

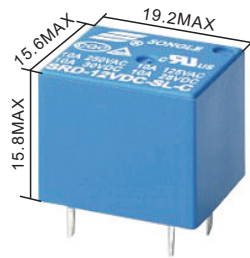
# SRD Series SUBMINATURE HIGH POWER RELAY 7A/10A/15A



R50056114  
R50137084



CQC08002027667

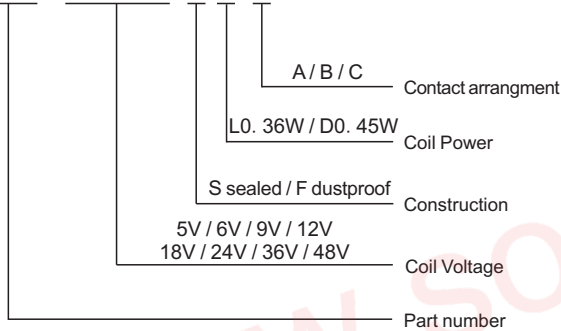


## Features

- Miniature volume, PCB usage
- Contact rating: 7A/10A/15A
- Temperature range: +85°C/+105°C

## Ordering Information

SRD-12VDC-S L-C



## Contact Rating

|                                               |                                                |
|-----------------------------------------------|------------------------------------------------|
| Contact arrangement                           | 1A(spstno)/1B(Spstnc)/1C(Spdt)                 |
| Contact resistance                            | 100mΩ (1A 6VDC)                                |
| Contact material                              | Silver alloy: AgCdO, AgSnO <sub>2</sub> , AgNi |
| Contact rating                                | 7A/250VAC 10A/250VAC 15A/250VAC                |
| Max switching voltage                         | 250VAC                                         |
| Max switching current                         | 15A                                            |
| Max switching power                           | 3750VA                                         |
| Electrical endurance (frequency: 1800 ops/h)  | 1x10 <sup>5</sup> ops / 1x10 <sup>4</sup> ops  |
| Mechanical endurance (frequency: 18000 ops/h) | 1x10 <sup>7</sup> ops                          |

## Characteristics

|                                         |                           |                     |
|-----------------------------------------|---------------------------|---------------------|
| Insulation system                       | Class B / Class F         |                     |
| Insulation resistance                   | 100MΩ (500VDC)            |                     |
| Dielectric Strength                     | Between contacts and coil | 1500VAC 1 minute    |
|                                         | Between open contacts     | 1000VAC 1 minute    |
| Leakage current 1mA                     |                           |                     |
| Operate time(Under nominal voltage)     | ≤10ms                     |                     |
| Release time(Under nominal voltage)     | ≤10ms                     |                     |
| Humidity                                | 85% RH (20°C)             |                     |
| Ambient Temperature                     | -40°C~+85°C/-40°C~+105°C  |                     |
| Shock resistance                        | Functional                | 98m/s <sup>2</sup>  |
|                                         | Destructive               | 980m/s <sup>2</sup> |
| Vibration resistance (Double amplitude) | 10Hz~55Hz 1.5mm           |                     |
| Weight                                  | Approx 9g                 |                     |
| Construction                            | Sealed                    |                     |

Remark:1)All above data is initial value

## Coil Data

(at 20°C)

| Power dissipation W | Voltage VDC | Current mA | Resistance Ω±10% | Pick-up voltage | Drop-out voltage | Max allowable |
|---------------------|-------------|------------|------------------|-----------------|------------------|---------------|
| 0.36W (L)           | 05          | 71.4       | 70               | 75%Max          | 10%Min           | 130%          |
|                     | 06          | 60         | 100              |                 |                  |               |
|                     | 09          | 40         | 225              |                 |                  |               |
|                     | 12          | 30         | 400              |                 |                  |               |
|                     | 18          | 20         | 900              |                 |                  |               |
|                     | 24          | 15         | 1600             |                 |                  |               |
|                     | 36          | 10         | 3600             |                 |                  |               |
|                     | 48          | 7.5        | 6400             |                 |                  |               |
| 0.45W (D)           | 05          | 89.3       | 55               | 75%Max          | 10%Min           | 130%          |
|                     | 06          | 75         | 80               |                 |                  |               |
|                     | 09          | 50         | 180              |                 |                  |               |
|                     | 12          | 37.5       | 320              |                 |                  |               |
|                     | 18          | 25         | 720              |                 |                  |               |
|                     | 24          | 18.7       | 1280             |                 |                  |               |
|                     | 36          | 12.5       | 2880             |                 |                  |               |
|                     | 48          | 10         | 4500             |                 |                  |               |

