
FnIO G – Series :

GT-5758

GT-5758 (8 Channels Digital Input, PTC)

Specification

Table of Contents

[Table of Contents.....2](#)

[History.....3](#)

[1.Environment Specification.....4](#)

[2.GT-5758 \(8 Channels, PTC\).....5](#)

[2.1.GT-5758 Specification.....5](#)

[2.2.Resistance characteristic.....6](#)

[2.3.GT-5758 Wiring Diagram.....7](#)

[2.4.GT-5758 LED Indicator.....8](#)

[2.4.1.LED Indicator.....8](#)

[2.5.Data Value / State.....8](#)

[2.6.Mapping Data into the Image Table.....8](#)

[2.7.Parameter Data.....8](#)

History

Rev	Pages	Remarks	Date	Editor
1.00		NEW	AUG 22, 2024	Juheon, Lee
1.01	5	Edit System, Field Power Dissipation	2025/05/30	Suna, Hwang

Specification

1. Environment Specification

Environmental Specification	
Operation Temperature	-40°C to 70°C
UL Temperature	-20°C to 60°C
Storage Temperature	-40°C to 85°C
Relative Humidity	5% to 95% Non-condensing
Mounting	DIN rail
General Specification	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6, 4g
Industrial Emissions	EN61000-6-4/All : 2011
Industrial Immunity	EN 61000-6-2 : 2019
Installation Position	Vertical and horizontal installation is available
Product Certifications	CE, UL, UKCA

Specification

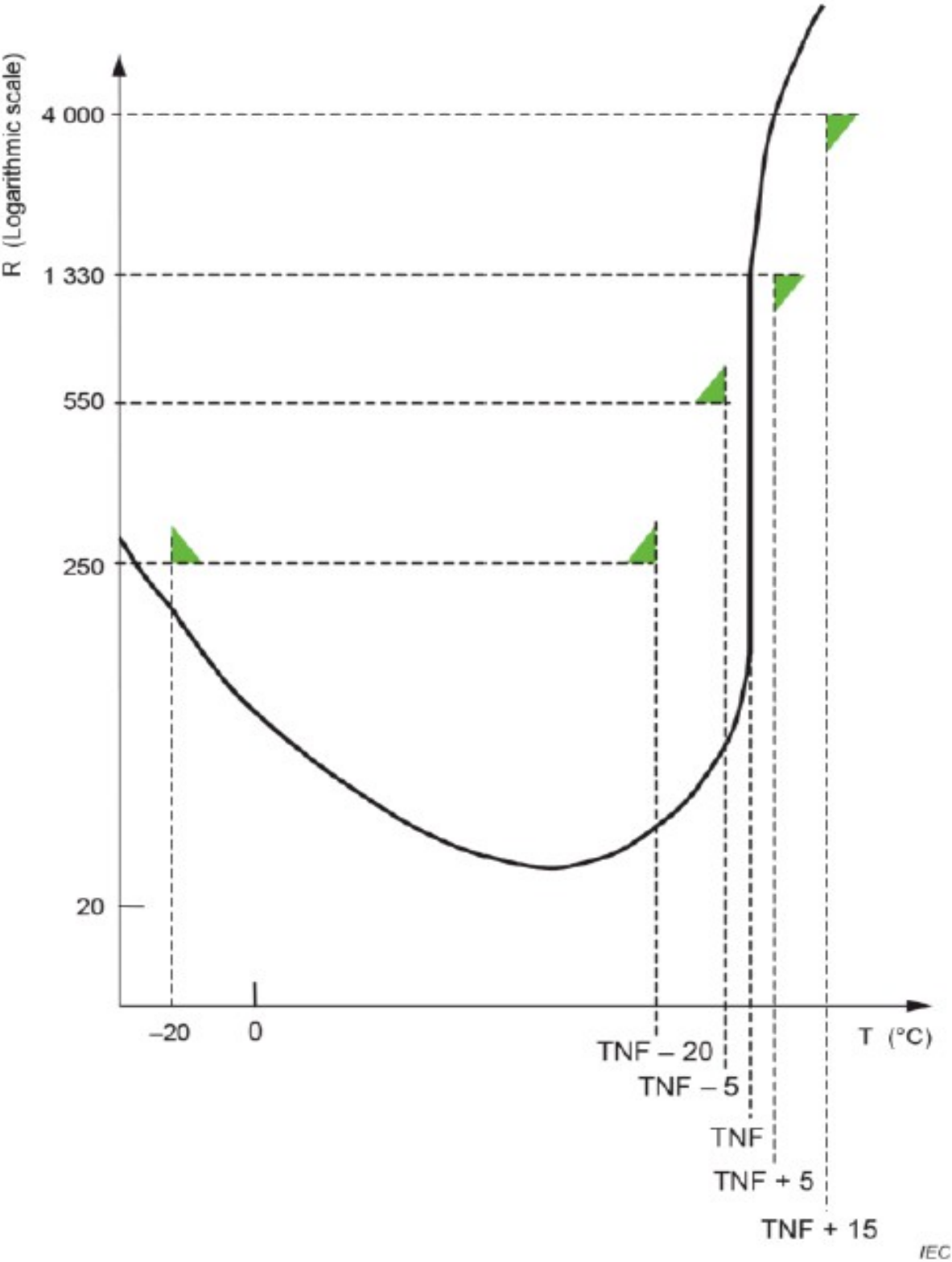
2. GT-5758 (8 Channels, PTC)

