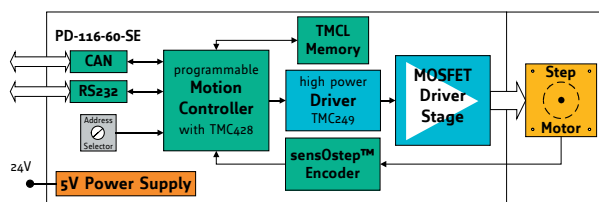# PD-**116-60**-SE

**6omm / NEMA24
Stepper Motor with
Controller / Driver,
with Encoder and
Serial Interface**

INFO The PD-116-60-SE is a full mechatronic solution including a 60 mm flange motor (NEMA24). It combines a convenient controller electronic and a sensOstep™ encoder with a range of different motor types. The PD-116-60-SE offers four motor torque options and can be controlled via RS-232 or CAN interface. Power supply, RS232 interface and multi purpose I/Os can be connected via a 15-pin D-Sub connector and CAN via a 9-pin D-Sub connector. The chopSync™ feature allows high speed movement avoiding resonances. The PD-116-60-SE 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 onboard. The TMCL program can be stored in the on-board EEPROM for stand-alone operation. An optional firmware allows to control the PD-116-60-SE via CANopen. The firmware of the module can be updated via the serial interface.

MAIN CHARACTERISTICS

ELECTRICAL DATA	· nom. 24V DC supply voltage (28.5V max.)
	· up to 2.8A RMS coil current
MOTOR DATA	· holding torque 1.10 / 1.65 / 2.10 / 3.10 Nm
	· please also refer to the motor datasheet
INTERFACE	· CAN 2.0b (up-to 1Mbit/s) and RS232 interface
	· five 24V compatible inputs (stop- and home-switch) and 3 open-collector outputs
FEATURES	· sensOstep™ encoder (max. 4096 incr./rot.)
	· chopSync™ for high velocity operation
	· stallGuard™ for motor stall detection
	· up to 64 times microstepping
	· memory for 2048 TMCL commands
	· rotary switches to adjust CAN-ID
	· motion profile calculation in real-time
	· on the fly alteration of motion parameters
	· dynamic current control
	· 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	· 15-pin D-Sub connector (male)
	· 9-pin D-Sub connector (male)
	· RoHS compliant

ORDER CODE	DESCRIPTION
PD1-116-60-SE (-option)	PANdrive 1.10 Nm, 77 mm length with motor QSH6018-45-28-110
PD2-116-60-SE (-option)	PANdrive 1.65 Nm, 88 mm length with motor QSH6018-56-28-165
PD3-116-60-SE (-option)	PANdrive 2.10 Nm, 97 mm length with motor QSH6018-65-28-210
PD4-116-60-SE (-option)	PANdrive 3.10 Nm, 118 mm length with motor QSH6018-86-28-310
OPTIONS	
TMCL	with TMCL firmware
CANopen	with CANopen firmware