
FnIO G – Series :

GT-221F

GT-221F(16 Channels, Sink Output Terminal, 24Vdc/0.3A)

Specification Preliminary

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Specification Preliminary

History

REV.	PAGES	REMARKS	DATE	Editor
Preliminary		Preliminary	Apr 08, 2016	HS KIM
1.01		Environment Specification, Current	Jun 03, 2016	DHLEE
1.02	5	Field Power dissipation	Mar 31, 2017	HSKIM
1.03		Edit typos	July 17, 2017	HSKIM

Specification Preliminary

1. ENVIRONMENT SPECIFICATION

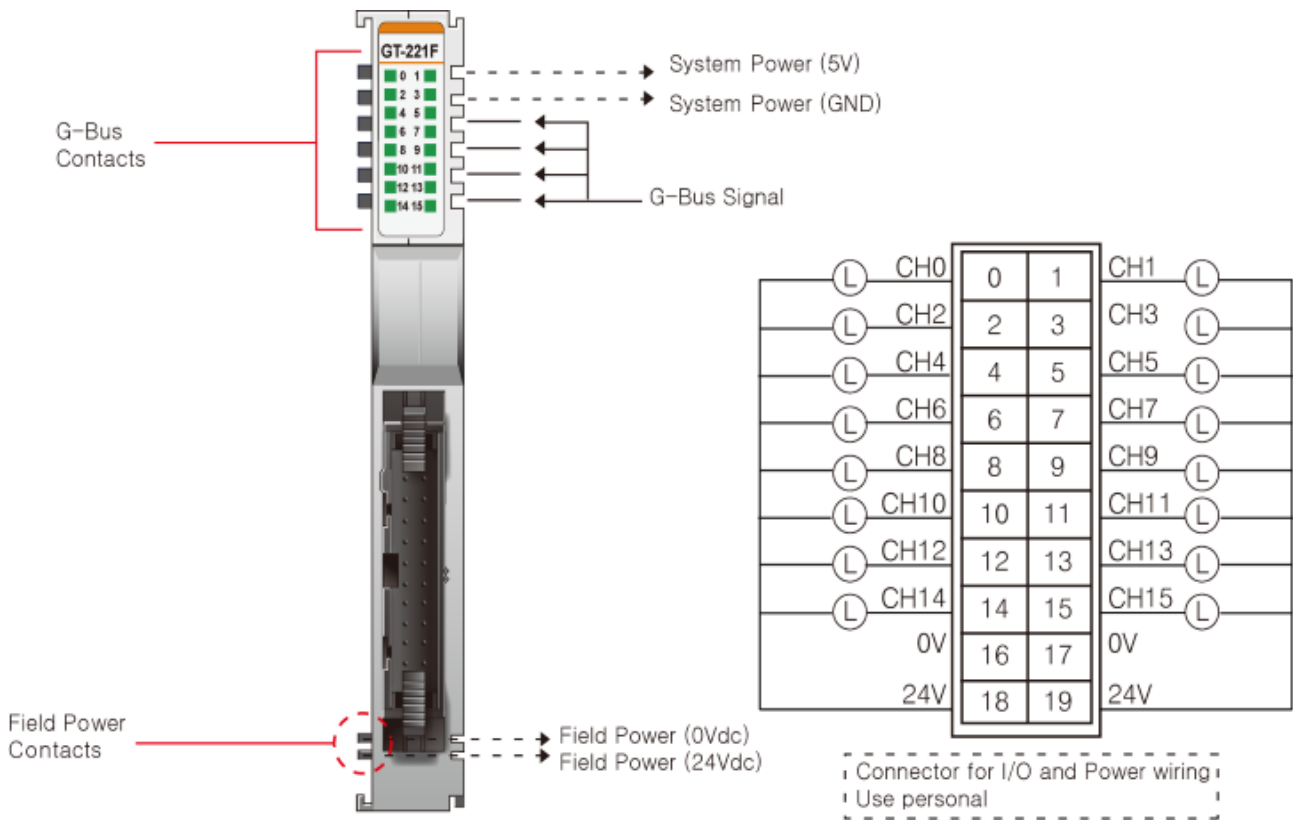
Environment specification	
Operating Temperature	-40°C~70°C
UL Temperature	-20°C~60°C
Storage Temperature	-40°C~85°C
Relative Humidity	5% ~ 90% non-condensing
Mounting	DIN rail
General specification	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6 Sine Vibration <ul style="list-style-type: none"> - 5 ~ 25Hz : ±1.6mm - 25 ~ 300Hz : 4g - Sweep Rate : 1 Oct/min, 20 cycles Random Vibration <ul style="list-style-type: none"> - 10 ~ 40 Hz : 0.0125 g²/Hz - 40 ~ 100 Hz : 0.0125 → 0.002 g²/Hz - 100 ~ 500 Hz : 0.002 g²/Hz - 500 ~ 2000 Hz : 0.002 → 1.3 x 10⁻⁴g²/Hz - Test time : 1hrs for each test
Industrial Emissions	EN61000-6-4/All : 2011
Industrial Immunity	EN 61000-6-2 : 2005
Installation Position	Vertical and horizontal installation is available.
Product Certifications	CE, UL

