



GPC HIGH POWER PCB RELAY

FEATURES

- ▶ 32.4 X 27.4 X 28.2(H, -2 TYPE) MM.
- ▶ HIGH POWER RELAY WITH FLANGE BASE.
- ▶ UP TO 40A MAX SWITCHING CAPACITY.
- ▶ WITHSTAND 6KV IMPLUSE VOLTAGE.
- ▶ UL CLASS F INSULATION AVAILABLE.



 File Number: E517609
 File Number: R50484238

CONTACT RATINGS

Contact Form	1A, 1B, 1C		
Contact Resistance	≤50mΩ (1A 24VDC)		
Contact Material	Ag Alloy (AgSnO ₂ , AgSnO ₂ In ₂ O ₃ , AgCdO)		
Rated Load (Resistive)	1A	1C	
		NO	NC
	40A 240VAC 40A 28VDC	40A 240VAC 40A 28VDC	30A 240VAC 30A 28VDC
Max. Switching Current	40A		30A
Max. Switching Power	9,600VA / 1,120W		7,200VA / 840W
Max. Switching Voltage	240VAC / 28VDC		
Min. Permissible Load	500mA at 5VDC		

CHARACTERISTICS

Operate Time	≤ 15ms		
Release Time	≤ 10ms		
Insulation Resistance	100MΩ (500VDC)		
Dielectric Strength	I / O	O / O	
	4,500VAC 1min	1,500VAC 1 min	
Impulse Withstand Voltage	6.0 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: -55°C to 105°C with no icing or condensation		
Ambient Humidity	Operating: 5% to 85%		
Pin Type	PCB Pins and Quick Connector		
Weight	Approx. 36g		

NOTE: The data shown above are initial values.

COIL DATA

DC Coil	Approx. 900mW				
Rated Voltage (VDC)	Operate Voltage (VDC)	Release Voltage (VDC)	Max. Voltage (VDC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%
5	≤3.75	≥0.5	6.5	180	27.8
6	≤4.5	≥0.6	7.8	150	40
9	≤6.75	≥0.9	11.7	100	90
12	≤9	≥1.2	15.6	75	160
18	≤13.5	≥1.8	23.4	50	360
24	≤18	≥2.4	31.2	37.5	640
48	≤36	≥4.8	62.4	18.75	2,560
110	≤82.5	≥11	143	8.18	13,444.4
AC Coil	Approx. 2VA				
Rated Voltage (VAC)	Operate Voltage (VAC)	Release Voltage (VAC)	Max. Voltage (VAC)	Nominal Current (mA)	Coil Resistance (Ω) ±10%
24	≤19.2	≥4.8	31.2	83.33	100
120	≤96	≥24	156	16.67	2,500
220	≤176	≥44	286	9.09	13,490

LIFE EXPECTANCY DATA

Mechanical Life Expectancy	10,000,000 Operations	
Electrical Life Expectancy	FORM A	FORM C
	100,000 Operations (30A 250VAC Resistive Load, 1s ON / 9s OFF)	20,000 Operations (NO: 30A / NC: 20A 250VAC Resistive Load, 1s ON / 9s OFF)
	120,000 Operations (20A 250VAC Resistive Load, 1s ON / 9s OFF)	

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

SAFETY APPROVALS

ULus / cUL	Coil Rating	Contact Rating	
		NO	NC
	6 to 48VDC	40A 240VAC / 28VDC 85°C / 105°C 30A 240VAC / 28VDC 85°C / 105°C	30A 240VAC / 28VDC 85°C / 105°C 20A 240VAC / 28VDC 85°C / 105°C
TUV	Coil Rating	Contact Rating	
		NO	NC
	6 to 48VDC	40A 240VAC / 28VDC 85°C / 105°C 30A 240VAC / 28VDC 85°C / 105°C	30A 240VAC / 28VDC 85°C / 105°C 20A 240VAC / 28VDC 85°C / 105°C

ORDERING INFORMATION

Type	Contact / Seal Key	Variation Key	Coil Key
GPC	S 1 A	K F 1	24 VDC or VAC
Seal Type	Nil: Flux Proof (RTII); S: Fully Sealed (RTIII)		X / XX / XXX (5 ~ 220): DC / AC Coil Voltage Value Coil Voltage
NO of Pole	1: Single Pole		Nil: Exposed; 1: With Arc Shield; 2: Full Height Quick Connector Type
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
			Nil: Standard DC Coil: 0.9W; K: High Power Coil: 1.2W Power Consumption
			Nil: Standard Switching Capacity (up to 40A) Contact Capacity

