EMD8204/08
EMD8204-5V

Ethernet Digital I/O module

User's Manual (V1.3)

Correction record

Version	Record
1.0	firmware version 1.0 up
1.1	Add System Reset
1.2	1. Modify 3.4.5 dimension
	2. Add 4.3 dimension Image
1.3	Add EMD8204-5V Information

Contents

Notes on hardware installation

Please register as user's club member to download the "Step_by_step_installation_of_Ethernet_module" document from http://automation.com.tw

1. Forward

Thank you for your selection of Ethernet module 8204/04-5V/08 digital input output interface.

Thanks to the booming of network, Ethernet become a reliable and low cost solution for data communication. To utilize the Ethernet as data communication highway of industrial control devices is more attractive than ever. EMD8204/04-5V/08 module is a simple web based digital I/O control module. We also provide the dll's of Window's or Linux system, enabling you coding the flexible application as you need. Stable, high reliability and remote addressable module give you a new approach of application.

In the same series:

  EMD8216   16 I/O Ethernet DIO module

Any comment is welcome,
please visit our website
http://www.automation.com.tw/
http://www.automation-js.com/   for the up to date information.

2. <u>Features</u>

- Over-voltage and over-current protection on digital input

- Various IO combinations

  4 photo isolated input and 4 relay output (EMD8204)

  4 photo isolated input by +5V and 4 relay output (EMD8204-5V)

  8 photo isolated input and 8 relay output (EMD8208)

- Digital I/P as counter input

- Direct web page control

- IP re-assignment

- 10/100M auto detection

- Software key function

- Peer to peer response time <2ms

3. Specifications

3.1 Digital input

3.1.1   Photo isolated input : 4 (EMD8204/EMD8204-5V)

8 (EMD8208)

3.1.2   Logic high level: 3.15V(min)

3.1.3   Logic low level: 1.35V(max)

3.1.4   Over-voltage protection: 60Vdc(max)

3.1.5   Over-current protection: 50mA(max)

3.1.6   Counter input : any digital input

3.1.7   Counter speed : 100Hz (max) square wave

3.2 Digital output

3.2.1   Relay output points: 4 (EMD8204/EMD8204-5V)

8 (EMD8208)

