Your vision, automated

MCOM301IO

INDUSTRIAL INPUT OUTPUT MODULE

The MCOM301IO is a compact industrial I/O expansion module for PLC, SCADA, and automation systems. It provides digital and analog inputs/outputs with photocoupler isolation and communicates via RS485 Modbus RTU. Designed for robust industrial performance across -25°C to +75°C, it is ideal for industrial automation, building control, and process monitoring.

➢ FEATURES

- Source-type Digital Outputs
- Sink-type Digital Inputs
- Photocoupler Isolation
- 4-channel Single-ended for Analog input.
- Resolution: 12 bit for Analog Output.
- Watchdog
- DIP Switch for device configuration
- Cost-effective
- Wide Operating Temperature Range: -25 °C ~ +75 °C

➢ INPUT OUTPUT SPECIFICATIONS

DIGITAL INPUT		
Input Channels	4	
Type	Wet Contact (Sink)	
On Voltage Level	+12.0 VDC ~30 VDC	
Off Voltage Level	+11 V max.	
Input Impedance	10 KΩ, 0.66 W	
DIGITAL OUTPUT		
Output Channels	3	
Type	Open Collector (Source)	
Max. Load Current	500 mA/channel	
Load Voltage	+12 VDC ~ +30 VDC	
ANALOG INPUT		
Input Channels	4	
Type	0 ~ 20 mA/ 4 ~ 20 mA	
Resolution	12-bit	
Sampling Rate	100 Hz total	
Accuracy	+/-0.1%	
Zero Drift	+/- 20 µV/°C	
Span Drift	+/- 25 ppm/°C	
Input Impedance	Voltage	10 MΩ
	Current	100 Ω
Overvoltage Protection	120 VDC	
Open Wire Detection for 4 ~ 20 mA	Yes	
ANALOG OUTPUT		
Output Channel	2	
Type	0 ~ 20 mA/ 4 ~ 20 mA	

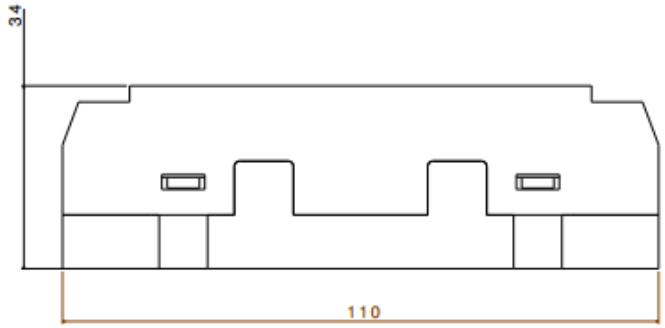
➢ SYSTEM SPECIFICATIONS

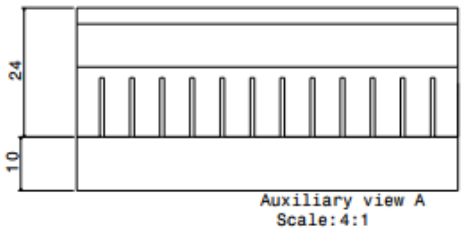
COMMUNICATION	
Interface	RS-485
Format	(N, 8, 1), (N, 8, 2), (O, 8, 1), (E, 8, 1)
Baud Rate	1200 ~ 115200 bps
Protocol	Modbus/RTU
Watchdog	Yes
POWER REQUIREMENTS	
Reverse Polarity Protection	Yes
Powered from Terminal Block	Yes, 12 ~ 30 VDC
Consumption	0.5 W Max.
ENVIRONMENT	
Operating Temperature	-25 °C ~ +75 °C
Storage Temperature	-30 °C ~ +75 °C
Humidity	10 ~ 95% RH, Non-condensing

