CHID SERIES 50A MINIATURE POWER RELAY

Churod Electronics

FEATURES

- Outline dimension(35mm×16mm×28mm)
- PCB terminal
- 1 Form A and 1 Form B（SPST）contact arrangement
- Designed to meet UL/cUL,TUV,CQC requirements
- Contact GAP 2.25mm Min
- RoHS compliance
- REACH SvHC compliance

File NO. E341422

File NO.R50597026

File NO. CQC23002396385

APPLICATION

Charging pile，Industrial control

COIL PARAMETER

Coli voltage	5-48VDC
Coli power	2.1W
Holding voltage	35%~130%Un（The ambient temperature is 23℃）
	45%~60%Un（The ambient temperature is 85℃）

COIL DATA@23℃

CHID				
Nominal coil voltage (VDC)	Operate Voltage (VDC Max.)	Release Voltage (VDC Min.)	Holding voltage (VDC Min.)	Coil Resistance (Ω±10%)
5	3.75	0.25	1.75	11.8
9	6.75	0.5	3.15	38.4
12	9.0	0.6	4.2	68.5
24	18.0	1.2	8.4	274.0
48	36.0	2.4	16.8	1096.0

NOTE:

1) The above values are initial values.

2) Coli holding voltage is the coil voltage applied 100ms after the rated voltage is applied to the coil.

3) The relay is not allowed to apply a holding voltage that exceeds the upper limit of the holding voltage for a long time.It is recommended that customers use the relay coil to apply the rated voltage after 100ms and drop to the lower limit of the holding voltage specification.

CONTACT DATA

Contact arrangement		1 Form A and 1 Form B（SPST）
Contact material		Main contact：AgSnO2
		Auxiliary contact：AgNi Alloy
Initial contact resistance		100mΩ Max. @6VDC 1A（Main contact）
Max. switching voltage		440VAC
Max. switching current		50A
Max. switching power		22,000VA
Contact rating	Main contact	40A 440VAC, Resistive
		50A 440VAC,Resistive
		32A 440VAC, Resistive
	Auxiliary contact	10mA 12VDC
Mechanical endurance		300,000 ops Min.(no load)
Electrical endurance	Main contact	50A 440VAC, Resistive，6,000 ops Min.
		40A 440VAC, Resistive，30,000 ops Min.
		32A 440VAC, Resistive，50,000 ops Min.
		20A-50A-20A 440VAC，Resistive，50,000 ops Min.
	Auxiliary contact	10mA 12VDC，50,000 ops Min.

CHARACTERISTICS

Operate voltage		75% of nominal voltage or less
Release voltage		5% of nominal voltage or more
Operate time (At nominal voltage)		30ms Max
Release time(At nominal voltage)		10ms Max
Insulation resistance		1,000MΩ Min（at 500 VDC）
Dielectric strength	Between open contacts (main contact)	2,500 VAC, 50/60Hz (1 min)
	Between coil and main contacts	4,000 VAC, 50/60Hz (1 min)
	Between open contacts (Auxiliary contact)	500 VAC, 50/60Hz (1 min)
	Between coil and Auxiliary contacts	500 VAC, 50/60Hz (1 min)
	Between Auxiliary contacts and main contacts	4,000 VAC, 50/60Hz (1 min)
Resistance to short circuit current		Based on IEC62752,≥1.5kA, ≥6.0kA^{2}S,
		Based on IEC62955,≥1.85kA, ≥4.5kA^{2}S,
Surge voltage between coil and main contacts		6,000V(1.2/50us)
Vibration resistance		10Hz to 55Hz., 1.5mm double amplitude
Shock resistance	Destruction	1,000m/S^2(100G approximately)
	Malfunction	100m/S2(10G approximately)
Ambient humidity		5%~85% RH
Ambient temperature		-40℃~+85℃（without icing or condensation）
Terminal		PCB terminal
Enclosure (94V-0 Flammability Ratings)		V: Vented(Flux-tight),plastic cover.(RT II)
Main contact clearance		≥2.25mm
Weight		Approx.35g

2023 Rev.00 Churod Electronics Co., Ltd.

ORDERING INFORMATION

	CHID	-50	/12	D	A	2	-B	P	000

1.Product Family

CHID

2.Rated current

50=50A

3.Rate coil voltage

05=5VDC 09=9VDC 12=12VDC 24 =24VDC 48=48VDC

4.Coil Input

D =2.1W

5.Contact Arrangement

A = 1 Form A (SPST-NO)

6.Contact material (main contact)

2 = AgSnO2

7.Auxiliary Contact Arrangement

B =1 Form B (SPST-NC)

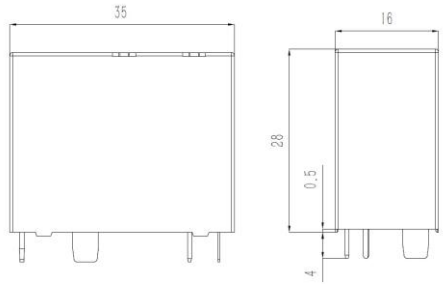
8.Auxiliary Terminal

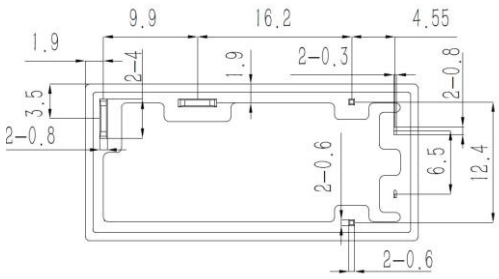
P=PCB Terminal

9.Additional numbers and /or letters

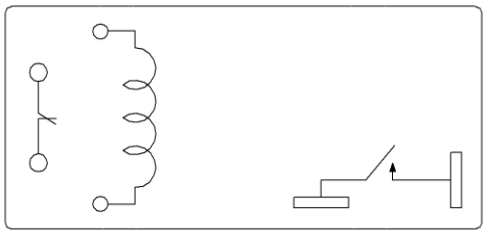
000-999, AAA-ZZZ, aaa-zzz or blank, which does not represent electrical changes, only for specific customer requirements

OUTLINE DIMENSION

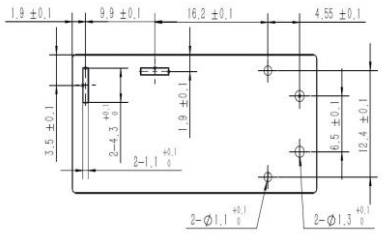




WIRING DIAGRAMS (BOTTOM VIEWS)



PC BOARD LAYOUTS (BOTTOM VIEWS)



NOTE:

1) The reference tolerance in outline dimension;

outline dimension ≤1mm, reference tolerance is ±0.2mm;

outline dimension > 1mm and ≤5mm, reference tolerance is ±0.3mm;

outline dimension > 5mm, reference tolerance is ±0.5mm.

2) The reference tolerance for PC Board layout is ±0.1mm.