



RAYEX ELEC.

JQX38 SERIES

FEATURES

- 2 Pole and 3 Pole type are available.
- Contact rating up to 40A/250VAC



ORDERING INFORMATION

JQX38 — F 12 D

1
2
3
4

1. Type
2. Nil: 2PDT
F: 3PDT
3. Coil Nominal Voltage
4. Coil Nominal Voltage Type
D: DC
A: AC

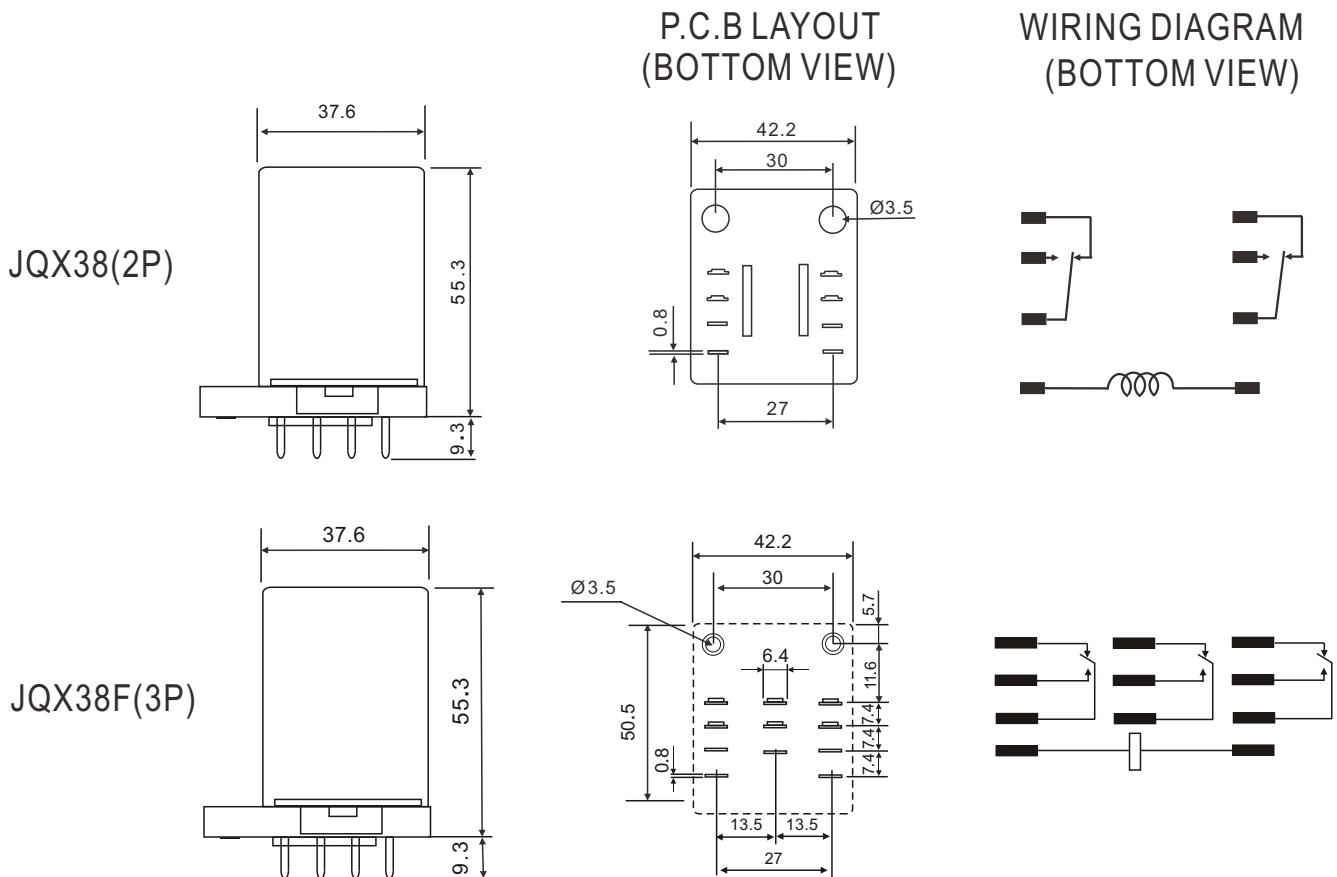
COIL DATA(at 25°C)

