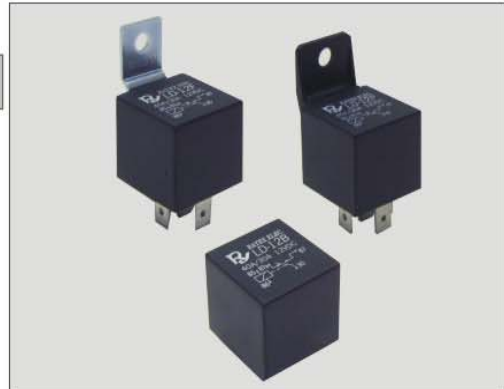


FEATURES

- 40A switching use relay at ambient temperature of 80K
- Solder lug (quick connect) and PCB terminals are available for customer's selection.
- Contact form: 1 form C, 1 Form B, 1 Form A, and 2 Form A
- Using at automotives, direct connection with cell motors, transmission, and anti-locking braking system.



ORDERING INFORMATION

LD — 12 F

1 2 3 4 5

1. Type

2. Contact Arrangement

Nil : 1 Form C
 1A : 1 Form A
 1B : 1 Form B
 2A : 1PDM

3. Coil Nominal Voltage

4. Cover Type

F : Cover for Steel Bracket
 P : Cover for Plastic Bracket
 B : Plastic Cover

5. Terminal Type

Nil : Standard Type
 P : PCB Terminal

5. Special Mark

Nil : Standard Type.

R1 : Coil parallel with 1/2W resistor 680 for 12VDC, 2700 for 24VDC.

R2 : Coil parallel with 1/2W resistor 820 for 12VDC, 3200 for 24VDC.

D1 : Coil parallel with diode 1N4007 the Positive pole "+" on # 85 terminal.

D2 : Coil parallel with diode 1N4007 the Negative pole "-" on # 85 terminal.

D3 : Coil parallel with diode 1N4004 the Positive pole "+" on # 85 terminal.

D4 : Coil parallel with diode 1N4004 the Negative pole "-" on # 85 terminal.

CONTACT RATING

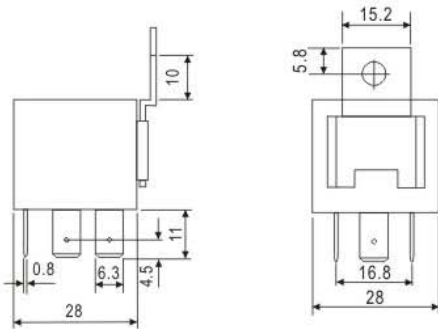
1PDT	Resistive (Cos.θ = 1)	DC 12V	40A/30A
1PST-DM	Resistive (Cos.θ = 1)	DC 12V	2 x 20A

COIL DATA(1.8W, at 25°C)

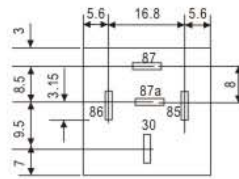
Coil Nominal Voltage (VDC)	Resistance Tol. 10% (Ohms)	Nominal Current (mA)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
12	80	150	7.8	1.2
24	320	75	17.0	2.4

DIMENSIONS(mm)

F TYPE

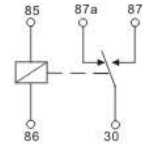


P.C.B LAYOUT
(BOTTOM VIEW)

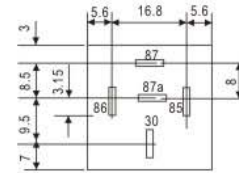
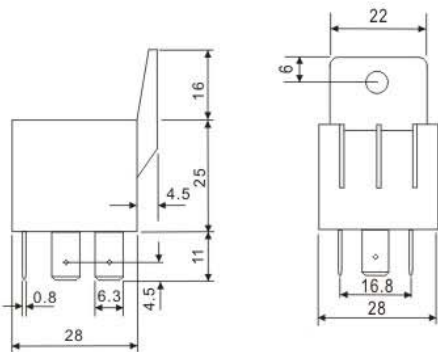


WIRING DIAGRAM
(BOTTOM VIEW)

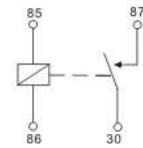
1C



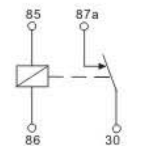
P TYPE



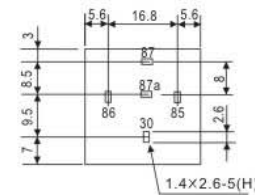
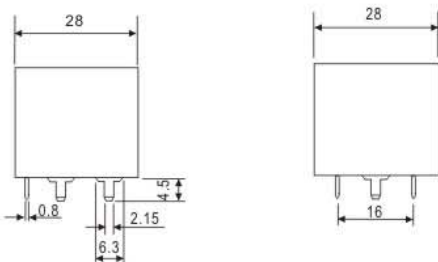
1A



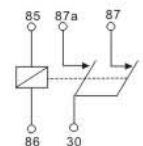
1B



B TYPE



2A



GENERAL DATA

Insulation Resistance	50 MΩ Min. (DC 500V)
Dielectric Strength	500 VAC, 50/60Hz between contact.
	1,000 VAC, 50/60Hz between all elements.
Contact Material	Silver- Cadmium Oxide as standard.
Contact Resistance	100 milliohms max. (initial value)
Shock Resistance	Malfunction: 10G(11ms) ; Destructive: 100G(6ms)
Vibration Resistance	Malfunction: 10 to 55 Hz. at Double Amplitude of 1.5 mm
	Destructive: 10 to 55 Hz. at Double Amplitude of 1.5 mm
Operation Time	10 ms max.
Release Time	10 ms max.
Temperature Range	- 40°C ~ + 85°C
Expected Life	With operation rate 30/min.
	Mechanical - 1,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	38 grams