Mixed I/O Module Specifications

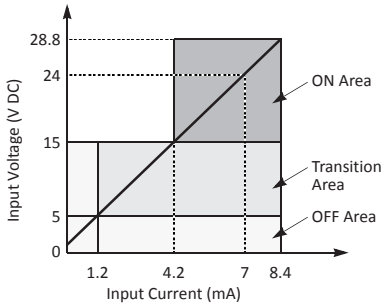
Type No.		FC4A-M08BR1	FC4A-M24BR2
I/O Points		4 inputs in 1 common line 4 outputs in 1 common line	16 inputs in 1 common line 8 outputs in 2 common lines
Terminal Arrangement		See Mixed I/O Module Terminal Arrangement on pages 2-53 and 2-54.	
Connector on Mother Board		MC1.5/11-G-3.81BK (Phoenix Contact)	Input: F6018-17P (Fujicon) Output: F6018-11P (Fujicon)
Connector Insertion/Removal Durability		100 times minimum	Not removable
Internal Current Draw	All I/Os ON	25 mA (5V DC) 20 mA (24V DC)	65 mA (5V DC) 45 mA (24V DC)
	All I/Os OFF	5 mA (5V DC) 0 mA (24V DC)	10 mA (5V DC) 0 mA (24V DC)
Internal Power Consumption (at 24V DC while all outputs ON)		0.65W	1.52W
Weight		95g	140g

DC Input Specifications (Mixed I/O Module)

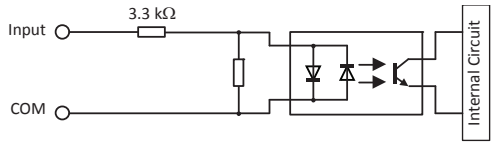
Input Points and Common Line	4 points in 1 common line	16 points in 1 common line
Rated Input Voltage	24V DC sink/source input signal	
Input Voltage Range	20.4 to 28.8V DC	
Rated Input Current	7 mA/point (24V DC)	
Input Impedance	3.4 kΩ	
Turn ON Time	4 ms (24V DC)	
Turn OFF Time	4 ms (24V DC)	
Isolation	Between input terminals: Not isolated Internal circuit: Photocoupler isolated	
External Load for I/O Interconnection	Not needed	
Signal Determination Method	Static	
Effect of Improper Input Connection	Both sinking and sourcing input signals can be connected. If any input exceeding the rated value is applied, permanent damage may be caused.	
Cable Length	3m (9.84 ft.) in compliance with electromagnetic immunity	

Input Operating Range

The input operating range of Type 1 (IEC 61131-2) input modules is shown below:

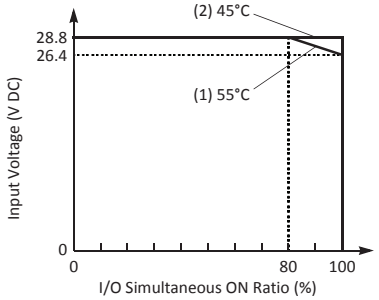


Input Internal Circuit



I/O Usage Limits

When using the FC4A-M24BR2 at an ambient temperature of 55°C in the normal mounting direction, limit the inputs and outputs, respectively, which turn on simultaneously along line (1).



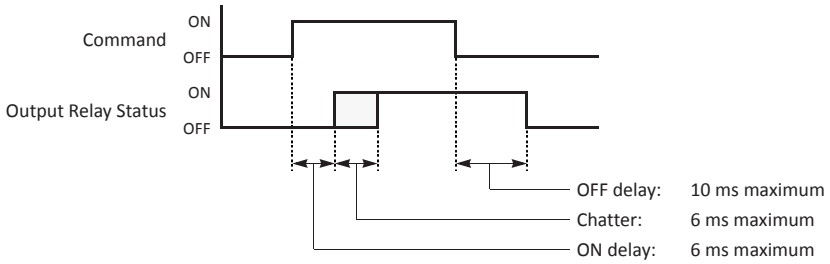
When using at 45°C, all I/Os can be turned on simultaneously at input voltage 28.8V DC as indicated with line (2).

When using the FC4A-M08BR1, all I/Os can be turned on simultaneously at 55°C, input voltage 28.8V DC.

Relay Output Specifications (Mixed I/O Module)

Type No.	FC4A-M08BR1	FC4A-M24BR2
Output Points and Common Lines	4 NO contacts in 1 common line	8 NO contacts in 2 common lines
Maximum Load Current	2A per point 7A per common line	
Minimum Switching Load	1 mA/5V DC (reference value)	
Initial Contact Resistance	30 mΩ maximum	
Electrical Life	100,000 operations minimum (rated load 1,800 operations/hour)	
Mechanical Life	20,000,000 operations minimum (no load 18,000 operations/hour)	
Rated Load	240V AC/2A (resistive load, inductive load cos ø = 0.4) 30V DC/2A (resistive load, inductive load L/R = 7 ms)	
Dielectric Strength	Between output and ⏚ or ⏚ terminals: 1,500V AC, 1 minute Between output terminal and internal circuit: 1,500V AC, 1 minute Between output terminals (COMs): 1,500V AC, 1 minute	
Contact Protection Circuit for Relay Output	See page 3-17.	

