KG Technologies™

HIGH POWER LATCHING RELAY

- 120A Latching Relay
- UC3 capability as per IEC 62052-31:

    Rated Operational Current (Ie) = 100A

    Rated Operational Voltage (Ue) = 240Vac

- 4kV dielectric strength between coil and contacts
- Outline dimensions: (59.9 x 42.5 x 24.6)mm
- Load Terminal Configuration: LNNL
- Custom assemblies available with flex wire and/or copper extensions, and/or with integrated shunt
- RoHS compliant materials and process
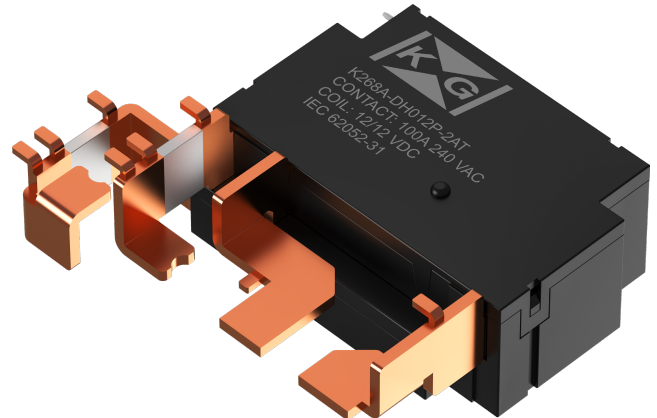
Contact Data

Rated Load *	100A @ 276Vac
Contact form	2A or 2B
Contact material	$AgSnO_2$
Contact resistance †	0.5mΩ (at 100 A)
Max. switching voltage ‡	276 Vac
Max. carrying current	120 A
Max. switching current §	100 A
Rated switching power	27,600 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.
Across open contacts	2.0kVac for 1min.
Dielectric creepage	9.5 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 Quick Connect
Unit weight	±169g

* *Load at which the relay can pass UC3 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 UC3 as per IEC 62052-31*

** *Unit may change state but is still functional*

Coil Data

	Single Coil (Latching)	Dual Coil (Latching)
Coil Consumption	5W	10W
Pulse Duration	50ms	50ms

Coil Resistance

(Ω±10%) at 23°C

Nominal Coil Voltage	Min Set/Reset Voltage	Single Coil (Latching)	Dual Coil (Latching)
6Vdc	4.8Vdc	7.6Ω	2 x 3.8Ω
9Vdc	7.2Vdc	16.2Ω	2 x 8.1Ω
12Vdc	9.6Vdc	28.8Ω	2 x 14.4Ω
24Vdc	19.2Vdc	115.2Ω	2 x 57.6Ω
48Vdc	38.4Vdc	460.8Ω	2 x 230.4Ω

