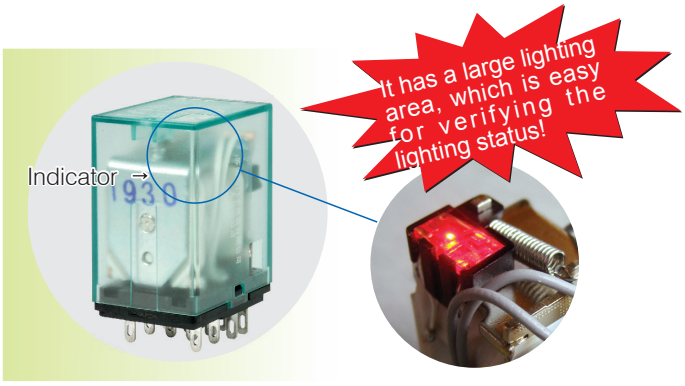
DY Series Control Replay

Product Features

- variety type model and it is almost 400 model;
- Apply in many industry and the contact capacity current from low current (10mA) to power current (10A);
- The control voltages of the coil: DC6V-120V, AC12V-240V (50/60Hz);
- Multi installation methods with various sockets for selection;



- LED indicator, green for DC and red for AC;
- It has a large lighting area, which is easy for verifying the lighting status;
- The lindicator light and surge suppressor are integrated together.

- Test button function, easy for debugging and maintenance.

Description of Model Number

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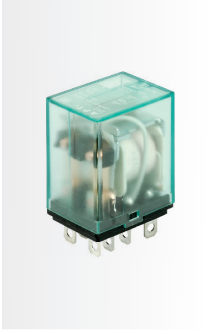
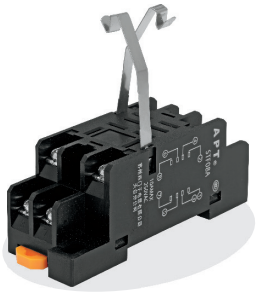
Coil Voltage: DC: 6V, 12V, 24V, 36V, 48V, 110V, 220V
AC: 6V, 12V, 24V, 36V, 48V, 110V, 220V
Type Feature: no mark: without surge suppression loop
D2: with surge suppression loop (DC specification)
Terminal Type: no mark: plug-in type terminal
02: ZY series welded type terminal
0: DY series welded type terminal
The cover Type: no mark: transparent (DY3/DY4 series)
J: frosted (ZY2/ZY3/ZY4/DY2 series)
Indicator: no mark: without indicator light
N: with indicator light
Number of Contactors: 2: 2 poles
3: 3 poles
4: 4 poles
Auxiliary Actuating Mechanism: no mark: without manual test button
S: with manual test button (DY3 and DY4 have no manual text button)
Designed Model: ZY: mini medium power control relay
DY: mini large power control replay

DY Series Relays

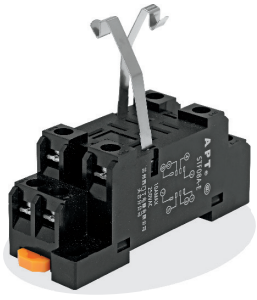
DY2-J Series



DY2-J (Standard Type)

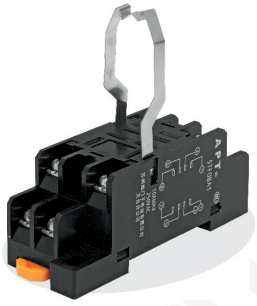


Applicable Sockets
(STF08A)
Standard screw terminal type
with the width of 28mm

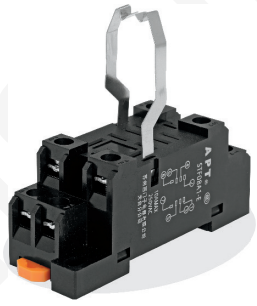


Applicable Sockets
(STF08A-E)
Safety type screw terminal
type with the width of 28mm

DYS2-J
(Manual test button
Type)



