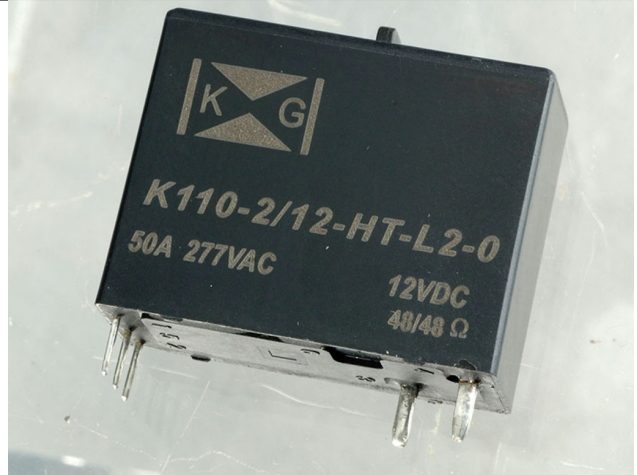


World Class Switching Solutions for Energy Management

50A POWER LATCHING RELAY

- » 5000W lamp load, 5Hp motor load
- » 8mm creepage. 4000Vac dielectric strength
- » SPST and SPDT configuration
- » Sealed IP67 and flux proof type available
- » Manual switch function available
- » Outline dimensions:
(39.0 x 15.0 x 30.2)mm
- » RoHS compliant



Contact Data		Characteristics	
Rated load	1A, 1B: 50A/277VAC, 1x10 ⁵ ops(Resistive) 5000W 240VAC 3x10 ⁴ ops (lamp load) 16A 277VAC, 6000ops (electronic ballast) 5HP 277VAC, 3x10 ⁴ ops (Motor) 1C: 40A 277VAC, 3x10 ⁴ ops (Resistive)	Insulation resistance	1,000 MΩ (at 500Vdc)
Contact form	Form 1A, 1B, 1C	Dielectric strength:	
Contact material	AgSnO ₂	Coil to contact	4,000 VAC for 1 min.
Contact resistance	20mΩ (1A 24VDC)	Across open contacts	1,500 VAC for 1 min.
Max. switching voltage	440Vac	Dielectric creepage:	
Max. switching current	50A	1A, 1B: 8mm	
Max. switching power	1A: 12,500VA / 1C: 10,000/VA	1C: 6mm	
Max. continuous current	50A	Set time	≤15ms
Mechanical endurance	1x10 ⁶ ops	Reset time	≤15ms
Electrical endurance	See rated load	Max. operate frequency	1A, 1B: 20cycles/min 1C: 10cycles/min
		Ambient temperature	-40 to +70°C
		Ambient humidity	5% ~ 85%RH
		Vibration	1.5mm (DA) 10Hz to 55 Hz
		Shock resistance:	
		Functional**	98m/s ²
		Destructive	980m/s ²
		Termination:	
		Coil termination	PCB
		Load termination	PCB&QC
		Unit weight	Approx. 32g
		Construction	Plastic sealed, Flux proofed

* Typical value for Initial Contact Resistance: Using a sample quantity of at least 20 units, take the average value from 5 continuous measurements from each sample.

** Unit may change state but is still functional.

Coil Data

	Single Coil (Latching)	Dual Coil (Latching)
Coil Consumption	1.5W	3.0W
Pulse Duration	50ms	50ms

Coil resistance ($\Omega \pm 10\%$) @ 23°C			
Nominal Coil Voltage	Set/Reset Voltage VDC	Single Coil (Latching)	Dual Coil (Latching)
6Vdc	$\leq 4.8\text{Vdc}$	24 Ω	2 x 12 Ω
9Vdc	$\leq 7.2\text{Vdc}$	54 Ω	2 x 27 Ω
12Vdc	$\leq 9.6\text{Vdc}$	96 Ω	2 x 48 Ω
24Vdc	$\leq 19.2\text{Vdc}$	384 Ω	2 x 192 Ω
48Vdc	$\leq 38.4\text{Vdc}$	1536 Ω	2 x 768 Ω

