

# 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

### 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.

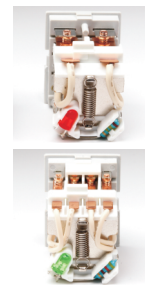
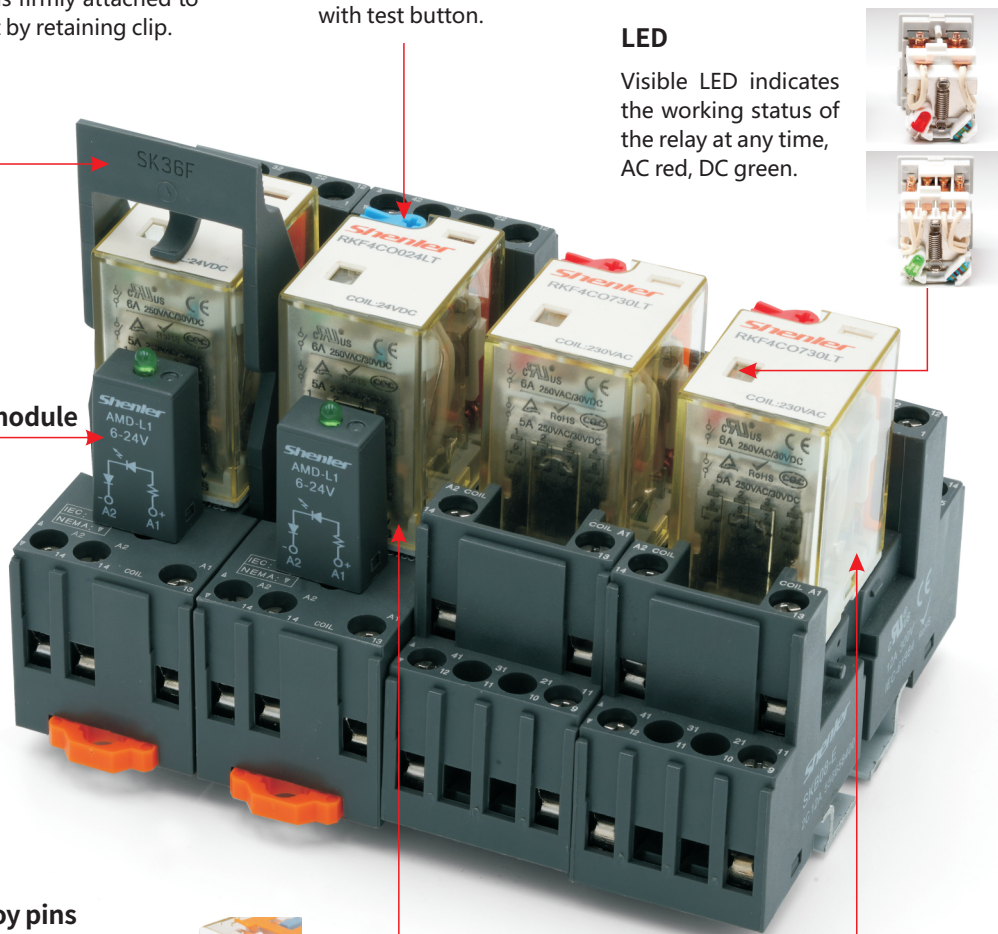
### AMD module

