FnIO G – Series :

M5442

M5442(2CH PWM Output, 0.5A/24Vdc, Push-pull)

Date: 2021.08.23

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History

REV.	PAGES	REMARKS	DATE	Editor
Preliminary		Preliminary	Aug 23, 2021	Soyeong, Park

1. ENVIRONMENT SPECIFICATION

Environmental specification	
Operating Temperature	-25℃~60℃
UL Temperature	-25℃~60℃
Storage Temperature	-40℃~85℃
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, 4g
Industrial Emissions	EN 61000-6-4/A11 : 2011
Industrial Immunity	EN 61000-6-2 : 2019
Installation Position	Vertical and horizontal installation is available.
Product Certifications	UL, ATEX, CE, UKCA

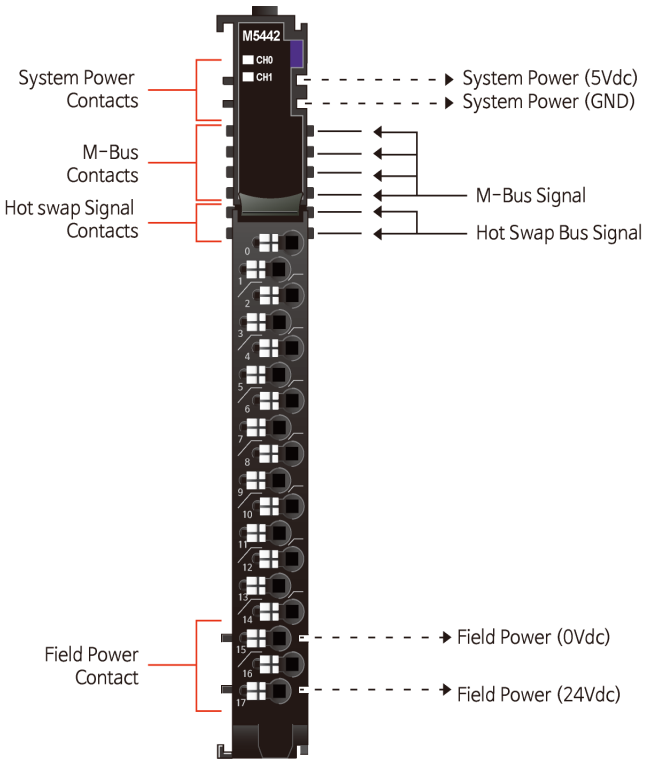
2. M5442 (2CH PWM Output, 0.5A/24Vdc, Push-pull)

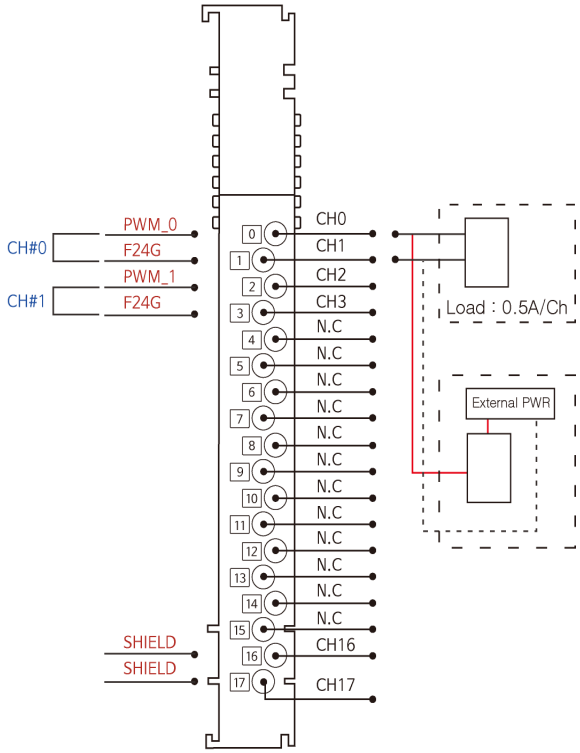
2.1. M5442 Specification

Items	Specification
Output Specification	
Number of channel	2 Channels
Number of output	2 Output, Push-pull Type
Indicators	2 Green Pulse Output LED
Output Voltage	24Vdc
Output current	0.5A per channel, 1.0A per Module Operating Temperature -25℃~60℃ : 0.3A per channel -25℃~45℃ : 0.5A per channel
Pulse output frequency	1-5kHz±0.5%
Pulse output duty	0.0-100.0% ±1.0% (0.1%/1LSB), Ton>1us, Toff>1us
Protection	Short Protection
Common Type	2 Common, Field Power 0V is Common
General specification	
Power Dissipation	Max. 75mA @ 5.0Vdc
Isolation	I/O to Logic : Photocoupler Isolation Field Power : Non-Isolation
UL Field Power	Supply voltage : 24Vdc nominal, Class 2
Field Power	Supply voltage : 24Vdc nominal Voltage range : 15~28.8Vdc Power dissipation : 10mA @ 24Vdc except load
Single Wire	0.205㎟ - 1.3㎟ (24-16 AWG)
Torque	0.8Nm(7 lb-in)
Weight	70g
Module Size	12mm x 110mm x 75mm
Environment Condition	**Refer to '1. Environment Specification'**

* Class 2, adjacent to voltage rating (30Vmax)

2.2. M5442 Wiring Diagram





Pin No.	Signal Description
0	PWM Channel #0
1	Field Power 0V
2	PWM Channel #1
3	Field Power 0V
4	N.C
5	N.C
6	N.C
7	N.C
8	N.C
9	N.C
10	N.C
11	N.C
12	N.C
13	N.C
14	N.C
15	N.C
16	Shield
17	Shield

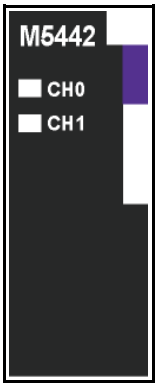
N.C : Not Connect

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

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

2.3. M5442 LED Indicator

2.3.1. LED Indicator



LED No.	LED Function / Description	LED Color
0	PWM Output Channel #0	Green
1	PWM Output Channel #1	Green

2.3.2. Channel Status LED

Status	**LED is**	**To indicate**
No Signal	Off	Normal Operation
On Signal	Green	Normal Operation

2.4. Mapping data into the image table

- **Input Image Value - 2Byte**

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

- **Output Image Value – 8Byte**

Bit No	Bit7	Bit6	Bit5	Bit4	Bit3	Bit2	Bit1	Bit0
Byte0	Frequency CH#0 Low Byte							
Byte1	Frequency CH#0 High Byte							
Byte2	Duty CH#0 Low Byte							
Byte3	Duty CH#0 High Byte							
Byte4	Frequency CH#1 Low Byte							
Byte5	Frequency CH#1 High Byte							
Byte6	Duty CH#1 Low Byte							
Byte7	Duty CH#1 High Byte							

- Range of each Duty is 0(0.0%) ~ 1000(100.0%). If Duty value is 365, then duty rate is 36.5%

2.5. Parameter Data

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

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