


안전상의 주의 사항

*경고와 주의로 구분되어 있으니, 필히 숙지 하여 주십시오.

지시사항을 위반하였을 때, 심각한 상황을 초래하여 사망 또는 중상을 입을 가능성이 있는 경우

- 전원이 인가된 상태에서 단자대를 만지지 마십시오.
- 전원이 인가된 상태에서 제품조립 및 배선작업을 하지 마십시오.
- 제품내부에 금속성 이물질이 유입되지 않도록 하십시오.
- 배선 작업은 전기공사 전문가가 해 주십시오.


감전사고 및 오동작의 원인이 됩니다.
화재, 감전사고 및 오동작의 원인이 됩니다.
화재, 감전 사고 및 오동작의 원인이 됩니다.
화재, 감전사고 및 오동작의 원인이 됩니다

 경고

지시사항을 위반하였을 때, 경미한 손해나 제품손상 및 대물손해가 발생할 가능성이 있는 경우

- 제품의 정격전압 및 단자배열을 확인 후 배선하여 주십시오.
- 주변 온도 55℃ 및 습도 85%를 넘는 장소는 피해 주십시오.
- 직사 광선이 직접 노출된 장소는 피해 주십시오.
- 가연성 물질이 있는 주변에 설치하지 마십시오.
- 제품에 직접 진동이 인가되지 않도록 하십시오.
- 전문 A/S요원외에는 제품을 분해,수리,개조하지 마십시오.
- 사용설명서에 명기된 환경조건에서 사용해 주십시오.
- 제품의 부하는 규정된 정격이내의 것을 연결하십시오.

화재,감전사고, 오동작의 원인이 됩니다.
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화재 및 감전의 원인이 됩니다.
화재 및 감전사고의 원인이 됩니다.
감전, 화재, 오동작 또는 제품 열화의 원인이 됩니다.
화재, 오동작 또는 고장의 원인이 됩니다.

 주의

1. PWM, Pulse Module별 세부사양

▶ 1-1. PWM Output

모델	ST-5422	ST-5442	ST-5444
특성	PWM Output		
Number of Outputs	2 Channels		4 Channels
Type	Source		
Output Current	1.5A/Ch, 3A/All Channel	0.5A/Ch, 1A/All Channel	0.5A/Ch, 2A/All Channel
Output Inrush Current	Max. 2A, 100ms/Ch	Max.1.5A, 100ms/Ch	
PWM Frequency	1~2500Hz±0.5%		
PWM Duty	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us		
Diagnostic	Short Protection		
Common Type	2Common		
Power Dissipation	Max. 150mA@5.0Vdc		
Isolation	Photocoupler Isolation		

▶ 1-2. Pulse Output

모델	ST-5641	ST-5642	ST-5651
특성	PULSE Output		
Number of Channels	1 Channel	2Channels	1 Channel
Number of Outputs	2 Output/Channel		2 Output
Type	Source		RS 422
Output Current	0.5A/Output, 1A/All Output	0.5A/Output, 2A/All Output,	-
Pulse Output Frequency	1~20,000Hz±0.5%		5~20,000Hz±1.0%
Pulse Output Duty	50%±3.0% Fixed, Ton>5us, Toff>5us		50%±0.1% Fixed, Ton>10ns, Toff>10ns
Pulse Output Quantity	Max. +1~-+32767 : Pulse Direction Output OFF, Max. -1~-32767 : Pulse Direction Output ON.		
Pulse Output Counter	Signed 32bit-wide		
Diagnostic	Short protection		-
Common Type	2Common		1 Common, 1 Shield
Power Dissipation	Max. 150mA@5.0Vdc		
Isolation	Photocoupler Isolation		

Class 2, adjacent to voltage rating (30Vmax.)

Cautions for your Safety

*This consists of Warning and Notice. Please make sure of reading them before you use the products.

If you don't follow the directions, it could cause a personal injury, damage to the equipment or explosion

Warning!

- Do not assemble the products and wire with power applied to the system. Else it may cause an electric arc, which can result into unexpected and potentially dangerous action by field devices. Arching is explosion risk in hazardous locations. Be sure that the area is non-hazardous or remove system power appropriately before assembling or wiring the modules.
- Do not touch any terminal blocks or IO modules when system is running. Else it may cause the unit to an electric shock or malfunction.
- Keep away from the strange metallic materials not related to the unit and wiring works should be controlled by the electric expert engineer. Else it may cause the unit to a fire, electric shock or malfunction.

If you disobey the instructions, there may be possibility of personal injury, damage to equipment or explosion. Please follow below Instructions.

Caution!