### 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.





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**

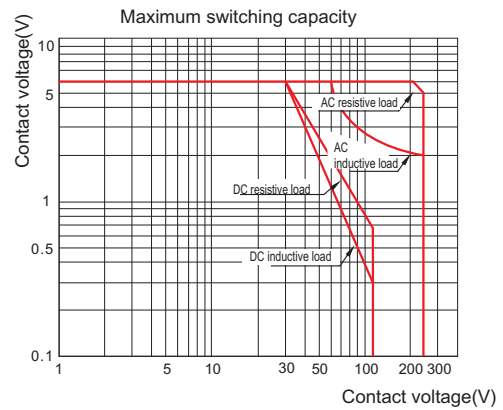
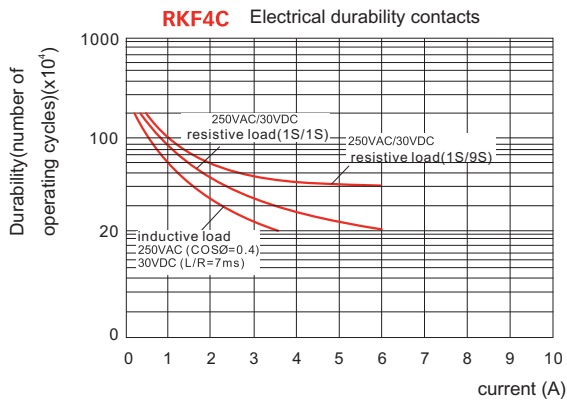
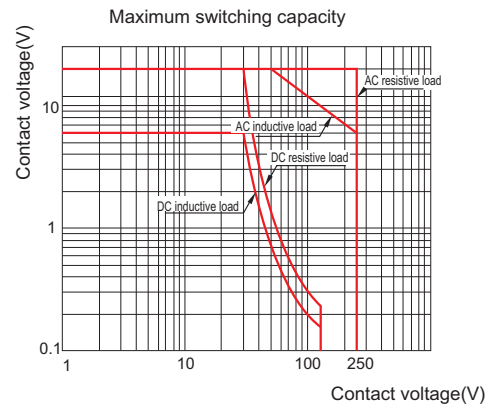
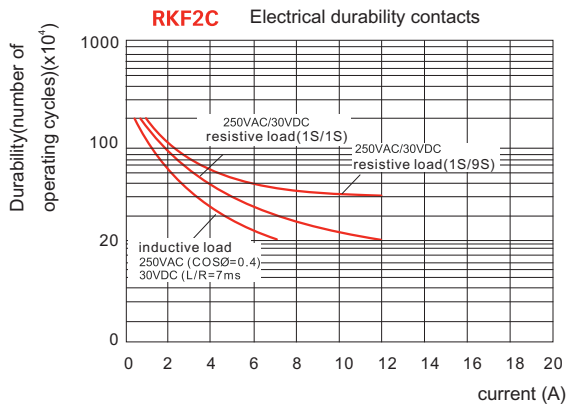
Configuration		2C	4C
Load	Resistance	12A/250VAC, 30VDC	6A/250VAC, 30VDC
	Motor load	1/3HP, 240VAC	1/6HP, 240VAC
Max. switching capacity (resistive)		3000VA, 360W	1500VA, 180W
Contact	Min. switching capacity	170mW(17V/10mA); LTA: 500mW(5V/100mA)	
	Initial contact resistance	≤50mΩ	
Material		Ag alloy	
Electric durability(110%rated voltage, 55°C)		≥20 x 10 <sup>4</sup> Cycles (1800 Ops/h)	
Electric 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	
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
	IEC 60664 UL840 Overvoltage level	III	II
Impulse withstand voltage (waveform: 1.2/50μs)		4000V	
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)**

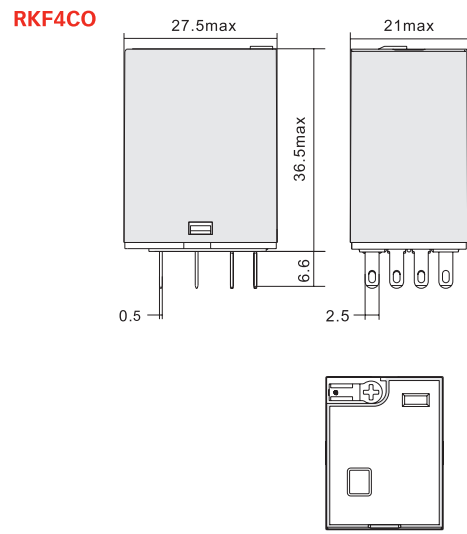
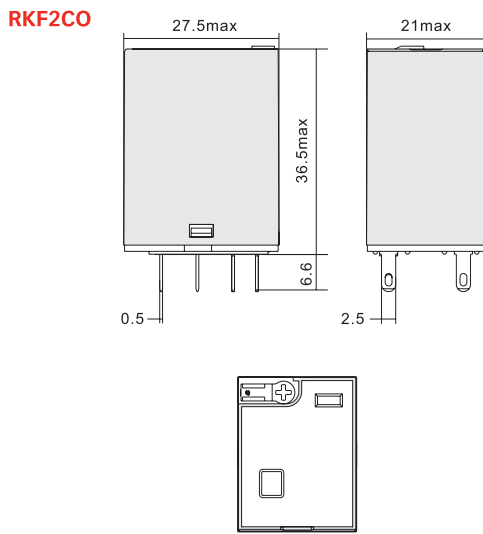
Nominal voltage V.DC	6	12	24	48	110	220	
Coil resistance $\Omega$	40	180	640	2600	13000	42000	
Nominal voltage V.AC	6	24	36	48	115	230	380
Coil resistance $\Omega$	11.5	180	370	640	4430	16500	42000

