

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 오 동작의 원인이 됩니다.

화재, 감전사고 및 오 동작의 원인이 됩니다.

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**경고**

지시사항을 위반하였을 때, 경미한 상해나 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.
- 입력단의 부하는 규정된 정격 이내의 것을 연결하십시오.

화재,감전사고, 오 동작의 원인이 됩니다.

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화재의 원인이 됩니다.

화재 및 감전사고의 원인이 됩니다.

화재 및 감전사고의 원인이 됩니다.

감전, 화재, 오 동작 또는 제품 열화의 원인이 됩니다.

화재, 오 동작 또는 고장의 원인이 됩니다.

**주의**

1. Input Module별 세부사양

모델	ST-1114		ST-1124		ST-1214		ST-1224		ST-1314		ST-1324		ST-1804		ST-1904	
접점 수	4점															
Type	sink		source		sink		source		sink		source		AC			
정격 전압	5Vdc				12V/24Vdc				48Vdc				120Vac		240Vac	
사용 전압	2.4Vdc ~ 5.5Vdc				11Vdc ~ 28.8Vdc				34Vdc ~ 60Vdc				85Vac ~ 132Vac		170Vac ~ 264Vac	
On 전압	2.4Vdc 이상				11Vdc 이상				34Vdc 이상				85Vac 이상		170Vac 이상	
Off 전압	0.8Vdc 이하				5Vdc 이하				10Vdc 이하				60Vac 이하		130Vac 이하	
접점 소비전류	4.5mA 이하				6mA 이하				4mA 이하				8mA 이하		12mA 이하	
모듈 소비전류	35mA/5Vdc															
응답 시간	OFF->ON: 0.5ms이하, ON->OFF: 0.5ms이하				OFF -> ON : 3ms 이하, ON -> OFF : 3ms 이하								OFF->ON: 10ms이하, ON->OFF: 10ms이하			
Common 방식	4 Points / 2COM (Single Common)															
절연 방식	Photocoupler Isolation															
Connection	terminal block															

모델	ST-1218	ST-1228	ST-111F	ST-112F	ST-121F	ST-122F	ST-131F	ST-132F
접점 수	8점		16점					
Type	sink	source	sink	source	sink	source	sink	source
정격 전압	12V/24Vdc		5Vdc		12V/24Vdc		48Vdc	
사용 전압	11Vdc ~ 28.8Vdc		2.4Vdc ~ 5.5Vdc		11Vdc ~ 28.8Vdc		34Vdc ~ 60Vdc	
On 전압	11Vdc 이상		2.4Vdc 이상		11Vdc 이상		34Vdc 이상	
Off 전압	5Vdc 이하		0.8Vdc 이하		5Vdc 이하		10Vdc 이하	
접점 소비전류	6mA 이하		4.5mA 이하		6mA 이하		4mA 이하	
모듈 소비전류	35mA/5Vdc		45mA/5Vdc					
응답 시간	OFF -> ON : 3ms 이하, ON -> OFF : 3ms 이하							
Common 방식	External Common		16 Points / 2COM					
절연 방식	Photocoupler Isolation							
Connection	terminal block		20P Connector					

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

* Specifications and designs could be changed without advance Notice.

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. Input Module Specification