Ordering Information

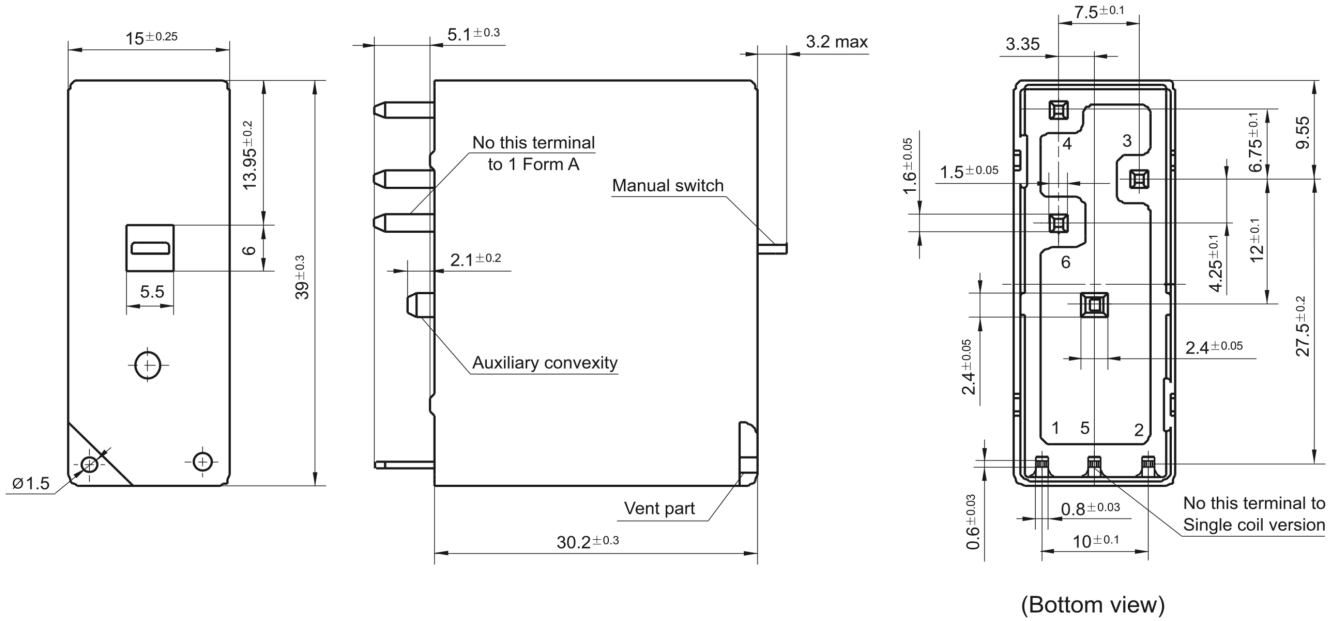
	K110	-	2	-	S	012	P	-	1A	T	-	Y
Relay Series:												
Configuration:	1: No switch; no auxiliary convexity 2: With switch; no auxiliary convexity 3: No switch; with auxiliary convexity 4: With switch; with auxiliary convexity 5: With switch, no auxiliary convexity reverse action											
Coil Type:	S: Single coil D: Dual coil											
Coil Voltage¹:	6, 9, 12, 24, 48 Vdc											
Coil Polarity:	P: Positive N: Negative											
Contact Form:	1A: Form 1A – NO 1B: Form 1B – NC 1C: Form 1C (No for K110-5)											
Contact Material:	T: AgSnO ₂											
Construction:	Y: Sealed IP67 (Only for K110-1 and K110-3) Z: Flux proofed											

¹ Coil voltage should be indicated in three digit format (6Vdc = 006)

