

HFGD11-4

FORCIBLY GUIDED RELAY MODULE



Features

- A variety of contact combinations ranging from two to six sets, with a width of only 18mm
- Forced-guided contact structure (compliant with IEC 61810-3 standard)
- Single set of contacts load capacity 6A 250VAC/30VDC
- Non-polarized wiring, which can prevent operational failures caused by incorrect wiring
- Push-in spring terminal blocks
- 0.2-1.5mm²/24-16AWG Wide range wiring capacity
- Installation method: DIN35

CHARACTERISTICS

INPUT						
Nominal Voltage	12VDC, 24VDC, 48VDC, 110VAC/DC, 230VAC/DC (Allow 85% to 110% rated change range, at 23°C)					
Rated power(W)	Type	12VDC	24VDC	48VDC	110VAC/DC	230VAC/DC
	2H	Approx. 0.8	Approx. 0.8	Approx. 0.8	Approx. 0.7	Approx. 1.6
	3H	Approx. 0.4	Approx. 0.5	Approx. 0.5	Approx. 0.4	Approx. 0.8
	4H	Approx. 0.4	Approx. 0.5	Approx. 0.5	Approx. 0.4	Approx. 0.8
	6H	Approx. 0.6	Approx. 0.6	Approx. 0.6	Approx. 0.5	Approx. 1.2
Wiring polarity	No					
Terminal type	Push-in spring terminal blocks (See Annex 4)					
Control Channel Qty	1					
OUTPUT						
Relay specification	HFA2, HFA4, HFA6 (See Annex 1, 2, 3)					
Contact arrangement	1H1D, 2Z, 2H1D, 2H2D, 3H1D, 3H3D, 4H2D, 5H1D					
Rated voltage	250VAC/30VDC					
Rated current	6A					
Terminal type	Push-in spring terminal blocks (See Annex 4)					
ENVIRONMENTAL AND SAFETY REGULATIONS						
Ambient temperature	-40°C to 70°C					
Storage temperature	-40°C to 70°C					
Vibration resistance	10Hz to 60Hz, 0.3mm DC, 60Hz to 150Hz, 19.6m/s ²					
Shock resistance	98m/s ²					
Standard compliance	IEC 61810-3					
Creepage distance	Between output channels					≥3mm
	Between input and output					≥5.5mm



HONGFA APPLICATION ELECTRONIC MODULE

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000, ISO/IEC 27001 CERTIFIED

2025 Rev. 3.00

CHARACTERISTICS

ENVIRONMENTAL AND SAFETY REGULATIONS

Dielectric strength	Between output channels	2500VAC 1min
	Between input and output	4000VAC 1min
	Between open contacts	1500VAC 1min
Surge voltage(1.2/50 μ s)	Between output channels	4kV
	Between input and output	6kV
	Between open contacts	2.5kV

Product Installation and Maintenance

Installation method	DIN35 (Compatible with thicknesses of 1.0mm and 1.2mm)
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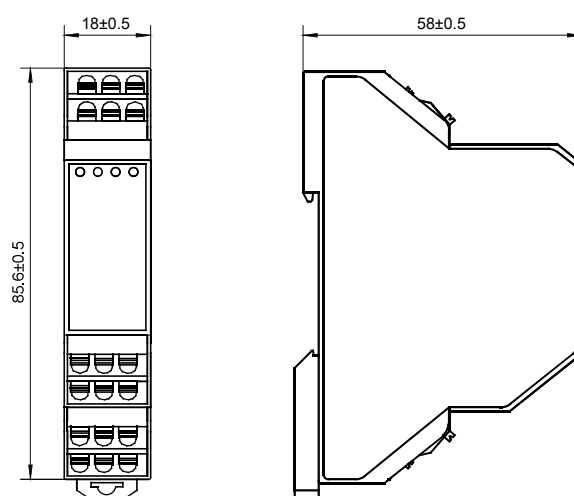
ORDERING INFORMATION

Type	HFGD11-4 /	CN1H1D	-R	D24	(XXX)
Output Channel Type	CN1H1D: 1 Form A+1 Form B CN2Z: 2 Form C CN2H1D: 2 Form A+1 Form B CN2H2D: 2 Form A+2 Form B CN3H1D: 3 Form A+1 Form B CN3H3D: 3 Form A+3 Form B CN4H2D: 4 Form A+2 Form B CN5H1D: 5 Form A+1 Form B				
Installation method	R: Rail				
Input rated voltage	D12: 12VDC D24: 24VDC D48: 48VDC U110: 110VAC/DC U230: 230VAC/DC				
Special code	XXX: Customer special requirement Nil: Standard				

Notes: Special requirements of customers will be expressed as special codes after being evaluated by Hongfa.