AC 4.5~5VA				DC 2.5W				
Coil Nominal Voltage (50/60Hz)	Resistance Tol. ±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)	Coil Nominal Voltage (VDC)	Resistance Tol. ±10% (Ohms)	Nominal Current (mA)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
12	10	9.6	3.6	12	57	75	9.0	1.2
24	39	19.2	7.2	24	230	37	18.0	2.4
48	155	38.4	14.4	48	920	19	36.0	4.8
110	847	96.0	36.0	110	4,840	9	82.5	11.0
220/240	3380/4030	192.0	72.0					

CONTACT RATING

JQX38 (2PDT)	AC 250V/30VDC	40A
JQX38F(3PDT)	AC 250V/30VDC	40A

DIMENSIONS(±0.2mm)

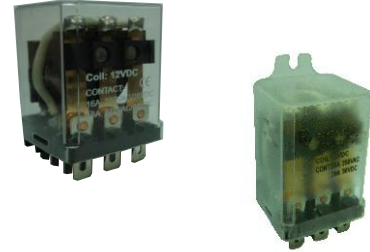


GENERAL DATA

Insulation Resistance	100 MΩ Min. (DC 500V)
Dielectric Strength	1,000 VAC, 50/60Hz between contact.
	2,500 VAC, 50/60Hz between all elements.
Contact Material	Ag Alloy
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	15 ms max.
Release Time	10 ms max.
Temperature Range	- 40°C ~ + 60°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	130 grams

FEATURES

- 2 Pole and 3 Pole type are available.
- Contact rating up to 10A/250VAC, 20A/250VAC



ORDERING INFORMATION

JQX53 — 12 D F S

1

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- | | |
|---|---|
| <p>1. Type</p> <p>2. NIL: 10A
F: 20A</p> <p>3. 2: 2PDT
3: 3PDT</p> <p>4. Coil Nominal Voltage</p> <p>5. Coil Nominal Voltage Type
D: DC
A: AC</p> | <p>6. NIL: Standard Type
F: Flange Cover</p> <p>7. S: Solder Lug/Plug-In Terminal
P: PCB Terminal</p> |
|---|---|

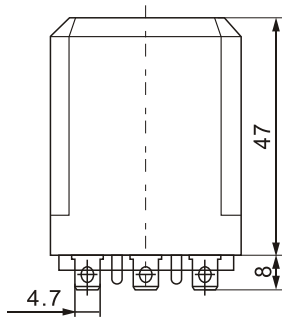
COIL DATA(at 25°C)

AC 2.5VA				DC 1.2W			
Coil Nominal Voltage (50/60Hz)	Resistance Tol. ±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)	Coil Nominal Voltage (VDC)	Resistance Tol. ±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
12	20	9.6	3.6	12	120	9.0	1.2
24	81	19.2	7.2	24	480	18.0	2.4
48	320	38.4	14.4	48	1920	36.0	4.8
120	2000	88.0	36.0	120	12000	82.5	11.0
220	6700	176.0	72.0				

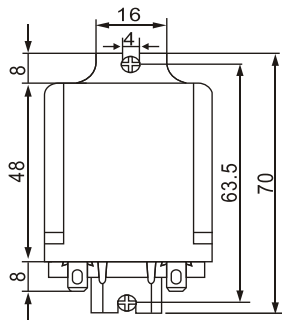
CONTACT RATING

JQX53	AC 250V/30VDC	10A
JQX53F	AC 250V/30VDC	20A

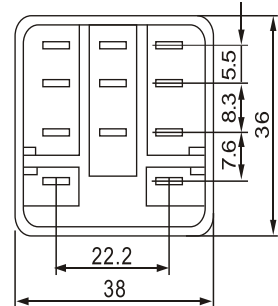
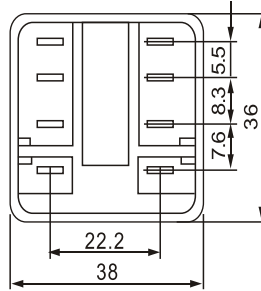
DIMENSIONS(±0.2mm)



