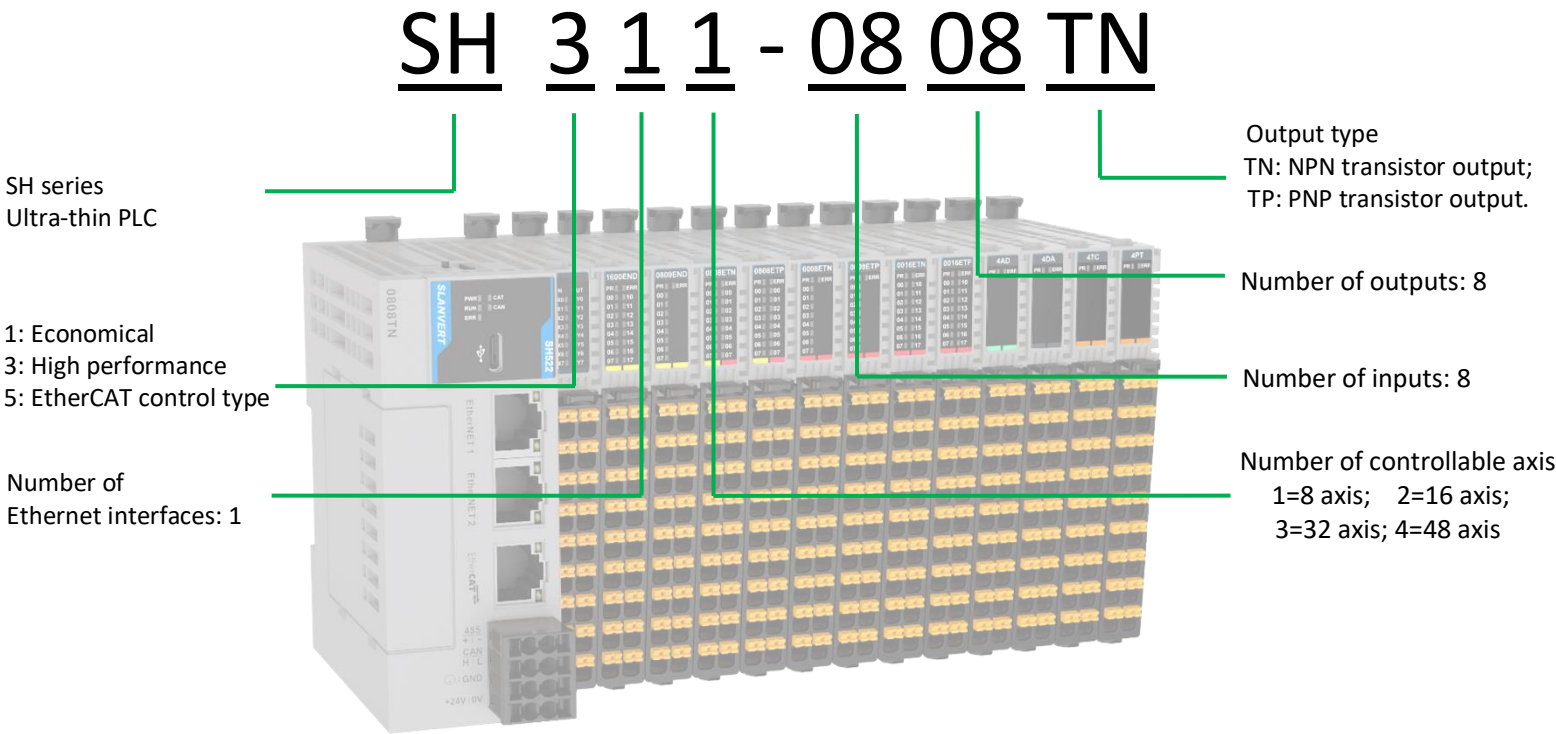


SH Series PLC



Features

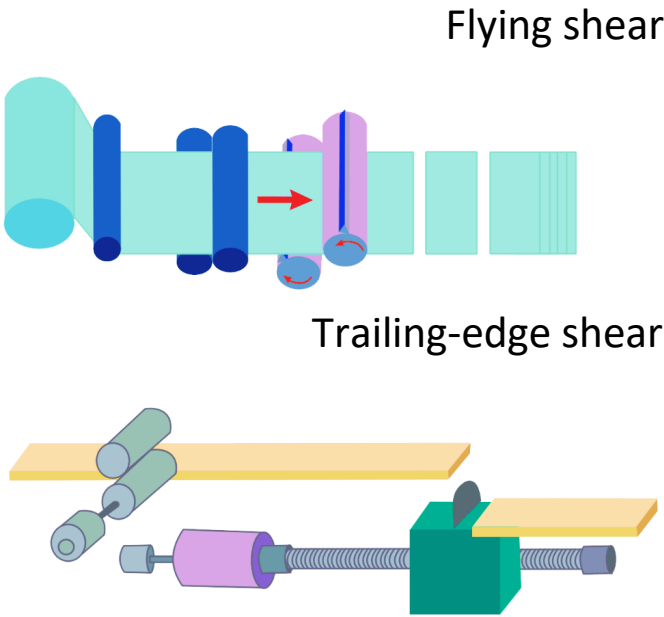
- BUS + PULSE, motion control + process control Flying shear and following cut function
- Expansion module, flexible optional expansion (expansion module for SH300/500)
- Easy to use, modular standard instructions, easy programming
- SH300/SH500 integrated E-CAM, linear and circular interpolation
- New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