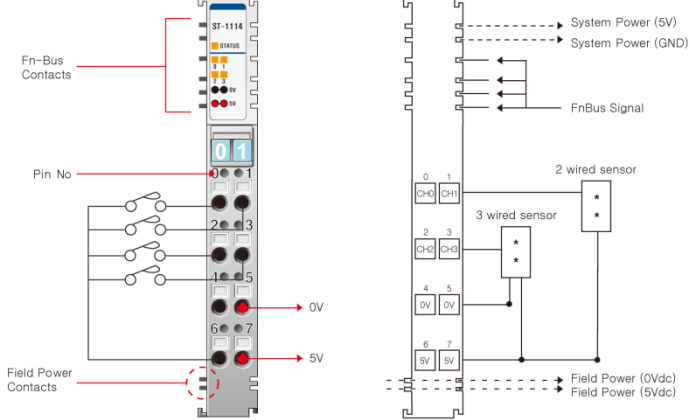
Model	ST-1114	ST-1124	ST-1214	ST-1224	ST-1314	ST-1324	ST-1804	ST-1904
Points	4 Points							
Type	sink	source	sink	source	sink	source	AC	
Normal Voltage	5Vdc		12V/24Vdc		48Vdc		120Vac	240Vac
Allowed Voltage	2.4Vdc ~ 5.5Vdc		11Vdc ~ 28.8Vdc		34Vdc ~ 60Vdc		85Vac ~ 132Vac	170Vac ~ 264Vac
On Voltage	Over 2.4Vdc		Over 11Vdc		Over 34Vdc		Over 85Vac	Over 170Vac
Off Voltage	Below 0.8Vdc		Below 5Vdc		Below 10Vdc		Below 60Vac	Below 130Vac
Point Consump. Curr.	Below 4.5mA		Below 6mA		Below 4mA		Below 8mA	Below 12mA
Module Consump. Curr.	35mA/5Vdc							
Response Time	OFF->ON: Below 0.5ms, ON->OFF: Below 0.5ms		OFF -> ON : Below 3ms, ON -> OFF : Below 3ms				OFF->ON: Below 10ms, ON->OFF: Below 10ms	
Common Type	4 Points / 2COM (Single Common)							
Isolation	Photocoupler Isolation							
Connection	terminal block							

Model	ST-1218	ST-1228	ST-111F	ST-112F	ST-121F	ST-122F	ST-131F	ST-132F
Points	8 Points		16 Points					
Type	sink	source	sink	source	sink	source	sink	source
Normal Voltage	12V/24Vdc		5Vdc		12V/24Vdc		48Vdc	
Allowed Voltage	11Vdc ~ 28.8Vdc		2.4Vdc ~ 5.5Vdc		11Vdc ~ 28.8Vdc		34Vdc ~ 60Vdc	
On Voltage	Over 11Vdc		Over 2.4Vdc		Over 11Vdc		Over 34Vdc	
Off Voltage	Below 5Vdc		Below 0.8Vdc		Below 5Vdc		Below 10Vdc	
Point Consump. Curr.	Below 6mA		Below 4.5mA		Below 6mA		Below 4mA	
Module Consump. Curr.	35mA/5Vdc		45mA/5Vdc					
Response Time	OFF -> ON : Below 3ms, ON -> OFF : Below 3ms							
Common Type	External Common		16 Points / 2COM					
Isolation	Photocoupler Isolation							
Connection	terminal block		20P Connector					

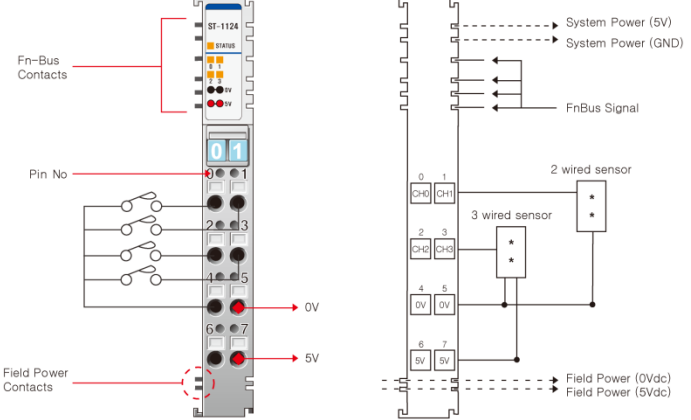


2. Input wiring Diagram

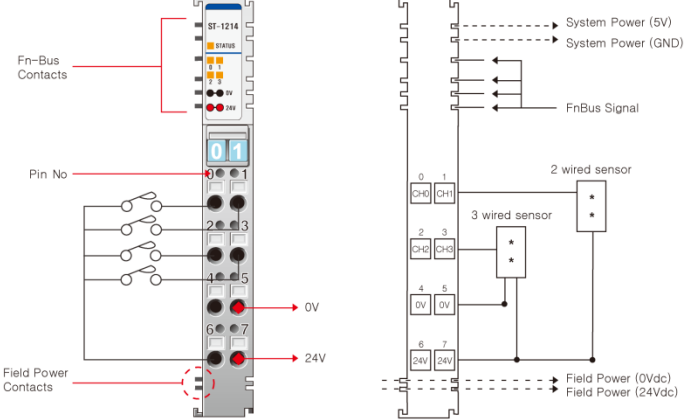
ST-1114 : 4 points DC 5V Sink(Positive) Type



