



Typical Applications

Fog lamp & headlight control, Sunroof motor control, Air-conditioning, Mirror adjustment, Horn control, Cooling fan control.

Features

- ISO 7588-1 (1998) standard foot position
- Extended temp. range up to 125°C
- Action temperature range : -40°C~ +125°C
- Continuous load current : 40 A
- 1 Form A contact arrangement
- Compliance with DIN ISO 22628 Lead Free Standard

RoHS compliant

CHARACTERISTICS

| | | | |
|--|---|--------------------------------------|---|
| Contact arrangement | 1A | Shock resistance ^{(5) (10)} | 294m/s ² |
| Voltage drop | Typ.: 15mV Max.: 100mV (at 10A) | Flammability ⁽⁶⁾ | UL94-HB or better (meets FMVSS 302) |
| Max. continuous current ^{(1) (8)} | 60 A(at 23°C) 40 A(at 85°C) 17 A(at 125°C) | Termination | QC ⁽⁹⁾ |
| Max. switching current ⁽⁸⁾ | Make:150A (2) Break (NO):40A(Resistive, 13.5V) | Construction | Dust protected |
| Min. contact load | 1A 12VDC ⁽³⁾ | Unit weight | Approx. 24g |
| Electrical endurance | See "CONTACT DATA" | Mechanical data | housing retention (pull & push): 200N min. terminal retention (pull & push): 100N min. terminal resistance to bending (front & side): 10N min. ⁽⁷⁾ |
| Mechanical endurance | 1×10 ⁶ ops(300ops/min) | | |
| insulation resistance | 100MΩ(at 500VDC) | | |
| Dielectric strength ⁽³⁾ | 500VAC | | |
| Operate time ⁽⁸⁾ | Max.: 10ms (at nomi. vol.) | | |
| Release time ⁽⁸⁾ | Max.: 10ms(4) | | |
| Ambient temperature | -40°C to 125°C | | |
| Vibration resistance ^{(5) (8)} | 5Hz to 22.3Hz 10mm DA 22.3Hz to 500Hz 98m/s ² | | |

- 1) Measured when applying 100% rated voltage on coil.
- 2) Inrush peak current under lamp load, at 13.5VDC.
- 3) 1min leakage current less than 1mA
- 4) The value is measured when voltage drops suddenly from nominal voltage to 0VDC and coil is not paralleled with suppression circuit.
- 5) When energized or non-energized, opening time of NO contacts not exceed 1ms.
- 6) FMVSS: Federal Motor Vehicle Safety Standard.
- 7) Test point is at 2mm away from terminal end, and after removing testing force, the terminal transfiguration shall not exceed 0.5mm.
- 8) Only for the 12VDC coil voltage type.
- 9) Do NOT knock on relays with hard objects such as rubber rod and rubber hammer during mounting, which might lead to relay damage.

COIL DATA

| Nominal Voltage VDC | Pick-up Voltage VDC max | Drop-out voltage VDC min | Coil Resistance ×(1±10%)Ω | Parallel Resistance ×(1±5%)Ω | Equivalent Resistance ×(1±10%)Ω | Power Consumption W | Max. allowable overdrive voltage ¹⁾ VDC |
|---------------------|-------------------------|--------------------------|---------------------------|------------------------------|---------------------------------|---------------------|--|
| 12 | 8.0 | 1.2 | 85 | — | — | 1.7 | 18 |
| 12 | 8.0 | 1.2 | 85 | 680 | 75.6 | 1.9 | 18 |
| 24 | 16.0 | 2.4 | 320 | — | — | 1.8 | 36 |
| 24 | 16.0 | 2.4 | 320 | 2700 | 286 | 2.0 | 36 |

1) Max. allowable overdrive voltage is stated with no load applied and minimum coil resistance.



