

# SCP40-AC Charging Product Introduction

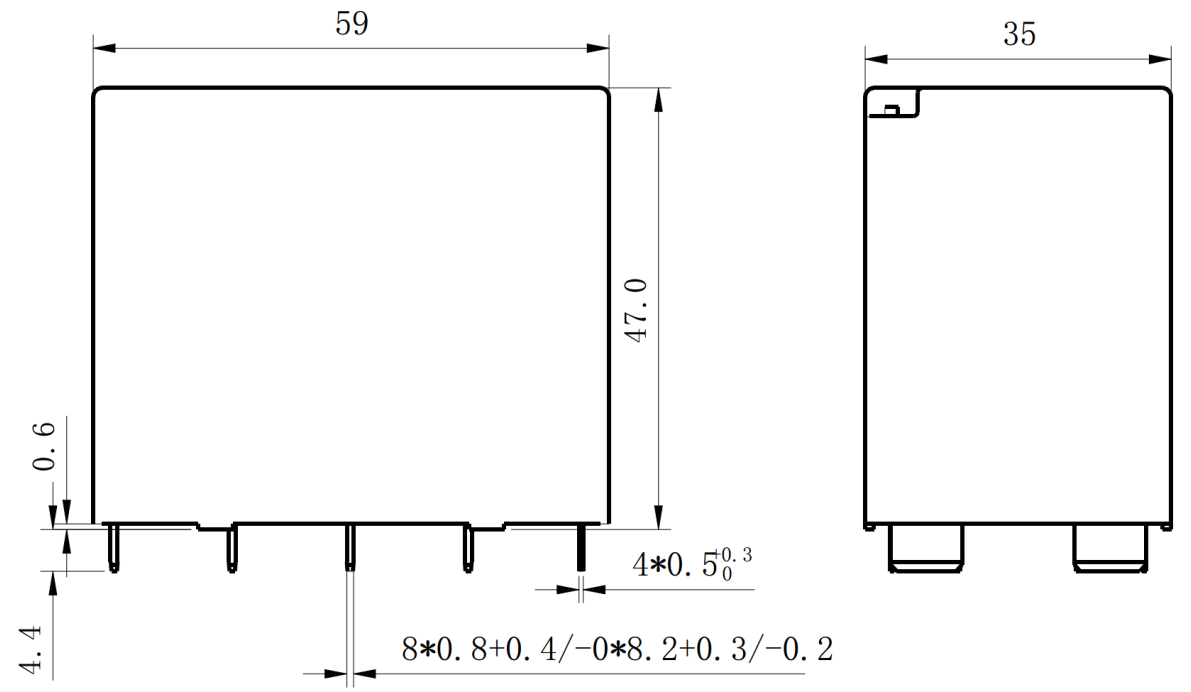
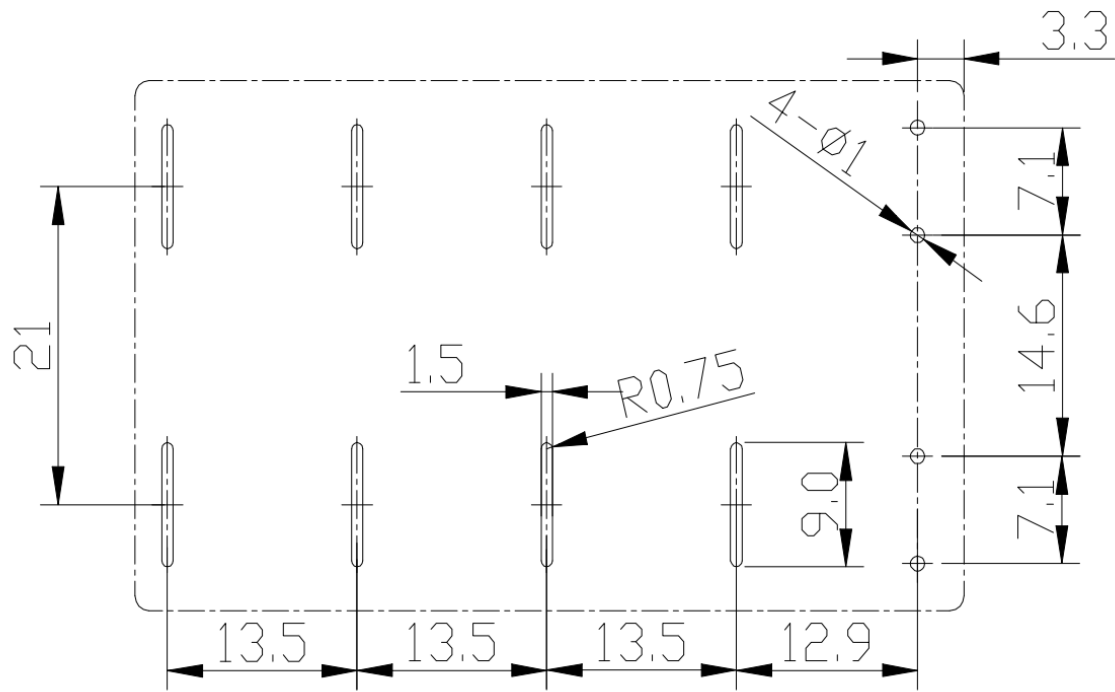




