

# IDM240/640 INTELLIGENT SERVO DRIVES

# 240/640W

## DIGITAL MOTOR CONTROL FOR BRUSHLESS, DC BRUSH, LINEAR AND STEP MOTORS

The IDM240 and IDM640 are new members of the fully digital servo drive family from Technosoft with embedded intelligence based on the latest DSP controller technology.

These high-performance intelligent servo drives, combine motion controller, drive and PLC functionality in a single compact unit. The drives are programmable with the high level Technosoft motion language (TML), used for the definition and the execution of speed or position commands from a master or of pre-stored motion sequences triggered by I/O signals.

Distributed motion control functionality is ensured by the embedded CAN controller or by the RS-485 interface.

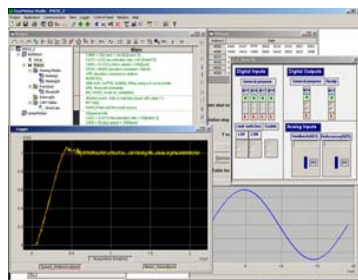
Compatible with Technosoft EasyMotion Studio for quick configuration, tuning and motion programming, the IDM drives offer a flexible and easy to implement solution for a wide range of applications.

### GO FOR REAL INTELLIGENT MOTION "MOTION CONTROL AT THE CLICK OF A MOUSE"

The configuration, tuning and programming of the IDM intelligent servo drives is easy using the powerful graphical Technosoft EasyMotion Studio.

The **first step**, consists of the system **configuration** by the selection and definition of system structure, motor type, feedback types and control mode. Test procedures help you to test and verify the hardware structure.

As the **second step**, the EasyMotion Studio supports the **parameterisation** and the **tuning** of the digital control loops of the selected motor control scheme. Data logging and scope facilities will capture variables during test movements for analysis and fine-tuning.



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 DC, brushless AC (vector control), linear, step and DC brush motors
- Programmable with High level Technosoft EasyMotion Studio software for quick axis configuration and tuning
- Various control modes as:
  - Torque, speed or position control
  - Electronic gearing, contouring, profiling
  - Step motor emulation in BL mode (step and direction input)
  - Open/closed loop, microstepping and stepless operation (step motors)
  - External variables control capabilities (pressure, flow, temperature etc.)
- High resolution up to equivalent of 256 microsteps/step (step motors)
- 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, RS-485 serial communication
- CAN-Bus 2.0B up to 1 Mbit/s / CANopen (IDM240 optional)
- Accepts external digital or analogue reference inputs
  - Opto-isolated programmable I/O (6 outputs / 7 inputs)
  - 2 differential analog inputs +/-10V (reference and tachometer)
  - Differential quadrature encoder (RS422), digital Halls
- Power supplies for logic (12-48V) and motor (12-80V) (IDM640)
- 5A (IDM240), 8A (IDM640) continuous, 16A peak current
- Protection for over current, short circuit, earth fault, over temperature, over- and under-voltage, I<sup>2</sup>t, control error

The **third step** may already be the use of the axis on your machine. Using high level TML commands, you can define and start on-line motion sequences via serial communication port from your host, PC, or an optional hand-held terminal. In the standalone mode, pre-stored motion sequences can be executed, which can be activated through programmable I/O lines.

**Application notes** with ready to run Motion Language program examples are available at [www.technosoftmotion.com](http://www.technosoftmotion.com)



