



Model Description

SH Series PLC

SH 3 1 1 - 08 08 TN



Features

- BUS + PULSE, motion control + process control
- Flying shear and following cut function
- Expansion module, flexible optional expansion (expansion module for SH300/500)
- Easy to use, modular standard instructions, easy programming
- SH300/SH500 integrated E-CAM, linear and circular interpolation
- New generation upgraded processor and ultra-thin structure design
- Light-weight structure, greatly optimized assembly efficiency

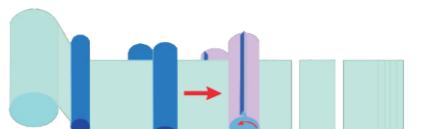
SH100/200 Series*

Model	SH100-0808TN/P	SH210-0808TN/P	SH210-0808TN/P1		
Features	8 NPN/PNP input 8 NPN or PNP output	8 NPN/PNP input 8 NPN or PNP output	8 NPN/PNP points, 8 NPN or PNP output 1 channel AD and DA, 0-20mA, $\pm 1\%$		
Supply voltage	DC24V				
Program storage capacity	16k steps				
Basic instruction execution time	0.2 μ s				
Power-off retention	FLASH permanent storage, maximum 2K Bytes	84k Bytes user software components 20k Bytes power-off data retention			
Programming language	LD, IL, SFC				
Digital input type	NPN and PNP				
Rated Voltage	DC24V, 4mA				
Logic 1 (voltage range)	>15V DC				
Logic 0 (voltage range)	<5V DC				
Filter	X0~X7 have digital filtering function, filtering time 0~60ms Other terminals adopt hardware filter, about 10ms				
High-speed counter	X0/X1: 50kHz, X2-X7: 10kHz	X0/X1: 50kHz, X2-X7: 10 kHz			
Highest pulse output (transistor)	3 channel 100kHz: Y0-Y2	4 channels 100kHz: Y0-Y3			
Interface	Port 0: RS232; Port 1: RS485; 1 USB	Port 0: RS232; Port 1: RS485; 1 USB, 1 Ethernet (ModbusTCP, master or slave)			
Baud rate	1.2kbps~115.2kbps	1.2kbps~115.2kbps			
Communication protocol	Modbus/Free port/N:				
USB communication	USB2.0, Type C. Supports program upload and download, monitoring, solid-state software upgrade.				

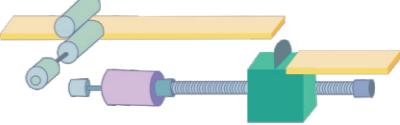
*: SH100 not support expansion module, SH200/300/500 support expansion module.

SH300 series

Motion control



Trailing-edge shear



Model	SH301-0808TN	SH301-0808TP	SH311-0808TN	SH311-0808TP
Features	8 points DC24V input 8 points NPN output 8 points PNP output 1 serial port 1 USB 8*200kHz input/output	8 points DC24V input 8 points NPN output 8 points PNP output 1 serial port 1 USB 8*200kHz input/output	8 points DC24V input 8 points NPN output 1 serial port 1 CANopen 1 Ethernet 8*200kHz input/output	8 points DC24V input 8 points PNP output 1 serial port 1 USB 1 CANopen 1 Ethernet 8*200kHz input/output
Supply voltage	DC24V			
Program storage capacity	200K Bytes			
Power-off retention	128K Bytes user soft components, about 84K Bytes power off retention; 1M Bytes custom variables, of which 128K Bytes power-off retention			
Programming language	LD, FBD, ST, SFC			
Right-side expansion	Max 16 pcs SH series right-side expansion module			
Left-side expansion	Max. 1 pc SH series left-side expansion module			
Real-time clock	PLC without real-time clock, can be extended with 1pc left-side RTC expansion module			
SD card	SD card can be used to upgrade the firmware update program.			
USB	USB2.0, Type C. Supports program upload and download, monitoring, solid-state software upgrade.			
Input	8-channel 200kHz high-speed pulse input, Support single-phase dual-phase (Up/Down), AB phase (1x and 4x) counting.			
Output	8-channel 200kHz high-speed pulse output, supporting positioning control instruction group			
bps	1.2kbps~115.2kbps			
RS-485	Protocol	With 1 communication interface, support 2 expansions, supporting Modbus/Freeport/N:N communication protocol		
	Terminal resistor	With terminal resistor, can be used as master or slave, supports up to 31 Modbus-RTU slaves		
	CAN	No		
		Support CANopen master, supports up to 31 slaves		
	EtherNET	No		
		Support ModbusTCP master-slave protocol, program upload, download and monitoring, support 16 slaves and 4 masters at the same time, TCP free protocol, support 4 connections		
	Motion control	Support positioning control instruction group, support linear and circular interpolation, electronic gear, E-CAM motion control.		

