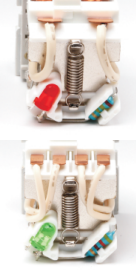


# Selection manual of industrial control relay

## 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

**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.

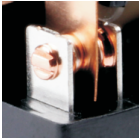
**ID tag**



Silver alloy pins


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

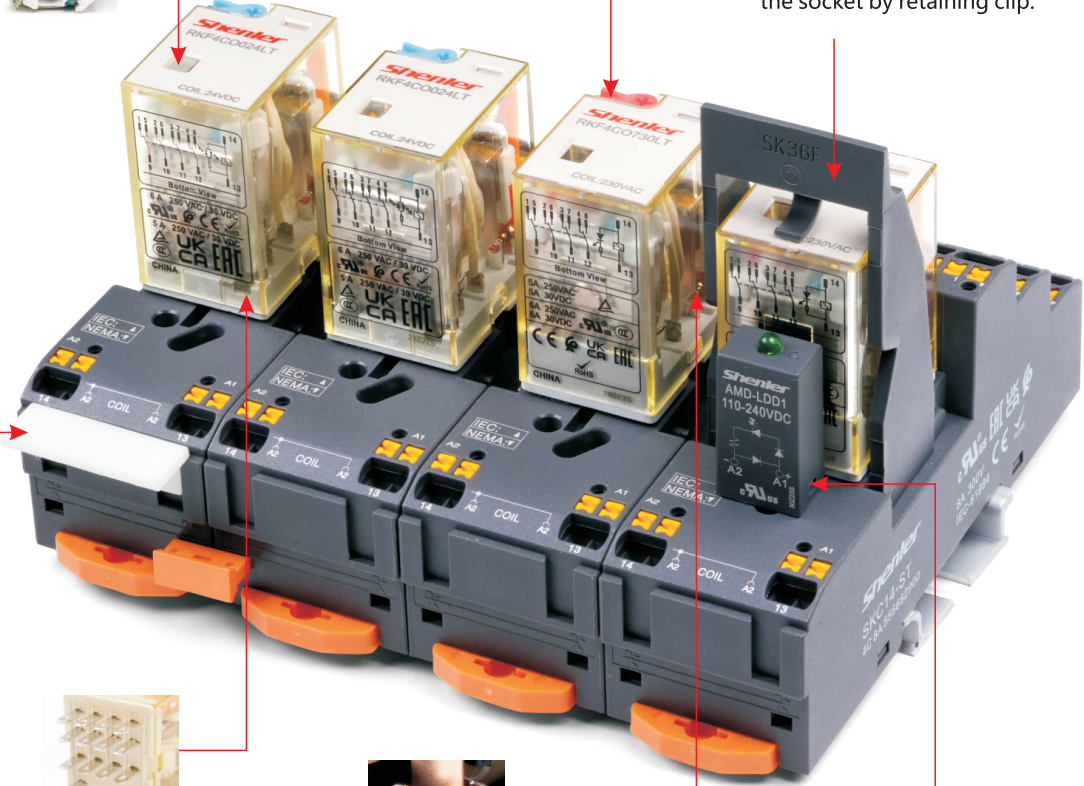
**Silver alloy contacts**

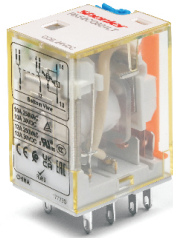


It can carry more current, with stronger conductivity and more sensitive response, and greatly extend electrical life, and works more stable.

