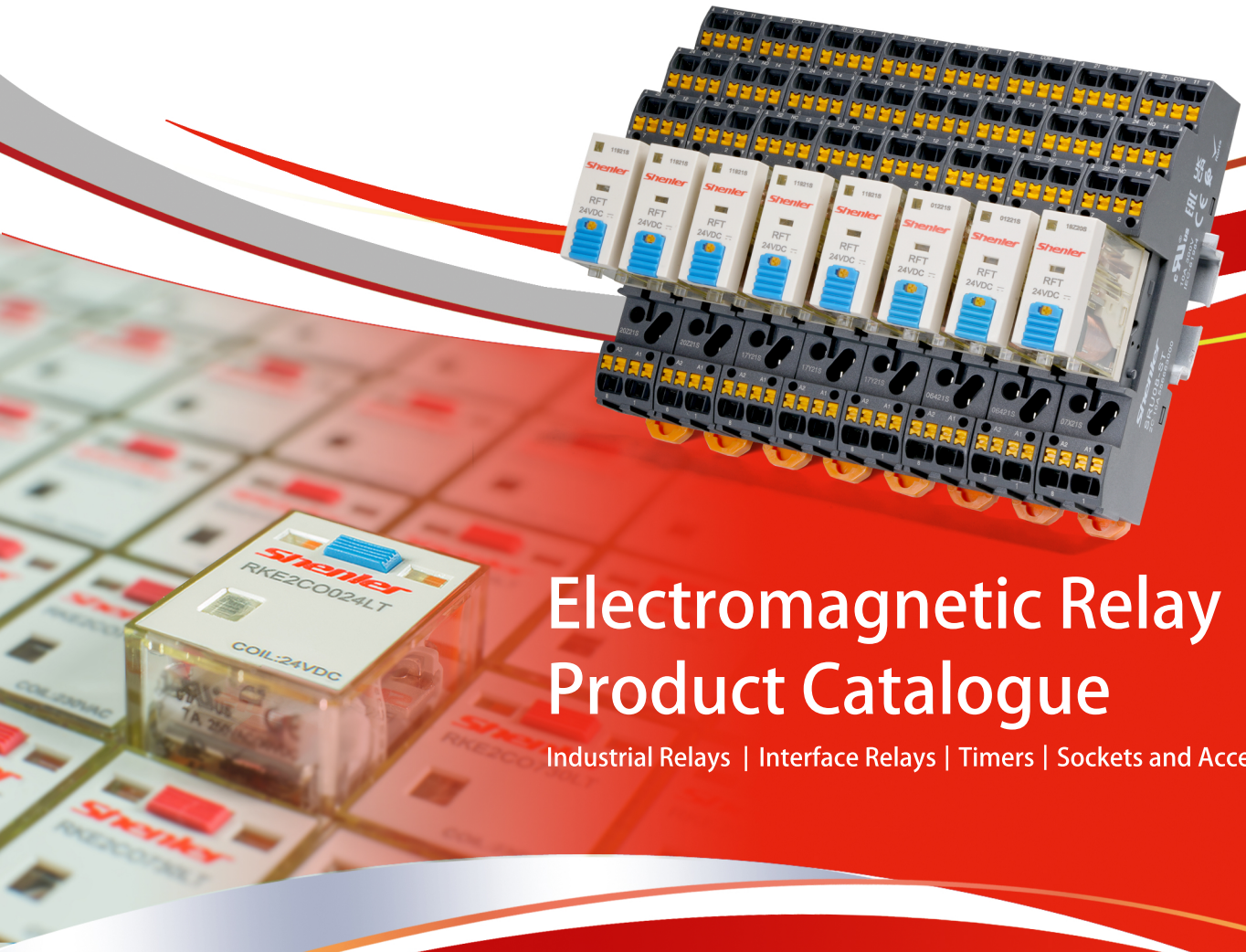
Shenler

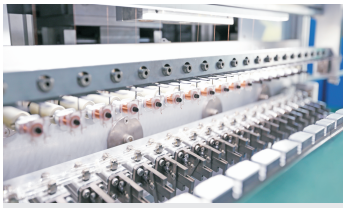



# Electromagnetic Relay Product Catalogue

Industrial Relays | Interface Relays | Timers | Sockets and Accessories


Shenle New Energy Industrial Plant


Shenle Industrial Plant


Winding workshop


Automation relay workshop

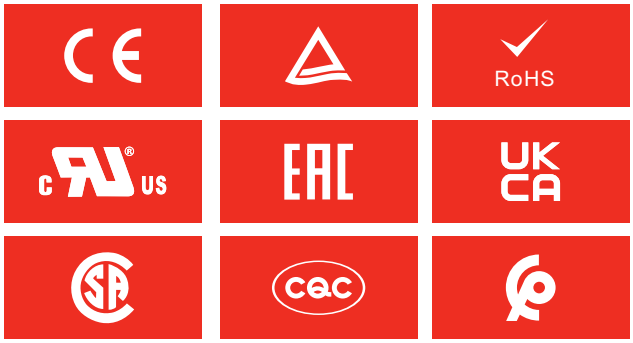

UL TÜV Witnessing Laboratory

# About Shenler

Founded in 2014, Shenle Corporation Ltd. is an intelligent relay manufacturing factory, mainly engaged in industrial relays, interface relays, automotive relays, relay modules, time relays, solid state relays, sockets, limit switches, buttons, industrial auxiliary materials, automated smart manufacturing and equipment. The company's total construction area is 36,000 square meters, covering an area of 23 acres.In 2022, the production capacity exceeds 100 million pieces, and the current market share accounts for 30%. Shenle's sales and service network covers the world, and more than 65% of its products are sold overseas. The products are widely used in machinery manufacturing, hoisting machinery, machine tools, papermaking equipment, motor control, elevators, robots, food and beverages, rubber equipment, ceramics machinery, printing and packaging, injection molding machinery, textile machinery, logistics equipment, electronic manufacturing, petrochemical, new energy and other fields.

# Qualifications

Shenle products have passed CE,TÜV,RoSH, UL, EAC,UKCA,CSA,CQC, CP,certifications.



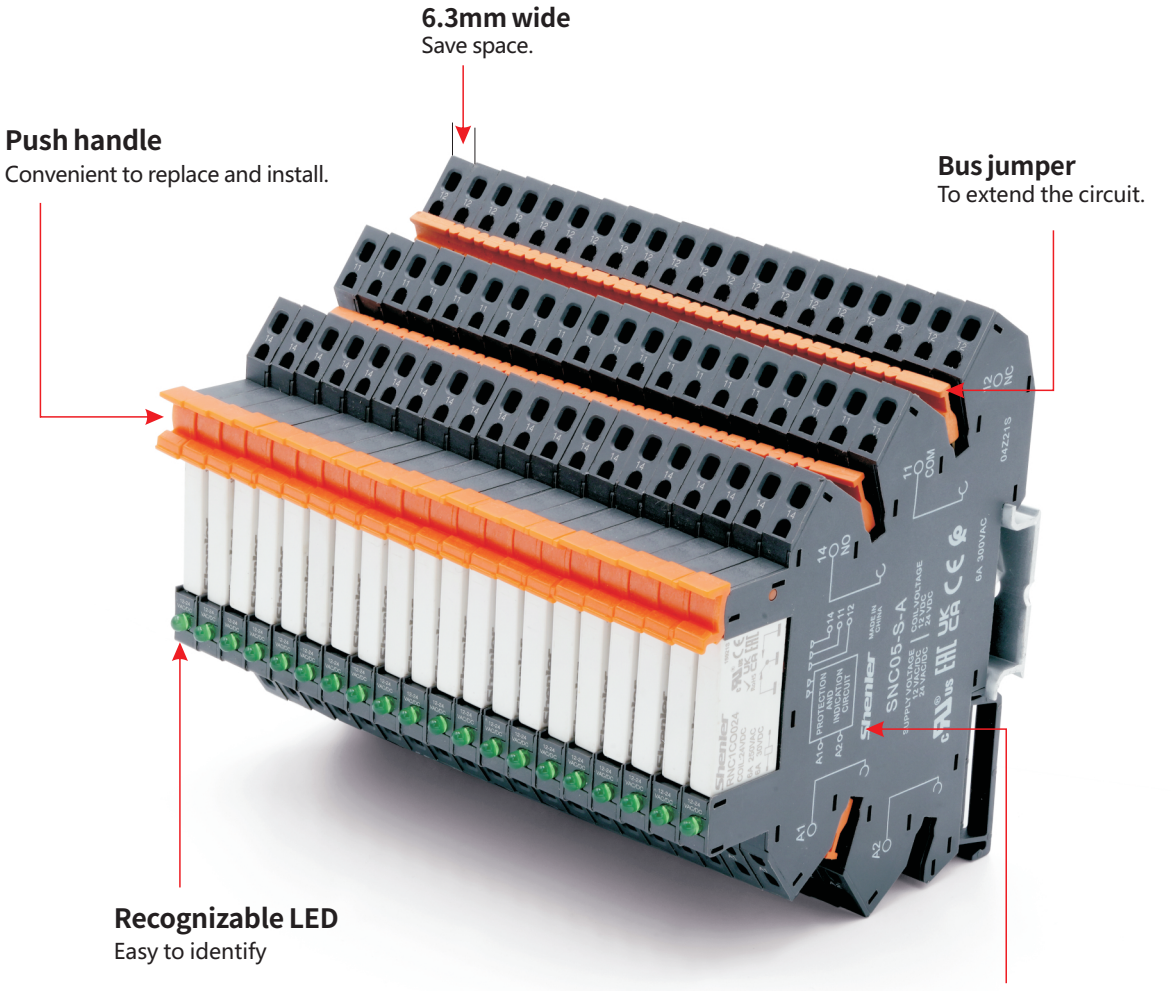

- National Spark Program Project
- Top 10 Brands of Relays in China
- High–tech Enterprise
- Zhejiang Science & Technology Enterprise
- Supporting the whole industry chain of automation equipment manufacturing
- TÜV Rheinland Witnessing Laboratory
- UL Witnessing Laboratory
- Zhejiang Enterprise Research Institute

# Contents

# RNC

Interface Relay Module

- Ultra-slim, high sensitivity and low consumption, the maximum load power 6A.
- Reasonable structure, meets environmental protection requirements, the control voltage range can be extended with matching sockets.
- Shenler industrial relays are widely used in the output signal and safety drive of PLC, CNC system, robot, intelligent manufacturing and other control systems. It is the best choice to realize remote control, production and processing, packaging, transportation, testing, storage and other equipment and automatic assembly lines.

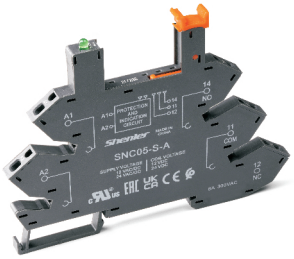


# RNC

Interface Relay Module

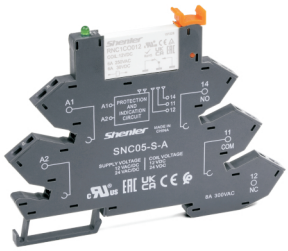

Relay

+




Socket

=




Relay module

RNC □ □ □ □

**Other options**
Blank: Conventional
A: Gold plated contact

**Coil voltage code**

| Code | 005 | 006 | 012 | 024 |
|---|---|---|---|---|
| Voltage (V DC) | 5 | 6 | 12 | 24 |
| Code | 048 | 060 | | |
| Voltage (V DC) | 48 | 60 | | |

**Terminal arrangement**
O: Vertical pin
P: Horizontal pin

**Contact form**
1A: (NO)
1C: (CO)

**Series**

## Characteristics

| | | |
|---|---|---|
| Contact | Configuration | 1A,1C |
| | Load Resistance | 6A/250VAC 30VDC |
| | Max. switching capacity (resistive) | 1500VA,180W |
| | Min. switching capacity | 170mW(17V/10mA) |
| | Initial contact resistance | ≤100mΩ (gold plated contact ≤ 30mΩ) |
| | Material | Ag alloy |
| | Electrical durability (normal temperature)(frequency 1s on, 5s off) | NO: $6x10^4$Cycles (600 Ops/h); NC: $3x10^4$ Cycles (600 Ops/h) |
| | Mechanical durability | ≥2 x $10^7$Cycles (18000 Ops/h) |
| Pick-up voltage (23℃) (Rated voltage) | | DC:≤75% |
| Drop-out voltage (23℃) (Rated voltage) | | DC:≥5% |
| Maximum voltage (23℃) (Rated voltage) | | 110% |
| Insulation resistance | | ≥1000MΩ (500VDC) |
| Coil operating power | 3~24 VDC | approx. 0.175W |
| | 48~60 VDC | approx. 0.21W |
| Operate time (at nominal voltage) | | ≤8ms |
| Release time (at nominal voltage) | | ≤4ms |
| Initial breakdown voltage | Between open contacts | 1000VAC/1min (leakage current 1mA) |
| | Between contacts and coil | 4000VAC/1min (leakage current 1mA) |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | 250VAC |
| | Pollution level | 3 |
| | Overvoltage level | III |
| Impulse withstand voltage (waveform: 1.2/50μs ) | | 4000V |
| Protection level | | IP20 |
| Storage temperature/ humidity | | -55~+85℃/ ≤85%RH (18 months) |
| Working temperature/ humidity | | -40~+85℃/ 5%~85%RH (No condensation) |
| Air pressure | | 86~106KPa |
| Shock resistance | | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | | 10~55Hz double-amplitude:1.0mm |
| Mounting | | PCB |
| Unit weight | | approx. 6g |

# RNC
Interface Relay Module

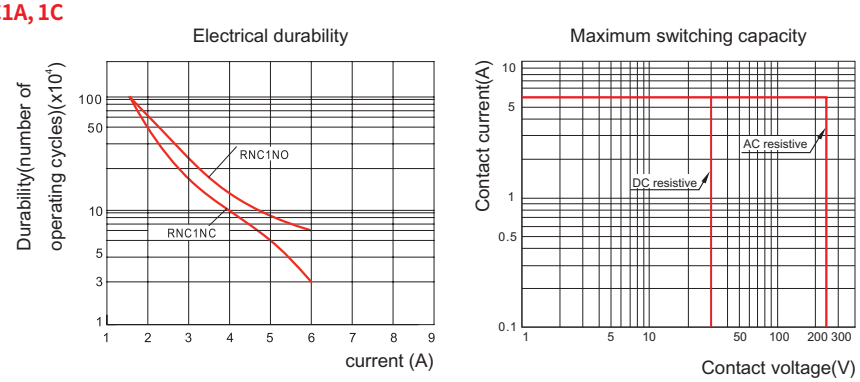
## Coil Specifications (23°C)

| | | | | |
|---|---|---|---|---|
| Nominal voltage V.DC (0.17W) | 5 | 6 | 12 | 24 |
| Coil resistance Ω | 147 | 212 | 847 | 3250 |
| Nominal voltage V.DC (0.21W) | 48 | 60 | | |
| Coil resistance Ω | 10971 | 17143 | | |

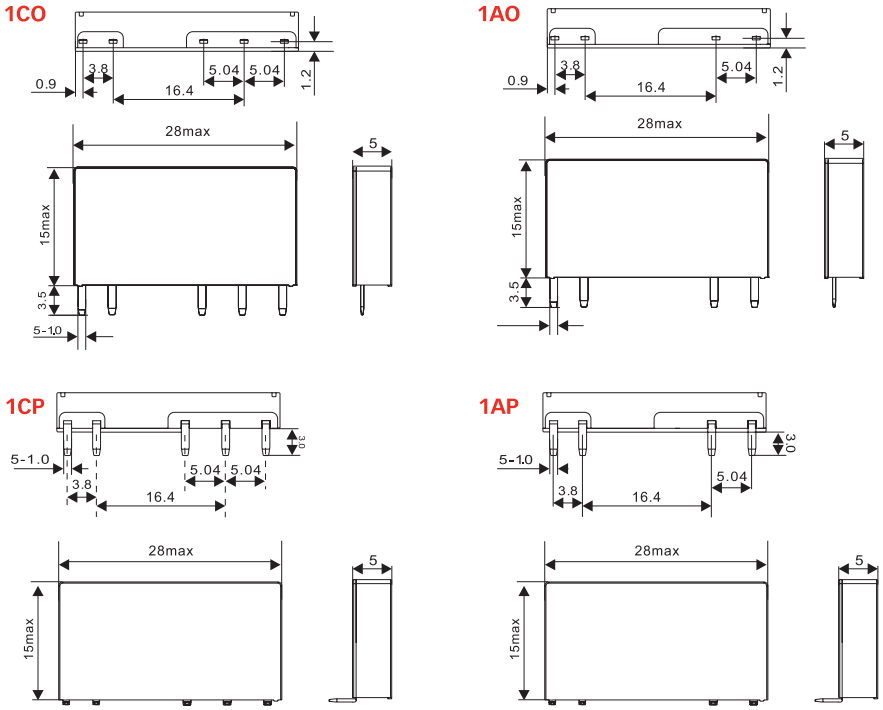
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω.

## Contact Specification

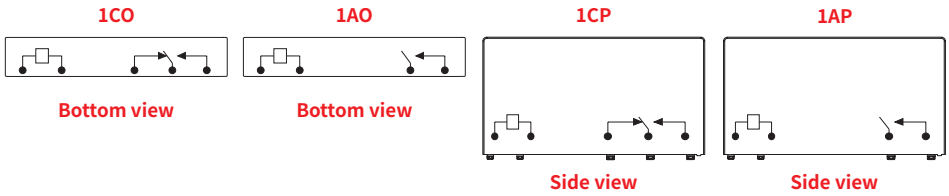
### RNC1A, 1C




## Dimensions (mm)



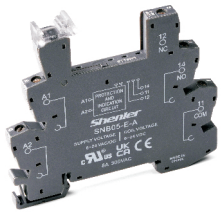

## Wiring Diagrams



# SNB05-E

RNC Socket

## Characteristics



SNB05-E

| Model No. | Input | Relay |
|---|---|---|
| SNB05-E-AR | 6~24VDC | 6~24VDC |
| SNB05-E-A | 6~24V | 6~24VDC |
| SNB05-E-B | 48V | 24VDC |
| SNB05-E-C | 110V | 24VDC |
| SNB05-E-D | 230V | 48VDC |

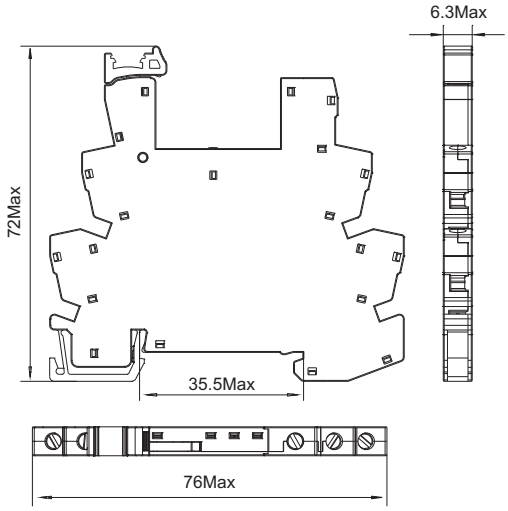
**Characteristics**

| | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Max. tightening torque | | Nm | 0.5 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 19.5 |

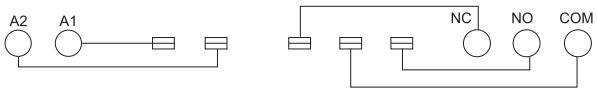
**Accessories**

| Bus jumper | Legend |
|---|---|
|  |  |
| SN20A | SN64P |

## Dimensions (mm)



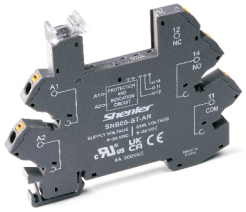

## Connection Diagrams



# SNB05-ST

RNC Socket

## Characteristics




SNB05-ST

| Model No. | Input | Relay |
|---|---|---|
| SNB05-ST-AR | 6~24VDC | 6~24VDC |
| SNB05-ST-A | 6~24V | 6~24VDC |
| SNB05-ST-B | 48V | 24VDC |
| SNB05-ST-C | 110V | 24VDC |
| SNB05-ST-D | 230V | 48VDC |

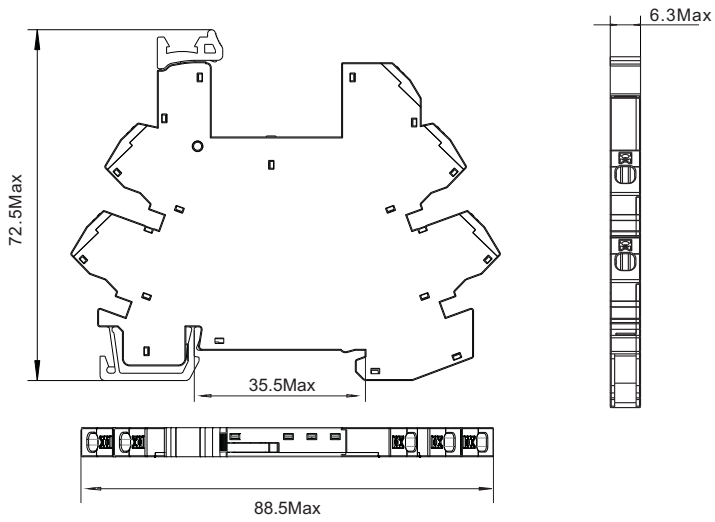
**Characteristics**

| | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 19.5 |

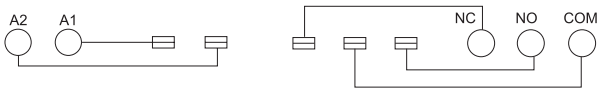
**Accessories**

| Bus jumper | Legend |
|---|---|
|  |  |
| SN20A | SN64P |

## Dimensions (mm)



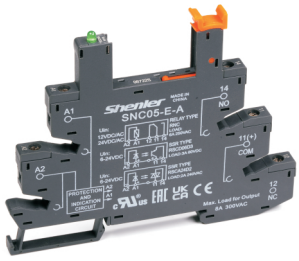

## Connection Diagrams



# SNC05-E

RNC Socket

## Characteristics



SNC05-E

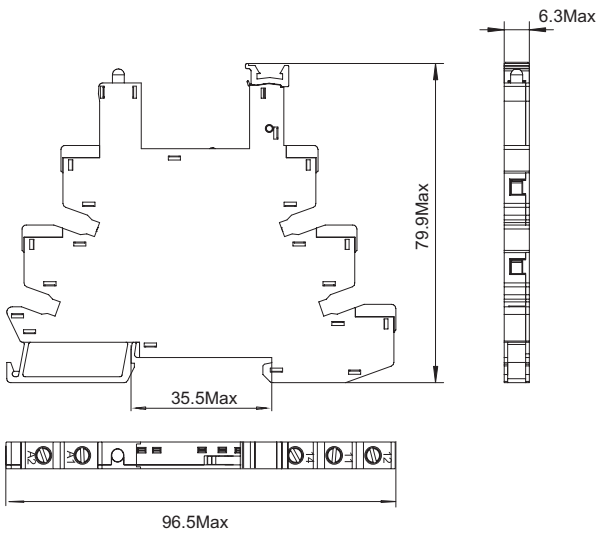
| Model No. | Input | Relay |
|---|---|---|
| SNC05-E-A | 12~24V | 12~24VDC |
| SNC05-E-B | 48~60V | 48~60VDC |
| SNC05-E-C | 110V | 60VDC |
| SNC05-E-D | 230V | 60VDC |

| Characteristics | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Max. tightening torque | | Nm | 0.5 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 24 |

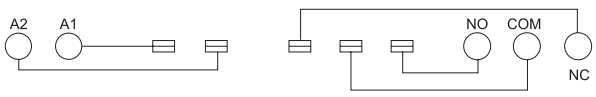
**Accessories**

| Bus jumper | Legend | Partition plate |
|---|---|---|
|  SN20B |  SN64P |  SN20S |

## Dimensions (mm)



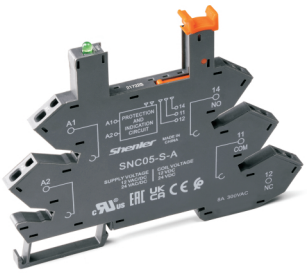

## Connection Diagrams



# SNC05-S

RNC Socket

## Characteristics



SNC05-S

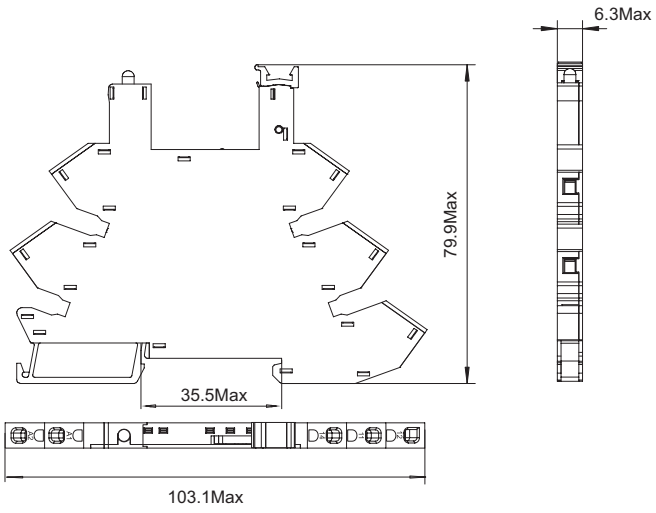
| Model No. | Input | Relay |
|---|---|---|
| SNC05-S-A | 12~24V | 12~24VDC |
| SNC05-S-B | 48~60V | 48~60VDC |
| SNC05-S-C | 110V | 60VDC |
| SNC05-S-D | 230V | 60VDC |

| Characteristics | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 25 |

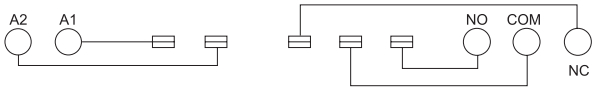
**Accessories**

| Bus jumper | Legend | Partition plate |
|---|---|---|
|  SN20B |  SN64P |  SN20S |

## Dimensions (mm)




## Connection Diagrams



# SNC05-P

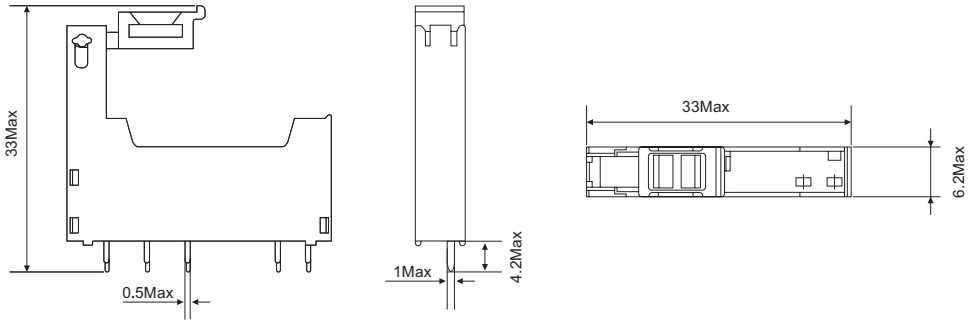
RNC Socket

## Characteristics

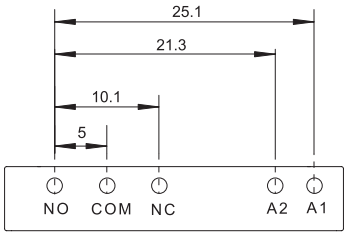

SNC05-P

| | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Wire size | | AWG/mm$^2$ | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 2.6 |

## Dimensions (mm)

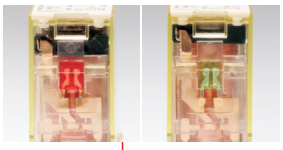



## Connection Diagrams



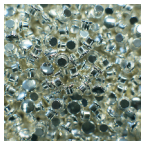
# RFT
Interface Relay

- Slim and compact size
- 1 pole 12A; 2 pole 8A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive

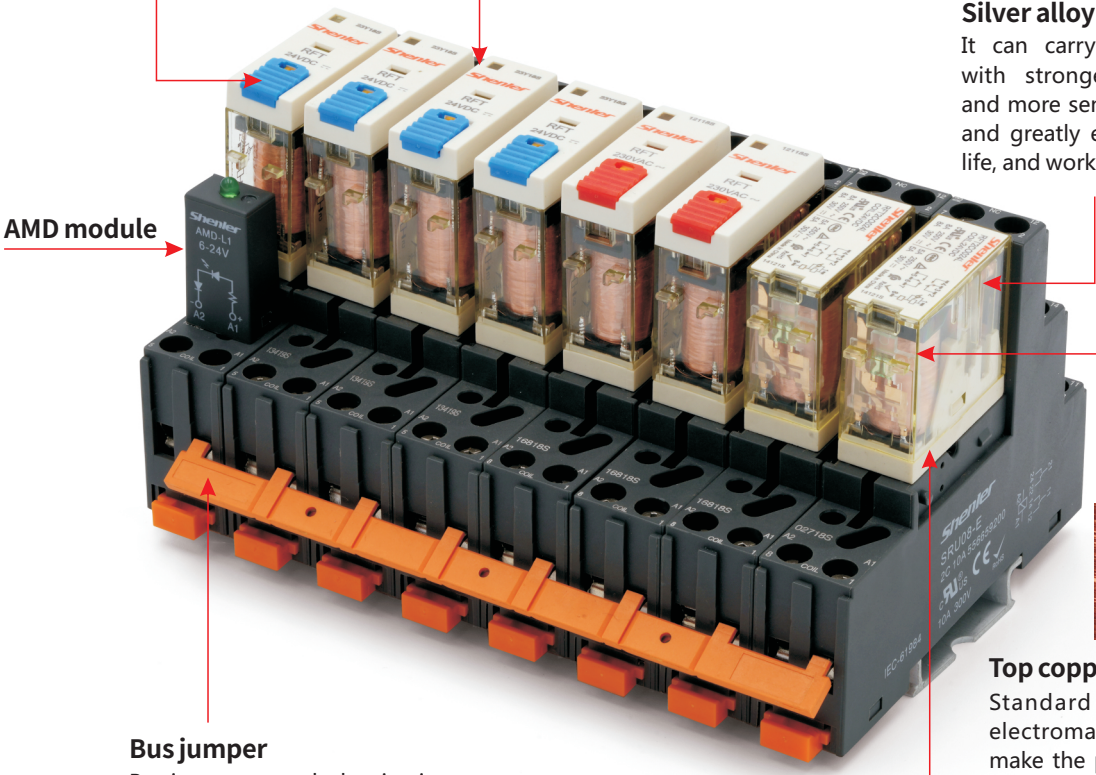


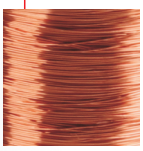
**LED**
Visible LED indicates the working status of the relay at any time, AC red, DC green

**Test button**
On-site test is available with test button.



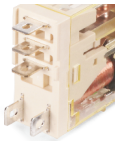
**Silver alloy contacts**
It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.



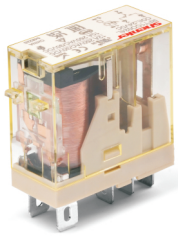
**Top copper coil material**
Standard turns and electromagnetic coils make the pick-up more reliable and enduring, which can reach more than 20 million cycles.

**Bus jumper**
Bus jumper extends the circuit.



**Silver alloy pins**
High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.

# RFT
Interface Relay

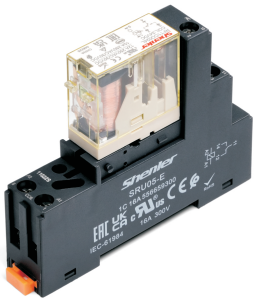


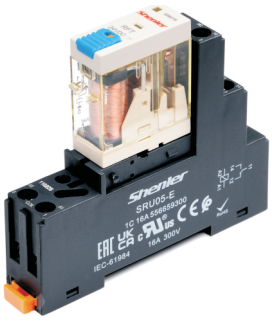
Relay

+

Socket

=





Relay module

RFT □ □ □ □

**Other options**
blank: standard type
L: with LED
D: with diode (1-,5+ ; 1-,8+)
D1: with diode(1+,5-; 1+,8-)
LD: with LED and diode (1-,5+ ; 1-,8+)
LD1: with LED and diode (1+,5-; 1+,8-)
LT: LED + Test button
LTD: LED + test button+diode (1-, 5+; 1-, 8+)
LTD1: LED + test button+diode (1+, 5-; 1+, 8-)
B: cover with flange (selection plus B,namely LB,DB,LDB, etc.)
A:gold plated contact

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | |
|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 |

**Terminal arrangement**
O: plug in

**Contact form**
1C: 1CO
2C: 2CO

**Series**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 1C | 2C |
| | Load | Resistance | 12A/250VAC, 30VDC | 8A/250VAC, 30VDC |
| | | Motor load | 1/3HP, 240VAC | 1/6HP, 240VAC |
| | Max. switching capacity (resistive) | | 3000VA, 360W | 2000VA, 240W |
| | Min. switching capacity | | 170mW(17V/10mA) | |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electrical durability (high temp., frequency 1s on, 1s off) | | ≥20 x $10^4$Cycles (1800 Ops/h) | |
| | Electrical durability (normal temp., frequency 1s on, 5s off) | | ≥30 x $10^4$Cycles(600 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75% ,AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10% ,AC:≥30% 50/60Hz | |
| Maximum voltage (23℃)(Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | |
| Coil operating power | DC(W) | | approx. 0.53 | |
| | AC(VA) | | approx. 1.0 | |
| Operate time (at nominal voltage) | | | ≤20ms | |
| Release time (at nominal voltage) | | | ≤10ms | |
| Initial breakdown voltage | Between open contacts | | 1000VAC/1min (leakage current 1mA) | |
| | Between poles | | 3000VAC/1min (leakage current 1mA) | |
| | Between contacts and coil | | 5000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 250VAC | |
| | Pollution level | | 3 | |
| | Overvoltage level | | III | |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 4000V | |

# RFT
Interface Relay

| | |
|---|---|
| Protection level | IP20 |
| Storage temperature/ humbidity | 55~+85℃/5%~68%RH(18 months) |
| Working temperature/ humbidity | -40~+55℃/5%~85%RH((No condensation) |
| Air pressure | 86~106KPa |
| Shock resistance | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | 10~55Hz double-amplitude:1.0mm |
| Mounting | plug in |
| Unit weight | approx. 18g |

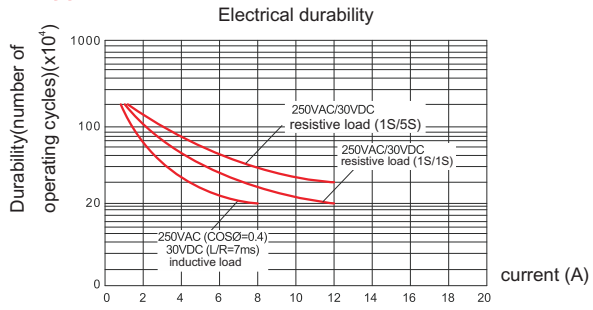
## Coil Specifications (23°C)

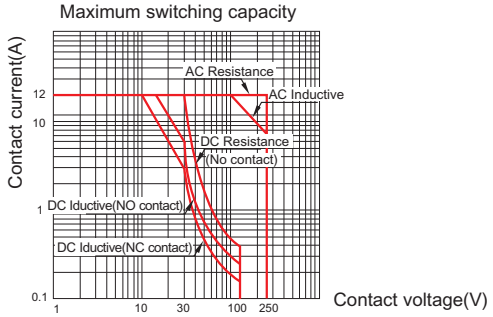
| | | | | | | |
|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | |
| Coil resistance Ω | 68 | 270 | 1100 | 4300 | 22800 | |
| Nominal voltage V.AC | 6 | 12 | 24 | 48 | 115 | 230 |
| Coil resistance Ω | 16 | 63 | 240 | 1085 | 6300 | 23000 |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

