

# PIM2401 INTELLIGENT PLUG-IN CONTROL MODULE

25W

DIGITAL DRIVE FOR BRUSHLESS, DC BRUSH, LINEAR AND STEP MOTORS

The PIM2401 is a new Technosoft high-performance intelligent plug-in control module, combining motion controller, drive and PLC functionality in a single compact unit.

The PIM2401 drive is a flexible, cost effective and compact solution, particularly adapted for distributed and co-ordinated control of brushless, DC, linear or step motors of powers up to 25W, with voltages up to 24V.

Typical applications include distributed motor control with possibilities of gearing and electronic CAM functions in a CAN network operation (optional configuration).

The PIM2401 hardware structure is based on a cost optimised design integrating all the basic motor control functions and motion control functionality on a single module. A series of I/O signals, both digital and analogue, are available for easy interfacing with the application.

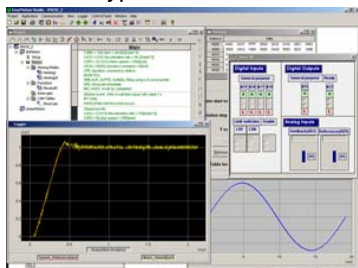
A complete set of high-level Technosoft Motion Language (TML) instructions permit to define and start complex motion sequences from your host, PC, or to execute pre-stored motion sequences selected from I/O lines, in a stand-alone mode.

The embedded intelligence of the PIM2401 facilitates its configuration and programming through a high level graphical interface as the EasyMotion Studio.

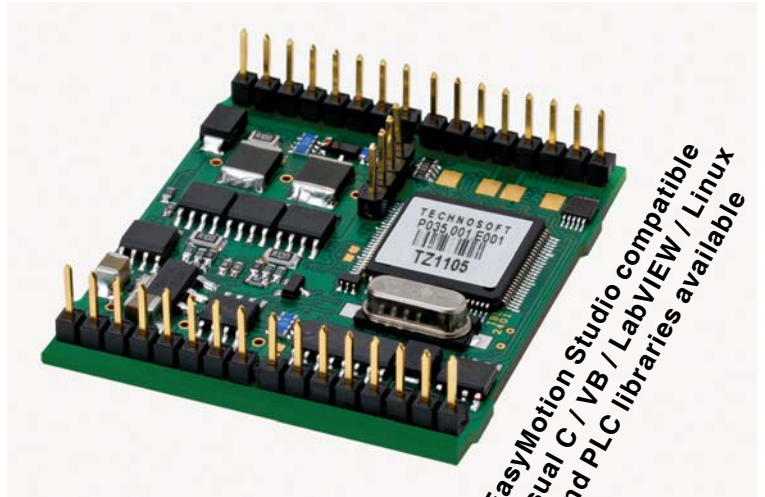
## YOUR NEXT INTELLIGENT MOVE "MOTION CONTROL AT THE CLICK OF A MOUSE"

The configuration, tuning and programming of the PIM2401 intelligent drive is easy using the powerful graphical Technosoft EasyMotion Studio.

System **configuration** and **parameterization** are performed by the selection and test of system structure, motor and sensors type and control mode.



P091.035.PIM2401 LFT.0310



EasyMotion Studio compatible  
Visual C / VB / LabVIEW / Linux  
and PLC libraries available

## FEATURES

- Fully digital servo drive with embedded intelligence and PLC functionality
- Suitable for brushless (sinusoidal or trapezoidal commutation), linear, step and DC brush
- Compact design (49x44x14 mm)
- Various control modes as:
  - Torque, speed or position control
  - Electronic gearing, contouring, profiling
  - Step motor emulation (step and direction input)
  - External variables control capabilities (pressure, flow, temperature etc.)
- Powerful Technosoft Motion Language (TML) instruction set for definition and execution of motion sequences in:
  - Single or multi axis control (master or slave mode)
  - Standalone operation with Stored Motion sequences
- RS-232 serial communication
- Optional CAN-Bus 2.0B up to 1 Mbit/s / CANopen
- Programmable digital input / outputs and analog inputs
  - 5 inputs, 5 or 24V compatible (Enable, Pulse and Direction, Limit Switches)
  - 2 outputs (open-collector), 5 or 24V compatible (Ready, GPO)
  - Differential quadrature encoder and digital Hall interface
  - Linear Hall sensors interface
  - 2 analog inputs, 0/+5V range (+/- 10V optional)
- 6-24V power supply and 5V logic
- High current capability (1A continuous, 3.6A peak current)
- Protection for over current, short circuit, earth fault, over- and under-voltage, I<sup>2</sup>t, control error
- 2.54 mm pitch header pins

## TYPICAL APPLICATIONS

- Systems with distributed motor control intelligence
- Packaging equipment
- Printing
- Textile
- Automotive
- Pick and place
- Factory automation

