HF92F (692) MINIATURE INTERMEDIATE POWER RELAY

c UL us
File No.:E134517

VDE
File No.:40016109

CQC
File No.:CQC02001001955

Features

- 30A switching capabiliy
- Creepage distance: 8mm
- 4kV dielectric strength (between coil and contacts)
- Class F construction
- Wash tight and dust protecetd types available
- PCB & QC layouts available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (52.0 x 33.7 x 26.7) mm

CONTACT DATA

Contact arrangement	2A, 2C
Contact resistance	50mΩ (at 1A 24VDC)
Contact material	$AgSnO_2$, AgCdO
Contact rating (Res. load)	NO:30A 250VAC; 20A 28VDC NC: 3A 277VAC/28VDC
Max. switching voltage	277VAC / 30VDC
Max. switching current	30A
Max. switching power	7500VA / 560W
Mechanical endurance	5 x 10^6 OPS
Electrical endurance	1 x 10^5 OPS

CHARACTERISTICS

Insulation resistance		1000MΩ (at 500VDC)
Dielectric strength	Between coil & contacts	4000VAC 1min
	Between open contacts	1500VAC 1min
	Between contact poles	2000VAC 1min
Surge voltage (between coil & contacts)		10kV (1.2×50μs)
Operate time (at nomi. volt.)		DC type: 25ms max.
Release time (at nomi. volt.)		DC type: 25ms max.
Temperature rise (at nomi. volt.)		AC type: 85K max. DC type: 65K max.
Shock resistance	Functional	100m/s²(10g)
	Destructive	1000m/s²(100g)
Vibration resistance		10Hz to 55Hz 1.65mm DA
Humidity		35% to 85% RH, 40°C
Ambient temperature		AC: -40°C to 65°C DC: -40°C to 85°C
Termination		PCB, QC
Unit weight		Approx. 86g
Construction		Wash tight, Dust protected

Notes: The data shown above are initial values.

COIL

Coil power	DC type: 1.7W; AC type: 4.0VA

COIL DATA at 23°C

DC type

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.8	0.5	8.0	15.3 x (1±10%)
6	4.5	0.6	9.6	22 x (1±10%)
12	9	1.2	19.2	86 x (1±10%)
24	18	2.4	38.4	350 x (1±10%)
48	36	4.8	76.8	1390 x (1±10%)
110	82.5	11	176	7255 x (1±10%)

AC type (50Hz)

Nominal Voltage VAC	Pick-up Voltage VAC	Drop-out Voltage VAC	Max. Allowable Voltage VAC	Coil Resistance Ω
24	19.2	4.8	26.4	45 x (1±10%)
120	96	24	132	1125 x (1±10%)
208	166.4	41.6	229	3278 x (1±10%)
220	176	44	242	3800 x (1±10%)
240	192	48	264	4500 x (1±10%)
277	221.6	55.4	305	5960 x (1±10%)

COIL DATA

at 23˚C

AC type (60Hz)

Nominal Voltage VAC	Pick-up Voltage VAC	Drop-out Voltage VAC	Max. Allowable Voltage VAC	Coil Resistance Ω
24	19.2	4.8	26.4	35.7 x (1±10%)
120	96	24	132	830 x (1±10%)
208	166.4	41.6	229	2600 x (1±10%)
220	176	44	242	2870 x (1±10%)
240	192	48	264	3800 x (1±10%)
277	221.6	55.4	305	4700 x (1±10%)

SAFETY APPROVAL RATINGS

UL&CUR	NO	30A 277VAC 1HP 120VAC 2.5HP 240VAC 110 LRA/25.3 FLA 240VAC (DC type)
	NC	3A 277VAC
VDE	NO	30A 250VAC
	NC	3A 250VAC

Notes: Only some typical ratings are listed above. If more details are required, please contact us.

ORDERING INFORMATION

HF92F -012 D -2C 2 2 F (XXX)

Type 1)	HF92F 692 (Old type)	
Coil voltage	**DC:** 5 to 110VDC	**AC:** 24 to 277VAC
Coil voltage form	**D:** DC	**A5:** AC 50Hz **A6:** AC 60Hz
Contact arrangement	**2A:** 2 Form A	**2C:** 2 Form C
Termination	**1:** PCB	**2, 3:** QC
Contact material	**1:** $AgSnO_2$	**2:** AgCdO
Construction 2)	**S:** Wash tight	**F:** Dust protected
Customer special code 3) (Only for special requirements)	e.g. (551) stands for RoHS compliant (Cadmium containing contacts) (555) stands for RoHS compliant (Cadmium-free contacts)	

Notes: 1) We have now gradually updated our ordering information. We suggest new type should be selected. If necessary, old type can be kept for some period for the old customers.

