

## Modbus I/O Module

MODEL	DESCRIPTION
SfAR-1M-4DI	Modbus I/O module with 4 digital inputs



### APPLICATION AND USE

SfAR-1M-4DI is designed for production lines, with options to connect 2 encoders and counting pulses from flowmeters. Perfect choice for applications with a need for counting or timing of digital inputs state. The module has 4 digital inputs (DI). Digital inputs can work as fast pulse counters with up to 1000 counts per sec, or timers measuring the ON state, and also offering a possibility to connect 2 encoders. Digital inputs support both PNP and NPN input types. All inputs and outputs are isolated from the logic with opto-isolators. 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 of the unit without additional power supply.

### FEATURES

- 4 opto-isolated digital inputs
- Each DI can work as 32-bit pulse counters or timer
- Support for 2 encoders
- 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

### TECHNICAL SPECIFICATION

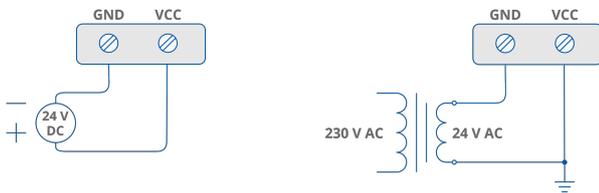
DESCRIPTION		SfAR-1M-4DI
Power supply	Voltage	10-38 V DC; 10-28 V AC
Digital input	Number of inputs	4
	Type	PNP or NPN transistor inputs Fast pulse counter up to 1 kHz Timer Encoder support
TX	RS485 interface	Up to 128 devices
	Communication protocol	Modbus RTU/ASCII
	Ports	3-pin screw connector
	Baud rate	2400-115200 bps
USB	mini USB	Type B, for configuration
Ingress protection	IP rating	IP 40 for indoor installation

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

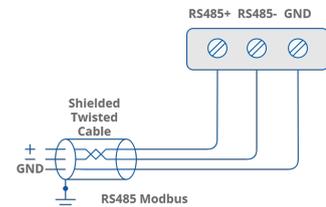
DESCRIPTION		SfAR-1M-4DI
Temperature	Storage	-40°C to +85°C (-40°F to +185°F)
	Operating	-10°C to +50°C (14°F to 122°F)
Humidity	Relative	5 to 95% RH (without condensation)
Screw connectors	Type	2-pin (power supply), 3-pin (RS485, I/O)
	Maximum cable size	2.5 mm <sup>2</sup> (18...12 AWG)
Housing	Material	Self-extinguishing plastic (PC/ABS)
	Cooling	Internal air circulation
	Mounting	DIN (DIN EN 50022 norm)
Dimensions	Width	90.00 mm/3.54 in
	Length	56.40 mm/2.22 in
	Height	17.50 mm/0.69 in

## WIRING DIAGRAMS

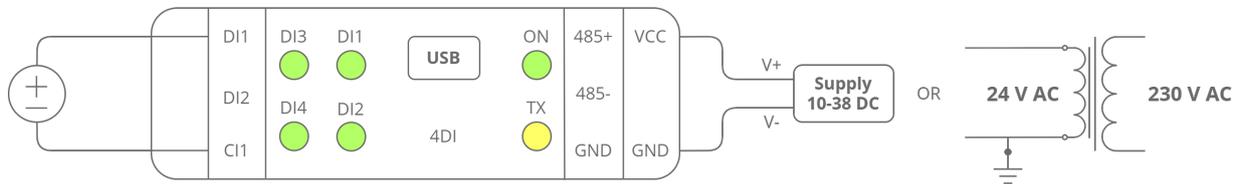
### Power Supply



### Communication

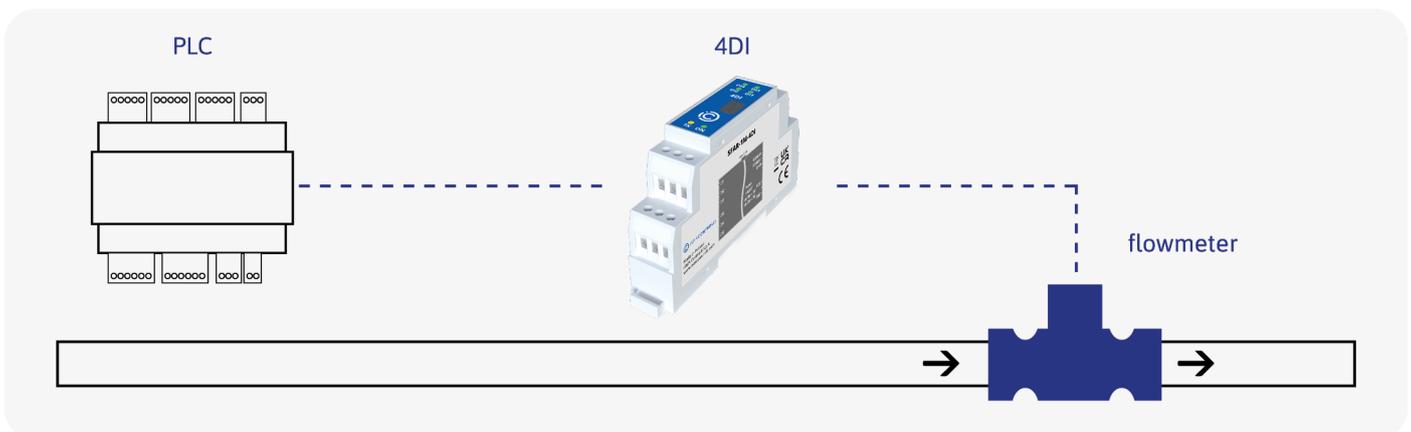


### Digital Input



## APPLICATION EXAMPLE

### Connection of flow meters



## DEDICATED SOFTWARE

## DIMENSIONS [mm]

