
FnIO G-Series

GT-4214

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

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History

REV.	PAGES	REMARKS	DATE	Editor
1.00	9	New Document	Mar 7, 2019	Soyeong, Park
1.01		Field power specification	June, 21, 2019	Seokhyun, Jun

1. Environment Specification

Environmental specification	
Operating Temperature	-40°C~70°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 Sine Vibration 5 ~ 25Hz : 1.6mm 25 ~ 300Hz : 4g Sweep Rate : 1 Oct/min, 20 cycles Random Vibration 10 ~ 40Hz : 0.0125g ² /Hz 40 ~ 100Hz : 0.0125 → 0.002g ² /Hz 100 ~ 500Hz : 0.002g ² /Hz 500 ~ 2000Hz : 0.002 → 1.3 x 10 ⁻⁴ g ² /Hz Test time : 1hrs for each test
EMC Resistance Burst/ESD	EN 61000-6-2 : 2005 EN 61000-6-4/A11 : 2011
Installation Pos. / Protect. Class	Variable/IP20
Product Certifications	CE, UL

Specification

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

2.1. GT-4214 Specification

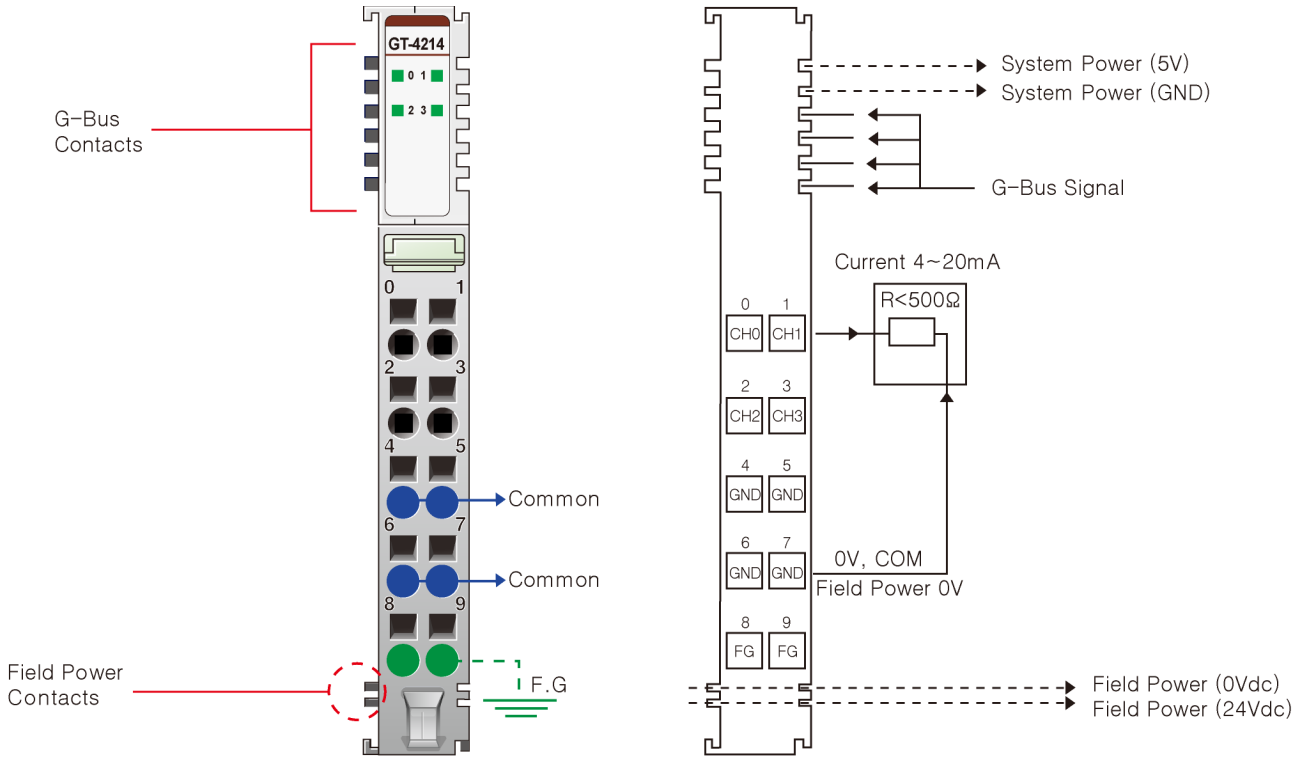
Items	Specification
Output Specification	
Outputs per module	4 Channels single ended
Indicators(Logic side)	4 Green Output Status LEDs
Resolution in Ranges	12 bits : 3.91uA/bit
Output Range	4~20mA
Data Format	16bits Integer (2's complement)
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C
Load Resistance	Max. 250Ω *
Diagnostic	Field Power Off : LED Blinking Field Power On : Output LED ON
Conversion Time	Max. 150usec / All Channel
Calibration	Not Required
Common Type	4 Channels / 4 Common
General Specification	
Power Dissipation	Max. 30mA @ 5Vdc
Isolation	I/O to Logic : Photocoupler Isolation Field power : Non-Isolation
Field Power	Supply Voltage : 24Vdc nominal Voltage Range * : 18 ~ 32Vdc Power Dissipation : Max. 80mA @ 24Vdc
Wiring	I/O Cable Max. 2.0mm ² (AWG 14)
Weight	58g
Module Size	12mm x 99mm x 70mm
Environment Condition	Refer to 'Environment Specification'

