

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. Special Module별 세부사양

1-1. High Speed Counter

모델	ST-5101	ST-5111	ST-5112	ST-5114
특성	High Speed Counter			
Input Channels	1 Channel		2Channels	4Channels
Input Voltage	5Vdc	24Vdc		
Input Current	16.2mA/5Vdc	6.1mA/24Vdc		
Input Frequency	Max. 1.5MHz		0~100KHz except Encoder 4x	0~50KHz except Encoder 4x
Input Duty Range	10%~90%		20%~80%	
Counter Size	24bit-wide		32bit-wide/Channel	
Common Type	0-1, 2-3, 4-5		2Common	
Number of Outputs	1 Channel, sink Type		2 Channels, source Type	
Output Voltage	5 to 28.8Vdc		24Vdc	
Output Current	Max. 0.5A		0.5A/Ch, 1A/All Channel	
Power Dissipation	Max. 80mA/5.0Vdc		Max. 160mA/5.0Vdc	
Isolation	Photocoupler Isolation			

1-2. SSI Interface

모델	ST-5351
특성	SSI Interface
Number of Channels	1 Channel
SSI Data Rate	62.5K,100K,125K,250K,500K,1M,2Mbps
SSI Data Width	Max. 30bit
SSI Data Delay Time	20usec~10msec
SSI Output	C+,C- RS422 Differential Output
SSI Input	D+,D- RS422 Differential Input
SSI Data Code Type	Gray Code or Natural Binary
Digital Input	24Vdc Input nominal, Sink Type
Diagnostic	Field Power, SSI Frame
Common Type	1 Common, 1 Shield
Power Dissipation	Max. 150mA@5.0Vdc
Isolation	Photocoupler Isolation

1-3. Extension Module

모델	ST-5725 (Master)	ST-5726 (Slave)
Number of Expansion I/O slots	Max 32 slots	
Max. Length Extension Line	Approximately Max. 300m	
Number of Extension Nodes	Max 3 Nodes	
Connection Type	RTB 8Points	
Power Dissipation	Max. 100mA @5Vdc	
Field Power	No Connection with Field Power	
Wiring	Extension Cable	

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. Special Module Specification

### 1-1. High Speed Counter

Model	ST-5101	ST-5111	ST-5112	ST-5114
Specificity	High Speed Counter			
Input Channels	1 Channel		2Channels	4Channels
Input Voltage	5Vdc	24Vdc		
Input Current	16.2mA/5Vdc	6.1mA/24Vdc		
Input Frequency	Max. 1.5MHz		0~100KHz except Encoder 4x	0~50KHz except Encoder 4x
Input Duty Range	10%~90%		20%~80%	
Counter Size	24bit-wide		32bit-wide/Channel	
Common Type	0-1, 2-3, 4-5		2Common	
Channel Type	1 Channel, sink Type		2 Channels, source Type	
Output Voltage	5 to 28.8Vdc		24Vdc	
Output Current	Max. 0.5A		0.5A/Ch, 1A/All Channel	
Power Dissipation	Max. 80mA/5.0Vdc		Max. 160mA/5.0Vdc	
Isolation	Photocoupler Isolation			

### 1-2. SSI Interface

Model	ST-5351
Specificity	SSI Interface
Number of Channels	1 Channel
SSI Data Rate	62.5K, 100K, 125K,250K,500K,1M,2Mbps
SSI Data Width	Max. 30bit
SSI Data Delay Time	20usec~10msec
SSI Output	C+,C- RS422 Differential Output
SSI Input	D+,D- RS422 Differential Input
SSI Data Code Type	Gray Code or Natural Binary
Digital Input	24Vdc Input nominal, Sink Type
Diagnostic	Field Power, SSI Frame
Common Type	1 Common, 1 Shield
Power Dissipation	Max. 150mA@5.0Vdc
Isolation	Photocoupler Isolation

### 1-3. Extension Module

Model	ST-5725 (Master)	ST-5726 (Slave)
Number of Expansion I/O slots	Max 32 slots	
Max. Length Extension Line	Approximately Max. 300m	
Number of Extension Nodes	Max 3 Nodes	
Connection Type	RTB 8Points	
Power Dissipation	Max. 100mA @5Vdc	
Field Power	No Connection with Field Power	
Wiring	Extension Cable	

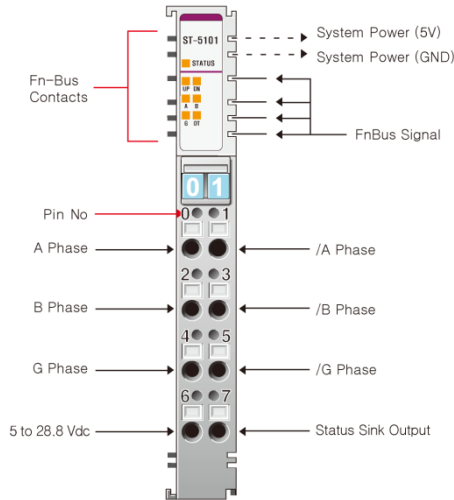
Class 2, adjacent to voltage rating (30Vmax.)



