
FnIO G – Series :

GT-221F

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

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History

Rev	Pages	Remarks	Date	Editor
1.00			2016/04/08	Hongseok, Kim
1.01		Environment Specification, Current	2016/06/03	Dohoon, Lee
1.02	5	Field Power dissipation	2017/03/31	Hongseok, Kim
1.03		Edit typos	2017/07/17	Hongseok, Kim
1.04	4,5	Shock, Vibration specification changed General specification added(UL)	2020/04/20	Juyong, Bae
1.05	6	Change Diagram, Signal Description	2023/04/03	Soyeong, Park
1.06	4,6,7	Edit Certification / Change Diagram, Status LED	2023/08/04	Suna, Hwang
1.07	5	Add Wiring-Module Connector	2026/03/10	Soyeong, Park

Specification

1. ENVIRONMENT SPECIFICATION

Environmental specification	
Operation 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, 4g
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

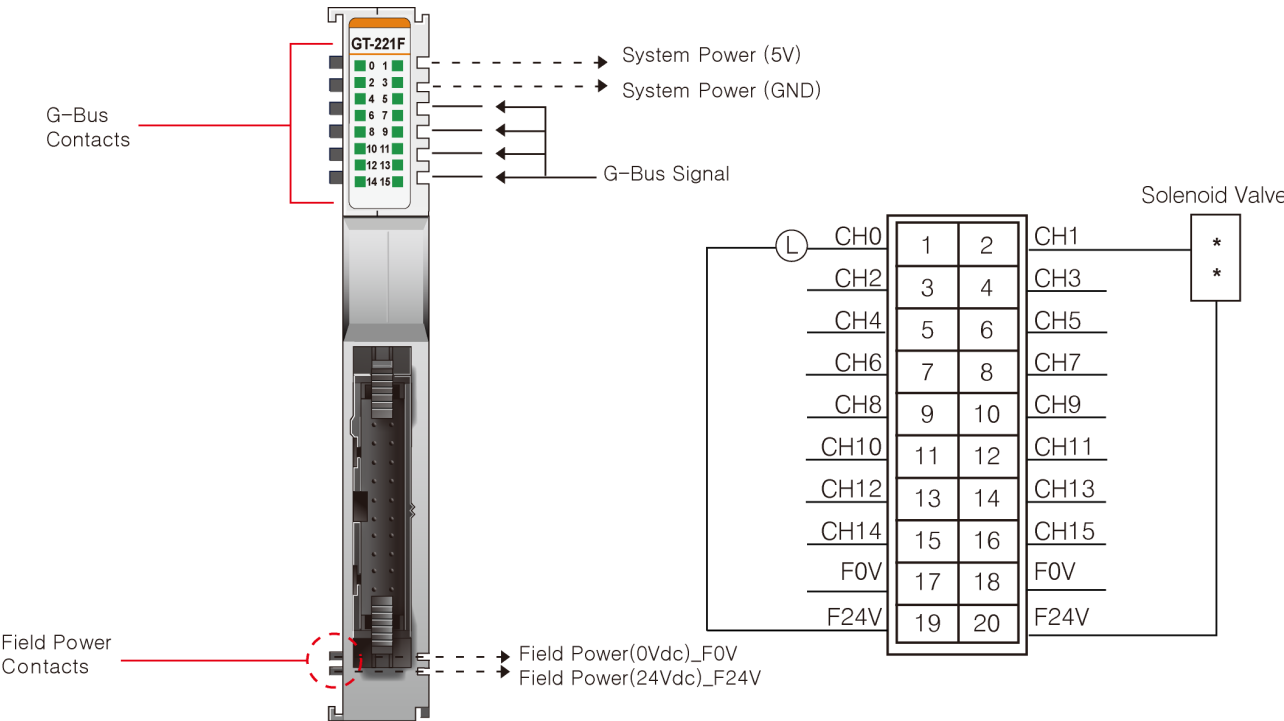
Specification

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

2.1. GT-221F Specification

Items	Specification
Input Specification	
Output per module	16 points sink type
Indicators	16 green output status
Output voltage range	24Vdc nominal 15Vdc ~ 30Vdc @ 70°C
On-state voltage drop	0.3Vdc @ 25°C 0.5Vdc @ 70°C
On-state min. current	Min. 1mA
Off-state leakage current	Max. 30uA
Output signal delay	OFF to ON : Max. 0.5ms ON to OFF : Max 0.5ms
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
General specification	
Power dissipation	Max. 50mA @ 5Vdc
Isolation	I/O to Logic : photocoupler isolation Field power : non-isolation
UL field power	Supply voltage : 24Vdc nominal, Class 2
Field power	Supply voltage : 24Vdc nominal Voltage range : 15~30Vdc Power dissipation: 10mA @ 24Vdc
Wiring	According to the connector specification Hirose Connector : HIF3BA-20PA-2.54DSA Omron Connector : XG4A-2031
Weight	53g
Module size	12mm x 99mm x 70mm
Environment condition	Refer to '1. Environment Specification'

2.2. GT-221F Wiring Diagram

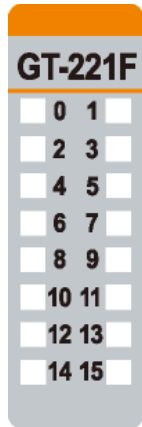


Pin No.	Signal Description	Signal Description	Pin No.
1	Output Channel 0	Output Channel 1	2
3	Output Channel 2	Output Channel 3	4
5	Output Channel 4	Output Channel 5	6
7	Output Channel 6	Output Channel 7	8
9	Output Channel 8	Output Channel 9	10
11	Output Channel 10	Output Channel 11	12
13	Output Channel 12	Output Channel 13	14
15	Output Channel 14	Output Channel 15	16
17	Field Power 0V	Field Power 0V	18
19	Common (Field Power 24V)	Common (Field Power 24V)	20

Specification

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

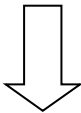
2.3.2. Channel Status LED

Status	LED	To indicate
No Signal	Off	No Output Signal
On Signal	Green	Output Signal detected

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							