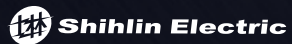


Factory Automation

Factory Automation



Head Office: | 16F, No. 88, Sec. 6, ChungShan N. Rd., Taipei, Taiwan, 111
TEL: +886-2-2834-2662 FAX: +886-2-2836-6187

HsinFun Factory (Taiwan): | No. 234, Chung Lun, Hsin Fun, HsinChu, Taiwan, 304
TEL: +886-3-599-5111 FAX: +886-3-5907173

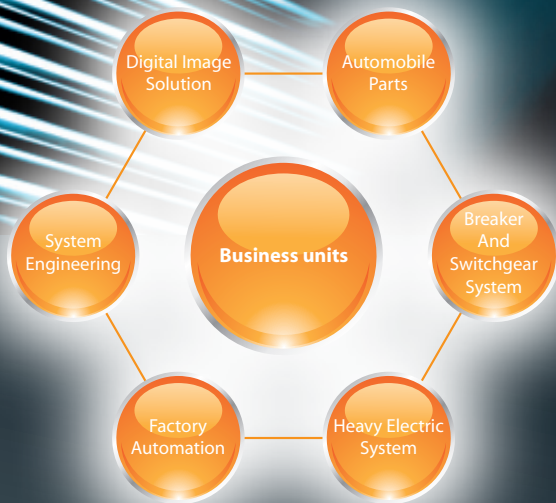
SuZhou Factory (China): | No. 22, HuoJu Rd., SuZhou Tech. District, JiangSu, China. 215009
TEL: +86-512-6843-2662 FAX: +86-512-6843-2669

