

HFA2

SAFETY RELAY (RELAY WITH FORCIBLY GUIDED CONTACTS)



File No.:E134517



Features

- Multi contact arrangements: 2 Form C (2Z type), 1NO+1NC (HD1 type), 1NO+1NC (HD2 type)
- Forcibly guided contacts according to EN50205
- 6A switching capability
- High insulation capability (1.2 x 50µs):10kV surge voltage between coil & contacts and 6kV between contact sets
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (29 x12.6 x25.5) mm

CONTACT DATA

Contact arrangement	2 Form C (2Z type) 1NO+1NC (HD1 type) 1NO+1NC (HD2 type)
Forcibly guided contacts Type (according to EN50205)	HD1, HD2 type: Type A 2Z type: Type B
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	AgSnO ₂
Contact rating (Res. load)	6A 250VAC / 30VDC
Max. switching voltage	400VAC / 30VDC
Max. switching current	6A
Max. switching power	1500VA / 180W
Typical application load	AC-15 (according to IEC60947-5-1) NO: 3A 250VAC (inrush current 30A) NC: 1.5A 250VAC (inrush current 15A)
Mechanical endurance	1 x 10 ⁷ OPS
Electrical endurance ¹⁾	NO:1 x 10 ⁵ OPS NC:1 x 10 ⁴ OPS

Notes: 1) Applicable for rated load only on 1NO or 1NC.

COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil resistance Ω
5	3.80	0.5	7.5	35.7 x (1±10%)
6	4.50	0.6	9.0	51 x (1±10%)
9	6.80	0.9	13.5	116 x (1±10%)
12	9.00	1.2	18	206 x (1±10%)
15	11.3	1.5	22.5	321 x (1±10%)
18	13.5	1.8	27	483 x (1±10%)
21	15.8	2.1	31.5	630 x (1±10%)
24	18.0	2.4	36	823 x (1±10%)
36	27.0	3.6	54	1851 x (1±10%)
40	30.0	4.0	60	2286 x (1±10%)
48	36.0	4.8	72	3291 x (1±15%)
60	45.0	6.0	90	5142 x (1±15%)
80	64.0	8.0	120	9143 x (1±15%)
110	82.5	11.0	165	17285 x (1±15%)

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4000VAC 1 min
	Between open contacts	1500VAC 1 min
	Between contact sets	3000VAC 1 min
Surge voltage	Between coil & contacts	10kV (1.2 x 50µs)
	Between open contacts	2.5kV (1.2 x 50µs)
	Between contact sets	6.0kV (1.2 x 50µs)
Operate time (at rated voltage)	15ms max.	
Release time (at rated voltage)	10ms max.	
Vibration resistance	NO:10Hz to 55Hz 1.6mm DA 55Hz to 200Hz, 980m/s ² NC:10Hz to 55Hz 0.4mm DA	
Shock resistance	Functional	NO:98m/s ² NC: 49m/s ²
	Destructive	980m/s ²
Creepage distance	Between coil & contacts	8mm
	Between contacts	5.5mm
Clearance distance	Between coil & contacts	8mm
	Between contacts	5.5mm
Humidity	98% RH (+40°C)	
Ambient temperature	-40°C to 70°C	
Termination	PCB	
Unit weight	Approx. 20g	
Construction	Flux proofed, Plastic sealed	

COIL

Coil power	700mW
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SAFETY APPROVAL RATINGS

UL/CUL	6A 250VAC / 277VAC / 30VDC at 70°C NO: Pilot duty A300, at 70°C NC: Pilot duty B300, at 70°C
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HONGFA RELAY

ISO9001, ISO/TS16949, ISO14001, OHSAS18001, IECQ QC 080000 CERTIFIED

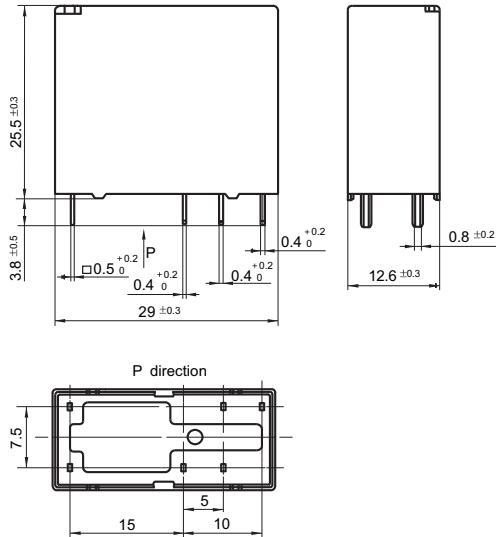
2010 Rev. 1.00

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

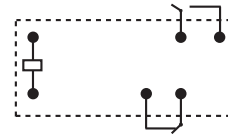
Unit: mm

HFA2/ □□ - HD1□T□ (□□□)

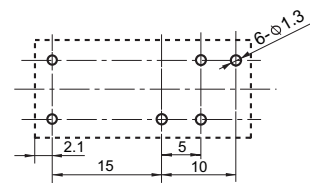
Outline Dimensions



Wiring Diagram

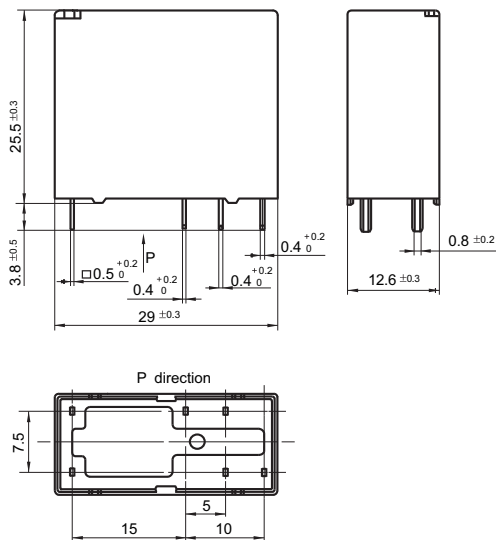


PCB Layout
(Bottom view)

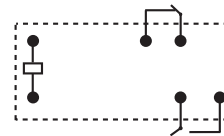


HFA2/ □□ - HD2□T□ (□□□)

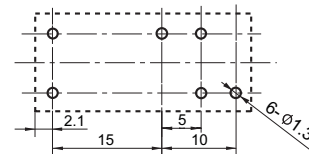
Outline Dimensions



Wiring Diagram



PCB Layout
(Bottom view)



- Remark: 1) In case of no tolerance shown in outline dimension: 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) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

Disclaimer

This datasheet is for the customers' reference. All the specifications are 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.

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