* Operating temperature

-40 ~ 70°C temperature range specification can be guaranteed under the following conditions.

- Load Resistance : Min 100Ω, Max 250Ω
- Field Power Voltage Range : Max 26.4V
- Otherwise, temperature specification can be guaranteed with -40 ~ 60°C

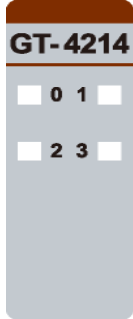
2.2. GT-4214 Wiring Diagram



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	F.G	F.G	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

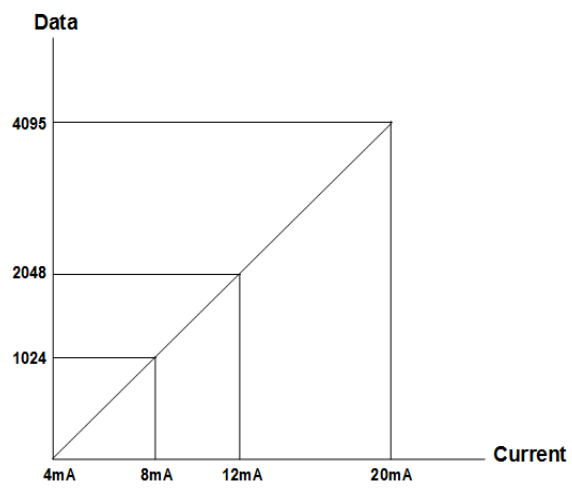
2.3.2. Channel Status LED

Status	LED	To indicate
Normal Operation	Green	Normal Operation
Field Power Error	All Channel Repeat Green and Off	Field Power is unconnected.

2.4. Data Value / Current

Current Range : 4~20mA

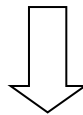
Current	4.0mA	8.0mA	12.0mA	20.0mA
Data(Hex)	H0000	H0400	H0800	H0FFF



2.5. Mapping Data from the Image Table

- **Output Image Value**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte 0	Analog Output Ch0 Low byte							
Byte 1	Analog Output Ch0 High byte							
Byte 2	Analog Output Ch1 Low byte							
Byte 3	Analog Output Ch1 High byte							
Byte 4	Analog Output Ch2 Low byte							
Byte 5	Analog Output Ch2 High byte							
Byte 6	Analog Output Ch3 Low byte							
Byte 7	Analog Output Ch3 High byte							



- **Output Module Data -8byte Output 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	Not used							
Byte2	Fault Value Low Byte							
Byte3	Not used				Fault Value High Byte			