
FnIO G – Series :

GT-1B7F

***GT-1B7F (Total 16 Points, Selectable DI/DO,
Sink Input / Source Output, 24Vdc)***

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History

Rev	Pages	Remarks	Date	Editor
1.00			2020/11/26	Seonghyeon, Park
1.01	6	Change Diagram, Channel to Point	2023/04/03	Soyeong, Park
1.02	4,6,7	Edit Certification / Change Diagram, Status LED	2023/08/04	Suna, Hwang

Specification

1. ENVIRONMENT SPECIFICATION

Environmental specification	
Operation Temperature	-40°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 : 2019
Installation Position	Vertical and horizontal installation is available
Product Certifications	CE

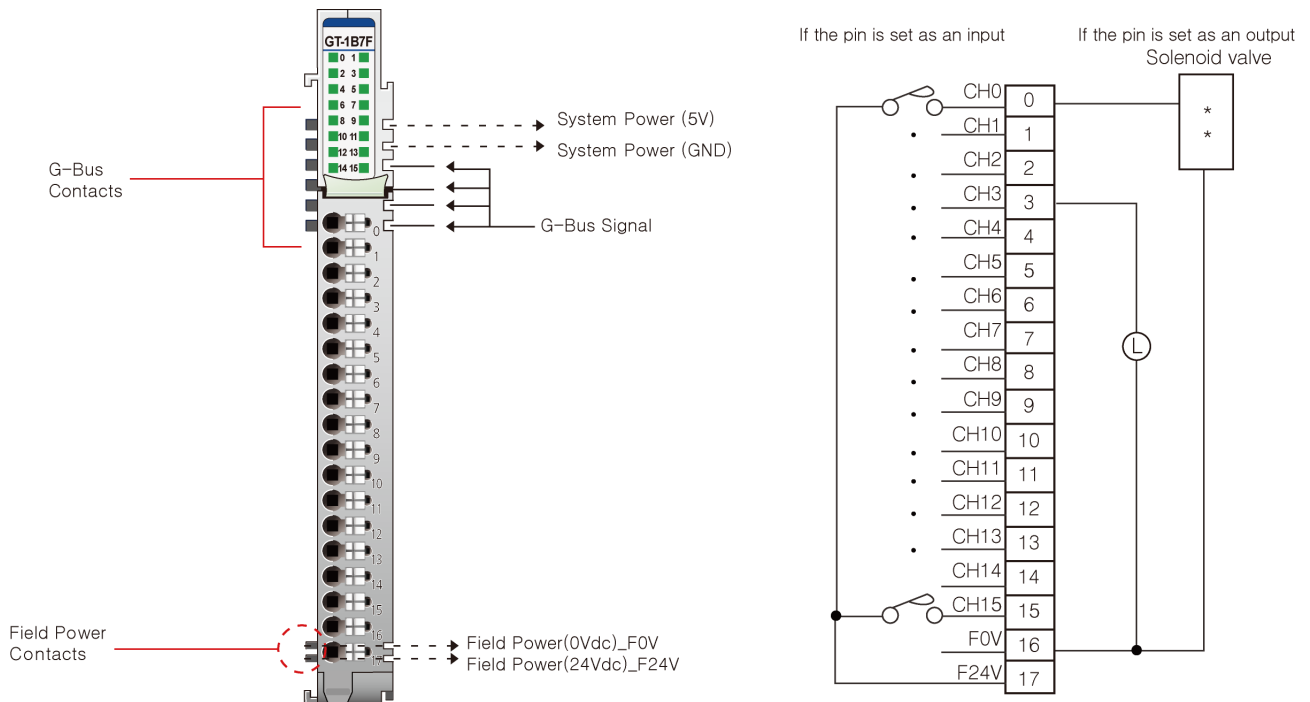
Specification

2. GT-1B7F (Selectable DI/DO, Sink Input/Source Output Terminal)

2.1. GT-1B7F Specification

Items	Specification
Input Specification	
Input per module	16 points sink type
Indicators	16 green input status
On-state voltage	24Vdc nominal *(≤ Field Power) 15 ~ 28.8Vdc @ 60°C
On-state current	3.2mA @ 24Vdc 3.8mA @ 30Vdc
Off-state voltage	12.5Vdc @ 25°C
Input signal delay	OFF to ON : 0.4ms Max ON to OFF : 0.5ms Max
Input filter	Adjustable, up to 10ms
Nominal input impedance	10.58K ohm typical
Common type	16 points / 2 COM(Sink)
Output Specification	
Output per module	16 points source type
Indicators	16 green output status
Output voltage range	24Vdc nominal 15Vdc ~ 28.8Vdc @ 60°C
On-state voltage drop	0.3Vdc @ 25°C 0.3Vdc @ 60°C
On-state min. current	Min. 1mA
Off-state leakage current	Max. 10uA
Output signal delay	OFF to ON : 0.3ms maximum ON to OFF : 0.5ms maximum
Output current rating	Max. 0.3A per channel / Max. 4.8A per unit
Protection	Over current limit : 12A@ 25°C per each channels Thermal shutdown : Typical. 175°C @ 25°C per each channels Short circuit protection
Common type	16 points / 2 COM(Source)
General specification	
Power dissipation	Max. 60mA @ 5Vdc
Isolation	I/O to Logic : photocoupler isolation
UL field power	Supply voltage : 24Vdc nominal, Class 2
Field power	Supply voltage : 24Vdc nominal Voltage range : 15 ~ 28.8Vdc Power dissipation : 55mA @ 24Vdc
Wiring	I/O Cable Max. 0.823mm ² (AWG 18)
Weight	63g
Module size	12mm x 109mm x 70mm
Environment condition	Refer to 'Environment Specification'

2.2. GT-1B7F Wiring Diagram

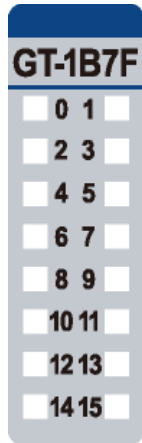


Pin No.	Signal Description
0	Input / Output Channel 0
1	Input / Output Channel 1
2	Input / Output Channel 2
3	Input / Output Channel 3
4	Input / Output Channel 4
5	Input / Output Channel 5
6	Input / Output Channel 6
7	Input / Output Channel 7
8	Input / Output Channel 8
9	Input / Output Channel 9
10	Input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

Specification

2.3. GT-1B7F LED Indicator

2.3.1. LED Indicator



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

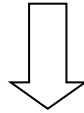
2.3.2. Channel Status LED

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

2.4. Mapping data into the image table

● Input Module Data

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

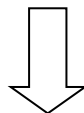


● Input Image Value

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 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: 8 Bytes
- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	*Operation Selection (ch0~ch7) 0: Input, 1: Output							
Byte1	*Operation Selection (ch8~ch15) 0: Input, 1: Output							
Byte2	Fault Action (ch0~ch7) 0: Fault value, 1: Hold last state							
Byte3	Fault Action (ch8~ch15) 0: Fault value, 1: Hold last state							
Byte4	Fault value(ch0~ch7) 0: Off, 1: On							
Byte5	Fault value(ch8~ch15) 0: Off, 1: On							
Byte6	Input Filter value : 0 ~ 10 (unit : ms)							
Byte7	Reserved							

* You can check the status of Operation Selection through LED.

* Precautions for use : if you changed Operation Selection, you must reset Module.