



SKYWELL CONTROL SYSTEM



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The Skywell Control System is designed on the core principles of the Internet of Things (IoT), offering seamless remote programming and remote access capabilities.

Built to meet IEC-61131 international standards, the system ensures robust performance and reliable quality for industrial applications.

Its innovative design includes a built-in simulator and intuitive programming software, making it easy to learn, configure, and deploy — empowering engineers with flexibility, efficiency, and confidence.

CHARACTERISTICS

Quality Assurance

- Developed in accordance with **IEC-61131 international standards**, ensuring high reliability and performance.

Innovative Design

- Equipped with a **built-in simulator** and **user-friendly programming software** — easy to learn, configure, and use.

Remote Control & Monitoring:

- Supports the **Skywell Cloud Platform** for **remote programming**, access, and diagnostics.

Comprehensive Communication Options:

- **Ethernet + Serial Connectivity:** One Ethernet port and five RS232/RS485 ports operating simultaneously.
- **Protocols Supported:** Modbus TCP, Skywellbus TCP, Modbus RTU/ASCII, Skywellbus High-Speed Protocol, and user-defined (freedom) protocols.
- Enables **multi-level networking** and seamless system integration.

Advanced Motion Control:

- Supports **linear interpolation**, **arc interpolation**, **synchronous pulse output**, and **backlash compensation**.
- Allows **absolute and relative positioning**, **home return**, and **electronic origin redefinition**.

Distributed I/O Capabilities:

- Up to **10 expansion modules** via Ethernet or RS485.
- Supports **remote I/O installation**, reducing wiring and improving flexibility.

Remote I/O Functions:

- Compatible with parallel and serial buses.
- Operates independently or with PLC host systems.
- Offers long-distance communication, flexible configuration, and cost-effective scalability.

REMOTE I/O FUNCTIONS

- Support parallel buses and serial bus, can work with PLC host or running independently.
- Can be installed independently without PLC system point's limitation.
- Long distance. Flexible configuration. Low cost.

SKYWELL - CPU

Ethernet Model		Model		Specification						Dimension W*H*D (mm)
24V DC	220V AC	24V DC	220V AC	DI	DO	Pulse Input	Pulse Output	Communication	Max Exp	
SW16S0R-e	SW16S2R-e	SW16S0R	SW16S2R	8	8 Relay	2 Channels A/B phase, 4 points 200KHz		RS232 + RS485, Max 5 ports	7	93x95x82mm
SW16S0T-e	SW16S2T-e	SW16S0T	SW16S2T	8	8 Transistor NPN	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW16S0P-e	SW16S2P-e	SW16S0P	SW16S2P	8	8 Transistor PNP	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW24S0R-e	SW24S2R-e	SW24S0R	SW24S2R	16	8 Relay	2 Channels A/B phase, 4 points 200KHz		RS232 + RS485, Max 5 ports	7	131x95x82mm
SW24S0T-e	SW24S2T-e	SW24S0T	SW24S2T	16	8 Transistor NPN	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW24S0P-e	SW24S2P-e	SW24S0P	SW24S2P	16	8 Transistor PNP	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW32S0R-e	SW32S2R-e	SW32S0R	SW32S2R	16	16 Relay	2 Channels A/B phase, 4 points 200KHz		RS232 + RS485, Max 5 ports	7	131x95x82mm
SW32S0T-e	SW32S2T-e	SW32S0T	SW32S2T	16	16 Transistor NPN	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW32S0P-e	SW32S2P-e	SW32S0P	SW32S2P	16	16 Transistor PNP	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW48S0R-e	SW48S2R-e	SW48S0R	SW48S2R	28	20 Relay	2 Channels A/B phase, 4 points 200KHz		RS232 + RS485, Max 5 ports	7	177x95x82mm
SW48S0T-e	SW48S2T-e	SW48S0T	SW48S2T	28	20 Transistor NPN	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	

SW48S0P-e	SW48S2P-e	SW48S0P	SW48S2P	28	20 Transistor PNP	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW60S0R-e	SW60S2R-e	SW60S0R	SW60S2R	36	24 Relay	2 Channels A/B phase, 4 points 200KHz		RS232 + RS485, Max 5 ports	7	
SW60S0T-e	SW60S2T-e	SW60S0T	SW60S2T	36	24 Transistor NPN	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	
SW60S0P-e	SW60S2P-e	SW60S0P	SW60S2P	36	24 Transistor PNP	2 Channels A/B phase, 4 points 200KHz	2 Channels A/B phase, 4 points 200KHz	RS232 + RS485, Max 5 ports	7	