Ordering Information

K268 ■ -■ ■ ■ ■ -■ T -Cxxxx

Relay Series	
Terminal Type:	A: See drawing X: Custom Design [††]
Coil Type:	S: Single Coil D: Dual Coil
Coil Pin Orientation [‡‡]:	H: Coil pins exit horizontally V: Coil pins exit vertically
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$_2$
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*
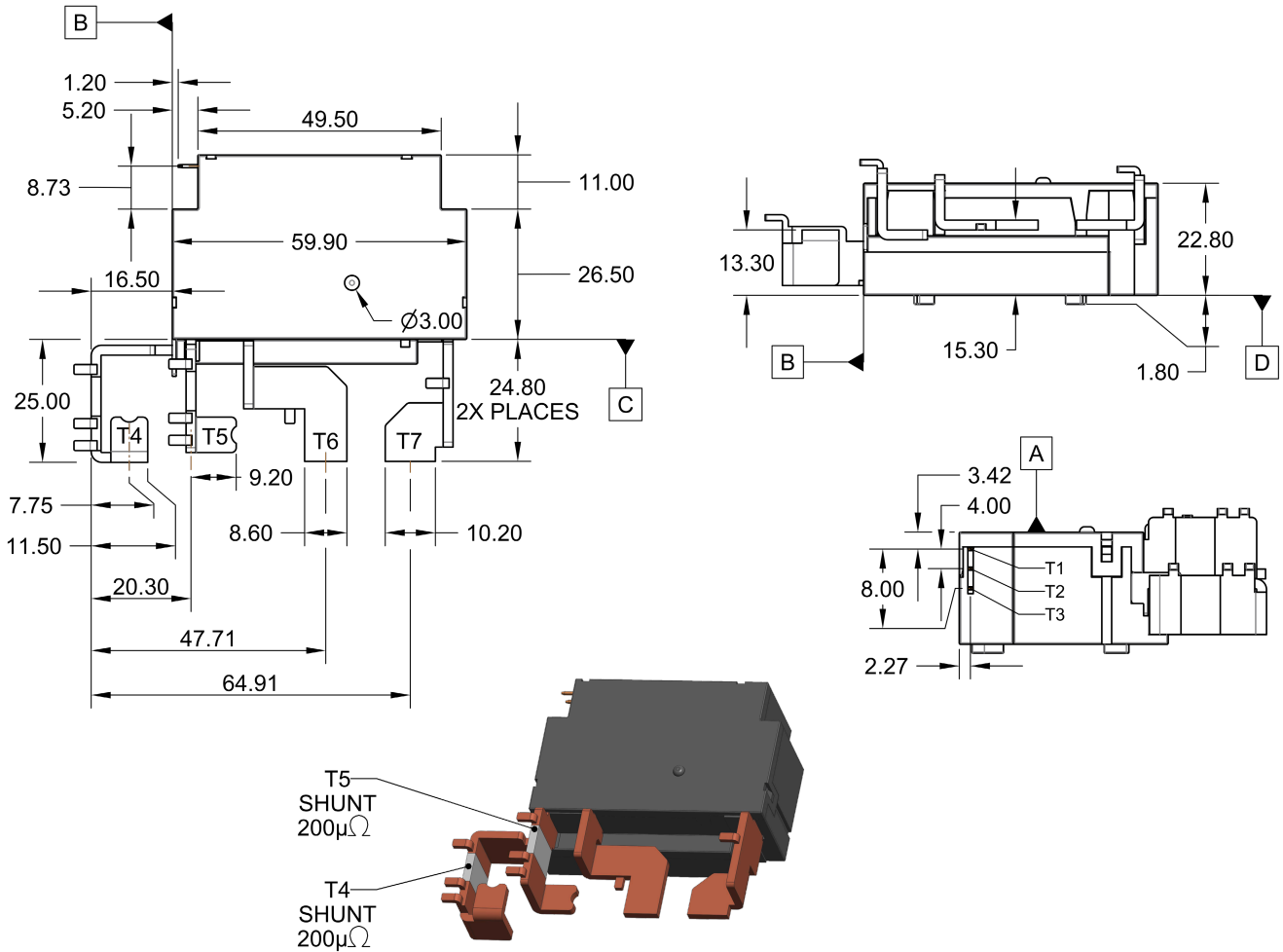
[‡‡] *Refer to the drawing for additional clarity*

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

[***] *Default shunt values for T4, T5 are 200µΩ. Shunt values can be customized*

