

# **FnIO G – Series :**

## ***GT-4C38***

***GT-4C38(4 Channels Voltage Output 0~10Vdc,  
4 Channels Current Output 0~20mA, 16bit)***

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History

Rev	Pages	Remarks	Date	Editor
1.00			2025/04/16	Suna, Hwang

# Specification

## 1. Environment Specification

Environmental Specification	
Operation Temperature	-40°C ~60°C
UL Temperature	-20°C ~60°C
Non-Operating 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, UL, UKCA

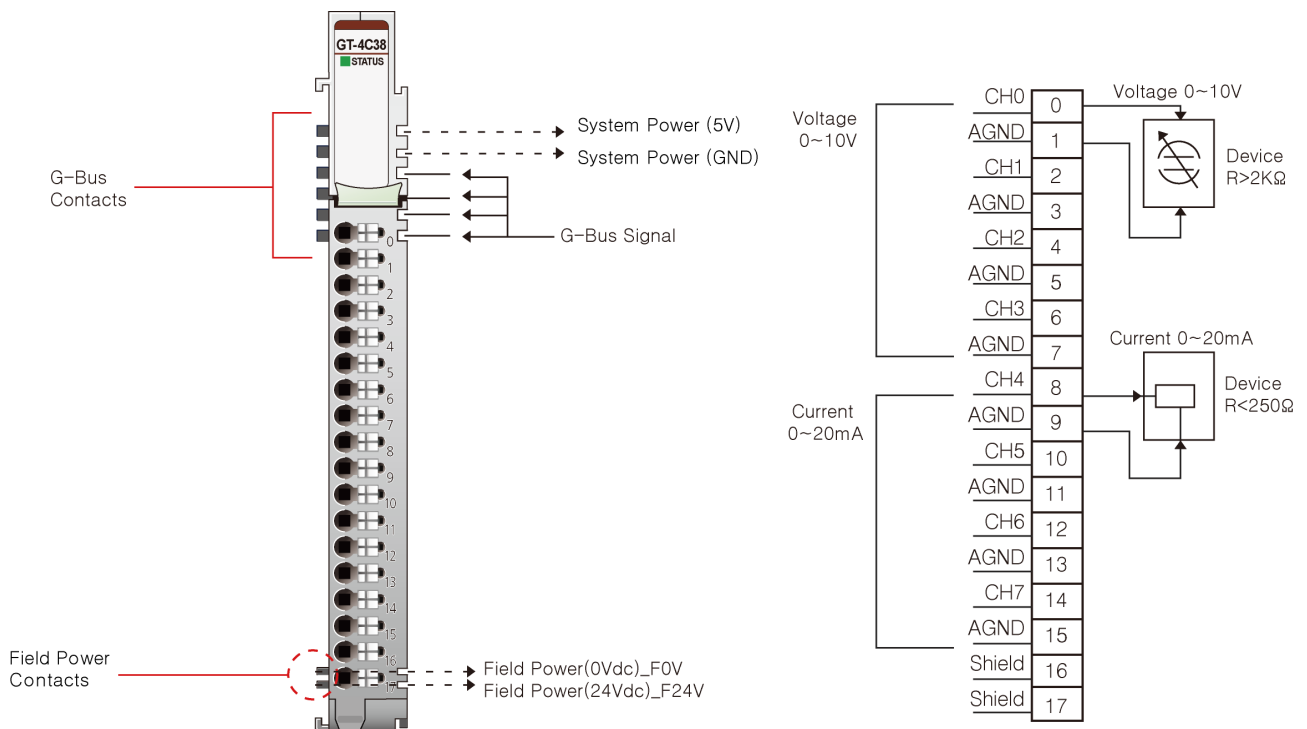
# Specification

## 2. GT-4C38 (4 Channels Voltage Output 0~10Vdc, 4 Channels Current Output 0~20mA, 16bit)

### 2.1. GT-4C38 Specification

Items	Specification	
Output Specification		
Outputs Per Module	8 Channels single ended, non-isolated between channel	
Output Unit	Voltage (4 Channels)	Current (4 Channels)
Output Resolution in range	16 bit (Include Sign) 15bits : 0.31mV/bit(0~10Vdc)	16 bit (Include Sign) 15bits : 0.61uA/bit(0~20mA)
Output Range	0~10Vdc	0~20mA
Load resistance	Min. 2kΩ	Max. 250Ω
Data Format	16bits Integer	
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C	
Signal Common Specification		
Diagnostic	Diagnostic Field Power Off : LED Blinking	
Conversion Time	1msec / All channel	
Calibration	Not Required	
Common Type	8 Common, Field Power 0V is Common(AGND)	
General Specification		
Power Dissipation	Max. 30mA @ 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 Supply Voltage : 18~30Vdc Power Dissipation : Max. 100mA@24Vdc	
Wiring	I/O Cable Max. 0.823mm²(AWG 18)	
Weight	64g	
Module Size	12mm x 109mm x 70mm	
Environment Condition	Refer to ‘Environment Specification’	

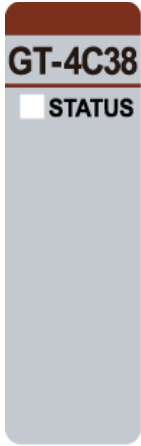
## 2.2. GT-4C38 Wiring Diagram



Pin No.	Signal Description
0	Analog Output Voltage Channel 0
1	AGND
2	Analog Output Voltage Channel 1
3	AGND
4	Analog Output Voltage Channel 2
5	AGND
6	Analog Output Voltage Channel 3
7	AGND
8	Analog Output Current Channel 4
9	AGND
10	Analog Output Current Channel 5
11	AGND
12	Analog Output Current Channel 6
13	AGND
14	Analog Output Current Channel 7
15	AGND
16	Shield
17	Shield

