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# **FnIO G – Series :**

## ***GT-1B8F***

***GT-1B8F(Total 16Channels, Selectable DI/DO, Source Input / Sink Output, 24Vdc)***

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## Table of Contents

<a href="#">Table of Contents.....</a>	<a href="#">2</a>
<a href="#">History.....</a>	<a href="#">3</a>
<a href="#">1.ENVIRONMENT SPECIFICATION.....</a>	<a href="#">4</a>
<a href="#">2.GT-1B8F (Selectable DI/DO, Source Input/Sink Output Terminal).....</a>	<a href="#">5</a>
<a href="#">2.1.GT-1B8F Specification .....</a>	<a href="#">5</a>
<a href="#">2.2.GT-1B8F Wiring Diagram.....</a>	<a href="#">6</a>
<a href="#">2.3.GT-1B8F LED Indicator.....</a>	<a href="#">7</a>
<a href="#">2.3.1.LED Indicator.....</a>	<a href="#">7</a>
<a href="#">2.3.2.Channel Status LED.....</a>	<a href="#">7</a>
<a href="#">2.4.Mapping data into the image table.....</a>	<a href="#">8</a>
<a href="#">2.5.Parameter Data.....</a>	<a href="#">9</a>

# Specification

## History

REV.	PAGES	REMARKS	DATE	Editor
1		New Documnet	Nov 27, 2020	Seonghyeon, Park

# Specification

## 1. ENVIRONMENT SPECIFICATION

<b>Environmental specification</b>	
Operation Temperature	-40°C~60°C
UL Temperature	-20°C~60°C
Storage Temperature	-40°C~85°C
Relative Humidity	5%~90% Non-condensing
Mounting	DIN Rail
<b>General specification</b>	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6 DNVGL-CG-0039 : Vibration Class B, 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, FCC

