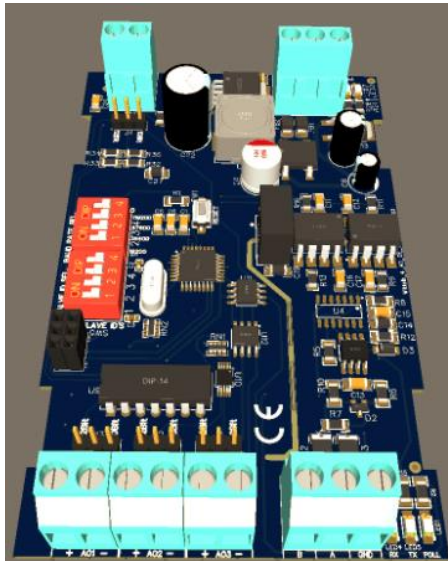


## Technical Datasheet Input / Output Modules with Modbus RTU Protocol with RS485 Interface

The IO modules communicate via RS485. The port can drive distances up to max 700 meters without the use of any repeater (*this feature however also depends on the signal strength of the Modbus Master Device*).

The RS485 Digital IO module is sturdy, low power usage and easy to use.

### 4 Port AO Module: -



The IO modules are mounted on DIN rail mountable enclosure. There is LED indication for Power, Modbus TX/RX

The design of the modules incorporates '**resettable Fuses**' to safeguard against reverse polarity connection both for **Power** and **Communication** port.

## Specifications

### General –

<b>I/O Connectors</b>	2 Pin 5.08 mm pitch pluggable screw terminals.
<b>Dimensions</b>	70 mm x 110 mm x 50 mm
<b>Power</b>	Input Power – 24 V AC/DC Typical – 12V DC @ 80mA
<b>Operating Temperature</b>	0 – 60° C (32 ~ 140°F)
<b>Storage Temperature</b>	-20 - 70° C (-4 ~ 158°F)
<b>Storage Humidity</b>	5 ~ 95 % RH, non – Condensing



## Certifications

### AO Outputs –

Channels	4
Inputs Resolution	10 Bit (12 Bit Optional)
Signal Range	0 – 10V
Accuracy	± 2 % of Full scale
Linearity Error	0.1 %
Conversion Time	20 msec

### Additional Features: -

- Communication port isolated
- Input power reverse polarity safety
- ESD Safety IEC 61000-4-2, ± 30KV contact, ± 30KV air
- EFT IEC 61000-4-4, 50A (5/50ms)
- 750V isolation.
- CRC Error check.
- No configuration needed on the IO board

### Configuration Settings: -

Communication Speed	9600 Kbps (DIP SW selectable)
Data Bits	8
Parity	None
Stop bit	1
CRC	Yes
Slave ID	1 – 15 (DIP SW selectable)
Function code AO	0x10 Write Multiple registers
AO Register Address	8,9,10,11.

**Note: -**

For MODBUS communications, a **shielded and twisted pair cable** is used. One example of such cable is Belden 3105A.

**Recommended Cable Electrical Characteristics: -**

<b>22 AWG Cable</b>	Shielded and twisted pair should be used.
<b>Tinned Copper</b>	Recommended
<b>Nominal Conductor DCR</b>	14.7 ohm / 1000 ft
<b>Nominal Capacitance</b>	11 pf / feet (conductor to conductor)
<b>High Frequency Non-Insertion Loss</b>	0.5db / 100ft

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