

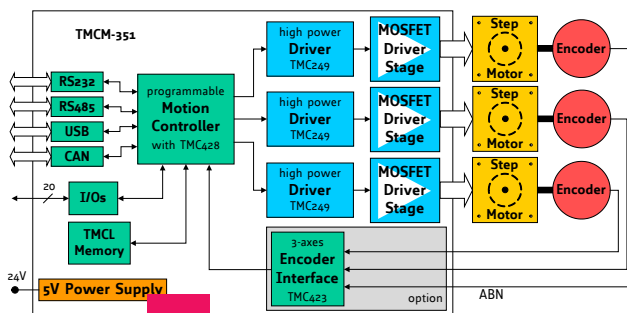
# TMCM-351

**3-Axis  
Controller / Driver  
2.8A / 24V  
Optional Encoder Interface  
Optional CANopen Firmware**

**INFO** The TCMC-351 is a powerful triple axis 2-phase stepper motor controller/driver module with optional encoder interface. Using the integrated additional I/Os it even can do complete system control applications. The motors and switches can be connected easily with screw or crimp style connectors. The connection of the I/Os, the encoder and SPI can be done via a two row header. The TCMC-351 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“ rapid and fast development of motion control applications is guaranteed. The TCMC-351 can be controlled via RS-232, RS485, CAN or USB interface. Communication traffic is kept very low since all time critical operations, e.g. ramp calculation are performed on board. A user TMCL program can be stored in the on board EEPROM for stand-alone operation. An optional firmware allows to control the TCMC-351 via CANopen. The firmware of the module can be updated via the serial interface. With the stallGuard™ feature it is possible to detect overload and stall of the motor.

MAIN CHARACTERISTICS

- ELECTRICAL DATA**
  - up to 2.8A coil current RMS
  - nom. 24V DC supply voltage (28.5V DC max)
- SUPPORTED MOTORS**
  - two-phase bipolar motors with up-to 2.8A coil current
- INTERFACE**
  - RS-232, RS-485, CAN 2.0b host and USB serial communication interfaces
  - inputs for reference and stop switches
  - general purpose analog and digital I/Os
  - SPI connector with three chip select signals for I/O extension
- FEATURES**
  - each axis individually programmable
  - closed loop operation with TMCL possible
  - up to 64 times microstepping
  - memory for 2048 TMCL commands
  - motion profile generation in real-time
  - on the fly alteration of motion parameters
  - dynamic current control
  - stallGuard™ for sensorless stall detection
  - integrated protection
  - TRINAMIC driver technology: low power dissipation, no heatsink required
- SOFTWARE**
  - stand-alone operation using TMCL or remote controlled operation
  - PC-based application development software TMCL-IDE included
  - optional CANopen firmware (CiA 301, 402)
- OTHER**
  - pluggable screw or crimp style connectors
  - RoHS compliant
  - size: 160 x 100 mm<sup>2</sup>



ORDER CODE	DESCRIPTION
TMCM-351 (-option)	TMCM-351 without encoder interface
TMCM-351-E (-opt.)	TMCM-351 with encoder interface
<b>OPTIONS</b>	
TMCL	with TMCL firmware
CANopen	with CANopen firmware