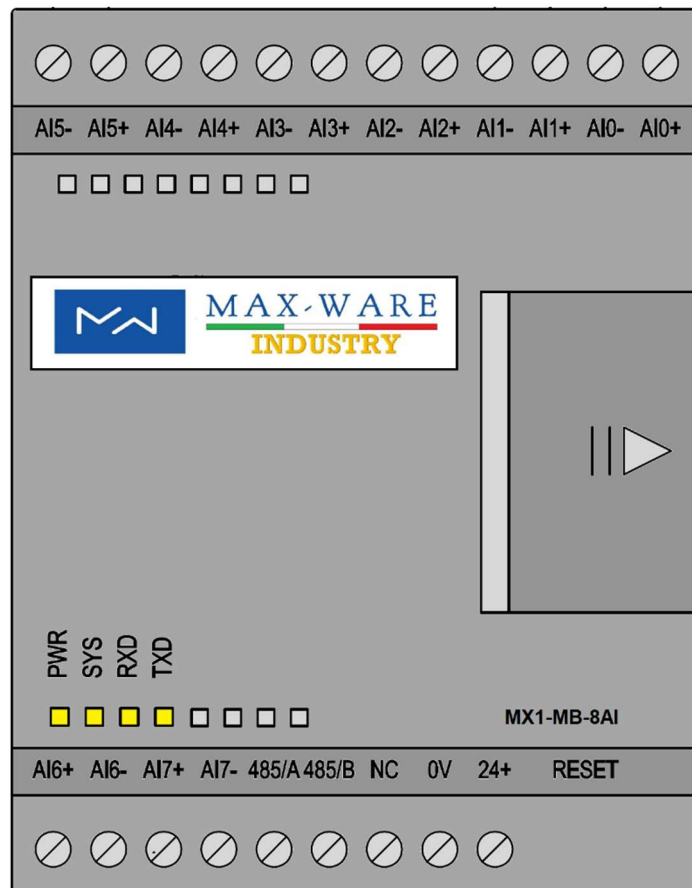




MAX-WARE
INDUSTRY

MX1-MB-8AI

MODBUS DATA ACQUISITION MODULE





MAX-WARE
INDUSTRY

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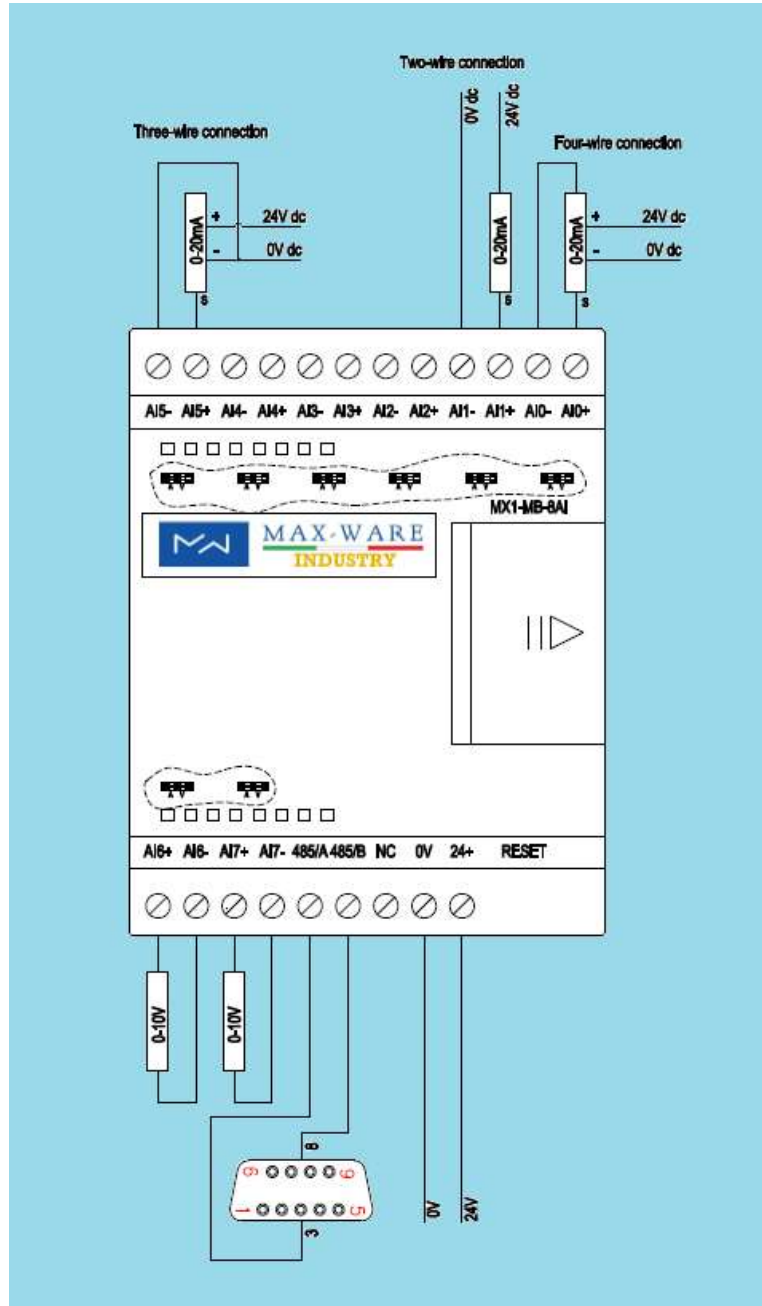


