

# CHAK01&02 Series 40A Automotive Relay

## FEATURES

- 40A switching capability
- 1 Form A, 1 Form B and 1 Form C contact arrangement
- Operate temperature up to 125°C
- Multiple operating voltage
- Comply with RoHS and ELV instruction

## APPLICATION

ABS Control System, Air blower  
 Car alarms, Cooling fan  
 Engine control system  
 Fog lamp, Interior lights, Turn signal

## COIL PARAMETER

Coil voltage	12VDC/24VDC	
Coil power	CHAK01&02	1.6W

## COIL DATA @23°C

CHAK01&02				
Nominal coil voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω)±10%	Operate Voltage (VDC Max.)	Release Voltage (VDC Min.)
12	110.1	110	8.4	1.2
24	51.6	440	16.8	2.4



## CONTACT DATA

Contact arrangement	1 Form A, 1 Form C, 1 Form B
Contact material	Silver Alloy
Initial contact resistance	40mV Type, 200mV Max (at 10A)
Max. switching voltage	30VDC
Max. switching current	40A
Max. switching power	560W
Contact rating (Resistive Load)	NO/NC: 40A/30A 14VDC
Mechanical endurance	10,000,000 ops Min.(no load)
Electrical endurance	100,000 ops Min.(rated load)
Minimum load (reference value)	1A@6VDC

## CHARACTERISTICS

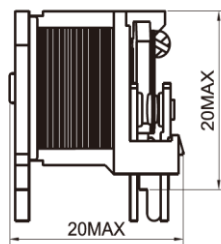
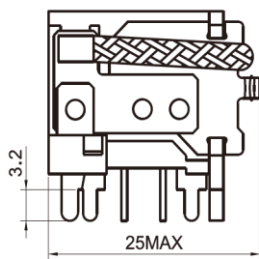
Operate voltage	70% of nominal voltage or less	
Release voltage	10% of nominal voltage or more	
Operate time(At nominal voltage)	10ms max.	
Release time(At nominal voltage)	10ms max.	
Insulation resistance	100MΩ min. (at 500 VDC)	
Dielectric strength	Between coil and contacts	≥500 VAC, 50/60Hz ( 1 min)
	Between open contacts	≥500 VAC, 50/60Hz ( 1 min)
Vibration resistance	Destruction	10Hz~ 55Hz., 1.5mm double amplitude
	Malfunction	10Hz~ 55Hz., 1.5mm double amplitude
Shock resistance	Destruction	1,000m/S <sup>2</sup> (100G Min.)
	Malfunction	100m/S <sup>2</sup> (10G Min.)
Ambient temperature	-40~ +125°C (without icing or condensation)	
Ambient humidity	20%~85% RH	
Terminal	PCB Terminal	
Enclosure (94V-0 Flammability Ratings)	V: Vented(Flux proof, RTII)	
	S: Sealed(Wash-tight, RTIII)	
Weight	Approx. 19g	

## ORDERING INFORMATION

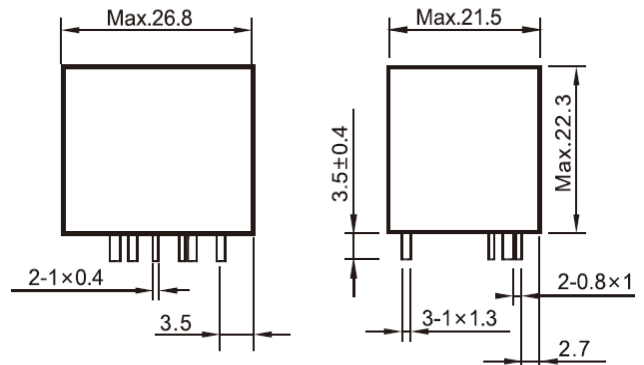
CHAK01	-S2	-1	12	D	A	2	,000
<p>1.Product Family CHAK01: European style pin CHAK02: American style pin</p> <p>2.Enclosure P: 3 feet yoke(Unenclosed type) P2: 2 feet yoke(Unenclosed type) S2: 2 feet yoke(Enclosure type) S3: 3 feet yoke(Enclosure type)</p> <p>3.Number of Poles 1=1 pole</p> <p>4.Rated Coil Voltage 12,24VDC</p> <p>5.Coil power D: standard form</p> <p>6.Contact Arrangement A: Form A(SPST) C: Form C(SPDT)</p> <p>7.Contact Material 2: AgSnO2</p> <p>8.Additional numbers and /or letters 000-999, AAA-ZZZ, aaa-zzz or blank, which does not represent electrical changes, only for specific customer requirements</p>							