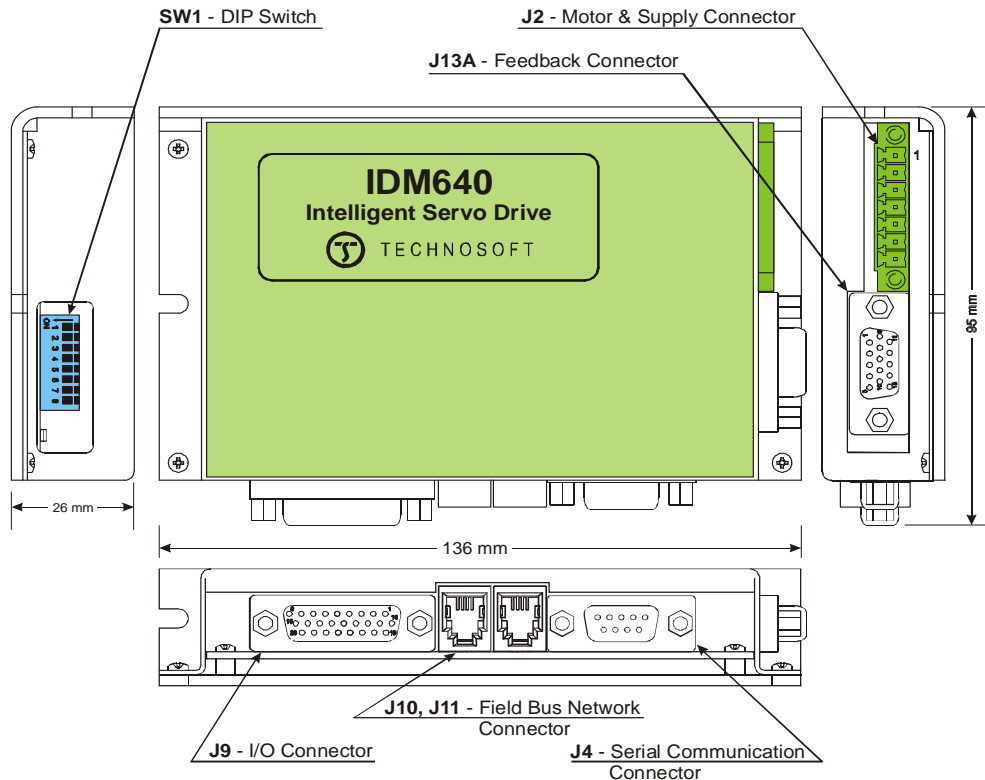
Your  
Next  
Intelligent  
Move



TECHNO SOFT  
MOTION TECHNOLOGY

# DIMENSIONS, SPECIFICATION, ORDERING INFORMATION

## IDM240 / IDM640



### 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
- 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.

### IDM240/640 STARTER KITS

Complete evaluation packages for the IDM drives, containing the servodrive, motor, I/O board, EasyMotion Studio software that are supported by a collection of application notes and documentation.

### IDM240 / IDM640 INTELLIGENT SERVO DRIVES

Electrical Specifications	IDM240	IDM640
DC supply voltage: logic	12-48V	
motor	12-48V	12-80V
Maximum continuous current	5A	8A
Peak current (1 sec. max.)	16A	
Minimal load inductance	200 microHenry*	330 microHenry*
Nominal switching frequency	20kHz	
Operating ambient temperature	0°C-40°C	

\*at 48V (IDM240) / 80V (IDM640) and 20kHz switching frequency

### Ordering Information

<b>P051.001.E002</b>	<b>IDM240-5EI; 48V, 5A, Encoder, Opto-isol. I/O, CAN</b>
<b>P048.001.E101</b>	<b>IDM640-8EI; 80V, 8A, Encoder, Opto-isol. I/O, CAN</b>
<b>P048.001.E111</b>	<b>IDM640-8EI; 80V, 8A, Encoder, Opto-isol. I/O, CANopen</b>
<b>P048.001.E085</b>	<b>IDM640 Starter Kit for Brushless Motor</b>
<b>P048.001.E084</b>	<b>IDM640 Starter Kit for Step Motor</b>
<b>P048.001.E184</b>	<b>IDM240/640 I/O board</b>
<b>P034.001.E002</b>	<b>EasyMotion Studio software</b>
<b>P040.001.Exxx</b>	<b>TML_LIB Motion Libraries**</b>

\*\*ask for existing libraries types

### FLEXIBILITY

Standard control schemes supported by the IDM Drives

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

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