

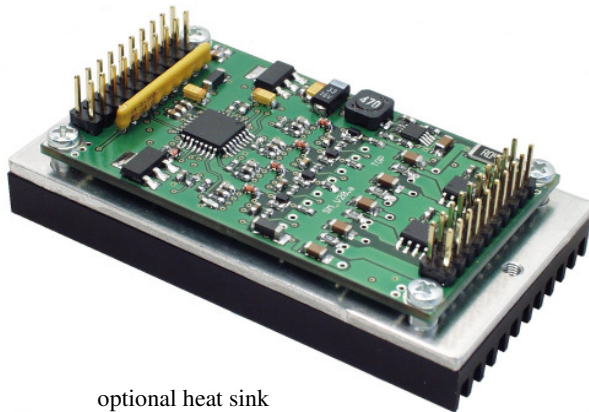
# Product Info

# 2.Q.2009



## Stepper Module SM-V20

- OEM module for 2(3)-phase steppers
- Automatic motor setup at power on
- Automatic setting of the operating parameters
- 24-80V motor voltage      1-8A peak phase current



optional heat sink

- **200 to 10000 steps/revolution**  
for all common lead screw pitches
- **High step accuracy and high and constant torque**
- **Automatic current reduction and StandBy-Mode**
- **Variable Boost-Function**
- **Control Interface** (3,3V, TTL, CMOS compatible)
  - o Pulse and Direction up to 500kHz
  - o optional: ASI(RS232, RS485), SPI, I<sup>2</sup>C
- **Outputs** (3,3V, TTL)
  - o Ready, Diagnostics
- **Comprehensive protection functions**
  - o Over current, temperature + cooling fan control,
  - o Low voltage, phase interruption, current reduction
- **Comprehensive diagnostics indicator LED**
- **Innovative Mechatronics**
  - o Heat conducting mounting bracket
  - o Optional heat sink
- **All signals on pin row**
  - o Module for plug in or to solder in
- **Super compact, only 75x40x10 mm<sup>3</sup>**

### Variants / Order Code:

		SM_Vxxn
2/3	2/3 Phase	_____
0/1/2	PCB only / with bracket / with heat sink	_____
n	customer specific	_____

### Stepper power for limited space requirements

The SM-Vxx stepper module is intended for all users who want to integrate a high power density drive into their application. The module is complete, meaning all "critical" components are already integrated. Therefore special power drive know is not essential. Integration into a user circuit is simple and easy. All signals are connected via pin rows. The module can also be plugged in since the high current power signals share multiple pins.

The power drive sets new standards for digital control of stepper drives. Utilizing state-of-the-art DSP-technology made it possible to realize new control procedures and circuit technologies. These are especially the **Automatic Controller Setup** ( used for optimal stepper performance ) when switching on the drive power, the continuous **Setting of the Operating Parameters** during operation, a **variable Boost-Function** and current reduction as well as a special **StandBy Mode** when the drive is idle. The power drive design is fully digital and the phase current is measured directly in the motor windings. The strict focus was here to achieve optimal operating performance such as low resonance run, high step angle accuracy and high and constant torque from step to step. The power specs are 24...80V, 1...8A peak, up to 10000 steps/revolution with a super compact design foot print of only 75x40x10mm<sup>3</sup>. In addition to pulse and direction signal there are optional interfaces such as ASI(RS232, RS485), SPI and I<sup>2</sup>C possible that allow set drive operating parameters remotely.

### Block Diagram

