Programmable Logic Controllers **IDEC**

Flat-Pak Modular

Key features of the FA2J flat-pack modular include:

- 6ms/K processing
- Up to 128 inputs, 128 outputs
- DC inputs, relay or transistor outputs
- Low profile for shallow panels
- 8-bit or 12-bit analog input, multiplexer
- Replaceable relays
- Memory: 1K, 4K
- High-speed counter
- Computer link, networking

UL Listed
File No. E102542

CSA Certified
File No. LR66809   CE

Programming	Boolean or ladder logic
Available Instructions	15 basic, 57 advanced instructions [FA1J: 27 advanced instructions]
Capacity	964 steps (1K memory) 3,300 steps (4K memory)
Memory	1K, 4K CMOS-RAM (with battery) 4K EEPROM
Processing	6ms per 1K (basic instructions) [FA1J: 32ms per 1K]
Input	128 points (maximum)
Output	128 points (maximum)
Total I/O	256 points (maximum)
Internal Relay	608 points (240 can be maintained) [FA1J: 240 points; all can be maintained]
Special I/R	16 points
Shift Register	128 points (all can be maintained)
Single Shot Output	96 points
10ms Timer	80 points, subtracting, 0 to 999.9s 80 points [FA1J: not available]
Counter	45 points, adding, 0 to 9,999 (all can be maintained)
Reversible Counter	2 points (all can be maintained)
Data Register	400 points (all can be maintained) [FA1J: 100 points; all can be maintained]
Computer Interface	RS-232 link adaptor
External Control	Start: input 0; Stop and reset: function settings
Power Failure Protection	Internal relay, shift register, counter, reversible counter, data register
Diagnostics	CPU error (WDT), communication error, CRC error in user programs, operation code error
Auto Start	After power-up, automatic run state using function setting
Rated Voltage	100 to 240V AC 50/60Hz; Allowable: 85 to 110% of rated voltage; 24V DC ±20% (ripple 10% maximum)
Dielectric Strength	Between power or I/O terminal and ground: 1,500V AC, 1 minute (500V AC for analog lines)
Insulation Resistance	Between power or I/O terminal and ground: 10MΩ (500V DC megger)
Temperature	Operating: 0 to +55°C; Storage: −20 to +70°C
Operating Humidity	45 to 85% RH (avoid condensation)
Vibration Resistance	2G, 1 hour in each of 3 axes
Shock Resistance	10G
Noise Resistance	Between power or I/O terminal and ground: ±1.3kV p-p, 1μs (1kV DC pulse generator)
Ground Resistance	100Ω (maximum)
Mounting Style	Panel mount

Specifications

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Part Numbers: FA2J

Item			Description	Part Number
CPU		AC	FA2J CPU; power: 100 to 240V AC	PF2J-CPU1E
		DC	FA2J CPU; power: 24V DC	PF2J-CPU1DCE
Power		AC DC	Internal power supply for I/O expansion (100 to 240V AC) Internal power supply for I/O expansion (24V DC)	PFJ-PS1 PFJ-PS1DC
		External	External power supply for DC inputs, sensors (24V DC/0.5A)	PFJ-PU2
Expansion		Base Plate	For installing two I/O modules	PFJ-EB1
		Double-Stack Expansion	Mount CPU or expansion power, plus "piggyback" mounting capacity for two I/O modules (order one PFJ-EB1 separately)	PFJ-DP1
			Mount two I/O modules, plus "piggyback" mounting capacity for two more I/O modules (order two PFJ-EB1s parts separately)	PFJ-DP2
Input	8-Point DC	Transistor (source)	24V DC NPN transistor inputs	PFJ-N081
		Transistor (sink)	24V DC PNP transistor inputs	PFJ-N082
	8-Point AC	100V AC	100 to 120V AC inputs, standard response 100 to 120V AC inputs, fast response	PFJ-N083 PFJ-N083A
		200V AC	200 to 240V AC inputs, standard response 200 to 240V AC inputs, fast response	PFJ-N084 PFJ-N084A
	16-Point DC	Transistor (source)	24V DC NPN transistor inputs 5V DC NPN transistor inputs	PFJ-N161 PFJ-N161A
		Transistor (sink)	24V DC PNP transistor inputs	PFJ-N162
Analog Input	8-Bit	Voltage	0 to 10V DC inputs, 8-bit resolution, fast response 0 to 10V DC inputs, 8-bit resolution, standard response	PFJ-N012 PFJ-N012A
		Current	4 to 20mA DC inputs, 8-bit resolution, fast response 4 to 20mA DC inputs, 8-bit resolution, standard response	PFJ-N013 PFJ-N013A
	12-Bit	Voltage	0 to 10V DC analog input, 1 point, 12-bit resolution 1 to 5V DC analog input, 1 point, 12-bit resolution	PFJ-N112A PFJ-N113A
		Current	4 to 20mA DC analog input, 1 point, 12-bit resolution	PFJ-N114A
Multiplexer	12-Bit Analog Input	Voltage Current	Analog multiplexer module, 4 points, voltage Analog multiplexer module, 4 points, current	PFJ-4MPV PFJ-4MPI
Output	8-Point	Relay	1NO contact, rated load 110V AC, 5A; 220V AC, 2A	PFJ-T081
		Transistor (sink)	Rated load 12 to 48V DC, 1A per point	PFJ-T082
		SSR	Rated load 100 to 240V AC 1A per point	PFJ-T083
	16-Point Transistor	Transistor (sink)	Rated load 12 to 28V DC, 0.5A per point Rated load 5 to 12V DC, 20mA per point	PFJ-T162 PFJ-T162A
		Transistor (source)	Rated load 12 to 28V DC, 50mA per point Rated load 12 to 28V DC, 0.5A per point	PFJ-T162B PFJ-T162C
	Analog	Voltage Current	0 to 10V DC output, 8-bit resolution 4 to 20mA DC output, 8-bit resolution	PFJ-T012 PFJ-T013
Program Loader		Loader Extension Cable	Program loader with built-in PROM burner 59" (1.5m) — not included with program loader	PF3S-HL161E PFA-1A11
Memory Packs (see details on page J-42)			4K EEPROM (compatible with FA3S) 1K CMOS-RAM (compatible with FA3S) 4K CMOS-RAM (compatible with FA3S)	PFA-1M14 PFA-1M21 PFA-1M24
High Performance Input		High-Speed Counter	Single-phase, for high-frequency inputs Two-phase, for quadrature rotary encoder inputs	PFA-N011A PFA-N011B
Blank Module			Occupies unused slot on base plate	PFJ-DM
Computer Interface (all 3 parts required)			Link adaptor for 1:1 communications to IBM-compatible PC Link cable, FA series CPU to link adapter 12" (300mm) Link cable, PC to link adapter, 78.74" (2m)	PF2-CLA PFA-1A51 PFA-1A54A
Software			Windows-based programming software for all IDEC PLCs (for more information, see page J-44)	WINDLDR
User's Manuals			User's Manual FA2J	EM325-0
			8 Bit Analog I/O Manual	EM049
			12 Bit Analog Input Manual	EM225

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