

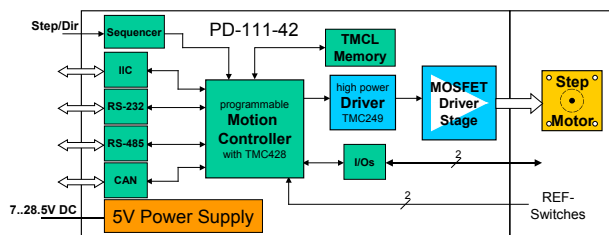
# PD-111-42

42mm / NEMA17  
 High Performance  
 Stepper Motor with  
 Controller / Driver  
 and Serial Interface

**INFO** The PD-111-42 is a full mechatronic solution including a 42 mm flange high torque motor. Its high motor current allows up to 1200 RPM movement and high precision 64 microsteps. The PD-111-42 can be controlled via RS232, IIC, RS485 or CAN interface. The power supply, interface and the multi purpose I/Os can be connected with small JST connectors. The PD-111-42 comes with the PC based software development environment TMCL-IDE for the Trinamic Motion Control Language (TMCL). Using predefined TMCL high level commands like „move to position“ or „constant rotation“ a rapid and fast development of motion control applications is guaranteed. Communication traffic is kept very low since all time critical operations, e.g. ramp calculation are performed on board. The TMCL program can be stored in the on board EEPROM for stand-alone operation. The firmware of the module can be updated via the serial interface. With the stallGuard™ feature it is possible to detect motor overload or motor stall.

### MAIN CHARACTERISTICS

- ELECTRICAL DATA**
  - 7V to 28.5V supply voltage
- MOTOR DATA**
  - total length: 74 mm: max. torque 0.46Nm
  - up to 1200 RPM at 0.25Nm
  - motor uses 2.8A RMS current
- INTERFACE**
  - RS-232, I<sup>2</sup>C, RS-485 or CAN 2.0b host interface
  - 2 inputs for reference and stop switches
  - 1 general purpose input and 1 output
- FEATURES**
  - up to 64 times microstepping
  - memory for 2048 TMCL commands
  - automatic ramp generation in hardware
  - on the fly alteration of motion parameters (e.g. position, velocity, acceleration)
  - stallGuard™ for sensorless motor stall detection
  - dynamic current control
- SOFTWARE**
  - stand-alone operation using TMCL or remote controlled operation
  - PC-based application development software TMCL-IDE included
- OTHER**
  - pluggable JST connectors / cables included
  - RoHS compliant



ORDER CODE	DESCRIPTION
PD-111-42 (-option)	PANdrive 0.46 Nm with high speed motor
OPTIONS	
485	RS-485, RS-232 and I2C interface
CAN	CAN, RS-232 and I2C interface