FEATURES

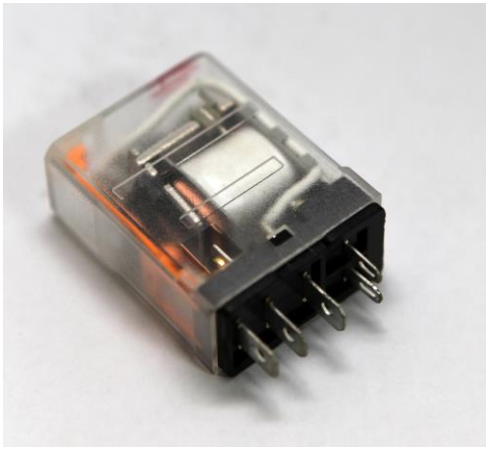
■ Large capacity 10A-20A of general purpose relay.

■ 4PDT, 3PDT ,DPDT ,SPDT, contact arrangement.

■ L.E.D. status lamp: Shows coil ”ON” or ”OFF” status, ideal in low light conditions. DC: bi-polar L.E.D.

■ Flag indicator: Shows relay status in manual or powered condition.

■ Rotary button : Allows for manual operation of relay without the need for coil power, ideal for field service personnel to test control circuits.



■ The full feature relay includes the combination for rotary button or plain button or light or indicator flag. they can be chosen for every combination

■ Finger-grip cover: Allows operator to remove relays from sockets more easily than conventional relays.

■ The relay can be assembled by the various kinds of sockets and adapters ,it will be used conveniently

■ UL e115915/TUV

LINEUP

■ STANDARD COIL POLARITY (10amp)

Contact form	Plug-in socket/Solder terminals				
	Standard	With LED	With LED Indicator	With LED Indicator Button	With LED Indicator Rotary Button
SPDT	BLY5-1C-S-CW-	BLY5-1C-S-CWL-	BLY5-1C-S-CL-	BLY5-1C-S-CML-	BLY5-1C-S-CM4L-
DPDT	BLY5-2C-S-CW-	BLY5-2C-S-CWL-	BLY5-2C-S-CL-	BLY5-2C-S-CML-	BLY5-2C-S-CM4L-
3PDT	BLY5-3C-S-CW-	BLY5-3C-S-CWL-	BLY5-3C-S-CL-	BLY5-3C-S-CML-	BLY5-3C-S-CM4L-
4PDT	BLY5-4C-S-CW-	BLY5-4C-S-CWL-	BLY5-4C-S-CL-	BLY5-4C-S-CML-	BLY5-4C-S-CM4L-

Note： 1) You can choose two different types of terminal by switching the codes. For example, BLY5-1C-S-CW (S type) can be changed to BLY5-1C-P-CW (P type).

2) The above listed item are TUV & UL complaint and the contact rating is 10amp.

■ STANDARD COIL POLARITY (12amp, 15amp, 20amp)

Contact form	Plug-in socket/Solder terminals				
	Standard	With LED	With LED Indicator	With LED Indicator Button	With LED Indicator Rotary Button
SPDT	BLY5-1C20-S-CW-	BLY5-1C20-S-CWL-	BLY5-1C20-S-CL-	BLY5-1C20-S-CML-	BLY5-1C20-S-CM4L-
DPDT	BLY5-2C20-S-CW-	BLY5-2C20-S-CWL-	BLY5-2C20-S-CL-	BLY5-2C20-S-CML-	BLY5-2C20-S-CM4L-
3PDT	BLY5-3C12-S-CW-	BLY5-3C12-S-CWL-	BLY5-3C12-S-CL-	BLY5-3C12-S-CML-	BLY5-3C12-S-CM4L-
4PDT	BLY5-4C12-S-CW-	BLY5-4C12-S-CWL-	BLY5-4C12-S-CL-	BLY5-4C12-S-CML-	BLY5-4C12-S-CM4L-

Note：1) You can choose two different types of terminal by switching the codes. For example, BLY5-1C20-S-CW (S type) can be changed to BLY5-1C20-P-CW (P type).

2) You can choose two different contact rating by switching the codes. For example, BLY5-1C-S-CW (10amp) can be changed to BLY5-1C20-P-CW (20amp). See more detail of the codes of contact rating on the last page of “HOW TO ORDER”

3) The above listed item are UL complain with high contact rating.

■ SOCKETS & ACCESSARIES

Contact form	Front-connecting Socket （FOR 10A） (DIN-track/screw mounting)	TOP COVER DIN ADAPTER	TOP OR BOTTOM FLANGE ADAPTER
SPDT	PTF-05	BLY5-59-A	BLY5-59-B
DPDT	PTF-08A、PTF-08、PTF-08AN、PF-08-S/P	BLY6-59-A	BLY6-59-B
3PDT	PTF-11A	BLY3-59-A	BLY3-59-B
4PDT	PTF-14A	BLY4-59-A	BLY4-59-B

SPECIFICATIONS

■ COIL RATINGS

Single-pole Relays

Rated voltage		Rated current (mA)		Coil resistance	Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		% of rated voltage			
AC	6 V	218	182	18.8	80%	30%	110%	1.2VA
	12 V	96	58.5	76.8				
	24 V	87.2	78.5	300				
	48 V	20.2	17.4	1280				
	110V	9.6	8.3	6950				
	120 V	9.27	8	7680				
	220/230 V	10.8	9.5	15000				
	240 V	10.9	9.4	15720				
DC	6 V	150		47	75%	10%		0.77-0.9W
	12 V	75		188				
	24 V	120		750				
	48 V	17.8		2600				
	110 V	9.8		15125				

Note:

1. The test value of coil resistance was at a temperature of 25 ° C, humidity 35% to 70%.
2. The operating parameter is measured at a coil temperature of 25℃ indicated in the percentage of the rated voltages.
3. The coil rated current is measured as the real current consumption under the rated voltages.

Double-pole Relays

Rated voltage		Rated current (mA)		Coil resistance	Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		% of rated voltage			
AC	6 V	331	284	9.5	80%	30%	110%	1.2VA
	12 V	94.2	73.5	46				
	24 V	54.5	46.5	180				
	48 V	24.1	18.2	770				
	110V	11.2	8.1	3830				
	120 V	11.5	8.4	4430				
	220/230 V	6.9	5.8	15000				
	240 V	6.1	3.8	15700				
DC	6 V	150		40	75%	10%		0.89-1.1W
	12 V	74.5		160				
	24 V	36		650				
	48 V	14.5		2600				
	110 V	9.7		11000				

Note：

1. The test value of coil resistance was at a temperature of 25 ° C, humidity 35% to 70%.

2. The operating parameter is measured at a coil temperature of 25℃ indicated in the percentage of the rated voltages.

3. The coil rated current is measured as the real current consumption under the rated voltages.

Three-pole Relays

Rated voltage		Rated current (mA)		Coil resistance	Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		% of rated voltage			
AC	6 V	487	407	6	80%	30%	110%	2.5VA
	12 V	209	182.4	25.3				
	24 V	97.8	77.7	103				
	48 V	45.1	36.8	460				
	110V	25.5	21.6	2200				
	120 V	19.9	17.1	2770				
	220/230 V	9.2	7.9	10800				
	240 V	8	6.7	12100				
DC	6 V	252		25	75%	10%		1.44W
	12 V	137.4		100				
	24 V	61.2		400				
	48 V	31.6		1600				
	110 V	12.95		8500				

