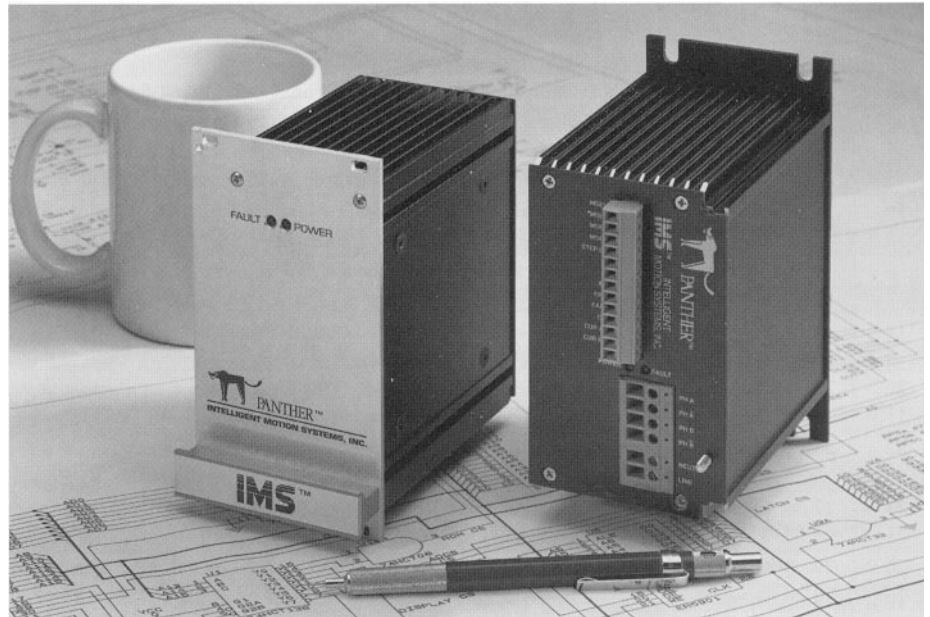


# PANTHER LD

## COMPLETE HIGH PERFORMANCE MICROSTEPPING SYSTEM

### FEATURES

- Integral Driver and Power Supply
- Low Cost
- Extremely Compact (2.6 x 3.9 x 5.4 inches) (68 x 101 x 137 mm)
- High Output Current (3 Amps RMS, 4 Amps Peak)
- Advanced Surface Mount and ASIC Technology
- 115 VAC Input
- No Minimum Inductance
- Fault and Power Indicators
- Up to a 10 MHz Step Clock Rate
- Optically Isolated Inputs
- Automatic Current Reduction
- Short Circuit and Over Temperature Protection
- Up to 51,200 Steps/Rev
- Automatically Switches Between Slow and Fast Decay for Unmatched Performance
- 14 Selectable Resolutions, in Both Decimal and Binary
- Fault Output
- Optional Rack Mounting
- Number of Microsteps Per Step Can Be Changed On-The-Fly Without Motor Movement Interruption
- 20 kHz Chopping Rate
- Built-in Line Filter
- Optional On-Board Indexer and Encoder Feedback



### DESCRIPTION

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

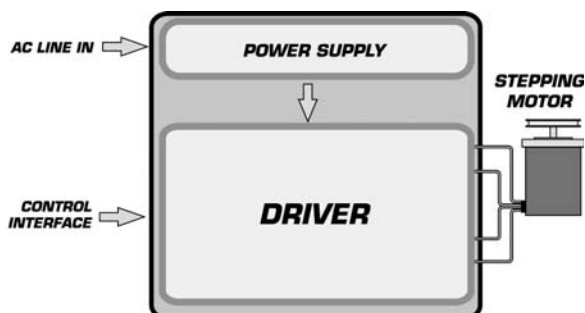
The heart of the PANTHER LD is our IM483 miniature OEM microstepping driver which utilizes our highly integrated IM2000 microstepping controller IC.

Incorporated into the PANTHER LD driver are proprietary circuits that minimize 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 PANTHER LD allows you to change the number of microsteps per step at anytime. There is no need to reset the driver. Built into the driver are 14 different resolutions in both binary and decimal, allowing the user to rapidly move long distances, yet precisely position the motor at the end of travel without the expense of high performance controllers.

IMS recognizes that cost and size are important criteria in many low and medium power applications. The PANTHER LD was developed to meet those needs along with innovative features found only in IMS drivers.

### BLOCK DIAGRAM



## ELECTRICAL SPECIFICATIONS

Input Voltage .....	90 to 128 VAC
Drive Current Per Phase .....	0.4 to 4 Amps Peak (Max 3 Amps RMS)
Isolated Logic Inputs.....	Step Clock, Direction, Enable, Reset
Step Frequency (Max) .....	10 MHz
Steps/Revolutions – 1.8° Step Motors .....	400, 800, 1000, 1600, 2000, 3200, 5000, 6400, 10000, 12800, 25000, 25600, 50000, 51200
Status Indicators (LEDs) .....	Power, Fault
Protection.....	Thermal, Ø to Ø, Ø to Ground, and Ø to +V <sub>BUS</sub> Short Circuit

## PIN ASSIGNMENTS

CONNECTOR P1		CONNECTOR P2	
PIN	FUNCTION	PIN	FUNCTION
1	Phase A	1	Microstep Resolution Select 0
2	Phase /A	2	Microstep Resolution Select 1
3	Phase B	3	Microstep Resolution Select 2
4	Phase /B	4	Microstep Resolution Select 3
5	AC Neutral	5	Step Clock
6	AC Line	6	Direction
		7	Enable
		8	Reset
		9	Opto Supply
		10	Fault
		11	Ground
		12	Current Adjust
		13	Reduction Adjust

## TEMPERATURE

Storage .....	-40 to +125° C
Case .....	0 to +60° C

## ORDER INFORMATION

Name	Part Number
Microstepping System .....	Panther LD
Rack Mounting Option.....	add -RM to basic part #
Small End Screwdriver .....	SD-1

## MECHANICAL

Dimensions in Inches (mm)

