3 & 5 WATT REGULATED

DC/DC CONVERTERS A & D SERIES

FEATURES

- Input/Output isolated
- Continuous short circuit protected, self recovering
- Line regulation 0.02%
- Load regulation 0.02%
- Pi input filter
- No derating to 71°C
- Single and dual outputs
- PC mountable
- Designed to meet FCC Sect 15 Sub Part J, A & B
- 100% burned-in and triple tested
- 2 year warranty

GENERAL DESCRIPTION

The A and D Series of DC/DC converters provide tight regulation and accuracy in a compact, cost effective package. The series operates from nominal inputs of 5, 12 or 24VDC with single and dual output voltages. Outputs feature extremely low noise due to the use of high quality, reliable components. The series provides 3 to 6 watts of output power with high efficiency for a converter of this type. The A and D Series are designed for board level DC power applications such as A/D and D/A converters, operational and instrument amplifiers, and portable data acquisition equipment.

GENERAL ELECTRICAL SPECIFICATIONS

(Specifications at Nominal Input and 25° C)

PARAMETER	LIMIT	CONDITIONS
Input Filter	Pi Filter	All Units
Input/Output Isolation		
Voltage	500VDC (Min.)	All Units
Leakage Current	<0.5 ua	
Resistance	$>10^3$ megohms	
Output Voltage Accuracy	+/- 1%	Factory Set
Load Regualtion	0.02% (Max.)	NL to FL ±12V and ±15V output models
	0.1% (Max.)	5V ouput models
Line Regulation	0.02% (Max.)	LL to HL at Full Load
Output Voltage Stability	0.02%/°C	Typical
Output Noise/Ripple	40mV, P-P (Max.)	20 Hz-20MHz Bandwidth
Short Circuit Protection	Current Limited	All Units
Duration	Continuous	
Thermal Overload Protection	Dual Output Units	
Foldback Current Limiting	Single Output Units	
Switching Frequency	25 KHz	
Operating Temperature	-25° to +71°C	
Derating	None	To 71°C
Storage Temperature	-35°C to +125°C	

SELECTION GUIDE STANDARD PRODUCTS

DEVICE TYPE	INPUT VOLTAGE RANGE (VDC)	INPUT CURRENT A (MAX.)	OUTPUT VOLTAGE VDC	OUTPUT CURRENT mA (MAX.)	PACKAGE
3A5R5	4.5 - 5.5	1.20	+ or - 5	600	A
3D5R5	4.5 - 5.5	1.20	+ or - 5	600	D
3A5R12-12	4.5 - 5.5	1.60	± 12	± 150	A
3D5R12-12	4.5 - 5.5	1.60	± 12	± 150	D
3A5R15-15	4.5 - 5.5	1.90	± 15	± 150	A
3D5R15-15	4.5 - 5.5	1.90	± 15	± 150	D
5A5R5	4.5 - 5.5	1.82	+ or - 5	1000	A
5D5R5	4.5 - 5.5	1.82	+ or - 5	1000	D
5A5R12-12	4.5 - 5.5	2.40	± 12	± 250	A
5D5R12-12	4.5 - 5.5	2.40	± 12	± 250	D
5A5R15-15	4.5 - 5.5	2.40	± 15	± 200	A
5D5R15-15	4.5 - 5.5	2.40	± 15	± 200	D
3A12R5	10.8 - 13.2	.46	+ or - 5	600	A
3D12R5	10.8 - 13.2	.46	+ or - 5	600	D
3A12R12-12	10.8 - 13.2	.55	± 12	± 150	A
3D12R12-12	10.8 - 13.2	.55	± 12	± 150	D
3A12R15-15	10.8 - 13.2	.65	± 15	± 150	A
3D12R15-15	10.8 - 13.2	.65	± 15	± 150	D

