PWM module of DeviceNet Slave

CE FC

CAN-2088D

Dimensions

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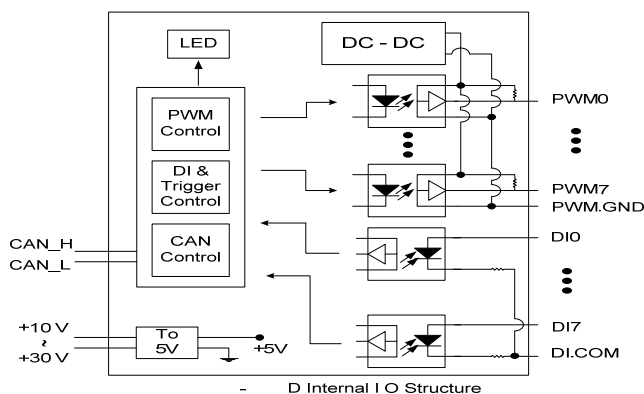32.3
Unit: mm
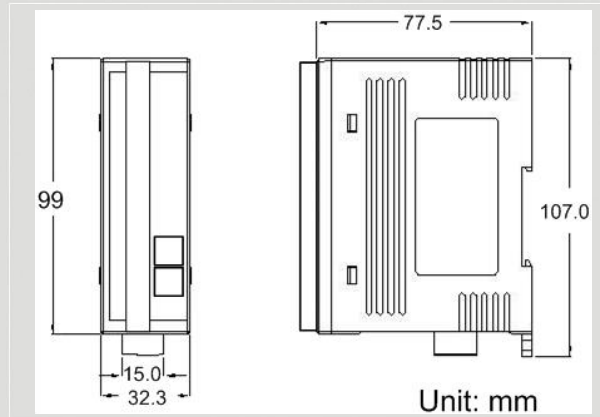
PWM (Pulse width modulation) is a powerful technique for controlling analog circuits. By using digital outputs, it can generate a waveform with variant duty cycle and frequency to control analog circuits. CAN-2088D, a CAN bus remote I/O modules with DeviceNet protocol, provides 8 PWM output channels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

Block Diagram

D Internal I O Structure

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 — PO X / PO.GND	Relay Off — PO X / PO.GND
Resistance Load	PO X / PO.GND	PO X / PO.GND

Input Type	ON State LED ON Readback as 1	OFF State LED OFF Readback as 0
Relay Contact	Relay On — Relay Close — DI X / DI.GND	Relay Off — Relay Open — DI X / DI.GND
TTL/CMOS Logic	Voltage > 10 V — Logic Power / Logic Level Low — DI X / DI.GND	Voltage < 4 V — Logic Power / Logic Level Low — DI X / DI.GND
NPN Output	Open Collector On — DI X / DI.GND	Open Collector Off — DI X / DI.GND
PNP Output	Open Collector On — DI X / DI.GND	Open Collector Off — DI X / DI.GND

CAN Pin & Baud Rate Rotary

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

Baud rate rotary

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

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)
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
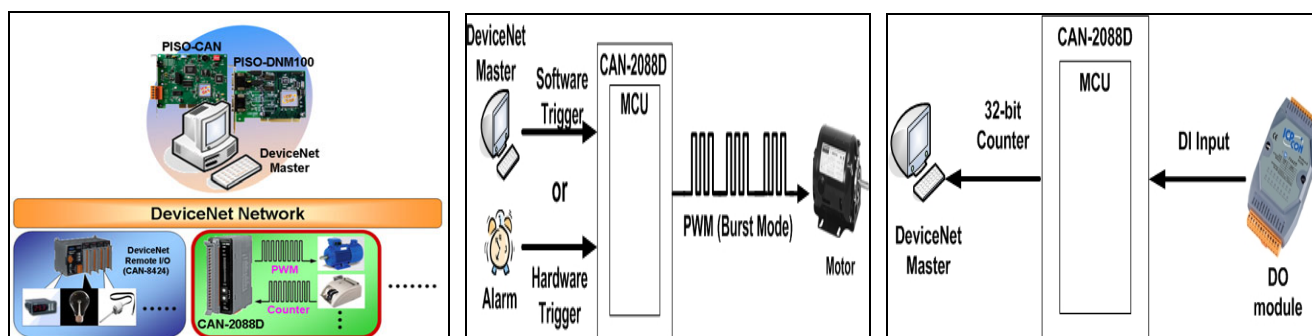
Ordering Information Art.-Nr. 125296

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