2. GT-221F (16 Channels Sink Output Terminal)

2.1. GT-221F Specification

Items	Specification
Input Specification	
Output per module	16 Points Sink type
Indicators	16 Green output state
Output Voltage Range	Nominal 24Vdc, Min. 15Vdc ~ Max. 32Vdc
ON-state voltage drop	Max. 0.3Vdc @ 25°C / 0.5Vdc@ 70°C
ON-State Min. Current	1mA per channel
OFF-State Leakage current	Max. 30uA
Output Signal Delay	OFF to ON : 0.5ms maximum ON to OFF : 0.5ms maximum
Output Current Rating	Max. 0.3A per channel / Max. 4.8A per unit
Protection	Over Current limit: Min. 3.5A@ 25°C per each channels Thermal Shutdown : Min 3A@ 25°C per each channels Short circuit protection
COMMON Type	16 points / 2 COM (Single Common)
General specification	
Power dissipation	50mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 15~32Vdc Power dissipation: 10mA @24Vdc
Wiring	20Pin Connector Type
Weight	53g
Module Size	12mm x 99mm x 70mm
Environment Condition	Refer to '1. Environment Specification'

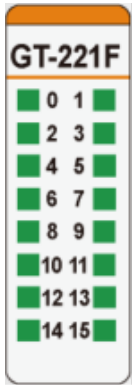
2.2. GT-221F Wiring Diagram



Pin No.	Signal Description	Signal Description	Pin No.
0	Output Channel 0	Output Channel 1	1
2	Output Channel 2	Output Channel 3	3
4	Output Channel 4	Output Channel 5	5
6	Output Channel 6	Output Channel 7	7
8	Output Channel 8	Output Channel 9	9
10	Output Channel 10	Output Channel 11	11
12	Output Channel 12	Output Channel 13	13
14	Output Channel 14	Output Channel 15	15
16	Common (Field Power 0V)	Common (Field Power 0V)	17
18	Common (Field Power 24V)	Common (Field Power 24V)	19

2.3. GT-221F LED Indicator

2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	OUTPUT Channel 0	Green
1	OUTPUT Channel 1	Green
2	OUTPUT Channel 2	Green
3	OUTPUT Channel 3	Green
4	OUTPUT Channel 4	Green
5	OUTPUT Channel 5	Green
6	OUTPUT Channel 6	Green
7	OUTPUT Channel 7	Green
8	OUTPUT Channel 8	Green
9	OUTPUT Channel 9	Green
10	OUTPUT Channel 10	Green
11	OUTPUT Channel 11	Green
12	OUTPUT Channel 12	Green
13	OUTPUT Channel 13	Green
14	OUTPUT Channel 14	Green
15	OUTPUT Channel 15	Green

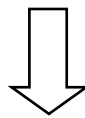
2.3.2. Channel Status LED

Status	LED	To indicate
Not Signal	Off	Normal Operation
On Signal	Green	Normal Operation

2.4. Mapping data into the image table

- **Output Image Value**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	D7	D6	D5	D4	D3	D2	D1	D0
Byte1	D15	D14	D13	D12	D11	D10	D9	D8



- **Output Module Data**

D7	D6	D5	D4	D3	D2	D1	D0
D15	D14	D13	D12	D11	D10	D9	D8

2.5. Parameter Data

- **Valid Parameter length: 4 Bytes**
- **Parameter Data**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Fault Action (ch0~ch7)				0: Fault value, 1:Hold last state			
Byte1	Fault Action (ch8~ch15)				0: Fault value, 1:Hold last state			
Byte2	Fault value (ch0~ch7)				0:Off, 1:On			
Byte3	Fault value (ch8~ch15)				0:Off, 1:On			