

ASD10

ISOLATED AND REGULATED 10-WATT MODULAR DC/DC CONVERTERS

The ASD10 series of isolated and regulated 10-watt modular DC/DC converters stand out for their exceptional performance and versatility. With an impressive 4:1 input range of 9 to 36V or 18 to 75V, these converters are ideal for various applications. Their high efficiency ensures optimal power conversion, while regulated outputs guarantee a stable and reliable power supply. Additionally, the converters boast 1500 VDC isolation, full EMI shielding, and standard pinouts for seamless integration into your systems. Trust in the ASD10 series to deliver precise and dependable power solutions for your needs.



HOW TO ORDER

ASD10-12S3

- OUTPUT VOLTAGE
  - 3 = 3.3 VDC
  - 5 = 5 VDC
  - 9 = 9 VDC
  - 12 = 12 VDC
  - 15 = 15 VDC
- NUMBER OF OUTPUTS
  - S = SINGLE OUTPUT
  - D = DOUBLE OUTPUT
- INPUT RANGE VOLTAGE
  - 12 = 9–36 VDC
  - 48 = 18–75 VDC
- OUTPUT POWER: 10W
- FAMILY: ASD SERIES

FEATURES

DC INPUT Wide 4:1
Nominal: 12VDC 48VDC
Range: 9-36VDC 18-75VDC

OUTPUT RANGE
10 Watts Output

OPERATING TEMPERATURE
-25 to +71°C(FL)

SAFETY APPROVALS
Mil Std 217, 25°C

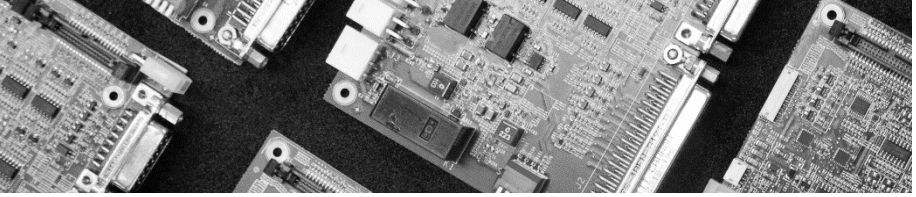
SHOCK/VIBRATION
MIL-STD 810°C

HIGH EFFICIENCY

ISOLATION
1500VDC (48V)

FULL EMI SHIELDING

STANDARD PINOUTS



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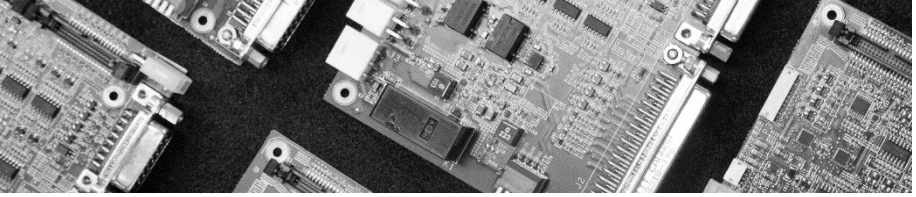
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PARAMETERS	ASD10
INPUT SPECIFICATIONS	
Input Voltage, Nominal	12VDC 48VDC
Input Voltage Ranges	9-36 18-75 VDC
Input Surge Voltage	50V (12V Models), * 100V (48V Models), * 10 mS duration, min.
OUTPUT SPECIFICATIONS	
Voltage and Current	See Selection Chart
Preset Accuracy	Singles: +/- 3% max. Duals: +/- 4% max.
Cross Regulation (Duals)	5-8% typ.
Load Regulation	singles: +/- 0.5%
20% - FL	duals: +/-1%, +/-3% (5V mod)
Line Regulation	singles: +/- 0.5% duals: +/- 1%
Minimum Load	5% of Full Load
Temperature Coefficient	+/-0.03%/°C
Ripple/Noise (Pk-Pk, typ)	(Note 1)
Single 3.3V	150mV
Single 5V	100mV (12Vin), 150mV (48Vin)
Single 9,12V	50mV (12Vin), 100mV (48Vin)
Single 15V	50mV
Dual 5V	150mV
Dual 12, 15V	100mV
Overvoltage Protection	Clamp, 130-150%*
Short Circuit Protection	Clamp, need to release load*

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long-term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

GENERAL SPECIFICATIONS	
On/Off Control	(Ref to - Input pin) Logic "1"/Open=ON Logic "0"/GND=OFF
Shutdown Idle Current	15mA
Input-Out Isolation	1500VDC (48V) 500 VDC (12V)
In/Out Capacitance	1000 pF
Efficiency at nom. Input	12V: 72%-81%, typ. 48V: 77%-82%, typ.
Switching Frequency	450Khz