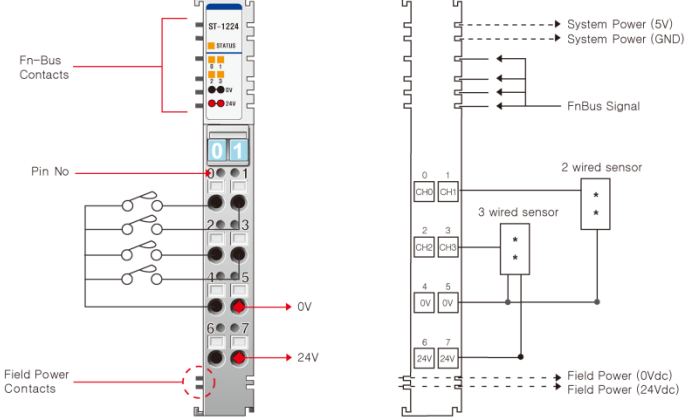
ST-1124 : 4 points DC 5V Source(Negative) Type



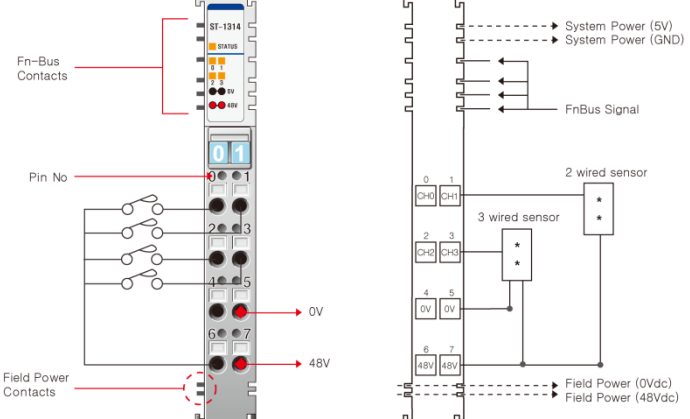
ST-1214 : 4 points DC 12V/24V Sink(Positive) Type



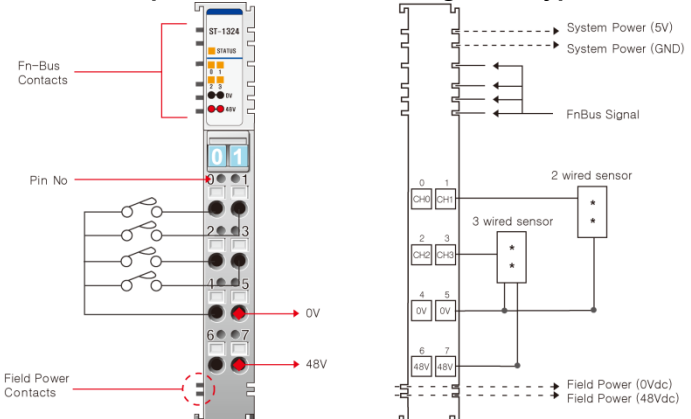
ST-1224 : 4 points DC 12V/24V Source(Negative) Type



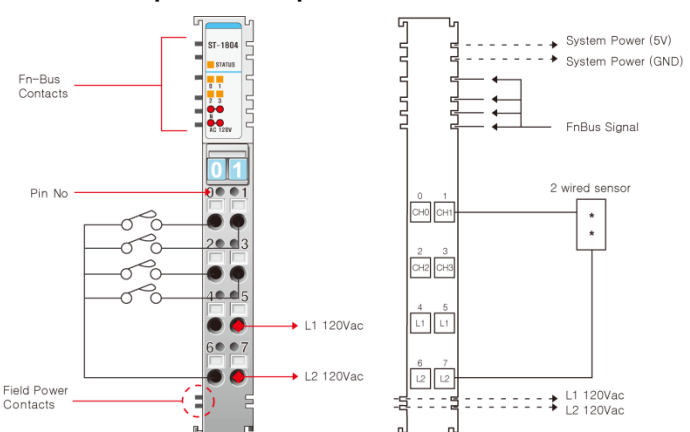
ST-1314 : 4 points DC 48V Sink(Positive) Type