This product specification only for your reference, we will not notify you if we do any improvement. We reserve all the right for the final explanation





Web: [www.songle.com](http://www.songle.com) [www.songlerelay.com](http://www.songlerelay.com)


Add.: CW7, Zone A, Far East Industrial Park, Yuyao City, Zhejiang, China Zip Code: 315400

SRD Series SUBMINATURE HIGH POWER RELAY 7A/10A/15A

Safety Approval Ratings

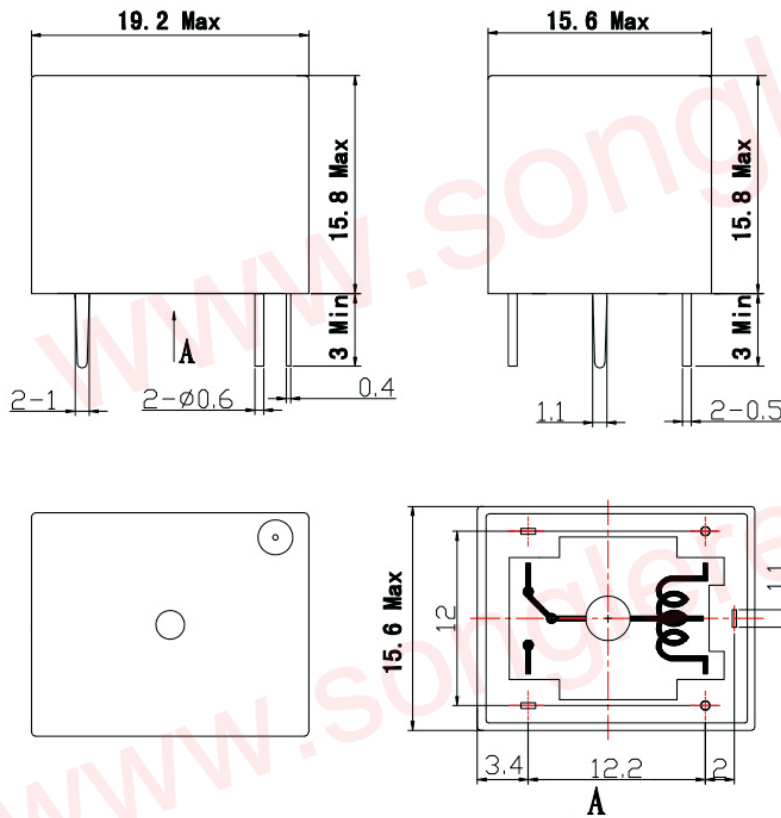
|                                                                                                  |
|--------------------------------------------------------------------------------------------------|
|  CQC08002027667 |
| 7A 250VAC<br>10A 250VAC                                                                          |

|                                                                                                          |
|----------------------------------------------------------------------------------------------------------|
|  R50056114<br>R50137084 |
| 7A 250VAC<br>10A 250VAC<br>15A 250VAC NO                                                                 |

|                                                                                                |
|------------------------------------------------------------------------------------------------|
|  US E167996 |
| 3A 125VAC inductive<br>10A 125VAC<br>15A 125VAC NO                                             |

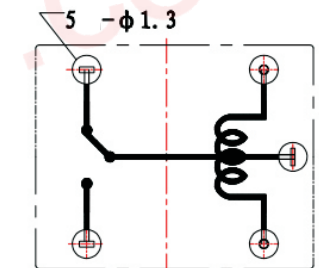
OUTLINE DIMENSIONS ,WIRING DIAGRAM AND PC BOARD LAYOUT Unit:mm

