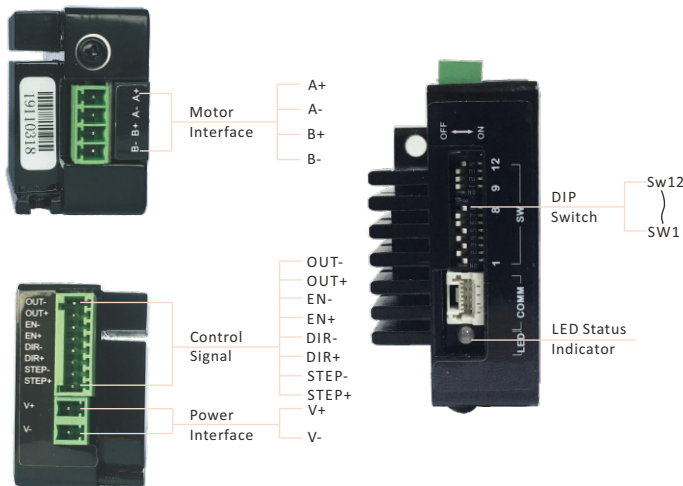


Technical Features

| Item | Description |
|------------------------|---|
| Input Voltage | 12 to 48VDC |
| Output Current | 0.4 to 3.0A (Peak) |
| Control Mode | Pulse and Direction, CW & CCW |
| Control Signal | 5VDC and 24VDC Compatible |
| Micro Step Range | 16 Types, 1-128 Micro Step Settings, From 200 to 25600 Pules/Round |
| Idle Current | 50% or 90% by Setting Jumpers |
| Special Functions | Auto Tuning, Self Test, Micro Step Interpolation, Load Inertia Selection |
| Input signal Filtering | 150KHz Digital Filtering for Low Micro Step Scenarios 2MHz Digital Filtering for High Micro Step Scenarios |
| Protection | Metal, High EMC Performance, Multi-Level Electrical Protection |
| Matching Motors | Adaptive to Stepper Motors of Nema11 to Nema23 |



Driver Interfaces



LED Status Indicator

| Display | Color | Description |
|---------|-------|--|
| Power | Green | Flashing indicates drive working normally |
| Error | Red | Green and red LEDs flashing alternatively indicates drive working abnormally |

| Status | Failure | Reason |
|--------------------------|----------------------------------|--|
| Green flicker | Drive normal | -- |
| green light is always on | Drive not enabled | EN Port has high level input |
| 3 red and 1 green | Drive temperature is too high | Need to strengthen the heat |
| 4 red and 1 green | Driver power input over voltage | Power supply voltage is greater than 48VDC |
| 5 red and 1 green | Drive over current | Motor wiring fault or poor contact |
| 6 red and 1 green | Motor winding open circuit | The motor is not connected well |
| 3 red and 2 green | Drive internal voltage error | Power is too small |
| 4 red and 2 green | Driver power input under voltage | Power supply voltage is less than 12VDC |

Advantages

**High Power Grid Compatibility,
High Reliability,
High Performance,
Rich Industrial Applications**

DIP Switch Settings

Output Current Settings

| Switch Settings | | | Peak Current /A |
|-----------------|-----|-----|-----------------|
| SW1 | SW2 | SW3 | |
| Off | Off | Off | 3.0 |
| On | Off | Off | 2.7 |
| Off | On | Off | 2.4 |
| On | On | Off | 2.0 |
| Off | Off | On | 1.6 |
| On | Off | On | 1.2 |
| Off | On | On | 0.8 |
| On | On | On | 0.4 |

Idle Current Settings

| DIP | Status | Function |
|-----|--------|--------------------------|
| SW4 | On | 50% of operation current |
| | Off | 90% of operation current |

