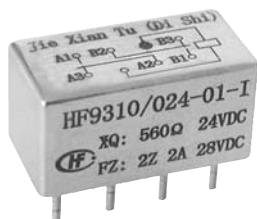


HF9310

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 | | | | 4.4KPa |
| Vibration Resistance | Frequency | 10Hz to 2000Hz | 10Hz to 3000Hz | 10Hz to 3000Hz |
| | Acceleration | 196m/s ² | 294m/s ² | 294m/s ² |
| Shock Resistance | | 735m/s ² | 980m/s ² | 980m/s ² |
| Random Vibration Acceleration | | | | 40(m/s ²) ² /Hz 490m/s ² |

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 ⁵ OPS |
| II | 2.0A 28Vd.c. | Resistive | 1 x 10 ⁵ OPS |
| | 0.5A 28Vd.c. 200mH | Inductive | 1 x 10 ⁵ OPS |
| III | 2.0A 28Vd.c. | Resistive | 1 x 10 ⁵ OPS |
| | 0.3A 115Va.c. | Resistive | 1 x 10 ⁵ OPS |
| | 0.75A 28Vd.c. 200mH | Inductive | 1 x 10 ⁵ OPS |
| | 0.16A 28Vd.c. | Lamp | 1 x 10 ⁵ OPS |
| | 50μA 50mVd.c. | Low Level | 1 x 10 ⁵ OPS |



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2006 Rev. 1.10

SPECIFICATION

| Ambient Grade | | I | II | III |
|--|--------------------------|-----------------------------|--|--|
| Insulation Resistance (min.) | | 1000MΩ (at 500Vd.c.) | 10000MΩ (at 500Vd.c.) | 10000MΩ (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·cm ³ /s | 1 x 10 ⁻² Pa·cm ³ /s | 1 x 10 ⁻³ Pa·cm ³ /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

| | |
|---------------------|--------------|
| Norminal Coil Power | Approx. 0.9W |
|---------------------|--------------|

Coil Version

Vd.c.

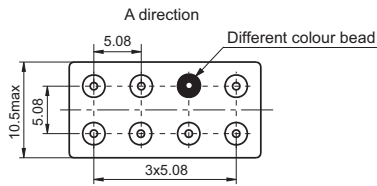
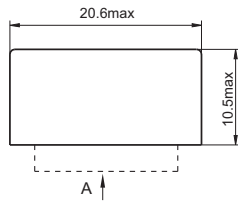
| Coi Voltage | | 25°C | | | | | -65°C to +125°C | | | |
|-------------|------|---------------------|---------|------------------|----------------------|---------------------------|---------------------|---------|------------------|----------------------|
| Nominal | Max | Pick-up Voltage max | | Hold Voltage max | Drop-out Voltage min | Coil Resistance (1±10%) Ω | 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.

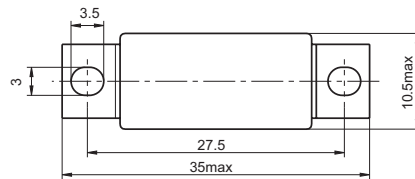
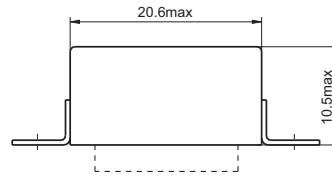
ORDERING INFORMATION

| | | | | | | |
|-----------------|--|------|---|---|---|---|
| Type | HF9310 | -012 | L | 0 | 1 | I |
| Coil Voltage | 5, 6, 9, 12, 24, 27Vd.c. | | | | | |
| Failure Rate | L, M (Level III only) | | | | | |
| Mounting Styles | 0, 1, 2, 3 (See " Mounting styles " below) | | | | | |
| Terminals | 1, 3, 4 (See " Terminal styles " below) | | | | | |
| Ambient Grade | I , II , III (Products without failure rate requirements only) | | | | | |

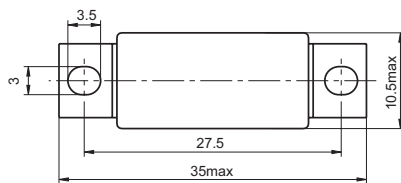
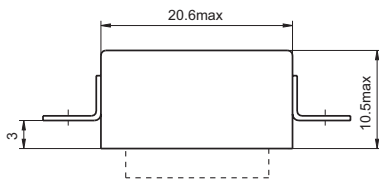
Mounting style 0



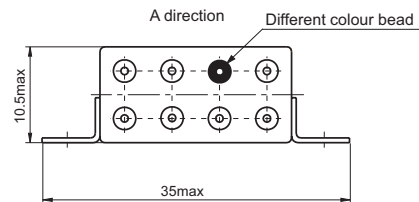
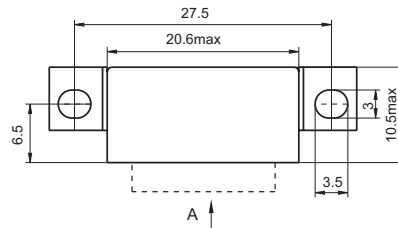
Mounting style 1



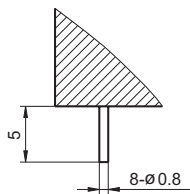
Mounting style 2



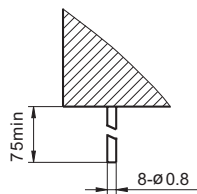
Mounting style 3



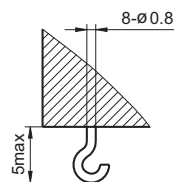
Terminal style 1



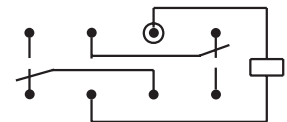
Terminal style 3



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.