Physical installation diagram

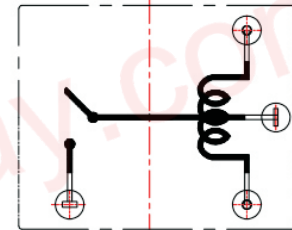


Tolerance:  $\pm 0.1\text{mm}$

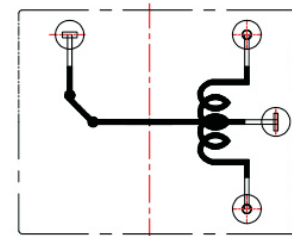
PCB board diagram  
(bottom view diagram)



Conversion C type



Normally open A type



Normally closed B type

(Bottom view )

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# SONGLE RELAY

|                                                                                   |               |     |
|-----------------------------------------------------------------------------------|---------------|-----|
|  | RELAY ISO9002 | SRD |
|-----------------------------------------------------------------------------------|---------------|-----|



## 1. MAIN FEATURES

- Switching capacity available by 10A in spite of small size design for highdensity P.C. board mounting technique.
- UL,CUL,TUV recognized.
- Selection of plastic material for high temperature and better chemical solution performance.
  - Sealed types available.
- Simple relay magnetic circuit to meet low cost of mass production.

## 2. APPLICATIONS

- Domestic appliance, office machine, audio, equipment, automobile, etc.  
( Remote control TV receiver, monitor display, audio equipment high rushing current use application.)

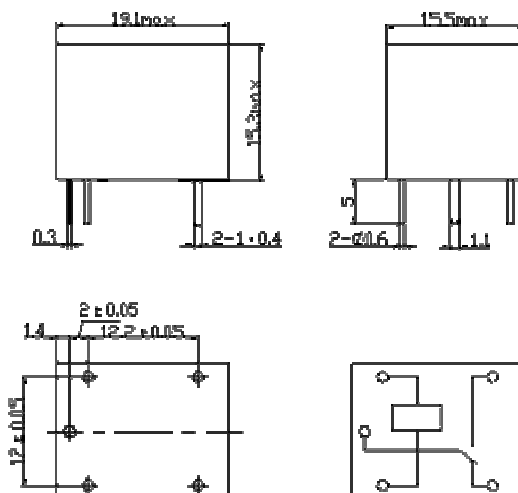
## 3. ORDERING INFORMATION

| SRD            | XX VDC                  | S                                 | L                  | C                                      |
|----------------|-------------------------|-----------------------------------|--------------------|----------------------------------------|
| Model of relay | Nominal coil voltage    | Structure                         | Coil               | Contact form                           |
| SRD            | 03 05 06 09 12 24 48VDC | S:Sealed type<br>F:Flux free type | L:0.36W<br>D:0.45W | A:1 form A<br>B:1 form B<br>C:1 form C |

## 4. RATING

|        |                            |                  |
|--------|----------------------------|------------------|
| CCC    | FILE NUMBER:CQC03001003729 | 7A/240VDC        |
| CCC    | FILE NUMBER:CQC03001003731 | 10A/250VDC       |
| UL/CUL | FILE NUMBER: E167996       | 10A/125VAC 28VDC |
| TUV    | FILE NUMBER: R50056114     | 10A/250VAC 30VDC |

## 5. DIMENSION(unit:mm) DRILLING(unit:mm) WIRING DIAGRAM



## 6. COIL DATA CHART (AT20 ° C)

| Coil Sensitivity          | Coil Voltage Code | Nominal Voltage (VDC) | Nominal Current (mA) | Coil Resistance (Ω) □ | Power Consumption (W) | Pull-In Voltage (VDC) | Drop-Out Voltage (VDC) | Max-Allowable Voltage (VDC) |
|---------------------------|-------------------|-----------------------|----------------------|-----------------------|-----------------------|-----------------------|------------------------|-----------------------------|
| SRD<br>(High Sensitivity) | 03                | 03                    | 120                  | 25                    | abt. 0.36W            | 75%Max.               | 10% Min.               | 120%                        |
|                           | 05                | 05                    | 71.4                 | 70                    |                       |                       |                        |                             |
|                           | 06                | 06                    | 60                   | 100                   |                       |                       |                        |                             |
|                           | 09                | 09                    | 40                   | 225                   |                       |                       |                        |                             |
|                           | 12                | 12                    | 30                   | 400                   |                       |                       |                        |                             |
|                           | 24                | 24                    | 15                   | 1600                  |                       |                       |                        |                             |
| SRD<br>(Standard)         | 03                | 03                    | 150                  | 20                    | abt. 0.45W            | 75% Max.              | 10% Min.               | 110%                        |
|                           | 05                | 05                    | 89.3                 | 55                    |                       |                       |                        |                             |
|                           | 06                | 06                    | 75                   | 80                    |                       |                       |                        |                             |
|                           | 09                | 09                    | 50                   | 180                   |                       |                       |                        |                             |
|                           | 12                | 12                    | 37.5                 | 320                   |                       |                       |                        |                             |
|                           | 24                | 24                    | 18.7                 | 1280                  |                       |                       |                        |                             |
|                           | 48                | 48                    | 10                   | 4500                  | abt. 0.51W            |                       |                        |                             |

