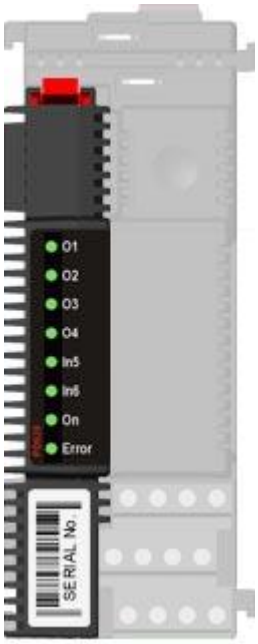
PD 626 Stepper motor controller and driver

Specific Features



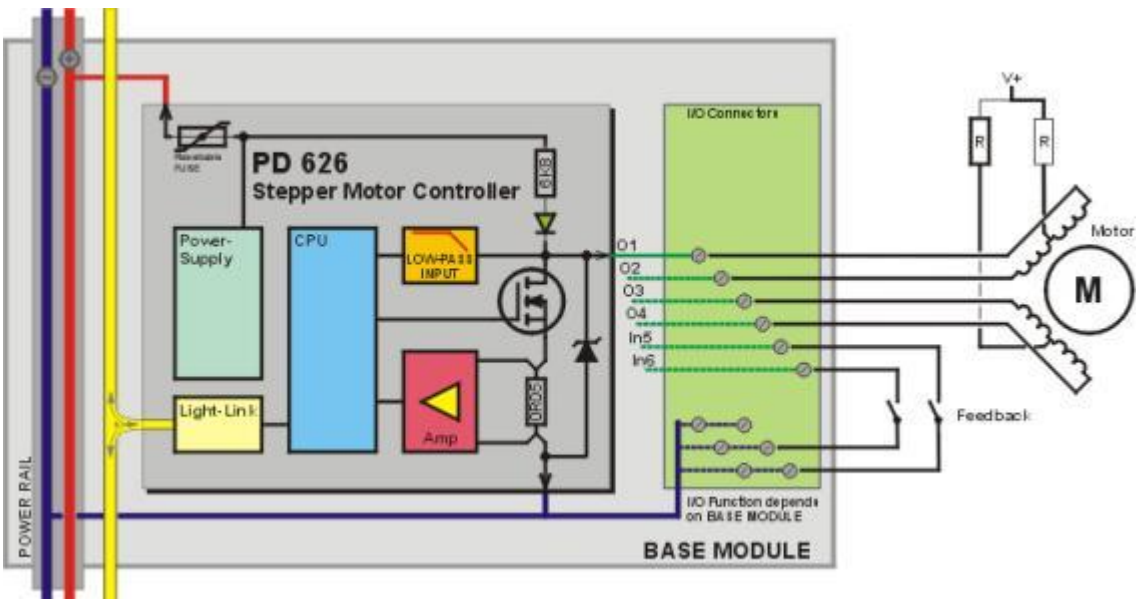
The PD 626 is an integrated controller and driver for stepper motors.
It can directly drive a unipolar stepper motor having up to 1.8A windings.
The software in the controller permanently controls the acceleration or deceleration to reach the target position or the target speed.

Individual control parameters for each rotation direction are provided
Integrated high-speed limit inputs, enable configurable motor control events to be executed on the raising or falling edge of each input.
Used with base module BM 005 provides easy-to-use DIN-rail mounting.

- 13000 Hz stepping rate.
- 1.8 A per winding by integrated driver.
- Half stepping.
- Single full stepping.
- Dual full stepping.
- Permanent acceleration / deceleration control.
- Target speed mode.
- Target position mode.
- High-speed inputs for motor control triggers.
- 32 bit resolution; allowing a single move command to span 2 billion steps in each direction.
- Wide power supply range.
- Wide temperature range.
- 2 LEDs for power On and Error indication.
- 4 LEDs for motor control status.
- 2 LEDs for limit input status.

PD 626 Block Schematic

The diagram shows connection of a stepper motor and limit switches to a PD 626.



Channel Structure

The PD 626 consists of 2 channels as shown in the table.

Channel No.	Channel Name	Channel Description
0	Service	Device Ident.,Address and Config.
1	Stepper	Control of stepper motor

Electrical Specifications

Power supply		
Power supply DC:	nom.	24.0 V
	min.	18.0 V
	max.	32.0 V
Ripple:	max.	5%
Step controller		
Step frequency	max.	13,000 step/sec
Acceleration	min.	0.87 step / sec²
	max.	800,000 step / sec²
Speed accuracy		See graphs.
Speed repeatability error	max.	0.01%
Span of one positional movement	max.	+ / - 2 billion steps
Power consumption @ 24Vdc		
All outputs/inputs = ON	max.	45 mA
All outputs/inputs = OFF	max.	30 mA
Current requirement at power up:	max.	60 mA
Short circuit cut-off delay time (current > 2 A)	max.	100 µsec
Temperature		
Operating temperature	-25 °C - 70 °C	
Storage temperature	-40 °C - 85 °C	
Humidity		
Relative humidity:	max. 95%	
EMC		
Test method	EN 61000-6-2, EN 61000-6-3	
Vibration		
Test method	IEC 60068-2-6	
Frequency range:	2-100 Hz	
Frequency / amplitude:	2-10 Hz : +/- 5.0 mm	
	10-100 Hz: +/- 2g	
Sweep rate:	max. 1 octave/min	
Number of axes:	3 mutually perpendicular	

Mechanical Details