**AMD module**





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**

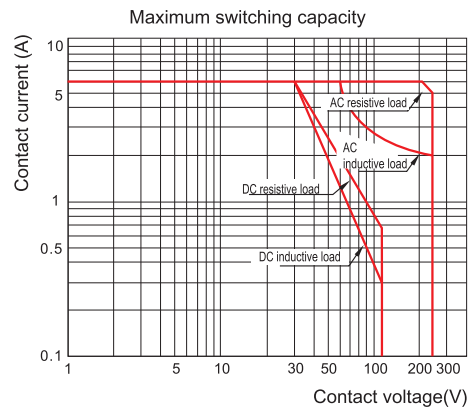
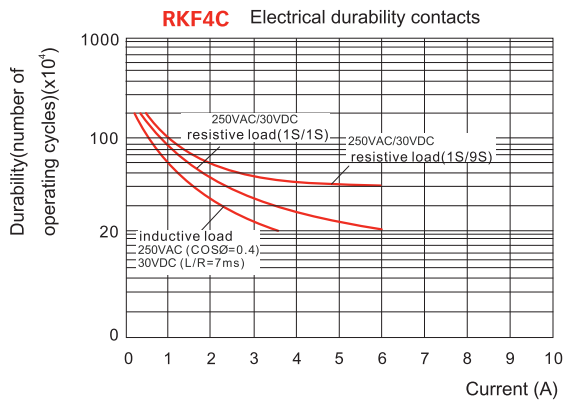
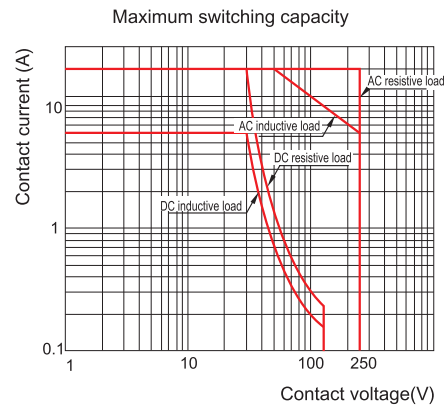
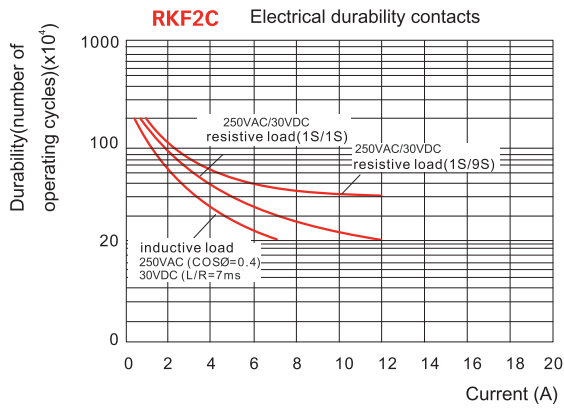
| Configuration                                  |   | 2C   | 4C               |
|--|---|--|------------------|
| Load   | Resistance                                      | 12A/250VAC, 30VDC                            | 6A/250VAC, 30VDC |
|  | Motor load                                      | 1/3HP, 240VAC                                | 1/6HP, 240VAC    |
| Max. switching capacity (resistive)            |   | 3000VA, 360W                                 | 1500VA, 180W     |
| Contact  | Min. switching capacity                         | 170mW(17V/10mA); LTA: 500mW(5V/10mA)         |                  |
|  | Initial contact resistance                      | ≤50mΩ  |                  |
|  | Material  | Ag alloy                                     |                  |
|  | Electrical durability (110%rated voltage, 55°C) | ≥20 x 10 <sup>4</sup> Cycles (1800 Ops/h)    |                  |
|  | Electrical durability (Normal temperature)      | ≥40 x 10 <sup>4</sup> Cycles (360 Ops/h)     |                  |
|  | Mechanical durability                           | ≥2000 x 10 <sup>4</sup> Cycles (18000 Ops/h) |                  |
|  | Pick-up voltage (23°C) (Rated voltage)          | DC:≤75%, AC:≤80% 50/60Hz                     |                  |
| Drop-out voltage (23°C) (Rated voltage)        |   | DC:≥10%, AC:≥30% 50/60Hz                     |                  |
| Maximum voltage (23°C) (Rated voltage)         |   | 110%   |                  |
| Insulation resistance                          |   | ≥1000MΩ (500VDC)                             |                  |
| Coil operating power                           | DC(W)   | approx. 0.9                                  |                  |
|  | AC(VA)  | approx. 1.2(60Hz)                            |                  |
| 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                     | Rated voltage                                   | 250VAC                                       |                  |
|  | Pollution level                                 | 3  | 2                |
|  | Overvoltage level                               | III  | II               |
| IEC 60664 UL840                                |   |  |                  |
| Impulse withstand voltage (waveform: 1.2/50μs) |   | 4000V(Altitude 2000m)                        |                  |
| Protection level                               |   | IP20   |                  |
| Storage temperature/ humidity                  |   | -55~+85°C/ ≤85%RH (18 months)                |                  |
| Working temperature/ humidity                  |   | -55~+70°C/ 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)**