Note：

1. The test value of coil resistance was at a temperature of 25 ° C, humidity 35% to 70%.

2. The operating parameter is measured at a coil temperature of 25℃ indicated in the percentage of the rated voltages.

3. The coil rated current is measured as the real current consumption under the rated voltages.

Four-pole Relays

Rated voltage		Rated current (mA)		Coil resistance	Must operate voltage	Must release voltage	Max. voltage	Power consumption (approx.)
		50 Hz	60 Hz		% of rated voltage			
AC	6 V	518	448	5.4	80%	30%	110%	2.2-2.7VA
	12 V	254	218	21.2				
	24 V	115.5	99	84.5				
	48 V	53.4	44.3	340				
	110V	27.3	23.2	1800				
	120 V	25.3	21.2	2220				
	220/230 V	10	8	8520				
	240 V	12.2	10.2	9120				
DC	6 V	258		24	75%	10%		1.5-1.65W
	12 V	137.5		96				
	24 V	76.2		388				
	48 V	39.3		1550				
	110 V	20.5		7340				

Note:

1. The test value of coil resistance was at a temperature of 25 ° C, humidity 35% to 70%.

2. The operating parameter is measured at a coil temperature of 25℃ indicated in the percentage of the rated voltages.

3. The coil rated current is measured as the real current consumption under the rated voltages.

■ CONTACT RATINGS

Item		SPDT	DPDT	3PDT	4PDT
Resistive load (cosΦ = 1)		10A, 28VDC 10A, 240VAC	10A, 28VDC 10A, 240VAC	10A, 28VDC 10A, 240VAC	10A, 28VDC 10A, 240VAC
		20A,28VDC 20A,120VAC 20A,277VAC	20A,28VDC 20A,120VAC 20A,277VAC	12A,28VDC 12A,120VAC 15A,277VAC	12A,28VDC 12A,120VAC 15A,277VAC
Inductive load (cosΦ = 0.4, L/R = 7 ms)		5A, 240VAC 5A, 28VDC	5A, 240VAC 5A, 28VDC	5A, 240VAC 5A, 28VDC	5A, 240VAC 5A, 28VDC
Motor	10amp	1/3 HP, 120 VAC	1/3 HP, 120 VAC	1/3 HP, 120 VAC	1/3 HP, 120 VAC
		1/2 HP, 240 VAC	1/2 HP, 240 VAC	1/2 HP, 240 VAC	1/2 HP, 240 VAC
	12, 15, 20 amp	1/2HP 120VAC	1/2HP 120VAC	3/4HP，250VAC	3/4HP，250VAC
		1HP 277VAC	1HP 277VAC	1/2HP，240VAC	1/2HP，240VAC
Carry current		20A		12A	
Max. switching voltage		300 VAC 125 VDC	300 VAC 125 VDC	300 VAC 125 VDC	300 VAC 125 VDC
Max. switching current		20A		15A	
Max. switching power		5540VA 560W	5540VA 560W	3324VA 336W	3324VA 336W

■ CHARACTERISTICS

Item	All Relays
Contact resistance	100 mΩ max.
Contact Material	10A:AgNi（UL/TUV）， 12A/15A/20A:AgSnO2 (UL)
Operate time	20 ms max
Release time	15 ms max
Max. operating frequency	Mechanical: 18,000 operations/hr Electrical: 1,800 operations/hr (under rated load)
Insulation resistance	500MΩ minimum at 500VDC
Dielectric strength	Between open contact: 1000 VAC for 1 minute，Coil to frame: 1500 VAC for 1 minute， Contact to coil: 1500 VAC for 1 minute，Pole to pole: 1500 VAC for 1 minute
Vibration resistance	Destruction: 10 to 55 Hz, 0.5 mm single amplitude (1.0 mm double amplitude) Malfunction: 10 to 55 Hz, 0.5 mm single amplitude (1.0 mm double amplitude)
Shock resistance	Destruction: 1,000 m/s^2 Malfunction: 200 m/s^2
Endurance	Mechanical life：10,000,000 operations，Electrical life：100,000 operations
Ambient temperature	-25°C to +50°C (AC); -25°C to +55°C (DC)
Ambient humidity	Operating: 5% to 85%
Weight	single-pole；24g double -pole；37g three-pole；58g four-pole:78g

■ SOCKETS Dielectric Strength, Insulation resistance

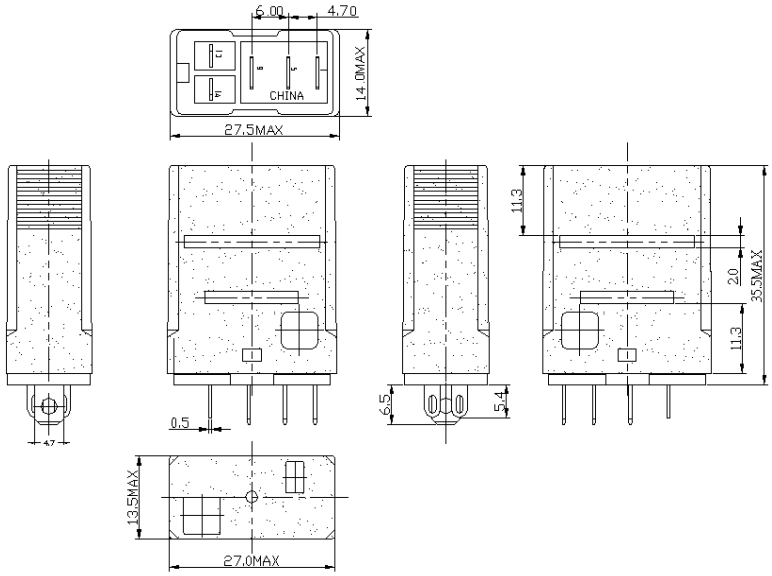
Contact form	Model (FOR 10A)	Dielectric withstand voltage	Insulation resistance
SPDT	PTF-05	1800VAC，1mA/min	1000MΩ @500VDC
DPDT	PTF-08A、PTF-08、 PTF-08AN、PF-08-S/P.	1800VAC，1mA/min	1000MΩ @500VDC
3PDT	PTF-11A	1800VAC，1mA/min	1000MΩ @500VDC
4PDT	PTF-14A	1800VAC，1mA/min	1000MΩ @500VDC

DIMENSION （mm）

■ Relays with Solder/Plug-in Terminals

BLY5-1C

CL(1C)



