ARTISAN®
TECHNOLOGY GROUP

Your **definitive** source for quality pre-owned equipment.

**Artisan Technology Group**
(217) 352-9330 | sales@artisantg.com | artisantg.com

**Full-service, independent repair center**
with experienced engineers and technicians on staff.

**We buy your excess, underutilized, and idle equipment**
along with credit for buybacks and trade-ins.

**Custom engineering**
so your equipment works exactly as you specify.

- Critical and expedited services
- In stock / Ready-to-ship
- Leasing / Rentals / Demos
- ITAR-certified secure asset solutions

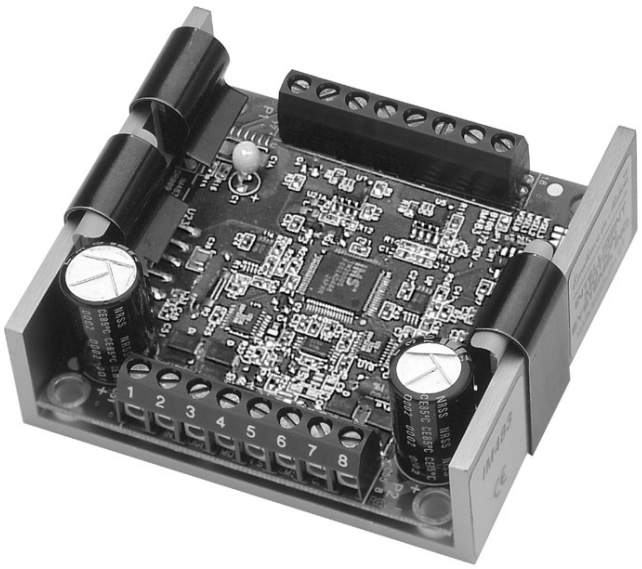
**Expert team | Trust guarantee | 100% satisfaction**

All trademarks, brand names, and brands appearing herein are the property of their respective owners.

Find the *Intelligent Motion Systems IM483 V 1.5* at our website: *Click HERE*

# IM483 CE

## HIGH PERFORMANCE MICROSTEPPING DRIVER



## FEATURES

- Low Cost
- Extremely Small
  (2.7 x 3.0 x 1.2 inches)
  (70 x 69 x 31 mm)
- Single Supply
- High Input Voltage (+48 V)
- High Output Current
  (3 Amps RMS, 4 Amps Peak)
- Advanced Surface Mount and ASIC Technology
- No Minimum Inductance
- 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

## 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.

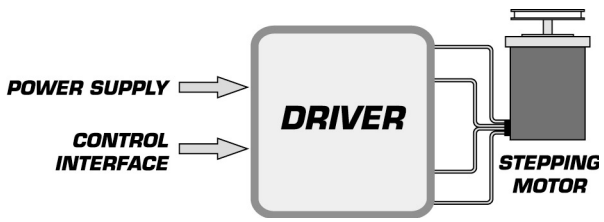
The IM483 has 14 different resolutions (both in binary and decimal) built into the driver. These resolutions can be changed at any time. There is no need to reset the driver.

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.

### BLOCK DIAGRAM






Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

## ELECTRICAL SPECIFICATIONS

Input Voltage* ..... +12 to +48 Volts
Drive Current Per Phase ..... 0.4 to 4 Amps Peak (Max 3 Amps RMS)
Isolated Inputs ..... Step Clock, Direction, Enable & Reset
Step Frequency (Max) ..... 10 MHz (1.8 MHz with –NR Option)
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

*Includes Motor Back EMF, Power Supply Ripple and High Line Conditions. Recommended Power Supply: ISP200-4.

## PIN ASSIGNMENTS

| CONNECTOR P1 – 8 Pin | | CONNECTOR P2 – 8 Pin | |
|---|---|---|---|
| PIN | FUNCTION | PIN | FUNCTION |
| 1 | No Connect | 1 | Reduction Adjust |
| 2 | Step Clock | 2 | Current Adjust |
| 3 | Direction | 3 | Ground |
| 4 | Opto Supply | 4 | +V (+12 to +48 VDC) |
| 5 | Enable | 5 | Phase /B |
| 6 | Reset | 6 | Phase B |
| 7 | Fault | 7 | Phase /A |
| 8 | On Full Step | 8 | Phase A |

| CONNECTOR P1 – 34 Pin | | | |
|---|---|---|---|
| PIN | FUNCTION | PIN | FUNCTION |
| 3 | Resolution Select 3 | 21 | Step Clock Out |
| 4 | Step Clock In | 22 | Direction Out |
| 6 | Direction In | 23 | Resolution Select 0 |
| 8 | Opto Supply | 24 | Resolution Select 2 |
| 10 | Enable | 25 | Resolution Select 1 |
| 12 | Reset | 26 | On Full Step |
| 14 | Fault | 27 | Ground |
| 16 | On Full Step | Pins not shown are NO CONNECT. | |

