DeviceNet Slave

PWM Module of DeviceNet Slave

CE FC RoHS

CAN-2088D

Dimensions

77.5
99
107.0
15.0
32.3
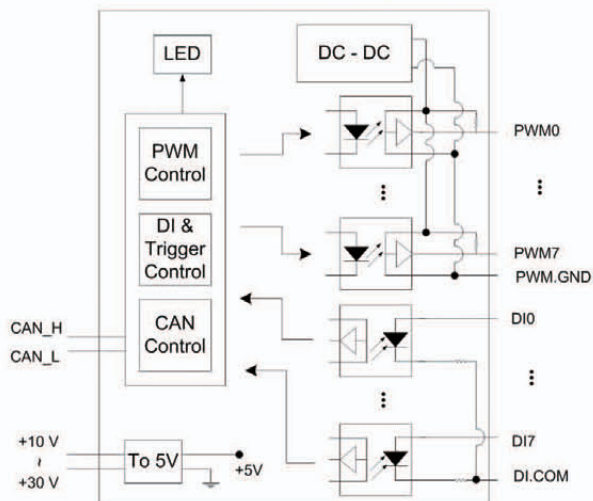Unit: mm
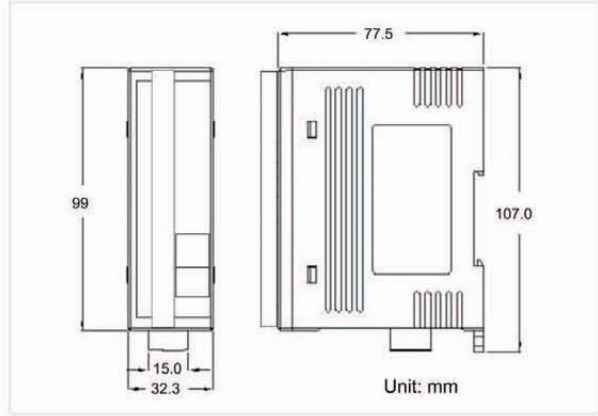
PWM (Pulse width modulation) is a powerful technique for controlling analog circuits. By using digital outputs, it can generate a waveform with variant duty cycle and frequency to control analog circuits. CAN-2088D, a CAN bus remote I/O modules with DeviceNet protocol, provides 8 PWM output channels and 8 digital inputs channels with high-speed counter function. It can be used to develop practical and economical analog control systems in the DeviceNet network.

Features

- Hardware-controlled PWM output
- PWM output frequency: 0.2 Hz ~ 500 kHz with 0.1%~99.9% duty cycle
- PWM Output Modes: software trigger / hardware trigger
- Trigger each PWM output individually or all PWM outputs synchronously
- Support Burst output mode and Continue output mode
- Provide 32-bit 500 kHz high-speed counter for each DI channel
- Pass the validation of DeviceNet conformance test
- Provide EDS file for DeviceNet master interface

Internal I/O Structure

LED
DC - DC
PWM Control
PWM0
PWM7
PWM.GND
DI & Trigger Control
CAN Control
DI0
DI7
DI.COM
CAN_H
CAN_L
+10 V
+30 V
To 5V
+5V

I/O Pin & Wire Connection

Terminal No.	Pin Assignment	Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
01	PO.0	Drive Relay	Relay On	Relay Off
02	PO.1		PO X / PO.GND	PO X / PO.GND
03	PO.2			
04	PO.3			
05	PO.4	Resistance Load	PO X / PO.GND	PO X / PO.GND
06	PO.5			
07	PO.6			
08	PO.7			
09	PO.GND			
10	PO.GND			

Terminal No.	Pin Assignment	Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
11	DI.0	Relay Contact	Relay On	Relay Off
12	DI.1		DI X / DI.GND	DI X / DI.GND
13	DI.2	TTL/CMOS Logic	Voltage > 10 V	Voltage < 4 V
14	DI.3		DI X / DI.GND	DI X / DI.GND
15	DI.4			
16	DI.5	NPN Output	Open Collector On	Open Collector Off
17	DI.6		DI X / DI.GND	DI X / DI.GND
18	DI.7			
19	DI.GND	PNP Output	Open Collector On	Open Collector Off
20	DI.GND		DI X / DI.GND	DI X / DI.GND

