

FRECON



PL10 Series Programmable Controller



FRECON ELECTRIC (SHENZHEN) CO.,LTD.



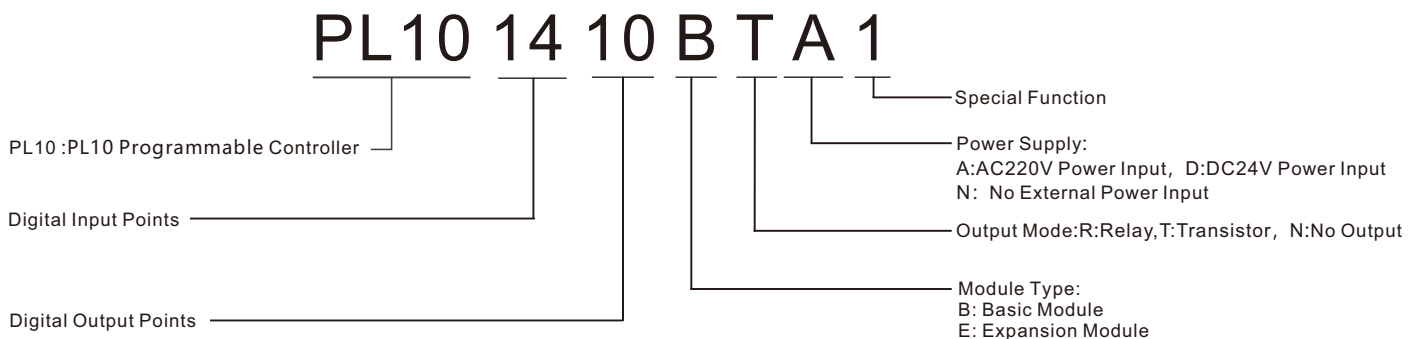
Basic Introduction

PL10 Series

- PL10 is a micro PLC launched by our company, with 4-channel pulse output and easy for operation. It is compact, powerful, and high cost-effective. Widely used in textile, chemical fiber, tools, cables machine, food & beverage, packaging, plastic steel, construction machinery, air conditioner, elevator, printing and other industries.

PL10 Series Programmable Controller

Product Nameplate Instructions



Product Features

➤ Mini size, high configuration, large capacity, high speed

- Integrate with analog I/O.
- The program capacity can reach 12K bytes, and the basic instruction execution takes only 0.3μs, and 4 extendible modules.

➤ Much safer, more stable and more reliable

- 8-digit password protection, can be set to prohibit program upload and unauthorized copying.
- Ultra-wide voltage design, three-proof processing, input filtering and power-off protection functions to ensure the PLC is more stable and reliable.

➤ Rich interrupt resources

- Support communication interruption, pulse interruption, power failure interruption, and configurable interruption priority to achieve advanced control.

➤ Strong communication networking capability

- Support PLbus N:N network communication protocol, support OPC service, provide PROFIBUS-DP slave communication simulation.

➤ Flexible programmatically

- Support MODBUS network, PDA, and remote dialing program methods, which is easy for maintenance and debugging.

➤ Powerful positioning and high-speed processing capabilities

- Positioning instructions to achieve position control of equipment.
- Variable speed pulse output, including liner pulse output function, to realize multi-stage variable speed control of servo motor and stepper motor.
- Built-in high-speed processing: 6 channels high-speed pulse input, maximum frequency 50KHz; and 2 channels 100KHz high-speed pulse output.

➤ Convenient and useful features

- Provides special function module configuration and inverter communication commands to simplify complex programming.
- Provide system configuration verification tools for users to expand configuration easily.

