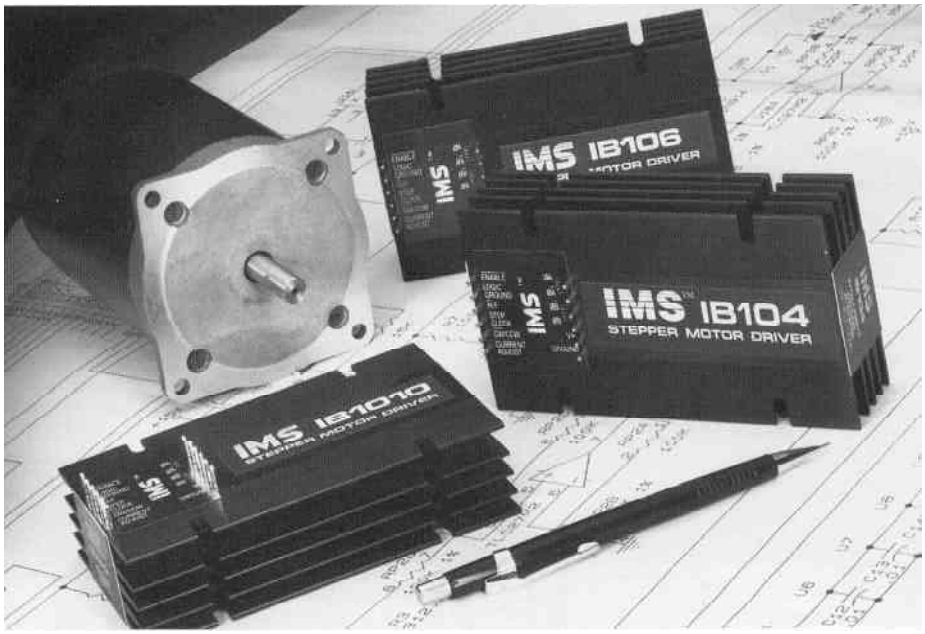
IB104 • IB106 • IB1010

MINIATURE HIGH PERFORMANCE BIPOLAR STEPPING MOTOR DRIVERS

FEATURES

- Low Cost
- Single Supply
- High Input Voltage (+80 V)
- High Output Current (4/6/9 Amps)
- Isolated Inputs
- 20 kHz Chopping Rate
- On-Board Phase Logic
- PC or Chassis Mountable
- Extremely Small Size
- Full or Half Step
- MOSFET Output Stage
- High Step Rate (250 kHz)
- Over/Under Voltage Protection



DESCRIPTION

Intelligent Motion Systems continues to meet the needs of a growing motion industry with these powerful, high performance stepper motor drivers — the IB104, IB106 and IB1010.

Using MOSFET technology to achieve high power from a miniature package, these drives have what it takes to get the maximum performance from the larger, higher torque motors. This type of performance is required for today's most demanding applications. OEM designers will appreciate not only the enhanced capabilities in such a small package, but the LOW price as well.

These 80 volt drives have advanced features usually found only in more expensive drives — single supply, optically isolated inputs, half and full step, and a chopping rate of over 20 kHz that eliminates audible noise.

IMS has preserved pin compatibility with our smaller drives for an easy upgrade if more power is needed. In addition, their small size makes them ideal for PC board mounting, but they can also be frame or chassis mounted and will accept 0.200/0.196 center connectors or plug type terminal strips.

THE IB104

The IB104 operates from +24 to +80 volts at 4 amps/phase for lower power applications requiring high voltage performance.

The IB104 will run cooler because it uses the same MOSFET technology as our larger 80 volt drives.

THE IB106

Higher performance motors require more current. The IB106 was designed for applications requiring increased power.

THE IB1010

The IB1010 has the same high input voltage (+80V), yet with even MORE power! A full 9 Amps per phase for an incredible 1800 watts!

The IB1010 uses the same small package as the IB106, but with an output power increase of 50%!

The IB1010 is for those applications requiring maximum power, but where size and cost are still important factors.