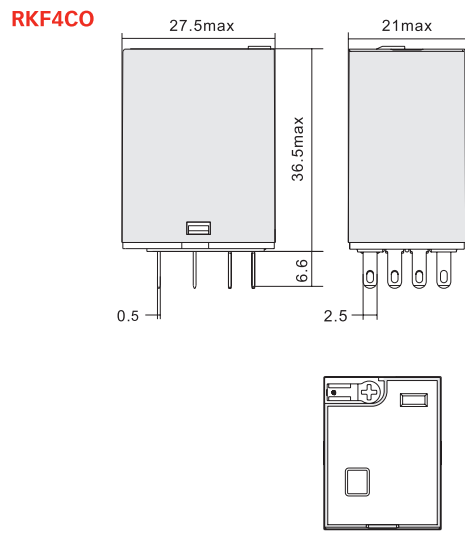
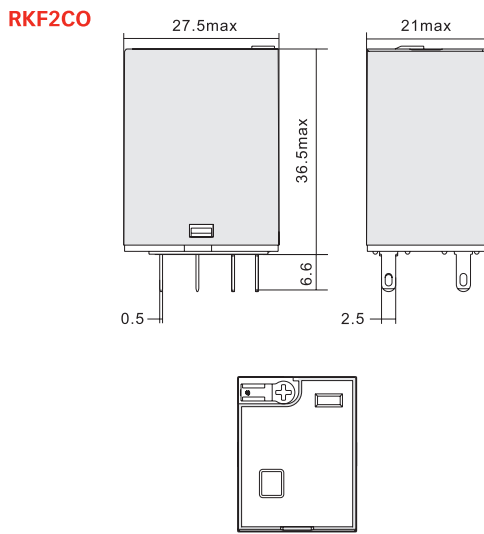
|                          |      |     |     |      |       |       |       |
|--------------------------|------|-----|-----|------|-------|-------|-------|
| Nominal voltage V.DC     | 6    | 12  | 24  | 48   | 110   | 220   |       |
| Coil resistance $\Omega$ | 40   | 180 | 640 | 2600 | 13000 | 42000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

Coil resistance: under coil voltage 110V are measured with tolerance of  $\pm 10\% \Omega$ , above 110V with tolerance of  $\pm 15\% \Omega$ .

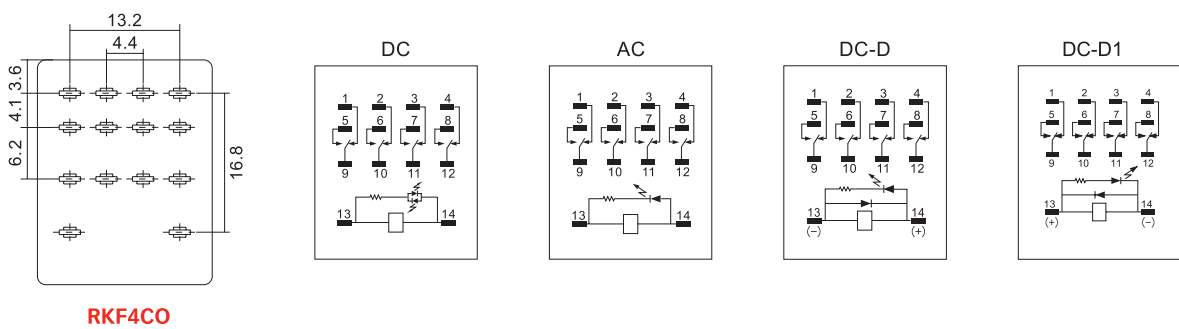
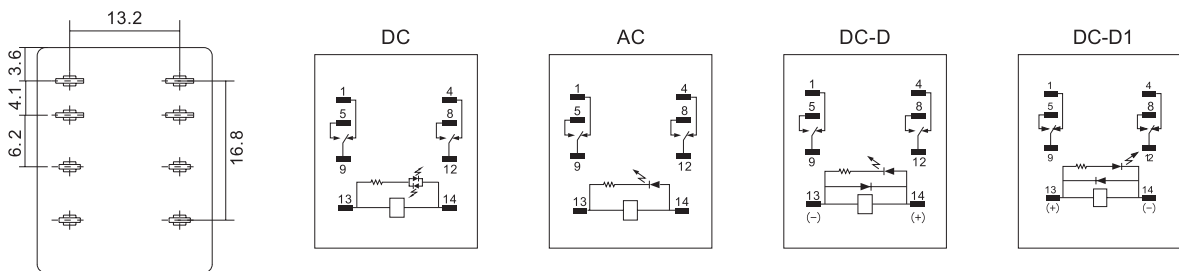
**Contact Specification**