Application notes with TML program examples available at [www.technosoftmotion.com](http://www.technosoftmotion.com)



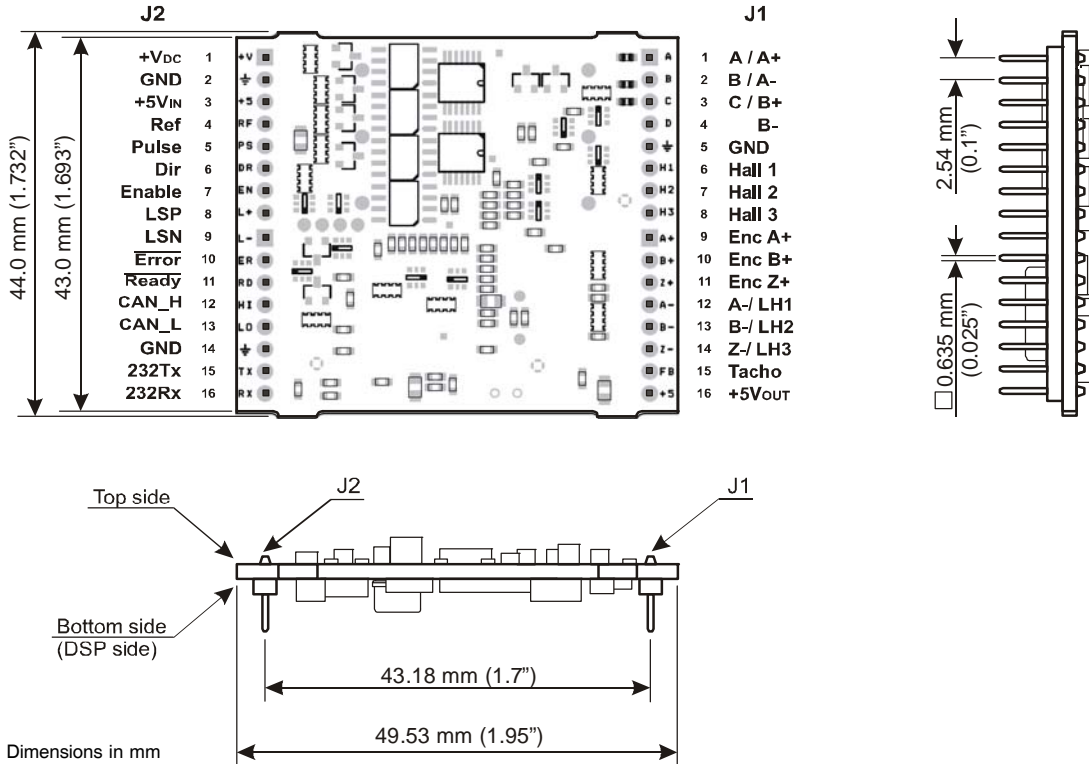
Your  
Next  
Intelligent  
Move



TECHNOSOFT  
MOTION TECHNOLOGY

# DIMENSIONS, SPECIFICATION, ORDERING INFORMATION

## PIM2401



### EASYMOTION STUDIO

The high level graphical development environment EasyMotion Studio, supports the configuration, parameterization and programming of the drive, through

- Motion system set-up wizard
- Tuning assistance with capture functions
- Definition, programming and testing of motion sequences

### MOTION CONTROL LIBRARIES

The TML\_LIB Motion Control Libraries can be used to implement a motion control application on a PC from Visual C / C++, C#, Visual Basic, Delphi or LabVIEW under Windows or Linux operating systems. If a PLC is used as host, implementations of the TML\_LIB observing the IEC 61131 standard are available for Siemens and Omron PLCs.

### FLEXIBILITY

Control schemes supported by the PIM2401 Drive

Motor Types	Torque control	Speed control	Position control
Brushless DC / AC	✓	✓	✓
DC Brush	✓	✓	✓
Linear	✓	✓	✓
Step	✓	✓	✓

### PIM2401 INTELLIGENT PLUG-IN CONTROL MODULE

#### Electrical Specifications

DC supply voltage: motor and logic	6-24V
Maximum continuous current	1A
Peak current (1 sec.)	3.6A
Minimal load inductance	50 microHenry*
Nominal switching frequency	40kHz
Operating ambient temperature	0°C-40°C

\*at 24V and 40kHz switching frequency

#### Ordering Information

P035.001.E102	PIM2401 Plug-in Control Module, 24V, 1A, CAN
P035.001.E112	PIM2401 Plug-in Control Module, 24V, 1A, CANopen
P034.001.E002	EasyMotion Studio software
P040.001.Exxx	TML_LIB Motion Library **

\*\*ask for existing libraries types

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