

New



RoHS compliant

FEATURES

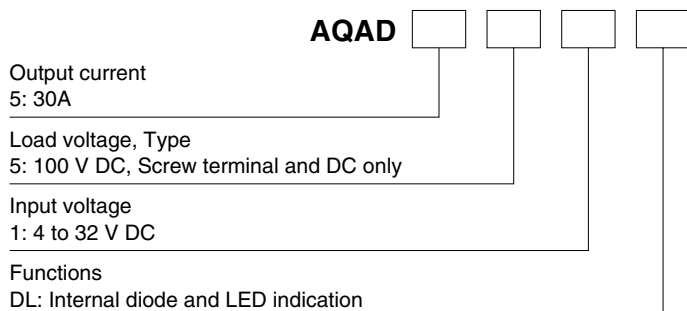
- 1. Compact Size**
W 40 × L 58 × H 25.5 mm
W 1.575 × L 2.283 × H 1.004 inch
- 2. With terminal cover for safety (output side only).**
* Cover on input side available as option.
- 3. Mounting pitch 47.5 mm 1.870 inch**
- 4. Internal diode protects element on output side**
- 5. With LED indication for operation status verification**

TYPICAL APPLICATIONS

- Photovoltaic power generation system
- Storage battery system
- For control of all types of business equipment and industrial use DC heaters/motors, etc.

* Please check our website for the latest information on compliance to overseas standards.

ORDERING INFORMATION



TYPES

1. AQ-A Solid State Relays (DC only)

Type	Load current	Load voltage	Input voltage	Part No.
DC only	30A	100V DC	4 to 32V DC	AQAD551DL

Standard Packing; carton: 2 pcs., case: 60 pcs.

2. Accessories

Type	Part No.	Packaged quantity
Standard heat sink	AQP-HS-J10A	5 in a carton, 20 in a case
	AQP-HS-30/40A	5 in a carton, 20 in a case
	AQP-HS-J25A	No carton, 5 in a case
Slim heat sink (45mm 1.772inch wide) (Mountable on a DIN rail)	AQP-HS-SJ20A	No carton, 8 in a case
DIN rail mounting plate	AQP-DPJ	No carton, 50 in a case
Terminal cover	AQA801	No carton, 50 in a case
Mounting rail	AT8-DLA1	1 in a carton, 100 in a case
Fastening plate	ATA4806	1 in a carton, 200 in a case

AQ-A (AQAD5)

RATING

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

Item	Part No.	AQAD551DL	Remarks
Input side	Input voltage	4 to 32V DC	
	Input current	Max. 20mA	
	Drop-out voltage	Min. 1V	
Output side	Max. load current (DC)	30A	
	Peak load current	80A	100 ms (1 shot), VL = DC
	Load voltage (DC)	100V	Absolute maximum rating
	“OFF-state” leakage current	Max. 100μA	100V DC
	“ON” resistance	Max. 20mΩ	at Max. carrying current
	Max. power dissipation	20W	

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

Item	AQAD551DL	Remarks
Operate time	Max. 10ms	
Release time	Max. 3ms	
Insulation resistance	100MΩ between input and output	at 500V DC
Breakdown voltage	4,000 Vrms between input and output 2,500 Vrms between input, output and case	for 1min.
Vibration resistance	10 to 55Hz double amplitude of 1.5mm .059inch	X, Y, Z axes
Shock resistance	Min. 980 m/s²	X, Y, Z axes
Ambient temperature	−20°C to +80°C −4°F to +176°F	Non-condensing at low temperatures
Storage temperature	−20°C to +85°C −4°F to +185°F	Non-condensing at low temperatures
Max. switching frequency	0.5 times/s	Vin: 4 V, duty: 50%, IL × VL: 3,000 (V·A)

REFERENCE DATA

1. Load current vs. ambient temperature characteristics
Use load current within range specified in the figure below.
Tested condition

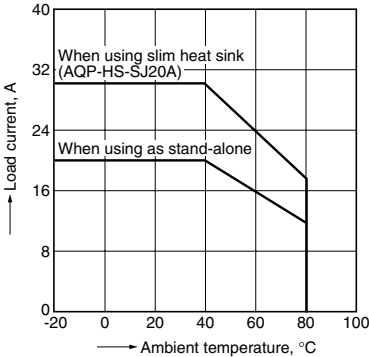
With external heat sink

When using slim heat sink (AQP-HS-SJ20A)
1) If attached to a heat sink, use a heat conductive compound (Ex. Momentive Performance Materials Inc. YG6111 or TSK5303) of similar coating to improve cooling.