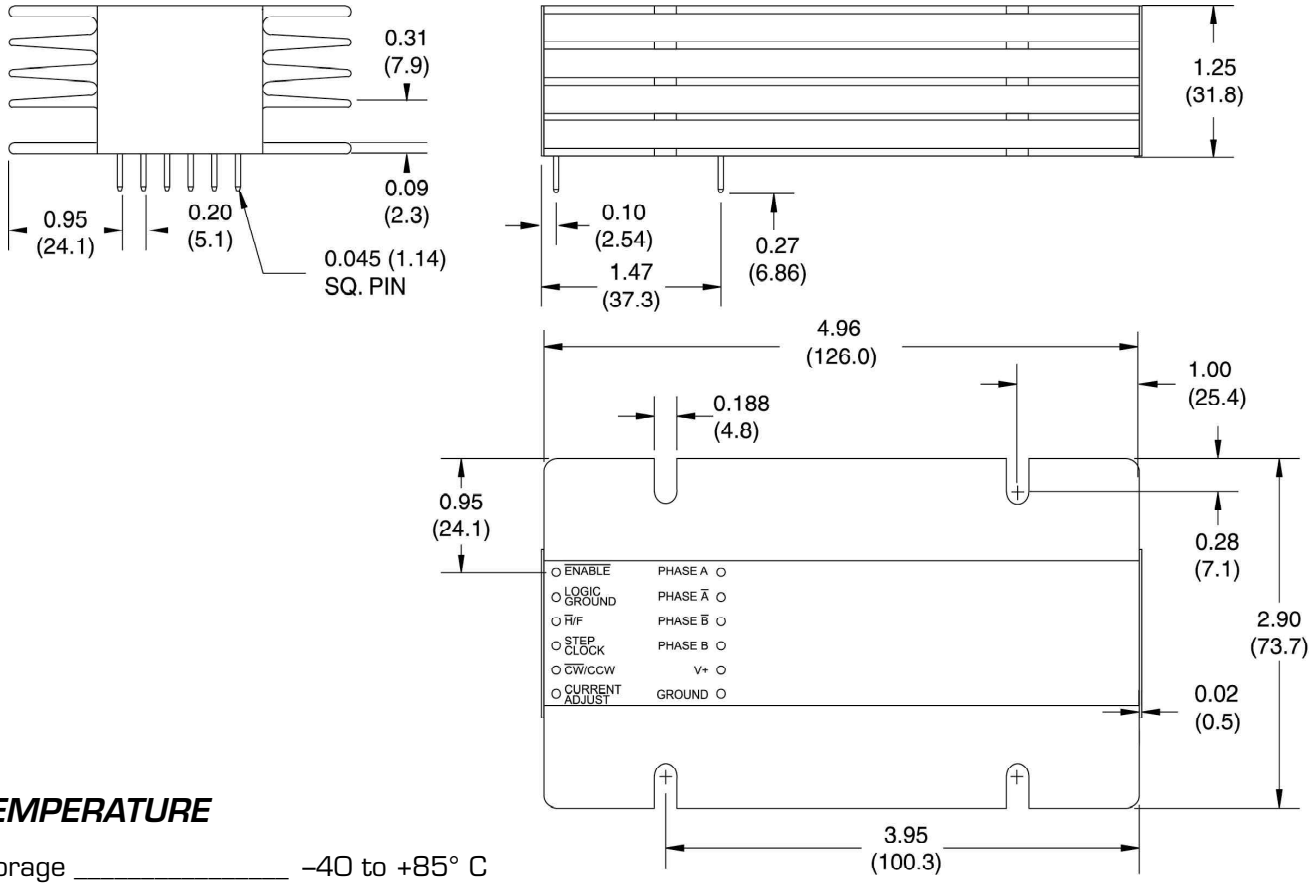
SPECIFICATIONS

ELECTRICAL

	IB104	IB106	IB1010
Input Voltage	+24 to +80 VDC	+24 to +80 VDC	+24 to +80 VDC
Drive Current (Per Phase)	0 to 4 Amps	0 to 6 Amps	0 to 9 Amps
Logic Input Current (to Opto)	7.0 mA (Typ)	7.0 mA (Typ)	7.0 mA (Typ)
Step Frequency (Max)	250 kHz	250 kHz	250 kHz

MECHANICAL

Dimensions in Inches (mm)



TEMPERATURE

Storage	–40 to +85° C
Operating	0 to +50° C
Case* (Max)	+70° C

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

PIN FUNCTIONS

1. Enable
2. Logic Gnd
3. Half/Full Step
4. Step Clock
5. Direction
6. Current Adjust
12. Phase A
11. Phase $\overline{A}$
10. Phase $\overline{B}$
9. Phase B
8. V+
7. Gnd

OPTIONS

OPT140	Interface Board
TS-6	Snap-on Terminal Strips
H-100	Heat Sink
TN-100	Non-IsolatingThermal Pad
TI-100	Isolating Thermal Pad