



FEATURES:

- Single & Dual Models
- SMD Package
- Low Ripple & Noise
- High Efficiency up to 83%
- Operating Temperature -40°C to +85°C
- Input/Output Isolation of 1000 & 3000VDC
- Pin Compatible with multiple manufacturers
- RoHS Compliant



Models
Single output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1L-0303S-FZ	2.97-3.63	3.3	200	1000	73
AM1L-0305S-FZ	2.97-3.63	5	200	1000	72
AM1L-0309S-FZ	2.97-3.63	9	111	1000	75
AM1L-0312S-FZ	2.97-3.63	12	84	1000	75
AM1L-0315S-FZ	2.97-3.63	15	67	1000	76
AM1L-0503S-FZ	4.5-5.5	3.3	200	1000	77
AM1L-0505S-FZ	4.5-5.5	5	200	1000	81
AM1L-0509S-FZ	4.5-5.5	9	110	1000	78
AM1L-0512S-FZ	4.5-5.5	12	84	1000	80
AM1L-0515S-FZ	4.5-5.5	15	67	1000	81
AM1L-1203S-FZ	10.8-13.2	3.3	200	1000	75
AM1L-1205S-FZ	10.8-13.2	5	200	1000	81
AM1L-1209S-FZ	10.8-13.2	9	110	1000	78
AM1L-1212S-FZ	10.8-13.2	12	84	1000	81
AM1L-1215S-FZ	10.8-13.2	15	67	1000	83
AM1L-2403S-FZ	21.6-26.4	3.3	200	1000	67
AM1L-2405S-FZ	21.6-26.4	5	200	1000	71
AM1L-2409S-FZ	21.6-26.4	9	110	1000	73
AM1L-2412S-FZ	21.6-26.4	12	84	1000	76
AM1L-2415S-FZ	21.6-26.4	15	67	1000	77
AM1L-0303SH30-FZ	2.97-3.63	3.3	200	3000	77
AM1L-0305SH30-FZ	2.97-3.63	5	200	3000	81
AM1L-0309SH30-FZ	2.97-3.63	9	110	3000	78
AM1L-0312SH30-FZ	2.97-3.63	12	84	3000	80
AM1L-0315SH30-FZ	2.97-3.63	15	67	3000	81
AM1L-0503SH30-FZ	4.5-5.5	3.3	200	3000	77
AM1L-0505SH30-FZ	4.5-5.5	5	200	3000	81
AM1L-0509SH30-FZ	4.5-5.5	9	110	3000	78
AM1L-0512SH30-FZ	4.5-5.5	12	84	3000	80
AM1L-0515SH30-FZ	4.5-5.5	15	67	3000	81
AM1L-1203SH30-FZ	10.8-13.2	3.3	200	3000	75
AM1L-1205SH30-FZ	10.8-13.2	5	200	3000	81
AM1L-1209SH30-FZ	10.8-13.2	9	110	3000	78
AM1L-1212SH30-FZ	10.8-13.2	12	84	3000	81
AM1L-1215SH30-FZ	10.8-13.2	15	67	3000	83
AM1L-2403SH30-FZ	21.6-26.4	3.3	200	3000	67
AM1L-2405SH30-FZ	21.6-26.4	5	200	3000	71
AM1L-2409SH30-FZ	21.6-26.4	9	110	3000	73
AM1L-2412SH30-FZ	21.6-26.4	12	84	3000	76
AM1L-2415SH30-FZ	21.6-26.4	15	67	3000	77