Applicable Sockets
(STF08A1)
Standard screw terminal type
with the width of 28mm



Applicable Sockets
(STF08A1-E)
Safety type screw terminal
type with the width of 28mm

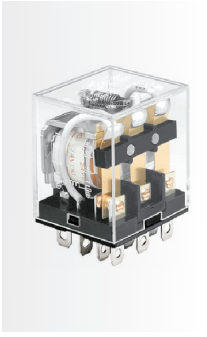
Category

Classification	Model.	Coil Voltage
Standard Type	DY2-J	DC: 6V, 12V, 24V, 36V, 48V, 110V, 220V AC: 6V, 12V, 24V, 36V, 48V, 110V, 220V
Manual Button Type	DYS2-J	
Welded Terminal Type	DY2-J0	
Indicator Light Type	DY2N-J	
Surge Suppression Loop Type (DC specification)	DY2-JD2	

For example: Manual test button, 2 poles with indicator lights and surge suppression loop, and DC12V coil voltage, welded type, the large power relay as: DYS2N-J0D2DC12V

ZY/DY Series Control Replay

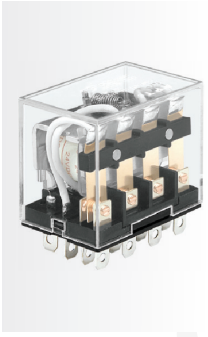
DY3 Series



DY3 (Standard Type)

Applicable Sockets
(STF11A)
Standard screw terminal type with the width of 40mm

DY4 Series



DY4 (Standard Type)

Applicable Sockets
(STF14A)
Standard screw terminal type with the width of 50mm

Category

Classification	Model.	Coil Voltage
Standard Type	DY3	DC: 6V, 12V, 24V, 48V, 110V AC: 12V, 24V, 48V, 110V, 220V
Welded Terminal Type	DY3-0	
Indicator Type	DY3N	
Surge Suppression Loop Type (DC specification)	DY3-D2	

For example: with indicator lights, 3 poles, with surge suppression loop, DC12V coil voltage, welded type, the large power relay as: DY3N-0D2DC12V.

Category

Classification	Model.	Coil Voltage
Standard Type	DY4	DC: 6V, 12V, 24V, 48V, 110V AC: 12V, 24V, 48V, 110V, 220V
Welded Terminal Type	DY4-0	
Indicator Light Type	DY4N	
Surge Suppression Loop Type (DC specification)	DY4-D2	

For example: with indicator lights, 4 poles, with surge suppression loop, DC12V coil voltage, welded type, the large power relay as: DY4N-0D2DC12V.

Technical data

(1) Basic Technical data

Item		DY2-J/DYS2-J	DY3	DY4
Ith		10A		
Ui		250V		
Max. Working Voltage of Coil		110%Us		
Action Time		≤20ms		
Release Time		≤30ms		
Contact Changeover & Release Time		≥0.15ms		
Contact Resistance		≤50mΩ		
Max. Working Voltage of Contact		AC250V, DC250V		
Insulation Resistance		≥100MΩ		
Uimp	Between Breaking Contacts	AC1100V, 50Hz, 1min		
	Between Contact Poles	AC1500V, 50Hz, 1min		
	Between Contact - Coil	AC1500V, 50Hz, 1min		
	Between Contact/Coil - Ground	AC1500V, 50Hz, 1min		
Operation Frequency		≤ 30 times/minute		
Vibration		10～55Hz, complex amplitude 1.0mm, 1min		
Impact		200m/s^2, 11ms		
Electrical endurance		2×10^5 times	1×10^5 times	1×10^5 times
Mechanical endurance		2×10^7 times	1×10^7 times	1×10^7 times
Ambient Temperature		-5℃ ～+40℃		
Weight		About 40g	About 50g	About 70g