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

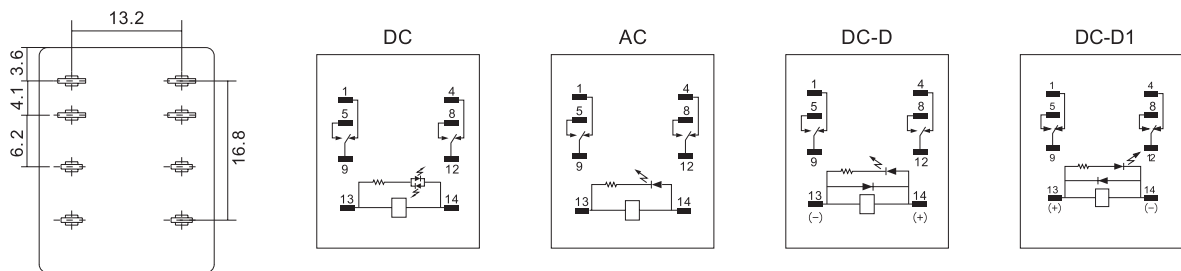
**Contact Specification**



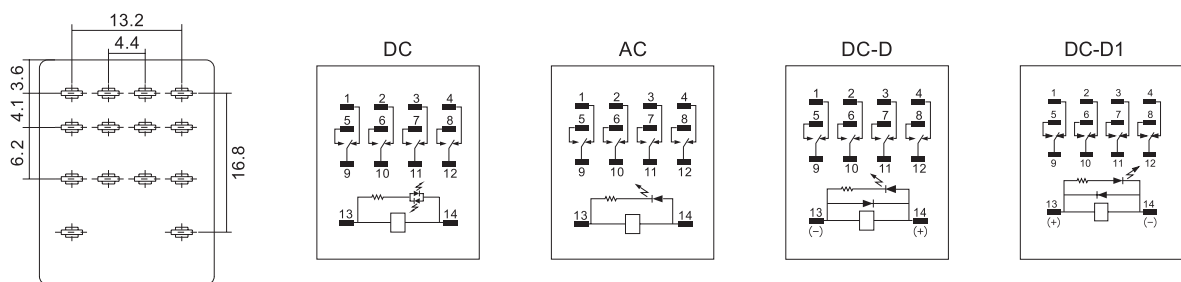
**Dimensions (mm)**



**Wiring Diagrams**



**RKF2CO**



**RKF4CO**

## Characteristics



SKF08-E



SKF14-E

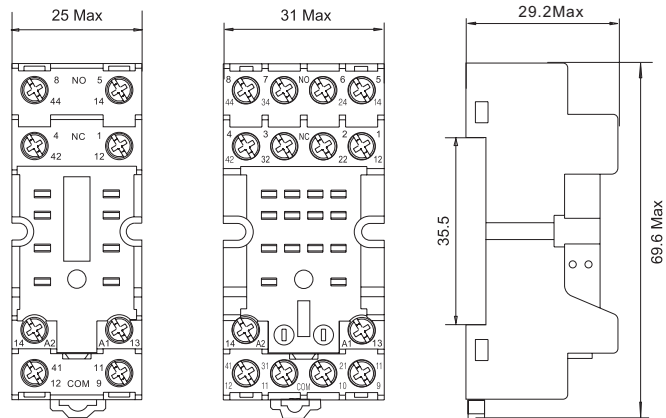


Type		SKF08-E	SKF14-E
Nominal load	Current	A	12
	Voltage	V	300
Dielectric strength	V/min	2500	
Max. tightening torque	Nm	1.0	
Wire size	AWG/mm <sup>2</sup>	20-14/0.5-2.5	
Ambient temperature	°C	-40~+85	
Unit weight	g	35	45