2.1. GT-5758 Specification

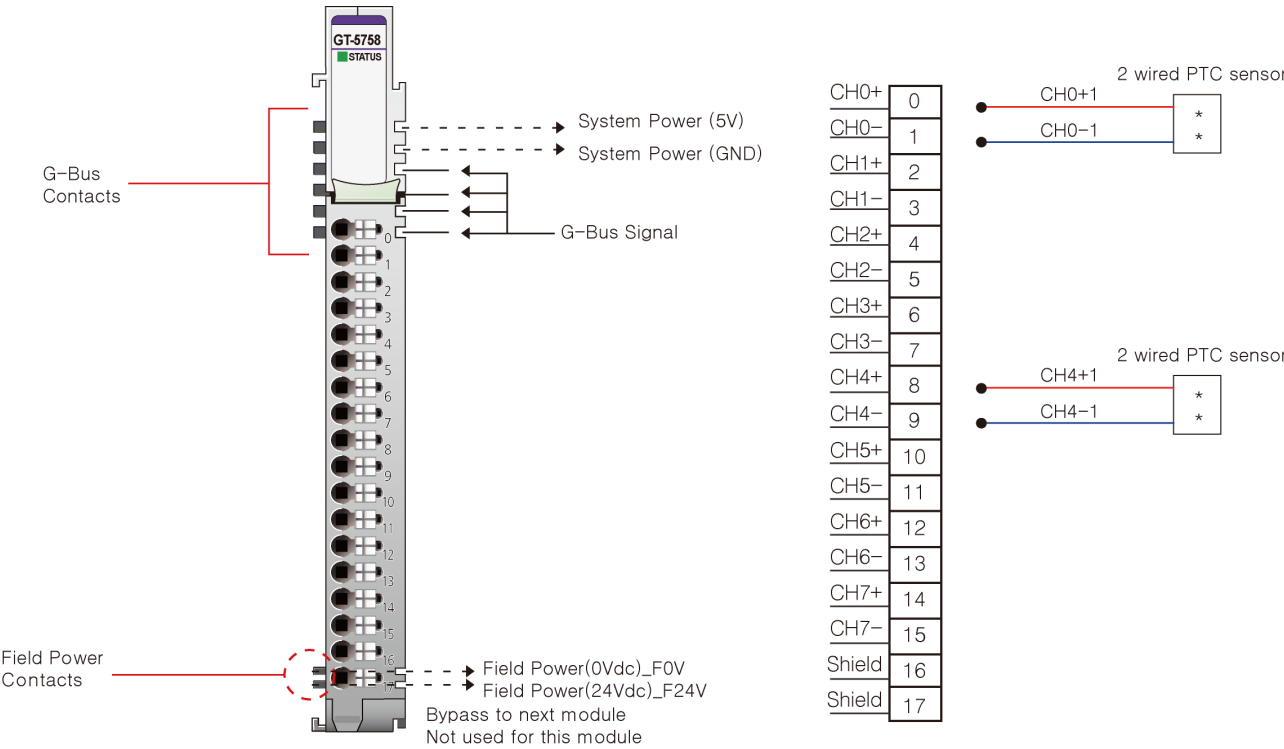
Items	Specification
Input Specification	
Inputs Per Module	8 Channels single ended, non-isolated between channel
Sensor Types	PTC Input
Connection Method	2-Wire
Data Format	16-bit (status)
OverTemperature Value (status bit 00 → 01)	$R \geq 3.1 \text{ [K}\Omega\text{]}$
Return Value (status bit 01 → 00)	$R \leq 1.5 \text{ [K}\Omega\text{]}$
Hysteresis	$R = 1.5 \text{ [K}\Omega\text{]}$
Wire break Value	$R \geq 20 \text{ [K}\Omega\text{]} \pm 5\%$
Short circuit Value	$R \leq 20 \text{ [}\Omega\text{]}$
Sensor voltage	$\leq 2.5 \text{ V}$
Sensor Current	$\leq 0.5 \text{ mA}$
Signal Common Specification	
Conversion Time	2msec / All channel
Calibration	Not Required
Common Type	8 Common, Field Power 0V is Common(AGND)
General Specification	
Power Dissipation	Max. 30mA @ 5Vdc
Isolation	I/O to Logic : Isolation
UL Field Power	Supply voltage : 24Vdc nominal, Class2
Field Power	Max. 30mA @ 24Vdc
Wiring	I/O Cable Max. 0.823mm ² (AWG 18)
Weight	64g
Module Size	12mm x 109mm x 70mm
Environment Condition	Refer to 'Environment Specification'

