

60A POWER LATCHING RELAY

- » VDE IEC 61810-1 Certified
- » RoHS compliant
- » Custom assemblies available with integrated shunts, flex-wire and copper extensions and brass terminals
- » Outline dimensions:
(38.0 x 31.1 x 16.0)mm



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

Rated load	60A 250Vac
Contact form	Form 1A or 1B
Contact material	AgSnO ₂
Max. switching voltage	250Vac
Max. switching current	60A
Max. AC switching power	15,000VA
Electrical endurance	5,000 cycles
Mechanical endurance	100,000 cycles

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

Insulation resistance	1,000 MΩ (at 500Vdc)
Dielectric strength:	
Coil to contact	4,000 Vac for 1 min.
Across open contacts	1,500 Vac for 1 min.
Dielectric creepage	8mm
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. 33g
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	1.0W	2.0W
Pulse Duration	50ms	50ms

			Coil Resistance (Ω±10%) @ 23°C	
Nominal Coil Voltage	Min. Operating Voltage	Max. Operating Voltage	Single Coil (latching)	Dual Coil (latching)
6Vdc	4.2Vdc	7.2Vdc	35Ω	2 x 17.5Ω
9Vdc	6.3Vdc	10.8Vdc	80Ω	2 x 40.0Ω
12Vdc	8.4Vdc	14.4Vdc	145Ω	2 x 72.5Ω
24Vdc	16.8Vdc	28.8Vdc	575Ω	2 x 287.5Ω
48Vdc	33.6Vdc	57.6Vdc	2270Ω	2 x 1135Ω

Ordering Information

	K109	A	-	S	012	P	-	1A	T	-	Y
Relay Series:											
Terminal Type:	A: See drawing ¹ X: Custom design ²										
Coil Type:	S: Single coil latching D: Dual coils latching										
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										
Sealed/Non-Sealed:	Y: Sealed IP67 Z: Flux proofed										

¹ Other standard terminal type drawings available upon request.

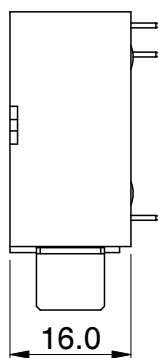
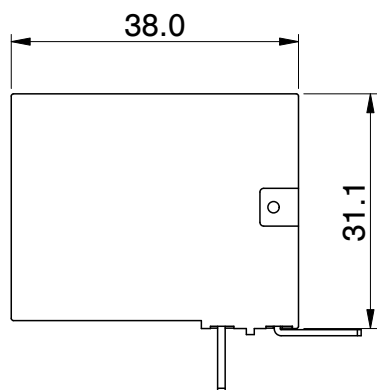
² For custom designs, please contact KG Technologies. Integrated shunts, flex-wire, copper extensions and brass terminals available.

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

Dimensional Drawings

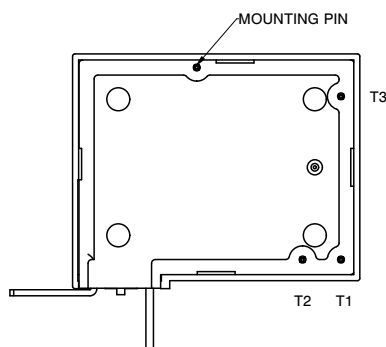
All dimensions in mm unless otherwise noted. For more information, please contact KG Technologies.

A-Style Terminals

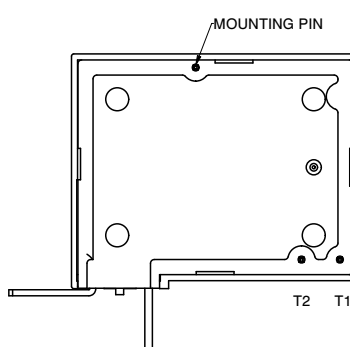


Wiring Diagrams

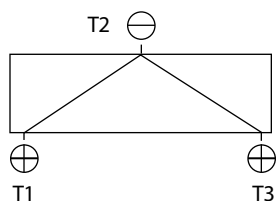
Dual Coil



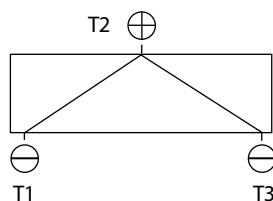
Single Coil



Dual Coil Connection

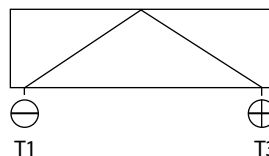


Positive Polarity



Negative Polarity

Single Coil Connection



Application Notes

Dual Coil – Positive Polarity: Place a negative connection on T2. Then apply a 50ms 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 a 50ms negative pulse to T3 to open the contacts or to T1 to close the contacts.

Single Coil: Place a negative connection on T1. Then apply a 50ms positive pulse to T3 to close the contacts. Reversing polarity will open the contacts.

Additional Application Notes

- 1:** All relays are shipped in the “Closed” position. It is possible that during transit or final assembly the relay could change its state to the “Open” position. Therefore, it is recommended that all relays be set to the desired state of the relay 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 50ms 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 incur).
- 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.