

CWD860

Digital Stepper Drive



Descriptions:

The CWD860 is a new generation digital 2-phase stepper motor driver, based on a 32-bit DSP processor, combination of the anti-resonance, low noise, micro-step and low temperature rise technology significantly improve the performance of the stepper motor, has low noise, small vibration, low temperature rise and high-speed torque. The driver use online adaptive PID technology, without manual adjustment can be automatically generated optimal parameters for different motors, and achieve the best performance.

Supply voltage range from 20VAC to 60VAC or from 24VDC to 90VDC, suitable for driving various 2-phase hybrid stepping motors which phase current below 7.2A. The microstep can be set from full step to 51200steps/rev and the output current can be set form 2.4A to 7.2A; with automatic idle-current reduction, self-test, overvoltage, under-voltage and over-current protection.

Features:

- High-performance, low price;
- micro-step;
- Automatic idle-current reduction;
- Optical isolating signals I/O;
- Max response frequency up to 200Kpps;
- Low temperature rise, smooth motion;
- Online adaptive PID technology.

Applications:

Suitable for a variety of large-scale automation equipments and instruments. For example: labeling machine, cutting machine, packaging machine, plotter, engraving machine, CNC machine tools and so on. It always performs well when applied for equipment which requires for low-vibration, low-noise, high-precision and high-velocity.

Electrical Specifications:

| Parameter | Min | Typical | Max | Unit |
|------------------------|-----|---------|-----|------|
| Input Voltage(DC) | 24 | - | 90 | VDC |
| Input Voltage(AC) | 20 | - | 60 | VAC |
| Output current | 0 | - | 7.2 | A |
| Pulse Signal Frequency | 0 | - | 200 | KHZ |
| Logic Signal Current | 7 | 10 | 16 | MA |

Current Setting:

| RMS | Peak | SW1 | SW2 | SW3 |
|-------|-------|-----|-----|-----|
| 2.00A | 2.40A | on | on | on |
| 2.57A | 3.08A | off | on | on |
| 3.14A | 3.77A | on | off | on |
| 3.71A | 4.45A | off | off | on |
| 4.28A | 5.14A | on | on | off |
| 4.86A | 5.83A | off | on | off |
| 5.43A | 6.52A | on | off | off |
| 6.00A | 7.20A | off | off | off |

Standstill Current Setting:

SW4 is used for standstill current setting. OFF meaning that the standstill current is half of the dynamic current; and ON meaning that standstill current is the same as the selected dynamic current. Usually the SW4 is set to OFF, in order to reduce the heat of the motor and driver.

Microstep Setting:

| Step/Rev | SW5 | SW6 | SW7 | SW8 |
|----------|-----|-----|-----|-----|
| Default | on | on | on | on |
| 800 | off | on | on | on |
| 1600 | on | off | on | on |
| 3200 | off | off | on | on |
| 6400 | on | on | off | on |
| 12800 | off | on | off | on |
| 25600 | on | off | off | on |
| 51200 | off | off | off | on |
| 1000 | on | on | on | off |
| 2000 | off | on | on | off |
| 4000 | on | off | on | off |
| 5000 | off | off | on | off |
| 8000 | on | on | off | off |
| 10000 | off | on | off | off |
| 20000 | on | off | off | off |
| 40000 | off | off | off | off |

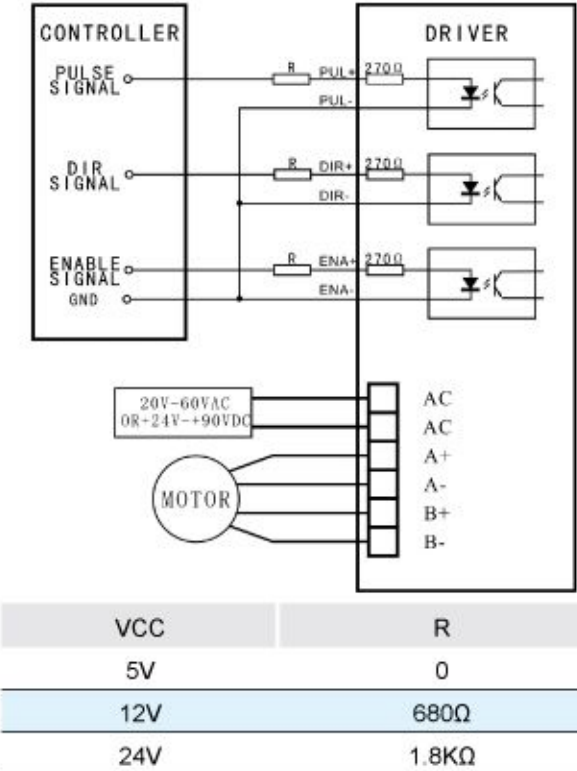
Control Signal Connector:

| Name | Description |
|------|--|
| PUL+ | Pulse signal positive |
| PUL- | Pulse signal negative |
| DIR+ | Direction signal positive |
| DIR- | Direction signal negative |
| ENA+ | Enable signal positive, usually left unconnected(enable) |
| ENA- | Enable signal negative, usually left unconnected(enable) |

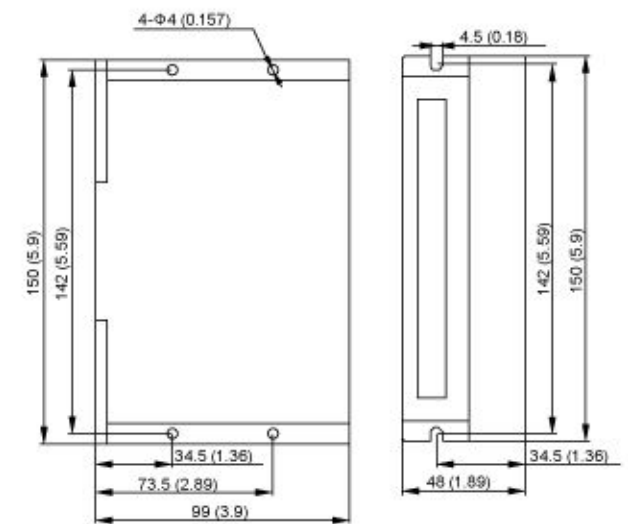
Power and Motor Connector:

| | |
|----|--------------------------|
| AC | Power supply |
| AC | +24~+90 VDC or 20V-60VAC |
| A+ | Motor phase A |
| A- | |
| B+ | Motor phase B |
| B- | |

Typical Connection:



Mechanical Specifications:



unit: mm(inch), 1 inch = 25.4mm