# HF179F-35W MINIATURE HIGH POWER RELAY

c UL us
File No.：E133481

File No.：R 50463696

## Features

- 35A Carrying capability
- 4kV dielectric strength(between coil and contacts, for type 1 PCB layout)
- Creepage distance: ＞5mm(for type 1 PCB layout)
- Meet to IEC 62368-1 Clause G2.1 and G2.2
- Flux proofed type

**RoHS compliant**

## CONTACT DATA

| | |
|---|---|
| Contact arrangement | 1A |
| Contact resistance1) | 10mΩ max.(6VDC 20A) |
| Contact material | $AgSnO_2$ |
| Contact rating (resistance) | Making 16A, Carrying 35A, Breaking 16A, 277VAC |
| Max.swtiching voltage | 277VAC |
| Max.switching current | 16A |
| Max.switching power | 4432VA |
| Max.continuous current | 35A 85℃ |
| Mechanical endurance | $1\times10^5$ ops |
| Electrical endurance | $3\times10^4$ ops (NO:Making 16A,Carrying 35A, Breaking 16A,277VAC, Resistive load, 85℃,1s on 9s off) |

**Notes:**1) The data shown above are initial values.
2) Min. contact load is reference value. Please perform the confirmation test with the actual load before usage since reference value may change according to switching frequencies, environmental conditions and expected life cycles.

## COIL

| | |
|---|---|
| Coil power | Approx.1.67W |
| Holding voltage[1)] | 35% to 70%$U_N$(at 23℃)<br>40% to 45%$U_N$(at 85℃) |

**Notes:**1) The coil holding voltage is the voltage applied to coil 200ms after the rated voltage.
2) To avoid overheating and burning,the coil can not be consistently applied to with voltage larger than maximum holding voltage.
3) To energize relay properly apply 100%~120% rated coil voltage for 200ms.

## COIL DATA 23℃

| Nominal Voltage VDC | Pick-up Voltage VDC max. | Drop-out Voltage VDC min | Max. Allowable Voltage VDC [2)] | Coil Resistance Ω |
|---|---|---|---|---|
| 12 | 9.6 | 0.60 | 13.2 | 86×(1±10%) |
| 24 | 19.2 | 1.20 | 26.4 | 345×(1±10%) |
| 48 | 38.4 | 2.40 | 52.8 | 1380×(1±10%) |

**Notes:**1) The data shown above are initial values.
2) Maximum voltage refers to the maximum voltage which relay coil could endure in a short period of time.

## CHARACTERISTICS

| | | |
|---|---|---|
| Insulation resistance | | 1000 MΩ (500VDC) |
| Dielectric strength | Between open Main contact | 2000VAC 1min |
| | Between coil & contact | 4000VAC 1min(type1)<br>2500VAC 1min(type2) |
| Operate time (at nomi. volt.) | | ≤15ms |
| Release time (at nomi. volt.) | | ≤10ms |
| Shock resistance | Functional | $98m/s^2$ |
| | Destructive | $980m/s^2$ |
| Vibration resistance | | 10Hz to 55Hz 1.5mm DA |
| Humidity | | 5 % to 85 % RH |
| Ambient temperature | | -40℃ to 85℃ |
| Termination | | PCB |
| Unit weight | | Approx.16g |
| Construction | | Flux proofed |

**Notes:**1) The data shown above are initial values.

## SAFETY APPROVAL RATINGS

| | |
|---|---|
| **UL/CUL** | NO：Making 16A，Carrying 35A，Breaking 16A, 277VAC，85℃ |
| **TÜV** | NO：Making 16A，Carrying 35A，Breaking 16A, 277VAC，85℃ |

**Notes:** 1) All values unspecified are at room temperature.
2) Only some typical rating are listed above.If more details are required,please contact us.

## ORDERING INFORMATION

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | HF179F-35W | 12 | -H | 1 | L | T | F | （XXX） |
| **Type** | | | | | | | | |
| **Coil voltage** | 12,24,48 VDC | | | | | | | |
| **Contact arrangement** | **H:**1 Form A | | | | | | | |
| **Construction** | **1:**Type 1 PCB layout<br>**2:**Type 2 PCB layout | | | | | | | |
| **Coil power** | **L:** Sensitive type | | | | | | | |
| **Contact material** | **T:** $AgSnO_2$ | | | | | | | |
| **Insulation class** | **F:** Class F | | | | | | | |
| **Special code** | **XXX:** Customer special requiremen | | **Nil:** Standard | | | | | |

