# CAN-2088D
PWM Module of DeviceNet Slave

Features

- Hardware-controlled PWM output
- PWM output frequency: 0.2 Hz ~ 500 kHz with 0.1%~99.9% duty cycl
- 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

Introduction

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 DevicdNet network.

Internal I/O Structure

CAN-2088D Internal I/O Structure
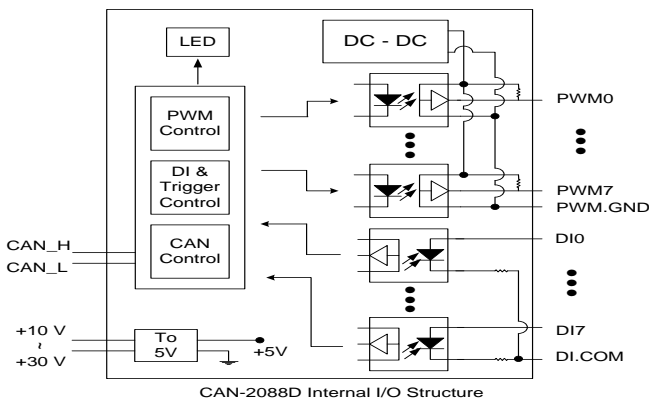
Dimensions (Units: mm)

Unit: mm
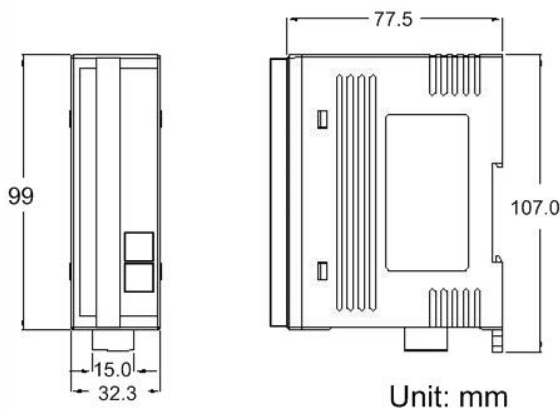
I/O Pin & Wire Connection

Terminal No.	Pin Assignment
01	PO.0
02	PO.1
03	PO.2
04	PO.3
05	PO.4
06	PO.5
07	PO.6
08	PO.7
09	PO.GND
10	PO.GND
11	DI.0
12	DI.1
13	DI.2
14	DI.3
15	DI.4
16	DI.5
17	DI.6
18	DI.7
19	DI.GND
20	DI.GND

Output Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Drive Relay	Relay On	Relay Off
Resistance Load		

| Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay On	Relay Off
TTL/CMOS Logic	Voltage > 10 V	Voltage < 4 V
NPN Output	Open Collector On	Open Collector Off
PNP Output	Open Collector On	Open Collector Off

CAN Pin & Baud Rate Rotary

5-pin screw terminal block
5 : CAN_V+
3 : CAN_H
4 : CAN_Shield
2 : CAN_L
1 : CAN_GND

Baud rate rotary switch

Switch Value	Baud Rate
0	125 kbps
1	250 kbps
2	500 kbps

■ 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
Terminal Resistor	Switch for 120 Ω terminal 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 ℃
Storage Temp.	-30 ~ +80 ℃
Humidity	10 ~ 90% RH, non-condensing

■ Application
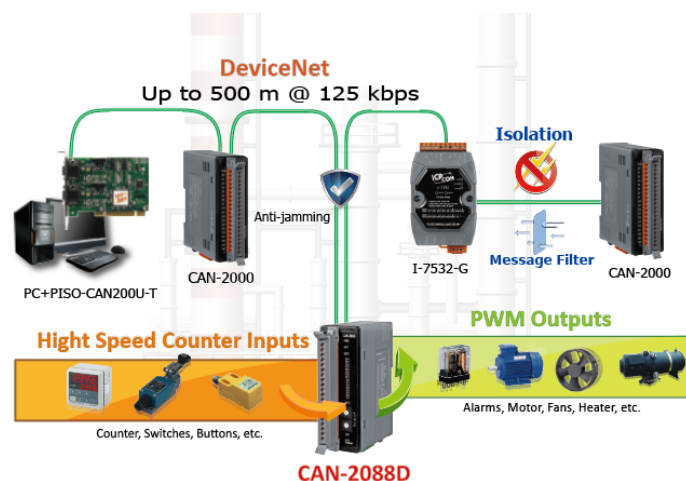
■ Ordering Information

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