coolStep™

PD-1161

**57/60mm | NEMA23/24
Stepper Motor with
Controller / Driver
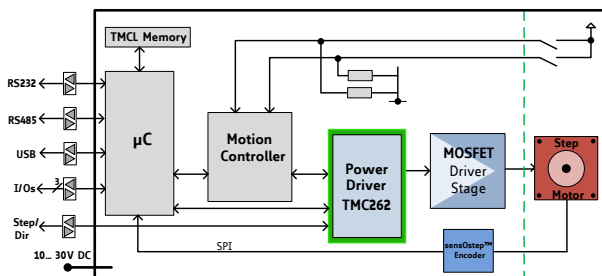sensOstep™ Encoder
Serial Interface**

INFO The PANdrive PD57-1161 and PD60-1161 family is a mechatronic solution including a 57mm or 60mm flange motor, a controller board and a sensOstep™ encoder. It can be controlled via serial interface or operated in standalone mode. Power supply, external encoder, interface and I/Os can be connected with JST connectors.

With the advanced stallGuard2™ the motor load can be detected with high resolution. The outstanding coolStep™ technology for sensorless load dependent current control allows efficient motor operation.

The PC based software development environment TMCL-IDE for the Trinamic Motion Control Language (TMCL™) can be downloaded free of charge from the TRINAMIC website.

MAIN CHARACTERISTICS

ELECTRICAL DATA
· nom. 24V DC supply voltage (10V to 30V)

MOTOR DATA
· flange size 57/60mm | NEMA23/24

INTERFACE
· USB, RS232, RS485
· step&direction interface
· inputs for ref. & stop switches
· general purpose I/Os

FEATURES
· up to 256 times microstepping
· memory for 2048 TMCL™ commands
· stallGuard2™ sensorless load detection
· coolStep™ sensorless load dependent current control
· microPlyer™ 16 to 256 times microstepping interpolation
· integrated absolute sensOstep™ encoder with 1024 ppr.
· automatic ramp generation in hardware
· on the fly alteration of motion parameters

SOFTWARE
· standalone operation using TMCL or remote controlled operation
· PC-based (Windows) application development software TMCL-IDE downloadable

OTHER
· RoHS compliant

Block diagram

RS232		
RS485	µC	Motion Controller
USB		
I/Os		
Step/Dir		

TMCL Memory

Power Driver TMC262

MOSFET Driver Stage

Step Motor

sensOstep™ Encoder

SPI

10...30V DC

ORDER CODE	DESCRIPTION
PD57-1-1161	0.55 Nm / QMot motor QSH5718-41-28-055
PD57-2-1161	1.01 Nm / QMot motor QSH5718-51-28-101
PD60-3-1161	2.10 Nm / QMot motor QSH6018-65-28-210
PD60-4-1161	3.10 Nm / QMot motor QSH6018-86-28-310
TMCM-1161-CABLE	Cable loom including all neccessary cables (single ended)