

---

# **FnIO G-Series**

## ***GT-4214***

***GT-4214 (4 Channels, Current Output, 4~20mA, 12bit)***

Table of Contents

[Table of Contents.....2](#)

[History.....3](#)

[1.ENVIRONMENT SPECIFICATION.....4](#)

[2.GT-4214 \(4 Channels Current Output, 4~20mA, 12bit\).....5](#)

[2.1.GT-4214 Specification.....5](#)

[2.2.GT-4214 Wiring Diagram.....6](#)

[2.3.GT-4214 LED Indicator.....7](#)

[2.3.1.LED Indicator.....7](#)

[2.3.2.Channel Status LED.....7](#)

[2.4.Data Value / Current.....7](#)

[2.5.Mapping data from the image table.....8](#)

[2.6.Parameter Data.....8](#)

History

Rev	Pages	Remarks	Date	Editor
1.00			2019/03/07	Soyeong, Park
1.01		Field power specification	2019/06/21	Seokhyun, Jun
1.02		Release	2020/04/21	Seokhyun, Jun
1.03		Changed Operating Temperature	2022/12/07	Soyeong, Park
1.04		Edit Diagram Image	2023/01/16	Soyeong, Park
1.05	4,6	Change Diagram/Edit Certification, Signal Description	2023/09/05	Soyeong, Park
1.06	5	Edit System, Field Power Dissipation	2025/05/30	Suna, Hwang

# Specification

## 1. ENVIRONMENT SPECIFICATION

Environmental specification	
Operating 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

