

# SfAR-S-ETH

**SfAR-S-ETH** module is a **Modbus TCP to Modbus RTU/ASCII gateway**, allowing a connection of Modbus RTU/ASCII devices to the Modbus TCP network.

The device has the **Ethernet** and **RS485** interfaces, 4 **digital inputs** (DI), and 3 **relay outputs** (RO). Digital inputs can work as fast pulse counters or timers, they support **PNP** or **NPN** input types, also offering the possibility to connect an encoder. Relay outputs are normally open (**NO**) type. All inputs and outputs are isolated from the logic with optoisolators.

Communication is performed with the Modbus TCP protocol. The 32-bit ARM core processor provides fast processing and communication. The SfAR-S-ETH offers a unique feature, the **Device Table**, which facilitates communication with devices connected to the RS485 port, making it even faster.

The module is equipped with a set of **LEDs indicators**.

Configuration of the modules is carried out with our free software, the **SfAR Configurator**. A built-in mini **USB** allows performing a primary configuration of the unit 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 connecting of up to 10 modules, which provide both RS485 communication and external power supply.

## Key Features

- Modbus TCP to RS485 Gateway
- Configuration through a web browser
- 1 ETH interface
- 1 RS485 interface
- 4 digital inputs with counters
- 3 relay outputs
- Watchdog function for outputs
- 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



# SfAR-S-ETH

## Specification

### Digital Inputs (DI)

- PNP or NPN transistor input
- Fast pulse counter up to 1 kHz
- Opto-isolated from RS485 and power supply

### Relay Outputs (RO)

- NO relay output, max
- Resistive load AC1: 3 A @ 230 V AC or 3 A @ 30 V DC
- Inductive load AC3: 75 VA @ 230V AC or 30 W @ 30 V DC

### 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
- Quick Connector system
- Built-in LED indicators
- Free software: SfAR Configurator

### Dimensions

### Power Supply

- 10-38 V DC; 10-28 V AC

### Housing

- Dimensions WxHxD: 22,7x110,8x119,1 mm (0.894x4.362x4.689 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

