



FEATURES:

- Wide 4:1 Input Voltage Range
- High efficiency up to 88%
- 1500 & 2250VDC Isolation
- Over Current Protection
- No load consumption $\leq 0.12W$
- Operating Temperature $-40^{\circ}C$ to $+85^{\circ}C$
- Output Over Voltage protection
- Continuous Short Circuit Protection
- Input Under Voltage Protection

Models
Single output



Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (μF)	Efficiency (%)
AM6CW-2403S-NZ	9-36	3.3	1500	1500	1800	79
AM6CW-2405S-NZ	9-36	5	1200	1500	1000	83
AM6CW-2409S-NZ	9-36	9	667	1500	680	85
AM6CW-2412S-NZ	9-36	12	500	1500	470	87
AM6CW-2415S-NZ	9-36	15	400	1500	220	88
AM6CW-2424S-NZ	9-36	24	250	1500	100	88
AM6CW-4803S-NZ	18-75	3.3	1500	1500	1800	79
AM6CW-4805S-NZ	18-75	5	1200	1500	1000	83
AM6CW-4812S-NZ	18-75	12	500	1500	470	87
AM6CW-4815S-NZ	18-75	15	400	1500	220	88
AM6CW-4824S-NZ	18-75	24	250	1500	100	88
AM6CW-11005SH22-NZ	40-160	5	1200	2250	1000	80
AM6CW-11012SH22-NZ	40-160	12	500	2250	470	84
AM6CW-11015SH22-NZ	40-160	15	400	2250	220	85
AM6CW-11024SH22-NZ	40-160	24	250	2250	100	86

Models
Dual output

Model	Input Voltage (V)	Output Voltage (V)	Output Current max (mA)	Isolation (VDC)	Max Capacitive Load (μF)	Efficiency (%)
AM6CW-2405D-NZ	9-36	± 5	± 600	1500	470	83
AM6CW-2412D-NZ	9-36	± 12	± 250	1500	100	87
AM6CW-2415D-NZ	9-36	± 15	± 200	1500	100	88
AM6CW-2424D-NZ	9-36	± 24	± 125	1500	100	88
AM6CW-4805D-NZ	18-75	± 5	± 600	1500	470	83
AM6CW-4812D-NZ	18-75	± 12	± 250	1500	100	87
AM6CW-4815D-NZ	18-75	± 15	± 200	1500	100	88

Note:

*Add suffix “-K” for optional heatsink

**Add suffix “-ST” for optional screw terminal bottom plate

***Add suffix “-STD” for optional DIN Rail screw terminal bottom plate

****Add suffix “-K-ST” for optional heat sink with screw terminal bottom plate

*****Add suffix “-K-STD” for optional heat sink with DIN Rail screw terminal bottom plate

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

Input Specifications

Parameters	Nominal	Typical	Maximum	Units
Voltage range	24	9-36		VDC
	48	18-75		
	110	40-160		
Filter	Pi			
Absolute Maximum Rating (1s)	24		-0.7 - 50	VDC
	48		-0.7 - 100	
	110		-0.7 - 180	
No Load Input Current	24 48, 110		12 8	mA
Input reflected current		25		mA
Input Under voltage turn off*	24	6.5		VDC
	48	15.5		
	110, 2250V Isolation	33		
Startup time	For 110Vin, 2250V Isolation models		10	ms

*Except for 110V input 1500V isolation models only.

Isolation Specifications

Parameters	Conditions	Typical	Rated	Units
Tested I/O voltage	60 sec, <1mA		1500 & 2250	VDC
Tested Input or Output / Case voltage	60 sec, <1mA, 110Vin, 2250V Isolation models		1600	
Resistance	500VDC		>1000	MOhm
Capacitance	I/O, 100KHz/0.1V	1000		pF

Output Specifications

Parameters	Conditions	Typical	Maximum	Units
Voltage accuracy		±2		%
Voltage balance (Dual Output Models)	Balanced Load	±1.5		%
Over voltage protection		110-160		% of Vout
Over current protection	24 & 48V input models only	110-190		% of Iout
	110Vin, 2250V Isolation models	120-210		
Short Circuit protection	Continuous			
Short circuit restart	Auto-Recovery			
Line voltage regulation (Single)	Full load, LL to HL	±0.5		% of Vin
Line voltage regulation (Dual)	Full load, LL to HL	±1		% of Vin
Load voltage regulation (Single)	0-100% load, 110Vin, 2250V Isolation models	±1		%
	5- 100% load, others	±1		
Load voltage regulation (Dual)	5% to 100% load	±1.5		%
Cross Regulation (Dual Output Models)	25% load on 1st output - 100% load on 2nd load	±5		%
Temperature coefficient	100% load		±0.03	%/°C
Ripple & Noise		100		mV p-p
Transient recovery time	25% load step change, 110Vin, 2250V Isolation		0.5	mS
	25% load step change, others		1	
Transient recovery deviation	25% load step change		±8	%