### Accessories

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

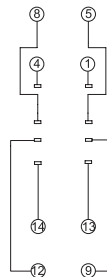
## Dimensions (mm)



SKF08-E

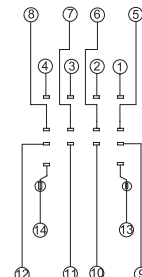
SKF14-E

## 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



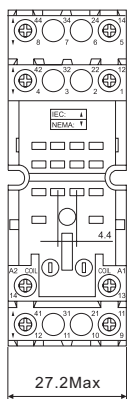
SKB14-E



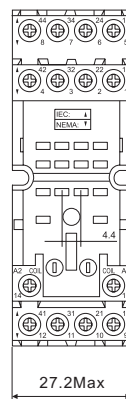
Type		SKB08-E	SKB14-E
Nominal load	Current	A	12
	Voltage	V	300
Dielectric strength	Between coil and contact	V/min	4000
	Between contacts	V/min	2500
Max. tightening torque	Nm	1.0	
Wire size	AWG/mm <sup>2</sup>	20-14/0.5-2.5	
Ambient temperature	°C	-40~+85	
Unit weight	g	50	56

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

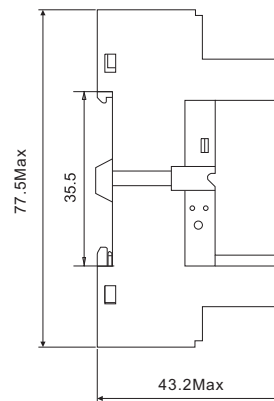
## Dimensions (mm)



SKB08-E



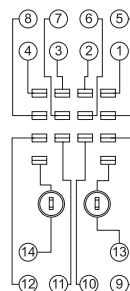
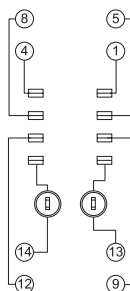
SKB14-E



## 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

## Characteristics



SKC08-E







SKC14-E

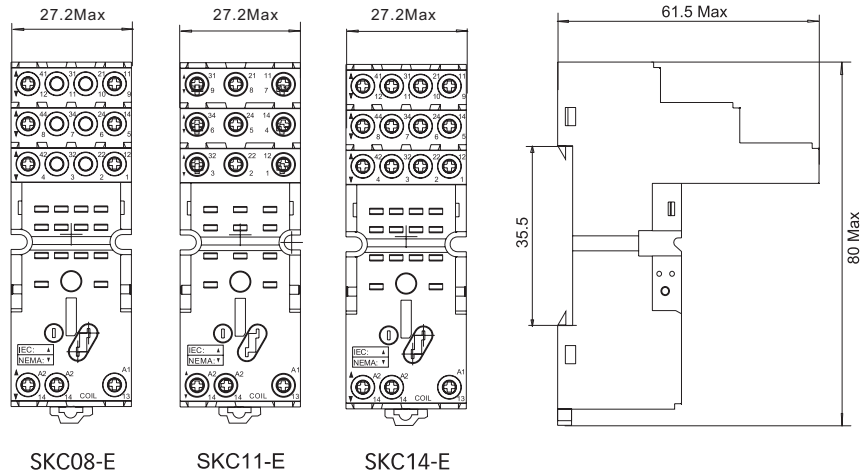


Type		SKC08-E	SKC11-E	SKC14-E
Nominal load	Current	A	12	10
	Voltage	V	300	
Dielectric strength	Between coil and contact	V/min	4000	
	Between contacts	V/min	2500	
Max. tightening torque	Nm	1.0		
Wire size	AWG/mm <sup>2</sup>	20-14/0.5-2.5		
Ambient temperature	°C	-40~+85		
Unit weight	g	50	56	62