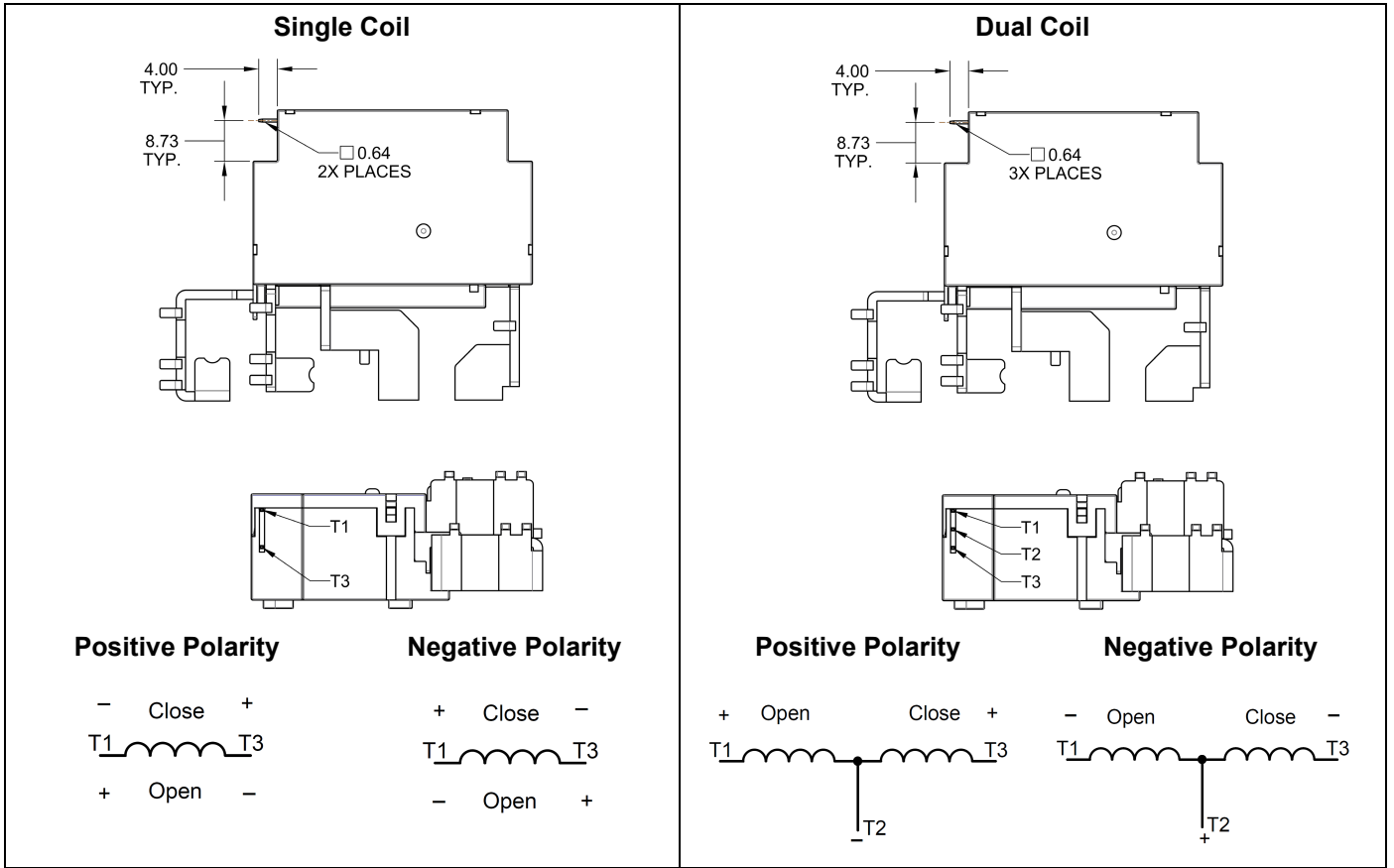# Dimensional Drawings

(Unit: mm)

TYPE A CONTACT TERMINALS †††

††† Load terminal configuration:

