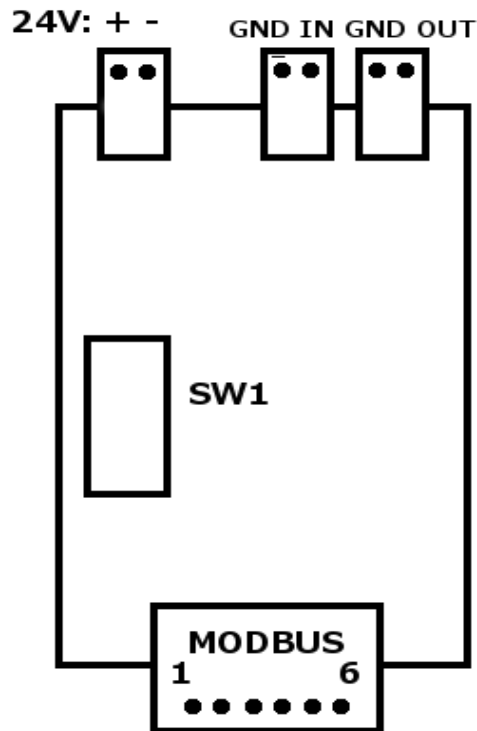# Analog I/O module with MODBUS RS485 / RS422 connection
TAIO-15-1

TAIO-15-1 module can provide any PLC system with one analog input and one analog output, both in the range of 0-10V and both isolated from the communication bus as well as from the input power supply.

MODBUS slave address:
Using SW1 any address in the range 0-255 can be selected where the LSB is labeled "1" and the MSB is labeled "8"

Analog input:
The analog input is hi-Z (100kOhm to GND) and can be read using the MODBUS "Read Input Registers" command where the register address is 0. 0V reads as 0 and 10V reads as 32767 or 7FFFh.

Analog output:
The analog output provides a voltage level output of 0-10V and can be set using either one of the "Write Single Register" and "Write Multiple Registers" MODBUS commands where the register address is 0. A value of 0 produces 0V output voltage where 32767 or 7FFFh produces 10V.

Galvanic isolation:
The module uses 2 DC-DC converters in order to provide 3 galvanicly isolated parts:
  - the 24V power supply input
  - the RS422 / 485 interface
  - the analog connectors
If both the analog input and output are used, one should keep in mind that these two share a

common GND.

MODBUS connector:

1	TA
2	TB
3	RA
4	RB
5	GND_MODBUS
6	NC

The device supports both RS422 and RS485 modes of operation. In RS485 mode, pins TA and RA should be shorted as well as pins TB and RB.