



# Important Product Information

## Discrete Input Modules

GFK-2763A  
Aug 2012

### Before using the units

To use the units safely and effectively, please read this document and refer to GFK-2745 & network adapter user manuals for further details.

### Warnings and Cautions

**Warning notices are used in this publication to emphasize that hazardous voltages, currents, temperatures, or other conditions that could cause personal injury exist in this equipment or may be associated with its use. In situations where inattention could cause either personal injury or damage to equipment, a Warning notice is used.**

**Warning!**

- Installing or removing modules or wiring with power applied to the system or field wiring can cause an electrical arc. This can result in unexpected and potentially dangerous action by field devices. Arcing is an explosion risk in hazardous locations. Be sure that the area is non-hazardous or remove power appropriately before installing or removing modules or wiring.
- Potentially dangerous voltages are present on a module's terminals, even when system power is turned off. Field power must be turned off when installing or removing a Terminal Block assembly.
- Personnel who install, operate and maintain automation systems that contain these products must be trained and qualified to perform those functions.
- Overloading power modules or Network adapter can result into electric arc & damage to modules.

**Caution notices are used where equipment might be damaged if care is not taken.**

**Caution!**

- Check the rated voltage and terminal array before wiring.
- Ensure that specified environmental conditions are not exceeded. Avoid placing the module in direct sunlight.
- Review module specifications carefully, and ensure that input and output connections are made in accordance with the specifications.
- Use specified cables for wiring.
- Field Power Isolators must be used according to the requirements of the 5VDC/24VDC/48VDC or AC Voltage modules used in the system.
- If system power consumption exceeds the power limits, use system power expansion modules.
- System power and field power must be supplied from separate sources.

### 1. Input Module Specifications\*

Model	ST-1114	ST-1124	ST-1214	ST-1224	ST-1314	ST-1324	ST-1804	ST-1904
Points	4 Points							
Logic Type	Positive	Negative	Positive	Negative	Positive	Negative	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
ON state current	Max 4.5mA per point		Max 6mA per point		Max 4mA per point		Max 8mA per point	Max 12mA per point
Module current consumption.	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 Logic	4 Points / 2COM (Single Common)							
Isolation	Photocoupler Isolation							
Connection	Terminal block							
Surrounding Air Temp./ Ambient Temp.	-20°C to 55°C for UL applications ; -20°C to 60°C for non-UL applications ; Storage -40°C to 85°C							
Relative Humidity	5% ~ 90%, without condensation							

\* Specifications and designs could be changed without advance notice

## 1. Input Module Specifications\*

Model	ST-1218	ST-1228	ST-121F	ST-122F	ST-131F
Points	8 Points		16 Points		
Logic Type	Positive	Negative	Positive	Negative	Positive
Normal Voltage	12V/24Vdc (Both)		12V/24Vdc (Both)		48Vdc
Allowed Voltage	11Vdc ~ 28.8Vdc		11Vdc ~ 28.8Vdc		34Vdc ~ 60Vdc
On Voltage	Over 11Vdc		Over 11Vdc		Over 34Vdc
Off Voltage	Below 5Vdc		Below 5Vdc		Below 10Vdc
ON state current	Max 6mA per point		Max 6mA per point		Max 4mA per point
Module current consumption	35mA/5Vdc		45mA/5Vdc		
Response Time	OFF -> ON : Below 3ms, ON -> OFF : Below 3ms				
Common Logic	External Common		16 Points / 2COM		
Isolation	Photocoupler Isolation				
Connection	Terminal block		20P Connector		
Surrounding Air Temp./ Ambient Temp.	-20°C to 55°C for UL applications ; -20°C to 60°C for non-UL applications ; Storage -40°C to 85°C				
Relative Humidity	5% ~ 90%, without condensation				

## 2. Release Information

Part Number	ST-1114-AA	ST-1124-AA	ST-1214-AA	ST-1224-AA	ST-1314-AA	ST-1324-AA	ST-1804-AA	ST-1904-AA
HW Version	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Firmware Revision	20.000	20.000	20.000	20.000	20.000	20.000	20.000	20.000

Part Number	ST-1218-AA	ST-1228-AA	ST-121F-AA	ST-122F-AA	ST-131F-AA
HW Version	20.00	20.00	20.00	20.00	20.00
Firmware Revision	20.000	20.000	20.000	20.000	20.000

