

# FnIO G-Series

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

## ***GT-4114***

***GT-4114 (4 Channels, Current Output, 0~20mA, 12bits)***

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**History**

REV.	PAGES	REMARKS	DATE	Editor
1.00	9	New Document	Apr,7, 2016	Jun, Seokhyun
1.01	9	Environment Specification	June 03, 2016	Jun, Seokhyun
1.02	5	Changed Load Resistance Value	June 10, 2016	Park, Joonho
1.03	6	Changed Wiring Diagram	Apr, 23, 2019	Soyeong, Park

## 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 <sup>2</sup> /Hz 40 ~ 100Hz : 0.0125 → 0.002g <sup>2</sup> /Hz 100 ~ 500Hz : 0.002g <sup>2</sup> /Hz 500 ~ 2000Hz : 0.002 → 1.3 x 10 <sup>-4</sup> g <sup>2</sup> /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-4114 (4 Channels, Current Output, 0~20mA, 12bits)

### 2.1. GT-4114 Specification

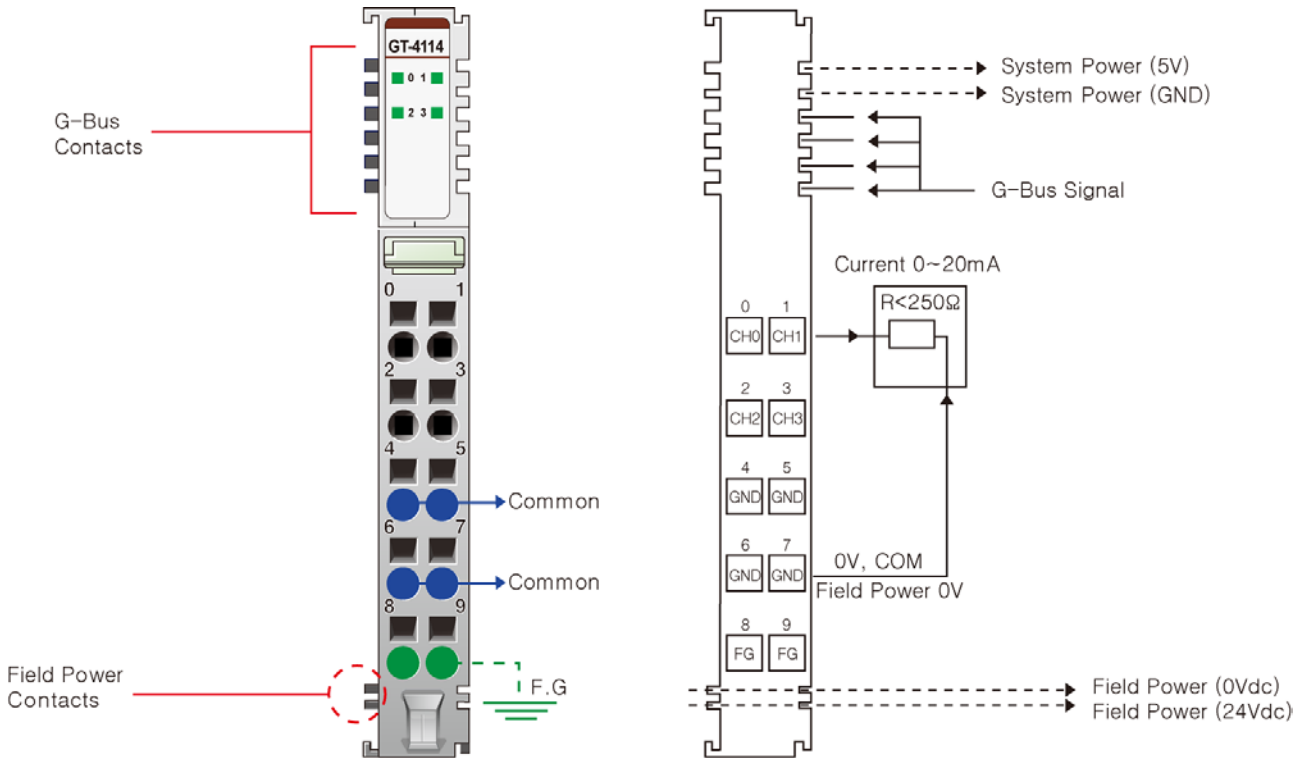
Items	Specification
<b>Output Specification</b>	
Outputs per module	4 Channels single ended
Indicators(Logic side )	4 Green Output Status LEDs
Resolution in Ranges	12 bits : 4.88uA/bit
Output Range	0~20mA
Data Format	16bits Integer (2's complement )
Module Error	±0.1% Full Scale @ 25°C ±0.3% Full Scale @ -40°C, 70°C
Load Resistance	Max. 250Ω *
Dignostic	Field Power Off : LED Blinking Field Power On : No Output LED Off Field Power On : Output LED ON
Conversion Time	Max. 150usec / All Channel
Calibration	Not Required
Common Type	4 Channels / 4 Common
<b>General Specification</b>	
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 <sup>2</sup> (AWG 14)
Weight	58g
Module Size	12mm x 99mm x 70mm
<b>Environment Condition</b>	<b>Refer to 'Environment Specification'</b>

\* Operating temperature

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

- Load Resistance : Min 100Ω, Max 250Ω
- Otherwise, temperature specification can be guaranteed with -40 ~ 60°C.

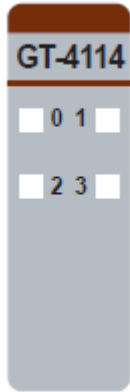
## 2.2. GT-4114 Wiring Diagram



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	Field Ground	Field Ground	9

## 2.3. GT-4114 LED Indicator

### 2.3.1. LED Indicator



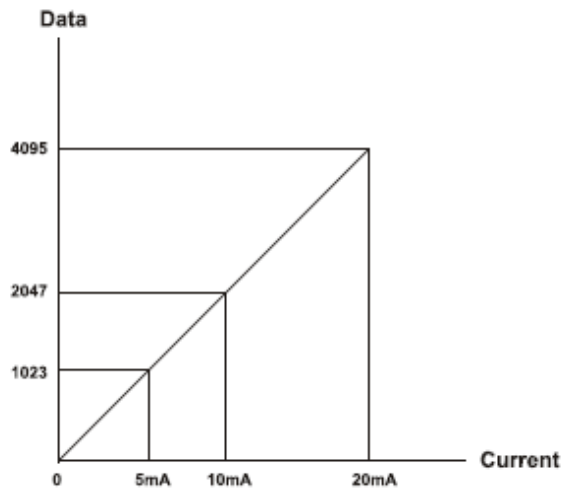
### 2.3.2. Channel Status LED

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

## 2.4. Data Value / Current

Current Range : 0~20mA

Current	0.0mA	5.0mA	10.0mA	20.0mA
Data(Hex)	H0000	H03FF	H07FF	H0FFF

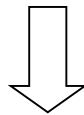




## 2.5. Mapping Data from the Image Table

- **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
<b>Byte0</b>	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							
<b>Byte1</b>	Not used							
<b>Byte2</b>	Fault Value Low Byte							
<b>Byte3</b>	Not used				Fault Value High Byte			