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# PROFILE

## OF EMERSON NETWORK POWER & BMP/CP PRODUCT LINE

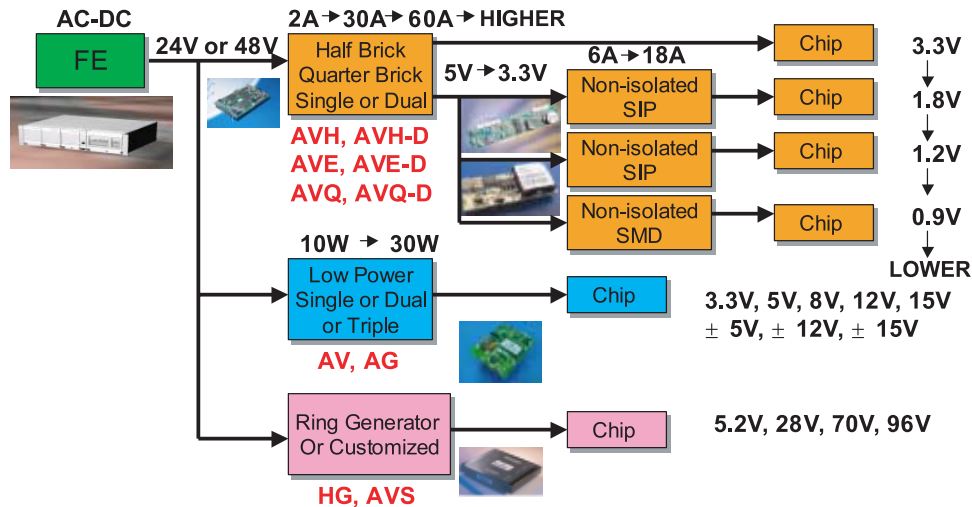
Emerson Electric Co., of which headquarter is located in St Louis, USA, was established in year 1890, it earned a sales revenue of 15 billion dollars in 2004, ranked No.3 amongst global electronic companies, and ranked No.2 in American electronic industry; it was listed within the top 50 "most appreciated companies in the world" according to "Fortune" magazine, 2003.

Emerson Network Power China, located in Hi-tech Park, Nanshan District, Shenzhen, is not only one of the significant subsidiaries of Emerson Electric Co., a world top 500 enterprise; but also its most enormous investment in China. The sales revenue of this subsidiary reached 3.2 billion RMB in 2004.

BMP&CP product line is one of the most crucial parts that compose Emerson Network Power China. The product line has over 10 years of R&D and marketing experience, is providing overall power supply solution for switch, broadband, data-telecom, NGN network, optical network and wireless telecom facilities. Products include all kinds of AC/DC power, embedded power system and DC/DC power modules. DC/DC power module has become one of the international recognized brands, the yielding and sales amount takes the leading place in the industry. Millions of products has successfully operated online accompanied with facilities by well-known enterprises such as Huawei, Huawei-3com, Lucent, UT-Starcom, Motorola. Currently the product line is actively expanding its business throughout the world via the aid of Emerson Corporate brand and its network.

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# POWER SOLUTION OF EMERSON NETWORK POWER



Emerson Network Power Has the power to solve your toughest telecommunications and electronic data processing applications needs with our standard DC-DC converter range.

We offer a complete range of standard DC-DC converters with over 500 products to choose from. These range between 10W to 700W output efficiencies reaching 92%, high-power densities, and extraordinary reliability. Typical demonstrated mean-time-between-failure greater than 1 million hours (some with more than 2 million) and a three-year warranty are standard.

With Emerson Network Power, you get a world leading manufacturer of standard DC-DC converters and a product line generally characterized by:

- Revolutionary magnetic components, synchronous rectification technology, advanced packaging, and surface-mount technology that deliver optimum reliability, size, and thermal performance
- Power levels ranging from 10W to 700W
- Low output ripple, low-noise operation
- Wide operating and storage temperature ranges
- Wide input-voltage range ratio, 2:1
- Over voltage protection, over current protection and over temperature protection
- Tighter tolerance output voltage set point
- Flexible dual and triple output versions
- SMT and Through-hole versions



# POWER SOLUTION

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## OF EMERSON NETWORK POWER

### Applications

- Wireless Networks
- Access and Optical Networks
- Data Networking
- Enterprise Networks
- Latest generation IC s(DSP,FPGA,ASIC) and Microprocessor powered applications

Today's Telecom and Datacom equipment demand high reliability, smaller size, high-density, low-profile power supply. To meet these challenges, Emerson Network Power provides the best choice for your total DC-DC power solution.

Your next generation power solution starts here

Our summary chart offers a quick and easy way to identify some of the new products in our 2005 product line-up. Many new and exciting designs have been added to Emerson Network Power already extensive range of standard DC-DC converters.

Single and flexible dual outputs ultra-high efficiency performance, cost-efficient open-frame designs, industry standard footprints, outstanding power density, surface mount versions low profile packages and excellent thermal performance are some of the key attributes that characterize our new product range. These new solutions have been designed with the end-user application in mind so whether you are looking for a RF Power Amplifier power supply or you are designing a new processor board we have the right product for the job. Check out the industry leading performance of these new products on the following pages.



# POWER SOLUTION

## OF EMERSON NETWORK POWER

### BMP product series

#### Isolated single output

PI	10-15W	20-30W 6A	50-100W 12-20A	100-150W 30-40A	150-300W 40-60A	Above 300W
Size	1 x 2	1.6 x 2	1/4B 1/8B	1/4B 1/8B	HB,1/4B	FB
Product Series	AV10 AG15 AG15B	AG25 AVH30 (HB)	AVQ50 (12A) AVQ75(15A) AV075(20-25A) AVQ100(20A)	AGQ100(25-30A) AVQ200(35-40A) AGQ200(40A) AV0100(30A)	AVE200 (40A) AVE250 AVE300(60A) AGQ300(60A)	AVF500 AVF700

#### Isolated double outputs

PI	30W 6-7A	50W-75W 15A	75W 15A	100W 20-25A
size	1/4B	1/4B	HB	HB
Product series	AVQ30B-D 3.3/1.5V 3.3/1.2V I sum= 13A	AVQ50-D 3.3@8A/1.5V@12A 3.3@8A/1.2V@13A 3.3@10A/1.8V@10A AVQ75-D 3.3@15A/1.5V@15A	AVH75-D 5/3.3V 3.3/2.5V AVE75-D 5/3.3V I smax=15A	AVE100-D 5/3.3V I smax= 20A or 25A

#### Non-Isolated single output

current	4-6A	8A	12A	18A	18A
size	2.5in SIP	1.3in SMT	1.3in SMT	1.3in SMT	2in SIP
Input voltage	3.3/5V	3.3/5/12V	3.3/5/12V	5/12V	5/12V
Input voltage	1.2-5V	0.9-3.3V	0.9-3.3V	0.75-5.5V	0.75-5.5V
Product series	AVN20B	APC08	APC12	APC18	APA18



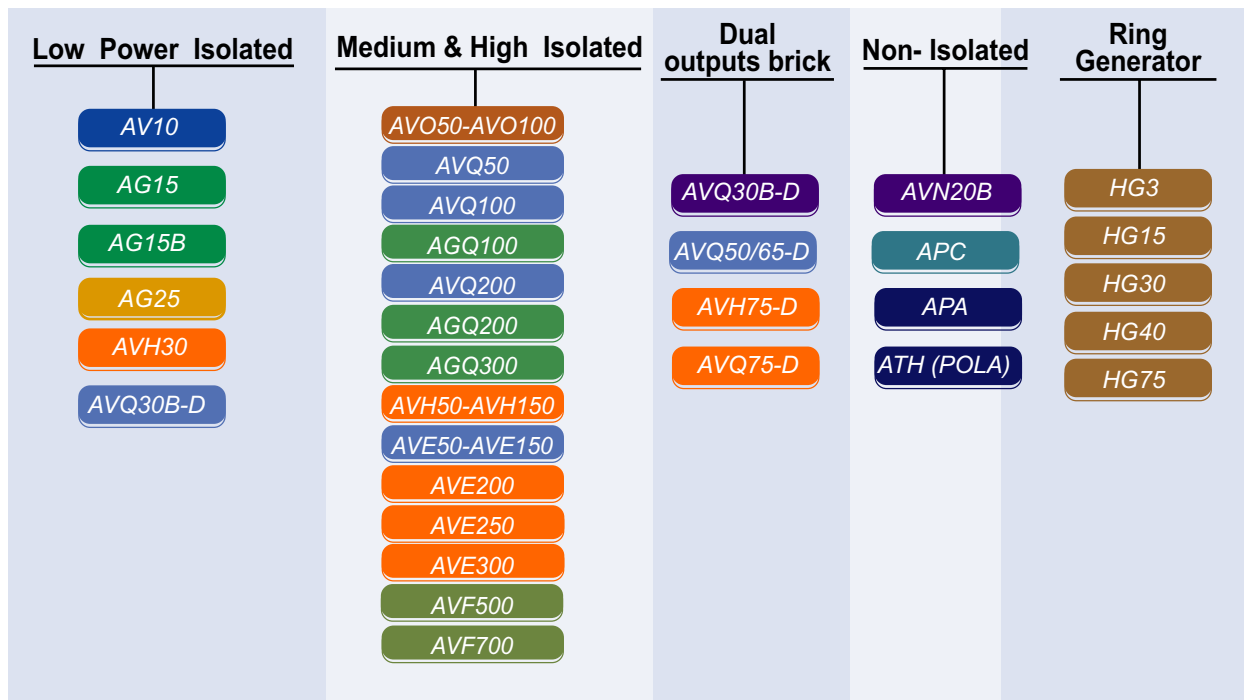
# MODEL

## SERIES INFORMATION

### DC/DC Package Information

2"x1"	2"x1.6"	1.45"x2.28"	2.4"x2.28"	3.1"x2.6"	4.6"x2.4"	2.5"x0.55"	1.3"x0.53" 1.3"x0.63"
AV10 AG15 AG15B	AG25	AVQ30B-D AVQ50 AVQ75 AVQ100 AGQ100 AVQ200 AGQ200 AGQ300	AVH30 AVH AVE AVH-D	AW30	AVF500 AVF700	AVN20B	APC08 APC12

### DC/DC Product Series



### DC/AC Ring Generator Product Series





# MODEL

## NUMBER DESCRIPTION

AV Q 200 - 48 S 3V3 P - 6

### Output Power

Power digit based on 5V and higher output voltage. The lower output is limited by its current

### Input Voltage

03 = 3 to 3.6V  
3V3 = 3 to 4V  
04 = 3 to 5.5V  
05 = 4.5 to 5.5V  
12 = 9 to 18V  
24 = 18 to 36V  
48 = 36 to 75V or 36 to 72V

### Single output voltage

1V2 = 1.2V 5V2 = 5.2V  
1V5 = 1.5V 06 = 6V  
1V8 = 1.8V 08 = 8V  
2V1 = 2.1V 12 = 12V  
2V5 = 2.5V 15 = 15V  
3V3/03 = 3.3V 28 = 28V  
05 = 5V 70 = 70V  
96 = 96V

### CNT logic

Omit this digit for Negative logic  
P = Positive logic

### Baseplate

Omit this digit for no baseplate  
B = Baseplate

### Special Function

E = Basic  
(Only for AVN20B)

### Pin shape

Omit this digit for straight  
R = Right angle  
(Only for AVN20B)

### Pin Length

Omit this digit for standard 5.8 mm  
4 = 4.8 mm  
6 = 3.8 mm  
8 = 2.8 mm

### Series

Omit this digit for standard low power module  
F = Full Brick  
H = Half Brick  
Q = Quarter Brick  
O = One Eighth Brick  
E = High efficiency Half Brick  
N = Non-isolated SIP module  
M = Surface mounted module  
S = Specific Customer module

### Outputs

S = Single output  
D = Dual outputs  
T = Triple outputs  
Q = Quad outputs

### Dual outputs(different value)

12 = 1.2V 02/25 = 2.5V  
15 = 1.5V 03/33 = 3.3V  
18 = 1.8V 05 = 5V

### Dual outputs(equal value)

05 = ± 5V  
12 = ± 12V  
15 = ± 15V

### Triple or Duad outputs

The first digit is represent middle voltage value  
The second digit is represent low voltage value  
The last digit is represent high voltage value

### Main series

AV = The normal standard module  
AW = Old economy module  
AS = Surface mounted module  
AG = New generation normal standard module  
AB = Bus convertor module

\*For the CNT functioning and Pin length feature, the current products are available in the detailed list

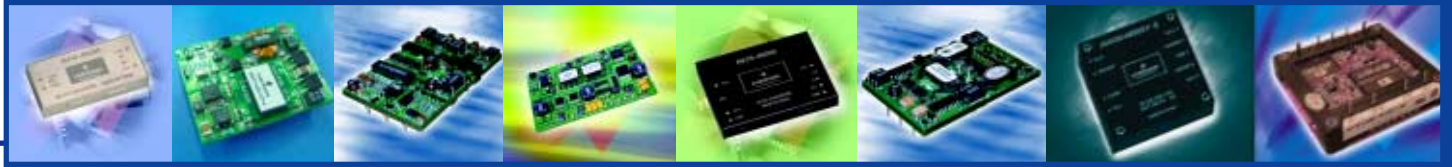
**M****MODEL****EXPRESS SELECTION****48V Input Modules, Single Output****1.2V Single Output**

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
14.4W	12A	82%	Quarter Brick	Open-frame	57.9*36.8*9.0	Negative logic/Pin length:4.8mm	AVQ50-48S1V2-4/NN	AVQ	39
14.4W	12A	82%	Quarter Brick	Open-frame	57.9*36.8*9.0	Positive logic/Pin length:4.8mm	AVQ50-48S1V2P-4/NN	AVQ	39
24W	20A	87%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S1V2-4	AV0	53
24W	20A	87%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S1V2P-4	AV0	53
30W	25A	87%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S1V2-4	AV0	53
30W	25A	87%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S1V2P-4	AV0	53
30W	30A	87%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S1V2-4	AGQ	49
30W	30A	87%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S1V2P-4	AGQ	49
30W	30A	87%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S1V2B-4	AGQ	49
30W	30A	87%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S1V2PB-4	AGQ	49
48W	40A	85%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:5.8mm	AVQ200-48S1V2	AVQ	47
48W	40A	85%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:5.8mm	AVQ200-48S1V2P	AVQ	47
48W	40A	85%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:4.8mm	AVQ200-48S1V2-4	AVQ	47
48W	40A	85%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:4.8mm	AVQ200-48S1V2P-4	AVQ	47
48W	40A	83%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE200-48S1V2-4	AVE	67
48W	40A	83%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE200-48S1V2P-4	AVE	67
72W	60A	88%	Half Brick	Open-frame	61.0*57.9*9.5	Negative logic/Pin length:4.8mm	AVE300-48S1V2-4	AVE	73
72W	60A	88%	Half Brick	Open-frame	61.0*57.9*9.5	Positive logic/Pin length:4.8mm	AVE300-48S1V2P-4	AVE	73
72W	60A	88%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE300-48S1V2B-4	AVE	73
72W	60A	88%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE300-48S1V2PB-4	AVE	73

**1.5V Single Output**

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
18W	12A	82%	Quarter Brick	Open-frame	57.9*36.8*9.0	Negative logic/Pin length:4.8mm	AVQ50-48S1V5-4	AVQ	39
18W	12A	82%	Quarter Brick	Open-frame	57.9*36.8*9.0	Positive logic/Pin length:4.8mm	AVQ50-48S1V5P-4	AVQ	39
18W	12A	82%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Negative logic/Pin length:4.8mm	AVQ50-48S1V5B-4	AVQ	39
18W	12A	82%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Positive logic/Pin length:4.8mm	AVQ50-48S1V5PB-4	AVQ	39
30W	20A	85%	Quarter Brick	Aluminum Board	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AVQ100-48S1V5-4	AVQ	45
30W	20A	85%	Quarter Brick	Aluminum Board	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AVQ100-48S1V5P-4	AVQ	45

. New Products



30W	20A	88%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S1V5-4	AV0	53
30W	20A	88%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S1V5P-4	AV0	53
37.5W	25A	88%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S1V5-4	AV0	53
37.5W	25A	88%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S1V5P-4	AV0	53
37.5W	30A	88%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S1V5-4	AGQ	49
37.5W	30A	88%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S1V5P-4	AGQ	49
37.5W	30A	88%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S1V5B-4	AGQ	49
37.5W	30A	88%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S1V5PB-4	AGQ	49
45W	30A	78%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE150-48S1V5	AVE	65
60W	40A	86%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:5.8mm	AVQ200-48S1V5	AVQ	47
60W	40A	86%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:5.8mm	AVQ200-48S1V5P	AVQ	47
60W	40A	86%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:4.8mm	AVQ200-48S1V5-4	AVQ	47
60W	40A	86%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:4.8mm	AVQ200-48S1V5P-4	AVQ	47
90W	60A	89%	Quarter Brick	Open-frame	57.9*36.8*9.8	Negative logic/Pin length:4.8mm	AGQ300-48S1V5-4	AGQ	51
90W	60A	89%	Quarter Brick	Open-frame	57.9*36.8*9.8	Positive logic/Pin length:4.8mm	AGQ300-48S1V5P-4	AGQ	51
90W	60A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ300-48S1V5B-4	AGQ	51
90W	60A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ300-48S1V5PB-4	AGQ	51
90W	60A	89%	Half Brick	Open-frame	61.0*57.9*9.5	Negative logic/Pin length:4.8mm	AVE300-48S1V5-4	AVE	73
90W	60A	89%	Half Brick	Open-frame	61.0*57.9*9.5	Positive logic/Pin length:4.8mm	AVE300-48S1V5P-4	AVE	73
90W	60A	89%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE300-48S1V5B-4	AVE	73
90W	60A	89%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE300-48S1V5PB-4	AVE	73

### 1.8V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
21.6W	12A	84%	Quarter Brick	Open-frame	57.9*36.8*9.0	Negative logic/Pin length:4.8mm	AVQ50-48S1V8-4	AVQ	39
21.6W	12A	84%	Quarter Brick	Open-frame	57.9*36.8*9.0	Positive logic/Pin length:4.8mm	AVQ50-48S1V8P-4	AVQ	39
21.6W	12A	84%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Negative logic/Pin length:4.8mm	AVQ50-48S1V8B-4	AVQ	39
21.6W	12A	84%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Positive logic/Pin length:4.8mm	AVQ50-48S1V8PB-4	AVQ	39
36W	20A	89%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S1V8-4	AV0	53
36W	20A	89%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S1V8P-4	AV0	53
36W	20A	85%	Quarter Brick	Aluminum Board	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AVQ100-48S1V8-4	AVQ	45
36W	20A	85%	Quarter Brick	Aluminum Board	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AVQ100-48S1V8P-4	AVQ	45
36W	20A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm/OCP mode: Hiccup	AVE100-48S1V8-4	AVE	65

. New Products



# MODEL EXPRESS SELECTION

36W	20A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE100-48S1V8P-4	AVE	65
45W	25A	89%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S1V8-4	AVO	53
45W	25A	89%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S1V8P-4	AVO	53
45W	30A	89%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S1V8-4	AGQ	49
45W	30A	89%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S1V8P-4	AGQ	49
45W	30A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S1V8B-4	AGQ	49
45W	30A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S1V8PB-4	AGQ	49
54W	30A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm/OCP mode: Hiccup	AVE150-48S1V8-4	AVE	65
54W	30A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE150-48S1V8P-4	AVE	65
72W	40A	87%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:5.8mm	AVQ200-48S1V8	AVQ	47
72W	40A	87%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:5.8mm	AVQ200-48S1V8P	AVQ	47
72W	40A	87%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:4.8mm	AVQ200-48S1V8-4	AVQ	47
72W	40A	87%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:4.8mm	AVQ200-48S1V8P-4	AVQ	47
108W	60A	90%	Half Brick	Open-frame	61.0*57.9*9.5	Negative logic/Pin length:4.8mm	AVE300-48S1V8-4	AVE	73
108W	60A	90%	Half Brick	Open-frame	61.0*57.9*9.5	Positive logic/Pin length:4.8mm	AVE300-48S1V8P-4	AVE	73
108W	60A	90%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE300-48S1V8B-4	AVE	73
108W	60A	90%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE300-48S1V8PB-4	AVE	73

## 2.5V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
11.3W	4.5A	81%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Trim/Long pin:5.6mm	AG15-48S2V5NTL	AG15	25
25W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-48S2V5	AVE	65
37.5W	15A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE75-48S2V5	AVE	65
50W	20A	86%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-48S2V5	AVE	65
50W	20A	90%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S2V5-4	AVO	53
50W	20A	90%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S2V5P-4	AVO	53
62.5W	25A	90%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S2V5-4	AVO	53
62.5W	25A	90%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S2V5P-4	AVO	53
62.5W	25A	88%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S2V5-4	AGQ	49
62.5W	25A	88%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S2V5P-4	AGQ	49
62.5W	25A	88%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S2V5B-4	AGQ	49
62.5W	25A	88%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S2V5PB-4	AGQ	49
75W	30A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE150-48S2V5	AVE	65
75W	30A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:3.8mm	AVE150-48S2V5-6	AVE	65
100W	40A	88.5%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:5.8mm	AVQ200-48S2V5	AVQ	47
100W	40A	88.5%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:5.8mm	AVQ200-48S2V5P	AVQ	47

New Products



100W	40A	88.5%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:4.8mm	AVQ200-48S2V5-4	AVQ	47
100W	40A	88.5%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:4.8mm	AVQ200-48S2V5P-4	AVQ	47
150W	60A	91%	Half Brick	Open-frame	61.0*57.9*9.5	Negative logic/Pin length:4.8mm	AVE300-48S2V5-4	AVE	73
150W	60A	91%	Half Brick	Open-frame	61.0*57.9*9.5	Positive logic/Pin length:4.8mm	AVE300-48S2V5P-4	AVE	73
150W	60A	91%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE300-48S2V5B-4	AVE	73
150W	60A	91%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE300-48S2V5PB-4	AVE	73

### 3.3V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
8.3W	2.5A	77%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S03	AV10	21
14.9W	4.5A	85%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Trim/Long pin:5.6mm	AG15-48S03NTL	AG15	25
19.8W	6A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48S03-4	AG25	31
19.8W	6A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48S03P-4	AG25	31
19.8W	6A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm/Customized	AG25-48S03P-4/HO	AG25	31
21.5W	6.5A	84%	Half Brick	Encapsulate	61.0*57.9*12.7	Positive logic/Pin length:5.1mm	AVH30-48S03P	AVH	57
21.5W	6.5A	84%	Half Brick	Encapsulate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVH30-48S03P-8	AVH	57
33W	10A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S03	AVH	59
33W	10A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH50-48S03P	AVH	59
33W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-48S03	AVE	65
33W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:3.8mm	AVE50-48S03P-6	AVE	65
33W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVE50-48S03P-8	AVE	65
33W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm/Lucent customized	AVE50-48S03P-8/L	AVE	65
39.6W	12A	88%	Quarter Brick	Open-frame	57.9*36.8*9.0	Negative logic/Pin length:4.8mm	AVQ50-48S3V3-4	AVQ	39
39.6W	12A	88%	Quarter Brick	Open-frame	57.9*36.8*9.0	Positive logic/Pin length:4.8mm	AVQ50-48S3V3P-4	AVQ	39
49.5W	15A	89%	Quarter Brick	Open-frame	57.9*36.8*9.2	Negative logic/Pin length:4.8mm	AVQ75-48S3V3-4	AVQ	43
49.5W	15A	89%	Quarter Brick	Open-frame	57.9*36.8*9.2	Positive logic/Pin length:4.8mm	AVQ75-48S3V3P-4	AVQ	43
49.5W	15A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.7	Negative logic/Pin length:4.8mm	AVQ75-48S3V3B-4	AVQ	43
49.5W	15A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.7	Positive logic/Pin length:4.8mm	AVQ75-48S3V3PB-4	AVQ	43
49.5W	15A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48S03	AVH	59
49.5W	15A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH75-48S03P	AVH	59
49.5W	15A	88%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE75-48S03	AVE	65
49.5W	15A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S3V3-4	AV0	53
49.5W	15A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S3V3P-4	AV0	53
66W	20A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S03	AVH	59
66W	20A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH100-48S03P	AVH	59