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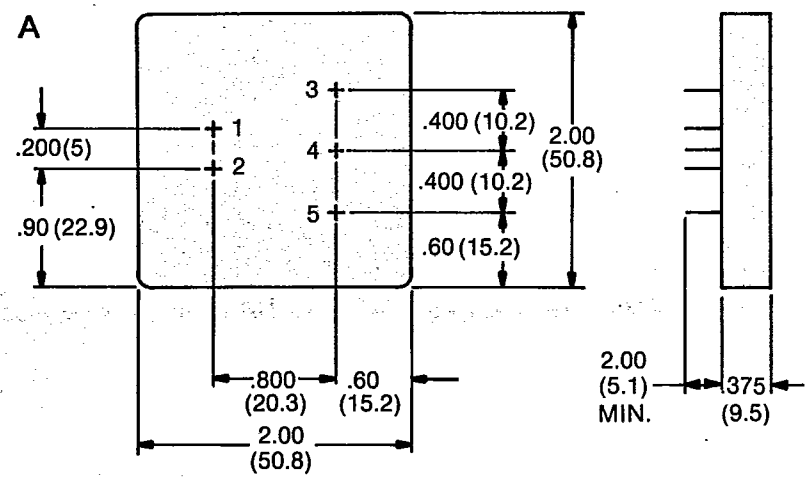
SELECTION GUIDE
STANDARD PRODUCTS

DEVICE TYPE	INPUT VOLTAGE RANGE (VDC)	INPUT CURRENT A (MAX.)	OUTPUT VOLTAGE VDC	OUTPUT CURRENT mA (MAX.)	PACKAGE
5A12R5	10.8 - 13.2	.72	+ or - 5	1000	A
5D12R5	10.8 - 13.2	.72	+ or - 5	1000	D
5A12R12-12	10.8 - 13.2	.85	± 12	± 250	A
5D12R12-12	10.8 - 13.2	.85	± 12	± 250	D
5A12R15-15	10.8 - 13.2	.85	± 15	± 200	A
5D12R15-15	10.8 - 13.2	.85	± 15	± 200	D
3A24R5	21.6 - 26.4	.25	+ or - 5	600	A
3D24R5	21.6 - 26.4	.25	+ or - 5	600	D
3A24R12-12	21.6 - 26.4	.28	± 12	± 150	A
3D24R12-12	21.6 - 26.4	.28	± 12	± 150	D
3A24R15-15	21.6 - 26.4	.34	± 15	± 150	A
3D24R15-15	21.6 - 26.4	.34	± 15	± 150	D
5A24R5	21.6 - 26.4	.35	+ or - 5	1000	A
5D24R5	21.6 - 26.4	.35	+ or - 5	1000	D
5A24R12-12	21.6 - 26.4	.45	± 12	± 250	A
5D24R12-12	21.6 - 26.4	.45	± 12	± 250	D
5A24R15-15	21.6 - 26.4	.45	± 15	± 200	A
5D24R15-15	21.6 - 26.4	.45	± 15	± 200	D

MECHANICAL DIMENSIONS AND PIN CONNECTIONS

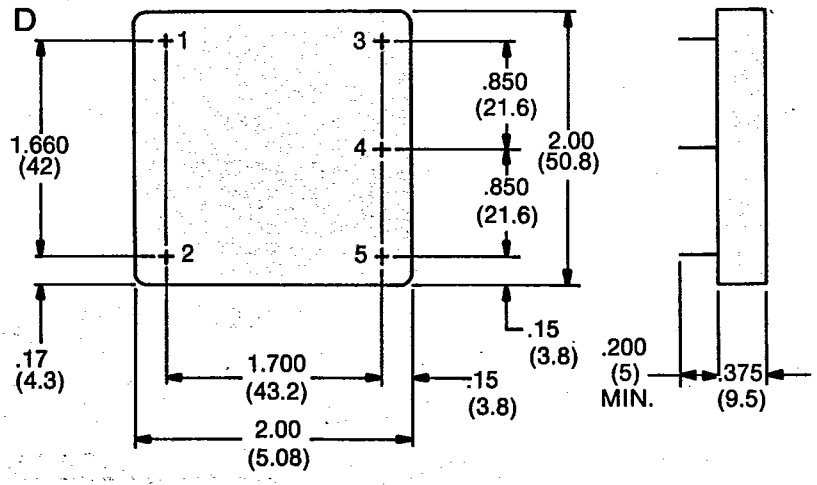
A



A

PIN	SINGLE OUTPUT
1	+ INPUT
2	- INPUT
3	+ OUTPUT
4	- OUTPUT
5	- OUTPUT
PIN	DUAL OUTPUT
1	+ INPUT
2	- INPUT
3	+ OUTPUT
4	COMMON
5	- OUTPUT

