

# HF9511

## 1/5 CUBIC INCH 2 FORM C HERMETICALLY SEALED ELECTROMAGNETIC RELAY WITH COIL TRANSIENT SUPPRESSION



### Features

- Force balanced type
- With coil transient suppression
- 5A contacts switching capability
- Failure rate can be level L
- High ambient applicability
- All metal welded construction
- Hermetically welded and marked by laser

Conform to GJB2888-97 (Equivalent to MIL-PRF-83536)

### 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>	980 m/s <sup>2</sup>	1960 m/s <sup>2</sup>
Random vibration		—	20 (m/s <sup>2</sup> ) <sup>2</sup> /Hz	40 (m/s <sup>2</sup> ) <sup>2</sup> /Hz
Steady-state acceleration		147 m/s <sup>2</sup>	294 m/s <sup>2</sup>	490 m/s <sup>2</sup>

### CONTACT DATA

Ambient grade		I	II	III
Arrangement		2 C		
Contact resistance or voltage drop	Initial max.	0.05Ω		
	After life max.	0.125V		

### Contact and life ratings

Type	Contact load		Electrical life min.
	28Vd.c.	115Va.c. 400Hz Single phase	
Resistive	5A	5A	1 x 10 <sup>5</sup> OPS
Inductive	3A	5A	2 x 10 <sup>4</sup> OPS
Motor	2A	—	1 x 10 <sup>5</sup> OPS
Lamp load	1A	—	1 x 10 <sup>5</sup> OPS

## SPECIFICATION

Ambient grade		I	II	II
Insulation resistance min.	Initial	100 MΩ (@ 500 Vd.c.)	100 MΩ (@ 500 Vd.c.)	100 MΩ (@ 500 Vd.c.)
	After life or after testing	50 MΩ (@ 500 Vd.c.)	50 MΩ (@ 500 Vd.c.)	50 MΩ (@ 500 Vd.c.)
Dielectric strength min. (Normal condition)	Between coil & cover (initial)	1000 Vr.m.s.	1000 Vr.m.s.	1000 Vr.m.s.
	Between coil & cover (after life testing)	750 Vr.m.s.	750 Vr.m.s.	750 Vr.m.s.
Dielectric strength min. (Low air pressure condition)		250 Vr.m.s.	250 Vr.m.s.	250 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		
Release time max.		6 ms		
Mounting style		See the mounting dimension		
Terminals		See the terminal styles		
Work position		Random		
Weight max.		20.4 g		

## COIL DATA

Norminal coil power	Approx.2W
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### Coil Version

Order Number	Coil voltage		at 25 °C				-65°C to 125°C			Pick-up voltage max.	
	Nominal voltage	Value max.	Coil resistance (Ω) min.	Pick-up voltage max.	Hold voltage max.	Drop-out voltage min.	Pick-up voltage max.	Hold voltage max.	Drop-out voltage min.	High temp. test	Continuous electric test
006	6	7.3	18	3.3	1.6	0.50	4.5	2.3	0.25	5.0	5.70
012	12	14.5	85	6.5	3.3	0.75	9.0	4.5	0.50	9.9	11.25
028	28	29.0	450	15.5	5.5	2.30	20.0	7.0	1.50	21.0	25.0

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

## ORDERING INFORMATION

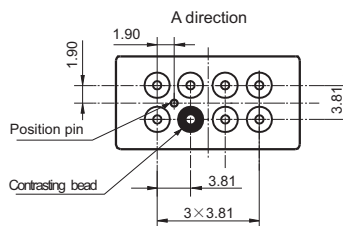
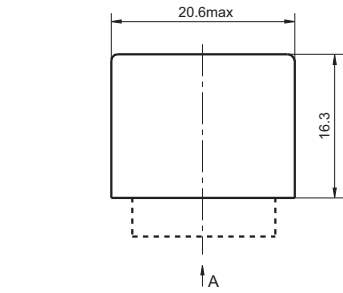
Type	HF9511	-012	L	-0	1	-II
Order Number	006、012、028					
Failure Rate	L: Failure rate level L (level III products available) <sup>1)</sup> Nil: Without failure rate requirement(level I ,II ,IIIproducts available)					
Mounting Style	0, 2, 3 (See the mounting dimension)					
Terminals Style	1, 4 (See " Terminal styles " below)					
Ambient Grade	I : level I II : level II III: level III					

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

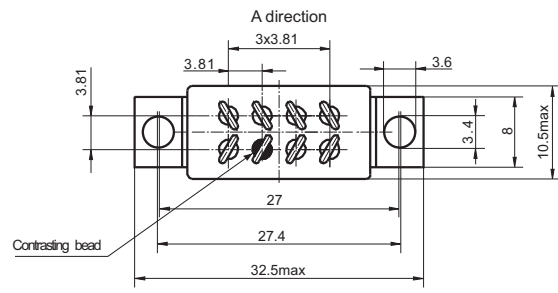
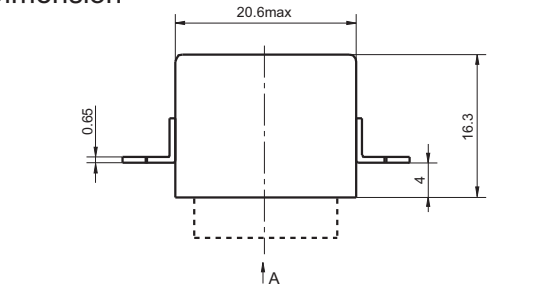
# OUTLINE DIMENSIONS AND WIRING DIAGRAM

Unit:mm

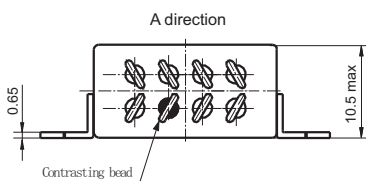
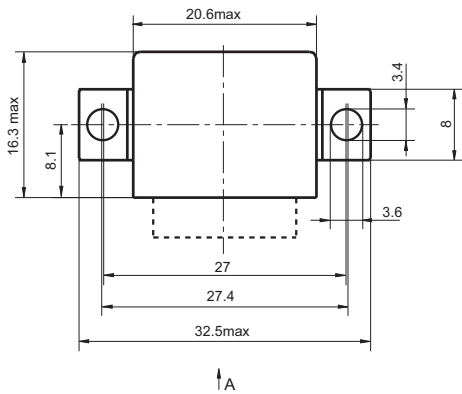
## Outline Dimension



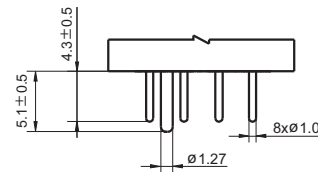
Mouting style 0



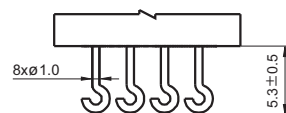
Mouting style 2



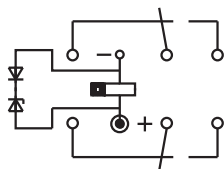
Mouting style 3



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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