www.seec.com.tw

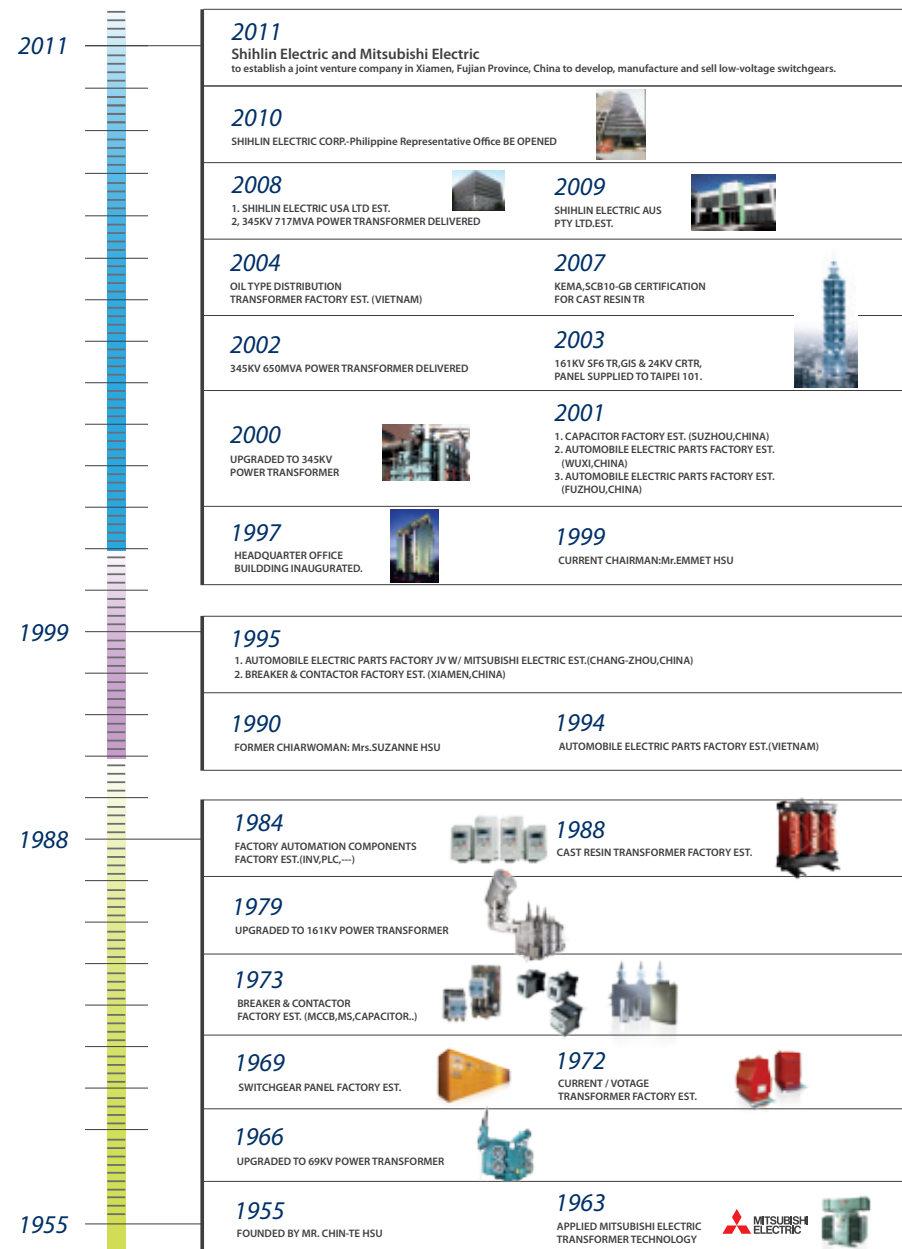
www.seec.com.tw

About US

Shihlin Electric Group was established in 1955 with headquarter located in Taipei, Taiwan. The company has offered a wide range of services that cover the areas of power distribution system, automobile equipment, low-voltage electrics, factory automation, and system engineering. The products of Shihlin Electric, including universal circuit breaker, molded case circuit breaker, mini circuit breaker, contactor, thermal overload relay, surge protection device, automatic transfer switch, power transformer, switch cabinet, high-voltage switch, capacitor, programmable controller, inverter, human-machine interface, servo motors & drives, temperature controller, sensor, car alternator, starter motor, etc., are famous for their excellence in quality, which are well appreciated by the clients in the industries.



MILESTONE OF SHIH LIN ELECTRIC



Factory Automation Division Introduction

In view of the continuous industrial and technological advancement, Shihlin Electric established the Automation Business Group in 1984 to search for talents in advanced technology and management. The main objective of Automation Business Group is to provide automation equipment for the industries and to help the development of industries toward automation, technologization and digitization. The Shihlin Automation Business Group is one of the well-known manufacturers in Taiwan capable of providing the client a complete set of industrial automation products including Programmable Logic Controller (PLC), Human-Machine Interface (HMI), Temperature Controller, Inverter (AC Drives) and AC Servo motors and drives.

The Automation Business Group of Shihlin Electric was founded initially as an agent for selling Mitsubishi's Programmable Logic Controller (PLC) 27 years ago, as well as inverters, AC servo motors & drives in followings years. To achieve sustainable operation, it began the development and manufacturing of the next generation Shihlin Electric inverter that has the advantages of high efficiency and compact design. Later, the Automation Business Group employed the high-speed SMT automated production line as well as the high-precision testing equipment (i.e., ICT), and began the development of novel Human-Machine Interface (HMI), AC Drives, AC Servo Motors and Drives, etc. Based on the accumulated experience in technology R&D, the Automation Business Group of Shihlin Electric has become a key automation products and service provider.

Manufacturing Plant Milestone

SuZhou Factory Milestone (China)		HsinFun Factory Milestone (Taiwan)
New Plant Start Work	2011	HMI EC Series, Inverter SE2/SS2 series
Inverter SF/SE2/SS2 series	2010	Servo System SDA Series Star Producing
Inverter SE/SC series	2009	INV SE Series Start Producing
Eaton OEM, ROHS Production Line	2008	PLC AX1N Series Producing; HMI EU series
SMT for ROHS Requirement	2007	
Inverter SH series 18.5-22KW	2006	ROHS Producing, PLC FX2N Power OEM
Inverter SS and SH series under 15KW	2005	Inverter SS series
Inverter R&D center	2004	Cell Production Line
SMT Line Setup, Sensor OEM	2003	PLC AXON Extension Module
SuZhou Factory Funded	2002	Inverter SH series
	1998	Inverter SL series
	1997	PLC AXON series Producing
	1996	Second SMT Line,
	1994	The first SMT Line, OEM for SUNX
	1993	OEM for Mitsubishi (Power card)
	1984	Factory Automation Division Founded