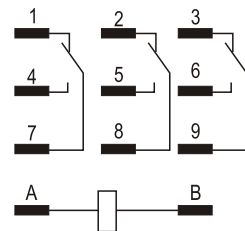
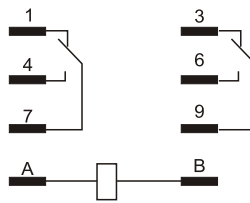
FLANGE COVER



P.C.B LAYOUT
(BOTTOM VIEW)



WIRING DIAGRAM
(BOTTOM VIEW)



GENERAL DATA

Insulation Resistance	1000 MΩ Min. (DC 500V)
Dielectric Strength	2,500 VAC, 50/60Hz between contact.
	1,200 VAC, 50/60Hz between all elements.
Contact Material	Agcdo alloy
Contact Resistance	100 milliohms max. (1A 6VDC)
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	15 ms max.
Release Time	10 ms max.
Temperature Range	- 40°C ~ + 60°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	125 grams

FEATURES

- 2 Pole type are available.
- Contact rating up to 80A/250VAC



ORDERING INFORMATION

JQX62 - F 12 D

1 2 3 4

1. Type
2. NIL:1PDT
F:2PDT
3. Coil Nominal Voltage
4. Coil Nominal Voltage Type
D:DC
A:AC

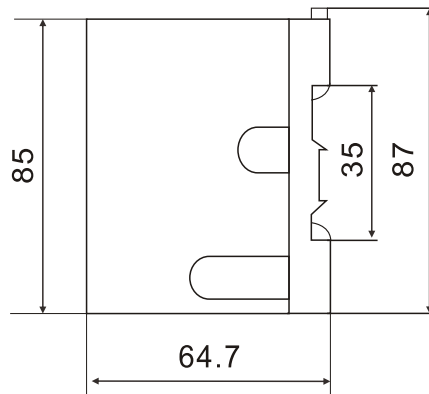
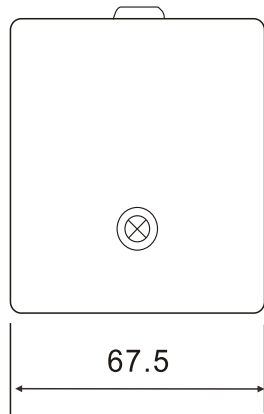
CONTACT RATING

JQX62	Resistive (Cos.θ = 1)	250V AC/30VDC	80A
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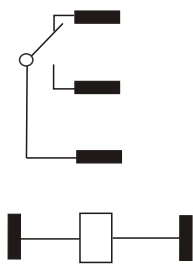
COIL DATA(at 25°C)

AC 4.0VA				DC 2.0W			
Coil Nominal Voltage (50/60Hz)	Resistance Tol.±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)	Coil Nominal Voltage (VDC)	Resistance Tol.±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
6	9	4.8	1.8	6	18	4.8	0.6
12	36	9.6	3.6	12	57	9.6	1.2
24	144	19.2	7.2	24	230	19.2	2.4
48	576	38.4	14.4	48	920	38.4	4.8
110	3025	88	36.0	110	4,840	88	11.0
220	12000	176	72.0				

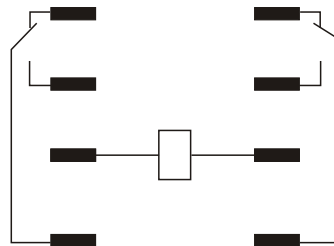
DIMENSIONS(±0.2mm)



WIRING DIAGRAM
(BOTTOM VIEW)