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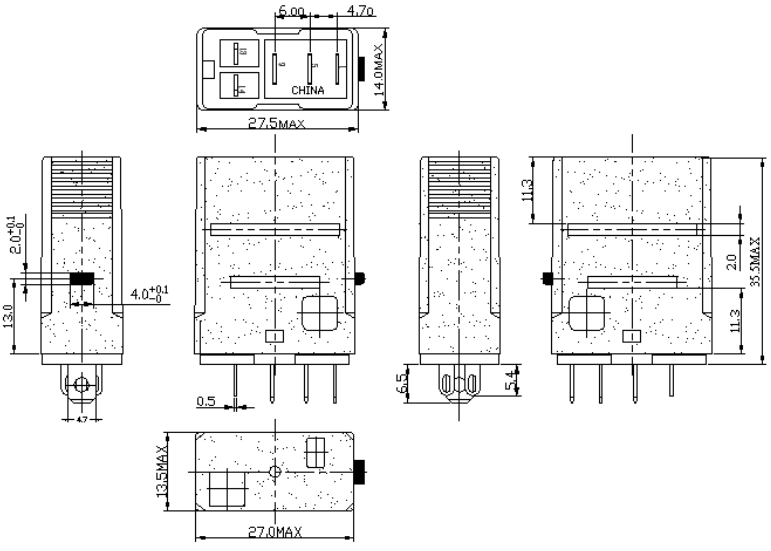
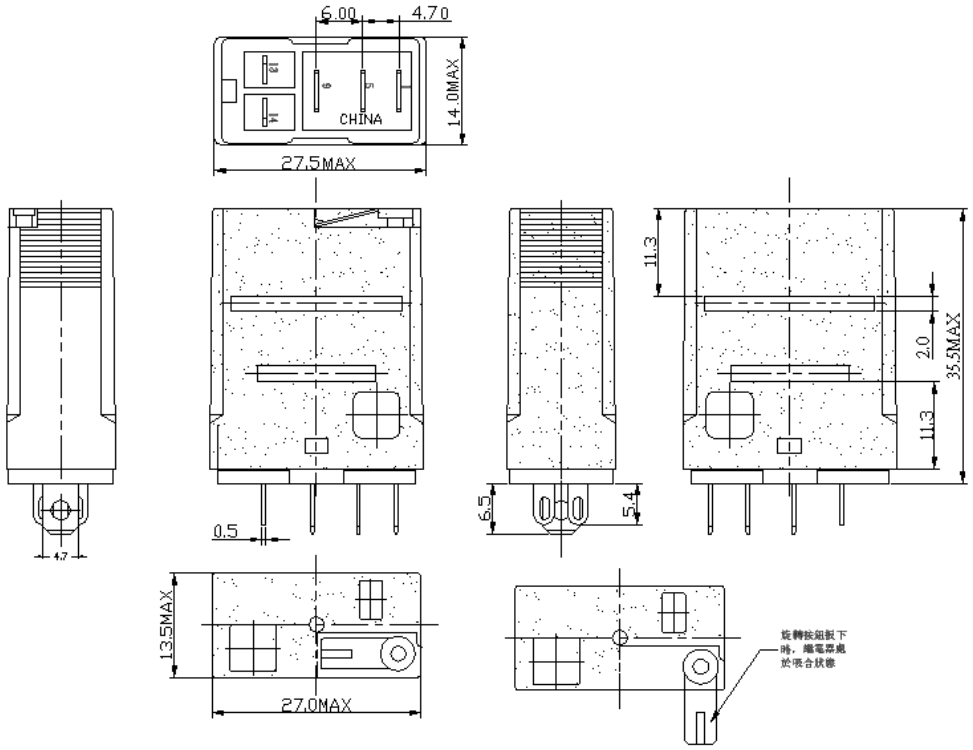
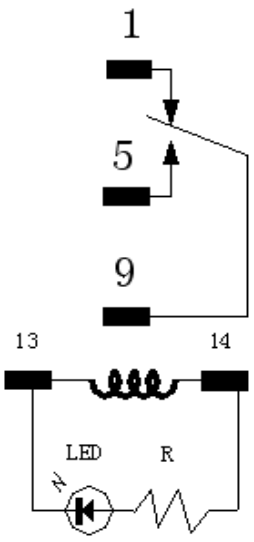


CM4L(1C)

