# C9 series—*Variable Frequency Digital Controllers*

## Digital Control Revolutionizes Parts Delivery

A revolutionary new controller series for use with regular parts feeders for conveyance of parts of all sizes. Auto-tuning function eliminates need for frequency adjustment, and convenient digital settings and displays, etc. allow parts feeders to operate to their full potential.


### Features

- **Auto-tuning function eliminates need for frequency adjustment**

  This digital system has an advanced frequency auto-tuning function. It automatically tracks resonance point changes resulting from mechanical? changes over time, regardless of changes to the volume of workpieces, to deliver optimal vibration at all times. There is no need for leaf-spring adjustments, and even frequency adjustment is unnecessary. This keeps the equipment activated much more of the time and saves energy.

- **Digital setting/display makes settings easy to manage**

  Amplitude, drive frequency, output voltage notches are all set and displayed digitally, making them easy to manage.

- **Constant amplitude control matched to workpieces**

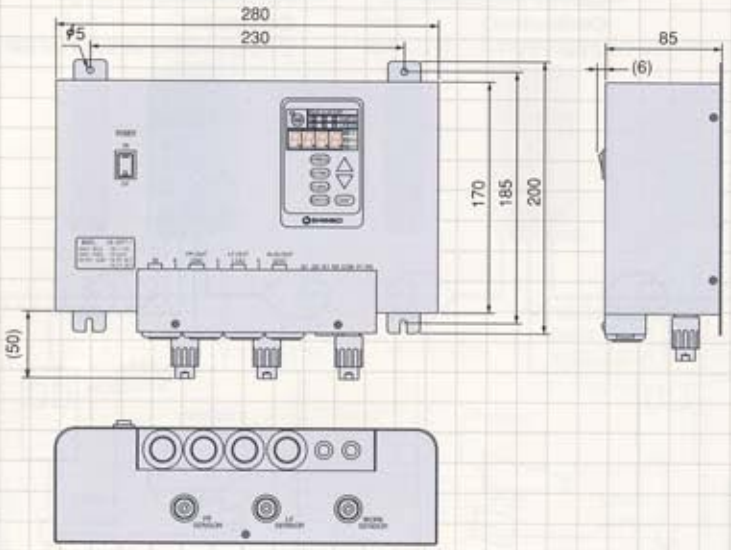
  With digital setting of amplitude, an amplitude detection sensor allows drive at a constant amplitude suited to the workpieces under conveyance.

- **Complete control possible with a single controller**

  Control of both a parts feeder and linear feeder is possible with a single controller.

- **Electronic control gives ideal drive**

## C9-3VFT-2B/C9-3VFT-1B Dimensions




(Unit: mm)

## Specifications

| Model | | | C9-3VFT-2B | C9-3VFT-1B |
|---|---|---|---|---|
| Input Power source | | | AC200/220V ±10%, 50/60Hz | AC100/110V ±10%, 50/60Hz |
| Control system | | | PWM system | |
| Output | Voltage | | 0~190V | |
| | Vibration frequency | Parts feeder | 50~90Hz 100~180Hz | |
| | | Linear feeder | 50~60Hz 65~120Hz 100~180Hz | |
| | Maximum current | Parts feeder | 3A | |
| | | Linear feeder | 1A | |
| Operating modes | Auto-tuning mode | | With frequency auto-tuning, constant amplitude control requires no frequency setting | |
| | Constant amplitude mode | | Constant amplitude control at set frequency | |
| | Constant voltage mode | | Frequency, output voltage set manually | |
| Additional features | Quick removal function | | Temporary increase in PF amplitude to clear leftover workpieces, etc. | |
| | Speed selector | | Selection of amplitude settings (up to 4) by means of external signal | |
| | Start/Stop control | | Start/stop control by external signal | |
| | Output signal | | Outputs signal tuned to parts feeder operation | |
| | Soft start | | Start-up time 0.2~4.0 seconds | |
| | On/Off delay timer | | Delay time 0.2~4.0 seconds | |
| | Sensor power source | | 3P power plug gives DC12V, max. 80A | |
| Tuned power source output | Function | | Power source output tuned to parts feeder operation (RUN) | |
| | Control system | | ON/OFF control by Triac | |
| | Output voltage | | As power source input to controller | |
| | Maximum current | | 2A | |
| Conditions for use | Noise tolerant voltage | | Above 1000V | |
| | Ambient temperature | | 0~40°C | |
| | Ambient humidity | | 10~90% (no condensation) | |
| | Case color | | Gray (Japan Paint Industry Association S2-1006) | |
| | Dimensions | | 280W x 200H x 90D mm (excl. plug) | |
| | Weight | | 2.3 kg | |
| Compatible SHINKO Parts feeders | | | EA-15/20/25/30/38/45, ER-25B/30B/38B/45B | |
| Compatible SHINKO Linear feeders | | | LFB-300/400/550, LFG-400/550/700 | |