

# **FnIO G – Series :**

***GT-12DF***

***GT-12DF(16 Channels, Universal Input Terminal, 24Vdc)***

# Specification Preliminary

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## History

REV.	PAGES	REMARKS	DATE	Editor
Preliminary	8	Preliminary	10.16.2017	HS KIM

# Specification Preliminary

## 1. ENVIRONMENT SPECIFICATION

<b>Environmentalspecification</b>	
Operation Temperature	-40°C to 70°C
Non-Operating Temperature	-40°C to 85°C
Relative Humidity	5% to 95% Non-condensing
Operating Altitude	2,000m
Mounting	DIN Rail
<b>General specification</b>	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6 Sine Vibration <ul style="list-style-type: none"> <li>- 5 ~ 25Hz : ±1.6mm</li> <li>- 25 ~ 300Hz : 4g</li> <li>- Sweep Rate : 1 Oct/min, 20 cycles</li> </ul> Random Vibration <ul style="list-style-type: none"> <li>- 10 ~ 40 Hz : 0.0125 g<sup>2</sup>/Hz</li> <li>- 40 ~ 100 Hz : 0.0125 → 0.002 g<sup>2</sup>/Hz</li> <li>- 100 ~ 500 Hz : 0.002 g<sup>2</sup>/Hz</li> <li>- 500 ~ 2000 Hz : 0.002 → 1.3 x 10<sup>-4</sup>g<sup>2</sup>/Hz</li> <li>- Test time : 1hrs for each test</li> </ul>
Industrial Emissions	EN 61000-6-4 : 2007 +A1:2011
Industrial Immunity	EN 61000-6-2 : 2005
Installation Position	Vertical and horizontal installation is available.
Product Certifications	CE, UL
<b>Environmentalspecification</b>	<b>Environmentalspecification</b>