SS2 Series Compact Design Vector Control Inverter

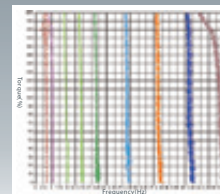
Product Range

Model	KW (HP)	0.2 (0.25)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7)
SS2	SS2021	1-phase 220V						
	SS2023	3-phase 220V						
	SS2043	3-phase 440V						

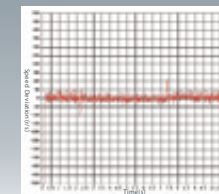
Main Features

- * Built-in shuttle knob to adjust output frequency easily
- * Built-in RS-485 communication interface
- * Support MODBUS and Shihlin communication protocol
- * Built-in proportion linkage control function to support multi inverters connection
- * Maximum 650Hz frequency output enable to support special and high-speed motors.
- * Support DIN rail mount
- * The resolution of frequency setting: digital 0.01Hz ; analog 1/1000
- * The accuracy of output frequency: 0.01%
- * Multi-function input/output terminals
- * Support 2 analog setting types. 0-10V and 4-20mA

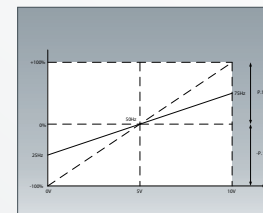
Product Features



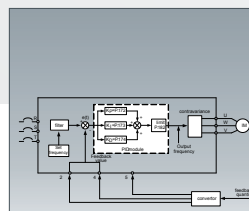
High-performance sensorless vector control technique



Speed accuracy within 1% (0%~100% loading changes)



Proportion linkage function



PID Control function with feedback detection

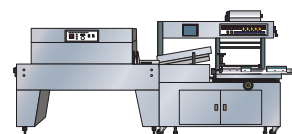


DIN-rail mount

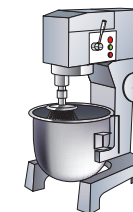


Installed side by side

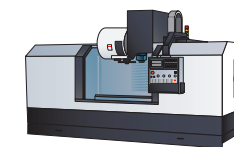
Application



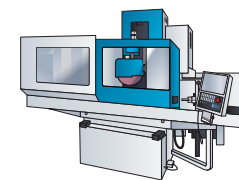
Packing machine



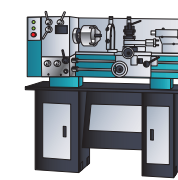
Mixer machine



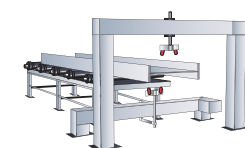
CNC tooling machine



Grinding machine



Desktop type lathe



Painting Machine



SE2 Series High Performance Vector Control Inverter

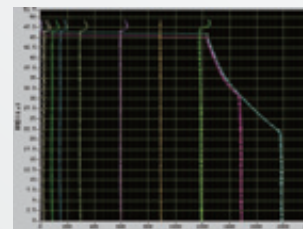
Product Range

Model	KW (HP)	0.2 (0.25)	0.4 (0.5)	0.75 (1)	1.5 (2)	2.2 (3)	3.7 (5)	5.5 (7)	7.5 (10)	11 (15)
SE2	SE2021	1-phase 220V								
	SE2023	3-phase 220V								
	SE2043	3-phase 440V								