1 PRODUCT SPECIFICATION

DIGITAL INPUT	NO
DIGITAL OUTPUT	NO
ANALOGIC INPUT	8 ANALOG INPUT Type: 0-10v or 0..20ma Conversion accuracy current: 12bit (0-4096 INT) Conversion accuracy voltage: 13bit (0-8192 INT) Jumper selection mode. Default current
ANALOGIC OUTPUT	NO
COM PORT 1	Type: RS485 2 wire A-B Baudrate: 1200-115200 (cfg) Communication format: Default 8-bit data, 1-bit stop, no check (cfg) Address range: 1-254 Trasmission distance: 1200m Communication mode: MODBUS RTU slave
COM PORT 2	NO
ETHERNET PORT	NO
POWER	Operating voltage: DC 24V; with anti-reverse protection Power consupion: 2-4 W
TEMPERATURE	-20°C +70°C
DIMENSIONS	70MM (length) * 80MM (width) * 60MM (height)
INSTALLATION MODE	Guide rail DIN



2 WIRING

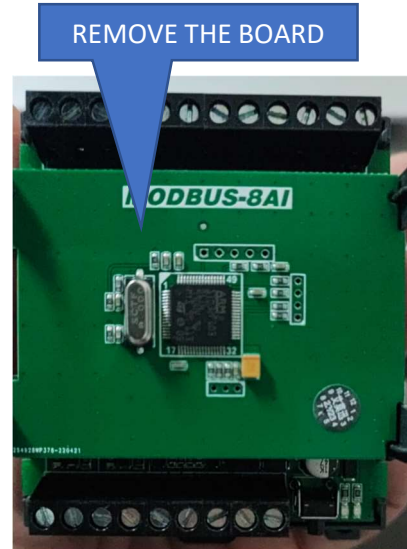




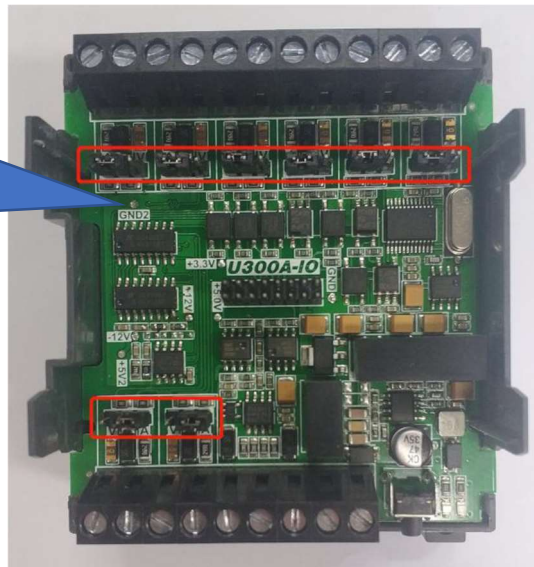
PIN ASSIGNEMENT					
AI0+	Ch1 input +	AI0-	Ch1 input -	24+	24VDC
AI1+	Ch2 input +	AI1-	Ch2 input -	0V	0 VDC
AI2+	Ch3 input +	AI2-	Ch3 input -	B	B MODBUS
AI3+	Ch4 input +	AI3-	Ch4 input -	A	A MODBUS
AI4+	Ch5 input +	AI4-	Ch5 input -		
AI5+	Ch6 input +	AI5-	Ch6 input -		
AI6+	Ch7 input +	AI6-	Ch7 input -		
AI7+	Ch8 input +	AI7-	Ch8 input -		