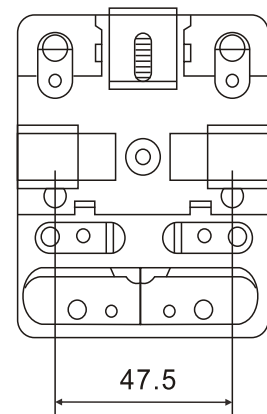


1PDT



2PDT

P.C.B LAYOUT
(BOTTOM VIEW)



GENERAL DATA

Insulation Resistance	1000 MΩ Min. (DC 500V)
Dielectric Strength	1200 VAC, 50/60Hz between contact.
	2500 VAC, 50/60Hz between all elements.
Contact Material	Ag Alloy.
Contact Resistance	100 milliohms max. (1A 6VDC)
Shock Resistance	Malfunction: 10G(11ms) ; Destructive: 100G(6ms)
Vibration Resistance	10Hz~500Hz Acceleration:43.1m/s ²
Operation Time	40 ms max.
Release Time	25 ms max.
Temperature Range	- 40°C ~ 105°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	4.1 grams

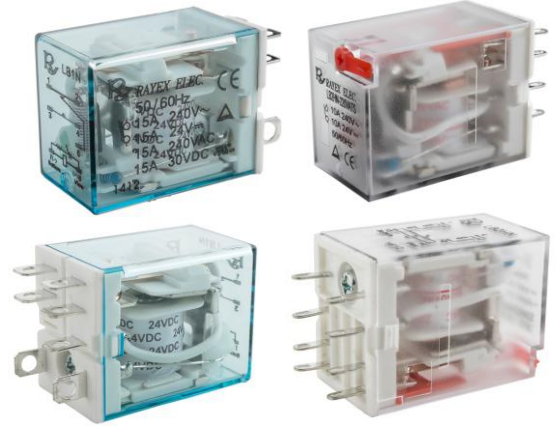


RAYEX ELEC.

LB SERIES

FEATURES

- High performance power relay
- PCB terminal and solder lug terminal and flanged case are available
- LED version is available
- UL, CUL, TUV, and CE approved
- Using at control equipment, vending machines, cooking appliances, office machine, domestic appliances, etc.



UL FILE NO.: E131959
 CUL FILE NO.: E131959
 TUV FILE NO.: R09956267

ORDERING INFORMATION

LB1 N — 12 D F S
 1 2 3 4 5 6

1. Type

- LB1(1PDT) : 15A
- LB2(2PDT) : 12A
- LB2H(2PDT) : 10A
- LB4H(4PDT) : 5A

2. LED

- Nil : Without LED
- N : With LED

3. Coil Nominal Voltage

- 4. Coil Nominal Voltage Type
- D : DC
- A : AC

5. Cover Type

- Nil : Standard Type
- F : Flange Cover
- T : Test button (Not applicable at LB1)

6. Terminal Type

- S : Solder Lug / Plug-In Terminal
- P : PCB Terminal

COIL DATA(at 25°C)

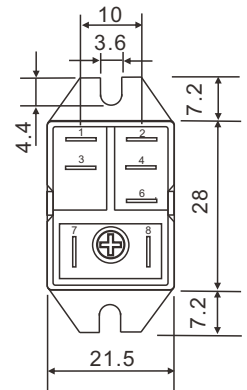
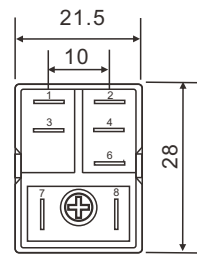
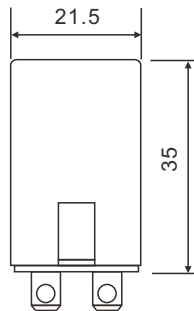
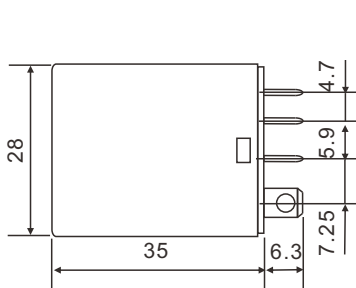
AC 1.2VA				DC 0.9-1.1W				
Coil Nominal Voltage (50/60Hz)	Resistance Tol.±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)	Coil Nominal Voltage (VDC)	Resistance Tol.±10% (Ohms)	Nominal Current (mA)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
6	10	4.8	1.8	6	40	150	4.5	0.6
12	45	9.6	3.6	12	160	75	9.0	1.2
24	160	19.2	7.2	24	650	37	18.0	2.4
48	670	38.4	14.4	48	2,600	19	36.0	4.8
100/110	3,900	88.0	33.0	100/110	11,000	9	82.5	11.0
220/240	16,000	176.0	66.0					

