

FnIO G – Series :

GT-317F

GT-317F (16 Channels 18pt RTB, Current Input)

0~20mA / 4~20mA, 12bit

Specification

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Specification

History

REV.	PAGES	REMARKS	DATE	Editor
1.00	11	New Document	July 28, 2017	Seokhyun, Jun

Specification

1. ENVIRONMENT SPECIFICATION

Environment 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 : 1 hrs for each test
EMC Resistance	EN 61000-6-2 : 2005 EN 61000-6-4 : 2007+A1:2011
Installation Pos. / Protect. Class	Variable/IP20
Product Certifications	CE, UL

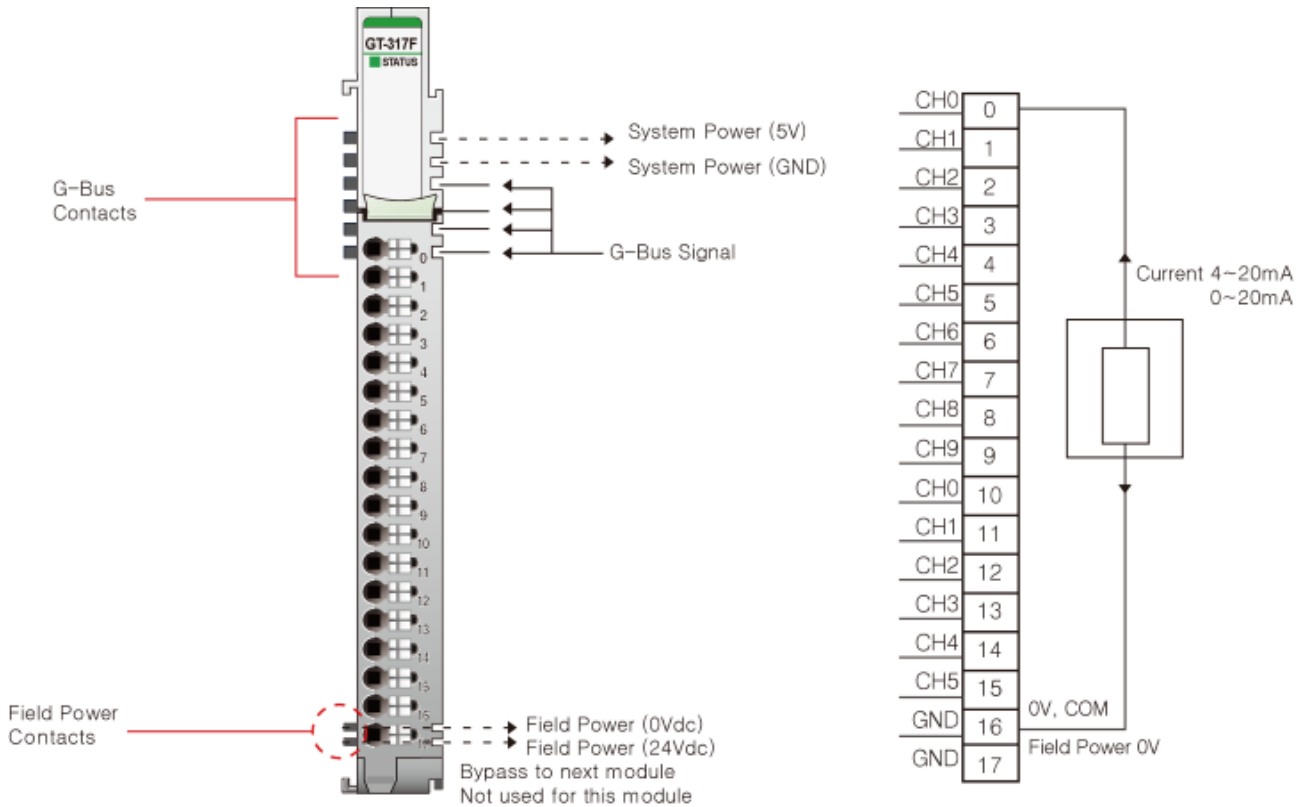
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2. GT-317F(16 CHANNELS CURRENT INPUT, 0~20mA/4~20mA, 12BIT)

