

# Panasonic

ideas for life

## SLIM, SPACE-SAVING RELAY TERMINAL FOR 4-POINT OUTPUT

## RT-3 UNIT RELAY

(PA Relay type)



### FEATURES

**1. Space-saving type (33 mm 1.299 inch wide) with four independent points on a base measuring 33 × 67 mm 1.299 × 2.638 inch. This contributes to a more compact control panel.**

**2. PA relays, which have high sensitivity Au clad twin contacts, are installed.**

PA relays, 5 mm .197 inch wide, are installed. The PA relays feature high sensitivity (12 V type: 120 mW, 24 V type: 180 mW) and twin contacts with Au-cladding, which combine to ensure high reliability even with minute loads.

**3. Can be mounted on a DIN rail or mounted directly (by screw).**

**4. Equipped with an LED display to allow easy confirmation of operation.**

**5. Incorporates a surge protector.**

Incorporates an absorber circuit for coil surges. This protects the circuitry of the controller and prevents operation errors.

**6. Relay installation and removal can be easily accomplished with the removal key accessory.**

**7. Includes a cover as standard equipment for increased safety.**

Compliance with RoHS Directive

### TYPES

Contact arrangement	Rated input voltage	Part No.
1 Form A × 4	12 V DC	RT3S-12V
	24 V DC	RT3S-24V

Packing quantity: Carton: 1 pc.; Case: 20 pcs.

Notes: 1. Cannot be equipped with Power PhotoMOS standard type relays. However, equipping with voltage-sensitive type of Power PhotoMOS relays (AQZ○○○○) is possible.

2. 5 V DC units are also available. Please inquire.

3. Please inquire about other contact arrangement.

4. Empty 4-point terminal, which no relay is pre-installed on, is also available (Part No.: RT3BB).

### RATING

#### 1. Input ratings (per PA relay)

Part No.	Rated input voltage	Input current (at rated input voltage, 20°C 68°F) (approx.)	Allowable variation of rated input voltage (-20 to +55°C -4 to +131°F)
RT3S-12V	12 V DC	11.5 mA (Relay 10 mA + LED 1.5 mA)	12 V DC ± 10%
RT3S-24V	24 V DC	10.5 mA (Relay 7.5 mA + LED 3 mA)	24 V DC ± 10%

#### 2. Relay coil specifications (per PA relay) (ref. value)

Relay part No.	Rated coil voltage	Pick-up voltage (at 20°C 68°F) (Initial)	Drop-out voltage (at 20°C 68°F) (Initial)	10% Coil resistance (±10%) (at 20°C 68°F)	Rated consumption power
PA1a-12V	12 V DC	70%V or less of nominal voltage	5%V or more of nominal voltage	1,200 Ω	120 mW
PA1a-24V	24 V DC			3,200 Ω	180 mA

#### 3. Output ratings (per PA relay)

Specification	Item	Performance
Contact rating	Rated control capacity (resistive load)	3 A 250 V AC, 3 A 30 V DC
	Maximum allowable contact power (resistive load)	500 VA (AC), 60 W (DC)
	Maximum allowable contact voltage	250 V AC, 30 V DC
	Maximum allowable contact current	3 A
	Minimum load (ref. value)	100 mV 100 μA
Expected life	Electrical (resistive load)	Min. 3 × 10 <sup>4</sup> : 3 A 250V AC Min. 3 × 10 <sup>4</sup> : 3 A 30V DC Min. 10 <sup>5</sup> : 2 A 250V AC, Min. 10 <sup>5</sup> : 2 A 30V DC
	Mechanical	Min. 2 × 10 <sup>7</sup> (at 180 cpm)

## SPECIFICATIONS

Item	Specifications	
Breakdown voltage	Between input and output	2,000 Vrms for 1 min.
	Between different terminals (between relays, both ways)	1,500 Vrms for 1 min.
Insulation resistance	Min. 100 MΩ (Using 500 V DC megger)	
Vibration resistance (destructive)	10 to 55 Hz at double amplitude 1 mm .039 inch	
Vibration resistance (functional)	10 to 55 Hz at double amplitude 1 mm .039 inch	
Shock resistance (destructive)	Min. 196 m/s <sup>2</sup>	
Shock resistance (functional)	Min. 98 m/s <sup>2</sup>	
Ambient temperature	-20°C to +55°C -4°F to +131°F	
Ambient humidity	35% to 85% R.H. (Not condensing)	
Storage temperature	-30°C to +80°C -22°F to +176°F (Not freezing and condensing)	
Terminal screw fasten torque	0.3 to 0.5 Nm {3 to 5 kgf-cm}	
Coil surge absorber	Diode (1 A, 400 V)	
Cross connection protecting diode	1.5 A, inverse voltage 40 V	
Unit weight	Approx. 100 g 3.53 oz	