**Dimensions (mm)**



**Wiring Diagrams**



## Characteristics



SKF08-E



SKF14-E

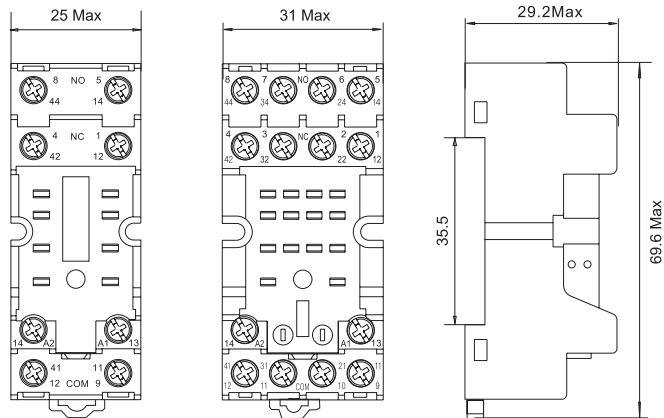


|                        |                          |               |         |
|------------------------|--------------------------|---------------|---------|
| Type                   |                          | SKF08-E       | SKF14-E |
| Nominal load           | Current                  | A             | 12      |
|                        | Voltage                  | V             | 300     |
| Dielectric strength    | Between coil and contact | V/min         | 4000    |
|                        | Between contacts         | V/min         | 2000    |
| Max. tightening torque | Nm                       | 1.0           |         |
| Wire size              | AWG/mm <sup>2</sup>      | 20-14/0.5-2.5 |         |
| Ambient temperature    | °C                       | -40~+85       |         |
| Unit weight            | g                        | 35            | 45      |

### Accessories

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

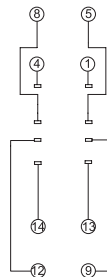
## Dimensions (mm)



SKF08-E

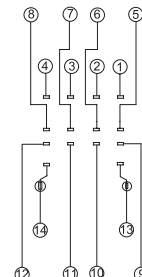
SKF14-E

## Connection Diagrams



SKF08-E

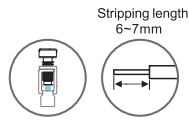
⑬ ⑭ : A1 A2  
 ① ④ : NC  
 ⑤ ⑧ : NO  
 ⑨ ⑫ : COM



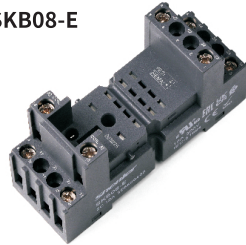
SKF14-E

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

**Characteristics**



SKB08-E



SKB14-E

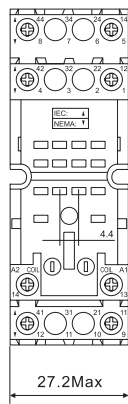


|                        |                          |               |         |
|------------------------|--------------------------|---------------|---------|
| Type                   |                          | SKB08-E       | SKB14-E |
| Nominal load           | Current                  | A             | 12      |
|                        | 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 <sup>2</sup>      | 20-14/0.5-2.5 |         |
| Ambient temperature    | °C                       | -40~+85       |         |
| Unit weight            | g                        | 50            | 56      |

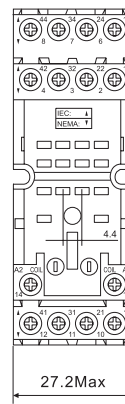
**Accessories**

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

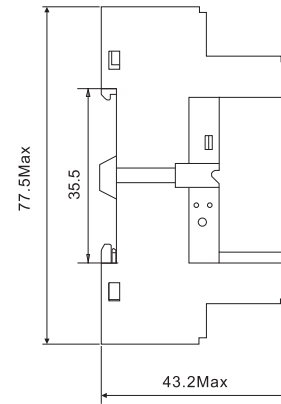
**Dimensions (mm)**



SKB08-E



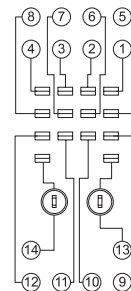
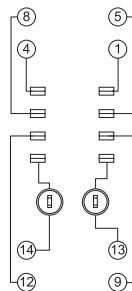
SKB14-E