CONTACT RATING

LB1 TYPE	Resistive (Cos.θ = 1)	AC 240V / DC 30V	15A	UL
		AC 240V / DC 24V	15A	TUV
	Inductive (Cos.θ = 0.4)	AC 240V	8A	TUV
LB2 TYPE	Resistive (Cos.θ = 1)	AC 240V / DC 30V	12A	UL
		AC 240V / DC 24V	10A	TUV
	Inductive (Cos.θ = 0.4)	AC 240V	5A	TUV
LB2H TYPE	Resistive (Cos.θ = 1)	AC 240V / DC 30V	10A	UL
		AC 240V / DC 24V	10A	TUV
	Inductive (Cos.θ = 0.4)	AC 240V	5A	TUV
LB4H TYPE	Resistive (Cos.θ = 1)	AC 240V / DC 30V	5A	UL
		AC 240V / DC 24V	5A	TUV
	Inductive (Cos.θ = 0.4)	AC 240V	3A	TUV

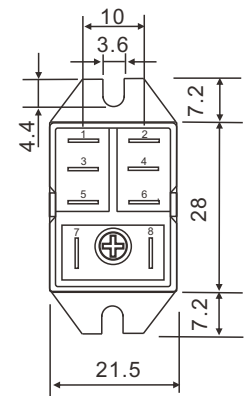
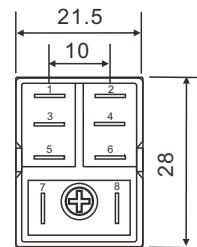
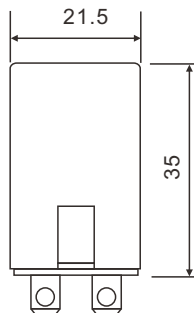
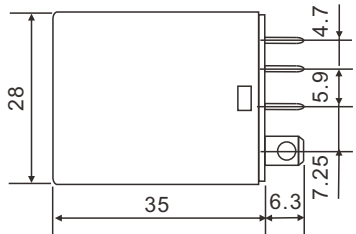
DIMENSIONS(±0.2mm)

LB1



Flange Cover

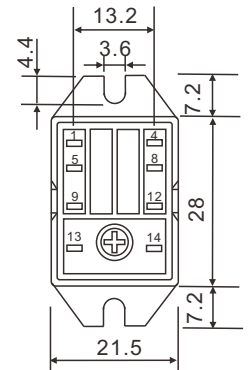
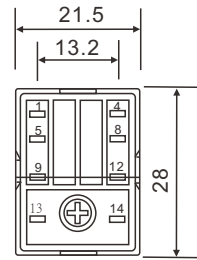
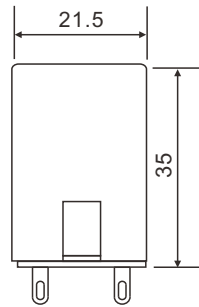
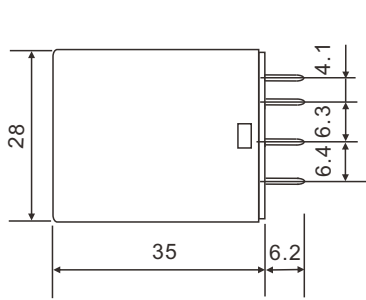
LB2-(T)



