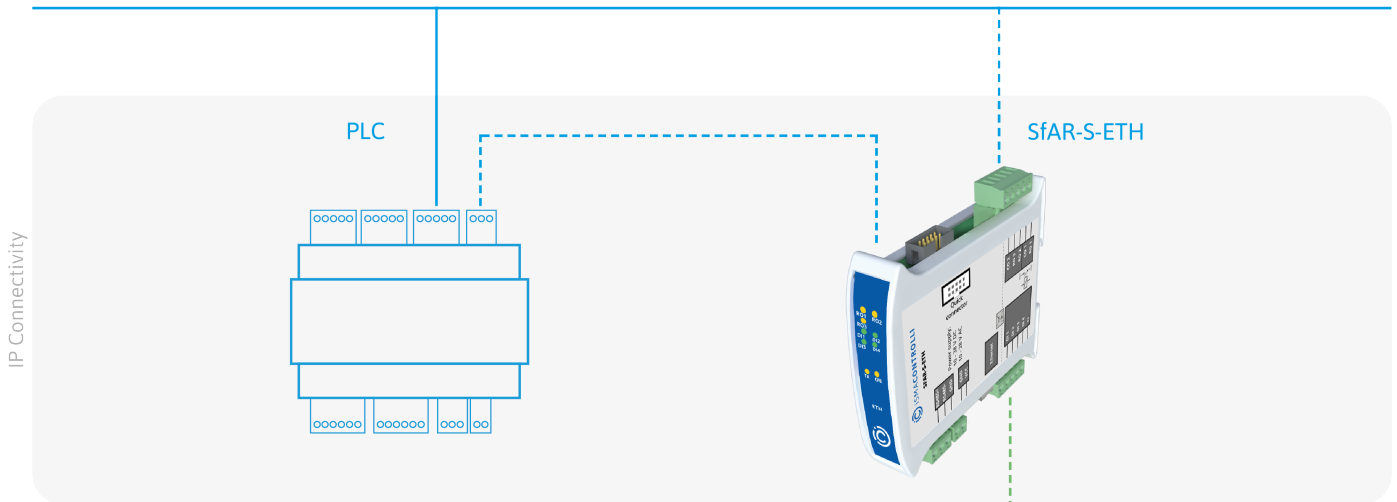


SfAR Configurator - Windows-based freeware configuration tool made for Modbus I/O modules

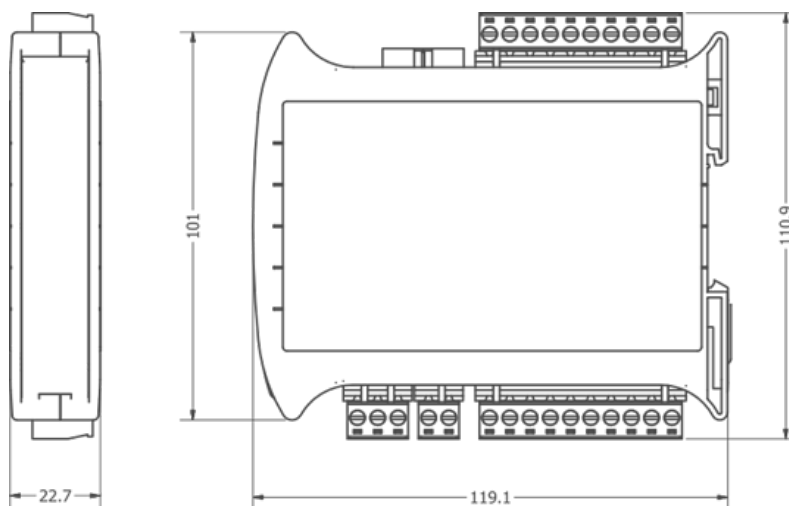
APPLICATION EXAMPLE

Modbus TCP/IP

IP



DIMENSIONS [mm]



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