**Notes:** 1) The customer special requirement express as special code after evaluating by Hongfa.

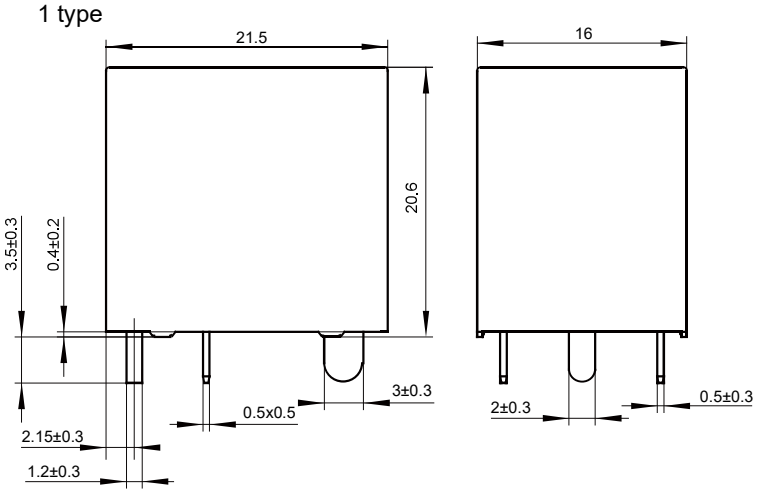
## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

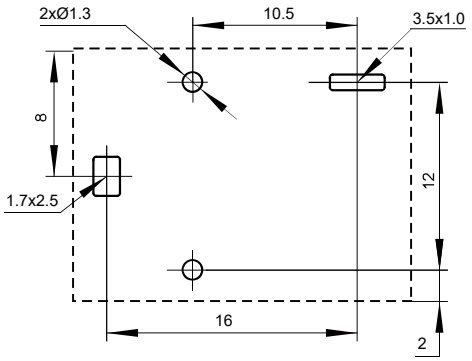
Unit: mm

Outline Dimensions

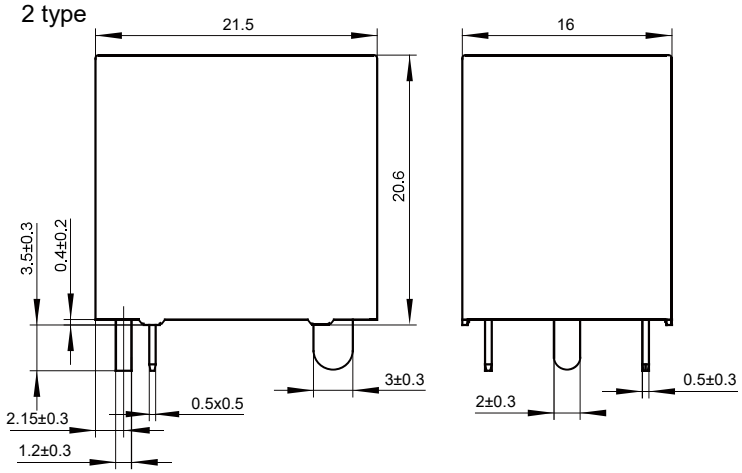
PCB Layout
(Bottom view)

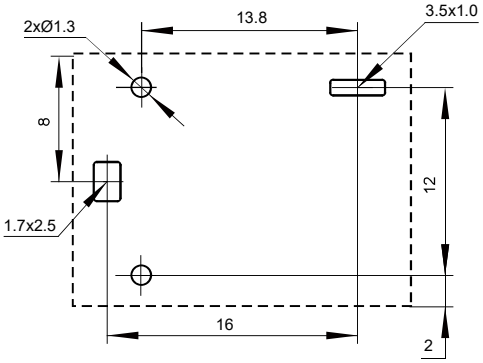
1 type




2 type

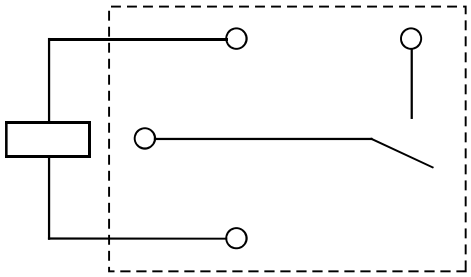


## OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Wiring Diagram
(Bottom view)



**Notes:**1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm;
outline dimension＞1mm and ≤5mm,tolerance should be ±0.3mm; outline dimension＞5mm, toleranceshould be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.