

JQX-105F-4 (HF105F-4)

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:R50050266



File No.:CQC02001001955



Features

- 30A switching capability
- 2.5KV dielectric strength (between coil and contacts)
- Heavy load up to 7,200VA
- Class F insulation available
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 50.2 x 27.5 x 27.8 mm

CONTACT DATA

| | | | | |
|----------------------------|----------------------------|-------------------------|-------------------------|-------------------------|
| Contact arrangement | 1A | 1B | 1C (NO) | 1C (NC) |
| Initial contact resistance | 50mΩ (at 1A 24VDC) | | | |
| Contact material | AgSnO ₂ , AgCdO | | | |
| Max. switching capacity | 7200VA/560W | 3600VA/280W | 4800VA/560W | 2400VA/280W |
| Max. switching voltage | 277VAC/28VDC | | | |
| Max. switching current | 30A | 15A | 20A | 10A |
| JQX-105F-4 rating | 30A 240VAC 20A 28VDC | 15A 240VAC 10A 28VDC | 20A 240VAC 20A 28VDC | 10A 240VAC 10A 28VDC |
| JQX-105F-4L rating | 25A 240VAC 20A 28VDC | 15A 240VAC 10A 28VDC | 20A 240VAC 20A 28VDC | 10A 240VAC 10A 28VDC |
| Mechanical life | 1 x 10 ⁷ OPS | | | |
| Electrical life | 1 x 10 ⁵ OPS | | | |

CHARACTERISTICS

| | | |
|-------------------------------|-------------------------|---|
| Initial insulation resistance | 1000MΩ, at 500VDC | |
| Dielectric strength | Between coil & contacts | 2500VAC 1min. |
| | Between open contacts | 1500VAC 1min. |
| Operate time (at nomi. volt.) | Max. 15ms | |
| Release time (at nomi. volt.) | Max. 10ms | |
| Ambient temperature | Class B | DC:-55°C to +85°C AC:-55°C to +60°C |
| | Class F | DC:-55°C to +105°C AC:-55°C to +85°C |
| Shock resistance | Functional | 98 m/s ² |
| | Destructive | 980 m/s ² |
| Vibration resistance | DA: 1.5mm, 10 to 55Hz | |
| Humidity | 98%, +40°C | |
| Termination | QC | |
| Unit weight | Approx. 36g | |
| Construction | Sealed IP67, Dust cover | |

COIL

| | |
|------------|------------------------------|
| Coil power | DC type: 900mW; AC type: 2VA |
|------------|------------------------------|

SAFETY APPROVAL RATINGS

| | | | |
|----------|------------|------------------------|------------|
| UL & CUR | 1 Form A | NO | 30A 277VAC |
| | | | 30A 28VDC |
| | 2HP 250VAC | | |
| 1 Form B | NO | 1HP 125VAC | |
| | | 277VAC(FLA=20)(LRA=60) | |
| 1 Form C | NO | 15A 277VAC | |
| | | 10A 28VDC | |
| 1 Form C | NC | 1/2HP 250VAC | |
| | | 1/4HP 125VAC | |
| 1 Form C | NC | 277VAC(FLA=10)(LRA=33) | |
| | | 30A 277VAC | |
| 1 Form C | NO | 20A 277VAC | |
| | | 10A 28VDC | |
| 1 Form C | NO | 2HP 250VAC | |
| | | 1HP 125VAC | |
| 1 Form C | NO | 277VAC(FLA=20)(LRA=60) | |
| | | 20A 277VAC | |
| 1 Form C | NO | 10A 277VAC | |
| | | 10A 28VDC | |
| 1 Form C | NO | 1/2HP 250VAC | |
| | | 1/4HP 125VAC | |
| 1 Form C | NO | 277VAC(FLA=10)(LRA=33) | |
| | | 15A 250VAC cosφ=0.4 | |



HONGFA RELAY

ISO9001、ISO/TS16949、ISO14001、OHSAS18001 CERTIFIED

2006 Rev. 1.10

COIL DATA

| Nominal Voltage (VDC) | Pick-up Voltage (VDC) | Drop-out Voltage (VDC) | Max. Allowable Voltage (VDC) 25°C | Coil Resistance (Ω) |
|-----------------------|-----------------------|------------------------|-----------------------------------|---------------------|
| 5 | 3.75 | 0.5 | 6.5 | 27 ± 10% |
| 6 | 4.50 | 0.6 | 7.8 | 40 ± 10% |
| 9 | 6.75 | 0.9 | 11.7 | 97 ± 10% |
| 12 | 9.00 | 1.2 | 15.6 | 155 ± 10% |
| 15 | 11.25 | 1.5 | 19.5 | 256 ± 10% |
| 18 | 13.50 | 1.8 | 23.4 | 380 ± 10% |
| 24 | 18.00 | 2.4 | 31.2 | 660 ± 10% |
| 48 | 36.00 | 4.8 | 62.4 | 2560 ± 10% |
| 70 | 52.50 | 7.0 | 91 | 5500 ± 10% |
| 110 | 82.50 | 11 | 143 | 13450 ± 10% |

