New Generation PLC

FT1A Series SmartAXIS - 48 I/O

Key Features

- Available in 100-240 VAC and 24 VDC power
- Available with/without embedded LCD
- USB Mini-B Programming Port
- Embedded 8-pt analog inputs (0-10VDC, 10-bit, DC power)
- Integrated 4 x 100KHz high-speed counters
- Embedded Ethernet port
- Supports Modbus TCP and RTU
- SD Memory card for data logging and program storage
- Optional RS232C/RS485 adapter
- 100KHz high-speed outputs



General Specifications

Part Numbers	FT1A-H48KA, H48SA	FT1A-B48KA, B48SA	FT1A-H48KC, H48SC	FT1A-B48KC, B48SC
Appearance				
LCD Screen	Yes	N/A	Yes	N/A
Operating Temperature	0 to +55°C (operating ambient temperature)			
Storage Temperature	–25 to +70°C (no freezing)			
Rated Power Voltage	24V DC		100 to 240V AC	
Allowable Voltage Range	20.4 to 28.8V DC (Including ripple voltage)		85 to 264V AC	
Rated Power Frequency	–		50/60Hz (47 to 63Hz)	
Maximum Power Consumption	6.0W		43VA	
Weight	Approx. 380g		Approx. 540g	

Function Specifications

Part Numbers		FT1A-H48KA, H48SA, B48KA, B48SA	FT1A-H48KC, H48SC, B48KC, B48SC
Program Capacity Note 1		47,400 bytes (11,850 steps)	
Input	Points	30	
	Digital Input (Terminal No.)	22 (I0 to I7, I10 to I17, I20 to I25)	30 (I0 to I7, I10 to I17, I20 to I27, I30 to I35)
	Shared Analog Input (Terminal No.)	8 (I26, I27, I30 to I35)	–
	Output Points	18	
	10A Relay Output (Terminal No.)	–	
	2A Relay Output (Terminal No.)	–	
	Transistor Output (Terminal No.)	18 (Q0 to Q7, Q10 to Q17, Q20, Q21)	
User Program Storage		Flash ROM (10,000 rewriting life)	
Backup Function	RAM	Backup data: Internal relay, shift register, counter current value, data register Note 2, clock data (year, month, and day)	
	Backup Duration	Approx. 30 days (typical) at 25°C after backup battery fully charged	
	Battery	Lithium	
	Charging Time	Approx. 15 hours for charging from 0% to 90% of full charge	
	Battery Life	5 years	
	Replaceability	Not possible	
Clock Function Note 3		Clock accuracy: ±30 sec/month (typical) at 25°C	
Control System		Stored program system	

Specifications con't on next page

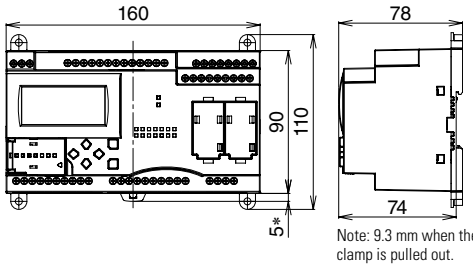
Specifications con't

Part Numbers		FT1A-H48KA, H48SA, B48KA, B48SA	FT1A-H48KC, H48SC, B48KC, B48SC
Instruction Words	Basic Instructions	42	
	Advanced Instructions	DC: 125, AC: 111	
Processing Time	Basic Instruction	0.95ms (1000 steps)	
	END Processing	640µs	
Internal Relay		1024	
Shift Register		128	
Data Register		2,000	
Counter (adding, reversible)		200	
Timer (1-sec, 100ms,10ms, 1ms)		200	
Input Filter		Without filter, 3 to 15ms (selectable in increments of 1ms)	
Catch Input/Interrupt Input	Input Points	6	
Self-diagnostic Function		Keep data, Power failure, Clock error, Watchdog timer, Timer/counter preset value change error, User program syntax, User program execution, System error, Memory cartridge transfer error	
High-speed Counter	Points	Total 6 points	–
	Maximum Counter Frequency	Single/two-phase selectable: 100kHz (2 points) , Single-phase: 100kHz (4 points)	
	Counting Range	0 to 4,294,967,295 (32 bit)	
	Operation Mode	Rotary encoder mode and adding counter mode	
Pulse Output (Maximum frequency: 100kHz)	Points	2 (Q14, Q15)	
Pulse Output (Maximum frequency: 5kHz)	Points	2 (Q16, Q17)	
Analog Voltage Input	Points (Terminal No.)	8 (I26, I27, I30 to I35)	–
	Input voltage Range	0 to 10V DC	
	Digital Resolution	0 to 1000	
USB Port	Points	1	
	USB Standard	USB 2.0	
	Connector	Mini-B type	
Expansion Communication Ports		2	
Ethernet Port		1	
Memory Cartridge Connectors		1	
SD Memory Card Slots		1	

1. Step is equivalent to 4 bytes.
2. Among data registers D0 to D1999, only D0 to D999 are backed up.
3. Set the calendar/clock using the clock function in WindLDR.

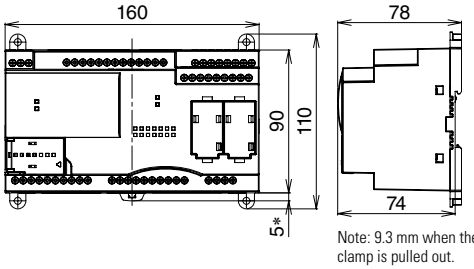
Dimensions (mm)

With LCD
FT1A-H48*A/*C



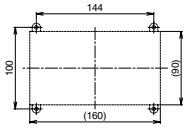
Note: 9.3 mm when the clamp is pulled out.

Without LCD
FT1A-B48*A/*C



Note: 9.3 mm when the clamp is pulled out.

Mounting Hole Layout



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