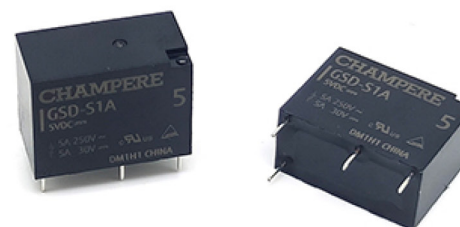




GSD. MININATURE POWER RELAY

FEATURES

- ▶ 20.5 X 10.5 X 15.6(H) MM.
- ▶ EXCELLENT DIELECTRIC STRENGTH.
- ▶ 10A MAX. SWITCHING CAPACITY, CREEPAGE DISTANCE ≥ 8MM.
- ▶ AVAILABLE IN SENSITIVE COIL AND GWT VERSION.
- ▶ UL CLASS F INSULATION AVAILABLE.



 File Number: E516488
 File Number: R50472301

CONTACT RATINGS

Contact Form	1A, 1B, 1C		
Contact Resistance	≤100mΩ (1A 6VDC)		
Contact Material	Ag Alloy (AgSnO ₂ , AgSnO ₂ In ₂ O ₃ , AgNi)		
Rated Load (Resistive)	1 FORM A	1 FORM C	
		NO	NC
	10A 277VAC 10A 30VDC	5A 277VAC 5A 30VDC	5A 277VAC 3A 30VDC
Max. Switching Current	10A	5A	5A
Max. Switching Power	2,770VA / 300W	1,385VA / 150W	1,385VA / 90W
Max. Switching Voltage	277VAC / 30VDC		
Min. Permissible Load	100mA at 5VDC		

CHARACTERISTICS

Operate Time	≤ 10ms		
Release Time	≤ 5ms		
Insulation Resistance	1,000MΩ (500VDC)		
Dielectric Strength	I / O	O / O	
	4,000VAC 1min	1,000VAC 1min	
Impulse Withstand Voltage	8 kV (1.2 x 50μs)		
Shock Resistance	Non-energized	Destruction	Malfunction
	100 m/s ² (10G)	1,000 m/s ² (100G)	100 m/s ² (10G)
Vibration Resistance	Destruction		Malfunction
	10 to 55 Hz, (1.5mm double amplitude)		10 to 55 Hz, (1.5mm double amplitude)
Ambient Temperature	Operating: -40°C to +105°C with no icing or condensation		
Ambient Humidity	Operating: 5% to 85%		
Pin Type	PCB Pins		
Weight	Approx. 6g		

NOTE: The data shown above are initial values.

COIL DATA

Standard	Approx. 450mW				
Rated Voltage (VDC)	Operate Voltage (VDC)	Release Voltage (VDC)	Max. Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%
3	≤2.25	≥0.15	3.9	150	20
5	≤3.75	≥0.25	6.5	90	55.5
6	≤4.5	≥0.3	7.8	75	80
9	≤6.75	≥0.45	11.7	50	180
12	≤9	≥0.6	15.6	37.5	320
24	≤18	≥1.2	31.2	18.8	1,280
Sensitive	Approx. 200mW				
Rated Voltage (VDC)	Operate Voltage (VDC)	Release Voltage (VDC)	Max. Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%
3	≤2.4	≥0.15	3.9	66.7	45
5	≤4	≥0.25	6.5	40	125
6	≤4.8	≥0.3	7.8	33.3	180
9	≤7.2	≥0.45	11.7	22.2	405
12	≤9.6	≥0.6	15.6	16.7	720
24	≤19.2	≥1.2	31.2	8.3	2,880

LIFE EXPECTANCY DATA

Mechanical Life Expectancy	10,000,000 Operations	
Electrical Life Expectancy	1 FORM A	1 FORM C
	100,000 Operations (H Type) (10A 277VAC Resistive Load, 1s ON / 9s OFF)	50,000 Operations (NO: 5A / NC: 5A 277VAC Resistive Load, 1s ON / 9s OFF)
	100,000 Operations (5A 277VAC Resistive Load, 1s ON / 9s OFF)	20,000 Operations (NO: 5A / NC: 3A 30VDC Resistive Load, 1s ON / 9s OFF)
	20,000 Operations (10A 30VDC Resistive Load, 1s ON / 9s OFF)	

NOTE: The electrical life data items shown are possible at 23°C.