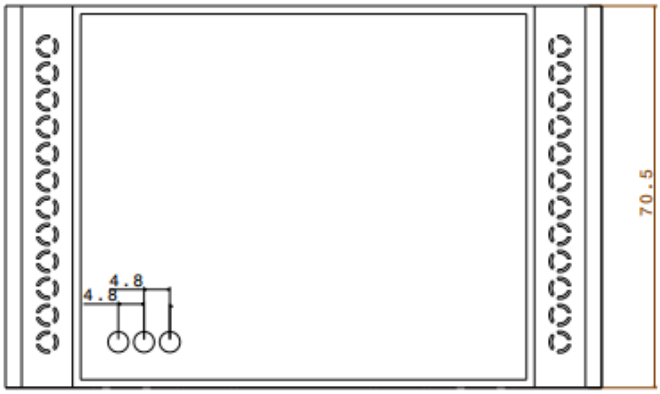
➢ APPLICATIONS

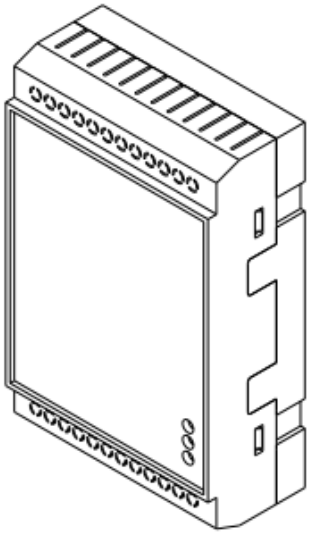
- Industrial Automation
- Industrial Machinery
- Building Automation
- Food and Beverage Systems
- Semiconductor Fabrication
- Control Systems

