

# HF9320

## HALF-SIZE CRYSTAL CAN 2 FORM C HERMETICALLY SEALED ELECTROMAGNETIC RELAY WITH COIL TRANSIENT SUPPRESSION



### Features

- With coil transient suppression
- Failure rate level can be level M
- High ambient applicability
- All metal welded construction
- Hermetically welded and marked by laser

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

### AMBIENT ADAPTABILITY

Ambient grade		I	II	III
Ambient temperature		-55 °C to 85 °C	-55 °C to 85 °C	-65 °C to 125 °C
Humidity		98 %, 40 °C		
Low air pressure		58.53 kPa	4.39 kPa	4.39 kPa
Sine vibration	Frequency	10 Hz to 1000 Hz	10 Hz to 2000 Hz	10 Hz to 3000 Hz
	Acceleration	147 m/s <sup>2</sup>	196 m/s <sup>2</sup>	294 m/s <sup>2</sup>
Shock resistance		490 m/s <sup>2</sup>	735 m/s <sup>2</sup>	980 m/s <sup>2</sup>
Random vibration		—	20 (m/s <sup>2</sup> )/Hz	40 (m/s <sup>2</sup> )/Hz
Steady-state acceleration		490 m/s <sup>2</sup>		

### CONTACT DATA

Ambient grade		I	II	III
Arrangement		2 C		
Contact resistance	Initial max.	50 mΩ		
	After life max.	100 mΩ		

### Contact ratings

Ambient grade	Contact load	Type	Electrical life min.
I	2 A 28 Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	2 A 28 Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
II	0.1 A 115 Va.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.5 A 28 Vd.c. 200 mH	Inductive	1 x 10 <sup>5</sup> OPS
III	2 A 28 Vd.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.3 A 115 Va.c.	Resistive	1 x 10 <sup>5</sup> OPS
	0.75 A 28 Vd.c. 200 mH	Inductive	1 x 10 <sup>5</sup> OPS
	0.16 A 28 Vd.c.	Lamp load	1 x 10 <sup>5</sup> OPS
	50 μA 50 mVd.c.	Low level	1 x 10 <sup>5</sup> OPS

## SPECIFICATION

Ambient grade		I	II	III
Insulation resistance min.		1000 MΩ (@ 500 Vd.c.)	10000 MΩ (@ 500 Vd.c.)	10000 MΩ (@ 500 Vd.c.)
Dielectric strength min. (Normal condition)	Between open contacts	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
	Between contact & coil	750 Vr.m.s.	1000 Vr.m.s.	1000 Vr.m.s.
	Between contact & cover	750 Vr.m.s.	1000 Vr.m.s.	1000 Vr.m.s.
	Between contact group	750 Vr.m.s.	1000 Vr.m.s.	1000 Vr.m.s.
	Between coil & cover	500 Vr.m.s.	500 Vr.m.s.	500 Vr.m.s.
Dielectric strength min. (Low air pressure condition)		350 Vr.m.s.	350 Vr.m.s.	350 Vr.m.s.
Leakage rate max.		1 Pa·cm <sup>3</sup> /s	1 x 10 <sup>-1</sup> Pa·cm <sup>3</sup> /s	1 x 10 <sup>-3</sup> Pa·cm <sup>3</sup> /s
Operate time max.		6 ms	4 ms	4 ms
Release time max.				7 ms
Mounting style		See the mounting dimension		
Terminals		See the terminal styles		
Work position		Random		
Weight max.		13 g		

## COIL DATA

Normal coil power	Approx.0.9W
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### Coil Version

Order Number	Coil voltage		at 25 °C					-65°C to 125°C			
	Nominal voltage	Value max.	Coil resistance (1±10%) Ω	Pick-up voltage max.		Hold voltage max.	Drop-out voltage min.	Pick-up voltage max.		Hold voltage max.	Drop-out voltage min.
				I	II, III			I	II, III		
005	5	6.0	27	3.0	2.7	1.65	0.29	4.0	3.8	2.4	0.21
006	6	7.5	40	3.6	3.2	2.00	0.35	4.8	4.5	2.9	0.25
009	9	10.8	90	5.4	4.8	3.00	0.52	7.2	6.75	4.4	0.38
012	12	15.0	160	7.2	6.4	4.00	0.70	9.6	9.0	5.8	0.50
024	24	30.0	600	14.4	12.8	7.00	1.20	19.2	17.0	10.2	0.90
027	27	32.0	700	16.2	13.5	8.00	1.20	21.6	18.0	14.0	1.00

