

Churod Relays Introduction



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Home Appliance Relay Solution

1 Applications



2 Relay Recommendation

No.	Relay Part	Feature
1	A1-S-112DA	5A, Sealed/Explosion-proof
2	A1-V-112DA	5A, Vented
3	A1-S-112HA	10A, Sealed/Explosion-proof
4	A1-V-112HA	10A, Vented
5	A1-S-112HAF	10A, Sealed/Explosion-proof
6	CHM-S-112DA3	5A, Sealed/Explosion-proof
7	CHM-V-112DA3	5A, Vented
8	A2-S-112DA2	5A, Sealed, SPST(Form A)
9	A2-S-112DC2	5A, Sealed, SPDT(Form C)
10	CHW-S-112DA2	10A, Sealed, SPST(Form A)
11	CHW-S-112DC2	10A, Sealed, SPDT(Form C)
12	CHZ01-S-112LA2	10A, Sealed
13	CHZ02-S-112LA2	16A, Sealed/Explosion-proof
14	CHZ03-S-112LA2	16A, Sealed/Explosion-proof
15	CHI03-S-112DA2	20A, Sealed/Explosion-proof
16	CHF-S-112DA2	20A/25A, Sealed/Explosion-proof
17	CHF-V-112DA2	20A/25A, Vented
18	CHFN-S-112DA2	20A/25A, Sealed/Explosion-proof
19	CHFN-V-112DA2	20A/25A, Vented
20	CHS01-S-112LA	30A/40A, Vented/Sealed
21	CHS02-S-112LA	30A, Vented/Sealed

3 Relay Features

A1-V/S-112DA/HA/HAF

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 450mW/200mW
- ▶ Cert. Load: DA:5A / HA/HAF:10A
- ▶ Type of Encapsulation: Vented/Sealed/Explosion-proof(optional)



A2-S-112DA2/DC2

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 200mW/150mW
- ▶ Cert. Load: 10A
- ▶ Type of Encapsulation: Sealed



CHI03-S-112DA2

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 400mW
- ▶ Cert. Load: 20A
- ▶ Type of Encapsulation: Sealed/Explosion-proof(optional)



CHZ01/02/03-S-112LA2

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 530mW
- ▶ Cert. Load: 10A/16A
- ▶ Type of Encapsulation: Sealed/Explosion-proof(optional)



CHF/CHFN-V/S-112DA2

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 900mW
- ▶ Cert. Load: 20A/25A(optional)
- ▶ Type of Encapsulation: Vented/Sealed/Explosion-proof(optional)



CHS01/02-S-112LA2

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 900mW
- ▶ Cert. Load: 30A/40A
- ▶ Type of Encapsulation: Sealed/Explosion-proof(optional)



Smart Homes Relay Solution

1 Applications



2 Relay Recommendation

No.	Applications	Relay P/N
1	Smart switch Smart socket	A1-S-105HA2
		A1-S-112HA2
		CHI03-S-105DA2
		CHI03-S-112DA2
		CHI03L-S-105DA2
		CHI03L-S-112DA2
		CHI03L-S-105HA2
		CHI03L-S-112HA2
2	Smart window/motor	A16-V-105DA2F
		A16-V-112DA2F
2	Smart window/motor	A1-S-112HA2
3	Smart lighting control	A1-S-112HA2
		CHI03-S-112DA2
4	Smart toilet	CHI03-S-112DA2
5	Smart clothes hanger	A1-S-112HA2
6	Others	A1-S-112HA2
		A1-S-124HA2
		CHI03-S-112DA2
		CHI03-S-124DA2
		CHI03L-S-112HA2

3 Relay Features

A1 series

- ▶ Coil Voltage: 5VDC-24VDC
- ▶ Coil Power: 450mW/200mW
- ▶ Cert. Load: 10A TV-5

CHI03 series

- ▶ Coil Voltage: 5VDC-24VDC
- ▶ Coil Power : 400mW
- ▶ Cert. Load : 20A TV-8

CHI03L series

- ▶ Coil Voltage: 5VDC-24VDC
- ▶ Coil Power: 400mW/600mW
- ▶ Cert. Load: 16A TV-8
- ▶ Type of Coil: Latching (optional)