 . New Products

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66W	20A	88%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-48S03	AVE	65
66W	20A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S3V3-4	AVO	53
66W	20A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S3V3P-4	AVO	53
82.5W	25A	89.5%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S3V3-4	AGQ	49
82.5W	25A	89.5%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S3V3P-4	AGQ	49
82.5W	25A	89.5%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S3V3B-4	AGQ	49
82.5W	25A	89.5%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S3V3PB-4	AGQ	49
99W	30A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH150-48S03	AVH	59
99W	30A	81%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH150-48S03P	AVH	59
99W	30A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE150-48S03	AVE	65
99W	30A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm/OCP mode: Hiccup	AVE150-48S03/HW	AVE	65
99W	30A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV0100-48S3V3-4	AVO	55
99W	30A	91%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV0100-48S3V3P-4	AVO	55
115.5W	35A	90%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:5.8mm	AVQ200-48S3V3	AVQ	47
115.5W	35A	90%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:5.8mm	AVQ200-48S3V3P	AVQ	47
115.5W	35A	90%	Quarter Brick	Open-frame	57.9*36.8*9.7	Negative logic/Pin length:4.8mm	AVQ200-48S3V3-4	AVQ	47
115.5W	35A	90%	Quarter Brick	Open-frame	57.9*36.8*9.7	Positive logic/Pin length:4.8mm	AVQ200-48S3V3P-4	AVQ	47
132W	40A	89%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE200-48S3V3-4	AVE	67
132W	40A	89%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE200-48S3V3P-4	AVE	67
132W	40A	92%	Quarter Brick	Open-frame	57.9*36.8*9.8	Negative logic/Pin length:4.8mm	AGQ200-48S3V3-4	AGQ	51
132W	40A	92%	Quarter Brick	Open-frame	57.9*36.8*9.8	Positive logic/Pin length:4.8mm	AGQ200-48S3V3P-4	AGQ	41
132W	40A	92%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ200-48S3V3B-4	AGQ	41
132W	40A	92%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ200-48S3V3PB-4	AGQ	41
198W	60A	92%	Half Brick	Open-frame	61.0*57.9*9.5	Negative logic/Pin length:4.8mm	AVE300-48S3V3-4	AVE	73
198W	60A	92%	Half Brick	Open-frame	61.0*57.9*9.5	Positive logic/Pin length:4.8mm	AVE300-48S3V3P-4	AVE	73
198W	60A	92%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE300-48S3V3B-4	AVE	73
198W	60A	92%	Half Brick	Open-frame with baseplate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE300-48S3V3PB-4	AVE	73

## 5V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10W	2A	80%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S05	AV10	21
15W	3A	85%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Trim/Long pin:5.6mm	AG15-48S05NTL	AG15	25
15W	3A	85%	1"*2"	Encapsulate	50.8*25.4*10.2	Positive logic/Long pin:5.6mm	AG15-48S05PL	AG15	25
15W	3A	85%	1"*2"	Encapsulate	50.8*25.4*10.2	Positive logic/Trim/Long pin:5.6mm	AG15-48S05PTL	AG15	25
25W	5A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48S05-4	AG25	31

. New Products



25W	5A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48S05P-4	AG25	31
30W	6A	87%	Half Brick	Encapsulate	61.0*57.9*12.7	Negative logic/Pin length:5.1mm	AVH30-48S05	AVH	57
30W	6A	87%	Half Brick	Encapsulate	61.0*57.9*12.7	Positive logic/Pin length:5.1mm	AVH30-48S05P	AVH	57
30W	6A	87%	Half Brick	Encapsulate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVH30-48S05P-8	AVH	57
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S05	AVH	59
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:3.8mm	AVH50-48S05-6	AVH	59
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:2.8mm	AVH50-48S05-8	AVH	59
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH50-48S05P	AVH	59
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:3.8mm	AVH50-48S05P-6	AVH	59
50W	10A	84%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVH50-48S05P-8	AVH	59
50W	10A	89%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-48S05	AVE	65
50W	10A	89%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:3.8mm	AVE50-48S05P-6	AVE	65
50W	10A	89%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVE50-48S05P-8	AVE	65
50W	10A	89%	Quarter Brick	Open-frame	57.9*36.8*9.0	Negative logic/Pin length:4.8mm	AVQ50-48S05-4	AVQ	39
50W	10A	89%	Quarter Brick	Open-frame	57.9*36.8*9.0	Positive logic/Pin length:4.8mm	AVQ50-48S05P-4	AVQ	39
50W	10A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S05-4	AV0	53
50W	10A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S05P-4	AV0	53
75W	15A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S05-4	AV0	53
75W	15A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S05P-4	AV0	53
75W	15A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48S05	AVH	59
75W	15A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH75-48S05P	AVH	59
75W	15A	89%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE75-48S05	AVE	65
100W	20A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S05	AVH	59
100W	20A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH100-48S05P	AVH	59
100W	20A	89%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-48S05	AVE	65
100W	20A	90%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S05-4	AGQ	49
100W	20A	90%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S05P-4	AGQ	49
100W	20A	90%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S05B-4	AGQ	49
100W	20A	90%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S05PB-4	AGQ	49
150W	30A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH150-48S05	AVH	59
150W	30A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH150-48S05P	AVH	59
150W	30A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:3.8mm	AVH150-48S05-6	AVH	59
150W	30A	88%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE150-48S05	AVE	65

New Products

# MODEL EXPRESS SELECTION

## 5.2V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10.4W	2A	77%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S5V2	AV10	21

## 8V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
9.6W	1.2A	82%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S08	AV10	21
25W	3.13A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48S08-4	AG25	31
25W	3.13A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48S08P-4	AG25	31
50.4W	6.3A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Negative logic/Pin length:4.8mm	AVQ50-48S08B-4	AVQ	39
50.4W	6.3A	89%	Quarter Brick	Open-frame with baseplate	57.9*36.8*11.5	Positive logic/Pin length:4.8mm	AVQ50-48S08PB-4	AVQ	39
100W	12.5A	86%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S08	AVH	61

## 12V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10.1W	0.84A	85%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S12	AV10	21
15W	1.25A	87%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Trim/Long pin:5.6mm	AG15-48S12NTL	AG15	25
25.2W	2.1A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48S12-4	AG25	31
25.2W	2.1A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48S12P-4	AG25	31
49.9W	4.16A	85%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S12	AVH	61
50W	4.2A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV050-48S12-4	AV0	53
50W	4.2A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV050-48S12P-4	AV0	53
72W	6A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Negative logic/Pin length:4.8mm	AV075-48S12-4	AV0	53
72W	6A	92%	Eighth Brick	Open-frame	57.9*22.9*8.9	Positive logic/Pin length:4.8mm	AV075-48S12P-4	AV0	53
75W	6.25A	86%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48S12	AVH	61
100W	8.33A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S12	AVH	61
100W	8.33A	90%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:4.8mm	AGQ100-48S12-4	AGQ	49
100W	8.33A	90%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:4.8mm	AGQ100-48S12P-4	AGQ	49
100W	8.33A	90%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Negative logic/Pin length:4.8mm	AGQ100-48S12B-4	AGQ	49
100W	8.33A	90%	Quarter Brick	Open-frame with baseplate	57.9*36.8*12.7	Positive logic/Pin length:4.8mm	AGQ100-48S12PB-4	AGQ	49
150W	12.5A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH150-48S12	AVH	61

New Products



### 15V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10.2W	0.68A	85%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S15	AV10	21
25.1W	1.67A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48S15-4	AG25	31
25.1W	1.67A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48S15P-4	AG25	31
50W	3.33A	86%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S15	AVH	61
75W	5A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48S15	AVH	61
100W	6.67A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S15	AVH	61
150W	10A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH150-48S15	AVH	61

### 28V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
50.1W	1.79A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S28	AVH	61
50.1W	1.79A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH50-48S28/DT	AVH	61
100W	3.57A	87%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH100-48S28	AVH	61
252W	9A	91%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE250-48S28-4	AVE	69
252W	9A	91%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:4.8mm	AVE250-48S28P-4	AVE	69
504W	18A	90%	Full Brick	Aluminum Substate	116.8*61.0*12.7	Negative logic/Pin length:4.8mm	AVF500-48S28-6	AVF	75
504W	18A	90%	Full Brick	Aluminum Substate	116.8*61.0*12.7	Positive logic/Pin length:3.8mm	AVF500-48S28P-6	AVF	75
700W	25A	89%	Full Brick	Aluminum Substate	116.8*61.0*12.7	Negative logic/Pin length:3.8mm	AVF700-48S28-6	AVF	77
700W	25A	89%	Full Brick	Aluminum Substate	116.8*61.0*12.7	Positive logic/Pin length:3.8mm	AVF700-48S28P-6	AVF	77

### 68V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
252W	3A	91%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:4.8mm	AVE250-48S68-4	AVE	69

### 96V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
9.6W	100mA	85%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48S96	AV10	21

AVE250-48S68-4 . New Products

# MODEL EXPRESS SELECTION

## 48V Input Modules, Multiple Outputs

### 3.3V/1.2V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
28.2W	6A/7A	84%	Quarter Brick	Open-frame	57.9*36.8*10.9	Negative logic/Pin length:3.8mm	AVQ30B-48D3312-6	AVQ	35
42W	8A/13A	87%	Quarter Brick	Open-frame	57.9*36.8*10.9	Negative logic/Pin length:3.8mm	AVQ50-48D3312-6	AVQ	37

### 3.3V/1.5V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
30.3W	6A/7A	84%	Quarter Brick	Open-frame	57.9*36.8*10.9	Negative logic/Pin length:3.8mm	AVQ30B-48D3315-6	AVQ	35
44.4W	8A/12A	87%	Quarter Brick	Open-frame	58.4*36.8*12.7	Negative logic/Pin length:3.8mm	AVQ50-48D3315-6	AVQ	37
72W	125/15A	87%	Quarter Brick	Open-frame	58.4*36.8*12.7	Negative logic/Pin length:3.8mm	AVQ75-48D3315-6	AVQ	37

### 3.3V/1.8V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
44.4W	10A/10A	87%	Quarter Brick	Open-frame	58.4*36.8*12.7	Negative logic/Pin length:3.8mm	AVQ50-48D3318-6	AVQ	37

### 3.3V/2.5V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48D0302	AVH	63
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:3.8mm	AVH75-48D0302-6	AVH	63
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:2.8mm	AVH75-48D0302-8	AVH	63
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH75-48D0302P	AVH	63
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:3.8mm	AVH75-48D0302P-6	AVH	63
49.5W	15A/15A	80%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVH75-48D0302P-8	AVH	63

### 5V/3.3V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVH75-48D0503	AVH	63
75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:3.8mm	AVH75-48D0503-6	AVH	63
75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:2.8mm	AVH75-48D0503-8	AVH	63
75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:5.8mm	AVH75-48D0503P	AVH	63

  . New Products



75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:3.8mm	AVH75-48D0503P-6	AVH	63
75W	15A/15A	82%	Half Brick	Aluminum Substate	61.0*57.9*12.7	Positive logic/Pin length:2.8mm	AVH75-48D0503P-8	AVH	63

### +5V/-5V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10W	± 1A	79%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48D05	AV10	23
30W	± 3A	84%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48D05-4	AG25	33
30W	± 3A	84%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48D05P-4	AG25	33

### +12V/-12V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10.1W	± 0.42A	85%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48D12	AV10	23
15.1W	± 0.63A	86%	1"*2"	Encapsulate	50.8*25.4*10.2	Positive logic/Long pin:5.6mm	AG15-48D12PL	AG15	27
15.1W	± 0.63A	86%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Long pin:5.6mm	AG15-48D12NL	AG15	27
30W	± 1.25A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-48D12-4	AG25	23
30W	± 1.25A	87%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-48D12P-4	AG25	23
64.8W	± 2.7A	89%	Quarter Brick	Open-frame	57.9*36.8*10.2	Negative logic/Pin length:3.8mm	AVQ65-48D12-6	AVQ	41
64.8W	± 2.7A	89%	Quarter Brick	Open-frame	57.9*36.8*10.2	Positive logic/Pin length:3.8mm	AVQ65-48D12P-6	AVQ	41

### +15V/-15V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
9.9W	± 0.33A	83%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-48D15	AV10	23

  . New Products



# MODEL EXPRESS SELECTION

## 24V Input Modules, Single Output

### 2.5V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
25W	10A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-24S2V5	AVE	71
50W	20A	85%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-24S2V5	AVE	71

### 3.3V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
8.3W	2.5A	76%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24S03	AV10	21
14.9W	4.5A	84%	1"*2"	Encapsulate	50.8*25.4*10.2	Negative logic/Trim/Long pin:5.6mm	AG15-24S03NTL	AG15	25
14.9W	4.5A	84%	1"*2"	Encapsulate	50.8*25.4*10.2	Positive logic/Trim/Long pin:5.6mm	AG15-24S03PTL	AG15	25
14.9W	4.5A	84%	1"*2"	Encapsulate	50.8*25.4*10.2	Positive logic/Trim/Short pin:2.8mm	AG15-24S03PTS	AG15	25
19.8W	6A	83%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-24S03-4	AG25	31
19.8W	6A	83%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-24S03P-4	AG25	31
19.8W	6A	83%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm/Customized	AG25-24S03P-4/HO	AG25	31
33W	10A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-24S03	AVE	71
66W	20A	87%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-24S03	AVE	71

### 5V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
10W	2A	78%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24S05	AV10	21
25W	5A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Negative logic/Pin length:4.8mm	AG25-24S05-4	AG25	31
25W	5A	85%	1.6"*2"	Open-frame	50.8*40.6*9.7	Positive logic/Pin length:4.8mm	AG25-24S05P-4	AG25	31
50W	10A	88%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE50-24S05	AVE	71
100W	20A	88%	Half Brick	Open-shelf Aluminum Substate	61.0*57.9*12.7	Negative logic/Pin length:5.8mm	AVE100-24S05	AVE	71

### 8V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
9.6W	1.2A	82%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24S08	AV10	21

■ . New Products



### 12V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family Page
10.1W	0.84A	82%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24S12	AV10 21

### 15V Single Output

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family Page
10.2W	0.68A	82%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24S15	AV10 21

## 24V Input Modules, Multiple Outputs

### +5V/-5V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family Page
10W	± 1A	79%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24D05	AV10 23

### +12V/-12V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family Page
10.1W	± 0.42A	83%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24D12	AV10 23

### +15V/-15V Dual Outputs

Power	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family Page
9.9W	± 0.33A	83%	1"*2"	Encapsulate	50.8*25.4*9.0	Pin length:6.6mm	AV10-24D15	AV10 23

■ . New Products

# MODEL EXPRESS SELECTION

## Non-Isolated

### 3.3V Norminal Input voltage

Power	Vout	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
20W	5V	4A	87%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-3V3S05	AVN20B	91
20W	5V	4A	87%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-3V3S05-06	AVN20B	91
20W	5V	4A	87%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-3V3S05-R-06	AVN20B	91

### 3-5.5V Norminal Input voltage

Power	Vout	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
7.2W	1.2V	6A	78%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-04S1V2	AVN20B	89
7.2W	1.2V	6A	78%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-04S1V2-06	AVN20B	89
7.2W	1.2V	6A	78%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-04S1V2-E-06	AVN20B	89
7.2W	1.2V	6A	78%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-04S1V2-R-06	AVN20B	89
9W	1.5V	6A	81%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-04S1V5	AVN20B	89
9W	1.5V	6A	81%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-04S1V5-06	AVN20B	89
9W	1.5V	6A	81%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-04S1V5-E-06	AVN20B	89
9W	1.5V	6A	81%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-04S1V5-R-06	AVN20B	89
10.8W	1.8V	6A	83%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-04S1V8	AVN20B	89
10.8W	1.8V	6A	83%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-04S1V8-06	AVN20B	89
10.8W	1.8V	6A	83%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-04S1V8-E-06	AVN20B	89
10.8W	1.8V	6A	83%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-04S1V8-R-06	AVN20B	89
12.6W	2.1V	6A	86%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-04S2V1	AVN20B	89
12.6W	2.1V	6A	86%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-04S2V1-06	AVN20B	89
12.6W	2.1V	6A	86%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-04S2V1-E-06	AVN20B	89
12.6W	2.1V	6A	86%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-04S2V1-R-06	AVN20B	89

### 5V Norminal Input voltage

Power	Vout	Current	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Product Code	Family	Page
5W	2.5V	6A	88%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-05S2V5	AVN20B	89
15W	2.5V	6A	88%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-05S2V5-06	AVN20B	89
15W	2.5V	6A	88%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-05S2V5-E-06	AVN20B	89
15W	2.5V	6A	88%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-05S2V5-R-06	AVN20B	89
19.8W	3.3V	6A	89%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:5.8mm	AVN20B-05S3V3	AVN20B	89
19.8W	3.3V	6A	89%	2.5"*0.55"	SIP	63.5*8.38*14.0	Pin length:3.8mm	AVN20B-05S3V3-06	AVN20B	89

 . New Products



19.8W	3.3V	6A	89%	2.5"*0.55"	SIP	63.5*8.38*14.0	Basic function/Pin length:3.8mm	AVN20B-05S3V3-E-06	AVN20B	89
19.8W	3.3V	6A	89%	2.5"*0.55"	SIP	63.5*8.38*14.0	Right angle pins/Pin length:3.8mm	AVN20B-05S3V3-R-06	AVN20B	89

## Others

### Ring Generator

Model number	Vin	Power	Out	Efficiency	Package Type	Package Style	L*W*H(mm)	Features	Page
HG3-24RNG	24V	3W	75VAC/40mA, 25Hz	60%	1.96"*2.56"	Screw fasten	65.0*50.0*8.5	Pin length:8.0mm	79
HG3-48RNG	48V	3W	75VAC/40mA, 25Hz	58%	1.96"*2.56"	Screw fasten	65.0*50.0*8.5	Pin length:8.0mm	79
HG30-48RNG	48V	30W	75VAC/400mA, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*12.7	Pin length:6.0mm	83
HG30-48RNGN	48V	30W	75VAC/400mA, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*12.7	Negative logic/Pin length:6.0mm	83
HG40-48RNG	48V	40W	75VAC/530mA, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*12.7	Pin length:5.5mm	85
HG40-48RNG/95	48V	40W	95VAC/420mA, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*16.0	Pin length:7.5mm	85
HG75-48RNG	48V	75W	75VAC/1A, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*16.0	Pin length:7.5mm	87
HG75-48RNG/J	48V	75W	75VAC/1A, 25Hz	85%	3.94"*3.94"	Screw fasten	100.0*100.0*16.0	Pin length:7.5mm	87

HG40-48RNG . New Products

# AV10-S Low Power Series

## 10 Watt Single Output

21

### Features

- Small size and low profile:  
2.0" x 1.0" x 0.35"  
(50.8mm x 25.4mm x 9.0mm)
- Industry standard footprint
- High efficiency: 82%
- 2:1 wide input voltage of 18-36V,  
36-72V
- Isolated output: 3.3V, 5V, 5.2V, 8V,  
12V, 15V, 96V

### Environmental

- Operating case temperature range:  
-25°C to 95°C
- Storage temperature:  
-40°C to 105°C
- MTBF: See Application Manual

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

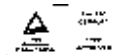
### Electrical Specifications

#### Input

Input Range	18 to 36 Vdc 36 to 72 Vdc
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#### Output

Voltage Setpoint Accuracy	± 1%Vo max. (± 2% Vo for 3.3V Output)
Line Regulation	± 0.2%Vo max.
Load Regulation	± 0.5%Vo max. (± 1% Vo for 3.3V Output)
Ripple and Noise	100mVpp max. (75mVpp max. for 3.3V Output)
Transient Response	5%Vo max. ; recovery <200uSec max. (25% step load change from 50%Io) di / dt :1A / 10µs

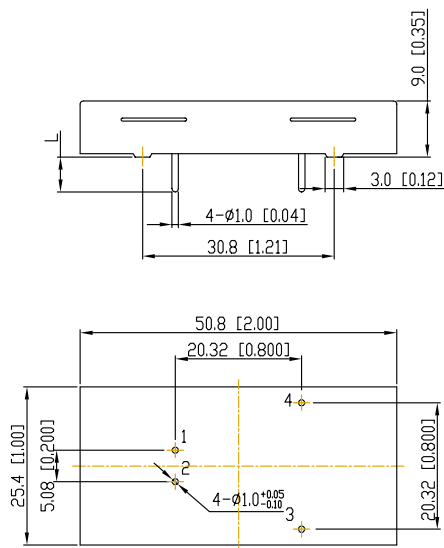


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
24V	3.3V	2.50A	76%	AV10-24S03
24V	5V	2.00A	78%	AV10-24S05
24V	8V	1.20A	82%	AV10-24S08
24V	12V	0.84A	82%	AV10-24S12
24V	15V	0.68A	82%	AV10-24S15
48V	3.3V	2.50A	77%	AV10-48S03
48V	5V	2.00A	80%	AV10-48S05
48V	5.2V	2.00A	77%	AV10-48S5V2
48V	8V	1.20A	82%	AV10-48S08
48V	12V	0.84A	85%	AV10-48S12
48V	15V	0.68A	85%	AV10-48S15
48V	96V	0.1A	85%	AV10-48S96

## Dimensions

Top view



## Pin Assignments

1. -Vin
2. +Vin
3. +Vout
4. -Vout

## Pin Length

6.6mm

Notes: 1. "Top view" means the logo face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AV10-D Low Power Series

## 10 Watt Dual Outputs

23

### Features

- Small size and low profile:  
2.0" x 1.0" x 0.35"  
(50.8mm x 25.4mm x 9.0mm)
- Industry standard footprint
- High efficiency: 82%
- 2:1 wide input voltage of 18-36V,  
36-72V
- Isolated output:  $\pm 5V, \pm 12V, \pm 15V$

### Environmental

- Operating case temperature range:  
-25°C to 95°C
- Storage temperature:  
-40°C to 105°C
- MTBF: See Application Manual

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

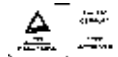
### Electrical Specifications

#### Input

Input Range	18 to 36 Vdc 36 to 72 Vdc
-------------	------------------------------

#### Output

Voltage Setpoint Accuracy	$\pm 1\%V_o$ max. ( $\pm 2\% V_o$ for dual outputs)
Line Regulation	$\pm 0.2\%V_o$ max.
Load Regulation	$\pm 0.5\%V_o$ max.
Ripple and Noise	100mVpp max.
Transient Response	5% $V_o$ max. ; recovery <200uSec max. (25% step load change from 50% $I_o$ ) di / dt :1A / 10 $\mu$ s

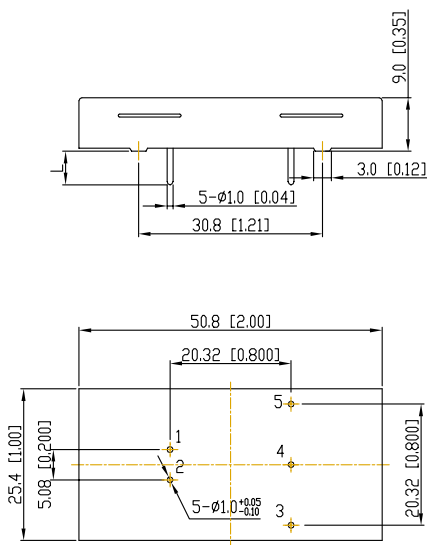


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
24V	± 5V	± 1A	79%	AV10-24D05
24V	± 12V	± 0.42A	83%	AV10-24D12
24V	± 15V	± 0.33A	83%	AV10-24D15
48V	± 5V	± 1A	79%	AV10-48D05
48V	± 12V	± 0.42A	85%	AV10-48D12
48V	± 15V	± 0.33A	83%	AV10-48D15

## Dimensions

Top view



## Pin Assignments

1. -Vin
2. +Vin
3. +Vout
4. Com
5. -Vout

## Pin Length

6.6mm

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# AG15-S High Efficiency Low Power Series

## 15 Watt Single Output

25

### Features

- Small size and low profile:  
2.0" x 1.0" x 0.4"  
(50.8mm x 25.4mm x 10.16mm)
- High efficiency and power density: 87%
- 2:1 wide input voltage of 18-36V,  
36-75V
- Isolated output: 2.5V, 3.3V, 5V, 12V,
- Input LVP, output OVP and OCP
- Remote control and trim function

### Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 1.5 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

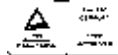
Input Range	18 to 36 Vdc 36 to 75 Vdc
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#### Output

Voltage Setpoint Accuracy	± 50mV for 2.5,3.3,5Vout ± 120mV for 12Vout
Voltage Adjust	90% to 110% Vo
Line Regulation	± 0.2%Vo max.
Load Regulation	± 0.5%Vo max.
Ripple and Noise	100mVpp max. (120mVpp for 12Vout)
Transient Response	5%Vo max. ; recovery < 200uSec max. (25% step load change from 50%Io) di / dt :1A / 10μs

#### Control

Control Voltage	
Positive logic	
High=on	3.5 to 10 Vdc
Low=off	-0.7 to 1.2 Vdc
Negative logic	
Low=on	-0.7 to 1.2 Vdc
High=off	3.5 to 10 Vdc
Control Current	2 mA max.



## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
24V	3.3V	4.5A	84%	AG15-24S03
48V	2.5V	4.5A	81%	AG15-48S2V5
48V	3.3V	4.5A	85%	AG15-48S03
48V	5V	3A	87%	AG15-48S05
48V	12V	1.25A	87%	AG15-48S12

### Suffix with:

/T 10% trim

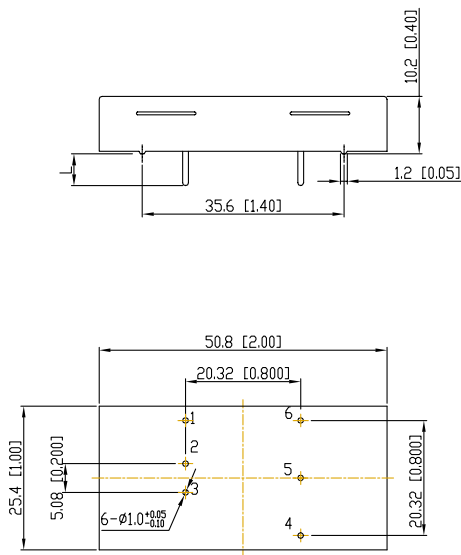
/N Control pin option with negative logic  
(low = on, open/high = off).

/P Control pin option with positive logic  
(open/high = on, low = off).

The trim and control pins are not present if the trim and control options are not selected.

## Dimensions

### Top view



## Pin Assignments

1. CNT
2. -Vin
3. +Vin
4. +Vout
5. Trim
6. -Vout

## Pin Length

Long pin = 5.6 mm /L  
Short pin = 2.8 mm /S

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AG15-D High Efficiency Low Power Series 15 Watt Dual Outputs

27

## Features

- Small size and low profile:  
2.0" x 1.0" x 0.4"  
(50.8mm x 25.4mm x 10.16mm)
- High efficiency and power density: 86%
- 2:1 wide input voltage of 36-75V
- Isolated output:  $\pm 12V$
- Input LVP, output OVP and OCP
- Remote control function

## Environmental

- Operating case temperature range:  
 $-40^{\circ}C$  to  $100^{\circ}C$
- Storage temperature:  
 $-55^{\circ}C$  to  $125^{\circ}C$
- MTBF: > 2.2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max.(+12V output)  
 $\pm 5\%V_o$  max.(-12V output)

Line Regulation  $\pm 0.2\%V_o$  max.(+12V output)  
 $\pm 2\%V_o$  max.(-12V output)

Load Regulation  $\pm 0.5\%V_o$  max.(+12V output)  
 $\pm 10\%V_o$  max.(-12V output)

Ripple and Noise 120mVpp max.

Transient Response 5% $V_o$  max. ;  
recovery <200uSec max.  
(25% step load change from 50% $I_o$ )  
di / dt :1A / 10 $\mu$ s

### Control

Control Voltage

Positive logic

High=on 3.5 to 10 Vdc

Low=off -0.7 to 1.2 Vdc

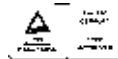
Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 10 Vdc

Control Current

1.5 mA max.



## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	± 12V	± 0.63A	86%	AG15-48D12

**Suffix with:**

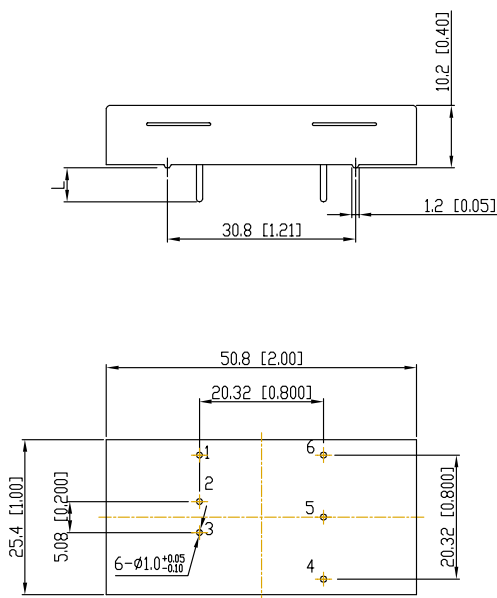
/N Control pin option with negative logic (low = on, open/high = off).

/P Control pin option with positive logic (open/high = on, low = off).

The control pins are not present if the control options are not selected.

## Dimensions

**Top view**



### Pin Assignments

1. CNT
2. -Vin
3. +Vin
4. +Vout
5. Com
6. -Vout

### Pin Length

Long pin = 5.6 mm /L  
 Short pin = 2.8 mm /S

Notes: 1. "Top view" means the logo face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AG15B-S High Efficiency Low Power Series

## 15 Watt Single Output

29

### Features

- Small size and low profile:  
2.0" x 1.0" x 0.4"  
(50.8mm x 25.4mm x 10.16mm)
- High efficiency and power density: 85%  
(@5Vout)
- 2:1 wide input voltage of 36-75V
- Isolated output: 3.3V, 5V
- Input LVP, output OVP and OCP
- Remote control and trim function

### Environmental

- Operating case temperature range:  
-40°C to 65°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2.0 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 60\text{mV}$  for 3.3Vout  
 $\pm 50\text{mV}$  for 5Vout

Voltage Adjust 90% to 110%Vout

Line Regulation  $\pm 10\text{mV}$  max.

Load Regulation  $\pm 25\text{mV}$  max.

Ripple and Noise 100mVpp max.

Transient Response 5%Vo max. ;  
recovery <200uSec max.  
(25%-50%-25%Io)  
di / dt :1A / 10 $\mu\text{s}$

#### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 12 Vdc

Control Current

1.5 mA max.



## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	4.5A	84%	AG15B-48S03
48V	5V	3A	85%	AG15B-48S05

### Suffix with:

/T 10% trim

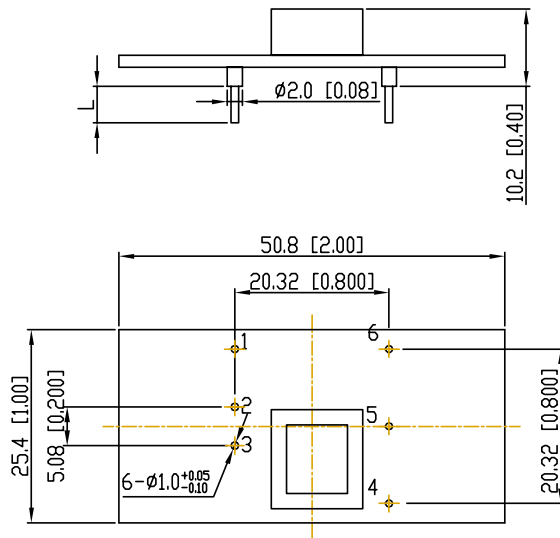
/N Control pin option with negative logic  
(low = on, open/high = off).

/P Control pin option with positive logic  
(open/high = on, low = off).

The trim and control pins are not present if the trim and control options are not selected.

## Dimensions

### Top view



### Pin Assignments

1. CNT
2. -Vin
3. +Vin
4. +Vout
5. Trim
6. -Vout

### Pin Length

- |       |       |
|-------|-------|
| 4.8mm | -4    |
| 3.8mm | -6    |
| 2.8mm | -8    |
| 5.8mm | -None |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AG25-S High Efficiency Low Power Series

## 25 Watt Single Output

### Features

- Small size and low profile:  
2" x1.6" x0.38"  
(50.8mm x 40.6mm x 9.66mm)
- Industry standard footprint and open frame
- High efficiency and power density: 87%
- 2:1 wide input voltage of 18-36V,36-75V
- Isolated output: 3.3V,5V,8V,12V,15V
- Remote control and trim function
- Input under-voltage shutdown
- Output OVP and OCP protection

### Environmental

- Board temperature range:  
-40°C to 100°C
- Operating Ambient temperature range:  
-40°C to 55°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2.0 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

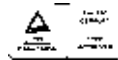
Input Range	18 to 36 Vdc 36 to 75 Vdc
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#### Output

Voltage Setpoint Accuracy	± 1%Vo max.
Voltage Adjust	90% to 110% Vo
Line Regulation	± 0.2%Vo max.
Load Regulation	± 0.5%Vo max.
Ripple and Noise	75mVpp max. for 3.3 or 5Vout 90mVpp max. for 8Vout 150mVpp max. for 12 or 15Vout
Transient Response	3%Vo max. ; recovery <200uSec max. (25% step load change from 50%Io) di / dt :1A / 10µs

#### Control

Control Voltage	
Positive logic	
High=on	3.5 to 12 Vdc
Low=off	-0.7 to 0.8 Vdc
Negative logic	
Low=on	-0.7 to 0.8 Vdc
High=off	3.5 to 12 Vdc
Control Current	2 mA max.

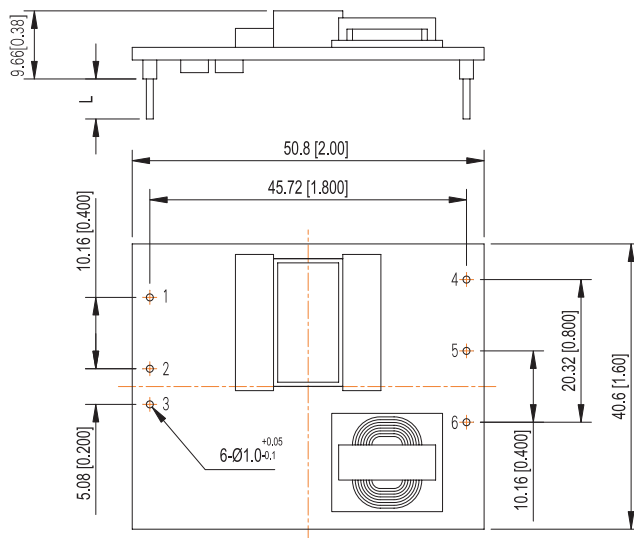


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
24V	3.3V	6A	83%	AG25-24S03
24V	5V	5A	85%	AG25-24S05
48V	3.3V	6A	85%	AG25-48S03
48V	5V	5A	87%	AG25-48S05
48V	8V	3.2A	85%	AG25-48S08
48V	12V	2.1A	87%	AG25-48S12
48V	15V	1.67A	87%	AG25-48S15

## Dimensions

Top view



## Pin Assignments

1. CNT
2. -Vin
3. +Vin
4. Trim
5. -Vo
6. +Vo

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# AG25-D High Efficiency Low Power Series 30 Watt Dual Outputs

## Features

- Small size and low profile:  
2" x1.6" x0.38"  
(50.8mm x 40.6mm x 9.66mm)
- Industry standard footprint  
and open frame
- High efficiency and power density: 87%
- 2:1 wide input voltage of 36-75V
- Isolated output:  $\pm 5V$ ,  $\pm 12V$ ,  $\pm 15V$
- Remote control and trim function
- Input under-voltage shutdown
- Output OVP and OCP protection

## Environmental

- Board temperature range:  
-40°C to 100°C
- Operating case temperature range:  
-40°C to 55°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2.0 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max.

Voltage Adjust 90% to 110%  $V_o$

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp max.

Transient Response 3% $V_o$  max. ;  
recovery <200uSec max.

(25% step load change from 50% $I_o$ )  
di / dt :1A / 10 $\mu$ s

### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

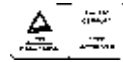
Low=off -0.7 to 0.8 Vdc

Negative logic

Low=on -0.7 to 0.8 Vdc

High=off 3.5 to 12 Vdc

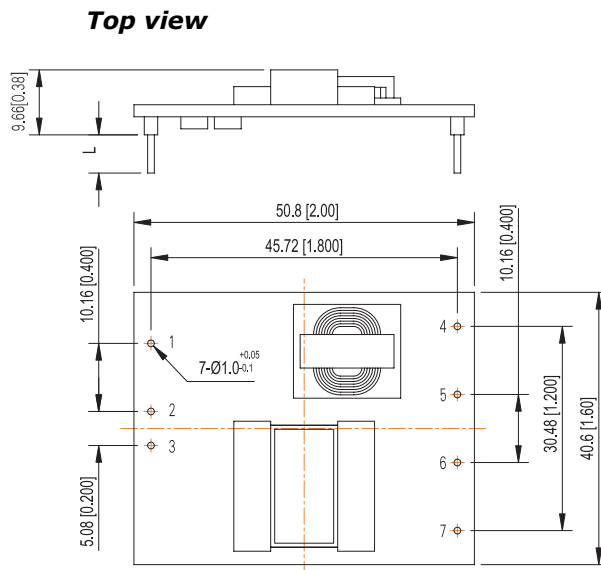
Control Current 2 mA max.



## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	± 5V	3.0A	84%	AG25-48D05
48V	± 12V	1.25A	87%	AG25-48D12
48V	± 15V	1.0A	87%	AG25-48D15

## Dimensions



### Pin Assignments

1. CNT
2. -Vin
3. +Vin
4. Trim
5. -Vo
6. COM
7. +Vo

### Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ30B-D Quarter Brick Series

## 48V Input, Dual Outputs

### Features

- Standard Quarter Brick:  
2.28" x1.45" x 0.43"  
(36.8mm x 57.9mm x10.9mm)
- 2:1 input voltage: 36-75V
- Output power: 30W
- Isolated dual output: 3.3V/1.5V, 3.3V/1.2V
- High efficiency: 84%
- Remote Control, Trim Function
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection
- Basic Isolation

### Environmental

- Operating temperature range:  
-40°C to 60°C
- Over Temperature Protection:  
101°C to 115°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 1.8 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy 50mV max. for 3.3Vout  
20mV max. for 1.5V,1.2Vout

Voltage Adjust 80% to 110% Vo  
only for second output(1.5V/1.2V)

Line Regulation 8mV max. for 3.3Vout  
5mV max. for 1.5V,1.2Vout

Load Regulation 20mV max. for 3.3Vout  
20mV max. for, 1.5V,1.2Vout

Ripple and Noise 50mVpp max.

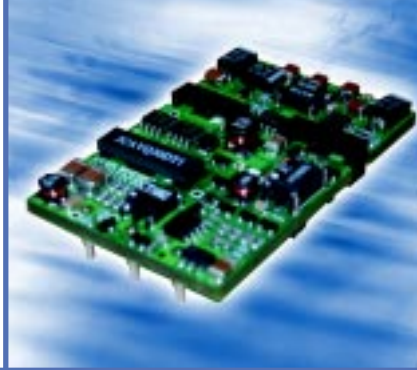
Transient Response 5%Vo max. ;  
recovery <200uSec max.  
(25% step load change from 50%Io)  
di/dt:1A/μs

#### Control

Control Voltage  
Positive logic  
High=on 3.5 to 12 Vdc  
Low=off -0.7 to 1.8 Vdc

Negative logic  
Low=on -0.7 to 1.8 Vdc  
High=off 3.5 to 12 Vdc

Control Current 2 mA max.



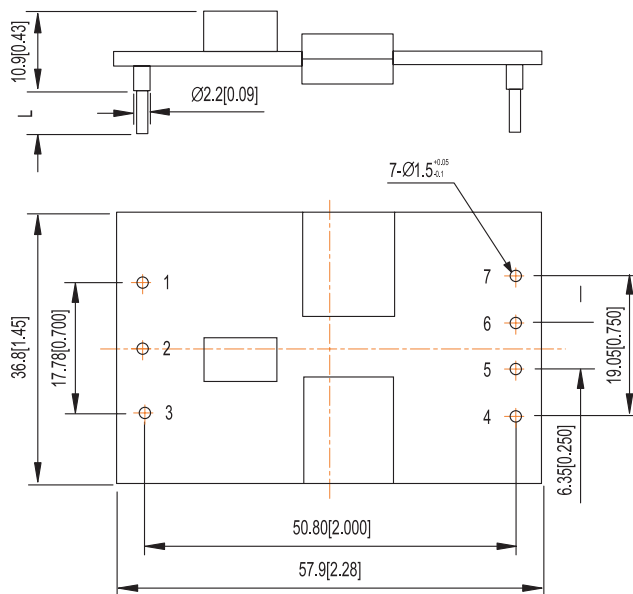
## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	6A	84%	AVQ30B-48D3312
	1.2V	7A		
48V	3.3V	6A	84%	AVQ30B-48D3315
	1.5V	7A		

36

## Dimensions

### Top view



### Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. +Vo2 (1.8/1.5/1.2V)
5. COM
6. Trim
7. +Vo1 (3.3V)

### Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ50/75-D 1/4 Brick Series

## 50-75W Watt Dual Outputs

### Features

- Standard quarter brick:  
2.3" x 1.45" x 0.5"  
(58.4mm x 36.8mm x 12.7mm)
- 2:1 Input voltage: 36-75V
- Isolated output: 3.3V/1.5V (1.8V/1.2V)
- High efficiency: 88%
- 1V2/1V5/1V8 output can be trimmed
- Remote control, trim function

### Environmental

- Operating case temperature range:  
-25°C to 100°C
- Storage temperature:  
-55°C to 120°C
- Over Temperature Protection:  
101°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max  
Voltage Adjust 80% to 110%  $V_o$   
Line Regulation 0.5% $V_{o1}$  max.

0.5% $V_{o2}$  max.  
Load Regulation 1.5% $V_{o1}$  max.  
1.5% $V_{o2}$  max.

Ripple and Noise 50mVpp

Transient Response 5% $V_o$  max. ;  
recovery <200uSec max.

(25% step load change from 50% $I_o$ )  
di/dt:1A/ $\mu$ s

#### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

Low=off 0 to 1.2 Vdc

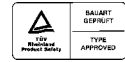
Negative logic

Low=on 0 to 1.2 Vdc

High=off 3.5 to 12 Vdc

Control Current

2.0 mA max.

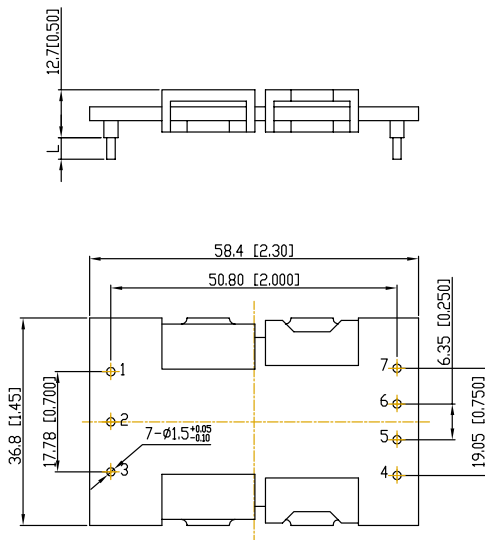


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	8A	87%	AVQ50-48D3312
	1.2V	13A		
48V	3.3V	8A	88%	AVQ50-48D3315
	1.5V	12A		
48V	3.3V	10A	88%	AVQ50-48D3318
	1.8V	10A		
48V	3.3V	15A	89%	AVQ75-48D3315
	1.5V	15A		

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. +Vout2
5. COM
6. Trim
7. +Vout1

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ50-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard quarter brick(open frame/baseplate):  
1.45" x 2.28" x 0.35"/0.45"  
(36.8mm x 57.9mm x 9.0mm/11.5mm)
- 2:1 input voltage: 36-75V
- Output power: 14.4W-50W
- Isolated output: 1.2V,1.5V, 1.8V, 3.3V, 8V
- Super high efficiency: 90% (@8Vout)
- Remote control, trim, sense function
- Basic Isolation

### Environmental

- Operating Ambient Temperature Range:  
-40°C to 55°C
- Over Temperature Protection:  
101°C to 120°C (Board)
- Storage Temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

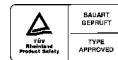
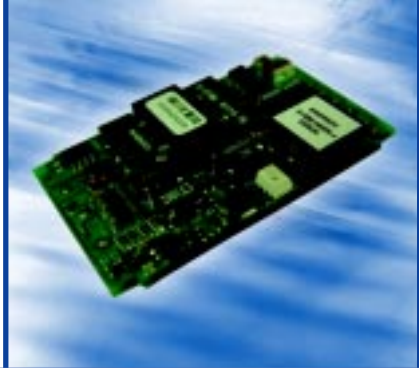
Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy	± 100mV max. for 8Vout ± 50mV max. for 5V,3.3Vout ± 30mV max. for 1.8Vout ± 20mV max. for 1.2Vout
Voltage Adjust	80% to 110% Vo
Line Regulation	± 0.2%Vo
Load Regulation	± 20mv max. for 8Vo,3.3Vo ± 10mv max. for 1.8Vo,1.5Vo,1.2Vo
Ripple and Noise	150mVpp max. for 5V,8Vout 120mVpp max. for 3.3Vout 100mVpp max. for 1.8V,1.5Vout 80mVpp max. for 1.2Vout
Transient Response	5%Vo max. ; recovery <200uSec max. (25% step load change from 50%Io) di/dt : 1A/10µs 200mV max. ; recovery <200uSec max. (25% step load change from 50%Io) di/dt : 1A/µs,only for≤ 3.3Vout.

#### control

Control Voltage	
Positive logic	
High=on	3.5 to 12 Vdc
Low=off	-0.7 to 1.2 Vdc
Negative logic	
Low=on	-0.7 to 1.2 Vdc
High=off	3.5 to 12 Vdc
Control Current	1 mA max.



## Ordering Information

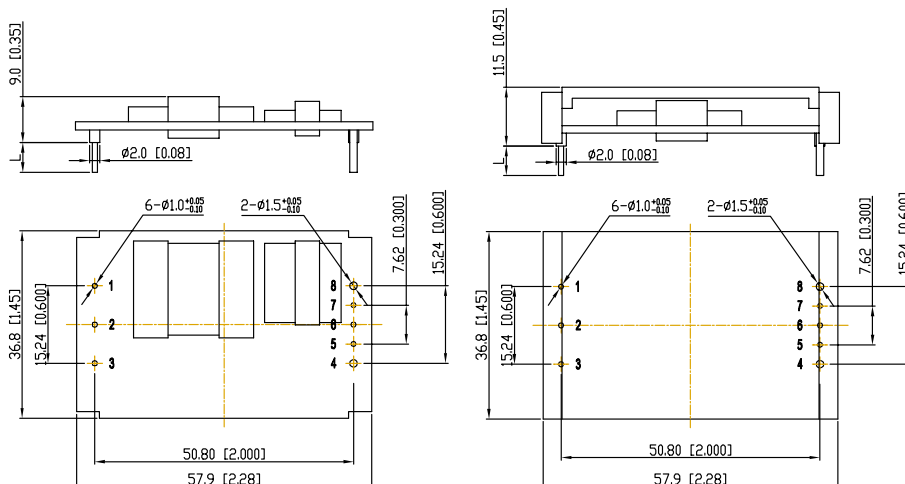
Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.2V	12A	80%	AVQ50-48S1V2
48V	1.5V	12A	82%	AVQ50-48S1V5
48V	1.8V	12A	84%	AVQ50-48S1V8
48V	3.3V	12A	88%	AVQ50-48S3V3
48V	8V	6.3A	90%	AVQ50-48S08

### Suffix with:

- B: with baseplate omitting is open frame
- N: negative logic(low = on, open/high = off),omitting is neagtive logic
- P: positive logic(low = on, open/high = off).

## Dimensions

### Top view



## Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. -Vout
5. -Sense
6. Trim
7. +Sense
8. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# AVQ65-48D12 1/4 Brick 65W Dual Output

## Features

- 65 watts of output power
- Standard half brick 2.28" x 1.45" x 0.4"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection
- Basic Isolation

## Environmental

- Operating case temperature range:  
-25°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 120°C
- MTBF: > 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy 12~12.2V

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp max.

Transient Response 300mV max. ;  
recovery <300uSec max.

(25% step load change from 50%Io)  
di/dt: 0.1A/ $\mu$ s

### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

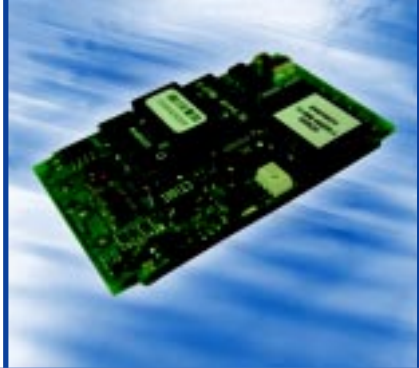
Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 12 Vdc

High=off 3.5 to 12 Vdc

Control Current 2 mA max.