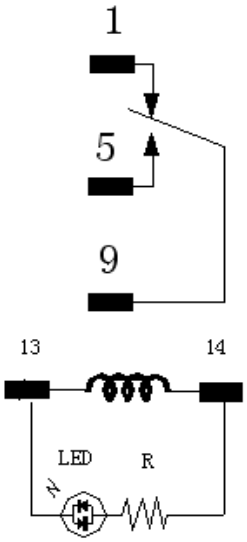


Wiring diagram

1C AC styles
Bottom view

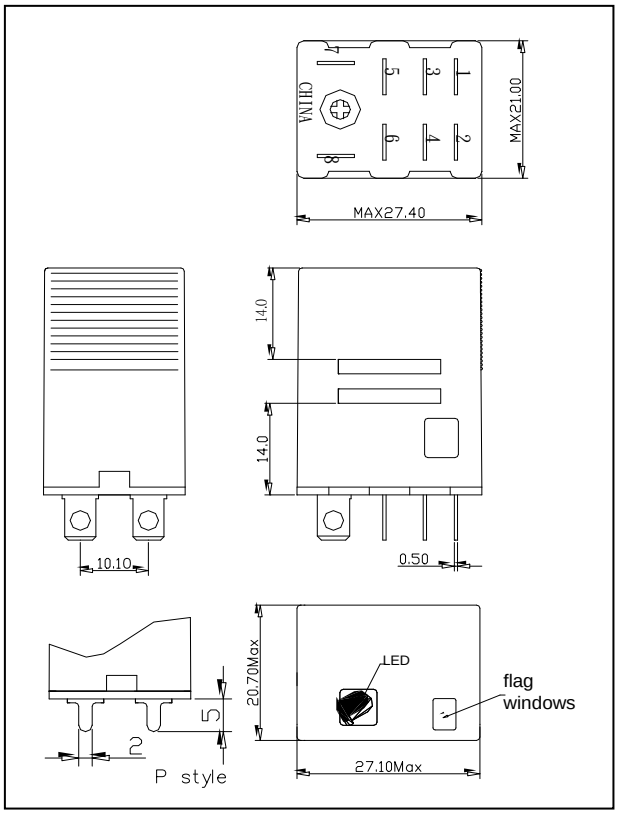


1C DC styles
Bottom view

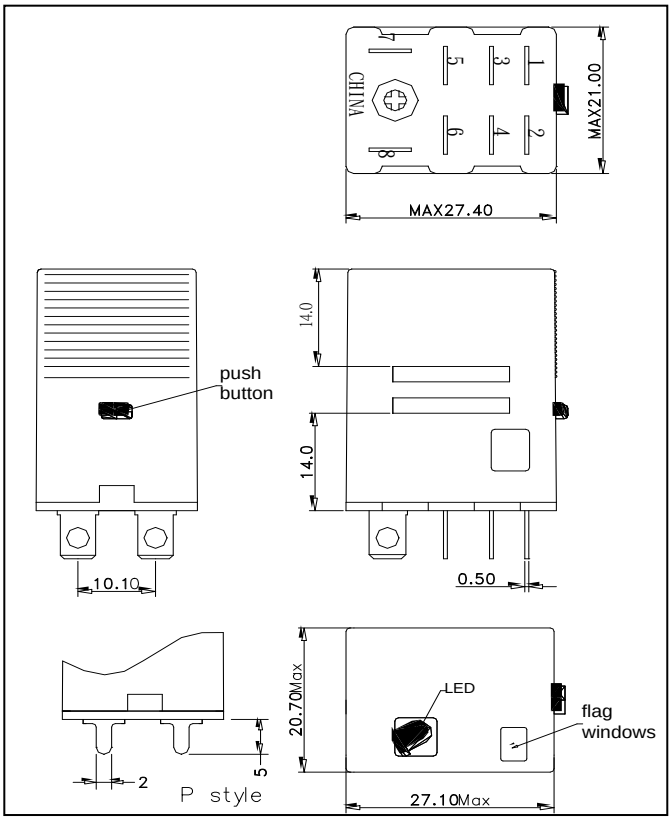


BLY5-2C

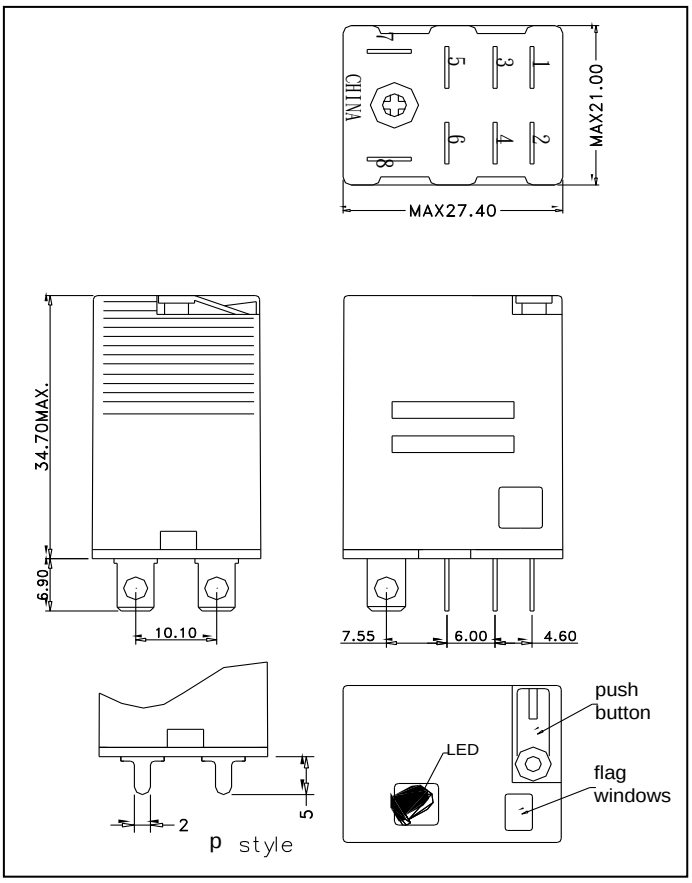
CL(2C)



CML(2C)

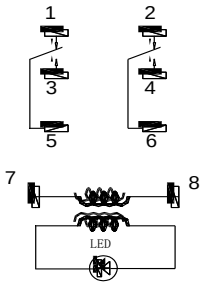


CM4L(2C)

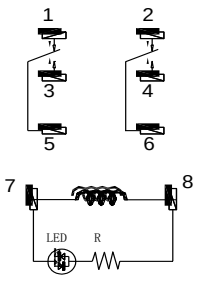


Wiring diagram

2C AC styles
Bottom view

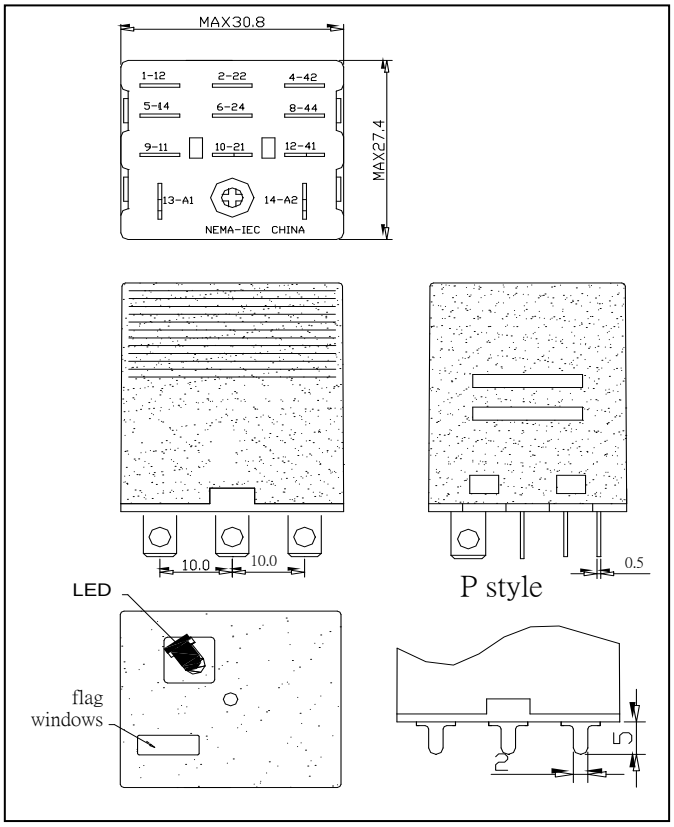


2C DC styles
Bottom view



BLY5-3C

CL(3C)



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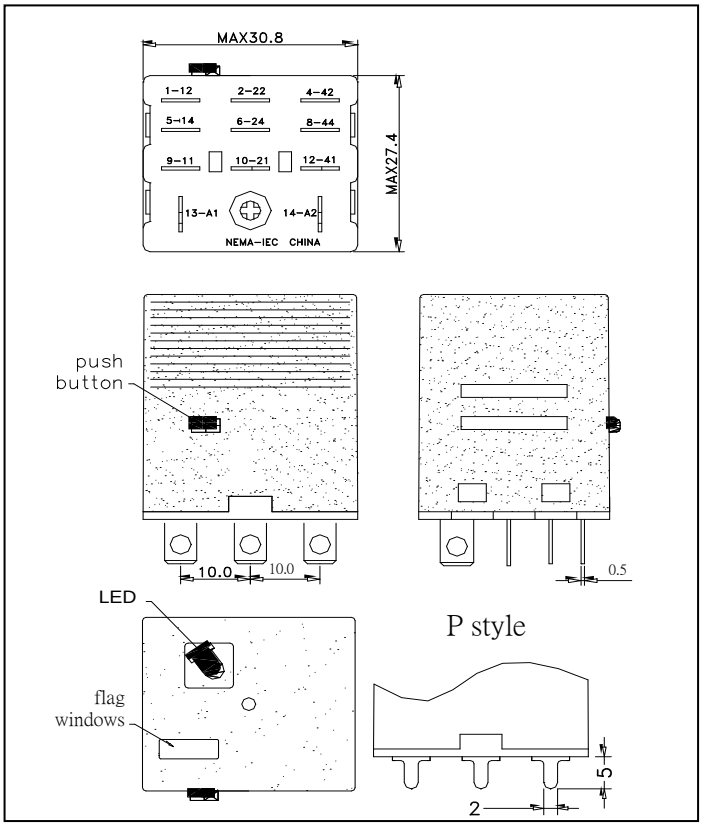
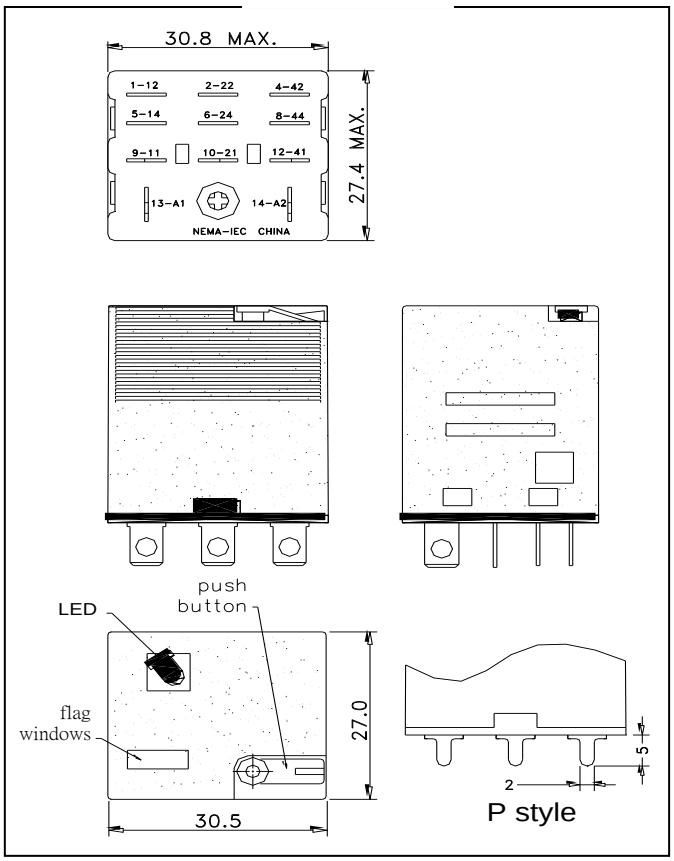
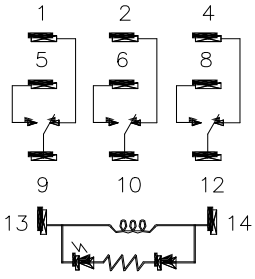