2.1. GT-317F Specification

Items	Specification
Input Specification	
Inputs per module	16 Channels single ended, non-isolated between channels
Indicators	1 Green G-Bus status LED
Resolution in Ranges	12 bits : 4.88uA/Bit(0~20mA), 3.91uA/Bit(4~20mA)
Input Range	0~20mA, 4~20mA
Data Format	16bits Integer (2' compliment)
Module Error	±0.1% Full Scale @ 25°C ambient ±0.3% Full Scale @ -40°C~70°C
Input Impedance	121.5Ω
Conversion Time	Max. 3.2msec (All channel)(TBD)
Field calibration	Not Required
Common Type	2 Common, Field Power 0V is Common(AGND)
General Specification	
Power dissipation	Max. 30mA @ 5.0Vdc(TBD)
Isolation	I/O to Logic : Photocoupler Isolation Field power : Not Connected
Field Power	Not used Field power bypass to next expansion module
Wiring	I/O Cable Max. 2.0mm ² (AWG 14)
Weight	63g
Module Size	12mm x 109mm x 70mm
Environment Condition	Refer to 'Environment Specification'

2.2. GT-317F Wiring Diagram



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

2.3. GT-317F LED Indicator

2.3.1. LED Indicator



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

2.3.2. Channel Status LED

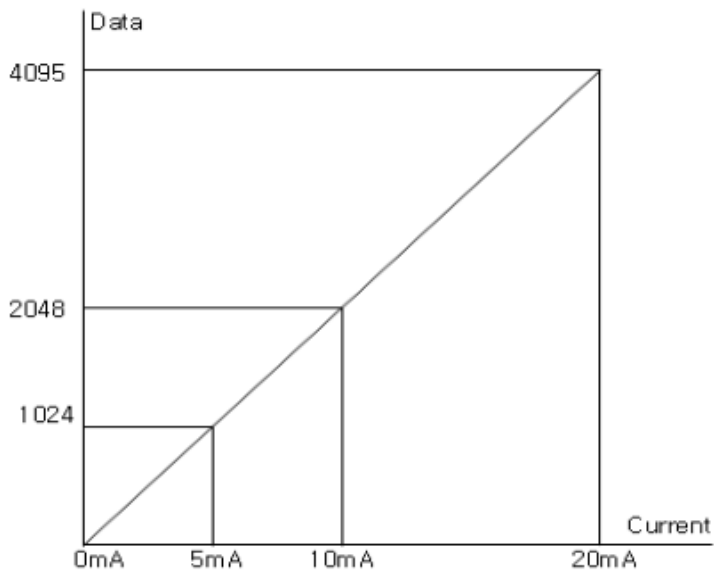
Status	LED	To indicate
G-Bus Status	Off Green	Disconnection Connection

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2.3.3. Data value / Current

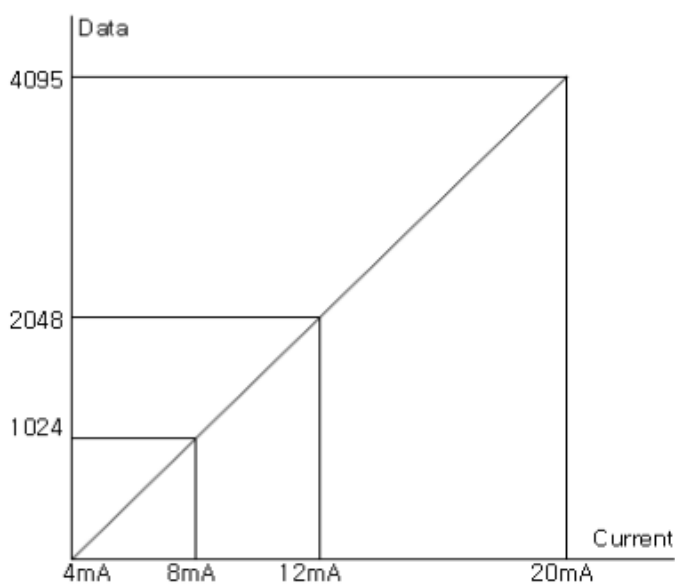
Current Range : 0~20mA

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



Current Range : 4~20mA

Current	4.0mA	8.0mA	12.0mA	20.0mA
Data(Hex)	H0000	H03FF	H07FF	H0FFF



Specification

2.4. Mapping data into the image table

- **Input Module Data**

	Analog Input Ch0
	Analog Input Ch1
	Analog Input Ch2
	Analog Input Ch3
	Analog Input Ch4
	Analog Input Ch5
	Analog Input Ch6
	Analog Input Ch7
	Analog Input Ch8
	Analog Input Ch9
	Analog Input Ch10
	Analog Input Ch11
	Analog Input Ch12
	Analog Input Ch13
	Analog Input Ch14
	Analog Input Ch15



