



Character

- ◇ 100A contact switching capability
- ◇ Only impulse excitation needed, both for single and double coil.
- ◇ Low power consumption, small in size
- ◇ Custom assemblies available with flexible wire and/or copper straps, and/or with integrated shunt
- ◇ 4KV dielectric strength between coil and contacts
- ◇ RoHS compliant
- ◇ IEC62055-31 UC2 compliant
- ◇ Outline dimensions: (39 x 30 x 16.8) (mm)

Contact Data

Contact Form	1B/1H (double contact)	
Contact Material	AgSnO ₂	
Contact Resistance	Max. 1.0mΩ (1A 6VDC)	
Rated Load(Resistive)	100A 250VAC	
Max. Switching Voltage	250VAC	
Max. Switching Current	100A	
Max. Switching Power	25000VAC	
Service Life	Mechanical Endurance	1×10 ⁵ OPS
	Electrical Endurance	5×10 ³ OPS(100A 250VAC) 1×10 ⁵ OPS(80A 250VAC)
Max. Short-circuit Current		2500A/10ms 4500A/10ms(no explosion)

Note: 1H represents double contact

Characteristics

Operate Time	20ms Max.	
Release Time	20ms Max.	
Insulation Resistance (500VDC)	1000MΩ Min.	
Dielectric Strength (50/60Hz, 1Min)	Contact to Coil	4000VAC
	Across Open Contacts	2000VAC
	Contact to contact	
Surge Voltage (1.2/50 μs)	Contact to Coil	10KV
Creepage Distance	8mm	
Unit Weight	About 45g	

Environmental Data

Ambient Temperature	-40°C ~ +85°C	Relative Humidity	5%-85% RH
Vibration	10-55Hz 1.5mm	Shock	Functional 98m/s ² Survival 980m/s ²

Coil Data (20°C)

conventional version

Coil Voltage (VDC)	Coil Resistance(Ω) ±10%		Coil Power(w)		Operating Voltage (VDC)	Releasing Voltage (VDC)	Allowing voltage (VDC)	Pulse Duration (ms)
	Single	Double	Single	Double				
□ 6	18	9/9			≤4.2	≤4.2	12	
□ 9	40.5	20.3/20.3	2.0	4.0	≤6.3	≤6.3	18	≥50
□ 12	72	36/36			≤8.4	≤8.4	24	
□ 24	288	144/144			≤16.8	≤16.8	48	

low power version

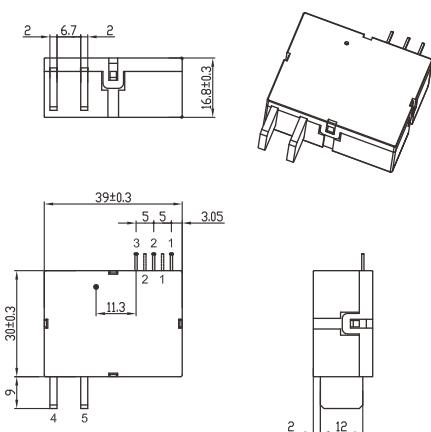
Coil Voltage (VDC)	Coil Resistance(Ω) ±10%		Coil Power(w)		Operating Voltage (VDC)	Releasing Voltage (VDC)	Allowing voltage (VDC)	Pulse Duration (ms)
	Single	Double	Single	Double				
□ 6	24	12/12			≤4.2	≤4.2	12	
□ 9	54	27/27	1.5	3.0	≤6.3	≤6.3	18	≥50
□ 12	96	48/48			≤8.4	≤8.4	24	
□ 24	384	192/192			≤16.8	≤16.8	48	

Ordering information

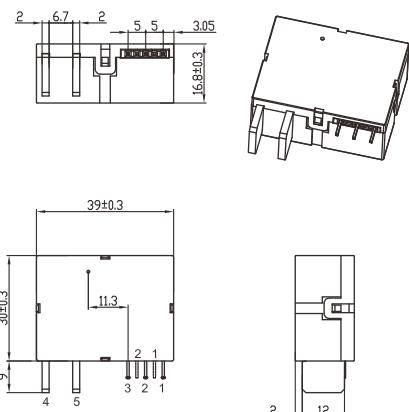
GRT508B	100A	1B	12VDC	S	XX	
						Terminal type: Custom design
						Coil type: S:single coil D:double coil
						Coil voltage: 5, 6, 9, 12, 24, 48V
						Contact form: 1B:a set of contacts remain closed
						Contact current: 100A
						Relay Series: GRT508B