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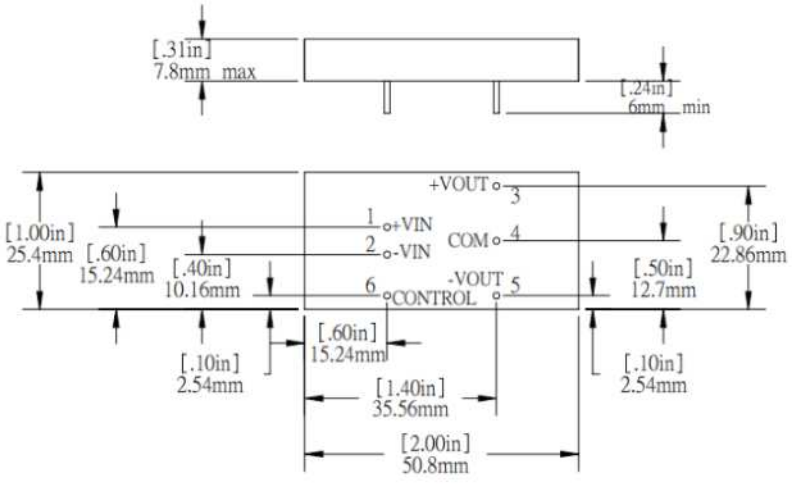
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PARAMETERS	ASD10
ENVIRONMENTAL SPECIFICATIONS	
Oper. Temperature	-25 to +71°C(FL)
Storage Temperature	-40 to +125°C *
Maximum Case Temp	110°C *
Input Fusing	12V: 4A, 48V: 2A
MTBF	1,000,000 Hrs Mil Std 217, 25°C
Shock/Vibration	To MIL-STD 810°C
PHYSICAL SPECIFICATIONS	
Case Material	Aluminum
Construction	Fully Encapsulated
Weight	0.64 oz, (18g)

NOTES

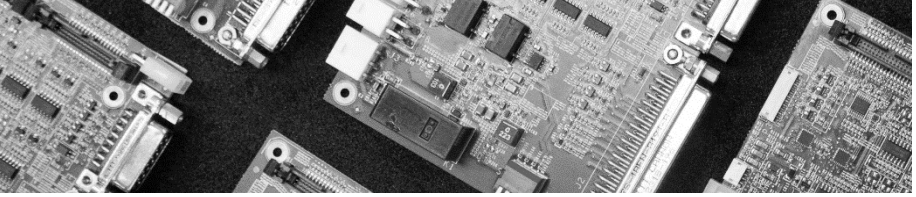
1. Ripple & Noise are measured by using a 20MHz bandwidth oscilloscope and terminating the output with a 47uF electrolytic capacitor paralleled with a 0.1uF ceramic capacitor

MECHANICAL DIMENSION



Pin#	Single Outputs	Dual Outputs
1	+Input	+Input
2	- Input	- Input
3	+Output	+Output
4	N/A	Common
5	- Output	- Output
6	Control	Control

TOLERANCES : .XX ± 0.5mm(0.02in)
: .XXX ± 0.25mm(0.01in)



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MODEL NUMBER	OUTPUT VOLTAGE	OUTPUT AMPS	INPUT RANGE
Single Output			
ASD10-12S3	3.3 VDC	2.5	9-36 VDC
ASD10-48S3	3.3 VDC	2.5	18-75 VDC
ASD10-12S5	5 VDC	2	9-36 VDC
ASD10-48S5	5 VDC	2	18-75 VDC
ASD10-12S9	9 VDC	1.1	9-36 VDC
ASD10-48S9	9 VDC	1.1	18-75 VDC
ASD10-12S12	12 VDC	0.83	9-36 VDC
ASD10-48S12	12 VDC	0.83	18-75 VDC
ASD10-12S15	15 VDC	0.67	9-36 VDC
ASD10-48S15	15 VDC	0.67	18-75 VDC
Dual Output			
ASD10-12D5	+/-5 VDC	+/-1	9-36 VDC
ASD10-48D5	+/-5 VDC	+/-1	18-75 VDC
ASD10-12D12	+/-12 VDC	+/-0.42	9-36 VDC
ASD10-48D12	+/-12 VDC	+/-0.42	18-75 VDC
ASD10-12D15	+/-15 VDC	+/-0.33	9-36 VDC
ASD10-48D15	+/-15 VDC	+/-0.33	18-75 VDC

OUTPUT DERATING CURVE