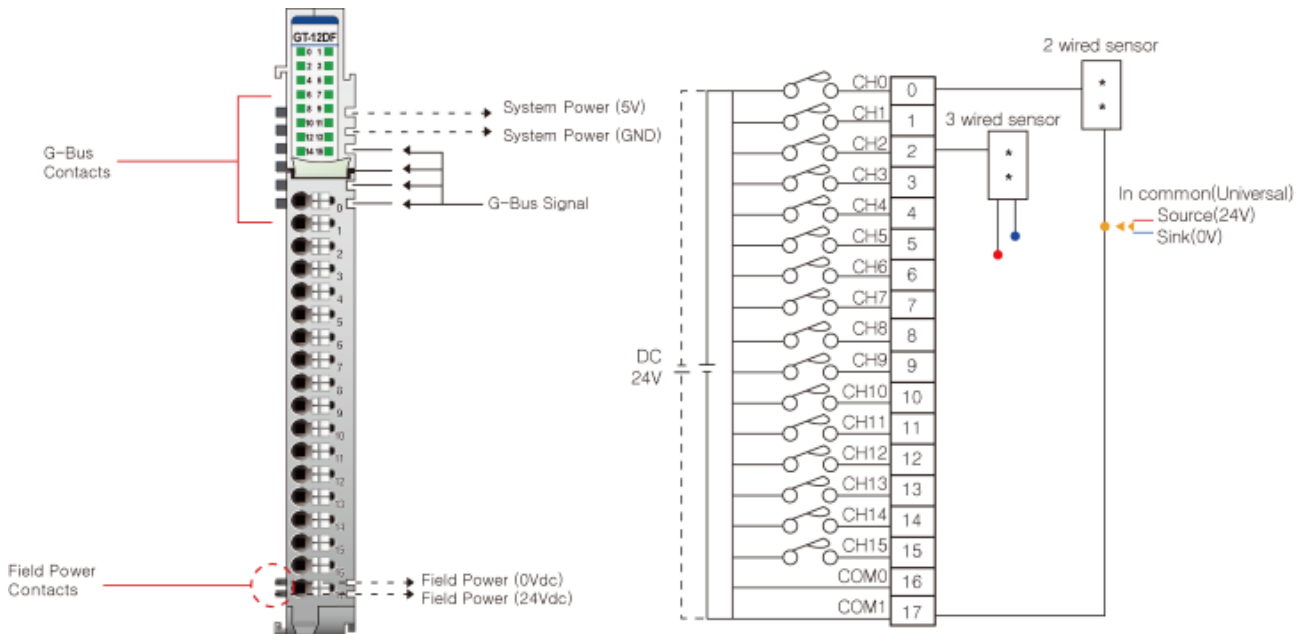
# Specification Preliminary

## 2. GT-12DF (16 Channels Universal Input Terminal)

### 2.1. GT-12DF Specification

Items	Specification
<b>Input Specification</b>	
Inputs per module	16 Points Universal Digital Type
Indicators	16 Green input state
ON-state Voltage	24V dc nominal @70°C - Min. 15Vdc to Max. 28.8Vdc @60°C - Min. 15Vdc to Max. 32Vdc
ON-state current	3.05mA maximum/point @32Vdc
Input Signal Delay	OFF to ON : 0.3ms Max ON to OFF : 0.3ms Max
Nominal Input Impedance	14.9K ohm typical
COMMON Type	16 points / 2 COM (Single Common)
<b>General specification</b>	
Power dissipation	50mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler isolation
Field Power	Supply voltage : 24Vdc nominal Voltage range : 15~32Vdc Power dissipation: 0mA @ 32Vdc
Wiring	I/O Cable Max. 0.32mm <sup>2</sup> (AWG 22)
Weight	52g
Module Size	12mm x 99mm x 70mm
<b>Environment Condition</b>	<b>Refer to '1. Environment Specification'</b>

## 2.2. GT-12DF Wiring Diagram



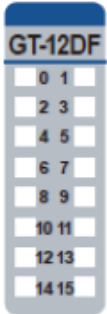
Pin No.	Signal Description	Signal Description	Pin No.
0	Input Channel 0	Input Channel 1	1
2	Input Channel 2	Input Channel 3	3
4	Input Channel 4	Input Channel 5	5
6	Input Channel 6	Input Channel 7	7
8	Input Channel 8	Input Channel 9	9
10	Input Channel 10	Input Channel 11	11
12	Input Channel 12	Input Channel 13	13
14	Input Channel 14	Input Channel 15	15
16	Common(Sink Oper.0V/ Source Oper.24V)	Common(Sink Oper.0V/ Source Oper.24V)	17

\* Although the image above is GT-(Universal input module), it does not matter to refer to wiring diagram.

Refer to the Sink (0V).

## 2.3. GT-12DF LED Indicator

### 2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	INPUT Channel 0	Green
1	INPUT Channel 1	Green
2	INPUT Channel 2	Green
3	INPUT Channel 3	Green
4	INPUT Channel 4	Green
5	INPUT Channel 5	Green
6	INPUT Channel 6	Green
7	INPUT Channel 7	Green
8	INPUT Channel 8	Green
9	INPUT Channel 9	Green
10	INPUT Channel 10	Green
11	INPUT Channel 11	Green
12	INPUT Channel 12	Green
13	INPUT Channel 13	Green
14	INPUT Channel 14	Green
15	INPUT Channel 15	Green

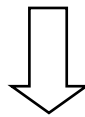
### 2.3.2. Channel Status LED

Status	LED	To indicate
Not Signal	Off	Normal Operation
On Signal	Green	Normal Operation

**2.3.3. Mapping data into the image table**

- **Input Module Data**

D7	D6	D5	D4	D3	D2	D1	D0
D15	D14	D13	D12	D11	D10	D9	D8



- **Input Image Value**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	D7	D6	D5	D4	D3	D2	D1	D0
Byte1	D15	D14	D13	D12	D11	D10	D9	D8

**2.4. Parameter Data**

- **Valid Parameter length: 2 Bytes**
- **Parameter Data**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Input Filter value : 0 ~ 10 (unit : ms)							
Byte1	Reserved							