



Resolution Air, Ltd.'s Easy Pinch Controller (EP-1) is a compact motion control system combining a high performance stepper motor driver, intelligent controller with a full-color touch screen HMI. Purpose-built to optimize the performance of our patented Proportional Pinch Valves, the EP-1 enables fast deployment, simplified validation, and consistent performance. It's dual mode design supports both 4-20 mA analog as well as digital on/off control. This all-in-one architecture simplifies system design, reduces wiring complexity, and improves reliability in automation environments. In addition, the EP-1 enables single-use system designers to simplify motion control, accelerate equipment deployment, and maintain consistent performance-while supporting the flexibility that disposable bioprocessing demands.



Key Features

Simplified control development and integration.

- Complex stepper motor coding eliminated.
- Input requirements: 4-20 mA analog , 5-24 VDC digital.
- Reduced time and cost associated with developing control custom solution.

Dual Mode Functionality

- Analog mode: 4-20 mA input signal controls valve position.
- Digital mode: 5-24 VDC input signal provides On/Off functionality mimicking traditional pinch valve operation.

Combines driver, controller, and HMI into a single unit

- Reduces panel space and overall system cost.
- Compact footprint ideal for mobile carts and modular skids.
- Din rail mounting brackets or back plate mountable.

Intuitive Color Touch Screen Interface

- On screen configuration of performance parameters including:
- Speed, acceleration, micro-stepping, idle current, analog and digital control.
- No PLC required for set-up or adjustments.

Precise Motor Current Adjustment

- Current settings are rotary switch selectable for both the MPPV and HPPV valve series
- Enables quick tuning for different valves models or load conditions.

Common Applications

- Automated machinery
- System pressure control circuits
- Process automation
- Laboratory and test equipment

Common Single-Use (SU) Applications

- Single-use pinch valve actuation
- Media and buffer transfer skids
- Single-use filtration systems
- Chromatography and TFF modules
- Bioreactor feed, bleed, and harvest systems
- Pilot and clinical-scale production equipment

Electrical Parameters

Motor Type	Bi-Polar Chopper Motor (MPPV, HPPV valve series)
Control Inputs	Analog: 4-20 mA Analog Digital: 5-24 VDC, Optically Isolated
Motor Current	Rotary Switch Selectable 0-0.820 mA rms (maximum).
Display	Full Color Touch Screen (resistive touch)
Power Supply	+24 VDC supply
Analog Input Resolution	16 Bit