D

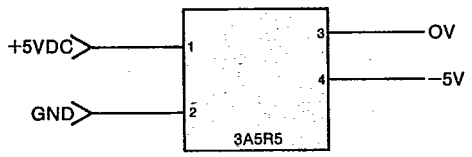


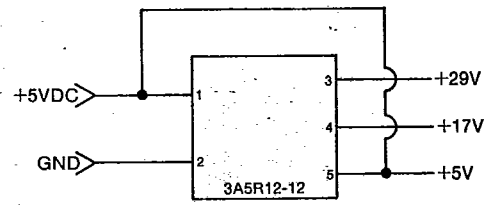
D

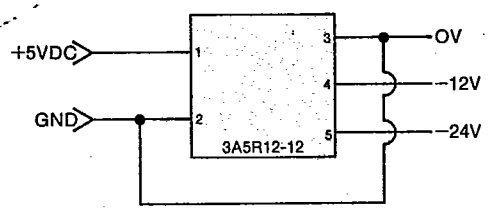
PIN	SINGLE OUTPUT
1	+ INPUT
2	- INPUT
3	+ OUTPUT
4	- OUTPUT
5	- OUTPUT
PIN	DUAL OUTPUT
1	+ INPUT
2	- INPUT
3	+ OUTPUT
4	COMMON
5	- OUTPUT

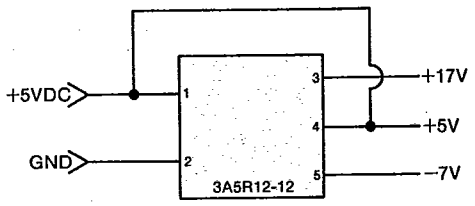
(Note) All dimensions in parentheses are metric.

OUTPUT CONFIGURATION OPTIONS







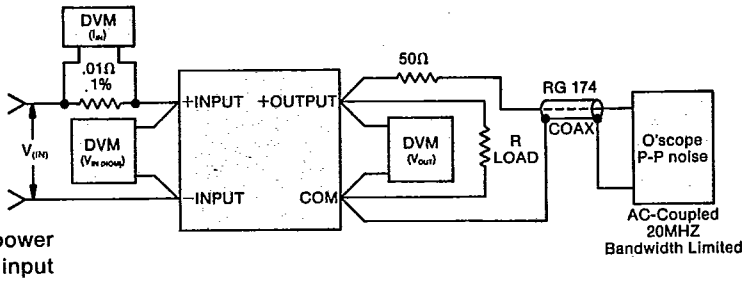


Standard isolated outputs: ± 12, ± 15VDC
Combined isolated outputs: 24, 30VDC
Combined non-isolated outputs:-3, -5, -6, -7, -10, -12, -15, -19, -24, -25, -30, +5, +10, +12,+15, +17, +20, +24,+27, +29, +30, +35, +36, +39, +42, +48, +54VDC.

- Achieving these voltages is dependent on model-type selected and configuration used. Please contact factory for assistance in selection.

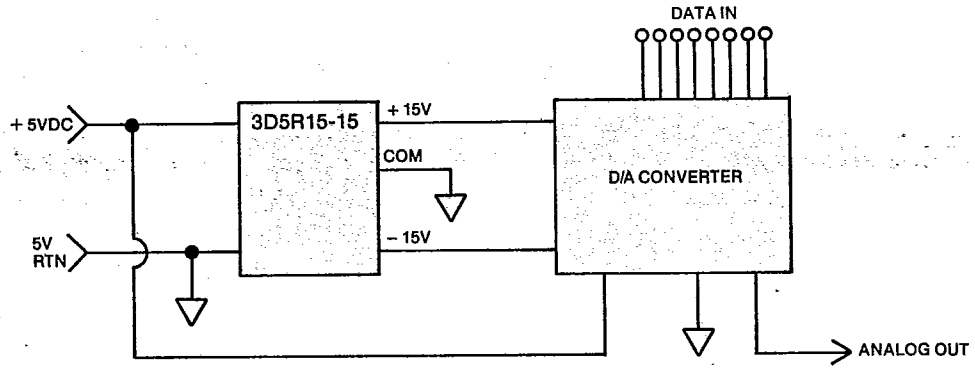
TEST CIRCUIT SCHEMATIC

- When measuring output noise use most direct connections to ensure correct readings. All noise measurements taken within 20HZ to 20 MHZBW.



Caution: (1) Do not insert or remove device with power applied. (2) Care must be taken to observe input polarity.

TYPICAL APPLICATION



Reliability®