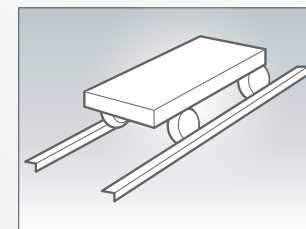
Main Features

- * High performance sensorless vector control
- * With auto-tuning function
- * High starting torque, 150%/1Hz and 200% /3Hz
- * Output frequency from 0.2Hz to 1000Hz
- * Speed accuracy: less than 1% with 0~100% load variation
- * High-precision static motor parameter auto-tuning function
- * Excellent performance with load capacity of 200%/1s
- * Hardware protection design including ground short circuit protection, output short circuit protection, analog in error
- * Built-in RS-485 communication interface
- * Support MODBUS and Shihlin communication protocol
- * Built-in brake resistor
- * A built in EMC input filter is available
- * Energy saving function realizes power-saving control
- * Constant pressure setting for water pump
- * Support various expansion card: I/O card, RS-485/422 card, 4-20mA power card, Profibus communication card, DeviceNet communication card

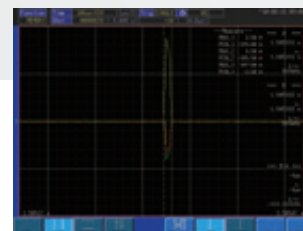
Product Features



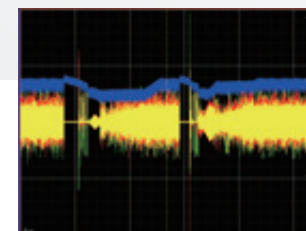
High-performance sensorless vector control technique



Excellent performance with load capacity of 200% 1s

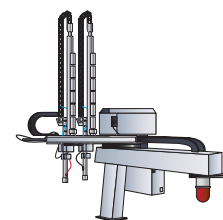


Hardware protection design

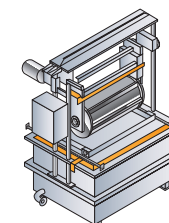


Tracking compensation mechanism

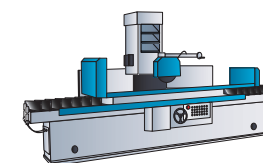
Application



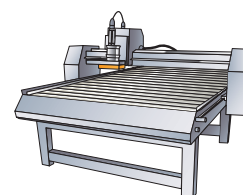
Robot Arm



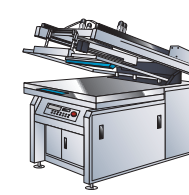
Plating Machine



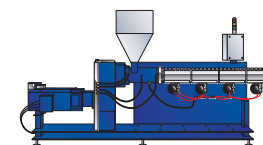
Grinding machine



Wood processing machine



Printing Machine



Extruder



SF-G Series Dual-load, High Performance Vector Control Inverter

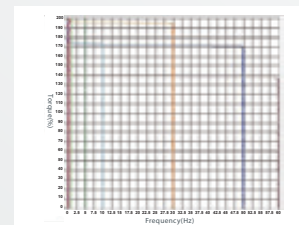
Product Range

Model	KW (HP)	2.2 (3)	3.7 (5)	5.5 (7)	7.5 (10)	11 (15)	15 (20)	18.5 (25)	22 (30)	30 (40)	37 (50)	45 (60)	55 (75)	75 (100)	90 (120)	100 (150)	132 (175)	160 (215)
SF-G	SF020-G	3-phase 220V	120%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
			150%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
	SF040-G	3-phase 440V	120%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
			150%, 60s →	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

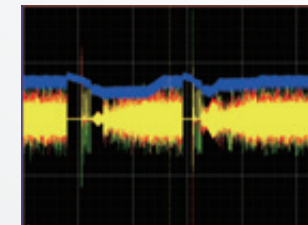
Main Features

- * Dual specification with HD(-G): 150% 60s / LD: 120% 60s
- * V/F control, general purpose magnetic flux vector control, SVC sensor-less vector control, FOC+PG closed loop vector control, high torque output at low speed, and the best power saving control mode.
- * Increased load capacity to 200% / 15(-G)
- * Hardware type circuit protection design
- * Embedded regeneration brake crystal(22kW or below)
- * Strengthened PID function, multiple machine(fan/pump) control function
- * RS-485 interface, selection between Shihlin protocol/standard Modbus protocol
- * Strengthened speed tracking compensation capability
- * Soft PWM function
- * Multiple function pulse output
- * Operation panel convenient to move around
- * 0-1A/0-10A feedback input board (optional), appropriate for equipment modification of injection molding machine for power saving

