KG Technologies™

K218-60

HIGH POWER LATCHING RELAY

- 60A Latching Relay
- UC2 capability as per IEC 62052-31:
  Rated Operational Current (Ie) = 60A
  Rated Operational Voltage (Ue) = 240Vac
- 4kV dielectric strength between coil and contacts
- 10kV impulse withstand (Circuit to Circuit)
- Outline dimensions: (55.6 x 30.5 x 16.5)mm
- Custom assemblies available with flex wire and/or copper extensions, and/or with integrated shunt
- RoHS compliant materials and process

Contact Data

Rated Load *	60A @ 240Vac
Contact form	2A or 2B
Contact material	$AgSnO_2$
Contact resistance †	0.5mΩ (at 60 A)
Max. switching voltage ‡	277 Vac
Max. carrying current §	60 A
Max. switching current	80 A
Rated switching power	14,400 VA
Set time	≤ 30 ms
Reset time	≤ 30 ms
Electrical endurance **	10,000 cycles
Mechanical endurance	100,000 cycles

Characteristics

Insulation resistance	1,000MΩ (at 500 Vdc)
Dielectric strength:	
Coil to contact	4kVac for 1 min
Circuit to circuit	4kVac for 1 min
Across open contacts	2kVac for 1 min
Circuit to circuit	10kVac impulse
Dielectric creepage	9.6 mm
Ambient temperature	-40°C to +85°C
Ambient humidity	5% - 85% RH
Vibration	1.5 mm (DA) 10 Hz to 55 Hz
Shock resistance:	
Functional ††	98 m/s^2
Survival	980 m/s^2
Coil termination	PCB or Wire
Unit weight	±60.5g

** Load at which the relay can pass UC2 as per IEC 62052-31*

† Typical value for initial contact resistance per relay pole: Using a sample quantity of at least 20 units, take the average value from 5 continuous measurements from each sample

‡ Voltage at which the relay can pass electrical endurance testing as per IEC 62052-31

§ Current at which the relay can pass UC2 as per IEC 62052-31

*** Evaluated and tested in full compliance with IEC 62052-31 at 240Vac/60A@23°C*

†† Unit may change state but is still functional

Coil Data

	Single Coil (Latching)	Dual Coil (Latching)
Coil Consumption	3W	6W
Pulse Duration	50ms	50ms

Coil Resistance

(Ω±7%) at 23°C

Nominal Coil Voltage	Min Set/Reset Voltage	Single Coil (Latching)	Dual Coil (Latching)
6Vdc	4.2Vdc	12Ω	2 x 6Ω
9Vdc	6.3Vdc	27Ω	2 x 13.5Ω
12Vdc	8.4Vdc	48Ω	2 x 24Ω
24Vdc	16.8Vdc	192Ω	2 x 96Ω
48Vdc	33.6Vdc	768Ω	2 x 384Ω

Ordering Information

K218	■	-■	■	■	■	-■	T	-60	-Cxxxx

Relay Series	
Terminal Type:	A: See drawing X: Custom Design ‡‡
Coil Type:	S: Single Coil D: Dual Coil
Coil Pin Orientation:	V: Vertical H: Horizontal
Coil Voltage §§:	6, 9, 12, 24, 48 Vdc
Polarity:	P: Positive N: Negative
Contact Form:	2A: Form 2A – Normally open (NO) 2B: Form 2B – Normally closed (NC)
Contact Material:	T: $AgSnO_2$
Version:	60: UC2 at 240Vac Ue, 60A Ie as per IEC 62052-31
Custom Number:	Cxxxx: Where xxxx represents a unique number for custom relay terminal designs

