

FnIO G – Series :

GT-2438

GT-2438(8 Points, Sink Output With Diagnostics, 24Vdc/2A)

Specification

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Specification

History

REV.	PAGES	REMARKS	DATE	Editor
1.00		Draft	May 04, 2022	Joonho, Park
1.01	5	Modify Image	July 15, 2022	CW, SEO
1.02	8	LED Status	July 27, 2022	CW, SEO
1.03	5	Change Output Delay Time and Leakage current	Sep 30, 2022	CW, SEO
1.04	6	Changed Diagram / Signal Description	Apr 03, 2023	Soyeong, Park
1.05	7	Bus Fault LED changed	Mar, 19, 2023	CW, SEO

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1. ENVIRONMENT SPECIFICATION

Environmental specification	
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
General specification	
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

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2. GT-2438 (8 Points Sink Output with Diagnostics)

2.1. GT-2438 Specification

Items	Specification
Input specification	
Output per module	8 points sink type
Indicators	8 green output status, 8 red diagnostic state
Output voltage range	24Vdc nominal 15Vdc ~ 30Vdc
On-state voltage drop	3.0Vdc @ 2A / 0.5Vdc @ 0.3A
On-state min. current	Min. 1mA
Off-state leakage current	Max. 2uA
Output signal delay	OFF to ON : Max. 0.4ms @ 2A / OFF to ON : Max. 0.2ms @ 0.3A ON to OFF : Max. 0.4ms @ 2A / ON to OFF : Max. 0.4ms @ 0.3A
Output current rating	Refer to Specification of NA -GT9xxx: Max. 2.0A per channel / Max. 10A per unit. -GL9xxx: Max. 2.0A per channel / Max. 8A per unit.
Protection ⁽¹⁾	None
Common type	8 points / 10 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: 35mA @ 24Vdc
Single Wiring	I/O Cable Max. 0.75mm ² (AWG 18)
Weight	63g
Module size	12mm x 109mm x 70mm
Environment condition	Refer to '1. Environment Specification'

(1) Check the 2.2.1 Wiring Guide.

2.2. GT-2438 Wiring Diagram

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

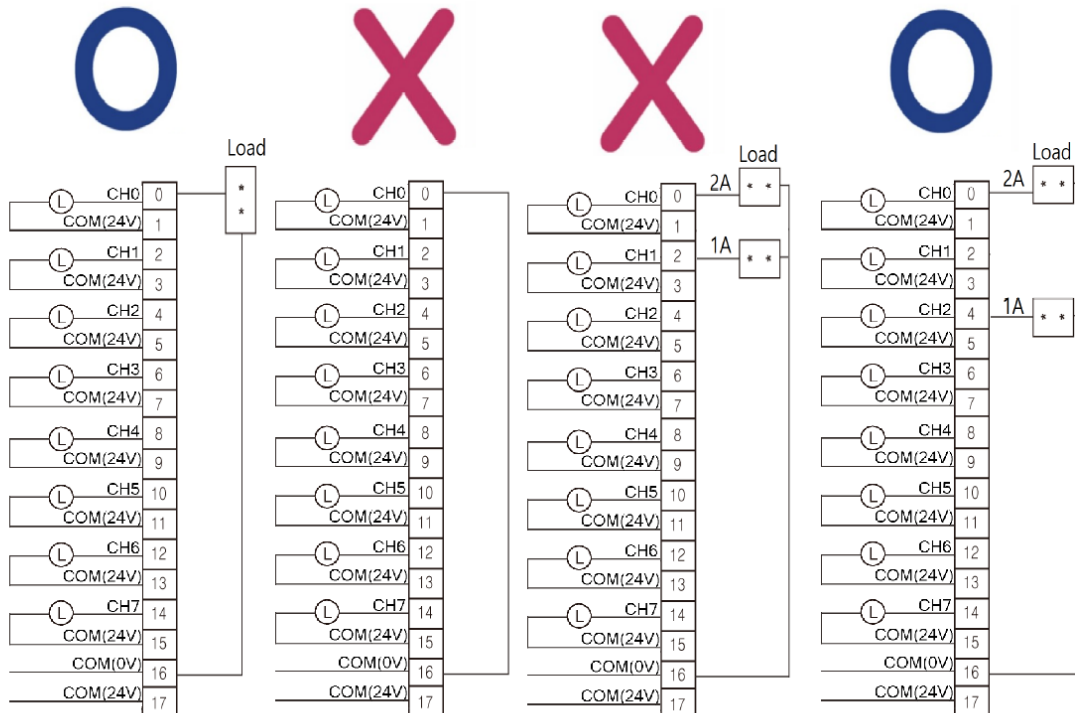
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2.2.1. Wiring Guide

WARNING !

Observe the following instructions for wiring

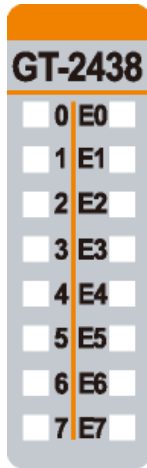
- Observe the maximum output current of the I/O Module. Parts may be damaged.
- Do not connect the input and GND pins without any load. Parts may be damaged.
- If you are using current above 1.0A, Do not use next one channel.



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2.3. GT-2438 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
E0	Channel 0 Diagnostic	Red
E1	Channel 1 Diagnostic	Red
E2	Channel 2 Diagnostic	Red
E3	Channel 3 Diagnostic	Red
E4	Channel 4 Diagnostic	Red
E5	Channel 5 Diagnostic	Red
E6	Channel 6 Diagnostic	Red
E7	Channel 7 Diagnostic	Red

2.3.2. Channel Status LED

- LED No. 0~7

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

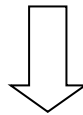
- LED No. E0~E7

Status	LED	To indicate
Bus Fault	Red(ALL)	G-Bus Fault
Channel Fault	Red	Field Power Off

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

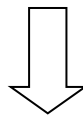


- **Output Module Data**

D7	D6	D5	D4	D3	D2	D1	D0
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- **Input Module Data**

D7	D6	D5	D4	D3	D2	D1	D0
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- **Input Image Value**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	D7	D6	D5	D4	D3	D2	D1	D0

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2.5. Parameter Data

- Valid Parameter length: 2 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 value (ch0~ch7) 0:Off, 1:On							