ARTESYN AEE Series

50 Watts



Advanced Energy's Artesyn AEE 50W series is a high efficiency, highly compact and high density DCDC converter designed to be used in applications where a very wide input voltage range is required. The family covers an input voltage of 18Vdc to 75Vdc. The fully potted, metal cased construction also makes this family an ideal choice for harsh environments.

DATA SHEET

Total Power:

50 Watts

Input Voltage:

12 V, 24 V or 48 V

# of Outputs:

Single

SPECIAL FEATURES

- Encapsulated
- Wide 4:1 input range
- 1" x 2" DIP package
- 1500 Vdc I/O isolation
- Single output
- OCP, OVP, OTP PProtection
- Remote On/Off
- High efficiency OF 92%
- Operating temp. range
- –40 °C to +85 °C (with derating)

SAFETY

- UL/cUL/IEC/EN 62368-1 (60950-1) Safety Approval & CE Marking

TYPICAL APPLICATION

- Industrial

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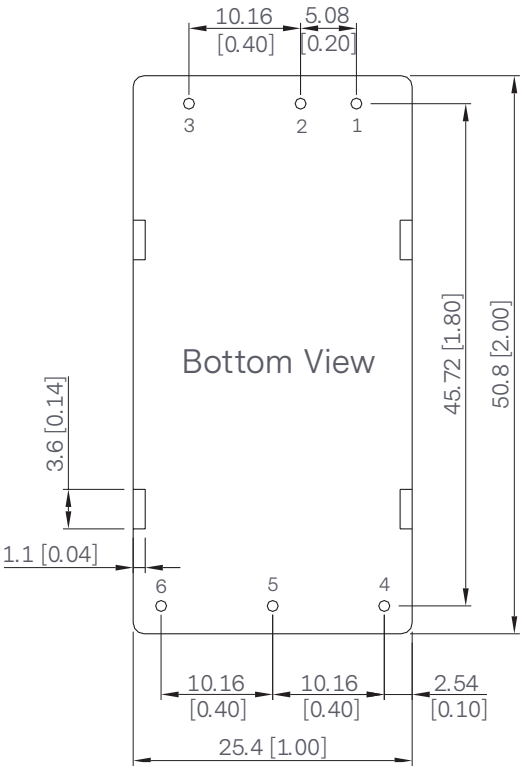
ELECTRICAL SPECIFICATIONS

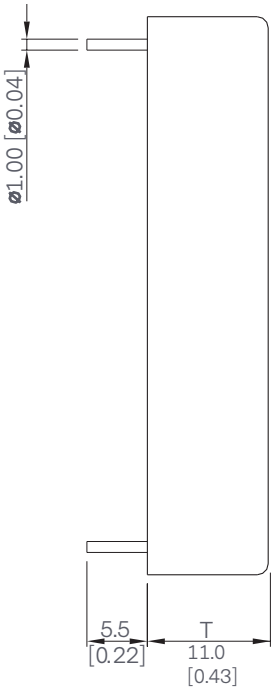
Input	
Input range	9 to 36 Vdc; 18 to 75 Vdc
Efficiency	92% @ 12 Vo
Output	
Voltage tolerance	±1.0%
Line regulation	±0.5%
Load regulation	Single output: ±0.5%
Noise/ripple	3.3 Vo, 5 Vo: 100 mV Others: 150 mV
OCP and S/C protection	Hiccup
Overvoltage protection	Latched
OTP protection	Latched
Switching frequency	285 KHz
Temperature coefficient	±0.02 /°C
Isolation	
I/O isolation	1500 Vdc min.
Insulation resistance	1000 Mohm
Insulation capacitance	2200 pF

ENVIRONMENTAL SPECIFICATIONS

Operating ambient temperature range	-40 °C to +85 °C
Storage temperature	-50 °C to +125 °C
Humidity	5% to 95% (non-condensing)
Calculated MTBF	233 Khrs

MECHANICAL DRAWINGS





Pin No.	Single Output
1	+Vin
2	-Vin
3	Remote On/Off
4	+Vout
5	-Vout
6	Trim

All dimensions in mm (inches)
Tolerance: X.X±0.25 (X.XX±0.01)
X.XX±0.13 (X.XXX±0.005)
Pin diameter Ø 1.0 ±0.05 (0.04±0.002)

