HFD27 SUBMINIATURE DIP RELAY

File No.:E133481

File No.:R50075362

File No.:CQC02001001938



Features

- 2 Form C configuration
- High switching capacity:125VA/60W
- Matching 16 pin IC socket
- Bifurcated contacts
- Epoxy sealed for automatic-wave soldering and cleaning
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (20.2 x 10.0 x 11.5) mm

CONTACT DATA

Contact arrangement	2C
Contact resistance	50mΩ (at 0.1A 6VDC)
Contact material	AgNi + Au plated
Contact rating (Res. load)	1A 125VAC, 2A 30VDC
Max. switching voltage	240VAC / 120VDC
Max. switching current	2A
Max. switching power	125VA / 60W
Min. applicable load	10mV 10μA
Mechanical endurance	$1x10^8$ OPS
Electrical endurance	$1x10^5$ OPS (at 2A 30VDC) $3x10^5$ OPS (at 1A 30VDC)

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	1500VAC 1min
	Between open contacts	M, S type: 1000VAC 1min H type: 750VAC 1min
Operate time (at nomi. volt.)		6ms max.
Release time (at nomi. volt.)		4ms max.
Ambient temperature		-40˚C to 85˚C
Humidity		40% to 85% RH
Vibration resistance		10Hz to 55Hz 1.5mm DA
Shock resistance	Functional	196m/s²
	Destructive	980m/s²
Termination		PCB (DIP)
Unit weight		Approx. 5g
Construction		Wash tight

Notes: The data shown above are initial values.

COIL

Coil power	Standard: 280 to 580mW Sensitive: 200mW High Sensitive: 150mW
Temperature rise	65K max.

COIL DATA at 23˚C

Standard (280 to 580mW)

Order Number	Coil Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
003-M	3	2.25	0.3	4.5	30 x (1±10%)
005-M	5	3.75	0.5	8.0	90 x (1±10%)
006-M	6	4.50	0.6	10.0	130 x (1±10%)
009-M	9	6.80	0.9	14.5	280 x (1±10%)
012-M	12	9.00	1.2	18.5	450 x (1±10%)
015-M	15	11.3	1.5	22.0	625 x (1±10%)
024-M	24	18.0	2.4	35.5	1600 x (1±10%)
048-M	48	36.0	4.8	56.0	4000 x (1±10%)

Sensitive (200mW)

Order Number	Coil Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
003-S	3	2.25	0.3	6	45 x (1±10%)
005-S	5	3.75	0.5	10	125 x (1±10%)
006-S	6	4.50	0.6	12	180 x (1±10%)
009-S	9	6.80	0.9	18	405 x (1±10%)
012-S	12	9.00	1.2	24	720 x (1±10%)
015-S	15	11.3	1.5	30	1125 x (1±10%)
024-S	24	18.0	2.4	48	2880 x (1±10%)

COIL DATA

at 23°C

High Sensitive (150mW)

Order Number	Coil Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
003-H	3	2.4	0.3	7.0	60 x (1±10%)
005-H	5	4.0	0.5	11.5	167 x (1±10%)
006-H	6	4.8	0.6	13.8	240 x (1±10%)
009-H	9	7.2	0.9	20.8	540 x (1±10%)
012-H	12	9.6	1.2	27.7	960 x (1±10%)
015-H	15	12.0	1.5	34.6	1500 x (1±10%)
024-H	24	19.2	2.4	55.2	3840 x (1±10%)

Notes: When user's requirements cant't be found in the above table, special order allowed.

SAFETY APPROVAL RATINGS

UL&CUL	2A 30VDC 1A 125VAC
TÜV	2A 30VDC 1A 125VAC

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

ORDERING INFORMATION

HFD27 / 012 -S (XXX)

Type

Coil voltage 3, 5, 6, 9, 12, 15, 24, 48VDC 1)

Coil power **M:** Standard (280 to 580mW) **S:** Sensitive (200mW)
H: High-sensitive (150mW)

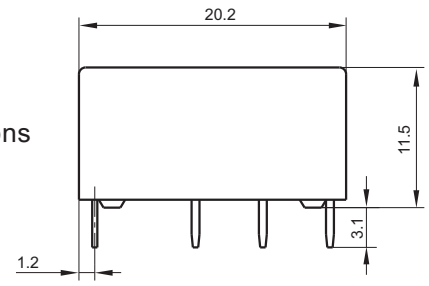
Customer special code

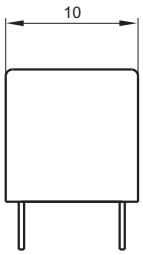
Notes: 1) 48VDC coil voltage is only for standard version.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

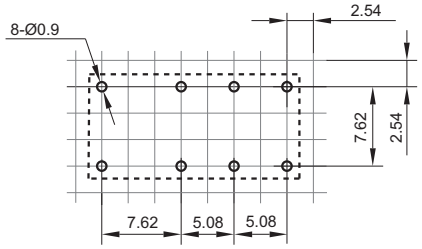
Unit: mm

Outline Dimensions

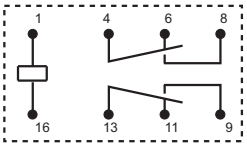




PCB Layout
(Bottom view)



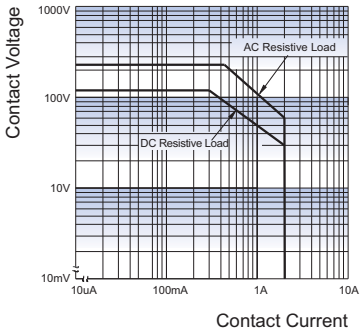
Wiring Diagram
(Bottom view)



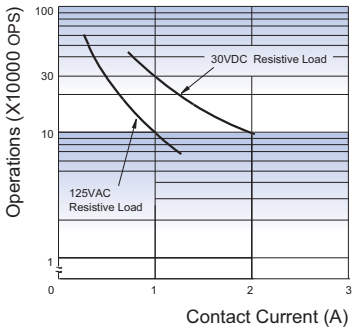
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The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

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE



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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