



**Discontinued**  
Last time buy: August 31, 2012



(Breakdown voltage 2,500V)

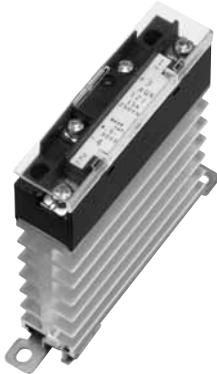


(Breakdown voltage 4,000V)

**Panasonic**  
ideas for life

**Slim profile SSR  
with heat sink mountable  
on DIN rail**

**AQ-K RELAYS**



RoHS compliant

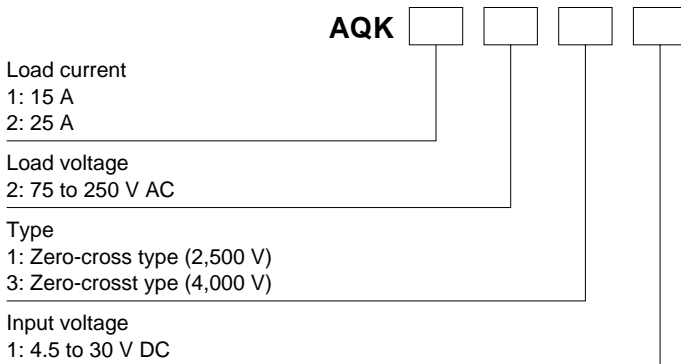
### FEATURES

- 1. Combined with heat sink for vertical profile**  
Helps to save space on control panel
- 2. Dielectric voltage of 2,500V or 4,000V**
- 3. Both screw-on installation or one-touch DIN-rail installation available**
- 4. Includes operation LED (red)**
- 5. Built-in varistor**

### APPLICATIONS

1. Molding machine (heater control)
2. Temperature controlled bath (heater control)
3. Printing machine (heater control)
4. Machine tool (motor control)

### ORDERING INFORMATION



### TYPES

Type	Load current	Load voltage	Input voltage	Breakdown voltage	Part No.
Zero-cross	15 A	75 to 250 V AC	4.5 to 30 V DC	2,500 V AC	AQK1211
			4.5 to 30 V DC	4,000 V AC	AQK1231
	25 A	75 to 250 V AC	4.5 to 30 V DC	2,500 V AC	AQK2211
			4.5 to 30 V DC	4,000 V AC	AQK2231

Standard packing: Carton 10 pcs., Case: 60 pcs.



## RATING

### 1. Ratings (Ambient temperature: 20°C 68°F, Input ripple: 1% or less)

#### 1) 10 A type

Item	Type	AQK1211	AQK1231	AQK2211	AQK2231	Remarks
Input side	Input voltage	4.5 to 30 V DC				*1
	Input current, max.	10 mA				
	Drop-out voltage, min.	1 V				
Load side	Max. load current	15 A*2		25 A*2		Ta = Max. 40°C 104°F
	Load voltage	75 to 250 V AC				
	Frequency	45 to 65 Hz				
	Non-repetitive surge current	150 A*3		250 A*3		In one cycle at 60 Hz
	Max. "OFF-state" leakage current	9 mA				at 60 Hz, 200 V AC
	Max. "ON-state" voltage drop	1.6 V				at max. carrying current
	Min. load current	100 mA*4				

Notes: \*1. Refer to REFERENCE DATA "3. Input current vs. input voltage".

\*2. Refer to REFERENCE DATA "1. Load current vs. ambient temperature".

\*3. Refer to REFERENCE DATA "2. Non-repetitive surge current vs. carrying time".

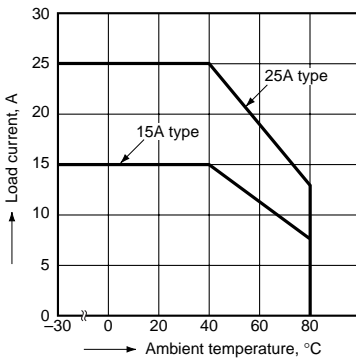
\*4. When the load current is less than the rated minimum load current, please refer to "Cautions for Use of SSR".

### 2. Characteristics (Ambient temperature: 20°C 68°F, Input ripple: 1% or less)

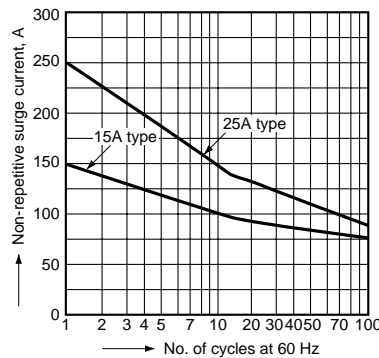
Item	Part No.	AQK1211	AQK1231	AQK2211	AQK2231	Remarks
Operate time, max.		1/2 cycle of voltage sine wave + 1 ms				
Release time, max.		1/2 cycle of voltage sine wave + 1 ms				
Breakdown voltage		2,500 V AC	4,000 V AC	2,500 V AC	4,000 V AC	
Insulation resistance, min., Initial		100 MΩ between input, output and case				at 500V DC
Vibration resistance		10 to 55 Hz at double amplitude of 0.75 mm				1 hour for X, Y, Z axes
Shock resistance		Min. 294 m/s <sup>2</sup>				10 minutes for X, Y, Z axes
Ambient temperature		-30°C to +80°C -22°F to +176°F				Non-condensing at low temperatures
Storage temperature		-35°C to +100°C -31°F to +212°F				
Operational method		Zero-cross (Turn-ON and Turn-OFF)				

