

# **FnIO M – Series :**

## **M2768**

**M2768(8 Points, MOS Relay Terminal, 24Vdc/ac, 2A)**

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## History

REV.	PAGES	REMARKS	DATE	Editor
Preliminary		Preliminary	Aug. 27, 2019	BS, HA
1.01		Image, UL Spec, Torque, Hotswap Function	2020/04/21	CW SEO
1.02		Vibration specification, Product certification changed	2020/04/27	CW SEO
1.03	10~14	Added Module mounting	2020/05/07	bs, HA
1.04		Remove Description pages of Hot Swap Function, Use in Hazardous Environments and Caution(Before using the unit)	2020/12/08	SJ LIM

## 1. Environment Specification

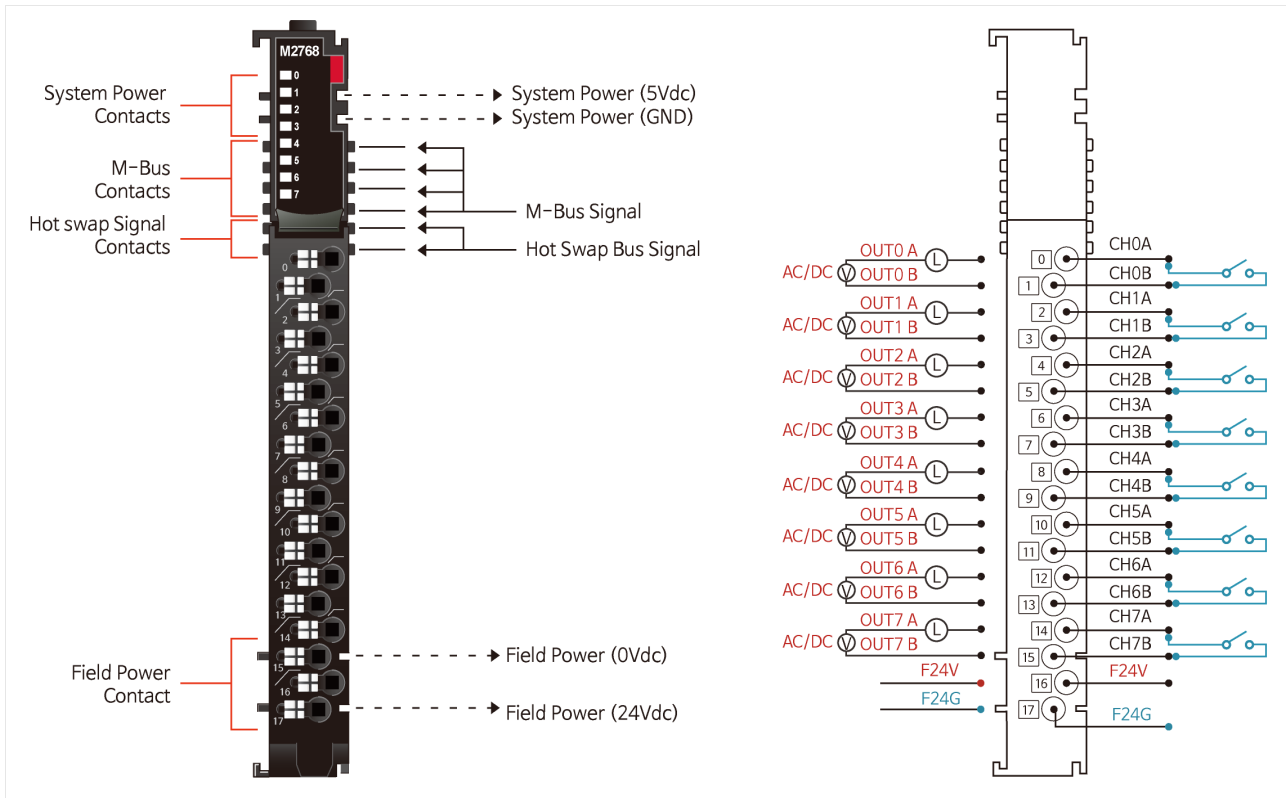
<b>Environmental specification</b>	
Operating Temperature	-25 °C ~60 °C
UL Temperature	-20 °C ~60 °C
Storage Temperature	-40 °C ~85 °C
Relative Humidity	5% ~ 90% non-condensing
Mounting	DIN rail
<b>General specification</b>	
Shock Operating	IEC 60068-2-27
Vibration Resistance	Based on IEC 60068-2-6 DNVGL-CG-0039 : Vibration Class B, 4g
Industrial Emissions	EN 61000-6-4/A11 : 2011
Industrial Immunity	EN 61000-6-2 : 2005
Installation Position	Vertical and horizontal installation is available.
Protection type	IP20
Product Certifications	CE, UL, FCC

