

SM-S7-1500 Series SIEMENS Connector Module

User's Guide



Thank you for purchasing product of SAMWON ACT.
Please check model of product that you purchase first, and read this manual prior to use it.

Caution for safety

- Warning** Case that results in serious damage in human body or equipment, and fire if user handles this equipment wrongly
- Caution** Case that results in slight damage in human body or equipment, and fire if user handles this equipment wrongly

Warning

- Do not open the cover while the power is on or during operation.
It may cause electric shock.
- Be sure to shut off the power supply from the outside before mounting and wiring.
It is cause fire or electric shock.
- Do not use if the cable sheath is damaged.
It may cause electric shock.
- When machining and wiring the mounting hole, do not allow foreign matter such as dust or wire covering to enter the connection terminal.
Failure to do so may result in damage to the unit, heat, or ignition.

* The connection cable for PLC of various makers is provided by us. Please refer to the catalogue or contact Head or branch office if you need more detail models and specifications.

Caution

- Use within the specified rated voltage and rated current range.
This may result in fire or damage to the product.
- Do not use outdoors.
Electric shock and product life may be shortened.
- Use within the specified temperature range. (-10°C ~ +50°C)
Damage to the outer case may occur.
- Do not use water or organic solvents for cleaning.
It may cause electric shock and damage to the product.

Use caution

- Use in the specified temperature and humidity.
- Please make sure to check the internal wiring diagram of the terminal block and the arrangement of the controller PIN (terminal) when making the connection cable between the controller (PLC etc.).
- Use AWG 22 ~ 16 (1.5mm / MAX) for the suitable wire, and check the crimp terminal after checking the "Applicable crimp terminal" specification.
- The device is intended to be installed in a suitable fire, mechanical and electrical enclosure.
- Can be used under the following environmental conditions.
①Indoor ②Pollution Degree 2 ③Altitude 2,000m or less ④Overvoltage Category II

Model configuration

SM - S7 - 1500

- SIEMENS Connector Module
- Apply S7-1500 Series PLC
- Auxiliary power selection

Model selection

Model	IO Point(s)	Mounted connector	Mounted connector model	Power terminal model	Usage
SM-S7-1500A	40	MIL Standard	HIF3BA-40PA-2.54DSA or XG4A-4031	SPT-THR 1.5/ 2-V-3.5*2	Digital I/O only
SM-S7-1500B				None	Digital I/O, Analog I/O

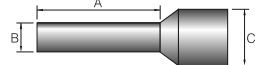
* Mounted connector can be changed into a compatible product without advance notice.

General specification/Material

Model	SM-S7-1500A	SM-S7-1500B
Rated voltage	30VDC ≒	
Rated current	Mounted connector	1A
	Power terminal	4A -
Insulation resistance	100MΩ or more (500VDC ≒)	
Withstand voltage	500VAC ~ 1min	
Case	PBT	
Board	Epoxy 1.6t	
Terminal	LCP	
Pin header	Cu alloy	
Applicable wire	Solid wire	AWG 26 ~ 16 (Use copper conductor only)
	Stranded wire	AWG 22 ~ 16 (Use copper conductor only)
Environment (Note1)	Ambient temperature	-10°C ~ +50°C
	Ambient humidity	35 ~ 85%RH
Weight (Note2)	About 84g (About 67g)	About 82g (About 65g)

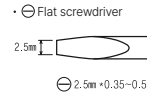
(Note1) The conditions of use of the environment items are that they are not freezing or condensing.
(Note2) It is weight in packed condition, parenthesized is only the product weight.
* Be sure to use a ferrule when using a stranded wire.
* When using 1.5mm stranded wire, recommended to use a rod-type terminal.

Selection of ferrule (When using a stranded wire.)