CM4L(3C)

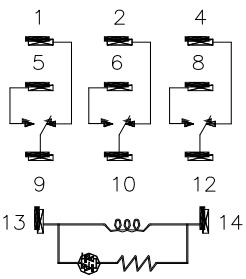


Wiring diagram

3C AC styles
Bottom view

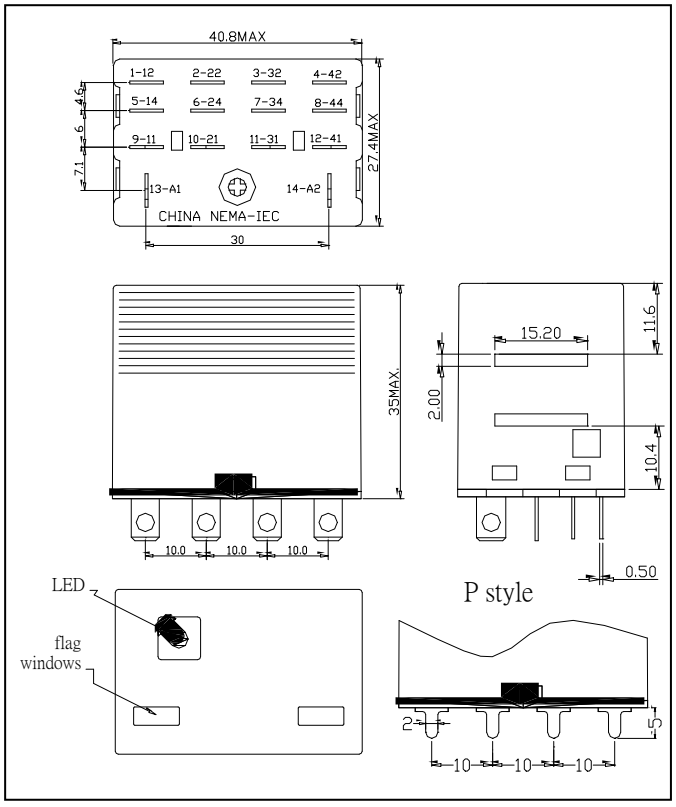


3C DC styles
Bottom view



BLY5-4C

CL(4C)



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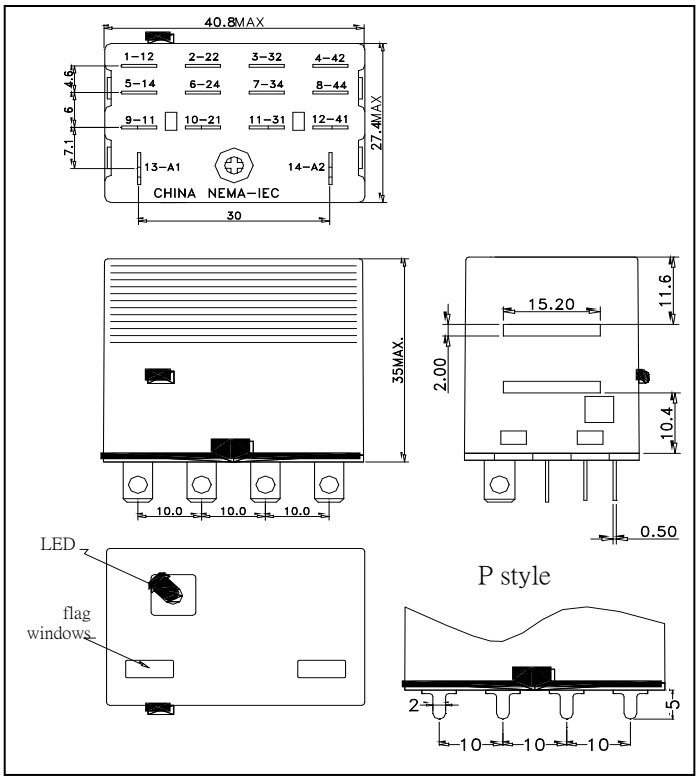

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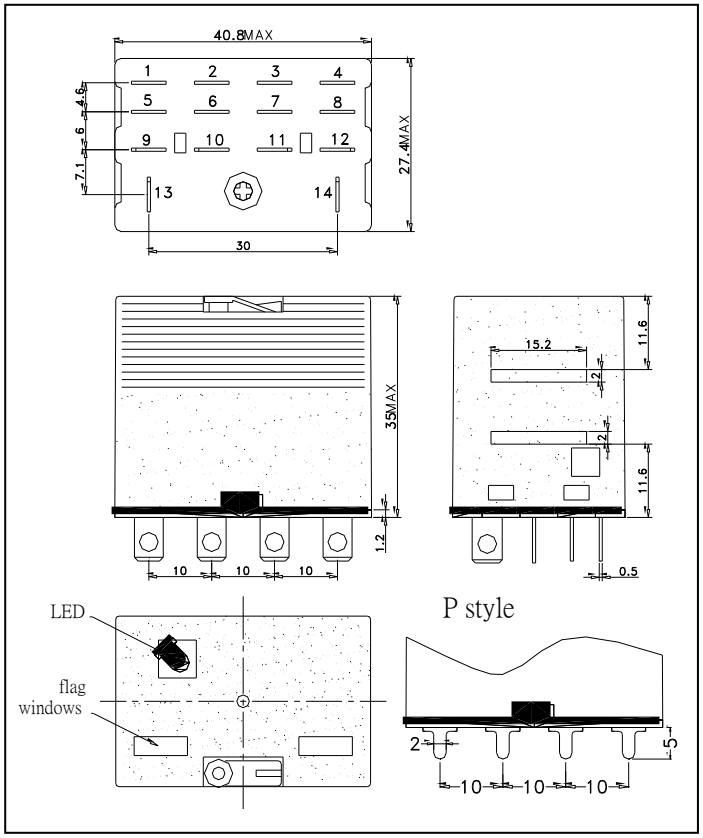
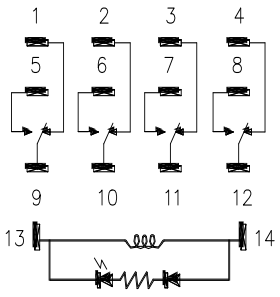
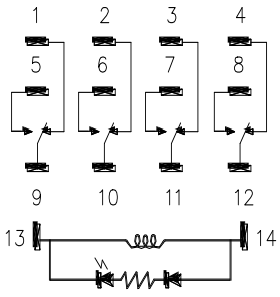