### Accessories

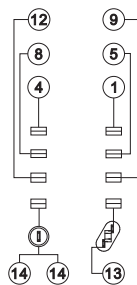
Socket	Plastic clip	Metal clip	ID tag	Module
SKC08-E				
SKC11-E				
SKC14-E	SK36F	SK36M	SK4P	AMD

## Dimensions (mm)

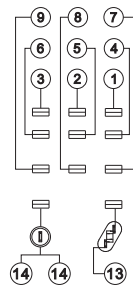


## Connection Diagrams

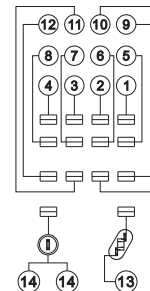
SKC08-E



SKC11-E



SKC14-E



## Characteristics



SKC08-ST



SKC14-ST

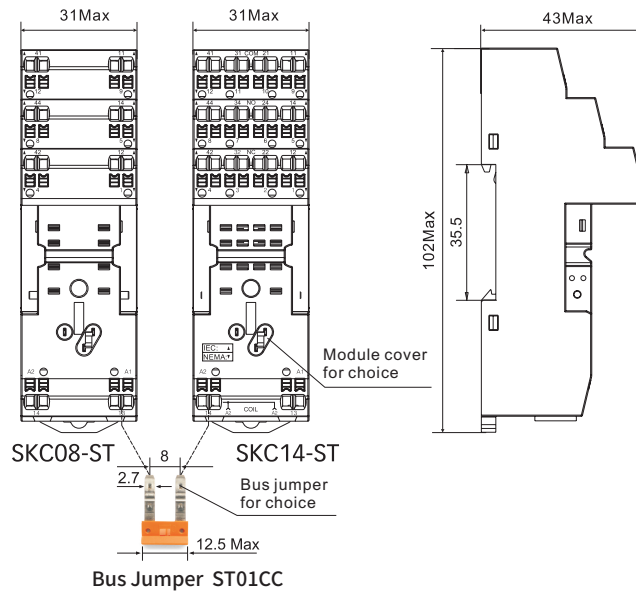


Type		SKC08-ST	SKC14-ST
Nominal load	Current	A	12
	Voltage	V	300
Dielectric strength	Between coil and contact	V/min	4000
	Between contacts	V/min	2500
Max. tightening torque	Nm	-	
Wire size	AWG/mm <sup>2</sup>	20-16/0.5-1.5	
Ambient temperature	°C	-40~+85	
Unit weight	g	80	80