3 ANALOGIC INPUT CONFIGURATION



MOVE THE JUMPER:
V= VOLTAGE
A= CURRENT
DEFAULT POSITION = A



PLUG AND UNPLUG JUMPER CAP MUST BE OPERATED UNDER MODULE POWER FAILURE



4 COMMUNICATION FUNCTION

SERIAL PORT FUNCTION

PORT	SUPPORT FUNCTION	MAX CONNECTION	DESCRIPTION
COM 1	MODBUS RTU SLAVE	1	MODBUS RTU SLAVE

5 RESTORE TO FACTORY DEFAULT

Re-power, effective within 1 minute, long press reset button indicator light flashing 6 times after release, the indicator light will always light for about 3 seconds and then resume the slow flash that the reset is successful

Parameter Name	Parameter Default Value
Module Address	1
Baud rate	9600
Serial communication parameters	8 bits of data, 1 bit of stop bit, no parity
Serial port mode	MODBUS RTU SLAVE
Bus error mode	Output reset



6 MODBUS ADDRESS TABLE

NAME	PLC ADDRESS	MODBUS ADDRESS	FUNCTION
ANALOG INPUT CH 1	30001	0x00	0x04
ANALOG INPUT CH 2	30002	0x01	0x04
ANALOG INPUT CH 3	30003	0x02	0x04
ANALOG INPUT CH 4	30004	0x03	0x04
ANALOG INPUT CH 5	30005	0x04	0x04
ANALOG INPUT CH 6	30006	0x05	0x04
ANALOG INPUT CH 7	30007	0x06	0x04
ANALOG INPUT CH 8	30008	0x07	0x04
SYSTEM			
NAME	MODBUS ADDRESS	default	



7 CONFIGURATION

Use 485 interface and software for the configuration.

Software link: [DOWNLOAD](http://www.max-ware.it/DOWNLOAD/MX1-SOFT-CONF.zip) (www.max-ware.it/DOWNLOAD/MX1-SOFT-CONF.zip)

Interface type: 485-usb interface (MX1-MB-INTERFACE)



Default connection parameter:

Connection parameters	
COM number	COM1 ▾
Baud rate	9600 ▾
Parity bits	None ▾
Data bits	8 ▾
Stop bits	1 ▾
Address	1



The screenshot shows the MAX-WARE software interface with several callouts:

- INPUT TEST**: Points to the 'Analog quantity input' table.
- INPUT VISUALIZATION TYPE**: Points to the 'Signal type' column in the 'Analog quantity input' table.
- CHANGE MODULE COMMUNICATION PARAMETER**: Points to the 'Module Parameter Configuration' section.
- UNDER CONSTRUCTION**: Points to the 'Save configuration parameters' button.

Communication parameters

Connection parameters

COM number	COM1	Search for port
Baud rate	9600	Disconnect
Parity bits	None	Connect
Data bits	8	
Stop bits	1	
Address	1	

Module Parameter Configuration

Baud rate	9600	Readout paramete
Parity bits	None	Restore factory
Address	1	Write paramete
Version		

Analog quantity input

Channel	Internal Code	Voltage or Current	Calibration	Signal type
CH0			Zero Point 10 volts 20 mA	0~10V Set
CH1			Zero Point 10 volts 20 mA	Set
CH2			Zero Point 10 volts 20 mA	Set
CH3			Zero Point 10 volts 20 mA	Set
CH4			Zero Point 10 volts 20 mA	Set
CH5			Zero Point 10 volts 20 mA	Set
CH6			Zero Point 10 volts 20 mA	Set
CH7			Zero Point 10 volts 20 mA	Set

quantity of channel: 8 Set

Sampling depth: 4 Set

Resolution ratio: 14 Set

Buttons: Set all to voltage type, Set all to current type, Save configuration parameters

After each change a reboot is necessary