

Instructions

APT0.463.027

Before installing the device, please read the instructions.

1. Summary

1.1 Main application

ZY/DY series relays is suitable for the circuits that the voltage up to AC 240V(50Hz/60Hz or DC 220V).It is used for auto-controlling,transferring signal,enlarging control ranges.It also can be used for controlling slight load directly such as small electric motor,small electromagnet.

1.2 General product information:Model specification

ZY S 2 N- J 02 D2 DC24 □

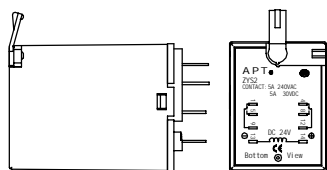
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

- | | |
|--|--|
| <ul style="list-style-type: none"> ① Model series : ZY: control relay; DY: power control relay ② Test button: s: with test button(only for ZYS and DYS2)
no sign: standard type(without test button) ③ Number of contacts: 2: 2PDT; 3: 3PDT; 4: 4PDT ④ Indicator lights: N: with operating indicator
no sign: standard type ⑤ J:Frosted: no sign: transparent(only for DY3 and DY4) | <ul style="list-style-type: none"> ⑥ Terminal type:
02: PCB board type terminal(for ZY series)
0: PCB board type terminal(for DY series)
no sign: plug-in type terminal ⑦ Pattern characteristics: no sign: standard type
D2: with surge suppression device(only for DC type) ⑧ Rated coil voltage: AC6V-240V(50Hz); DC6V-240V ⑨ Implementation Code |
|--|--|

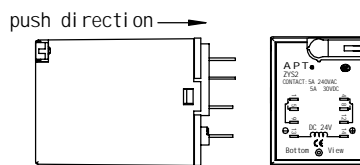
2 Installation caution

- 1)Please select correct Coil voltage and contact capacity.
- 2) ripple factor of DC coil power≤5%.Pay attention to the coil polarities(+,-) of the relay with polarities.
- 3) Open-close frequency≤30cpm.If you exceed specified frequency,it may cause miswork.
- 4) It is recommended that the relay is install with the contact up and coil down.
- 5) It is suggested that the same polarity shall be used between contacts.
- 6) Wiring length of relay and power is no more than 1 meters. Otherwise,it may cause the wrong action and delay work.
- 7) Make sure manual test button fix designated location before use.
- 8) Applicable fuse type: ZY/NT00-6 DY/NT00-1

3 Manual test button instruction (available for ZYS2/ZYS3/ZYS4/DYS2)



When the pushbutton locate vertical position, the relay is closing.Whether the relay contact electricity,natural opening contact is closed, natural closing contact is opened.



When the pushbutton locate horizontal position, the relay is in free state.It could operate in making current and release in breaking current. If you push button, the relay is closed.Oppositely,it is released.