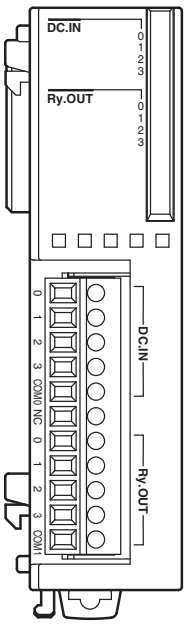
Output Delay

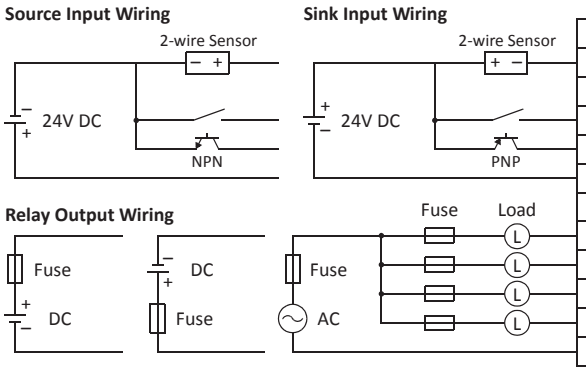


Mixed I/O Module Terminal Arrangement and Wiring Diagrams

FC4A-M08BR1 (Mixed I/O Module) — Screw Terminal Type

Applicable Terminal Block: FC4A-PMT11P (supplied with the mixed I/O module)

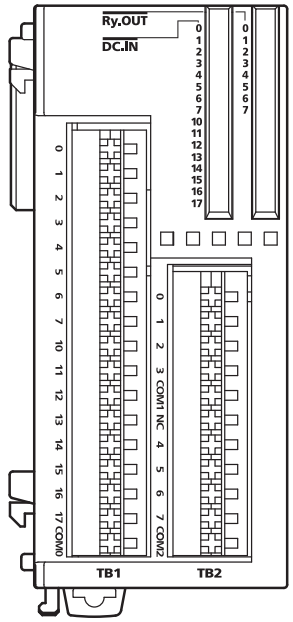




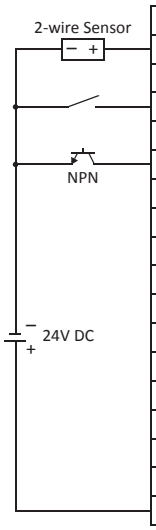
Terminal No.	I/O
0	I0
1	I1
2	I2
3	I3
COM0	COM0
NC	NC
0	Q0
1	Q1
2	Q2
3	Q3
COM1	COM1

- COM0 and COM1 terminals are *not* interconnected.
- For wiring precautions, see pages 3-15 and 3-16.

FC4A-M24BR2 (Mixed I/O Module) — Wire-clamp Terminal Type

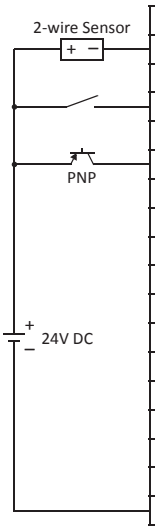


Source Input Wiring



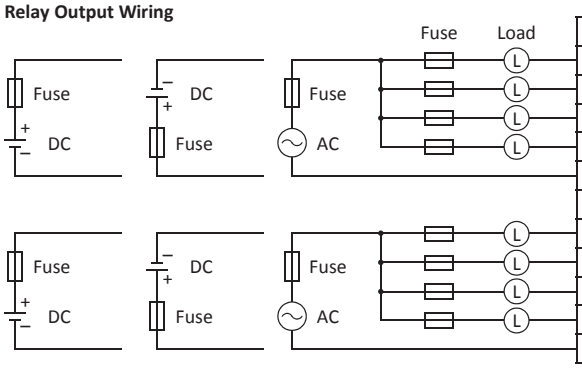
Terminal No.	Input
1	I0
2	I1
3	I2
4	I3
5	I4
6	I5
7	I6
8	I7
9	I10
10	I11
11	I12
12	I13
13	I14
14	I15
15	I16
16	I17
17	COM0

Sink Input Wiring



Terminal No.	Input
1	I0
2	I1
3	I2
4	I3
5	I4
6	I5
7	I6
8	I7
9	I10
10	I11
11	I12
12	I13
13	I14
14	I15
15	I16
16	I17
17	COM0

Relay Output Wiring



Terminal No.	Output
1	Q0
2	Q1
3	Q2
4	Q3
5	COM1
6	NC
7	Q4
8	Q5
9	Q6
10	Q7
11	COM2

- COM0, COM1, and COM2 terminals are *not* interconnected.
- Connect a fuse appropriate for the load.
- For wiring precautions, see pages 3-15 and 3-16.