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Efficiency (%)
AM1L-0505D-FZ	4.5-5.5	±5	±100	1000	71
AM1L-0509D-FZ	4.5-5.5	±9	±56	1000	78
AM1L-0512D-FZ	4.5-5.5	±12	±42	1000	78
AM1L-0515D-FZ	4.5-5.5	±15	±34	1000	81
AM1L-1205D-FZ	10.8-13.2	±5	±100	1000	73
AM1L-1209D-FZ	10.8-13.2	±9	±56	1000	79
AM1L-1212D-FZ	10.8-13.2	±12	±42	1000	81
AM1L-1215D-FZ	10.8-13.2	±15	±34	1000	83
AM1L-2403D-FZ	21.6-26.4	±3.3	±100	1000	66
AM1L-2405D-FZ	21.6-26.4	±5	±100	1000	76
AM1L-2409D-FZ	21.6-26.4	±9	±56	1000	78
AM1L-2412D-FZ	21.6-26.4	±12	±42	1000	80
AM1L-2415D-FZ	21.6-26.4	±15	±34	1000	75
AM1L-0505DH30-FZ	4.5-5.5	±5	±100	3000	71
AM1L-0509DH30-FZ	4.5-5.5	±9	±56	3000	78
AM1L-0512DH30-FZ	4.5-5.5	±12	±42	3000	78
AM1L-0515DH30-FZ	4.5-5.5	±15	±34	3000	81
AM1L-1205DH30-FZ	10.8-13.2	±5	±100	3000	73
AM1L-1209DH30-FZ	10.8-13.2	±9	±56	3000	79
AM1L-1212DH30-FZ	10.8-13.2	±12	±42	3000	81
AM1L-1215DH30-FZ	10.8-13.2	±15	±34	3000	83
AM1L-2403DH30-FZ	21.6-26.4	±3.3	±100	3000	66
AM1L-2405DH30-FZ	21.6-26.4	±5	±100	3000	76
AM1L-2409DH30-FZ	21.6-26.4	±9	±56	3000	78
AM1L-2412DH30-FZ	21.6-26.4	±12	±42	3000	80
AM1L-2415DH30-FZ	21.6-26.4	±15	±34	3000	75

NOTE 1 : Add suffix "TR" to a part number when ordering in tape and reel package

NOTE 2 : All specifications in this datasheet are measured at an ambient temperature of 25°C, humidity<75%, nominal input voltage and at rated output load unless otherwise specified.

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	3.3	3.0-3.6		VDC
	5	4.5-5.5		
	12	10.8-13.2		
	24	22.4-26.4		
Filter	Capacitor			
Start up time				ms
Absolute Maximum Rating	3.3V input models		-0.7 to 5	VDC
	5V input models		-0.7 to 7.5	
	12V input models		-0.7 to 15	
	24V input models		-0.7 to 30	
No Load Input Current		15	28	mA

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60sec		1000,3000	VDC
Resistance	500VDC	1000		MOhm
Capacitance	3.3V input model	16		pF
	5V input model	14/15(minimum 8)		
	12V input model	18(minimum 6/7)		
	24V input model	20(minimum 8)		

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy	Nominal input	1	3	%
Voltage balance (Dual Output Models)	Balanced Load		±1	%
Cross Regulation (Dual Output Models)	25% load on one output - 100% load on second load		5	%
Short Circuit protection	Max 1 second			
Line voltage regulation	Per 1% of Vin Change		1.2	%
Load voltage regulation (Single)	Output current change from 20% to 100% max load	8	12	%
Load voltage regulation (Dual)	Output current change from 20% to 100% max load	9	12	%
Temperature coefficient	Nominal Input	±0.01	±0.02	%/°C
Ripple & Noise	20MHz Bandwidth	100		mV p-p

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	100 (Min 70KHz)	150	KHz
Operating temperature		-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			100	°C
Derating	No derating up to +85 °C			
Cooling	Free Air Convection			
Humidity			90	% RH
Case material	Plastic (UL94-V0)			
Weight		1.6/2.1		g
Dimensions (L x W x H)	1KVdc isolation single output models : 0.50 x 0.44 x 0.29 inches 12.80 x 11.20 x 7.40 mm All other models : 0.60 x 0.44 x 0.29 inches 15.20 x 11.20 x 7.40 mm			
MTBF		3000k hours		
Maximum soldering temperature	300 (1.5mm from case for 10 seconds)			°C