**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

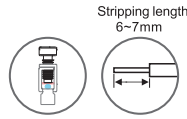
# SKC08-E & SKC11-E

# & SKC14-E

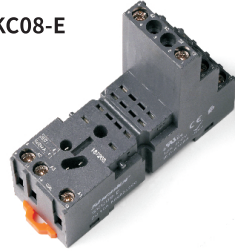
RKF Socket



## Characteristics



SKC08-E



SKC14-E

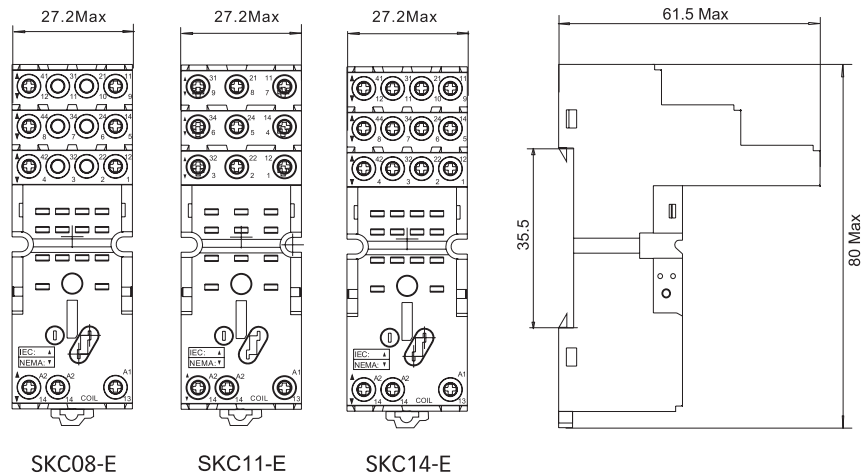


|                        |                          |               |         |         |
|------------------------|--------------------------|---------------|---------|---------|
| Type                   |                          | SKC08-E       | SKC11-E | SKC14-E |
| Nominal load           | Current                  | 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/mm <sup>2</sup>      | 20-14/0.5-2.5 |         |         |
| Ambient temperature    | °C                       | -40~+85       |         |         |
| Unit weight            | g                        | 50            | 56      | 62      |

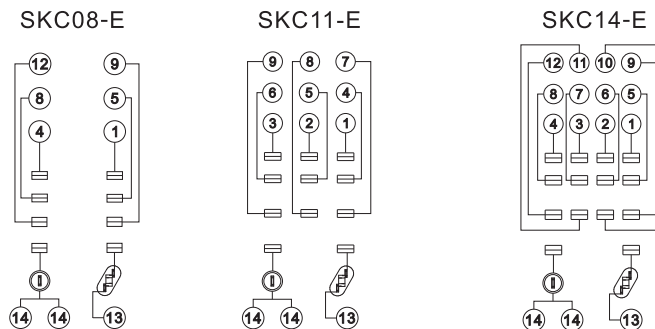
### Accessories

| Socket  | Plastic clip | Metal clip | ID tag | Module |
|---------|--------------|------------|--------|--------|
| SKC08-E |              |            |        |        |
| SKC11-E |              |            |        |        |
| SKC14-E |              |            |        |        |

## Dimensions (mm)



## Connection Diagrams



## Characteristics



SKC08-ST



SKC14-ST

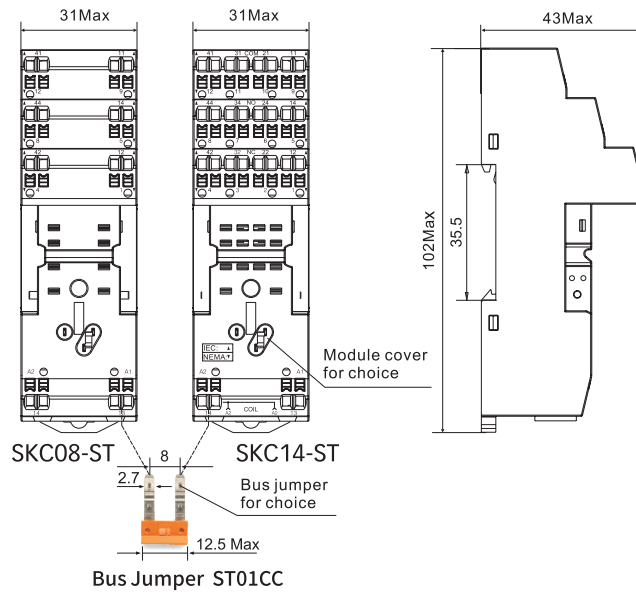


|                        |                          |               |          |
|------------------------|--------------------------|---------------|----------|
| Type                   |                          | SKC08-ST      | SKC14-ST |
| Nominal load           | Current                  | A             | 12       |
|                        | Voltage                  | V             | 300      |
| Dielectric strength    | Between coil and contact | V/min         | 4000     |
|                        | Between contacts         | V/min         | 2500     |
| Max. tightening torque | Nm                       | -             |          |
| Wire size              | AWG/mm <sup>2</sup>      | 20-16/0.5-1.5 |          |
| Ambient temperature    | °C                       | -40~+85       |          |
| Unit weight            | g                        | 80            | 80       |