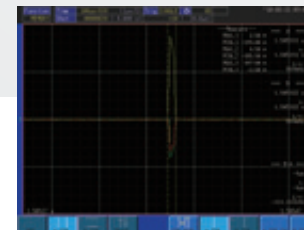
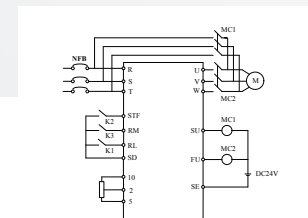
Product Features



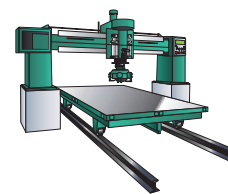
High Performance Vector Control



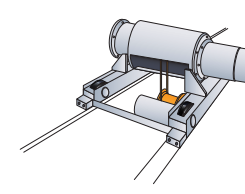
Tracking compensation mechanism

Hardware ground fault over current /
Output short circuit protection designEquipped with grid power frequency
switching mechanism

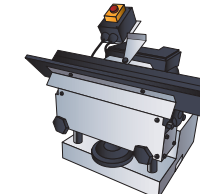
Application



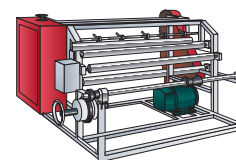
Polishing Machine



Crane



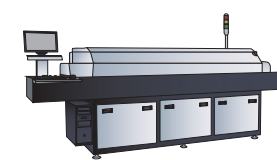
Chamfer Machine



Slitting Machine



Constant pressure Water supply



Solder Equipment



EU200 Series (EU206/208/210)

Main Features

- * LCD size: 5.7 inch, 8 inch, and 10.4 inch
- * Screen: Mono (GS)TFT 65536 colors (CT)
- * Resoultion: 320x240 DPI(5.7") / 800x600 DPI(8" & 10.4")
- * COM port x 2 for RS-232/422/485 communication
- * USB port x2, SD Slot x1 (Maximum 8G SDHC)
- * Support Ethernet Communication(CT11)

Human Machine Interface

Hardware features

- | | |
|-----------------------------------|---|
| * Memory Capacity Expanded | * Edit List of Commands & Monitor Ladder Diagrams |
| * External Control Buttons | * Multiple Data Transmission |
| * Multiple PLC Brands Connectable | * Many-to-One Transmission |
| * Multilingual Support | * The New Generation Editing Software: EU Works 2 |
| * Rich Text Effects | |
| * Flexible Communication | |

EC200 Series (EC207/210)

Main Features

- * LCD size: 7 inch and 10.2 inch
- * Screen: TFT 65536 colors
- * Resoultion: 800x480 DPI
- * COM port x 3 for RS-232/422/485 communication
- * USB port x2, SD Slot x1 (Maximum 16G SDHC)
- * Audio Input x 1
- * Support Ethernet Communication(CT11)

Software features

- | | | |
|--------------------------|---|-------------------------------|
| * First page assignable | * Advance recipe funtion | * The alarm record function |
| * Time action | * Blacklight lighting for alarm trigger | * The recipe function |
| * Clock function | * History trend chart | * The floating alarm function |
| * Numeral blink function | * Combobox function | * The security function |
| * Print screen function | * Slider function | |
| * Confirm box function | * The library function | |



