

# Product Info SMDx76



- Power Drive for 2-(3) Phase Steppers
- Automatic motor set up at power on
- Automatic operating parameter setup
  - o High dynamic in the upper speed range
  - o High torque during acceleration
  - o Quiet at stand still due to StandBy Mode
- 24...80 Volt, 1,5...8 Ampere



optional heat sink

- 200 to 10000 steps / revolution for all common lead screw pitches
- High and constant torque from step to step
- Inputs: (opto isolator)  
**PULSE, DIRECTION, IN1[OFF, RESET, GATE]**  
Wide range input 3,5...24V  
Step frequency up to 250 kHz
- Outputs: (opto isolator)  
**READY**
- Protected against over-current, over-temperature, over-voltage and low voltage
- Extensive device status information with LEDs
- High quality setup and connector elements
- Automatic current reduction at stand still
- Active ballast circuit protects from over-voltage
- Only one supply voltage necessary
- Wall mount or DIN-rail mounting
- very compact, only 112x20x80 mm<sup>3</sup> (without heat sink)

## Stepper Motor Technology new defined

This power drive sets new standards for the digital control of stepping motors. Utilizing a state-of-the-art digital signal processor (DSP) made it possible to develop new procedures and control technologies. The result is a low cost and very compact power drive especially efficient in highly dynamic applications. The robust drive is suitable for rough industrial environments. A wide range of 2-phase and 3-phase stepping motors (sizes NEMA23,24 and 34) can be covered.

**Automatic Controller Setup** At power on, the drive electronically analyzes the motor. Next the operating parameters are automatically tuned to achieve optimal dynamic and smooth run drive performance. Consequently the power drive adjusts itself to the respective motor. Specific power drive know how is therefore not required.

**Boost and Current Reduction** A variable boost function is enabled depending on the actual acceleration rate, i.e. an additional current offset is added to the set current value. With this, higher acceleration rates are possible. The current reduction reduces the motor current at stand still to 60% of the set current value.

### Dynamic Operating Parameter Adjustment

Several conditions are continuously monitored during operation and the operating parameters are automatically adjusted. As a result the constant motor torque range stretches and dynamic positioning moves are also possible in the higher speed range.

**StandBy Mode** With lower speeds down to stand still the power drive gradually switches to the stand by mode. The motor is absolutely quiet and this with full torque. A big advantage for office and lab environments.

**Digital Phase Current Controller** The power drive design is fully digital and the phase current is measured directly in the motor windings. So this results in optimal operating performance such as low resonance run, high step angle accuracy and high and constant torque from step to step.

## Variants / Order Code

SMD276-xx	2-Phase Power Drive
SMD376-xx	3-Phase Power Drive
-00	standard
-01	Replacement for SMD243
-02	Replacement for SMD275
-03+	customized variants