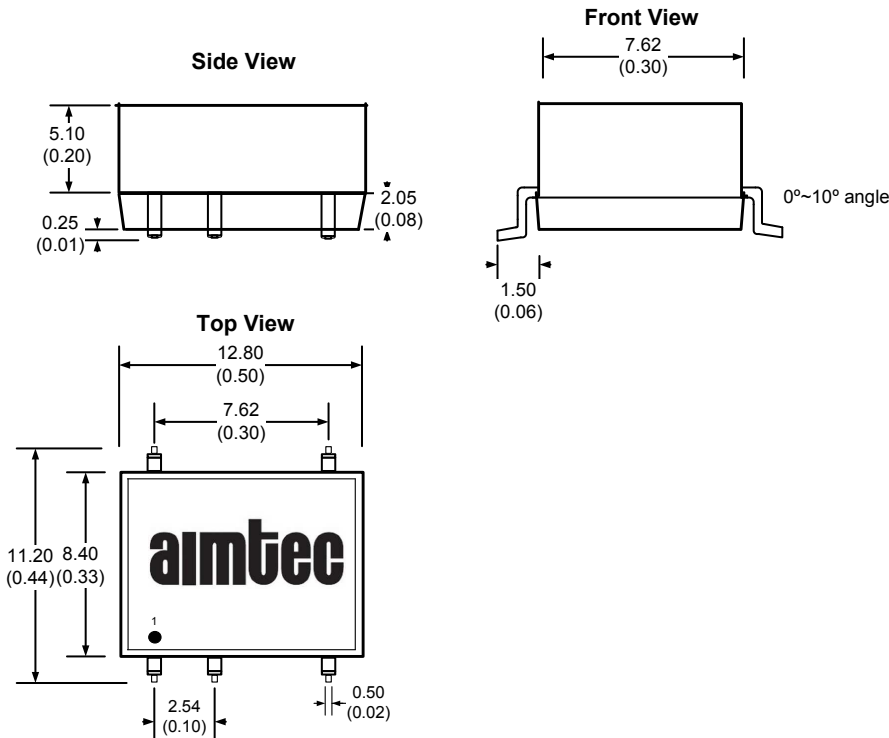
Pin Out Specifications

Pin	1000VDC Single
1	-V Input
2	+V Input
3	No Pin
4	-V Output
5	+V Output
6	No Pin
7	No Pin
8	N.C

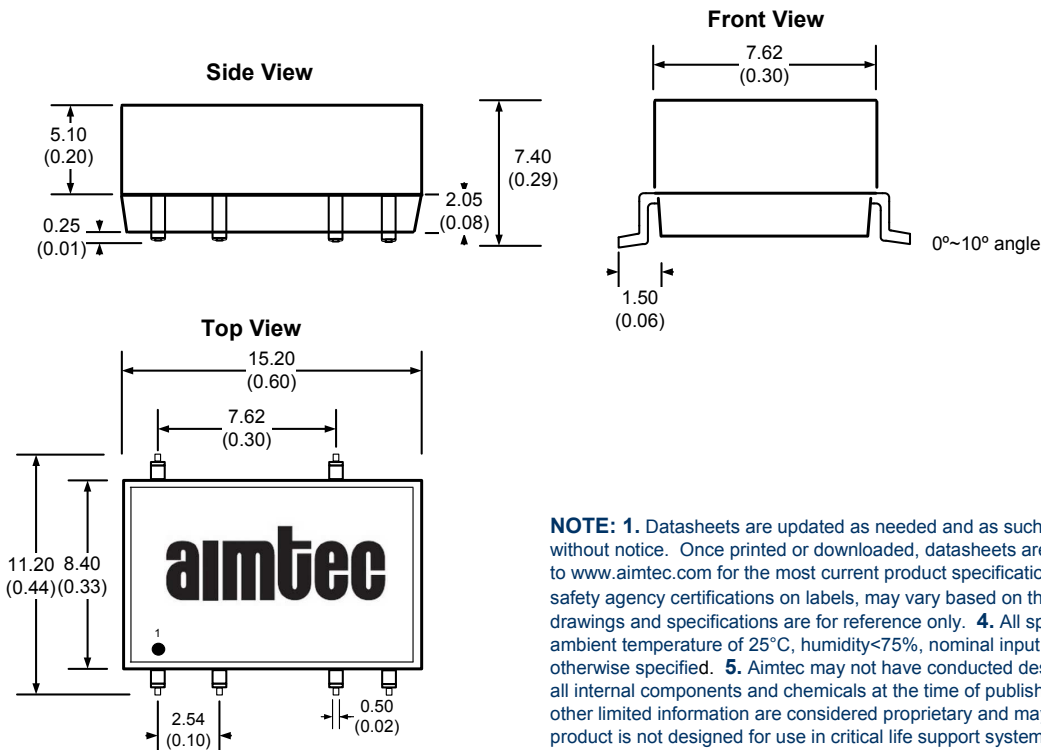
Pin	1000VDC	3000VDC	
	Dual	Single	Dual
1	-V Input	-V Input	-V Input
2	+V Input	+V Input	+V Input
3	No Pin	No Pin	No Pin
4	Common	-V Output	Common
5	-V Output	N.C.	-V Output
6	No Pin	No Pin	No Pin
7	+V Output	+V Output	+V Output
8	No Pin	No Pin	No Pin
9	No Pin	No Pin	No Pin
10	N.C.	N.C.	N.C.

Block Diagrams

Single 1000Vdc Isolation



All other models



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