

FnIO G – Series :

GT-1428

***GT-1428 (Total 16 Points, Combination DI/DO,
8PTs Sink Input + 8 PTs Source Output with Diagnostic, 24Vdc)***

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Specification

History

Rev	Pages	Remarks	Date	Editor
1.00			2019/05/27	Seokhyun, Jun
1.01	4,5	Shock, Vibration specification changed General specification added(UL)	2020/04/20	Joonho, Park
1.02		Diagnostics specification alteration	2020/05/21	Seokhyun, Jun
1.03	6	Edit module diagram image	2021/07/12	Soyeong, Park
1.04	6	Change Diagram, Channel to Point	2023/04/03	Soyeong, Park
1.05	4,6,7	Edit Certification / Change Diagram, Status LED	2023/08/08	Suna, Hwang

Specification

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, 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

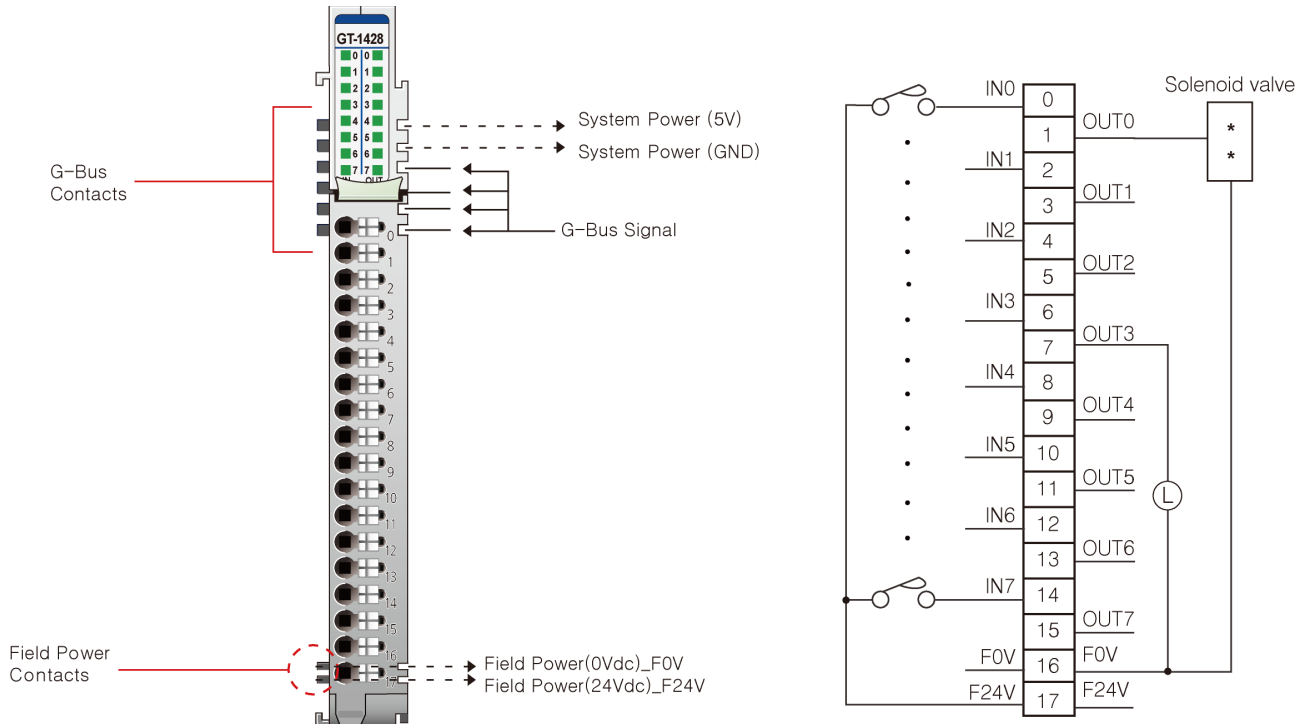
Specification

2. GT-1428 (Combination DI/DO, Sink Input/Source Output with Diagnostic, 24Vdc)

2.1. GT-1428 Specification

Items	Specification
Input Specification	
Input per module	8 points sink type
Indicators	8 green input status
On-state voltage	24V dc nominal 15 ~ 30Vdc @ 60°C
On-state current	2.25mA @ 24Vdc 3mA @ 30Vdc
Off-state voltage	8Vdc @ 25°C
Input signal delay	OFF to ON : 0.3ms Max ON to OFF : 0.3ms Max
Input filter	Adjustable, up to 10ms
Nominal input impedance	10.2K ohm typical
Output Specification	
Output per module	8 points source type
Indicators	8 Green output status
Output voltage range	24Vdc nominal 15Vdc ~ 30Vdc @ 60°C
On-state voltage drop	0.3Vdc @ 25°C 0.6Vdc @ 60°C
On-state min. current	Min. 1mA
Off-state leakage current	Max. 10uA
Output signal delay	OFF to ON : 0.1ms maximum ON to OFF : 0.35ms maximum
Output current rating	Max. 0.5A per channel / Max. 4A per unit
Protection	Over current limit : 2.2A@ 25°C per each channels Thermal shutdown : 175°C Short circuit protection
General specification	
Power dissipation	Max. 55mA @ 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 ~ 30Vdc Power dissipation : 40mA @ 24Vdc
Single 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-1428 Wiring Diagram

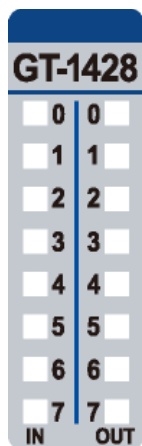


Pin No.	Signal Description
0	Input Channel 0
1	Output Channel 0
2	Input Channel 1
3	Output Channel 1
4	Input Channel 2
5	Output Channel 2
6	Input Channel 3
7	Output Channel 3
8	Input Channel 4
9	Output Channel 4
10	Input Channel 5
11	Output Channel 5
12	Input Channel 6
13	Output Channel 6
14	Input Channel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

Specification

2.3. GT-1428 LED Indicator

2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0(Left side)	INPUT Channel 0	Green
1	INPUT Channel 1	Green
2	INPUT Channel 2	Green
3	INPUT Channel 3	Green
4	INPUT Channel 4	Green
5	INPUT Channel 5	Green
6	INPUT Channel 6	Green
7	INPUT Channel 7	Green
0(Right side)	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

2.3.2. Channel Status LED

● LED No. 0~7 (Left side)

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

● LED No. 0~7 (Right side)

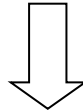
Status	LED	To indicate
No Signal	Off	No Output Signal
On Signal	Green	Output Signal detected
Channel Fault	Flash	Short to GND
		Overcurrent
		Overtemperature

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
	Input value							
Byte1	D15	D14	D13	D12	D11	D10	D9	D8
	Diagnostic error status for Output signal							

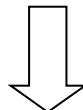
* D8~15 : Diagnostic error status for Output Channel 0~7

- 0 : Normal Operation

- 1 : Short to GND / Overcurrent / Overtemperature

● 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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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 value (ch0~ch7) 0:Off, 1:On							
Byte2	Input Filter value : 0 ~ 10 (unit : ms)							
Byte3	Reserved							