Micro Step Settings

| Switch Settings | | | | Micro Step | Pulse/Round |
|-----------------|-----|-----|-----|------------|-------------|
| SW5 | SW6 | SW7 | SW8 | | |
| Off | Off | Off | Off | 125 | 25000 |
| On | Off | Off | Off | 100 | 20000 |
| Off | On | Off | Off | 50 | 10000 |
| On | On | Off | Off | 40 | 8000 |
| Off | Off | On | Off | 25 | 5000 |
| On | Off | On | Off | 20 | 4000 |
| Off | On | On | Off | 10 | 2000 |
| On | On | On | Off | 5 | 1000 |
| Off | Off | Off | On | 128 | 25600 |
| On | Off | Off | On | 64 | 12800 |
| Off | On | Off | On | 32 | 6400 |
| On | On | Off | On | 16 | 3200 |
| Off | Off | On | On | 8 | 1600 |
| On | Off | On | On | 4 | 800 |
| Off | On | On | On | 2 | 400 |
| On | On | On | On | 1 | 200 |

Stepper Drive Y2SD1R5-Plus

Open loop, DC Input 2-phase

◆ Self Test

| DIP | Function | Description |
|-----|-----------|---|
| SW9 | Self Test | On: motor will rotate at 1rpm/s for 1 round clockwise and 1 round back. |

◆ Micro Step Interpolation

| DIP | Function | Description |
|------|--------------------------|---|
| SW10 | Micro Step Interpolation | On: Micro Step Interpolation enabled, suggest to use when micro step is less then 8. Off: Function disenabled. |

◆ Pulse Mode Selection

| DIP | Function | Description |
|------|----------------------|--|
| SW11 | Pulse Mode Selection | On: CW and CCW Off: Pulse and Direction |

◆ Input Signal Digital Filtering

| DIP | Function | Description |
|------|--------------------------------|--|
| SW12 | Input Signal Digital Filtering | On: 150kHz, suitable for low micro step settings Off: 2MHz, suitable for high micro step settings |

Note: 150kHz filtering recommended for better anti-interference effect.

Power Interface

| PIN | Description |
|-----|--------------|
| L | Live wire |
| N | Neutral wire |

Motor Interface

Motor connection, please refer to motor connection information

Control Interface

◆ Input Signals

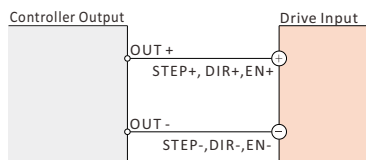
| PIN | Name | Description |
|------|------------------|---|
| STEP | Pulse Signal | Pulse signal from controllers, 5 to 24V, Differential, PNP, NPN supported. |
| DIR | Direction Signal | Direction signal from controllers, 5 to 24V, Differential, PNP, NPN supported. |
| EN | Enable Signal | Enable disconnected, motor enabled, 5 to 24V, Differential, PNP, NPN supported. |

◆ Output Signals

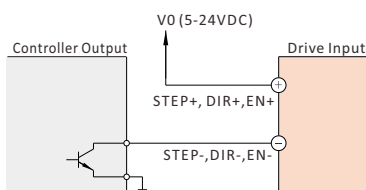
| PIN | Name | Description |
|-----|--------------|--|
| OUT | Alarm Output | OUT+ and OUT- connected when drive working abnormally. Max. bear 30VDC and 100mA. |

◆ Input Connect

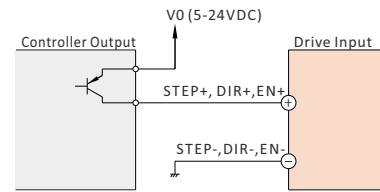
Differential Type



NPN Type

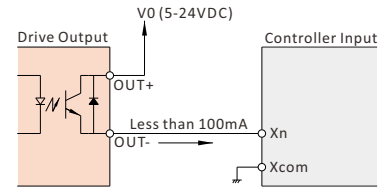


PNP Type

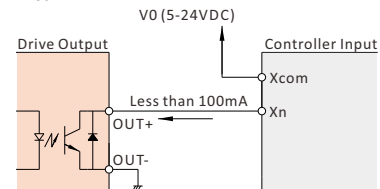


◆ Output Connect

Common Cathode Type



Common Anode Type



Mechanical Dimensions (in mm)