Wiring diagram

4C AC styles
Bottom view

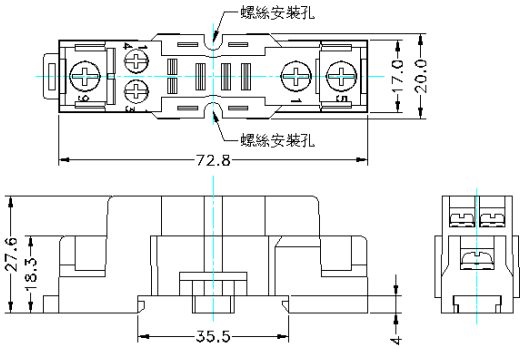
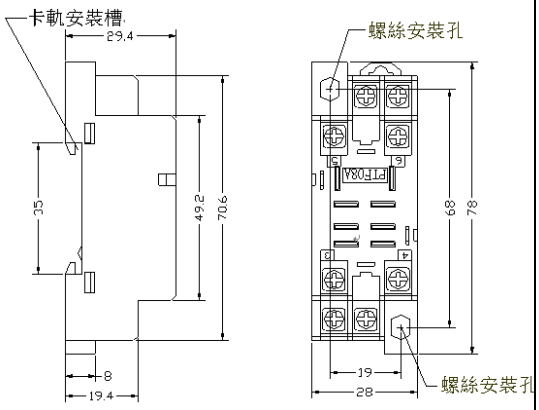


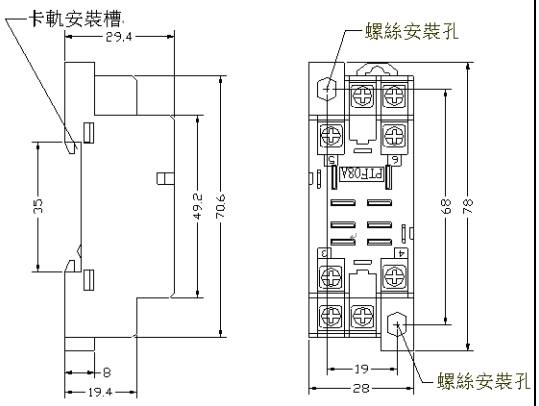
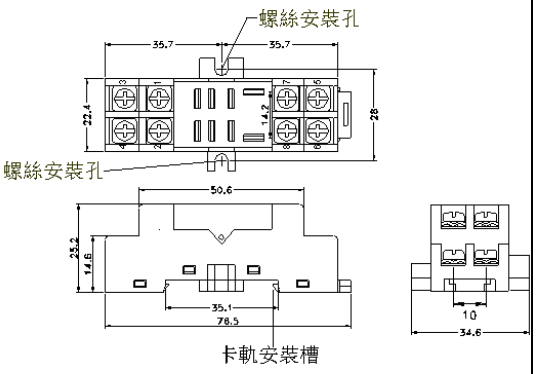
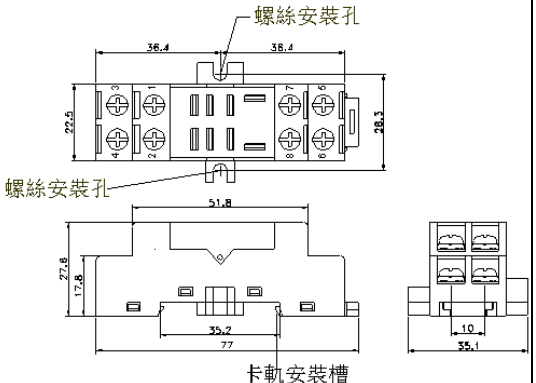
4C AC styles
Bottom view

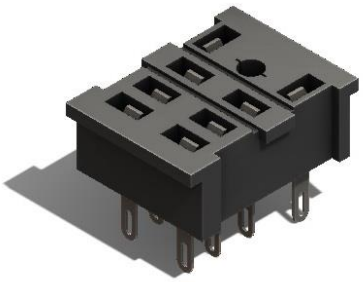
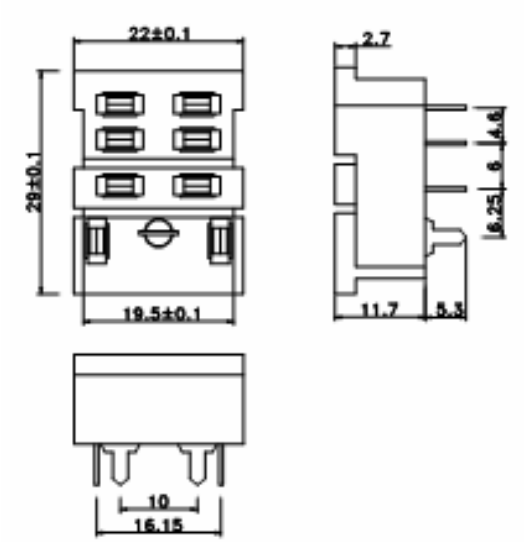
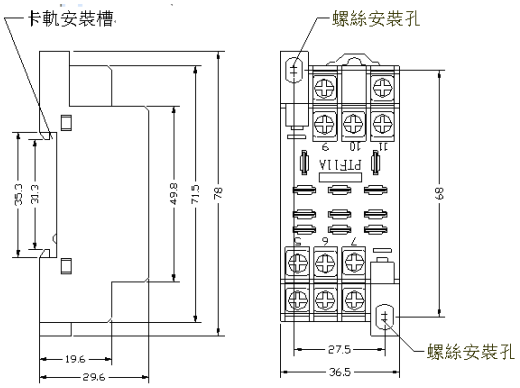
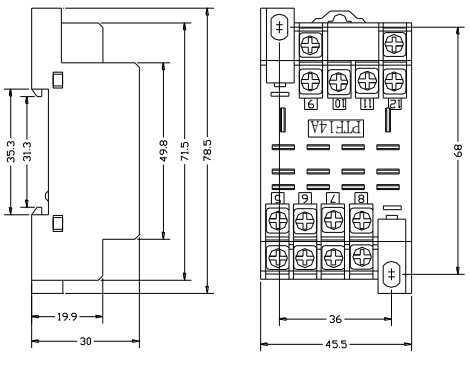