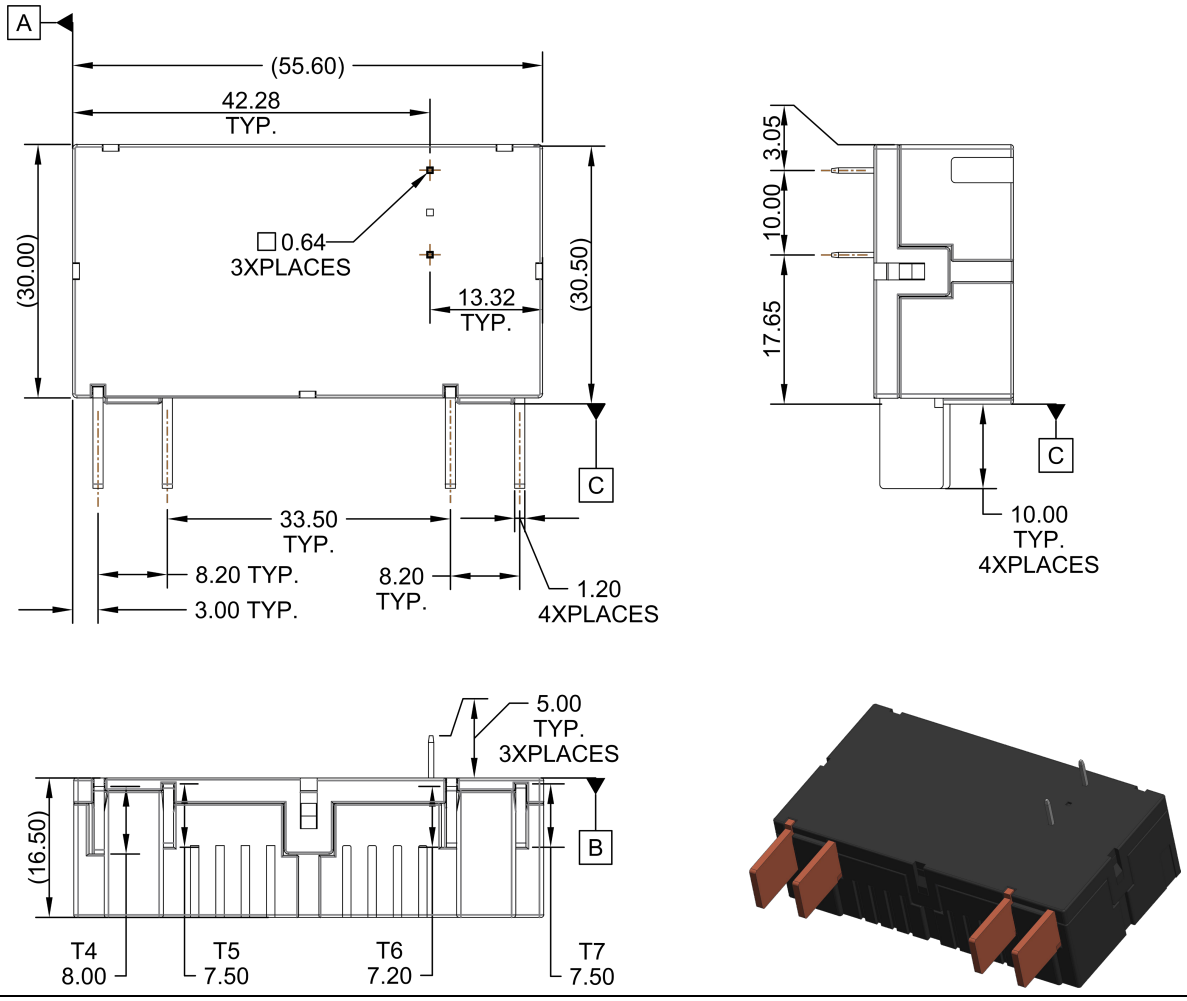
‡‡ *For custom designs, please contact KG Technologies. Integrated shunts, flex-wire, copper extension and brass terminals available*

§§ *Coil voltage should be indicated in three-digit format (6Vdc = 006)*

Dimensional Drawings

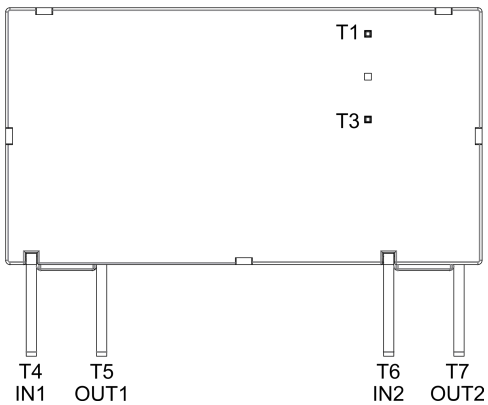
(Unit: mm)

TYPE A CONTACT TERMINALS

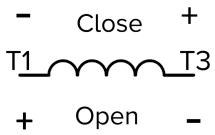


Wiring Diagrams

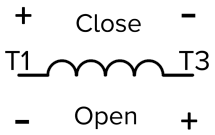
Single Coil



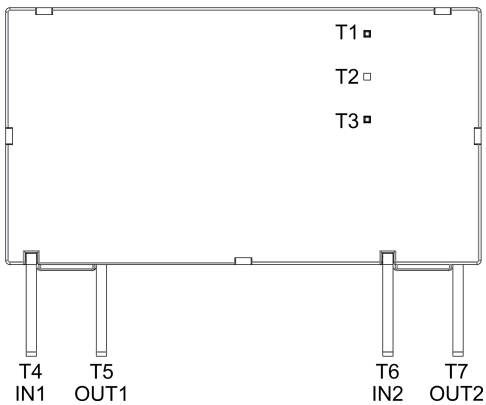
Positive Polarity



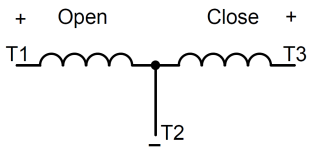
Negative Polarity



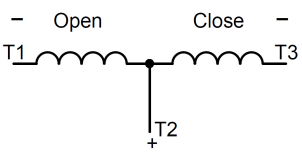
Dual Coil



Positive Polarity

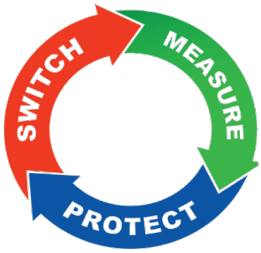


Negative Polarity



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 occur).
3. Applying excessive heat to the relay terminals (soldering or welding) can cause damage to the internal structure of the relay and should be avoided.
4. Moving or bending the terminals can cause damage to the internal structure of the relay and should be avoided.
5. For definitions of terms used in this data sheet, see glossary at www.kgtechnologies.net.



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Scan for more information

Disclaimer: This datasheet 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 datasheet.