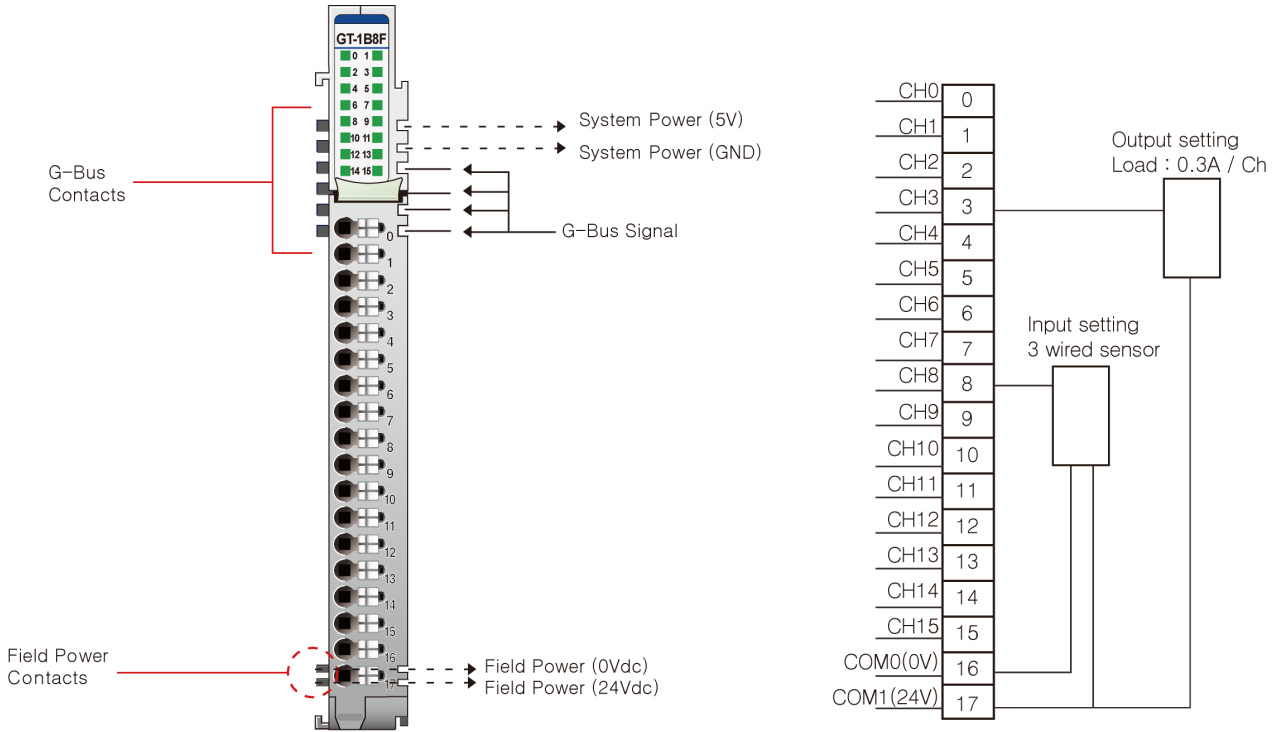
# Specification

## 2. GT-1B8F (Selectable DI/DO, Source Input/Sink Output Terminal)

### 2.1. GT-1B8F Specification

Items	Specification
<b>Input Specification</b>	
Input per module	16 points source type
Indicators	16 green input status
On-state voltage	24Vdc nominal *(≤ Field Power) 15 ~ 28.8Vdc @ 60°C
On-state current	2.3mA @ 24Vdc 2.9mA @ 30Vdc
Off-state voltage	13.0Vdc @ 25°C
Input signal delay	OFF to ON : 0.3ms typical ON to OFF : 0.5ms typical
Input filter	Adjustable, up to 10ms
Nominal input impedance	10.5K ohm typical
Common type	16 points / 2 COM(Sink)
<b>Output Specification</b>	
Output per module	16 points sink type
Indicators	16 Green output status
Output voltage range	24Vdc nominal 15Vdc ~ 28.8Vdc @ 60°C
On-state voltage drop	Max. 0.5Vdc @ 25°C Max. 0.6Vdc @ 60°C
On-state min. current	Min. 1mA
Off-state leakage current	Max. 25uA
Output signal delay	OFF to ON : Max. 0.3ms ON to OFF : Max. 0.5ms
Output current rating	Max. 0.3A per channel / Max. 4.8A per unit
Protection	Over current limit : 3.5A@ 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)
<b>General specification</b>	
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. 0.75mm <sup>2</sup> (AWG 18)
Weight	63g
Module size	12mm x 109mm x 70mm
<b>Environment condition</b>	<b>Refer to 'Environment Specification'</b>

## 2.2. GT-1B8F Wiring Diagram

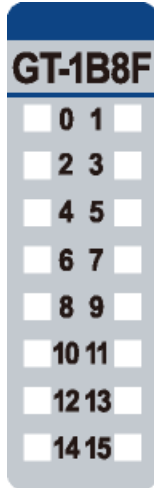


Pin No.	Signal Description
0	Input / Output Channel 0
1	Input / Output Channel 1
2	Input / Output Channel 2
3	Input / Output Channel 3
4	Input / Output Channel 4
5	Input / Output Channel 5
6	Input / Output Channel 6
7	Input / Output Channel 7
8	Input / Output Channel 8
9	Input / Output Channel 9
10	Input / 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-1B8F 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

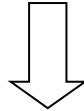
Status	LED	To indicate
No Signal	Off	Normal Operation
On Signal	Green	Normal Operation

# Specification

## 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

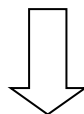


### ● Input Image Value

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



# Specification

## 2.5. Parameter Data

- Valid Parameter length: 8 Bytes
- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte 0	*Operatin Selection (ch0~ch7) 0: Input, 1: Output							
Byte 1	*Operatin Selection (ch8~ch15) 0: Input, 1: Output							
Byte 2	Fault Action (ch0~ch7) 0: Fault value, 1: Hold last state							
Byte 3	Fault Action (ch8~ch15) 0: Fault value, 1: Hold last state							
Byte 4	Fault value(ch0~ch7) 0: Off, 1: On							
Byte 5	Fault value(ch8~ch15) 0: Off, 1: On							
Byte 6	Input Filter value : 0 ~ 10 (unit : ms)							
Byte 7	Reserved							

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

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