■ ACCESSARIES

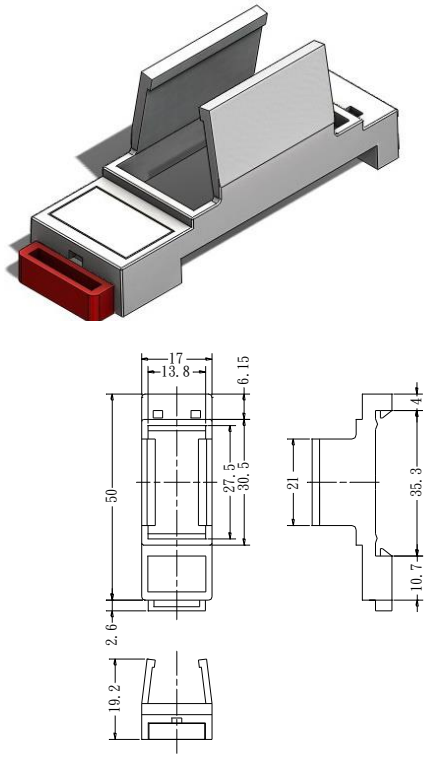
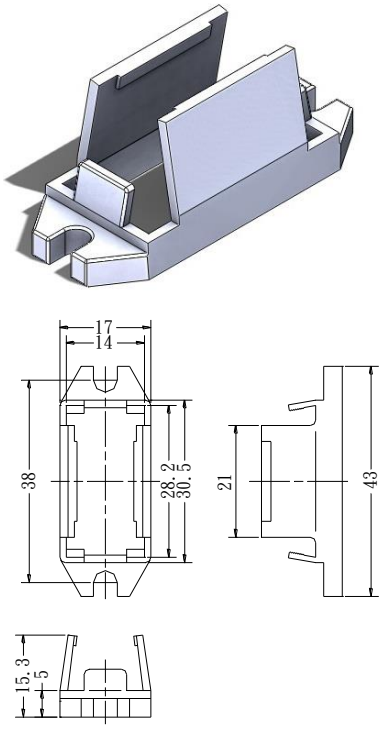
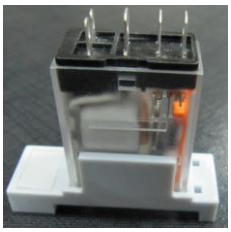
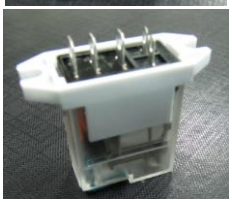
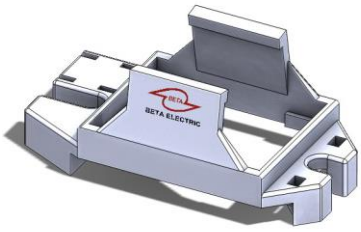
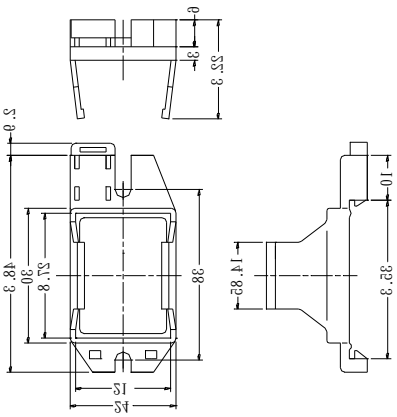
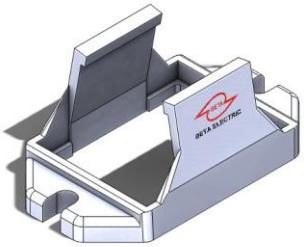
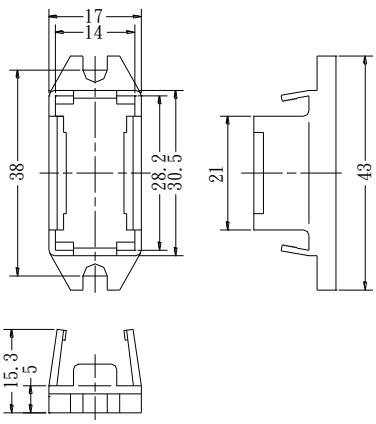
SOCKET (FOR 10A)

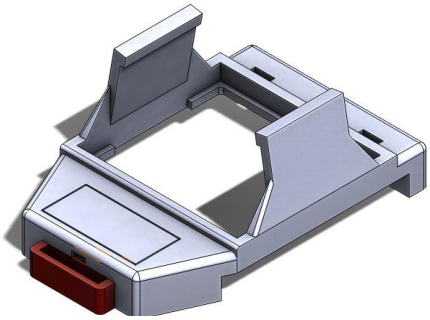
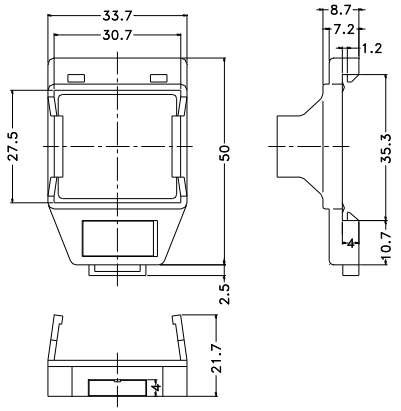
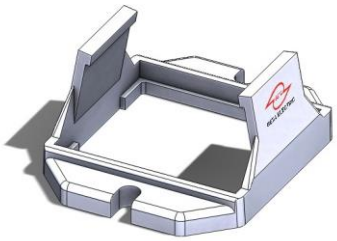
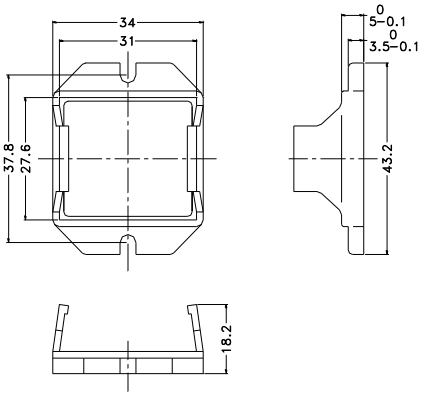
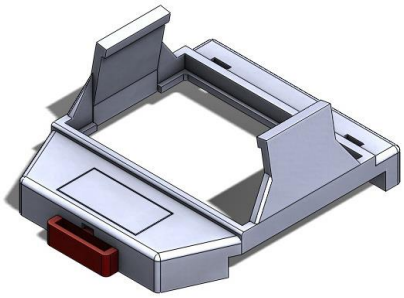
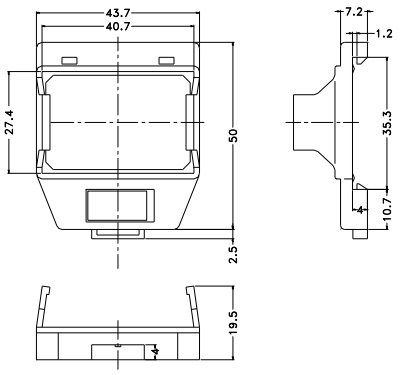
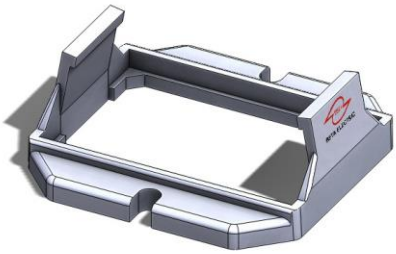
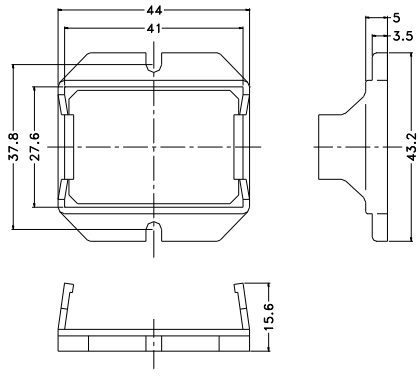
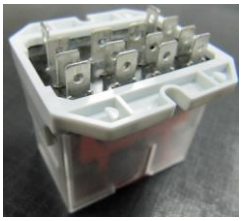
Poles	3D	Dimension	Wiring diagram	mounting
1	PTF-05 		Refer to Wiring diagram 1C	1. screw mounting 2.din rail mounting。
2	PTF-08A 		Refer to Wiring diagram 2C	1. screw mounting 2. din rail mounting

