

Datasheet

MINIATURE HIGH POWER RELAY



File No.:E134517



File No.:R9933807



File No.:CQC02001001955



Features

- 4.5kV dielectric strength (between coil and contacts)
- Heavy load up to 5000VA
- Ideal for motor switching
- Withstand inrush current of 80A
- PCB & QC layouts available
- Environmental friendly product (RoHS compliant)
- Outline Dimensions: (30.5 x 16.0 x 23.5) mm

CONTACT DATA

Contact arrangement	1A
Contact resistance	100mΩ (at 1A 6VDC)
Contact material	AgSnO ₂ , AgCdO
Contact rating	Resistive: 20A Motor, Inrush: 80A 0.3s (cosφ=0.7) Break: 20A (cosφ=0.9)
Max. switching voltage	250VAC
Max. switching current	Resistive: 25A Motor: 80A
Max. switching power	6250VA
Mechanical endurance	2 x 10 ⁶ OPS
Electrical endurance	1 x 10 ⁵ OPS (See approval reports for more details)

CHARACTERISTICS

Insulation resistance	1000MΩ (at 500VDC)	
Dielectric strength	Between coil & contacts	4500VAC 1min
	Between open contacts	1000VAC 1min
Operate time (at nomi. volt.)	20ms max.	
Release time (at nomi. volt.)	10ms max.	
Temperature rise (at nomi. volt.)	60K max.	
Shock resistance	Functional	200m/s ² (20g)
	Destructive	1000m/s ² (100g)
Vibration resistance	10Hz to 55Hz 1.5mm DA	
Ambient temperature	-25°C to 70°C	
Humidity	85% RH, 40°C	
Termination	HF102F: PCB & QC	
	HF102F-P: PCB	
Unit weight	Approx. 23g	
Construction	Flux proofed	

Notes: The data shown above are initial values.

COIL

Coil power	900mW
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COIL DATA

at 23°C

Nominal Voltage VDC	Pick-up Voltage VDC	Drop-out Voltage VDC	Max. Allowable Voltage VDC	Coil Resistance Ω
5	3.5	0.5	6.0	27.8 x (1±10%)
12	8.4	1.2	14.4	160 x (1±10%)
24	16.8	2.4	28.8	640 x (1±10%)
48	33.6	4.8	57.6	2560 x (1±10%)

SAFETY APPROVAL RATINGS

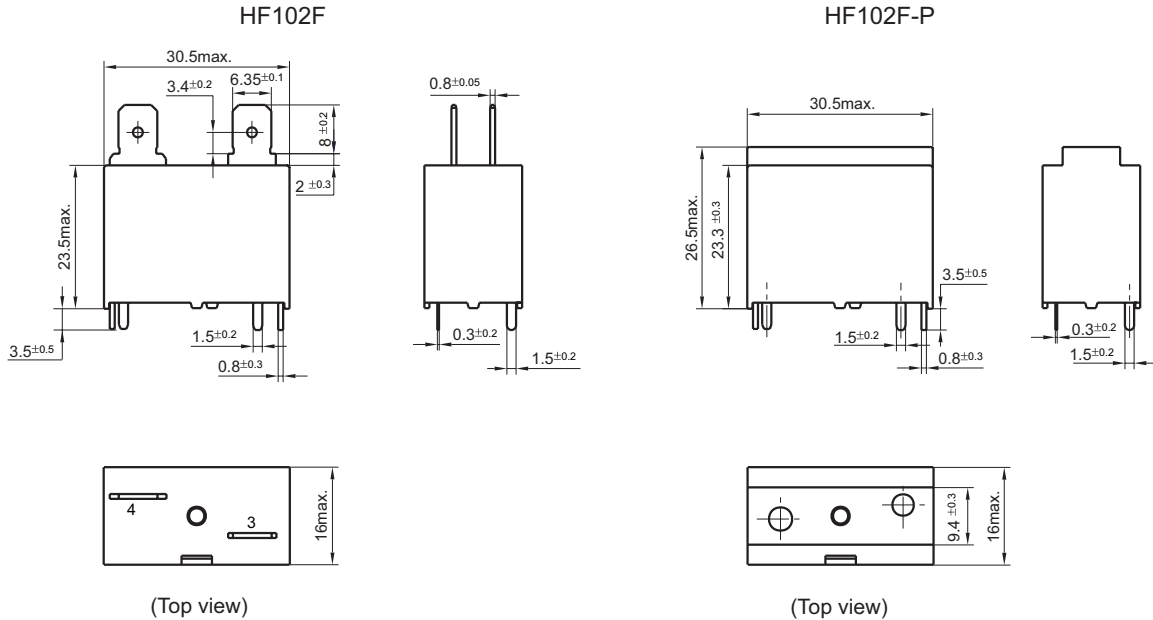
UL&CUR	25A 250VAC
	20A 250VAC
	1HP 120VAC
	2HP 240VAC
TÜV	25A 250VAC
	20A 250VAC

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

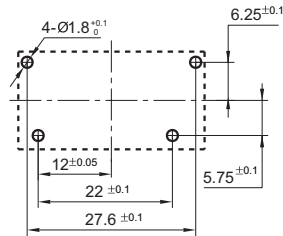
OUTLINE DIMENSIONS, WIRING DIAGRAM AND PC BOARD LAYOUT

Unit: mm

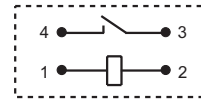
Outline Dimensions



PCB Layout (Bottom view)



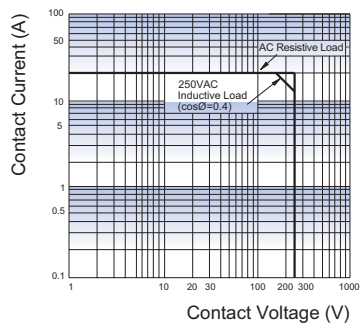
Wiring Diagram



Remark: 1) In case of no tolerance shown in outline dimension: outline dimension $\leq 1\text{mm}$, tolerance should be $\pm 0.2\text{mm}$; outline dimension $> 1\text{mm}$ and $\leq 5\text{mm}$, tolerance should be $\pm 0.3\text{mm}$; outline dimension $> 5\text{mm}$, tolerance should be $\pm 0.4\text{mm}$.
 2) The tolerance without indicating for PCB layout is always $\pm 0.1\text{mm}$.

CHARACTERISTIC CURVES

MAXIMUM SWITCHING POWER



ENDURANCE CURVE

