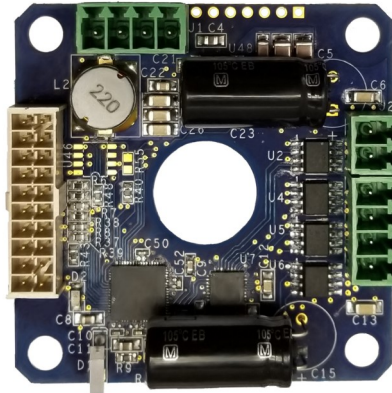


## OMDE2

The OMDE2 is a microstep motor driver integrated with an advanced motion controller that supports incremental and absolute encoders (**BiSS/SSI**). Capable of microstepping up to 1/256 steps the OMDE2 can support 2.5 Amp of motor phase current. Its small design is compatible to mount directly on to a NEMA 23 stepper motor, and includes a through-hole in the center so the shaft of a linear actuator motor can pass through when mounted on the motor. The connectors are screw terminal plugs for easy and secure wiring.



### FEATURES

- Integrated Stepper Motor Microstep Driver with Controller
- Encoder support includes: Incremental, BiSS and SSI
- RS485 communications, Modbus option
- Velocity = 0 to 2M steps per second
- Step resolutions include: full, 1/2, 1/4, 1/8, 1/16, 1/64, 1/128, 1/256.
- Single supply voltage +12V to +50V
- Up to 2.5 Amp phase current for high torque motors
- Center pass-through hole for linear actuator stepper motors
- No heat-sink required for typical current
- Motor current and step resolution set through the communication interface
- Size matches the NEMA 23 dimension for direct motor mounting
- Use existing motors or select the optimum motor for the application for cost control and best performance
- Screw-terminal connector plugs for convenient wiring
- LED indicator for status
- Automatic current decay mode detection
- Optional travel limit input for additional protection



503-629-8081, Fax: 503-629-0688

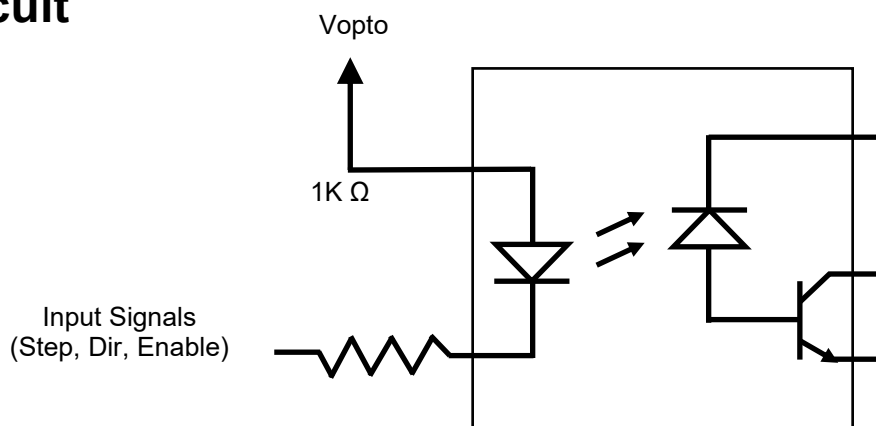
E-mail: Sales@OMSmotion.com

[www.OMSmotion.com](http://www.OMSmotion.com)

## Electrical Specifications

Parameter	Min	Typ	Max	Unit	Notes
Supply Voltage	12		50	VDC	
Output Current/Phase (PEAK)	0		2.5	A	Programmable
Vopto		5	20	V	
Input Voltage (STEP/DIR/ENABLE)	0		Vopto	V	
STEP frequency	0		2	MHz	The maximum frequency is gated by the optocoupler's circuitry.
Incremental Encoder	0		999	MHz	Differential signals
BiSS/SSI Data resolution		32	60	Bits	Data bits are programmable
BiSS/SSI Communications	125k		6M	Hz	

## Input Circuit



## Environmental Specifications

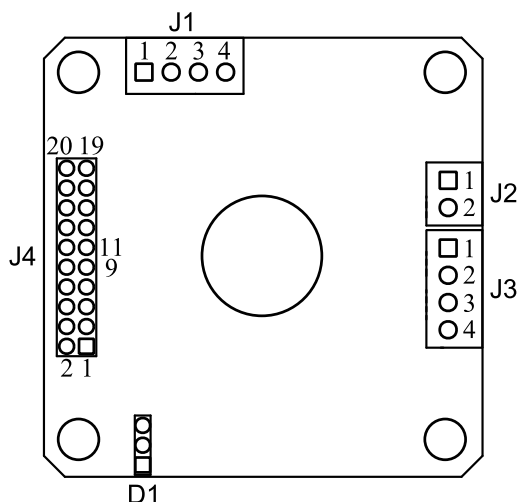
- Operating Temperature..... 0.0 to +50° C
- Storage Temperature..... - 40° to +125° C
- Weight..... 31.2g (including mating connectors)
- Humidity..... 20 to 95% Φ, non-condensing
- Outline..... 2.22" x 2.22" x 1.1" (including mating connectors)