Poles	3D	Dimension	Wiring diagram	mounting
2	PTF-08A 		Refer to Wiring diagram 2C	1. screw mounting 2. din rail mounting
	PTF-08. 		Refer to Wiring diagram 2C	1. screw mounting 2. din rail mounting
	PTF-08AN 		Refer to Wiring diagram 2C	1. screw mounting 2. din rail mounting

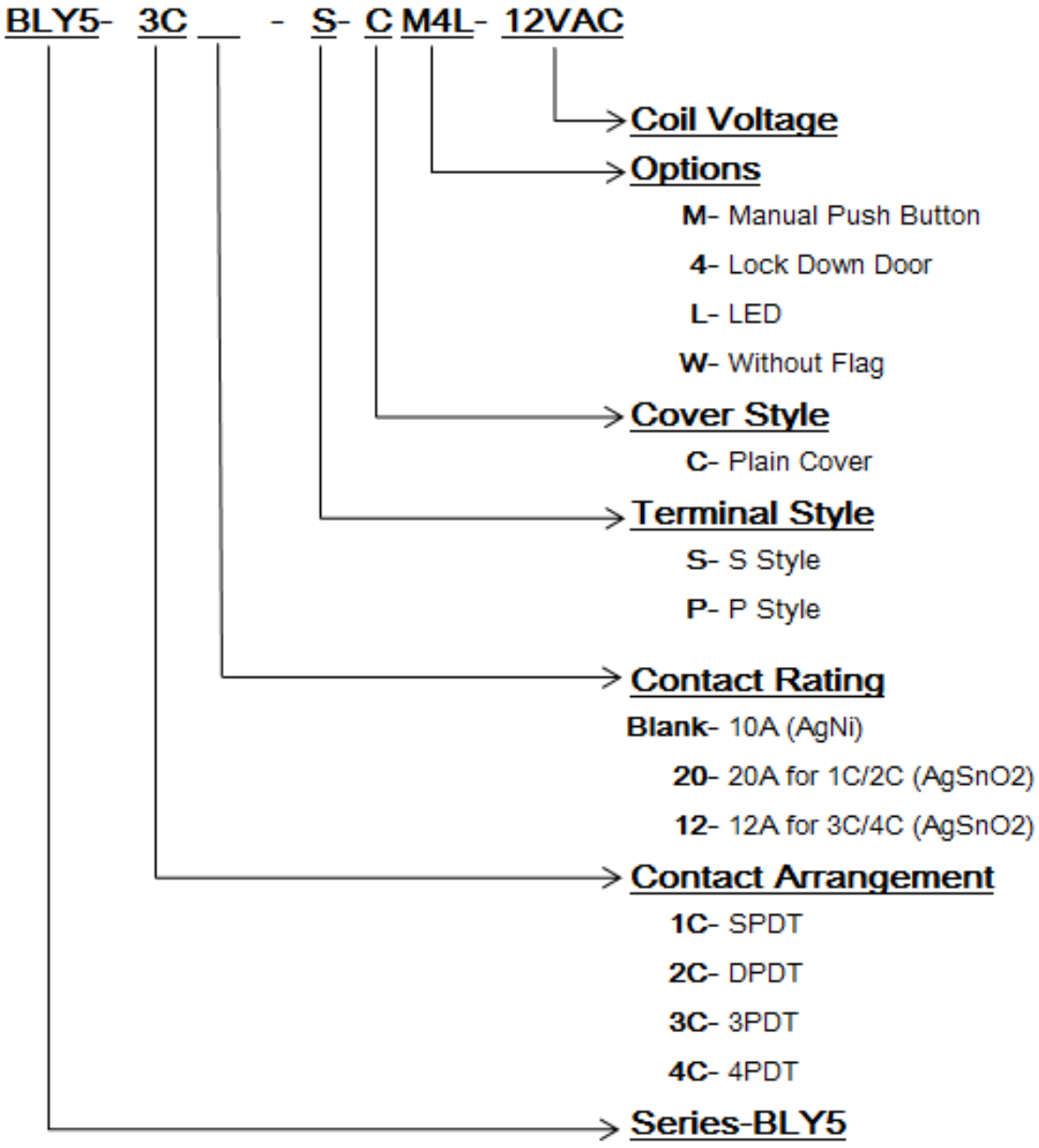
Poles	3D	Dimension	Wiring diagram	application
2	PF-08-S/P. 		Refer to Wiring diagram 2C	Tin solder mounting
3	PTF-11A 		Refer to Wiring diagram 3C	1. screw mounting 2. din rail mounting
4	PTF-14A 		Refer to Wiring diagram 4C	1. screw mounting 2.din rail mounting

ADAPTER

Poles	TOP COVER DIN ADAPTER	TOP OR BOTTOM FLANGE ADAPTER	mounting
1	BLY5-59-A 	BLY5-59-B 	1.BLY5-59-A  2.BLY5-59-B  
2	BLY6-59-A  	BLY6-59-B  	BLY6-59-A  2. BLY6-59-B  

Poles	TOP COVER DIN ADAPTER	TOP OR BOTTOM FLANGE ADAPTER	mounting
3	BLY3-59-A   	BLY3-59-B   	1.BLY3-59-A  1.BLY3-59-B  
4	BLY4-59-A   	BLY4-59-B   	1. BLY4-59-A  2. BLY4-59-B  

HOW TO ORDER


BLY5- 3C __ - S- C M4L- 12VAC
Coil Voltage
Options
M- Manual Push Button
4- Lock Down Door
L- LED
W- Without Flag
Cover Style
C- Plain Cover
Terminal Style
S- S Style
P- P Style
Contact Rating
Blank- 10A (AgNi)
20- 20A for 1C/2C (AgSnO2)
12- 12A for 3C/4C (AgSnO2)
Contact Arrangement
1C- SPDT
2C- DPDT
3C- 3PDT
4C- 4PDT
Series-BLY5