General Specifications

Parameters	Conditions	Typical	Maximum	Units
Switching frequency	100% load	300		KHz
Operating temperature	Derating above 71°C	-40 to +85		°C
Storage temperature		-55 to +125		°C
Maximum case temperature			100	°C
Cooling	Free air convection			
Humidity			95	% RH
Case material	Aluminum Alloy			
Weight	Pin mountable	15		g
	With optional -ST mounting plate:	35		
	With optional -STD mounting plate:	55		
	With optional -K Pin mountable	20		

	With optional -ST-K mounting plate:	40	
	With optional -STD-K mounting plate:	59	
Dimensions (L x W x H)	Pin mountable	1 x 1 x 0.46 inches	25.40 x 25.40 x 11.70 mm
	With optional -ST mounting plate:	2.99 x 1.24 x 0.84 inches	76.00 x 31.50 x 21.20 mm
	With optional -STD mounting plate:	2.99 x 1.24 x 1.02 inches	76.00 x 31.50 x 25.80 mm
	With optional -K Pin mountable	1 x 1 x 0.64 inches	25.40 x 25.40 x 16.20 mm
	With optional -ST-K mounting plate:	2.99 x 1.24 x 0.99 inches	76.00 x 31.50 x 25.20 mm
	With optional -STD-K mounting plate:	2.99 x 1.24 x 1.17 inches	76.00 x 31.50 x 29.80 mm
MTBF	>1,000,000 hours (MIL-HDBK -217F, Ground Benign, t=+25°C)		
Maximum soldering temperature	1.5mm from case for 10 sec	300	°C

Environmental Specifications

Parameters

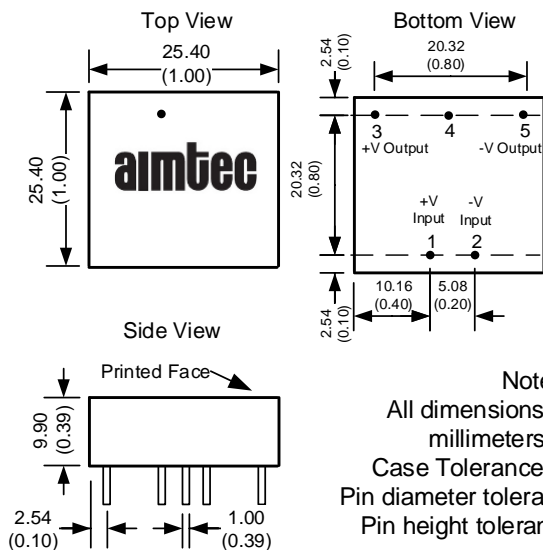
Vibration	Test mode	5-150Hz
	Acceleration	2G, 30min one cycle, every axis tested
	Displacement	7.5mm
Vibration 110Vin, 2250V Isolation	Test mode	IEC61373 car body 1 B mold

Safety Specifications

Parameters

Approval	CE, UL
Standards	EN 55022, class B (with the recommended EMC circuit)
	ICE/EN/UL 60950-1
	IEC61000-4-2, Contact ±6KV (2250 VDC Isolated models), Contact ±4KV (24 & 48 Vin), Criteria B
	IEC61000-4-3, 10V/m, Criteria A
	IEC61000-4-4, ±4KV (2250 VDC), ±2KV (24 & 48 Vin), with the recommended EMC circuit, Criteria B
	IEC61000-4-5, ±2KV, (with the recommended EMC circuit), Criteria B
	IEC61000-4-6, 3 Vrms (24 & 48 Vin), 10 Vrms (2250 VDC Isolated models), Criteria A
IEC61000-4-29, 0-70%, Criteria B	
	IEC/EN/UL 60950-1
	Meets EN50155 (2250 VDC Isolated models)

