

JQX-105F-1 (HF105F-1)

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:R50050266



File No.:CQC02001001955



Features

- 30A switching capability
- 4KV dielectric strength (between coil and contacts)
- Heavy load up to 7,200VA
- PCB coil terminals, ideal for heavy duty load
- Open, sealed & dust cover types available
- Class F insulation available
- Environmental friendly product available (RoHS compliant)
- Outline Dimensions: 32.2 x 27.0 x 20.4 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-1 rating	30A 240VAC 20A 28VDC	15A 240VAC 10A 28VDC	20A 240VAC 20A 28VDC	10A 240VAC 10A 28VDC
JQX-105F-1L 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	2500/4000VAC 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	98m/s ²
	Destructive	980m/s ²
Vibration resistance		10 to 55Hz 1.5mm DA
Humidity		98% RH, +40°C
Termination		PCB
Unit weight		Approx. 36g
Construction		Open (Only for 1 Form A), Sealed IP67, Dust cover

COIL

Coil power	DC type: 900mW; AC type: 2VA
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SAFETY APPROVAL RATINGS

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

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%

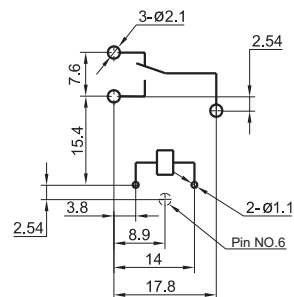
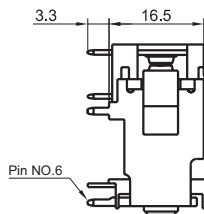
Notes: When requiring pick-up voltage < 80% of nominal voltage, special order allowed.

ORDERING INFORMATION

JQX-105F-1 / 018 D T 1H S T F XXX	
Type	JQX-105-1: 30A (Open, only for 1 Form A) JQX-105-1L: 25A (Open, only for 1 Form A) JQX-105F-1: 30A JQX-105F-1L: 25A
Coil voltage	DC: 5 to 110VDC AC: 12 to 277VAC
Coil voltage form	D: DC A: AC
Termination	6 : With Pin NO.6, Dielectric Strength Between Coil and Contact: 2500VAC T : Without Pin NO.6, Dielectric Strength Between Coil and Contact: 4000VAC Nil: Without Pin NO.6, Dielectric Strength Between Coil and Contact: 2500VAC
Contact arrangement	1H: 1 Form A 1D: 1 Form B 1Z: 1 Form C
Construction	S: Sealed IP67 Nil: Dust cover (For JQX-105F-1, JQX-105F-1L) Open (For JQX-105-1, JQX-105-1L)
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)

Unit: mm

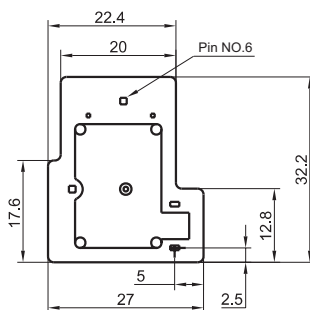
PCB Layout



Pin NO.6

3.3

20.1



Percentage Of Nominal Coil Voltage (at 20°C)	Temperature rise (°C) - 0A	Temperature rise (°C) - 30A
80	55	80
100	65	90
120	75	100
140	85	110
150	90	120
160	95	-
170	100	-
180	115	-

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.