

# **FnIO G – Series :**

## ***GT-347F***

***GT-347F (16 Channels 18PT RTB, Voltage Input)***

***0~10Vdc / 0~5Vdc / 1~5Vdc, 12bit***

# Specification

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**History**

<b>REV.</b>	<b>PAGES</b>	<b>REMARKS</b>	<b>DATE</b>	<b>Editor</b>
1.00	12	New Document	Aug 4, 2017	Seokhyun, Jun
1.01		Specification Revision	Apr 18, 2018	Soyeong, Park
1.02		Edit conversion time	Apr 17, 2020	Seokhyun, Jun
1.03	5-6	Wiring Diagram & Common Type	Oct 14, 2020	Suna, Hwang

# Specification

## 1. ENVIRONMENT SPECIFICATION

<b>Environmental specification</b>	
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
<b>General specification</b>	
Shock Operating	IEC 60068-2-27 : 2008 / 15g, 11ms
Vibration Resistance	Based on IEC 60068-2-6 DNVGL-CG-0039 : Vibration Class B, 4g
EMC Resistance	EN 61000-6-2 : 2005 EN 61000-6-4 : 2007+A1:2011
Installation Pos. / Protect. Class	Variable/IP20
Product Certifications	CE, UL, FCC

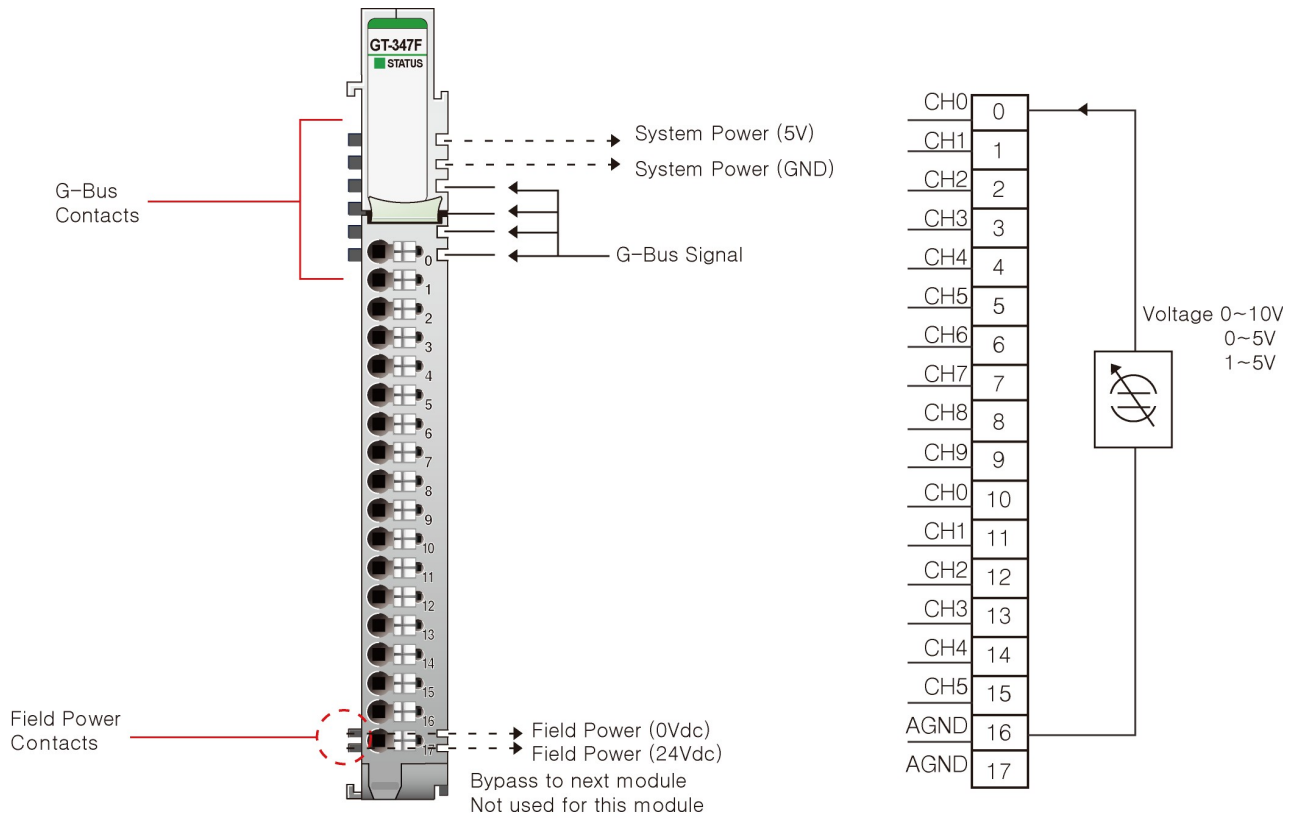
# Specification

## 2. GT-347F (16 CHANNELS VOLTAGE INPUT, 0~10Vdc/0~5Vdc/1~5Vdc, 12BIT)

### 2.1. GT-347F Specification

Items	Specification
<b>Input Specification</b>	
Inputs per module	16 Channels single ended, non-isolated between channel