SH500 series



Model	SH511-0808TN	SH511-0808TP	SH522-0808TN	SH522-0808TP	SH523-0808TN	SH523-0808TP						
Feature	8-point DC24V input, 8-point NPN transistor output, 1 serial port, 1 USB, 1 Ethernet, 1 EtherCAT bus, maximum 8 axis	8-point DC24V input, 8-point PNP transistor output, 1 serial port, 1 USB, 1 Ethernet, 1 EtherCAT bus, maximum 8 axis	8-point DC24V input, 8-point NPN transistor output, 1 serial port, 1 USB, 1 CANopen, 2 Ethernet, 1 EtherCAT bus, maximum 16 axis	8-point DC24V input, 8-point PNP transistor output, 1 serial port, 1 USB, 1 CANopen, 2 Ethernet, 1 EtherCAT bus, maximum 16 axis	8-point DC24V input, 8-point NPN transistor output, 1 serial port, 1 USB, 1 CANopen, 2 Ethernet, 1 EtherCAT bus, maximum 32 axis	8-point DC24V input, 8-point PNP transistor output, 1 serial port, 1 USB, 1 CANopen, 2 Ethernet, 1 EtherCAT bus, maximum 32 axis						
Supply voltage												
DC24V												
Program storage capacity	200K Bytes											
Power-off retention												
128K Bytes user soft components, about 84K Bytes power-off retention; 1M Bytes custom variables of which 128K Bytes power-off retention												
Programming language	LD, FBD, ST, SFC											
Right-side expansion	Max. 16 pcs SH series right-side expansion module											
Left-side expansion	Max. 1 pc SH series left-side expansion module											
Real-time clock	PLC without real-time clock, can be extended with 1pc left-side RTC expansion module											
SD card	SD card can be used to upgrade the firmware update program.											
USB	USB2.0, Type C. Supports program upload and download, monitoring, solid-state software upgrade.											
Input	8 channel normal inputs	8-channel 200kHz high-speed pulse input support single-phase, dual-phase (Up/Down), AB phase (1x and 4x) counting.										
Output	8 channel normal output	8-channel 200kHz high-speed pulse output supporting positioning control instruction group										
RS485	Protocol	With 1 communication interface, support 2 expansions, supporting Modbus/Freepoint/N:N communication protocol										
	Terminal resistor	With terminal resistor, can be used as master or slave, supports up to 31 Modbus-RTU slaves										
CAN	No	Supports CAN open master, supports up to 31 slaves										
Ether NET	Number of network ports	Single network port	Dual Ethernet ports correspond to single network card, two Ethernet ports share one IP, support network switching function									
	Protocol	Support Modbus TCP master-slave protocol, support program upload, download and monitoring, support 16 slaves and 4 masters at the same time. TCP free protocol, support 4 connections.										
Motion control		Support positioning control instruction group, support linear and circular interpolation, electronic gear, electronic cam motion control.										
Ether CAT	Number of axis	8 axis	16 axis	32 axis								
	Number of slaves	Up to 72 slaves (including servo axis), including real axis and virtual axis, totaling 48 axis										
	Performance of axis	Communication cycle 250us~8ms, adjustable synchronization jitter time ±80ns										

Extension modules



Type	Model	Specification
Right-side Extension modules	SH-0808ETN	8 digital input module, 8 digital transistor NPN output module
	SH-0808ETP	8 digital input module, 8 digital transistor PNP output module
	SH-0016ETN	16 digital transistor NPN output module
	SH-0016ETP	16 digital transistor PNP output module
	SH-1600END	16 digital input module
	SH-0800END	8 digital input module
	SH-0008ETN	8-channel digital transistor NPN output module
	SH-0008ETP	8-channel digital transistor PNP output module
	SH-4AD	4-channel analog input module
	SH-4DA	4-channel analog output module
Left-side Extension modules	SH-4PT	4-channel input thermal resistance temperature detection module
	SH-4TC	4-channel input thermocouple temperature detection module
	SH-RS485	2 channel RS485
	SH-RS485-RTC	2 channel RS485 + Real-time clock
	SH-RS485-1	1 channel RS485
	SH-RS485-RTC-	1 channel RS485 + Real-time clock
	SH-RTC	Real-time clock