PIN	J1
1	GND
2	D-/B
3	D+/A
4	GPIO5

PIN	J2
1	12-50 VDC
2	GND

PIN	J3
1	Phase A1
2	Phase A2
3	Phase B1
4	Phase B2



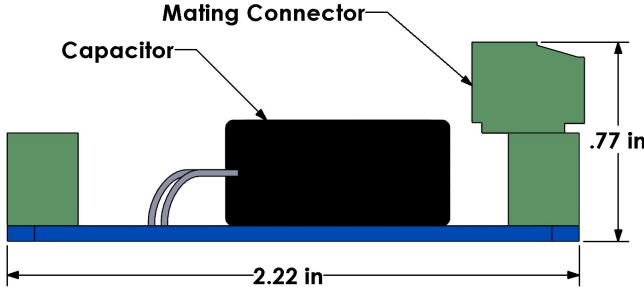
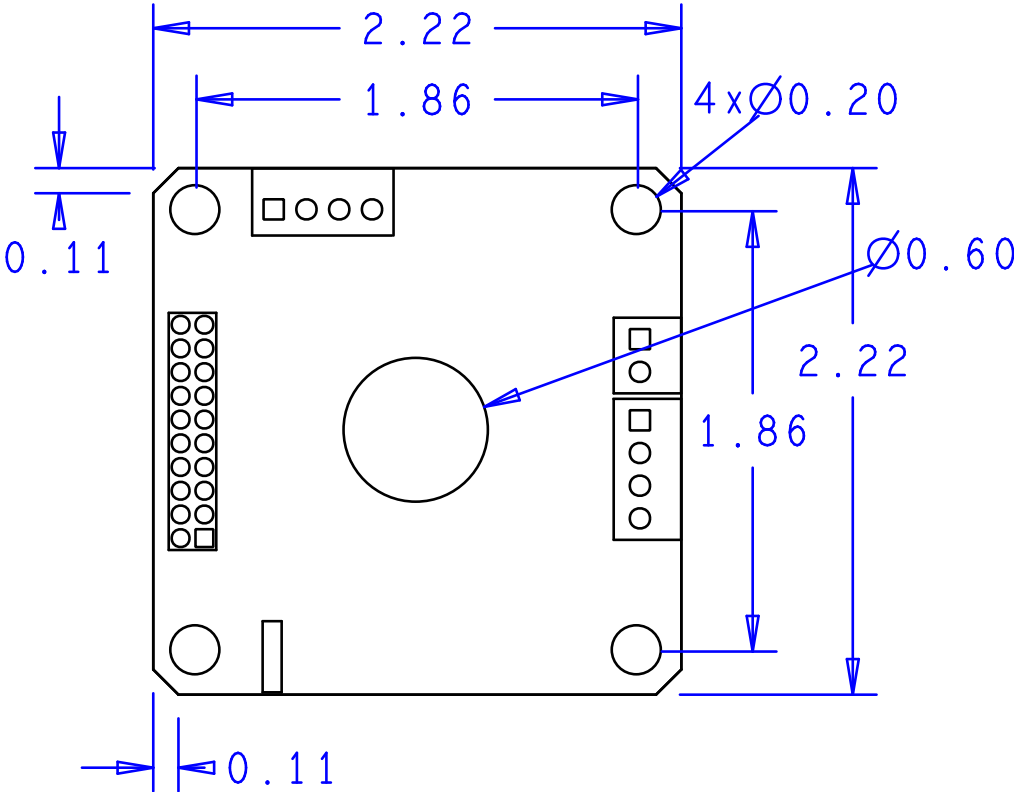
PIN	J4	PIN	J4
1	VIO / 5V	2	GND
3	GPIO0	4	GND
5	GPIO1	6	GND
7	Pos Limit / GPIO2	8	GND
9	Neg Limit / GPIO3	10	GND
11	Home / GPIO4	12	GND
13	Indx+ / DCIk+	14	Indx- / DCIk-
15	PhB+	16	PhB-
17	PhA+ / Data+	18	PhA- / Data-
19	5V	20	GND

## STATUS LED (D1)

D1, PATTERN	DESCRIPTION
	Short Flash ON (red) Drive disabled (J1,4 short to J1,1)
	Red ON solid Power Low
	Fast Blink (green) Initialize
	Slow Blink (green) Motor Disabled (ABL = no motor current)
	Flash OFF (green) Motor in Hold Current (no motion active)
	Green On solid Motor in Run Current (motion active)
	Double Flash OFF (red) Transition to Drive Disable (motion active)



Dimensions



ORDERING INFORMATION

Model	Description
OMDE2	Integrated Drive/Controller, Encoders, 2.5A



ISO 9001  
QMI-SAI Global

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