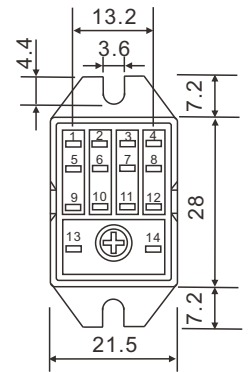
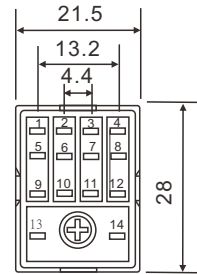
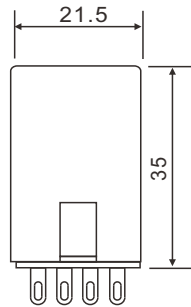
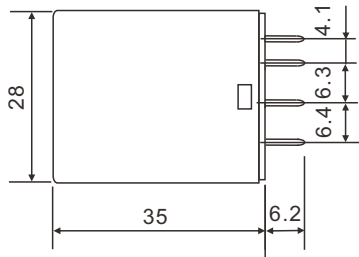
DIMENSIONS(±0.2mm)

Flange Cover

LB2H-(T)

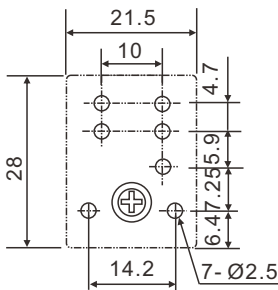


LB4H-(T)

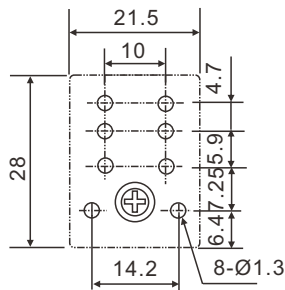


DRILLING PLAN

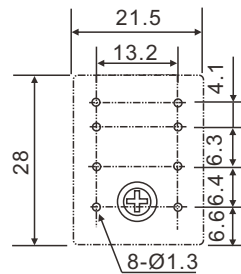
LB1



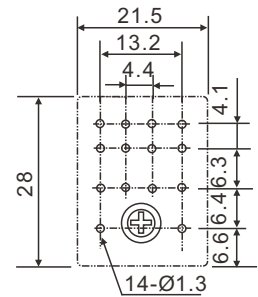
LB2



LB2H

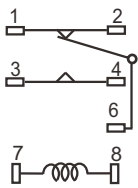


LB4H

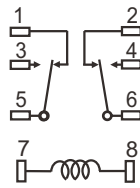


WIRING DIAGRAM

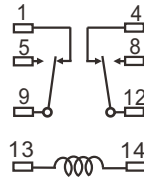
LB1



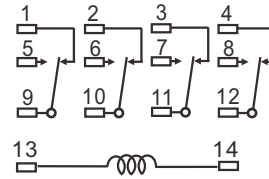
LB2



LB2H



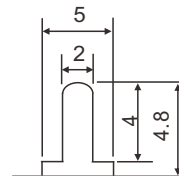
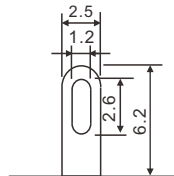
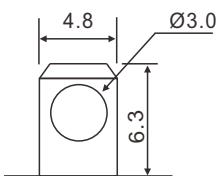
LB4H



TERMINAL TYPE(±0.2mm)

SOLDER LUG/PLUG-IN

PRINTED CIRCUIT



LB1, LB2

LB2H, LB4H

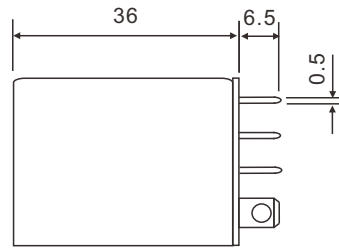
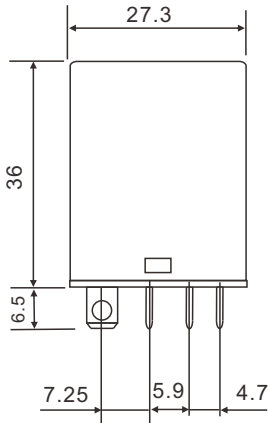
GENERAL DATA

