

## Input/Relay Output Specifications (Expansion Modules)

### Input Module Specifications

		DC Input				AC Input
		FC4A-N08B1	FC4A-N16B1	FC4A-N16B3	FC4A-N32B3	FC4A-N08A11
<b>Input Points</b>		8 points (8/1 common)	16 points (16/1 common)		32 points (16/1 common)	8 points (4/1 common)
<b>Rated Input Voltage</b>		24V DC sink/source input signal				100 - 120V AC (50-60Hz)
<b>Input Voltage Range</b>		20.4 to 28.8V DC				85 to 132V AC
<b>Rated Input Current</b>		7mA/point (24V DC)		5mA/point (24V DC)		7.5mA/pt (100V AC, 60Hz)
<b>Input Impedance</b>		3.4 kΩ		4.4 kΩ		0.8kΩ (60Hz)
<b>Input Delay Time</b>		ON time: 4 msec OFF time: 4 msec				ON time: 25 msec OFF time: 30 msec
<b>Isolation</b>	Between input terminals	Not isolated				In the same commons: not isolated In different commons: 500V
	Internal circuit	Photocoupler isolated				2500V (photocoupler isolated)
<b>External Load for I/O Interconnection</b>		Not needed				
<b>Signal Determination Method</b>		Static				
<b>Effect of Improper Input Connection</b>		Both sinking and sourcing input signals can be connected. If any input exceeding the rated value is applied, permanent damage may be caused.				
<b>Cable Length</b>		3m (9.84 ft) in compliance with electromagnetic immunity				
<b>Connector</b>	<b>On Mother Board</b>	MC1.5/10-G-3.81BK (Phoenix contact)			FL20A2MA (Oki Electric Cable)	
	<b>Insertion/Removal Durability</b>	100 times minimum				
<b>Internal Current Draw</b>	<b>All Inputs ON</b>	25 mA (5V DC) 0 mA (24V DC)	40 mA (5V DC) 0 mA (24V DC)	35 mA (5V DC) 0 mA (24V DC)	65 mA (5V DC) 0 mA (24V DC)	60mA (5V DC) 0mA (24V DC)
	<b>All Inputs OFF</b>	5 mA (5V DC) 0 mA (24V DC)	5 mA (5V DC) 0 mA (24V DC)	5 mA (5V DC) 0 mA (24V DC)	10 mA (5V DC) 0 mA (24V DC)	30mA (5V DC) 0mA (24V DC)
<b>Weight</b>		85g	100g	65g	100g	-

### Relay Output Module Specifications

		FC4A-R081	FC4A-R161
<b>Output Points and Common Lines</b>		8 points (4/1 common)	16 points (8/1 common)
<b>Output Type</b>		1NO	
<b>Maximum Load Current</b>	<b>per point</b>	2A	
	<b>per common</b>	7A	8A
<b>Minimum Switching Load</b>		0.1 mA/0.1V DC (reference value)	
<b>Initial Contact Resistance</b>		30 mΩ maximum	
<b>Electrical Life</b>		100,000 operations minimum (rated load 1,800 operations/hour)	
<b>Mechanical Life</b>		20,000,000 operations minimum (no load 18,000 operations/hour)	
<b>Rated Load (resistive/inductive)</b>		240V AC/2A, 30V DC/2A	
<b>Dielectric Strength</b>		Between output and ⊕ terminals: 1500V AC, 1 minute Between output terminals and internal circuit: 1500V AC, 1 minute Between output terminals (COMs): 1500 V AC, 1 minute	
<b>Connector</b>	<b>On Mother Board</b>	MC1.5/11-G-3.81BK (Phoenix contact)	MC1.5/10-G-3.81BK (Phoenix contact)
	<b>Insertion/Removal Durability</b>	100 times minimum	
<b>Internal Current Draw</b>	<b>All Inputs ON</b>	30 mA (5V DC) 40 mA (24V DC)	45 mA (5V DC) 75 mA (24V DC)
	<b>All Inputs OFF</b>	5 mA (5V DC) 0 mA (24V DC)	5 mA (5V DC) 0 mA (24V DC)
<b>Weight</b>		110g	145g

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Programmable Logic Controllers