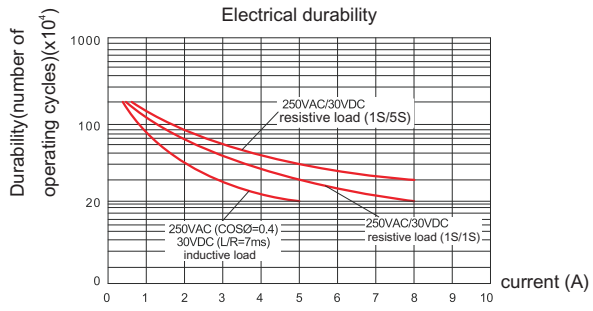
## Contact Specification

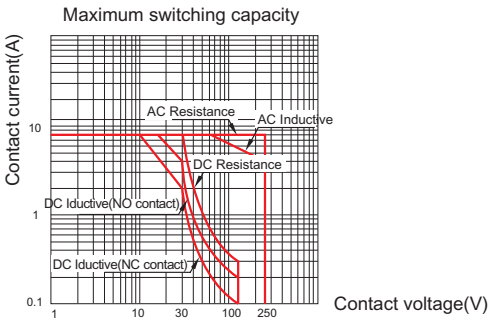
### RFT1CO




### RFT2CO

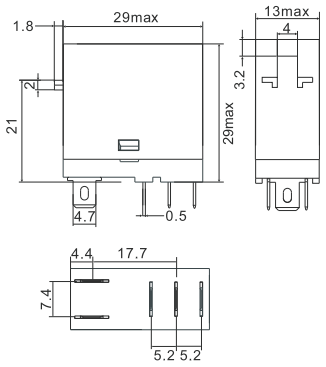


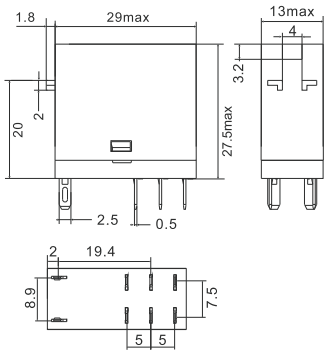
# RFT
Interface Relay

## Dimensions (mm)

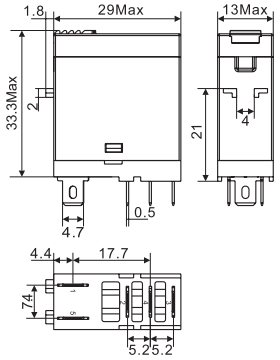
### RFT1C



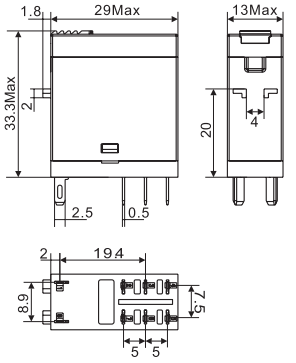

### RFT2C



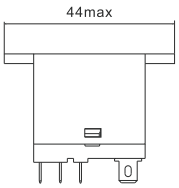

### RFT1CO-LT



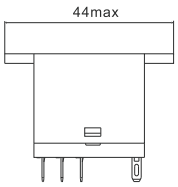

### RFT2CO-LT

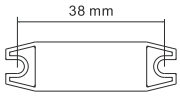



### RFT1CO-B



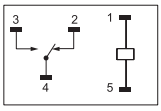

### RFT2CO-B



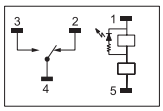




## Wiring Diagrams

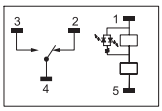
### RFT1CO



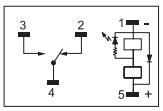

### RFT1COL/LT AC



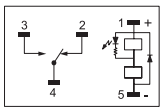

### RFT1COL/LT DC



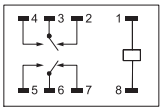

### RFT1COLD/LTD DC



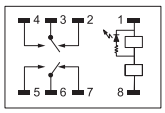

### RFT1COLD1/LTD1



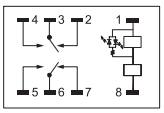

### RFT2CO



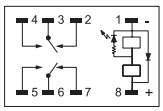

### RFT2COL/LT AC



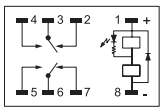

### RFT2COL/LT DC




### RFT2COLD/LTD DC




### RFT2COLD1/LTD1

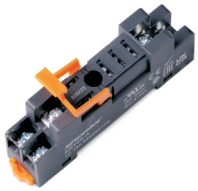


# SRT05-A&SRT08-A

RFT Socket

## Characteristics

SRT05-A



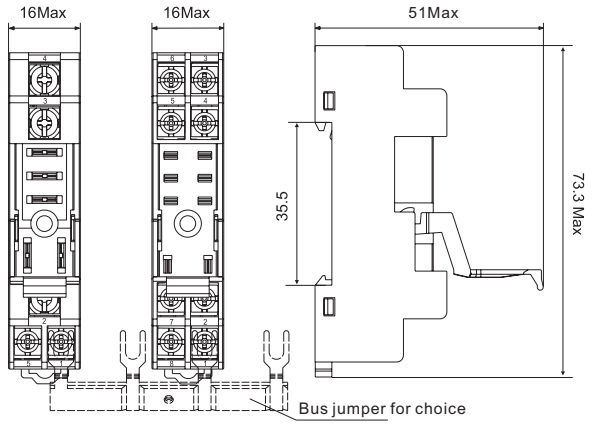
SRT08-A

| Type | | | SRT05-A | SRT08-A |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm $^2$ | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 22 | 27 |

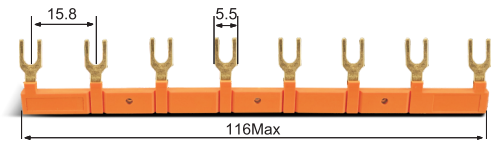
**Accessories**

| Plastic clip | Bus jumper |
|---|---|
|  SR20 (included in socket) |  SR08C |

## Dimensions (mm)



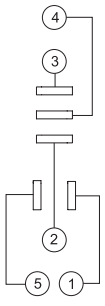

SRT05-A SRT08-A



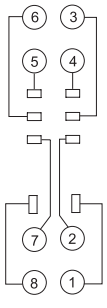

**Bus jumper SR08C**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM



SRT05-A



SRT08-A

①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

# SRT05-E&SRT08-E

RFT Socket

## Characteristics

SRT05-E

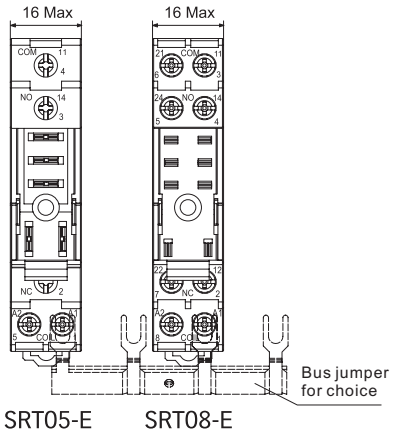
SRT08-E

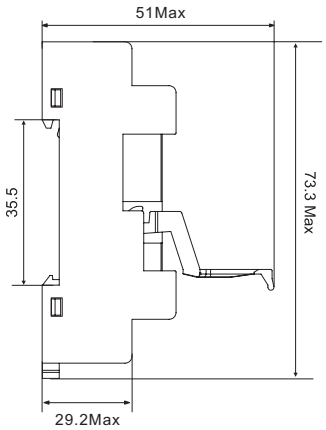
| Type | | | SRT05-E | SRT08-E |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm $^2$ | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 22 | 27 |

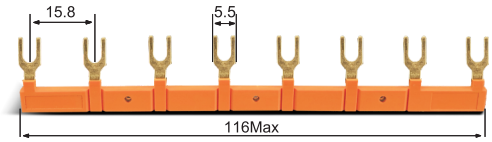
**Accessories**

| Plastic clip | Bus jumper |
|---|---|
|  SR20 (included in socket) |  SR08C |

## Dimensions (mm)



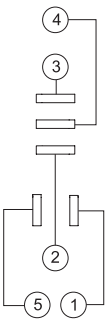



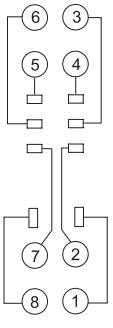

**Bus jumper SR08C**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM




SRT05-E




SRT08-E

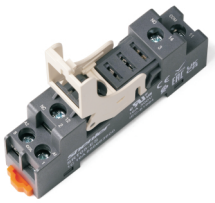
①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

# SRT05-ES&SRT08-ES

RFT Socket

## Characteristics

SRT05-ES



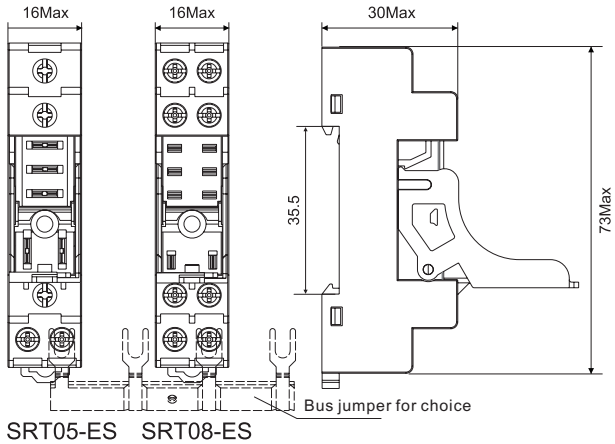
SRT08-ES

| Type | | | SRT05-ES | SRT08-ES |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm $^2$ | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 22 | 27 |

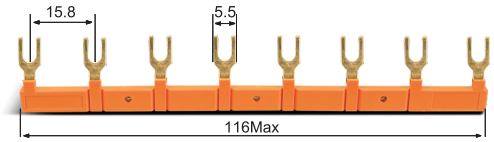
**Accessories**

| Socket | Plastic clip | Bus jumper |
|---|---|---|
| SRT05-ES |  |  |
| SRT08-ES | SR20L (included in socket) | SR08C |

## Dimensions (mm)



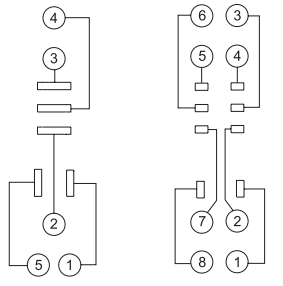

SRT05-ES SRT08-ES




**Bus jumper SR08C**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM




SRT05-ES




SRT08-ES

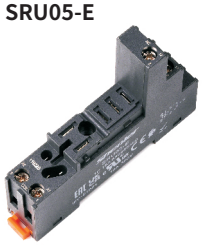
①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

# SRU05-E&SRU08-E

RFT Socket

## Characteristics

SRU05-E



SRU08-E

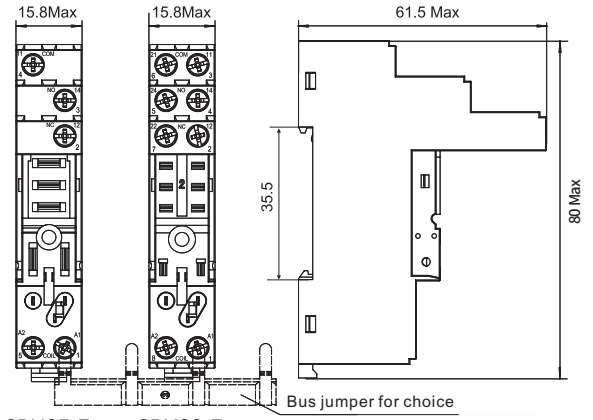
| Type | | | SRU05-E | SRU08-E |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 35 | 43 |

**Accessories**

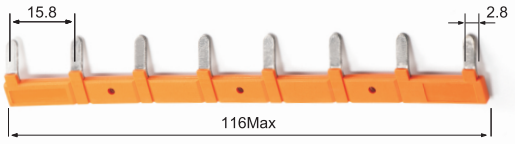
| Socket | Plastic clip | Metal clip★ | ID tag | Module | Bus jumper |
|---|---|---|---|---|---|
| SRU05-E |  |  SR27M |  SR2P |  AMD |  SR08B |
| SRU08-E | SR20T |  SR32M | | | |

★ SR27M is for relay with no test button; SR320M is for relay with test button.

## Dimensions (mm)



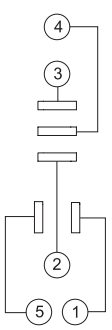

SRU05-E SRU08-E



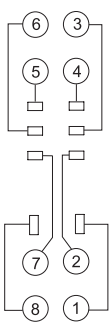

**Bus jumper SR08B**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM




SRT05-E




SRT08-E

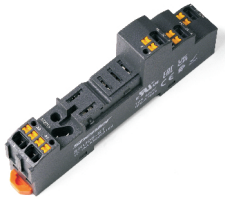
①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

# SRU05-ST&SRU08-ST

RFT Socket

## Characteristics

SRU05-ST



SRU08-ST

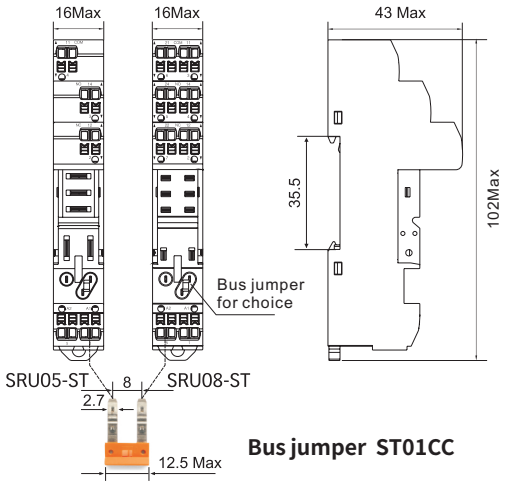
| Type | | | SRU05-ST | SRU08-ST |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | - | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 35 | 43 |

**Accessories**

| Socket | Plastic clip | Metal clip★ | ID tag | Module | Bus jumper |
|---|---|---|---|---|---|
| SRU05-ST |  |  SR27M |  SR2P |  AMD |  ST01CC |
| SRU08-ST | SR20T |  SR32M | | | |

★ SR27M is for relay with no test button; SR320M is for relay with test button.

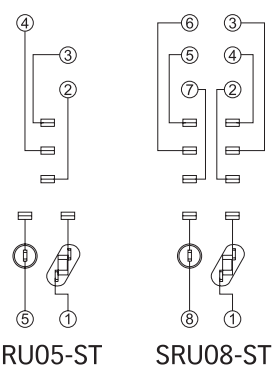
## Dimensions (mm)




**Bus jumper ST01CC**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM



①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

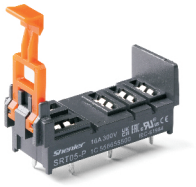
SRU05-ST SRU08-ST

# SRT05-P&SRT08-P&

RFT Socket

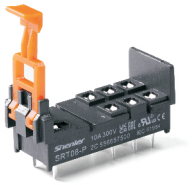
## Characteristics

**SRT05-P**

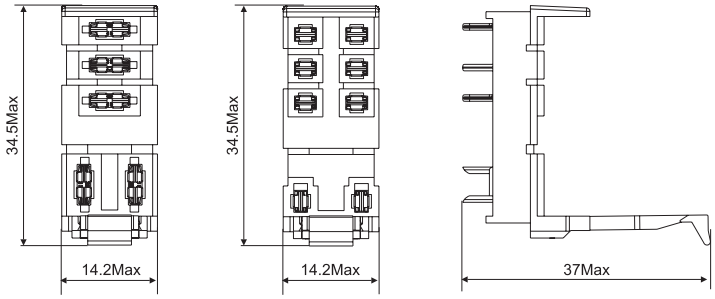


| Type | | | SRT05-P | SRT08-P |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 4 | |

**SRT08-P**

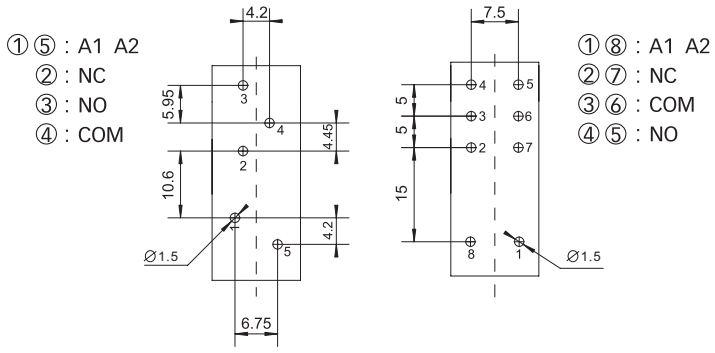


## Dimensions (mm)




SRT05-P SRT08-P

## Connection Diagrams



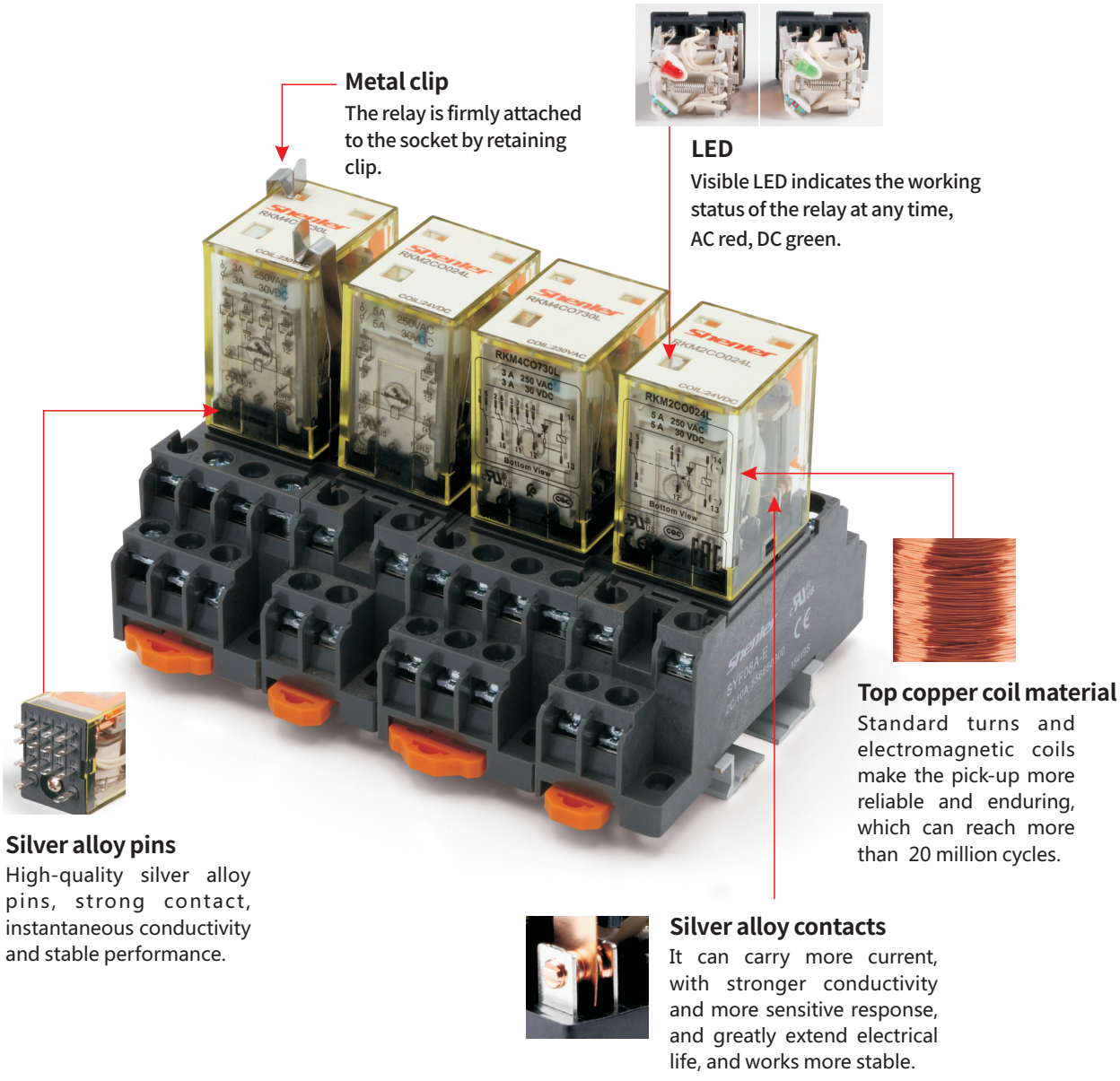

SRT05-P
Bottom view

SRT08-P
Bottom view

# RKM

Miniature General
Purpose Relay

- 2 poles 5A, 4 poles 3A
- With LED integrated in relay
- With inspection window
- Shenler industrial relays are widely used in the output signal and safety drive of PLC, CNC system, robot, intelligent manufacturing and other control systems. It is the best choice to realize remote control, production and processing, packaging, transportation, testing, storage and other equipment and automatic assembly lines.



# RKM

Miniature General Purpose Relay

Relay

+

Socket

=

Relay module

RKM □ □ □ □

**Other options**
L: LED
LD: LED + diode (13-,14+)
LD1: LED+diode(13+, 14-)

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Mount options**
O: plug in

**Contact form**
2C: 2CO
3C: 3CO
4C: 4CO

**Series name**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 2C/3C | 4C |
| | Load | Resistance | 5A/250VAC, 30VDC | 3A/250VAC, 30VDC |
| | | Motor load | 1/3HP, 240VAC | 1/6HP, 240VAC |
| | Max. switching capacity (resistive) | | 1250VA, 150W | 750VA, 90W |
| | Min. switching capacity | | 170mW(17V/10mA) | |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electrical durability | | ≥10 x $10^4$Cycles (1800 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥500MΩ (500VDC) | |
| Coil operating power | DC(W) | | approx. 0.9 | |
| | AC(VA) | | approx. 1.2 | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | |
| Initial breakdown voltage | Between open contacts | | 1000VAC/1min (leakage current 1mA) | |
| | Between poles | | 2000VAC/1min (leakage current 1mA) | |
| | Between contacts and coil | | 2000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 250VAC | |
| | Pollution level | | 3 | 2 |
| | Overvoltage level | | III | II |
| Impulse withstand voltage (waveform: 1.2/50us) | | | 4000V | |
| Protection level | | | IP20 | |
| Storage temperature/ humidity | | | -55~+85℃/ ≤85%RH (18 months) | |
| Working temperature/ humidity | | | -55~+70℃/ 5%~85%RH (No condensation) ★ | |
| Air pressure | | | 86~106KPa | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | |
| Mounting | | | plug in | |
| Unit weight | | | approx. 35g | |

★ If the storage exceeds 18 months (calculated from the factory date), it is recommended to re-test theparameters before using.

# RKM

Miniature General Purpose Relay

## Coil Specifications (23°C)

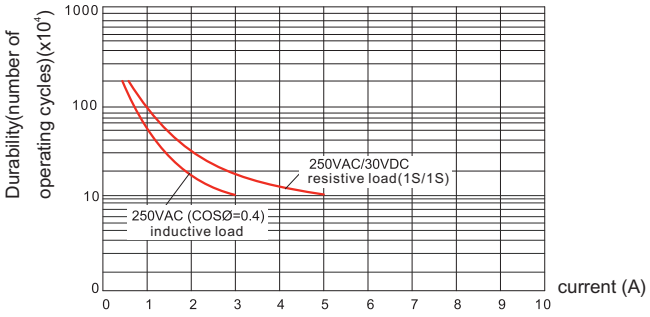
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | 42000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 | 42000 |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

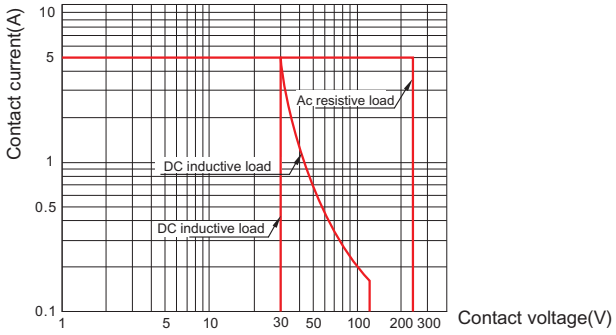
## Contact Specification

**RKM2CO**

Electrical durability contacts

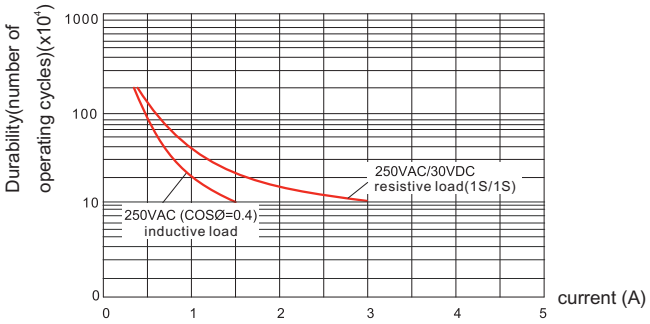



Maximum switching capacity

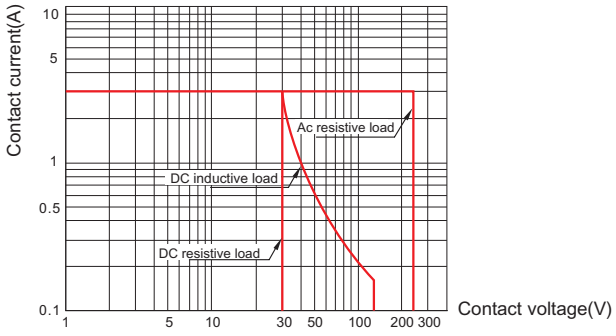



**RKM4CO**

Electrical durability contacts




Maximum switching capacity

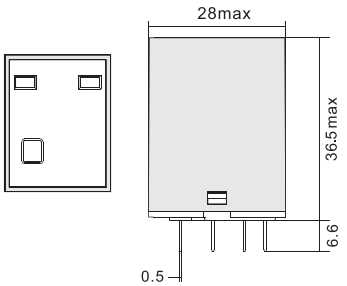


# RKM

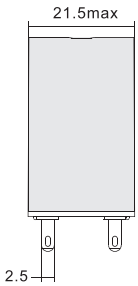
Miniature General
Purpose Relay

## Dimensions (mm)

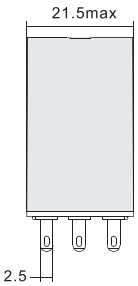
### RKM2CO/3CO/4CO



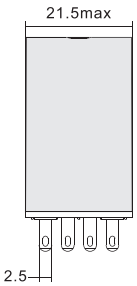

### RKM2CO




### RKM3CO

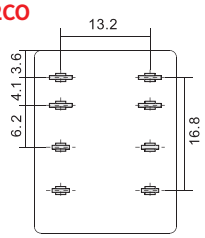



### RKM4CO

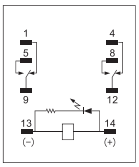



## Wiring Diagrams

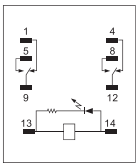
### RKM2CO



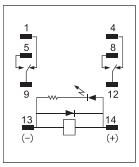

DC



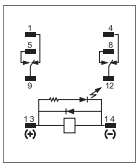
AC



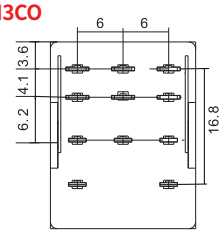
DC-D



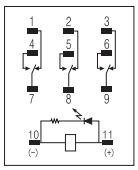
DC-D1



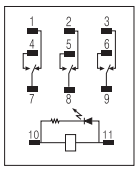
### RKM3CO



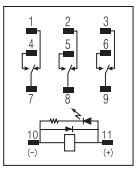

DC



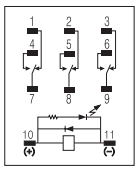
AC



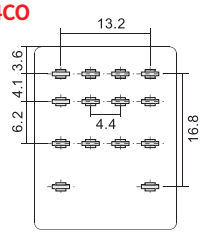
DC-D



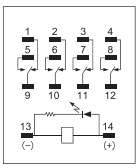
DC-D1



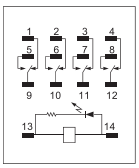
### RKM4CO



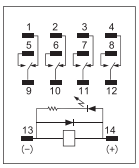

DC



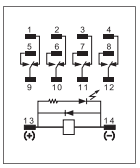
AC



DC-D



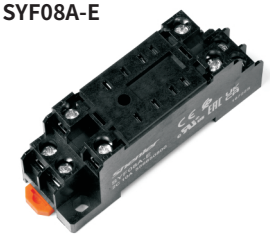
DC-D1



# SYF08A-E & SYF11A-E & SYF14A-E RKM Socket

## Characteristics

SYF08A-E



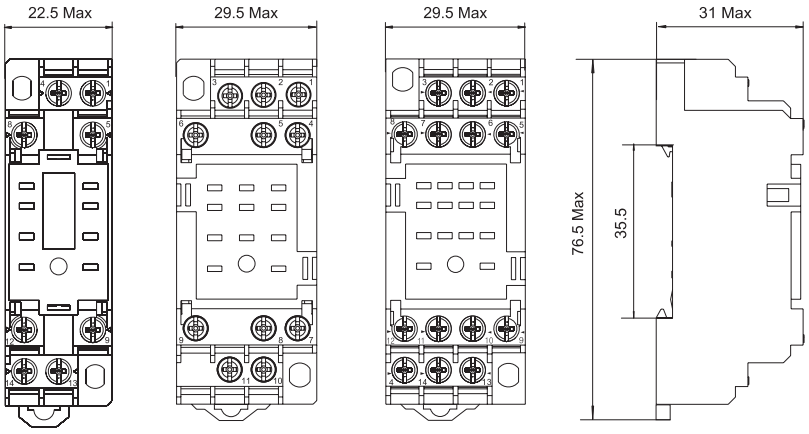
SYF14A-E

| Type | | | SYF08A-E | SYF11A-E | SYF14A-E |
|---|---|---|---|---|---|
| Nominal load | Current | A | 10 | 7 | 7 |
| | Voltage | V | 300 | | |
| Dielectric strength | | V/min | 2000 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 37 | 56 | 57 |

**Accessories**

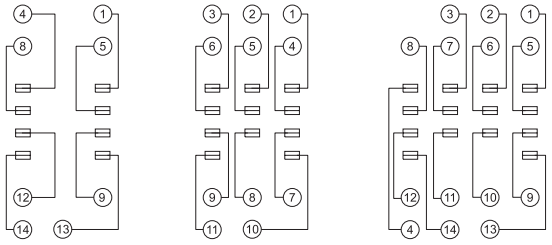
| Socket | Metal clip |
|---|---|
| SYF08A-E |  |
| SYF11A-E | |
| SYF14A-E | SY36S |

## Dimensions (mm)




SYF08A-E SYF11A-E SYF14A-E

## Connection Diagrams



SYF08A-E

⑭⑬ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SYF11A-E

⑩⑪ : A1 A2
①②③ : NC
④⑤⑥ : NO
⑦⑧⑨ : COM

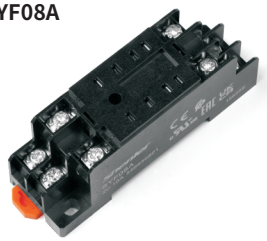
SYF14A-E

⑭⑬ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SYF08A & SYF11A & SYF14A RKM Socket

## Characteristics

SYF08A



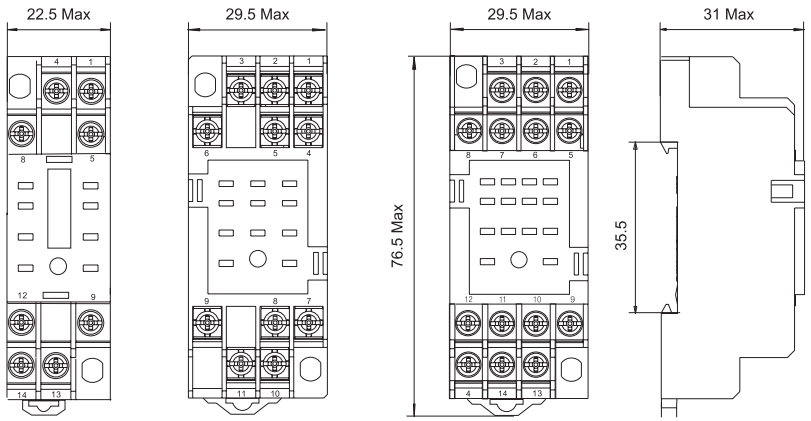
SYF14A

| Type | | | SYF08A | SYF11A | SYF14A |
|---|---|---|---|---|---|
| Nominal load | Current | A | 10 | 7 | 7 |
| | Voltage | V | 300 | | |
| Dielectric strength | | V/min | 2000 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 34 | 47 | 56 |

**Accessories**

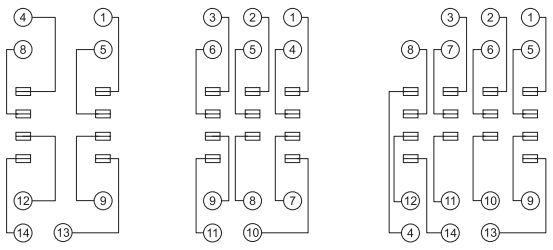
| Socket | Metal clip |
|---|---|
| SYF08A |  |
| SYF11A | |
| SYF14A | SY36S |

## Dimensions (mm)




SYF08A SYF11A SYF14A

## Connection Diagrams



SYF08A

⑭⑬ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SYF11A

⑩⑪ : A1 A2
①②③ : NC
④⑤⑥ : NO
⑦⑧⑨ : COM

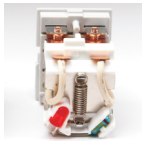
SYF14A

⑭⑬ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# RKE

Miniature General
Purpose Relay

- 2 poles 7A; 4 poles 5A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive



**LED**

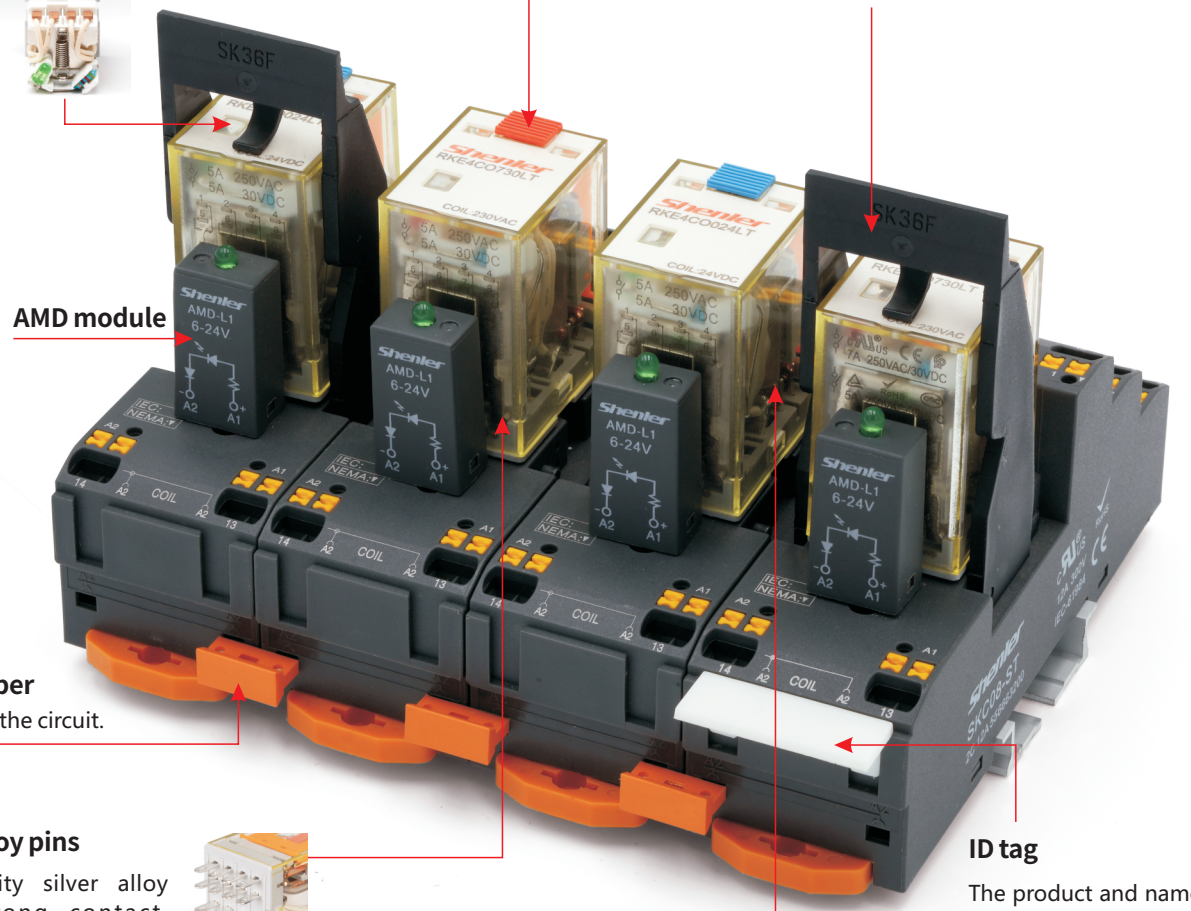
Visible LED indicates the working status of the relay at any time, AC red, DC green

**Test button**

On-site test is available with test button.

**Plastic clip**

The relay is firmly attached to the socket by retaining clip.



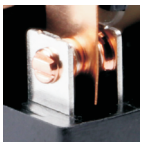

**AMD module**

**Bus jumper**

To extend the circuit.

**Silver alloy pins**

High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.



**Silver alloy contacts**

It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

**ID tag**

The product and nameplate is printed with clear wiring instruction.