3.2.2   Relay capacity: 3A@250Vac, 3A @30Vdc

3.3 Ethernet

3.3.1   10/100M auto switch x 2 port

3.3.2   Peer to peer response time <2ms

3.4 General

3.4.1   Power requirement: 24Vdc

3.4.2   Operation Temperature: 0~+70 degree C

3.4.3   Storage Temperature: -20 ~+80 degree C

3.4.4   Operation Humidity: 5~95% RH, non-condensing

3.4.5   Dimension: 115.4(D)*136(W)*34(H) mm

4.6(D)*5.4(W)*1.4(H) in

4. Layout and dimensions

4.1 EMD8204/EMD8204-5V Layout
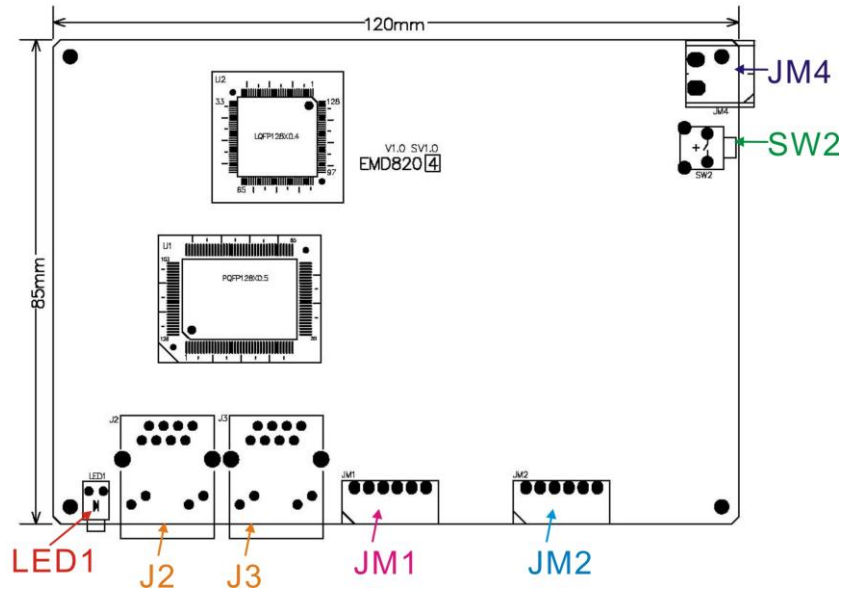
LED1: system active LED
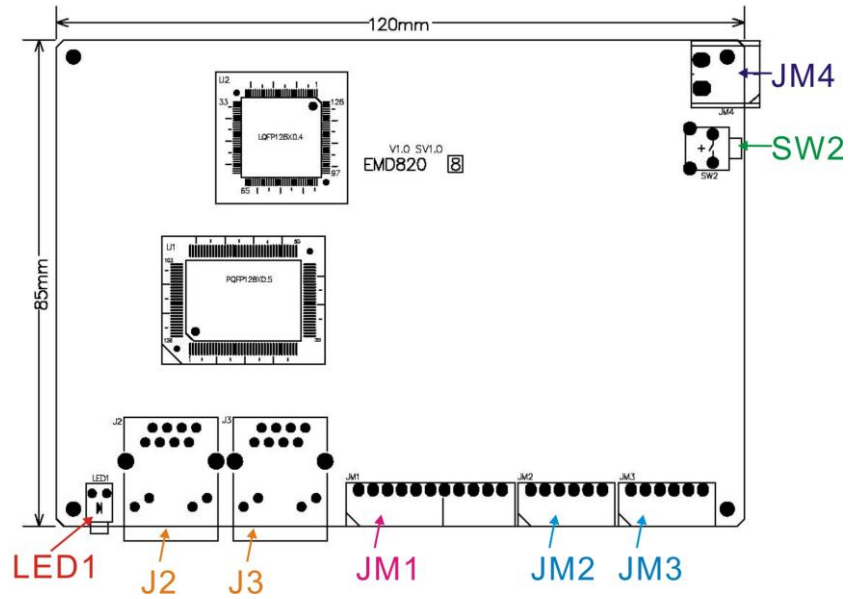
J2,J3: Ethernet RJ45 socket

JM1, JM2   I/O connector

JM4: external power 24V connector

SW2: system reset switch

4.2 EMD8208 Layout
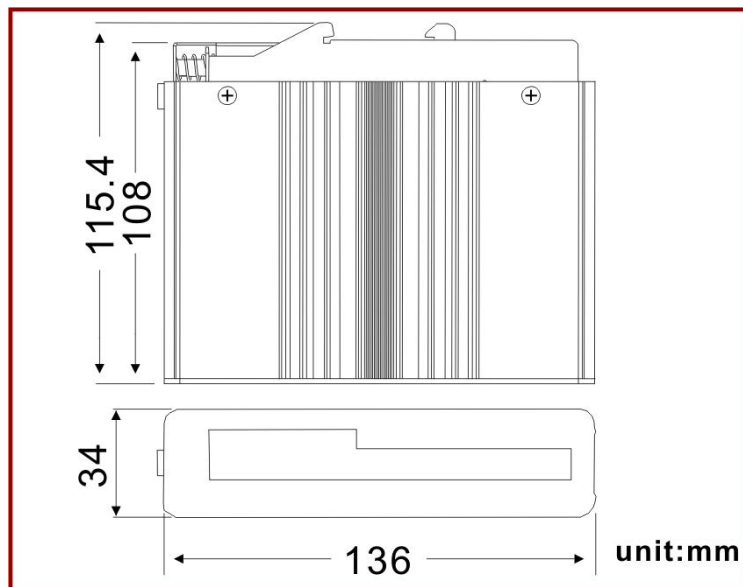

LED1: system active LED

J2,J3: Ethernet RJ45 socket

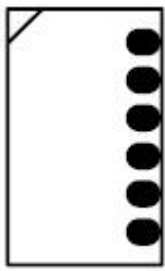JM1, JM2, JM3 I/O connector

JM4: external power 24V connector

SW2: system reset switch

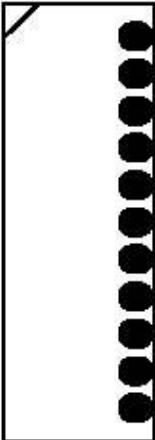### 4.3 EMD8204/EMD8204-5V/EMD8208 Dimension
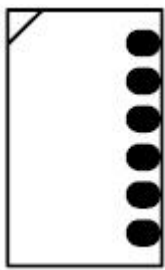
5. Pin definitions