## REFERENCE DATA

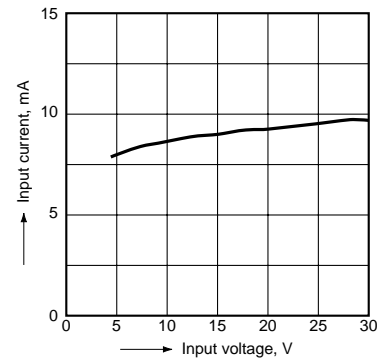
#### 1. Load current vs. ambient temperature characteristics



#### 2. Non-repetitive surge current vs. carrying time characteristics (15 A, 25 A type)

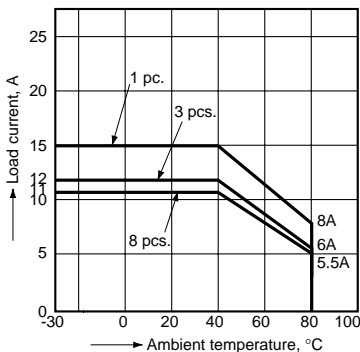


#### 3. Input current vs. input voltage characteristics



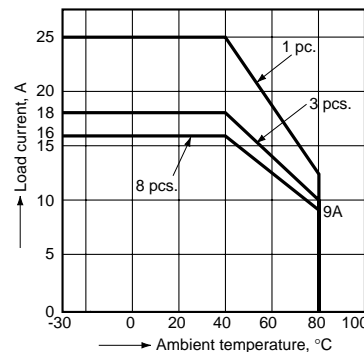
#### 4-(1) Load current when contact mounted vs. ambient temperature characteristics

Tested sample: AQK1211, AQK1231



#### 4-(2) Load current when contact mounted vs. ambient temperature characteristics

Tested sample: AQK2211, AQK2231





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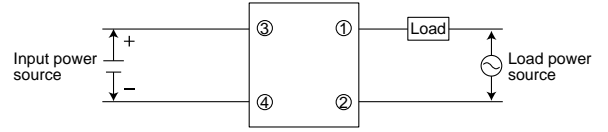
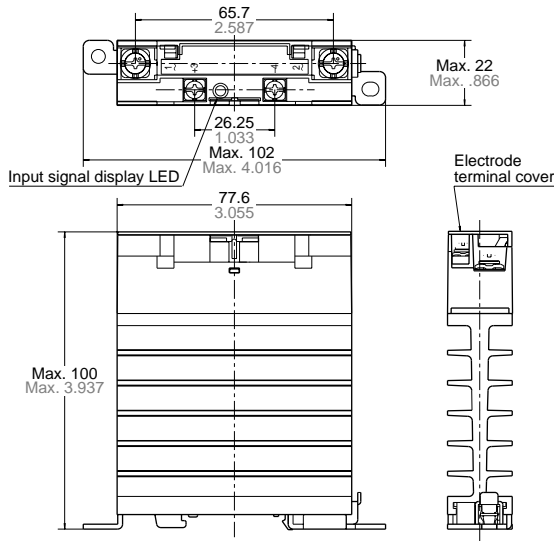
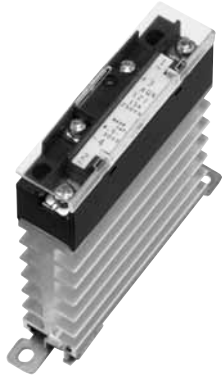
**DIMENSIONS** (mm inch)

The CAD data of the products with a **CAD Data** mark can be downloaded from: <http://industrial.panasonic.com/ac/e>

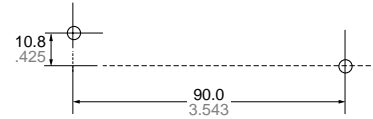
**CAD Data**

External dimensions

Schematic



Mounting dimensions (Bottom view)  
35-mm DIN rail installation, or 2-4.6/M4 dia. Screws



**Recommended Temperature Controllers**

**<KT4H Temperature Controller>**

Our temperature controller is recommended for use with our Solid State Relays.

**Features**

- Space saving requiring only a depth of 65 mm
- Data collection possible through a PLC using RS485 communication
- Tool port is standard for easy data setting
- Inverted LCD + backlight for good legibility with large characters
- Excellent operability and rich optional control functions

**Substitute part numbers**

Power supply	Control output	Part No.
100 to 240 V AC	Relay contact output	AKT4H111100

\* For detailed product information about temperature controllers, please refer to our website:  
<http://panasonic-electric-works.net/ac>

