



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

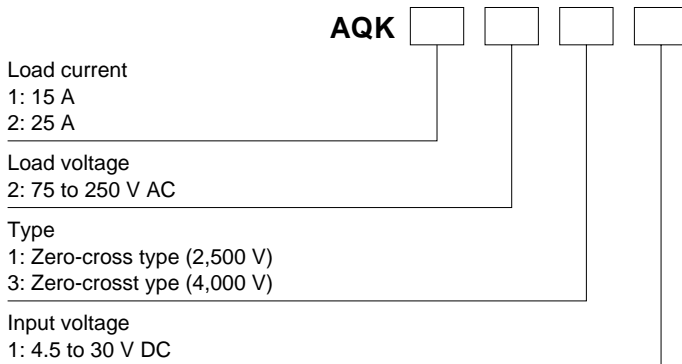
FEATURES

- 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".

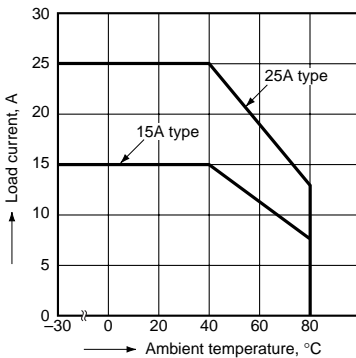
*4. When the load current is less than the rated minimum load current, please refer to "Cautions for Use of SSR".

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

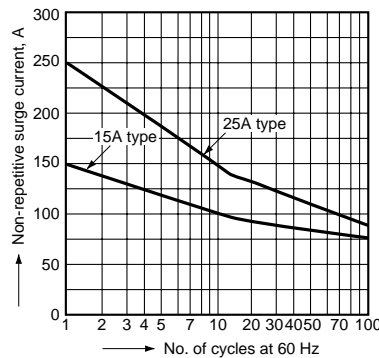
Item	Part No.	AQK1211	AQK1231	AQK2211	AQK2231	Remarks
Operate time, max.		1/2 cycle of voltage sine wave + 1 ms				
Release time, max.		1/2 cycle of voltage sine wave + 1 ms				
Breakdown voltage		2,500 V AC	4,000 V AC	2,500 V AC	4,000 V AC	
Insulation resistance, min., Initial		100 MΩ between input, 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 ²				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

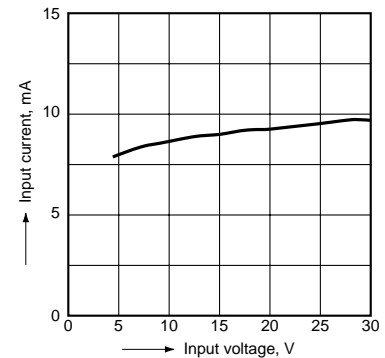
1. Load current vs. ambient temperature characteristics



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

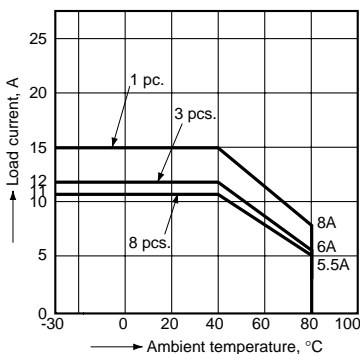


3. Input current vs. input voltage characteristics



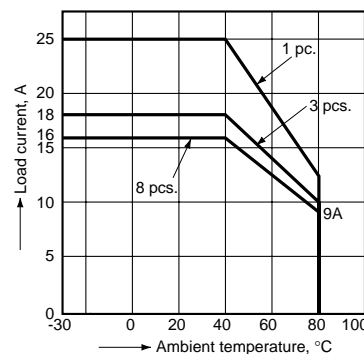
4-(1) Load current when contact mounted vs. ambient temperature characteristics

Tested sample: AQK1211, AQK1231



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

Tested sample: AQK2211, AQK2231





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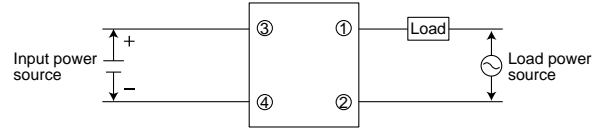
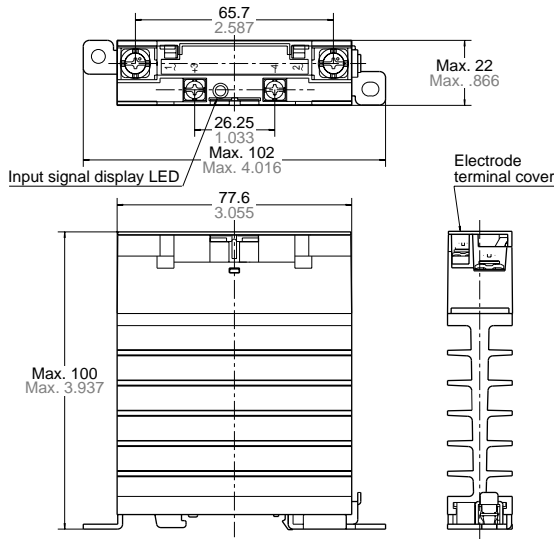
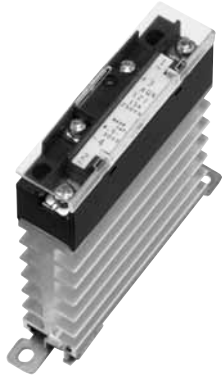
DIMENSIONS (mm inch)

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

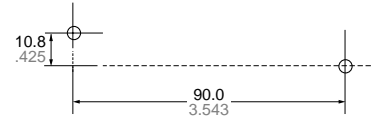
CAD Data

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>