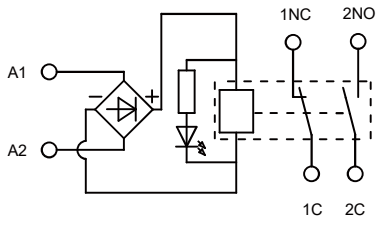
OUTLINE DIMENSIONS

Unit: mm

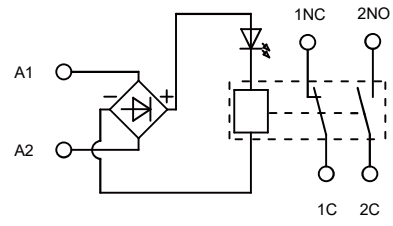


SCHEMATIC DIAGRAM

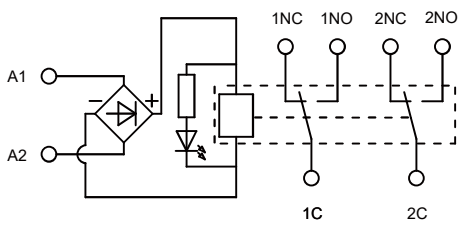
HFGD11-4/CN1H1D-RDxx



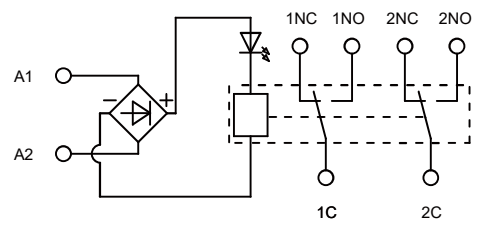
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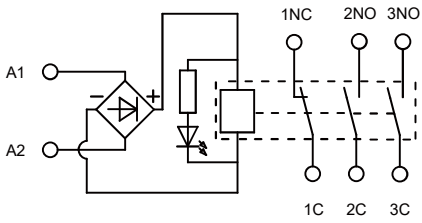
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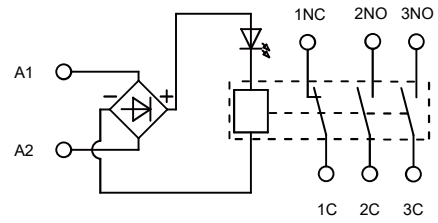
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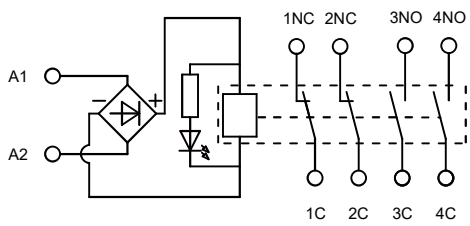
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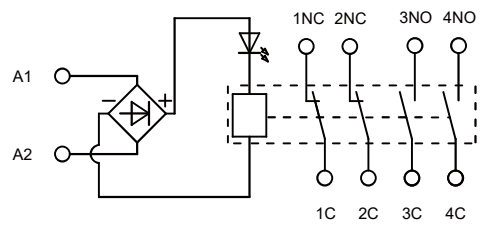
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HFGD11-4/CN2H2D-RDxx

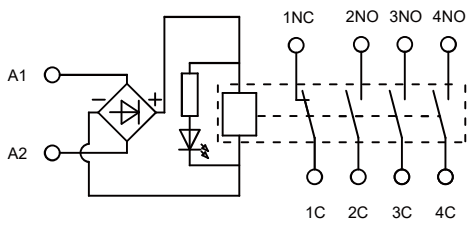


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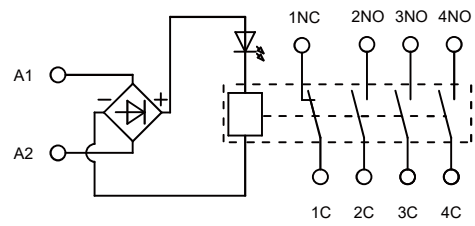