Dimensional Drawings/Wiring Diagrams(unit:mm)

VERSION:A



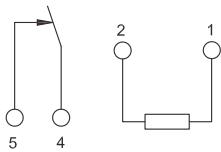
VERSION:B



Note: The broken line stands for the pins of single coil

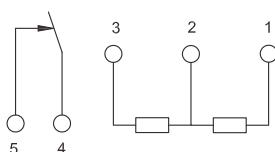
Note: The broken line stands for the pins of single coil

Single coil



1 (+) 2 (-) 4-5 Release(Open)
2 (+) 1 (-) 4-5 Operate(Close)

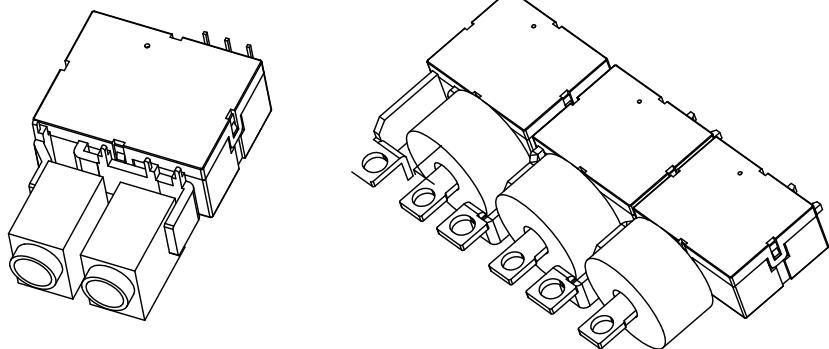
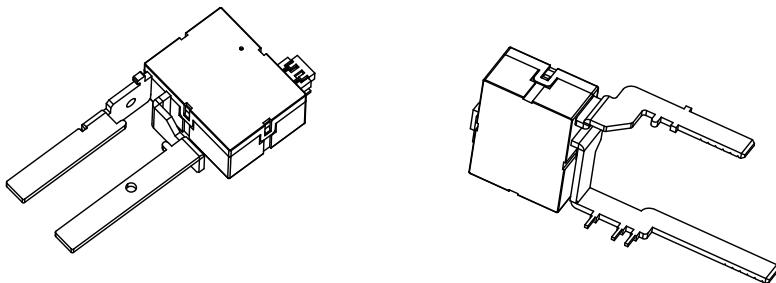
Double coil



1 (+) 2 (-) 4-5 Release(Open)
3 (+) 2 (-) 4-5 Operate(Close)

Note: No tolerance marked. If dimension $\leq 1\text{mm}$, the tolerance is $\pm 0.2\text{mm}$; if dimension $1\text{-}5\text{mm}$, the tolerance is $\pm 0.3\text{mm}$; if dimension $\geq 5\text{mm}$, the tolerance is $\pm 0.5\text{mm}$.

Typical Terminal Type



Typical application

- Smart Meter
- Electric Remote Control
- Electrical eaae Protector



Notes:

1. The factory defaults of relay contacts is set to be closed (reset state), however, due to the transportation or installation, contacts may be impacted, and change its state, so it is necessary to take action to reset before usage (access to power)

2. To be sure latching relay operating reliably, the excitation voltage to coil is to be attained rating, the setting of pulse width should be more than rating, long time (more than 1 min) applied voltage to coil is not acceptable

3. PCB type latching relay, suggested welding temperature is 240°C-260°C, time is 2S-5S. Please do not adopt reflow soldering. Normally, the temperature for wave soldering is required 250°C and time is $\leq 2S$.

4. Latching relay which is without copper braided wires, the load leading pin can neither be tin soldered nor be wrenched. Don't do any extra force to load

5. When screws or bolt is used for load leading terminal of latching relay, please be sure to connect tightly, in case of any damage or the other safety accident causing by over temperature rise.

6. Due to limited signal wire strength of coil or shunts, do not twist or pull the signal wire, it is easy to get it broken.

7. Please handle gently when doing coming inspection and usage, preventing falling to impact the parameters. Distinguish the product which needs destructive inspection with normal products when entering to the factory, forbidding using it.

Statement:

Product specification brochure is for reference only. GRT can't ensure relays meet all performance parameters in each specific application field.

Customers should choose the right products as per according to specific using conditions.