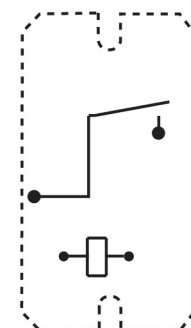
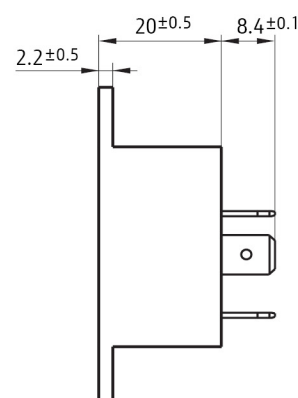
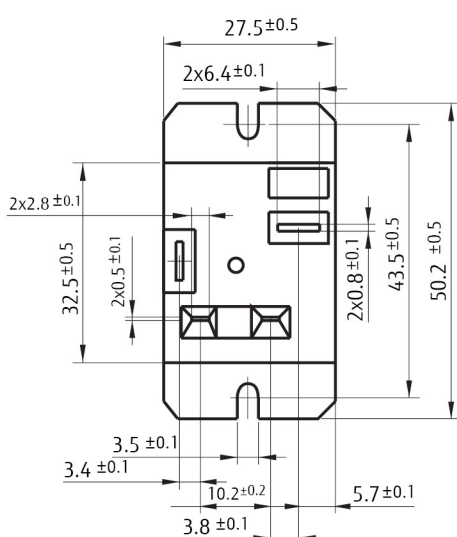
DIMENSIONS (UNIT: MM)

Outline Dimensions

Wiring Diagram

PCB Layout

1 FORM A - Standard (Quick Connectors Exposed)



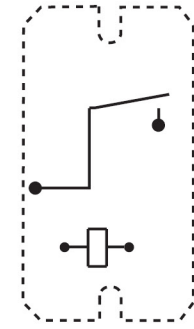
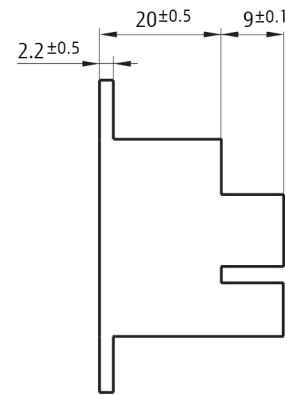
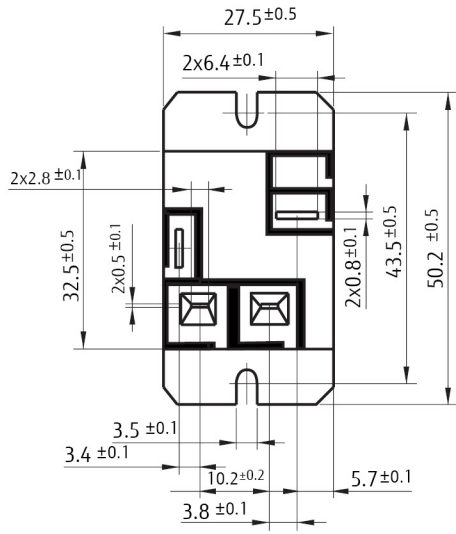
DIMENSIONS CONT.

Outline Dimensions

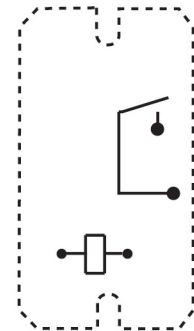
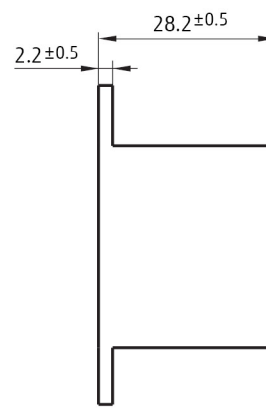
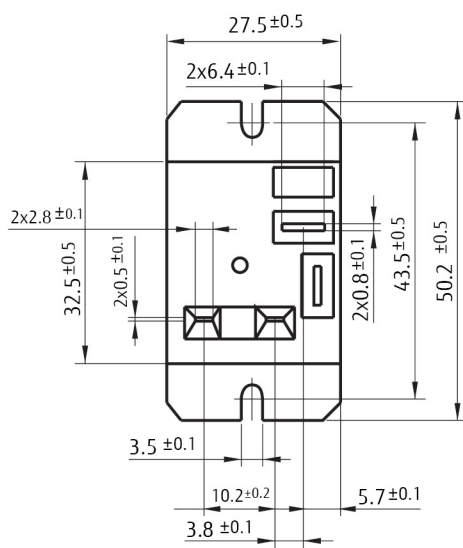
Wiring Diagram

