HFRD400   Plug-in Railway RELAY

Features

- Instantaneous compact relay,4CO contacts
- Integrated back EMF suppression diode
- Magnetic arc blow-out for high breaking capacity
- Minimum switching current 10mA
- Maximum continuous current 10A
- Mechanical life:5 million operations
- Integrated snaplock,no external retaining clip needed
- Visible cover & LED coil indicator
- Socket available

RoHS compliant

CONTACT DATA

Contact arrangement	4CO
Contact resistance[1]	100mΩ max.(at 0.1A 6VDC)
Contact material	Ag，Ag+Au plated
Contact rating	10A 110VDC
	5A 72VDC L/R≤40ms
	0.5A 110VDC L/R≤0ms
Max. Switching voltage	250VDC，440VAC
Max. Switching current	10A
Mechanical endurance	$5×10^6$OPS
Electrical endurance	≥$5×10^4$OPS(85℃，5s on 5s off, 10A 110VDC，Resistive load)

Notes: The data shown above are initial values.

CHARACTERISTICS

Insulation resistance		1000 MΩ (500VDC)
Dielectric strength	Between open contacts	1000VAC 1min
	Between contact sets	2500VAC 1min
	Between coil & contacts	2500VAC 1min
Surge voltage (Between coil & contacts)		5kV(1.2/50μs)
Operate time(at nomi. volt.)		30ms max.
Release time(at nomi. volt.)		30ms max.
Shock resistance		IEC 61373,Category I, Class B,Body mounted
Vibration resistance		IEC 61373,Category I, Class B,Body mounted
Humidity		5% ~ 95%RH
Ambient temperature		-50℃ to 85℃
Termination		Plug-in
Unit weight		Approx. 140g
Construction		Dust protected[1]

Notes: 1) The data shown above are initial values;
    2) Dust protected relays can not be used in the environment with pollutants like H_2S, SO_2, NO_2, dust,etc.

COIL

Coil power	Approx. 2.3W

COIL DATA   23℃

Nominal Voltage VDC	Pick-up Voltage VDC max.	Drop-out Voltage VDC min.	Max. Voltage VDC[2]	Coil Resistance Ω
12	8.4	1.2	15	72×(1±10%)
24	16.8	2.4	30	270×(1±10%)
36	25.2	3.6	45	562×(1±10%)
48	33.6	4.8	60	1044×(1±10%)
55	38.5	5.5	69	1300×(1±10%)
72	50.4	7.2	90	2406×(1±10%)
96	67.2	9.6	120	4400×(1±10%)
100	70	10	125	4400×(1±10%)
110	77	11	137.5	5330×(1±10%)
120	84	12	150	6160×(1±10%)
125	87.5	12.5	156.25	7634×(1±10%)
220	154	22	275	21776×(1±10%)
250	175	25	312.5	23850×(1±10%)

Notes: 1)The data shown above are initial values;
    2)Maximun voltage refers to the maximun voltage which relay coil could endure in a short period of time.

ORDERING INFORMATION

	HFRD400/	110	-3G	D	J	M	（XXX）
Type							

Coil voltage	12, 24, 36, 48, 55, 72, 100, 110, 120, 125, 220, 250 VDC
Contact material	**3:** Ag **3G:** Ag+Au plated
Coil protect	**D:** With Diode **Nil:** No Diode
Coil indicator	**J:** With LED **Nil:** No LED
Arc blow-out	**M:** Magnetic arc blow-out **Nil:** no Magnetic arc blow-out
Special code[1]	**XXX:** Customer special requirement **Nil:** Standard type

Notes: 1) The customer special requirement express as special code after evaluating by Hongfa.

## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions
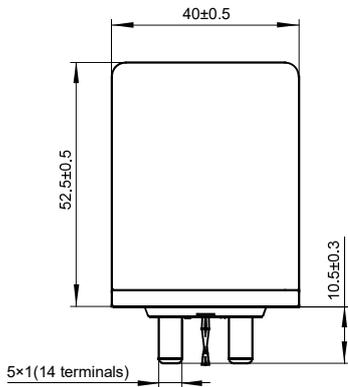
PCB Layout
(Bottom view)
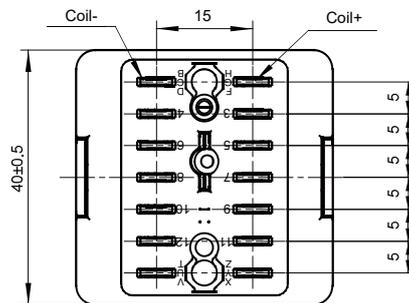
Wiring Diagram
(Bottom view)
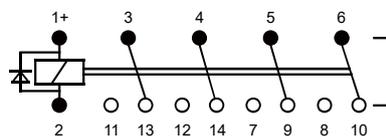
Notes: 1) Other requirement, like meet BZDT1111-FA-G000-002 standard,please contact with our engineer.
2) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension ＞1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension ＞5mm, tolerance should be ±0.4mm;

Disclaimer