## Key Features

- 4 sets of normally open main contacts (40A) + 1 set of normally closed auxiliary contacts (1A)
- When the main contact is bonded, the auxiliary contact meets the safety detection function (according to IEC61810-3)
- Compatible with AC charging stations
- Meet the 3KA short-circuit current test in IEC62955
- Optimized structure, stronger mechanical impact resistance and lower temperature rise
- Weighs only 150g
- Hold voltage can be applied to save power loss

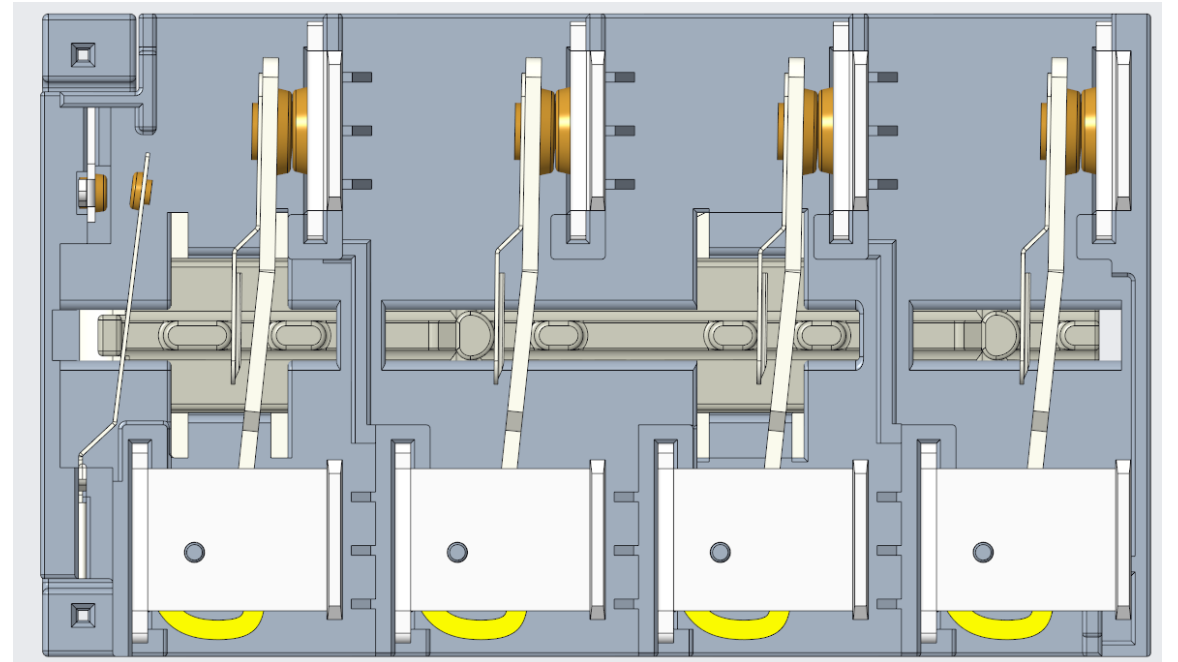
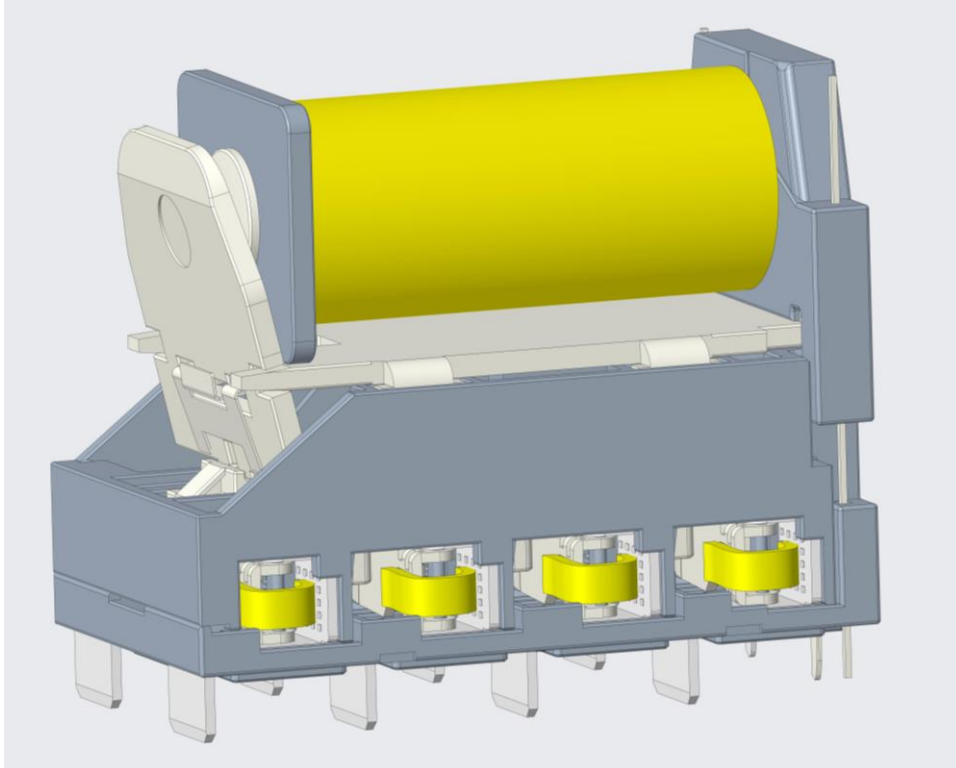
# Footprint SCP40



