

1 watt dc-dc converters

- 7PIN SIL PACKAGE
- REGULATED OUTPUT VOLTAGE
- LOW RIPPLE AND NOISE
- HIGH EFFICIENCY UP TO 70%
- INPUT/OUTPUT ISOLATION: 1000 or 3000VDC
- OPERATING TEMPERATURE: -40°C ... +85°C
- PIN-COMPATIBLE WITH OTHER MANUFACTURERS

GENERAL DESCRIPTION

The AM1DR series is a family of cost effective 1W single output isolated DC-DC converters. These converters achieve low cost and ultra-miniature SIL7 pin size without compro-mising performance and reliability.

Thirty models operates from input bus voltage of 5, 12 and 24VDC; producing regulated output voltage levels of 3.3, 5, 9, 12, 15VDC.

Full SMD-design and a 100% production test of parameters ensure a high reliability of this product.

ELECTRICAL SPECIFICATIONS

Specifications typical at +25°C, nominal input voltage, rated output current unless otherwise specified

Input Specifications:		General Specifications:	
Voltage range	±10%	Efficiency	58% to 70%
Filter	Capacitor	Switching frequency	125KHz, typ
Isolation Specifications:		Environmental Specifications:	
Rated voltage (60 sec)	1000VDC 3000VDC	Operating temperature (ambient)	-40°C ... +85°C
Leakage current	1mA	Storage temperature	-55°C ... +125°C
Resistance	> 1000MOhm	Derating	None required
Capacitance	60pF, typ	Humidity (non-condensing)	Up to 90%
		Cooling	Free-air Convection
Output Specifications:		Physical Specifications	
Voltage accuracy	±3%, max	Dimensions	19.50x6.00x10.00mm
Ripple and noise (at 20MHz BW)	50 mVp-p, max		0.76x0.24x0.39inches
Short circuit protection	Momentary	Weight	2.7g
Line voltage regulation	±0.5%, max	Case material	Non-conductive black plastic
Load voltage regulation	±0.5%, max		
Temperature coefficient	±0.02%/°C		

MTBF: > 880 000 hrs (MIL-HDBK-217F, Ground Benign, t=+25°C)

Specifications are subject to change without notification

MODELS

Single output

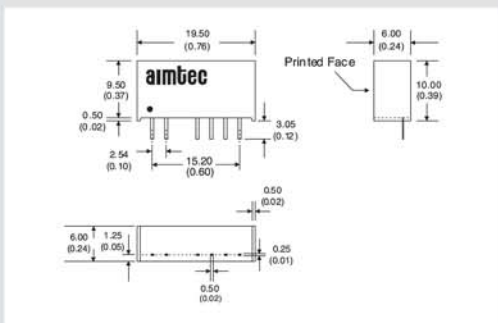
Models		Input voltage	Output voltage	Output current max.
Isolation 1000 VDC	Isolation 3000 VDC			
AM1DR-0503S	AM1DR-0503SH30	5V±10%	3.3VDC	200mA
AM1DR-0505S	AM1DR-0505SH30		5VDC	200mA
AM1DR-0509S	AM1DR-0509SH30		9VDC	111mA
AM1DR-0512S	AM1DR-0512SH30		12VDC	84mA
AM1DR-0515S	AM1DR-0515SH30		15VDC	67mA
AM1DR-1203S	AM1DR-1203SH30	12V±10%	3.3VDC	200mA
AM1DR-1205S	AM1DR-1205SH30		5VDC	200mA
AM1DR-1209S	AM1DR-1209SH30		9VDC	111mA
AM1DR-1212S	AM1DR-1212SH30		12VDC	84mA
AM1DR-1215S	AM1DR-1215SH30		15VDC	67mA
AM1DR-2403S	AM1DR-2403SH30	24V±10%	3.3VDC	200mA
AM1DR-2405S	AM1DR-2405SH30		5VDC	200mA
AM1DR-2409S	AM1DR-2409SH30		9VDC	111mA
AM1DR-2412S	AM1DR-2412SH30		12VDC	84mA
AM1DR-2415S	AM1DR-2415SH30		15VDC	67mA

INPUT CURRENT

No Load / Full Load

5 Vin models	25 / 260mA, typ
12 Vin models	20 / 113mA, typ
24 Vin models	9 / 58mA, typ

OUTLINE DIMENSIONS & PIN CONNECTIONS



Pin	1000VDC	3000VDC
	Single	Single
1	+V Input	+V Input
2	-V Input	-V Input
4	-V Output	Omitted
5	Omitted	-V Output
6	+V Output	Omitted
7	Omitted	+V Output