(2) Coil Specifications

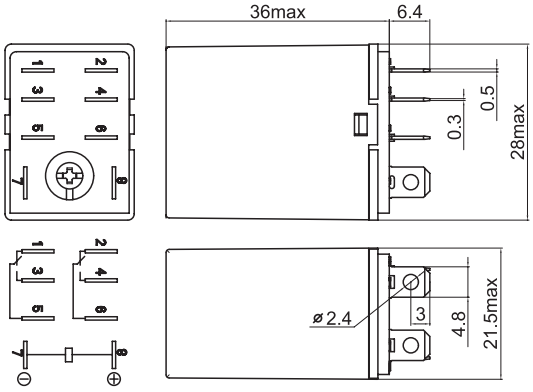
Rated Voltage	Operate Voltage	Release Voltage	Coil Resistance (Ω)			Coil Power Consumption		
			DY2-J/DYS2-J	DY3	DY4	DY2-J/DYS2-J	DY3	DY4
DC6V	≤4.5V	≥0.6V	40	25	24	About 0.9W	About 1.4W	About 1.5W
DC12V	≤9V	≥1.2V	160	100	96			
DC24V	≤18V	≥2.4V	640	400	350			
DC48V	≤36V	≥4.8V	2600	1700	1500			
DC110V	≤82.5V	≥11V	11500	8400	6500			
DC220V	≤165V	≥220V	46500	-	-			
AC12V	≤9.6V	≥3.6V	35	25.5	24	About 1.2VA	About 2VA	About 2.5VA
AC24V	≤19.2V	≥7.2V	160	102	96			
AC48V	≤38.4V	≥14.4V	590	410	350			
AC110V	≤88V	≥33V	3500	2900	1500			
AC220V	≤176V	≥66V	13800	9000	6500			

Notes: 1. The above data are tesed at room temperature (25℃).
2. AC specification is the parameter at 50Hz.
3. The special order shall be placed for other coil voltage specifications.

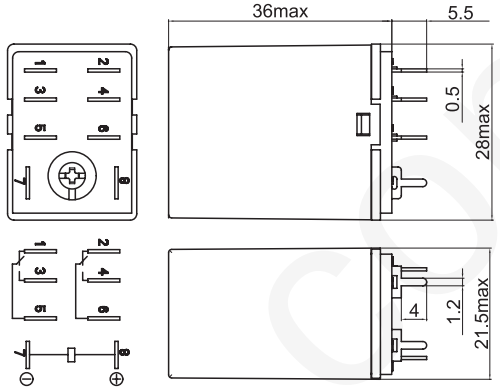
(3) Maximum Contact Capacity

Product Model.	AC-12	AC-15	DC-12	DC-13
DY2-J/DYS2-J DY3 /DY4	240V/10A	240V/2A	30V/10A	30V/2A

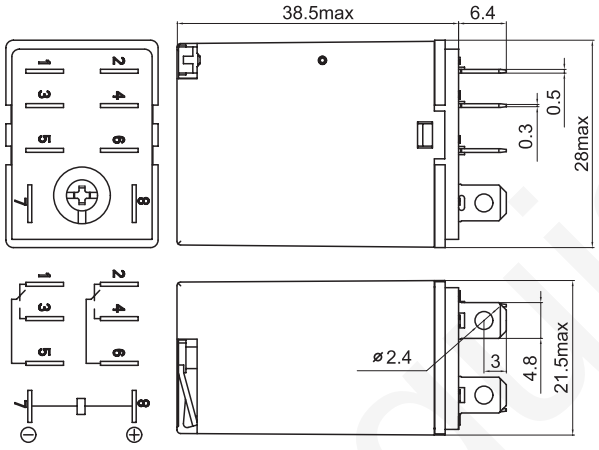
Appearance and Installation Sizes, Internal Wiring Diagram