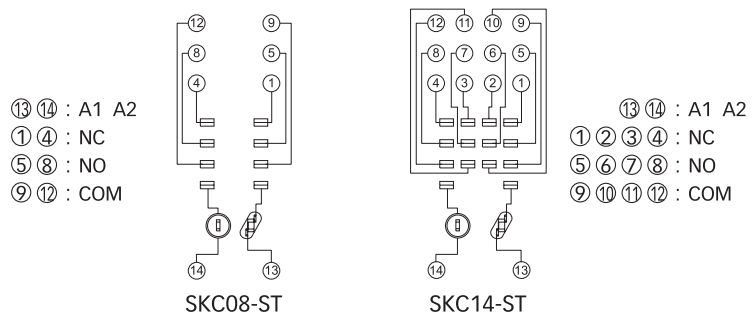
### Accessories

| Socket   | Plastic clip | Metal clip | ID tag | Module | Bus Jumper |
|----------|--------------|------------|--------|--------|------------|
| SKC08-ST |              |            |        |        |            |
| SKC14-ST | SK36F        | SK36M      | SK4P   | AMD    | ST01CC     |

## Dimensions (mm)



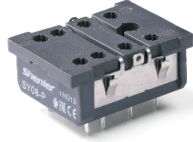
## Connection Diagrams



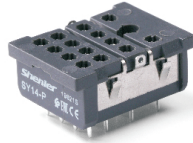


**Characteristics**

**SY08-P**

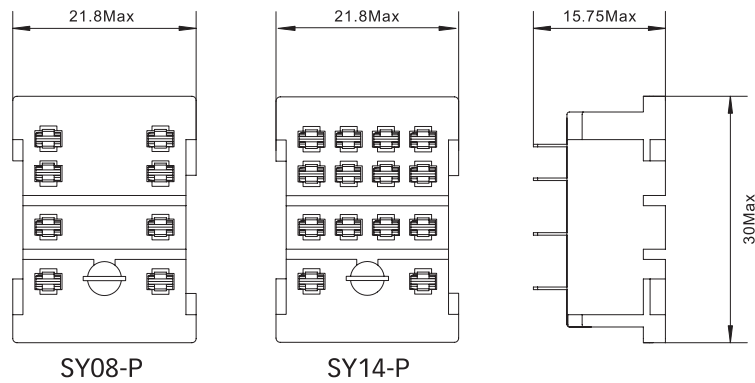


**SY14-P**

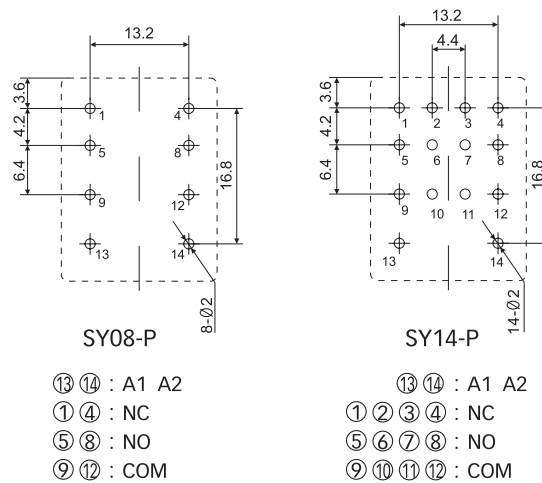


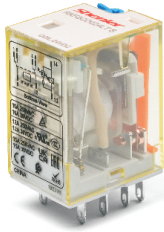
| Type                |                     | SY08-P        | SY14-P |
|---------------------|---------------------|---------------|--------|
| Nominal load        | Current             | A             | 10     |
|                     | Voltage             | V             | 300    |
| Dielectric strength | V/min               | 2000          |        |
| Wire size           | AWG/mm <sup>2</sup> | 20-14/0.5-2.5 |        |
| Ambient temperature | °C                  | -40~+85       |        |
| Unit weight         | g                   | 7             | 7      |
| Accessories         |                     |               |        |
| Socket              | Metal clip          |               |        |
| SY08-P              | <p>SY36M</p>        |               |        |
| SY14-P              |                     |               |        |

**Dimensions (mm)**



**Connection Diagrams**





Relay

+

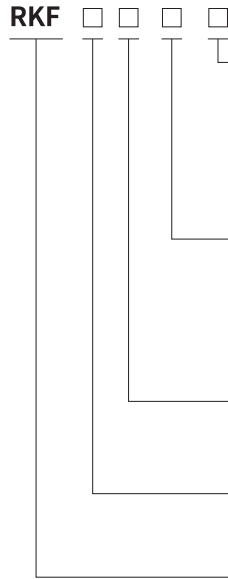


Socket

=



Relay module



**Other options**

- LT S: LED + test button+magnet
- LTD S: LED + test button +diode (13 - , 14 +) +magnet
- LTD1 S: LED + test button + diode (13 + , 14 - ) +magnet
- LT SM: LED+test button+magnet, 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