Insulation Resistance	1,500 MΩ Min. (DC 500V)
Dielectric Strength	750 VAC, 50/60Hz between contact.
	1,500 VAC, 50/60Hz between all elements.
Contact Material	Agcdo Alloy.
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	15 ms max.
Release Time	15 ms max.
Temperature Range	- 40°C ~ + 60°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	37 grams

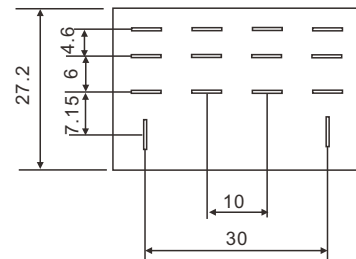
CONTACT RATING

LY4 TYPE	Resistive (Cos.θ = 1)	AC 250V/28V	10A
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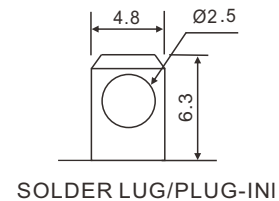
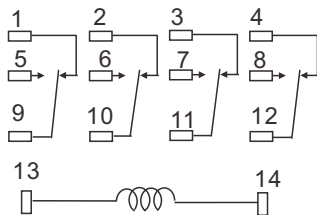
DIMENSIONS(±0.2mm)



P.C.B LAYOUT (BOTTOM VIEW)



WIRING DIAGRAM (BOTTOM VIEW)



SOLDER LUG/PLUG-INI

GENERAL DATA

Insulation Resistance	500 MΩ Min. (DC 500V)
Dielectric Strength	1,000 VAC, 50/60Hz between contact.
	1,500 VAC, 50/60Hz between all elements.
Contact Material	Ag Alloy.
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	25 ms max.
Release Time	25 ms max.
Temperature Range	- 40°C ~ + 55°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	Ly4 Type: 70 grams

FEATURES

- Industry standard octal-type termination for quick installation.
- Contact rating up to 10A/250VAC



ORDERING INFORMATION

MK **2** **N** — **D** **T**
 1 2 3 4 5 6

- | | |
|------------------------------|------------------------------|
| 1. Type | 5. Coil Nominal Voltage Type |
| 2. 2P (2PDT) | D: DC |
| 3P (3PDT) | A: AC |
| 3P5 (3PDT) | 6. Test button |
| 3. NIL: Without LED | NIL: Without test button |
| N: With LED | T: With test button |
| 4. Coil Nominal Voltage type | |

