

## FA3S: The Powerhouse

### Key features of the FA3S include:

- Up to 256 local I/O points
- Up to 1,024 fiber optic remote I/O points, from up to 3,280' (1km) away
- 8-channel analog module
- RS232 and RS485 modules available
- Modem communications
- Real-time clock and calendar available
- High-speed interrupt I/O (16 or 32 points)
- Average Boolean scan: 0.3ms/K
- Up to 8K program steps
- Built-in programming/ASCII port



UL Listed  
File No. E102542



CSA Certified  
File No. LR66809



CE Certified  
EMC Approved\*



File No. E9960513332  
\*Some modules excepted

	Standard CPUs	High-Performance CPU
<b>Available Instructions</b>	15 basic, 57 advanced CP11T: plus 6 clock and protect instructions	15 basic 122 advanced
<b>Program Capacity</b>	CP11: 964 steps (1K memory) 3,300 steps (4K memory) CP11T: 3,300 steps (built-in EEPROM)	964 steps (1K memory) 4,036 steps (4K memory) CP13: 8,072 steps (8K memory)
<b>Memory</b>	CP11: 1K and 4K CMOS-RAM (with battery); 4K EEPROM; 4K EPROM CP11T: Built-in 4K EEPROM memory	1K and 4K CMOS-RAM (with battery); 4K EEPROM CP13: 8K CMOS-RAM or EEPROM
<b>Average Scan Time</b>	6µs per basic instruction	0.3µs per basic instruction
<b>Input</b>	128 points (maximum)	I/O configurable
<b>Output</b>	128 points (maximum)	I/O configurable
<b>Total I/O Points</b>	256 points	256 points
<b>Internal Relay</b>	608 points (240 points can be maintained)	1,024 points (240 points can be maintained)
<b>Special Internal Relay</b>	CP11: 16 points; CP11T: 18 points	32 points
<b>Shift Register</b>	128 points	224 points
<b>Single Shot Output</b>	96 points	256 points
<b>Timer</b>	80 points, subtracting (0–999.9s)	256 points
<b>10ms Timer</b>	80 points	80 points
<b>Counter</b>	45 points, adding (0–9,999) (all points can be maintained)	100 points, adding (0–9,999) (all points can be maintained)
<b>Reversible Counter</b>	2 points (all points can be maintained)	2 points (all points can be maintained)
<b>Data Register</b>	400 points (all points can be maintained)	1,000 points (all points can be maintained)
<b>Forced I/O</b>	Not available	Available (50 points simultaneously)
<b>Remote I/O</b>	Not available	1,024 points (plus 256 points basic capacity)
<b>Runtime Program Modify</b>	Not available	Available
<b>Real-Time Clock/Calendar Runtime</b>	Available on CP11T only	Not available
<b>Program Protection</b>	Available on CP11T only	Available
<b>High-Performance Modules</b>	High-speed counter (PF3S-HSC2)	High-speed counters (PF3S-HSC1 and -HSC2), high-speed interrupt I/O, remote I/O, RS232, RS485
<b>External Control</b>	Start: input 0 (release possible); Stop/reset: function designated	
<b>Power Failure</b>	Protected: Internal relay, shift register, counter, reversible counter, data register	
<b>Self-Diagnostics</b>	CPU error (WDT), communication error, CRC error in user programs, operation code error	
<b>Auto Start Function</b>	After power-up, automatic run, function designated	

General Specifications

Programmable Logic Controllers



The FA2 loader (PF2-2H4RE) and FA3 loader (PF3S-HL161E) are compatible with all FA series PLCs and the Micro-1.

Part Numbers: FA3S Series

Item	Description		Part Number
CPU	Standard CPU		PF3S-CP11
	Standard CPU with built-in 4K EEPROM & clock		PF3S-CP11T
	High Performance CPUs		PF3S-CP12 PF3S-CP13
Input	Transistor	16 point sink/source	PF3S-N16B
		32 point sink/source	PF3S-N32B PF3S-N325B
	AC	16 point 100-120V AC	PF3S-N16A1
		16 point 200-240V AC	PF3S-N16A2
	Analog	8 Channel: 0 - 10V	PF3S-AD8B1
		8 Channel: 4 - 20mA	PF3S-AD8B2
		1 Channel: 0 - 10V	PF3S-AD121
1 Channel: 1 - 5V, 4 - 20mA		PF3S-AD122	
Multiplexer	4-channel analog input (voltage/current)		PF3S-MP41
Output	Relay	8-point	PF3S-R081
		16-point	PF3S-R161
	Transistor	16-point Transistor sink out	PF3S-T16K
		16-point Transistor source out	PF3S-T16S
		32-point Transistor source out	PF3S-T32K
		32-point TTL Transistor sink out	PF3S-T325K
		32-point Transitory source out	PF3S-T32S
	SSR	16-point	PF3S-S161
Analog	2 channel 0-10V, 4 - 20mA		PF3S-DA121
Combination I/O			PF3S-M32K PF3S-M325K
High Speed Counter	One Channel	use with CP12/CP13	PF3S-HSC1
		use with any CPU	PF3S-HSC2
High Speed I/O	8pt Source In/ 8pt Sink Out,	use with CP12/CP13	PF3S-HSL1
Serial Interface	RS232 Communication module		PF3S-SIF2
	RS485 Communication module		PF3S-SIF4
Fiber Optic Remote I/O	Master	short range	PF3S-RMP1
		medium range	PF3S-RMQ1
	Slave	short range	PF3S-RTP1
		medium range	PF3S-RTQ1
AC Power Supply	Standard	12V DC, 1.25A	PF3S-PSA1
	Large Capacity	12V DC, 2.0A	PF3S-PSA2
DC Power Supply	12V DC, 1.7A		PF3S-PSD1
External Power Supply	24V DC, 1.0A		PF3S-EPA1
Backplane	2-slot base plate		PF3S-BP12
	3-slot base plate		PF3S-BP13
Program Loader	Loader	Program loader with built-in PROM burner 59" (1.5m)	PF3S-HL161E
	Extension Cable	— not included with program loader	PFA-1A11
Memory Packs (see details on page J-42)	4K EEPROM (compatible with FA3S)		PFA-1M14
	1K CMOS-RAM (compatible with FA3S)		PFA-1M21
	4K CMOS-RAM (compatible with FA3S)		PFA-1M24
Computer Interface (all 3 parts required)	Link adaptor for 1:1 communications to IBM-compatible PC		PF2-CLA
	Link cable, FA series CPU to link adapter 12" (300mm)		PFA-1A51
	Link cable, PC to link adapter, 78.74" (2m)		PFA-1A54A
Software	Windows-based programming software for all IDEC PLCs (for more information, see page J-44)		WINDLDR
Manuals	FA3S (CP11) User's Manual		EM266-CP11
	FA3S (CP12/CP13) Users Manual		EM267
	CP11T Addendum to CP11		EM283
	HSC2 High Speed Manual		EM279
	SIF2/F4 Serial I/O Manual		EM284
	F A Advanced Users Guide		EM297
Battery	Lithium battery for PF3S-CP11T CPU		ER17/33WK23