4 Technical feature

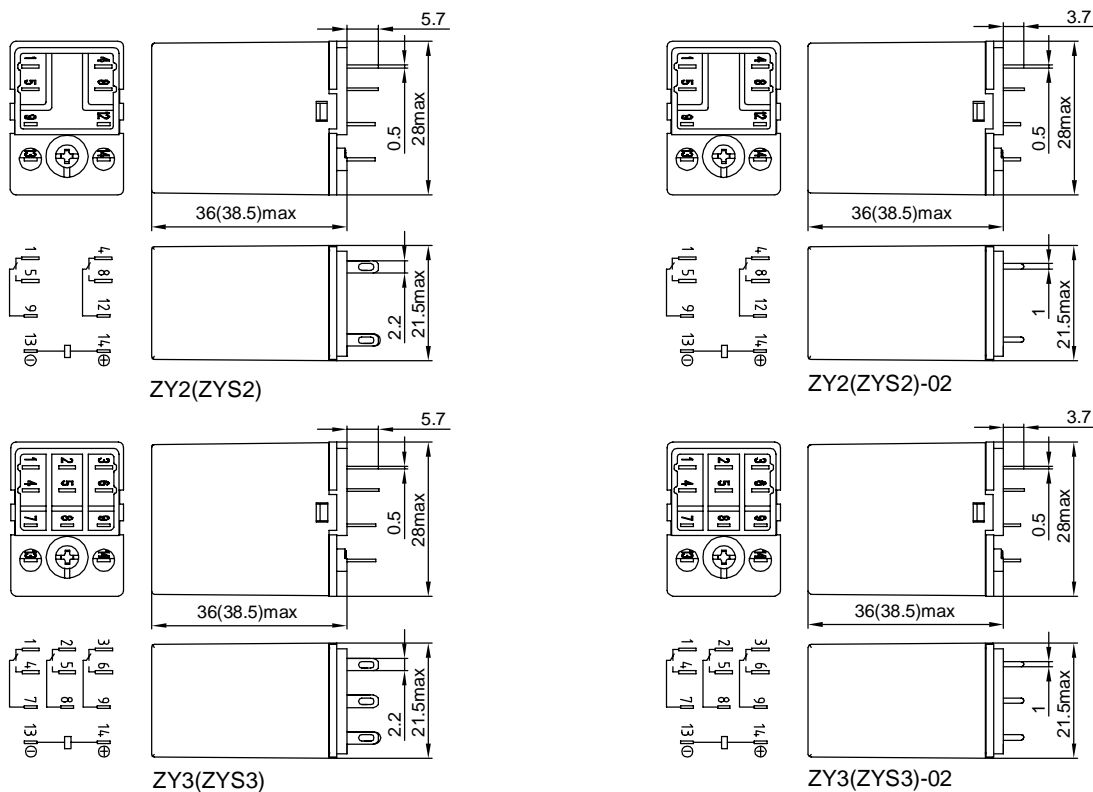
4.1 Operation condition

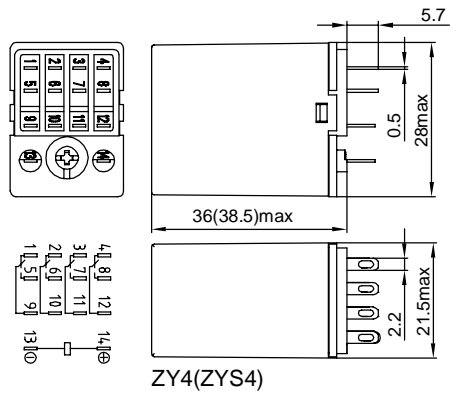
- 1) Environment temperature:
-5℃~+40℃.Average temperature can't exceed +35℃ in 24 hours.Relative air humidity:50%~90%
- 2) Altitude: ≤2000 meters
- 3) Mounted type: available for I and II
- 4) Pollution class: II

4.2 Technical feature

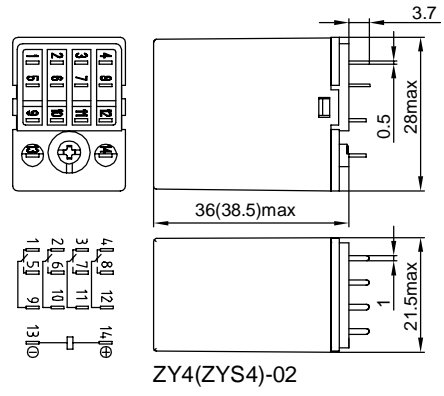
Model		ZY2/ZY3	ZY4	DY2	DY3/DY4
Rated insulation voltage		250V			
Coil voltage	AC	6V、12V、24V、36V、48V、110V、125V、220V、230V、240V			
	DC	6V、12V、24V、36V、48V、110V、125V、220V			
Operate voltage		AC:≤80%Us DC:≤75%Us		AC:≤80%Us DC:≤80%Us	
Release voltage		AC:≥30%Us DC:≥10%Us		AC:≥20%Us DC:≥10%Us	
Max working voltage of coil		110%Us			
Action time and release time		Action time:≤20ms Release time:≤30ms			
Rated short-time thermal current		5A	3A	10A	
Rated on-load of contact	AC-12	AC240V 5A	AC240V 3A	AC240V 10A	
	AC-15	AC240V 1A	AC240V 0.5A	AC240V 2A	
	DC-12	DC30V 5A	DC30V 3A	DC30V 10A	
	DC-13	DC30V 1A	DC30V 0.5A	DC30V 2A	
Max working voltage of contact		AC250V DC250V			
Contact resistance		≤50mΩ		≤75mΩ	
Power frequency withstand voltage		Between contacts:AC1100V,1min Between electric loop: AC1500V,1min			
Insulation resistance		≥100MΩ			
Vibration and impact		Vibration:10-55Hz,Complex amplitude 1.0mm,1min impact:200m/s ² ,11ms			
Electrical endurance		2×10 ⁵ times		1×10 ⁵ times	
Mechanical endurance		AC:2×10 ⁷ times DC:5×10 ⁷ times		1×10 ⁷ times	
Coil power consumption	AC	≤1.2VA		DY3:≤2VA DY4:≤2.5VA	
	DC	≤0.9W		DY3:≤1.4W DY4:≤1.5W	
Executive standard		GB 14048.5、EN 60947-5-1		GB/T 21711.1	

