

120A POWER LATCHING RELAY

- » Short circuit per IEC 62055-31
UC3 compliant 120A at 277Vac
- » Custom assemblies available with flex-wire and/or copper straps, and/or with integrated shunt
- » RoHS compliant
- » Outline dimensions:
(43.0 x 37.0 x 22.0)mm



Contact Data [Click here for glossary of terms](#)

Rated load	120A 250Vac
Contact form	1A or 1B
Contact material	AgSnO ₂
Max. switching voltage	440Vac
Max. switching current	120A
Max. AC switching power:	33,240VA
Electrical endurance	10,000 cycles
Mechanical endurance	100,000 cycles

Characteristics [Click here for glossary of terms](#)

Insulation resistance	1,000MΩ (at 500VDC)
Dielectric strength:	
Coil to contact	4,000 Vac for 1 min.
Across open contacts	2,000 Vac for 1 min.
Dielectric creepage	8.0mm
Ambient temperature	-40°C to +70°C
Ambient humidity	98%RH, +40°C
Vibration	1.5mm (DA), 10 to 55 Hz
Shock resistance:	
Functional*	10G
Destructive	100G
Unit weight	Approx. 75g
Construction	Dust protected
Termination	PCB

* Unit may change state but is still functional.

Coil Data [Click here for glossary of terms](#)

	Single Coil (Latching)	Dual Coil (Latching)
Coil Consumption	3W	6W
Pulse Duration	Min. 80ms	Min. 80ms

Nominal Coil Voltage	Minimum Operating Voltage	Coil Resistance (Ω ± 10%) @ 23°C	
		Single Coil (Latching)	Dual Coil (Latching)
6Vdc	4.8Vdc	13Ω	2 x 6.5Ω
9Vdc	7.2Vdc	39Ω	2 x 19.5Ω
12Vdc	9.6Vdc	50Ω	2 x 25Ω
24Vdc	19.2Vdc	210Ω	2 x 105Ω
48Vac	38.4Vac	860Ω	2 x 430Ω

Ordering Information

	K122	A	-	D	012	P	-	1A	T
Relay Series:									
Terminal Type:	A: See drawings ¹ X: Custom design ²								
Coil Type:	S: Single coil D: Dual coil								
Coil Voltage³:	6, 9, 12, 24, 48 Vdc								
Coil Polarity:	P: Positive N: Negative								
Contact Form:	1A: Form 1A – NO 1B: Form 1B – NC								
Contact Material:	T: AgSnO ₂								

¹ Other standard terminal type drawings available upon request.

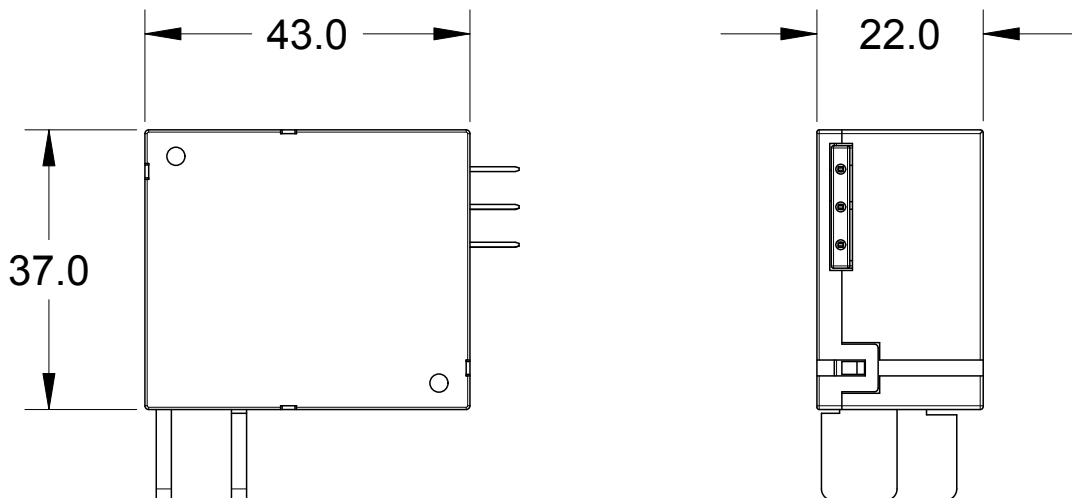
² For custom designs, please contact KG Technologies. Integrated shunts, flex-wire, and copper straps available.