## 3. Electronic Documentation

### Manuals:

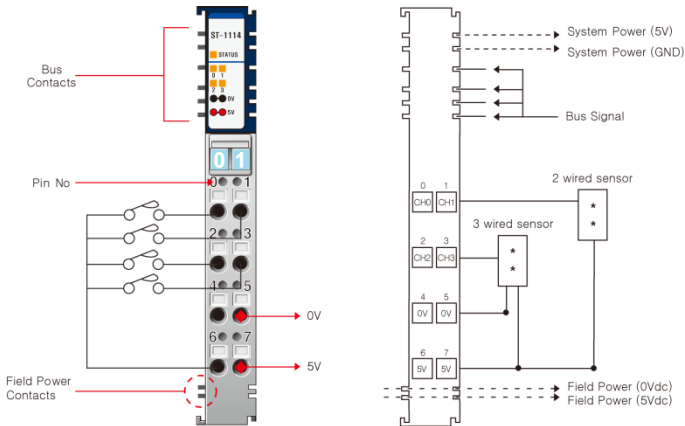
*PACSystems RSTi I/O User Manual, GFK-2745*

*PACSystems RSTi Network Adapter User Manuals*

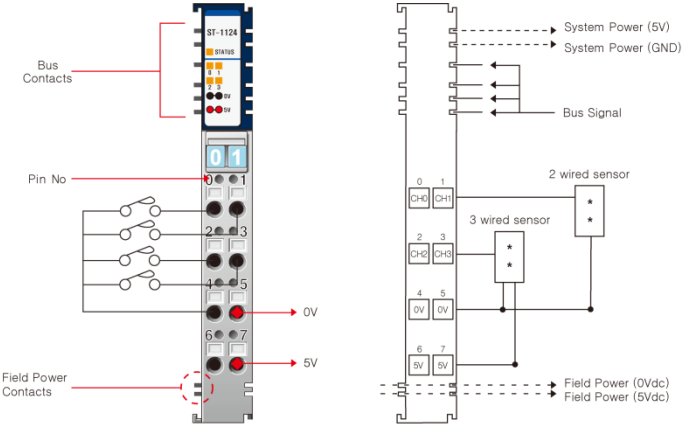
The most recent user documents are available on the Support website: <http://www.ge-ip.com/support>

## 4. Input wiring Diagrams

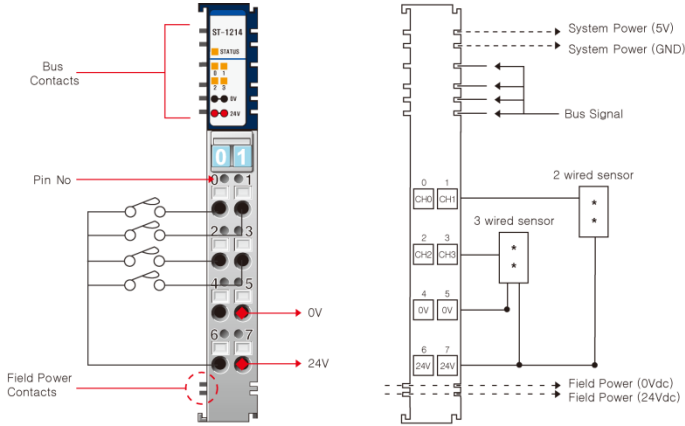
**ST-1114 : 4 points DC 5V Positive Logic**



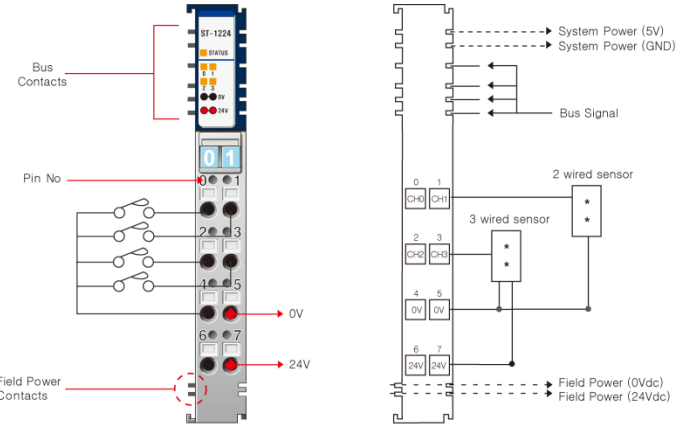
**ST-1124 : 4 points DC 5V Negative Logic**