5. Appearance dimension and internal wiring diagram

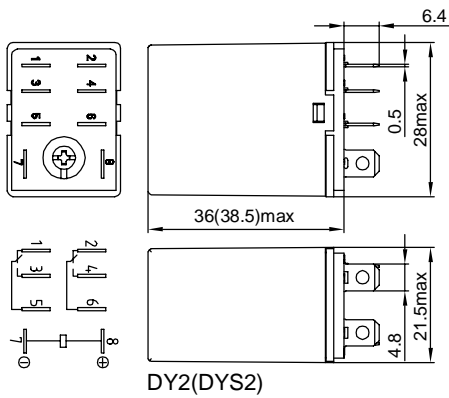




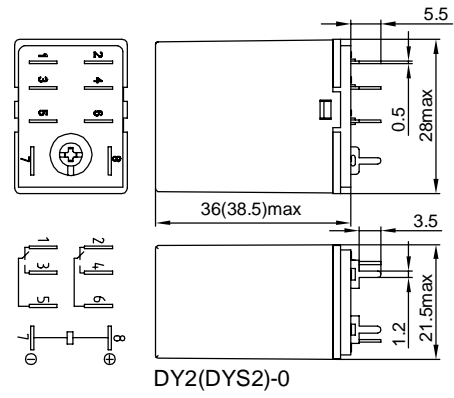
ZY4(ZYS4)



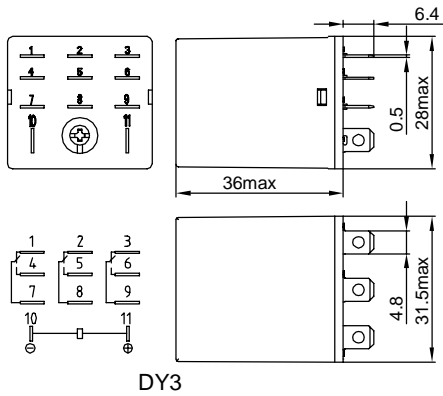
ZY4(ZYS4)-02



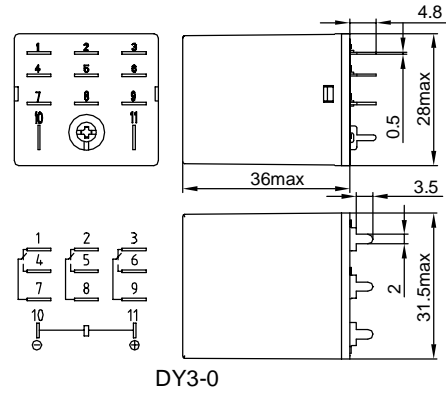
DY2(DYS2)