PCB Layout

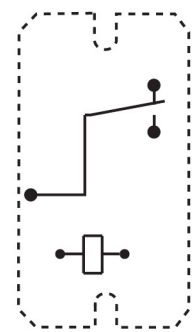
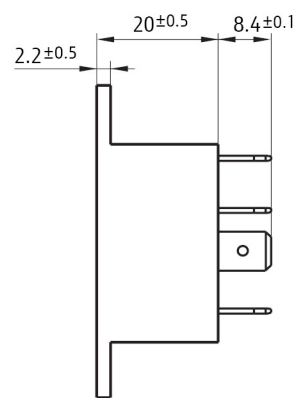
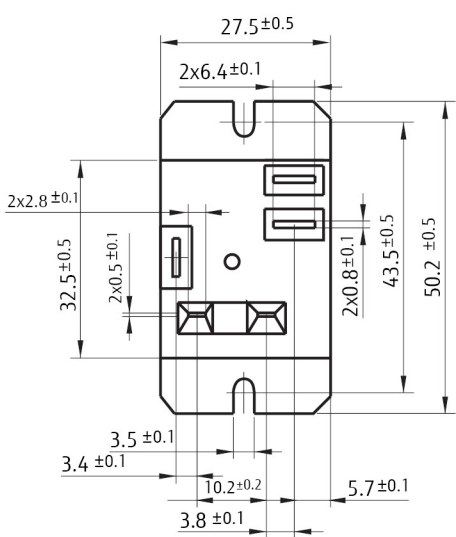
1 FORM A - Type 1 (Quick Connectors with Arc Shield)



1 FORM A - Type 2 (Full Height Case)



1 FORM C - Standard (Quick Connectors Exposed)



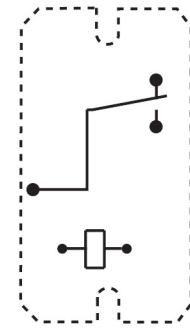
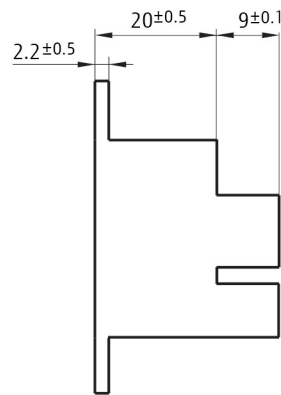
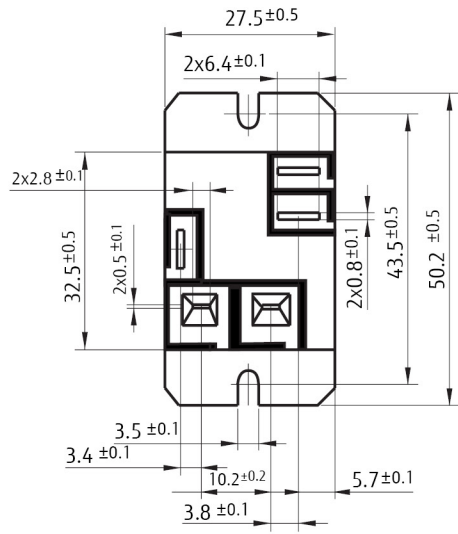
DIMENSIONS CONT.

Outline Dimensions

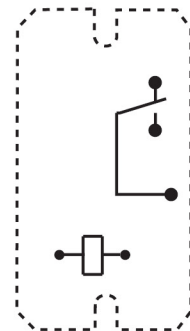
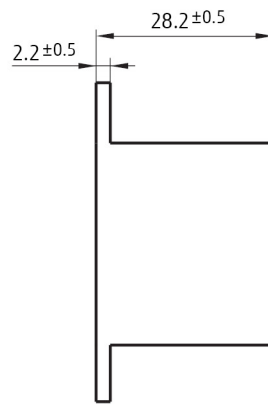
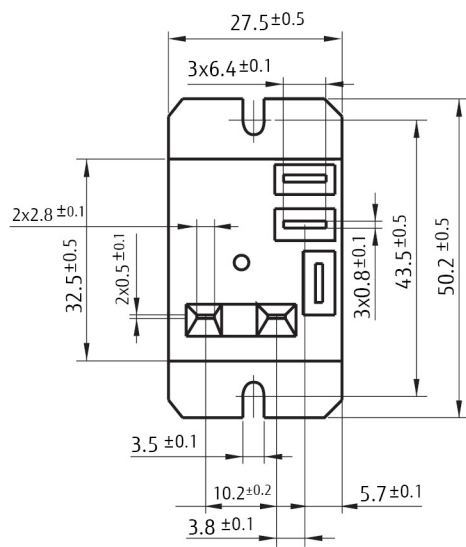
Wiring Diagram