- **Input Image Value**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte 0				Analog Input Ch0 Low byte				
Byte 1				Analog Input Ch0 High byte				
Byte 2				Analog Input Ch1 Low byte				
Byte 3				Analog Input Ch1 High byte				
Byte 4				Analog Input Ch2 Low byte				
Byte 5				Analog Input Ch2 High byte				
Byte 6				Analog Input Ch3 Low byte				
Byte 7				Analog Input Ch3 High byte				
Byte 8				Analog Input Ch4 Low byte				
Byte 9				Analog Input Ch4 High byte				
Byte 10				Analog Input Ch5 Low byte				
Byte 11				Analog Input Ch5 High byte				
Byte 12				Analog Input Ch6 Low byte				
Byte 13				Analog Input Ch6 High byte				
Byte 14				Analog Input Ch7 Low byte				
Byte 15				Analog Input Ch7 High byte				
Byte 16				Analog Input Ch8 Low byte				
Byte 17				Analog Input Ch8 High byte				
Byte 18				Analog Input Ch9 Low byte				
Byte 19				Analog Input Ch9 High byte				
Byte 20				Analog Input Ch10 Low byte				
Byte 21				Analog Input Ch10 High byte				
Byte 22				Analog Input Ch11 Low byte				
Byte 23				Analog Input Ch11 High byte				
Byte 24				Analog Input Ch12 Low byte				
Byte 25				Analog Input Ch12 High byte				
Byte 26				Analog Input Ch13 Low byte				
Byte 27				Analog Input Ch13 High byte				
Byte 28				Analog Input Ch14 Low byte				
Byte 29				Analog Input Ch14 High byte				
Byte 30				Analog Input Ch15 Low byte				
Byte 31				Analog Input Ch15 High byte				

2.5. Parameter Data

- Valid Parameter length: 18 Bytes
- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte 0	Current Range for Channel 0 (H00: 0~20mA, H01: 4~20mA)							
Byte 1	Current Range for Channel 1 (H00: 0~20mA, H01: 4~20mA)							
Byte 2	Current Range for Channel 2 (H00: 0~20mA, H01: 4~20mA)							
Byte 3	Current Range for Channel 3 (H00: 0~20mA, H01: 4~20mA)							
Byte 4	Current Range for Channel 4 (H00: 0~20mA, H01: 4~20mA)							
Byte 5	Current Range for Channel 5 (H00: 0~20mA, H01: 4~20mA)							
Byte 6	Current Range for Channel 6 (H00: 0~20mA, H01: 4~20mA)							
Byte 7	Current Range for Channel 7 (H00: 0~20mA, H01: 4~20mA)							
Byte 8	Current Range for Channel 8 (H00: 0~20mA, H01: 4~20mA)							
Byte 9	Current Range for Channel 9 (H00: 0~20mA, H01: 4~20mA)							
Byte 10	Current Range for Channel 10 (H00: 0~20mA, H01: 4~20mA)							
Byte 11	Current Range for Channel 11 (H00: 0~20mA, H01: 4~20mA)							
Byte 12	Current Range for Channel 12 (H00: 0~20mA, H01: 4~20mA)							
Byte 13	Current Range for Channel 13 (H00: 0~20mA, H01: 4~20mA)							
Byte 14	Current Range for Channel 14 (H00: 0~20mA, H01: 4~20mA)							
Byte 15	Current Range for Channel 15 (H00: 0~20mA, H01: 4~20mA)							
Byte 16	Filter Time (H00: Default Filter(=20) / H01: Fastest ~ / H62: Slowest)							
Byte 17	Not used(=00)							