5.1 JM1 pin definitions (EMD8204/EMD8204-5V)

+Ve*	1
IN 0	2
IN 1	3
IN 2	4
IN 3	5
EXTG	6
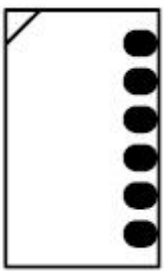
5.2 JM1 pin definitions (EMD8208)

+Ve*	1
IN 0	2
IN 1	3
IN 2	4
IN 3	5
EXTG	6
IN 4	7
IN 5	8
IN 6	9
IN 7	10
EXTG	11

5.3 JM2 pin definitions

OUT 0	1
OUT 1	2
COM 0	3
OUT 2	4
OUT 3	5
COM 1	6

5.4 JM3 pin definitions(EMD8208 Only)

OUT 4	1
OUT 5	2
COM 2	3
OUT 6	4
OUT 7	5
COM 3	6

* +Ve (EMD8204/08 is +24V ; EMD8204-5V is +5V)

6. I/O Interface diagram

6.1 Input diagram

I/P WIRING   Input interface

6.2 Output diagram

RELAY output
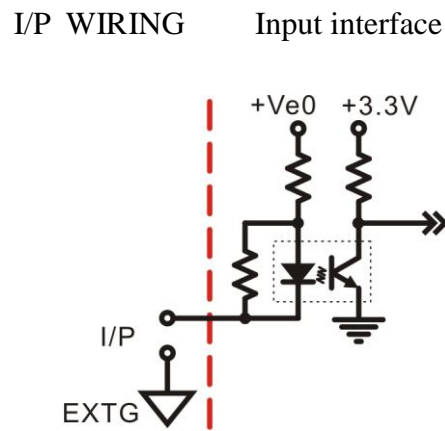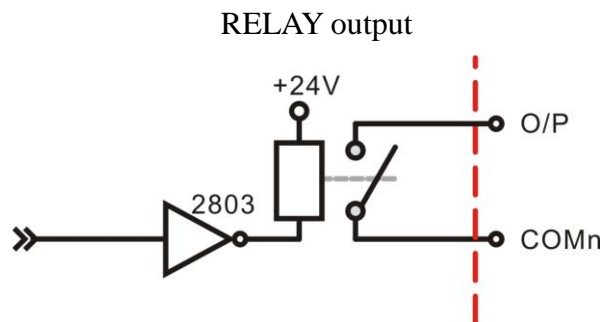
7. System Reset

The system reset switch SW2 has provide normal system reset and reset to default functions.

7.1 Normal system reset

Push the SW2 for more than 5 seconds, the power LED will flick at 3 HZ to signal the system has already reset. Once you release the switch, the LED will return to normal flick rate.

7.2 Reset to default

Push the switch while power on (We suggest to push the switch first then power on and wait for 3 seconds) for 3 seconds, the LED will:

1. stop flick
2. flicking at 3 Hz--- system now setting default data
3. flicking at normal speed --- system now already reset, you can release the switch.

item	default value
IP	192.168.0.100
password	12345678
socket port	6936
polarity	ALL inactive (0x0)
WDT timer	1second(0xA)
WDT output state	ALL inactive (0x0)
Web input name	IN0 ~ IN7
Web output name	OUT0 ~ OUT7

8. Applications

- For remote contact sensing
    - -- window or door open/close signal sensing
    - -- alram signal sensing
    - -- fire detector signal sensing
- For remote contact make or break control
    - -- window or door open close control
    - -- light control
    - -- power on/off control
- Multi-channel low speed counter (100Hz)

9. <u>Ordering information</u>

PRODUCT	DESCRIPTIONS
EMD8204	Ethernet module, 4 photo isolated input and 4 relay output
EMD8204-5V	Ethernet module, 4 photo isolated input by +5V and 4 relay output
EMD8208	Ethernet module, 8 photo isolated input and 8 relay output
JD52000	110/220Vac to 24Vdc @1.5A power supply
JS52026	110/220Vac to 24Vdc @0.75A power adapter