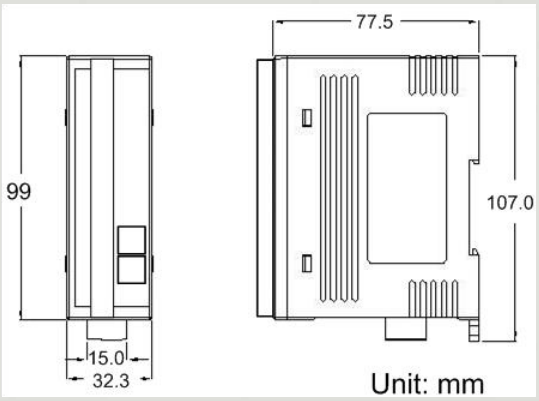
CANopen Series

PWM module of CANopen Slave

CAN-2088C



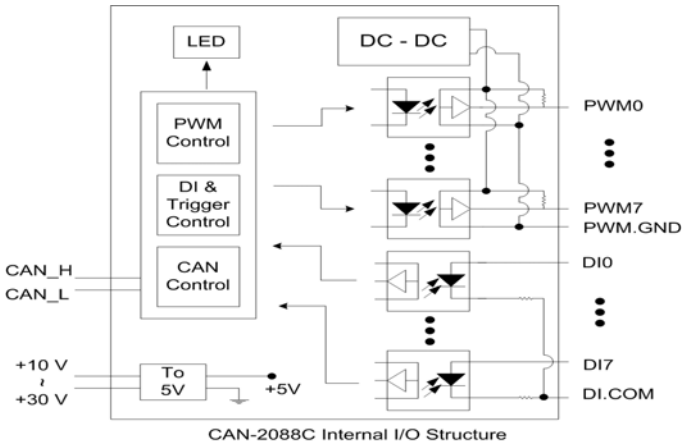
Dimensions

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-2088C, a CAN bus remote I/O modules with CANopen 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 CANopen conformance test.
- Provide EDS file for CANopen master interface.

Block Diagram



CAN-2088C 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	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

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

Baud rate rotary switch

Switch Value	Baud Rate
0	10 kbps
1	20 kbps
2	50 kbps
3	125 kbps
4	250 kbps
5	500 kbps
6	800 kbps
7	1000 kbps

Spectra GmbH & Co. KG
www.spectra.de spectra@spectra.de

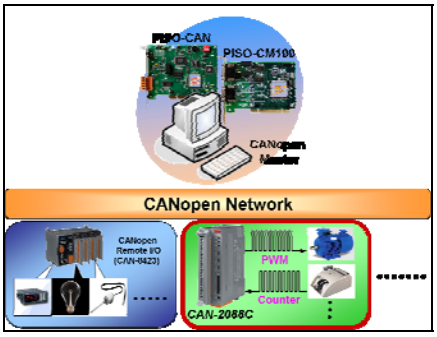
Niederlassung Österreich
www.spectra-austria.at info@spectra-austria.at

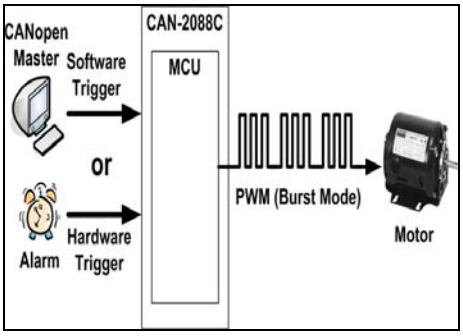
Spectra (Schweiz) AG
www.spectra.ch info@spectra.ch

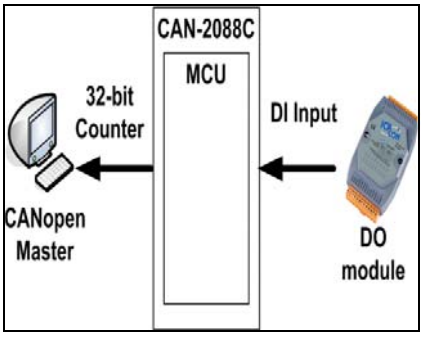
Hardware Specifications

CAN Interface	
Connector	5-pin screwed terminal block (CAN_GND, CAN_L, CAN_SHLD, CAN_H, CAN_V+)
Baud Rate (bps)	10 k, 20 k, 50 k, 125 k, 250 k, 500 k, 800 k, 1 M
Terminator Resistor	Switch for 120 Ω terminator resistor
Node ID	1~99 selected by rotary switch
Protocol	CANopen DS-301 ver4.02, DS-401 ver2.1
No. of PDOs	10 Rx, 10 Tx (support dynamic PDO)
PDO Mode	Event Triggered, Remotely requested, Cyclic and acyclic SYNC
Error Control	Node Guarding protocol and Heartbeat Producer protocol
Emergency Message	Yes
PWM Interface	
Channels	8 (Source)
Frequency Range	0.2 Hz ~ 500 kHz (non-continuous, the min. unit 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.
ESD Protection	4 kV Contact for each channel
LED	
Round LED	PWR LED, RUN LED, ERR 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

Applications







Ordering Information Art.-Nr. 125295

CAN-2088C	CANopen Module of 8-channel PWM and 8-channel DI with High-speed Counters.