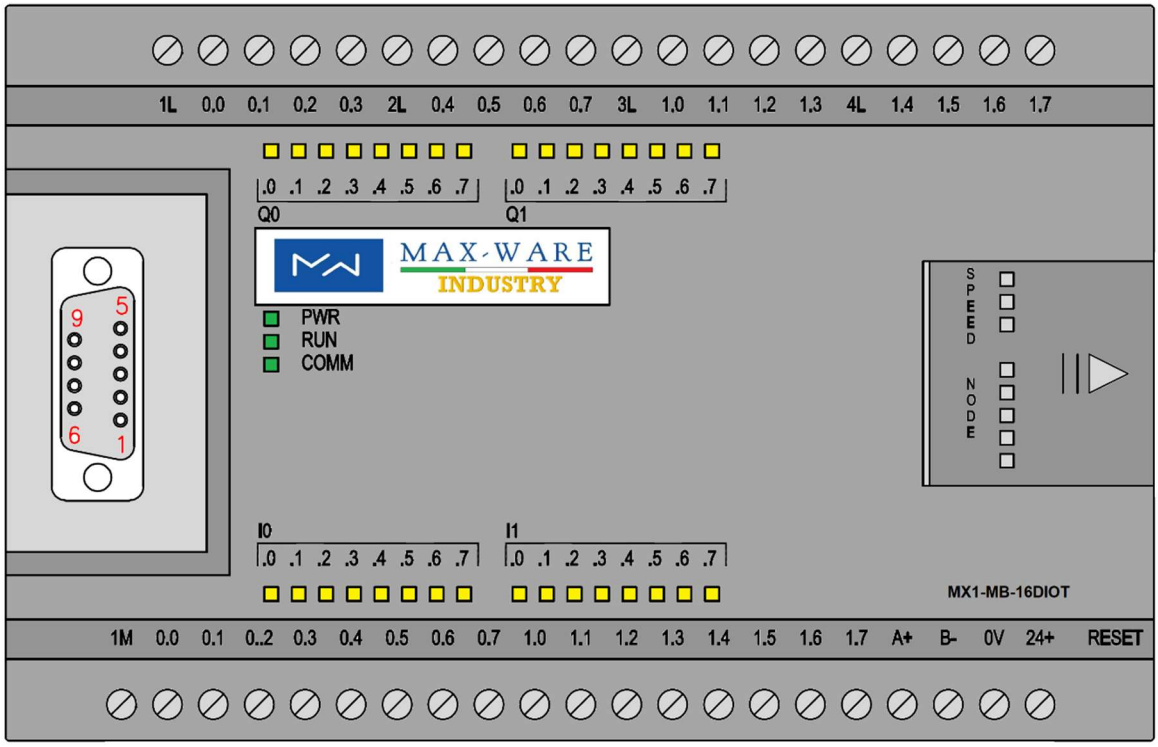
MAX-WARE
INDUSTRY

MX1-MB-16DIOT

MODBUS DATA ACQUISITION MODULE



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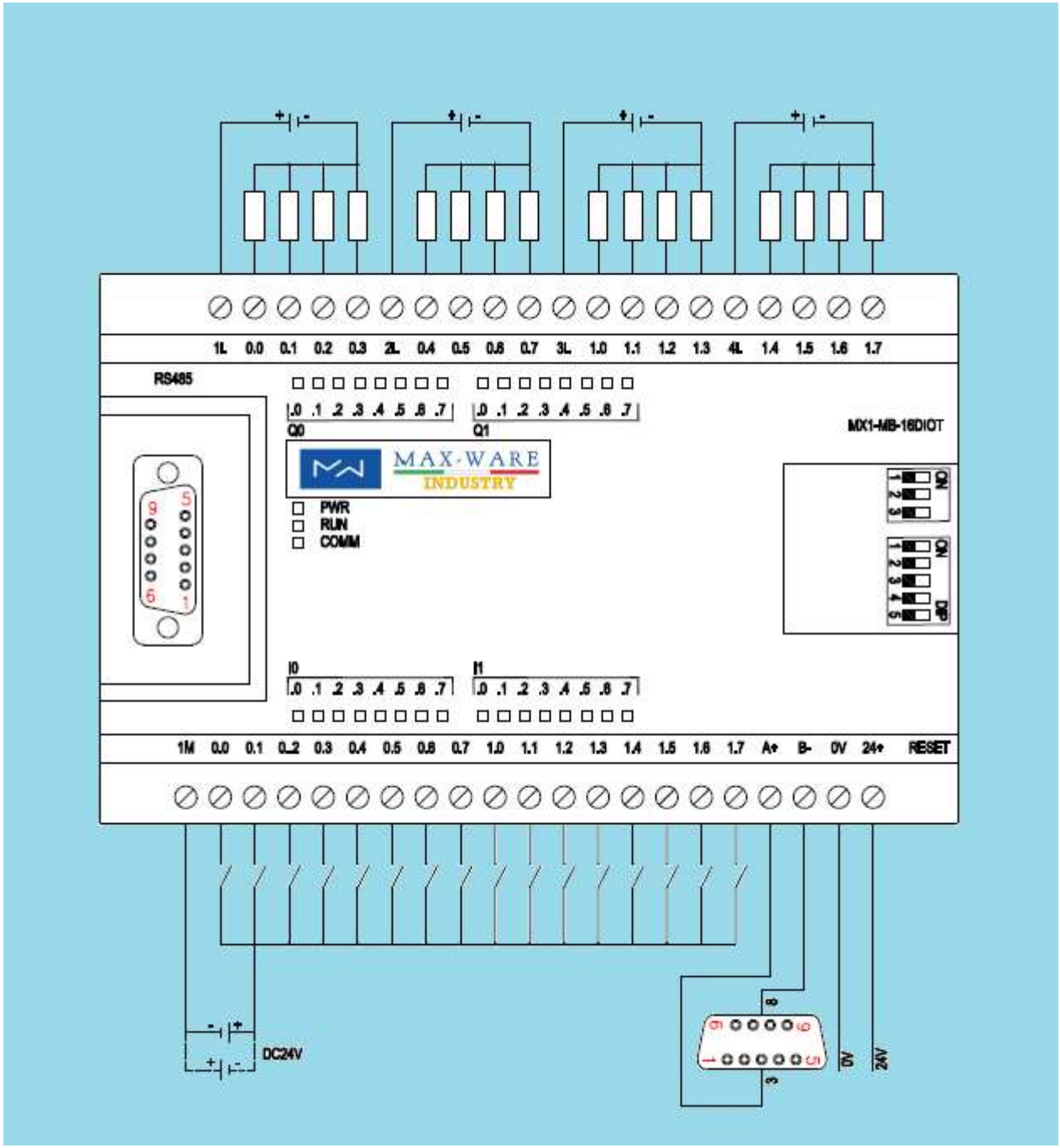
Sommario

1 PRODUCT SPECIFICATION

DIGITAL INPUT	16 DIGITAL INPUT Switch contact signal or level signal (PNP or NPN) Effective range: dc 20-28 vdc Optocupler isolation
DIGITAL OUTPUT	16 DIGITAL OUTPUT PNP transistor output Contact capacity: dc 3A/24V
ANALOGIC INPUT	NO
ANALOGIC OUTPUT	NO
COM PORT 1	Type: RS485 2 wire A-B Baudrate: 4800-115200 (cfg) Comunication format: Default 8-bit data, 1-bit stop, no check (cfg) Address range: 1-254 Trasmission distance: 1200m Comunication mode: MODBUS RTU slave
COM PORT 2	NO
ETHERNET PORT	NO
POWER	Operating voltage: DC 24V; with anti-reverse protection Power consuption: 2–4 W
TEMPERATURE	-20℃ +70℃
DIMENSIONS	125MM (length) * 80MM (width) * 50MM (height
INSTALLATION MODE	Guide rail DIN

2 WIRING


1L 0.0 0.1 0.2 0.3 2L 0.4 0.5 0.6 0.7 3L 1.0 1.1 1.2 1.3 4L 1.4 1.5 1.6 1.7
RS485
Q0
Q1
MAX-WARE
INDUSTRY
PWR
RUN
COMM
MX1-MB-16DIOT
I0
I1
1M 0.0 0.1 0.2 0.3 0.4 0.5 0.6 0.7 1.0 1.1 1.2 1.3 1.4 1.5 1.6 1.7 A+ B- 0V 24+ RESET
DC24V
0V
24V