- Check the rated voltage and terminal array before wiring. Avoid the circumstances over 55°C of temperature. Avoid placing it directly in the sunlight.
- Avoid the place under circumstances over 85% of humidity.
- Do not place Modules near by the inflammable material. Else it may cause a fire.
- Do not permit any vibration approaching it directly.
- Go through module specification carefully, ensure inputs, output connections are made with the specifications. Use standard cables for wiring.
- Use Product under pollution degree 2 environment.

1. PWM, Pulse Module Specification

► 1-1. PWM Output

Model	ST-5422	ST-5442	ST-5444
Specificity	PWM Output		
Number of Outputs	2 Channels		4 Channels
Type	Source		
Output Current	1.5A/Ch, 3A/All Channel	0.5A/Ch, 1A/All Channel	0.5A/Ch, 2A/All Channel
Output Inrush Current	Max. 2A, 100ms/Ch	Max.1.5A, 100ms/Ch	
PWM Frequency	1~2500Hz±0.5%		
PWM Duty	0.0~100.0%±1.0(0.1%/1LSB), Ton>5us, Toff>5us		
Diagnostic	Short Protection		
Common Type	2Common		
Power Dissipation	Max. 150mA@5.0Vdc		
Isolation	Photocoupler Isolation		

► 1-2. Pulse Output

Model	ST-5641	ST-5642	ST-5651
Specificity	PULSE Output		
Number of Channels	1 Channel	2Channels	1 Channel
Number of Outputs	2 Output/Channel		2 Output
Type	Source		RS 422
Output Current	0.5A/Output, 1A/All Output	0.5A/Output, 2A/All Output,	-
Pulse Output Frequency	1~20,000Hz±0.5%		5~20,000Hz±1.0%
Pulse Output Duty	50%±3.0% Fixed, Ton>5us, Toff>5us		50%±0.1% Fixed, Ton>10ns, Toff>10ns
Pulse Output Quantity	Max. +1~-+32767 : Pulse Direction Output OFF, Max. -1~-32767 : Pulse Direction Output ON.		
Pulse Output Counter	Signed 32bit-wide		
Diagnostic	Short protection		-
Common Type	2Common		1 Common, 1 Shield
Power Dissipation	Max. 150mA@5.0Vdc		
Isolation	Photocoupler Isolation		

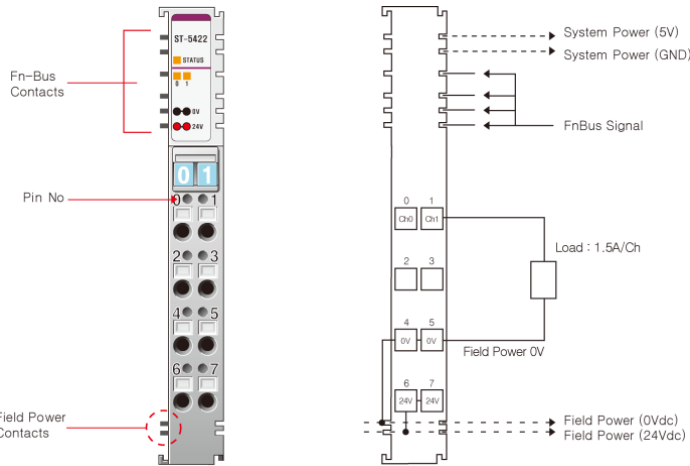
Class 2, adjacent to voltage rating (30Vmax.)



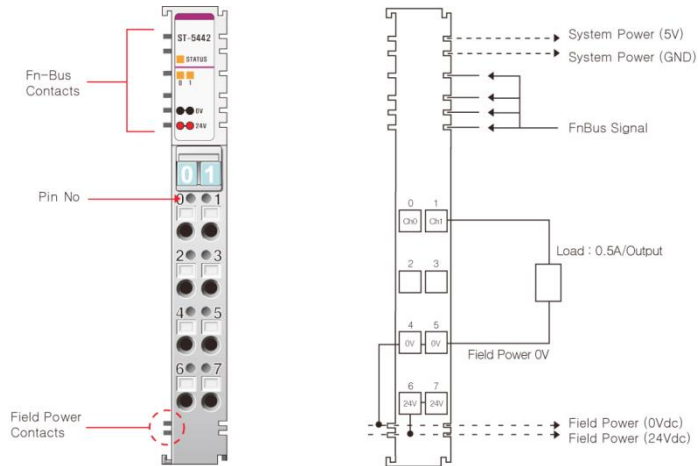
* Must to use shield for communication stability