T4: Phase In; T5: Neutral In
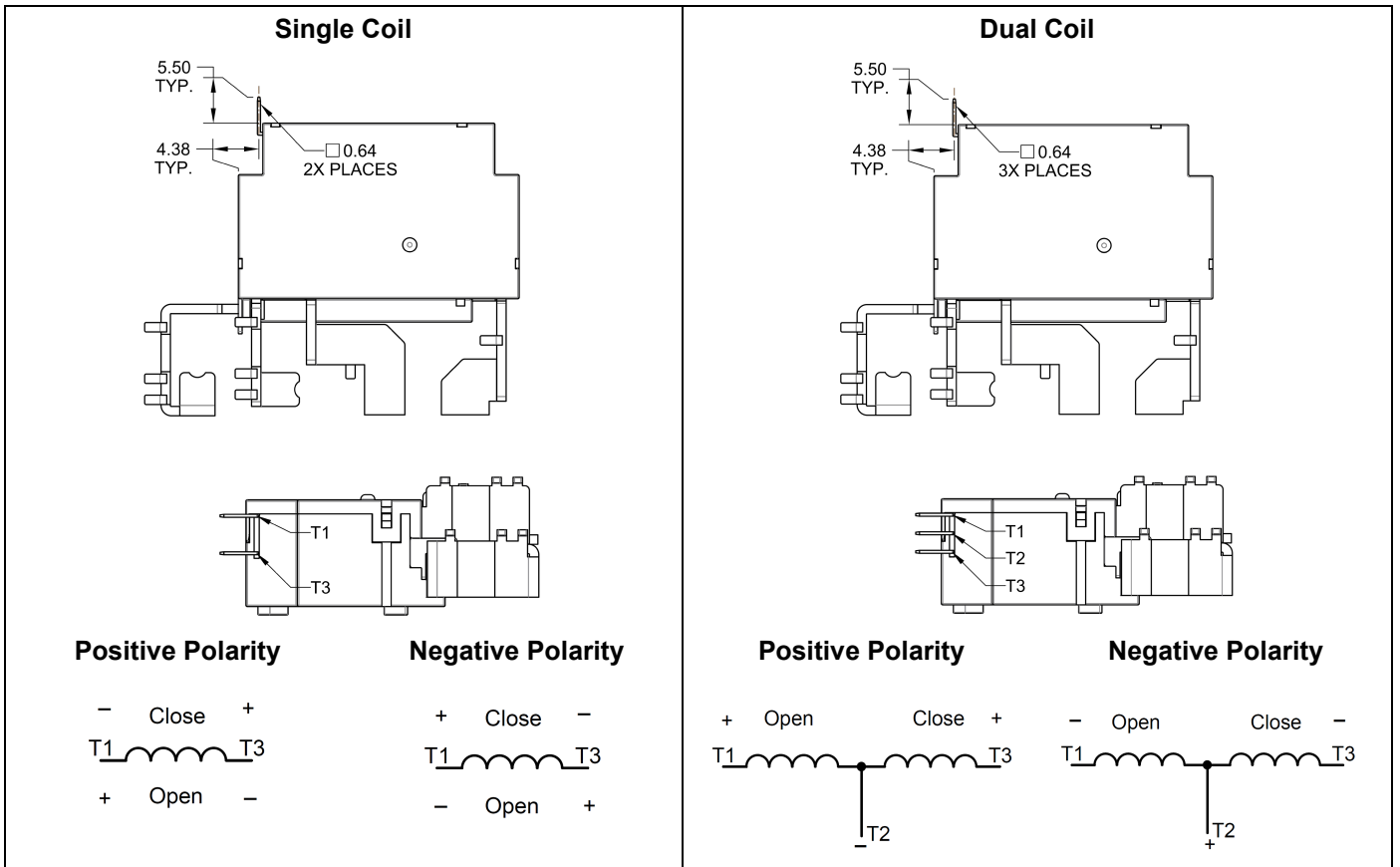
T6: Neutral Out; T7: Phase Out

Wiring Diagrams

Single Coil

4.00
TYP.

8.73
TYP.

□0.64
2X PLACES

T1

T3

Positive Polarity

−   Close   +

T1 ⌒⌒⌒ T3

+   Open   −

Negative Polarity

+   Close   −

T1 ⌒⌒⌒ T3

−   Open   +

Dual Coil

4.00
TYP.

8.73
TYP.

□0.64
3X PLACES

T1
T2
T3

Positive Polarity

+   Open   Close   +

T1 ⌒⌒⌒⌒ T3

− T2

Negative Polarity

−   Open   Close   −

T1 ⌒⌒⌒⌒ T3

+ T2

Wiring Diagrams

Single Coil

5.50
TYP.

4.38
TYP.

□0.64
2X PLACES

T1

T3

Positive Polarity

−   Close   +

T1 ⌒⌒⌒ T3

+   Open   −

Negative Polarity

+   Close   −

T1 ⌒⌒⌒ T3

−   Open   +

Dual Coil

5.50
TYP.

4.38
TYP.

□0.64
3X PLACES

T1
T2
T3

Positive Polarity

+   Open   Close   +

T1 ⌒⌒⌒⌒ T3

− T2

Negative Polarity

−   Open   Close   −

T1 ⌒⌒⌒⌒ T3

+ T2

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 here 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.