# Selection manual of industrial control relay

## RKE

Miniature General Purpose Relay

Relay

+

Socket

=

Relay module

RKE □ □ □ □

**Other options**
LT: LED + test button
LTD: LED + test button + diode (13-,14+)
LTD1: LED + test button + diode (13+,14-)
LT M: LED+test button, with 0.65Un coil tuned
LTA: LED + test button +gold plated contact

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Terminal arrangement**
O: plug in

**Contact form**
2C: 2CO
4C: 4CO

**Series name**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 2C | 4C |
| | Load | Resistance | 7A/250VAC, 30VDC | 5A/250VAC, 30VDC |
| | | Motor load | 1/6HP, 240VAC | |
| | Max. switching capacity (resistive) | | 1750VA, 210W | 1250VA, 150W |
| | Min. switching capacity | | 170mW(17V/10mA) | |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electric durability(110%rated voltage, 55℃) | | ≥20 x $10^4$Cycles (1800 Ops/h) | |
| | Electric durability (Normal temperature) | | ≥40x $10^4$Cycles (360 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥500MΩ (500VDC) | |
| Coil operating power | DC(W) | | approx. 0.9 | |
| | AC(VA) | | approx. 1.2 | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | |
| Initial breakdown voltage | Between open contacts | | 1000VAC/1min (leakage current 1mA) | |
| | Between poles | | 2000VAC/1min (leakage current 1mA) | |
| | Between contacts and coil | | 2000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 250VAC | |
| | Pollution level | | 3 | |
| | Overvoltage level | | III | |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 4000V | |
| Protection level | | | IP20 | |
| Storage temperature/ humidity | | | -55~+85℃/ ≤85%RH (18 months) | |
| Working temperature/ humidity | | | -55~+70℃/ 5%~85%RH (No condensation) | |
| Air pressure | | | 86~106KPa | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | |
| Mounting | | | plug in | |
| Unit weight | | | approx. 35g | |

# RKE

Miniature General
Purpose Relay

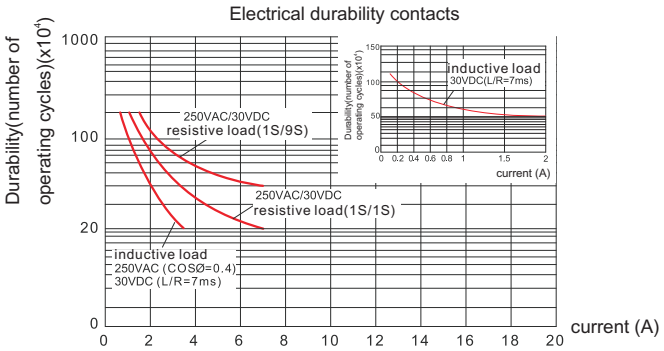
## Coil Specifications (23°C)

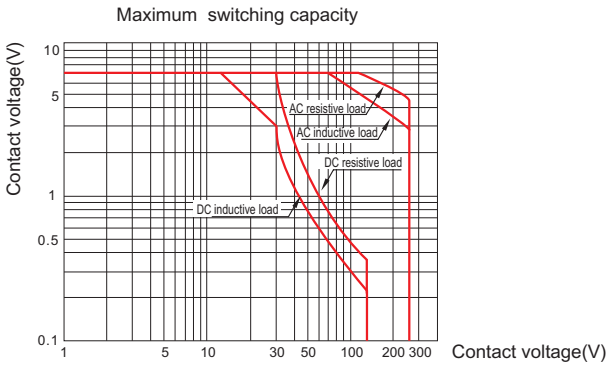
| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | 42000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 | 42000 |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

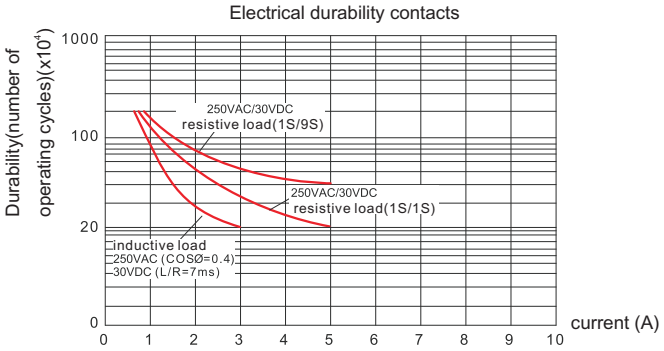
## Contact Specification

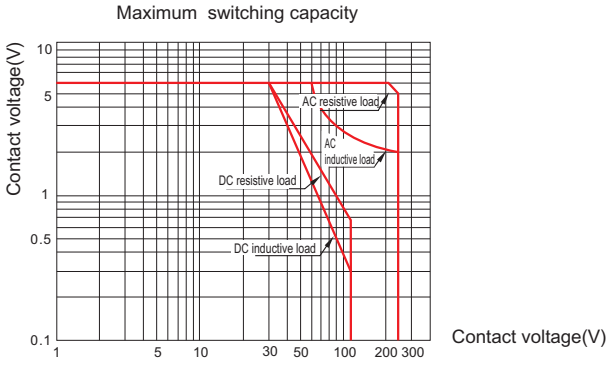
### RKE2CO




### RKE4CO



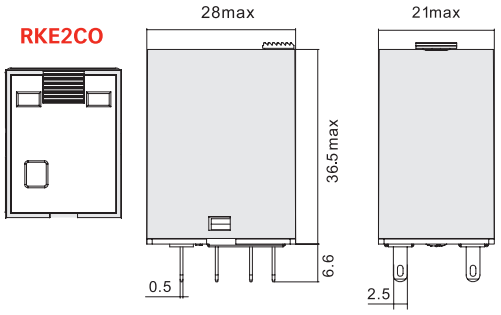

Note : These are typical curves, actual durability depends on load, environment, duty cycle, etc

# RKE

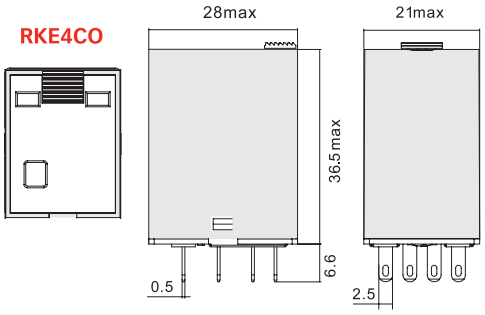
Miniature General
Purpose Relay

## Dimensions (mm)

RKE2CO

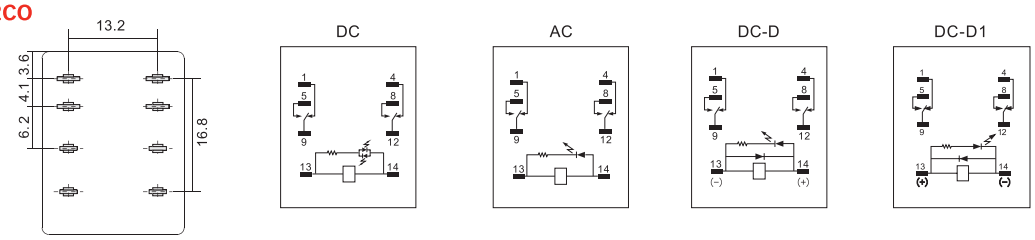



RKE4CO

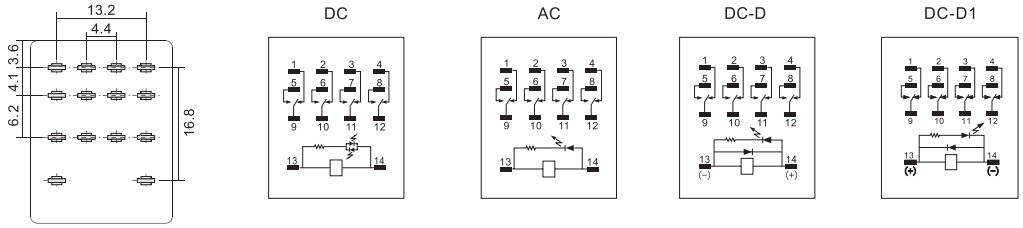



## Wiring Diagrams

RKE2CO




RKE4CO



Selection manual of industrial control relay

# RKE-LS

Sealed Power Relay

Relay

+

Socket

=

Relay module

RKE □ □ □ □

**Other options**
LS: LED + Sealed
LSA: LED + Sealed + Signal Control

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Terminal arrangement**
O: plug in

**Contact form**
2C: 2CO
4C: 4CO

**Series name**

Humidity proof

Dust proof

Oil proof

IP62
Protection level

- Good performance in bad working condition, especially in much oil, dust, humidity places
- Ip62
- 2 poles7A; 4 poles 5A
- With non-polarity LED integrated in relay
- Conformity with RoHs Directive

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 2C | 4C |
| | Load | Resistance | 7A/250VAC, 30VDC | 5A/250VAC, 30VDC |
| | | Motor load | 1/6HP, 240VAC | |
| | Max. switching capacity (resistive) | | 1750VA, 210W | 1250VA, 150W |
| | Min. switching capacity | | 170mW(17V/10mA) | |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electrical durability(110%rated voltage, 55℃) | | ≥20 x $10^4$Cycles (1800 Ops/h) | |
| | Electrical durability (Normal temperature) | | ≥40 x $10^4$Cycles (360 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥500MΩ (500VDC) | |
| Coil operating power | DC(W) | | approx. 0.9 | |
| | AC(VA) | | approx. 1.2 | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | |
| Initial breakdown voltage | Between open contacts | | 1000VAC/1min (leakage current 1mA) | |
| | Between poles | | 2000VAC/1min (leakage current 1mA) | |
| | Between contacts and coil | | 2000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 250VAC | |
| | Pollution level | | 3 | 2 |
| | Overvoltage level | | III | |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 4000V | |
| Protection level | | | IP62 | |
| Storage temperature/ humidity | | | -20~+85℃/ ≤85%RH (18 months) | |
| Working temperature/ humidity | | | -55~+70℃/ 5%~85%RH (No condensation) | |
| Air pressure | | | 86~106KPa | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | |
| Mounting | | | plug in | |
| Unit weight | | | approx. 35g | |

# RKE-LS

Sealed Power Relay

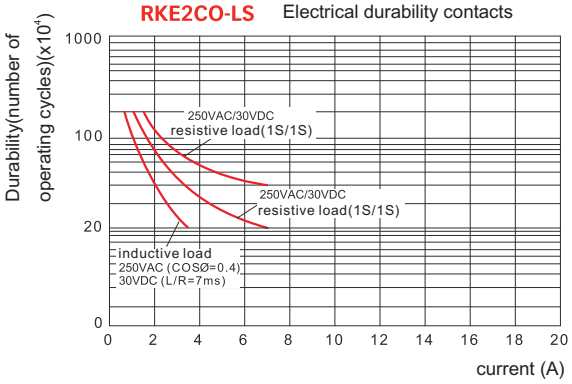
## Coil Specifications (23°C)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | 42000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 | 42000 |

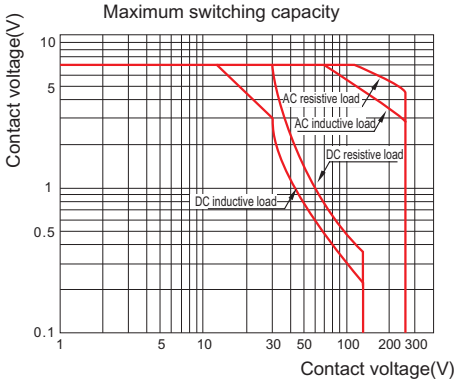
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

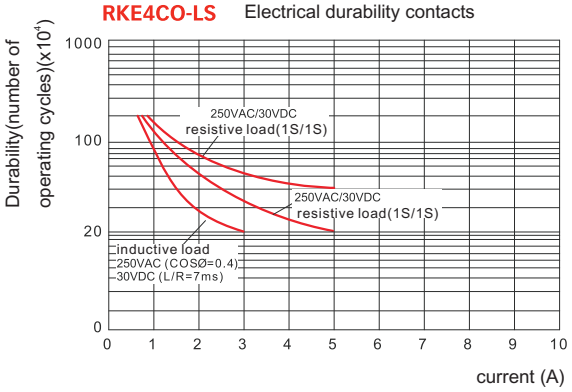
RKE2CO-LS Electrical durability contacts



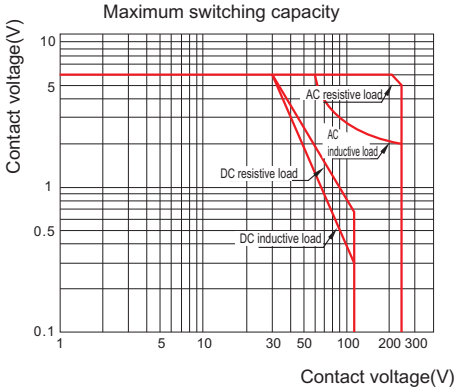

Maximum switching capacity




RKE4CO-LS Electrical durability contacts

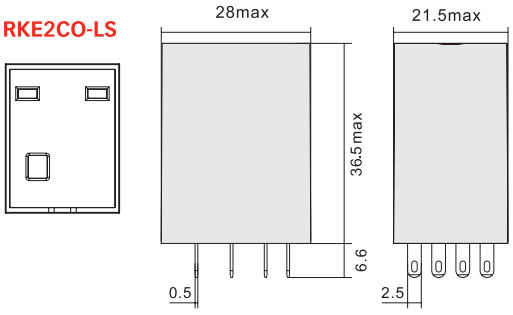



Maximum switching capacity

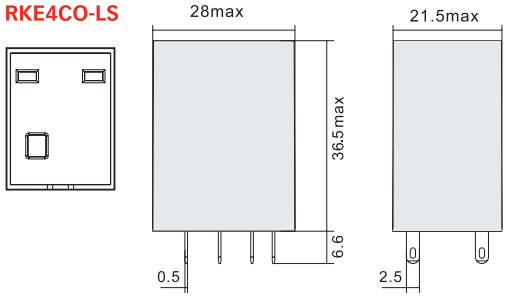



## Dimensions (mm)

RKE2CO-LS




RKE4CO-LS



# SYF08A-E & SYF11A-E & SYF14A-E RKE Socket

## Characteristics

SYF08A-E

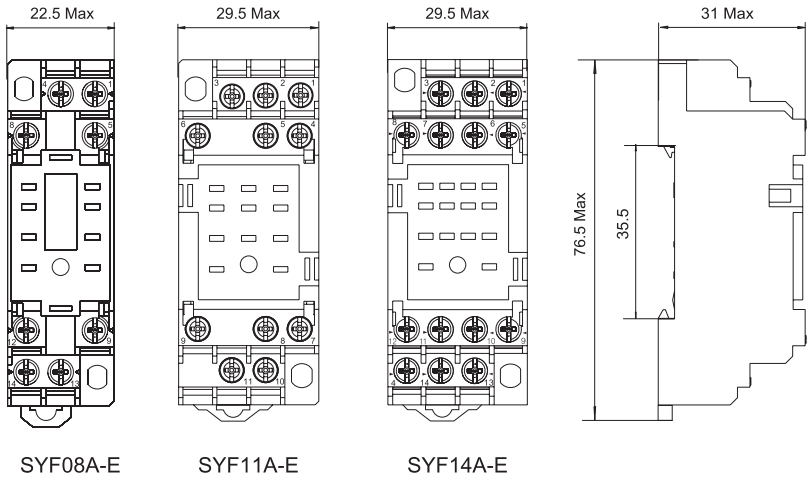
SYF14A-E

| Type | | | SYF08A-E | SYF11A-E | SYF14A-E |
|---|---|---|---|---|---|
| Nominal load | Current | A | 10 | 7 | 7 |
| | Voltage | V | 300 | | |
| Dielectric strength | | V/min | 2000 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 37 | 56 | 57 |

**Accessories**

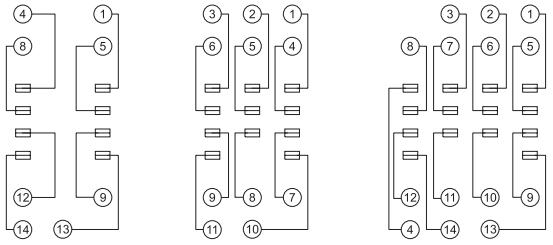
| Socket | Metal clip |
|---|---|
| SYF08A-E |  |
| SYF11A-E | |
| SYF14A-E | SY36S |

## Dimensions (mm)




SYF08A-E SYF11A-E SYF14A-E

## Connection Diagrams



SYF08A-E

⑭⑬ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SYF11A-E

⑩⑪ : A1 A2
①②③ : NC
④⑤⑥ : NO
⑦⑧⑨ : COM

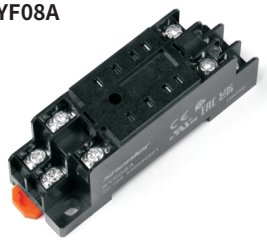
SYF14A-E

⑭⑬ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SYF08A & SYF11A & SYF14A RKE Socket

## Characteristics

SYF08A



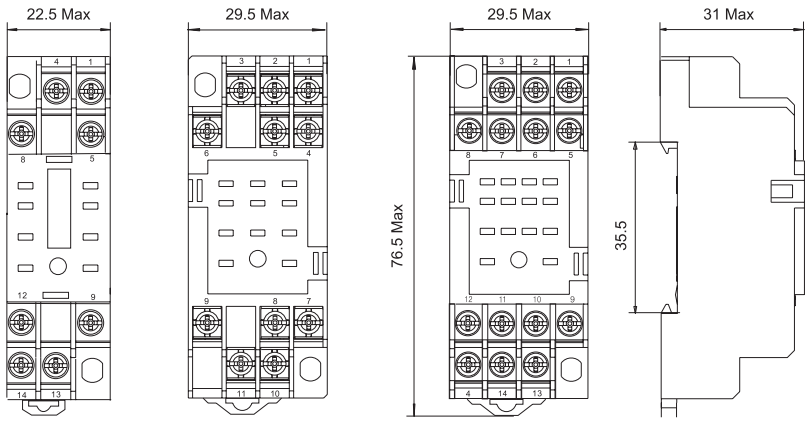
SYF14A

| Type | | | SYF08A | SYF11A | SYF14A |
|---|---|---|---|---|---|
| Nominal load | Current | A | 10 | 7 | 7 |
| | Voltage | V | 300 | | |
| Dielectric strength | | V/min | 2000 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 34 | 47 | 56 |

**Accessories**

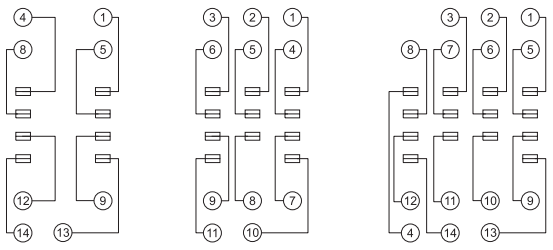
| Socket | Metal clip |
|---|---|
| SYF08A |  |
| SYF11A | |
| SYF14A | SY36S |

## Dimensions (mm)




SYF08A SYF11A SYF14A

## Connection Diagrams



SYF08A

⑭⑬ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SYF11A

⑩⑪ : A1 A2
①②③ : NC
④⑤⑥ : NO
⑦⑧⑨ : COM

SYF14A

⑭⑬ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SKB08-E & SKB14-E

RKE Socket

## Characteristics

SKB08-E

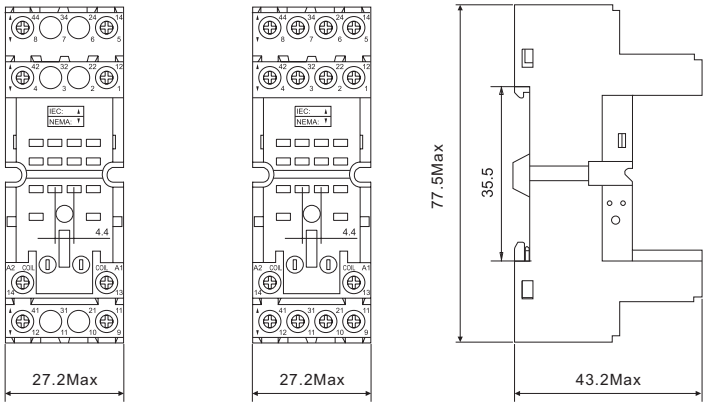
SKB14-E

| Type | | | SKB08-E | SKB14-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 50 | 56 |

**Accessories**

| Socket | Plastic clip | Metal clip | ID tag | Module |
|---|---|---|---|---|
| SKB08-E<br>SKB14-E |  SK36F |  SK36M |  SK4P |  AMD |

## Dimensions (mm)

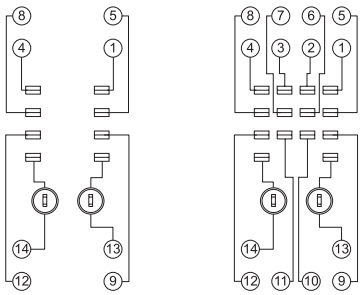



SKB08-E SKB14-E

## Connection Diagrams

SKB08-E

⑬⑭ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM



SKB14-E

⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SKC08-E & SKC11-E & SKC14-E RKE Socket

## Characteristics

SKC08-E

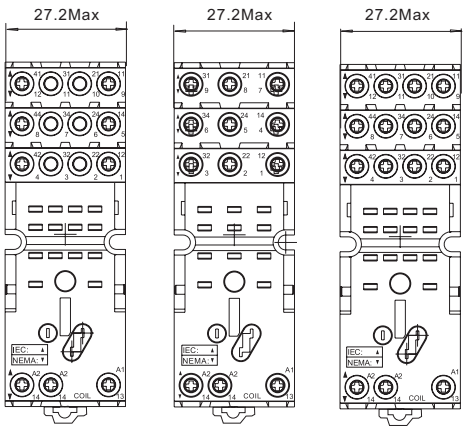
SKC14-E

| Type | | | SKC08-E | SKC11-E | SKC14-E |
|---|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 | 10 |
| | Voltage | V | 300 | | |
| Dielectric strength | Between coil and contact | V/min | 4000 | | |
| | Between contacts | V/min | 2500 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 50 | 56 | 62 |

**Accessories**

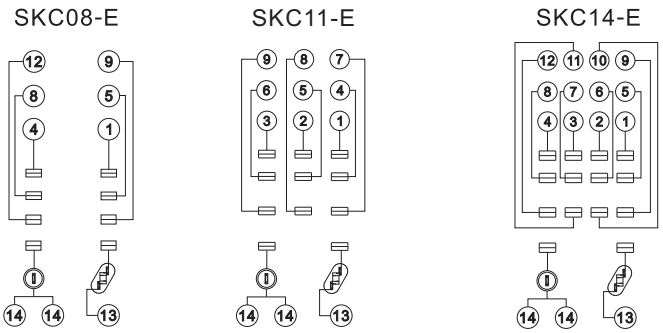
| Socket | Plastic clip | Metal clip | ID tag | Module |
|---|---|---|---|---|
| SKC08-E |  |  |  |  |
| SKC11-E | | | | |
| SKC14-E | SK36F | SK36M | SK4P | AMD |

## Dimensions (mm)




SKC08-E SKC11-E SKC14-E

## Connection Diagrams



# SKC08-ST & SKC14-ST

RKE Socket

## Characteristics


SKC08-ST

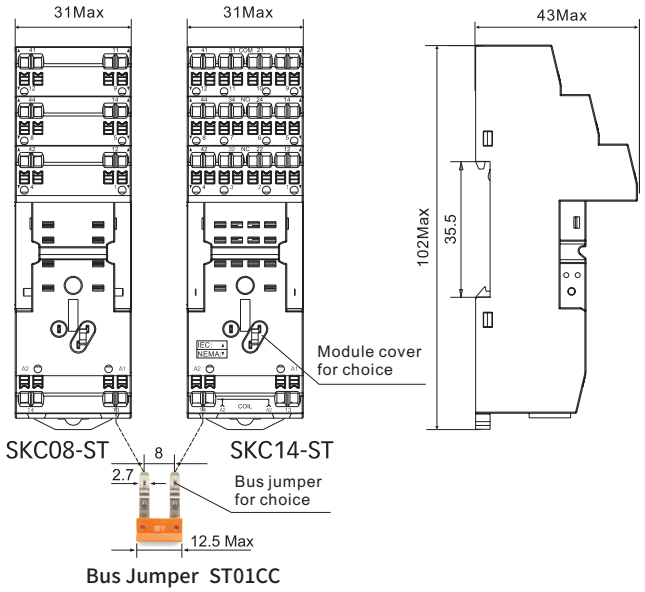
SKC14-ST

| Type | | | SKC08-ST | SKC14-ST |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 8 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | - | |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 80 | 80 |

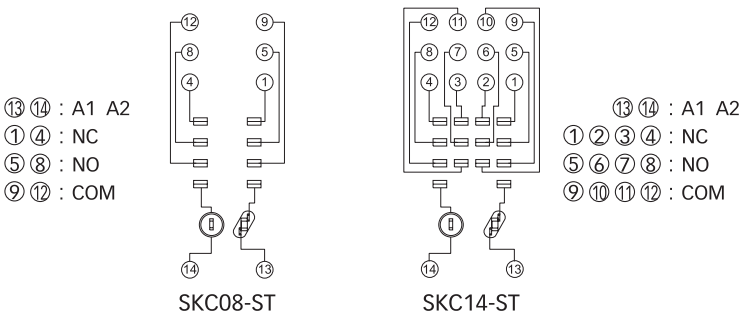
**Accessories**

| Socket | Plastic clip | ID tag | Module | Bus Jumper |
|---|---|---|---|---|
| SKC08-ST |  |  |  |  |
| SKC14-ST | SK36F | SK4P | AMD | ST01CC |

## Dimensions (mm)




## Connection Diagrams



# SKF08-E & SKF14-E

RKE Socket

## Characteristics

SKF08-E

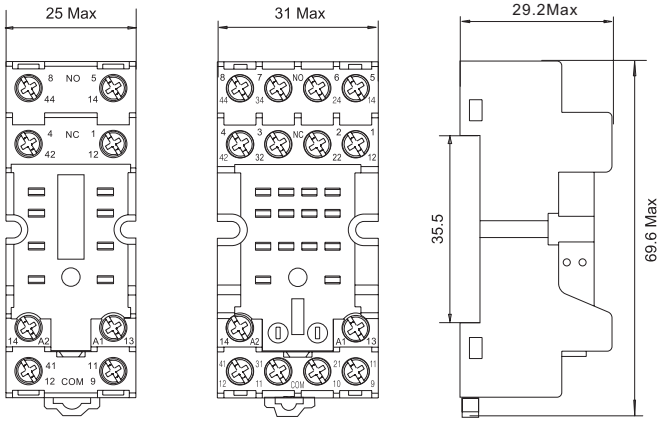
SKF14-E

| Type | | | SKF08-E | SKF14-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 35 | 45 |

**Accessories**

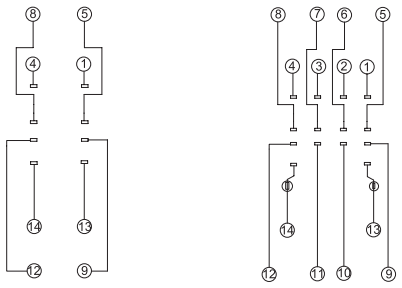
| Socket | Metal clip | ID tag | Module |
|---|---|---|---|
| SKF08-E | | | - |
| SKF14-E |  SK36M |  SK2P |  AMD |

## Dimensions (mm)




SKF08-E SKF14-E

## Connection Diagrams



SKF08-E

⑬⑭ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SKF14-E

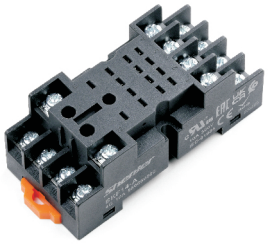
⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SKF14-A

RKE Socket

## Characteristics

SKF14-A

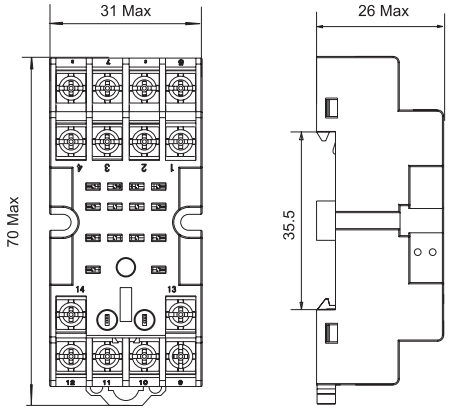


| Type | | | SKF14–A |
|---|---|---|---|
| Nominal load | Current | A | 10 |
| | Voltage | V | 300 |
| Dielectric strength | | V/min | 2500 |
| Max. tightening torque | | Nm | 1.0 |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 42.9 |

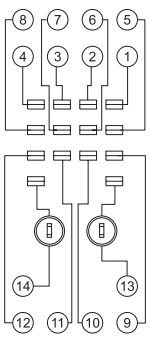
**Accessories**

| Socket | Metal clip | ID tag | Module |
|---|---|---|---|
| SKF14–A |  SK36M |  SK2P |  AMD |

## Dimensions (mm)




## Connection Diagrams




⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SY08-P & SY14-P

RKE Socket

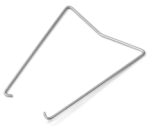
## Characteristics

**SY08-P**

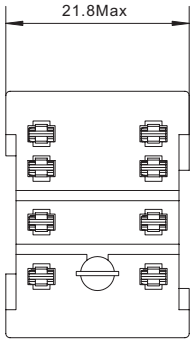
**SY14-P**

| Type | | | SY08-P | SY14-P |
|---|---|---|---|---|
| Nominal load | Current | A | 10 | 6 |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2000 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 7 | 7 |

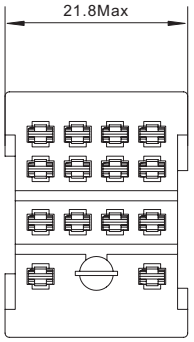
**Accessories**

| Socket | Metal clip |
|---|---|
| SY08-P |  SY36M |
| SY14-P | |

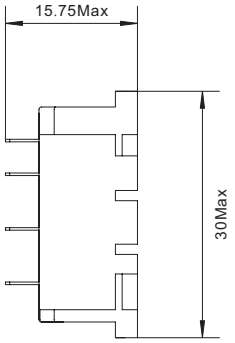
## Dimensions (mm)



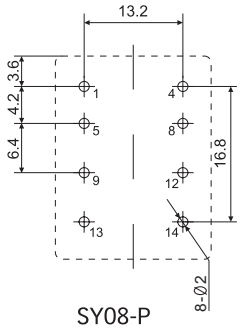

SY08-P




SY14-P

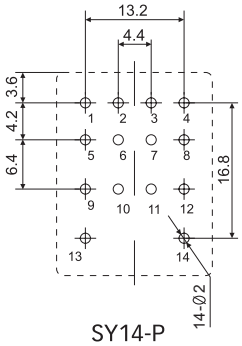



## Connection Diagrams




SY08-P

⑬ ⑭ : A1 A2
① ④ : NC
⑤ ⑧ : NO
⑨ ⑫ : COM




SY14-P

⑬ ⑭ : A1 A2
① ② ③ ④ : NC
⑤ ⑥ ⑦ ⑧ : NO
⑨ ⑩ ⑪ ⑫ : COM

# RKF

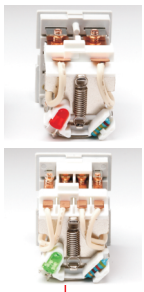
Miniature General
Purpose Relay

- 2 poles 12A; 4 poles 6A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive
- Gold plated contacts optional

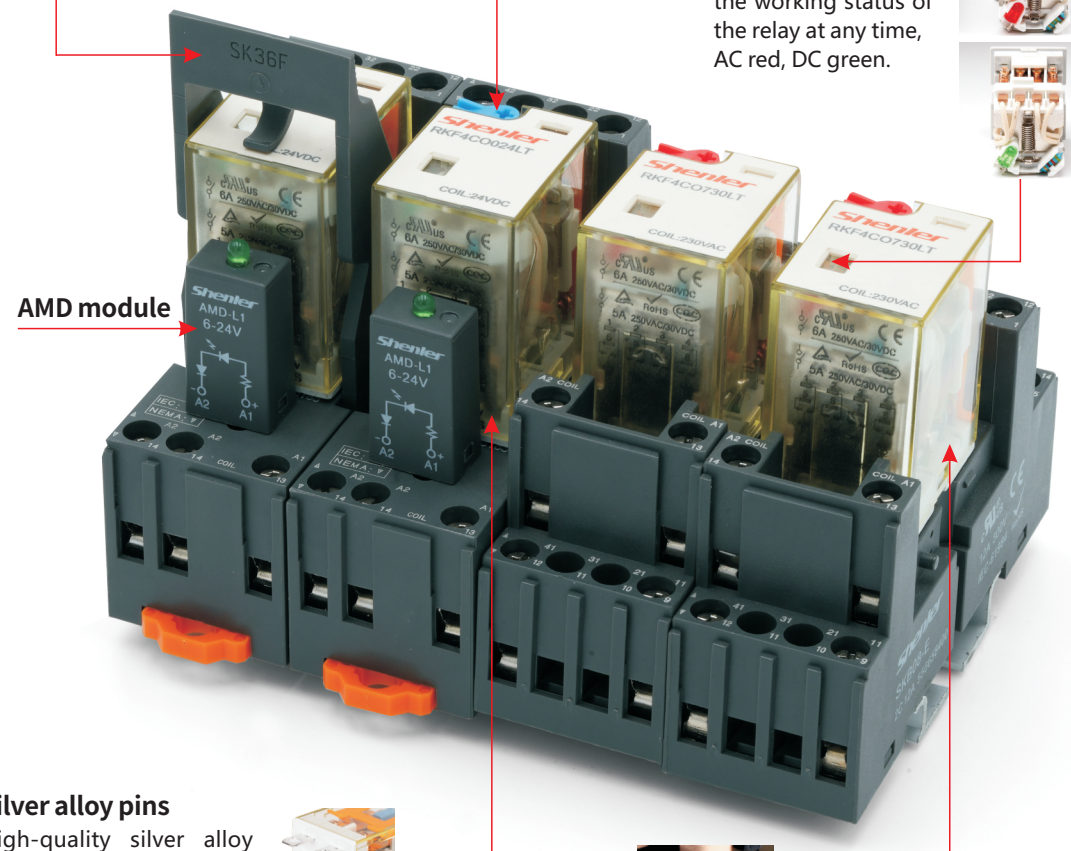
**Plastic clip**
The relay is firmly attached to the socket by retaining clip.

**Test button**
On-site test is available with test button.

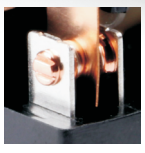
**LED**
Visible LED indicates the working status of the relay at any time, AC red, DC green.



**AMD module**




**Silver alloy pins**
High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.



**Silver alloy contacts**
It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

# Selection manual of industrial control relay

## RKF

Miniature General Purpose Relay

Relay

+

Socket

=

Relay module

RKF □ □ □ □

**Other options**

LT: LED + test button
LTD: LED + test button + diode (13-,14+)
LTD1: LED + test button + diode (13+,14-)
LTA: LED + test button + gold plated contact
LTDA: LED + test button + diode+gold plated contact
LT M: LED+test button, with 0.65Un coil tuned

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Terminal arrangement**

O: plug in

**Contact form**

2C: 2CO
4C: 4CO

**Series name**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 2C | 4C |
| | Load | Resistance | 12A/250VAC, 30VDC | 6A/250VAC, 30VDC |
| | | Motor load | 1/3HP, 240VAC | 1/6HP,240VAC |
| | Max. switching capacity (resistive) | | 3000VA, 360W | 1500VA, 180W |
| | Min. switching capacity | | 170mW(17V/10mA); LTA: 500mW(5V/100mA) | |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electric durability(110%rated voltage, 55℃) | | ≥20 x $10^4$Cycles (1800 Ops/h) | |
| | Electric durability (Normal temperature) | | ≥40 x $10^4$Cycles (360 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | |
| Coil operating power | | DC(W) | approx. 0.9 | |
| | | AC(VA) | approx. 1.2 | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | |
| Initial breakdown voltage | | Between open contacts | 1000VAC/1min (leakage current 1mA) | |
| | | Between poles | 2000VAC/1min (leakage current 1mA) | |
| | | Between contacts and coil | 2000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | | Rated voltage | 250VAC | |
| | | Pollution level | 3 | 2 |
| | | Overvoltage level | III | II |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 4000V | |
| Protection level | | | IP20 | |
| Storage temperature/ humidity | | | -55~+85℃/ ≤85%RH (18 months) | |
| Working temperature/ humidity | | | -55~+70℃/ 5%~85%RH (No condensation) | |
| Air pressure | | | 86~106KPa | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | |
| Mounting | | | plug in | |
| Unit weight | | | approx. 35g | |

# RKF

Miniature General
Purpose Relay

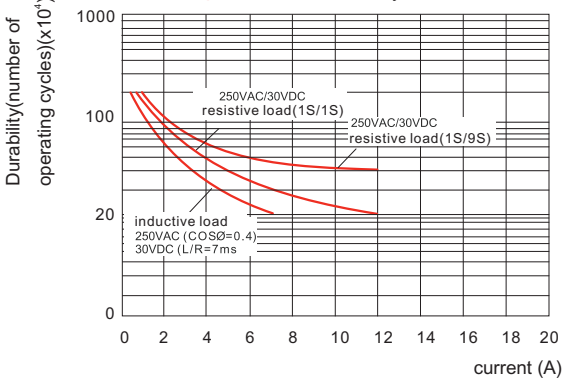
## Coil Specifications (23°C)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | 42000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 | 42000 |

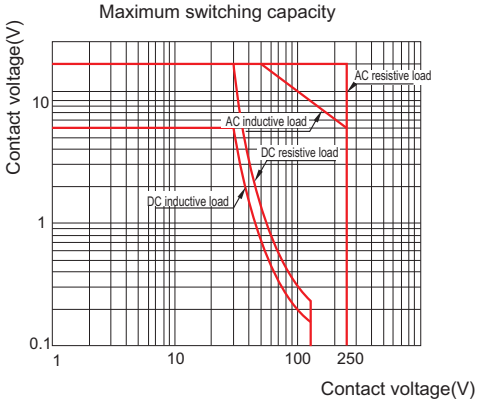
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

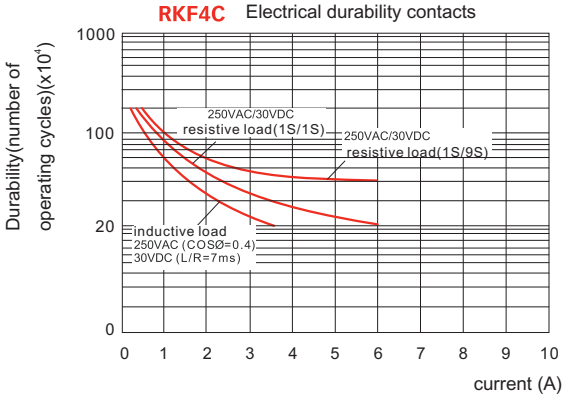
**RKF2C** Electrical durability contacts



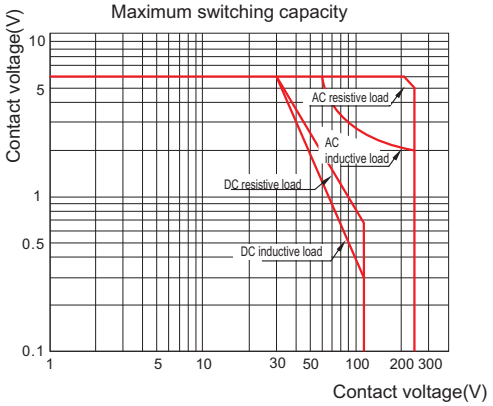

Maximum switching capacity




**RKF4C** Electrical durability contacts




Maximum switching capacity

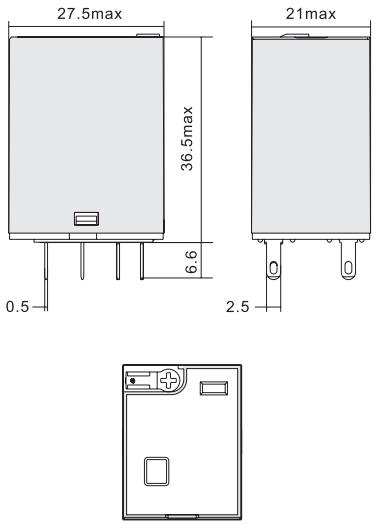


# RKF

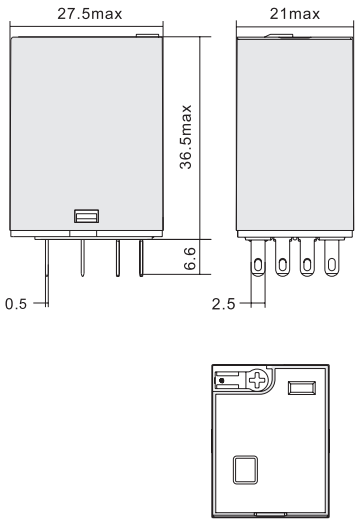
Miniature General
Purpose Relay

## Dimensions (mm)

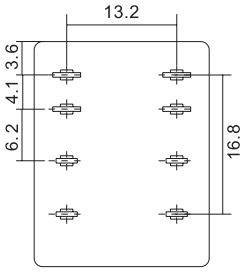
RKF2CO



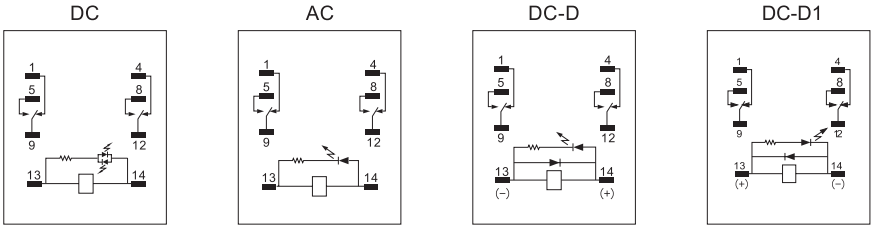

RKF4CO

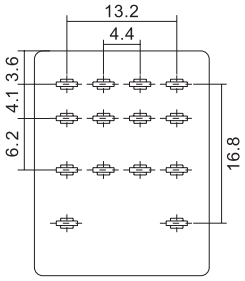



## Wiring Diagrams

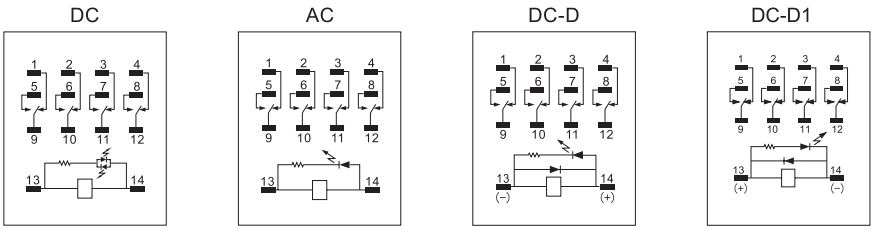



RKF2CO




RKF4CO



# SKF08-E & SKF14-E

RKF Socket

## Characteristics

SKF08-E

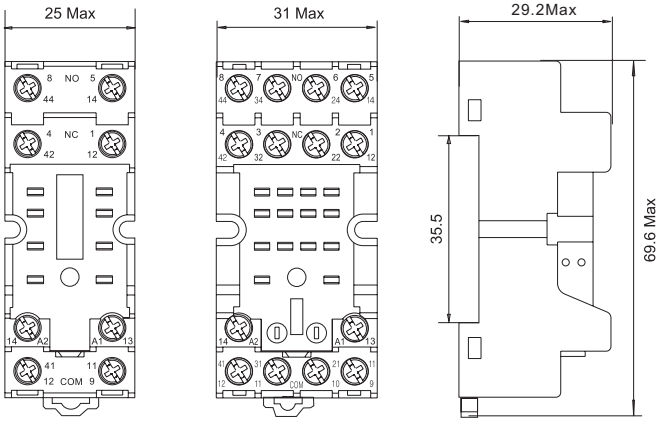
SKF14-E

| Type | | | SKF08-E | SKF14-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 35 | 45 |