| Nominal Voltage (VAC) | Pick-up Voltage (VAC) | Drop-out Voltage (VAC) | Max. Allowable Voltage (VDC) 25°C | Coil Resistance (Ω) |
|-----------------------|-----------------------|------------------------|-----------------------------------|---------------------|
| 12 | 9.6 | 2.4 | 15.6 | 25 ± 10% |
| 24 | 19.2 | 4.8 | 31.2 | 100 ± 10% |
| 120 | 96.0 | 24.0 | 156 | 2500 ± 10% |
| 208 | 166.4 | 41 | 270.4 | 11000 ± 10% |
| 220/240 | 192 | 48 | 286/312 | 13490 ± 10% |
| 277 | 220 | 54 | 360.1 | 15000 ± 10% |

Notes: When requiring pick-up voltage < 80% of nominal voltage, special order allowed.

ORDERING INFORMATION

| | |
|---|---|
| JQX-105F-4 / 018 D K 1H S T F XXX | |
| Type | JQX-105F-4: 30A JQX-105F-4L: 25A |
| Coil voltage | DC: 5 to 110VDC AC: 12 to 277VAC |
| Coil voltage form | D: DC A: AC |
| Coil terminal width | K: 4.8mm Nil: 2.8mm |
| Contact arrangement | 1H: 1 Form A 1D: 1 Form B 1Z: 1 Form C |
| Construction | S: Sealed IP67 Nil: Dust cover |
| Contact material | T: AgSnO ₂ Nil: AgCdO |
| Insulation standard | F: Class F Nil: Class B |
| Customer special code (Only for special requirements) | e.g. 551 stands for RoHS compliant (Cadmium containing contacts) 555 stands for RoHS compliant (Cadmium-free contacts) |

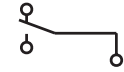
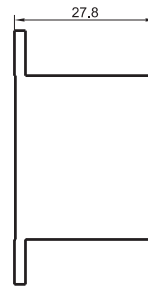
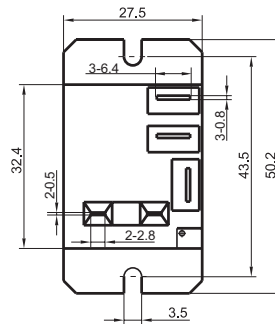
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

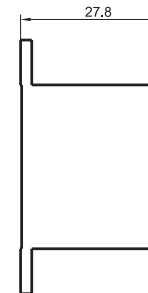
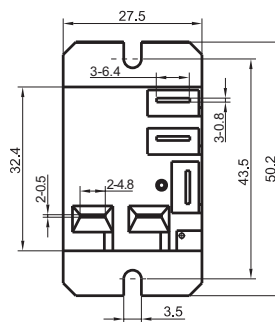
Wiring Diagram

JQX-105F-4 / □□□□-□-□□□□-□□
2.8mm coil terminal width



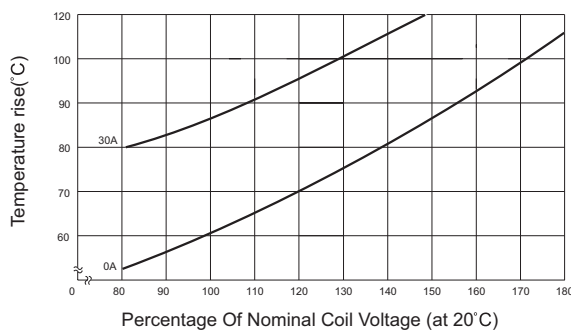
(Bottom view)

JQX-105F-4 / □□□□-□-K-□□□□-□□
4.8mm coil terminal width

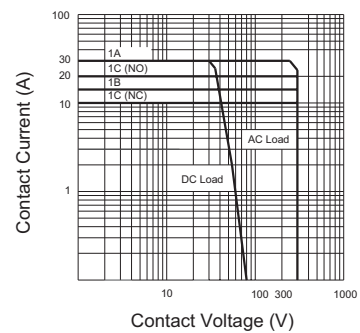


CHARACTERISTIC CURVES

COIL TEMPERATURE RISE



MAXIMUM SWITCHING POWER



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.

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