SfAR-S-8AI2DO

Modbus I/O Module

MODEL	DESCRIPTION
SfAR-S-8AI2DO	Modbus I/O module with 8 analog inputs and 2 digital outputs

APPLICATION AND USE

SfAR-S-8AI2DO is designed to be applied wherever multiple sensors are used. Thanks to 2 digital outputs and a pre-installed logic in the module, it can be used as a PLC I/O extension and as a standalone application controller. The module has 8 analog inputs (AI) and 2 digital outputs (DO). Analog inputs can work in 7 modes as voltage or current inputs. 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 of the unit 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

- 8 analog inputs with 14-bit resolution
- 2 digital outputs
- Support for voltage and current input ranges
- ADC processing time: 16 ms/channel
- 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

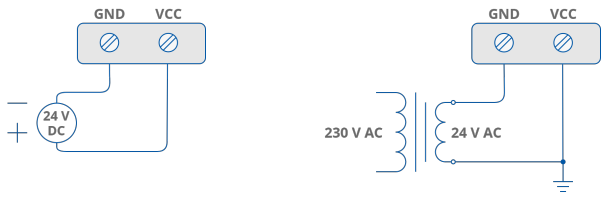
DESCRIPTION		SfAR-S-8AI2DO
Power supply	Voltage	10-38 V DC; 10-28 V AC
Analog input	Number of inputs	8
	Voltage input	0-1 V DC, resolution 1 mV -1-1 V DC, resolution 1 mV 0-10 V DC, resolution 1.5 mV -10-10 V DC, resolution 1.5 mV
		Input impedance: 120 kΩ
		Measurement accuracy: ±0.2%

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

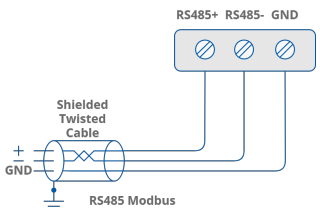
DESCRIPTION		SfAR-S-8AI2DO
Analog input	Current input	0-20 mA, resolution 3.75 µA 20 mA, resolution 3.75 µA -20-20 mA, resolution 3.75 µA
		Input impedance: 100 kΩ
		Measurement accuracy: ±0.2%
		Maximum input current: ±35 mA
	Measurement resolution	14-bit
	Processing time	16 ms/channel
Digital output	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 mm2 (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

