ARTESYN AYA SERIES

3 Watts



Advanced Energy's Artesyn AYA series of 3 watt isolated DC-DC converters are suitable for a diverse range of low power applications, including data communication, telecommunication and computer peripheral equipment, industrial automation and mobile battery-powered systems. The series comprises 28 variants, each of which is available in a mini dual-in-line package for through-hole mounting or a mini surface-mount package.

DATA SHEET

Total Power:

3 W

Input Voltage:

5, 12, 24, 48 V

# of Outputs:

Single and Dual

SPECIAL FEATURES

- Ultra compact DIP package (14 x 14 x 8.0 mm; 0.55 x 0.55 x 0.31 inches)
- Efficiency up to 87%
- I/O-isolation 1500 Vdc
- Wide 2:1 input range
- Operating temperature range -40 °C to +85 °C (with derating)
- Three year product warranty
- UL/cUL/IEC/EN 60950-1 Safety Approval, CE Mark

SAFETY

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

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ELECTRICAL SPECIFICATIONS

Input	
Input range	4.5 - 10 Vdc; 9 - 18 Vdc; 18 - 36 Vdc; 36 - 75 Vdc
Efficiency	87% @ 12 Vo
Output	
Voltage tolerance	±1.5%
Line regulation	±0.2%
Load regulation	1.0%
Noise/ripple	70 mV
Overload protection	170% typ of Io max, foldback
Short circuit protection	Continuous, automatic recovery
Switching frequency	100 kHz
Isolation	
I/O isolation	I/O: 1500 Vdc
Insulation resistance	1000 Mohm
Insulation capacitance	100 pF

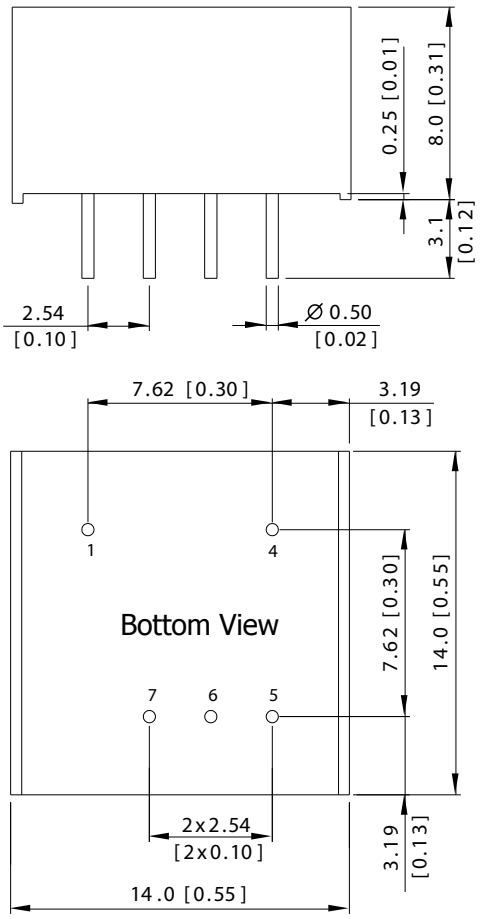
ENVIRONMENTAL SPECIFICATIONS

Operating ambient temperature range	-40 °C to +85 °C
Storage temperature	-50 °C to +125 °C
Humidity	5% to 95% non-condensing
MTBF	3.5 Mhrs calculated

ORDERING INFORMATION

Part Number	Input Voltage	Output Voltage	Output Current	Efficiency	Power
AYA01F05-L	4.5 - 10 Vdc	3.3 V	0.6 A	79%	2 W
AYA01A05-L	4.5 - 10 Vdc	5 V	0.6 A	81%	3 W
AYA01B05-L	4.5 - 10 Vdc	12 V	0.25 A	85%	3 W
AYA01C05-L	4.5 - 10 Vdc	15 V	0.2 A	85%	3 W
AYA01AA05-L	4.5 - 10 Vdc	±5 V	±0.3 A	82%	3 W
AYA01BB05-L	4.5 - 10 Vdc	±12 V	±0.125 A	84%	3 W
AYA01CC05-L	4.5 - 10 Vdc	±15 V	±0.1 A	85%	3 W
AYA01F12-L	9 - 18 Vdc	3.3 V	0.6 A	80%	2 W
AYA01A12-L	9 - 18 Vdc	5 V	0.6 A	83%	3 W
AYA01B12-L	9 - 18 Vdc	12 V	0.25 A	87%	3 W
AYA01C12-L	9 - 18 Vdc	15 V	0.2 A	87%	3 W
AYA01AA12-L	9 - 18 Vdc	±5 V	±0.3 A	84%	3 W
AYA01BB12-L	9 - 18 Vdc	±12 V	±0.125 A	86%	3 W
AYA01CC12-L	9 - 18 Vdc	±15 V	±0.1 A	87%	3 W
AYA01F24-L	18 - 36 Vdc	3.3 V	0.6 A	80%	2 W
AYA01A24-L	18 - 36 Vdc	5 V	0.6 A	83%	3 W
AYA01B24-L	18 - 36 Vdc	12 V	0.25 A	87%	3 W
AYA01C24-L	18 - 36 Vdc	15 V	0.2 A	87%	3 W
AYA01AA24-L	18 - 36 Vdc	±5 V	±0.3 A	84%	3 W
AYA01BB24-L	18 - 36 Vdc	±12 V	±0.125 A	86%	3 W
AYA01CC24-L	18 - 36 Vdc	±15 V	±0.1 A	87%	3 W
AYA01F48-L	36 - 75 Vdc	3.3 V	0.6 A	79%	2 W
AYA01A48-L	36 - 75 Vdc	5 V	0.6 A	82%	3 W
AYA01B48-L	36 - 75 Vdc	12 V	0.25 A	86%	3 W
AYA01C48-L	36 - 75 Vdc	15 V	0.2 A	86%	3 W
AYA01AA48-L	36 - 75 Vdc	±5 V	±0.3 A	82%	3 W
AYA01BB48-L	36 - 75 Vdc	±12 V	±0.125 A	85%	3 W
AYA01CC48-L	36 - 75 Vdc	±15 V	±0.1 A	85%	3 W

MECHANICAL DIMENSIONS



Pin Connections		
Pin	Single Output	Dual Output
1	-Vin	-Vin
4	+Vin	+Vin
5	+Vout	+Vout
6	No pin	Common
7	-Vout	-Vout

· All dimensions in mm (inches)
· Tolerance: X.X±0.5 (X.XX±0.02)
X.XX±0.25 (X.XXX±0.01)
· Pin diameter Ø 0.5 ±0.05 (0.02±0.002)

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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