

**HF9310****HALF-SIZE CRYSTAL CAN HERMETICALLY SEALED  
RELAY WITH ESTABLISHED RELIABILITY****Features**

- Failure rate can be level M
- High pure nitrogen protection
- High ambient applicability
- Diode type products available
- 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	10Hz to 3000Hz
	Acceleration	196m/s <sup>2</sup>	294m/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> ) <sup>2</sup> /Hz		
Acceleration		490m/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	2.0A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	2.0A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
II	0.3A 115Va.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.5A 28Vd.c. 200mH	Inductive	1 x 10 <sup>5</sup> OPS
III	2.0A 28Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.3A 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
	50μA 50mVd.c.	Low Level	1 x 10 <sup>5</sup> OPS



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2007 Rev. 1.00

**SPECIFICATION**

Ambient Grade		I	II	III
Insulation Resistance (min.)		1000M $\Omega$ (at 500Vd.c.)	10000M $\Omega$ (at 500Vd.c.)	10000M $\Omega$ (at 500Vd.c.)
Dielectric Strength min. (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 contacts sets	750Vr.m.s.	1000Vr.m.s.	1000Vr.m.s.
	Between coil & cover	500Vr.m.s.	500Vr.m.s.	500Vr.m.s.
Dielectric Strength min. (Low air pressure condition)		300Vr.m.s.	350Vr.m.s.	350Vr.m.s.
Leakage Rate		1 Pa $\cdot$ cm <sup>3</sup> /s	1 x 10 <sup>-2</sup> Pa $\cdot$ cm <sup>3</sup> /s	1 x 10 <sup>-3</sup> Pa $\cdot$ cm <sup>3</sup> /s
Operate Time (max.)		6ms	4ms	4ms
Release Time (max.)				4ms
Bounce Time(max.)		2.5ms	2.5ms	1.5ms
Contact Stabilization Time (max.)				2ms
Mounting Style		See "Mounting styles" below		
Terminals		PCB, Solder		
Work Position		Any position		
Weight (max.)		13g		

**COIL DATA**

Normal Coil Power	Approx. 0.9W
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**Coil Version**

Vd.c.

Coi Voltage		25°C					-65°C to 125°C			
Nominal	Max	Pick-up Voltage max		Hold Voltage max	Drop-out Voltage min	Coil Resistance (1 $\pm$ 10%) $\Omega$	Pick-up Voltage max		Hold Voltage max	Drop-out Voltage min
		I	II, III				I	II, III		
005	6.0	3.0	2.7	1.65	0.29	27	4.0	3.8	2.4	0.21
006	7.5	3.6	3.2	2.00	0.35	40	4.8	4.5	2.9	0.25
009	10.8	5.4	4.8	3.00	0.52	90	7.2	6.75	4.4	0.38
012	15.0	7.2	6.4	4.00	0.70	160	9.6	9.0	5.8	0.50
024	28.8	14.4	12.8	8.00	1.40	640	19.2	18.0	13.6	0.95
027	32.0	16.2	13.5	8.00	1.50	700	21.6	18.0	14.0	1.00

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

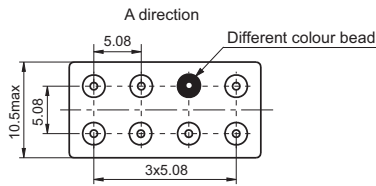
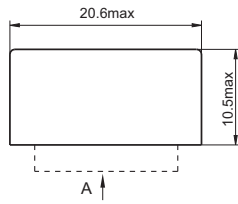
**ORDERING INFORMATION**

<b>Type</b>	HF9310	-012	L	0	1	I
<b>Coil Voltage</b>	5, 6, 9, 12, 24, 27Vd.c.					
<b>Failure Rate</b>	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)					
<b>Mounting Styles</b>	0, 1, 2, 3 (See " Mounting styles " below)					
<b>Terminals</b>	1, 3, 4 (See " Terminal styles " below)					
<b>Ambient Grade</b>	I : level I		II : level II		Nil: level III	

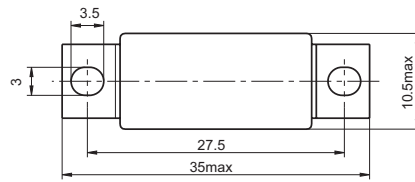
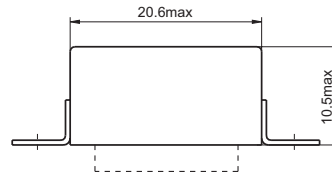
**OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT**

Unit: mm

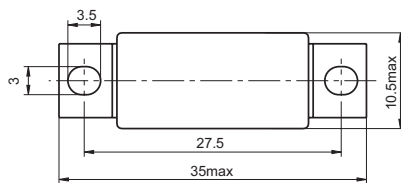
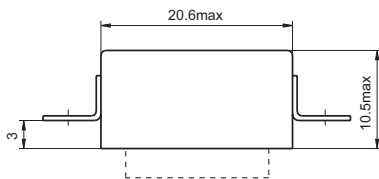
Mounting style 0



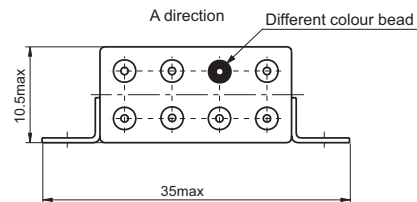
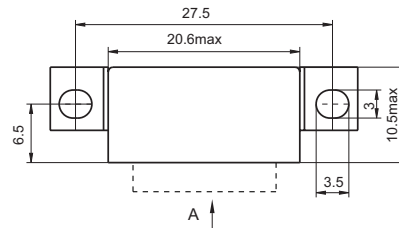
Mounting style 1



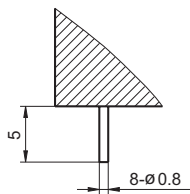
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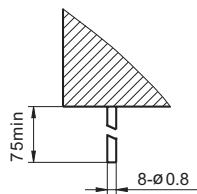
Mounting style 3



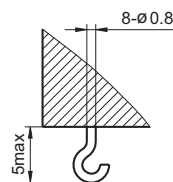
Terminal style 1



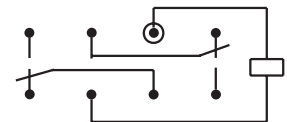
Terminal style 3



Terminal style 4



Wiring Diagram



(Bottom view)

**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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