HFD41/D41A   SUBMINIATURE SIGNAL RELAY

Features

- 5A switching capability
- 1 Form C configuration
- Standard PCB layout
- Plastic sealed and flux proofed types available
- UL insulation system: Class F available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (15.7 x 11.0 x 12.0) mm

File No.:E133481

File No.:CQC10002049171(Only HFD41A)

CONTACT DATA

Concat arrangement	1C
Contact resistance	100mΩ max. (at 1A 6VDC)
Contact material	AgNi, AgCdO
Contact rating (Res. load)	1A 125VAC/30VDC 1A 120VAC, 1A 240VAC/30VDC 2A 125VAC, 3A 120VAC 2A 120VAC, 5A 120VAC
Max. switching voltage	240VAC / 30VDC
Max. switching current	5A
Max. switching power	600VA / 30W
Mechanical endurance	1×10^7OPS
Electrical endurance	1×10^5OPS

CHARACTERISTICS

Insulation resistance		100MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	1000VAC 1min
	Between open contacts	500VAC 1min
Operate time (at nomi. volt.)		10ms max.
Release time (at nomi. volt.)		5ms max.
Shock resistance	Functional	98m/s²
	Destructive	980m/s²
Vibration resistance		10Hz to 55Hz 1.5mm DA
Humidity		5% to 85% RH
Ambient temperature		-25°C to 70°C
Termination		PCB (DIP)
Unit weight		Approx. 5g
Construction		Plastic sealed, Flux proofed

Notes: 1) The data shown above are initial values.

2) Please find coil temperature curve in the characteristic curves below.

3) UL insulation system: Class F, Class B.

COIL

Coil power	B type: Approx. 450mW; N type: Approx. 360mW; H type: Approx. 200mW

COIL DATA   at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Allowable Voltage VDC	Coil Resistance x (1±10%) Ω		
				H	N	B
3	2.3	0.3	3.9	45	25	20
5	3.8	0.5	6.5	120	70	56
6	4.5	0.6	7.8	180	100	80
9	6.8	0.9	11.7	400	220	180
12	9.0	1.2	15.6	700	400	320
24	18.0	2.4	31.2	2800	1600	1280

SAFETY APPROVAL RATINGS

UL/CUL	1A 120VAC, 1A 240VAC/30VDC 1A 125VAC/30VDC 2A 125VAC 2A 120VAC, 3A 120VAC 5A 120VAC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.

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

2013 Rev. 1.00

ORDERING INFORMATION

	HFD41 HFD41A	/12VDC	-N	S	G	F	3	(XXX)

Type	
Coil voltage	3, 5, 6, 9, 12, 24 VDC
Coil power	**H:** 200mW　　**N:** 360mW　　**B:** 450mW
Construction[1]	**S:** Plastic sealed　　**Nil:** Flux proofed
Contact plating	**G:** Gold plated[2]　　**Nil:** No gold plated
Insulation standard	**F:** Class F　　**Nil:** Class B
Contact capacity[3]	**1:** 1A, 2A（AgNi, riveted contact）　　**3:** 3A（AgCdO, riveted contact） **5:** 5A（AgCdO, riveted contact）　　**Nil:** 1A, 2A（AgNi, threaded contact）
Customer special code	

Notes: 1) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
　　　 If water cleaning is required after the relay is assembled on PCB, please contact us for suggestion about suitable parts.
　　 2) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC.
　　 3) For contact capacity type 3 or type 5, please contact the sales person to determine the contact material to be used. Because gold-plated contact may be required depending on the applications.

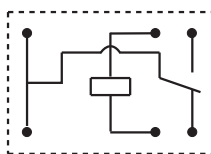## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT　　Unit: mm
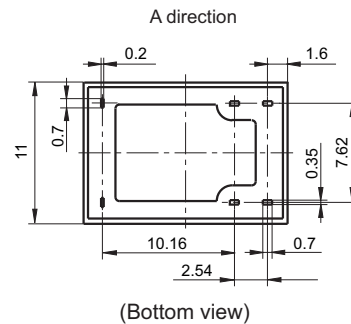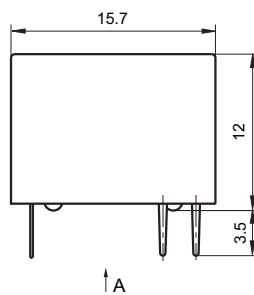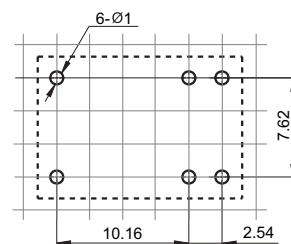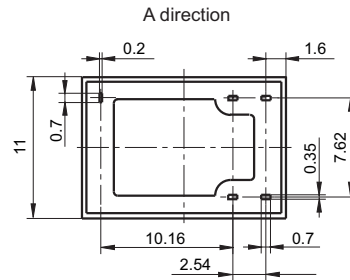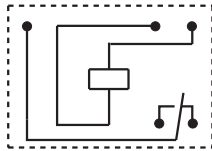
Outline Dimensions

HFD41

A direction

(Bottom view)

Wiring Diagram
(Bottom view)

PCB Layout
(Bottom view)

6-Ø1

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

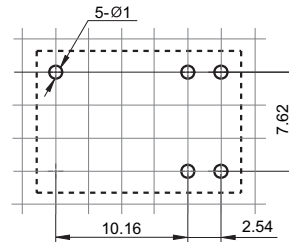### Outline Dimensions

HFD41A
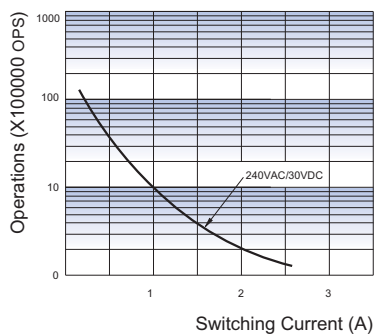
A direction

(Bottom view)

Wiring Diagram
(Bottom view)

PCB Layout
(Bottom view)

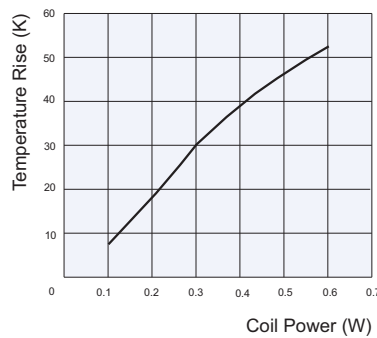5-Ø1
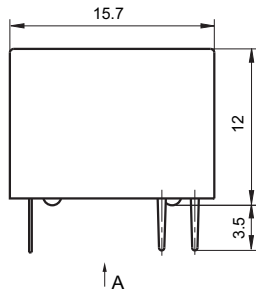
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
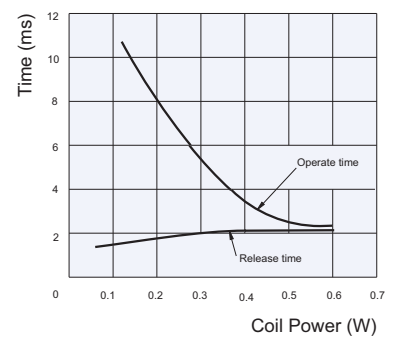3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES

ENDURANCE CURVE

Operations (X100000 OPS)

240VAC/30VDC

Switching Current (A)

COIL TEMPERATURE RISE

Temperature Rise (K)

Coil Power (W)

OPERATE TIME

Time (ms)

Operate time

Release time

Coil Power (W)

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.