DIGITAL INPUT		DIGITAL OUTPUT		POWER	
1M	Com input	1L	Com 0.0 - 0.3	24+	24VDC
0.0	Ch1 digital input	0.0	Ch1 digital output	0V	0 VDC
0.1	Ch2 digital input	0.1	Ch2 digital output	COM 1	
0.2	Ch3 digital input	0.2	Ch3 digital output	A	A+
0.3	Ch4 digital input	0.3	Ch4 digital output	B	B-
0.4	Ch5 digital input	2L	Com 0.4 - 0.7		
0.5	Ch6 digital input	0.4	Ch5 digital output		
0.6	Ch7 digital input	0.5	Ch6 digital output		
0.7	Ch8 digital input	0.6	Ch7 digital output		
1.0	Ch9 digital input	0.7	Ch8 digital output		
1.1	Ch10 digital input	3L	Com 1.0 - 1.3		
1.2	Ch11 digital input	1.0	Ch9 digital output		
1.3	Ch12 digital input	1.1	Ch10 digital output		
1.4	Ch13 digital input	1.2	Ch11 digital output		
1.5	Ch14 digital input	1.3	Ch12 digital output		
1.6	Ch15 digital input	4L	Com 1.4 - 1.7		
1.7	Ch16 digital input	1.4	Ch13 digital output		
		1.5	Ch14 digital output		
		1.6	Ch15 digital output		
		1.7	Ch16 digital output		

3 NODE CONFIGURATION

Dip switch speed of COM 1 

1	2	3	speed
OFF	OFF	OFF	9600
ON	OFF	OFF	19200
OFF	ON	OFF	38400
ON	ON	OFF	57600
OFF	OFF	ON	115200
ON	OFF	ON	9600
OFF	ON	ON	9600
ON	ON	ON	4800

Dip switch node of COM 1 

1	2	3	4	5	node
OFF	OFF	OFF	OFF	OFF	1
ON	OFF	OFF	OFF	OFF	2
OFF	ON	OFF	OFF	OFF	3
ON	ON	OFF	OFF	OFF	4
OFF	OFF	ON	OFF	OFF	5
ON	OFF	ON	OFF	OFF	6
OFF	ON	ON	OFF	OFF	7
ON	ON	ON	OFF	OFF	8
OFF	OFF	OFF	ON	OFF	9
ON	OFF	OFF	ON	OFF	10
OFF	ON	OFF	ON	OFF	11
ON	ON	OFF	ON	OFF	12
OFF	OFF	ON	ON	OFF	13
ON	OFF	ON	ON	OFF	14
OFF	ON	ON	ON	OFF	15
ON	ON	ON	ON	OFF	16
OFF	OFF	OFF	OFF	ON	17
ON	OFF	OFF	OFF	ON	18
OFF	ON	OFF	OFF	ON	19
ON	ON	OFF	OFF	ON	20
OFF	OFF	ON	OFF	ON	21
ON	OFF	ON	OFF	ON	22
OFF	ON	ON	OFF	ON	23
ON	ON	ON	OFF	ON	24
OFF	OFF	OFF	ON	ON	25
ON	OFF	OFF	ON	ON	26
OFF	ON	OFF	ON	ON	27
ON	ON	OFF	ON	ON	28
OFF	OFF	ON	ON	ON	29
ON	OFF	ON	ON	ON	30
OFF	ON	ON	ON	ON	31
ON	ON	ON	ON	ON	32

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 run light flashing 6 times after release, the run light will flashing fast than 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
DIGITAL INPUT CH 1	10001	0x00	0x02
DIGITAL INPUT CH 2	10002	0x01	0x02
DIGITAL INPUT CH 3	10003	0x02	0x02
DIGITAL INPUT CH 4	10004	0x03	0x02
DIGITAL INPUT CH 5	10005	0x04	0x02
DIGITAL INPUT CH 6	10006	0x05	0x02
DIGITAL INPUT CH 7	10007	0x06	0x02
DIGITAL INPUT CH 8	10008	0x07	0x02
DIGITAL INPUT CH 9	10009	0x08	0x02
DIGITAL INPUT CH 10	10010	0x09	0x02
DIGITAL INPUT CH 11	10011	0x10	0x02
DIGITAL INPUT CH 12	10012	0x11	0x02
DIGITAL INPUT CH 13	10013	0x12	0x02
DIGITAL INPUT CH 14	10014	0x13	0x02
DIGITAL INPUT CH 15	10015	0x14	0x02
DIGITAL INPUT CH 16	10016	0x15	0x02
DIGITAL OUTPUT CH 1	1	0x00	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 2	2	0x01	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 3	3	0x02	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 4	4	0x03	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 5	5	0x04	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 6	6	0x05	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 7	7	0x06	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 8	8	0x07	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 9	9	0x08	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 10	10	0x09	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 11	11	0x10	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 12	12	0x11	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 13	13	0x12	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 14	14	0x13	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 15	15	0x14	0x01 , 0x05 , 0x0F
DIGITAL OUTPUT CH 16	16	0x15	0x01 , 0x05 , 0x0F