SAFTY APPROVALS

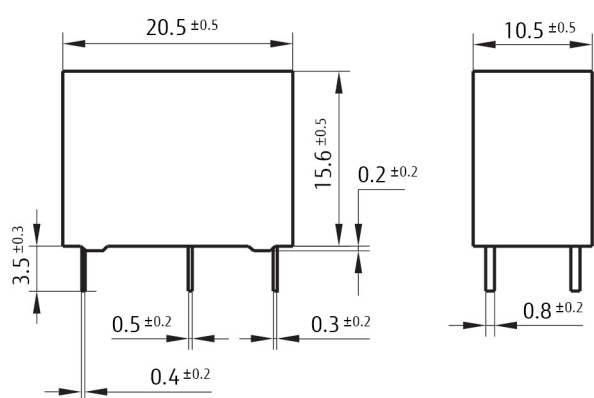
ULus / cUL	Coil Rating 3 to 48VDC	Contact Rating	
		NO 10A 277VAC 85°C 50,000 Operations 5A 277VAC 105°C 100,000 Operations	NC 5A 277VAC 85°C 100,000 Operations
TUV	Coil Rating 3 to 48VDC	Contact Rating	
		NO 10A 250VAC 85°C 100,000 Operations 10A 30VDC 85°C 100,000 Operations 5A 250VAC 85°C 100,000 Operations 5A 30VDC 85°C 100,000 Operations	NC 3A 250VAC 85°C 100,000 Operations 3A 30VDC 85°C 100,000 Operations

ORDERING INFORMATION

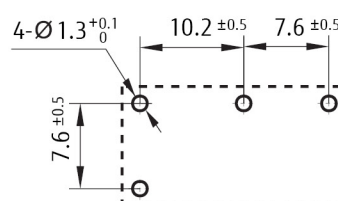
Type	Contact / Seal Key	Variation Key	Coil Key
GSD	S 1 A D H	L F 1	24 VDC
Seal Type	Nil: Flux Proof; S: Plastic Sealed		X / XX (3 ~ 48): Coil DC Voltage Value Coil Voltage
NO of Pole	1: Single Pole		Nil: Standard Pin; 1: Pin Pitch 1 (Discontinued) Pin Pitch
Contact Form	A: Form A / Normally Open; B: Form B / Normally Close; C: Form C / Change Over		Nil: Standard Insulation; F: Class F Insulation Insulation Class
Contact Material	Nil: Silver Alloy (ROHS Complaint); D: Silver Alloy: (Others)		Nil: Standard Coil: 0.45W; L: Sensitive Power Coil: 0.2W Power Consumption
			Nil: Standard Switching Capacity (5A); H: High Switching Capacity: (10A) Contact Capacity

DIMENSIONS (UNIT: MM)

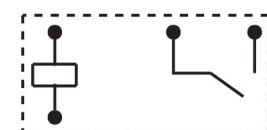
Outline Dimensions



Wiring Diagram (Bottom View)



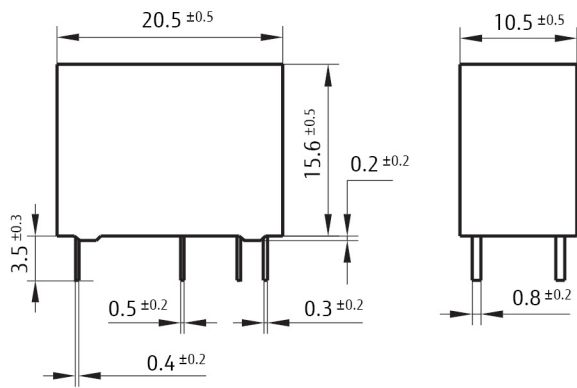
PCB Layout (Bottom View)



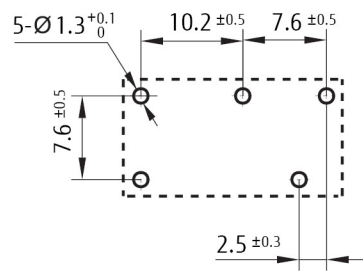
1 FORM A

DIMENSIONS CONT.

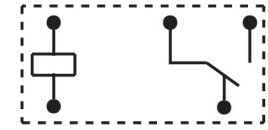
Outline Dimensions



Wiring Diagram (Bottom View)



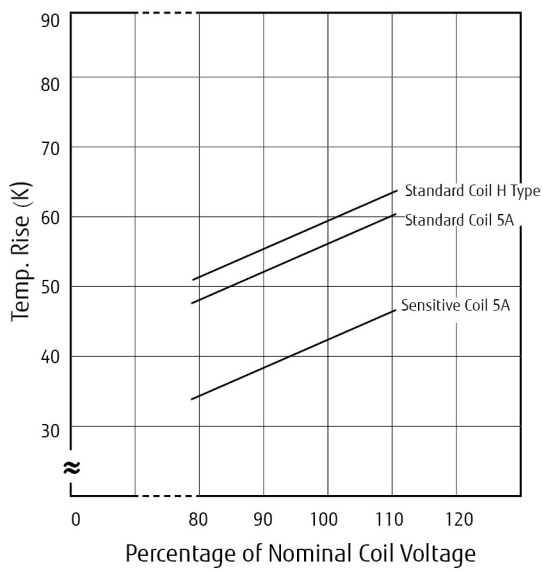
PCB Layout (Bottom View)



