

CHDR1 Series

Features

- Epoxy resin seal , Environmental protection category RTII
- 50A 85°C carrying capacity
- 1A (SPDM) , GAP>3.0mm
- Outline dimension: 38mm×29.8mm×33.6mm
- IEC61810, IEC60664, RoHS, REACH SvHC compliance
- PCB mounting type

Application

DC power control
 Precharge circuit control of inverter
 Industrial DC control unit
 AGV car

Coil parameters

Rated voltage Vd.c.	Rated power W	Rated current mA	Coil resistance $\Omega \pm 10\%$	Operate voltage Vd.c.	Release voltage Vd.c.
9	2	220	42.5	≤ 6.75	≥ 0.45
12	2	160	76	≤ 9	≥ 0.6
18	2	110	170	≤ 13.5	≥ 0.9
24	2	80	303	≤ 18	≥ 1.2
36	2	55	682	≤ 27	≥ 1.8
48	2	40	1212	≤ 36	≥ 2.4
60	2	33	1894	≤ 45	≥ 3.0
110	2	18	6368	≤ 82.5	≥ 5.5

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

Contact parameters

Contact form	1A (SPDM)
Contact material	AnSnO ₂
Initial voltage drop	≤ 60 mV at 50 A
Rated current (Resistive Load)	50A (@10mm ²)
Rated switching voltage	500 Vd.c.
Minimum applicable load	48Vd.c., 100mA
Max switching voltage	500 Vd.c.
Rated switching current	25kW (500 Vd.c.)
Maximum breaking current	100A (450 Vd.c.) ≥ 2 ops.

50A DC Relay



Durability

Electrical life (Resistive Load)	0.3x10 ³ ops. (500 Vd.c. 50 A) 3.0x10 ³ ops. (500 Vd.c. 40 A)
Current tolerance	50A, continuous
	60A, 1.0 h
	80A, 20 min
	100A, 30 s
	150A, 10 s
300A, 0.6 s	
Mechanical life	2x10 ⁵ ops.ON:OFF: 0.2s: 0.2s

Notes: Unless otherwise indicated, Electrical life at 23°C, ON: OFF=1s:9s. During the test, the coil was not connected to the surge suppression device. If the coil parallel diode is used, the release time of the relay will be lengthened and the service life will be reduced.

Other parameters

Dielectric strength	between open contacts	2500 Va.c. 50/60 Hz 1 min
	between coil to contacts	3500 Va.c. 50/60 Hz 1 min
Insulation resistance		1000 M Ω at 1000 Vd.c.
Operate time (at rated voltage)		≤ 25 ms
Release time (at rated voltage)		≤ 10 ms
Vibration resistance		10Hz~500Hz, 49m/s ²
Shock resistance	Functional	ON: 196m/s ² OFF: 98m/s ²
	Destruction	490m/s ²
Ambient temperature		-40°C~85°C (No dew, No ice)
Relative humidity		5% RH ~85% RH
Terminal style		PCB terminal
Installation		PCB terminal
Environmental protection category		RTII
Weight		70g
Overall dimensions		38mm×29.8mm×33.6mm

Notes: The above values are conservative at 23°C.

Selection of reference

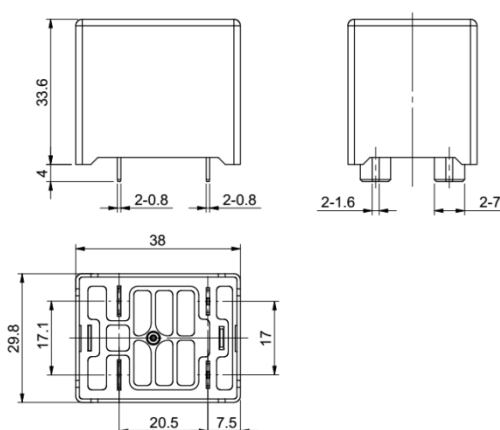
	CHDR1	-1	12	DO	50	000
Product code:						
CHDR1 series						
Contact form:						
1 Form A (SPDM)						
Coil rated voltage:						
09:9VDC 12:12VDC 18:18VDC 24:24VDC 36:36VDC 48:48VDC 60:60VDC 110:110VDC						
Rated switching voltage:						
DO: 500VDC						
Rated switching current:						
50: 50A						
Additional numbers and /or letters:						
000-999, AAA-ZZZ, aaa-zzz or blank, which does not represent electrical changes, only for specific customer requirements						

Notes: The special customer shall be identified by the form of characteristic number after our company's review.

Typical model

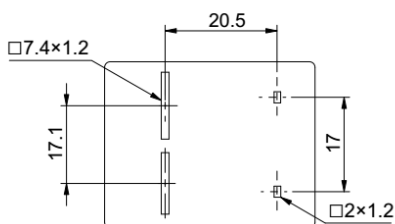
Product description		Characteristics				
Product name	Code	Coil voltage	Contact materials	Load	Electrical life	Safety certification
CHDR1-1**DO50	000	9V DC 12V DC 18V DC 24V DC 36V DC 48V DC 60V DC 110V DC	AgSnO2	50A @500VDC 40A @500VDC	300ops. 3000ops.	TUV CQC

Outline dimension

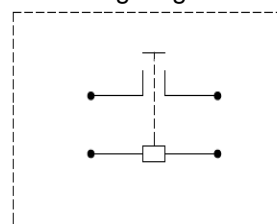


Notes: No dimensional tolerance noted :
 size ≤10mm; tolerance : ± 0.2mm;
 size 10~50mm; tolerance : ± 0.3mm;
 size >50mm时; tolerance : ± 0.4mm。

Mounting hole dimensions and wiring diagram



Wiring diagram



Notes: The load and the coil is non-polar.

Installation instructions

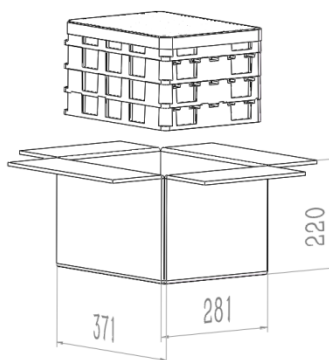
Product name	Load		Coil	
	Installation	TAB terminal	Connection method	TAB terminal
CHDR1-1XXDO50	PCB Terminal	/	PCB welding	/

Notes:

- 1、 Please avoid sticking grease and other foreign bodies on the lead end, PCB terminal use above 10mm² connecting wires. Otherwise, it may cause abnormal fever at the end of the derivation.
- 3、 PCB Terminal welding temperature and time are recommended not to exceed 260°C/10S. In the case of overrange, damage may result.

Packaging figure

Each plastic box 25PCS ,
Per carton 100PCS.



Statement

- This information is for customer reference only.Churod has tried its best to ensure the accuracy of the information. However, errors are unavoidable and the specifications and parameters of the product may change due to the improvement of the product.
- About application, Churod cannot assess relay for each specific application in the field of all performance parameters of the requirements, so customer should according to the specific conditions of use choose matching products, which did not make clear a regulation requirement, please contact Churod in order to get more technical support, Churod clear statement to this data information is only for reference, and the customer is responsible for the product to choose.