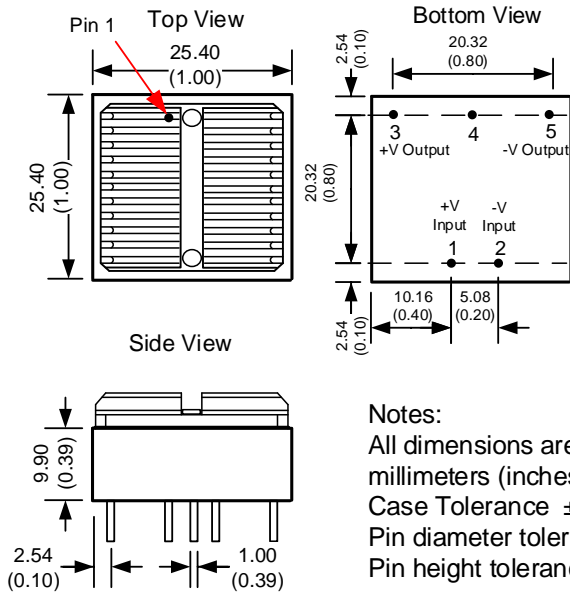
Dimensions



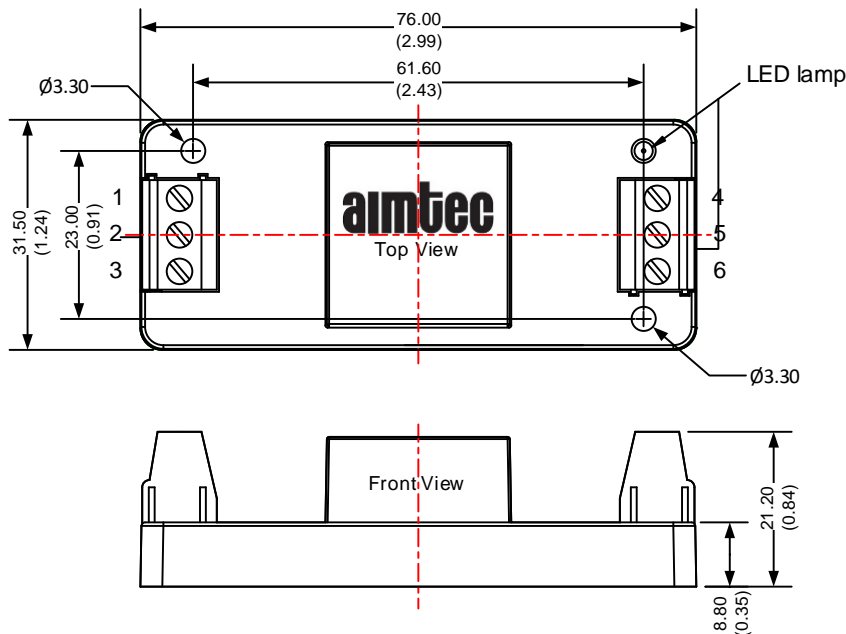
Pin Out Specifications

Pin	Single	Dual
1	+V Input	+V Input
2	-V Input	-V Input
3	+V Output	+V Output
4	No pin	Common
5	-V Output	-V Output

Heatsink Option: AM6CW-NZ-K



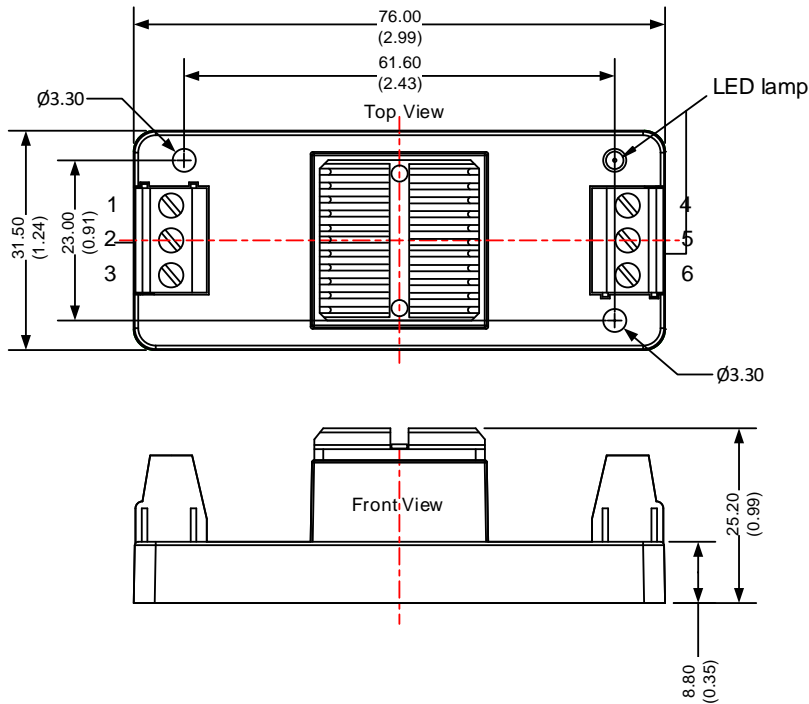
Screw Terminal Option: AM6CW-NZ-ST



Pin	Single	Dual
1	NC	NC
2	-V Input	-V Input
3	+V Input	+V Input
4	-V Output	-V Output
5	NC	Common
6	+V Output	+V Output