SCHEMATIC DIAGRAM

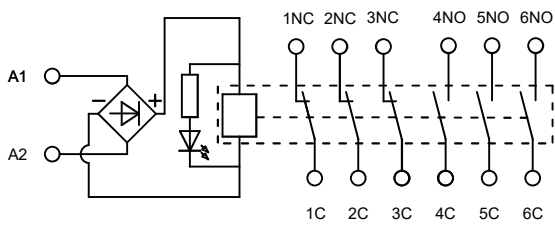
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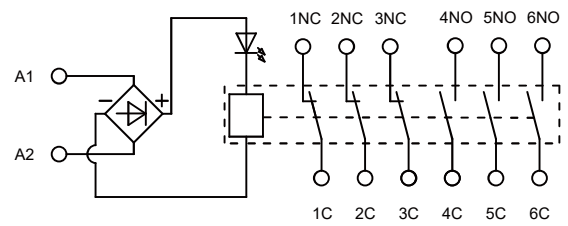
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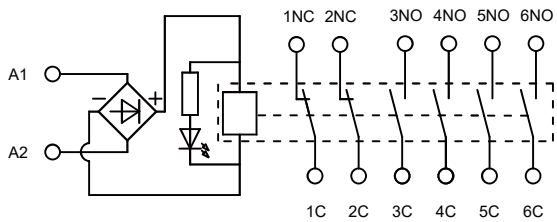
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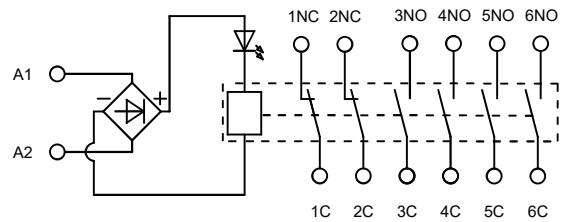
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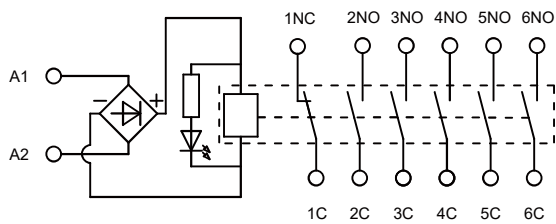
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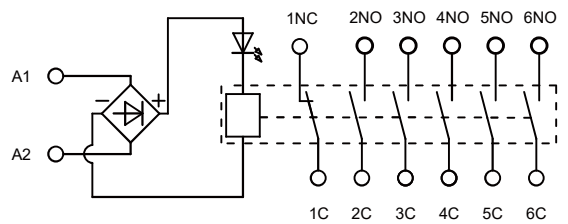
HFGD11-4/CN4H2D-RUxx



HFGD11-4/CN5H1D-RDxx



HFGD11-4/CN5H1D-RUxx



Annex 1: Relay parameter table(HFA2)



File No.: E134517



File No.: 40034342



Features

- Multi contact arrangements: 2 Form C (2Z type), 1NO+1NC (HD1 type), 1NO+1NC (HD2 type)
- Forcibly guided contacts according to IEC 61810-3
- 8A switching capability
- High insulation capability (1.2 / 50 μ s):10kV surge voltage between coil & contacts and 6kV between contact sets
- UL insulation system: Class F available

RoHS compliant

TECHNICAL SPECIFICATION

CONTACT DATA

Contact arrangement	2 Form C (2Z type), 1NO+1NC (HD1 type), 1NO+1NC (HD2 type)	
Forcibly guided contacts Type (according to IEC61810-3)	HD1,HD2	Type A
	2Z	Type B
Contact Resistance	$\leq 100\text{m}\Omega$ (at 1A 6VDC)	
Contact material	AgSnO ₂	
Contact rating	6A 250VAC/30VDC	
Max.switching voltage	400VAC/30VDC	
Max.switching current	8A	
Max.switching power	1500VA/180W	
Mechanical endurance	1 $\times 10^7$ OPS	
Electrical endurance	1 $\times 10^5$ OPS (1NO:6A 250VAC/30VDC, Resistive load, at 70 $^{\circ}$ C, 1s on 9s off)	
	5 $\times 10^4$ OPS (1NC:6A 250VAC/30VDC, Resistive load, at 70 $^{\circ}$ C, 1s on 9s off)	

CHARACTETISTIC

Insulation resistance	1000M Ω (500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1500VAC 1min
	Between contact sets	3000VAC 1min
Surge voltage(1.2/50 μ s)	Between coil & contacts	10kV
	Between open contacts	2.5kV
	Between contact sets	6kV

Annex 1: Relay parameter table(HFA4)

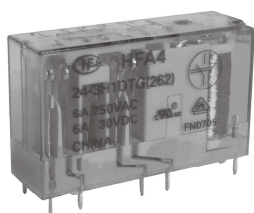


CALUS

File No.: E134517



File No.: 40034342



Features

- Multi contact arrangements: 2NO+2NC, 3NO+1NC
- Forcibly guided contacts according to IEC 61810-3
- 6A switching capability
- Low input power: 360mW
- High insulation capability: 10kV surge voltage between input and output
- UL insulation system: Class F available