DIGITAL I/O MODULES

Ethernet Model	Model	Specification			Dimension W*H*D (mm)
24V DC	24V DC	DI	DO	Communication	
	SW08DI	8			30x95x82
	SW08DOR		8 Relay		
	SW08DOT		8 Transistor NPN		
	SW08DOP		8 Transistor PNP		
	SW08XDR	4	4 Relay		
	SW08XDT	4	4 Transistor NPN		
	SW08XDP	4	4 Transistor PNP		
	SW16DI	16		RS485,support remote function	70x95x82
	SW16DOR		16 Relay	RS485,support remote function	
	SW16DOT		16 Transistor NPN	RS485,support remote function	
	SW16DOP		16 Transistor PNP	RS485,support remote function	
	SW16XDR	8	8 Relay	RS485,support remote function	
	SW16XDT	8	8 Transistor NPN	RS485,supports remote function	
	SW16XDP	8	8 Transistor PNP	RS485,supports remote function	
SW24DI-e	SW24DI	24		RS485,supports remote function	93x95x82
SW24XDR-e	SW24XDR	12	12 Relay	RS485,supports remote function	
SW24XDT-e	SW24XDT	12	12 Transistor NPN	RS485,supports remote function	
SW24XDP-e	SW24XDP	12	12 Transistor PNP	RS485,supports remote function	
SW40DI-e	SW40DI	40		RS485,supports remote function	131x95x82
SW36XDR-e	SW36XDR		36 Relay	RS485,support remote function	
SW36XDT-e	SW36XDT		36 Transistor NPN	RS485,support remote function	
SW36XDP-e	SW36XDP		36 Transistor PNP	RS485,support remote function	
SW40XDR-e	SW40XDR	20	20 Relay	RS485,support remote function	
SW40XDT-e	SW40XDT	20	20 Transistor NPN	RS485,support remote function	
SW40XDP-e	SW40XDP	20	20 Transistor PNP	RS485,support remote function	
SW64XDR-e	SW64XDR	32	32 Relay	RS485,support remote function	177x95x82
SW64XDT-e	SW64XDT	32	32 Transistor NPN	RS485,support remote function	
SW64XDP-e	SW64XDP	32	32 Transistor PNP	RS485,support remote function	

Analogue I/O Modules

Ethernet Model	Model	Specification				Dimension W*H*D (mm)
24V DC	24V DC	AI	AO	Conversion Accuracy	Communication	
	SW04AI	4		12 bits	RS485,supports remote function	70x95x82
	SW04AO		4	12 bits	RS485,supports remote function	
	SW04XA	2	2	12 bits	RS485,supports remote function	
SW08AI-e	SW08AI	8		12 bits	RS485,supports remote function	93x95x82
SW08AO-e	SW08AO		8	12 bits	RS485,supports remote function	
SW08XA-e	SW08XA	4	4	12 bits	RS485,supports remote function	

Temperature & Humidity Modules

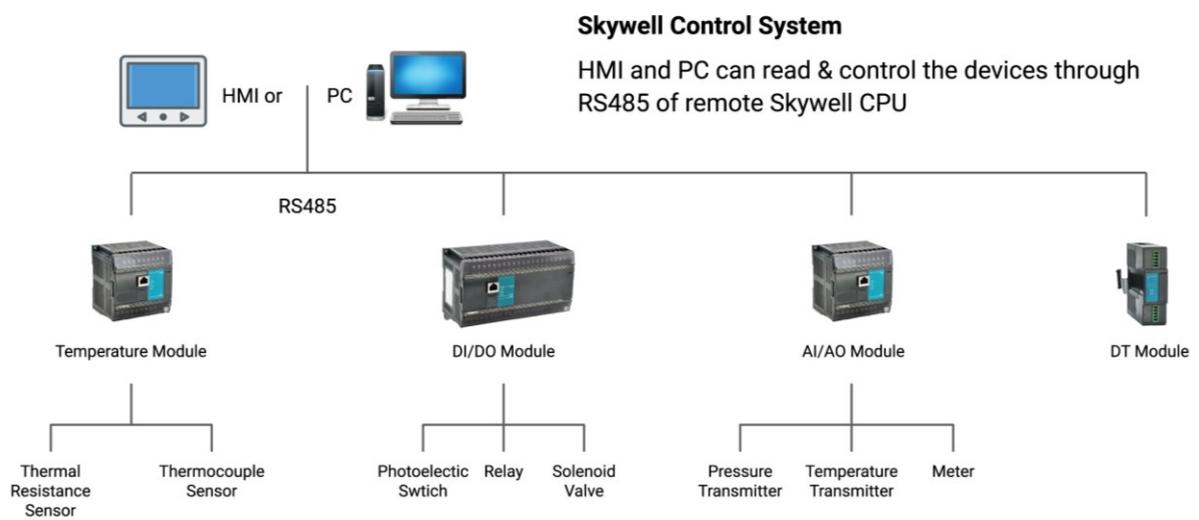
Ethernet Model	Model	Specification			Dimension W*H*D (mm)
24V DC	24V DC	Sensor	Conversion Accuracy	Communication	
	SW04DT	4 Channels DS18B20, RW1820 temperature sensor, DS 1990 sensor or SHT1x,SHT7x temperature and humidity sensor	9-12 bits		30x95x82
	SW32DT	32 Channels DS18B20, RW1820 temperature sensor, DS 1990 sensor	9-12 bits	RS485,supports remote function	
	SW04RC	4 thermal resistance	16 bits	RS485,supports remote function	70x95x82
	SW04TC	4 thermocouple	16 bits	RS485,supports remote function	
	SW08TC	8 thermocouple	16 bits	RS485,supports remote function	
SW08RC-e	SW08RC	8 thermal resistance	16 bits	RS485,supports remote function	93x95x82

FUNCTIONAL MODULES

Ethernet Model	Model	Specification				Dimension W*H*D (mm)
24V DC	24V DC	Type	Specification	Conversion Accuracy	Communication	
	SW01WG	Load CellModule	1 channel weighing	24 bits	RS485, supports remote function	30x95x82
	SW02WG		2 channel weighing	24 bits		

COMMUNICATION MODULE

Model	Specification	Dimension W*H*D (mm)
SW01RS	With isolation, 1 RS232/RS485 communication port, Modbus RTU/ASC protocol, freedom communication protocol, Haiwellbus high speed communication protocol, Baud rate 1200-57600bps	30x95x82





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