

HFD41/D41A

SUBMINIATURE SIGNAL RELAY


File No.:E133481


File No.:CQC10002049171(Only HFD41A)



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

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 x 10 ⁷ OPS
Electrical endurance	1 x 10 ⁵ OPS

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/s ²
	Destructive	980m/s ²
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.

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

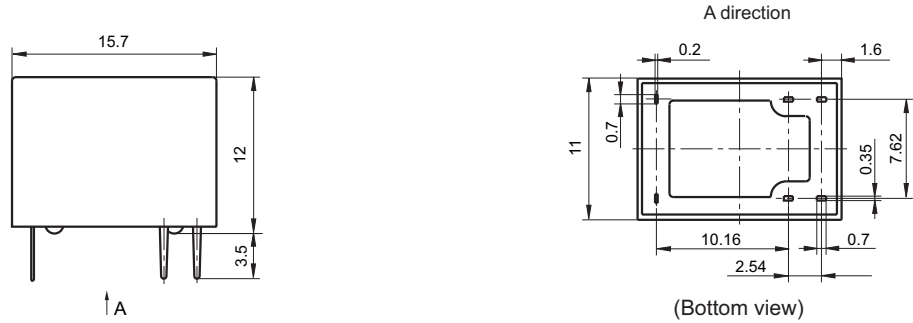
Notes: 1) Under the ambience with dangerous gas like H₂S, SO₂ or NO₂, plastic sealed type is recommended; Please test the relay in real applications. If the ambience allows, flux proofed type is preferentially recommended.
If water cleaning is required after the relay is assembled on PCB, please contact 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

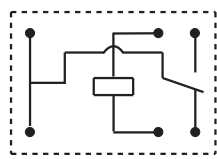
Unit: mm

Outline Dimensions

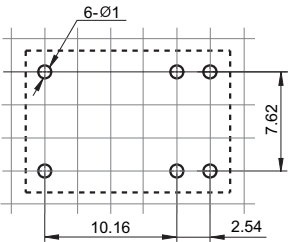
HFD41



Wiring Diagram
(Bottom view)



PCB Layout
(Bottom view)

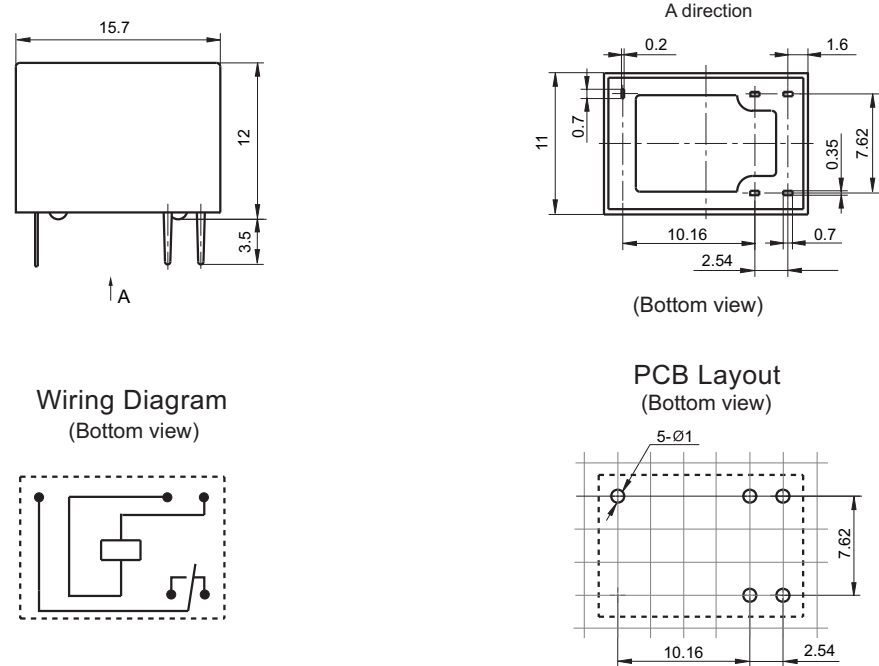


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

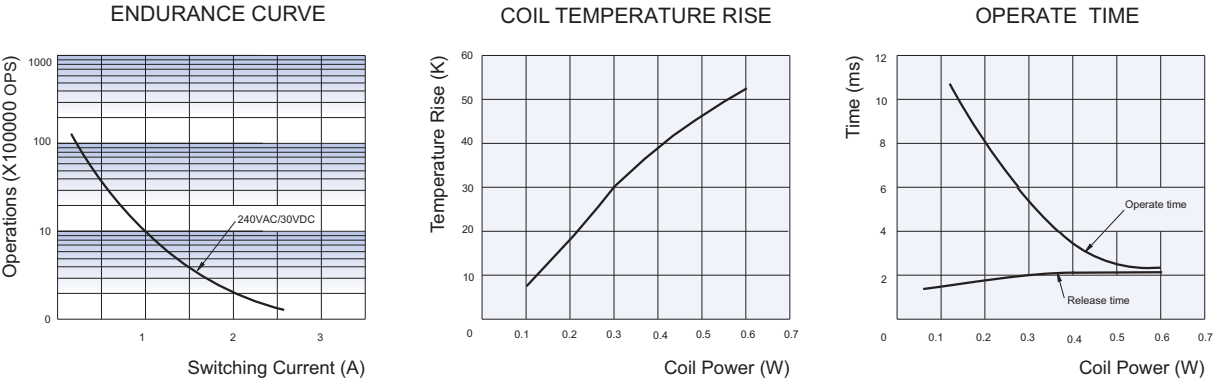
HFD41A

Outline Dimensions



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 $\pm 0.1\text{mm}$.
3) The width of the gridding is 2.54mm.

CHARACTERISTIC CURVES



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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