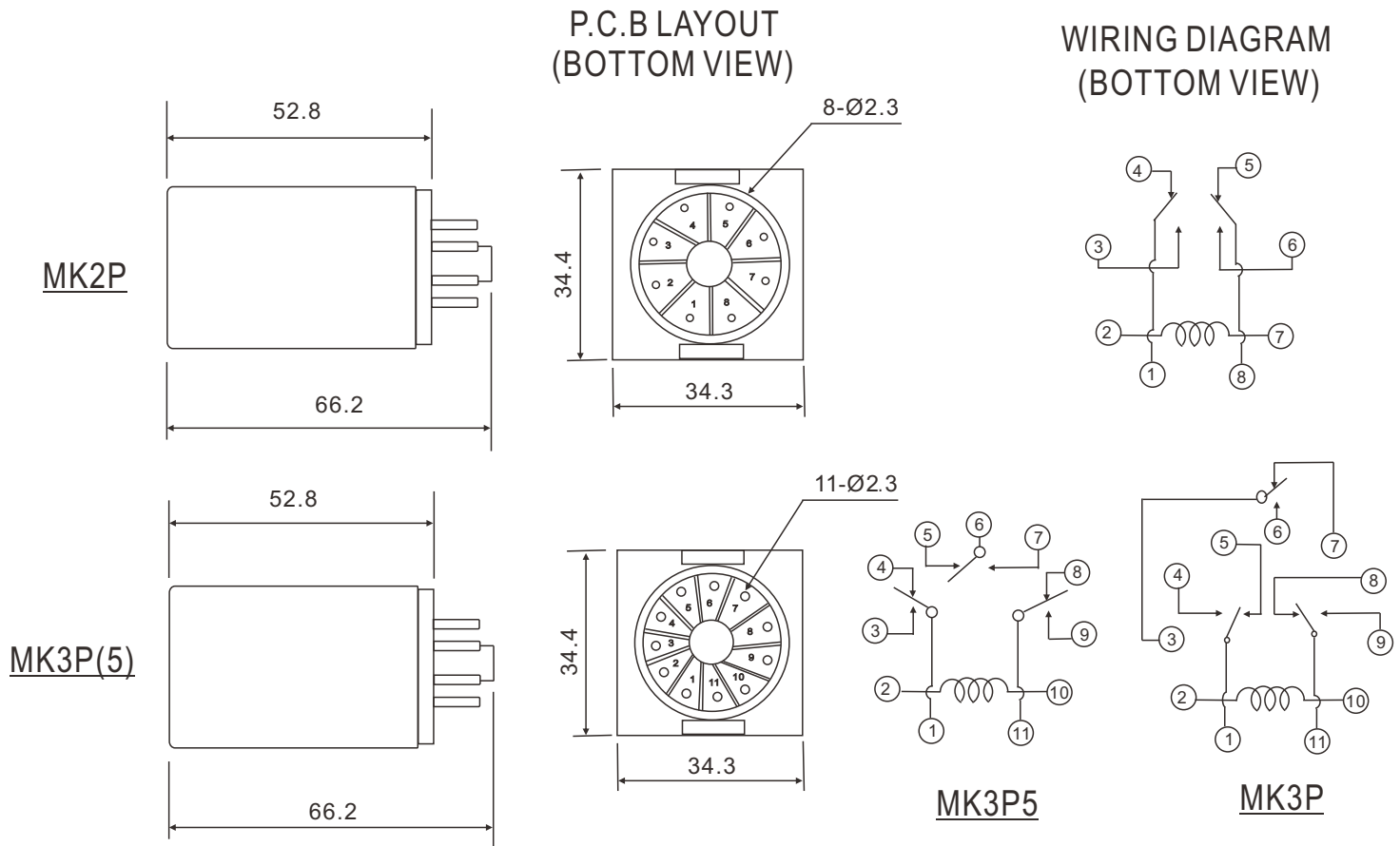
COIL DATA(at 25°C)

AC 2.8VA				DC 1.6W				
Coil Nominal Voltage (50/60Hz)	Resistance Tol.±10% (Ohms)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)	Coil Nominal Voltage (VDC)	Resistance Tol.±10% (Ohms)	Nominal Current (mA)	Maximum Pick Up Voltage (V)	Minimum Drop Out Voltage (V)
12	18	9.6	3.6	6	22.5	266	4.8	0.6
24	72	19.2	7.2	12	90	133	9.6	1.2
48	288	38.4	14.4	24	360	66	19.2	2.4
110	1,512	88.0	33.0	48	1,440	33	38.4	4.8
220	6,050	176.0	66.0	120	9,000	13	96.0	12.0
240	7,200	192.0	72.0					

CONTACT RATING

MK2P (2PDT)	AC 250V/30VDC	10A
MK3P(5)(3PDT)	AC 250V/30VDC	10A

DIMENSIONS(±0.2mm)



GENERAL DATA

Insulation Resistance	500 MΩ Min. (DC 500V)
Dielectric Strength	1,000 VAC, 50/60Hz between contact.
	1,500 VAC, 50/60Hz between all elements.
Contact Material	Ag Alloy.
Contact Resistance	50 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	15 ms max.
Release Time	10 ms max.
Temperature Range	- 40°C ~ + 55°C
Expected Life	With operation rate 30/min.
	Mechanical - 10,000,000 operations min.
	Electrical - 100,000 operations min. at rated load.
Weight	MK2P Type : 70 grams, MK3P5 Type : 80 grams