

Features

- Outline dimension: 38mm×33mm×39.5mm
- 1 Form X, GAP > 4.0mm
- Designed to meet GB21711.1, IEC61810, UL60947-1, RoHS, REACH SVHC requirements
- Environmental protection category RTII
- 90A contact switching capability
- Applicable to solar photovoltaic power inverter
- The product applies a small coil holding voltage to reduce power loss
- Insulation class F

 UL File NO. E341422
 TUV File NO. R50499133
 CQC File NO. CQC21002285874



Application

Inverter precharging circuit control

Coil Parameters@ 23°C

Rated voltage (VDC)	Rated power (W)	Rated current (mA)	Coil resistance ($\Omega \pm 10\%$)	Operate voltage (VDC)	Release voltage (VDC)
6	1.92	320	18.75	≤ 4.5	≥ 0.6
9	1.92	213	42.2	≤ 6.75	≥ 0.9
12	1.92	160	75	≤ 9	≥ 1.2
24	1.92	80	300	≤ 18	≥ 2.4
48	1.92	40	1200	≤ 36	≥ 4.8

Notes: The above values are the initial at 23°C.

Contact Parameters

Contact configuration	1 Form X
Contact material	AgSnO ₂ /AgCuO
Initial contact resistance	$\leq 5 \text{ m}\Omega$ (6VDC 20A)
Rated current	Make 30A-Carry 90A-Break 30A 60A@1000VAC, 6k cycles, 85°C
Rated switching voltage	1000VAC
Max. breaking current	90A
Max. switching power	100,000VA
Electrical endurance (Resistive Load)	$\geq 3 \times 10^4$ cycles (at 85°C, 1s ON-9s OFF) (UL, TUV, CQC) $\geq 6 \times 10^3$ cycles (at 85°C, 1s ON-9s OFF) (UL)
Mechanical endurance	1×10^6 cycles, 150 cycles/minute

Notes: The life expectancy will be lower when a diode is used in parallel with the coil.

Other Parameters

Dielectric strength	between open contacts	2500 VAC. 50/60 Hz 1 min
	between coil to contacts	4000 VAC. 50/60 Hz 1 min
Insulation resistance		100 M Ω (1000VDC)
Operate time (Rated voltage)		$\leq 35\text{ms}$ (at 23°C)
Release time (Rated voltage)		$\leq 30\text{ms}$
Vibration resistance	Capability to function after vibration	10Hz~ 55Hz, 1.5mm
	Capability to function during vibration	10Hz~ 500Hz, 49m/s ²
Shock resistance	Capability to function after shock	981m/s ²
	Capability to function during shock	98.1m/s ²
Operating temperature		-40°C~85°C (Without condensation and freezing)
Operating humidity		5% RH ~85% RH
Terminal style		PCB terminal
Category of protection		RT II (Flux proof)
Weight		About 89.5g

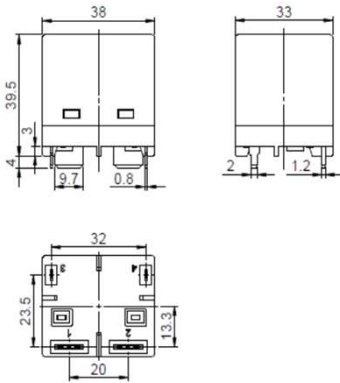
Notes: The above values are the initial at 23°C.

Ordering Information

1.Product Family	CHAR	-1	12	A90	C	,XXX
2.Contact form						
3.Coil rated voltage						
4.Rated switching current						
5.Product code						
6.Additional numbers and letters						

000-999, AAA-ZZZ, aaa-zzz or blank, which does not represent electrical changes, only for specific customer requirements

Outline dimension



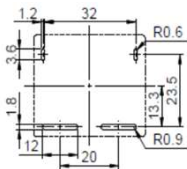
Unmarked geometric tolerance are as follows:

Outline dimension $\leq 10\text{mm}$, reference tolerance is $\pm 0.2\text{mm}$

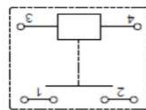
Outline dimension $> 10\text{mm}$ and $\leq 50\text{mm}$, reference tolerance is $\pm 0.3\text{mm}$

Mounting hole dimensions and wiring diagram

Mounting hole dimensions



Wiring diagram



Notes:

1. Please avoid sticking grease and other foreign bodies on the lead end, otherwise it may cause abnormal heating of the lead end.
2. The terminal welding temperature and time is recommended not to exceed $260^{\circ}\text{C}/10\text{S}$. In the case of exceeding the value, it may cause damage.

Disclaimer:

This specification is for reference only. For more details, please contact Churod. We are not able to evaluate all the performance and parameters of every possible application.

If you have any new needs, please contact us in time, we will be happy to serve you.