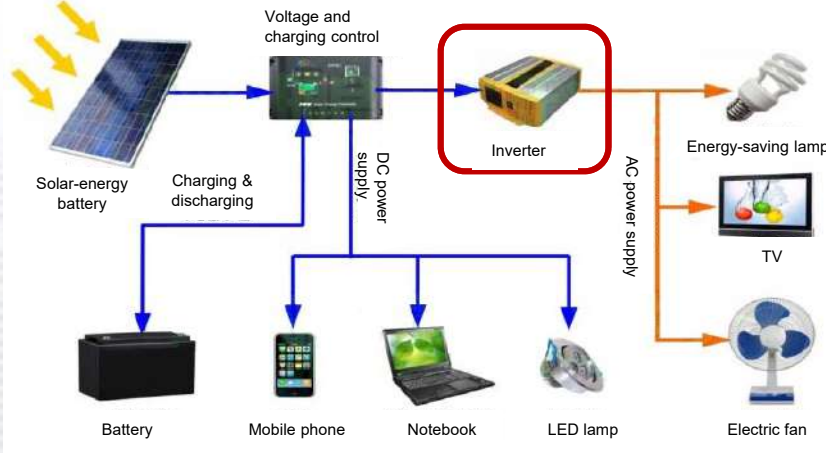
A16 series

- ▶ Coil Voltage: 5VDC-24VDC
- ▶ Coil Power : 400mW
- ▶ Cert. Load : 16A TV-8



Solar Relay Solution

1 Applications



2 Relay Recommendation

No.	Inverter Power	Major Relay P/N	Current
1	10KW or below	CHFN-V-112HA2F(31A)	31A
		CHFN-V-112HA2F(35A)	35A
2	10~25KW	CHS01-V-112HA(35A)	35A
		CHS01-V-112HA(43A)	43A
		CHS01-V-112HA2(43G)	43A
3	30~40KW	CHS01-V-112HA2(50G)	50A
		CHS01-V-112HA2(60G)	60A
		CHAR-112A70DA2	70A
4	40~60KW	CHAR-112A100T/CHAR-112A90C	100A
5	60~70KW	CHAR-112A130/CHAR-112A120C	130A
6	80~110KW	CHAR-112A150/CHAR-112A165C	150A
7	120~225KW	CHAR-112A200/CHAR-112A200C	200A
8	230~250KW	CHAR-112A230C	230A

3 Relay Features

CHFN-V-112HA2F(31A/35A)

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 1.4W
- ▶ Cert. Load: 31A/35A
- ▶ Contactor Gap: $\geq 1.8\text{mm} / 2.25\text{mm}$

CHS01-V-112HA(35A/43A)

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 2.25W
- ▶ Cert. Load: 35A/43A
- ▶ Contactor Gap: $\geq 1.8\text{mm}$

CHS01-V-112HA2(43G/50G/60G)

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 2.25W
- ▶ Cert. Load: 43A/50A/60A
- ▶ Contactor Gap: $\geq 2.25\text{mm}$

CHAR-112A100T/130/150/200

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 3.2W
- ▶ Cert. Load: 100A/130A/150A/200A
- ▶ Contactor Gap: $\geq 3.6\text{mm}$

CHAR-112A200C/230C

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power: 2.0W
- ▶ Cert. Load: 200A / 230A
- ▶ Contactor Gap: $\geq 4.0\text{mm}$





Charging Station Relay Solution

1 Applications



Charging Module



DC Charging



AC Charging

2 Relay Recommendation

No.	Applications	Major Relay P/N
1	Charging Module	CHS01-S-112LA (30A/40A) CHS01-V-112LA2 (50A/60A) CHP5-112BNB2-B60 (60A) CHP8-112DB2-S90 (90A)
2	DC Charging	CHEV-112EA120 CHEV-112EA150 CHEV-112EA200 CHEV-112EA250 CHEV-112EA300
3	AC Charging	CHS01-S-112LA (30A/40A) CHS01-V-112LA2 (50A/60A) CHP5-112BNB2-B60 (60A) CHP8-112DB2-S90 (90A)

3 Relay Features

CHS01-S-112LA(30A/40A)

- ▶ Coil Voltage: 12VDC
- ▶ Coil Power : 0.9W
- ▶ Cert. Rating: 30A/40A@277VAC
- ▶ Mounting : PCB

CHS01-V-112LA2(50A/60A)

- ▶ Coil Voltage : 12VDC
- ▶ Coil Power : 0.9W
- ▶ Cert. Rating: 50A/60A@277VAC
- ▶ Mounting : PCB

