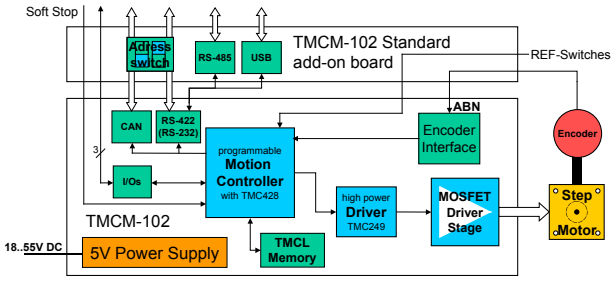


TMCM-102

**1-Axis
Controller / Driver
3.5A / 48V
with Encoder Inf.**

INFO

The TMCM-102 is a single axis 2-phase stepper motor controller and driver module with an aluminium profile for quick and robust mounting. The built in encoder feedback makes it an optimum solution for high-reliability drives. This drive is optimally suited for industrial high-reliability applications. The power stage has very low dissipation when compared to competitors' products. Its interface add-on board concept allows for customer specific interface / connector selection. The TMCM-102 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. 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
- up to 3.5A RMS coil current (5A peak)
- 18V to 55V motor supply voltage

SUPPORTED MOTORS
- two-phase bipolar motors with 1A to 3.5A coil current
- incremental encoder (2 or 3 channel, single ended)

INTERFACE (WITH ADD ON-BOARD)
- RS232, RS485, RS422, USB or CAN 2.0b host interface
- inputs for reference and stop switches
- general purpose analog and digital I/Os

FEATURES
- 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)
- closed loop for highly dependable drives
- stallGuard™ for sensorless motor stall detection

SOFTWARE
- stand-alone operation using TMCL or remote controlled operation
- PC-based application development software TMCL-IDE included
- optional simple to use ASCII protocol
- optional cmd. set similar to IMS IM483IE

OTHER
- RoHS compliant
- size: 76 x 70 mm²

ORDER CODE	DESCRIPTION
TMCM-102-IF	1-axis controller / driver 3.5A / 48V with interface add-on board (standard)
TMCM-102	1-axis controller / driver 3.5A / 48V (on request)