

**New  
Generation  
PLC**



# FT1A Series Smart **AXIS** - 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 <sup>Note 1</sup>	47,400 bytes (11,850 steps)	
Input	Points	30
	Digital Input (Terminal No.)	22 (I0 to I7, I10 to I17, I20 to I25)
	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 <sup>Note 2</sup> , 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 <sup>Note 3</sup>	Clock accuracy: ±30 sec/month (typical) at 25°C	
Control System	Stored program system	

Specifications con't on next page

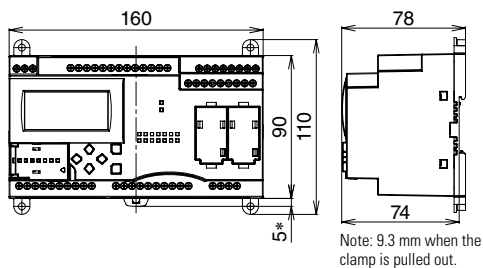
## Specifications con't

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	

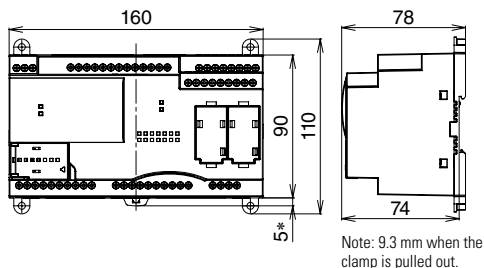
1. Step is equivalent to 4 bytes.
2. Among data registers D0 to D1999, only D0 to D999 are backed up.
3. Set the calendar/clock using the clock function in WindLDR.

## Dimensions (mm)

With LCD  
FT1A-H48\*A/\*C



Without LCD  
FT1A-B48\*A/\*C



## Mounting Hole Layout