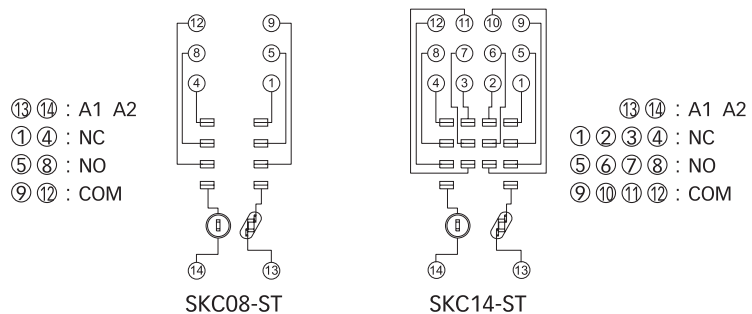
### Accessories

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

## Dimensions (mm)



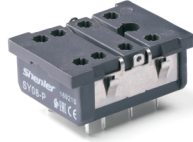
## Connection Diagrams



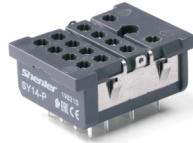


**Characteristics**

SY08-P

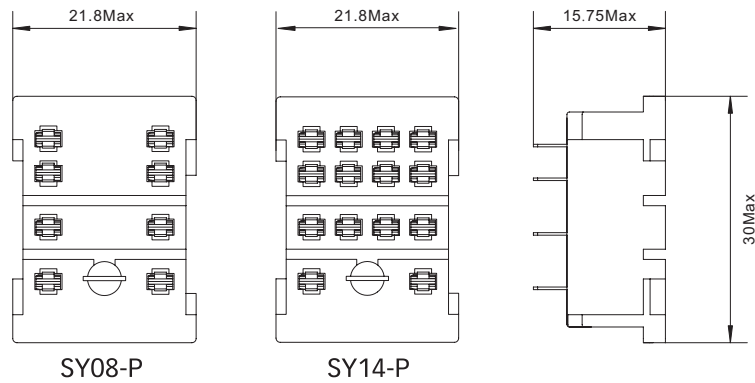


SY14-P

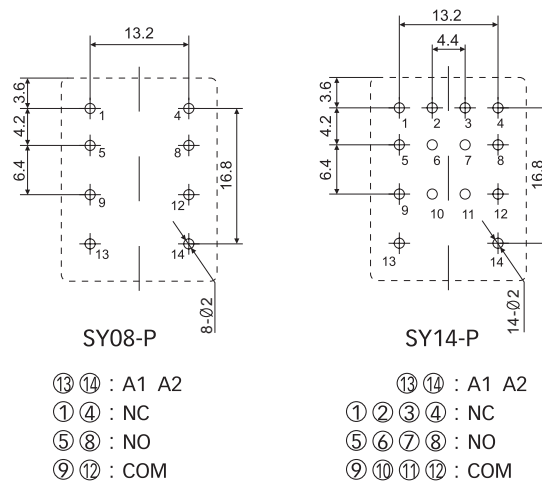


Type		SY08-P	SY14-P
Nominal load	Current	A	10
	Voltage	V	300
Dielectric strength	V/min	2000	
Wire size	AWG/mm <sup>2</sup>	20-14/0.5-2.5	
Ambient temperature	°C	-40~+85	
Unit weight	g	7	7
Accessories			
Socket	Metal clip		
SY08-P	<p>SY36M</p>		
SY14-P			

**Dimensions (mm)**



**Connection Diagrams**





Relay

+



Socket

=



Relay module

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**

Configuration	2C	
Load	Resistance	15A/250VAC 30VDC (NO:15A, NC:7.5A); 10A 60VDC
	Motor load	1/3HP, 240VAC
Contact	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°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
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

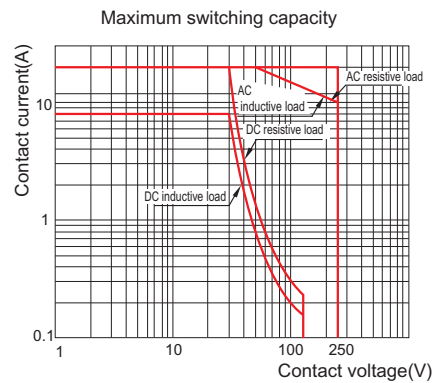
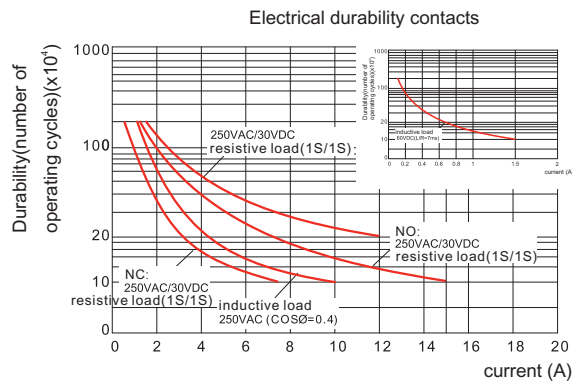
### Coil Specifications (23°C)