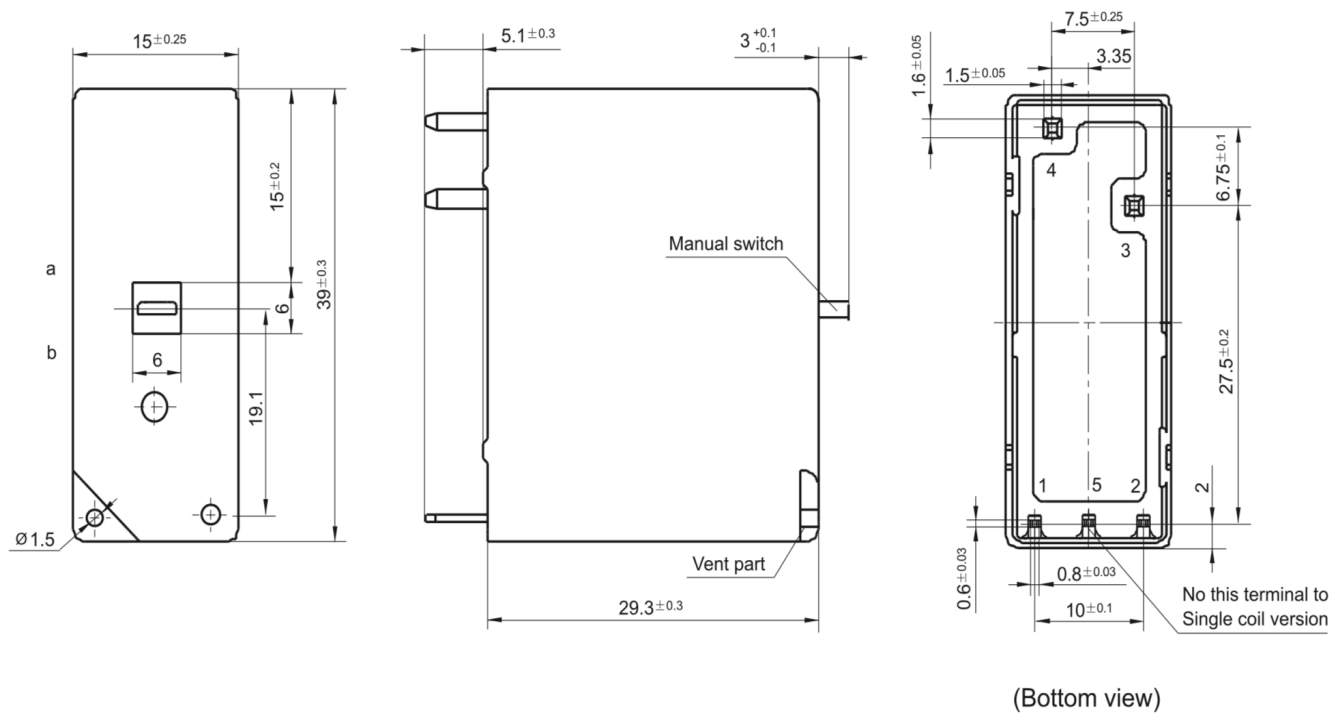
Dimensional Drawings

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

K110-1, K110-2, K110-3, K110-4



K110-5

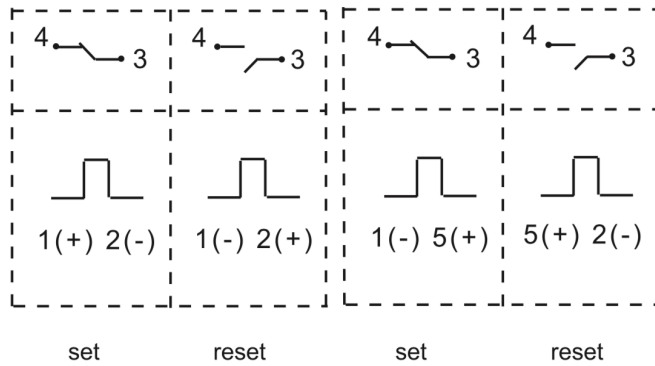


Wiring Diagrams

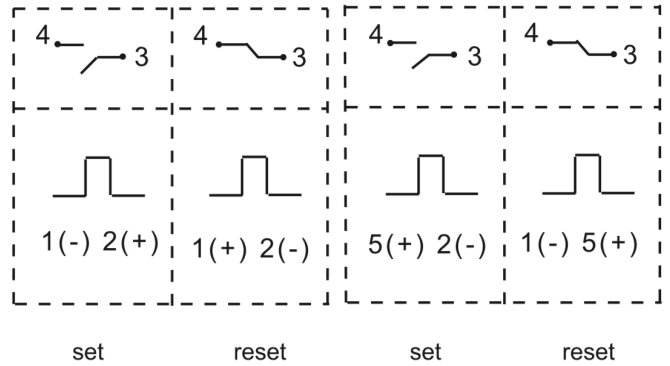
K110-1, K110-2, K110-3, K110-4

Positive polarity

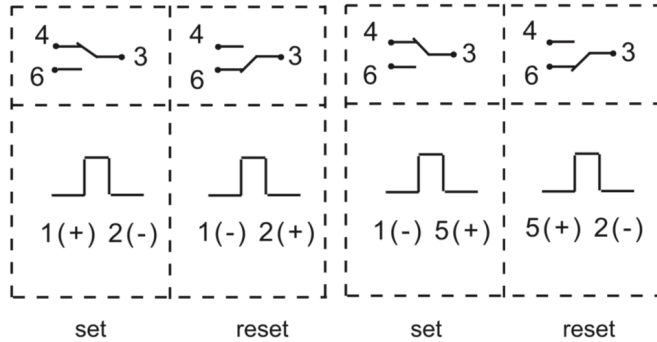
Single coil latching, 1 Form A Double coils latching, 1 Form A