CHEV-112EA120/150/200/250/300

- ▶ Coil Voltage: Economized 12-24VDC
- ▶ Coil Power: On 42~55W, Hold 1.8~3.0W
- ▶ Cert. Rating: 120A-300A@750VDC
- ▶ Product Structure: Ceramic & Metal Glazed
- ▶ Auxiliary Contact: available

CHP5-112BNB2-B60

- ▶Coil Voltage: 12VDC
- ▶Coil Power : Dual Coil 2.0W
- ▶Cert. Rating: 60A@250VAC
- ▶Mounting : PCB
- ▶Type of Coil: Latching Relay

CHP8-112DB2-S90

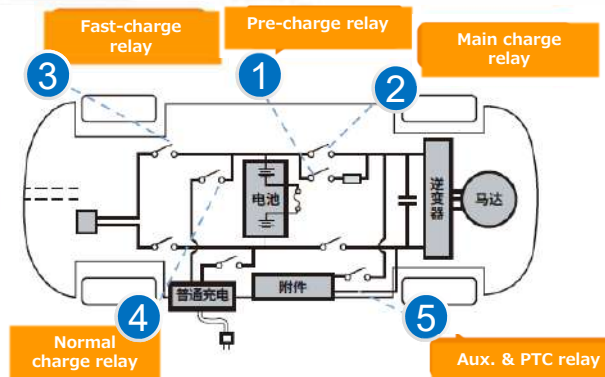
- ▶Coil Voltage: 12VDC
- ▶Coil Power: Single Coil 1.0W
- ▶Cert. Rating: 90A@250VAC
- ▶Mounting : PCB
- ▶Type of Coil: Latching Relay





Electric Vehicles Relay Solution

1 Application



2 Relay Recommendation

No.	Application	Major Relay P/N
1	Main charge relay	CHEV-112P150D
		CHEV-112P200
		CHEV-112P250
		CHEV-112H250
		CHEV-112H300
2	Pre-charge relay	CHEV-112H400
		CHDR1-112DV20
		CHDR1-112DV20T
		CHDR1-112DO50
3	Fast-charge relay	CHEV-112P100
		CHEV-112P150D
		CHEV-112P200
		CHEV-112P250
		CHEV-112H250
4	Normal-charge relay	CHEV-112H300
		CHEV-112H400
		CHDR1-112DV20
		CHDR1-112DV20T
		CHDR1-112DO50
5	Aux. & PTC relay	CHEV-112P100
		CHEV-112P150D
		CHDR1-112DV20
		CHDR1-112DV20T
		CHDR1-112DO50

3 Relay Features

CHDR1-112DV20/20T/50

- ▶ Coil Voltage : 12VDC, 24VDC
- ▶ Coil Power : 1.9W
- ▶ Rated Rating: 20A@600VDC / 50A@500VDC
- ▶ Structure : Epoxy Sealed



CHEV-112P60/100/150D/200/250

- ▶ Coil Voltage : 12VDC, 24VDC
- ▶ Coil Power : 5.2W~6.0W
- ▶ Rated Rating: 100A-250A@750VDC
- ▶ Structure: Ceramic & brass-solder sealing



CHEV-112H250/300/400

- ▶ Coil Voltage: 12VDC, 24VDC
- ▶ Coil Power : 6.0W
- ▶ Cert. Rating: 250A-400A@750VDC
- ▶ Structure: Ceramic & brass-solder sealing
- ▶ Short circuit capability: 8kA~10kA





Electric Forklift Relay Solution



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1 Applications

Electric Forklift



Battery Pack for Electric Fork

1. 24V battery system
2. 48V battery system
3. 72V battery system
4. Aux. heating system



2 Relay Recommendation

No.	Applications	Relay P/N
1	24V battery system	CHEV-112E200/CHDC-112D200AS CHEV-112E300/CHDC-112D400AS
2	48V battery system	CHEV-112E300/CHDC-112D400AS
3	72V battery system	CHEV-112E300/CHDC-112D400AS
4	Aux. heating system	CHEV-112S60 CHEV-112S120

3 Relay Features

CHEV-112E200

- ▶ Coil Voltage: Economy type 12-24VDC
- ▶ Coil Power : Switch 42W, Hold 1.8W
- ▶ Cert. Rating: 200A@750VDC
- ▶ Structure : Ceramic & Metal Glazed