**Series name**

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

**Characteristics**

|   |                                    |  |
|---|------------------------------------|--|
| Configuration                                   | 2C                                 |  |
| Load  | Resistance                         | 15A/250VAC 30VDC (NO:15A, NC:7.5A); 10A 60VDC  |
|   | Motor load                         | 1/3HP, 240VAC  |
| Contact   | Max.Switching capacity (resistive) | 3750VA, 600W   |
|   | Max.Switching capacity (inductive) | 2500VA, 90W  |
|   | Min. switching capacity            | 170mW(17V/10mA)  |
|   | Initial contact resistance         | ≤50mΩ  |
|   | Material                           | Ag alloy   |
| Electrical durability (110%rated voltage, 55°C) |                                    | ≥10 x 10 <sup>4</sup> Cycles (NO:15A, NC:7.5A); ≥20 x 10 <sup>4</sup> Cycles (NO/NC:12A) |
|   | Mechanical durability              | ≥2000 x 10 <sup>4</sup> Cycles (18000 Ops/h)   |
| Pick-up voltage (23°C) (Rated voltage)          | DC:≤75%, AC:≤80% 50/60Hz           |  |
| Drop-out voltage (23°C) (Rated voltage)         | DC:≥10%, AC:≥30% 50/60Hz           |  |
| Maximum voltage (23°C) (Rated voltage)          | 110%                               |  |
| Insulation resistance                           | ≥1000MΩ (500VDC)                   |  |
| Coil operating power                            | DC(W)                              | approx. 0.9  |
|   | AC(VA)                             | approx. 1.2(60Hz)  |
| 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                      | Rated voltage                      | 250VAC   |
|   | Pollution level                    | 3  |
|   | IEC 60664 UL840 Overvoltage level  | III  |
| Protection level                                | IP20                               |  |
| Storage temperature/ humidity                   | -25~+85°C/ ≤85%RH (18 months)      |  |

|                               |                                       |
|-------------------------------|---------------------------------------|
| Working temperature/ humidity | -55~+70°C/ 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                           |

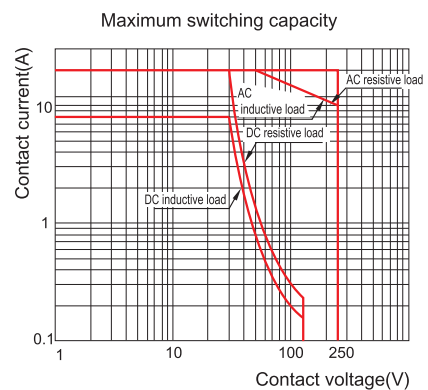
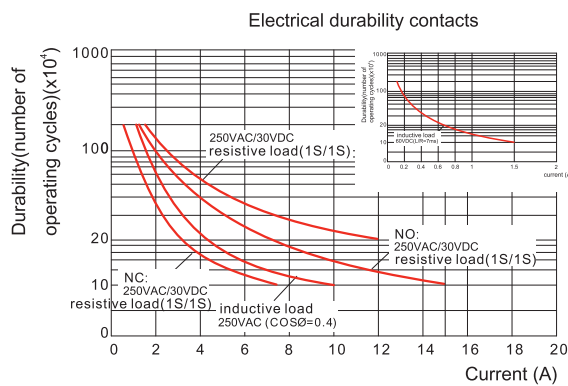
### Coil Specifications (23°C)

|                      |      |     |     |      |       |       |
|----------------------|------|-----|-----|------|-------|-------|
| 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.

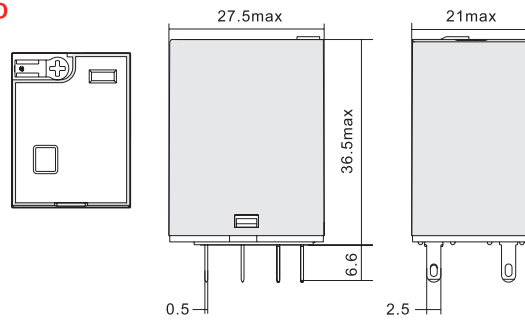
### Contact Specification

#### RKF2CO



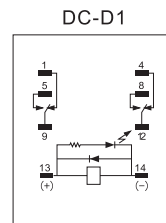
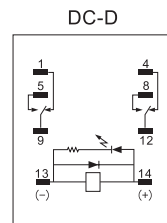
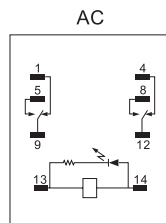
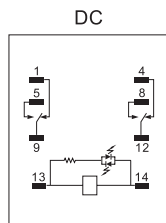
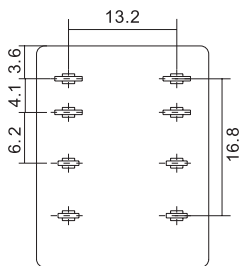
**Dimensions (mm)**

