

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) \pm 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 | 100M Ω min. (at 500 VDC) | |
| Dielectric strength | Between coil and contacts | \geq 500 VAC, 50/60Hz (1 min) |
| | Between open contacts | \geq 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 ² (100G Min.) |
| | Malfunction | 100m/S ² (10G Min.) |
| Ambient temperature | -40~+125°C (without icing or condensation) | |
| Ambient humidity | 20%~85% RH | |
| Terminal | PCB Terminal | |
| Enclosure (94V-0 Flammability Ratings) | P: Unenclosed(Unenclosed relay, RT 0) | |
| | S2/S3: Sealed(Wash -tight, RT III) | |
| Weight | Approx. 19g | |

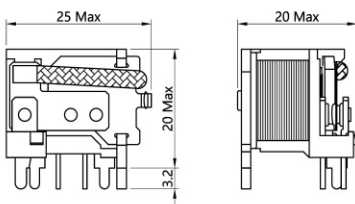
ORDERING INFORMATION

| | | | | | | | |
|--|-----|----|----|---|---|---|------|
| 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.Conact 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> | | | | | | | |

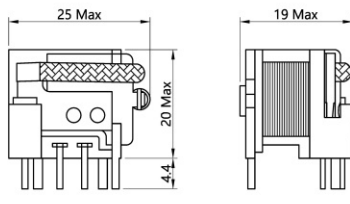
OUTLINE DIMENSION

PCB LAYOUTS

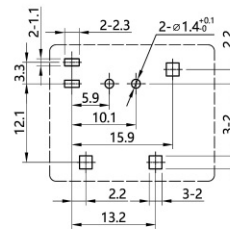
CHAK01-P-1□□□□2



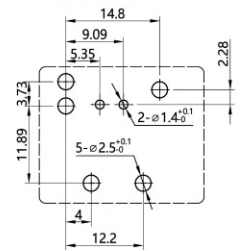
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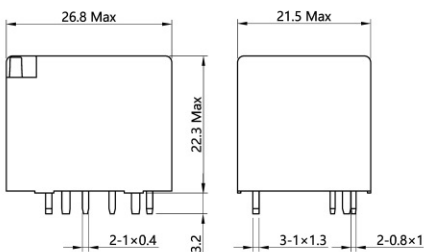
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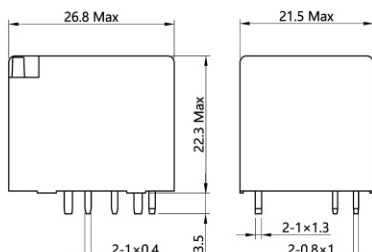
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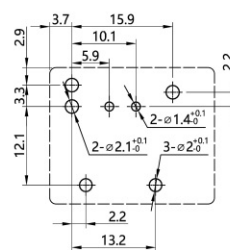
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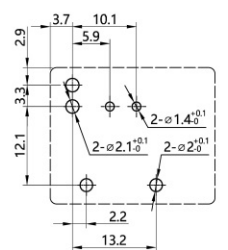
CHAK01-S2-1□□□□2



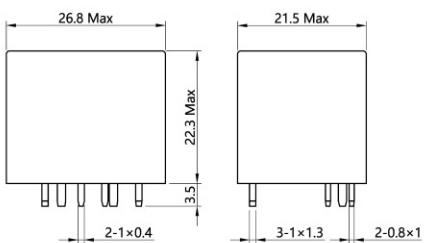
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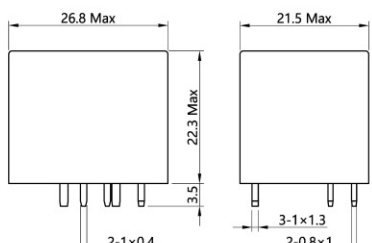
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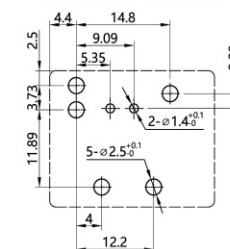
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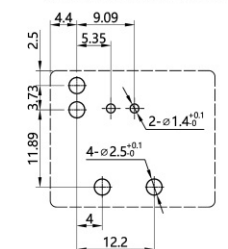
CHAK02-S2-1□□□□2