SYSTEM			
NAME	MODBUS ADDRESS	default	

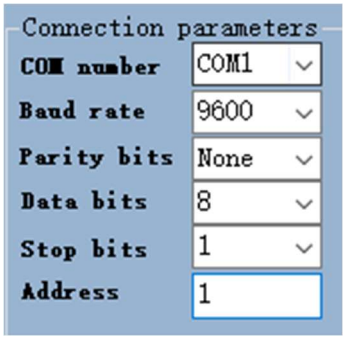
7 CONFIGURATION

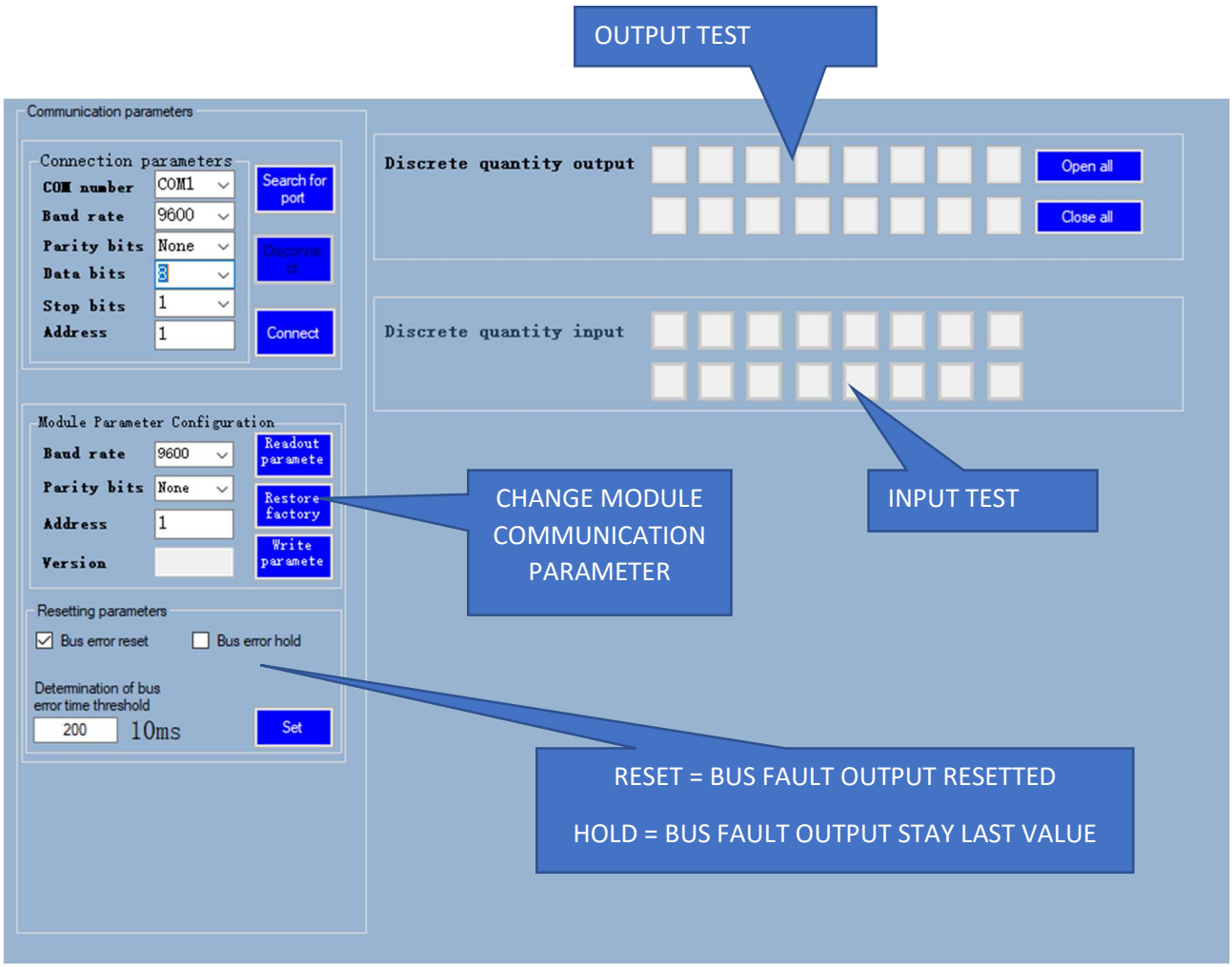
Use 485 interface and software for the configuration.

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

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

Default connection parameter:





After each change a reboot is necessary