- Key Technical Parameters

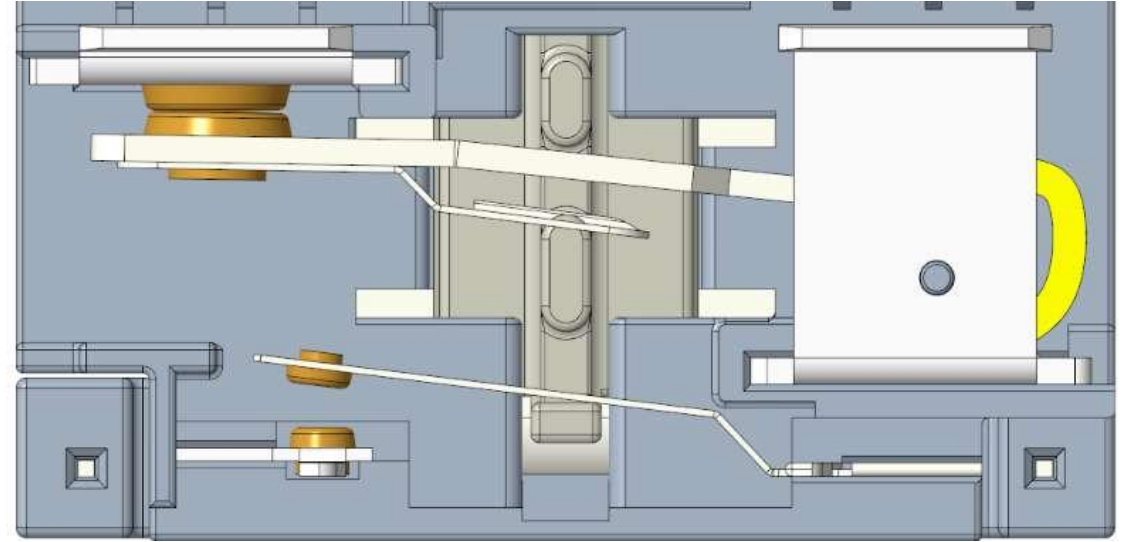
No.	Technical requirements	SCP40	
1	Rated Load	Main contact: 40A 440VAC Auxiliary contact: 1A 277VAC/30VDC	
2	Electrical endurance	NO: Switching current 10A, 440VAC, contact current 40A, resistive load, 85°C, $5 \times 10^4$ cycles Auxiliary contact: 1A 277VAC/30VDC, resistive load, 85°C, 1s on 9s off, $10 \times 10^4$ cycles	
3	Maximum switching current	Main contact: 40A Auxiliary contact: 1A	
4	Contact resistance	Main contact: $\leq 10\text{m}\Omega$ (6VDC 20A) Auxiliary contact: $\leq 100\text{m}\Omega$ (6VDC 1A)	
5	Dielectric Strength	between main contact	2000VAC 50/60Hz 1min
		between main contact and auxiliary contact	
		between main contact sets	
		between auxiliary contact and coil	5000VAC 50/60Hz 1min
		between main contact and coil	1000VAC 50/60Hz 1min
6	Mechanical endurance	100K cycles	
7	Operate voltage	$\leq 18\text{V}$	
8	Release voltage	$\geq 1.2\text{V}$	
9	Operate Time	$\leq 40\text{ms}$	
10	Release time	$\leq 40\text{ms}$	
11	Shock resistance(Malfunction)	$98\text{m/s}^2$	
	Shock resistance(Destructive)	$980\text{m/s}^2$	
12	Vibration (Malfunction)	10-55Hz 1.0mm Double-amplitude	
	Vibration (Destructive)	/	
13	Coil heating	$\leq 70\text{K}$ (Load: 40A, energized with rated volt for 100ms and use 60% rated volt as holding voltage, Ambient temperature: 85°C)	