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

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

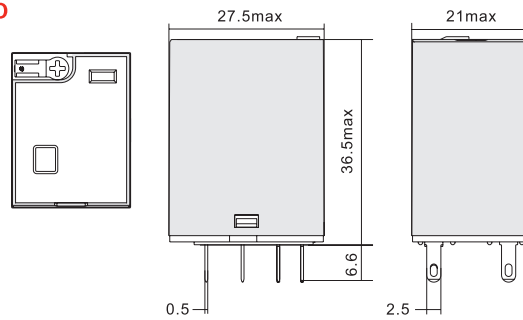
### Contact Specification

#### RKF2CO



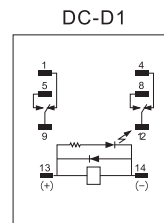
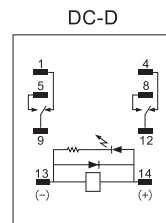
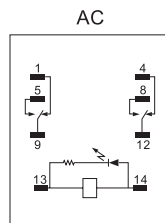
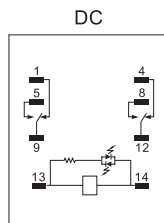
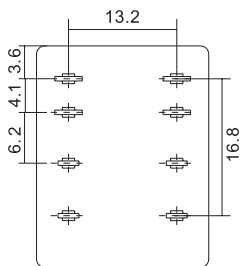
**Dimensions (mm)**

**RKF2CO**



**Wiring Diagrams**

**RKF2CO**



# SYF08A-E S

RKF Magnetic Blow-out Power Relay Socket



## Characteristics




SYF08A-E S

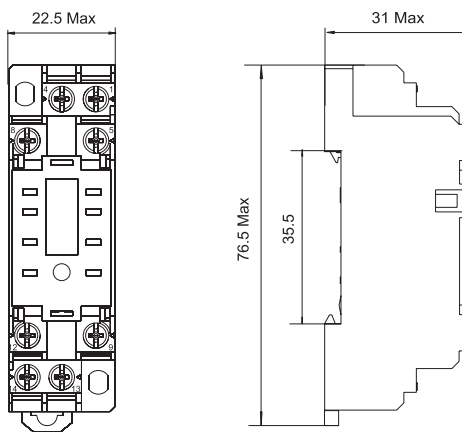


Type			SYF08A-E S
Nominal load	Current	A	15
	Voltage	V	300
Dielectric strength		V/min	2000
Max. tightening torque		Nm	1.0
Wire size		AWG/mm <sup>2</sup>	20-14/0.5-2.5
Ambient temperature		°C	-40~+65
Unit weight		g	37

### Accessories

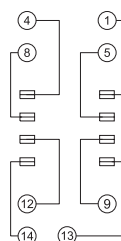
Socket	Metal clip
SYF08A-E S	 SY36S

## Dimensions (mm)



SYF08A-E S

## Connection Diagrams



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

SYF08A-E S

# SKC08-E S

RKF Magnetic Blow-out Power Relay Socket



## Characteristics







SKC08-E S

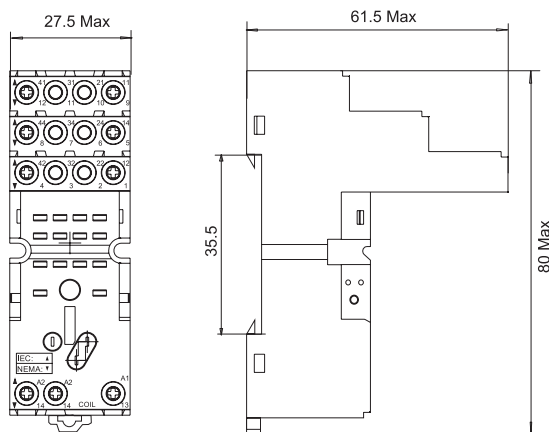


Type			SKC08-E S
Nominal load	Current	A	15
	Voltage	V	300
Dielectric strength	Between coil and contact	V/min	4000
	Between contacts	V/min	2500
Max. tightening torque	Nm	-	
Wire size	AWG/mm <sup>2</sup>	20-16/0.5-1.5	
Ambient temperature	°C	-40~+85	
Unit weight	g	50	

### Accessories

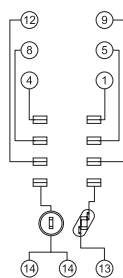
Socket	Plastic clip	Metal clip	ID tag	Module
SKC08-E S	 SK36F	 SK36M	 SK4P	 AMD

## Dimensions (mm)



SKC08-E S

## Connection Diagrams



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

SKC08-E S