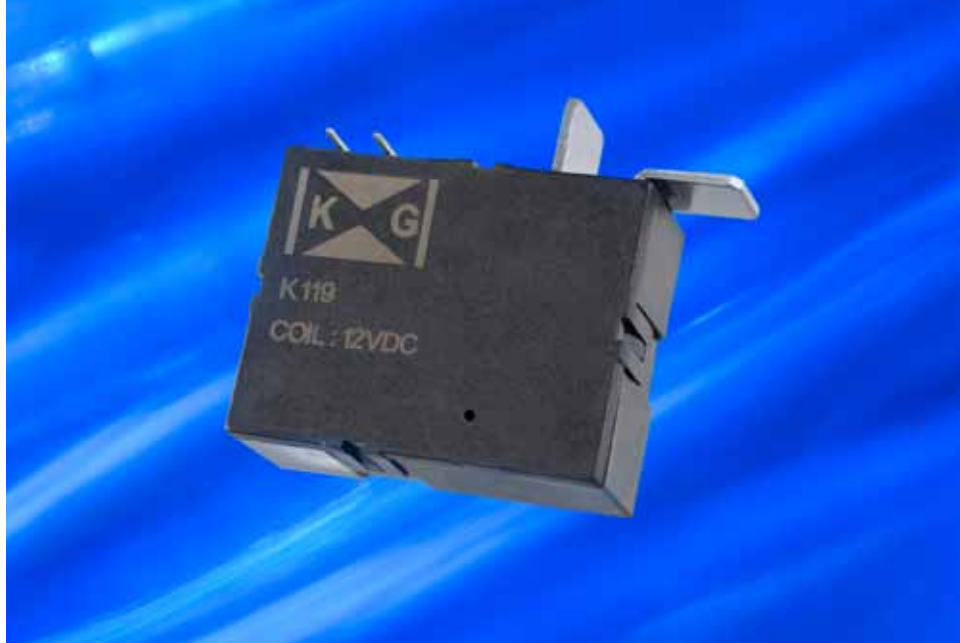


MINIATURE HIGH-POWER LATCHING RELAY

- » 90A Max. switching capability
- » 90A: IEC 62055-31 UC2 compliant at 63A
- » 90A: VDE IEC 61810-1 Certified
- » RoHS compliant
- » Outline dimensions:
(38.1 x 30.0 x 16.5)mm



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

Rated load	90A 277Vac
Contact form	1A or 1B
Contact material	AgSnO ₂
Max. switching voltage	250Vac
Max. switching current	90A
Max. AC switching power	24,930VA
Electrical endurance	10,000 cycles
Mechanical endurance	100,000 cycles
Set time	<20ms
Release time	<20ms

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

Insulation resistance	1,000 MΩ (500Vdc)
Dielectric strength:	
Coil to contact	4,000 Vac for 1 min.
Across open contacts	2,000 Vac for 1 min.
Dielectric creepage	8mm
Ambient temperature	-40 to +85°C
Ambient humidity	98% RH, +40°C
Vibration	1.5mm (DA) , 10 to 55Hz
Shock resistance:	
Functional*	10G
Destructive	100G
Unit weight	Approx. 65 g
Termination	PCB
Construction	Dust protected

* Unit may change state but is still functional.

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

	Single Coil (latching)		Dual Coil (latching)	
	Standard	Sensitive	Standard	Sensitive
Coil Consumption	1.5W	1.0W	3.0W	2.0W
Pulse Duration	100ms min.	100ms min.	100ms min.	100ms min.

Coil Data

Nominal Coil Voltage	Min. Operating Voltage	Single Coil	Dual Coil	Single Coil	Dual Coil
9Vdc	6.3Vdc	54Ω	2 x 27Ω	80Ω	2 x 40Ω
12Vdc	8.4Vdc	96Ω	2 x 48Ω	145Ω	2 x 72.5Ω
15Vdc	12Vdc	150Ω	2 x 75Ω	NA	NA
24Vdc	16.8Vdc	384Ω	2 x 192Ω	575Ω	2 x 287.5Ω
48Vdc	33.6Vdc	1536Ω	2 x 768Ω	2270Ω	2 x 1135Ω

Ordering Information

Relay Series:	K119	B	-	S	012	P	-	1A	T	-	90A
Terminal Style:	A: See illustration on page 3 ¹ B: See illustration on page 3 ¹ C: See illustration on page 3 ¹ D: See illustration on page 3 ¹ E: See illustration on page 3 ¹ X: Custom design ²										
Coil Type:	D: Dual coil; see drawings for terminals DX: Sensitive dual coil; see drawings for terminals S: Single coil; see drawings for terminals SX: Sensitive single coil; see drawings for terminals										
Coil Voltage³:	9, 12, 24, 48Vdc										
Coil Polarity:	P: Positive N: Negative										
Contact Form:	1A: Form 1A – NO 1B: Form 1B – NC										
Contact Material:	T: AgSnO ₂										
Contact Rating:	90A										

¹ Other standard terminal type drawings available upon request.

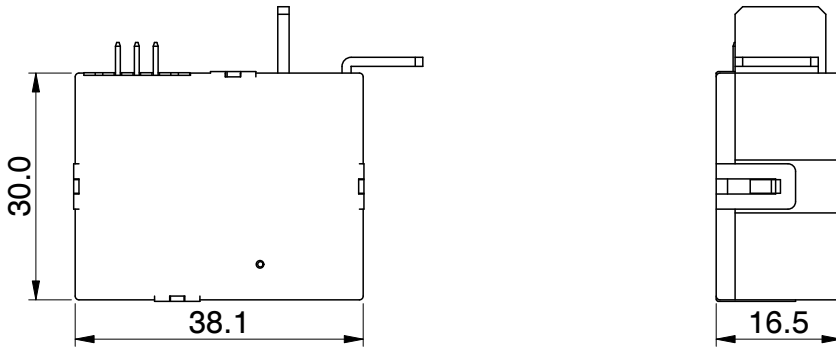
² For custom designs, please contact KG Technologies. Integrated shunts, flex-wire, copper extensions and brass terminals available.