- Basic Structure
- Push rod type, 4 sets of contact design



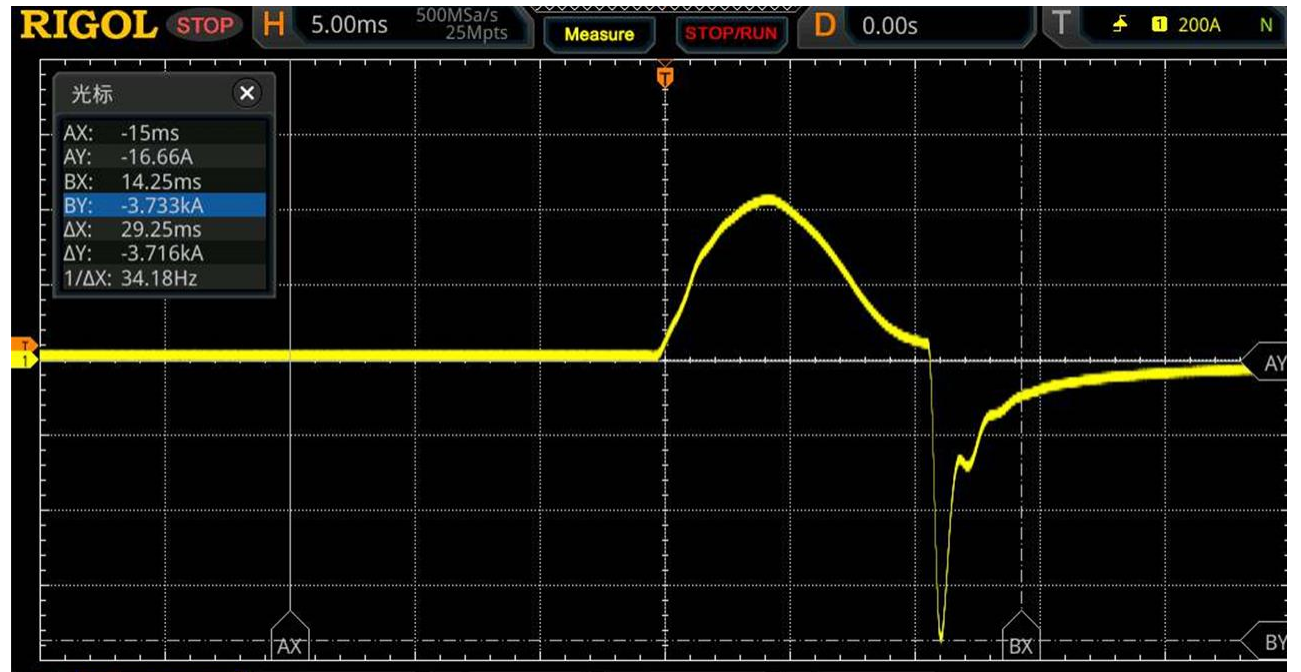
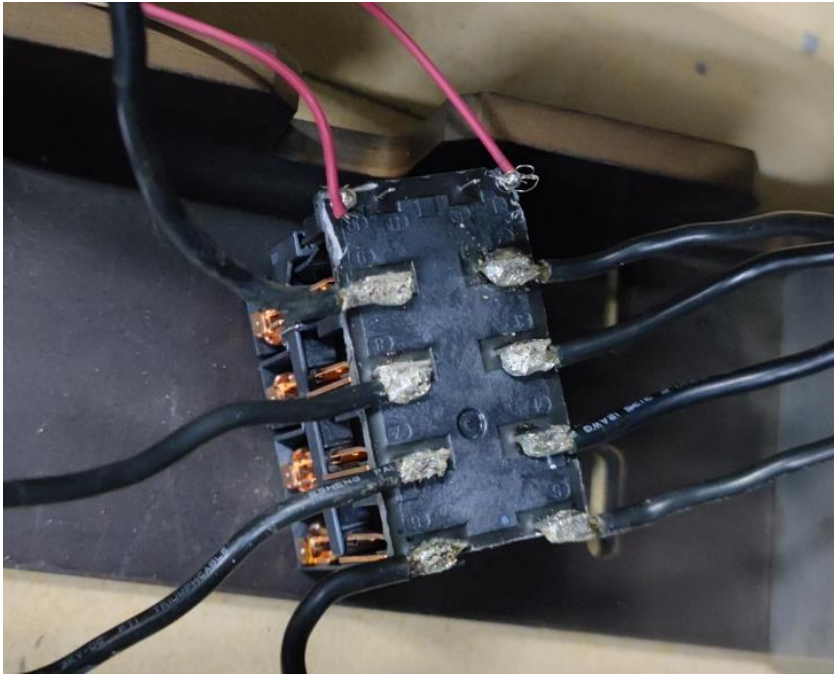
## Auxiliary contact and main contact operation IEC61810-3-4.1

- When the SCP40 main contact is closed, the auxiliary contact is in the open state, and the auxiliary contact gap is  $> 0.5\text{mm}$ .
- When the figure shows the energized state, the auxiliary contact is disconnected first, and then the main contact is closed.
- When the picture shows a power-off state, the main contact is disconnected first, and then the auxiliary contact is closed.
- Therefore, the main contact design of SCP40 meets the IEC61810 standard