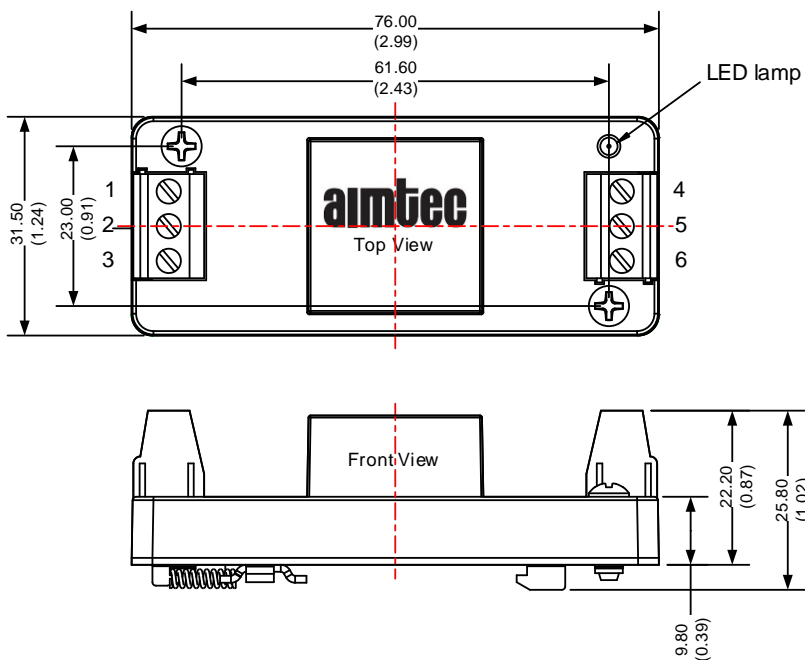
Note:
Unit: mm (inch)
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N*m
General tolerances: ± 0.50 (± 0.02)

Screw Terminal with heatsink Option: AM6CW-NZ-K-ST



Note:
Unit: mm (inch)
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N*m
General tolerances: ± 0.50 (± 0.02)

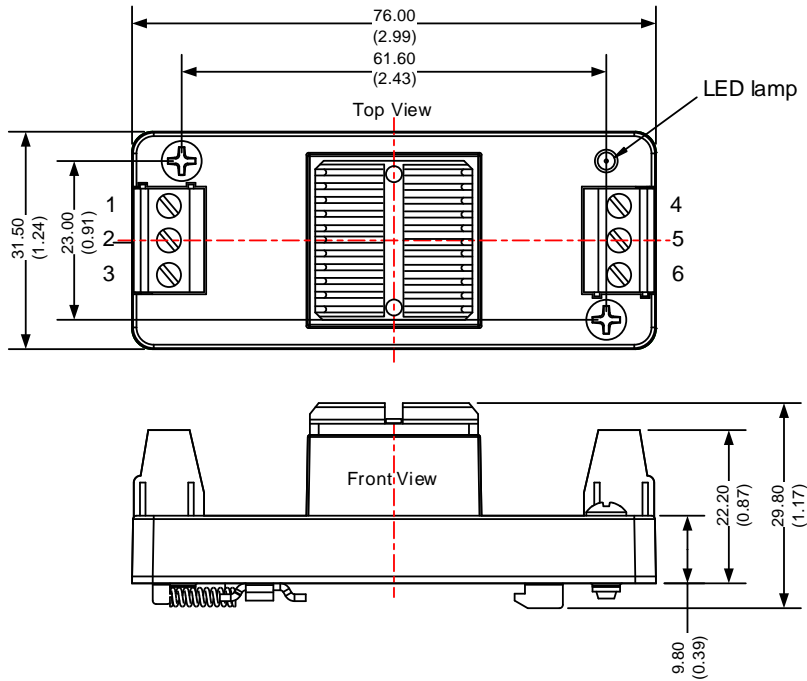
DIN-RAIL Option: AM6CW-NZ-STD



Pin	Single	Dual
1	NC	NC
2	-V Input	-V Input
3	+V Input	+V Input
4	-V Output	-V Output
5	NC	Common
6	+V Output	+V Output