HONGFA RELAY

ISO9001, IATF16949, ISO14001, ISO45001, IECQ QC 080000 CERTIFIED

2025 Rev. 1.00

CONTACT DATA

| Load voltage | Load type | | Load current | On/Off ratio | | Electrical Endurance ³⁾ OPS | Contact material | Ambient temp. |
|--------------|--------------------|-------|-------------------|--------------|-------|---|--------------------|-------------------------|
| | | | 1A | On s | Off s | | | |
| | | | NO | | | | | |
| 13.5 VDC | Resistive | Make | 40 | 2 | 2 | 1×10 ⁵ | AgSnO ₂ | See Ambient temp. curve |
| | | Break | 40 | | | | | |
| | Inductive | Make | 80 | 2 | 2 | 1×10 ⁵ | AgSnO ₂ | |
| | | Break | 33 | | | | | |
| | Lamp ¹⁾ | Make | 150 ²⁾ | 2 | 2 | 1×10 ⁵ | AgSnO ₂ | |
| | | Break | 30 | | | | | |

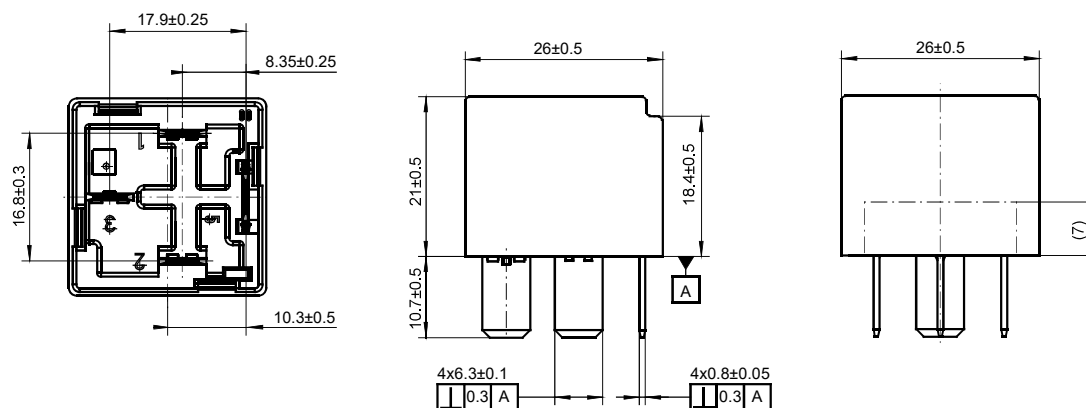
- 1) The load in the table excludes flasher. When applied in flasher, please connect by the polarity request according, a special silver alloy contact material should be used and the customer special code should be (170) as a suffix.
- 2) Corresponds to the peak inrush current on initial actuation (cold filament).
- 3) A low resistive or diode suppression device in parallel to the relay coil increases the release time and reduces the life time caused by increased erosion and / or higher risk of contact welding.
- 4) Loads mentioned in this chart is for relays with no parallel diode or Zener Diode. For those with parallel diode, Zener Diode or other components, please contact Hongfa for more technical supports. Please also contact Hongfa if the actual application load is different from what mentioned above.

ORDERING INFORMATION

| | | | | | | | | | |
|--|--|----|----|---|--------------------------|---|---|----|-------|
| Type | HFV15A / | 12 | -H | 1 | <input type="checkbox"/> | T | J | -R | (XXX) |
| Coil voltage | 12: 12VDC 24: 24VDC | | | | | | | | |
| Contact arrangement | H: 1 Form A | | | | | | | | |
| Construction | 1: QC Terminal | | | | | | | | |
| Coil power | S: Plastic sealed | | | | | | | | |
| Contact material | T: AgSnO ₂ | | | | | | | | |
| Terminal | J: QC Terminal without hole | | | | | | | | |
| Parallel coil components ¹⁾ | R: Parallel transient suppression resistors D: Parallel transient suppression diode, with anode connected to terminal#2 D1: Parallel transient suppression diode, with anode connected to terminal#1 Nil: Without parallel components | | | | | | | | |
| Special code | XXX: Customer special requirement Nil: Standard | | | | | | | | |

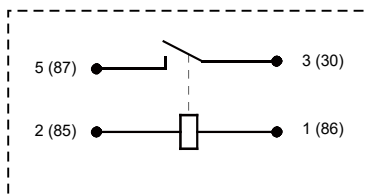
- 1) If the switch-off peak voltage of coil is required to be smaller than 100V, R1 shall be used (measured voltage of 12V is 13.5V);
- 2) The customer special requirement express as special code after evaluating by Hongfa.