2) Under the ambience with dangerous gas like H_2S, SO_2 or NO_2, wash tight type is recommended; please test the relay in real applications. If the ambience allows, dust protected is preferentially recommended.

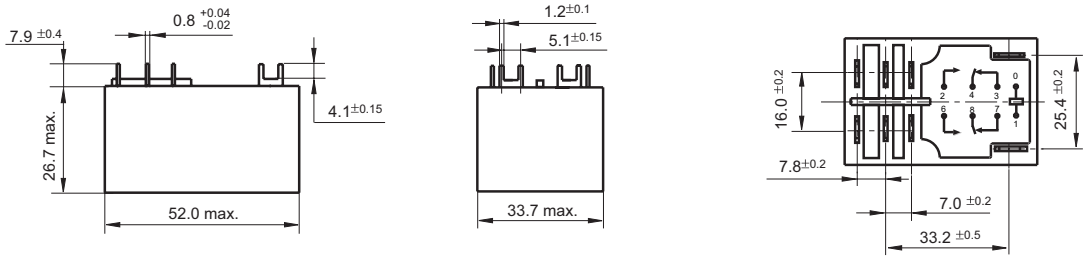
3) HF92F is an environmental friendly product. Please mark a special code (555) or (551) when ordering. (551) stands RoHS compliant with Cadmium contact; (555) stands for RoHS compliant with Cadmium-free contact.

OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

Outline Dimensions

1 Type (PCB)

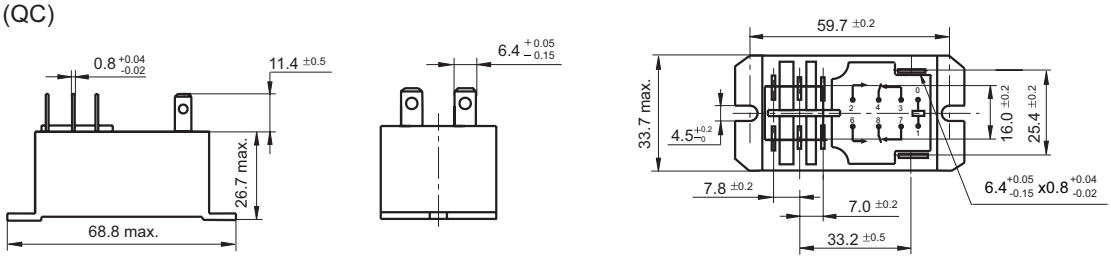


OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

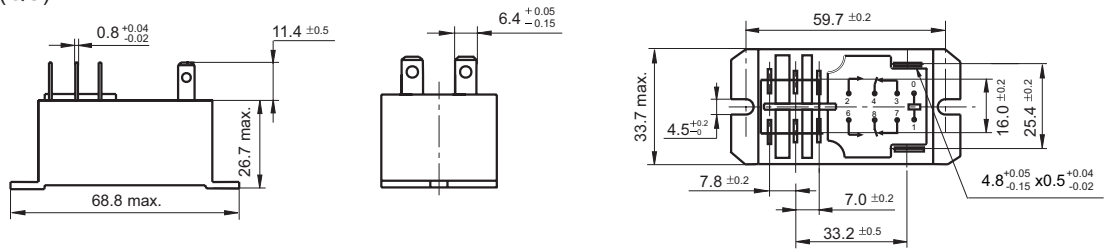
Unit: mm

Outline Dimensions

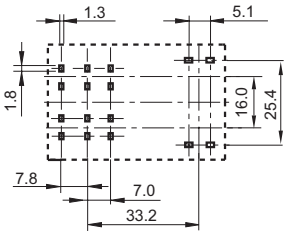
2 Type (QC)



3 Type (QC)



PCB Layout (Bottom view)



Wiring Diagram (Bottom view)

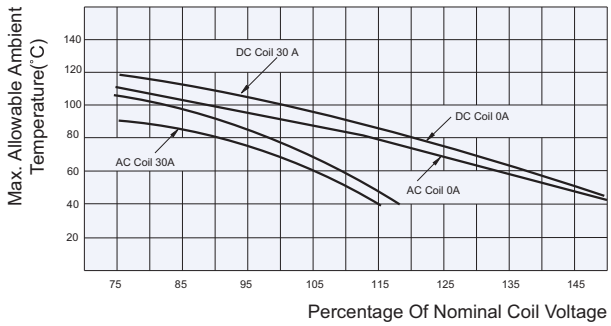
2 Form A　　2 Form C

Remark: 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, tolerance should be ±0.4mm.

2) The tolerance without indicating for PCB layout is always ±0.1mm.

CHARACTERISTIC CURVES

MAX. ALLOWABLE AMBIENT TEMPERATURE



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.