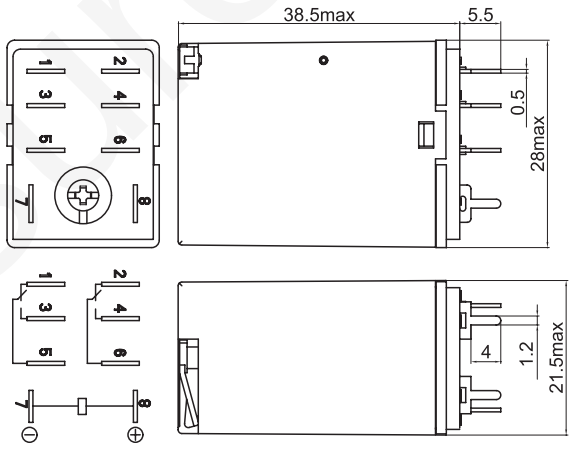
DY2-J Appearance Size and Internal Wiring Diagram



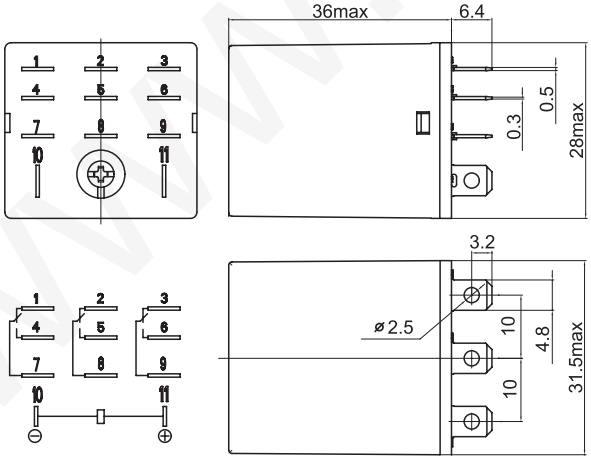
DY2-J0 Appearance Size and Internal Wiring Diagram



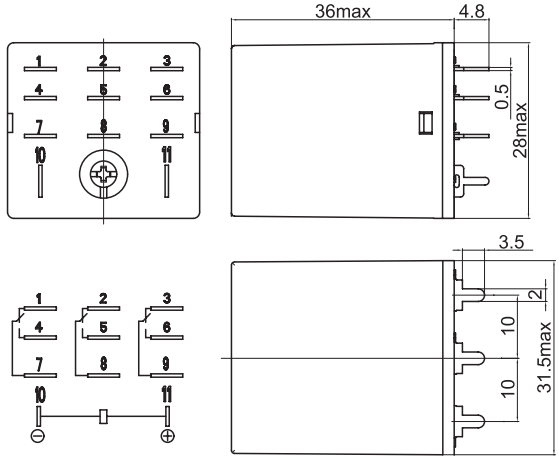
DYS2-J Appearance Size and Internal Wiring Diagram



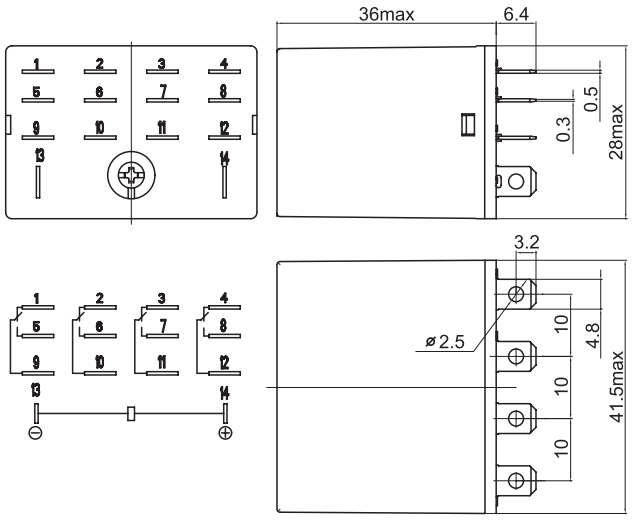
DYS2-J0 Appearance Size and Internal Wiring Diagram