Outline Dimensions

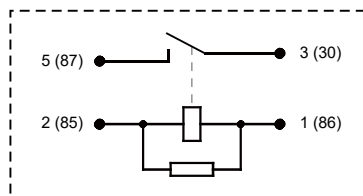


Wiring Diagram

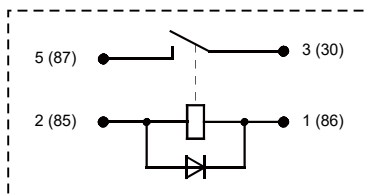
Parallel transient suppression resistors



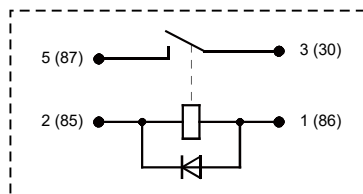
Without parallel components



Parallel diode D Type
(anode connected to terminal#2)

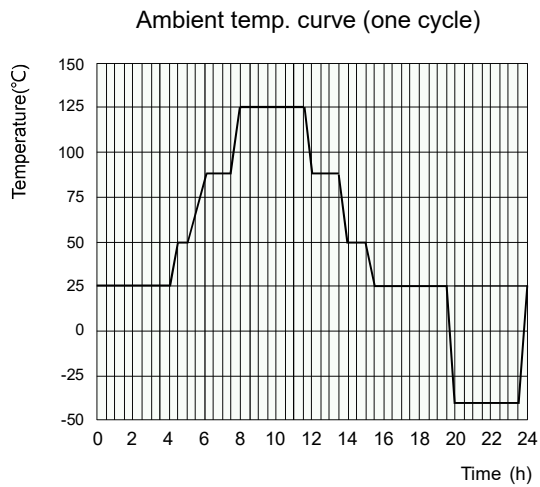


Parallel diode D1 Type
(anode connected to terminal#1)



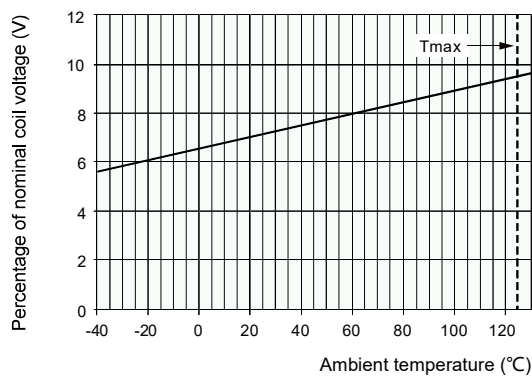
CHARACTERISTIC CURVES

1. Ambient temperature curve of the electrical endurance test



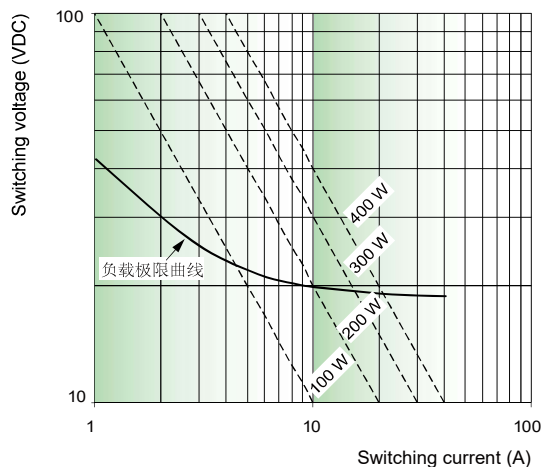
- 1) The minimum temperature is -40°C.
- 2) The maximum temperature is 125°C.

2. Coil operating voltage range



- 1) Temperature rise due to coil excitation and contact current is not included.

3. Load limit curve



- 1) The arc can be extinguished safely within the time of the moving contact.
- 2) Suitable only for pure resistive loads at +23°C ambient temperature.

Disclaimer

The specification is for reference only. See to "Terminology and Guidelines" for more information. Specifications subject to change without notice. In case there is specific criterion (such as mission profile, technical specification, PPAP etc.) checked and agreed by and between customer and Hongfa, this specific criterion should be taken as standard regarding any requirement on Hongfa product.

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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