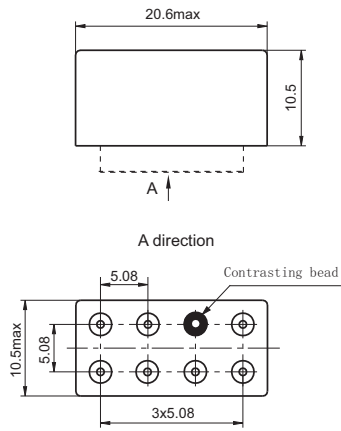
Notes: We can offer many kinds of coil voltage under the requirement of users.

## ORDERING INFORMATION

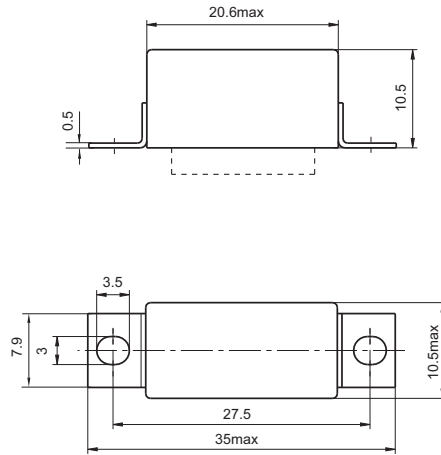
Type	HF9320	-012	M	-0	1	- I
Order Number	005、006、009、012、018、027					
Failure Rate	L: Failure rate level L (level III products available) <sup>1)</sup> M: Failure rate level M (level III products available) <sup>1)</sup> Nil: Without failure rate requirement(level I ,II ,IIIproducts available)					
Mounting Style	0, 1, 2, 3 (See the mounting dimension)					
Terminals Style	1, 4 (See " Terminal styles " below)					
Ambient Grade	I : level I    II : level II    III: level III					

Notes: 1) For the failure rate of L or M ,the letter "III" of ambient grade level will not appear on relay cover.

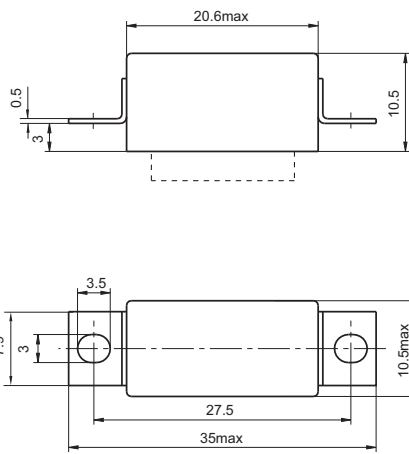
**Outline Dimension**



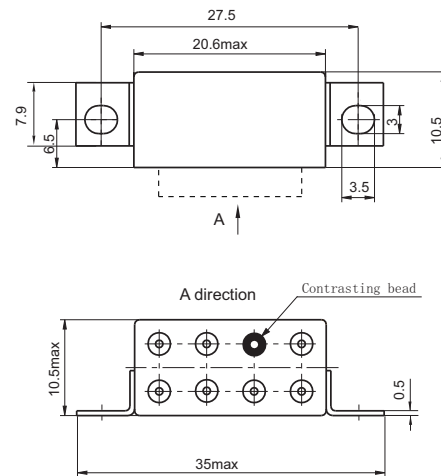
**Mouting style 0**



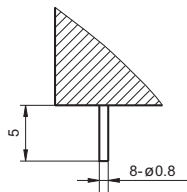
**Mouting style 1**



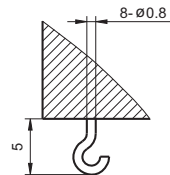
**Mouting style 2**



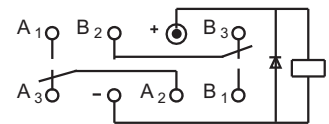
**Mouting style 3**



**Terminal style 1  
(Solder pin)**



**Terminal style 4  
(Solder hook)**



**Wiring Diagram  
(Bottom View)**

**Disclaimer**

This datasheet is for the customers' reference. All the specifications are subject to change without notice.

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