**RKF2CO**



**Wiring Diagrams**

**RKF2CO**



# SYF08A-E S

RKF-S Magnetic Blow-out Power Relay Socket



## Characteristics





SYF08A-E S

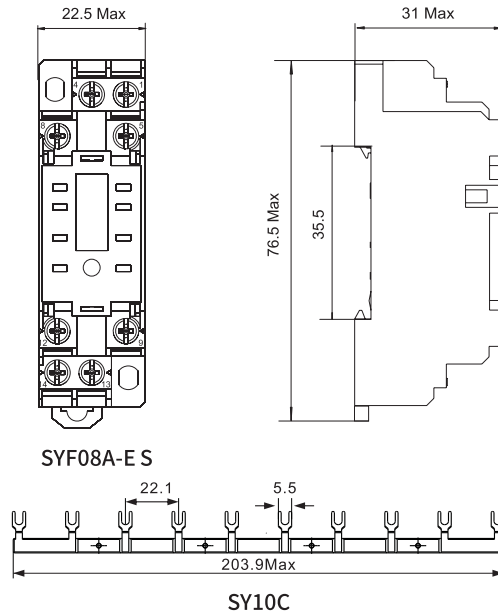


|                        |                          |                     |               |
|------------------------|--------------------------|---------------------|---------------|
| Type                   |                          |                     | SYF08A-E S    |
| Nominal load           | Current                  | A                   | 15            |
|                        | Voltage                  | V                   | 300           |
| Dielectric strength    | Between coil and contact | V/min               | 3000          |
|                        | Between contacts         | V/min               | 2000          |
| Max. tightening torque |                          | Nm                  | 1.0           |
| Wire size              |                          | AWG/mm <sup>2</sup> | 20-14/0.5-2.5 |
| Ambient temperature    |                          | °C                  | -40~+65       |
| Unit weight            |                          | g                   | 37            |

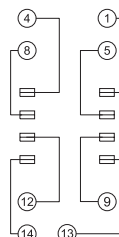
### Accessories

| Socket     | Bus jumper   | Metal clip   |
|------------|--|--|
| SYF08A-E S | <br>SY10C | <br>SY36S |

## Dimensions (mm)



## Connection Diagrams



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

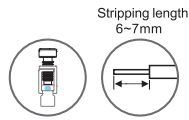
SYF08A-E S

# SKC08-E S

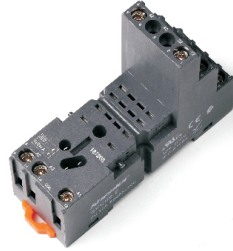
RKF-S Magnetic Blow-out Power Relay Socket



## Characteristics







SKC08-E S

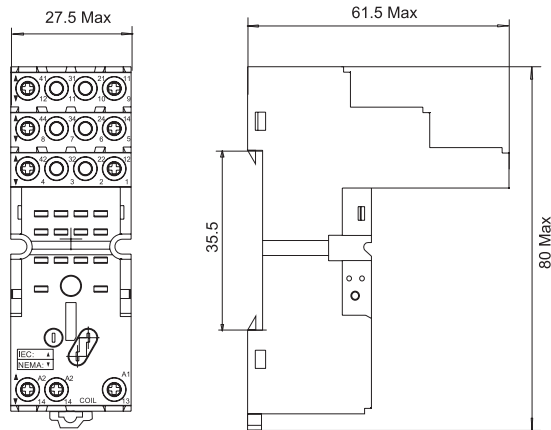


|                        |                          |               |           |
|------------------------|--------------------------|---------------|-----------|
| Type                   |                          |               | SKC08-E S |
| Nominal load           | Current                  | A             | 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/mm <sup>2</sup>      | 20-16/0.5-1.5 |           |
| Ambient temperature    | °C                       | -40~+85       |           |
| Unit weight            | g                        | 50            |           |

### Accessories

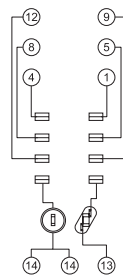
| Socket    | Plastic clip  | Metal clip   | ID tag  | Module   |
|-----------|---|--|---|--|
| SKC08-E S | <br>SK36F | <br>SK36M | <br>SK4P | <br>AMD |

## Dimensions (mm)



SKC08-E S

## Connection Diagrams



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

SKC08-E S