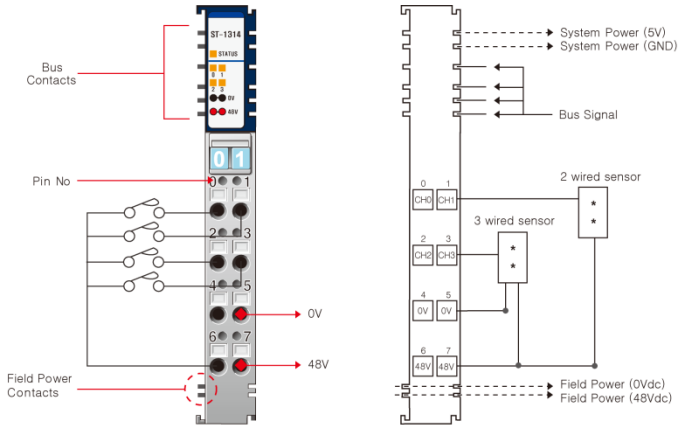
**ST-1214 : 4 points DC 12V/24V Positive Logic**



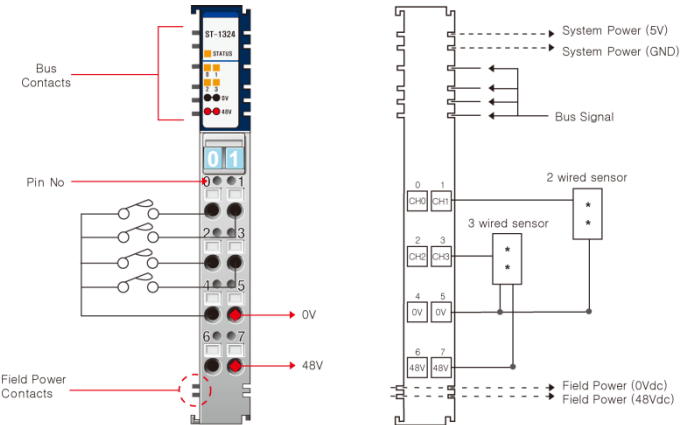
**ST-1224 : 4 points DC 12V/24V Negative Logic**



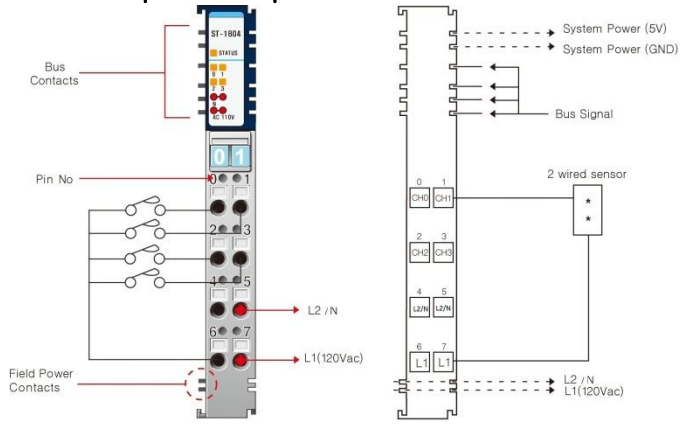
**ST-1314 : 4 points DC 48V Positive Logic**



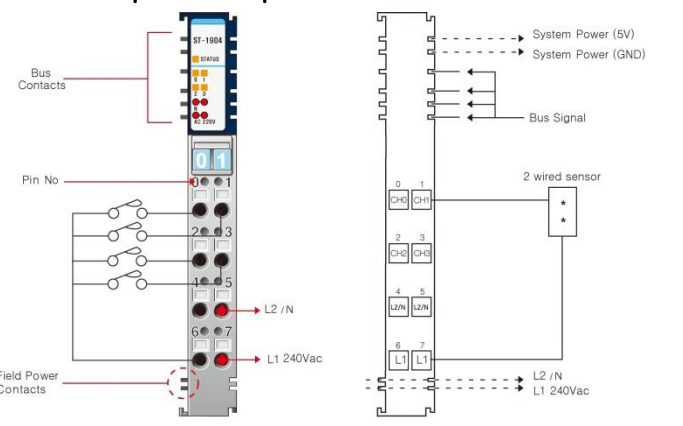
**ST-1324 : 4 points DC 48V Negative Logic**