## TEMPERATURE

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

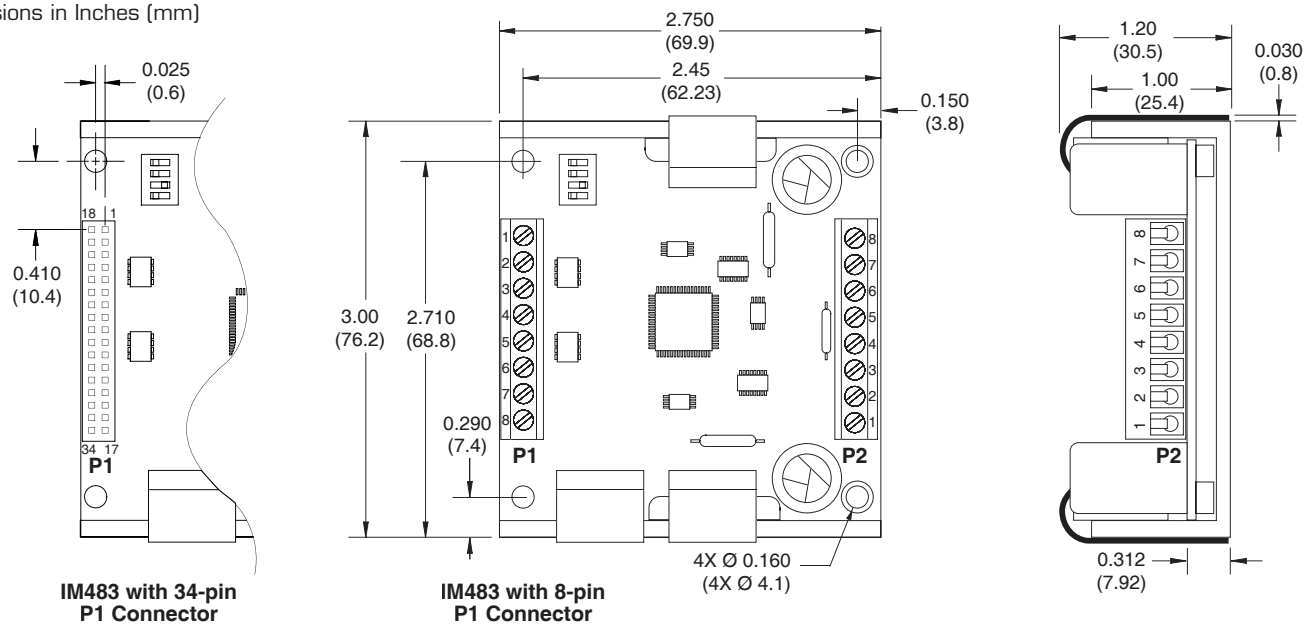
**External heat sink may be required to maintain case temperature.

## ORDER INFORMATION

| Name | Part Number |
|---|---|
| Microstepping Driver | IM483 |
| Noise Reduction Inputs (1.8 MHz) | add –NR to basic part # |
| Heat Sink | H–4X |
| Thermal Pad | TN–48 |
| 8 Position 0.045" sq Pin P2 Connector with 8 Position 0.025" sq Pin P1 Connector | –8P2 |
| 34 Position 0.025" sq Pin P1 Connector | –34P1 |
| Plug Type Terminal Strip for P1 and P2 Connectors | –PLG |
| Mating Connectors for the –PLG Option | PLG–R1/–R2 |
| Side Mounting Clip Set | U3-CLP |

## MECHANICAL SPECIFICATIONS

Dimensions in Inches (mm)




**IM483 with 34-pin P1 Connector**

**IM483 with 8-pin P1 Connector**

REV101805

Artisan Technology Group - Quality Instrumentation ... Guaranteed | (888) 88-SOURCE | www.artisantg.com

**Artisan Technology Group** is an independent supplier of quality pre-owned equipment

## Gold-standard solutions

Extend the life of your critical industrial, commercial, and military systems with our superior service and support.

## We buy equipment

Planning to upgrade your current equipment? Have surplus equipment taking up shelf space? We'll give it a new home.

## Learn more!

Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

Artisan Scientific Corporation dba Artisan Technology Group is not an affiliate, representative, or authorized distributor for any manufacturer listed herein.

We're here to make your life easier. How can we help you today?

(217) 352-9330 | sales@artisantg.com | artisantg.com

ARTISAN® TECHNOLOGY GROUP