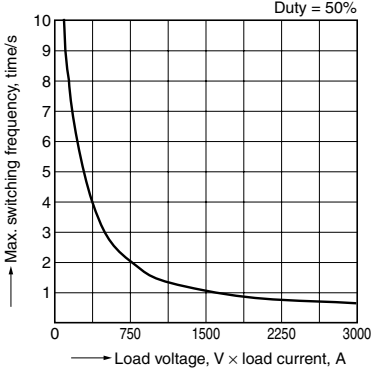
Without external heat sink

If the mounting surface is not metallic and a heat sink is not used, expose the bottom surface and plate surface to improve heat dissipation.

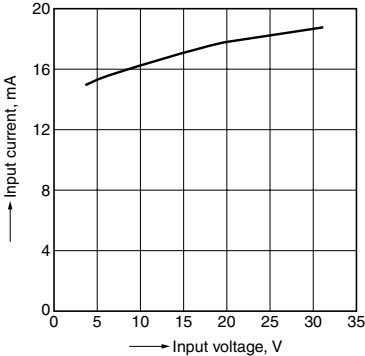
(1) 30A type (AQAD511DL)



2. Max. switching frequency vs. load voltage × load current characteristics
Ambient temperature: 20°C 68°F



3. Input current vs. input voltage characteristics



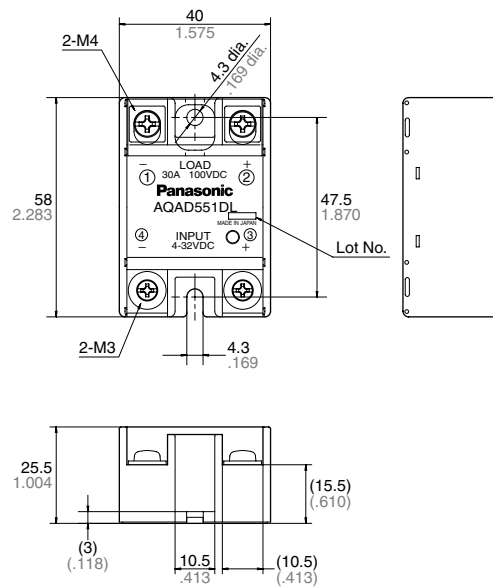
DIMENSIONS (mm inch)

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

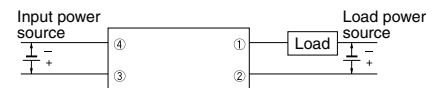
CAD Data



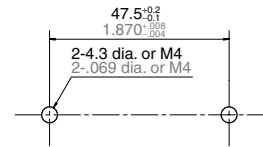
External dimensions



Schematic



Mounting dimensions



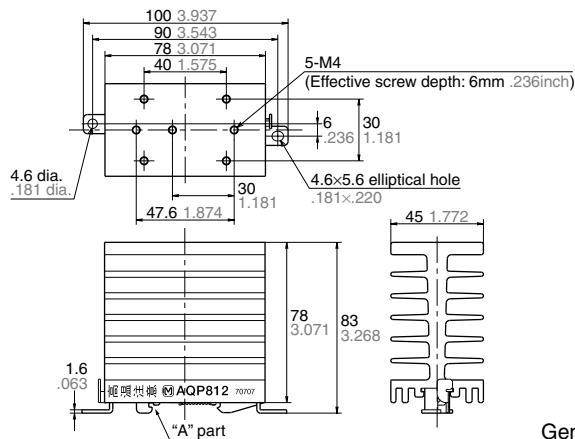
ACCESSORIES (mm inch)

AQP-HS-SJ20A Slim Heat Sink

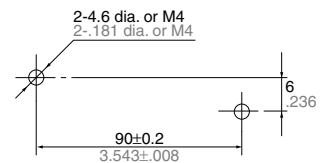
CAD Data



External dimensions



Mounting dimensions



Note: When using on a DIN rail, please install so that the "A" part is on top.