**ST-1804 : 4 points AC Input Terminal 120Vac**

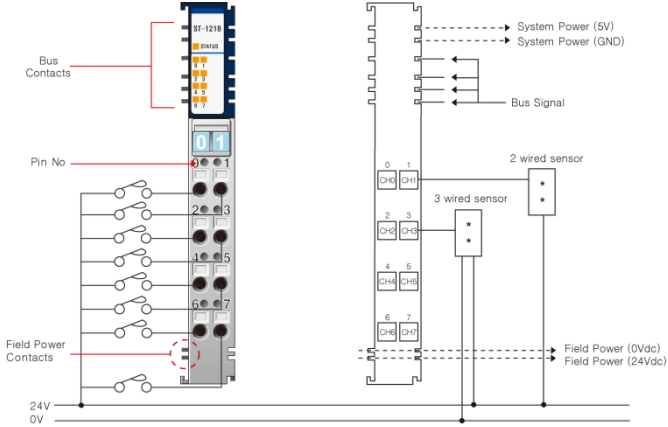


**ST-1904 : 4 points AC Input Terminal 240Vac**

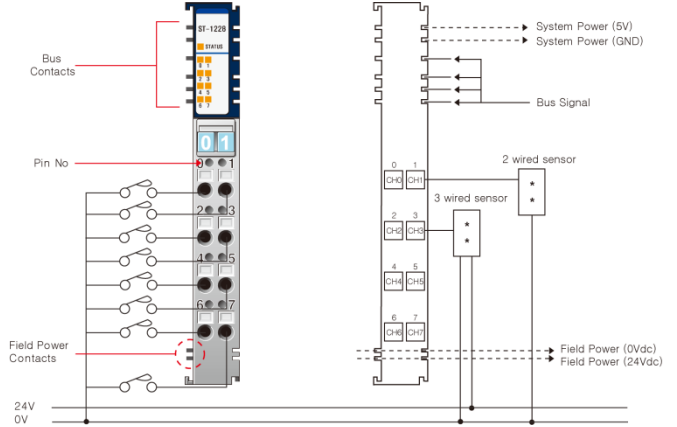


## 4. Input wiring Diagrams

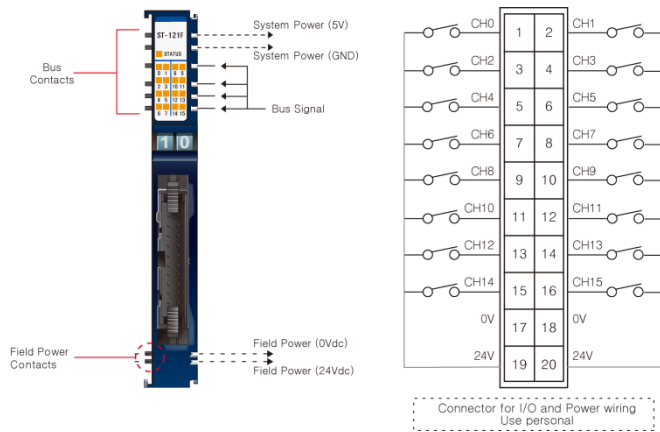
**ST-1218 : 8 points DC 12V/24V Positive Logic**



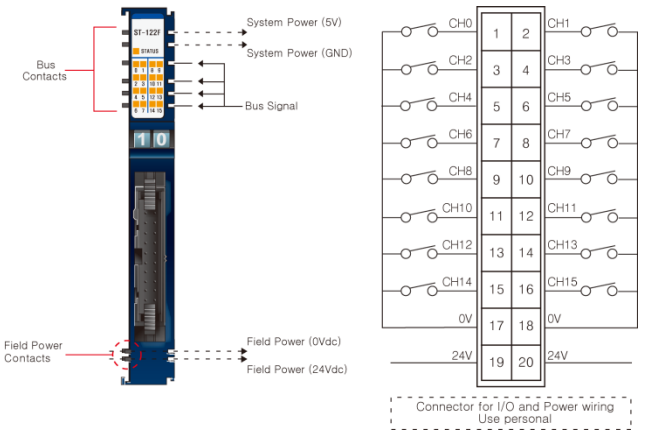
**ST-1228 : 8 points DC 12V/24V Negative Logic**



**ST-121F : 16points DC 12V /24V Positive Logic**



**ST-122F : 16 points DC 12V /24V Negative Logic**



**ST-131F : 16 points DC 48V Positive Logic**

