



M-7088-16

16-channel PWM Output Module

Features

- 16-channel PWM Output
- Burst Mode and Continuous Mode for PWM Output
- Individual and Synchronous PWM Output
- 4 kV ESD and EFT Protection
- Dual Watchdog



Introduction

The M-7088-16 provides 16-channel PWM (Pulse Width Modulation) Output, and can be used to develop powerful and cost-effective analog control systems. PWM is a powerful technique for controlling analog circuits that uses the Digital Output to generate a waveform with a variable duty cycle and frequency which can then be used to control an analog circuit in applications such as controlling the position or speed of motors, the brightness of lamps, or the speed of fans, etc. Either burst mode or continuous mode can be used for the PWM output depending on the application. It supports both the Modbus RTU and the DCON protocols, and External PWR allows the load voltage to be increased from +5 to +50 V for the 16-channels PWM (Pulse Width Modulation) output.

System Specifications

Model	M-7088-16
Communication	
Interface	RS-485
Bias Resistor	No (Usually supplied by the RS-485 Master. Alternatively, add a tM-SG4 or SG-785.)
Format	(N, 8, 1), (N, 8, 2), (E, 8, 1), (O, 8, 1)
Baud Rate	1200 to 115200 bps
Protocol	Modbus RTU, DCON
Dual Watchdog	Yes, Module (1.6 Seconds), Communication (Programmable)
LED Indicators/Display	
System LED Indicator	Yes, 1 as Power/Communication Indicator
I/O LED Indicators	-
7-segment LED Display	-
Isolation	
Intra-module Isolation, Field-to-Logic	2500 Vdc
EMS Protection	
ESD (IEC 61000-4-2)	±4 kV Contact for each Terminal
EFT (IEC 61000-4-4)	±4 kV to Power
Surge (IEC 61000-4-5)	-
Power	
Reverse Polarity Protection	Yes
Input Range	+10 ~ +48 VDC
Consumption	2.9 W
Mechanical	
Dimensions (L x W x H)	121 mm x 76 mm x 42 mm
Installation	DIN-Rail or Wall Mounting
Environment	
Operating Temperature	-25 to +75°C
Storage Temperature	-40 to +85°C
Humidity	10 to 95% RH, Non-condensing

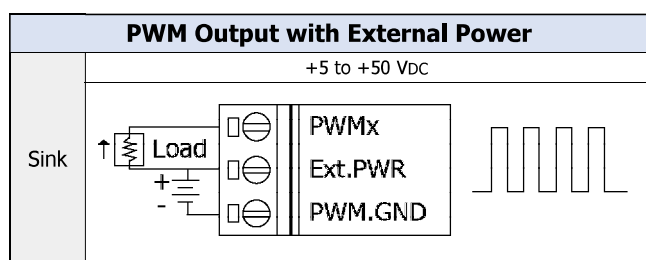
I/O Specifications

Model	M-7088-16	
Channels	16	
Type	PWM, TTL	
Sink/Source (NPN/PNP)	Sink	
Load Voltage	+5 ~ +50 Vdc	
Max. Load Current	Sink	+50 VDC @ 200 mA/Channel
	Source	-
PWM	Frequency	1 Hz ~ 500 KHz
	Duty Cycle	0.1 to 99.9%
	Mode	Burst, Continuous
	Burst Count	1 to 65535
Power-on Value	-	
Safe Value	-	