³ Coil voltage should be indicated in three digit format (6Vdc = 006)

Dimensional Drawings

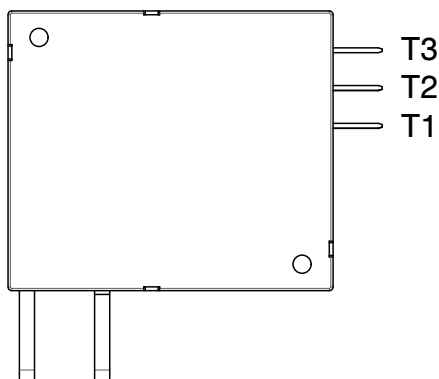
All dimensions in mm unless otherwise noted. For more information, please contact KG Technologies.

A-Style Terminals

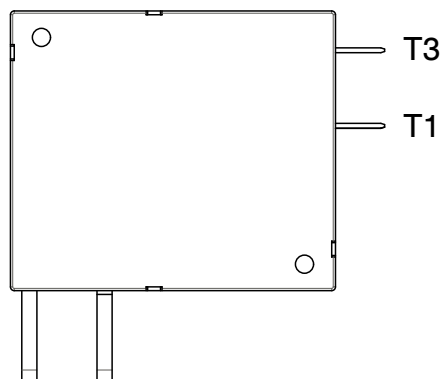


Wiring Diagrams

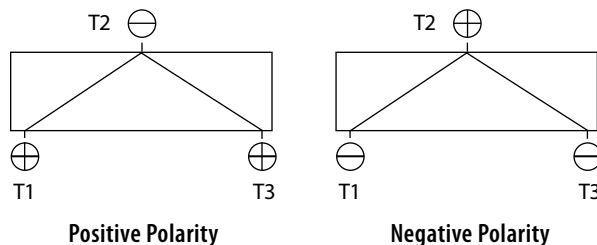
Dual Coil



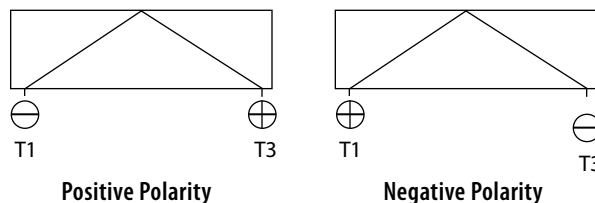
Single Coil



Dual Coil Connection



Single Coil Connection



Application Notes

Dual Coil – Positive Polarity: Place a negative connection on T2. Then apply an 80ms positive pulse to T1 to open the contacts or to T3 to close the contacts.

Dual Coil – Negative Polarity: Place a positive connection on T2. Then apply an 80ms negative pulse to T1 to open the contacts or to T3 to close the contacts.

Single Coil – Positive Polarity: Place a negative connection on T1. Then apply an 80ms positive pulse to T3 to close the contacts. Place a positive connection on T1. Then apply an 80ms negative pulse to T3 to open the contacts.

Single Coil – Negative Polarity: Place a positive connection on T1. Then apply an 80ms negative pulse to T3 to close the contacts. Place a negative connection on T1. Then apply an 80ms positive pulse to T3 to open the contacts.

Additional Application Notes

- 1:** It is possible that during transit or final assembly the relay could change state. Therefore, it is recommended that all relays be set to the desired state via a power supply.
- 2:** In order to maintain an “Open” or “Closed” state of the relay, the coil voltage should reach the rated voltage. The pulse width should be 80ms minimum to ensure a proper change of state. DO NOT energize both T1 and T3 at the same time on a Dual Coil or energize the coil for longer than 1 minute (damage to the coil could occur).
- 3:** Relays without flex-wire cannot be tin-soldered. Moving or bending the terminals could cause damage to the internal structure of the relay.
- 4:** For definitions of terms used in this data sheet, see glossary at www.kgtechnologies.net.

Disclaimer: This data sheet is for reference only. All specifications are subject to change without prior notice. KG Technologies, Inc. cannot predict every possible application for our relays. While we do our best to make our relays as versatile as possible, we highly recommend contacting our engineering team if you have any questions. KG Technologies, Inc. is not responsible for malfunctioning relays when operated outside the specified parameters given in this data sheet.