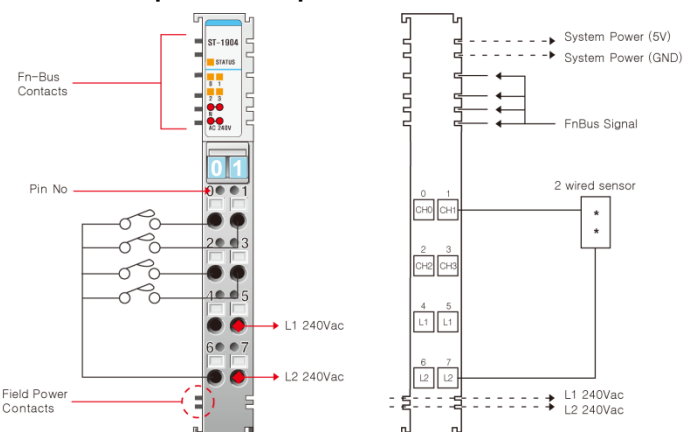
ST-1324 : 4 points DC 48V Source(Negative) Type



ST-1804 : 4 points AC Input Terminal 120Vac



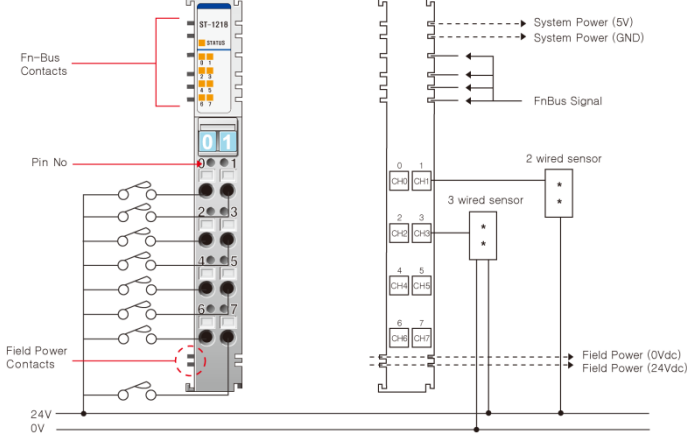
ST-1904 : 4 points AC Input Terminal 240Vac



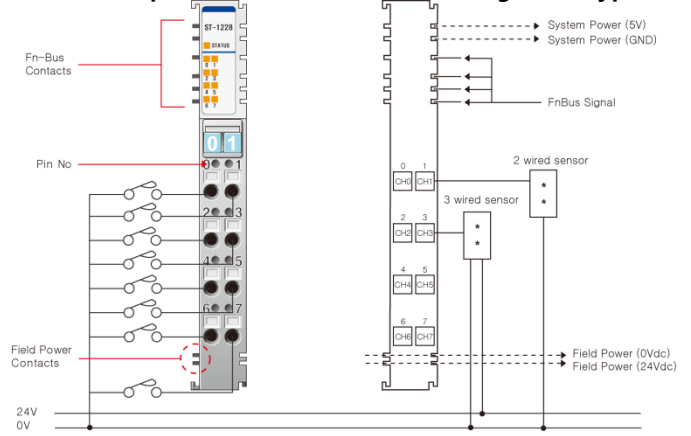
* Specifications and designs could be changed without advance Notice.

2. Input wiring Diagram

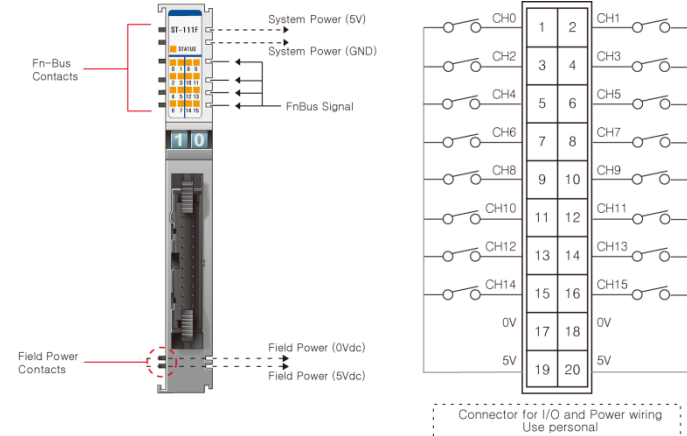
ST-1218 : 8 points DC 12V/24V Sink(Positive) Type



