Data Sheet 2CM2 Controller

ELECTRICAL CHARACTERISTICS

Absolute Maximum Ratings†

Battery (B+)	
All digital inputs with respect to ground	▼ 200V @ 15% D.C.
All analog inputs with respect to ground	▼ 90V
Sensor 5 Volt source current	50mA
Outputs (back feed condition)	Battery +0.7V
Storage temperature	65°C to +150°C
Ambient temperature with power applied	40°C to +85°C
ESD protection on all pins	4 kV

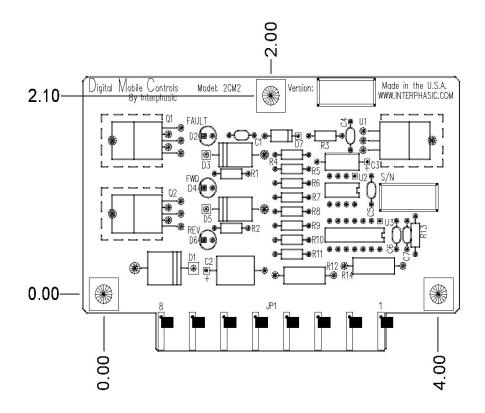
† NOTICE: Stress above those listed under "Absolute Maximum Ratings" may cause permanent damage to the controller. This is a stress rating only and functional operation of the controller at these or any other conditions above those indicated in the operational listings of this specification is not implied. Exposure to Absolute Maximum Rating conditions for extended periods may affect controller reliability.

Specifications: This is a LEAD-FREE (Pb) assembly.



Power supply input - nominal	9-30 VDC
Reverse polarity protection	Yes
Transient suppression	1500W@36 VDC
Digital inputs	All digital inputs active high
Input voltage span	▼ 30 VDC
Input impedance	3.3K 📣
High-level input voltage threshold (1)	2.75 VDC
Low-level input voltage threshold (0)	Q 1.75 VDC
Analog input	
Input voltage span	0-5 VDC
Input impedance	50K 📣
Cutoff Frequency filter pole location	-3dB/Dec @90Hz
Sensor supply voltage	
Supply voltage (filtered)	5 volts
Nominal source current	35mA

Current limit protection	Yes
I	
Outputs	
Number of outputs	2
Short proof protected	Yes
Driver resistance	.016Ω
Nominal drive current	5 Amp RMS
Peak drive current	35 Amps for 3 seconds @ 25°C
Inductive clamping type	Diode
Programmable PWM signal outputs	2
PWM Continuous inductive clamping current	3 Amps
PWM bandwidth	0 to 10Khz
PWM resolution	10 bits; depending on frequency
Output LED's V1 & V2	YELLOW
General specifications	
General specifications	
Status LED	RED
Controller weight	3.1 oz
Microprocessor: Microchip Enhanced FLASH (RISC)	PIC16F684
Frequency of operation	8Mhz
Execution time	500nS
Controller quiescent current	10mA
Controller logic family	100% CMOS
Environmental	
Gelatinous fill silicone conformal coating	IP54 rated
Environmental design practices for electronic equipment	SAE J1455
EMC, transient, shock, vibration design practices	SAE J1113
Flame retardant classification	UL 94V-0



Connection Detail

TB1 Connector Pins:

TB1-1 = INPUT 1, Digital TB1-2 = +5 Volt Supply TB1-3 = INPUT 2, Analog Input TB1-4 = OUTPUT, V1 TB1-5 = INPUT 3, Digital TB1-6 = POWER B+ TB1-7 = OUTPUT, V2 TB1-8 = GROUND