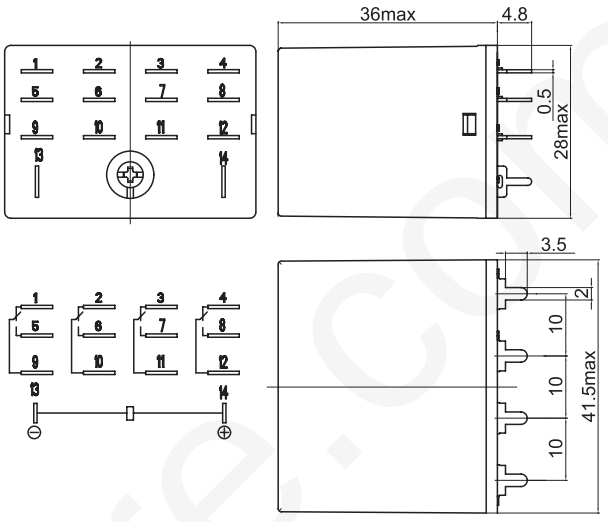
DY3 Appearance Size and Internal Wiring Diagram



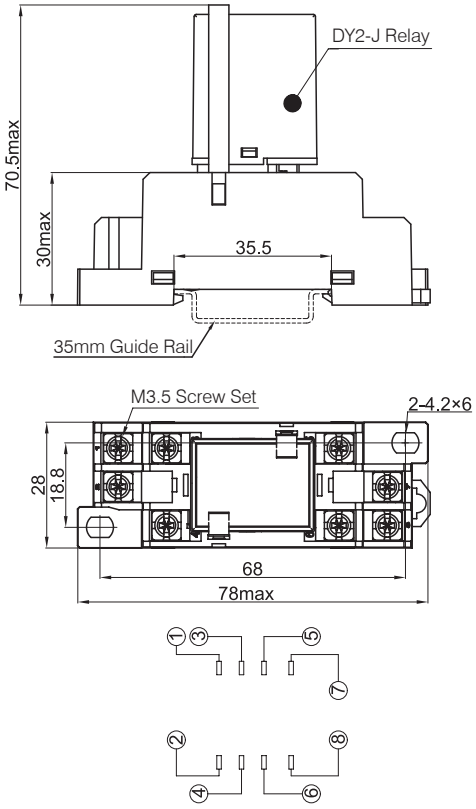
DY3-0 Appearance Size and Internal Wiring Diagram



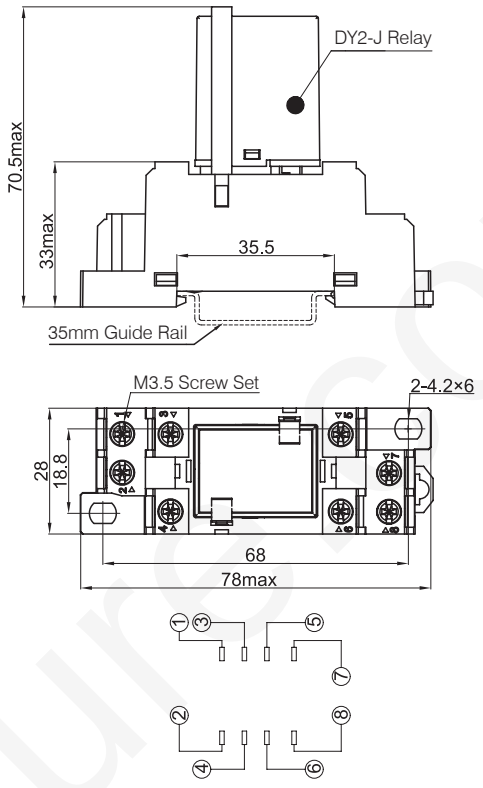
DY4 Appearance Size and Internal Wiring Diagram