Indicators(Logic side )	1 Green G-Bus status
Resolution in Ranges	12 bits : 2.44mV/Bit(0~10V) , 1.22mV/Bit(0~5V), 0.98mV/Bit(1~5V)
Input Current Range	0~10Vdc, 0~5Vdc, 1~5Vdc
Data Format	16bits Integer (2's complement)
Module Error	±0.1% Full Scale @ 25°C ambient ±0.3% Full Scale @ -40°C~60°C
Input Impedance	500kΩ
Conversion Time	1msec / All channel
Calibration	Not Required
<b>General specification</b>	
Power dissipation	Max. 210mA @ 5Vdc
Isolation	I/O to Logic : Photocoupler Isolation Field power : Not Connected
UL Field Power	Supply Voltage : 24Vdc nominal, Class 2
Field Power	Not used Field power bypass to next expansion module
Single Wiring	I/O Cable Max. 1.0mm <sup>2</sup> (AWG 18)
Weight	63g
Module Size	12mm x 109mm x 70mm
<b>Environment Condition</b>	<b>Refer to 'Environment Specification'</b>

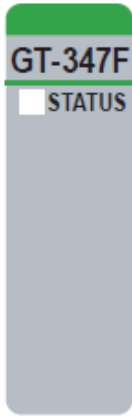
## 2.2. GT-347F Wiring Diagram



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-347F LED Indicator

### 2.3.1. LED Indicator



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

### 2.3.2. Channel Status LED

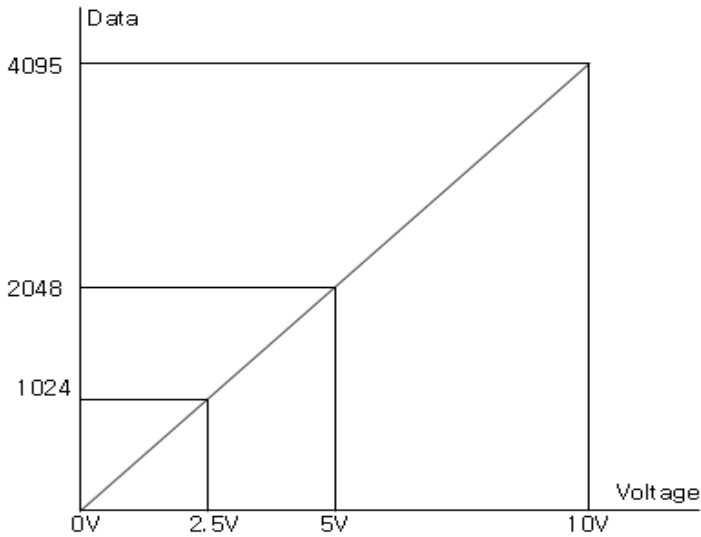
Status	LED	To indicate
G-Bus Status	Off Green	Disconnection Connection