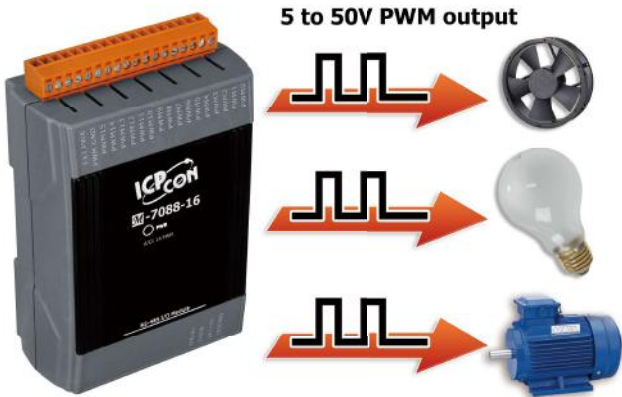
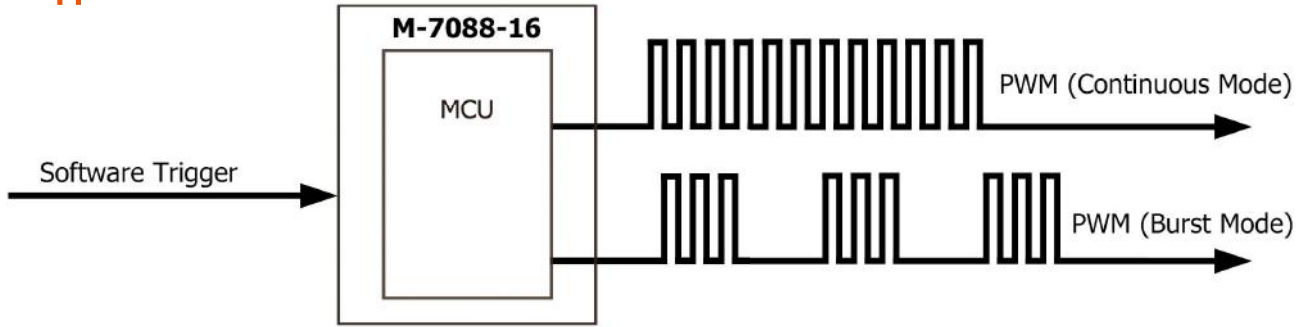
Applications

- Controlling Motor Position/Speed
- Dimming Lamp Brightness
- Controlling Fan Speed

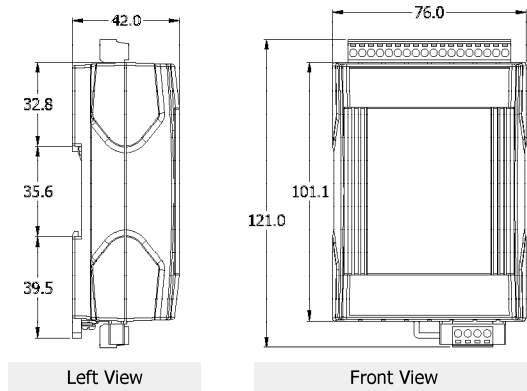
Wire Connections



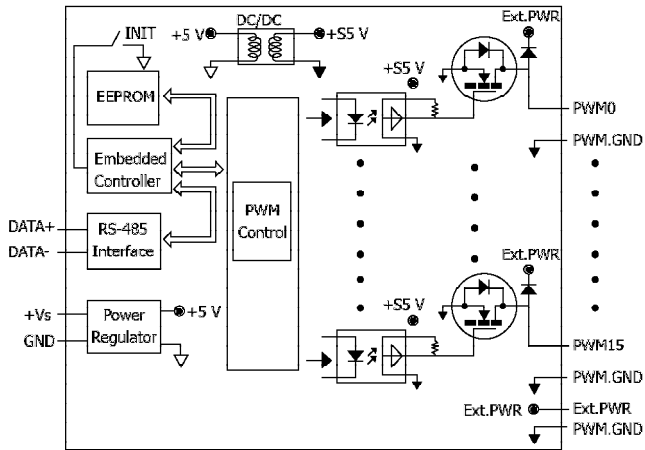
Applications



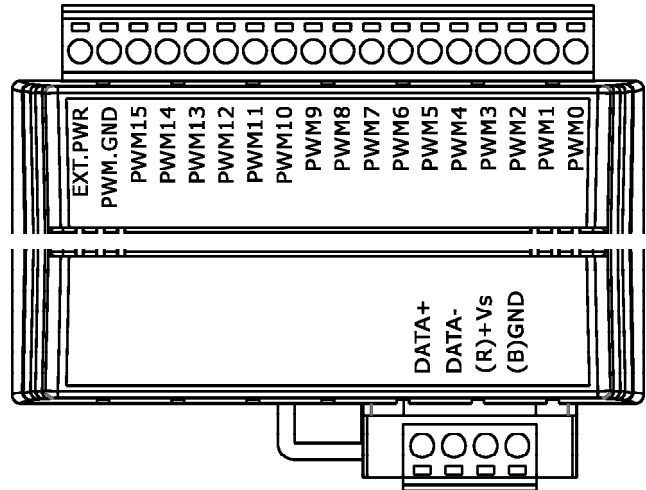
Dimensions (Units: mm)



Internal I/O Structure



Pin Assignments



Ordering Information

M-7088-16-G CR	16-channel PWM Output Module using the DCON and Modbus Protocols (Gray Cover) (RoHS)
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