➢ DIMENSION DIAGRAM

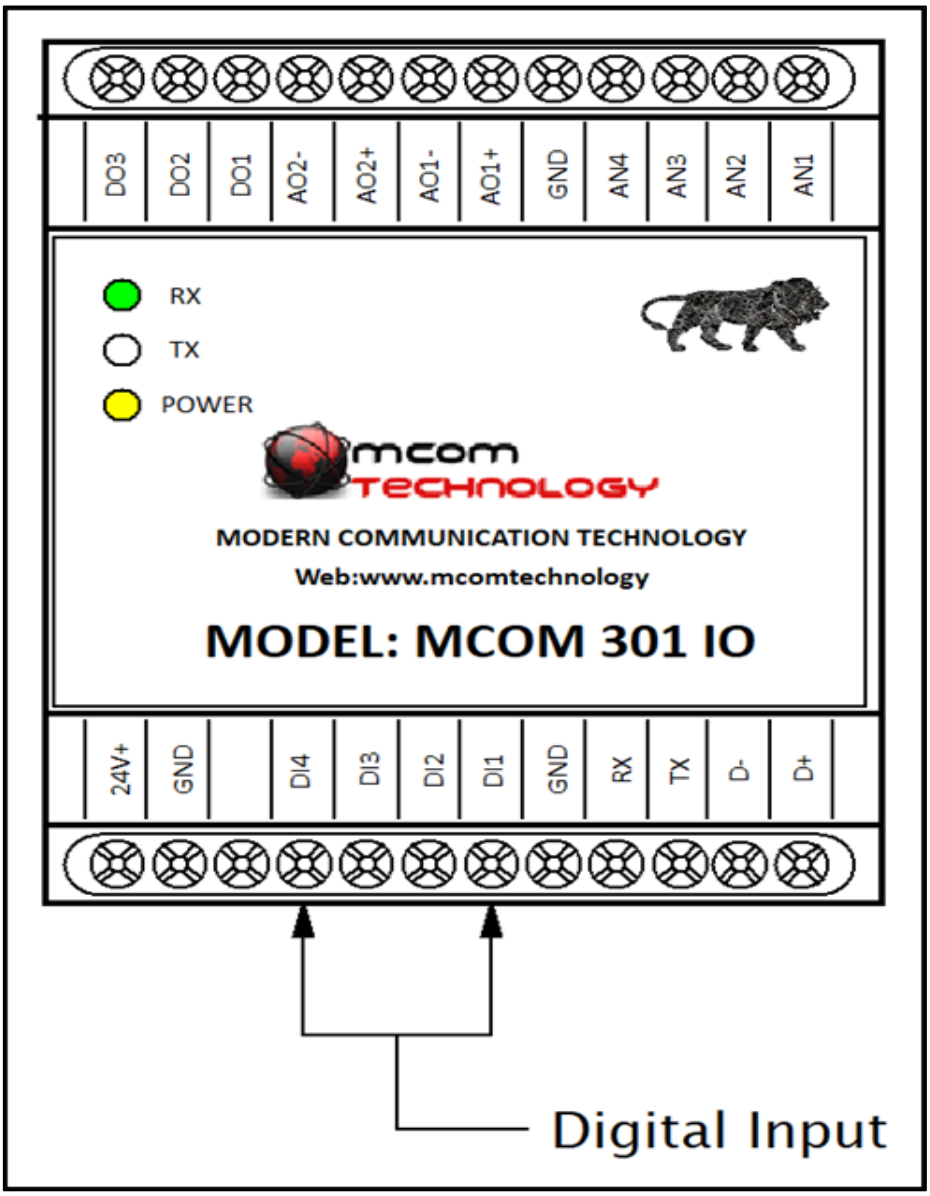




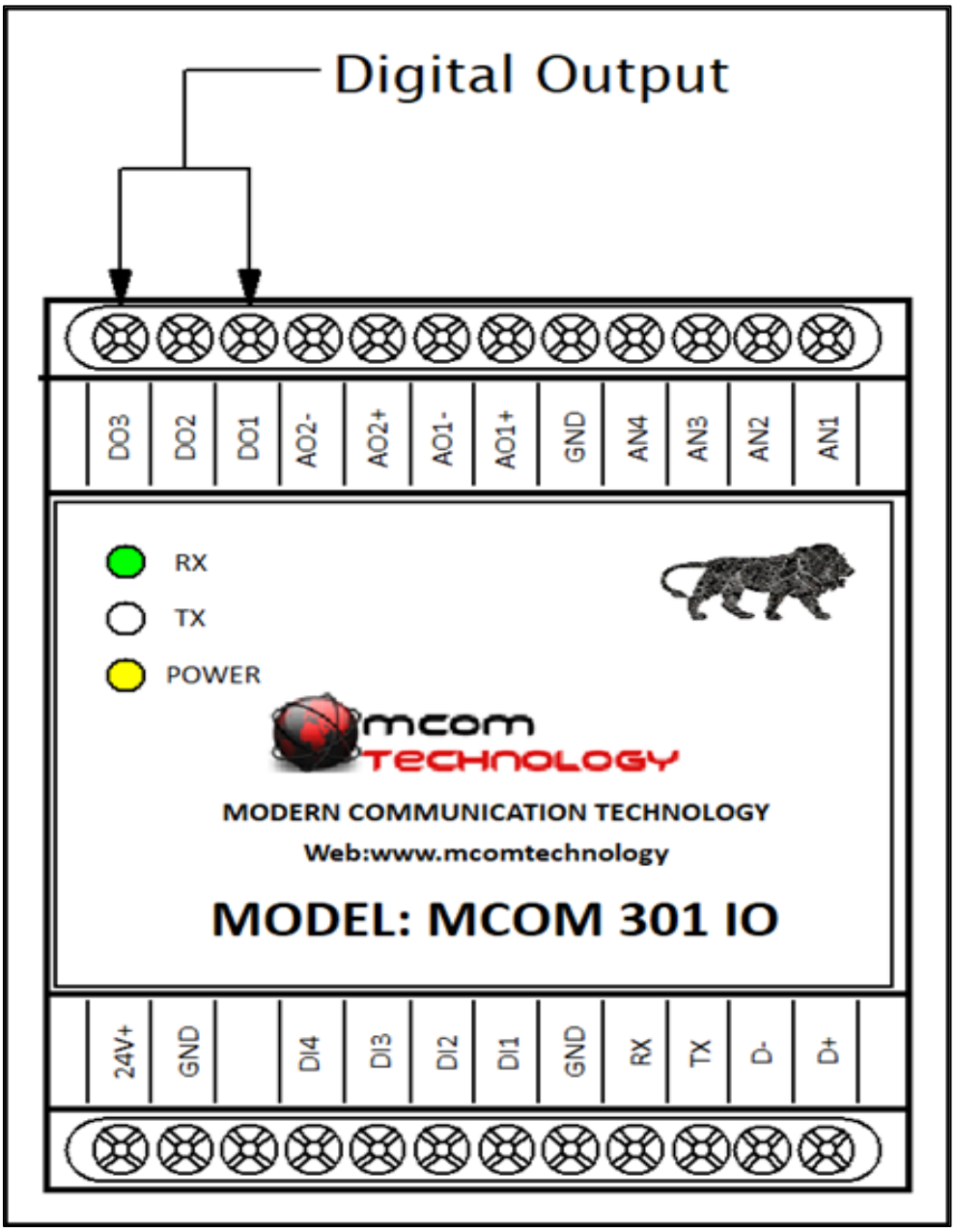




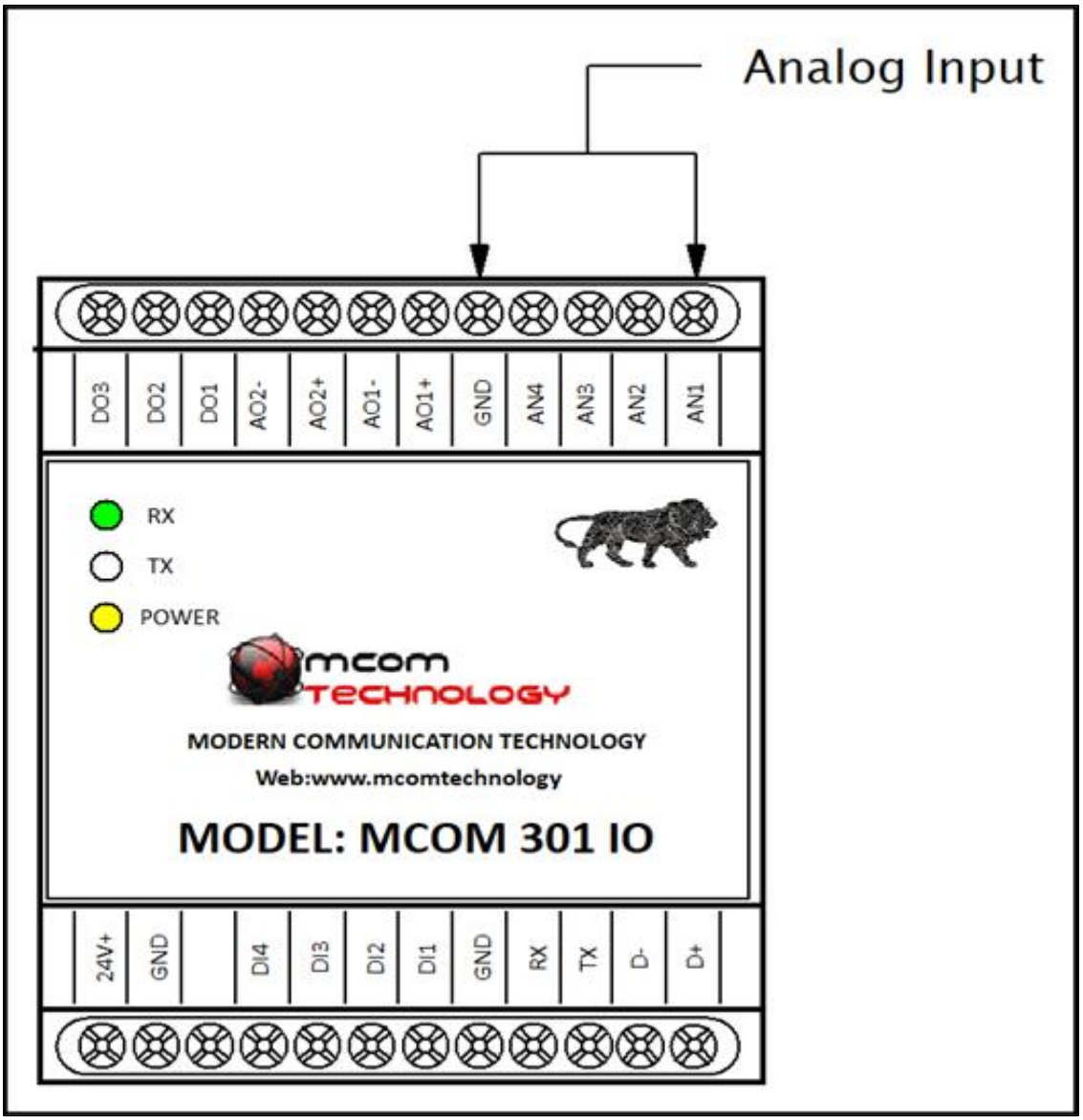