**Accessories**

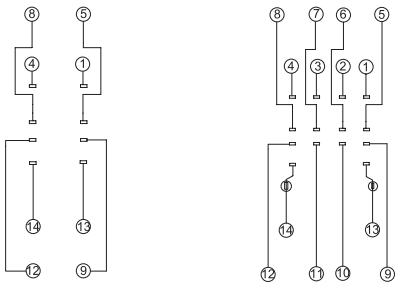
| Socket | Metal clip | ID tag | Module |
|---|---|---|---|
| SKF08-E | | | - |
| SKF14-E |  SK36M |  SK2P |  AMD |

## Dimensions (mm)




SKF08-E SKF14-E

## Connection Diagrams



SKF08-E

⑬⑭ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

SKF14-E

⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# SKB08-E & SKB14-E

RKF Socket

## Characteristics

SKB08-E

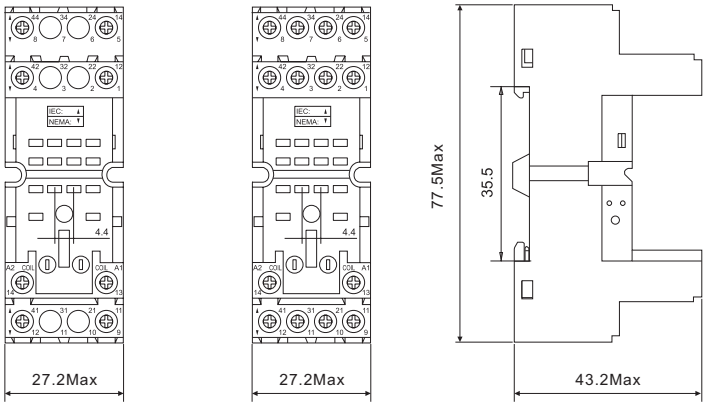
SKB14-E

| Type | | | SKB08-E | SKB14-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 50 | 56 |

**Accessories**

| Socket | Plastic clip | Metal clip | ID tag | Module |
|---|---|---|---|---|
| SKB08-E<br>SKB14-E |  SK36F |  SK36M |  SK4P |  AMD |

## Dimensions (mm)

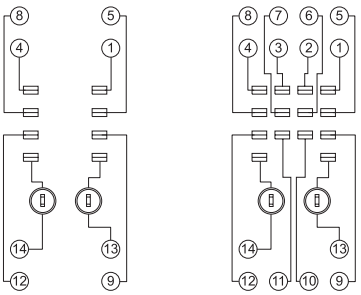



SKB08-E SKB14-E

## Connection Diagrams

SKB08-E

⑬ ⑭ : A1 A2
① ④ : NC
⑤ ⑧ : NO
⑨ ⑫ : COM



SKB14-E

⑬ ⑭ : A1 A2
① ② ③ ④ : NC
⑤ ⑥ ⑦ ⑧ : NO
⑨ ⑩ ⑪ ⑫ : COM

# SKC08-E & SKC14-E

RKF Socket

## Characteristics

SKC08-E

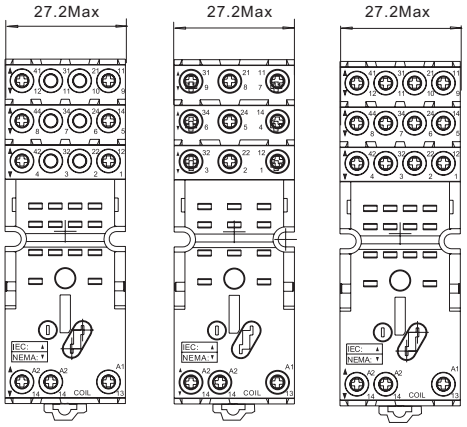
SKC14-E

| Type | | | SKC08-E | SKC11-E | SKC14-E |
|---|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 | 10 |
| | Voltage | V | 300 | | |
| Dielectric strength | Between coil and contact | V/min | 4000 | | |
| | Between contacts | V/min | 2500 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 50 | 56 | 62 |

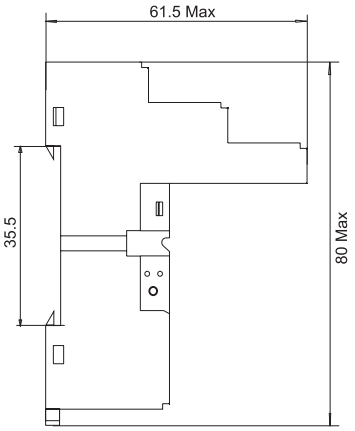
**Accessories**

| Socket | Plastic clip | Metal clip | ID tag | Module |
|---|---|---|---|---|
| SKC08-E |  |  |  |  |
| SKC11-E | | | | |
| SKC14-E | SK36F | SK36M | SK4P | AMD |

## Dimensions (mm)

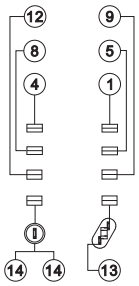



SKC08-E SKC11-E SKC14-E

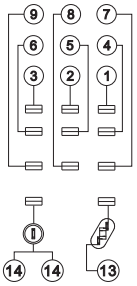



## Connection Diagrams

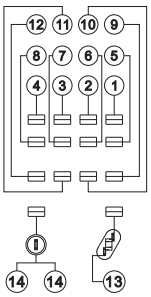
SKC08-E



SKC11-E



SKC14-E



# SKC08-ST & SKC14-ST

RKF Socket

## Characteristics


SKC08-ST

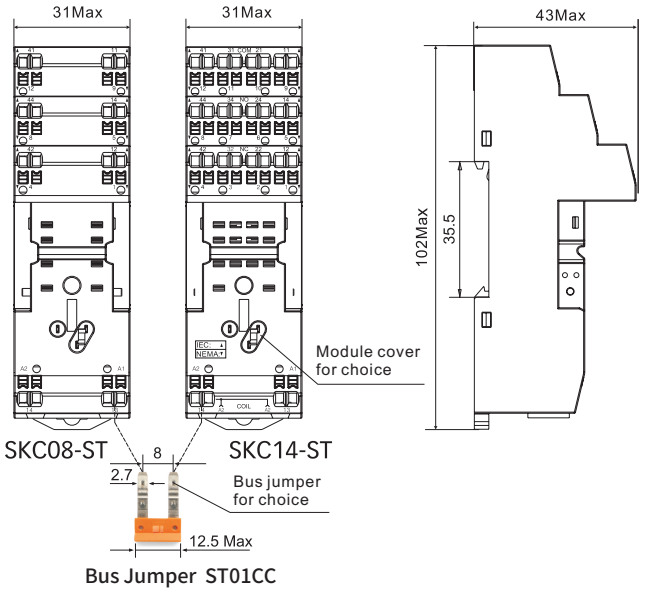
SKC14-ST

| Type | | | SKC08-ST | SKC14-ST |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 8 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | - | |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 80 | 80 |

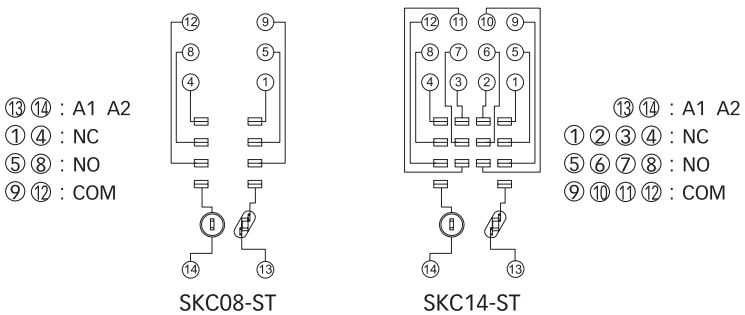
**Accessories**

| Socket | Plastic clip | ID tag | Module | Bus Jumper |
|---|---|---|---|---|
| SKC08-ST |  |  |  |  |
| SKC14-ST | SK36F | SK4P | AMD | ST01CC |

## Dimensions (mm)




## Connection Diagrams



# SY08-P & SY14-P

RKF Socket

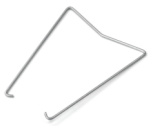
## Characteristics

**SY08-P**

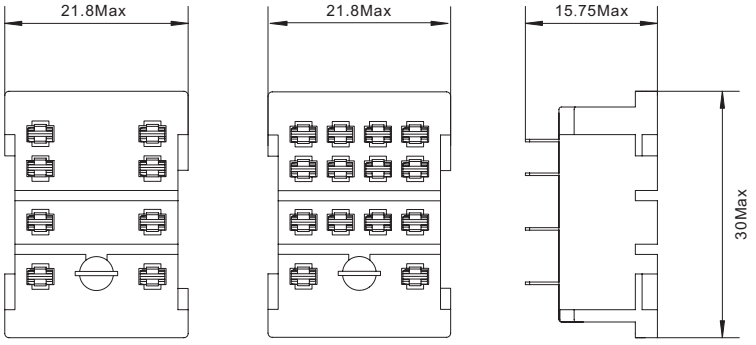
**SY14-P**

| Type | | | SY08-P | SY14-P |
|---|---|---|---|---|
| Nominal load | Current | A | 10 | 6 |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2000 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 7 | 7 |

**Accessories**

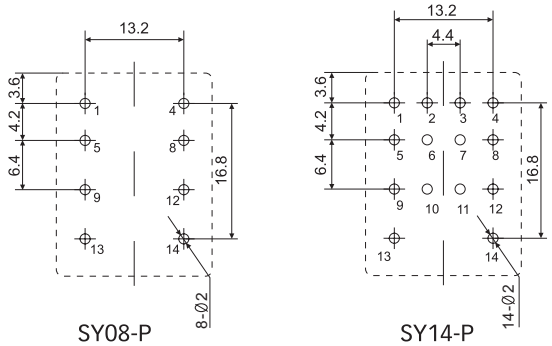
| Socket | Metal clip |
|---|---|
| SY08-P |  SY36M |
| SY14-P | |

## Dimensions (mm)




SY08-P SY14-P

## Connection Diagrams



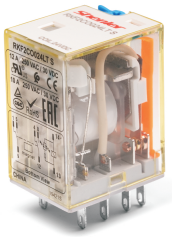

SY08-P SY14-P

⑬⑭ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# RKF

Magnetic Blow-out Power Relay



Relay

+

Socket

=

Relay module

RKF □ □ □ □

**Other options**

LT S: LED + test button+magnet
LTD S: LED + test button +diode (13 - , 14 +) +magnet
LTD1S: LED + test button + diode (13 + , 14 - ) +magnet
LTM S:LED+test button, with 0.65Un coil tuned+magnet

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Terminal arrangement**

O: plug in

**Contact form**

2C: 2CO

**Series name**

- Good performance for motor load application.With non-polarity LED,lockable test and inspection window
- Identification of coil through test button color (AC red / DC blue)

## Characteristics

| | | | |
|---|---|---|---|
| Contact | Configuration | | 2C |
| | Load | Resistance | 15A/250VAC 30VDC (NO:15A, NC:7.5A); 10A 60VDC |
| | | Motor load | 1/3HP, 240VAC |
| | Switching capacity (resistive) | | 3750VA, 600W |
| | Switching capacity (perceptual) | | 2500VA, 90W |
| | Min. switching capacity | | 170mW(17V/10mA) |
| | Initial contact resistance | | ≤50mΩ |
| | Material | | Ag alloy |
| | Electric durability(110%rated voltage, 55℃) | | ≥10 x $10^4$Cycles( NO:15A, NC:7.5A); ≥20 x $10^4$ Cycles (NO/NC:12A) |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz |
| Maximum voltage (23℃) (Rated voltage) | | | 110% |
| Insulation resistance | | | ≥1000MΩ (500VDC) |
| Coil operating power | DC(W) | | approx. 0.9 |
| | AC(VA) | | approx. 1.2 |
| Operate time&Release time (at nominal voltage) | | | ≤20ms |
| Initial breakdown voltage | Between open contacts | | 1000VAC/1min (leakage current 1mA) |
| | Between poles | | 2000VAC/1min (leakage current 1mA) |
| | Between contacts and coil | | 2000VAC/1min (leakage current 1mA) |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 250VAC |
| | Pollution level | | 3 |
| | Overvoltage level | | III |
| Protection level | | | IP20 |
| Storage temperature/ humidity | | | -25~+85℃/ ≤85%RH (18 months) |

# RKF

Magnetic Blow-out
Power Relay

| | |
|---|---|
| Working temperature/ humidity | -55~+70℃/ 5%~85%RH (No condensation) |
| Air pressure | 86~106KPa |
| Shock resistance | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | 10~55Hz double-amplitude:1.0mm |
| Mounting | plug in |
| Unit weight | approx. 35g |

## Coil Specifications (23°C)

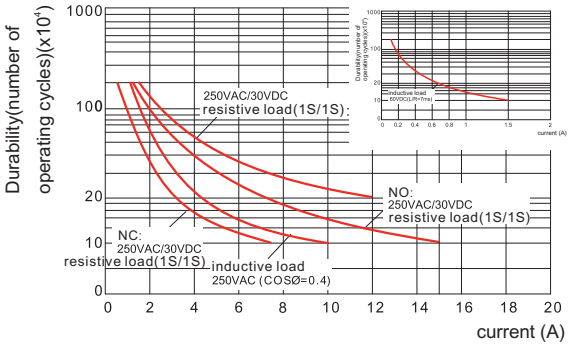
| | | | | | | |
|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | |
| Nominal voltage V.AC | 6 | 12 | 24 | 48 | 115 | 230 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

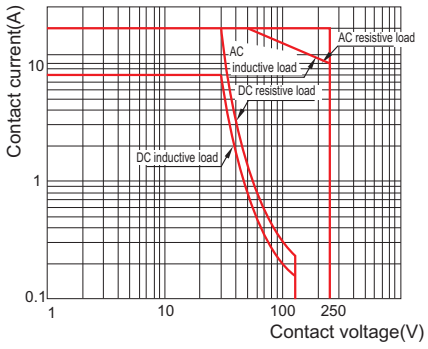
## Contact Specification

### RKF2CO

Electrical durability contacts




Maximum switching capacity

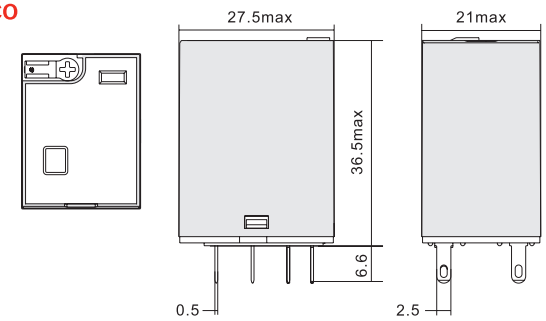


# RKF

Magnetic Blow-out
Power Relay

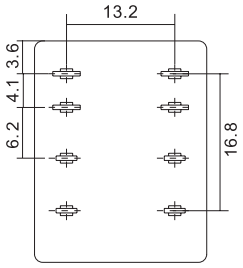
## Dimensions (mm)

RKF2CO

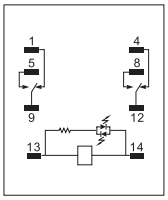



## Wiring Diagrams

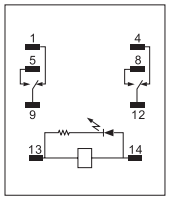
RKF2CO



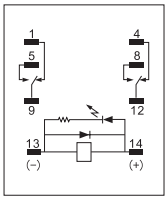

DC



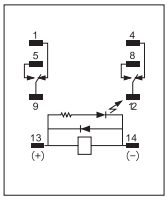

AC




DC-D




DC-D1



# SYF08A-E S

RKF Magnetic Blow-out
Power Relay Socket

## Characteristics

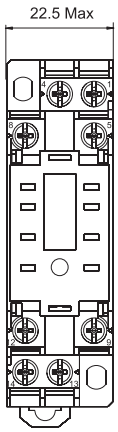
SYF08A-E S

| Type | | | SYF08A-E S |
|---|---|---|---|
| Nominal load | Current | A | 15 |
| | Voltage | V | 300 |
| Dielectric strength | | V/min | 2000 |
| Max. tightening torque | | Nm | 1.0 |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 |
| Ambient temperature | | ℃ | -40~+65 |
| Unit weight | | g | 37 |

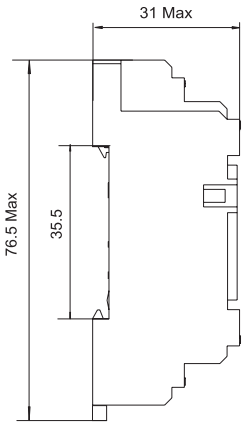
**Accessories**

| Socket | Metal clip |
|---|---|
| SYF08A-E S |  SY36S |

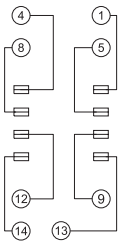
## Dimensions (mm)




SYF08A-E S




## Connection Diagrams




SYF08A-E S

⑭ ⑬ : A1 A2
① ④ : NC
⑤ ⑧ : NO
⑨ ⑫ : COM

# SKC08-E S

RKF Magnetic Blow-out
Power Relay Socket

## Characteristics

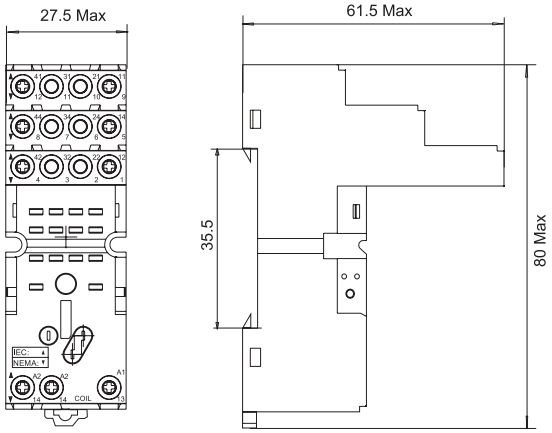
SKC08-E S

| Type | | | SKC08-E S |
|---|---|---|---|
| Nominal load | Current | A | 15 |
| | Voltage | V | 300 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Max. tightening torque | | Nm | - |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 50 |

**Accessories**

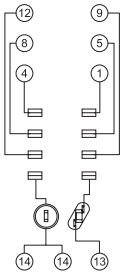
| Socket | Plastic clip | Metal clip | ID tag | Module |
|---|---|---|---|---|
| SKC08-E S |  SK36F |  SK36M |  SK4P |  AMD |

## Dimensions (mm)




SKC08-E S

## Connection Diagrams



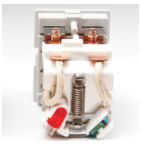

SKC08-E S

⑬⑭ : A1 A2
①④ : NC
⑤⑧ : NO
⑨⑫ : COM

# RKL

Miniature Power
Relay

- 1 pole 16A; 2,3,4 poles 10A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive



**LED**

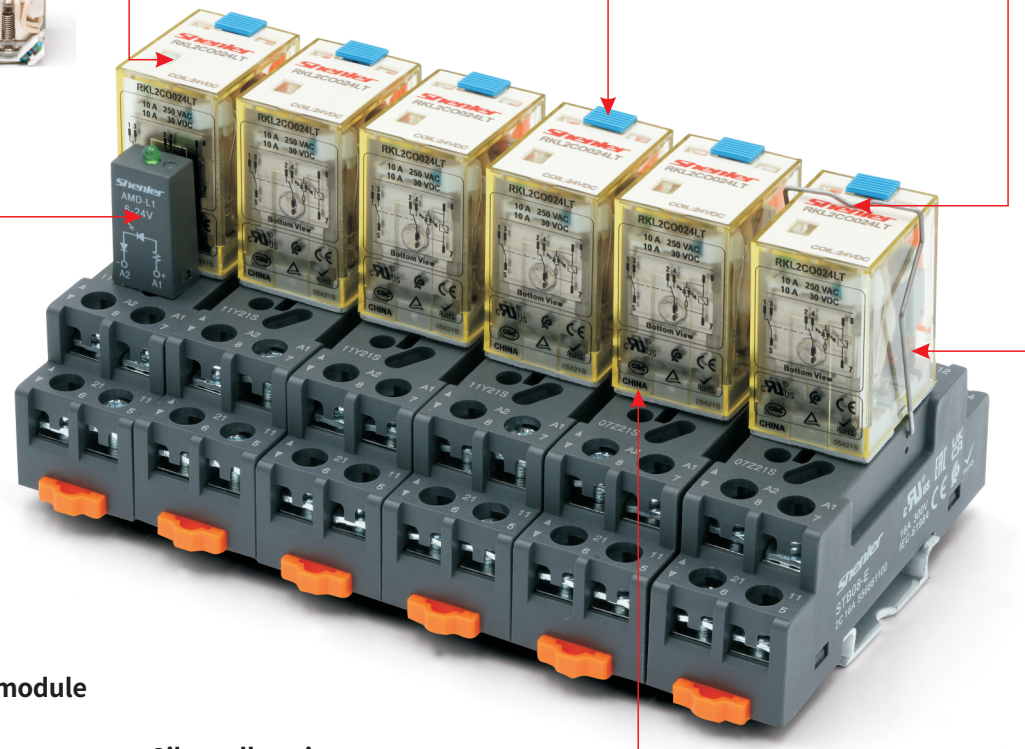
Visible LED indicates the working status of the relay at any time, AC red, DC green

**Test button**

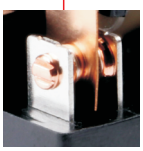
On-site test is available with test button.

**Metal clip**

The relay is firmly attached to the socket by Metal clip.



**AMD module**



**Silver alloy pins**

High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.

**Silver alloy contacts**

It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

Selection manual of industrial control relay

# RKL

Miniature Power Relay

Relay

+

Socket

=

Relay module

RKL □ □ □ □

**Other options**

LT:LED + test button

LTD: LED + test button + diode (13-,14+)

LTD1: LED + Test button + diode (13+,14-)

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 536 | 548 | 615 | 730 | 880 |
| Voltage (V AC) | 6 | 24 | 36 | 48 | 115 | 230 | 380 |

**Terminal arrangement**

O: plug in

**Contact form**

1C: 1CO

2C: 2CO

3C: 3CO

4C:4CO

**Series name**

## Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Contact | Configuration | | 1C | 2C | 3C / 4C |
| | Load | Resistance | 16A/250VAC 30VDC | 15A/250VAC 30VDC | |
| | | Motor load | 1/2HP, 120VAC, 1HP, 240VAC | 1/3HP 240VAC | 1/6HP 240VAC |
| | Max. switching capacity (resistive) | | 4000VA, 480W | 2500VA, 300W | |
| | Min. switching capacity | | 170mW(17V/10mA) | | |
| | Initial contact resistance | | ≤50mΩ | | |
| | Material | | Ag alloy | | |
| | Electrical durability | | 1C/3C/4C: ≥10 x $10^4$Cycles(1800 Ops/h), 2C: ≥20 x $10^4$Cycles(1800 Ops/h) | | |
| | Mechanical durability | | ≥1000 x $10^4$Cycles (1800 Ops/h) | | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | | |
| Insulation resistance | | | ≥500MΩ (500VDC) | | |
| Coil operating power | | DC(W) | approx. 0.9 | approx. 0.9 | approx. 1.4 / approx. 1.5 |
| | | AC(VA) | approx. 1.2 | approx. 1.2 | approx. 2 / approx. 2.5 |
| Operate time | | | ≤20ms | | |
| Release time (at nominal voltage) | | | ≤20ms | | |
| Initial breakdown voltage | | Between open contacts | 1000VAC/1min (leakage current 1mA) | | |
| | | Between poles | 2000VAC/1min (leakage current 1mA) | | |
| | | Between contacts and coil | 2000VAC/1min (leakage current 1mA) | | |
| Insulation characteristics IEC 60664 UL840 | | Rated voltage | 250VAC | | |
| | | Pollution level | 3 | | 2 |
| | | Overvoltage level | III | | II |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 4000V | | |
| Protection level | | | IP20 | | |
| Storage temperature/ humidity | | | -55~+85℃/ ≤85%RH (18 months) | | |
| Working temperature/ humidity | | | -25~+55℃/ 5%~85%RH (No condensation) | | |
| Air pressure | | | 86~106KPa | | |

# RKL

Miniature Power Relay

| | | | | |
|---|---|---|---|---|
| Shock resistance | 10G (half-sine shock pulse: 11ms) | | | |
| Vibration resistance | 10~55Hz double-amplitude:1.0mm | | | |
| Mounting | plug in | | | |
| Unit weight | approx. 35g | approx. 35g | approx. 50g | approx. 65g |

## Coil Specifications (23°C)

**RKL1, RKL2**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 180 | 640 | 2600 | 13000 | 42000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 11.5 | 180 | 370 | 640 | 4430 | 16500 | 42000 |

**RKL3**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 40 | 100 | 400 | 1600 | 8400 | 33000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 6.5 | 102 | 230 | 410 | 2500 | 10000 | 26000 |

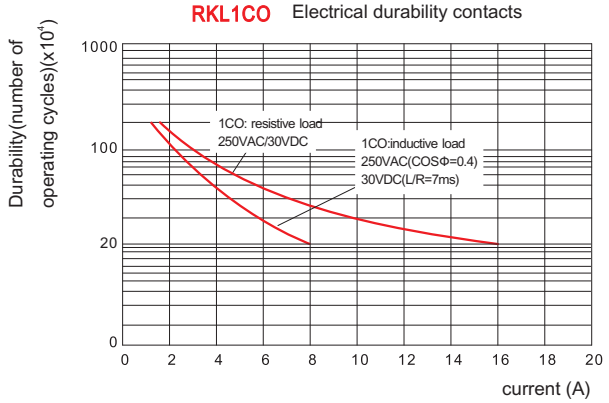
**RKL4**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 24 | 96 | 360 | 1500 | 6800 | 29000 | |
| Nominal voltage V.AC | 6 | 24 | 36 | 48 | 115 | 230 | 380 |
| Coil resistance Ω | 5 | 80 | 180 | 320 | 1680 | 8000 | 20000 |

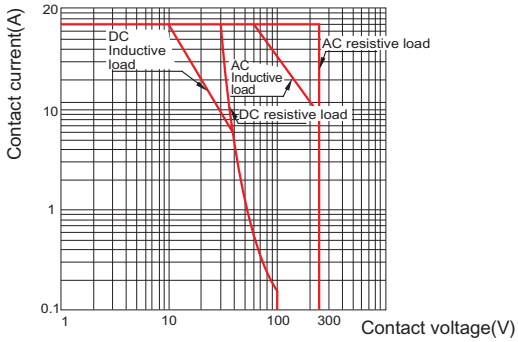
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

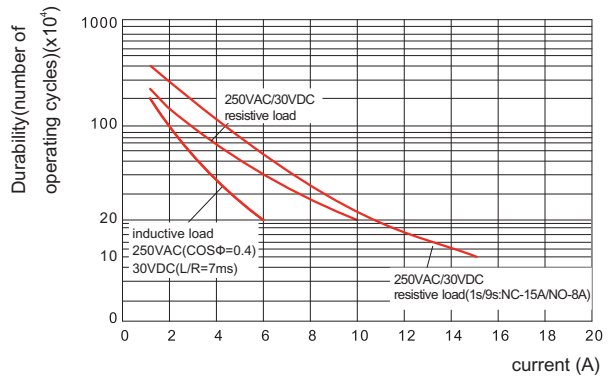
RKL1CO Electrical durability contacts



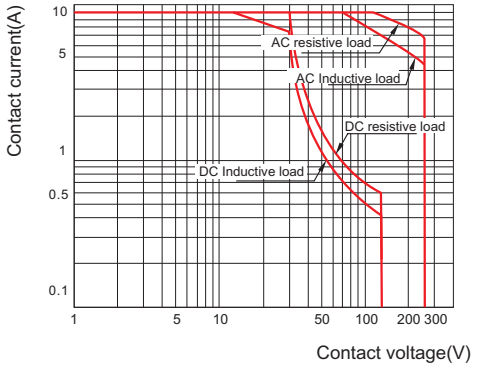

RKL1CO Maximum switching capacity




RKL2CO/3CO/4CO Electrical durability contacts




RKL2CO/3CO/4CO Maximum switching capacity

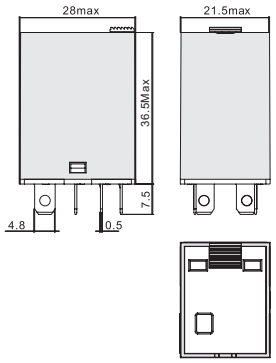


# RKL

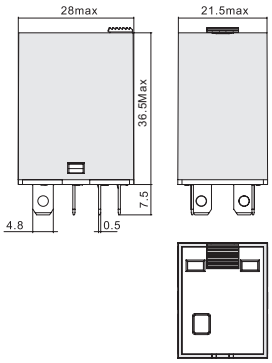
Miniature Power Relay

## Dimensions (mm)

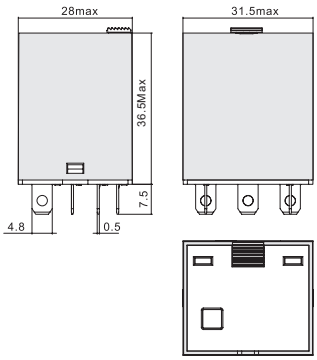
### RKL1CO



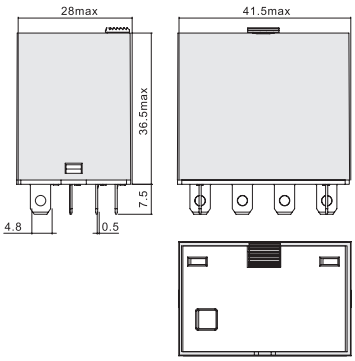

### RKL2CO




### RKL3CO

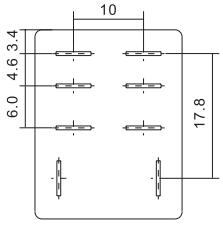


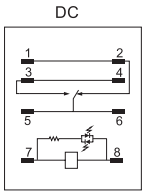

### RKL4CO

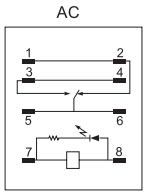


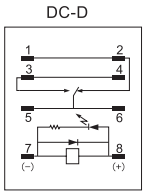

## Wiring Diagrams

### RKL1CO

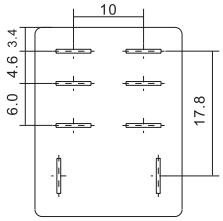


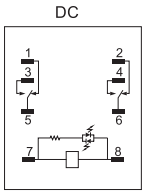



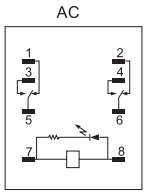



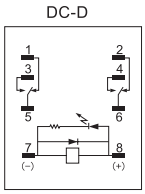




### RKL2CO

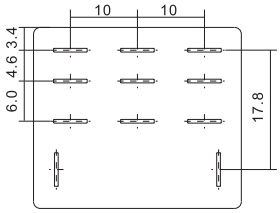


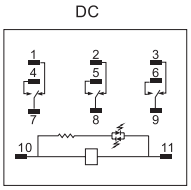



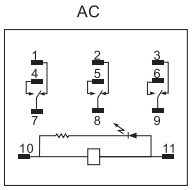



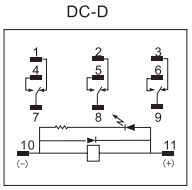




### RKL3CO

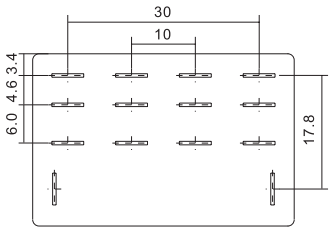


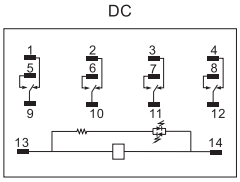



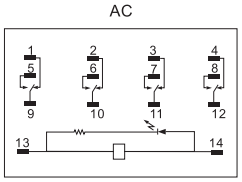



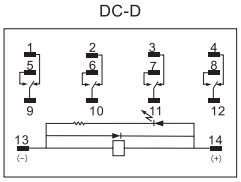




### RKL4CO



# STB08-E & STB11-E & STB14-E RKL Socket

## Characteristics

STB08-E

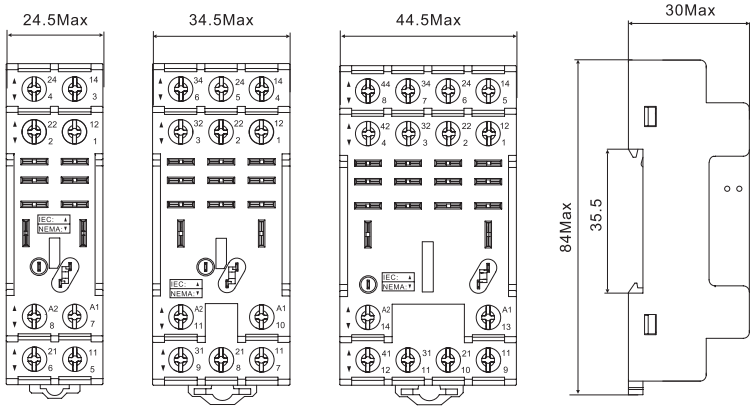
STB14-E

| Type | | | STB08-E | STB11-E | STB14-E |
|---|---|---|---|---|---|
| Nominal load | Current | A | 16 | | |
| | Voltage | V | 300 | | |
| Dielectric strength | Between coil and contact | V/min | 4000 | | |
| | Between contacts | V/min | 2500 | | |
| Max. tightening torque | | Nm | 1.0 | | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | | |
| Ambient temperature | | ℃ | -40~+85 | | |
| Unit weight | | g | 46 | 62 | 78 |

**Accessories**

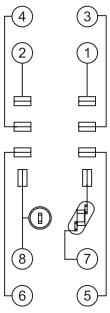
| Socket | Metal clip | Module |
|---|---|---|
| STB08-E | SK36M | AMD |
| STB11-E | ST36M3C | |
| STB14-E | ST36M4C | BMD |

## Dimensions (mm)



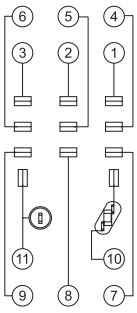

STB08-E STB11-E STB14-E

## Connection Diagrams



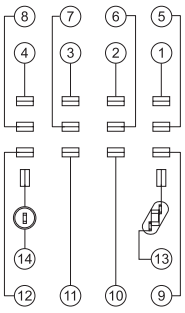
STB08-E

⑦⑧ : A1 A2
①② : NC
②④ : NO
⑤⑥ : COM



STB11-E

⑩⑪ : A1 A2
①②③ : NC
④⑤⑥ : NO
⑦⑧⑨ : COM



STB14-E

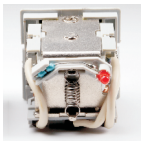
⑬⑭ : A1 A2
①②③④ : NC
⑤⑥⑦⑧ : NO
⑨⑩⑪⑫ : COM

# REH
Power Relay

- 2 poles, 3 poles contact load 16A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive

**LED**

Visible LED indicates the working status of the relay at any time, AC red, DC green



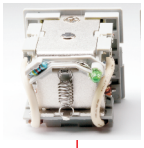
**Metal clip**

The relay is firmly attached to the socket by Metal clip.

**Test button**

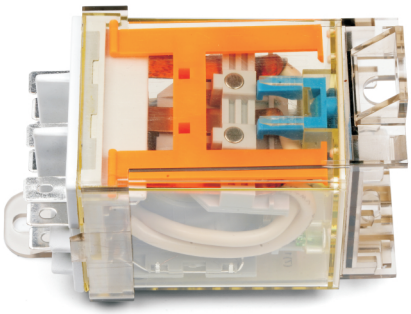
On-site test is available with test button.