SH100 series*

Model	SH100-0808TN	SH100-0808TP
Features	Ultra-thin programmable controller, 8-point input, 8-point NPN output	Ultra-thin programmable controller, 8 input points, 8 PNP output points
Supply voltage	DC24V	
Program storage capacity	16K steps	
Basic instruction execution time	0.2 μs	
Power-off retention	FLASH permanent storage, maximum 2K Bytes	
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	Single-phase 50kHz [2 pcs: X0/X1], 6x10 kHz [6 pcs: X2-X7] Dual-phase 25 kHz [1 pc], 5 kHz [3 pcs]	
Highest pulse output (transistor)	3 channels 100kHz pulse output [Y0-Y2]	
Interface	2 serial communication ports: Port 0: RS232; Port 1: RS485; 1 USB interface	
Baud rate	1.2kbps~115.2kbps	
Communication protocol	Modbus/Free port/N:N	
USB communication	USB2.0, Type C. Supports program upload and download, monitoring, solid-state software upgrade.	

*: SH100 not support expansion module, SH300/SH500 support left and right expansion module

SH300 series



Model		SH301-0808TN	SH301-0808TP	SH311-0808TN	SH311-0808TP
Features		8 points DC24V input 8 points NPN output 1 serial port 1 USB 8*200kHz input/output	8 points DC24V input 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 USB 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			
RS-485	bps	1.2kbps~115.2kbps			
	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.			

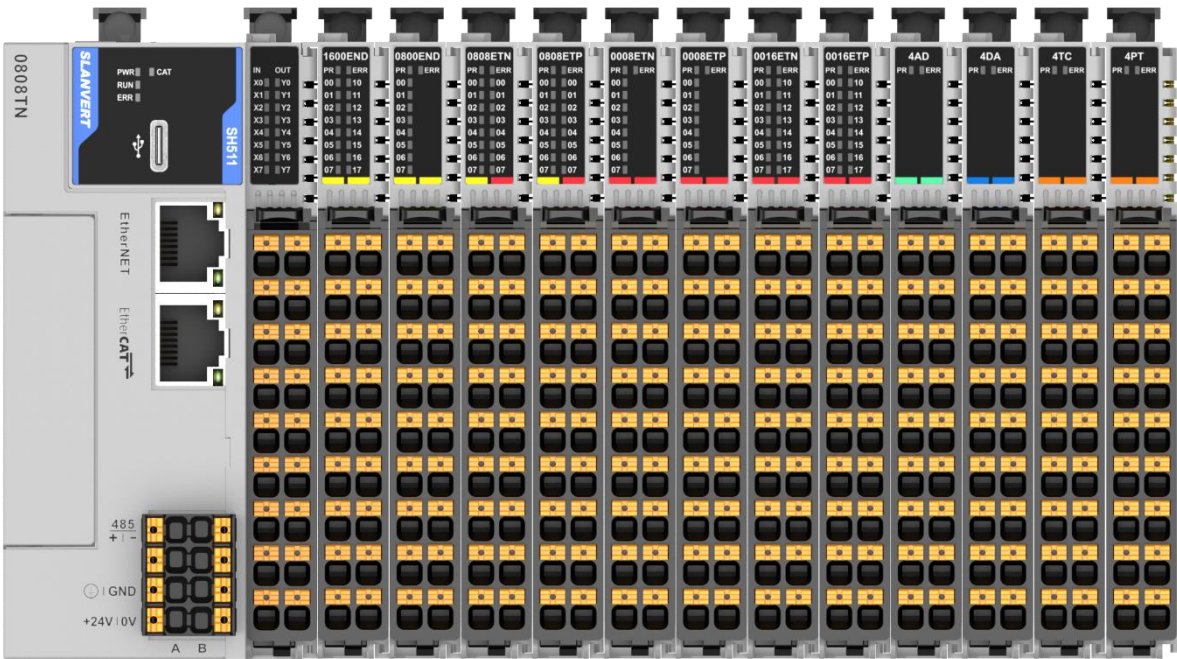
SH500 series

Motion control



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 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					
RS485	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	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
	SH-4PT	4-channel input thermal resistance temperature detection module
	SH-4TC	4-channel input thermocouple temperature detection module
Left-side Extension modules	SH-RS485	2 channel RS485
	SH-RS485-RTC	2 channel RS485 + Real-time clock
	SH-RS485-1	1 channel RS485
	SH-RS485-RTC-1	1 channel RS485 + Real-time clock
	SH-RTC	Real-time clock