

# HF9521

## 2/5 CUBIC INCH 4 FORM C HERMETICALLY SEALED ELECTROMAGNETIC RELAY



### Features

- Force balanced
- 5A contacts switching capability
- Failure rate level 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                       |   |
|---------------------------|----------------------|---------------------------|---------------------------|---|
|                           |                      |                           | Mounting Style 3          | Mounting Style 0、2                        |
| 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>      | 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>      | 980 m/s <sup>2</sup>      | 1960 m/s <sup>2</sup>                     |
| Random vibration          | —                    | 20 (m/s <sup>2</sup> )/Hz | 20 (m/s <sup>2</sup> )/Hz | 40 (m/s <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                           | 4 C             |        |     |
| Contact resistance<br>or voltage drop | Initial max.    | 0.05Ω  |     |
|                                       | After life max. | 0.125V |     |

### Contact and life ratings

| Type      | Contact load |                                |                                   | Electrical life<br>min. |
|-----------|--------------|--------------------------------|-----------------------------------|-------------------------|
|           | 28Vd.c.      | 115Va.c. 400Hz<br>Single phase | 115/200Va.c. 400Hz<br>Three phase |                         |
| Resistive | 5A           | 5A                             | 5A                                | 1 x 10 <sup>5</sup> OPS |
| Inductive | 3A           | 5A                             | 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 |



HONGFA HERMETICALLY SEALED RELAY

## SPECIFICATION

| Ambient grade  |  | I                          | II   | III  |
|--|--|----------------------------|--|--|
| 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.                                |
|  | Between other insulation parts(initial)            | 1000 Vr.m.s.               | 1000 Vr.m.s.                               | 1000 Vr.m.s.                               |
|  | Between other insulation parts(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.                                    |  | 7 ms                       |  |  |
| Release time max.                                    |  | 7 ms                       |  |  |
| Mounting style                                       |  | See the mounting dimension |  |  |
| Terminals  |  | See the terminal styles    |  |  |
| Work position  |  | Random                     |  |  |
| Weight max.  |  | 28.2 g                     |  |  |

## COIL DATA

|                     |             |
|---------------------|-------------|
| Norminal coil power | Approx.2.4W |
|---------------------|-------------|

### 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        | 15                       | 3.3                  | 1.6               | 0.40                  | 4.5                  | 2.3               | 0.25                  | 5.5                  | 5.70                     |
| 012          | 12              | 14.5       | 70                       | 6.6                  | 3.3               | 0.75                  | 9.0                  | 4.5               | 0.50                  | 9.9                  | 11.25                    |
| 028          | 28              | 29.0       | 360                      | 15.5                 | 5.5               | 2.30                  | 20.0                 | 7.0               | 1.50                  | 21.0                 | 25.0                     |

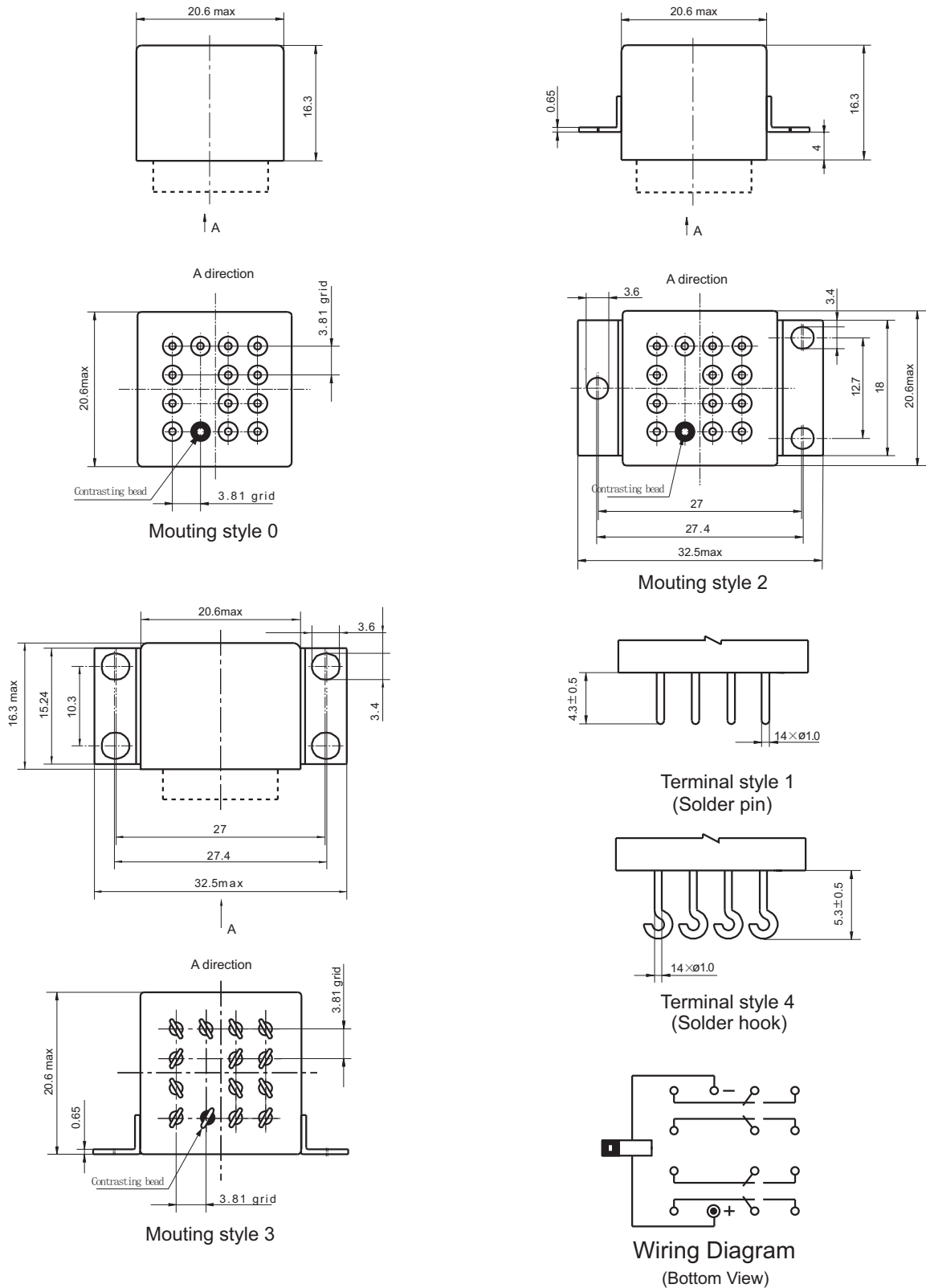
Notes: We can offer many kinds of coil voltage under the requirement of users.

## ORDERING INFORMATION

|                 |  |      |   |    |   |      |
|-----------------|--|------|---|----|---|------|
| Type            | HF9521   | -012 | L | -0 | 1 | - II |
| Order Number    | 006、012、028  |      |   |    |   |      |
| Failure Rate    | L: Failure rate level L (level III products available) <sup>1)</sup><br>Nil: Without failure rate requirement(level I ,II ,III products 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 Dimension**



**Disclaimer**

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

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