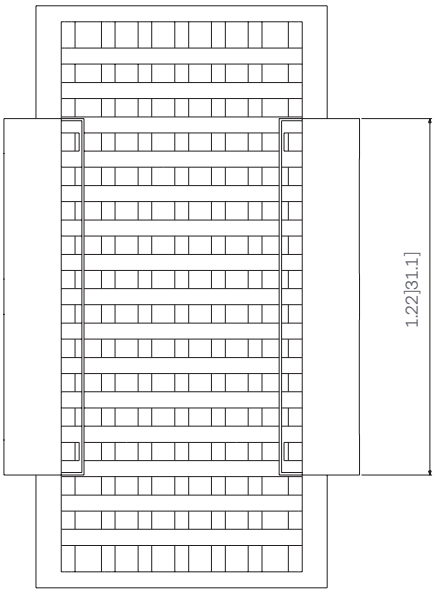
PHYSICAL CHARACTERISTICS

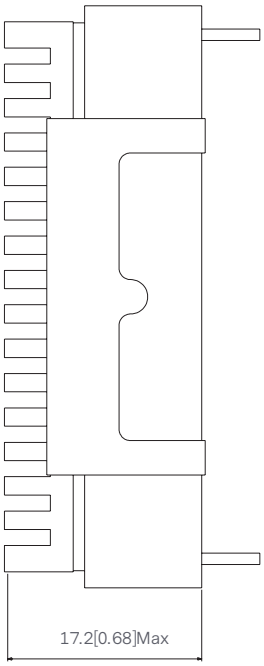
Case Size	50.8 x 25.4 x 11 mm (2.0 x 1.0 x 0.43 inches)
Case Material	Aluminium Alloy, Black Anodized Coating
Base Material	FR4 PCB (flammability to UL 94V-0 rated)
Pin Material	Copper Alloy with Gold Plate Over Nickel Subplate
Weight	30 g

ORDERING INFORMATION

Model Number	Input Voltage	Output 1 Voltage	Maximum Power
AEE10F18-L	9 - 36 V	3.3 V @ 10 A	33 W
AEE10A18-L	9 - 36 V	5 V @ 10 A	50 W
AEE04B18-L	9 - 36 V	12 V @ 4.17 A	50 W
AEE03C18-L	9 - 36 V	15 V @ 3.33 A	50 W
AEE02H18-L	9 - 36 V	24 V @ 2.08 A	50 W
AEE10F36-L	18 - 75 V	3.3 V @ 10 A	33 W
AEE10A36-L	18 - 75 V	5 V @ 10 A	50 W
AEE04B36-L	18 - 75 V	12 V @ 4.17 A	50 W
AEE03C36-L	18 - 75 V	15 V @ 3.33 A	50 W
AEE02H36-L	18 - 75 V	24 V @ 2.08 A	50 W

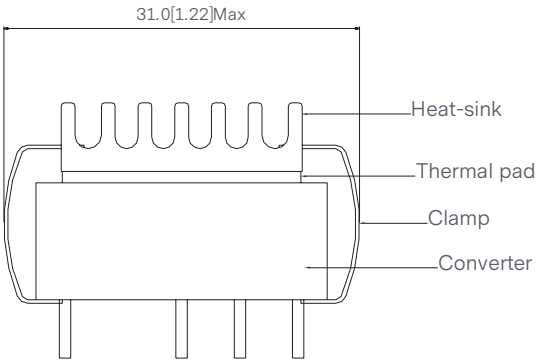
MECHANICAL DRAWINGS (CONTINUED)





The advantages of adding a heatsink are:

1. To help heat dissipation and increase the stability and reliability of DC/DC converters at high operating temperature atmosphere.
2. To upgrade the operating temperature of DC/DC converters, please refer to Derating Curve.



PHYSICAL CHARACTERISTICS

Heatsink Material	Aluminum
Finish	Black Anodized Coating
Weight	9 g

Note1 All specifications are subject to change without notice. Mechanical drawings are for reference only.
Note2 Warranty: 3 yr
Note3 Label and logo appearance may vary from what is shown on mechanical drawings.

ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

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