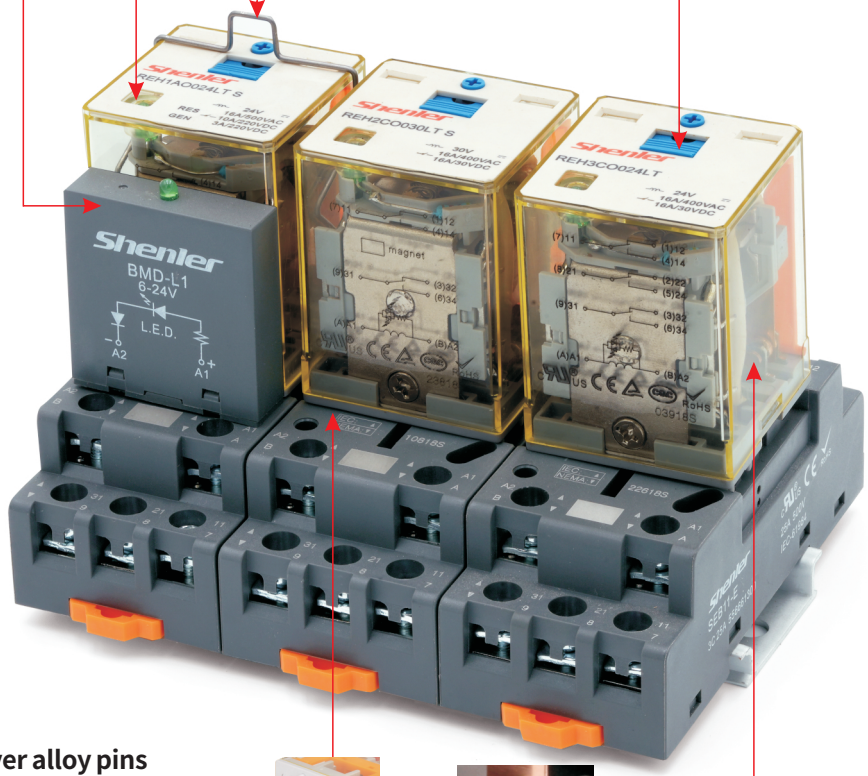
**BMD module**



**REH-DA Mounting Adaptor**

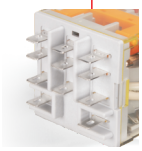
To meet with different monting way , extra cover is available for both bracket mount and top flange integrated.

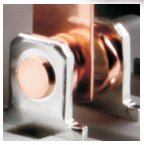





**Silver alloy pins**

High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.





**Silver alloy contacts**

It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

# REH
Power Relay

Relay

+

Socket

=

Relay module

REH □ □ □ □

**Other options**
L:LED
LT:LED + test button
LTD: LED + test button + diode (A1-, A2+)
LTD1: LED + Test button + diode (A1+, A2-)

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 524 | 548 | 615 | 730 | 880 | 900 |
| Voltage (V AC) | 6 | 24 | 48 | 115 | 230 | 380 | 400 |

**Terminal arrangement**
O: plug in

**Contact form**
2C: 2CO
3C: 3CO

**Series name**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 2C,3C | 2COLTS |
| | Load | Resistive | 16A/300VAC 30VDC | |
| | | Resistive | – | 10A/220VDC |
| | | inductive | – | 3A/220VDC(L/R=7ms) |
| | | Motor load | 1/2HP, 120VAC; 1HP,240VAC | |
| | Max. switching capacity (resistive) | | 4800VA, 480W | 2200W |
| | Max. switching capacity (inductive) | | 2500VA, 90W | 660W |
| | Initial contact resistance | | ≤50mΩ | |
| | Material | | Ag alloy | |
| | Electric durability(110%rated voltage, 55℃) | | ≥60 x $10^4$Cycles (600 Ops/h) | |
| | Electric durability (Normal temperature) | | ≥5000 x $10^4$Cycles (18000 Ops/h) | |
| | Mechanical durability | | ≥2000 x $10^4$Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75%, AC:≤80% 50/60Hz | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10%, AC:≥30% 50/60Hz | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | |
| Coil operating power | | DC(W) | approx. 1.5 | |
| | | AC(VA) | approx. 2.5 | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | |
| Initial breakdown voltage | | Between open contacts | 1500VAC/1min (leakage current 1mA) | |
| | | Between poles | 4000VAC/1min (leakage current 1mA) | |
| | | Between contacts and coil | 4000VAC/1min (leakage current 1mA) | |
| Insulation characteristics IEC 60664 UL840 | | Rated voltage | 300VAC | |
| | | Pollution level | 3 | |
| | | Overvoltage level | III | |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 6000V | |
| Protection level | | | IP20 | |
| Storage temperature/ humidity | | | -55~+85℃/ ≤85%RH (18 months) | |
| Working temperature/ humidity | | | -40~+55℃/ 5%~85%RH (No condensation) | |
| Air pressure | | | 86~106KPa | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | |
| Mounting | | | plug in | |
| Unit weight | | | approx. 90g | |

# REH
Power Relay

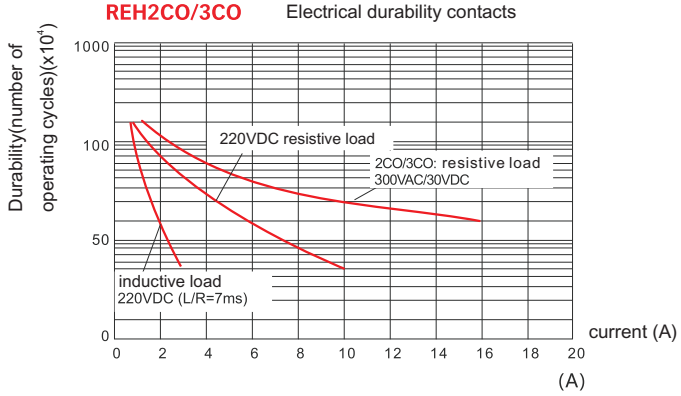
## Coil Specifications (23°C)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 24 | 96 | 385 | 1540 | 8070 | 32270 | |
| Nominal voltage V.AC | 6 | 24 | 48 | 115 | 230 | 380 | 400 |
| Coil resistance Ω | 8 | 100 | 350 | 2200 | 8000 | 26000 | 27000 |

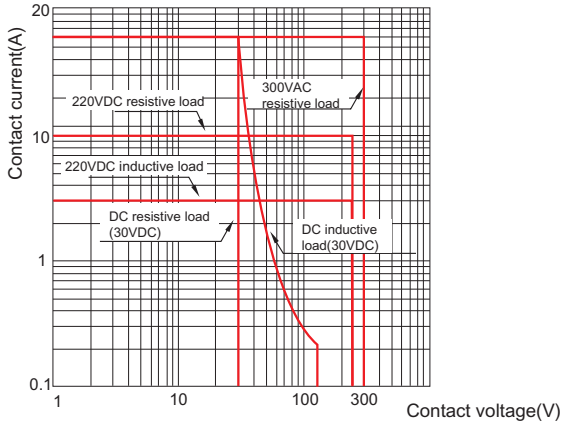
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

**REH2CO/3CO** Electrical durability contacts

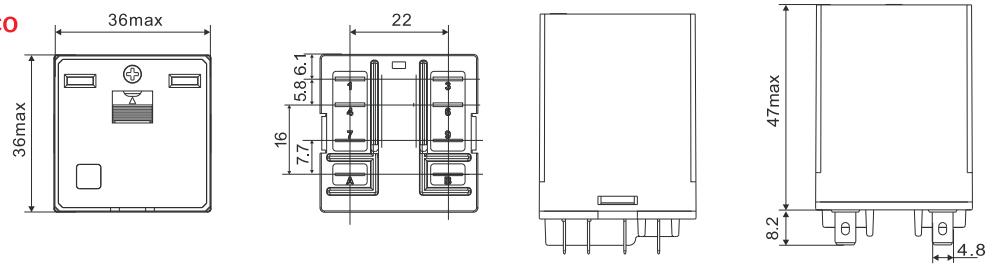



Maximum switching capacity

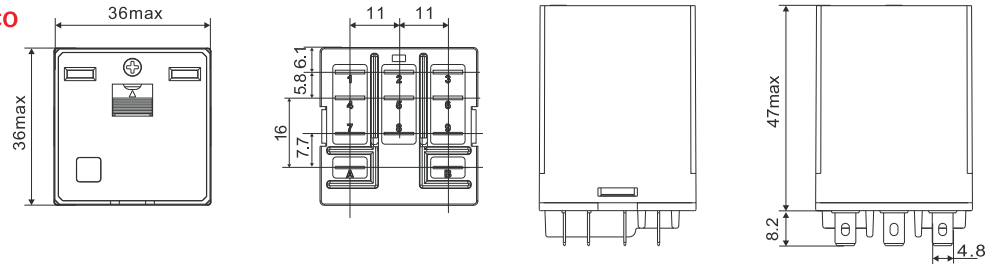



## Dimensions (mm)

**REH2CO**

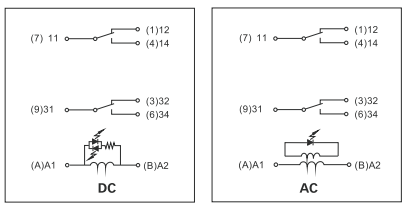



**REH3CO**

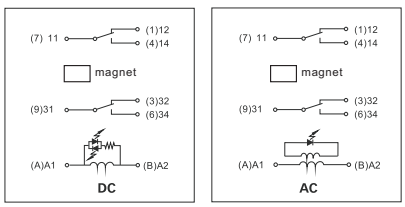



## Wiring Diagrams

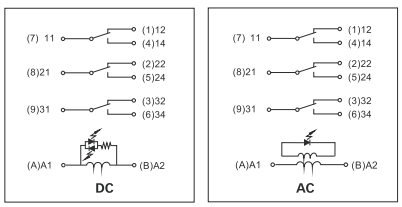
**REH2CO**




**REH2COLTS**




**REH3CO**



# Selection manual of industrial control relay

# REH

Magnetic Blow-out Power Relay

REH □ □ □ □

**Other options**
L S: LED + magnet
LT S: LED +test button + magnet

**Coil voltage code**

| Code | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|
| Voltage (V DC) | 12 | 24 | 48 | 110 | 220 | |
| Code | 524 | 548 | 615 | 730 | 880 | 900 |
| Voltage (V AC) | 24 | 48 | 115 | 230 | 380 | 400 |

**Terminal arrangement**
O: plug in

**Contact form**

| Code | 1A | 1B | 2A | 2B | 2FO | 3A |
|---|---|---|---|---|---|---|
| Contact form | 1NO | 1NC | 2NO | 2NC | 1NO&1NC | 3NO |

**Series name**

**Series Name**

+

**Socket**

=

**Relay module**

- Good performance in DC motor load
- With non-polarity LED and lockable test button.
- High capacity load (16A@400VAC) for well replacement of contactor
- With blow-out magnet
- Identification of coil through test button color (AC red /DC blue)

## Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Contact | Configuration | | 1A,1B | 2A,2B,2FO | 3A |
| | Load | Resistive | 16A/500VAC | 16A/250VAC | 16A/300VAC |
| | | Resistive | 10A/220VDC 16A/30VDC | | |
| | | inductive | 10A/250VAC(cosØ0.4); 3A/220VDC(L/R=7ms) | | |
| | Switching capacity | Resistive | 8000VA | 4000VA | 4800VA |
| | | Resistive | 2200W | | |
| | | inductive | 2500VA(cosΦ0.4);660W(L/R=7ms) | | |
| | Initial contact resistance | | ≤50mΩ | | |
| | Material | | Ag alloy | | |
| | Electrical durability(110%rated voltage, 55℃) | | ≥60 x $10^4$Cycles (600 Ops/h) | ≥20 x $10^4$Cycles (600 Ops/h) | |
| | Mechanical durability | | ≥5000 x $10^4$Cycles (18000 Ops/h) | | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤75% , AC:≤80% 50/60Hz | | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10% , AC:≥30% 50/60Hz | | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | | |
| Coil operating power | | DC (W) | approx. 1.5 | | |
| | | AC (VA) | approx. 2.5 | | |
| Operate time&Release time (at nominal voltage) | | | ≤20ms | | |
| Initial breakdown voltage | | Between open contacts | 1500VAC/1min (leakage current 1mA) | | |
| | | Between poles | 4000VAC/1min (leakage current 1mA) | | |
| | | Between contacts and coil | 4000VAC/1min (leakage current 1mA) | | |
| Insulation characteristics IEC 60664 UL840 | | Rated voltage | 400VAC | 250VAC | 250VAC |
| | | Pollution level | 2 | 3 | 3 |
| | | Overvoltage level | II | III | III |
| Protection level | | | IP20 | | |
| Storage temperature/ humidity | | | -20~+85℃/ ≤85%RH (18 months) | | |
| Working temperature/ humidity | | | -40~+55℃/ 5%~85%RH (No condensation) | | |
| Air pressure | | | 86~106KPa | | |
| Shock resistance | | | 10G (half-sine shock pulse: 11ms) | | |
| Vibration resistance | | | 10~55Hz double-amplitude:1.0mm | | |
| Mounting | | | plug in | | |
| Unit weight | | | approx. 90g | | |

# REH

Magnetic Blow-out Power Relay

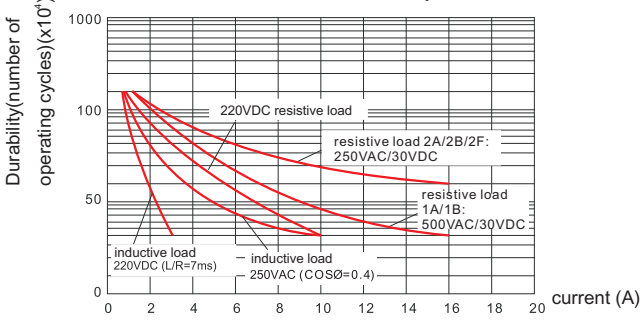
## Coil Specifications (23°C)

| | | | | | | |
|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 96 | 385 | 1540 | 8070 | 32270 | |
| Nominal voltage V.AC | 24 | 48 | 115 | 230 | 380 | 400 |
| Coil resistance Ω | 100 | 350 | 2200 | 8000 | 26000 | 27000 |

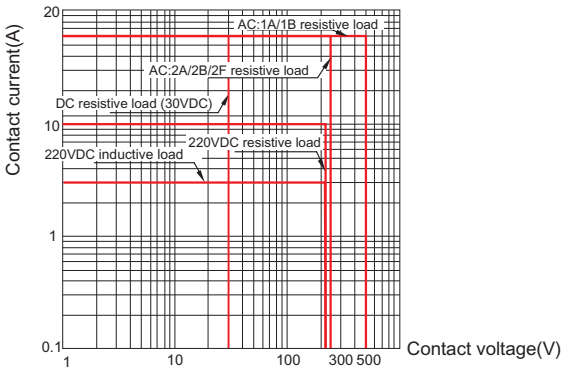
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

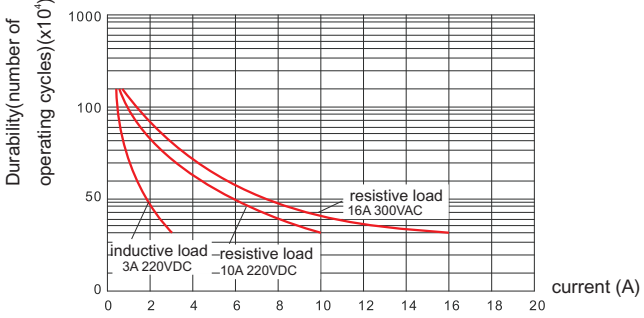
**REH1A/2A/2B/2F** Electrical durability contacts



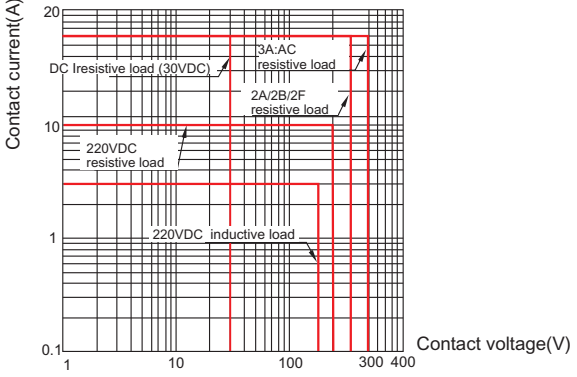

Maximum switching capacity




**REH3AO** Electrical durability contacts

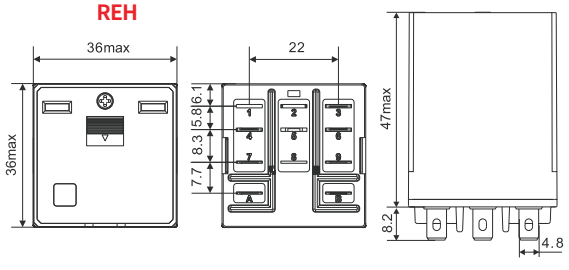



Maximum switching capacity

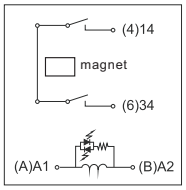



## Dimensions (mm) & Wiring Diagrams

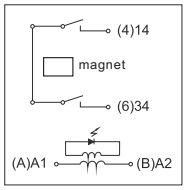
**REH**




**REH1AO**

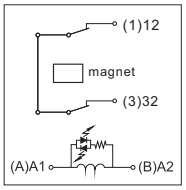



DC

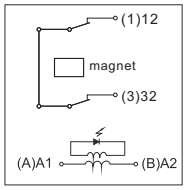



AC

**REH1BO**

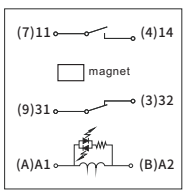



DC

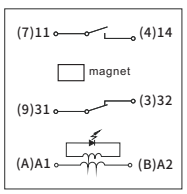



AC

**REH2FO**

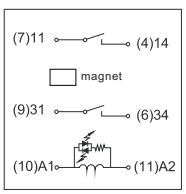



DC

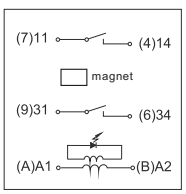



AC

**REH2AO**

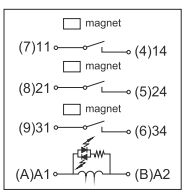



DC

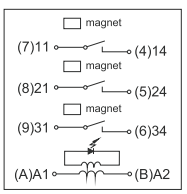



AC

**REH3AO**




DC




AC

# SEB11-E

REH Socket

## Characteristics

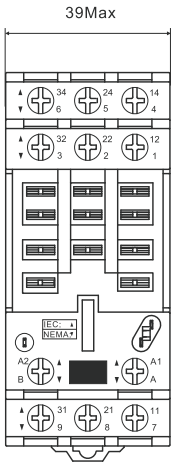
SEB11-E

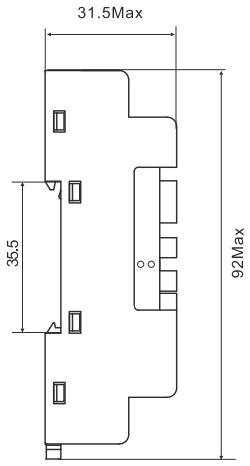
| Type | | | SEB11-E |
|---|---|---|---|
| Nominal load | Current | A | 25 |
| | Voltage | V | 500 |
| Dielectric strength | Between coil and contact | V/min | 4000 |
| | Between contacts | V/min | 2500 |
| Max. tightening torque | | Nm | 1.2 |
| Wire size | | AWG/mm² | 20-12/0.5-3.3 |
| Ambient temperature | | ℃ | -40~+75 |
| Unit weight | | g | 64 |

**Accessories**

| Socket | Metal clip | Module |
|---|---|---|
| SEB11-E |  SE52M |  BMD |

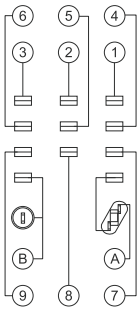
## Dimensions (mm)




## Connection Diagrams

Ⓐ Ⓑ : A1 A2
① ② ③ : NC
④ ⑤ ⑥ : NO
⑦ ⑧ ⑨ : COM



# SEB11-PS

REH Socket

## Characteristics

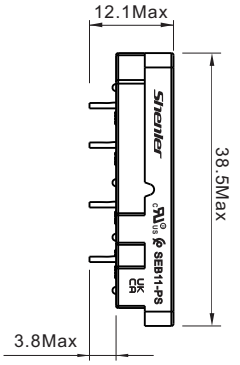
SEB11-PS

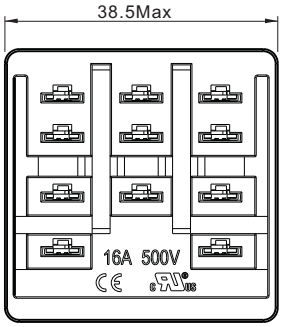
| | | | |
|---|---|---|---|
| Type | | | SEB11-PS |
| Nominal load | Current | A | 15 |
| | Voltage | V | 300 |
| Dielectric strength | | V/min | 2500 |
| Ambient temperature | | ℃ | -40~+75 |
| Unit weight | | g | 11.9 |

**Accessories**

| Socket | Metal clip |
|---|---|
| SEB11-PS |  SE48M |

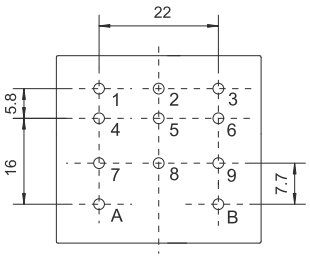
## Dimensions (mm)




## Connection Diagrams

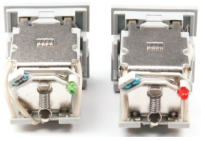
Ⓐ Ⓑ : A1 A2
① ② ③ : NC
④ ⑤ ⑥ : NO
⑦ ⑧ ⑨ : COM



# RUB

General Purpose Relay

- 2 poles, 3 poles contact load 10A
- With non-polarity LED integrated in relay
- With lockable test button and inspection window
- Identification of coils through test button color (AC red/DC blue)
- Conformity with RoHs Directive



**LED**

Visible LED indicates the working status of the relay at any time, AC red, DC green

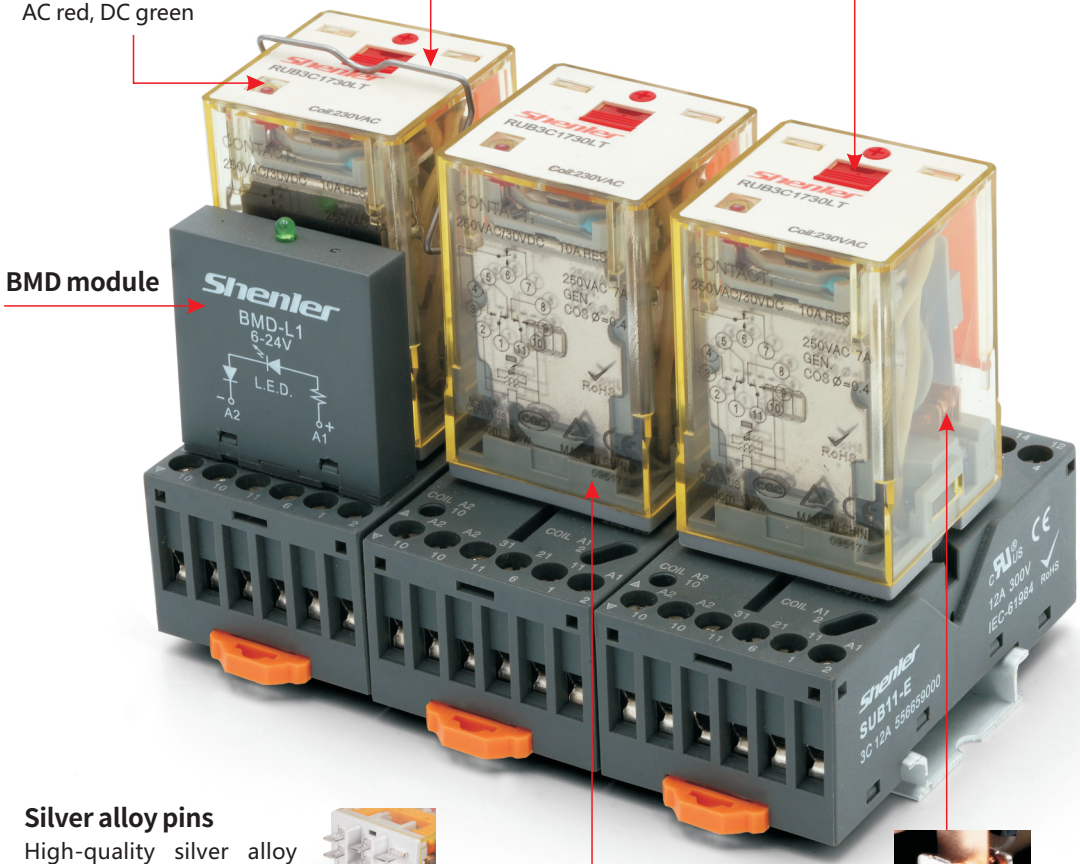
**Metal clip**

The relay is firmly attached to the socket by Metal clip.

**Test button**

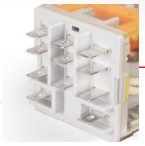
On-site test is available with test button.

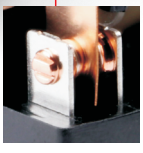
**BMD module**




**Silver alloy pins**

High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.



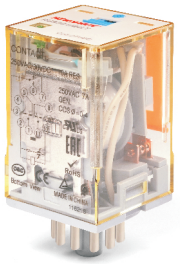


**Silver alloy contacts**

It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

# RUB

General Purpose Relay



Relay

+

Socket

=

Relay module

RUB □ □ □ □

**Other options**

LT: LED + test button

LTD: LED + test button + diode

RUB2C1 (2-,7+); RUB2C2 (1-,8+); RUB3C1 (2-,10+); RUB3C5 (2-10+); RUB3C2 (1-,11+)

LTD1: LED + Test button + diode

RUB2C1 (2+,7-); RUB2C2 (1+,8-); RUB3C1 (2+,10-); RUB3C5 (2+,10-); RUB3C2 (1+,11-)

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | |
| Code | 506 | 512 | 524 | 536 | 548 | 615 | 730 |
| Voltage (V AC) | 6 | 12 | 24 | 36 | 48 | 115 | 230 |

**Wiring type**

1: 1

2: 2-1

5: 5-1 (3C only)

**Contact form**

2C: 2CO

3C: 3CO

**Series name**

## Characteristics

| | | |
|---|---|---|
| Contact | Configuration | 2C,3C |
| | Rated current / Rated voltage | 10A/250VAC 30VDC (resistive RES); 7A/250VAC 30VDC (perceptual GEN) |
| | Max. switching capacity (resistive) | 2500VA, 300W |
| | Initial contact resistance | ≤50mΩ |
| | Material | Ag alloy |
| | Electrical durability | ≥$10^5$Cycles(1800 Ops/h) |
| | Mechanical durability | ≥2000 x $10^4$Cycles (18000 Ops/h) |
| Pick-up voltage (23℃) (Rated voltage) | | ≤80% |
| Drop-out voltage (23℃) (Rated voltage) | | DC:≥10%, AC:≥30% 50/60Hz |
| Maximum voltage (23℃) (Rated voltage) | | 110% |
| Insulation resistance | | ≥100MΩ (500VDC) |
| Coil operating power | DC(W) | approx. 1.5 |
| | AC(VA) | approx. 2.7 |
| Operate time | | ≤30ms |
| Release time (at nominal voltage) | | ≤20ms |
| Initial breakdown voltage | Between open contacts | 1000VAC/1min (leakage current 1mA) |
| | Between poles | 2500VAC/1min (leakage current 1mA) |
| | Between contacts and coil | 2500VAC/1min (leakage current 1mA) |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | 250VAC |
| | Pollution level | 3 |
| | Overvoltage level | III |
| Impulse withstand voltage (waveform: 1.2/50μs) | | 4000V |
| Protection level | | IP20 |
| Storage temperature/ humidity | | -55~+85℃/ ≤85%RH (18 months) |
| Working temperature/ humidity | | -10~+55℃/ 5%~85%RH (No condensation) |

# RUB
General Purpose Relay

| | |
|---|---|
| Air pressure | 86~106KPa |
| Shock resistance | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | 10~55Hz double-amplitude:1.5mm |
| Mounting | plug in |
| Unit weight | approx. 85g |

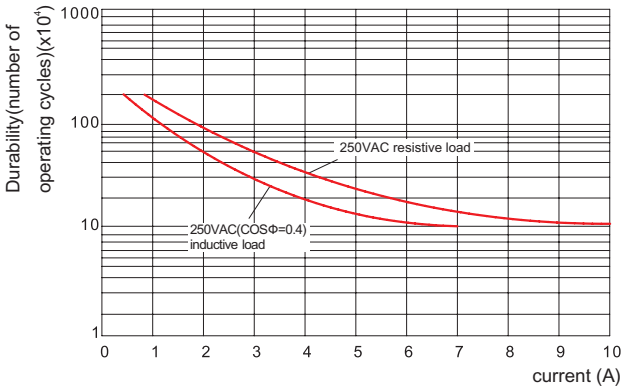
## Coil Specifications (23℃)

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | |
| Coil resistance Ω | 23.7 | 96 | 430 | 1640 | 7360 | 29500 | |
| Nominal voltage V.AC | 6 | 12 | 24 | 36 | 48 | 115 | 230 |
| Coil resistance Ω | 3.9 | 17 | 62.5 | 144 | 305 | 1250 | 5900 |

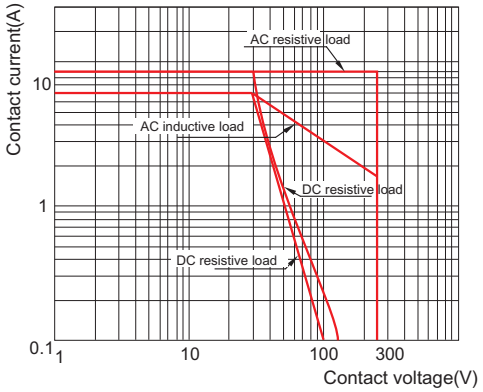
Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

## Contact Specification

**RUB2C/3C** Electrical durability contacts



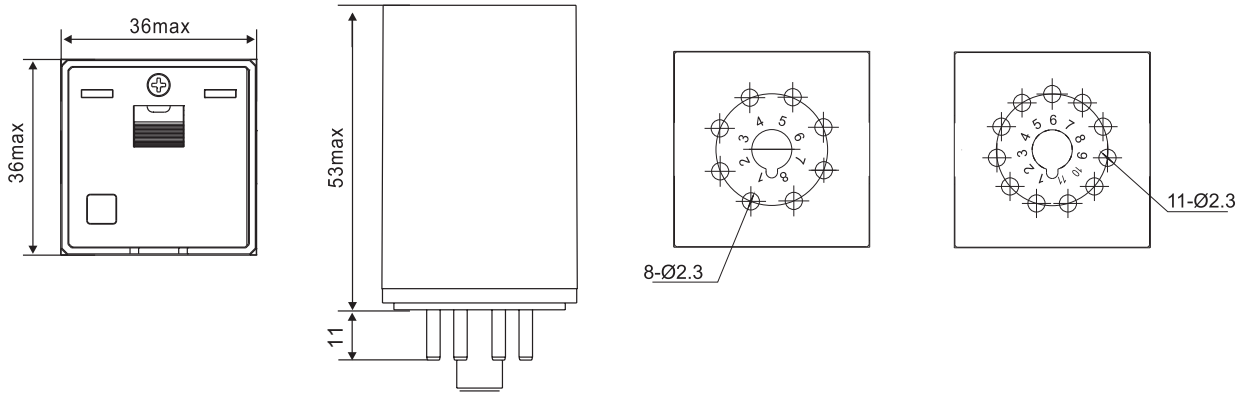

Maximum switching capacity



# RUB

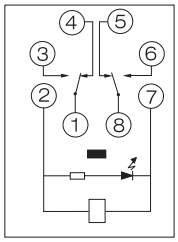
General Purpose
Relay

## Dimensions (mm)



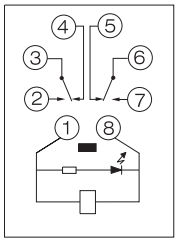

## Wiring Diagrams

### RUB2C1



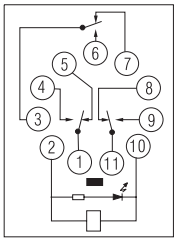
⑦ ② : A1, A2
① ⑧ : COM
③ ⑥ : NO
④ ⑤ : NC

### RUB2C2



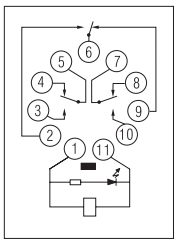
⑧ ① : A1, A2
③ ⑥ : COM
② ⑦ : NO
④ ⑤ : NC

### RUB3C1



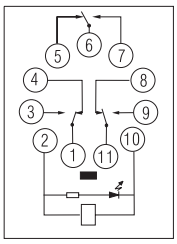
⑩ ② : A1, A2
① ③ ⑪ : COM
④ ⑥ ⑨ : NO
⑤ ⑦ ⑧ : NC

### RUB3C2



⑪ ① : A1, A2
⑤ ⑥ ⑦ : COM
② ③ ⑩ : NO
④ ⑧ ⑨ : NC

### RUB3C5



⑩ ② : A1, A2
① ⑥ ⑪ : COM
③ ⑦ ⑨ : NO
④ ⑤ ⑧ : NC

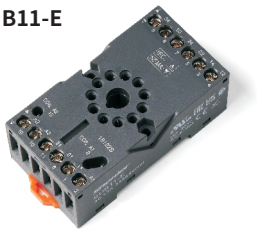
# SUB08-E & SUB11-E

RUB Socket

## Characteristics

**SUB08-E**

**SUB11-E**

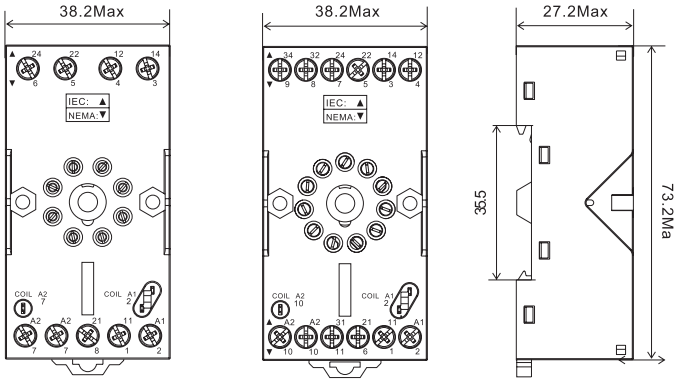


| Type | | | SUB08-E | SUB11-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 50 | 55 |

**Accessories**

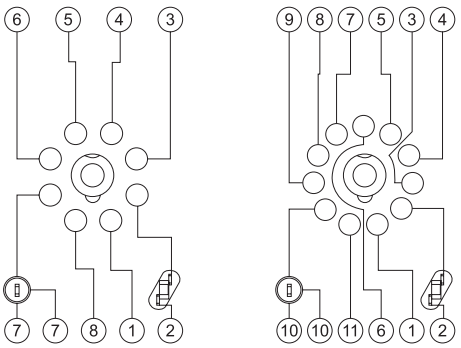
| Socket | Metal clip | ID tag | Module |
|---|---|---|---|
| SUB08-E |  |  |  |
| SUB11-E | SU60M | SU3P | BMD |

## Dimensions (mm)




SUB08-E SUB11-E

## Connection Diagrams




SUB08-E SUB11-E

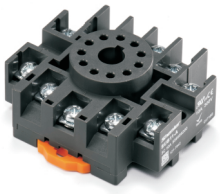
# SUB08-A & SUB11-A

RUB Socket

## Characteristics

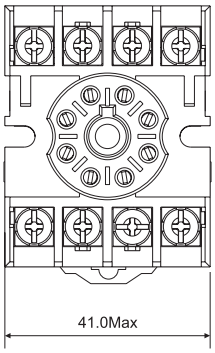
**SUB08-A**

**SUB11-A**

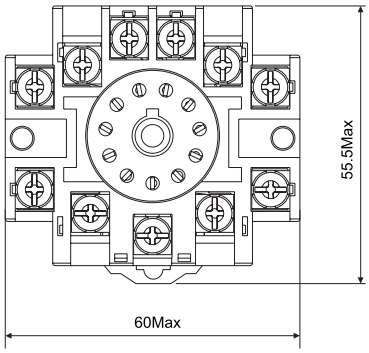


| Type | | | SUB08-A | SUB11-A |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40～+85 | |
| Unit weight | | g | 37 | 50 |

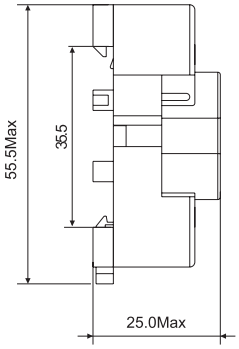
## Dimensions (mm)



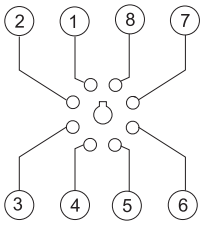

SUB08-A



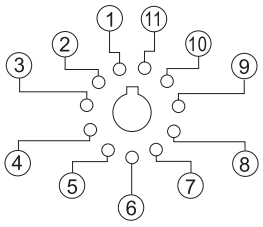

SUB11-A




## Connection Diagrams




SUB08-A

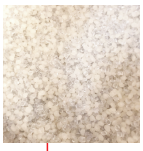



SUB11-A

# RGF
Power Relay

- 1 pole 30A ; 2 poles 25A/40A
- Top-mounted 1/4” quick-connect terminals
- Locating slot for DIN rail mounting
- With finger protection cover
- Conformity with RoHs directive
- With safety module monitor

**Fire-resistant materials**
The shell is made of flame retardant material, with high strength, high temperature resistance, corrosion resistance and more safety



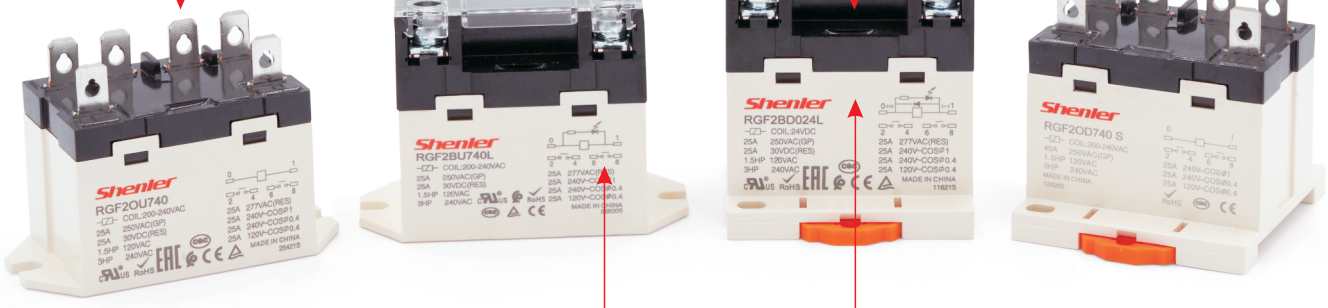
**LED**
Visible LED indicates the working status of the relay at any time, AC red, DC green

**Screw terminal & Flange**

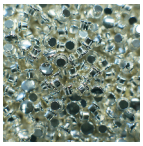
**Screw terminal & DIN rail**

**Plug in &DIN rail**

**Plug in & Flange**

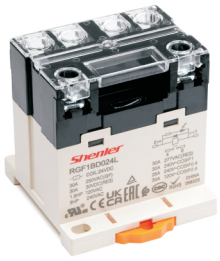



**Top copper coil material**
Standard turns and electromagnetic coils make the pick-up more reliable and enduring, which can reach more than 20 million cycles.

