ENGLISH

Datasheet

SPDT PCB Mount Non-Latching Relay, 12 A, 230V ac

RS Stock number 800-4479

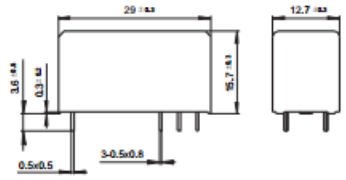
Dimensions: mm

File No.:E134517

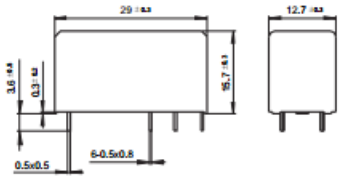
File No.:116934

Outline Dimensions

3.5mm Pinning (HF115F/ □□□ -□□ -□ -1 -□□)



5mm Pinning (HF115F/ □□□ -□□ -□ -2/3/4 -□□)



Wiring Diagram (Bottom view)

3.5/5mm Pinning, 1 Pole, 12A, HF115F/ □□□ -1 □ -□ -1/2-□□

1 Form A | 1 Form B | 1 Form C

5mm Pinning, 1 Pole, 16A, HF115F/ □□□ -1 □ -□ -3-□□

1 Form A | 1 Form B | 1 Form C

5mm Pinning, 2 Pole, 8A, HF115F/ □□□ -2 □ -□ -4-□□

2 Form A | 2 Form B | 2 Form C

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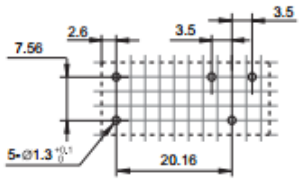
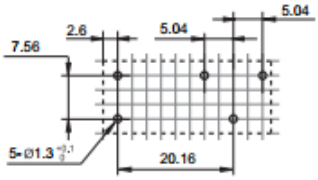
PCB Layout (Bottom view)

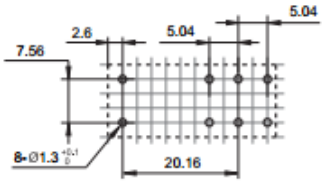
3.5mm 1Pole 12A



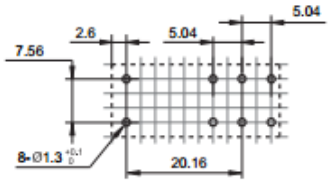
5mm 1Pole 12A



5mm 1Pole 16A



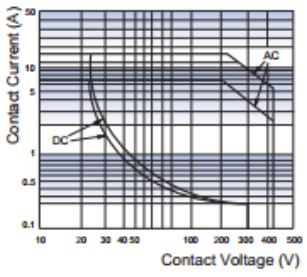
5mm 2Pole 8A



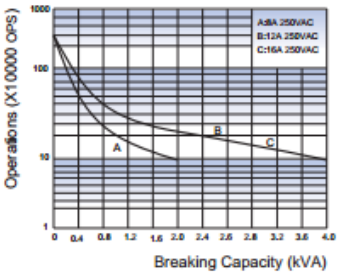
Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≤1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≤5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.4mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.
3) The width of the gridding is 2.52mm.

Characteristic Curves

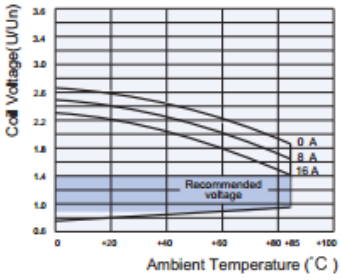
MAXIMUM SWITCHING POWER



ENDURANCE CURVE



COIL OPERATING RANGE (DC) *



Notes: * The use of a relay with an energising voltage other than the rated coil voltage may lead to reduced electrical life.
An energising voltage over the abver range may damage the insulation of relay coil.

Features

Low height- 15.7mm
16A switching capability
5kV dielectric strength (between coil and contacts)
Creepage distance: 10mm
Meeting VDE 0700,0631 reinforce insulation
Product in accordance to IEC 60335-1 available
Sockets available
Plastic sealed and flux proofed types available
UL insulation system: Class F available
Environmental friendly product RoHS compliant

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Contact Data

Contact arrangement: 1A, 1B, 1C / 2A, 2B, 2C
Contact resistance: 100m Ω max. (at 1A 6VDC)
Contact rating (Res.load) 12A/16A 250VAC / 8A 250VAC
Max. switching voltage: 440VAC / 300VDC
Max. switching current: 12A/ 16A / 8A
Max. switching power: 3000VA ,4000VA / 2000VA
Mechanical endurance: 1x10(7) OPS
Electrical endurance: 1x10(5) OPS