## 7. CONTACT RATING

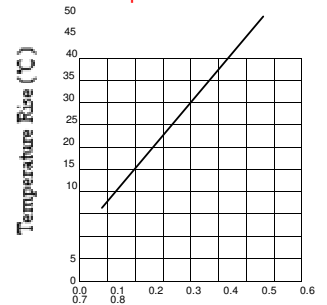
| Item                                   | Type          | SRD           |
|----------------------------------------|---------------|---------------|
|                                        | FORM C        | FORM A        |
| Contact Capacity                       | 7A            | 10A 30VDC     |
| Resistive Load (cosΦ=1)                | 30VDC         | 10A 240VAC    |
| Inductive Load<br>(cosΦ=0.4 L/R=7msec) | 10A 125VAC    | 5A 120VAC     |
|                                        | 10A 250VAC    | 5A 28VDC      |
|                                        | 3A 120VAC     |               |
|                                        | 3A 28VDC      |               |
| Max. Allowable Voltage                 | 250VAC/110VDC | 250VAC/110VDC |
| Max. Allowable Power Force             | 800VAC/240W   | 1200VA/300W   |
| Contact Material                       | AgCdO         | AgCdO         |

## 8. PERFORMANCE (at initial value)

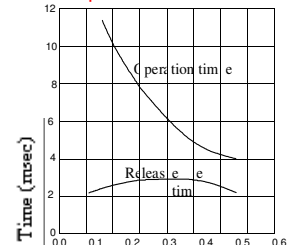
| Item                  | Type                   | SRD                                                      |
|-----------------------|------------------------|----------------------------------------------------------|
| Contact Resistance    |                        | 100mΩ Max.                                               |
| Operation Time        |                        | 10msec Max.                                              |
| Release Time          |                        | 5msec Max.                                               |
| Dielectric Strength   | Between coil & contact | 1500VAC 50/60HZ (1 minute)                               |
|                       | Between contacts       | 1000VAC 50/60HZ (1 minute)                               |
| Insulation Resistance |                        | 100 MΩ Min. (500VDC)                                     |
| Max. ON/OFF Switching |                        |                                                          |
| Mechanically          |                        | 300 operation/min                                        |
| Electrically          |                        | 30 operation/min                                         |
| Ambient Temperature   |                        | -25°C to +70 C                                           |
| Operating Humidity    |                        | 45 to 85% RH                                             |
| Vibration             |                        |                                                          |
| Endurance             |                        | 10 to 55Hz Double Amplitude 1.5mm                        |
| Error Operation       |                        | 10 to 55Hz Double Amplitude 1.5mm                        |
| Shock                 |                        |                                                          |
| Endurance             |                        | 100G Min.                                                |
| Error Operation       |                        | 10G Min.                                                 |
| Life Expectancy       |                        |                                                          |
| Mechanically          |                        | 10 <sup>7</sup> operations. Min. (no load)               |
| Electrically          |                        | 10 <sup>5</sup> operations. Min. (at rated coil voltage) |
| Weight                |                        | abt. 10grs.                                              |

## 9. REFERENCE DATA

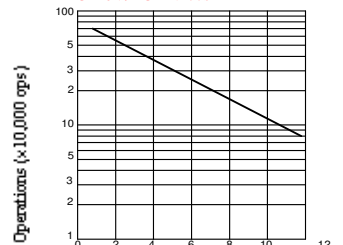
### Coil Temperature Rise



### Operation Time



### Life Expectancy



### Life Expectancy