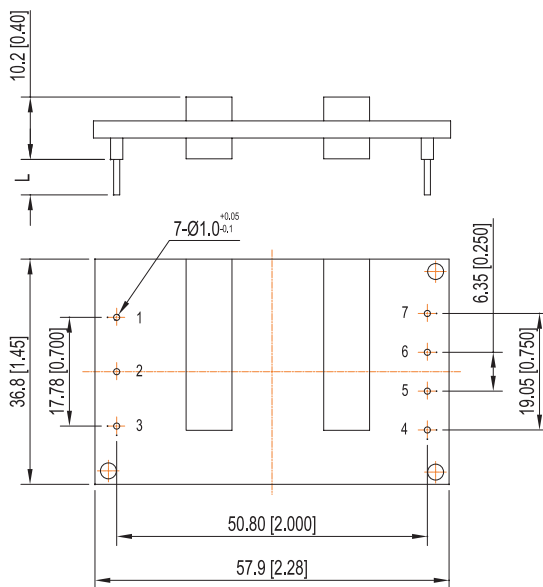


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	± 12V	2.7A	89%	AVQ65-48D12-6

## Dimensions

Top view



### Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. -Vout
5. COM
6. Trim
7. +Vout

### Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ75-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard quarter brick(open frame/baseplate):  
1.45" x 2.28" x 0.35"/0.45"  
(36.8mm x 57.9mm x 9.0mm/11.5mm)
- 2:1 input voltage: 36-75V
- Output power: 49.5W
- Isolated output: 3.3V
- Super high efficiency: 88.5%
- Remote control, trim, sense function
- Basic Isolation

### Environmental

- Operating temperature range:  
-40°C to 70°C
- Over Temperature Protection:  
105°C to 125°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy ± 50mV max. for 3.3V  
 Voltage Adjust 80% to 110% Vo  
 Line Regulation 5mV  
 Load Regulation 5mV  
 Ripple and Noise 100mVpp max. for 3.3Vout  
 Transient Response 90mV typ ;  
 (25% step load change from 50%Io) overy < 70Sec typ.  
 di/dt : 1A/10µs 150mV typ ;

#### control

Control Voltage  
 Positive logic  
     High=on 3.5 to 12 Vdc  
     Low=off -0.7 to 0.8 Vdc  
 Negative logic  
     Low=on -0.7 to 0.8 Vdc  
     High=off 3.5 to 12 Vdc  
 Control Current 1 mA max.



## Ordering Information

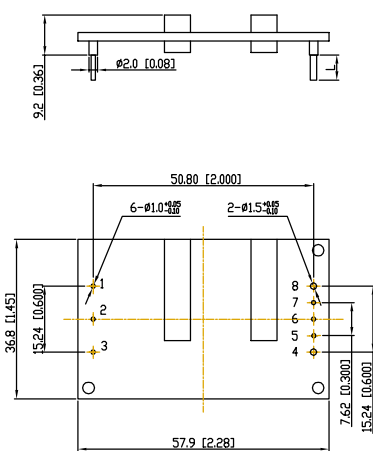
Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	15A	88.5%	AVQ75-48S3V3

### Suffix with:

- B: with baseplate omitting is open frame
- N: negative logic(low = on, open/high = off),omitting is negative logic
- P: positive logic(low = on, open/high = off).

## Dimensions

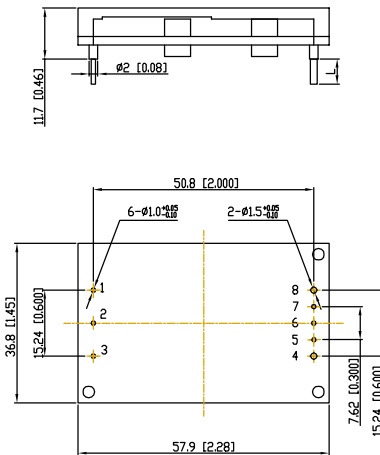
Top view



### Pin Assignments

- |          |           |
|----------|-----------|
| 1. +Vin  | 5. -Sense |
| 2. CNT   | 6. Trim   |
| 3. -Vin  | 7. +Sense |
| 4. -Vout | 8. +Vout  |

Top view



### Pin Length

- |       |      |
|-------|------|
| 4.8mm | -4   |
| 3.8mm | -6   |
| 2.8mm | -8   |
| 5.8mm | None |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ100-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard quarter brick:  
1.45" x 2.28" x 0.50"  
(36.8mm x 57.9mm x 12.7mm)
- 2:1 input voltage: 36-75V
- Output power: 30W-100W
- Isolated output: 1.5V, 1.8V, 3.3V, 5V
- Super high efficiency: 90% (@5Vout)
- Remote control, trim, sense function

### Environmental

- Wide case temperature range:  
-40°C to 100°C (Baseplate)
- Over Temperature Protection:  
100°C to 120°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

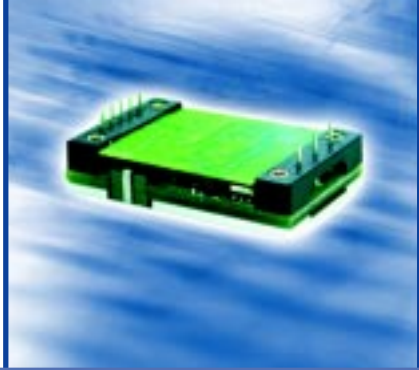
Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy 2%Vo max.  
 Voltage Adjust 80% to 110% Vo  
 Line Regulation  $\pm 0.2\%Vo$  max.  
 Load Regulation  $\pm 0.5\%Vo$  max.  
 Ripple and Noise 200mVpp  
 (150mVpp max.for 1.8,1.5Vout)  
 Transient Response 2%Vo typ  
 100 $\mu$ s typ  
 (25% step load change from 50%Io)  
 di/dt : 1A/10 $\mu$ s

#### control

Control Voltage  
 Positive logic  
 High=on 3.5 to 15 Vdc  
 Low=off -0.7 to 1.8 Vdc  
 Negative logic  
 Low=on -0.7 to 1.8 Vdc  
 High=off 3.5 to 15 Vdc  
 Control Current 2 mA max.

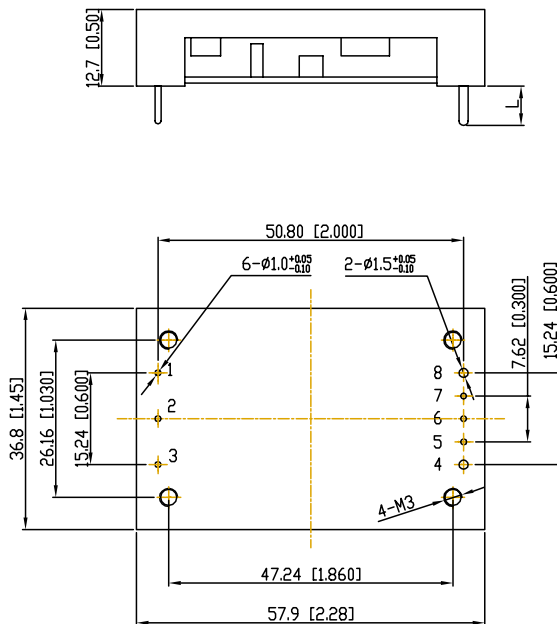


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.5V	20A	85%	AVQ100-48S1V5
48V	1.8V	20A	85%	AVQ100-48S1V8
48V	3.3V	20A	89%	AVQ100-48S3V3
48V	5V	20A	90%	AVQ100-48S05

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. -Vout
5. -Sense
6. Trim
7. +Sense
8. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVQ200-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard Quarter Brick :  
2.28" x 1.45" x 0.38" mm<sup>3</sup>
- Ultra High Efficiency
- Delivers up to 40A output current
- Basic Isolation
- Remote Control
- Trim Function
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating board temperature :  
-40°C to 100°C
- Over Temperature Protection:  
110°C (TYP)
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy ± 50mV max. for 3.3Vout  
± 40mV max. for 2.5Vout  
± 30mV max. for 1.8Vout  
± 20mV max. for 1.5V,1.2Vout

Voltage Adjust 80% to 110% Vo

Line Regulation 8mV max. for 3.3V,2.5V Vout

Load Regulation 5mV max.for 3.8V,1.5V,1.2V Vout  
15mV max.for 3.3V,2.5V Vout  
10mV max.for 1.8V,1.5V,1.2V Vout

Ripple and Noise (Peak-to-Peak) 120mVpp max. for 3.3Vout  
100mVpp max .for 2.5V,1.8V,1.5Vout  
80mVpp max. for 1.2Vout

#### Transient Response

(25% step load change from 50% Io)

di/dt:1A/10μs	5%Vo max. for 3.3V,2.5V,1.8V Vout 6%Vomax.for 1.5V,1.2V Vout recovery <400uSec max.
di/dt:1A/μs	200mV max. ; (180mV max.for 1.2V Vout) recovery <400uSec max.

#### Control

Control Voltage

Positive logic  
High=on 3.5 to 12 Vdc  
Low=off -0.7 to 1.2 Vdc

Negative logic  
Low=on -0.7 to 1.2 Vdc  
High=off 3.5 to 12 Vdc

Control Current 1 mA max.

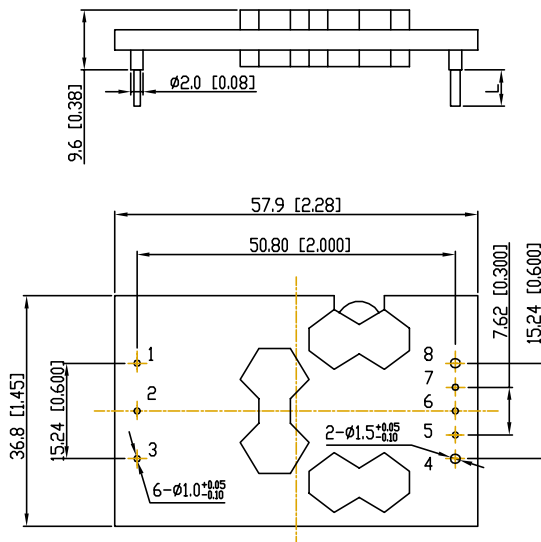


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.2V	40A	85%	AVQ200-48S1V2
48V	1.5V	40A	86%	AVQ200-48S1V5
48V	1.8V	40A	87%	AVQ200-48S1V8
48V	2.5V	40A	88.5%	AVQ200-48S2V5
48V	3.3V	35A	90%	AVQ200-48S3V3

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. -Vout
5. -Sense
6. Trim
7. +Sense
8. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# AGQ100-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard quarter brick(open frame/baseplate):  
1.45" x 2.28" x 0.4"/0.5"  
(36.8mm x 57.9mm x 10.2mm/12.7mm)
- 2:1 input voltage: 36-75V
- Output power: 14.4W-100W
- Isolated output: 2.5V, 3.3V, 5V, 12V
- Super high efficiency: 90%
- Remote control, trim, sense function
- Basic Isolation

### Environmental

- Operating temperature range:  
-40°C to 70°C
- Over Temperature Protection:  
106°C to 125°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy	± 40mV max. for 2.5Vout ± 50mV max. for 5V, 3.3Vout ± 50mV max. for 5Vout ± 120mV max. for 12Vout
Voltage Adjust	80% to 110% Vo
Line Regulation	12V:12mV;5V-2.5V:5mV
Load Regulation	12V:25mV;5V-2.5V:10mV
Ripple and Noise	180mVpp max. for 12V 120mVpp max. for 5V 100mVpp max. for 3.3V,2.5V
Transient Response	4%Vo max. ; (25% step load change from 50%Io)
di/dt : 1A/μs	recovery < 400uSec max.for 5V-2.5V < 700uSec max.for 12V 200mV max.for 3.3V,2.5V
di/dt : 1A/μs	recovery < 400uSec max.for 3.3V,2.5V

#### control

Control Voltage	
Positive logic	
High=on	3.5 to 12 Vdc
Low=off	-0.7 to 0.8 Vdc
Negative logic	
Low=on	-0.7 to 0.8 Vdc
High=off	3.5 to 12 Vdc
Control Current	1 mA max.



## Ordering Information

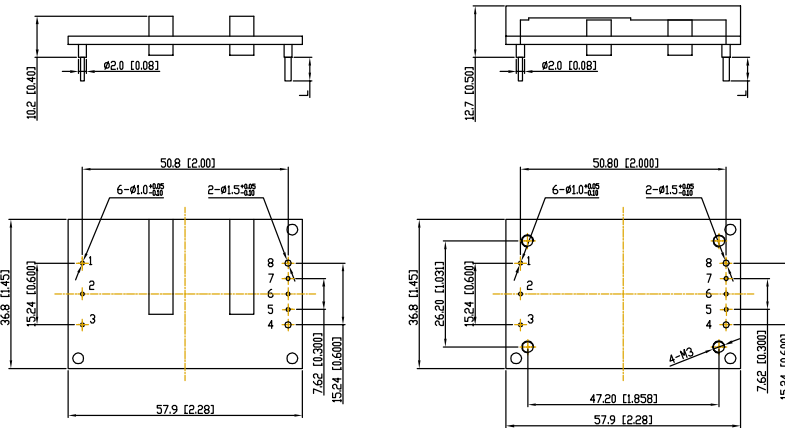
Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	2.5V	25A	88%	AGQ100-48S2V5
48V	3.3V	25A	89.5%	AGQ100-48S3V3
48V	5V	20A	90%	AGQ100-48S05
48V	12V	8.33A	90%	AGQ100-48S12

### Suffix with:

- B: with baseplate omitting is open frame
- N: negative logic(low = on, open/high = off),omitting is negative logic
- P: positive logic(low = on, open/high = off).

## Dimensions

### Top view



Notes:M3 hole is only for 3.3V,5V

### Pin Assignments

- |          |           |
|----------|-----------|
| 1. +Vin  | 5. -Sense |
| 2. CNT   | 6. Trim   |
| 3. -Vin  | 7. +Sense |
| 4. -Vout | 8. +Vout  |

### Pin Length

- |       |      |
|-------|------|
| 4.8mm | -4   |
| 3.8mm | -6   |
| 2.8mm | -8   |
| 5.8mm | None |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AGQ200/300-S Quarter Brick Series

## 48V Input, Single Output

### Features

- Standard Quarter Brick :  
2.28" x 1.45" x 0.38" mm<sup>3</sup>
- Ultra High Efficiency
- Delivers up to 60A output current
- Basic Isolation
- Remote Control
- Trim Function
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating board temperature :  
-40°C to 100°C
- Over Temperature Protection:  
110°C (TYP)
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy	± 50mV max. for 3.3Vout ± 20mV max. for 1.5Vout
Voltage Adjust	80% to 110% Vo
Line Regulation	10mV
Load Regulation	10mV
Ripple and Noise (Peak-to-Peak)	120mVpp max. for 3.3Vout 100mVpp max .for 2.5V,1.8V,1.5Vout
Transient Response (25% step load change from 50% Io)	
di/dt:1A/10μs	90mV max. for 1.5V 120mV max. for 3.3V recovery <300uSec max.
di/dt:1A/μs	180mV max. for 3.3V 150mV max. for 1.5V recovery <400uSec max.

#### Control

Control Voltage	
Positive logic	
High=on	3.5 to 12 Vdc
Low=off	-0.7 to 1.2 Vdc
Negative logic	
Low=on	-0.7 to 1.2 Vdc
High=off	3.5 to 12 Vdc
Control Current	1 mA max.

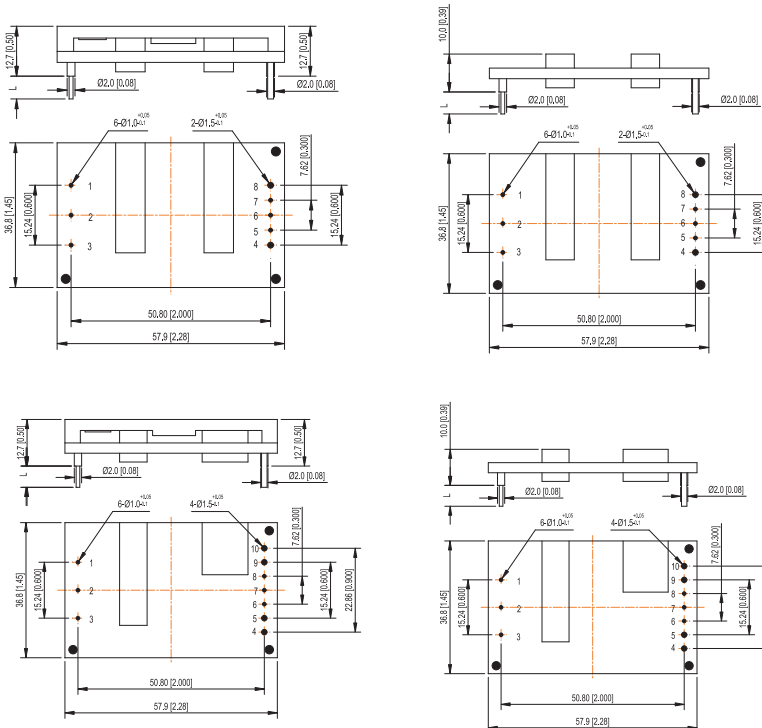


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.5V	60A	88%	AGQ300-48S1V5
48V	3.3V	40A	91.5%	AGQ200-48S3V3

## Dimensions

Top view



### 3.3V Pin Assignments

- |         |           |
|---------|-----------|
| 1. +Vin | 5. -Sense |
| 2. CNT  | 6. Trim   |
| 3. -Vin | 7. +Sense |
| 4. -Vo  | 8. +Vo    |

### 1.5V Pin Assignments

- |         |           |
|---------|-----------|
| 1. +Vin | 6. -Sense |
| 2. CNT  | 7. Trim   |
| 3. -Vin | 8. +Sense |
| 4. +Vo  | 9. +Vo    |
| 5. -Vo  | 10. -Vo   |

Notes: 1. "Top view" means the logo face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVO50/75-S Eighth Brick Series

## 48V Input, Single Output

### Features

- Standard Eighth Brick :  
2.28" x 0.9" x 0.36" mm<sup>3</sup>
- Ultra High Efficiency
- Delivers up to 25A output current
- Basic Isolation
- Remote Control
- Trim Function
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating Ambient temperature :  
-40°C to 85°C
- Over Temperature Protection:  
110°C (TYP)
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2.5 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 150\text{mV}$  max. for 12V  
 $\pm 50\text{mV}$  max. for 3.3V,5V  
 $\pm 40\text{mV}$  max. for 2.5V  
 $\pm 30\text{mV}$  max. for 1.8V  
 $\pm 20\text{mV}$  max. for 1.5V,1.2V

Voltage Adjust 12V:90% to 110% Vo;5V-1.2V:80% to 110%Vo

Line Regulation 12V:20mV;5V:10mV;3.3V,2.5V:8mV;  
1.8V,1.5V,1.2V:5mV

Load Regulation 12V:30mV;5V:20mV;3.3V,2.5V:15mV;  
1.8V,1.5V,1.2V:10mV

Ripple and Noise (Peak-to-Peak) 100mVpp max. for 3.3V  
90mVpp max. for 2.5V,1.8V,1.5V  
80mVpp max. for 1.2V  
180mVpp max. for 12V  
120mVpp max. for 5V

#### Transient Response

(25% step load change from 50% Io)

di/dt:1A/10 $\mu$ s 400mV max. for 12V  
200mV max. for 5V  
150mV max. for 3.3V  
120mV max. for 2.5V  
90mV max. for 1.8V,1.5V  
80mV max. for 1.2V  
recovery <400uSec max.

di/dt:1A/ $\mu$ s 600mV max. for 12V  
250mV max. for 5V  
180mV max. for 3.3V,2.5V  
140mV max. for 1.8V,1.5V,1.2V  
recovery <400uSec max.

#### Control

Control Voltage Positive logic  
High=on 3.5 to 12 Vdc  
Low=off -0.7 to 1.2 Vdc

Negative logic  
Low=on -0.7 to 1.2 Vdc  
High=off 3.5 to 12 Vdc

Control Current 1 mA max.



## Ordering Information

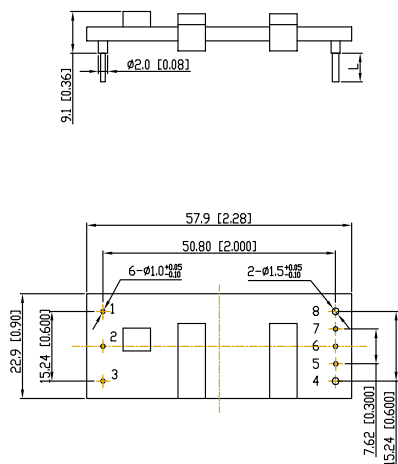
Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.2V	20A	87%	AV050-48S1V2
48V	1.5V	20A	89%	AV050-48S1V5
48V	1.8V	20A	89.5%	AV050-48S1V8
48V	2.5V	20A	90.5%	AV050-48S2V5
48V	3.3V	15A	92%	AV050-48S3V3
48V	5.0V	10A	90%	AV050-48S05
48V	12V	4.2A	89%	AV050-48S12
48V	1.2V	25A	86%	AV075-48S1V2
48V	1.5V	25A	88%	AV075-48S1V5
48V	1.8V	25A	89%	AV075-48S1V8
48V	2.5V	25A	90%	AV075-48S2V5
48V	3.3V	20A	91%	AV075-48S3V3
48V	5.0V	15A	91%	AV075-48S05
48V	12V	6.3A	91%	AV075-48S12

### Suffix with:

- N: negative logic(low = on, open/high = off),omitting is negative logic
- P: positive logic(low = on, open/high = off).

## Dimensions

### Top view



Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

## Pin Assignments

- +Vin
- CNT
- Vin
- Vout
- Sense
- Trim
- +Sense
- +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

# AVO100-S Eighth Brick Series

## 48V Input, Single Output

### Features

- Standard Eighth Brick :  
2.28" x 0.9" x 0.35" mm<sup>3</sup>
- Ultra High Efficiency
- Delivers up to 30A output current
- Basic Isolation
- Remote Control
- Trim Function
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating Ambient temperature :  
-40°C to 85°C
- Over Temperature Protection:  
110°C (TYP)
- Storage temperature:  
-55°C to 125°C
- MTBF: > 2.5 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy	± 50mV max. for 3.3Vout
Voltage Adjust	80% to 110% Vo
Line Regulation	3.3V:8mV
Load Regulation	3.3V:15mV
Ripple and Noise (Peak-to-Peak)	100mVpp max. for 3.3Vout
Transient Response (25% step load change from 50% Io)	
di/dt:1A/10µs	150mV max.for 3.3V recovery <400uSec max.
di/dt:1A/µs	19mV max. for 3.3V recovery <400uSec max.

#### Control

Control Voltage	
Positive logic	
High=on	3.5 to 12 Vdc
Low=off	-0.7 to 1.2 Vdc
Negative logic	
Low=on	-0.7 to 1.2 Vdc
High=off	3.5 to 12 Vdc
Control Current	1 mA max.



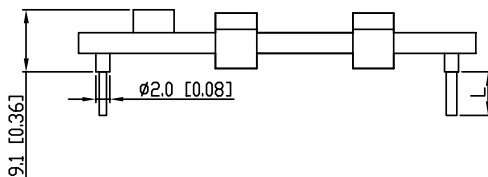
## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	30A	91%	AV0100-48S3V3

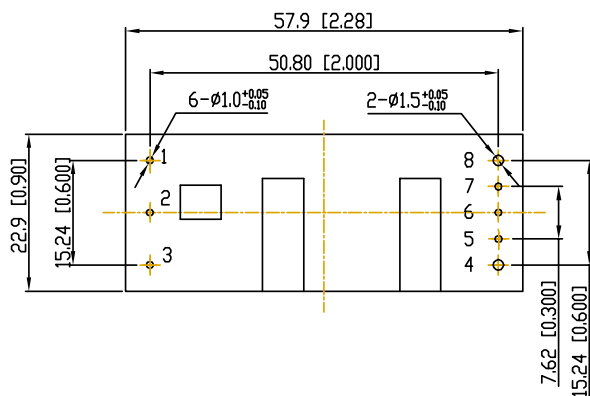
### Suffix with:

- N: negative logic(low = on, open/high = off),omitting is negative logic
- P: positive logic(low = on, open/high = off).

## Dimensions



### Top view



## Pin Assignments

1. +Vin
2. CNT
3. -Vin
4. -Vout
5. -Sense
6. Trim
7. +Sense
8. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# AVH30-S Half Brick Series

## 30 Watt Single Output

### Features

- Half brick size package:  
2.4" x 2.28" x 0.50"  
(61.0mm x 57.9mm x 12.7mm)
- Industry standard footprint and pin-out
- High efficiency: 87% @5V output
- wide input voltage: 36-75V
- Isolated output: 3.3V, 5V
- Remote control (positive or negative logic), remote sense
- Adjustable output voltage: 80%-110%Vo

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy 50mV max.

Voltage Adjust 80% to 110% Vo

Line Regulation 0.2%Vo max.

Load Regulation 0.5%Vo max.

Ripple and Noise 150mVpp max.

Transient Response 5%Vo max.

recovery <500uSec max.

(25% step load change from 50%Io)

di / dt :1A / 10μs

#### Control

Control Voltage

Logic High 3.5 to 6 Vdc

Logic Low -0.7 to 1.2 Vdc

Control Current

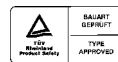
1.0 mA max.

### Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- MTBF: > 1.75 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

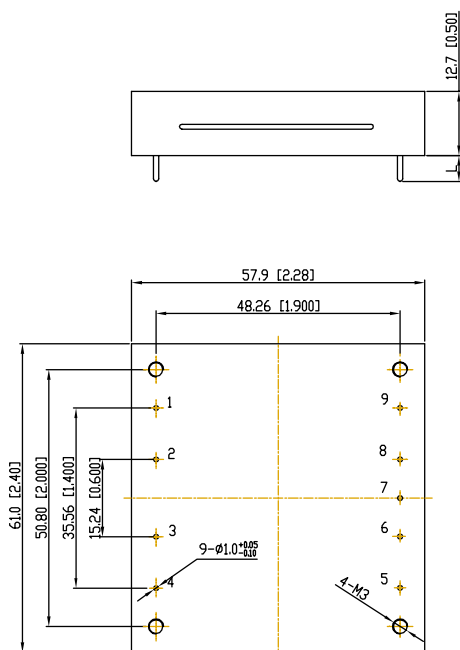


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	6.5A	84%	AVH30-48S03
48V	5V	6A	87%	AVH30-48S05

## Dimensions

### Top view



### Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. -Vout
6. -Sense
7. Trim
8. +Sense
9. +Vout

### Pin Length

- |       |      |
|-------|------|
| 2.8mm | -8   |
| 5.1mm | None |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVH-S Half Brick Series (3.3V/5V) 50-150 Watt Single Output

## Features

- 50-150 watts of output power
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 115°C
- MTBF: > 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max.

Voltage Adjust 90% to 110%  $V_o$

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp

Transient Response 5% $V_o$  max. ;

recovery <300uSec max.

(25% step load change from 50% $I_o$ )

di/dt:1A/10 $\mu$ s

### Control

Control Voltage

Positive logic

High=on 3.5 to 15 Vdc

Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 15 Vdc

Control Current

2 mA max.



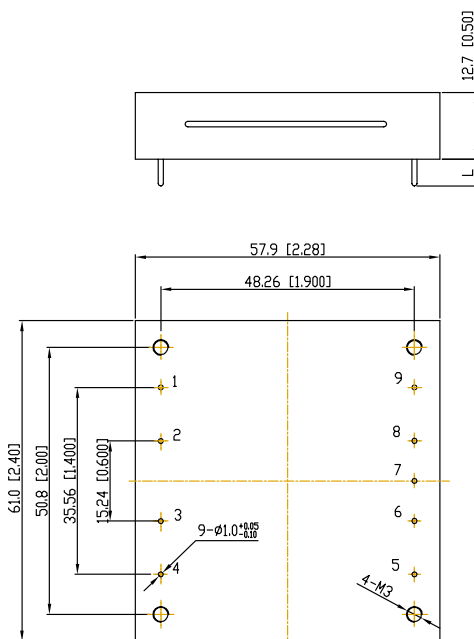
## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	3.3V	10A	81%	AVH50-48S03
48V	5V	10A	84%	AVH50-48S05
48V	3.3V	15A	81%	AVH75-48S03
48V	5V	15A	85%	AVH75-48S05
48V	3.3V	20A	81%	AVH100-48S03
48V	5V	20A	85%	AVH100-48S05
48V	3.3V	30A	81%	AVH150-48S03
48V	5V	30A	85%	AVH150-48S05

60

## Dimensions

### Top view



### Pin Assignments

- +Vin
- CNT
- Case
- Vin
- Vout
- Sense
- Trim
- +Sense
- +Vout

### Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVH-S Half Brick Series (8V/12V/15V/28V) 50-150 Watt Single Output

## Features

- 50-150 watts of output power
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection
- Basic Isolation

## Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 115°C
- MTBF:> 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max. for 12V,15V  
 $\pm 1.5\%V_o$  max. for 8V,28V

Voltage Adjust 80% to 110%  $V_o$

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp max. (for 8Vout)  
 250mVpp max. (for 12,15Vout)  
 350mVpp max. (for 28Vout)

Transient Response 3% $V_o$  max. ;  
 recovery <500uSec max.  
 (25% step load change from 50%Io)  
 di/dt:1A/10 $\mu$ s

### Control

(80% to 110%  $V_o$  for AVH100-48S08, AVH100-48S28)

Control Voltage

Positive logic

High=on 3.5 to 15 Vdc

Low=off -0.7 to 1.2 Vdc

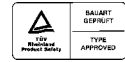
Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 15 Vdc

Control Current

2 mA max.

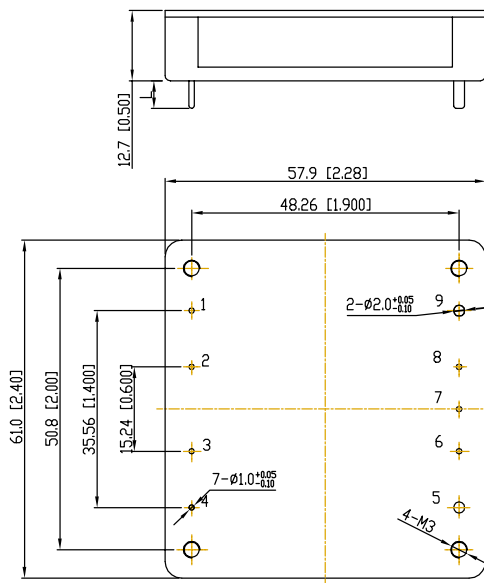


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	12V	4.2A	85%	AVH50-48S12
48V	15V	3.3A	86%	AVH50-48S15
48V	28V	1.79A	87%	AVH50-48S28
48V	12V	6.25A	86%	AVH75-48S12
48V	15V	5A	87%	AVH75-48S15
48V	8V	12.5A	86%	AVH100-48S08
48V	12V	8.3A	87%	AVH100-48S12
48V	15V	6.7A	87%	AVH100-48S15
48V	28V	3.57A	87%	AVH100-48S28
48V	12V	12.5A	87%	AVH150-48S12
48V	15V	10A	87%	AVH150-48S15

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. -Vout
6. -Sense
7. Trim
8. +Sense
9. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVH-D Half Brick Series

## 75 Watt Dual Outputs

### Features

- Standard half brick:  
2.4" x 2.28" x 0.5"  
(61.0mm x 57.9mm x 12.7mm )
- 2:1 Input voltage: 36-75V
- Isolated output: 5V/3.3V,3.3V/2.5V
- High efficiency: 82%
- half output can be trimmed speratly and flexible output power distribution
- Remote control, trim function

### Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 125°C
- MTBF: > 1.5million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy 50mV max

Voltage Adjust 90% to 110% Vo

Line Regulation 0.5%Vo1 max.

1.0%Vo2 max.

Load Regulation 0.5%Vo1 max.

1.0%Vo2 max.

Ripple and Noise 200mVpp

Transient Response 5%Vo max. ;

recovery <200uSec max.

(25% step load change from 50%Io)

di/dt:1A/10µs

#### Control

Control Voltage

Positive logic

High=on 5 to 15 Vdc

Low=off 0 to 1.2 Vdc

Negative logic

Low=on 0 to 1.2 Vdc

High=off 5 to 15 Vdc

Control Current

2 mA max.



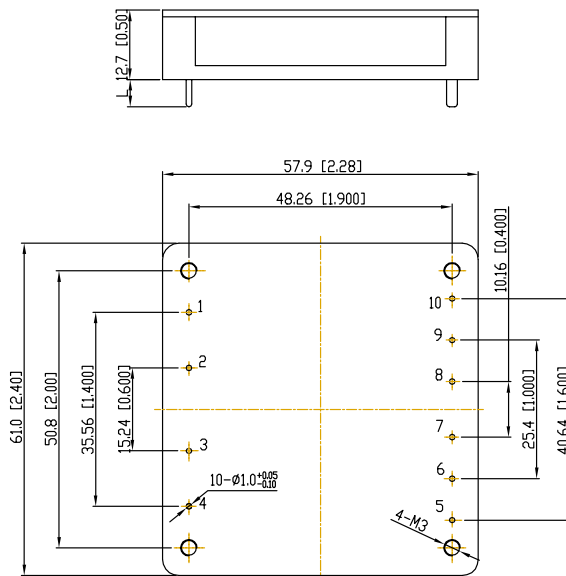
## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	5V	15A	82%	AVH75-48D0503
48V	3.3V	15A	80%	AVH75-48D0302
	3.3V	15A		
	2.5V	15A		

0.5A minimum load requirement for 5Vout(AVH75-48D0503)  
 1.5A minimum load requirement for 3.3Vout(AVH75-48D0302)  
 $I_{O1} + I_{O2} \leq 15A$

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. +Vout2
6. -Vout2
7. Trim2
8. +Vout1
9. -Vout1
10. Trim1

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.



# AVE-S High Efficiency Half Brick Series 50-150 Watt Single Output

## Features

- 50-150 watts of output power
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 115°C
- MTBF: > 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy 50mV max.  
(20mV max. for 1.5 Vout)

Voltage Adjust 90% to 110% Vo  
(80% to 110% Vo for 1.5Vout)

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp max.  
(100mVpp max. for 1.5Vout)

Transient Response 4%Vo max. ;  
80mV max for 1.5Vout  
recovery <200uSec max.  
(25% step load change from 50%Io  
di/dt:1A/10µs)

### Control

Control Voltage

Positive logic

High=on 3.5 to 15 Vdc

Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 15 Vdc

Control Current 2 mA max.

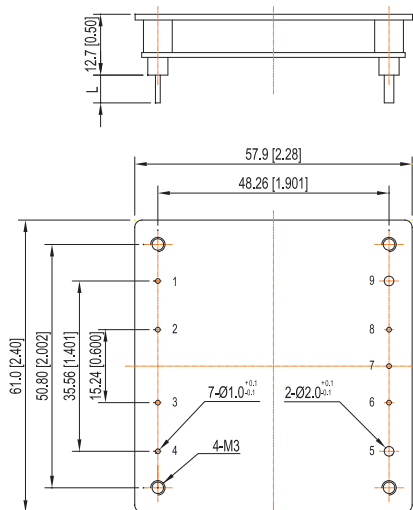


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	2.5V	10A	87%	AVE50-48S2V5
48V	3.3V	10A	87%	AVE50-48S03
48V	5V	10A	89%	AVE50-48S05
48V	2.5V	15A	87%	AVE75-48S2V5
48V	3.3V	15A	88%	AVE75-48S03
48V	5V	15A	89%	AVE75-48S05
48V	1.8V	20A	85%	AVE 100-48S1V8
48V	2.5V	20A	86%	AVE100-48S2V5
48V	3.3V	20A	88%	AVE100-48S03
48V	5V	20A	89%	AVE100-48S05
48V	1.5V	30A	78%	AVE150-48S1V5
48V	1.8V	30A	85%	AVE150-48S1V8
48V	2.5V	30A	85%	AVE150-48S2V5
48V	3.3V	30A	85%	AVE150-48S03
48V	5V	30A	88%	AVE150-48S05

## Dimensions

Top view



Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

## Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. -Vout
6. -Sense
7. Trim
8. +Sense
9. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

# AVE-S High Efficiency Half Brick Series 200 Watt Single Output

## Features

- 40A of output current
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection
- Basic Isolation

## Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 120°C
- MTBF: > 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy 50mV max. for 3.3Vout  
30mV max. for 1.8Vout  
20mV max. for 1.5V,1.2Vout

Voltage Adjust 80% to 110% Vo

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp max. for 3.3Vout  
100mVpp max. for 1.8V,1.5Vout  
80mVpp max. for 1.2Vout

Transient Response 5%Vo max. ;  
recovery <300uSec max.

(25% step load change from 50%Io  
di/dt:1A/10μs)

200mV max. ;  
recovery <300uSec max.

(25% step load change from 50%Io  
di/dt:1A/μs)

### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 12 Vdc

Control Current

1 mA max.

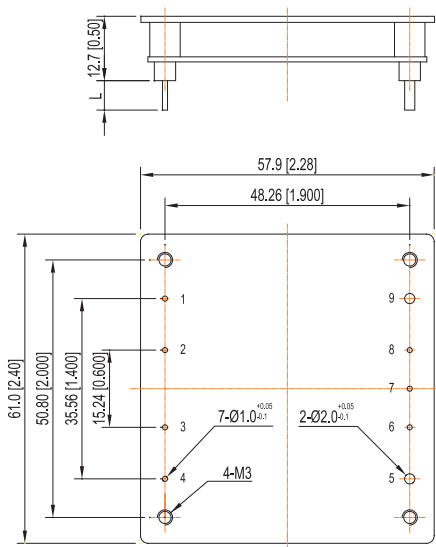


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.2V	40A	85%	AVE200-48S1V2
48V	3.3V	40A	89%	AVE200-48S3V3

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. -Vout
6. -Sense
7. Trim
8. +Sense
9. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVE-S High Efficiency Half Brick Series 250 Watt Single Output

## Features

- 250 watts of output power
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection
- Basic Isolation

## Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 120°C
- MTBF: > 2 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 1.5\%V_o$  max.

Voltage Adjust 80% to 110%  $V_o$

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 240mVpp max.

Transient Response 3% $V_o$  max. ;  
recovery <500uSec max.

(25% step load change from 50% $I_o$ )  
di/dt:1A/10 $\mu$ s

### Control

Control Voltage

Positive logic

High=on 3.5 to 12 Vdc

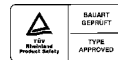
Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 12 Vdc

Control Current 1 mA max.

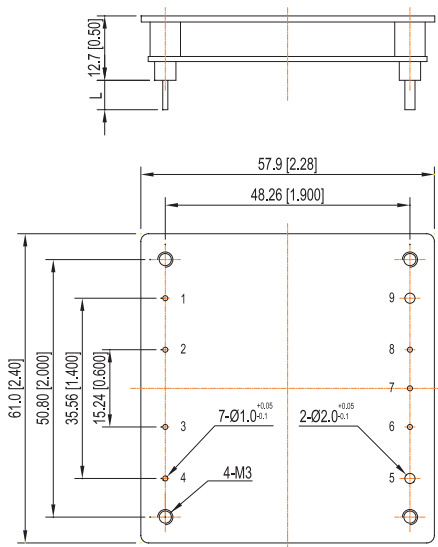


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	28V	9A	91%	AVE250-48S28

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. Case
4. -Vin
5. -Vout
6. -Sense
7. Trim
8. +Sense
9. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base palte face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVE-S High Efficiency Half Brick Series

## 24V Input, Single Output

### Features

- 50-150 watts of output power
- Standard half brick 2.4" x 2.28" x 0.5" Footprint
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection

### Environmental

- Operating case temperature range: -40°C to 100°C
- Storage temperature: -55°C to 125°C
- Over Temperature Protection: 101°C to 115°C
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 18 to 36 Vdc

#### Output

Voltage Setpoint Accuracy 50mV max.

Voltage Adjust 90% to 110% Vo

Line Regulation  $\pm 0.2\%V_o$  max.

Load Regulation  $\pm 0.5\%V_o$  max.

Ripple and Noise 150mVpp

Transient Response 5%Vo max. ;  
recovery <200uSec max.  
(25% step load change from 50%Io  
di/dt:1A/10µs)

#### Control

Control Voltage

Positive logic

High=on 3.5 to 15 Vdc

Low=off -0.7 to 1.2 Vdc

Negative logic

Low=on -0.7 to 1.2 Vdc

High=off 3.5 to 15 Vdc

Control Current

2 mA max.

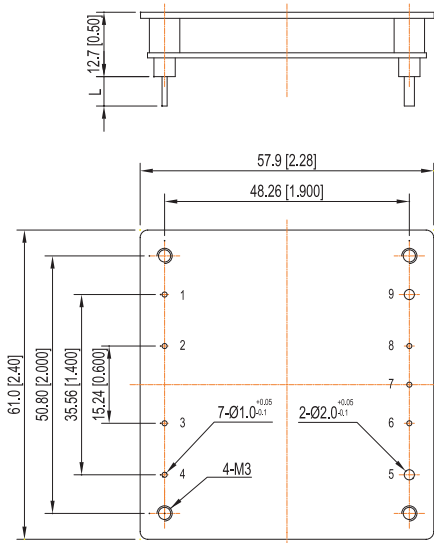


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
24V	2.5V	10A	85%	AVE50-24S2V5
24V	3.3V	10A	87%	AVE50-24S03
24V	5V	10A	88%	AVE50-24S05
24V	2.5V	20A	85%	AVE100-24S2V5
24V	3.3V	20A	87%	AVE100-24S03
24V	5V	20A	88%	AVE100-24S05

## Dimensions

Top view



Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

## Pin Assignments

- +Vin
- CNT
- Case
- Vin
- Vout
- Sense
- Trim
- +Sense
- +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None



# AVE-S High Efficiency Half Brick Series

## 300 Watt Single Output

### Features

- 60A of output current
- Standard half brick 2.4" x 2.28" x 0.5"
- Isolated Output
- Control Function
- Trim Function
- Overvoltage Protection
- Overcurrent Protection
- Basic Isolation
- Baseplate option

### Environmental

- Operating case temperature range:  
-40°C to 100°C (with baseplate)
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 115°C (with baseplate)
- MTBF: > 2 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy 50mV max. for 3.3Vout  
30mV max. for 2.5,1.8Vout  
20mV max. for 1.5V,1.2Vout

Voltage Adjust 80% to 110% Vo

Line Regulation 10mV max. for 3.3Vout  
5mV max. for 2.5V,1.8V,1.5V,1.2Vout

Load Regulation 20mV max. for 3.3Vout  
10mV max. for 2.5V,1.8V,1.5V,1.2Vout

Ripple and Noise 150mVpp max. for 3.3Vout  
100mVpp max. for 1.8V,1.5Vout

Transient Response 150mV max. for 3.3,2.5Vout  
100mV max. for 1.8,1.5,1.2Vout  
recovery < 500uSec max.  
(25% step load change from 50%Io  
di/dt:1A/10µs)

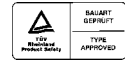
#### Control

Control Voltage

Positive logic  
High=on 3.5 to 12 Vdc  
Low=off -0.7 to 1.2 Vdc

Negative logic  
Low=on -0.7 to 1.2 Vdc  
High=off 3.5 to 12 Vdc

Control Current 1 mA max.

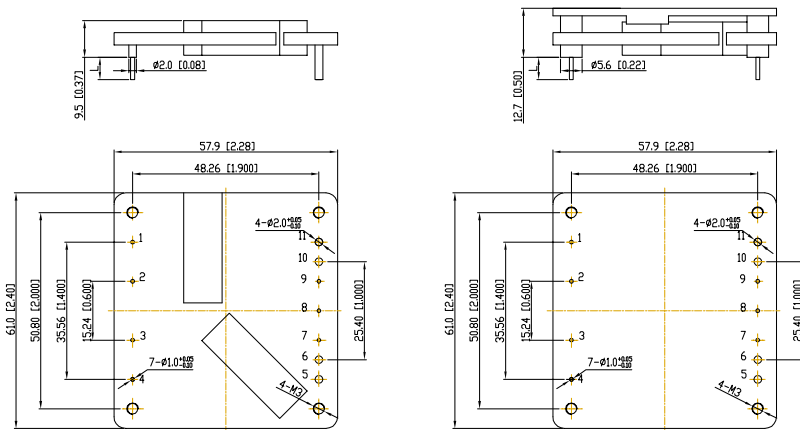


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	1.2V	60A	85%	AVE300-48S1V2B-4
48V	1.5V	60A	87%	AVE300-48S1V5B-4
48V	1.8V	60A	89%	AVE300-48S1V8B-4
48V	2.5V	60A	91%	AVE300-48S2V5B-4
48V	3.3V	60A	92%	AVE300-48S3V3B-4

## Dimensions

Top view



## Pin Assignments

1. +Vin
2. CNT
3. NC
4. -Vin
5. -Vout
6. NC
7. -Sense
8. Trim
9. +Sense
10. NC
11. +Vout

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVF-S Full Brick Series

## 500 Watt Single Output

### Features

- Standard full Brick:  
4.6" x 2.4" x 0.5"  
(116.8mm x 61.0mm x 12.7mm )
- 2:1 input voltage
- Isolated output
- High efficiency
- Remote Control, sense, current sharing, IOG/Tmp
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 120°C
- MTBF: 1.5 million hrs (typ)

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 0.5V$   
 Line Regulation 0.2%Vo max.  
 Load Regulation 0.5%Vo max.  
 Ripple and Noise 200mVpp max.  
 Transient Response 3%Vo max. ;  
 recovery <500uSec max.  
 (25% step load change from 50%Io)  
 di/dt:1A/10 $\mu$ s

#### Control

(CNT1)  
 Positive logic  
 High=on 3.5 to 7 Vdc  
 Low=off -0.7 to 1 Vdc  
 Negative logic  
 Low=on -0.7 to 1 Vdc  
 High=off 3.5 to 7 Vdc  
 Control Current 1 mA max.  
 CNT2/CNT3 must open when CNT1 used

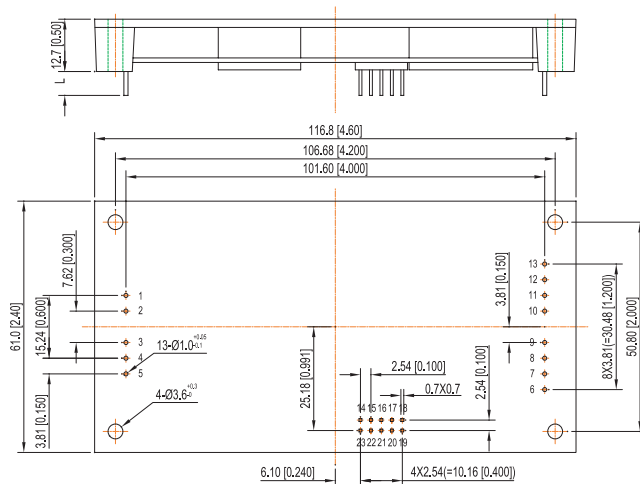


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	28V	18A	89%	AVF500B-48S28

## Dimensions

Top view



## Pin Assignments

1. +Vin	13. +Vout
2. NC	14. Trim
3. NC	15. +Sense
4. -Vin	16. -Sense
5. CNT1	17. IOG
6. -Vout	18. AUX
7. -Vout	19. CNT2
8. -Vout	20. CNT3
9. -Vout	21. TMP
10. +Vout	22. VB
11. +Vout	23. CB
12. +Vout	

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
 2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVF-S Full Brick Series

## 700 Watt Single Output

### Features

- Standard full Brick:  
4.6" x 2.4" x 0.5"  
(116.8mm x 61.0mm x 12.7mm )
- 2:1 input voltage
- Isolated output
- High efficiency
- Remote Control, sense, current sharing, IOG/Tmp
- Overcurrent Protection
- Overvoltage Protection
- Overtemperature Protection

### Environmental

- Operating case temperature range:  
-40°C to 100°C
- Storage temperature:  
-55°C to 125°C
- Over Temperature Protection:  
101°C to 120°C
- MTBF: 1.5 million hrs (typ)

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

### Electrical Specifications

#### Input

Input Range 36 to 75 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 0.5V$   
 Line Regulation 0.2%Vo max.  
 Load Regulation 0.5%Vo max.  
 Ripple and Noise 200mVpp max.  
 Transient Response 3%Vo max. ;  
 recovery <500uSec max.  
 (25% step load change from 50%Io)  
 di/dt:1A/10 $\mu$ s

#### Control

(CNT1)  
 Positive logic  
 High=on 3.5 to 7 Vdc  
 Low=off -0.7 to 1 Vdc  
 Negative logic  
 Low=on -0.7 to 1 Vdc  
 High=off 3.5 to 7 Vdc  
 Control Current 1 mA max.  
 CNT2/CNT3 must open when CNT1 used

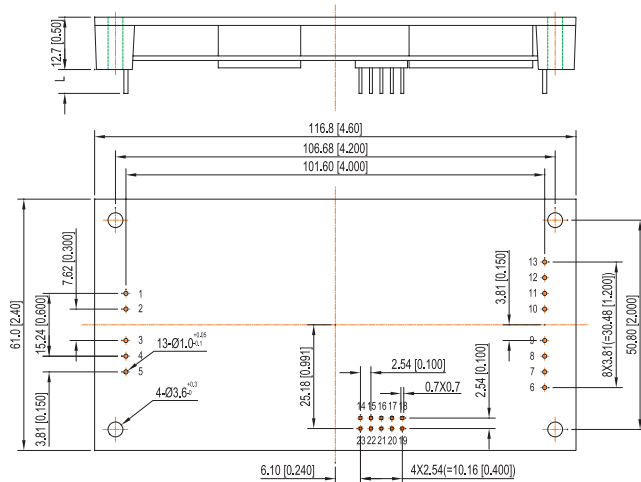


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
48V	28V	25A	89%	AVF700B-48S28

## Dimensions

Top view



## Pin Assignments

1. +Vin	13. +Vout
2. +Vin	14. Trim
3. -Vin	15. +Sense
4. -Vin	16. -Sense
5. CNT1	17. IOG
6. -Vout	18. AUX
7. -Vout	19. CNT2
8. -Vout	20. CNT3
9. -Vout	21. TMP
10. +Vout	22. VB
11. +Vout	23. CB
12. +Vout	

## Pin Length

4.8mm	-4
3.8mm	-6
2.8mm	-8
5.8mm	None

Notes: 1. "Top view" means the base plate face to viewer.  
2. The detail and recommended hole pattern layout is available in the Application Manual.

