

# 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

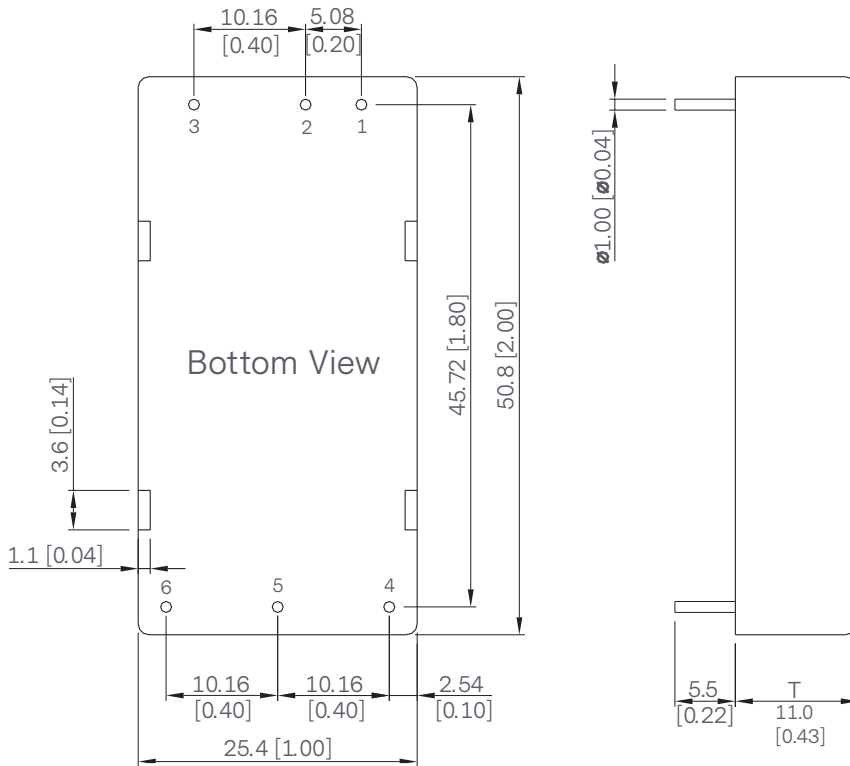
## ELECTRICAL SPECIFICATIONS

| 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<br>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  $\varnothing$  1.0 ±0.05 (0.04±0.002)

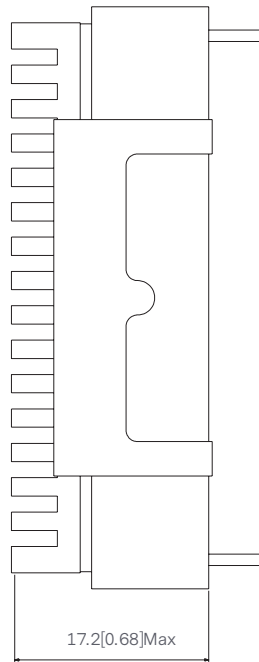
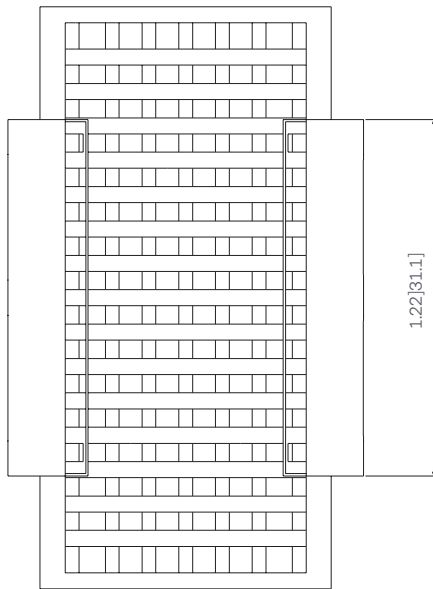
PHYSICAL CHARACTERISTICS

|               |   |
|---------------|---|
| 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

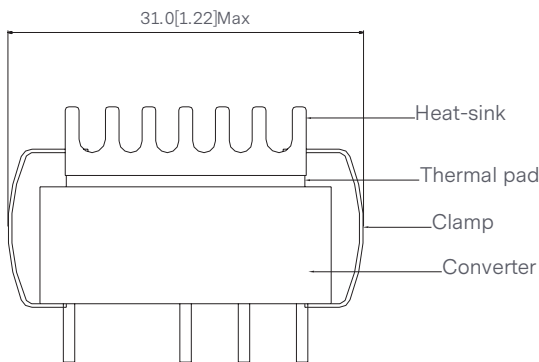
| Model Number | Input Voltage | Output 1 Voltage | Maximum Power |
|--------------|---------------|------------------|---------------|
| AEE10F18-L   | 9 - 36 V      | 3.3 V @ 10 A     | 33 W          |
| AEE10A18-L   | 9 - 36 V      | 5 V @ 10 A       | 50 W          |
| AEE04B18-L   | 9 - 36 V      | 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.



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## 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.

PRECISION | POWER | PERFORMANCE

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