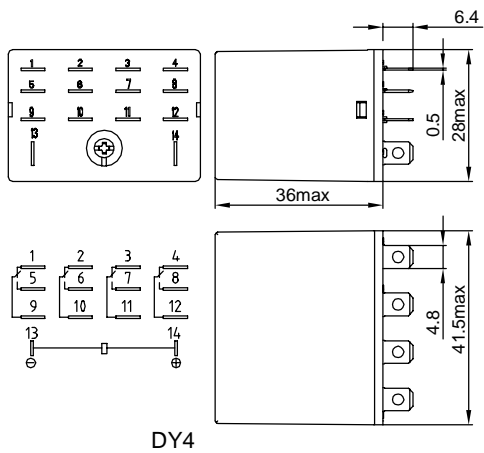
DY2(DYS2)-0



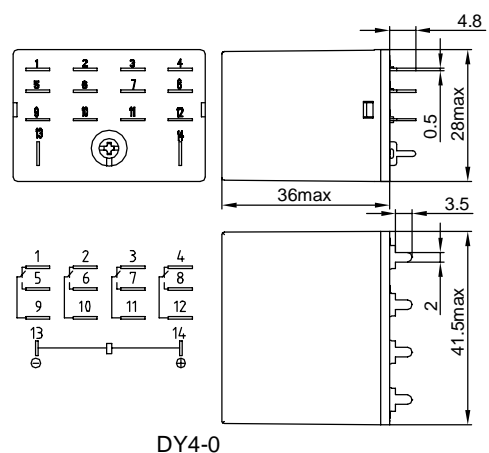
DY3



DY3-0



DY4



DY4-0

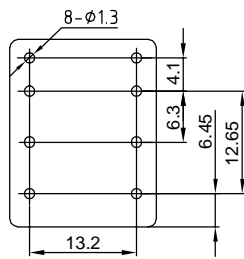
6 Mounting type and mounting dimension

6.1 Mounting type

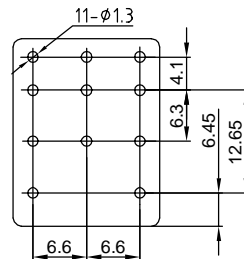
It includes plug-in type and PCB welded type. Plug-in type is usually applied to SYF/STF/SKB series socket . This type could install on 35mm standard guide rail and fix screw directly. Applicable socket type as below:

Model	Applicable socket type	contact wire		Matching terminal	Torsional moment of screw wiring	Remark
		AWG	mm ²			
ZY2	SYF08A	20~14	0.5~2.5	U/O	0.5~0.6 N·m	
	SYF08A-E/SYF08A-F/SKB08-E			U		
ZY3	SYF11A			U/O		
	SYF11A-E			U		
ZY4	SYF14A			U/O		
	SYF14A-E/SKB14-E			U		
DY2	STF08A			U/O		
	STF08A-E			U		
ZYS2	SYF08A1			U/O		
	SYF08A1-E			U		
ZYS3	SYF11A1			U/O		
	SYF11A1-E			U		
ZYS4	SYF14A1			U/O		
	SYF14A1-E			U		
DYS2	STF08A1			U/O		
	STF08A1-E			U		
DY3	STF11A			U/O		
DY4	STF14A			U/O		

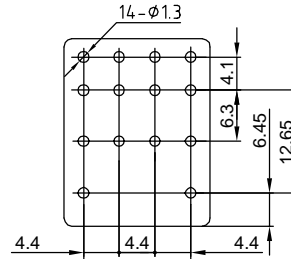
6.2 Hole opening dimension(welded PCB board)



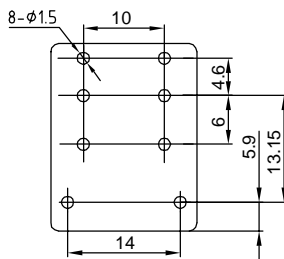
ZY2(ZYS2)-02



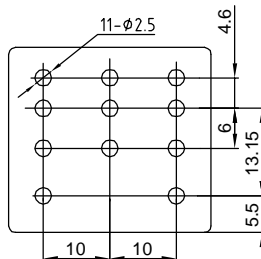
ZY3(ZYS3)-02



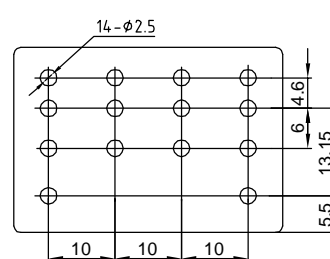
ZY4(ZYS4)-02



DY2(DYS2)-0



DY3-0



DY4-0