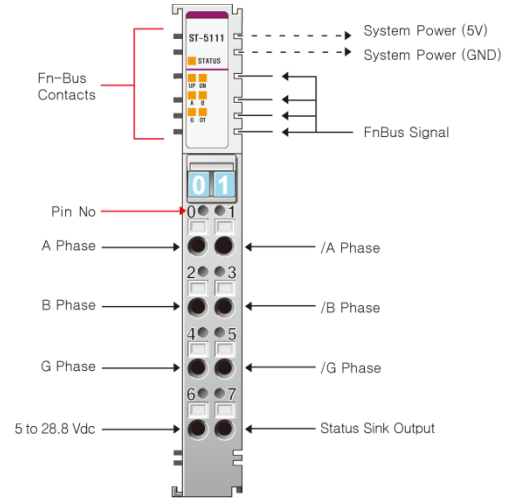
\* Must to use shield for communication stability

## 2. Wiring Diagram

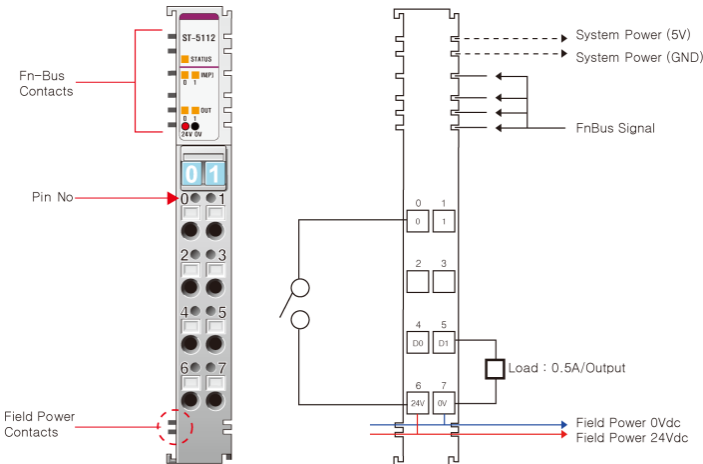
### ST-5101 : 1 Channel Encoder Interface



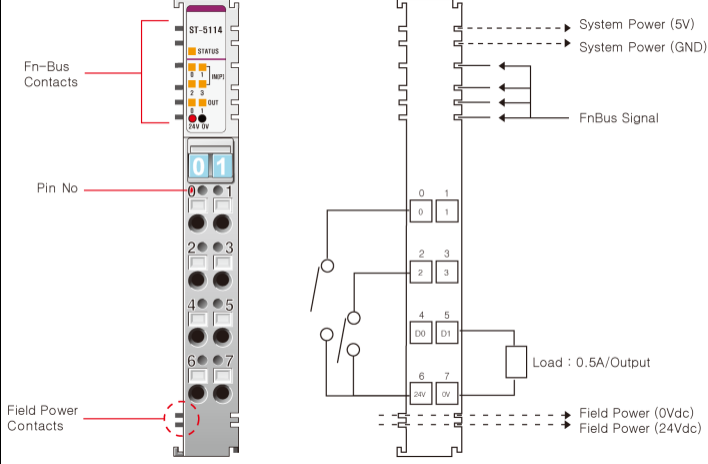
### ST-5111 : 1 Channel Encoder Interface



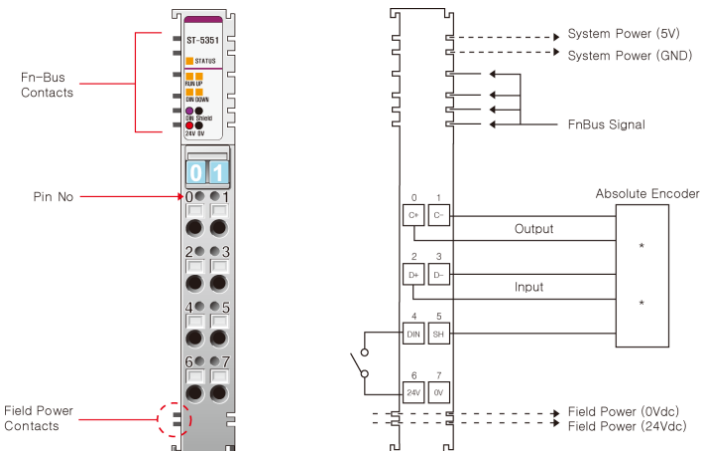
### ST-5112 : 2Ch High Speed Counter Input, 24Vdc



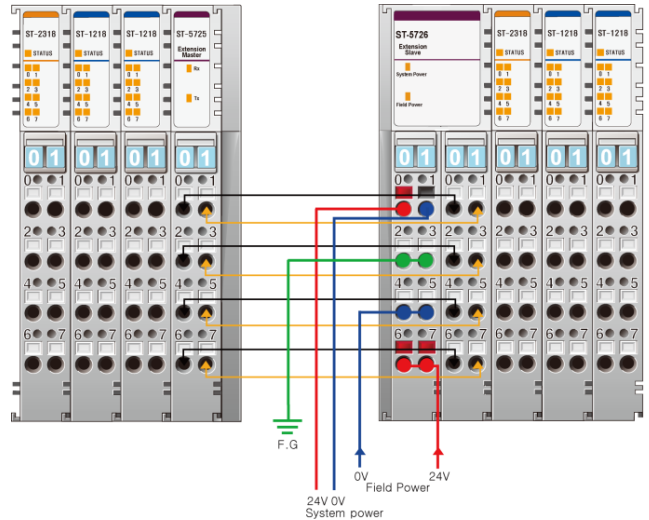
### ST-5114 : 4Ch High Speed Counter Input, 24Vdc



### ST-5351 : 1Ch SSI interface



### ST-5725, ST-5726 : Extension module



## MEMO