# Specification

### 2.3.3. Data value / Voltage

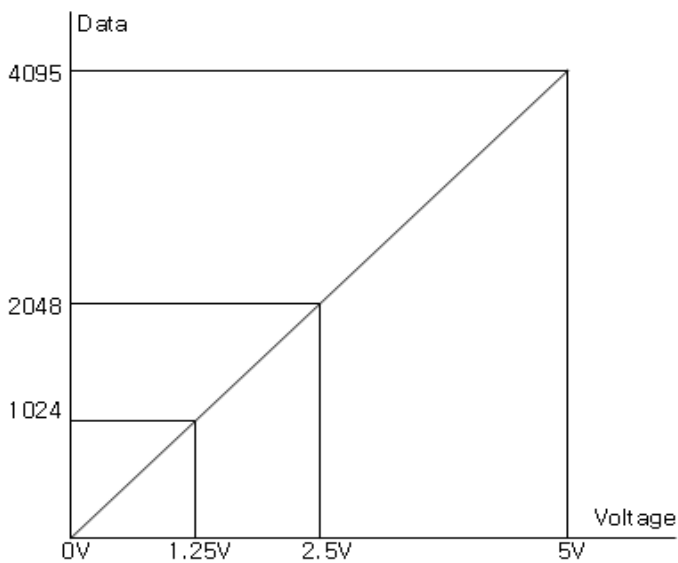
#### Voltage Range : 0~10Vdc

Voltage	0.0V	2.5V	5.0V	10.0V
Data(Hex)	H0000	H03FF	H07FF	H0FFF



#### Voltage Range : 0~5Vdc

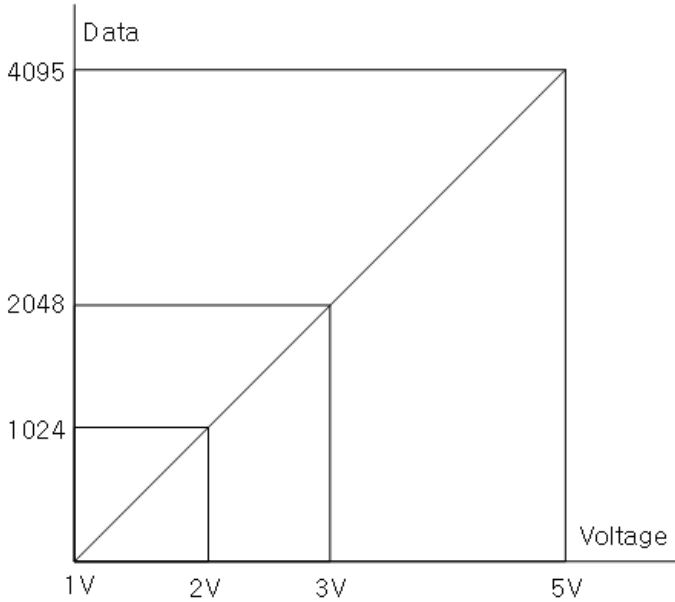
Voltage	0.0V	1.25V	2.5V	5.0V
Data(Hex)	H0000	H03FF	H07FF	H0FFF





**Voltage Range : 1~5Vdc**

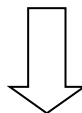
Voltage	1.0V	2.0V	3.0V	5.0V
Data(Hex)	H0000	H03FF	H07FF	H0FFF



## 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



# Specification

● **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	Voltage Range for Channel 0 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 1	Voltage Range for Channel 1 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 2	Voltage Range for Channel 2 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 3	Voltage Range for Channel 3 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 4	Voltage Range for Channel 4 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 5	Voltage Range for Channel 5 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 6	Voltage Range for Channel 6 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 7	Voltage Range for Channel 7 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 8	Voltage Range for Channel 8 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 9	Voltage Range for Channel 9 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 10	Voltage Range for Channel 10 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 11	Voltage Range for Channel 11 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 12	Voltage Range for Channel 12 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 13	Voltage Range for Channel 13 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 14	Voltage Range for Channel 14 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 15	Voltage Range for Channel 15 (H00: 0~10Vdc, H01: 0~5Vdc, H02 : 1~5Vdc)							
Byte 16	Filter Time ( H00: Default Filter(20) / H01: Fastest ~ / H3E: Slowest )							
Byte 17	Not used(=00)							