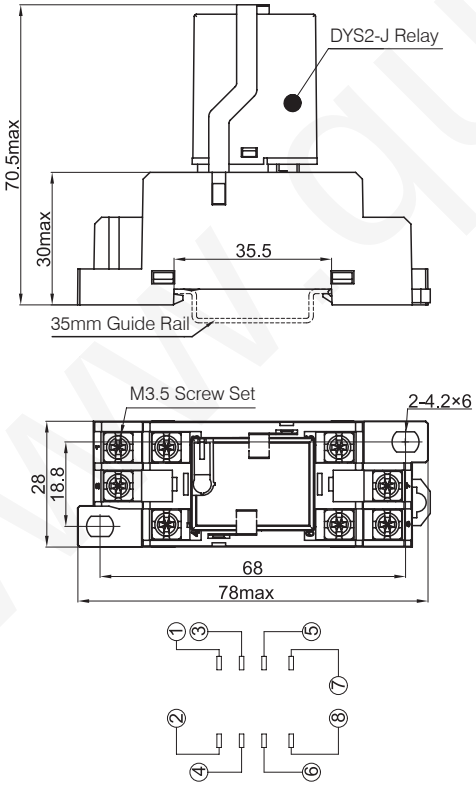
DY4-0 Appearance Size and Internal Wiring Diagram



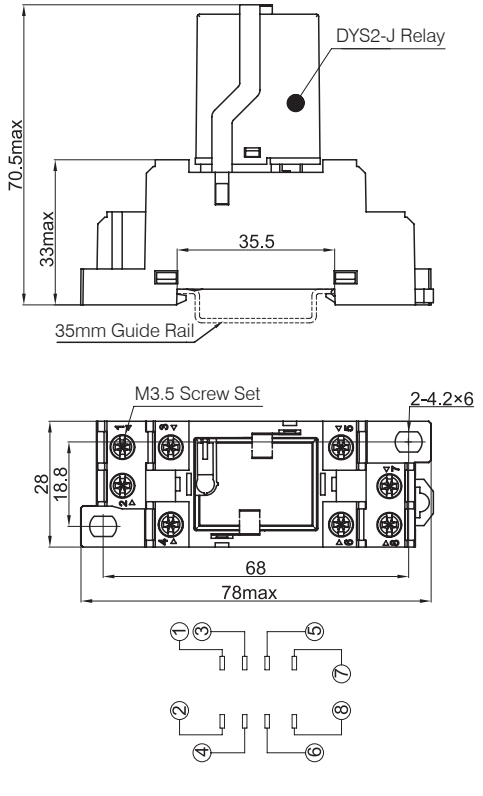
STF08A Socket Appearance & Installation Sizes and Internal Wiring Diagram



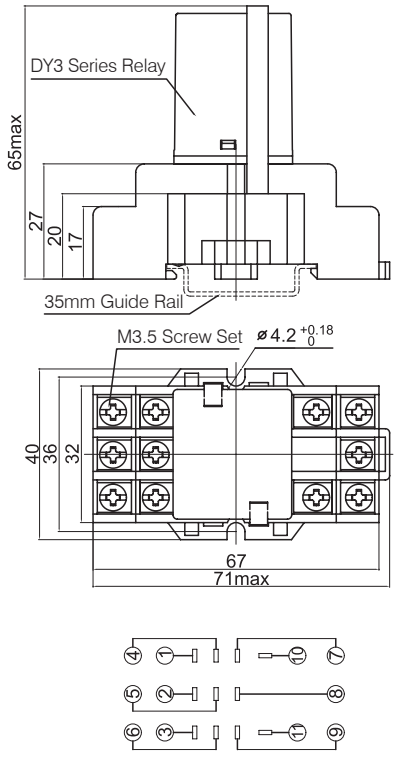
STF08A-E Socket Appearance & Installation Sizes and Internal Wiring Diagram