AWG/mm²	DIN46228	Other	A(mm)	B(mm)	C(mm)
20/0.5	White	White/Orange	8.0	1.3	3.2
18/0.75	Gray	Blue/White	8.0	1.5	3.4
17/1.0	Red	Red/Yellow	8.0	1.7	3.6

Appropriate tool



Applicable card (S7-1500 Series)

I/O Module (Digital, Analog)	Designation
6ES7 521-1BL00-0AB0	DI 32×24 VDC, 0.05 ms ... 20 ms, type 3
6ES7 521-1BH00-0AB0	DI 16×24 VDC, 0.05 ms ... 20 ms, type 3
6ES7 521-1BH50-0AA0	DI 16×24 VDC SRC BA
6ES7 522-1BL00-0AB0	DO 32×24 VDC, 0.5 A, substitute values
6ES7 522-1BL01-0AB0	DO 16×24 VDC, 0.5A HF
6ES7 522-1BH00-0AB0	DO 16×24 VDC/0.5A ST
6ES7 522-1BH01-0AB0	DO 16×24 VDC/0.5A HF
6ES7 531-7KF00-0AB0	AI 8xU, I, R, RTD, TC, 16-bit, 0.3 %
6ES7 531-7MH00-0AB0	AI 16xI BA
6ES7 531-7LH00-0AB0	AI 16xU BA
6ES7 531-7NF00-0AB0	AI 8xU/I HF
6ES7 531-7NF10-0AB0	AI 8xU, I, 14-bit, 0.3 %
6ES7 531-7PF00-0AB0	AI 8xU/I/R/RTD/TC HF
6ES7 531-7QF00-0AB0	AI 8xU/I/R/RTD BA
6ES7 532-5HF00-0AB0	AO 8xU/I HS

* Please contact us for the front connector type cards other than the above models.

Wiring diagram between interface terminal block 40P and S7-1500 digital IO module

1. When using the 6ES7 521-1BL00-0AB0(32 points input) and C40HH-DSU (IO cable)

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9

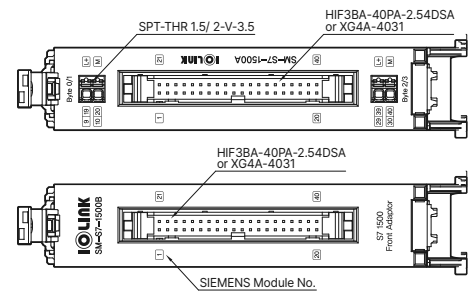
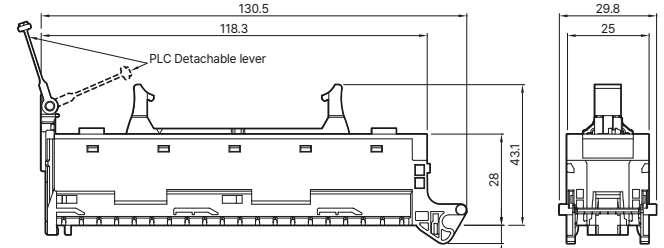
2. When using the 6ES7 522-1BL00-0AB0(32 points output) and C40HH-DSU (IO cable)

B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17	B18	B19	B20
0.0	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9