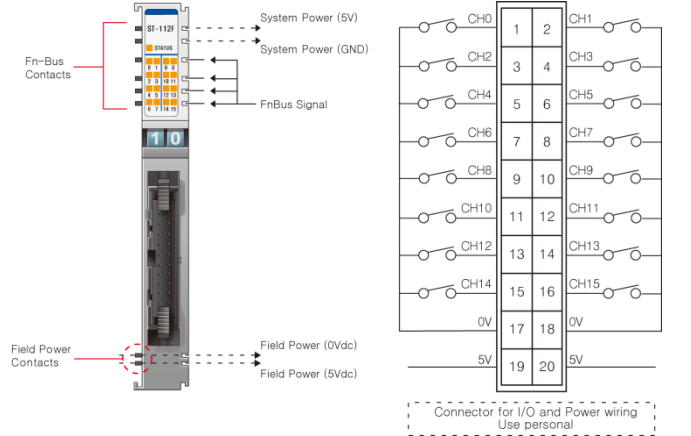
ST-1228 : 8 points DC 12V/24V Source(Negative) Type



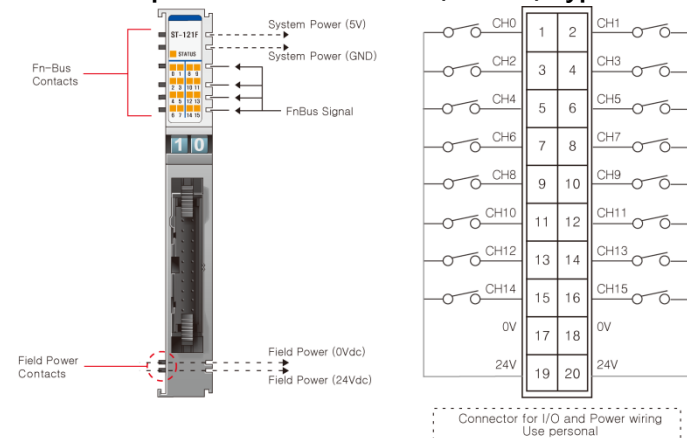
ST-111F : 16 points DC 5V Sink(Positive) Type



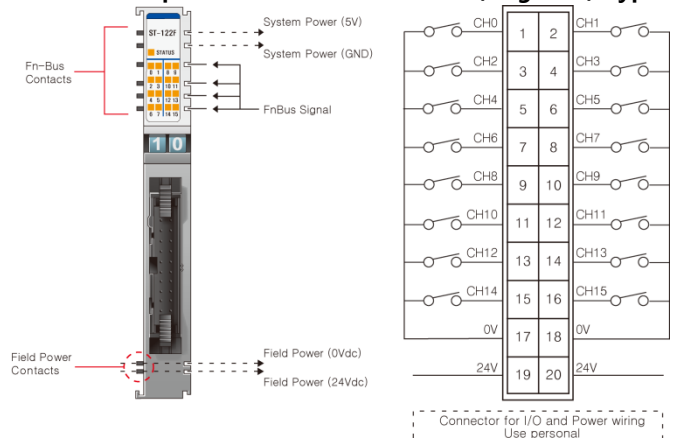
ST-112F : 16 points DC 5V Source(Negative) Type



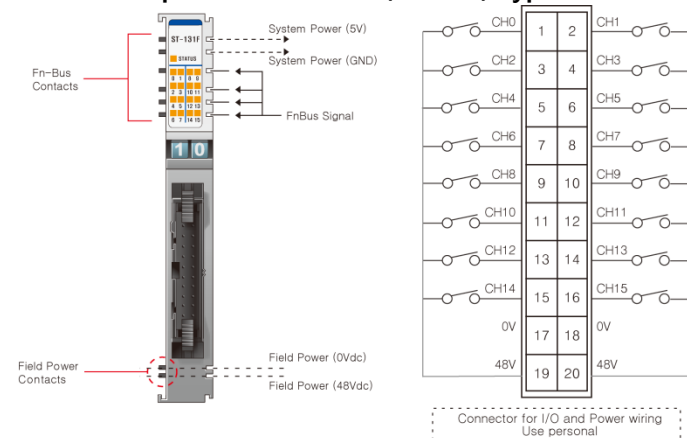
ST-121F : 16points DC 12V /24V Sink(Positive) Type



ST-122F : 16 points DC 12V /24V Source(Negative) Type



ST-131F : 16 points DC 48V Sink(Positive) Type



ST-132F : 16 points DC 48V Source(Negative) Type