## OUTLINE DIMENSION

CHAK01-P/CHAK01-P2/CHAK02-P/CHAK02-P2

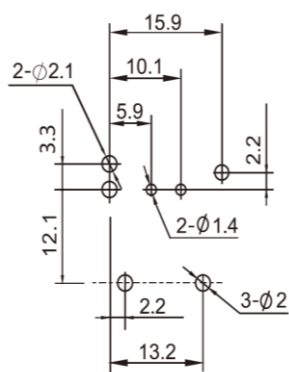


CHAK01-S2/CHAK01-S3/CHAK02-S2/CHAK02-S3

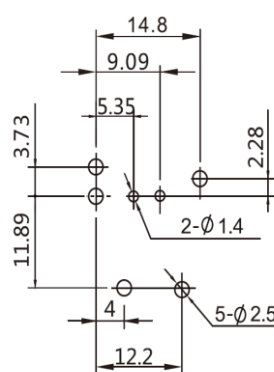


## OUTLINE DIMENSION

CHAK01



CHAK02

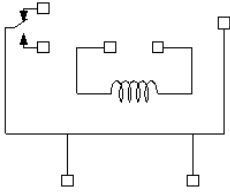


### Remarks:

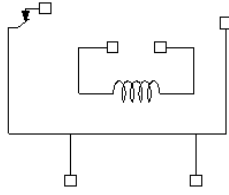
- The reference tolerance in outline dimension:  
outline dimension  $\leq 1\text{mm}$ , reference tolerance is  $\pm 0.2\text{mm}$ ;  
outline dimension  $> 1\text{mm}$  and  $\leq 5\text{mm}$ , reference tolerance is  $\pm 0.3\text{mm}$ ;  
outline dimension  $> 5\text{mm}$ , reference tolerance is  $\pm 0.5\text{mm}$ .
- The reference tolerance for PC Board layout is  $\pm 0.1\text{mm}$ .

## WIRING DIAGRAMS (BOTTOM VIEWS)

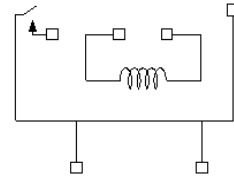
1C



1B

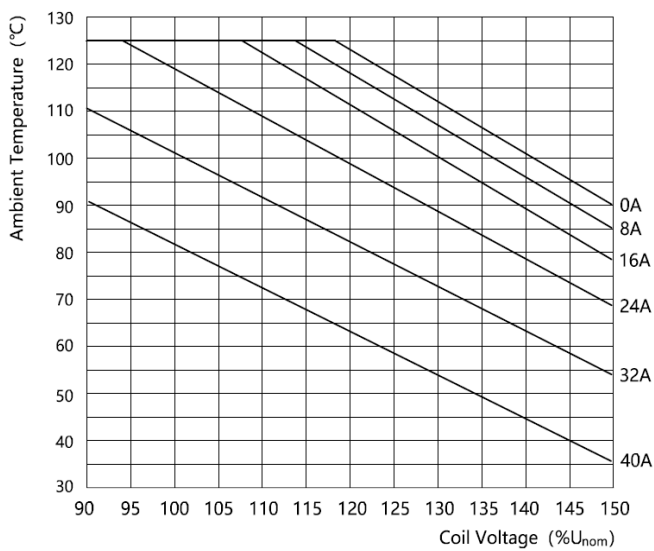


1A

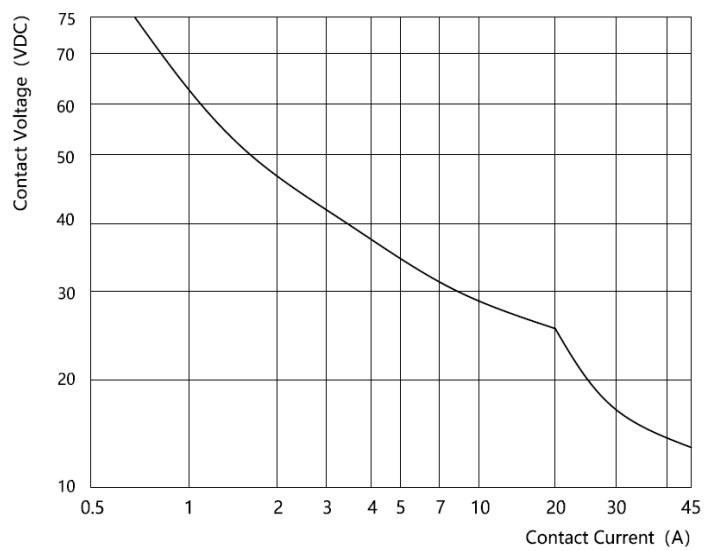


## REFERENCE DATA

Coil Continuous Voltage Range



Maximum Load Range



Disclaimer:

The specification is for reference only, if you need more detail information, please contact Churod. We could not evaluate all the performance and all parameters for every possible application. And the user should be in a right position to choose the suitable product for their own application. If there is any new need, please contact Churod for the technical service.

[Http://www.churod.com](http://www.churod.com)

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