Single coil latching, 1 Form B Double coils latching, 1 Form B

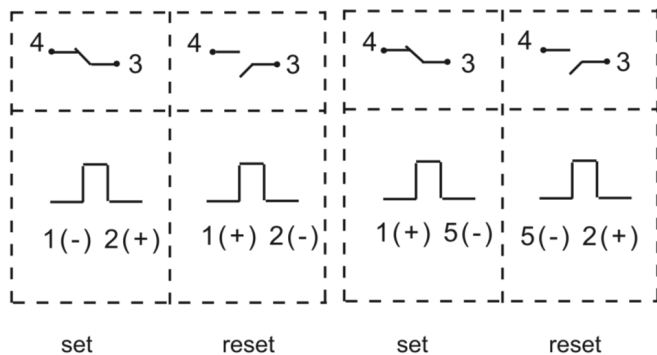


Single coil latching, 1 Form C Double coils latching, 1 Form C

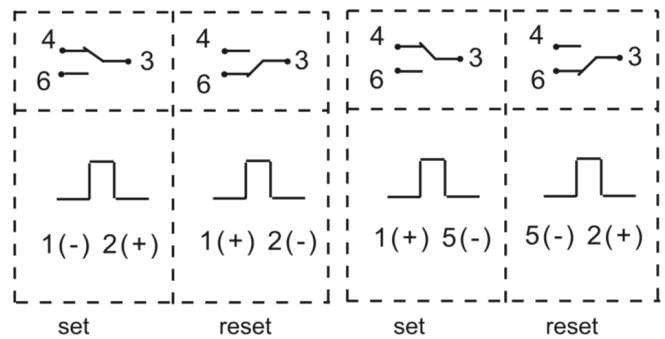


Negative polarity

Single coil latching, 1 Form A Double coils latching, 1 Form A

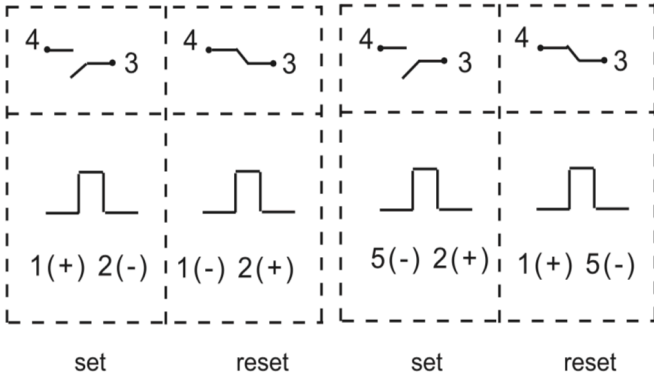


Single coil latching, 1 Form C Double coils latching, 1 Form C



Wiring Diagrams

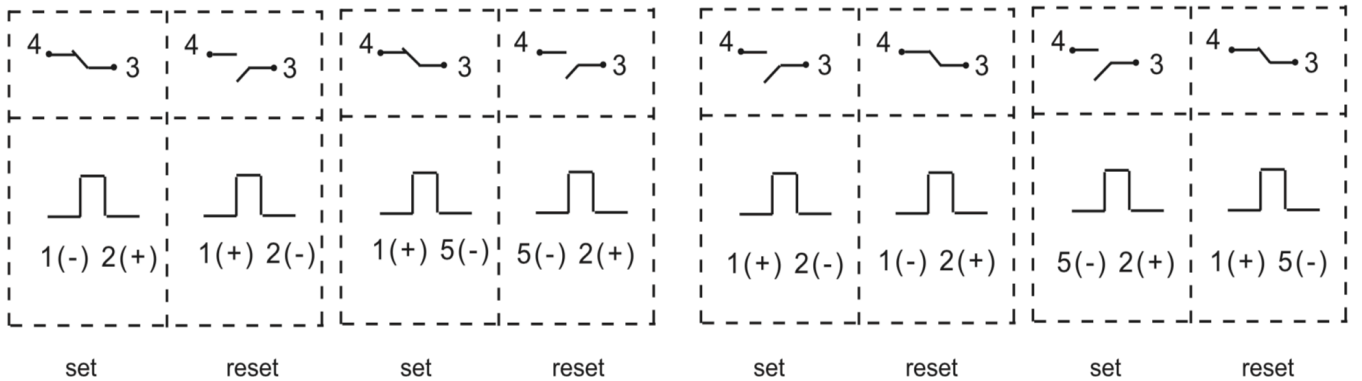
Single coil latching, 1 Form B Double coils latching, 1 Form B



HFE10-5

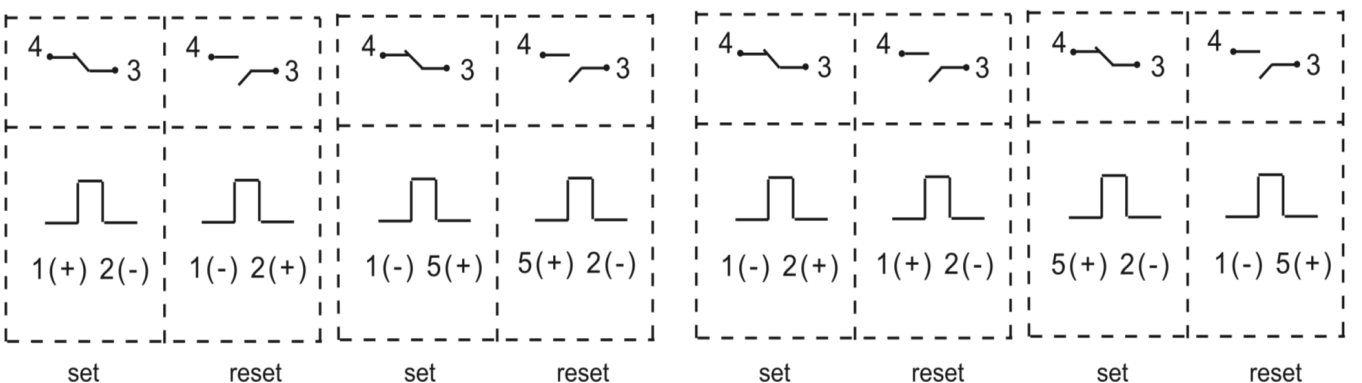
Positive polarity

Single coil latching, 1 Form A Double coils latching, 1 Form A Single coil latching, 1 Form B Double coils latching, 1 Form B



Negative polarity

Single coil latching, 1 Form A Double coils latching, 1 Form A Single coil latching, 1 Form B Double coils latching, 1 Form B



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 T2 at the same time on a Dual Coil or energize the coil longer than 1 minute (damage to the coil could occur).
- 3: For assistance with wave solder process settings, please contact KG Technologies.
- 4: For definitions of terms used in this data sheet, see glossary at: <https://kgtechnologies.net/pages/data-sheet-glossary>

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.