2. Wiring Diagram

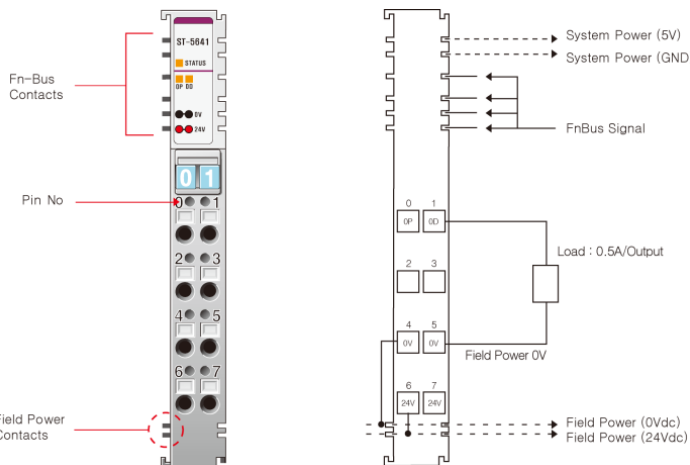
ST-5422 : 2Ch PWM Output, Source



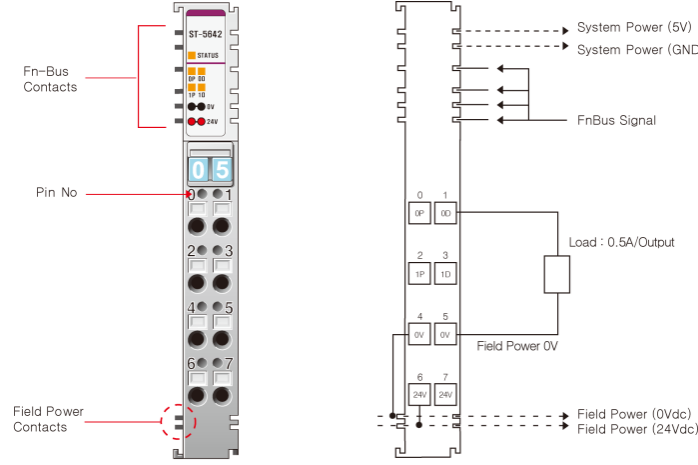
ST-5442 : 2Ch PWM Output, Source



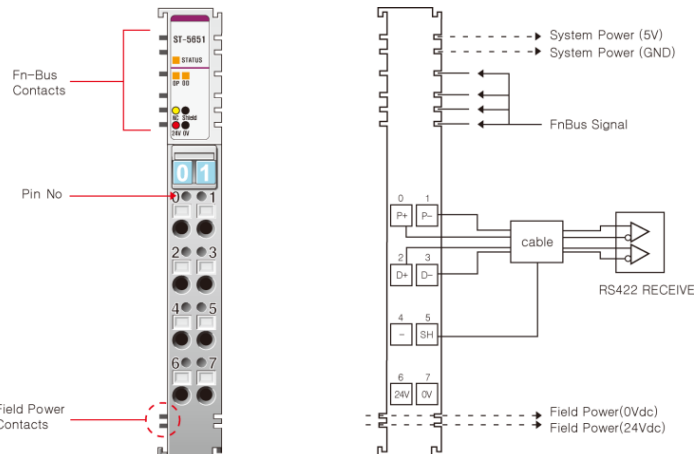
ST-5641 : 1Ch Pulse Output, Source



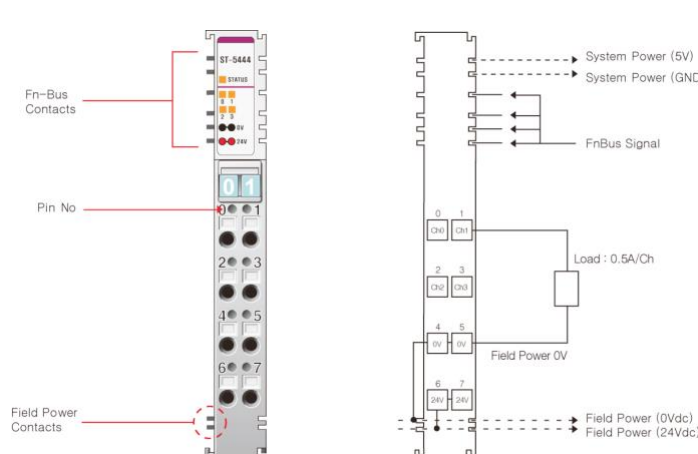
ST-5642 : 2Ch Pulse Output, Source



ST-5651 : 1Ch Pulse Output(RS 422)



ST-5444 : 4Ch PWM Output, Source



MEMO