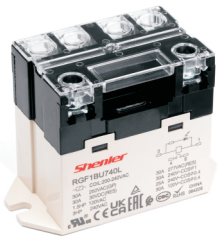


**Silver alloy contacts**
It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

# RGF
Power Relay

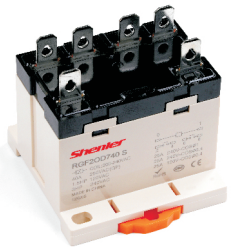


RGF1BD



RGF1BU

RGF1OU



RGF2OD

RGF □ □ □ □

**Other options**
L: with LED (only for BU and BD type)
F: with auxiliary module
S: with 40A/250VAC contact load (for 2 poles only)

**Coil voltage code**

| Code | 006 | 012 | 024 | 048 | 110 | 220 | | |
|---|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 12 | 24 | 48 | 110 | 220 | | |
| Code | 506 | 512 | 524 | 548 | 615 | 740 | 880 | 900 |
| Voltage (V AC) | 6 | 12 | 24 | 48 | 100-120 | 200-240 | 380 | 400 |

**Termainl & Mounting arrangement**
O: plug in
OD: plug in &DIN rail
OU: plug in & flange
P: PCB
BU: screw terminal& flange
BD: screw terminal & DIN rail

**Contact form**
1: 1A (NO)
2: 2A (NO)

**Series name**

## Characteristics

| | | | | | |
|---|---|---|---|---|---|
| Contact | Configuration | | 1A | 2A | 2A-S |
| | Load | Resistive | 30A 277VAC/30VDC | 25A 277VAC/30VDC | 40A 250VAC/30VDC |
| | | Motor load | 1.5 HP, 120VAC; 3HP,240VAC | | |
| | Max. switching capacity (resistive) | | 8310VA, 900W | 6925VA,750W | 10000VA,1200W |
| | Initial contact resistance | | ≤50mΩ | | |
| | Auxiliary module | Configuration | 1CO | | |
| | | Load (Resistive) | 250VAC,3A | | |
| | | Switching capacity (resistive) | 750VA | | |
| | | Contact resistance | ≤50mΩ | | |
| | Material | | Ag alloy | | |
| | Electrical durability | | ≥$10^5$Cycles (1800 Ops/h) | | ≥$5x10^4$ Cycles (360 Ops/h) |
| | Mechanical durability | | ⩾5000 x $10^4$Cycles (1800 Ops/h) | | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC:≤80% , AC:≤80% 50/60Hz | | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥15% , AC:≥15% 50/60Hz | | |
| Maximum voltage (23℃) (Rated voltage) | | | 110% | | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | | |
| Coil operating power | DC(W) | | approx. 1.9 | | |
| | AC(VA) | | approx. 2.5 | | |
| Operate time&Release time (at nominal voltage) | | | ≤30ms | | |
| Initial breakdown voltage | Between open contacts | | 2000VAC/1min (leakage current 1mA) | | |
| | Between poles | | 2000VAC/1min (leakage current 1mA) | | |
| | Between contacts and coil | | 4000VAC/1min (leakage current 1mA) | | |
| Insulation characteristics IEC 60664 UL840 | Rated voltage | | 277VAC | | |
| | Pollution level | | 3 | | |
| | Overvoltage level | | III | | |
| Impulse withstand voltage (waveform: 1.2/50μs) | | | 6000V | | |
| Protection level | | | IP20 | | |

# RGF
Power Relay

| | |
|---|---|
| Storage temperature/ humidity | -55~+85℃/ ≤85%RH (18 months) |
| Working temperature/ humidity | -25~+55℃/ 5%~85%RH (No condensation) |
| Air pressure | 86~106KPa |
| Shock resistance | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | 10~55Hz double-amplitude:1.5mm |
| Mounting | plug in type; screw type; PCB type; DIN rail mounting type |
| Unit weight | plug in type about 90g; screw type around 120g; screw type +DIN rail mountingwith auxiliary module about 135g |

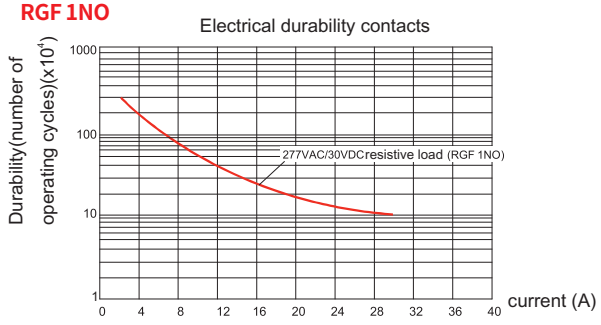
## Coil Specifications (23°C)

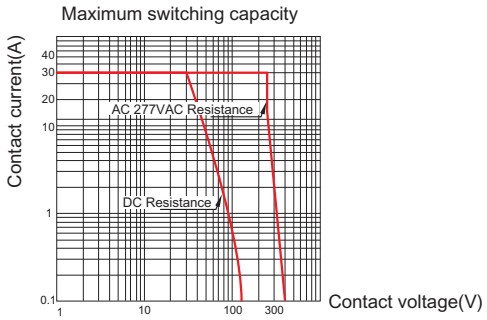
| Nominal voltage V.DC | 6 | 12 | 24 | 48 | 110 | 220 | | |
|---|---|---|---|---|---|---|---|---|
| Coil resistance Ω | 18.9 | 75 | 303 | 1220 | 6360 | 25474 | | |
| Nominal voltage V.AC | 6 | 12 | 24 | 48 | 100-120 | 200-240 | 380 | 400 |
| Coil resistance Ω | 14 | 55 | 275 | 1100 | 5200 | 21000 | 62650 | 62650 |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

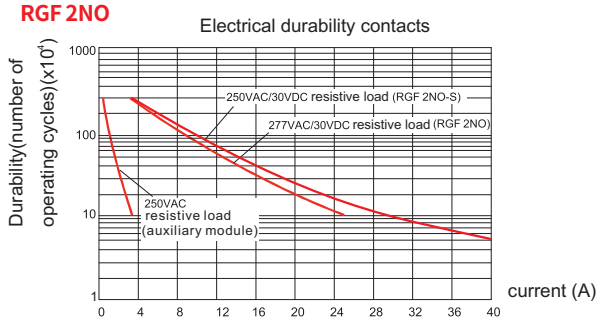
## Contact Specification

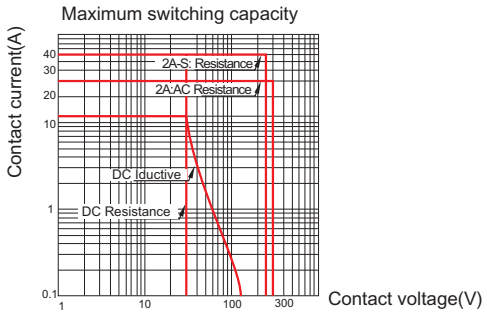
### RGF 1NO



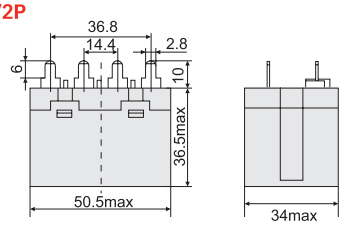

### RGF 2NO



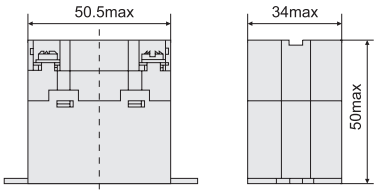



## Dimensions (mm)

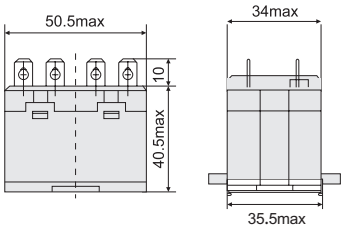
### RGF1P/2P



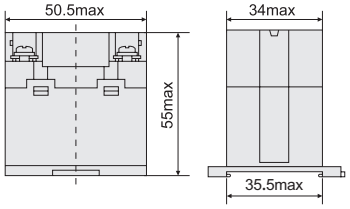

### RGF1BU/2BU



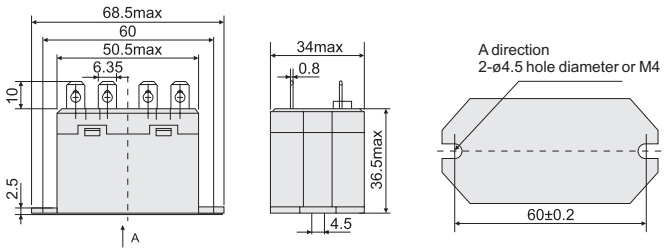

### RGF1OD/2OD



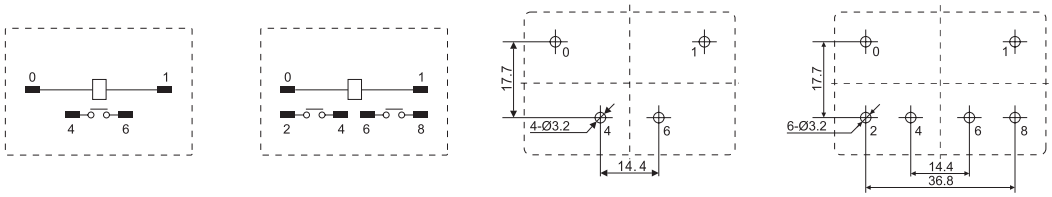

### RGF1BD/2BD




### RGF1OU/2OU



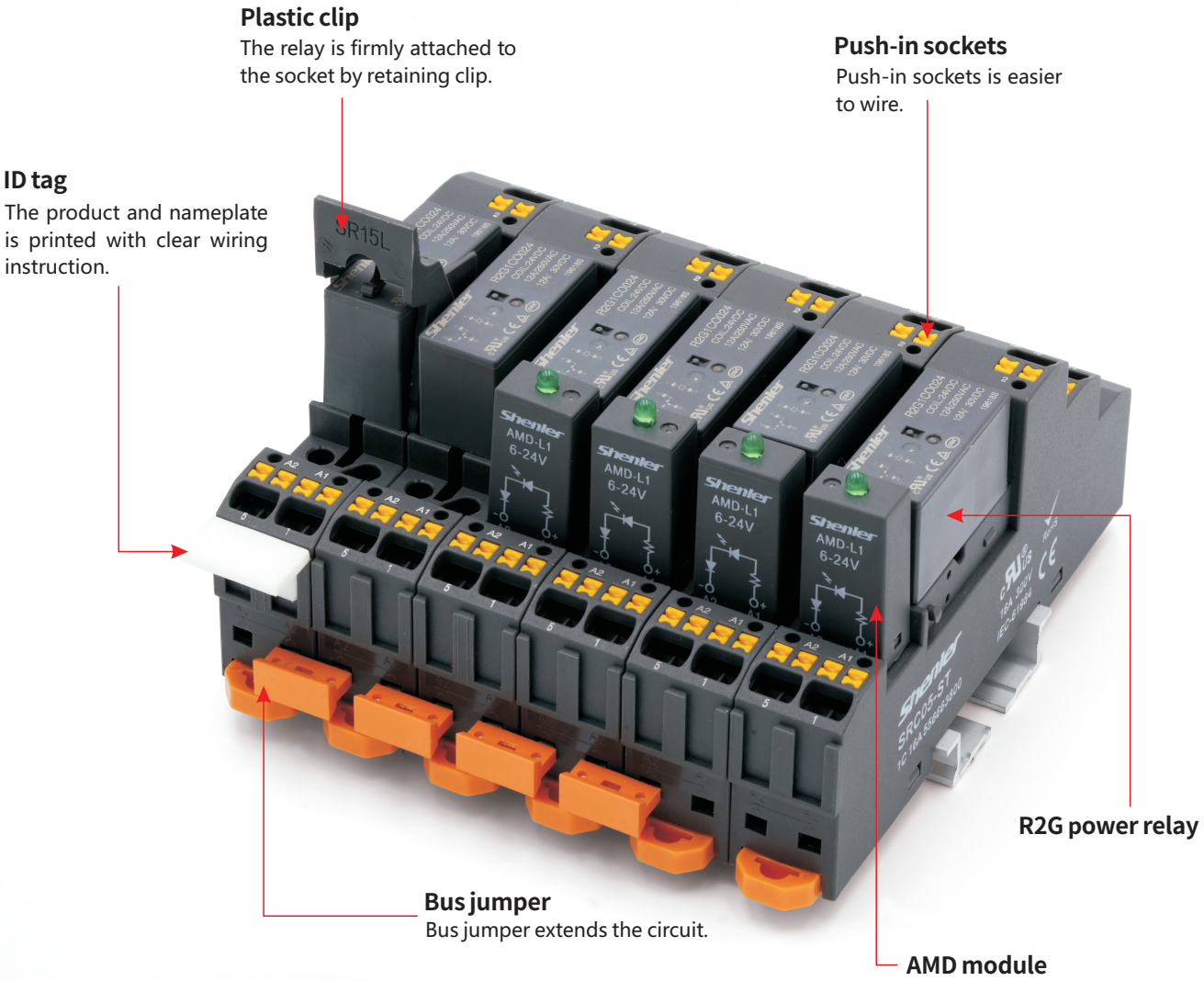

## Wiring Diagrams



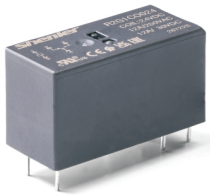

RGF1 RGF2 RGF1P RGF2P

# R2G
Power Relay

- Available for 1 and 2 poles, a variety of high capacity models
- High sensitive of consumed power 400mW
- With up to 8mm of insulation distance between coil and contacts
- High insulation with 10kv of shock resistant voltage
- Meet with the ambient temperature 85°C



# R2G
Power Relay



Relay

+

Socket

=

Relay module

R2G □ □ □ □ □ □

**Encapsulation Way**
Blank: Sealed
S: Flux proof

**Coil Consumption**
Blank: Standard (400mW)
T: Sensitive (250mW)

**Material Level**
Blank: B class
F: F class

**Coil voltage code**

| Code | 005 | 006 | 009 | 012 | 048 | 060 | 110 |
|---|---|---|---|---|---|---|---|
| Voltage (V DC) | 6 | 6 | 9 | 12 | 48 | 60 | 110 |
| Code | 524 | 615 | 730 | | | | |
| Voltage (V AC) | 24 | 115 | 230 | | | | |

**Terminal arrangement**
O: 3.5mm contact pin pitch 1 pole 12A
U: 5.0mm contact pin pitch 1 pole 12A
H: 5.0mm contact pin pitch 1 pole16A, 2 poles 8A

**Contact form**
1, 2 (A: NO, B: NC, C: CO)

**Series name**

## Characteristics

| | | | | |
|---|---|---|---|---|
| Contact | Configuration | | 1C/1A | 2C/2A |
| | Load | Resistive load (AC-1) | 12A,16A/250VAC,30VDC | 8A/250VAC,30VDC |
| | | Motor load (AC-15) | 1/2HP, 240VAC;3/4HP,120VAC | 1/3HP,240VAC,1/4HP,120VAC |
| | Max. switching capacity (resistive) | | 3000VA,360W;4000VA,480W | 2000VA,240W |
| | Min. switching capacity | | 170mW(17V/10mA) | |
| | Initial contact resistance | | ≤100mΩ | |
| | Material | | Ag alloy | |
| | Electrical durability (110% rated voltage , 85℃) | | 3.5mm: 1NO 12A; 1NC 6A ≥$10^5$ Cycles(85℃) | 5.0mm: 2NO 8A; 2NC 4A ≥$10^5$ Cycles(85℃) |
| | | | 5.0mm: 1NO 16A; 1NC 8A ≥$10^5$ Cycles(85℃) | - |
| | Electrical Durability (Normal temperature | | 3.5mm: 1NO 12A; 1NC 12A ≥5x$10^4$Cycles (23℃) | 5.0mm:2NO 8A; 2NC 8A ≥5x$10^4$ Cycles(23℃) |
| | | | 5.0mm: 1NO 16A; 1NC 16A ≥3x$10^4$Cycles(23℃) | - |
| | Mechanical durability | | Dc≥5000x$10^4$ Cycles (18000 Ops/h); Ac≥3000x$10^4$ Cycles (18000 Ops/h) | |
| Pick-up voltage (23℃) (Rated voltage) | | | DC≤70% | |
| Drop-out voltage (23℃) (Rated voltage) | | | DC:≥10% | |
| Maximum voltage (23℃) (Rated voltage) | | | 130% | |
| Insulation resistance | | | ≥1000MΩ (500VDC) | |
| Coil operating power | | DC(W) | approx. 0.43 | |
| | | AC(VA) | approx. 1 | |
| Operate time | | | ≤10ms | |
| Release time (at nominal voltage) | | | ≤5ms | |
| Initial breakdown voltage | | Between open contacts | 1000VAC/1min (leakage current 1mA) | 1000VAC/1min (leakage current 1mA) |
| | | Between poles | - | 2500VAC/1min (leakage current 1mA) |
| | | Between contacts and coil | 5000VAC/1min (leakage current 1mA) | 5000VAC/1min (leakage current 1mA) |
| Insulation characteristics IEC 60664 UL840 | | Rated voltage | 250VAC | |
| | | Pollution level | 3 | |
| | | Overvoltage level | III | |

# R2G
Power Relay

| | |
|---|---|
| Protection level | IP20 |
| Storage temperature/ humbidity | -55~+85℃/ 5%~68%RH (18 months) |
| Working temperature/ humbidity | -40~+85℃/ 5%~85%RH (No condensation) |
| Air pressure | 86~106KPa |
| Shock resistance | 10G (half-sine shock pulse: 11ms) |
| Vibration resistance | 10~55Hz double-amplitude:1.5mm |
| Mounting | PCB |
| Unit weight | approx. 13g |

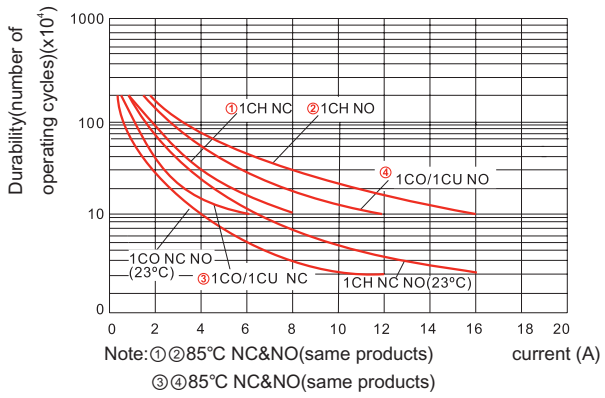
## Coil Specifications (23°C)

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Nominal voltage V.DC | 5 | 6 | 9 | 12 | 24 | 48 | 60 | 110 |
| Coil resistance Ω | 62.5 | 90 | 200 | 360 | 1440 | 5220 | 8570 | 28800 |
| Nominal voltage V.AC | 24 | 115 | 230 | | | | | |
| Coil resistance Ω | 350 | 8100 | 23800 | | | | | |

Coil resistance: under coil voltage 110V are measured with tolerance of ±10%Ω, above 110V with tolerance of ±15%Ω.

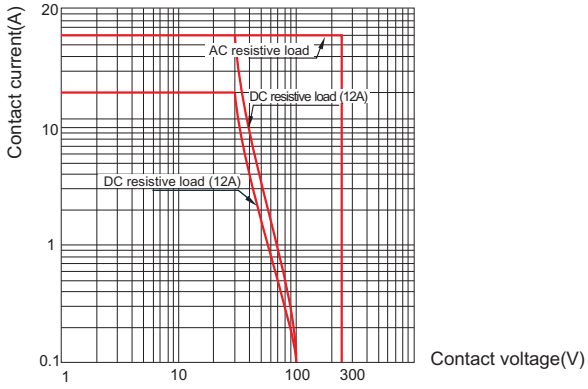
## Contact Specification

**R2G-1** Electrical durability contacts

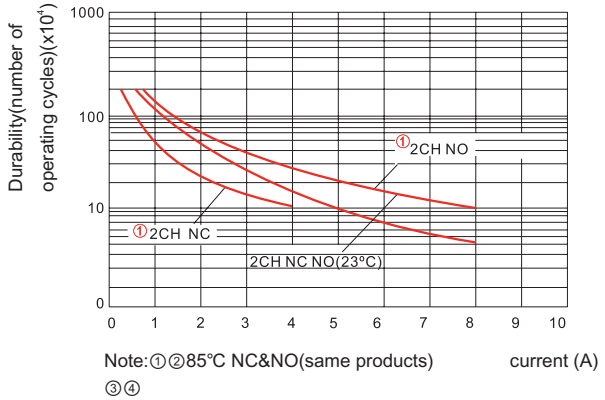



Note:①②85℃ NC&NO(same products)
③④85℃ NC&NO(same products)

Maximum switching capacity

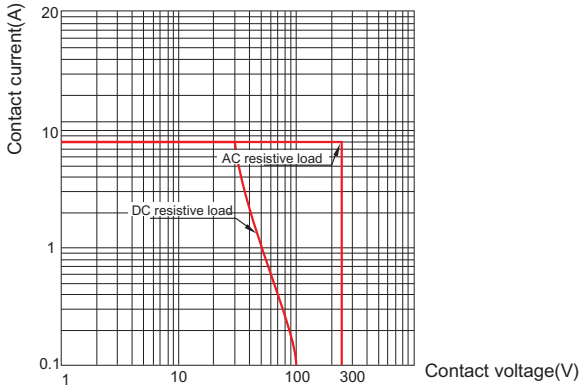



**R2G-2** Electrical durability contacts




Note:①②85℃ NC&NO(same products)
③④

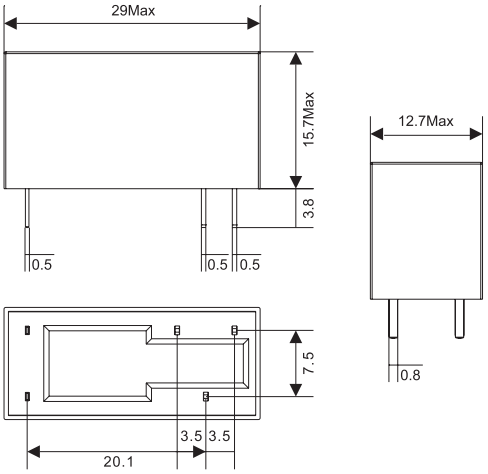
Maximum switching capacity



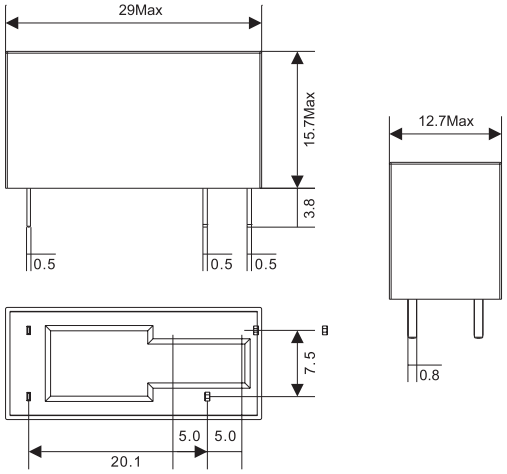
# R2G
Power Relay

## Dimensions (mm)

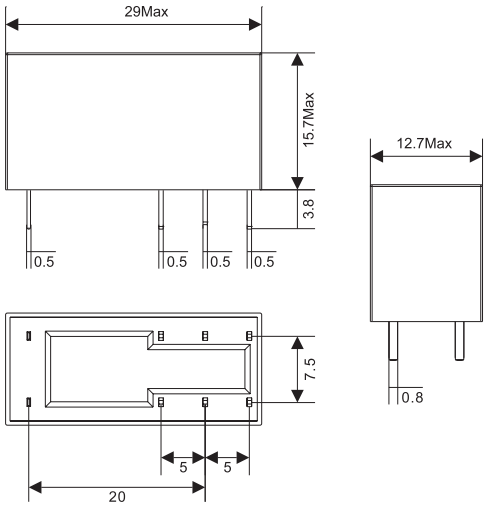
### R2G1CO 3.5mm



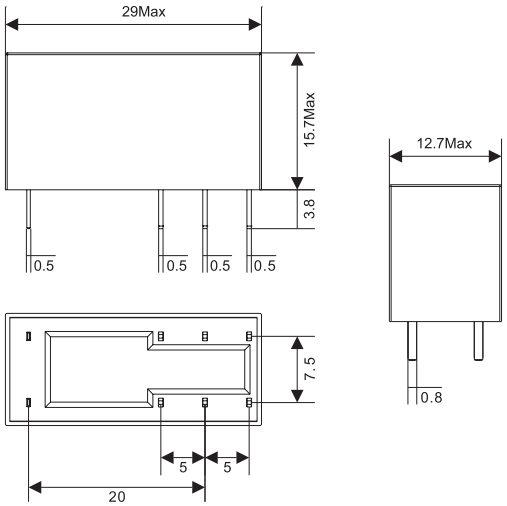

### R2G1CU 5.0mm




### R2G1CH 5.0mm



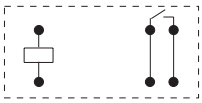

### R2G2CH 5.0mm




## Wiring Diagrams

### R2G1AO/1AU

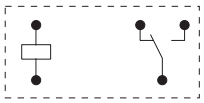
### R2G1AH



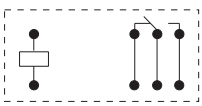
### R2G1BO/1BU

### R2G1BH

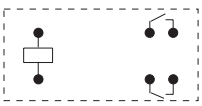
### R2G1CO/1CU



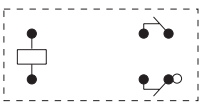
### R2G1CH



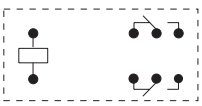
### R2G2AH



### R2G2BH



### R2G2CH



# SRC05-ST & SRC08-ST

R2G Socket

## Characteristics


SRC05-ST

SRC08-ST

| Type | | | SRC05-ST | SRC08-ST |
|---|---|---|---|---|
| Nominal load | Current | A | 16 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | - | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 37 | 42 |

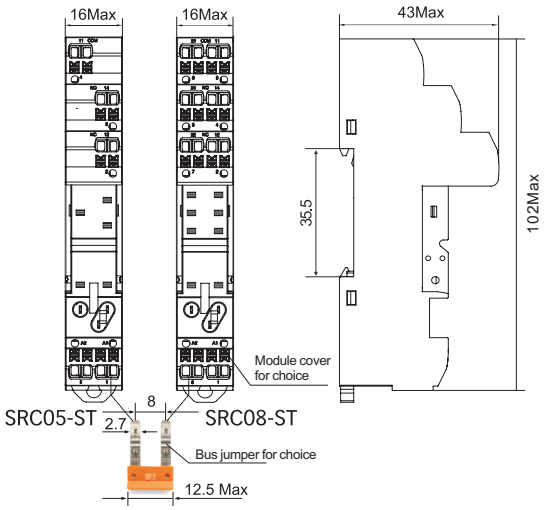
**Accessories**

| Socket | ID tag | Bus Jumper | Module |
|---|---|---|---|
| SRC05-ST |  |  |  |
| SRC08-ST | SR2P | ST01CC | AMD |

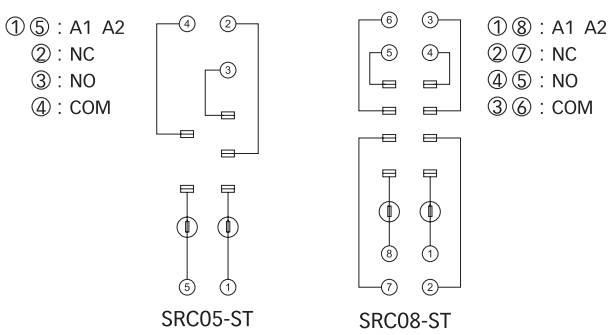
**Clip selection table**

| Relay H (mm) | 15 | 20 | 25 |
|---|---|---|---|
| Clip Type |  SR15L |  SR20F |  SR25C |

## Dimensions (mm)




## Connection Diagrams



# SRC05-E & SRC08-E

R2G Socket

## Characteristics

SRC05-E

SRC08-E

| Type | | | SRC05-E | SRC08-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 33 | 37 |

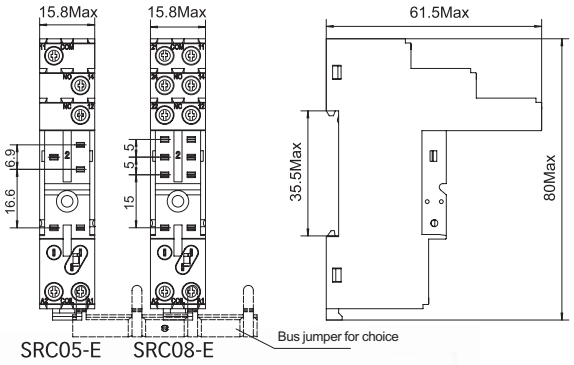
**Accessories**

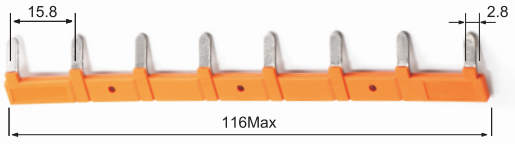
| Socket | ID tag | Bus Jumper | Module |
|---|---|---|---|
| SRC05-E |  SR2P |  SR08B |  AMD |
| SRC08-E | | | |

**Clip selection table**

| Relay H (mm) | 15 | 20 | 25 |
|---|---|---|---|
| Clip Type |  SR15L |  SR20F |  SR25C |

## Dimensions (mm)

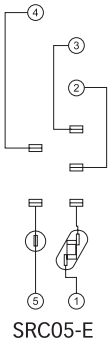


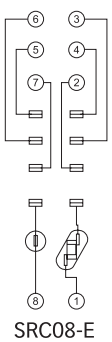




**Bus jumper SR08B**

## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM





①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

SRC05-E SRC08-E

# SRB05-E & SRB08-E

R2G Socket

## Characteristics

SRB05-E

SRB08-E

| Type | | | SRB05-E | SRB08-E |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 10 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | 1.0 | |
| Wire size | | AWG/mm² | 20-14/0.5-2.5 | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 33 | 37 |

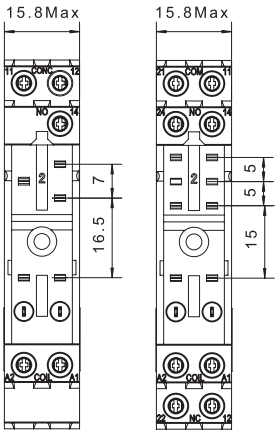
**Accessories**

| Socket | ID tag | Module |
|---|---|---|
| SRB05-E |  SR2P |  AMD |
| SRB08-E | | |

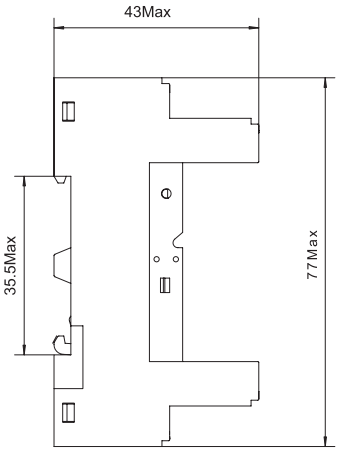
**Clip selection table**

| Relay H (mm) | 15 | 20 | 25 |
|---|---|---|---|
| Clip Type |  SR15L |  SR20F |  SR25C |

## Dimensions (mm)

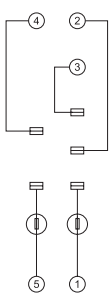



SRB05-E SRB08-E

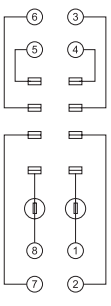



## Connection Diagrams

①⑤ : A1 A2
② : NC
③ : NO
④ : COM



SRB05-E



①⑧ : A1 A2
②⑦ : NC
④⑤ : NO
③⑥ : COM

SRB08-E

# SRC05-P & SRC08-P

R2G Socket

## Characteristics

SRC05-P

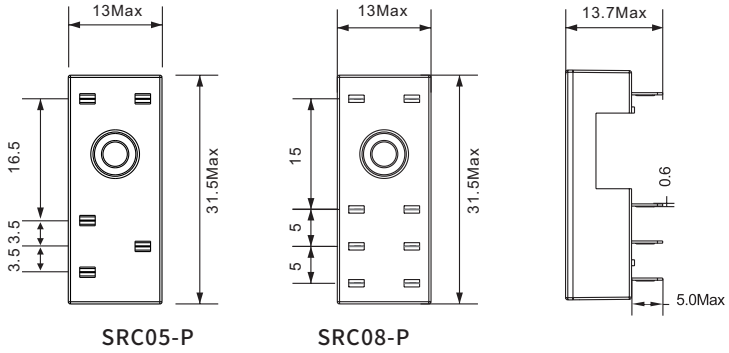
SRC08-P

| Type | | | SRC05-P | SRC08-P |
|---|---|---|---|---|
| Nominal load | Current | A | 12 | 8 |
| | Voltage | V | 300 | |
| Dielectric strength | Between coil and contact | V/min | 4000 | |
| | Between contacts | V/min | 2500 | |
| Max. tightening torque | | Nm | - | |
| Wire size | | AWG/mm² | - | |
| Ambient temperature | | ℃ | -40~+85 | |
| Unit weight | | g | 10 | 10 |

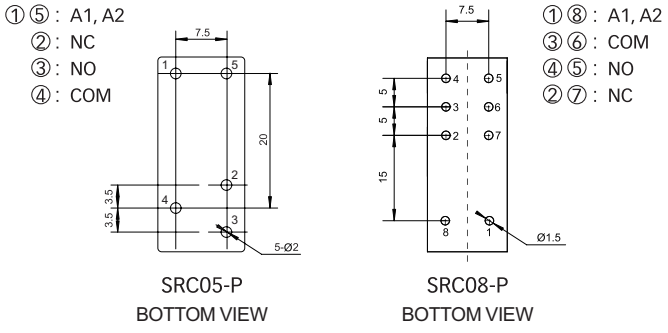
**Accessories**

| Socket | Metal clip |
|---|---|
| SRC05-P |  SR15M |
| SRC08-P |  SR1520M |

## Dimensions (mm)




## Connection Diagrams



# RSC Series

Solid State DC AC Slim Relay

- Ultra thin, small size, fast switching response
- no contact, no spark, long service life
- NO DC,AC output
- MOSFET output for DC, TRIAC output for AC.
- Imported optocoupler isolation
- Wide supply DC voltage range
- Shenler industrial control relay is widely used in the output signal and safety drive of PLC, CNC system, robot, intelligent manufacturing and other control systems. It is one of the best choices to realize the automatic assembly line of various equipment and products such as remote control, production and processing, packaging, transportation, detection and storage.