➢ DIGITAL INPUT



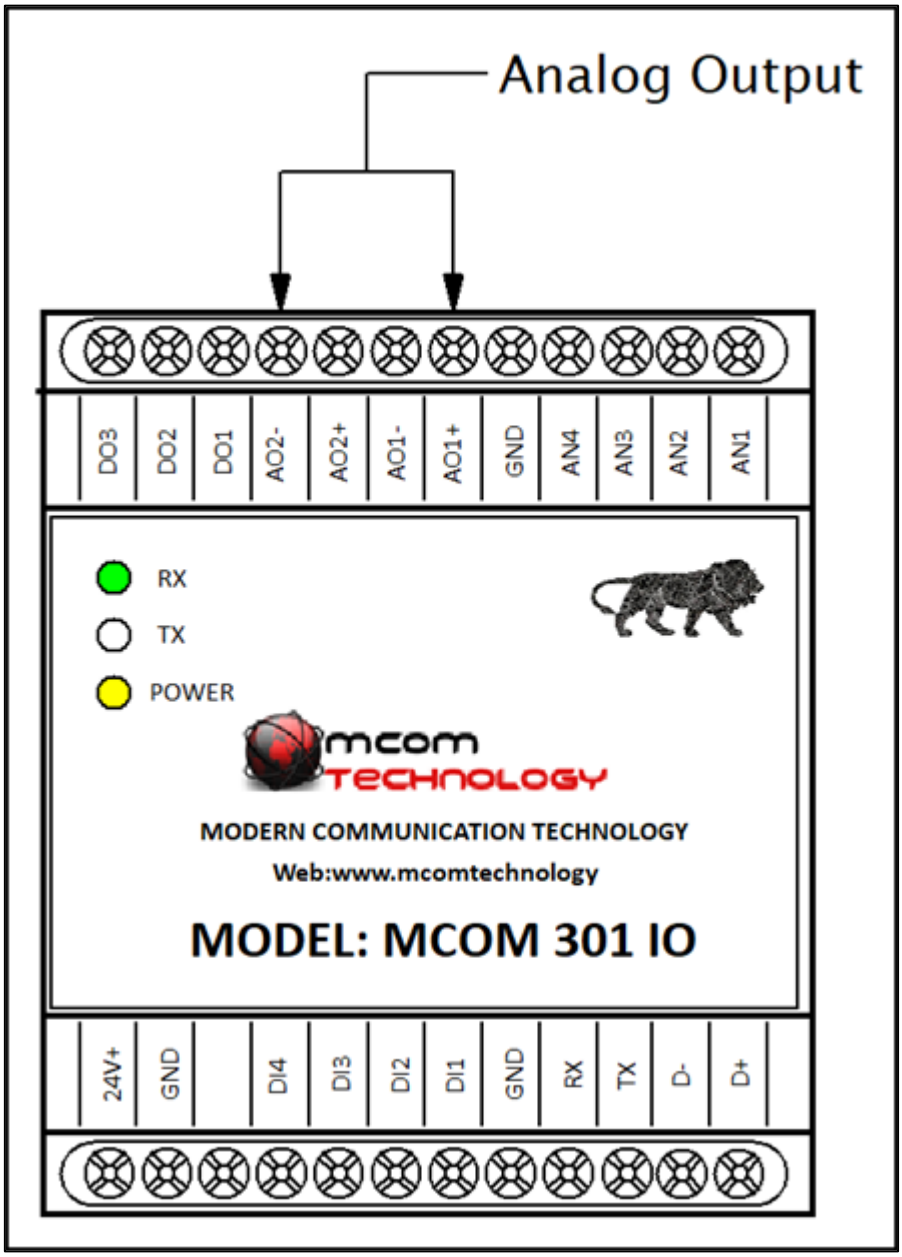
➢ DIGITAL OUTPUT



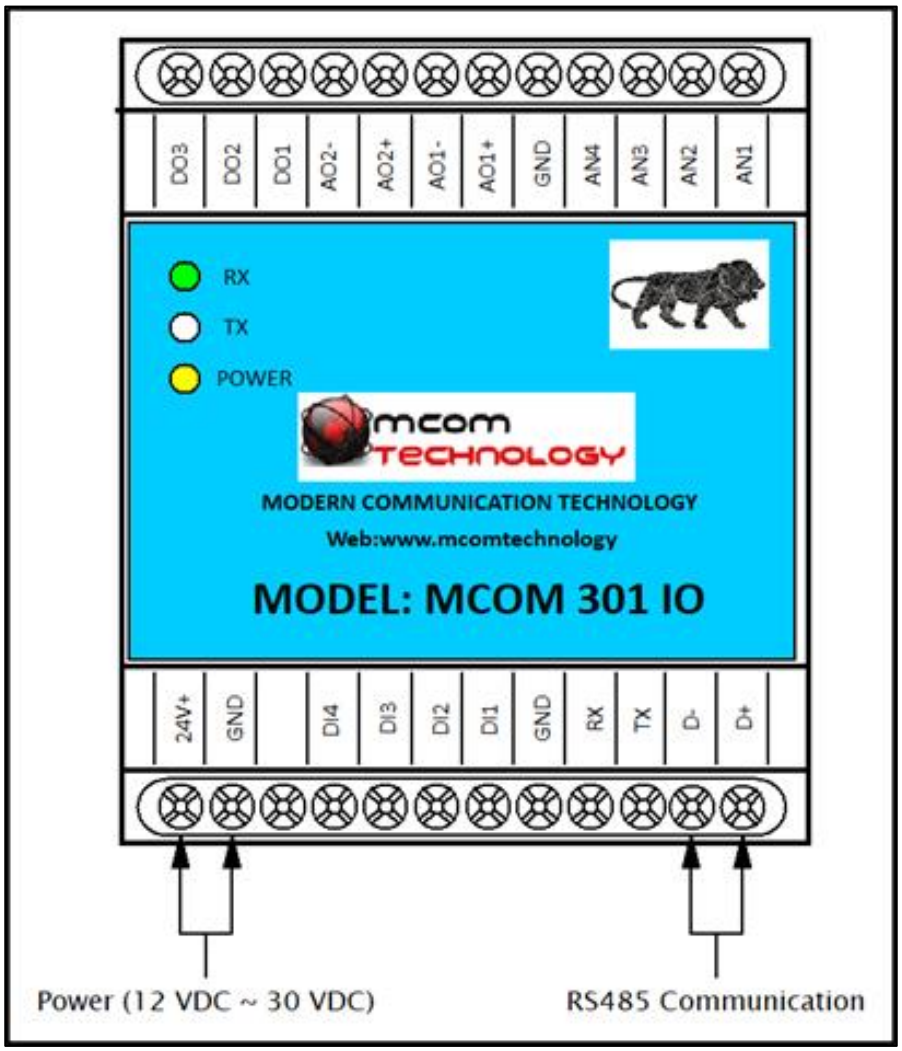
➢ ANALOG INPUT



➢ ANALOG OUTPUT



➢ POWER & RS485


DO3
DO2
DO1
AO2-
AO2+
AO1-
AO1+
GND
AN4
AN3
AN2
AN1
RX
TX
POWER
mcom TECHNOLOGY
MODERN COMMUNICATION TECHNOLOGY
Web:www.mcomtechnology
MODEL: MCOM 301 IO
24V+
GND
DI4
DI3
DI2
DI1
GND
RX
TX
D-
D+
Power (12 VDC ~ 30 VDC)
RS485 Communication