KG Technologies™

K106

World Class Switching Solutions for Energy Management

MINIATURE HIGH-POWER LATCHING RELAY

- 16A switching capability
- High inrush peak current 170A
- Outline dimensions: (29.0x13.0x15.7) mm
- RoHS compliant

Contact Data *Click here for glossary of terms*

Rated load	16A/20A 250Vac
Contact form	1A, 1B or 1C
Max. switching voltage	277Vac
Max. switching current	16A
Max. switching power	4,432VA
Electrical endurance	100,000 cycles
Mechanical endurance	5,000,000 cycles

Characteristics *Click here for glossary of terms*

Insulation resistance	1,000 MΩ (at 500Vdc)
Dielectric strength:	
Coil to contact	4,400 Vac for 1 min.
Across open contacts	1,000 Vac for 1 min.
Dielectric creepage	8mm
Ambient temperature	-40°C to +85°C
Ambient humidity	85% RH, +40°C
Vibration	1.5mm (DA), 10 to 55Hz
Shock resistance:	
Functional*	10G
Destructive	100G
Unit weight	Approx. 13g
Termination	PCB
Construction	Wash tight

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

Coil Data *Click here for glossary of terms*

	Single Coil (Latching)	Dual Coil (Latching)
Coil Consumption	400mW	600mW
Pulse Duration	50ms min.	50ms min.

			Coil Resistance (Ω ± 10%) @ 23°C	
Nominal Coil Voltage	**Min. Operating Voltage**	**Max. Operating Voltage**	**Single Coil (Latching)**	**Dual Coil (Latching)**
3Vdc	2.4Vdc	3.9Vdc	22.5Ω	2 x 15Ω
5Vdc	4.0Vdc	7.5Vdc	62.5Ω	2 x 42Ω
6Vdc	4.8Vdc	9Vdc	90Ω	2 x 60Ω
9Vdc	7.2Vdc	13.5Vdc	202.5Ω	2 x 101.25Ω
12Vdc	9.6Vdc	18Vdc	360Ω	2 x 240Ω
24Vdc	19.2Vdc	36Vdc	1440Ω	2 x 886Ω
48Vdc	38.4Vdc	72Vdc	5760Ω	2 x 2880Ω

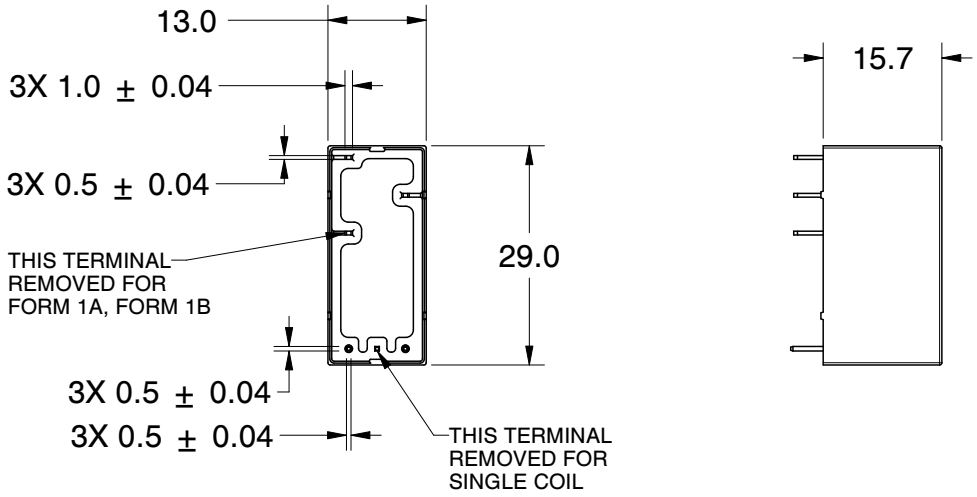
Ordering Information

	K106	–	1	D	012	P	–	1A	T	–	Y
Relay Series:											
Version:	1: 5mm pin spacing 2: 3.5 mm pin spacing 3: 2.5 mm pin spacing										
Coil Type:	S: Single coil D: Double coil										
Coil Voltage[1]:	3, 5, 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										
Contact Material:	T: $AgSnO_2$										
Sealed/Non-Sealed:	Y: Sealed Z: Flux proofed										

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

Dimensional Drawings

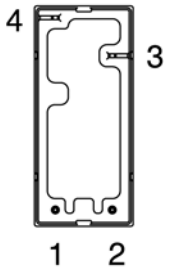
All dimensions in mm unless otherwise noted. For more information, please contact KG Technologies.