2.2. Resistance characteristic

- The resistance characteristic is defined in IEC-60947-8



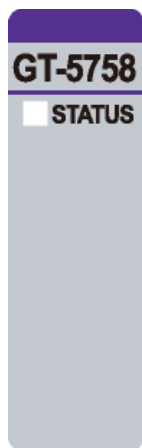
2.3. GT-5758 Wiring Diagram



Pin No.	Signal Description
0	PTC Channel 0+
1	PTC Channel 0-
2	PTC Channel 1+
3	PTC Channel 1-
4	PTC Channel 2+
5	PTC Channel 2-
6	PTC Channel 3+
7	PTC Channel 3-
8	PTC Channel 4+
9	PTC Channel 4-
10	PTC Channel 5+
11	PTC Channel 5-
12	PTC Channel 6+
13	PTC Channel 6-
14	PTC Channel 7+
15	PTC Channel 7-
16	Shield
17	Shield

2.4. GT-5758 LED Indicator

2.4.1. LED Indicator



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

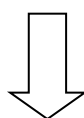
2.5. Data Value / State

Data	00	01	10	11
State	Normal Operation	Overtemperature	Short	Open

2.6. Mapping Data into the Image Table

- Input PTC Data

PTC State Data 1 Word



- Input Image Value

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	3Ch State		2Ch State		1Ch State		0Ch State	
Byte1	7Ch State		6Ch State		5Ch State		4Ch State	

- Data : 00 = Normal, 01 = Overtemperature, 10 = Short, 11 = Open

2.7. Parameter Data

- Valid Parameter length: 2 Bytes

- Parameter Data

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Reserved							
Byte1	Reserved							