Characteristics

Insulation resistance: 1000M Ω (at 500VDC)
Dielectric Strength: Between coil & contacts 5000VAC 1min
Between open contacts 1000VAC 1min
Between contact sets 2500VAC 1min
Surge voltage(between coil & contacts) 10kV (1.2/ 50us)
Operate time (at nomi. Volt.): 15ms max
Release time (at nomi. Volt.): 8ms max
Temperature rise (at nomi. Volt.): 55K max
Shock resistance: Functional 98m/s
Destructive 980m/s
Vibration resistance: 10Hz to 150Hz 10g/5g
Humidity: 5% to 85% RH
Ambient temperature: -40degC to 85deg
Termination: PBC
Unit weight: Approx. 13.5g
Construction: Plastic sealed
Flux Proof

Coil

Coil power: Approx. 400mW

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Nominal Voltage VDC	Pick-Up voltage VDC max.	Drop- out voltage VDC min.	Max allowable voltage VDC.	Coil Resistance
5	3.50	0.5	7.5	62 x (1±10%)
6	4.20	0.6	9.0	90 x (1±10%)
9	6.30	0.9	13.5	202 x (1±10%)
12	8.40	1.2	18	360 x (1±10%)
18	12.60	1.8	27	810 x (1±10%)
24	16.80	2.4	36	1440 x (1±10%)
48	33.60	4.8	72	5760 x (1±15%)
60	42.00	6.0	90	7500 x (1±15%)
110	77.00	11.0	165	25200 x (1±15%)

Notes
The max allowable voltage in the coil data is coil overdrive voltage, it is the instantaneous max voltage which the relay coil could endure in a very short time.

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Safety approval Ratings (VDE)

Contact material	Specifications	Ratings	Ambient Temperature
AgCdO	HF115F....2(H;Z)(S)4(G)(F)	8A 250VAC	at 70°C
	HF115F....1H(S)(1;2)(G)(F)	12A 250VAC	at 70°C
		10A 250VAC	at 70°C
	HF115F....1Z(S)(1;2)(G)(F)	12A 250VAC	at 70°C
	HF115F....1H(S)3(G)(F)	16A 250VAC	at 70°C
		10A 250VAC	at 70°C
		9A 250VAC COSØ =0.4	at 70°C
	HF115F....1Z(S)3(G)(F)	16A 250VAC	at 70°C
		9A 250VAC COSØ =0.4	at 70°C
AgNi	HF115F....2(H;Z)(S)4B(G)(F)	5A 400VAC	at 85°C
		8A 250VAC	at 85°C
	HF115F....1H(S)(1;2)B(G)(F)	12A 250VAC	at 85°C
	HF115F....1Z(S)(1;2)B(G)(F)	12A 250VAC	at 85°C
	HF115F....1H(S)3B(G)(F)	16A 250VAC	at 85°C
		12A 250VAC	at 85°C
		9A 250VAC COSØ =0.4	at 85°C
	HF115F....1Z(S)3B(G)(F)	16A 250VAC (NO only)	at 85°C
		12A 250VAC	at 85°C
		9A 250VAC COSØ =0.4 (NO only)	at 70°C
		10(4)A 250VAC (NO only)	at 65°C
		12(2)A 250VAC (NO only)	at 65°C
$AgSnO_2$	HF115F....2(H;Z)(S)4A(G)(F)	8A 250VAC	at 85°C
	HF115F....1(H;Z)(S)(1;2)A(G)(F)	12A 250VAC	at 85°C
	HF115F....1H(S)3A(G)(F)	16A 250VAC	at 85°C
		9A 250VAC COSØ =0.4	at 70°C
	HF115F....1Z(S)3A(G)(F)	16A 250VAC (NO only)	at 85°C
		9A 250VAC COSØ =0.4 (NO only)	at 70°C

UL/CUL

Version 1 or 2 (AgCdO)	12A 277VAC
	1/2HP 250VAC
	1/3HP 125VAC
Version 1 or 2 ($AgSnO_2$)	12A / 277VAC
	B300
	R300
Version 1 or 2 (AgNi)	12A 277VAC
Version 3 (AgCdO)	16A 277 VAC
	9A 250VAC at 105°C
	1HP 250VAC
	1/2HP 125VAC
	TV-5 125VAC
Version 3 ($AgSnO_2$)	16A 277 VAC
	1/3HP 125VAC
	1/2HP 250VAC
	B300
	R300
Version 3 (AgNi)	16A 277VAC
	5FLA, 30LRA 250VAC
Version 4 (AgCdO)	10A 250VAC
	8A 277VAC
	1/2HP 250VAC
	1/4HP 125VAC
Version 4 ($AgSnO_2$)	8A 277VAC
Version 4 (AgNi)	8A 277VAC

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