Table of cable for the connection of SIEMENS S7-1500 Series PLC card

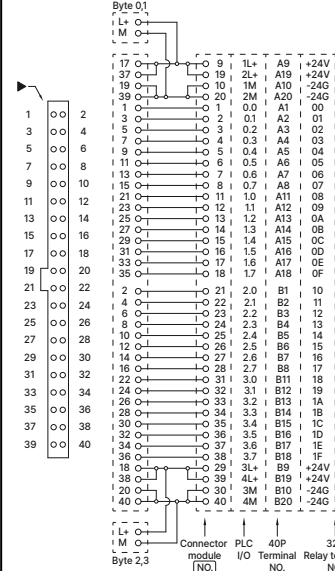
PLC CARD MODEL	PLC Connector module	I/O Point(s)	When using terminal blocks for both input and output		When using relay terminal for output	
			Terminal	Qty	Relay terminal	Qty
6ES7 521-1BL00-0AB0	SM-S7-1500A SM-S7-1500B	32 HF PNP (A)	XTB-40H TG7-1H40Q SR-1H40S SA-1H40S SE-1H40I	1	R32C-YPT R32C-YPT-V R32C-PS5A-40P R32C-PS5A-V R32C-PT-G6DN	1
6ES7 522-1BL00-0AB0		32 ST PNP (出)				
6ES7 522-1BL01-0AB0		32 HF PNP (出)				
6ES7 521-1BH00-0AB0		16 HF PNP (A)				
6ES7 521-1BH50-0AA0	SM-S7-1500B	16 SRC BA NPN (A)	XTB-20H SE-1H20I SA-1H20S	1	R16C-PS5A-20P R16C-PS5A-34P R16C-VPT R16C-YPC	1
6ES7 522-1BH00-0AB0		16 ST PNP (出)				
6ES7 522-1BH01-0AB0		16 HF PNP (出)				
6ES7 531-7KF00-0AB0						
6ES7 531-7MH00-0AB0	SM-S7-1500B	40P Analog	XTB-40H TG7-1H40Q SR-1H40S SA-1H40S SE-1H40I	1		
6ES7 531-7NF00-0AB0						
6ES7 531-7PF00-0AB0						
6ES7 532-5HF00-0AB0						
6ES7 531-7QF00-0AB0	SM-S7-1500B					
6ES7 531-7LH00-0AB0						
6ES7 521-1BP00-0AA0		64 SNK/SRC BA (A)		2	C40HH-CDSB-4 C40HH-CDSB-1	1
6ES7 522-1BP50-0AA0		64 SNK BA NPN (出)	XTB-40H TG7-1H40Q SR-1H40S SA-1H40S SE-1H40I	2	R32C-VNT R32C-VNT-V R32C-NSSA-40P R32C-NSSA-V R32C-NT-G6DN	2
6ES7 523-1BP50-0AA0		32 SNK/SRC (A)		1	C40HH-CDSB-4	1
		32 SNK BA NPN (出)		1	C40HH-CDSB-1	1

Dimension

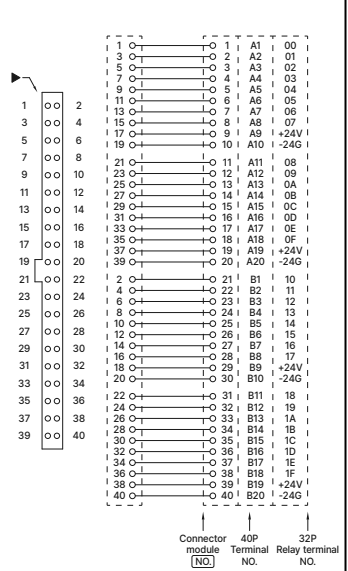


Wiring diagram

SM-S7-1500A



SM-S7-1500B



* The above specifications are subject to change without notice.
* Please contact HQ or branch office where you purchased product for A/S of this product or technique.

Major products

- Relay terminal 1, 2, 4, 6, 8, 16, 32point
- Interface terminal 20, 24, 26, 34, 40, 50, 40 × 2pole
- PLC I/O Connecting cables MITSUBISHI, LSIS, CIMON, OMRON, FUJI, YOKOGAWA, PROTERIAL, SIEMENS, AB, etc.
- Servo Connecting cables Encoder cable, Power cable, Motion cable / MITSUBISHI, YASKAWA, OMRON, PANASONIC, LSIS, SAMSUNG, etc.
- Wiring harness / Special cable assembly



■ HQ | 47035, 28, Daedong-ro, Sasang-gu, Busan
TEL : 051)320-7777 FAX : 051)312-2233
■ SEOUL Office | 14353, M Cluster-707, 17, Deogun-ro
104beon-gil, Gwangmyeong-si, Gyeonggi-do
TEL : 02)837-2230 FAX : 02)837-2228