RoHS compliant

TECHNICAL SPECIFICATION

CONTACT DATA

Contact arrangement	2H2D,3H1D
Forcibly guided contacts Type(according to IEC61810-3)	Type A
Contact Resistance	≤100mΩ (at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating	6A 250VAC/30VDC
Max.switching voltage	400VAC/30VDC
Max.switching current	6A
Max.switching power	1500VA/180W
Mechanical endurance	1×10 ⁷ ops
Electrical endurance	1×10 ⁵ ops(1NO:6A 30VDC, Resistive load, Room temp, 1s on 9s off)
	1×10 ⁵ ops(1NO:6A 250VAC, Resistive load, Room temp, 1s on 9s off)

CHARACTETISTIC

Insulation resistance	1000MΩ(500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1500VAC 1min
	Between contact sets	2500VAC 1min(7-8/9-10), 4000VAC 1min (Other)
Surge voltage(1.2/50μs)	Between coil & contacts	10kV
	Between open contacts	2.5kV
	Between contact sets	6kV

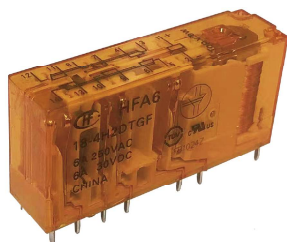
Annex 3: Relay parameter table(HFA6)



File No.: E134517



File No.: B 053286 0043



Features

- Multi contact arrangements: 5NO+1NC, 4NO+2NC, 3NO+3NC
- Forcibly guided contacts according to IEC 61810-3
- 6A switching capability
- Low input power: 500mW
- High insulation capability: 10kV surge voltage between input and output
- UL insulation system: Class F available

RoHS compliant

TECHNICAL SPECIFICATION

CONTACT DATA

Contact arrangement	5H1D,4H2D,3H3D
Forcibly guided contacts Type(according to IEC61810-3)	Type A
Contact Resistance	≤100mΩ (at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating	6A 250VAC/30VDC
Max.switching voltage	400VAC/30VDC
Max.switching current	6A
Max.switching power	1500VA/180W
Mechanical endurance	1×10 ⁷ OPS
Electrical endurance	1×10 ⁵ OPS (1NO:6A 30VDC, Resistive load, Room temp, 1s on 9s off)
	1×10 ⁵ OPS (1NO:6A 250VAC, Resistive load, Room temp, 1s on 9s off)

性能参数

Insulation resistance	1000MΩ(500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1500VAC 1min
	Between contact sets	2500VAC 1min(11-12/13-14), 4000VAC 1min (Other)
Surge voltage(1.2/50μs)	Between coil & contacts	10kV
	Between contact sets	5kV

Annex 4: Wiring terminal parameter table



Features

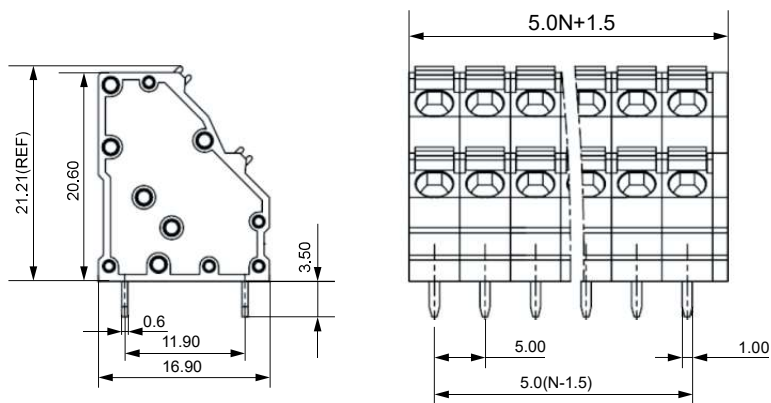
- PCB pair screw terminal
- Can be quickly inserted and removed

TECHNICAL SPECIFICATION

Rated load	10A 300V(UL Standard)/17.5A 250V(IEC Standard)
Pitch	5.0mm
Conductor Cross Section	0.2~1.5mm ²
Rated Dielectric Strength	1600VAC
Rated Withstand Pulse Voltage	4kV
Ambient Temperature	-40°C~105°C
Striping Length	(8-9)mm
Tightening Torque	/
Insulation Material Type/Insulation Material Group	UL94V-0

OUTLINE DIMENSIONS

Unit: mm



Remark:

- 1) Some outline dimensions of the product have no dimensional tolerance noted: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
- 2) In the layout of PCB mounting holes, if no dimensional tolerance is noted, it shall be calculated as $\pm 0.1\text{mm}$.

Disclaimer:

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact Hongfa for the technical service. However, it is the user's responsibility to determine which product should be used only.