# HG3-RNG Ring Generator Series

## Features

- Package: 2.56" x 2.0" x 0.33"  
(65.0mm x 50.0mm x 8.5mm)
- 3 watts of output power
- 2:1 input range: 18-36Vdc, 36-72Vdc
- Isolated sine wave output with 25Hz frequency
- Low THD
- Remote control function and trim function
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-20°C to 55°C
- Storage temperature range:  
-40°C to 105°C
- MTBF: > 0.2 million hrs

## Safety

UL                      UL60950

## Electrical Specifications

### Input

Input Range	18 to 36 Vdc
	36 to 72 Vdc

### Output

Voltage Setpoint Accuracy	± 5Vac max.
Voltage Adjust	65 to 85 Vac
Line Regulation	2%Vo max.
Load Regulation	2%Vo max.
THD	5% max.

### Control

Control Voltage	
Positive logic	
High=on	18Vmin. for 24VIn 36Vmin. for 48VIn
Low=off	15Vmax. for 24VIn 30Vmax. for 48VIn
Control Current	1 mA max.

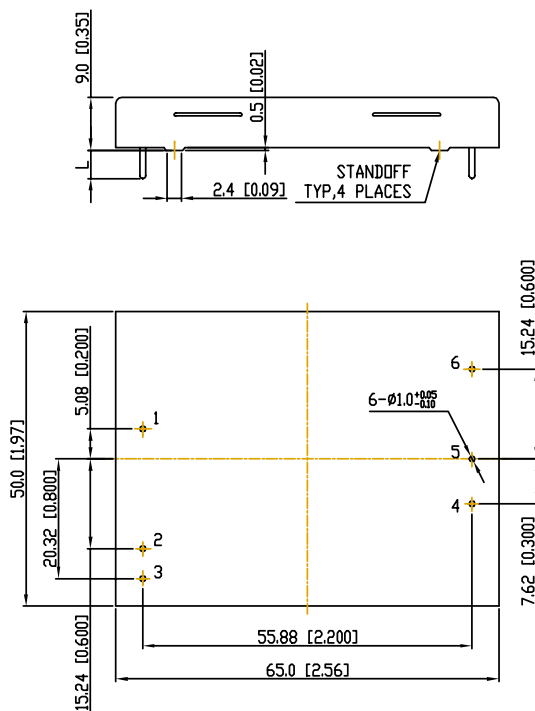


## Ordering Information

Input Voltage	Output Voltage	Output Current	Frequency	Efficiency	Model Number
24V	75V	40mA	25Hz	60%	HG3-24RNG
48V	75V	40mA	25Hz	58%	HG3-48RNG

## Dimensions

### Bottom view



### Pin Assignments

1. +Vin
2. -Vin
3. CNT
4. Trim
5. Vout2
6. Vout1

### Pin Length

5.8mm

Notes: 1. "Bottom view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# HG15-RNG Ring Generator Series

## Features

- Package: 3.1" x 2.6" x 0.6"  
(78.7mm x 66.0mm x 15.2mm)
- 15 watts of output power
- 2:1 input range: 18-36Vdc, 36-72Vdc
- Isolated sine wave output with 25Hz frequency
- Low THD
- Remote control function and trim function
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-25°C to 70°C
- Storage temperature range:  
-40°C to 105°C
- MTBF: > 0.2 million hrs

## Safety

UL                      UL60950

## Electrical Specifications

### Input

Input Range	18 to 36 Vdc
	36 to 72 Vdc

### Output

Voltage Setpoint Accuracy	± 5Vac max.
Voltage Adjust	65 to 85 Vac
Line Regulation	2%Vo max.
Load Regulation	2%Vo max.
THD	5% max.

### Control

Control Voltage	
Positive logic	
High=on	18min for 24Vin 36min for 48Vin
Low=off	15V max. for 24Vin 30V max. for 48Vin
Control Current	1 mA max.

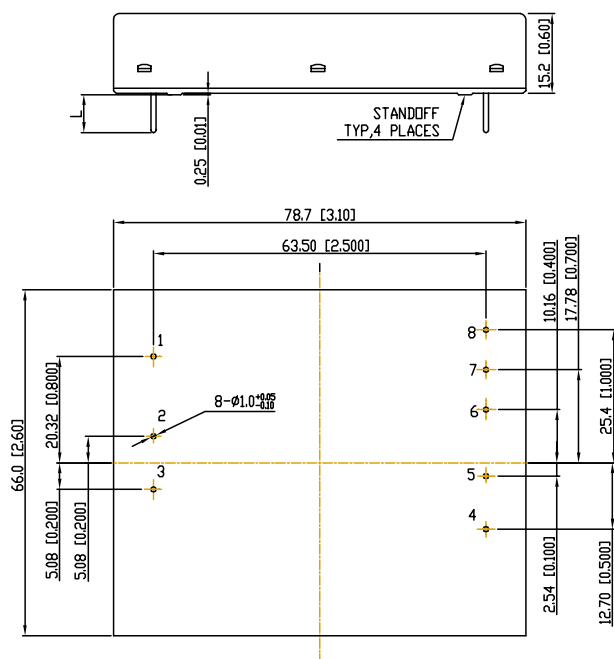


## Ordering Information

Input Voltage	Output Voltage	Output Current	Frequency	Efficiency	Model Number
24V	75Vac	200mA	25Hz	83%	HG15-24RNG
48V	75Vac	200mA	25Hz	84%	HG15-48RNG

## Dimensions

### Top view



## Pin Assignments

1. CNT
2. +Vin
3. -Vin
4. Vout2
5. Vout1
6. Trim
7. NC
8. Case

## Pin Length

5.8mm

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# HG30-RNG Ring Generator Series

## Features

- Package: 3.94" x 3.94" x 0.50"  
(100.0mm x 100.0mm x 12.7mm)
- 30 watts of output power
- 2:1 input range:  
18-36Vdc and 36-72Vdc
- Isolated sine wave output with  
25Hz frequency
- Low THD
- Remote control function
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-25°C to 70°C
- Storage temperature:  
-40°C to 105°C
- MTBF: > 1.2 million hrs

## Safety

UL                      UL60950

## Electrical Specifications

### Input

Input Range	18 to 36 Vdc
	36 to 72 Vdc

### Output

Voltage Setpoint Accuracy	± 5Vac max.
Line Regulation	1%Vo max.
Load Regulation	2%Vo max.
THD	5% max.

### Control

Control Voltage	
Positive logic	
High=on	18Vmin. for 24Vin 36Vmin. for 48Vin
Low=off	13Vmax. for 24Vin 30Vmax. for 48Vin
Control Current	1 mA max.

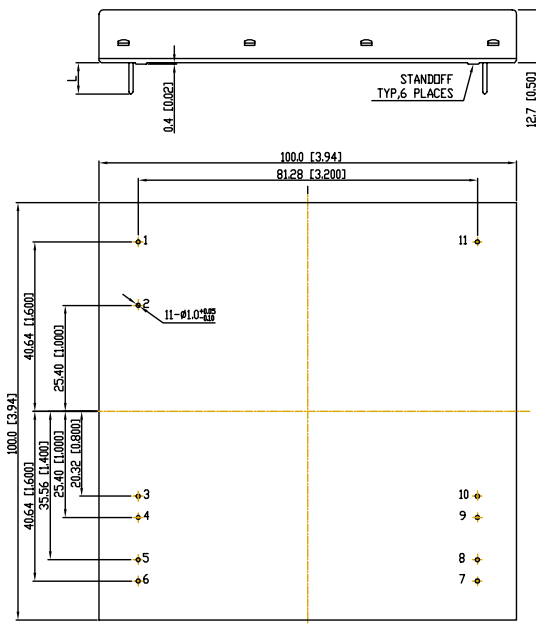


## Ordering Information

Input Voltage	Output Voltage	Output Current	Frequency	Efficiency	Model Number
24V	75Vac	400mA	25Hz	86%	HG30-24RNG
24V	85Vac	353mA	25Hz	86%	HG30-24RNG/85
24V	95Vac	316mA	25Hz	86%	HG30-24RNG/95
48V	75Vac	400mA	25Hz	86%	HG30-48RNG
48V	85Vac	353mA	25Hz	86%	HG30-48RNG/85
48V	95Vac	316mA	25Hz	86%	HG30-48RNG/95

## Dimensions

### Top view



## Pin Assignments

- |         |           |
|---------|-----------|
| 1. CNT  | 7. Vout2  |
| 2. Case | 8. Vout2  |
| 3. -Vin | 9. Vout1  |
| 4. -Vin | 10. Vout1 |
| 5. +Vin | 11. NC    |
| 6. +Vin |           |

## Pin Length

6.0mm

Notes: 1. "Top view" means the logo face to viewer.  
2. The detail and recommended hole pattern layout is available in the Application Manual.

# HG40-RNG Ring Generator Product

## Features

- Package: 95Vac: 3.94" x 3.94" x 0.63"  
(100.0mm x 100.0mm x 16.0mm)  
75Vac: 3.94" x 3.94" x 0.5"  
(100.0mm x 100.0mm x 12.7mm)
- 40 watts of output power
- 2:1 input range: 36-75Vdc
- Isolated sine wave output with 25Hz frequency
- Low THD
- Remote control function
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-25°C to 55°C
- Storage temperature:  
-40°C to 105°C
- MTBF: > 1.2 million hrs

## Safety

UL UL60950

## Electrical Specifications

### Input

Input Range 36 to 75 Vdc

### Output

Voltage Setpoint Accuracy  $\pm 5$ Vac max.

Line Regulation 1%Vo max.

Load Regulation 2%Vo max.

THD 5% max.

### Control

Control Voltage

Positive logic

High=on 36Vmin. for 48Vin

Low=off 30Vmax. for 48Vin

Control Current 1 mA max.

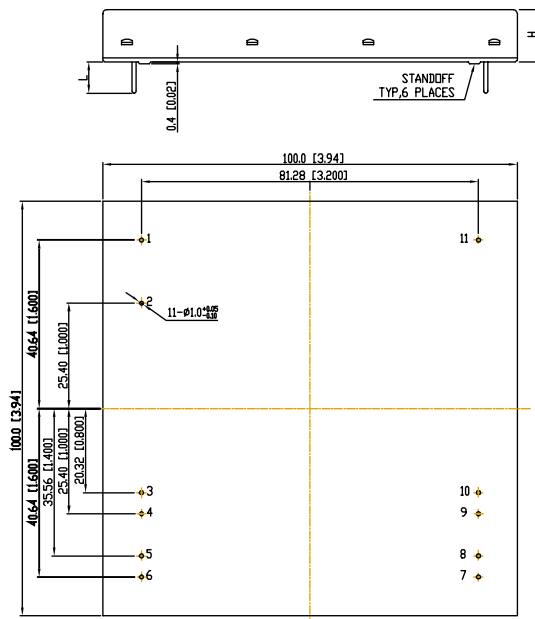


## Ordering Information

Input Voltage	Output Voltage	Output Current	Frequency	Efficiency	Model Number
48V	95Vac	420mA	25Hz	85%	HG40-48RNG/95
48V	75Vac	530mA	25Hz	85%	HG40-48RNG

## Dimensions

### Top view



## Pin Assignments

- |         |           |
|---------|-----------|
| 1. CNT  | 7. Vout2  |
| 2. Case | 8. Vout2  |
| 3. -Vin | 9. Vout1  |
| 4. -Vin | 10. Vout1 |
| 5. +Vin | 11. NC    |
| 6. +Vin |           |

## Pin Length

- |          |               |
|----------|---------------|
| L: 7.5mm | HG40-48RNG/95 |
| 5.5mm    | HG40-48RNG    |

- |                |               |
|----------------|---------------|
| H: 16.0(0.63") | HG40-48RNG/95 |
| 12.7(0.50")    | HG40-48RNG    |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# HG75-RNG Ring Generator Product

## Features

- Package: 3.94" x 3.94" x 0.63"  
(100.0mm x 100.0mm x 16.0mm)
- 75 watts of output power
- 2:1 input range: 36-75Vdc
- Isolated sine wave output with 25Hz frequency
- Low THD
- Remote control function
- Overcurrent Protection

## Environmental

- Operating case temperature range:  
-40°C to 55°C
- Storage temperature:  
-40°C to 105°C
- MTBF: > 1.2 million hrs

## Safety

UL                      UL60950

## Electrical Specifications

### Input

Input Range                      36 to 75 Vdc

### Output

Voltage Setpoint Accuracy                      ± 5Vac max.

Line Regulation                      1%Vo max.

Load Regulation                      2%Vo max.

THD                      5% max.

### Control

Control Voltage

Positive logic

High=on                      36Vmin.

Low=off                      30Vmax.

Control Current                      1 mA max.

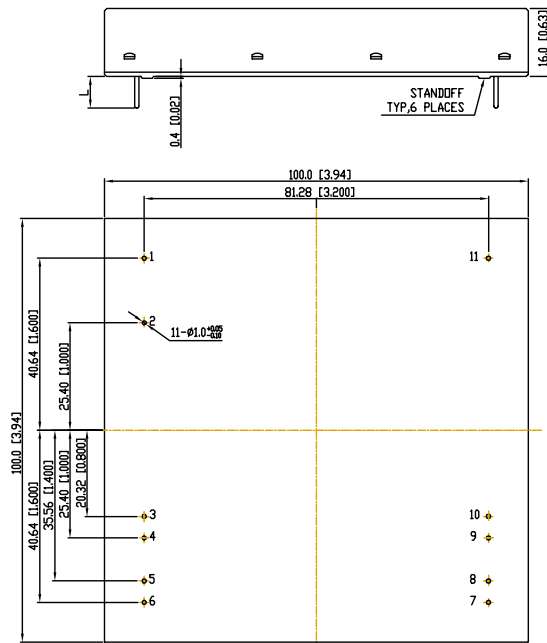


## Ordering Information

Input Voltage	Output Voltage	Output Current	Frequency	Efficiency	Model Number
48V	75Vac	1A	25Hz	85%	HG75-48RNG

## Dimensions

Top view



Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

## Pin Assignments

- |         |           |
|---------|-----------|
| 1. CNT  | 7. Vout2  |
| 2. Case | 8. Vout2  |
| 3. -Vin | 9. Vout1  |
| 4. -Vin | 10. Vout1 |
| 5. +Vin | 11. NC    |
| 6. +Vin |           |

## Pin Length

7.5mm



# AVN20B Non-isolated SIP Series

## Features

- Industry standard SIP package:  
2.5" x 0.55" x 0.33"  
(63.5mm x 14.0mm x 8.38mm)
- Input voltage: 3.3Vnom, 5Vnom
- Output power: 7.2-20 Watts
- High efficiency: 89%
- Non-isolated output: 1.2V, 1.5V, 1.8V, 2.1V, 2.5V, 3.3V
- Remote control, trim, sense and POWER GOOD function
- Provide boost or buck series

## Environmental

- Operating Temperature:  
Environment -25°C to 55°C
- Storage temperature:  
-40°C to 125°C
- MTBF: > 7.0 million hrs

## Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

## Electrical Specifications

### Input

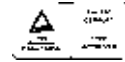
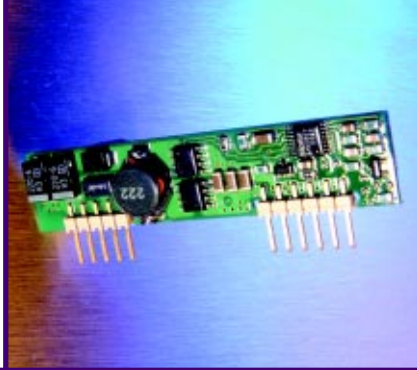
Input Range	3 to 5.5 Vdc
	4.5 to 5.5 Vdc

### Output

Voltage Setpoint Accuracy	± 1%Vo max.
Voltage Adjust	84% to 116% Vo (Vin-Vout > 0.8 for normal working)
Line Regulation	0.5%Vo max.
Load Regulation	1%Vo max.
Ripple and Noise	50mVpp max.
Transient Response	4%Vo max. ; recovery <200uSec max. (25% step load change from 50%Io) di / dt :1A / 10µs

### Control

Control Voltage	
Positive logic	
High=on	2.8 to 12 Vdc
Low=off	-0.7 to 1.2 Vdc
Negative logic	
Low=on	-0.7 to 1.2 Vdc
High=off	2.8 to 12 Vdc
Control Current	1 mA max.



## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
3.3 or 5V	1.2V	6A	78%	AVN20B-04S1V2
3.3 or 5V	1.5V	6A	81%	AVN20B-04S1V5
3.3 or 5V	1.8V	6A	83%	AVN20B-04S1V8
3.3 or 5V	2.1V	6A	86%	AVN20B-04S2V1
5V	2.5V	6A	88%	AVN20B-05S2V5
5V	3.3V	6A	89%	AVN20B-05S3V3

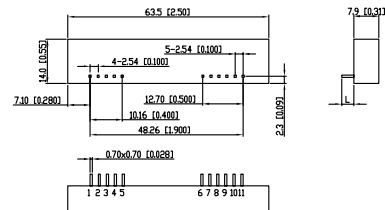
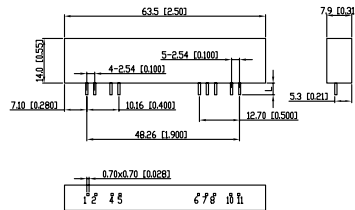
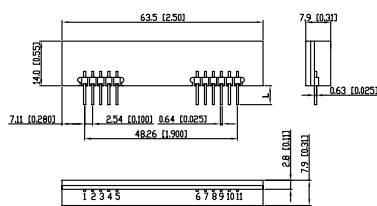
\*Min external load capacitance 220uF required.

No minimum load requirement. About redundant application, refer to the corresponding application manual.

Note: Add E to the product number for not featuring SENSE and POWER GOOD pins. We can provide angle right pins products.

## Dimensions

### Top view



### Pin Assignments

- |          |               |
|----------|---------------|
| 1. +Vout | 6. GND        |
| 2. +Vout | 7. +Vin       |
| 3. Sense | 8. +Vin       |
| 4. +Vout | 9. Power Good |
| 5. GND   | 10.Trim       |
|          | 11.CNT        |

### Pin Assignments

- |          |         |
|----------|---------|
| 1. +Vout | 6. GND  |
| 2. +Vout | 7. +Vin |
| 4. +Vout | 8. +Vin |
| 5. GND   | 10.Trim |
|          | 11.CNT  |

### Pin Assignments

- |          |               |
|----------|---------------|
| 1. +Vout | 6. GND        |
| 2. +Vout | 7. +Vin       |
| 3. Sense | 8. +Vin       |
| 4. +Vout | 9. Power Good |
| 5. GND   | 10.Trim       |
|          | 11.CNT        |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# AVN20B-3V3S05

## Non-Isolated SIP Product

### Features

- Industry standard SIP package:  
2.5" x 0.55" x 0.33"  
(63.5mm x 14.0mm x 8.38mm)
- Input voltage: 3.3Vnom
- Output power: 20 Watts
- High efficiency: 87%
- Non-isolated output: 5V

### Electrical Specifications

#### Input

Input Range 3 to 4 Vdc

#### Output

Voltage Setpoint Accuracy  $\pm 1\%V_o$  max.

Line Regulation  $0.5\%V_o$  max.

Load Regulation  $1\%V_o$  max.

Ripple and Noise 50mVpp max.

Transient Response 200mV max. ;

recovery < 500uSec max.

(25% step load change from 50%Io)

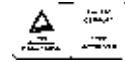
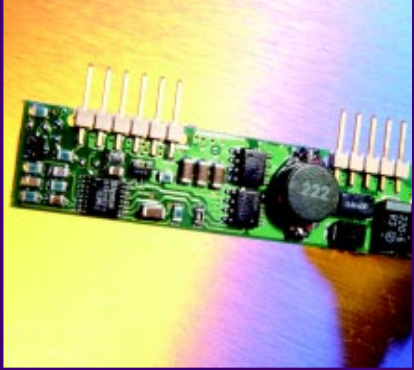
di / dt : 1A / 10 $\mu$ s

### Environmental

- Operating temperature range:  
-25°C to 55°C
- Storage temperature:  
-40°C to 125°C
- MTBF: > 7.0 million hrs

### Safety

UL	UL60950
CSA	CSA22.2-60950
TUV/CE	IEC/EN60950

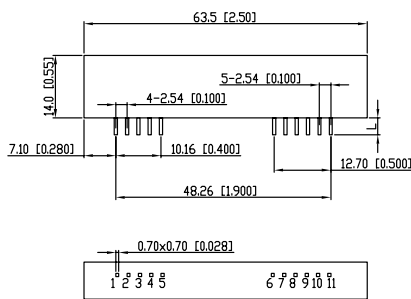


## Ordering Information

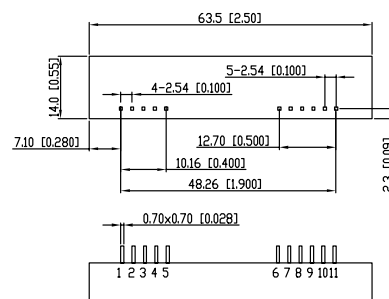
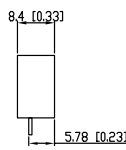
Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
3.0-4.0V	5V	4A	87%	AVN20B-3V3S05

## Dimensions

### Top view



AVN20B-3V3S05(-06)



AVN20B-3V3S05-R-06

### Pin Assignments

- |          |          |
|----------|----------|
| 1. +Vout | 6. GND   |
| 2. +Vout | 7. GND   |
| 3. +Vout | 8. +Vin  |
| 4. GND   | 9. +Vin  |
| 5. GND   | 10. +Vin |
|          | 11. +Vin |

### Pin Length

- 3.8mm -6
- 6.0mm NONE

### Pin Assignments

- |          |          |
|----------|----------|
| 1. +Vout | 6. GND   |
| 2. +Vout | 7. GND   |
| 3. +Vout | 8. +Vin  |
| 4. GND   | 9. +Vin  |
| 5. GND   | 10. +Vin |
|          | 11. +Vin |

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# APC08 Non-isolated SMT Series

## Features

- Point of load(POL) applications
- High efficiency,3.3V@90%
- -40 to +85 Ambient operating temperature
- Open Frame SMT
- Positive enable function
- Low output ripple and noise
- Regulation to zero load
- Programmable Output from 0.9V to 3.6V
- (External Trim Resistor)
- Fixed frequency switching (400KHZ)

## Environmental

- Operating case temperature range:  
-40°C to +85°C
- Storage temperature:  
-55°C to +105°C
- MTBF:>1 million hours

## Safety

UL,cUL	1950 Recognized
TUV	EN60950 Licensed

## Electrical Specifications

### Input

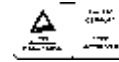
Input Range	1.8 to 6.0Vdc
	5.0 to 13.0Vdc

### Output

Regulation (Line,Load,Temp)	<3%
Ripple and Noise	75mVpp(>2.5V Output) 50mVpp(<2.5V Output)
Transient Response	5%Vo max. recovery <500uSec max. (25% step load change from 50%Io) di / dt :1A / 10μs

### Control

Voltage Adjust	0.9V to 3.6V
----------------	--------------

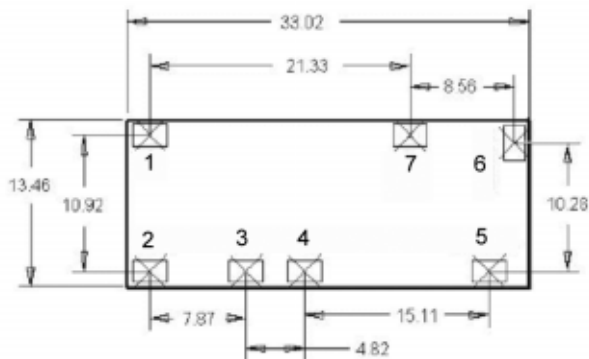


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
1.8V-6.0V	0.9V	8A	76%	APC08J03
1.8V-6.0V	1.2V	8A	81%	APC08K03
1.8V-6.0V	1.5V	8A	86%	APC08M03
1.8V-6.0V	1.8V	8A	88%	APC08Y03
1.8V-6.0V	2.5V	8A	91%	APC08G03
1.8V-6.0V	3.3V	8A	93%	APC08F03
5.0V-13.0V	0.9V	8A	76%	APC08J08
5.0V-13.0V	1.2V	8A	81%	APC08K08
5.0V-13.0V	1.5V	8A	84%	APC08M08
5.0V-13.0V	1.8V	8A	86%	APC08Y08
5.0V-13.0V	2.5V	8A	90%	APC08G08
5.0V-13.0V	3.3V	8A	92%	APC08F08

## Dimensions

Top view



## Pin Assignments

1. Vin
2. Trim
3. Gnd
4. Vo
5. PGood
6. Enable
7. P

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.