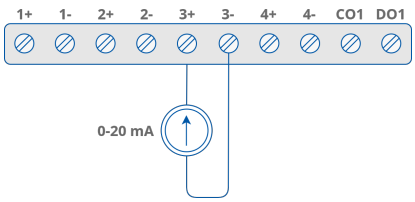
Power Supply

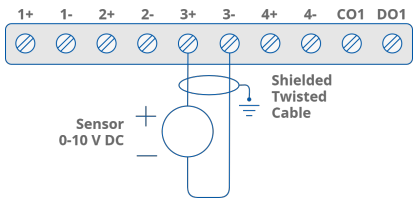


Communication

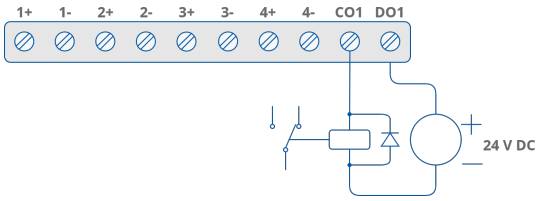


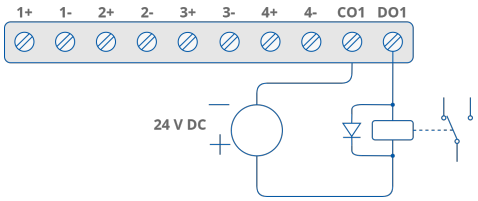
Analog Input





Digital Output

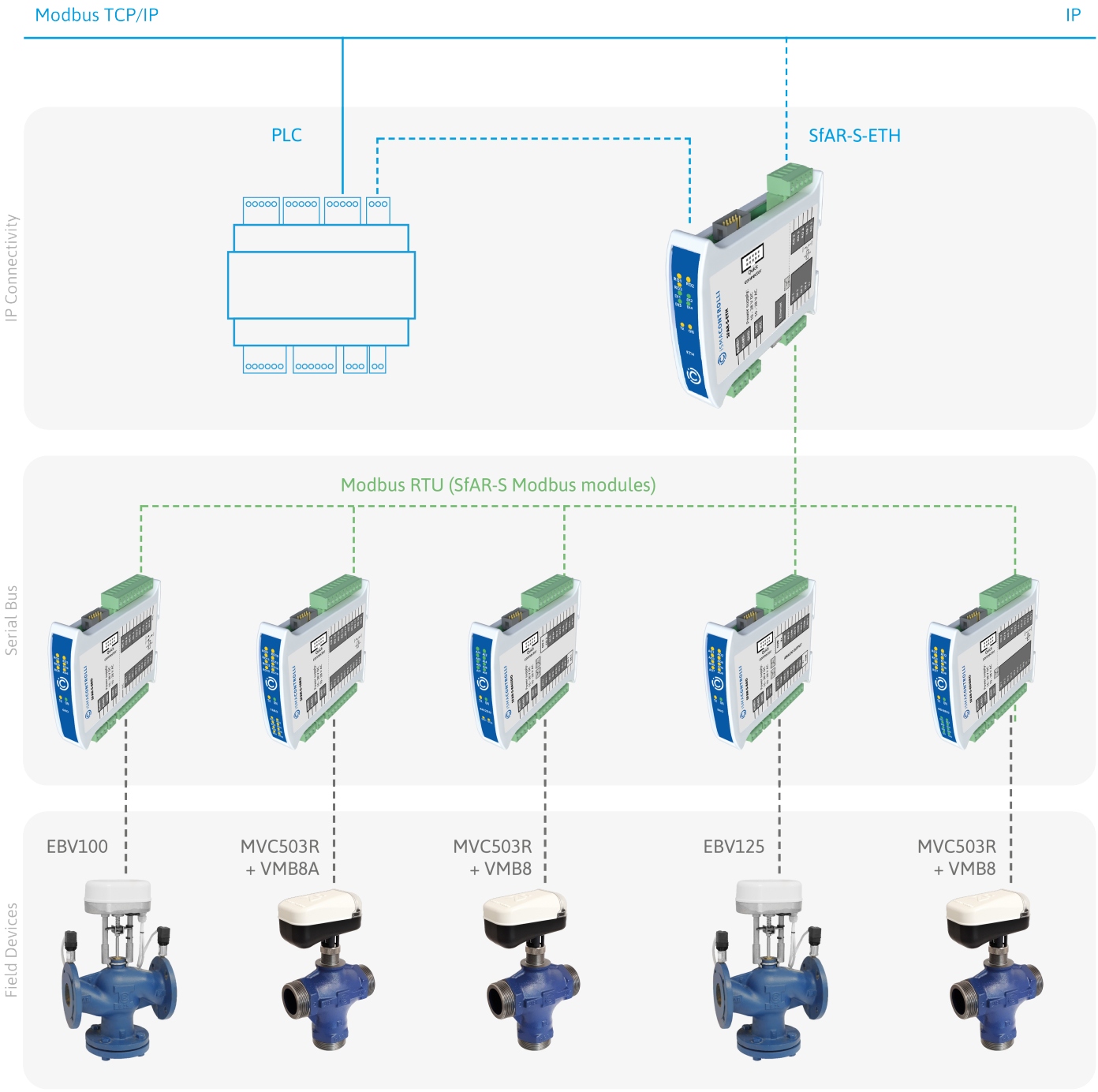




DEDICATED SOFTWARE

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

APPLICATION EXAMPLE



DIMENSIONS [mm]