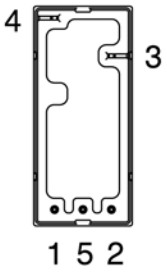
Dimensional Drawings

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

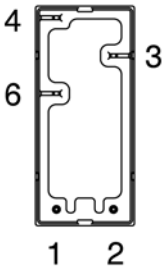
Single Coil, Form 1A, Form 1B



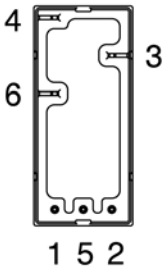
Dual Coil, Form 1A, Form 1B



Single Coil, Form 1C



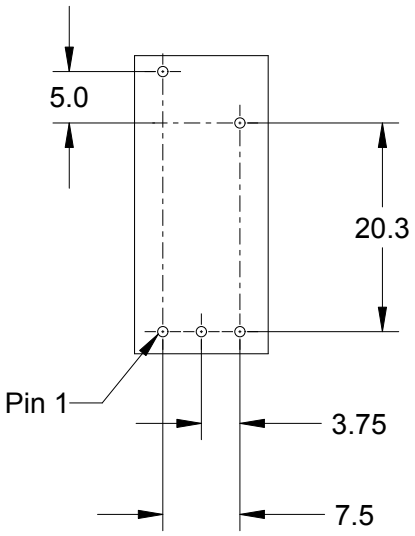
Dual Coil, Form 1C



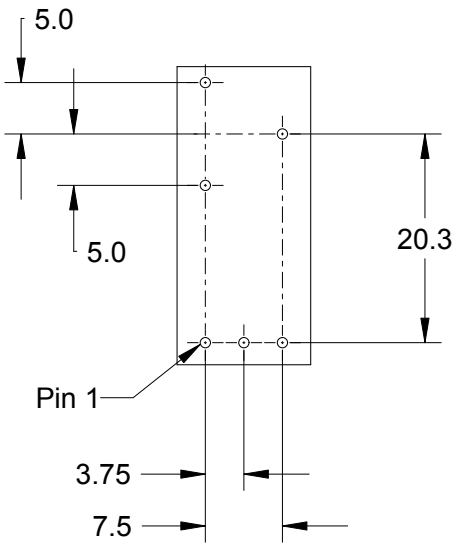
Wiring Diagrams

Version 1, PCB Layout (Bottom View)

Form 1A, Form 1B



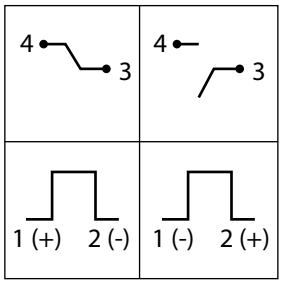
Form 1C



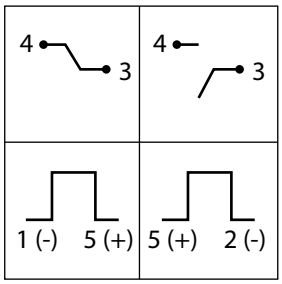
Wiring Diagrams

Positive Polarity

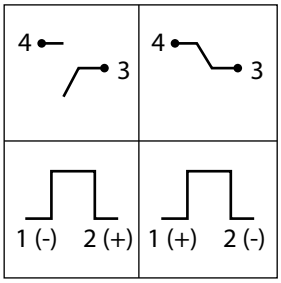
Single Coil, Form 1A



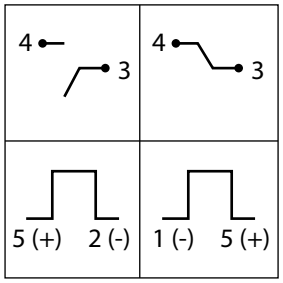
Dual Coil, Form 1A



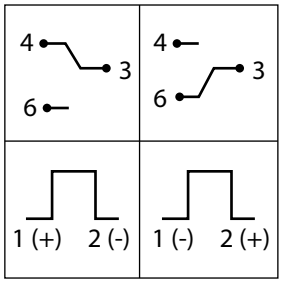
Single Coil, Form 1B



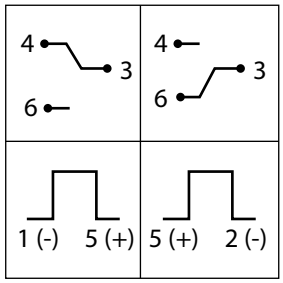
Dual Coil, Form 1B



Single Coil, Form 1C

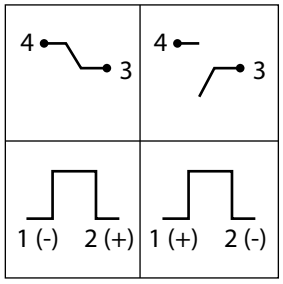


Dual Coil, Form 1C

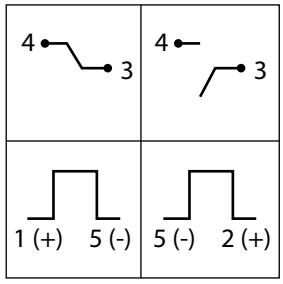


Negative Polarity

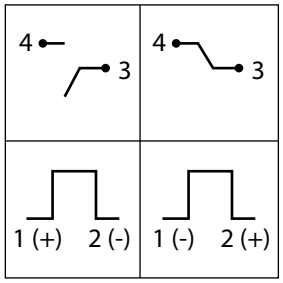
Single Coil, Form 1A



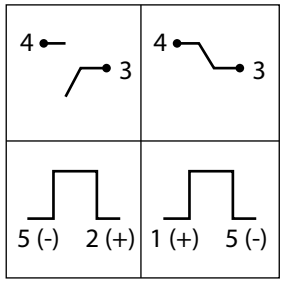
Dual Coil, Form 1A



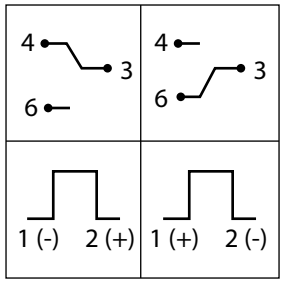
Single Coil, Form 1B



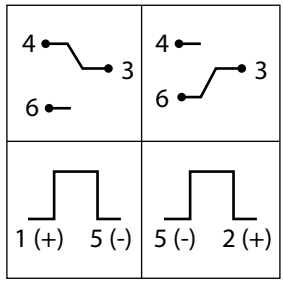
Dual Coil, Form 1B



Single Coil, Form 1C



Dual Coil, Form 1C



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 for longer than 1 minute (damage to the coil could incur).

3: For definitions of terms used in this data sheet, see glossary at www.kgtechnologies.net.