## 2. M2768 (8 Points, Relay Output Terminal, 24Vdc/ac, 2A)

### 2.1. M2768 Specification

Items	Specification
<b>Output specification</b>	
Output per module	8 Points, Bi-directional
Indicators (Logic side)	8 Green output state
Relay Type	MOS Relay (Solid State Relay)
Output Voltage Range ( Load Dependent )	Max. 24Vac @ 2A resistive Max. 24Vdc @ 2A resistive
Output Current Rating	Max. 2A per channel  Operating Temperature (Total Output Current) -25°C~60°C : Max. 7A per unit -25°C~50°C : Max. 8A per unit
Output Delay Time (resistive load) - Operate Time (OFF to ON) - Release Time (ON to OFF)	Max. 1 ms Max. 3 ms
Frequency range ( Vac )	47 ~ 63Hz
<b>General Specification</b>	
Power dissipation	130mA maximum @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler isolation
UL Field Power	Supply voltage : 24Vdc nominal, Class 2
Field Power	Field Power passes through to the next module.
Single Wire	0.205mm <sup>φ</sup> - 1.3mm <sup>φ</sup> (24-16 AWG)
Torque	0.8Nm(7 lb-in)
Weight	72g
Module Size	12mm x 110mm x 75mm
Hot Swap	Possible
<b>Environment Condition</b>	<b>Refer to '1. Environment Specification'</b>

## 2.2. M2768 Wiring Diagram



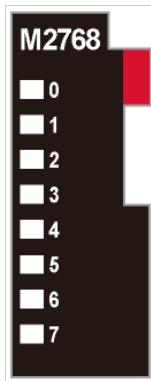
Pin No.	Signal Description
0	Output Channel 0 A
1	Output Channel 0 B
2	Output Channel 1 A
3	Output Channel 1 B
4	Output Channel 2 A
5	Output Channel 2 B
6	Output Channel 3 A
7	Output Channel 3 B
8	Output Channel 4 A
9	Output Channel 4 B
10	Output Channel 5 A
11	Output Channel 5 B
12	Output Channel 6 A
13	Output Channel 6 B
14	Output Channel 7 A
15	Output Channel 7 B
16	Field Power 24Vdc
17	Field Power 0Vdc

Series No	Through Air	Over Surface	CTI
RTB18C	1.5mm	1.5mm	175≤CTI≤400

Spacings : The following minimum spacing in inches (millimeters) shall be maintained between uninsulated live parts of opposite polarity; and between an uninsulated live part and a grounded part including any mounting surface or exposed metal part.

## 2.3. M2768 LED Indicator

### 2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	Output Channel Status 0	Green
1	Output Channel Status 1	Green
2	Output Channel Status 2	Green
3	Output Channel Status 3	Green
4	Output Channel Status 4	Green
5	Output Channel Status 5	Green
6	Output Channel Status 6	Green
7	Output Channel Status 7	Green

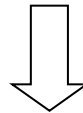
### 2.3.2. Channel Status LED

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

## 2.4. Mapping Data into the Image Table

- Output Image Value

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	D7	D6	D5	D4	D3	D2	D1	D0



- Output Module Data

D7	D6	D5	D4	D3	D2	D1	D0
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## 2.5. Parameter Data

- Valid Parameter length : 2 Bytes
- Parameter Data

Bit No	Bit 7	Bit 6	Bit 5	Bit 4	Bit 3	Bit 2	Bit 1	Bit 0
Byte 0	Fault Action (ch0~ch7) 0: Fault value, 1:Hold last state							
Byte 1	Fault value (ch0~ch7) 0:Off, 1:On							