



Technical Data Sheet DRV-1

Precise Motion Control. Quiet Operation. Easy Integration.

The Resolution Air DRV-1 Bi-Polar Chopper Driver is a compact, high-performance digital stepper motor driver designed to deliver smooth, accurate, and reliable motion control for industrial automation and OEM equipment. Utilizing advanced digital current control technology, the DRV-1 provides exceptional torque, low vibration, and quiet operation while requiring minimal setup.



Key Benefits

- Smooth, Quiet Motion – Advanced digital current control minimizes vibration and acoustic noise.
- High Torque Performance – Optimized current regulation delivers maximum motor performance throughout the speed range.
- Fast Installation – DIP-switch configuration eliminates software programming or PC setup.
- Flexible System Integration – Compatible with Step & Direction or CW/CCW control methods.
- Wide Input Compatibility – Accepts industry-standard 5–24 VDC, sinking or sourcing control signals.
- Reliable Industrial Design – Optically isolated inputs and integrated protection circuitry improve reliability.

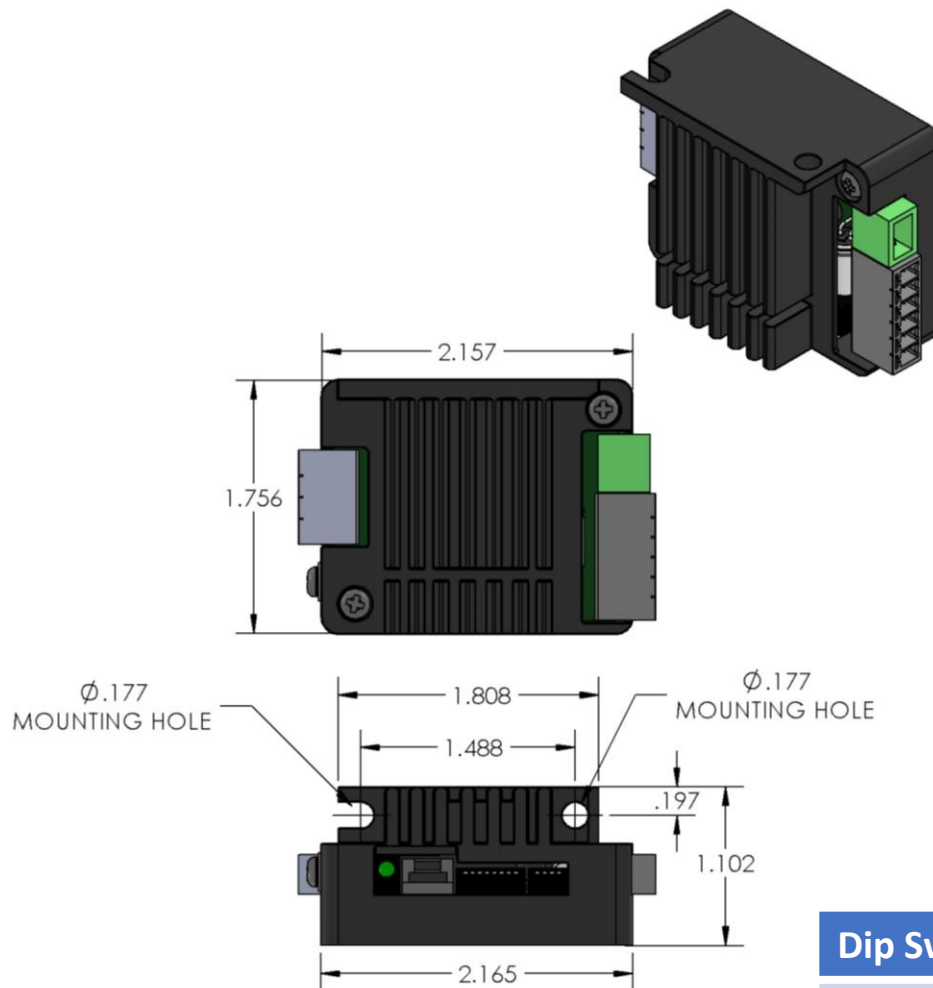
Features

- 12–40 VDC operating voltage
- Peak motor current up to 3.0 Amps
- Motor speeds up to 3000 RPM
- Step rates up to 500 kHz
- 16 selectable microstep resolutions
- Step & Direction or CW/CCW control
- Three optically isolated 5–24 VDC inputs
- Adjustable running current
- Automatic idle current reduction (50% or 90%)
- Built-in self-test
- Step smoothing and digital noise filtering

Why Choose the DRV-1

The DRV-1 combines advanced digital stepper technology with simple hardware configuration. Its compact footprint, wide operating voltage, configurable microstepping, and industrial-grade isolated inputs make it an ideal solution for OEMs and machine builders.

Parameter	Specification
Supply Voltage	12–40 VDC
Peak Output Current	Up to 3.0 A Peak
Control Inputs	STEP, DIR, ENABLE
Input Voltage	5–24 VDC Optically Isolated
Maximum Step Frequency	500 kHz
Maximum Speed	Up to 3000 RPM
Control Modes	Step & Direction, CW/CCW
Microstep Resolution	200–25,600 steps/rev (16 settings)
Idle Current Reduction	50% or 90% selectable
Configuration	DIP switches
Protection	Over-current and temperature monitoring



Current Settings

Current(Amps.) (Peak of Sine)	SW1	SW2	SW3	MPPV -	HPPV -
0.422	ON	ON	ON	77%	
0.476	OFF	ON	ON	87%	
0.531	ON	OFF	ON	97%	
0.614	OFF	OFF	ON		75%
0.693	ON	ON	OFF		85%
0.772	OFF	ON	OFF		95%
0.866	ON	OFF	OFF		
0.965	OFF	OFF	OFF		

Dip Switch Settings

Run Current: 0.422-0.965
Amps (Peak of Sine)

Idle Current: 50%, 90%

Micro-Stepping: Up to 1/32

Smoothing Filter: On/Off

Control Mode: Step & Dir.,
CW/CCW

Step Noise Filter: 150
kHz/500 kHz.