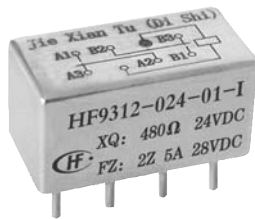


**HF9312****HALF-SIZE CRYSTAL CAN HERMETICALLY SEALED  
RELAY WITH ESTABLISHED RELIABILITY****Features**

- Failure rate can be Level M
- Load can be 5A 28Vd.c
- High pure nitrogen protection
- High ambient applicability
- All metal welded construction,
- Hermetically welded and marked by laser

Conform to GJB65B-99 (Equivalent to MIL-R-39016)

**AMBIENT ADAPTABILITY**

Ambient Grade	I	II	III
Ambient Temperature	-55°C to 85°C	-65°C to 125°C	-65°C to 125°C
Humidity	98%, 40°C		
Low Air Pressure	58.53kPa	4.4kPa	4.4KPa
Vibration Resistance	Frequency	10Hz to 2000Hz	10Hz to 3000Hz
	Acceleration	196m/s <sup>2</sup>	294m/s <sup>2</sup>
Shock Resistance	735m/s <sup>2</sup>	980m/s <sup>2</sup>	980m/s <sup>2</sup>
Random Vibration		40(m/s <sup>2</sup> )/Hz	40(m/s <sup>2</sup> )/Hz
Acceleration	490 m/s <sup>2</sup>		
Implementation Standard	GJB65B-99 (MIL-R-39016)		

**CONTACT DATA**

Ambient Grade	I	II	III
Arrangement	2 Form C		
Contact Material	Silver alloy	Gold plated hardened silver alloy	
Contact Resistance(max.)	Initial	50mΩ	
	After Life	100mΩ	
Failure Rate	Level L and M available		

**Contact Ratings**

Ambient Grade	Contact Load	Type	Electrical Life (min.)
I	5A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	5A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
II	2A 115Va.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.75A 28Vd.c. 200mH	Inductive	1 x 10 <sup>5</sup> OPS
	0.16A 28Vd.c.	Lamp	1 x 10 <sup>5</sup> OPS
III	5.0A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	50μA 50mVd.c.	Low Level	1 x 10 <sup>5</sup> OPS

**SPECIFICATION**

Ambient Grade		I	II	III
Insulation Resistance (min.)		1000MΩ (at 500Vd.c.)	10000MΩ (at 500Vd.c.)	10000MΩ (at 500Vd.c.)
Dielectric Withstanding Voltage (Normal Condition)	Between Open Contacts	500Vr.m.s.	500Vr.m.s.	500Vr.m.s.
	Between Contacts & Coil	750Vr.m.s.	1000Vr.m.s.	1000Vr.m.s.
	Between Contacts & Cover	750Vr.m.s.	1000Vr.m.s.	1000Vr.m.s.
	Between Adjacent Contacts	750Vr.m.s.	1000Vr.m.s.	1000Vr.m.s.
	Between Coil & cover	500Vr.m.s.	500Vr.m.s.	500Vr.m.s.
Dielectric Withstanding Voltage (Low air pressure condition)		300Vr.m.s.	350Vr.m.s.	350Vr.m.s.
Leakage Rate		1 Pa·cm <sup>3</sup> /s	1 x 10 <sup>-2</sup> Pa·cm <sup>3</sup> /s	1 x 10 <sup>-3</sup> Pa·cm <sup>3</sup> /s
Operate Time (max.)		6ms		
Release Time (max.)		4ms		
Mounting Style		See "Mounting styles" below		
Terminals		PCB, Solder		
Work Position		Any position		
Weight		13g		

**COIL DATA**

Normal Coil Power	1.2W
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**Coil Version**