SDA Series Servo Motors and Drives

Product Range

	KW (HP)	100W	200W	400W	500W	750W	1KW	1.5KW	2KW	3.5KW
Drive	1 phase 230V	•	•	•	•	•	•	•	•	•
	3 phase 200~230V	•	•	•	•	•	•	•	•	•
Motor	Low Inertia	•	•	•	•	•	•	•	•	•
	Medium Inertia				•		•	•	•	•

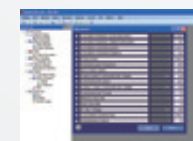
Main Features

- * High speed bandwidth (490Hz)
- * The position settling time less than 1.0ms.
- * On-line inertial estimation
- * Speed response
- * 9 different control modes
- * Built-in the internal position command
- * Built-in single-axis control mode(various home position return modes)
- * Multiple programmable digital inputs (DI) and digital outputs (DO)
- * Supported RS232C/RS485 transmission in RJ45 interface
- * PC communication software (USB/RJ45 interface)
- * Highly potent servo software
- * Auto tuning function
- * Mechanical resonance filter setup

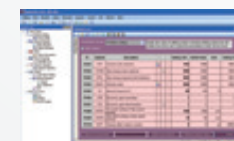
Software Features



* Device setup



* Status monitoring



* Parameter list



* Digital I/O monitoring



* Internal digital input controlling monitoring



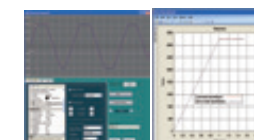
* Auto tuning function



* Alarm information monitoring



* Test modes monitoring



* Oscilloscope (responses monitoring) monitoring

Application



Cable cutting machine



Metal sawing machine



Bag cutting and sewing machine



Robot



SD Series Temperature Controller

DIN RAIL Installation

- Provided with two installing ways of DIN RAIL and Screw Lock, and suit for a considerable quantities installation in the panel board, it is easy to install and take out controller itself.



5 LED Indicator Lights

- LED shows alarm, control, output. Watch the acts condition clearly.



Design of Separating Secure Cover for Terminal

- Brand-new design of secure covers for terminal with European standard.
- Terminal with power doesn't expose external and feel artistic and security.



Compact Module Assembly Design

- Organization assembly disassembles easily, extreme light.
- Provided the advance SMT manufacturing system, high quality and high reliability.

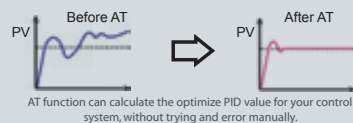


Base Attaches the Magnetic Place (Use for SDV)

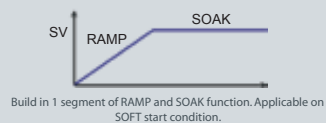
- Base attaches 3 magnets, it may adsorb the made of iron box body willfully.
- Don't need to worry about fix it problem, suitable in the short period testing or gauging.



Autotuning (AT)



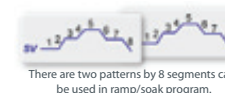
RAMP and Soak



WT Series Temperature Controller

Ramp/Soak Program

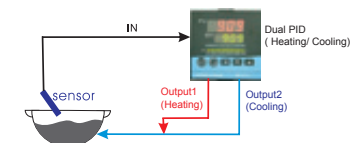
Pattern 1 Pattern 2



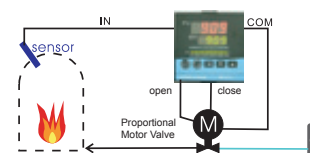
Pattern 0



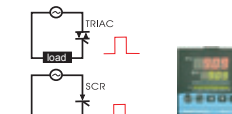
Heating and Cooling Control



Motor Value Control



SCR/ TRIAC trigger



10/30 Zero Cross control(10/30 SSR)
10/30 Phase Angle control(10/30 SSR)

High Accuracy

Input with 14 bit A/D resolution, 0.2% accuracy of FS. Build in Auto Zero- Auto Span function to keep good accuracy.

Modbus Communication

WT series sport both Modbus RTU and MODBUS ASCII protocol. Communication between controller and HMI or other equipment is more convenient. (*Option Function)

Global Sales Network

FA Distributor