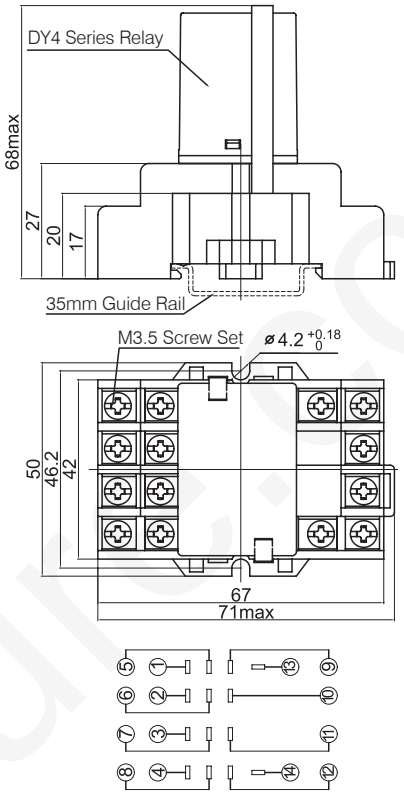
STF08A1 Socket Appearance & Installation Sizes and Internal Wiring Diagram



STF08A1-E Socket Appearance & Installation Sizes and Internal Wiring Diagram

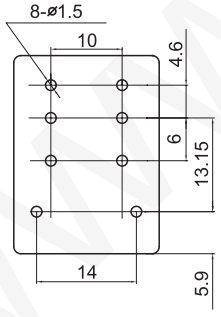


STF11A Socket Appearance & Installation Sizes and Internal Wiring Diagram

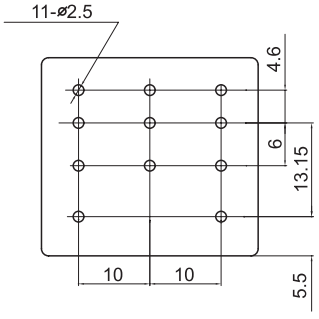


STF14A Socket Appearance & Installation Sizes and Internal Wiring Diagram

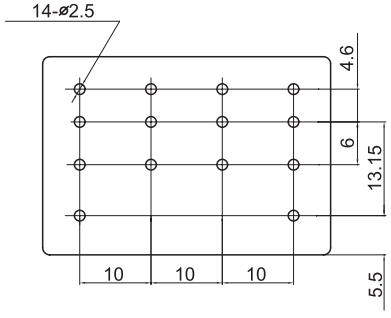
Hole Sizes



DY2-J0/DYS2-J0 Installation Hole Size



DY3-0 Installation Hole Size



DY4-0 Installation Hole Size

Product Cross-reference

APT	ZY2-J	ZY2-J02	ZY3-J	ZY3-J02	ZY4-J	ZY4-J02
OMRON	MY2J	MY2J-02	MY3J	MY3J-02	MY4J	MY4J-02
FUJI	HH52P	HH52B	HH53P	HH53B	HH54P	HH54B
NAiS	HC2-H	HC2-HP	HC3-H	HC3-HP	HC4-H	HC4-HP
IDEC	RM2S	RM2V			RY4S	RY4V
APT	DY2-J	DY2-J0	DY3	DY3-0	DY4	DY4-0
OMRON	LY2J	LY2J-0	LY3J	LY3J-0	LY4J	LY4J-0
FUJI	HH62P	HH62B	HH63P	HH63B	HH64P	HH64B
NAiS	HL2-H	HL2-HP				
IDEC	RH2B	RH2V2	RH3B	RH3V2	RH4B	RH4V2

Cautions

- Please pay attention to the coil polarities (+, -) of the relays with polarities.
- The application of the rated voltage to the coils is a basic operation. Moreover, please apply the rectangular wave to DC coils and sine wave to AC coils.
- Please note that the voltage applied to the coils shall not exceed the maximum allowable voltage.
- The rated control capacity or life has certain standard. The contact status or service life will be different very obviously due to the load categories or the differences of various conditions, please confirm it before use.
- It is recommended that the relay is installed with the contact up and coil down.
- When the relay of the welded terminal is welded, it is suggested to be welded manually and the cleaning shall be avoided after welding if possible.
- The action frequency of the relay shall not exceed the specified frequency. Otherwise, it may cause the wrong action and thus affect the service life of the relay.
- It is suggested that the same polarity shall be used between the relay contacts.