PCB Layout

1 FORM C - Type 1 (Quick Connectors with Arc Shield)

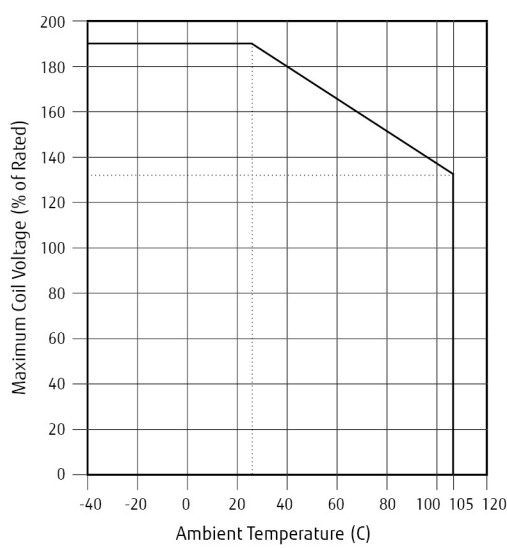


1 FORM C - Type 2 (Full Height Case)

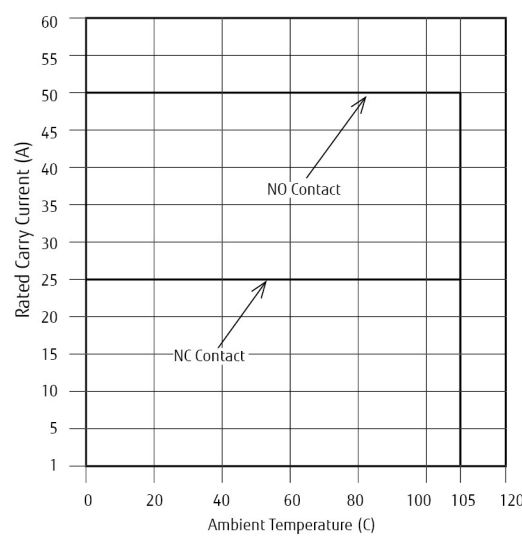


ENGINEERING DATA

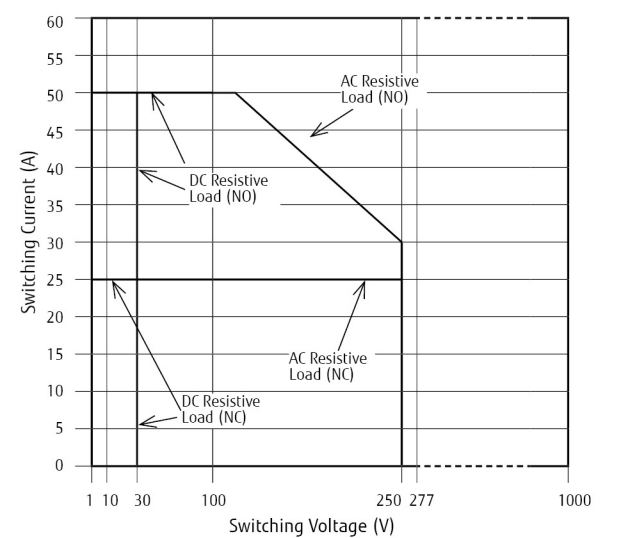
Ambient Temperature VS. Maximum Voltage



Ambient Temperature VS. Rated Carry Current



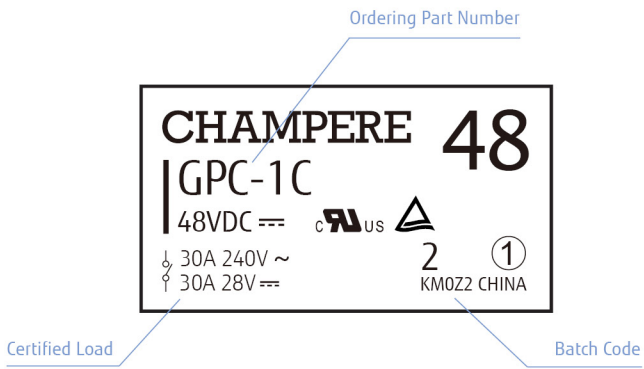
Maximum Switching Capacity



PRINT LAYOUT

Below layout is for reference only.

SIDE PRINTING
LASER PRINTED ON BLACK CASE



PACKAGE INFORMATION

Package 1 - Foam Tray	
Inner Package Type & Quantity	50Pcs Per Foam Tray
Outer Package Type & Quantity	500pcs per Carton with Logo and Sticker
Outer Package Dimension & Weight G.W. / N.W.	50 x 32 x 30 cm; 18.5Kgs / 17.5Kgs
Package 2 - PVC Tray	
Inner Package Type & Quantity	25Pcs Per PVC Tray
Outer Package Type & Quantity	500pcs per Carton with Logo and Sticker
Outer Package Dimension & Weight G.W. / N.W.	47 x 35 x 19 cm; 18Kgs / 17Kgs