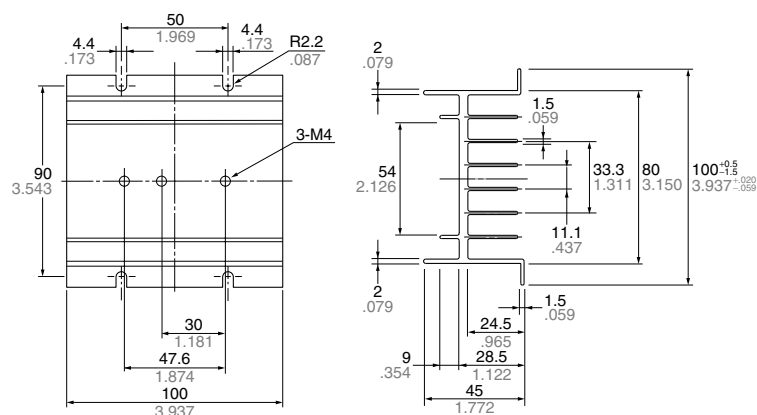
General tolerance: $\pm 1.0 \pm .039$

AQP-HS-J10A Standard Heat Sink

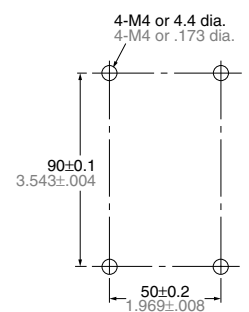
CAD Data



External dimensions



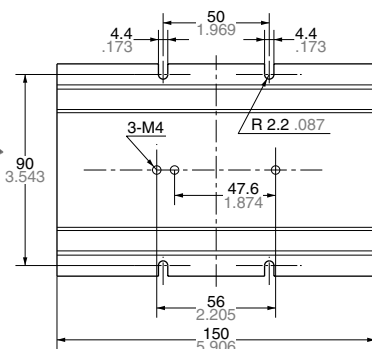
Mounting dimensions



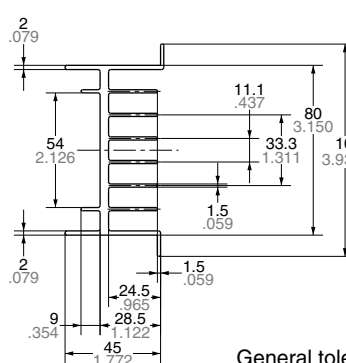
AQ-A (AQAD5)

AQP-HS-30/40A Standard Heat Sink

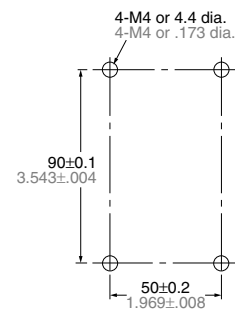
CAD Data



External dimensions



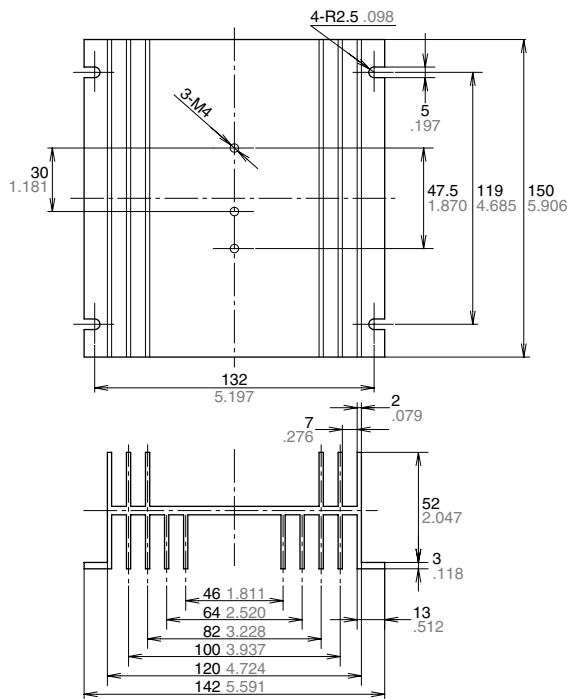
Mounting dimensions



General tolerance: $\pm 0.5 \pm .020$

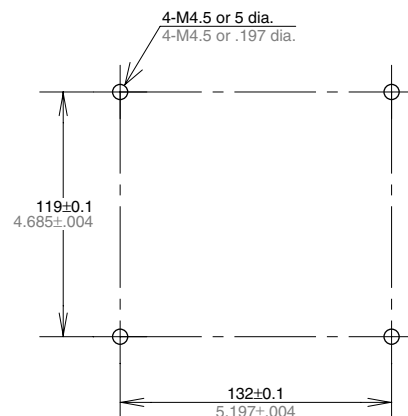
AQP-HS-J25A Standard Heat Sink

CAD Data



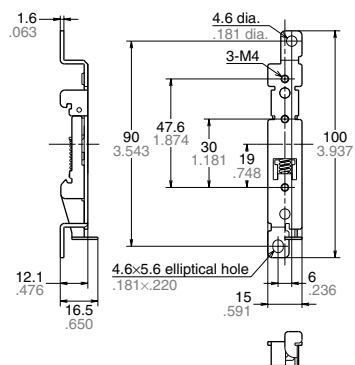
External dimensions

Mounting dimensions



AQP-DPJ DIN Rail Mounting Plate

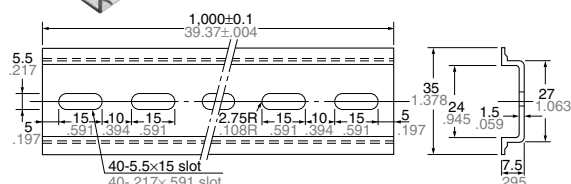
CAD Data



External dimensions

AT8-DLA1 Mounting Rail

CAD Data



ATA4806 Fastening plate

CAD Data