**Clear LED indicator**

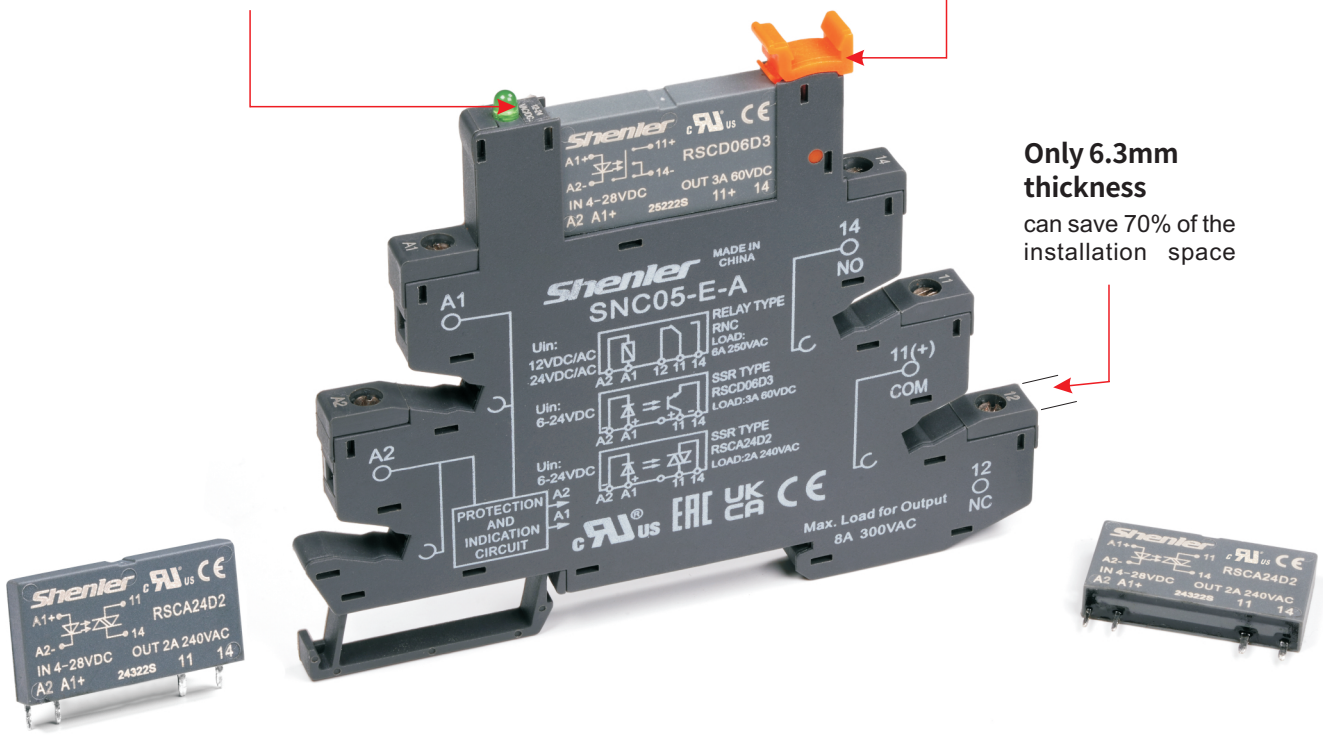
Led top high projection display, intuitive and easy to identify, making maintenance easier

**Release lever**

Press the lever on the top to make it easy to assemble and replace relay and protect the relay pins from damage

**Only 6.3mm thickness**

can save 70% of the installation space

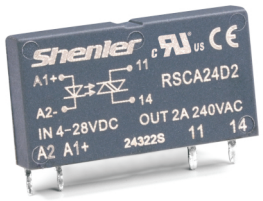


# RSCA Series

Solid State AC Slim Relay

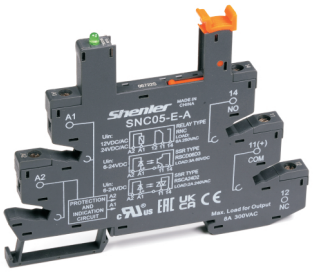
RSC A 24 D □ □

- **Load current**
  Blank: Zero voltage switching
  R: Random switching
- **Rated load current**
  2 : 2A
- **Control voltage range**
  D : 4-28V DC
  E:15-28VDC
- **Rated load range**
  24 : 240VAC
- **Load type**
  A: AC load
- **Series**



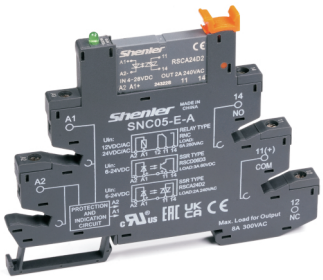

Relay

+




Socket

=




Relay Module

## Product performance

| Input parameter(Ta=25℃) | | | | |
|---|---|---|---|---|
| Part No. | RSCA24D2 | RSCA24D2R | RSCA24E2 | RSCA24E2R |
| Control voltage range | 4~28VDC | | 15~28VDC | |
| Must turn-on voltage | 4VDC | | 15VDC | |
| Must turn-off voltage | 1VDC | | 5VDC | |
| Control current range | 20mA | | | |

| Output parameters(Ta=25℃) | | | | |
|---|---|---|---|---|
| Part No. | RSCA24D2 | RSCA24E2 | RSCA24D2R | RSCA24E2R |
| Rated load voltage | 240VAC | | | |
| Load voltage range | 24~280VAC | | | |
| Maximum transient voltage | 600VPK | | | |
| Load current range | 0.02~2A | | | |
| Trigger type | Zero voltage switching | | Random switching | |
| Maximum conduction time | ½ cycle | | 1ms | |
| Maximum turn-off time | ½ cycle | | ½ cycle | |
| Non-repetitive surge current (within 10ms) | ≤50A | | | |
| Maximum off-state leakage current (at rated voltage) | ≤1.5mA | | | |
| Maximum on-state voltage drop (at rated current) | ≤1.3V | | | |
| Out-of-state voltage index rise rate dv/dt | 200V/us | | | |
| Load current safety factor | 40-60% | | | |

| Other parameters(Ta=25℃) | |
|---|---|
| Dielectric withstand voltage (Input / Output,50Hz/60Hz) | 2500VAC |
| Insulation resistance(@500VDC) | 1000MΩ |
| Operating temperature range | -30℃~+80℃ |
| Storage temperature range | -30℃~+100℃ |
| Weight | approx. 4g |

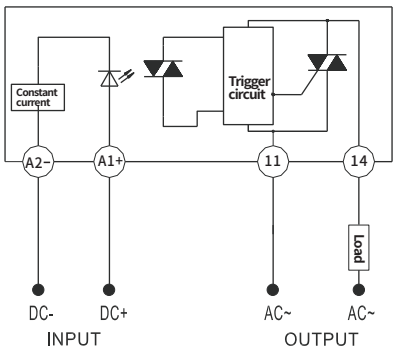
## Note:

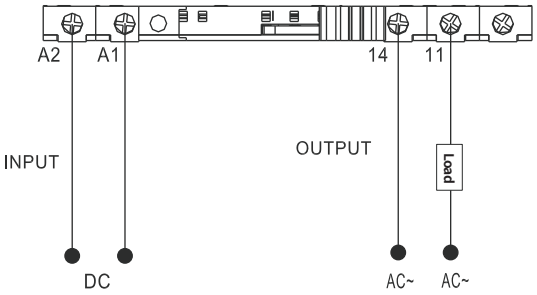
1.When welding and installing the printed substrate, please complete the welding within 8 seconds at 260℃ welding temperature (no more than 2 seconds for each pin).
2.The positive and negative polarity of input and output shall not be connected wrongly, otherwise it is easy to damage the product.
3.The recommended installation torque for base wiring is 0.5N m.
4.When the ambient temperature of the product is high, please refer to the temperature curve for derating.

# RSC Series

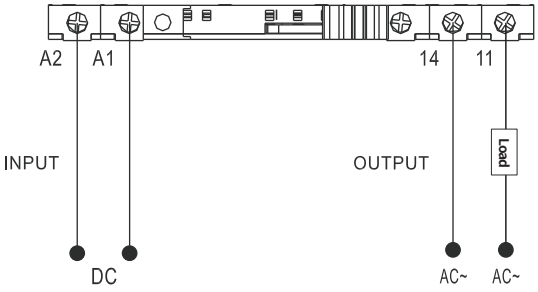
Solid State AC Slim Relay

## Wiring diagram



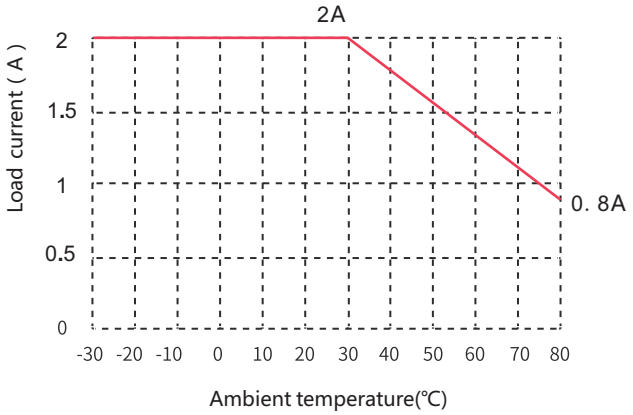




WITH SOCKET SNC05-E-A

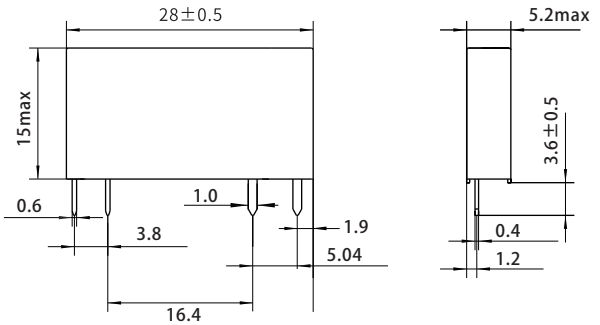



WITH SOCKET SNB05-E-A

## Contact Specification




## Dimension(mm)



# RSCD Series

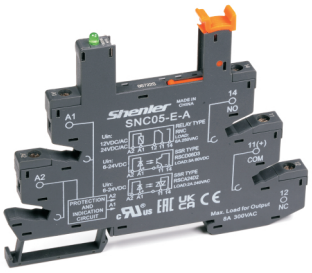
Solid State DC Slim Relay

RSC D 06 □ □

- Load current
  1:1 A;
  3:3 A
- Control Voltage range
  D:4-28VDC
  E:15-28VDC
- Rated load voltage
  06:60VDC
- Load type
  D: DC load
- Series

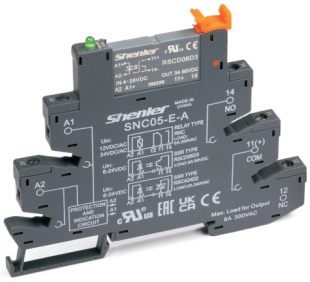

Relay

+




Socket

=




Relay Module

## Product performance

| Input parameter(Ta=25℃) | | | | |
|---|---|---|---|---|
| Part No. | RSCD06D1 | RSCD06D3 | RSCD06E1 | RSCD06E3 |
| Control voltage range | 4~28VDC | | 15~28VDC | |
| Must turn-on voltage | 4VDC | | 15VDC | |
| Must turn-off voltage | 1VDC | | 5VDC | |
| Control current range | 20mA | | | |

| Output parameters(Ta=25℃) | | | | |
|---|---|---|---|---|
| Part No. | RSCD06D1 | RSCD06E1 | RSCD06D3 | RSCD06E3 |
| Rated load voltage | 60VDC | | | |
| Load voltage range | 5~60VDC | | | |
| Peak withstand voltage | 100VDC | | | |
| Load current range | 0.002~1A | | 0.002~3A | |
| Non-repetitive surge current (within 10ms) | 16A | | 30A | |
| Maximum on-state voltage drop (at rated current) | ≤1.3V | | ≤0.1V | |
| Maximum off-state leakage current (at rated voltage) | ≤0.1mA | | | |
| Maximum turn-on time | ≤1ms | | | |
| Maximum turn-off time | ≤1ms | | | |
| Load current safety factor | 40~60% | | | |

| Other parameters(Ta=25℃) | |
|---|---|
| Dielectric withstand voltage (Input / Output,50Hz/60Hz) | 2500VAC |
| Insulation resistance(@500VDC) | 1000MΩ |
| Operating temperature range | -30℃~+80℃ |
| Storage temperature range | -30℃~+100℃ |
| Weight | 4g |

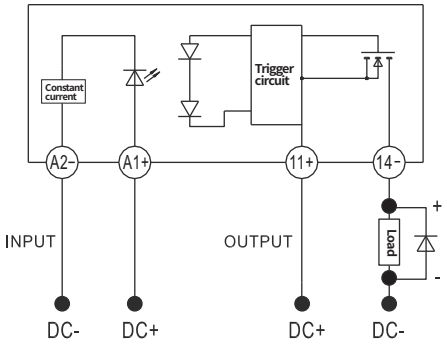
## Note:

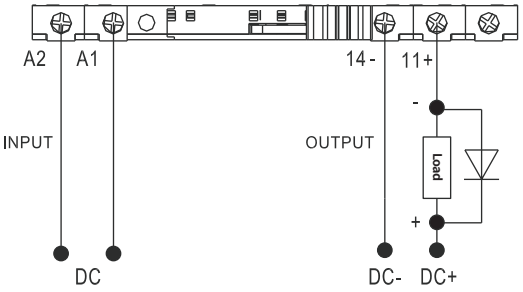
1.When welding and installing the printed substrate, please complete the welding within 8 seconds at 260℃ welding temperature (no more than 2 seconds for each pin).
2.The positive and negative polarity of input and output shall not be connected wrongly,otherwise it is easy to damage the product.
3.The recommended installation torque for base wiring is 0.5N m.
4.When the ambient temperature of the product is high, please refer to the temperature curve for derating.
5.When connecting inductive load, be sure to reverse parallel the freewheeling diode at the load end (see the wiring diagram for the specific connection method)!

# RSC Series

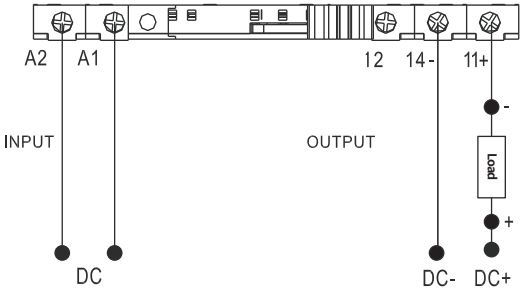
Solid State DC Slim Relay

## Wiring diagram

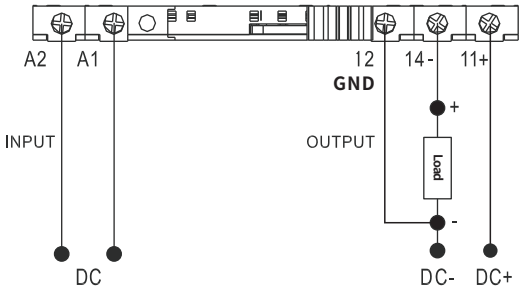



**WITH SOCKET SNC05-E-A**
**For Resistive Load**

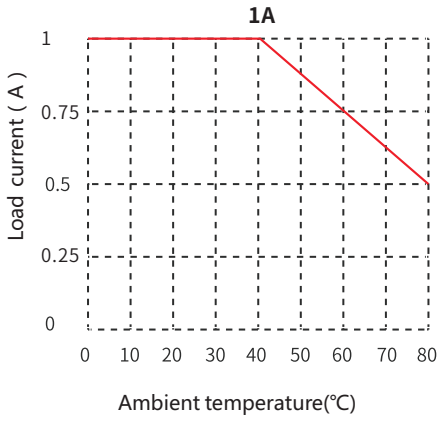


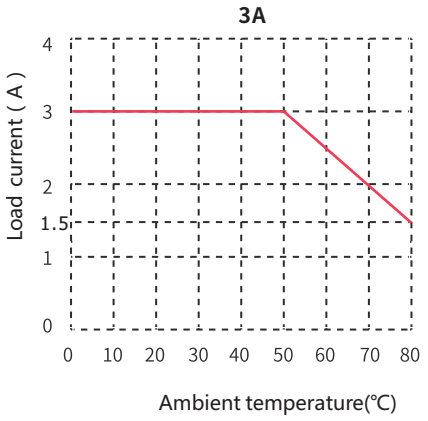

**WITH SOCKET SNB05-E-A**
**For Resistive Load**



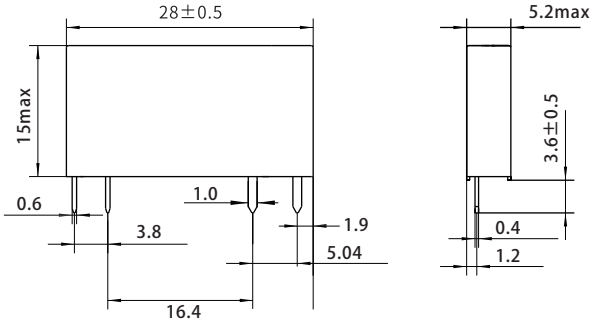

**WITH SOCKET SNB05-E-A D**
**For Inductive load**

## Contact Specification



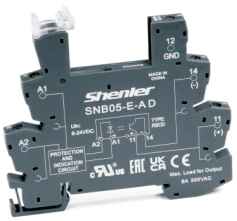

## Dimension(mm)



# SNB05-E-A

Solid state slim relay
PCB socket

## Characteristics



SNB05-E-A

| Model No. | Input | Relay |
|---|---|---|
| ★ SNB05-E-A | 6~24VDC | 4~28VDC |
| ★ SNB05-E-A D | 6~24VDC | 4~28VDC |

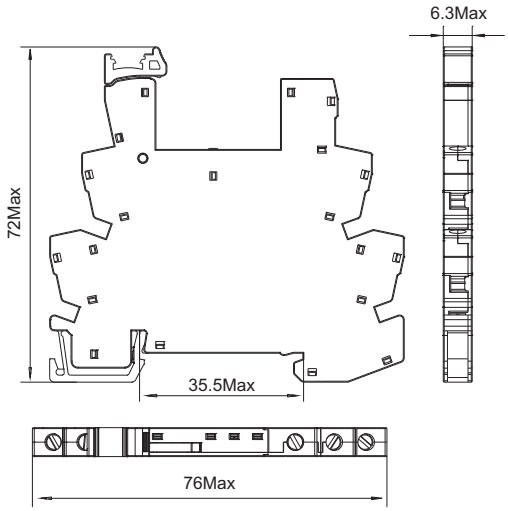
| Characteristics | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Input/Output | V/min | 2500 |
| Max. tightening torque | | Nm | 0.5 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 19.5 |

**Accessories**

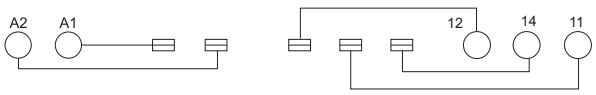
| Bus jumper | Legend |
|---|---|
|  |  |
| SN20A | SN64P |

★ Difference refer to wiring diagram

## Dimensions (mm)



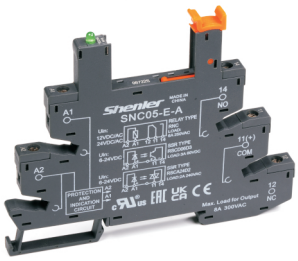

## Connection Diagrams



# SNC05-E-A

Solid state slim relay socket

## Characteristics




SNC05-E-A

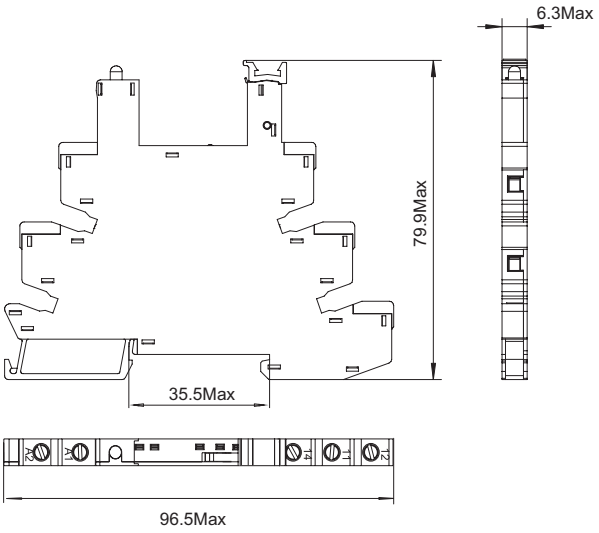
| Model No. | Input | Relay |
|---|---|---|
| SNC05-E-A | 6~24VDC | 4~28VDC |

| Characteristics | | | |
|---|---|---|---|
| Nominal load | Current | A | 8 |
| | Voltage | V | 300 |
| Dielectric strength | Input/Output | V/min | 2500 |
| Max. tightening torque | | Nm | 0.5 |
| Wire size | | AWG/mm² | 20-16/0.5-1.5 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 24 |

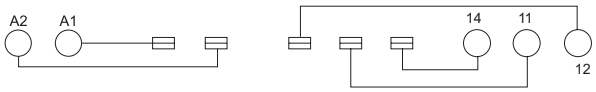
**Relay,accessories Selection Table**

| Bus jumper | Legend | Partition plate |
|---|---|---|
|  |  |  |
| SN20B | SN64P | SN20S |

## Dimensions (mm)




## Connection Diagrams

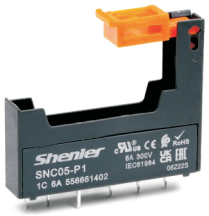


# SNC05-P1

Solid state slim relay
PCB socket

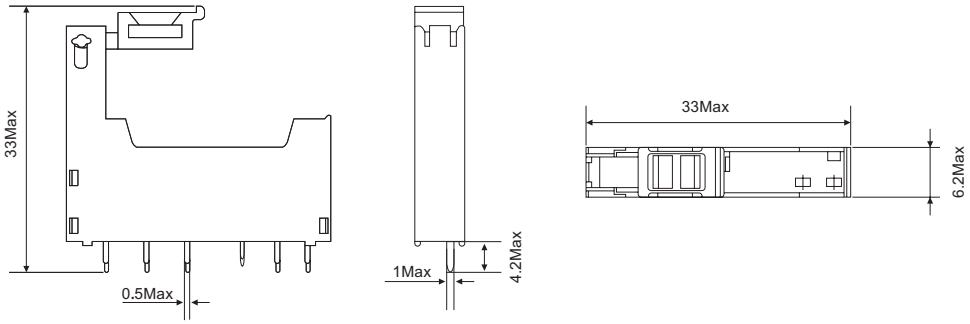
## Product performance

**SNC05-P1**

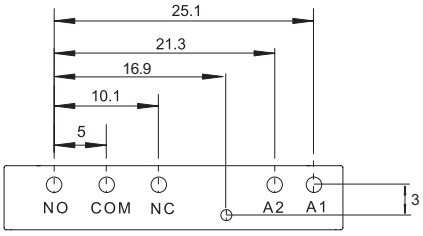



| | | | |
|---|---|---|---|
| Nominal load | Current | A | 6 |
| | Voltage | V | 300 |
| Dielectric strength | Input/output | V/min | 2500 |
| Ambient temperature | | ℃ | -40~+85 |
| Unit weight | | g | 2.6 |

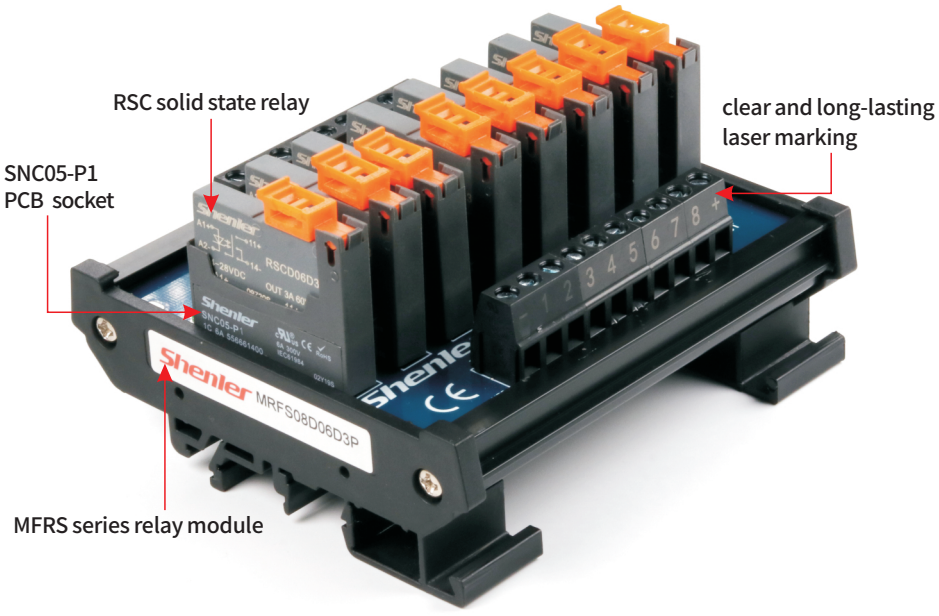
## Dimension (mm)




## Wiring Diagram




## Physical drawing of product application



# RSD-1D Series

AC DC Solid state relay

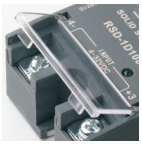
- 1 N/O SPST DC output
- No contact, no spark, long service life
- MOSFET output, fast switching response
- Imported optocoupler isolation
- Wide control voltage range, LED indicator
- Optional IP20 protective cover, panel mounting
- Widely used in DC heating, DC power supply, DC valve, DC motor, etc.

### MOS tube

The relay adopts MOS tube with low internal resistance, which has low calorific value and long service life

### Metal cooling base plate

The back adopts thickened metal plate; smooth surface helps fast cooling and avoid overheat.



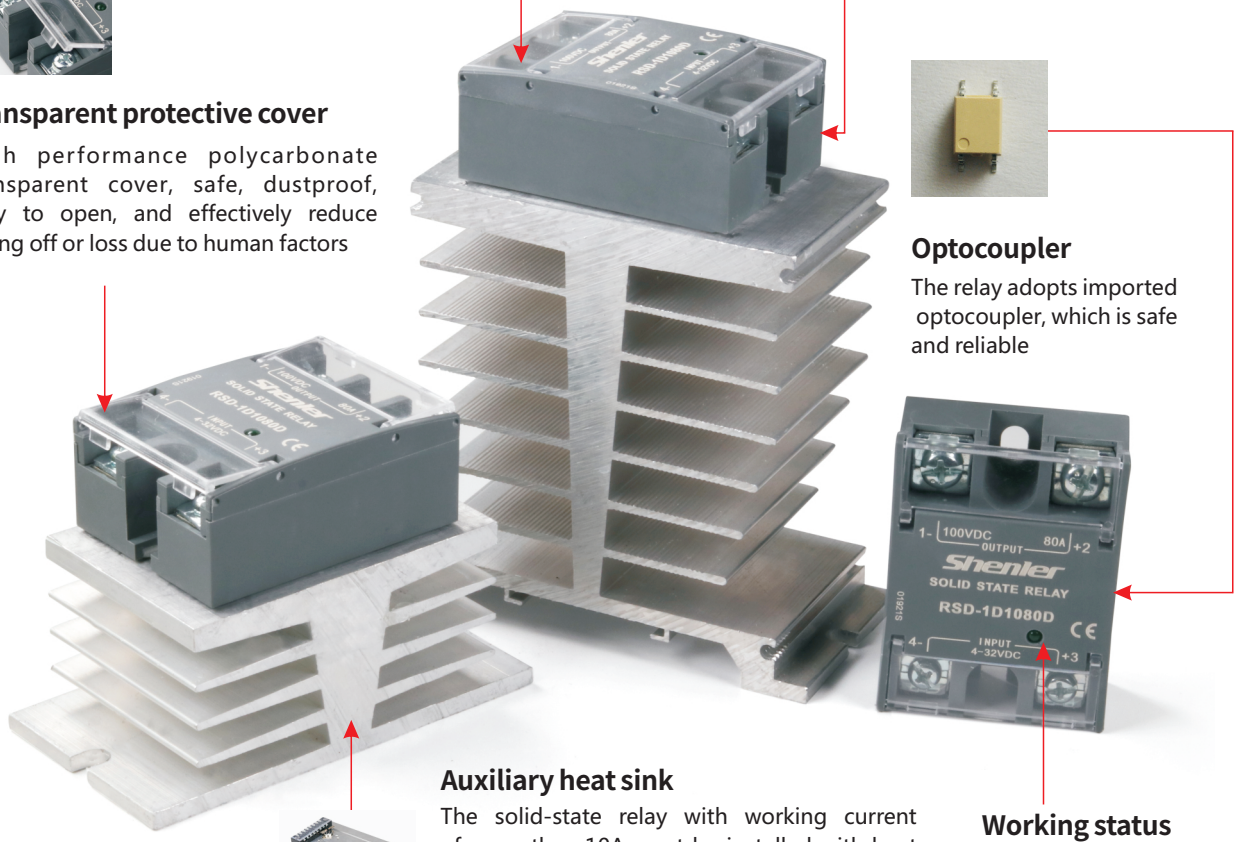
### Transparent protective cover

High performance polycarbonate transparent cover, safe, dustproof, easy to open, and effectively reduce falling off or loss due to human factors



### Optocoupler

The relay adopts imported optocoupler, which is safe and reliable




### Auxiliary heat sink

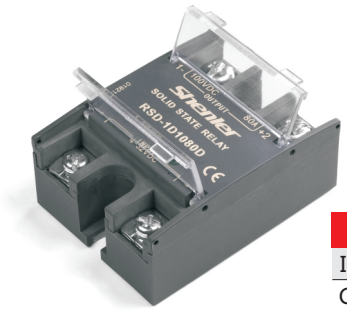
The solid-state relay with working current of more than 10A must be installed with heat sink, and thermal conductive silicone grease is added between the relay and the heat sink (fan forced cooling is added for more than 60A)

### Working status indicator

CE

# RSD-1D Series

DC Solid state relay


**Relay**

**RSD 1 D □ □ D**

**Control type**
D:4-32VDC DC control

**Load current**

| Code | 20 | 40 | 60 | 80 | 100 |
|---|---|---|---|---|---|
| Current (A) | 20 | 40 | 60 | 80 | 100 |
| Note | | | | For load voltage code 06 and 10 only | |

**Load voltage**

| Code | 06 | 10 | 20 |
|---|---|---|---|
| Voltage Range (VDC) | 7-48 | 7-75 | 7-120 |

**Load type**
D: DC load

**Single-phase**

**Series name**

## Product performance

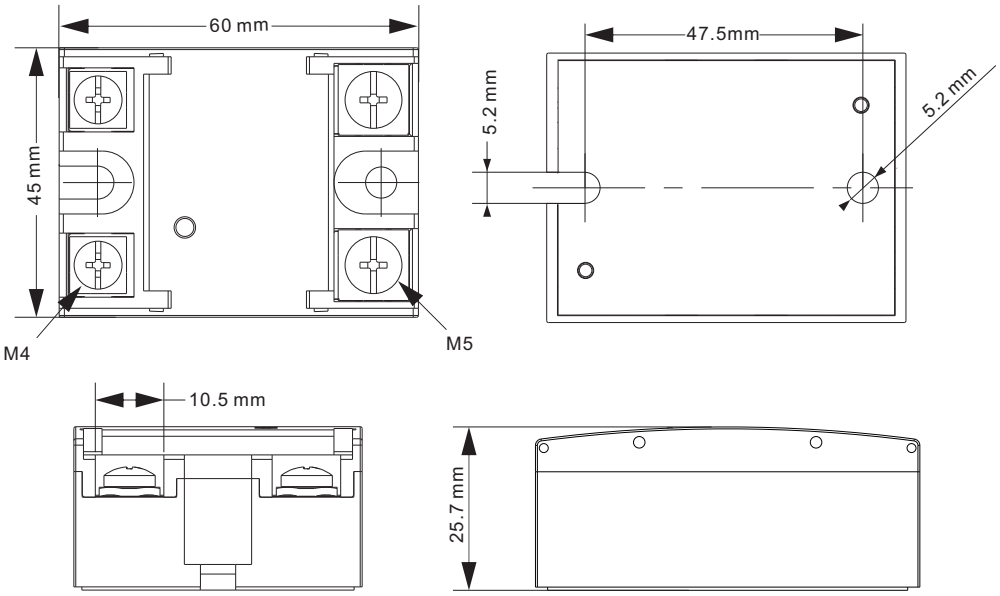
| | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Input parameter ( Ta=25℃ ) | | | | | | | | | | | | | | |
| Control voltage range | 4~32VDC | | | | | | | | | | | | | |
| Must ON voltage | 4VDC | | | | | | | | | | | | | |
| Must OFF voltage | 1VDC | | | | | | | | | | | | | |
| Control current range | 6~20mA | | | | | | | | | | | | | |
| Output parameters ( Ta=25℃ ) | | | | | | | | | | | | | | |
| Part No. | RSD-1D06xxD | | | | | RSD-1D10xxD | | | | | RSD-1D20xxD | | | |
| Load voltage range(VDC) | 7-48 | | | | | 7-75 | | | | | 7-120 | | | |
| Maximum load current(A) | 20 | 40 | 60 | 80 | 100 | 20 | 40 | 60 | 80 | 100 | 20 | 40 | 60 | |
| Maximum surge current (Apk,@10ms) | 110 | 160 | 200 | 260 | 300 | 90 | 140 | 180 | 220 | 280 | 80 | 160 | 200 | |
| Maximum PWM(Hz) ★ | 900 | 700 | 700 | 500 | 500 | 900 | 600 | 600 | 400 | 400 | 800 | 600 | 400 | |
| Maximum conduction voltage drop(V) | ≤1 | | | | | | | | | | ≤1.2 | | | |
| Maximum off- state leakage current(mA) | ≤0.3 | | | | | | | | | | | | | |
| Minimum load current(mA) | ≥2 | | | | | | | | | | | | | |
| Maximum conduction time(ms) | 1 | | | | | | | | | | | | | |
| Maximum off time(ms) | 1 | | | | | | | | | | | | | |
| Other parameters ( Ta=25℃ ) | | | | | | | | | | | | | | |
| Dielectric withstand voltage (50/60Hz) | Between Input and Output | 2500Vrms | | | | | | | | | | | | |
| | Input/Output to base | 2500Vrms | | | | | | | | | | | | |
| Insulation resistance(@500VDC) | 1000MΩ | | | | | | | | | | | | | |
| Operating temperature range | -30℃~+80℃ | | | | | | | | | | | | | |
| Storage temperature range | -40℃~+100℃ | | | | | | | | | | | | | |
| Operating ambient humidity range | 5 ~ 85%RH (No condensation) | | | | | | | | | | | | | |
| Cooling mode | fan forced cooling is added for more than 60A | | | | | | | | | | | | | |
| Weight Approx | 90g | | | | | | | | | | | | | |

★ Note: For PWM rating, a voltage of at least 8 Vdc must be applied to the control input.

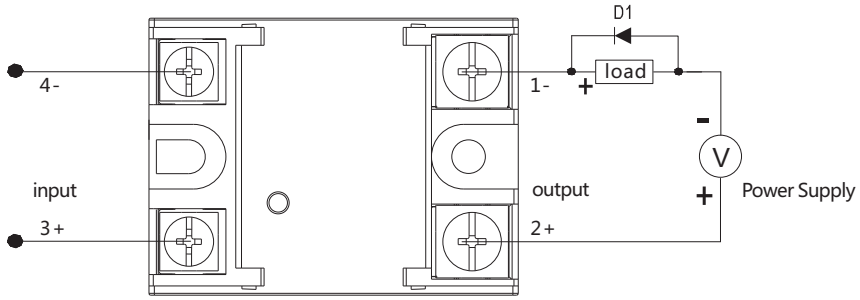
# RSD-1D Series

DC Solid state relay

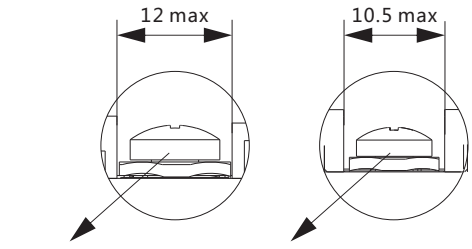
## Dimensions (mm)




## Wiring Diagrams




*When inductive load is used, suppression circuit must be added, as shown in the figure: reverse parallel freewheeling diode D1 at both ends of the load (D1 is a fast recovery diode)




To use cold rolled copper lugs

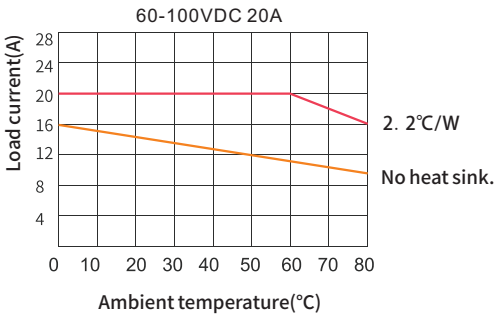
Output screw torque:(1.5-1.8)N·m

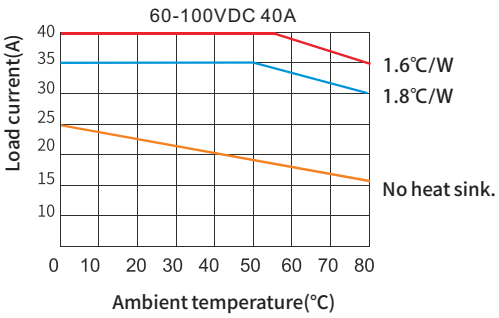
Input screw torque: (1.2-1.4)N·m

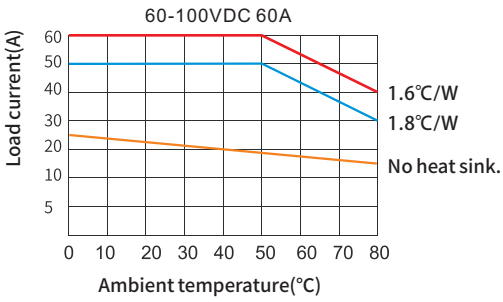
# RSD-1D Series

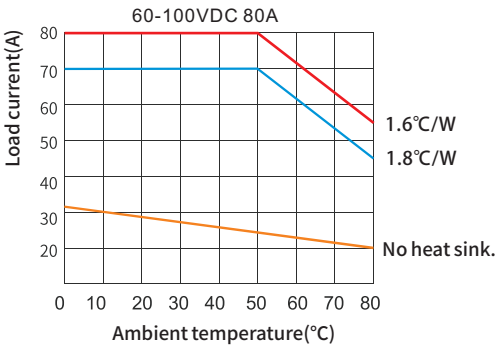
DC Solid state relay

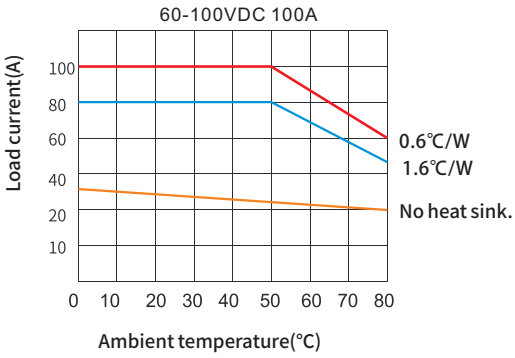
## Performance curve

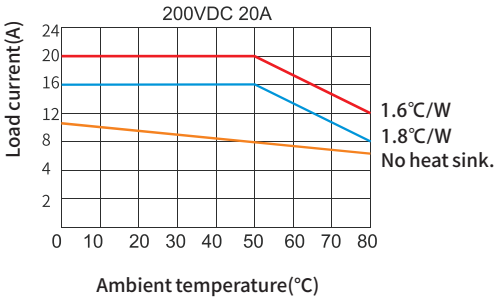


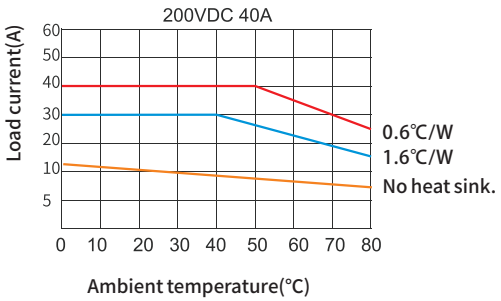



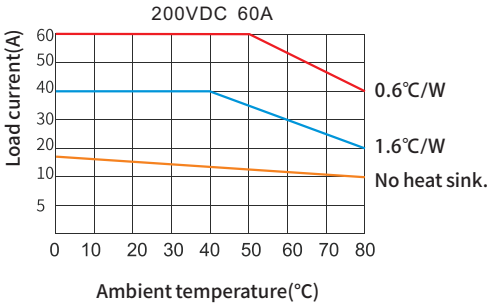



# RSD-1D Series

DC Solid state relay

## Current level selection

Considering the load surge current and relay overload capacity, to make the relay work with long life and high reliability, it is recommended to select the current magnification corresponding to the load type in the table below.

| Load type | Resistance | Electric heating wire | Incandescent lamp | ransformer / electromagnet | Motor |
|---|---|---|---|---|---|
| Power factor | 1.0 | 0.7 | 0.5 | 0.4 | 0.2 |
| Magnification | 1.5multiple | 2multiple | 2.5multiple | 4multiple | 7multiple |

## Note

1. Please be sure to set fuse, air circuit breaker and other protective equipment on the power side to prevent short circuit.
2. When connecting inductive load, be sure to reverse parallel freewheeling diode at the load end (see "Terminal configuration and wiring diagram" for specific connection method)!
3. M5 screw and spring washer are used with 2N.m torque. After 3 hours of use, tighten it once with the same torque. To ensure the close contact and firm installation between the base plate of the solid-state relay (hereinafter referred to as the product) and the heat sink.
4. The product wiring shall be standard wire, and the cross-sectional area can be selected according to 5-8A per square millimeter. The terminal shall ensure that the wiring is firm. Loose wiring will lead to abnormal heating and damage to the product. In case of high temperature and high humidity environment, conductive compound shall also be coated on the connection part.
5. The input terminal is standard M4 screw, and the wiring tightening torque is (1.2-1.4) N.m. the output terminal is standard M5 screw, and the wiring tightening torque is (1.5-1.8) N.m.
6. Please do not connect the current above the rated specification. Otherwise, it may cause abnormal heating of the product.
7. Do not apply voltage exceeding the rated value on the input circuit and output circuit, and pay attention to the wrong connection of positive and negative polarity, otherwise the product will fail or burn.
8. Requirements for installatio: it shall be installed vertically on the chassis with good ventilation conditions, and make full use of the heat dissipation conditions of air convection. When two or more products are installed side by side, an appropriate large gap shall be reserved.
9. When the ambient temperature of the product is high, please refer to "Performance curve" to check the current temperature curve for derating. When it exceeds 60 ℃, air cooling is needed to ensure that the temperature of the product bottom plate does not exceed 80 ℃.
10. Before installation, maintenance and other operations, be sure to cut off the power supply in case of electric shock!