³ Coil voltage should be indicated in three digit format (9Vdc = 009)

Dimensional Drawings

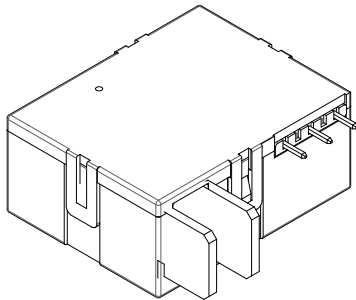
All dimensions in mm unless otherwise noted. For more information, please contact KG Technologies.

Outline Dimensions

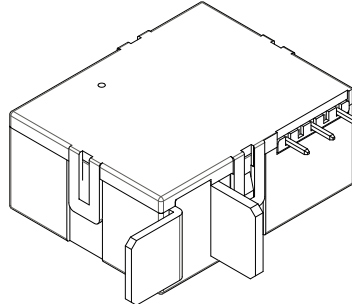


Standard Terminal Types

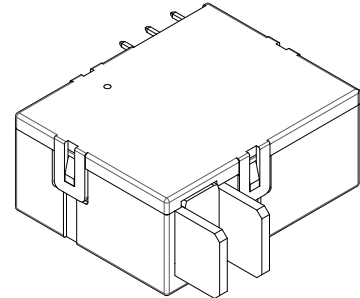
K119A



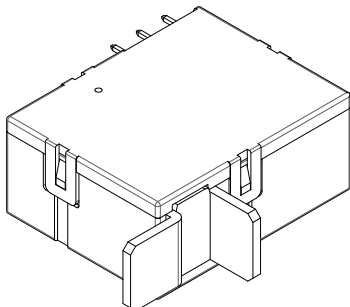
K119B



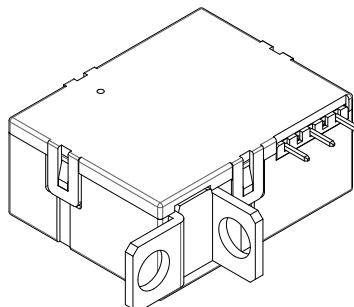
K119C



K119D

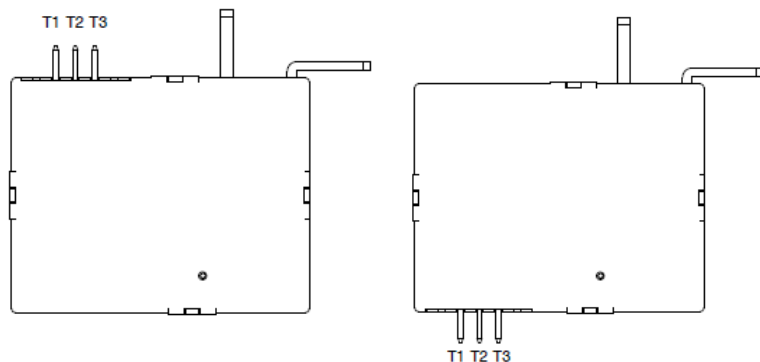


K119E

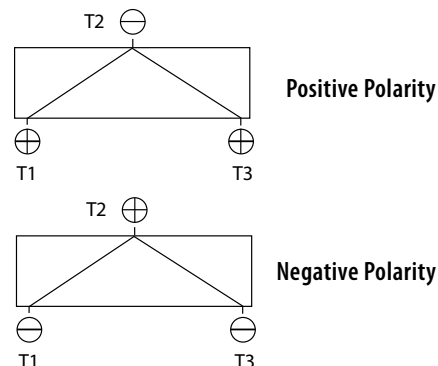


Wiring Diagrams

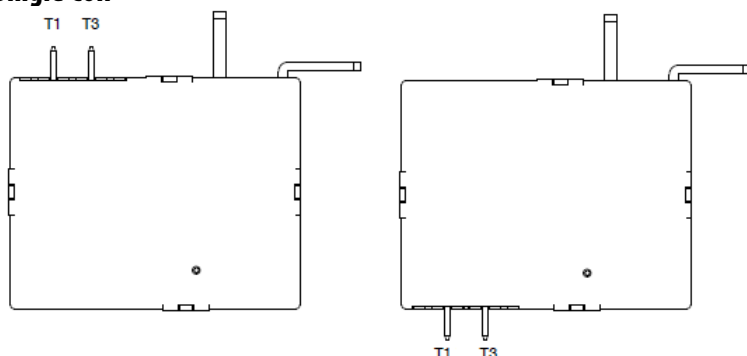
Dual Coil



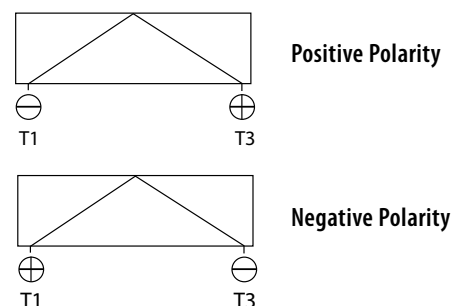
Dual Coil Connection



Single Coil



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 T1 to open the contacts or to T3 to close the contacts.

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

Single Coil – Negative Polarity: Place a positive connection on T1. Then apply a 50ms negative pulse to T3 to close the contacts. Place a negative connection on T1. Then apply a 50ms 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 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.