Technical Parameter

Item		Specification	
Execution way		Cyclic scan and interrupt mode	
Programmatically		Instruction, Ladder Diagram, Sequential Function Chart	
Instruction type	Basic instructions application instruction	32 pcs 226 pcs	
Execution time	Basic instructions application instruction	0.3μs Several μs ~ hundreds μs	
Program capacity		12K steps	
Maximum expansion		4 expansion modules, including I/O expansion and special function modules	
Input relay (X)		X0~X177, 128 points, octal code	
Output relay(X)		Y0~X177, 128 points, octal code	
Auxiliary relay (M)		M0~M2047, 2048 points	
Local Auxiliary Relay (LM)		LM0~LM63, 64 points	
Special auxiliary relay (SM)		SM0~SM255, 256 points	
Status relay(S)		S0~S1023, 1024 points	
Timer (T)		256 points (T0~T255)	100ms accuracy: T0~T299, 210pcs 10ms accuracy: T210~T251, 42 pcs 1ms accuracy: T252~T255, 4 pcs
Timer(s)		256 points (C0~C255)	16-bit count up: C0~C199, 200 pcs 32-bit up/down count: C200~C235, 36 pcs 32-bit high-speed count: C236~C255, 20 pcs
Data Register (D)		D0~D7999, 8000 points	
Local Data Register (V)		V0~V63, 64 points	
Indexed Addressing Register (Z)		Z0~Z15, 16 points	
Special Data Register (SD)		SD0~SD255, 256 points	
Power-down hold function		M, S, D, C elements can be saved, 320 bit elements and 180 word elements	
Storage medium		EEPROM+FLASH	
High-speed counter		Single phase: 6 groups, 2x50KHz+4x10KHz Biphase: 2 groups, 1x30KHz+1x5KHz	
Pulse output		Y0~Y1, two independent 100KHz outputs	
Interrupt resource	External input interrupt High-speed count interrupt Timed interrupt Communication interruption Pulse interruption Power outage interruption	16 (X0~X7, 8 supports rising edge and falling edge) 6 3 8 2 1	
Analog potentiometer input		2 (0~255)	
Pulse capture		8 channels, X0-X1: 20μs, X2-X7: 100μs	
Digital filtering		X0-X7 provide digital filtering, filtering time (ms) 0, 8, 16, 32, 64. Other hardware filtering	
Communication port		2 channels (1 channel is RS-232, 1 channel is RS232/RS-485 optional)	

Selection Table

Main Module

Series	Module	Description	Dimensions
PL10	PL10-1006BRA	10*DI,6*Transistor, 1*RS232, 2*RS485	135 x 90 x 75
PL10	PL10-1006BTA	10*DI,6*Transistor, 1*RS232, 2*RS485	135 x 90 x 75
PL10	PL10-1410BRA	14*DI,10*Relay, 1*RS232, 2*RS485	135 x 90 x 75
PL10	PL10-1410BTA	14*DI,10*Transistor, 1*RS232, 2*RS485	135 x 90 x 75
PL10	PL10-1614BRA	16*DI,14*Relay, 1*RS232, 2*RS485	150 x 90 x 75
PL10	PL10-1614BTA	16*DI,14*Transistor, 1*RS232, 2*RS485	150 x 90 x 75
PL10	PL10-1614BRA1	16*DI,14*Relay, 1*RS232, 2*RS485,2AI,1AO	182 x 90 x 75
PL10	PL10-1614BTA1	16*DI,14*Transistor, 1*RS232, 2*RS485,2AI,1AO	182 x 90 x 75
PL10	PL10-2416BRA	24*DI,16*Relay, 1*RS232, 2*RS485	182 x 90 x 75
PL10	PL10-2416BTA	24*DI,16*Transistor, 1*RS232, 2*RS485	182 x 90 x 75
PL10	PL10-3624BRA	36*DI,24*Relay, 1*RS232, 2*RS485	224.5 x 90 x 75
PL10	PL10-3624BTA	36*DI,24*Transistor, 1*RS232, 2*RS485	224.5 x 90 x 75

IO Expansion Module

Series	Module	Description	Dimensions
PL10	PL10-0808ERN	8*DI,8*Relay	61 x 90 x 75
PL10	PL10-0808ETN	8*DI,8*Transistor	61 x 90 x 75
PL10	PL10-1600ENN	16*DI	61 x 90 x 75
PL10	PL10-0016ETN	16*Transistor	61 x 90 x 75
PL10	PL10-0016ERN	16*Relay	61 x 90 x 75

Special Function Module

Series	Module	Description	Dimensions
PL10	PL10-4AD	4*AI(V/I)	61 x 90 x 75
PL10	PL10-4DA	4*AO(V/I)	61 x 90 x 75
PL10	PL10-4TC	4*Thermocouple	61 x 90 x 75
PL10	PL10-4PT	4*Thermal resistance	61 x 90 x 75
PL10	PL10-5AM	4*AI,1*AO	61 x 90 x 75

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