

DIGITAL MOTOR CONTROL FOR DC AND STEP MOTORS

The IPS110 is a new member of the fully Digital Motion Controllers family from Technosoft with embedded intelligence based on the latest DSP controller technology.

Specially designed to perform any stepper control mode from open loop to closed loop stepless operation with encoder feedback, the IPS110 drive works in either single-, multi-axis or stand-alone configurations.

Like all members of their family, the IPS110 drive «speaks» Technosoft Motion Language - a powerful high level instruction set for the definition and the execution of complex motion sequences.

Communication channels are provided under RS232 or CAN 2.0B interfaces (optional).

Compatible with Technosoft EasyMotion Studio for quick configuration, tuning and motion programming, the IPS110 drive offers a flexible and easy to implement solution for a wide range of stepper applications.

EASY SET-UP AND PROGRAMMING

“MOTION CONTROL AT THE CLICK OF A MOUSE”

The configuration, tuning and programming of the IPS110 intelligent stepper drive 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, sensors and control mode. Test procedures help you to test and verify the hardware structure, its integrity and functionality.

As a **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.

IPS210 Intelligent Minidrive version



P091.045.LFT.0310



FEATURES

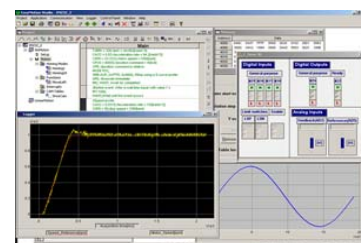
- Fully digital stepper drive with embedded intelligence and PLC functionality
- Programmable with high level EasyMotion Studio software for quick axis configuration and tuning
- Various control modes as:
 - Speed or position control
 - Open/closed loop, microstepping and stepless operation
 - Electronic gearing, contouring, profiling
- High resolution up to equivalent of 256 microsteps/step
- 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 up to 115Kbaud
- Optional CAN-Bus 2.0B up to 1 Mbit/s / CANopen
- Accepts external digital inputs / outputs
 - 2 programmable inputs / outputs
 - Differential Pulse & Direction inputs
 - Incremental encoder inputs
- Power supplies for logic (5V) and motor (12-45V)
- 500mA continuous current rating
- Protection for over current, short circuit, earth fault, over temperature, over- and under-voltage, I²t, control error
- Miniaturized size: DIP24 format (50x26)mm
- Intelligent Power Block execution available
- Starter kit available, containing drive, motor, I/O board, EasyMotion Studio and complete documentation

The **third step** refers to motion definition, and may already be followed by the final tests of the axis on your application.

Using high level TML commands, you can define and start motion sequences via serial communication port from your host or PC, or execute pre-stored motion sequences, which can be activated through programmable I/O lines.

Application notes with ready to run Motion Language programs are available at

www.technosoftmotion.com

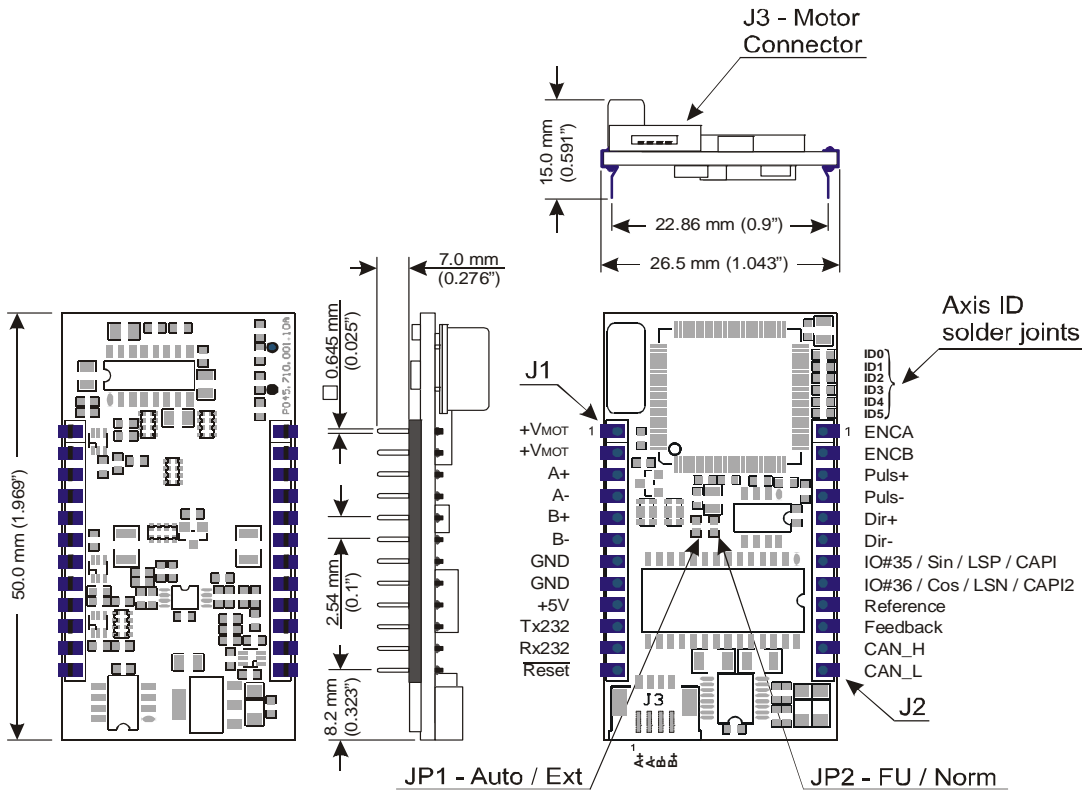


Your
Next
Intelligent
Move



DIMENSIONS, SPECIFICATION, ORDERING INFORMATION

IPS110



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.

STARTER KIT FOR IPS110

Technosoft also offers a Starter Kit based on the IPS110 drive, a ready-to-run package containing the drive, the EasyMotion Studio software, a step motor and a base I/O board, together with full documentation and application notes.

IPS110 INTELLIGENT STEPPER DRIVE

Electrical Specifications

	IPS110
DC supply voltage: logic	5V
motor	12-45V
Maximum continuous current	500mA
Peak current (1 sec. max.)	1A
Minimal load inductance	250 microHenry*
Nominal switching frequency	20kHz
Operating ambient temperature	0°C-40°C

*at 45V and 20kHz switching frequency

Ordering Information

P045.001.E001	IPS110 Microstep / DC Drive, 48V, 0.5A, RS232
P045.001.E002	IPS110 Microstep / DC Drive, 48V, 0.5A, CAN
P045.001.E012	IPS110 Microstep / DC Drive, 48V, 0.5A, CANopen
P045.001.E084	IPS110 Starter Kit for Stepper Motor
P034.001.E002	EasyMotion Studio software
P040.001.Exxx	TML_LIB Motion Libraries**
P045.001.E184	IPS110 I/O board

**ask for existing libraries types

FLEXIBILITY

Standard operation modes of IPS110 Intelligent Stepper Drive

Operation Mode	Full / Half Step	Micro - stepping	Stepless
Open Loop	✓	✓	
Closed Loop	✓	✓	✓

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