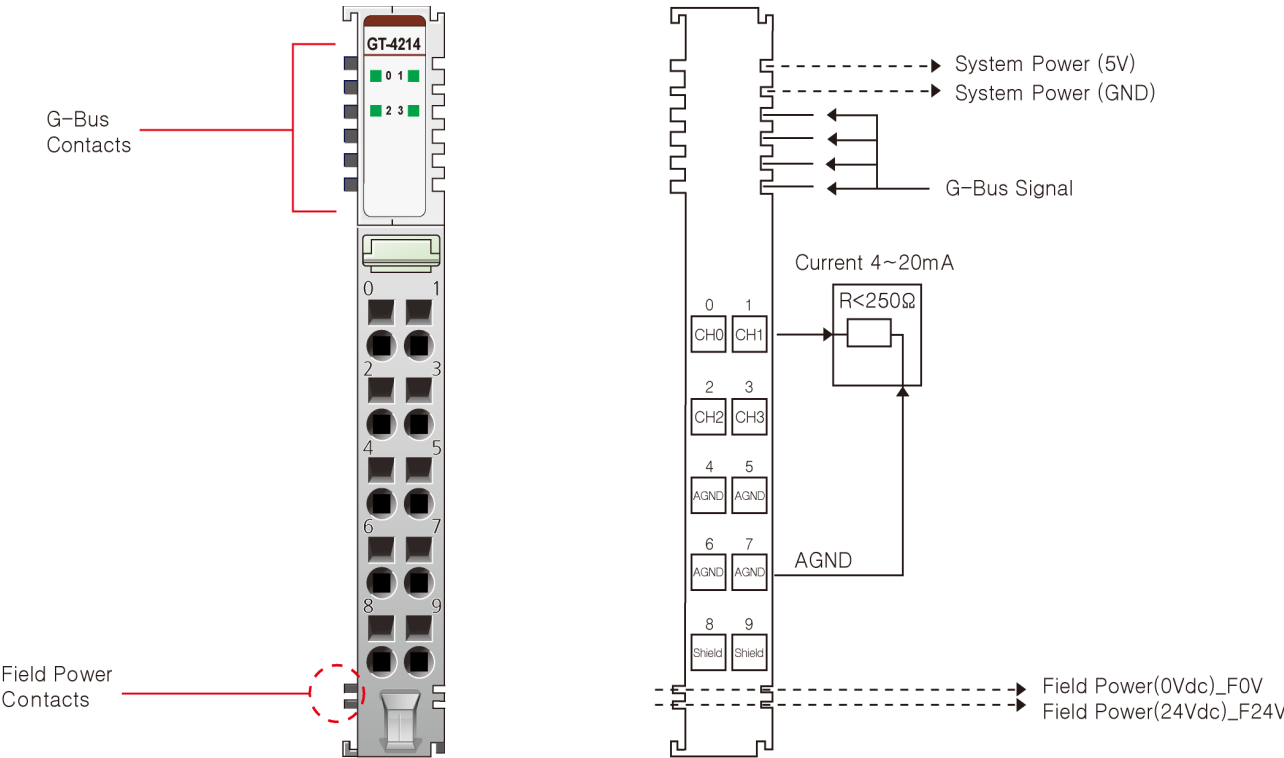
# Specification

## 2. GT-4214 (4 Channels Current Output, 4~20mA, 12bit)

### 2.1. GT-4214 Specification

Items	Specification
<b>Output Specification</b>	
Outputs per module	4 Channels single ended, non-isolated between channel
Indicators(Logic side )	4 Green Output Status
Resolution in Ranges	12 bits : 3.91uA/bit
Output Range	4~20mA
Data Format	16bits Integer (2's complement )
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 60°C
Load Resistance	Max. 250Ω
Diagnostic	Field Power Off : LED Blinking
Conversion Time	0.15msec / All Channel
Calibration	Not Required
Common Type	4 Channels / 4 Common
<b>General Specification</b>	
Power Dissipation	Max. 35mA @ 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 : 18 ~ 30Vdc Power Dissipation : Max. 85mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm <sup>2</sup> (AWG 14)
Weight	58g
Module Size	12mm x 99mm x 70mm
<b>Environment Condition</b>	<b>Refer to 'Environment Specification'</b>

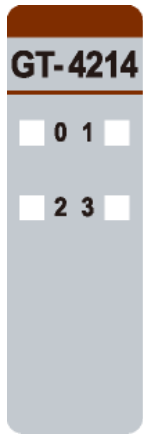
2.2. GT-4214 Wiring Diagram



Pin No.	Signal Description	Signal Description	Pin No.
0	Analog Output Channel 0	Analog Output Channel 1	1
2	Analog Output Channel 2	Analog Output Channel 3	3
4	Output Channel Common(AGND)	Output Channel Common(AGND)	5
6	Output Channel Common(AGND)	Output Channel Common(AGND)	7
8	Shield	Shield	9

2.3. GT-4214 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

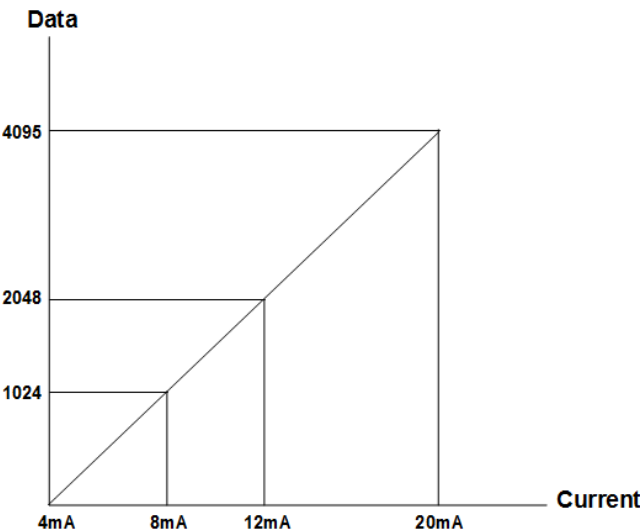
2.3.2. Channel Status LED

Status	LED	To indicate
Normal Operation	Off	No Output Value
	Green	Output Value
Field Power Error	All Channel Repeat Green and Off	Field Power is unconnected.

2.4. Data Value / Current

Current Range : 4~20mA

Current	4.0mA	8.0mA	12.0mA	20.0mA
Data(Hex)	H0000	H0400	H0800	H0FFF

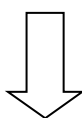


# Specification

## 2.5. Mapping data from the image table

- Output 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							



- Output Module Data

Analog Output Ch0							
Analog Output Ch1							
Analog Output Ch2							
Analog Output Ch3							

## 2.6. Parameter Data

- Valid Parameter length: 4 Bytes
- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Fault Action for channel 3		Fault Action for channel 2		Fault Action for channel 1		Fault Action for channel 0	
	00: Fault Value 01: Hold last state 10: Low Limit 11:High Limit							
Byte1	Reserved							
Byte2	Fault Value Low Byte							
Byte3	Reserved				Fault Value High Byte			