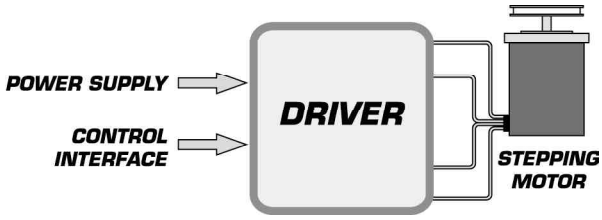
IM483

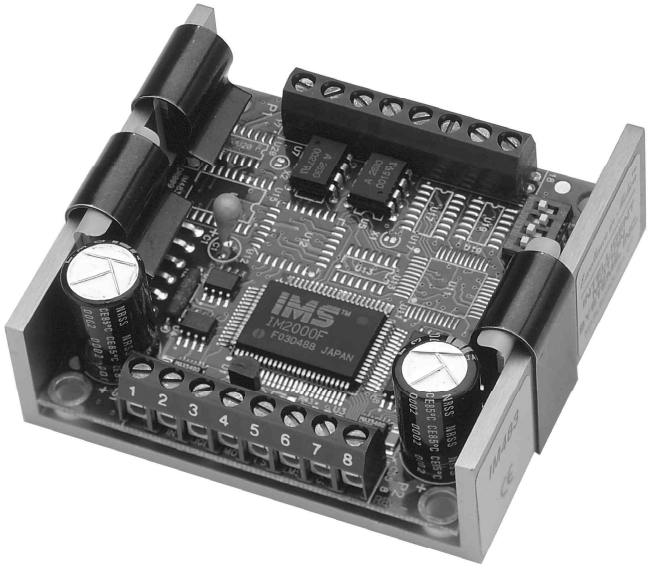
HIGH PERFORMANCE MICROSTEPPING DRIVER

FEATURES

- Low Cost
- Extremely Small (2.7 x 3.0 x 1.2 in.) (70 x 69 x 31 mm)
- High Input Voltage (48V)
- High Output Current (3 Amps RMS, 4 Amps Peak)
- Advanced Surface Mount and ASIC Technology
- No Minimum Inductance
- Single Supply
- Up to 10 MHz Step Clock Rate
- Opto-Isolated Inputs
- Fault Output
- Short Circuit and Over Temperature Protection
- Up to 51,200 Steps/Rev
- Microstep Resolutions Can Be Changed On-The-Fly without Loss of Motor Position
- 20 kHz Chopping Rate
- Automatically Switches Between Slow and Fast Decay for Unmatched Performance
- 14 Selectable Resolutions Both in Decimal and Binary
- Adjustable Automatic Current Reduction
- At Full Step Output
- Optional On-board Indexer and Encoder Feedback



BLOCK DIAGRAM



DESCRIPTION

The IM483 is a high performance, low cost microstepping driver that incorporates advanced surface mount and ASIC technology. The IM483 is small, easy to interface and use, yet powerful enough to handle the most demanding applications.

The IM483 has 14 different resolutions (both in binary and decimal) built into the driver. These resolutions can be changed at any time. There is no need to reset the driver.

This feature allows the user to rapidly move long distances, yet precisely position the motor at the end of travel without the expense of high performance controllers.

The development of proprietary circuits has minimized ripple current while maintaining a 20 kHz chopping rate. This prevents additional motor heating that is common with drivers requiring higher chopping rates. Now low inductance stepper motors can be used to improve high speed performance and system efficiency. The IM483 also comes with an optional on-board indexer to provide design engineers with versatility and power unmatched in today's industry.

The IM483 is priced lower to provide customers with affordable state-of-the-art technology for that competitive edge needed in today's market.

SPECIFICATIONS

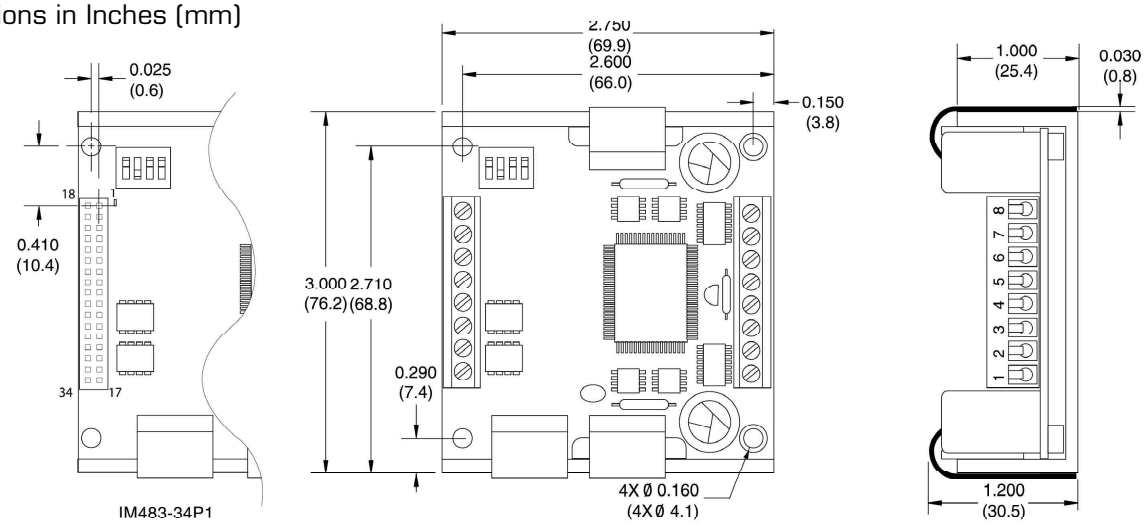
ELECTRICAL — IM483

Input Voltage	+12 to 48 Volts* (Includes Motor Back EMF)
Drive Current (Per Phase)	0.4 to 3 Amps RMS, 4 Amps Peak
Isolated Inputs	Step Clock, Direction, Enable & Reset
Step Frequency (Max)	10 MHz
Steps per Revolution (1.8° Motor)	400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 25000, 25600, 50000, 51200
Protection	Thermal and All Way Short Circuit

*Recommended Power Supply: ISP200-4

MECHANICAL

Dimensions in Inches (mm)



TEMPERATURE

Storage	–40 to +125° C
Case* (Max)	0 to +70° C

*External heat sink may be required to maintain case temperature.

OPTIONS

H–4X	Heat Sink
TN–48	Thermal Pad
–8P2	8 Position 0.045" sq Pin P2 Connector with 8 Position 0.025" sq Pin P1 Connector
–34P1	34 Position 0.025" sq Pin P1 Connector
–PLG	Plug Type Terminal Strip for P1 and P2 Connectors
PLG-R(1/2)	Mating Connectors for the -PLG Option
U3-CLP	Side Mounting Clip Set

PIN FUNCTIONS

Connector P1 (8 Pin)

1. No Connection
2. Step Clock
3. Direction
4. Opto Supply
5. Enable
6. Reset
7. Fault
8. On Full Step

Connector P1* (34 Pin)

3.	Resolution Select 3	16, 26.	On Full Step
4.	Step Clock In	21.	Step Clock Out
6.	Direction In	22.	Direction Out
8.	Opto Supply	23.	Resolution Select 0
10.	Enable	24.	Resolution Select 2
12.	Reset	25.	Resolution Select 1
14.	Fault	27.	Ground

*Pins not shown are no connections.

Connector P2

8. Phase $\overline{A}$
7. Phase A
6. Phase $\overline{B}$
5. Phase B
4. V+ (12V to 48V)
3. Ground
2. Current Adjust
1. Reduction Adjust