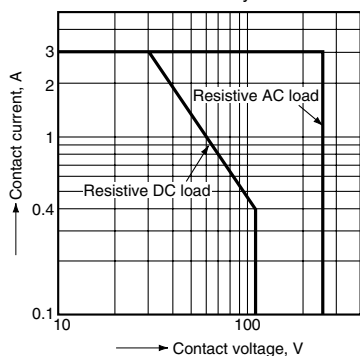
Notes: 1. The value of breakdown voltage and insulation resistance is the initial one.

2. Condensing occurs when the unit relay is exposed to sudden temperature change in a high temperature and high humidity atmosphere. This may cause some troubles like insulation failure of the socket or the print circuit board. Take care under this condition

3. Below 0°C 32°F, condensing water can freeze and cause socket contact failures and other problems. Take care under this condition.

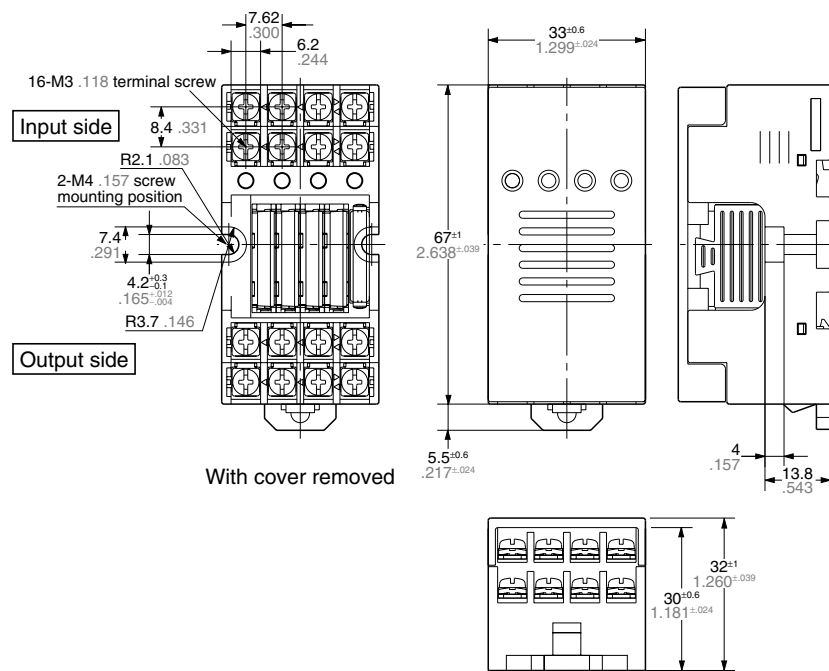
## REFERENCE DATA

Maximum value for switching capacity (output)  
Per PA relay

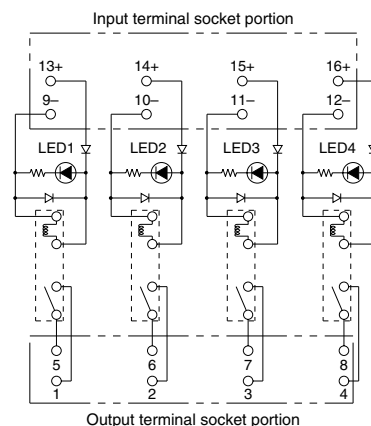


## DIMENSIONS (Unit: mm inch)

External dimensions

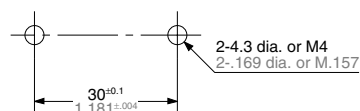


Schematic



Note: Cannot be equipped with Power PhotoMOS standard type relays. However, equipping with voltage sensitive type of Power PhotoMOS relays (AQ○○OD) is possible.

Mounting hole pattern



General tolerance: ±0.3 ±0.12

\* For Accessories, see page 210.

\*\*For Caution for Use, see page 209.