CAN Pin & Baud Rate Rotary

CAN_V+	•	Pin 5
CAN_H	•	Pin 4
CAN_Shield	•	Pin 3
CAN_L	•	Pin 2
CAN_GND	•	Pin 1

Baud rate rotary switch

Rotary Switch Value	Baud rate (kbps)
0	125
1	250
2	500

Hardware Specifications

CAN Interface	
DeviceNet Specification	Volume I, Release 2.0 & Volume II, Release 2.0, Errata 5
DeviceNet subscribe	Group 2 Only Server
Connection supported	1 connection for Explicit Messaging 1 connection for Polled I/O 1 connection for Bit-Strobe I/O
Node ID	0~63 selected by rotary switch
Baud Rate (bps)	125 kbps, 250 kbps, 500 kbps
Heartbeat message	Yes
Shutdown message	Yes
Terminator Resistor	Switch for 120 Ω terminator resistor
PWM Interface	
Channels	8 (Source)
Output Max. Load Current	1 mA
Frequency Range	0.2 Hz ~ 500 kHz (non-continuous, the min. units of the high/low level signal is 1 us)
PWM Mode	Continue mode, Burst mode, Hardware trigger mode, Software trigger mode
ESD Protection	4 kV Contact for each channel
DI Interface	
Channels	8 (Sink)
Counter Frequency	32-bit, 500 kHz Max.
LED	
Round LED	PWR LED, NET LED, MOD LED
I/O LED	8 LEDs as PWM, 8 LEDs as Digital Input, and 1 LED as terminal resister indicator
Power	
Input range	Unregulated +10 ~ +30 V_{DC}
Power Consumption	3.5 W
Mechanism	
Installation	DIN-Rail
Dimensions	32.3 mm x 99 mm x 77.5 mm (W x L x H)
Environment	
Operating Temp.	-25 ~ +75 °C
Storage Temp.	-30 ~ +80 °C
Humidity	10 ~ 90% RH, non-condensing

Application
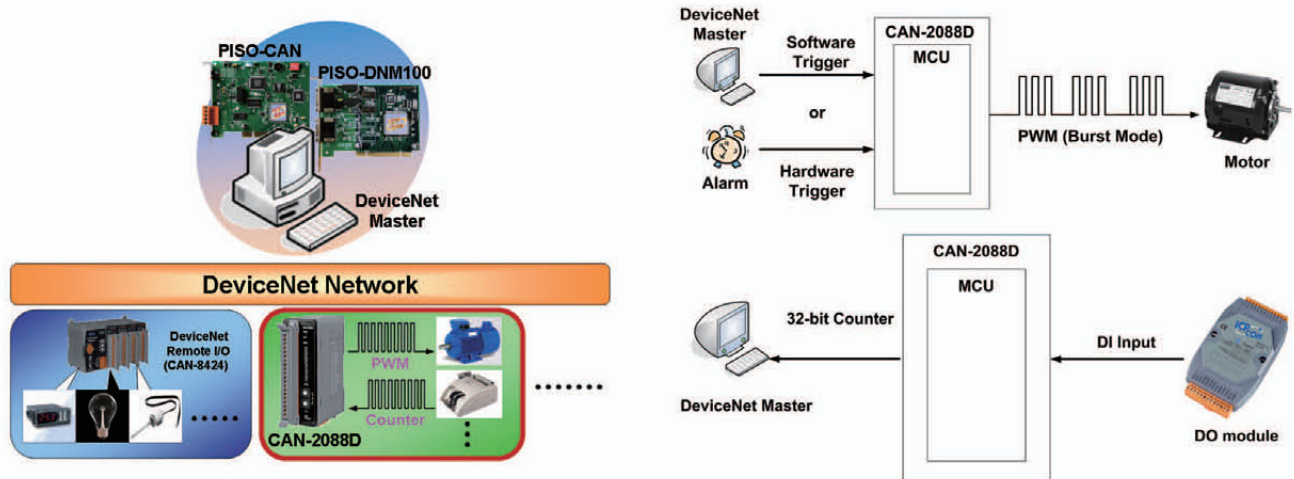
Ordering Information

CAN-2088D	DeviceNet module of 8-channel PWM and 8-channel DI with high-speed counters