## IEC62955 short-circuit requirements

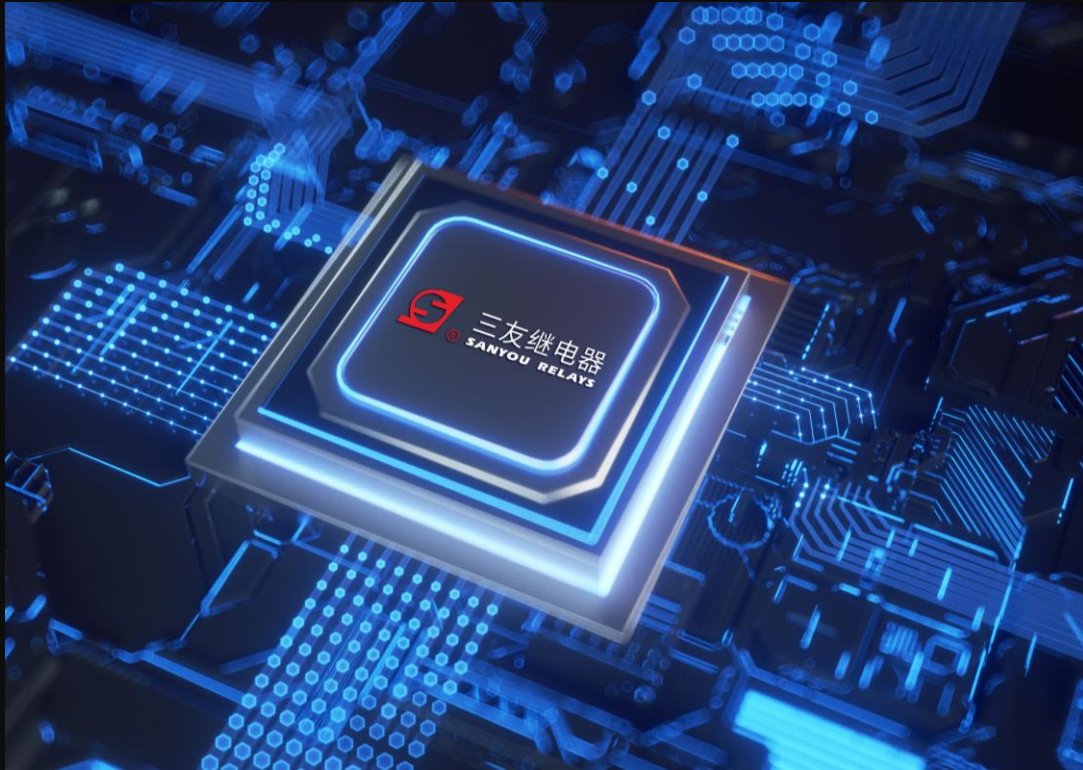
- short circuit performance is mainly related to the contact pressure,
- the greater the contact pressure, the stronger the short circuit resistance.
- SCP40 contact pressure design can reach 0.97N.



- Safety Certificate
- UL/TUV/CQC in process, expected in Sept

No	Safety regulations project	Coil Voltage	Contact Load 触点负载	Circuit diagramm 负载电路	Contact form 触点形式	Contact material 触点材质	Electrical endurance 电寿命次数	Duty factor 通断比	Ambient Temp. 环境温度
1	UL	9V	NO: Making 10A/440VAC, carrying 40A/440VAC breaking 10A/440VAC $\cos\phi=1$ NC: Making 1A 277VAC/30VDC	NO/NC	FormA	Main contact: AgSnO2 Auxiliary contact: AgNi	50K	1:9	85°C
		12V							
		24V							
		48V							
2	TUV	9V	NO: Making 10A/440VAC, carrying 40A/440VAC breaking 10A/440VAC $\cos\phi=1$ NC: Making 1A 277VAC/30VDC	NO/NC	FormA	Main contact: AgSnO2 Auxiliary contact: AgNi	50K	1:9	85°C
		12V							
		24V							
		48V							
3	CQC	9V	NO: Making 10A/440VAC, carrying 40A/440VAC breaking 10A/440VAC $\cos\phi=1$ NC: Making 1A 277VAC/30VDC	NO/NC	FormA	Main contact: AgSnO2 Auxiliary contact: AgNi	50K	1:9	85°C
		12V							
		24V							
		48V							





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