2.3. GT-4C38 LED Indicator

2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	Status LED	Green

2.3.2. Channel Status LED

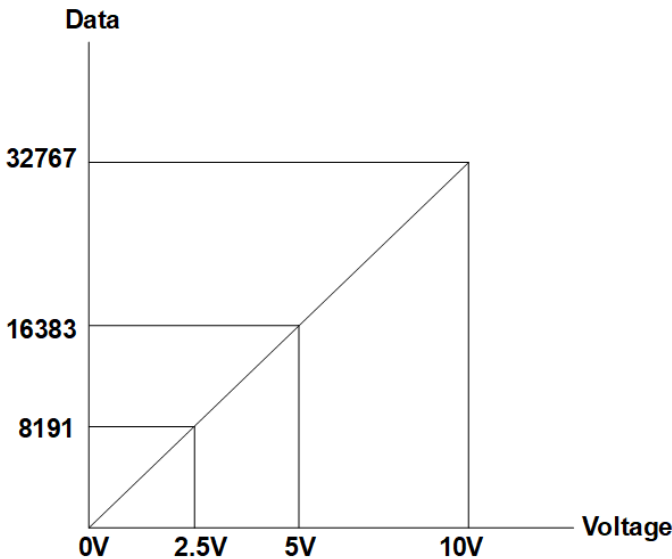
Status	LED	To indicate
G-Bus Status	Off	Disconnection
	Green	Connection
Field Power Error	Status Channel Repeat the Green and Off	Field power is unconnected.

2.4. Data Value / Voltage & Current

2.4.1. Voltage Operating Range

Voltage Range : 0~10V

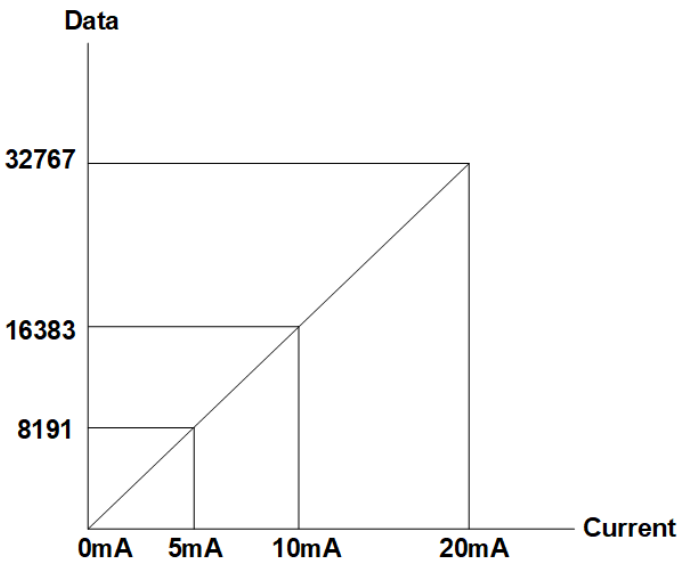
Voltage	0.0V	2.5V	5.0V	10.0V
Data(Hex)	H0000	H1FFF	H3FFF	H7FFF



2.4.2. Current Operating Range

Current Range : 0~20mA

Current	0.0mA	5.0mA	10.0mA	20.0mA
Data(Hex)	H0000	H1FFF	H3FFF	H7FFF



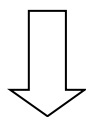


# Specification

## 2.5. Mapping Data into the Image Table

### ● Input Module Data

Analog Output Ch0
Analog Output Ch1
Analog Output Ch2
Analog Output Ch3
Analog Output Ch4
Analog Output Ch5
Analog Output Ch6
Analog Output Ch7



### ● Input Image Value

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Analog Output Ch0 Low byte							
Byte1	Analog Output Ch0 High byte							
Byte2	Analog Output Ch1 Low byte							
Byte3	Analog Output Ch1 High byte							
Byte4	Analog Output Ch2 Low byte							
Byte5	Analog Output Ch2 High byte							
Byte6	Analog Output Ch3 Low byte							
Byte7	Analog Output Ch3 High byte							
Byte8	Analog Output Ch4 Low byte							
Byte9	Analog Output Ch4 High byte							
Byte10	Analog Output Ch5 Low byte							
Byte11	Analog Output Ch5 High byte							
Byte12	Analog Output Ch6 Low byte							
Byte13	Analog Output Ch6 High byte							
Byte14	Analog Output Ch7 Low byte							
Byte15	Analog Output Ch7 High byte							

2.6. Parameter Data

- Valid Parameter length: 4 Bytes
- Parameter Data

Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte0	Fault Action for Channel 3		Fault Action for Channel 2		Fault Action for Channel 1		Fault Action for Channel 0	
Byte1	Fault Action for Channel 7		Fault Action for Channel 6		Fault Action for Channel 5		Fault Action for Channel 4	
	00 : Fault Value / 01 : Hold Last State / 10 : Low Limit / 11 : High Limit							
Byte2	Fault Value Low Byte							
Byte3	Fault Value High Byte							