CHAK02-S3-1□□□□2



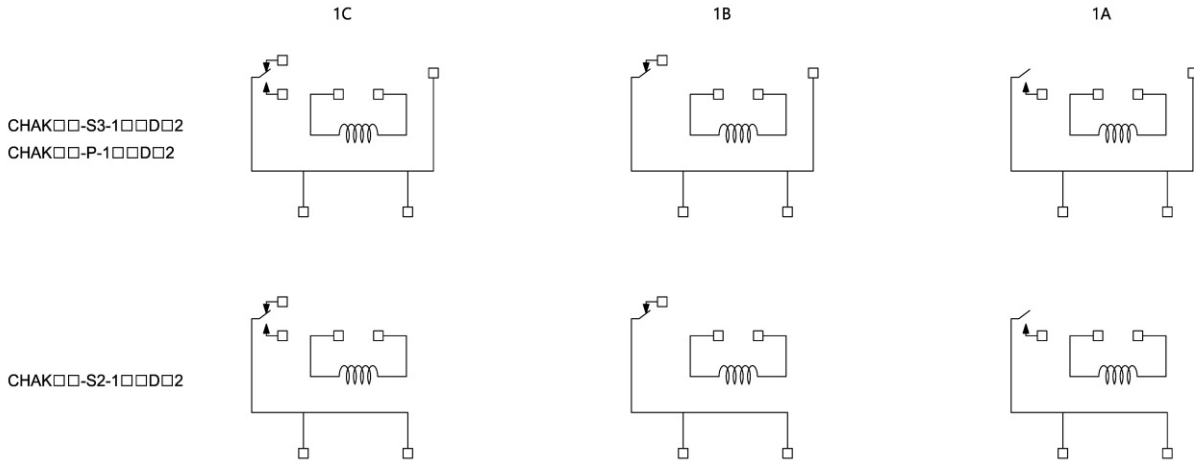
CHAK02-S2-1□□□□2



Remarks:

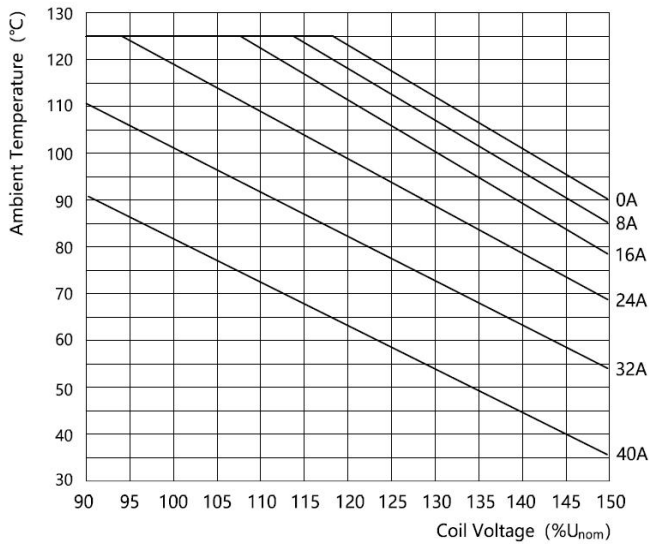
- 1)The reference tolerance in outline dimension:
 outline dimension $\leq 1\text{mm}$, reference tolerance is $\pm 0.2\text{mm}$;
 outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, reference tolerance is $\pm 0.3\text{mm}$;
 outline dimension $> 5\text{mm}$, reference tolerance is $\pm 0.5\text{mm}$.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

WIRING DIAGRAMS (BOTTOM VIEWS)

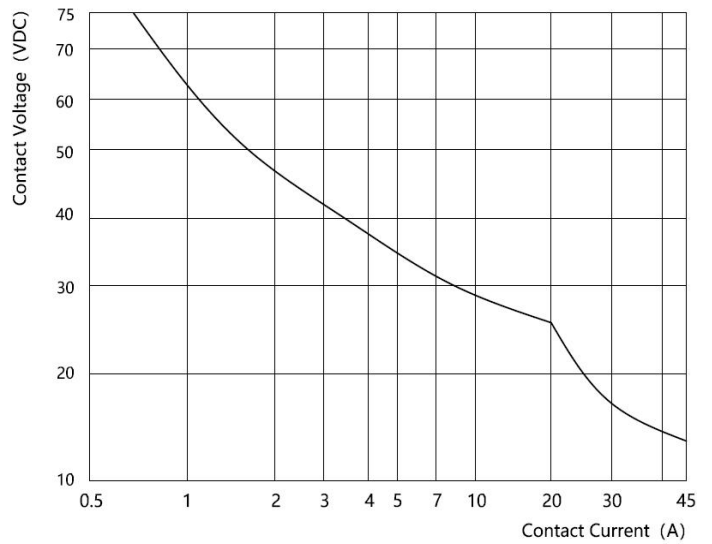


REFERENCE DATA

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.

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