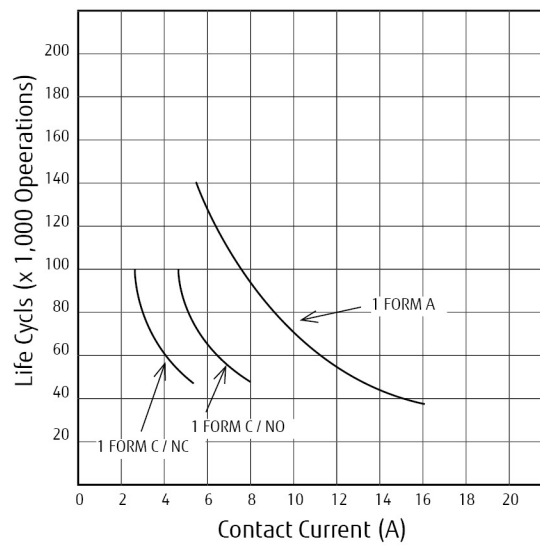
1 FORM C

ENGINEERING DATA

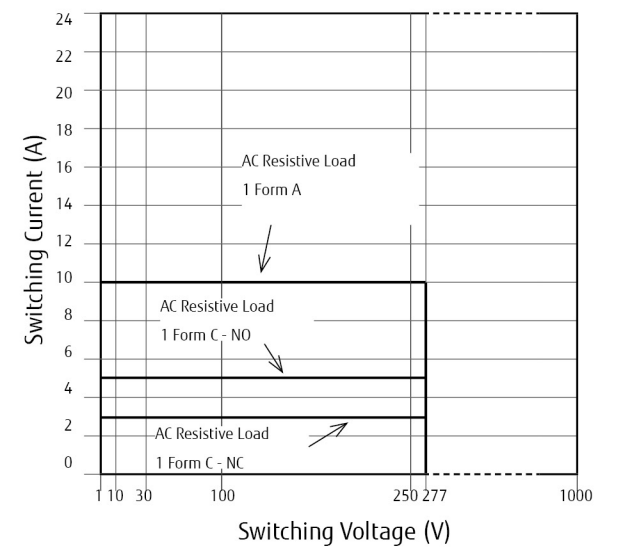
Coil Temperature Rise
70°C; Distance: 10mm



Electrical Cycles
NO: 277VAC NC: 277VAC Resistive 1s ON / 9s OFF Room Temperature



Maximum Switching Capacity

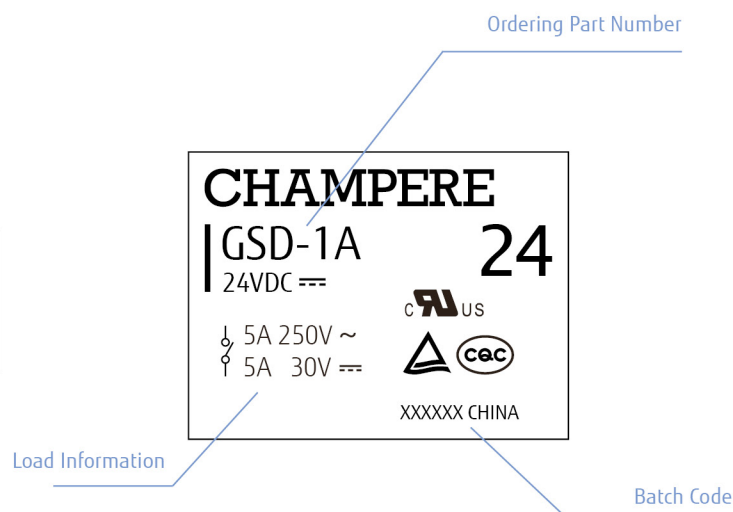


PRINT LAYOUT

Below layout is for reference only.

SIDE PRINTING

LASER PRINTED ON BLACK CASE



PACKAGE INFORMATION

Package 1: Paper Tray	
Inner Package Type & Quantity	100Pcs Per Paper Tray
Outer Package Type & Quantity	1,000pcs per Carton with Logo and Sticker
Outer Package Dimension & Weight G.W. / N.W.	32 x 25 x 16 cm; 7.5Kgs / 7Kgs
Package 2: PVC Tray	
Inner Package Type & Quantity	50Pcs Per PVC Tray
Outer Package Type & Quantity	1,000pcs per Carton with Logo and Sticker
Outer Package Dimension & Weight G.W. / N.W.	35 x 30 x 18 cm; 8Kgs / 7.5Kgs