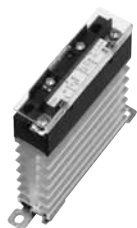


## AQ-K SOLID STATE RELAY

# AQ-K RELAYS



### FEATURES

- 1. Combined with heat sink for slim 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)

RoHS Directive compatibility information  
<http://www.nais-e.com/>

### TYPES

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

### ORDERING INFORMATION

Ex. AQK

Load current	Load voltage	Type	Input voltage
1: 15 A 2: 25 A	2: 75 to 250 V AC	1: Zero-cross type (2,500 V) 3: Zero-cross type (4,000 V)	1: 4.5 to 30 V DC

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

### SPECIFICATIONS

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

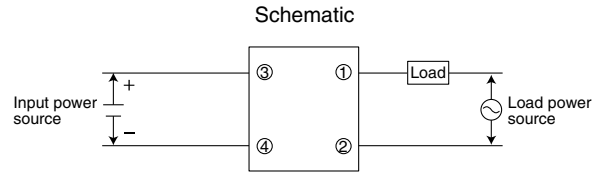
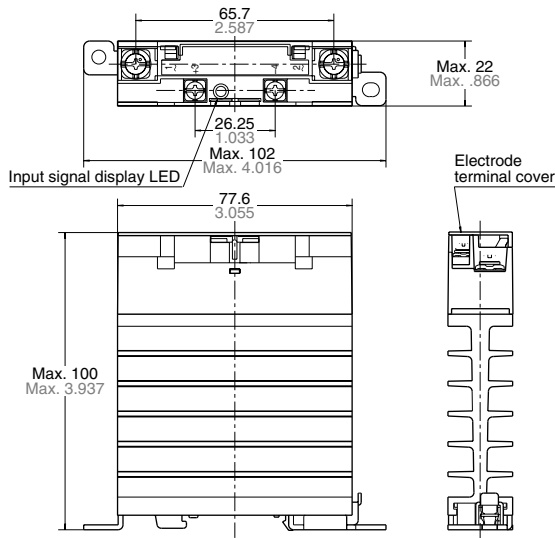
##### 1) 10 A type

Items	Type	AQK1211	AQK1231	AQK2211	AQK2231	Remarks
Input side	Input voltage	4.5 to 30 V DC				
	Input current, max.	10 mA				
	Drop-out voltage, min.	1 V				
Load side	Max. load current	15 A		25 A		See "REFERENCE DATA 1"
	Load voltage	75 to 250 V AC				
	Frequency	45 to 65 Hz				
	Non-repetitive surge current	150 A		250 A		In one cycle at 60 Hz
	Max. "OFF-state" leakage current	9 mA (when 200 V applied)				at 60 Hz
	Max. "ON-state" voltage drop	1.6 V				at max. carrying current
	Min. load current	100 mA				

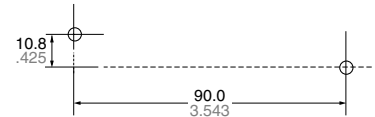
#### 2. Characteristics (at 20°C 68°F, Input ripple: 1% or less)

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	
Ambient temperature	-30°C to +80°C -22°F to +176°F				Non-condensing at low temperatures
Insulation resistance, min., Initial	100 M Ω between input, output and case				by 500V DC megger
Vibration resistance	10 to 55 Hz at double amplitude of 0.75 mm				For 1 min.
Shock resistance	Min. 294 m/s <sup>2</sup>				
Storage temperature	-35°C to +100°C -31°F to +212°F				
Operational method	Zero-cross (Turn-ON and Turn-OFF)				

# DIMENSIONS

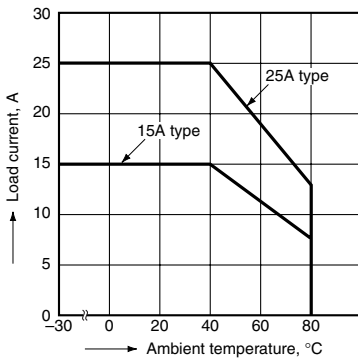


Mounting dimensions (Bottom view)  
35-mm DIN rail installation, or 2-4.6/M4 dia. Screws

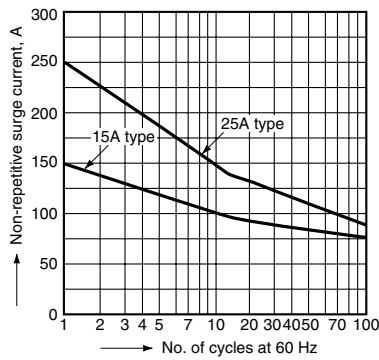


# REFERENCE DATA

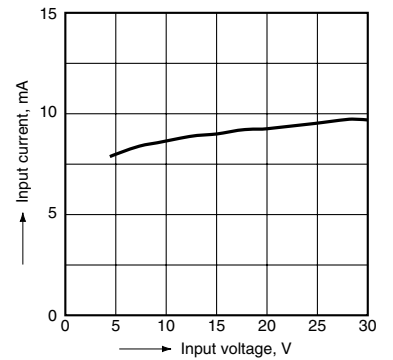
1. Load current vs. ambient temperature characteristics



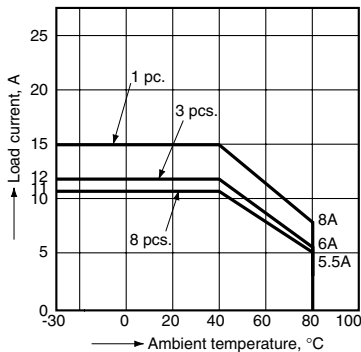
2. Non-repetitive surge current vs. carrying time (15 A, 25 A type)



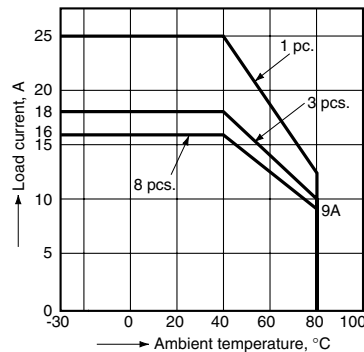
3. Input current vs. input voltage characteristics



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



# For Cautions for Use