

Datasheet

RS Pro SPDT PCB Mount Non-Latching Relay, 24V dc Coil, 3 A Subminiature Signal Relay

RS Stock No: 476-595



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

Contact arrangement	1C
Contact resistance	100mΩ max. (at 1A 6VDC)
Contact material	AgNi, AgCdO
Contact rating (Res. load)	1A 120VAC, 1A 240VAC / 30VDC 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	9.9 x 10 ⁴ ops (1A 120VAC, 1A 30VDC, Resistive load, Room temp., 1s on 9s off)

COIL

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

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. 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



CHARACTERISTICS

Insulation resistance		100M Ω (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.

SAFETY APPROVAL RATINGS

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



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⁾²⁾	S: Plastic sealed		Nil: Flux proofed						
Contact plating	G: Gold plated ³⁾		Nil: No gold plated						
Insulation standard	F: Class F		Nil: Class B						
Contact capacity ³⁾	3: 3A (AgCdO, riveted contact) 5: 5A (AgCdO, riveted contact) Nil: 1A, 2A (AgNi, threaded contact)								
Special code ⁴⁾	XXX: Customer special requirement				Nil: Standard				

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.

2) Contact is recommended for suitable condition and specifications if water cleaning or surface process is involved in assembling relays on PCB.

3) For gold plated type, the min. switching current and min. switching voltage is 10mA 5VDC. For 3A, 5A load products, only gold-plated contact is available.

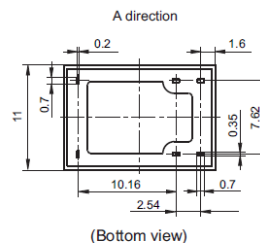
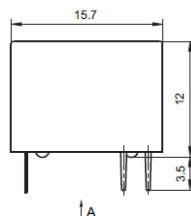
4) The customer special requirement express as special code after evaluating by Hongfa.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

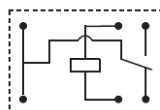
Unit: mm

Outline Dimensions

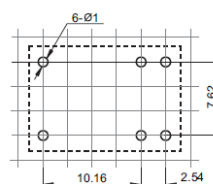
HFD41



Wiring Diagram
(Bottom view)



PCB Layout
(Bottom view)

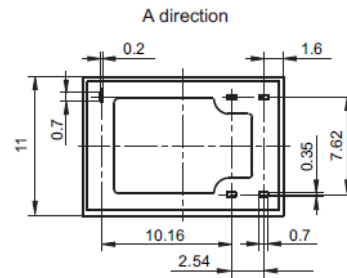
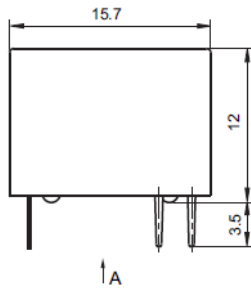


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

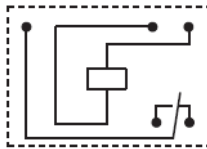
HFD41A

Outline Dimensions

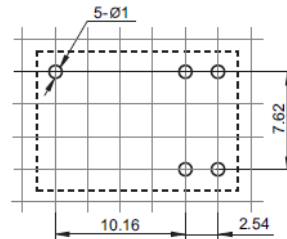


(Bottom view)

Wiring Diagram (Bottom view)

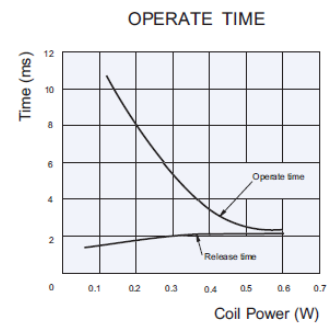
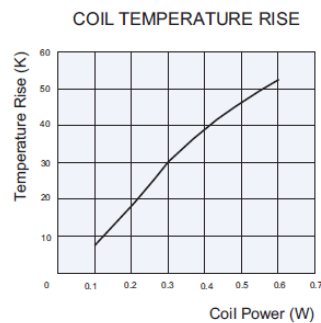
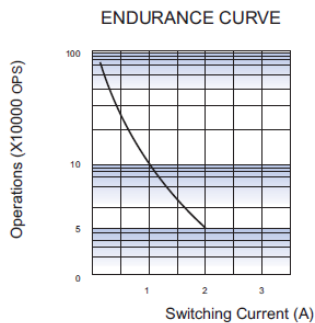


PCB Layout (Bottom view)



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

CHARACTERISTIC CURVES



Test conditions:

Resistive load, Room temp., 1s on 9s off.