# RSD-1A Series

AC Solid state relay




RSD 1 A □ □ □ □ □

**Protection type:**
Blank: RC (standard)
T: TVS

**Switching mode:**
Blank: Zero voltage switching
R:Random switching

**Control voltage (input) range:**
D:4-32V DC control
A:90-280V AC control
E: 18-36VAC/DC control

**Maxim load current:**
10：10A
15：15A
25：25A
40：40A
60：60A
80：80A

**Rated load voltage:**
38：380VAC
48：480VAC

**Load type:**
A: AC

**1: Single phase**

**Series**

## Current level selection

Considering the load surge current and the overload capacity of the relay, so that the relay can work with long life and high reliability, it is recommended to select the current amplification factor corresponding to the load type in the following table.

| Load type | Resistance | Electric heating wire | Incandescent lamp | Transformer /Electromagnet |
|---|---|---|---|---|
| Power factor | 1.0 | 0.7 | 0.5 | 0.4 |
| Magnification | 1.5 | 2 | 2.5 | 4 |

| Load type | Single phase motor | Three phase motor | Capacitor |
|---|---|---|---|
| Power factor | 0.2 | 0.3 | surge |
| Magnification | 7 | 6 | 10 |

## Voltage option

| Load type | 240V resistive or inductive load | 380V resistive load | 380V inducutive load | Capacitor load |
|---|---|---|---|---|
| Voltage | 380V | | 480V | |

# RSD-1A Series

AC Solid state relay

## Product performance

Input parameter ( Ta=25℃ )

| Part No. | RSD-1AxxxxD | RSD-1AxxxxDR | RSD-1AxxxxA | RSD-1AxxxxAR |
|---|---|---|---|---|
| Control voltage range | 4~32VDC | | 90~280VAC | |
| Must ON voltage | 4VDC | | 90VAC | |
| Must OFF voltage | 1VDC | | 10VAC | |
| Control current range | 6~25mA | | 6~20mA | |
| Maximum opening time | 1/2cycle | 1ms | 20ms | |
| Maximum closing time | 1/2cycle | 10ms | 30ms | |

| Part No. | RSD-1AxxxxE | RSD-1AxxxxER |
|---|---|---|
| Control voltage range | 18-36VAC/DC | |
| Must ON voltage | 18VAC/DC | |
| Must OFF voltage | 4VAC/DC | |
| Control current range | 6-20mA | |
| Maximum opening time | 20ms | |
| Maximum closing time | 30ms | |

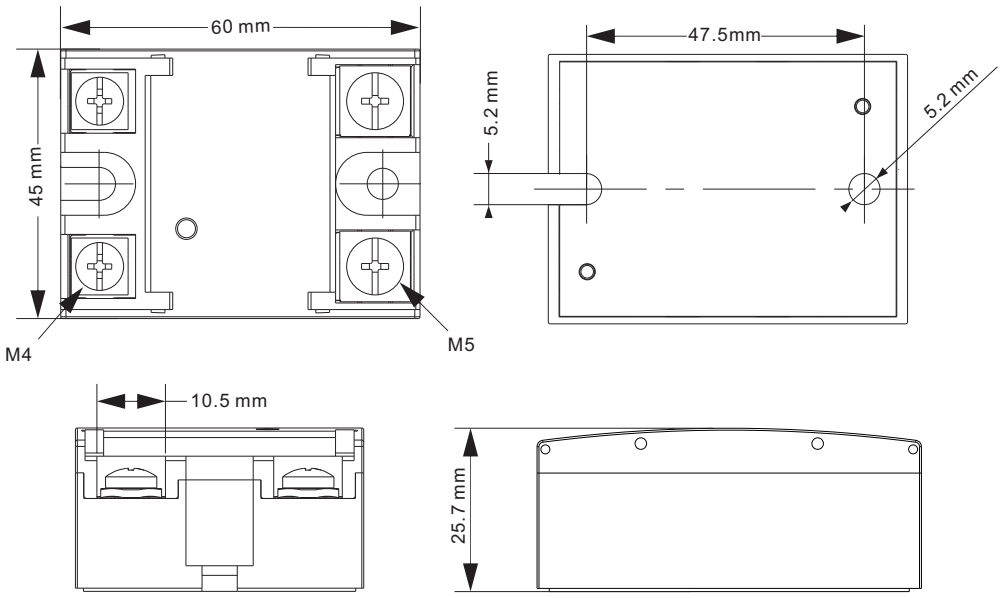
| Input parameter ( Ta=25℃ ) | | | | | | |
|---|---|---|---|---|---|---|
| Part No. | RSD-1A38xxxx | | | RSD-1A48xxxx | | |
| Rated load voltage (47-63Hz) | 380VAC | | | 480VAC | | |
| Load voltage range | 24-440VAC | | | 40-530VAC | | |
| Transient Overvoltage | 800Vpk | | | 1200Vpk | | |
| Critical rise rate of open-state voltage dv/dt | 500V/μs | | | | | |
| Minimum load current | 150mA | | | | | |
| Maximum open-state leakage current (at rated voltage) | 10mA | | | | | |
| Maximum conduction voltage drop (at rated current) | 1.5V | | | | | |
| Maximum load current | 10A | 15A | 25A | 40A | 60A | 80A |
| Maximum surge current [@ 10ms] | 120A | 160A | 250A | 500A | 700A | 1000A |
| Maximum $I^2T$ value [@ 10ms] | $80A^2s$ | $112A^2s$ | $312A^2s$ | $800A^2s$ | $1800A^2s$ | $5000A^2s$ |

| Other parameters (Ta=25 ℃) | | |
|---|---|---|
| Dielectric withstand voltage (50/60Hz) | Input/Output | 4000Vrms |
| | Input,output/base | 2500Vrms |
| Insulation resistance(@500VDC) | 1000MΩ | |
| Operating temperature range | -30℃~+80℃ | |
| Storage temperature range | -40℃~+100℃ | |
| Operating ambient humidity range | 5 ~ 85%RH (No condensation) | |
| Cooling mode | fan forced cooling is added for more than 60A | |
| Weight Approx | 100g | |

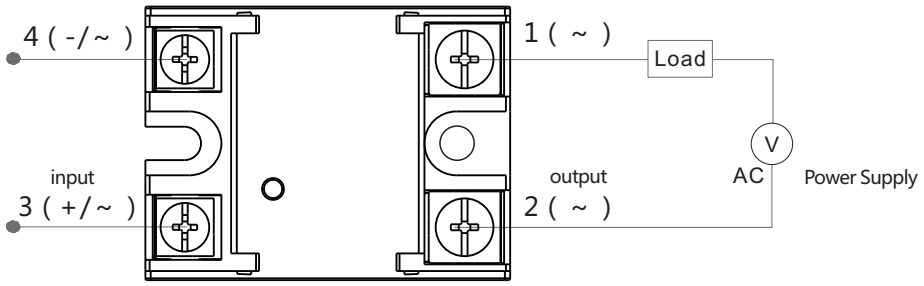
# RSD-1A Series

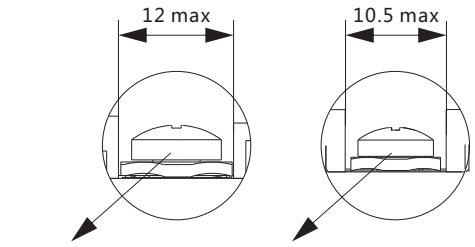
AC Solid state relay

## Dimensions (mm)




## Wiring Diagrams




To use cold rolled copper lugs

Output screw torque:(1.5-1.8)N·m

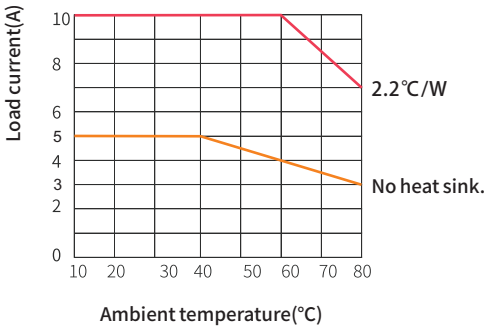
Input screw torque: (1.2-1.4)N·m

# RSD-1A Series

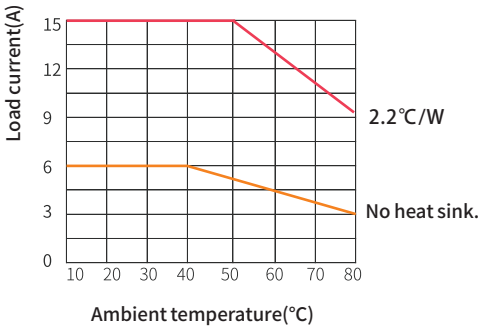
AC Solid state relay

## Performance curve

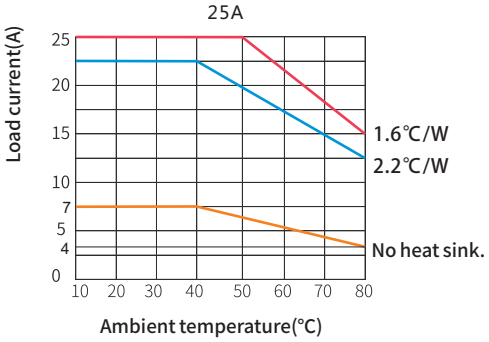
10A



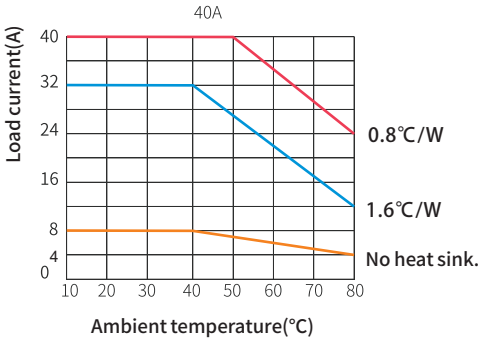

15A



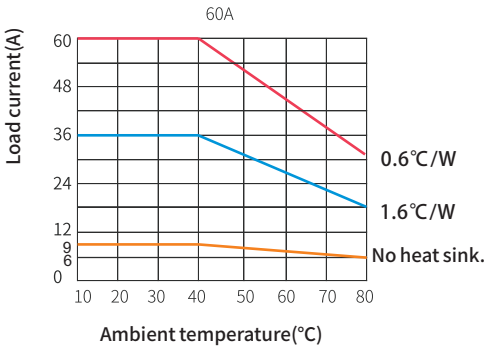

25A



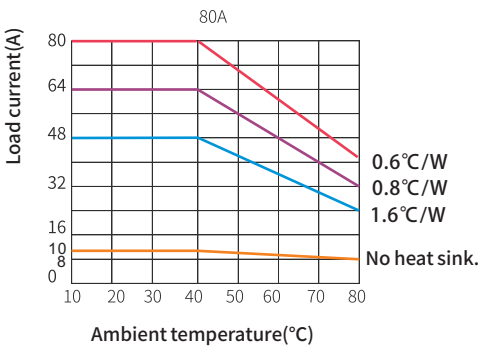

40A




60A




80A



# RSD-1A Series

AC Solid state relay

## Matters needing attention

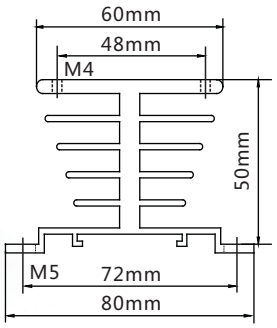
1. Please be sure to set fast fuse, air switch and other protective equipment on the power supply side to prevent short circuit. The principle of selecting the current level of the breaker is slightly greater than the load current. Resistive load and inductive load should be protected by fast fuse, and motor, power compensation capacitor and other loads should be protected by air switch.
2. When the solid-state relay (hereinafter referred to as SSR) works below - 20 ℃, the minimum control voltage needs to be increased by 1V.
3. Selection of SSR: For AC load and most AC inductive load, zero-crossing SSR shall be selected; For 380V inductive load and capacitive load, it is recommended to use 480V zero-crossing trigger SSR; It is used as phase output control or optional when the frequency is high.
4. Overvoltage protection selection: built-in RC absorption circuit (standard configuration); Built-in transient voltage suppression diode TVS.
5. Installation between SSR and radiator: select the matching radiator (thermal resistance shall be as small as possible), and evenly coat the SSR base plate with thermal conductive silicone grease orPlace the silicone pad, use M5 screws and spring washers, and tighten them with 2N. m torque. After 3 hours of use, tighten them with the same torqueTimes. To ensure that the SSR base plate is in close contact with the radiator and installed firmly.
6. The product wiring should use standard wire, the sectional area can be selected according to 5-8A per square millimeter, and the terminal should ensure that the wiring is firm and looseIt will cause abnormal heating of the product and damage the product. In case of high temperature and high humidity environment, conductive paste should also be applied to the connection part.
7. Input terminal adopts M4 screw, wiring tightening torque is (1.2-1.4) N.m, output terminal adopts M5 screw, wiring tightening torqueIs (1.5-1.8) N.m
8. Please do not connect the current above the rated specification. Otherwise, abnormal heat of SSR may be caused.
9. Do not apply voltage exceeding the rated value on the input circuit and output circuit, otherwise it will cause SSR failure or burning.
10. Requirements for installation conditions: it should be installed vertically on the case with good ventilation conditions, and make full use of the heat dissipation conditions of air convection. When two or more SSRs are installed side by side, there should be an appropriate large gap.
11. The SSR needs to install a radiator. Refer to the product derating curve.Fan forced cooling is added for more than 60A, air cooling should also be used. In order to prevent the SSR from overheating and damage, a temperature control switch of 80 ℃ can be installed on the radiator in series in the control circuit for protection.

12. Warning! During installation, maintenance and other operations, be sure to cut off the power supply before installation or maintenance. In case of electric shock!

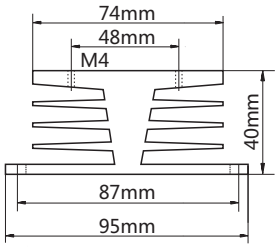
# KSR-1 Series

Single phase heat sink

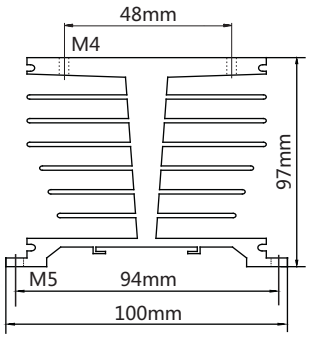
- Selection of heat sink: select the heat sink corresponding to thermal resistance according to "Performance curve" of solid-state relay . The smaller the thermal resistance value, the better the heat dissipation effect. >>>>>




| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-1A-50 | 50×80×50 | 70g | 2.2℃/W |

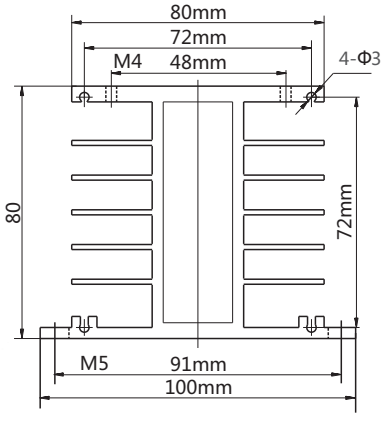



| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-1E-50 | 50×95×40 | 225g | 1.8℃/W |




| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-1T-50 | 50×100×97 | 324g | 1.6℃/W |
| KSR-1TF-76 | 76×100×97 | 580g | 0.6℃/W |

Note: the length of KSR-1TF-76 with fan is 76mm



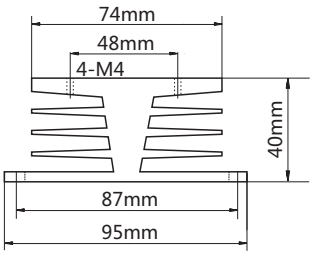

| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-1H-50 | 50×100×80 | 220g | 1.8℃/W |
| KSR-1HF-76 | 76×100×80 | 480g | 0.8℃/W |

Note: the length of KSR-1TF-76 with fan is 76mm

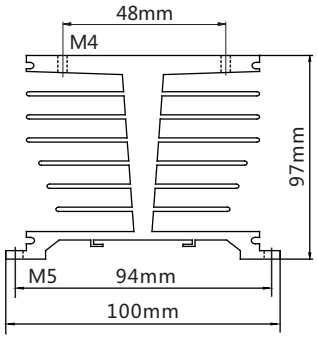
# KSR-3 Series

Three phase heat sink

- Installation: Evenly coat the bottom plate of the solid-state relay with thermal grease or place a silicone pad, then install and tighten the screws.

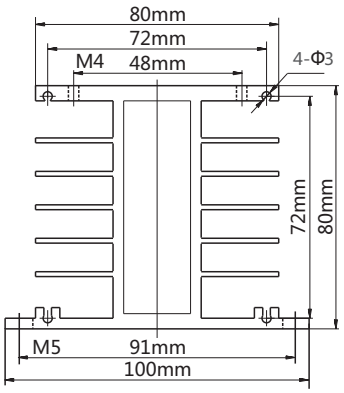



| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-3E-105 | 105×95×40 | 460g | 1.1℃/W |



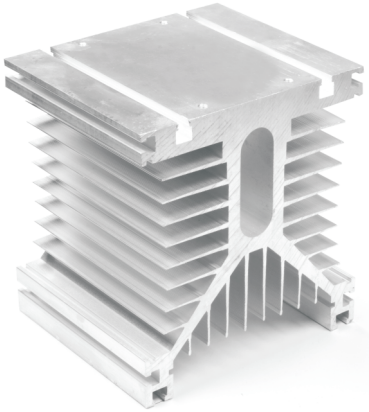

| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-3T-110 | 110×100×97 | 750g | 0.8℃/W |
| KSR-3TF-136 | 136×100×97 | 1100g | 0.35℃/W |

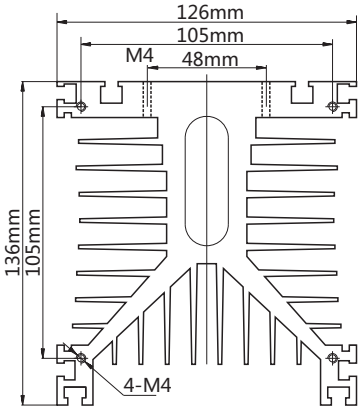
Note: the length of KSR-3TF-136 with fan is 136mm.




| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-3H-110 | 110×100×80 | 460g | 1℃/W |
| KSR-3H-150 | 150×100×80 | 630g | 0.8℃/W |
| KSR-3HF-136 | 136×100×80 | 670g | 0.5℃/W |
| KSR-3HF-176 | 176×100×80 | 840g | 0.4℃/W |

Note: the length of KSR-3HF-136 with fan is 136mm.
Note: the length of KSR-3HF-176 with fan is 176mm



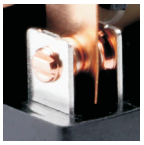



| Part No. | L x W x H | Weight≈ | Thermal resistance |
|---|---|---|---|
| KSR-3Y-110 | 110×126×136 | 1400g | 0.5℃/W |
| KSR-3Y-150 | 150×126×136 | 1900g | 0.4℃/W |

The length of fan is 38mm.

# TKB
Timer Relay

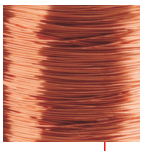
- Built-in dedicated IC program control mini time relay
- Reset time include mindway reset time under 100ms
- Use ⊖ screwdriver to set time
- Meet IEC60947-5-1: 2016 (GB/T14048.5-2017)



**Silver alloy contacts**
It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

**Time dial**
**Various delay time is optional.**

**Top copper coil material**
Standard turns and electromagnetic coils make the pick-up more reliable and enduring, which can reach more than 20 million cycles.



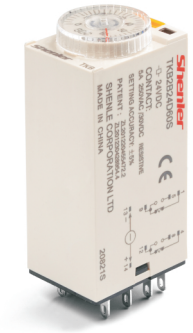

**Metal clip**
The relay is firmly attached to the socket by Metal clip.

**Silver alloy pins**
High-quality silver alloy pins, strong contact, instantaneous conductivity and stable performance.

CE

# TKB

Timer Relay

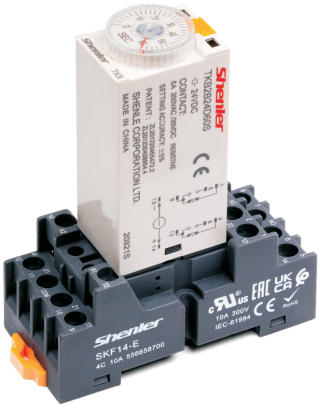


Relay

+

Socket

=



Relay module

**TKB 2 B 230A 5S**

**Rated time**
1s: 0.1s-1s
5s: 0.2s-5s
10s: 0.5s-10s
30s: 1s-30s
60s: 2.0s-60s
3min: 0.1min-3min
5min: 0.2min-5min
10min: 0.5min-10min
30min: 1min-30min

**Supply voltage**
120A: 120VAC
230A: 230VAC
24D: 24VDC

**Function**
**B: On-delay**
**E: Interval time-delay opeartion**
**F: Repeat-cycle off time delay**

**Terminal Type**
2: 2CO
4: 4CO

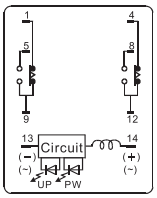
**Series name**

## Characteristics

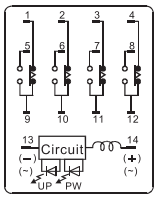
| Configuration | | TKB2B | TKB2E | TKB4B | TKB4E |
|---|---|---|---|---|---|
| Rated supply voltage | | 120VAC, 230VAC 50/60Hz; DC24V | | | |
| Operating voltage range | | Rated voltage 85-110% (90%-110% is DC12V) | | | |
| Power consumption | | 3.5W | | | |
| Max.output load | | 5A, 250 VAC (p.f.=1) | | 3A, 250 VAC (p.f.=1) | |
| Min. output load | | 10 mA, 17 VDC | | | |
| Repetitive error | | ±2% (FS max.) | | | |
| Setting error | | ±5% (FS max.) | | | |
| Voltage error | | ±2% (FS max.) | | | |
| Temperature error | | ±2% (FS max.) | | | |
| Resetting time | | Min.time: 0.2 sec | | | |
| Insulation resistance | | 100MΩ(DC500V) | | | |
| Dielectric strength | | Between current-carrying and Non-current-carrying parts 2000V 50/60Hz min | | | |
| | | Between control output terminals and operating circuit1500V 50/60Hz min | | | |
| | | Between contacts 1000V 50/60Hz min | | | |
| Vibration resistance | Destruction | 10~55Hz with 0.75mm single amplitude each in 3directions for 2 hours each | | | |
| | Malfunction | 10~55Hz with 0.5mm single amplitude each in 3 directions for 10 minutes each | | | |
| Shock resistance | Destruction | 30G | | | |
| | Malfunction | 10G | | | |
| Storage temperature | | -55~+85℃/ 5%~68%RH (18 months) | | | |
| Ambient temperature | | -10℃~55℃ | | | |
| Ambient humidity | | 35~85%RH (No condensation) | | | |
| Life expectancy | Mechanical | $>10^7$ (under no load, at 1,800 operations/hour) | | | |
| | Electrical | $>10^5$ | | | |
| Weight | | approx. 60g | | | |

# TKB
Timer Relay

## wiring diagram



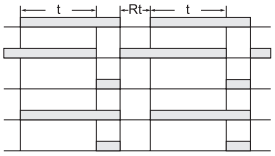

TKB2B TKB2E




TKB4B TKB4E

## Timing charts

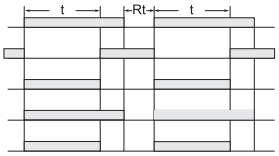
Power13-14
Time-limit contact (NC)9-1、12-4
Time-limit contact (NO)9-5、12-8
Power indicator
Output indicator




TKB2B

NOTE: t :set time, Rt: reset time

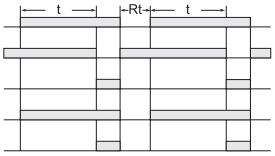
Power13-14
Time-limit contact (NC)9-1、12-4
Time-limit contact (NO)9-5、12-8
Power indicator
Output indicator




TKB2E

NOTE: t :set time, Rt: reset time

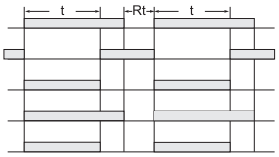
Power13-14
Time-limit contact (NC)9-1、10-2、
11-3、12-4
Time-limit contact (NO)9-5、10-6、
11-7、12-8
Power indicator
Output indicator




TKB4B

NOTE: t :set time, Rt: reset time

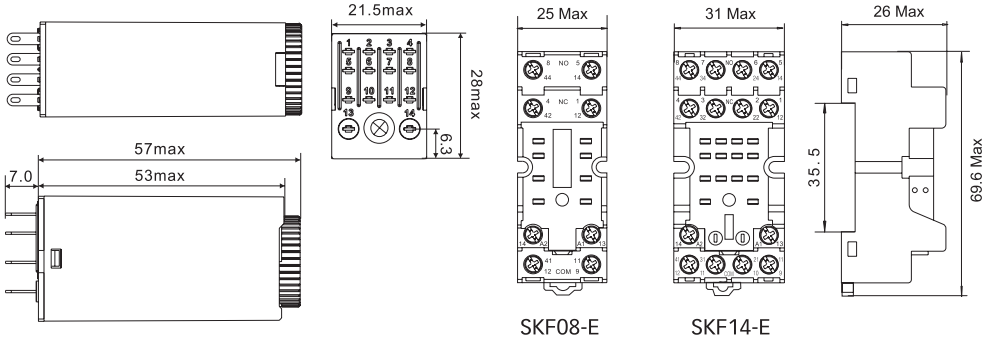
Power13-14
Time-limit contact (NC)9-1、10-2、
11-3、12-4
Time-limit contact (NO)9-5、10-6、
11-7、12-8
Power indicator
Output indicator




TKB4E

NOTE: t :set time, Rt: reset time

## Dimensions(mm)



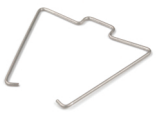
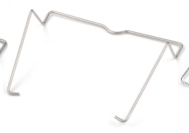
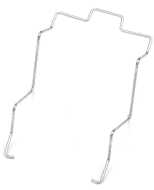

SKF08-E SKF14-E

# Accessory Series

| SR15L | SR20T | SR20F | SR25C | SK28L | SK36F |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| SRC/SRB | SRU | SRC/SRB | SRC/SRB | SKB/SKC | SKB/SKC |

| SN20S | SR2P | SK2P | SU3P | SK4P | SN64P |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| SNC05-E/S | SRC/SRB/SRU | SKF | SUB | SKC/SKB | SNC05-E/S<br>SNB05-E/ST |

| ST01CC | SN20A | SN20B | SR08B | SR08C | PFP | SY36S | SR15M |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
| SKC08/14-ST<br>SRU05/08-ST<br>SRC05/08-ST | SNB-E<br>SNB-ST | SNC05-E/S | SRU05/08-E,<br>SRC05/08-E | SRT05/08-E/-A/-ES | DIN | SYF | SRC05/08-P |

| SR2025M | SR27M | SR32M | SK36M | ST36M3C | ST36M4C | SE52M | SU60M |
|---|---|---|---|---|---|---|---|
|  |  |  |  |  |  |  |  |
| SRC05/08-P | SRU-E/SRU-ST | SRU-E/SRU-ST | SKC/SKB/SKF<br>STB08-E | STB11-E | STB14-E | SEB11-E/P/PS | SUB-E |

# AMD Module

Socket accessories


AMD – □ □ □ □

**Voltage**
VAC:AC voltage
VDC:DC voltage
V:AC and DC voltage general

**LED**
N： red
blank： green

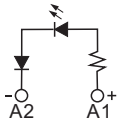
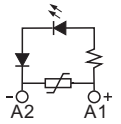
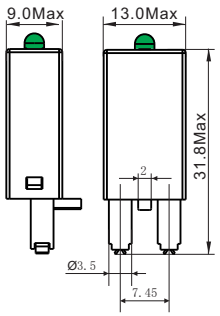
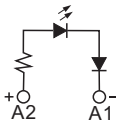
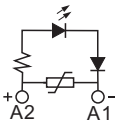
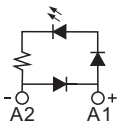
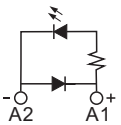
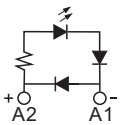
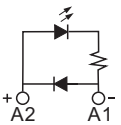
**Polarity**
blank : A1 - , A2 +
1: A1 + , A2 -

**Description**
L: LED　　LD: LED+D
LDD:LED+D+D　　ML: LED+varistor+D
M: Varistor　　D: diode　　RC: RC

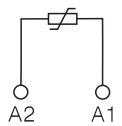
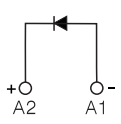
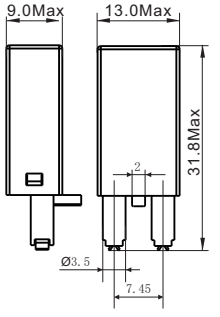
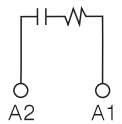
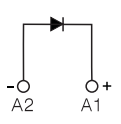
**Series**

- For surge suppressor
- With LED
- Work with relay socket

## Parameters, Wiring diagrams and Dimensions (mm)

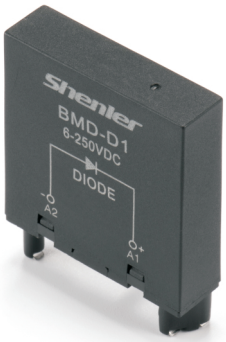
| Part No. | Wiring Diagram | Voltage | Function | Part No. | Wiring Diagram | Voltage | Function | Dimensions (mm) |
|---|---|---|---|---|---|---|---|---|
| AMD-L1<br>AMD-L1N |  | 6-24V<br>24-60V<br>110-240V | >LED indicator in AC/DC circuit (Polarity A2 - , A1 + | AMD-ML1<br>AMD-ML1N |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit<br>>LED indicator in AC/DC circuit<br>(Polarity A2 - , A1 +) |  |
| AMD-L<br>AMD-LN |  | 6-24V<br>24-60V<br>110-240V | >LED indicator in AC/DC circuit (Polarity A2 +, A1 -) | AMD-ML<br>AMD-MLN |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit<br>>LED indicator in AC/DC circuit<br>(Polarity A2 +, A1 -) | |
| AMD-LDD1<br>AMD-LDD1N |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>>LED reverse voltage protection in DC circuit<br>(Polarity A2 - , A1 +) | AMD-L1D<br>AMD-LD1N |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>(Polarity A2 - , A1 +) | |
| AMD-LDD<br>AMD-LDDN |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>>LED reverse voltage protection in DC circuit<br>(Polarity A2 +, A1 -) | AMD-LD<br>AMD-LDN |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>(Polarity A2 +, A1 -) | |



| Part No. | Wiring Diagram | Voltage | Function | Part No. | Wiring Diagram | Voltage | Function | Dimensions (mm) |
|---|---|---|---|---|---|---|---|---|
| AMD-M |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit | AMD-D |  | 6-250VDC | >Limit peak voltage in DC circuit<br>(Polarity A2 - , A1 +) |  |
| AMD-RC |  | 6-24VAC<br>24-60VAC<br>110-240VAC | > RC absorption in AC circuit | AMD-D1 |  | 6-250VDC | >Limit peak voltage in DC circuit<br>(Polarity A2 +, A1 -) | |

# BMD Module

Socket accessories




BMD – □ □ □ □

**Voltage**
VAC:AC voltage
VDC:DC voltage
V:AC and DC voltage general

**LED**
N： red
blank： green

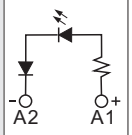
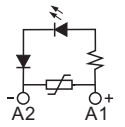
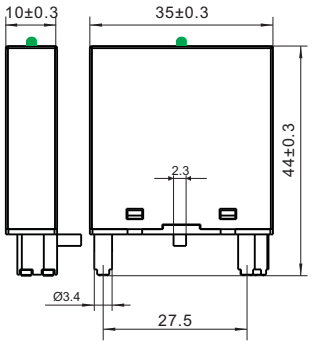
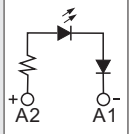
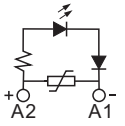
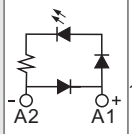
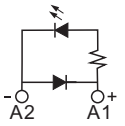
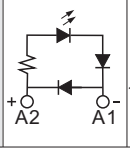
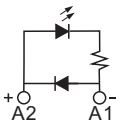
**Polarity**
blank : A1 - , A2 +
1: A1 + , A2 -

**Description**
L: LED
LD: LED+D
LDD:LED+D+D
ML: LED+varistor+D
M: Varistor
D: diode
RC: RC

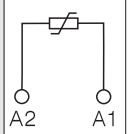
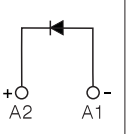
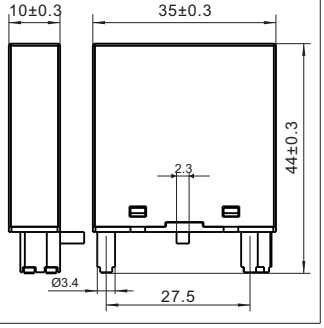
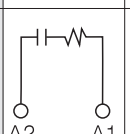
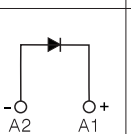
**Series**

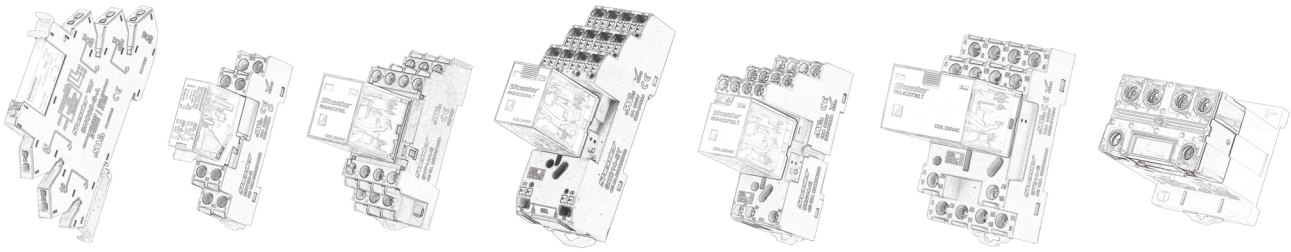
- For surge suppressor
- With LED
- Work with relay socket

## Parameters, Wiring diagrams and Dimensions (mm)

| Part No. | Wiring Diagram | Voltage | Function | Part No. | Wiring Diagram | Voltage | Function | Dimensions (mm) |
|---|---|---|---|---|---|---|---|---|
| BMD-L1<br>BMD-L1N |  | 6-24V<br>24-60V<br>110-240V | >LED indicator in AC/DC circuit (Polarity A2 - , A1 + | BMD-ML1<br>BMD-ML1N |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit<br>>LED indicator in AC/DC circuit (Polarity A2 - , A1 +) |  |
| BMD-L<br>BMD-LN |  | 6-24V<br>24-60V<br>110-240V | >LED indicator in AC/DC circuit (Polarity A2 + , A1 - ) | BMD-ML<br>BMD-MLN |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit<br>>LED indicator in AC/DC circuit (Polarity A2 + , A1 - ) | |
| BMD-LDD1<br>BMD-LDD1N |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>>LED reverse voltage protection in DC circuit (Polarity A2 - , A1 +) | BMD-L1D<br>BMD-LD1N |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit (Polarity A2 - , A1 +) | |
| BMD-LDD<br>BMD-LDDN |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit<br>>LED reverse voltage protection in DC circuit (Polarity A2 + , A1 - ) | BMD-LD<br>BMD-LDN |  | 6-24VDC<br>24-60VDC<br>110-240VDC | >Limit peak voltage in DC circuit<br>>LED indicator in DC circuit (Polarity A2 + , A1 - ) | |



| Part No. | Wiring Diagram | Voltage | Function | Part No. | Wiring Diagram | Voltage | Function | Dimensions (mm) |
|---|---|---|---|---|---|---|---|---|
| BMD-M |  | 24V<br>60V<br>120V<br>240V | >Overvoltage protection in AC/DC circuit | AMD-D |  | 6-250VDC | >Limit peak voltage in DC circuit (Polarity A2 - , A1 +) |  |
| BMD-RC |  | 6-24VAC<br>24-60VAC<br>110-240VAC | > RC absorption in AC circuit | AMD-D1 |  | 6-250VDC | >Limit peak voltage in DC circuit (Polarity A2 + , A1 - ) | |




SHENLE CORPORATION LTD.

Address: No.666 East Jiaotong Rd., Wu'niu St., Yongjia, Wenzhou,
Zhejiang, China
Post code: 325103
Tel: + 86-577-62994088/57150677/57150678/57150666
E-mail: sales@shenler.com
Website: www.shenler.com