CHEV-112E300

- ▶ Coil Voltage: Economized 12-24VDC
- ▶ Coil Power : Switch 55W, Hold 3.0W
- ▶ Cert. Rating: 300A@750VDC
- ▶ Structure : Ceramic & Metal Glazed



CHEV-112S60

- ▶ Coil Voltage : Single Coil 12VDC
- ▶ Coil Power : 6.0W
- ▶ Cert. Rating : 60A@750VDC
- ▶ Structure : Ceramic & Metal Glazed



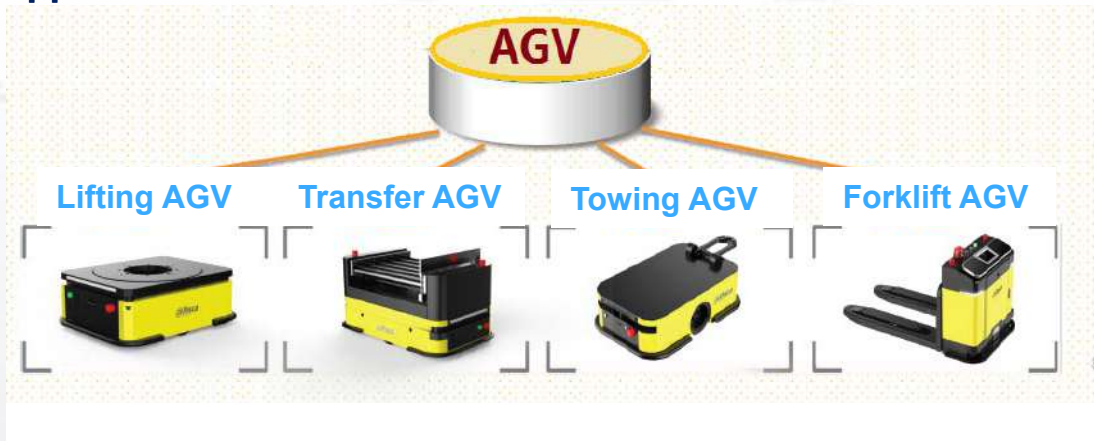
CHDC-112D200/400AS

- ▶ Coil Voltage : 12VDC
- ▶ Coil Power : Hold 5.0W
- ▶ Rated Load : 200A/400A@60VDC
- ▶ Mounting : Screw
- ▶ Type of Contactor: SPST-NO (1 form A)



AGV Relay Solution (2020)

1 Applications



2 Relays Recommendation

No.	Major Relay P/N
1	CHDR-124D100
2	CHDR-124D150H
3	CHDC-124D200SL

3 Relay Features

CHDR-124D100

- ▶ Coil Voltage: 24VDC
- ▶ Coil Power : 3.2W
- ▶ Rated Load: 100A@48VDC
- ▶ Mounting : PCB



CHDR-124D150H

- ▶ Coil Voltage: 24VDC
- ▶ Coil Power : 3.2W
- ▶ Rated Load: 150A@60VDC
- ▶ Mounting : PCB



CHDC-124D200SL

- ▶ Coil Voltage: 24VDC
- ▶ Coil Power : 48W
- ▶ Rated Load : 200A@80VDC
- ▶ Mounting : Screw



New Product CHDC series

1 Applications

5G Base Station Power



Energy Storage



Inverter



Low-speed Vehicle



2 Relay Recommendation:

No.	Application	Major Relay P/N
1	5G Base Station Power	CHDC-148D200BS
		CHDC-148D200SL
2	Energy Storage	CHDC-148D250ASH
3	Inverter	CHDC-124D200AS
		CHDC-124D400AS
4	Low-speed Vehicles	CHDC-124D200AS
		CHDC-124D400AS

3 Relay Features

CHDC-124D200BS/AS/400AS

- ▶ Coil Voltage: 24VDC/48VDC
- ▶ Coil Power : Hold 3.6W/4.8W
- ▶ Rated Load : 200A, 400A@60VDC
- ▶ Type of Contact: SPST-NO (1 form A) / SPDT (1 form C)
- ▶ Mounting: Screw Mounting

CHDC-148D200SL

- ▶ Coil Voltage: 48VDC
- ▶ Coil Power : 48W
- ▶ Rated Load : 200A@80VDC
- ▶ Type of Contact: SPST-NO (1 form A)
- ▶ Mounting: Screw Mounting
- ▶ Type of Coil: Latching Coil