Coi Voltage		25°C				-65°C to 125°C		
Nominal Voltage	Max	Pick-up Voltage max	Hold Voltage max	Drop-out Voltage min	Coil Resistance (1±10%) Ω	Pick-up Voltage max	Hold Voltage max	Drop-out Voltage min
005	6.0	3.0	1.65	0.29	21	4.2	2.4	0.21
006	7.5	3.6	2.00	0.35	30	5.1	2.9	0.25
009	11.8	5.4	3.00	0.52	68	7.7	4.3	0.38
012	15.0	7.3	4.00	0.70	125	10.5	5.8	0.50
024	28.8	14.8	7.50	1.20	480	20.8	11.6	0.90
027	32.0	16.0	8.50	1.50	600	22.5	14.0	1.00

Notes: We can offer many kinds of specification of coil voltage under the requirement of users.

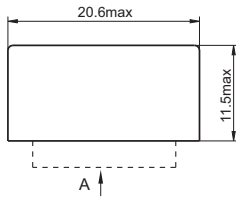
**ORDERING INFORMATION**

Type	HF9312	-012	L	0	1	I
Coil Voltage	5, 6, 9, 12, 24, 27Vd.c.					
Failure Rate	L: Failure rate level L (level III products available) M: Failure rate level M (level III products available) Nil: Without failure rate requirement(level I, II products available)					
Mounting Styles	0, 1, 2, 3 (See "Mounting styles" below)					
Terminals	1, 3, 4 (See "Terminal styles" below)					
Ambient Grade	I : level I    II : level II    Nil: level III					

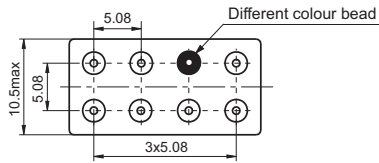
**OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT**

Unit: mm

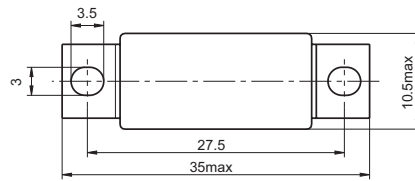
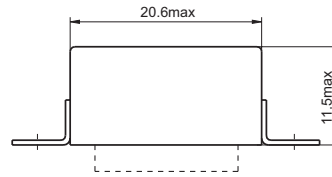
Mounting style 0



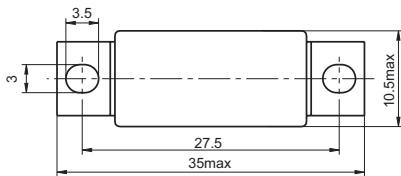
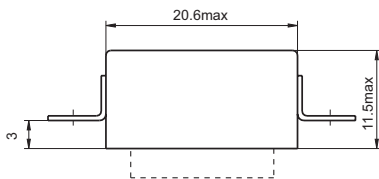
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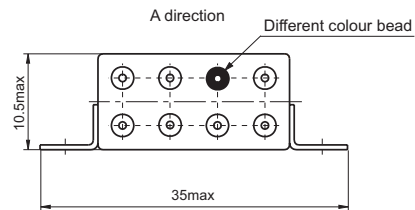
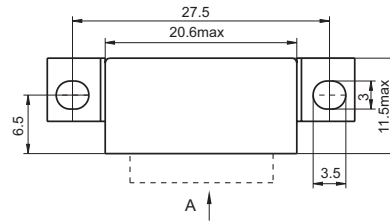
Mounting style 1



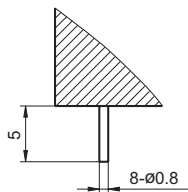
Mounting style 2



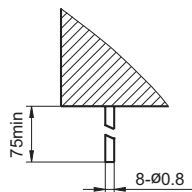
Mounting style 3



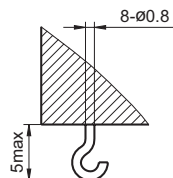
Terminal style 1



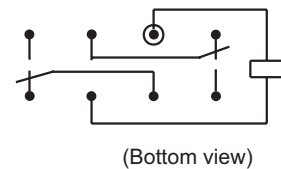
Terminal style 3



Terminal style 4



Wiring Diagram



**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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