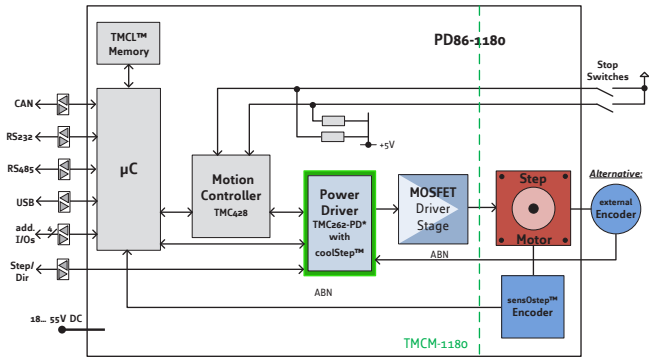coolStep™

10 mm

TMCM-1180

**1-Axis
Motor Mountable (NEMA34)
Controller / Driver
5.5A / 48V
with Encoder Interface
Optional CANopen**

INFO The TMCM-1180 is an intelligent stepper motor controller/driver module featuring the new outstanding coolStep™ technology for sensorless load dependent current control. This allows energy efficient motor operation. With the advanced stallGuard2™ feature the load of the motor can be detected with high resolution. The module is designed to be mounted directly on a 86mm flange QMot stepper motor. It converts the motor into a compact mechatronic device with serial bus oriented or stand-alone control. The TMCM-1180 comes with the PC based software development environment TMCL-IDE for the Trinamic Motion Control Language (TMCL™). Predefined high level TMCL™ commands guarantee a rapid development of motion control applications. Communication traffic is kept very low since all time critical operations, e.g. ramp calculation are performed onboard. CANopen firmware will be available optionally.

MAIN CHARACTERISTICS

ELECTRICAL DATA
- · 24 to 48V DC (nom.) supply voltage
- · up to 5.5A RMS coil current

SUPPORTED MOTORS
- · two-phase bipolar stepper motors
- · mountable on QMot motors (86mm/ NEMA34)

INTERFACE
- · CAN, USB, RS232, RS485
- · step&direction interface
- · inputs for ref. & stop switches
- · general purpose I/Os
- · encoder interface (ABN)

FEATURES
- · stallGuard2™ sensorless high resolution load detection
- · coolStep™ sensorless load dependent current control
- · up to 256 times microstepping
- · microPlyer™ 16 to 256 times microstepping interpolation
- · memory for 2048 TMCL commands
- · motion profile calculation in hardware (RT)
- · on the fly alteration of motion parameters (e.g. position, velocity, acceleration)

SOFTWARE
- · stand-alone operation using TMCL™ or remote controlled operation
- · PC-based application development software TMCL-IDE included
- · optional CANopen firmware (CiA 302, 402)

OTHER
- · pluggable JST connectors
- · RoHS compliant
- · size: 86 x 86 mm²

ORDER CODE	DESCRIPTION
TMCM-1180 (-option)	1-axis controller / driver module 5.5A / 48V
TMCM-1180-CABLE	cable loom including all neccessary cables (single ended)
Related products:	QMot motors QSH8618

INTERFACE OPTIONS	
TMCL	with TMCL™ firmware
CANopen	with CANopen firmware (under development)