# APC12 Non-isolated SMT Series

## Features

- Point of load(POL) applications
- High efficiency,3.3V@90%
- -40 to +85 Ambient operating temperature
- Open Frame SMT
- Positive enable function
- Low output ripple and noise
- Regulation to zero load
- Programmable Output from 0.9V to 3.6V
- (External Trim Resistor)
- Fixed frequency switching (400KHZ)

## Environmental

- Operating case temperature range:  
-40°C to +85°C
- Storage temperature:  
-55°C to +105°C
- MTBF:>1 million hours

## Safety

UL,cUL	1950 Recognized
TUV	EN60950 Licensed

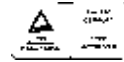
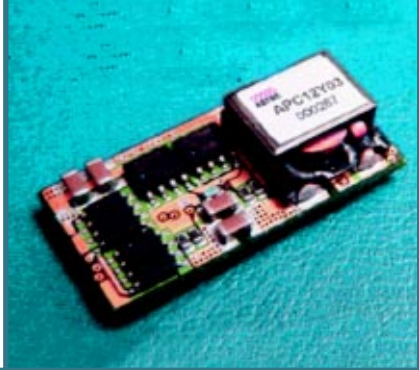
## Electrical Specifications

### Input

Input Range	1.8 to 6.0Vdc
	5.0 to 13.0Vdc

### Output

Voltage Adjust	0.9V to 3.6V
Regulation	
(Line,Load,Temp)	<3%
Ripple and Noise	75mVpp(>2.5V Output)
	50mVpp(<2.5V Output)
Transient Response	5%Vo max.
	recovery <500uSec max.
	(25% step load change from 50%Io)

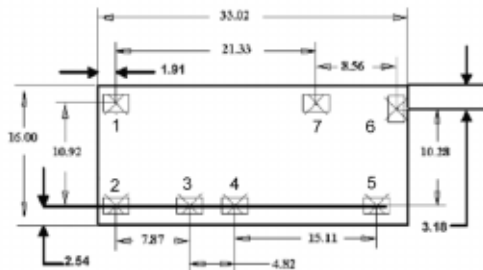


## Ordering Information

Input Voltage	Output Voltage	Output Current	Efficiency	Model Number
1.8V-6.0V	0.9V@12A	12A	76%	APC12J03
1.8V-6.0V	1.2V@12A	12A	81%	APC12K03
1.8V-6.0V	1.5V@12A	12A	86%	APC12M03
1.8V-6.0V	1.8V@12A	12A	87%	APC12Y03
1.8V-6.0V	2.5V@12A	12A	90%	APC12G03
1.8V-6.0V	3.3V@12A	12A	92%	APC12F03
5.0V-13.0V	0.9V@12A	12A	73%	APC12J08
5.0V-13.0V	1.2V@12A	12A	77%	APC12K08
5.0V-13.0V	1.5V@12A	12A	81%	APC12M08
5.0V-13.0V	1.8V@12A	12A	82%	APC12Y08
5.0V-13.0V	2.5V@12A	12A	87%	APC12G08
5.0V-13.0V	3.3V@12A	12A	90%	APC12F08

## Dimensions

**Top view**



## Pin Assignments

1. Vin
2. Trim
3. Gnd
4. Vo
5. PGood
6. Enable
7. P

Notes: 1. "Top view" means the logo face to viewer.

2. The detail and recommended hole pattern layout is available in the Application Manual.



# Industry Standard Non-Isolated

## Features

- ATH Series modules with Auto-Track Sequencing are Point-of-Load Alliance (POLA) products
- POLA offers customers advanced nonisolated modules that provide the same functionality form factor and electrical interoperability
- Products range from 6A to 30A in the families
- High efficiency
- Standardized electronically interoperable technology
- Same PWM for consistent performance under all conditions
- POLA partners have common leadfree manufacturing roadmap

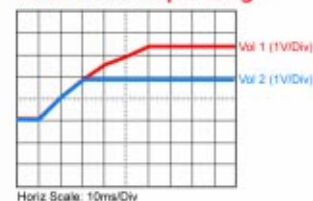
## Safety

EN60950 (TÜV Product Service)  
UL/cUL60950

## Bus Architecture



## Auto-Track Sequencing



\*\*\*\*\*



## Featuring "Auto-Track™ Sequencing"

### 0.8 - 2.5V POLA Industry Standard, Non-Isolated

Iout	Input	Voltage Package (mm)	Efficiency	Model Number
6A	3.3V (3.0-3.6V)	0.87" x 0.50" x 0.34" (22.1 x 12.70 x 8.64)	95%	ATH06T033-9*
8A	3.3V (3.0-3.6V)	0.90" x 0.33" x 0.50" (22.9 x 8.4 x 12.70) SIP	94%	PTV03010WAH
10A	3.3V (3.0-3.6V)	1.00" x 0.62" x 0.35" (25.4 x 15.7 x 8.9)	92%	ATH10T033-9*
15A	3.3V (3.0-3.6V)	1.37" x 0.62" x 0.35" (34.8 x 15.7 x 8.9)	95%	ATH15T033-9*
18A	3.3V (3.0-3.6V)	1.75" x 0.35" x 0.50" (44.5 x 8.9 x 12.7) SIP	92%	PTV03020WAH
22A	3.3V (3.0-3.6V)	1.50" x 0.87" x 0.35" (38.1 x 22.1 x 8.9)	93%	ATH22T033-9*
30A	3.3V (3.0-3.6V)	1.37" x 1.12" x 0.35" (34.8 x 28.4 x 8.9)	93%	ATH30T033-9*

### 0.8-3.6V POLA Industry Standard, Non-Isolated

Iout	Input	Voltage Package (mm)	Efficiency	Model Number
6A	5.0V (4.5-5.5V)	0.87" x 0.50" x 0.34" (22.1 x 12.70 x 8.64)	95%	ATH06T05-9*
8A	5.0V (4.5-5.5V)	0.90" x 0.33" x 0.50" (22.9 x 8.4 x 12.70) SIP	95%	PTV05010WAH
10A	5.0V (4.5-5.5V)	1.00" x 0.62" x 0.35" (25.4 x 15.7 x 8.9)	92%	ATH10T05-9*
15A	5.0V (4.5-5.5V)	1.37" x 0.62" x 0.35" (34.8 x 15.7 x 8.9)	96%	ATH15T05-9*
18A	5.0V (4.5-5.5V)	1.75" x 0.35" x 0.50" (44.5 x 8.9 x 12.7) SIP	92%	PTV05020WAH
22A	5.0V (4.5-5.5V)	1.50" x 0.87" x 0.35" (38.1 x 22.1 x 8.9)	93%	ATH22T05-9*
30A	5.0V (4.5-5.5V)	1.37" x 1.12" x 0.35" (34.8 x 28.4 x 8.9)	94%	ATH30T05-9*

### 1.2-5.5V POLA Industry Standard, Non-Isolated

Iout	Input	Voltage Package (mm)	Efficiency	Model Number
6A	12.0V (10.8-13.2V)	0.87" x 0.50" x 0.34" (22.1 x 12.70 x 8.64)	95%	ATH06K12-9*
8A	12.0V (10.8-13.2V)	0.90" x 0.33" x 0.50" (22.9 x 8.4 x 12.70) SIP	95%	PTV12010WAH
10A	12.0V (10.8-13.2V)	1.00" x 0.62" x 0.35" (25.4 x 15.7 x 8.9)	92%	ATH10K12-9*
12A	12.0V (10.8-13.2V)	1.37" x 0.62" x 0.35" (34.8 x 15.7 x 8.9)	94%	ATH12K12-9*
18A	12.0V (10.8-13.2V)	1.50" x 0.87" x 0.35" (38.1 x 22.1 x 8.9)	95%	ATH18K12-9*
18A	12.0V (10.8-13.2V)	1.75" x 0.35" x 0.50" (44.5 x 8.9 x 12.7) SIP	92%	PTV12020WAH
26A	12.0V (10.8-13.2V)	1.37" x 1.12" x 0.35" (34.8 x 28.4 x 8.9)	94%	ATH26K12-9*

Note: \*Add appropriate suffix for available option(s)  
 S = Surface Mount Termination (default is TH)  
 J = Tray Packaging (default is T&R)  
 SJ = Surface Mount/Tray Package

# M

# ODEL

## CATALOG

System Series			
	GIE4805/2A/500		GIE4815/3A/2.55KW-1B
	GIE4805/2A/500-2		GIE4820/3A/3.45KW
	GIE4815/2A/1.7KW		GIE4825/3A/4.35KW
	GIE4815/3A/2.55KW-1A		GIE4815/2A/1.6kW

# M O D E L

## NUMBER DESCRIPTION

### Power System:

GIE		48		/		15		/		3		/		A		/		2.55KW		- 1A	
Rated Output Voltage		Rated Output Current (Each Module)		Max. Module Number in fully system		Type of Power System		Maxium Power		Version Code											
48=48V 27=27V		05=5A 15=15A 25=25A 65=65A		2=up to 2 Module 3=up to 3 Module 4=up to 4 Module 5=up to 5 Module		A=AC/DC power system D=DC/DC power system		500 1.7KW 2.55KW 4.35KW 9KW													

# MODEL EXPRESS SELECTION

## Power System

Product Code	Input Voltage	Output Voltage	Output Current	Output Power	Package Type	W*H*D(mm)	Pages
GIE4805/2A/500	220Vac	- 48Vdc	10A	500W	19" Rack,1U Profile	483*44*322	103
GIE4805/2A/500-2	220Vac	- 48Vdc	10A	540W	19" Rack,1U Profile	483*43*240	105
GIE4815/2A/1.7KW	220V/110Vac	- 48Vdc	30A	1700W	19" Rack,2U Profile	483*88*341	107
GIE4815/3A/2.55KW-1A	220V/110Vac	- 48Vdc	45A	2550W	19" Rack,3U Profile	483*133*350	109
GIE4815/3A/2.55KW-1B	110Vac	- 48Vdc	45A	2550W	19" Rack,3U Profile	483*133*350	111
GIE4820/3A/3.45KW	220V/110Vac	- 48Vdc	60A	3450W	19" Rack,3U Profile	483*133*350	113
GIE4825/3A/4.35KW	220V/110Vac	- 48Vdc	75A	4350W	19" Rack,3U Profile	483*133*406	115
GIE4815/2A/1.6KW	220V/110Vac	- 48Vdc	28A	1600W	19" Rack,1U Profile	483*42*325	117



# GIE4805/2A/500 Power System



## Features

- 19" subrack mounting, 1U profile
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Two branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232 interface
- Forced air-cooling

## Environmental

Operating temperature	-5~+50°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	150V~280VAC
Input current	5A(Max.)
Frequency	47~63Hz
Efficiency	≥ 81%(Typical)
Power Factor	≥ 0.99(Typical)
Battery input	one group

### Output

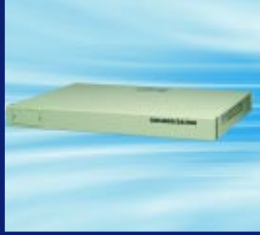
Output power	600W(Max.)
Output voltage	52~-59VDC
Output current	up to 10A
DC distribution branch	
Branch 1	15A (Fuse)
Branch 2	15A (Fuse)
Battery	15A (Fuse)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation	≤± 1%Vout
Load sharing	≤± 5%(50%-100%Load)

### System Configurations

Components	Optional Configuration	Model
Rectifier module	2	HRS300-9000
Monitoring module	0~1	PSM-B3
AC&DC power distribution Subrack	1	GIE4805/LB
Lightning Arrester Box	0~1	W14205ZB

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4805/2A/500 Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery Low Voltage Disconnection
- Equalize/Float charge transfer
- Current limiting

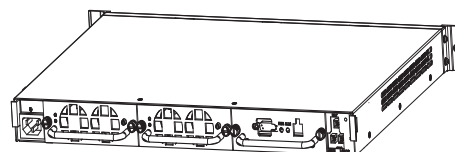
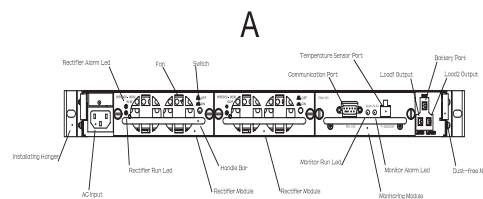
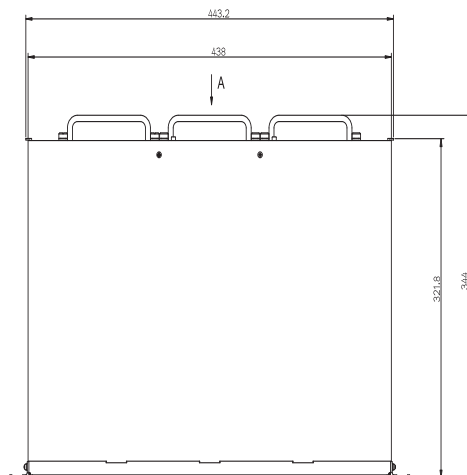
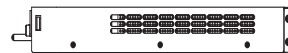
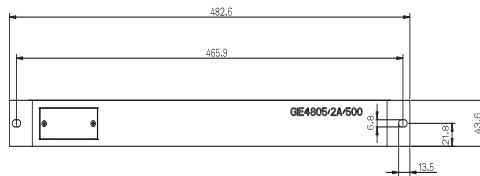
## Mechanical

- Dimensions 43.6 x 482.6 x 321.6mm(HxWxD)
- Weight <6.25kg
- Cooling Forced air cooling
- Enclosure IP20
- Mounting In 19" Subrack

### Symbol Assignments

NO.	Name	Description	Type
1	AC input socket	AC input	IEC 320 C14
2	Rectifier Module	Rectifier Module	HRS300-9000
3	Rectifier Module	Rectifier Module	HRS300-9000
4	Indicator light	"RUN" light	GREEN LED
5	Indicator light	"ALM" light	RED LED
6	Monitoring Module	Monitoring Module	PSM-B3
7	Communication port MS	RS232	DB9
8	Load 1 branch terminal	Load 1 branch terminal	P2441-02
9	Load 2 branch terminal	Load 2 branch terminal	P2441-02
10	Battery branch terminal	Battery branch terminal	P2441-02

## Outline



Note: All specifications are subject to change without notification.



# GIE4805/2A/500-2 Power System



## Features

- 19" subrack mounting, 1 U profile
- Wide input voltage range
- Active power factor correction
- Intelligent battery management function
- Two branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232 interface
- Front access
- Forced air-cooling

## Environmental

Operating temperature	-5~+55°C
Storage temperature	-50~+70°C
Relative humidity	≤ 95%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	90V~264VAC
Input current	8.4A(Max.)
Frequency	47~63Hz
Efficiency	≥ 80%(Typical)
Power Factor	≥ 0.95
Battery input	one group

### Output

Output power	540W(Max.)
Output voltage	-53.5~-54.5VDC
Output current	up to 10A
DC distribution branch	
Branch 1	8A (Fuse)
Branch 2	8A (Fuse)
Battery	8A (Fuse)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation	≤± 0.5%Vout
Load Sharing imbalance	≤± 15%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~3	HRS300-9000B
Monitoring module	1	PSM-B3A
AC&DC power distribution Subrack	1	GIE4805/LB
Lightning Arrester Box	0~1	W24205ZA

## Safety & EMC

UL 1950	
TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4805/2A/500-2 Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Battery Low Voltage Disconnection
- Current limiting

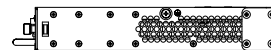
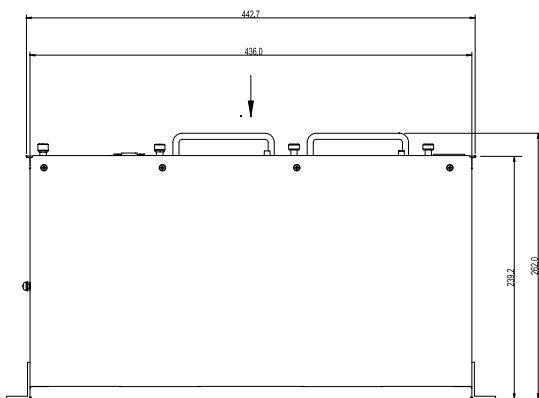
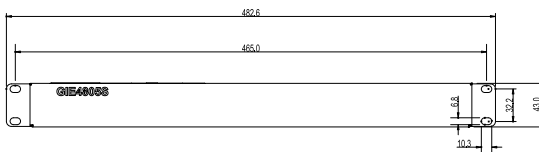
## Mechanical

- Dimensions 43 x 482.6 x 240mm(HxWxD)
- Weight <10kg
- Cooling Forced air cooling
- Enclosure IP20
- Mounting In 19" Subrack

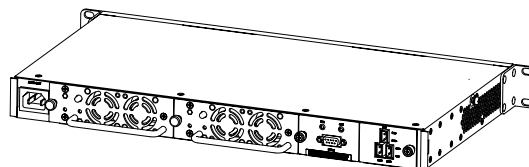
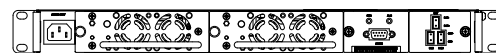
### Symbol Assignments

NO.	Name	Description	Type
1	AC input socket	AC input	IEC 320 C14
2	Rectifier Module	Rectifier Module	HRS300-9000
3	Rectifier Module	Rectifier Module	HRS300-9000
4	Indicator light	"RUN" light, "Vout" light	GREEN LED
5	Indicator light	"ALM" light	RED LED
6	Monitoring Module	Monitoring Module	PSM-B3A
7	Communication port MS	RS232	DB9
8	Load 1 branch terminal	Load 1 branch terminal	P2441-02
9	Load 2 branch terminal	Load 2 branch terminal	P2441-02
10	Battery branch terminal	Battery branch terminal	P2441-02
11	Loading Module	Loading Module	GIE4805/LB

## Outline



A-A



Note: All specifications are subject to change without notification.

# GIE4815/2A/1.7KW Power System



## Features

- 19" subrack mounting, 2U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Five branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS485/RS422 interface
- Forced air-cooling

## Environmental

Operating temperature	-10~+50°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	90V~290VAC (90~157.5VAC derating)
Input current	13A(Max.)
Frequency	45~65Hz
Efficiency	≥ 88%
Power Factor	≥ 0.99
Battery input	up to two group

### Output

Output power	1700W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	30A
DC distribution branch	
Branch 1	20A (Fuse)
Branch 2	20A (Fuse)
Branch 3	10A (Fuse)
Branch 4	5A (Fuse)
Branch 5	5A (Fuse)
Battery I	50A (MCB)
Battery II	50A (MCB)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing	≤± 5%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~2	HRS850-9000C
Monitoring module	1	M1421Z
Distribution subrack	1	[W1421ZB]PSM-B6

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS A
Radiation Emission	EN55022 CLASS A



# GIE4815/2A/1.7KW Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery Low Voltage Disconnection
- Equalize/Float charge transfer
- Current limiting

### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Three alarm dry contact output

## Mechanical

Dimensions 88.1 x 482.6 x 341mm(HxWxD)

Weight <10kg

Cooling Forced air cooling

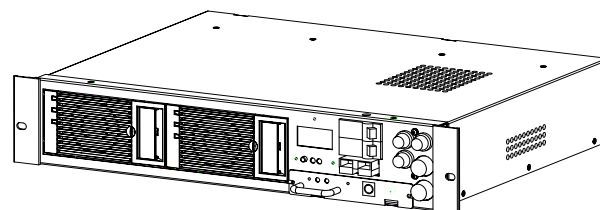
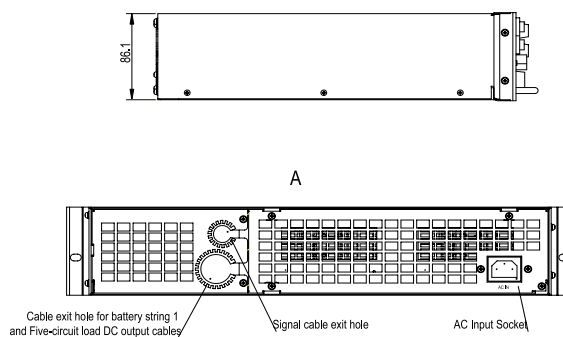
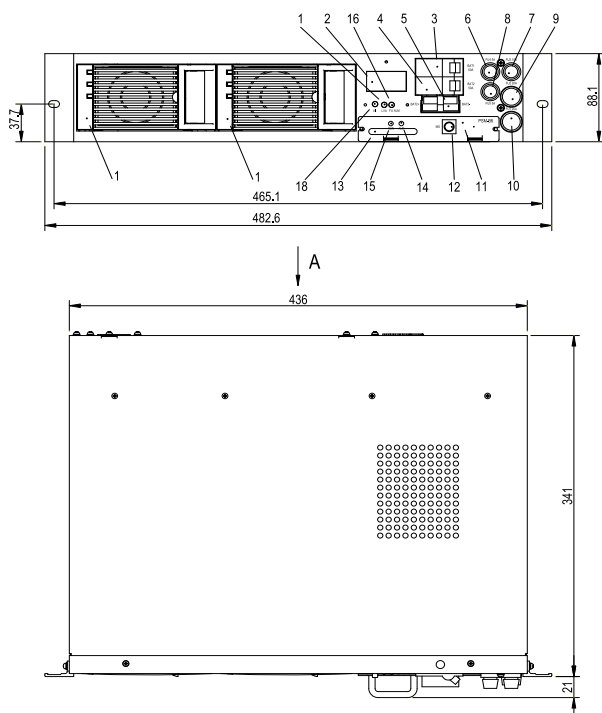
Enclosure IP20

Mounting In 19" Subrack

### Symbol Assignments

No.	Symbol	Description	Type
1	HRS850-9000C	rectifier module	
2	LED	Display voltage and current value.	TO-T5363DS-B
3	BAT1 50A	MCB of battery string I	NDM1-63C-50/1
4	BAT2 50A	MCB battery string II	NDM1-63C-50/1
5	BAT2+ BAT2-	Interface of temporary standby battery string II	Sb50(Anderson)
6	FU4 5A	FUSE4 5A	0215005.M
7	FU3 10A	FUSE3 10A	0215010.M
8	FU5 5A	FUSE5 5A	0215005.M
9	FU2 20A	FUSE2 20A	0314020.M
10	FU1 20A	FUSE1 20A	0314020.M
11	PSM-B6	monitoring module	
12	MS	"MS" communication port	A1004-6AT1S1W
13	/	handle	
14	ALM	When power systems operatingunconventionally, the Red LED is on	
15	RUN	When the working condition of module is normal, the green LED twinkles	
16	FU ALM	When output load fuses and battery MCB off, the Red LED is on	
17	LVA	When output DC Under-voltage Alarm, the Red LED is on	
18	V/I	Switcher of voltage/current display	

## Outline



Note: All specifications are subject to change without notification.

# GIE4815/3A/2.55KW-1A Power System



## Features

- 19" subrack mounting, 3U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Four branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232/RS422 interface
- Front access
- Forced air-cooling

## Environmental

Operating temperature	-10~+55°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	90V~290VAC (90~157.5VAC derating)
Input current	20A(Max.)
Frequency	45~65Hz
Efficiency	≥ 88%
Power Factor	≥ 0.99
Battery input	up to two group

### Output

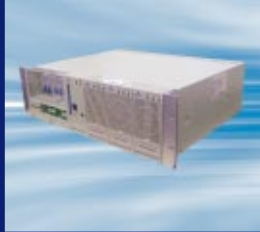
Output power	2550W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	up to 45A
DC distribution branch	
Branch 1	10A (MCB)
Branch 2	20A (MCB)
Branch 3	20A (MCB)
Branch 4	50A (MCB)
Battery	63A (MCB)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing imbalance	≤± 5%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~3	HRS850-9000C
Monitoring module	1	PSM-B5
Distribution subrack	1	W1A431ZB
Signal Transfer Box	0~1	W1A431Z1/Z2

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4815/3A/2.55KW-1A Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery discharge test
- Battery Low Voltage Disconnection
- Load Low Voltage Disconnection
- Equalize/Float charge transfer
- Current limiting

### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Ambient temperature
- Ambient humidity
- Gate magnetic
- Water-immersing
- Smoke etc.
- Two alarm dry contact output

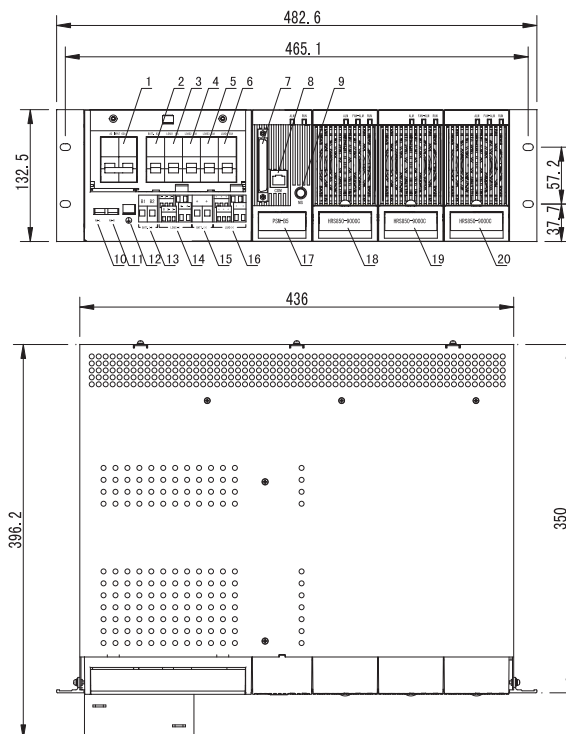
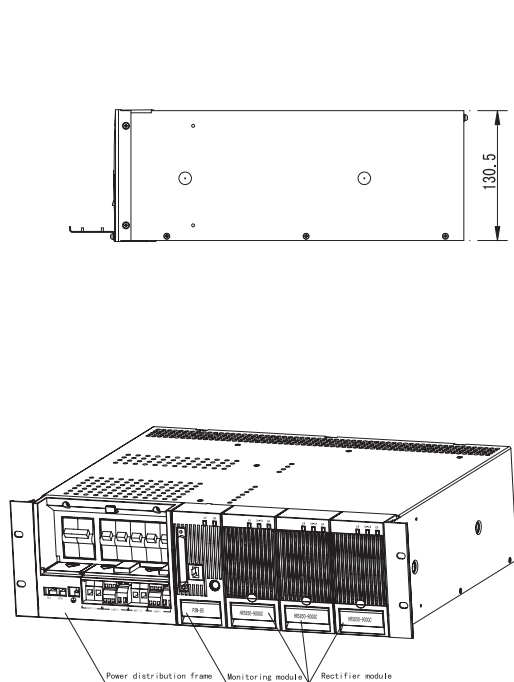
## Mechanical

- Dimensions 132.5 x 482.6 x 350mm(HxWxD)
- Weight <15kg
- Cooling Forced air cooling
- Enclosure IP20
- Mounting In 19" Subrack

### Symbol Assignments

No.	Name	Description	Type
1	AC input MCB	Circuit breaker for AC input control	63A
2	Battery input MCB	Circuit breaker for battery branch control	63A
3	Load 1 output MCB	Circuit breaker for Load 1 control	10A
4	Load 2 output MCB	Circuit breaker for Load 2 control	20A
5	Load 3 output MCB	Circuit breaker for Load 3 control	20A
6	Load 4 output MCB	Circuit breaker for Load 4 control	50A
7	Signal port DB37	Signal connection	DB37
8	Communication port COM	RS232/RS 422	RJ45
9	Communication port MS	RS232	MOUSE
10	AC phase line terminal	AC phase line terminal	DT-7C-801W-02
11	AC zero line terminal	AC zero line terminal	(DINKLE )
12	Protecting ground terminal	Protecting ground terminal	≤ 5
13	Battery branch 48V- terminal	Battery branch 48V- terminal	MKDSP 10/2-10.16 (PHOENIX )
14	Load branch 48V- terminal	Load branch 48V- terminal	MKDS 3/3-5.08; MKDS 5/2-6.35 (PHOENIX )
15	Battery branch 48V+ terminal	Battery branch 48V+ terminal	MKDSP 10/2-10.16 (PHOENIX )
16	Load branch 48V+ terminal	Load branch 48V+ terminal	MKDS 3/3-5.08; MKDS 5/2-6.35 (PHOENIX )
17	Monitoring Module	Monitoring Module	PSM-B5
18 ~ 20	Rectifier Module	Rectifier Module	HRS850-9000C

## Outline



Note: All specifications are subject to change without notification.

# GIE4815/3A/2.55KW-1B Power System



## Features

- 19" subrack mounting, 3U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Four branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232/RS422 interface
- Front access
- Forced air-cooling

## Environmental

Operating temperature	-10~+55°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	88V~155VAC
Input current	35A(Max.)
Frequency	45~65Hz
Efficiency	≥ 85%
Power Factor	≥ 0.99
Battery input	up to two group

### Output

Output power	2550W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	up to 45A
DC distribution branch	
Branch 1	10A (MCB)
Branch 2	20A (MCB)
Branch 3	20A (MCB)
Branch 4	50A (MCB)
Battery	63A (MCB)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing imbalance	≤± 5%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~3	[HRS850-9000D]
Monitoring module	1	PSM-B5
Distribution subrack	1	[W1B431ZB]
Signal Transfer Box	0~1	[W1B431Z1/Z2]

## Safety & EMC

UL UL60950  
Conduction Emission FCC CLASS B  
Radiation Emission FCC CLASS B



# GIE4815/3A/2.55KW-1B Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery discharge test
- Battery Low Voltage Disconnection
- Load Low Voltage Disconnection
- Equalize/Float charge transfer
- Current limiting

### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Ambient temperature
- Ambient humidity
- Gate magnetic
- Water-immersing
- Smoke etc.
- Two alarm dry contact output

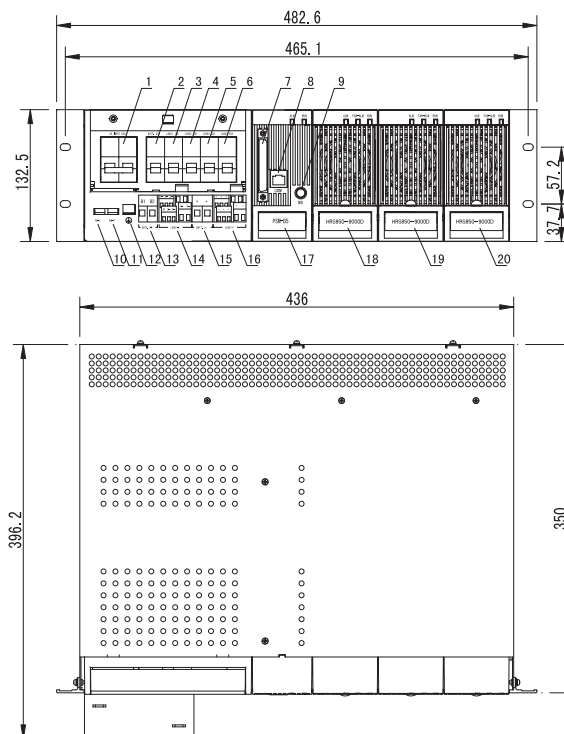
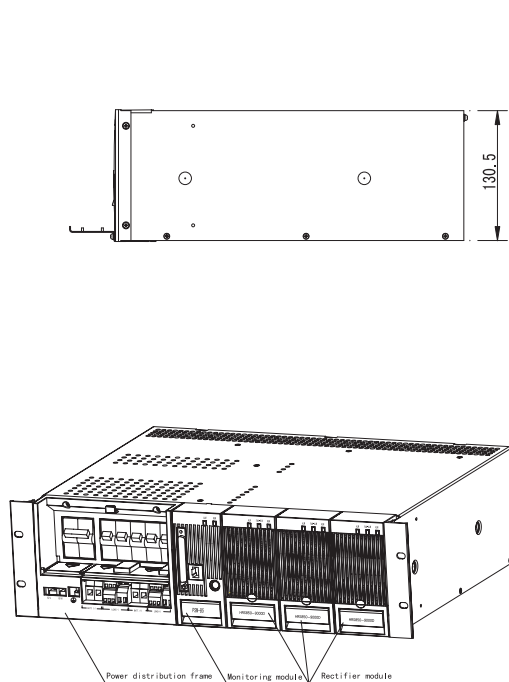
## Mechanical

- Dimensions 132.5 x 482.6 x 350mm(HxWxD)
- Weight <18kg
- Cooling Forced air cooling
- Enclosure IP20
- Mounting In 19" Subrack

### Symbol Assignments

No.	Name	Description	Type
1	AC input MCB	Circuit breaker for AC input control	63A
2	Battery input MCB	Circuit breaker for battery branch control	63A
3	Load 1 output MCB	Circuit breaker for Load 1 control	10A
4	Load 2 output MCB	Circuit breaker for Load 2 control	20A
5	Load 3 output MCB	Circuit breaker for Load 3 control	20A
6	Load 4 output MCB	Circuit breaker for Load 4 control	50A
7	Signal port DB37	Signal connection	DB37
8	Communication port COM	RS232/RS 422	RJ45
9	Communication port MS	RS232	MOUSE
10	AC phase line terminal	AC phase line terminal	DT-7C-B01W-02
11	AC zero line terminal	AC zero line terminal	(DINKLE )
12	Protecting ground terminal	Protecting ground terminal	≤ 5
13	Battery branch 48V- terminal	Battery branch 48V - terminal	MKDSP 10/2-10.16 (PHGENIX )
14	Load branch 48V- terminal	Load branch 48V- terminal	MKKDS 3/3-5.08; MKKDS 5/2-6.35 (PHGENIX )
15	Battery branch 48V+ terminal	Battery branch 48V+ terminal	MKDSP 10/2-10.16 (PHGENIX )
16	Load branch 48V + terminal	Load branch 48V + terminal	MKKDS 3/3-5.08; MKKDS 5/2-6.35 (PHGENIX )
17	Monitoring Module	Monitoring Module	PSM-B5
18 - 20	Rectifier Module	Rectifier Module	HRS850 -9000D

## Outline



Note: All specifications are subject to change without notification.



# GIE4820/3A/3.45KW Power System



## Features

- 19" subrack mounting, 3U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Four branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232/RS422 interface
- Front access
- Forced air-cooling

## Environmental

Operating temperature	-10~+50°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	90V~290VAC (90~176VAC derating)
Input current	25A(Max.)
Frequency	45~65Hz
Efficiency	≥ 89%
Power Factor	≥ 0.99
Battery input	up to two group

### Output

Output power	3450W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	up to 60A
DC distribution branch	
Branch 1	10A (MCB)
Branch 2	20A (MCB)
Branch 3	20A (MCB)
Branch 4	50A (MCB)
Battery	63A (MCB)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing imbalance	≤± 5%

### System Configurations

Components	Optional Configuration	Inner Model
Rectifier module	1~3	HRS1150-9000
Monitoring module	1	PSM-B9
Distribution subrack	1	W3432ZB
Signal Transfer Box	0~1	W1A431Z1/Z2

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4815/3A/2.55KW-1B Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery discharge test
- Battery Low Voltage Disconnection
- Load Low Voltage Disconnection
- Equalize/Float charge transfer
- Current limiting

### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Ambient temperature
- Ambient humidity
- Gate magnetic
- Water-immersing
- Smoke etc
- Two alarm dry contact output

## Mechanical

Dimensions 132.5 x 482.6 x 350mm(HxWxD)

Weight <18kg

Cooling Forced air cooling

Enclosure IP20

Mounting In 19" Subrack

### Symbol Assignments

No.	Name	Description	Type
1	AC input MCB	Circuit breaker for AC input control	63A
2	Battery input MCB	Circuit breaker for battery branch control	63A
3	Load 1 output MCB	Circuit breaker for Load 1 control	10A
4	Load 2 output MCB	Circuit breaker for Load 2 control	20A
5	Load 3 output MCB	Circuit breaker for Load 3 control	20A
6	Load 4 output MCB	Circuit breaker for Load 4 control	50A
7	Signal port DB37	Signal connection	DB37
8	Communication port COM	RS232/RS 422	RJ45
9	Communication port MS	RS232	MOUSE
10	AC phase line terminal	AC phase line terminal	DT-7C-B01W-02
11	AC zero line terminal	AC zero line terminal	(DINKLE )
12	Protecting ground terminal	Protecting ground terminal	≤ 5
13	Battery branch 48V- terminal	Battery branch 48V - terminal	MKDSP 10/2-10.16 (PHGENIX )
14	Load branch 48V- terminal	Load branch 48V- terminal	MKKDS 3/3-5.08; MKKDS 5/2-6.35 (PHGENIX )
15	Battery branch 48V+ terminal	Battery branch 48V+ terminal	MKDSP 10/2-10.16 (PHGENIX )
16	Load branch 48V + terminal	Load branch 48V + terminal	MKKDS 3/3-5.08; MKKDS 5/2-6.35 (PHGENIX )
17	Monitoring Module	Monitoring Module	PSM-B5
18 ~ 20	Rectifier Module	Rectifier Module	HRS850 - 9000D

## Outline

Note:All specifications are subject to change without notification.

# GIE4825/3A/4.35KW Power System



## Features

- 19" subrack mounting, 3U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Three branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232/RS422 interface
- Forced air-cooling
- DC lightning protection

## Environmental

Operating temperature	-5~+50°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%
Air pressure	86~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332)

## Electrical Specifications

### Input

Input voltage	90V~290VAC (90~176VAC derating)
Input current	30A(Max.)
Frequency	45~65Hz
Efficiency	≥ 88%
Power Factor	≥ 0.99
Battery input	one group

### Output

Output power	4350W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	up to 75A
DC distribution branch	
Branch 1	50A (MCB)
Branch 2	50A (MCB)
Branch 3	20A (MCB)
Battery	63A (MCB)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing imbalance	≤± 5%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~3	HRS1450-9000
Monitoring module	1	PSM-B4
Distribution subrack	1	W1432ZB

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4825/3A/4.35KW Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery discharge test
- Battery Low Voltage Disconnection
- Load Low Voltage Disconnection
- Battery high temperature disconnection
- Equalize/Float charge transfer
- Current limiting

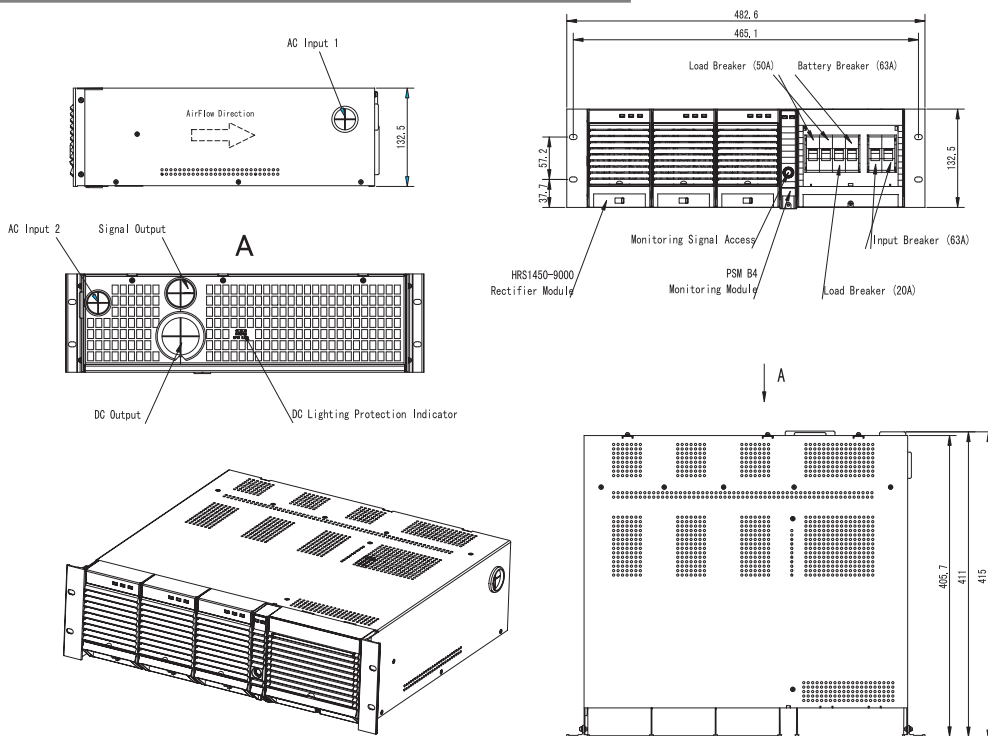
### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Ambient temperature
- Ambient humidity
- Gate magnetic
- Water-immersing
- Smoke etc.
- Two alarm dry contact output

## Mechanical

Dimensions	132.5 x 482.6 x 405.7mm(HxWxD)
Weight	<22kg
Cooling	Forced air cooling
Enclosure	IP20
Mounting	In 19" Subrack

## Outline



Note: All specifications are subject to change without notification.

# GIE4815/2A/1.6kW Power System



## Features

- 19" subrack mounting, 1U profile
- Wide input voltage range
- Active Power Factor Correction
- Intelligent battery management function
- Environmental parameter monitoring function
- Two branches DC distribution output
- Hot-swap (rectifier and monitor)
- Lightning arrester protection inside
- RS232/RS422 interface
- Front access
- Forced air-cooling

## Environmental

Operating temperature	-5~+50°C
Storage temperature	-40~+70°C
Relative humidity	≤ 90%(40± 2°C)
Air pressure	70~106KPa
MTBF	≥ 150KHrs (Bellcore TR-332 )

## Electrical Specifications

### Input

Input voltage	85V~300VAC (85~176VAC derating)
Input current	12A(Max.)
Frequency	45~65Hz
Efficiency	≥ 89%
Power Factor	≥ 0.99
Battery input	one group

### Output

Output power	1600W(Max.)
Output voltage	-43.2~-57.6VDC
Output current	up to 28A
DC distribution branch	
Branch 1	10A (FVSE)
Branch 2	20A (FVSE)
Battery	20A (FVSE)
Peak-peak noise	≤ 200mV(BW.20MHz)
Total regulation:	≤± 1%Vout
Load sharing	≤± 5%

### System Configurations

Components	Optional Configuration	Model
Rectifier module	1~3	HRS800-9000E
Monitoring module	1	PSM-BA
Distribution subrack	1	W2421ZB
Signal Transfer Box	0~1	W2421Z1

## Safety & EMC

TUV EN60950	
CE Mark	
Conduction Emission	EN55022 CLASS B
Radiation Emission	EN55022 CLASS B



# GIE4815/2A/1.6kW Power System

## Other Specifications

### 1. Protection

- DC Output Over Voltage Protection
- DC Output Short Current Protection
- DC Output Over Current Protection
- AC Input Over Voltage Protection
- AC Input Low Voltage Protection
- Over Temperature Protection

### 2. Intelligent Battery Management Function

- Temperature Compensation
- Battery Discharge Test
- Battery Low Voltage Disconnection
- Load Low Voltage Disconnection
- Equalize/Float Charge Transfer
- Current Limiting

### 3. Environmental Parameter Monitoring Function

- Battery temperature
- Ambient temperature
- Ambient humidity
- Gate magnetic
- Water-immersing
- Smoke etc
- Two alarm dry contact output

## Mechanical

Dimensions	41.6 x 482.6 x 325mm(HxWxD)
Weight	<8kg
Cooling	Forced air cooling
Enclosure	IP20
Mounting	In 19" Subrack

## Outline

Note: All specifications are subject to change without notification.

# Glossary

## A

accuracy	精度
air pressure	气压
altitude	海拔高度
aluminum board	铝板结构
aluminum electrolytic capacitor	铝电解电容器
aluminum substate	铝基板结构
ambient temperature	环境温度
assignment	配置定义
AC Input Low Voltage Protection	输入欠压保护
AC Input Over Voltage Protection	输入过压保护
Active Power Factor Correction	有源功率因数校正
Air pressure	气压
Ambient humidity	环境湿度
Ambient temperature	环境温度

## B

basic insulation	基本绝缘
Board Mounted Power(BMP)	印制板装电源 ( 俗称二次电源 )
burning	老化
Battery discharge test	电池放电测试
Battery Low Voltage Disconnection	电池欠压脱离
Battery temperature	电池温度

## C

Centralized Power Architecture(CPA)	集中式供电结构
ceramic capacitor	陶瓷电容器
certification	认证
chip capacitor	片状电容器
clamp	钳位
CNT	遥控开关机
compatible	兼容的
conducted emission	传导干扰
cross-regulation	交叉调整率
current limit	限流
current sharing	均流
Conduction Emission	传导干扰
Current limiting	限流

**D**

Datacom	数据通信
default	默认
definition	定义
delay time	延迟时间
derate	降额
deviation	背离
dimension	尺寸
Distributed Power Architecture(DPA)	分布式供电结构
dual outputs	双路输出
dynamic regulation	动态调整率
DC distribution	直流配电
DC Output Over Current Protection	输出过流保护
DC Output Over Voltage Protection	输出过压保护
DC Output Short Current Protection	输出短路保护
Dimensions ( HxWxD )	外形尺寸 ( 高 × 宽 × 深 )
Dry contact	干结电

**E**

efficiency	效率
ElectroMagnetic Compatibility(EMC)	电磁兼容性
Emerson Network Power	艾默生网络能源
encapsulate	灌胶
ESD	静电
Enclosure	外壳防护
Environmental parameter monitoring function	环境量监控
Equal Charge/Float Charge transfer	均充 / 浮充转换

**F**

feature	特性
ferrite core	磁芯
forced air cooling	强制风冷
Front End(FE)	前端模块
full brick	全砖
full load	满载
function	功能
fuse	熔断器



# Glossary

Forced air-cooling	强制风冷
Frequency	频率
Front access	前面接入维护

## G

Gate magnetic	门磁
---------------	----

## H

half brick	半砖
heatsink	散热器
hiccup	打嗝
high current density	高电流密度
high power density	高功率密度
hysteresis	回差
Hot-swap	热插拔

## I

immunity	抗扰性
inductor	电感器
inrush current	输入冲击电流
insulation	绝缘
isolation	隔离
Input current	输入电流
Input voltage	输入电压
Intelligent battery management	智能电池管理

## L

latch	锁死
Layout	布局图
line regulation	线性调整率 ( 又称源调整率 )
load regulation	负载调整率
Lower Voltage Protection(LVP)	欠压保护
Lightning arrester protection	防雷保护
Load Low Voltage Disconnection	负载欠压脱离
Load sharing imbalance	均流不平衡度

**M**

maintain	-----	维护
Mean Time Between Failure(MTBF)	-----	平均无故障时间
mechanical	-----	机械
multilayer board PCB	-----	多层印制板
multiple outputs	-----	多路输出
MCB	-----	空开
MTBF	-----	平均无故障时间

**N**

negative logic	-----	负逻辑
noise voltage	-----	噪声电压
Non-isolated	-----	非隔离

**O**

open-frame	-----	开放式结构
open-shelf	-----	开架式结构
operating temperature	-----	工作温度
Over Current Protection(OCP)	-----	过流保护
Over Temperature Protection(OTP)	-----	过温保护
Over Voltage Protection(OVP)	-----	过压保护
overshoot	-----	过冲
Operating temperature	-----	工作温度
Output current	-----	输出电流
Output power	-----	输出功率
Output voltage	-----	输出电压
Over Temperature Protection	-----	过温保护

**P**

package style	-----	封装型式
parallel	-----	并联
parameter	-----	参数
pilot	-----	中试
pin	-----	插针, 管脚
Point Of Load(POL)	-----	点负载

# Glossary

positive logic	正逻辑
product number	产品型号
profile	外形
prototype	初样
Peak-peak noise	峰峰值噪声
Power Factor	功率因数
Power System	内置电源系统

## Q

quad outputs	四路输出
quarter brick	1/4 砖

## R

radiated emission	辐射干扰
rating	额定
reflected ripple current	反射纹波电流
reliability	可靠性
remote control	遥控
ring generator	铃流发生器
ripple voltage	纹波电压
Radiation Emission	辐射干扰
Relative humidity	相对湿度

## S

schottky diode	肖特基二极管
screw fasten	螺钉紧固结构
sense	远端补偿
sequence	时序
setpoint	整定值
shock	冲击
short circuit	短路
single output	单路输出
Single-In-line Package	单列直插电源
soft start	软启动
specification	规格

start up time	-----	启动时间
storage temperature	-----	存储温度
supply voltage rejection	-----	音频隔离度
surge	-----	浪涌
synchronous rectification	-----	同步整流
Storage temperature	-----	存储温度

## T

tantalum electrolytic capacitor	-----	钽电解电容器
Telecom	-----	电信
topology	-----	拓扑
Total Harmonic Distortion(THD)	-----	总谐波畸变率
transformer	-----	变压器
transient response	-----	瞬态响应
Trim	-----	电压调节
triple outputs	-----	三路输出
Temperature Compensation	-----	温度补偿
Total regulation	-----	调整率

## V

voltage dip	-----	电压暂降
voltage short interruption	-----	电压短时中断
voltage variation	-----	电压变化

## W

Water-immersing	-----	水浸
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