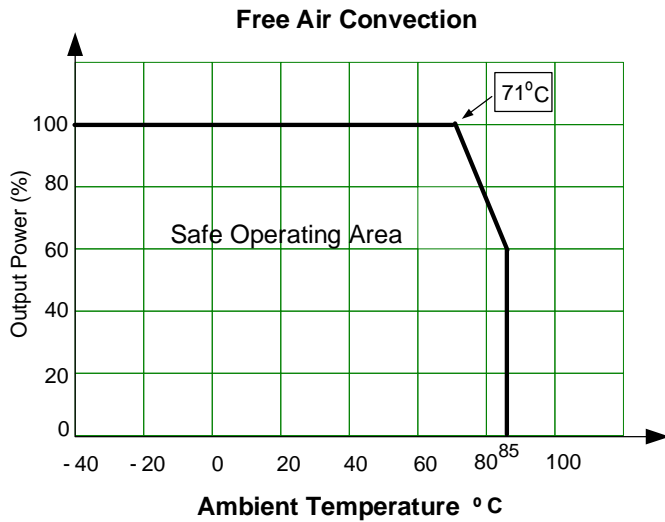
Note:
Unit: mm (inch)
Mounting rail: TS35
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N*m
General tolerances: ± 0.50 (± 0.02)

DIN-RAIL with heatsink Option: AM6CW-NZ-K-STD



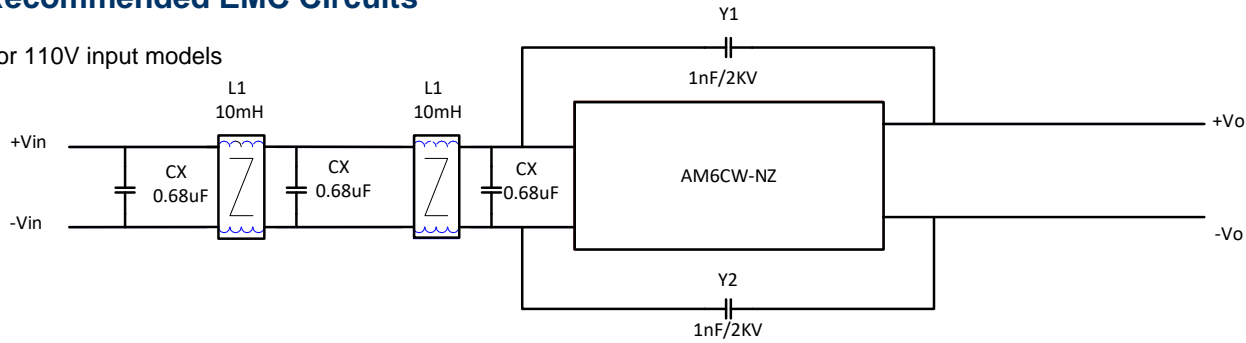
Note:
Unit: mm (inch)
Mounting rail: TS35
Wire range: 24-12 AWG
Tightening torque: Max 0.4 N*m
General tolerances: ±0.50 (±0.02)

Derating

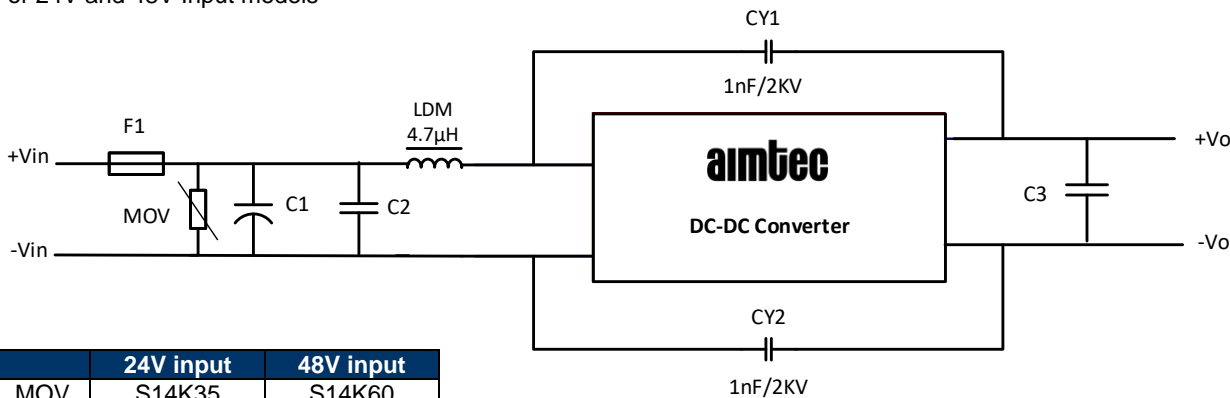


Recommended EMC Circuits

For 110V input models

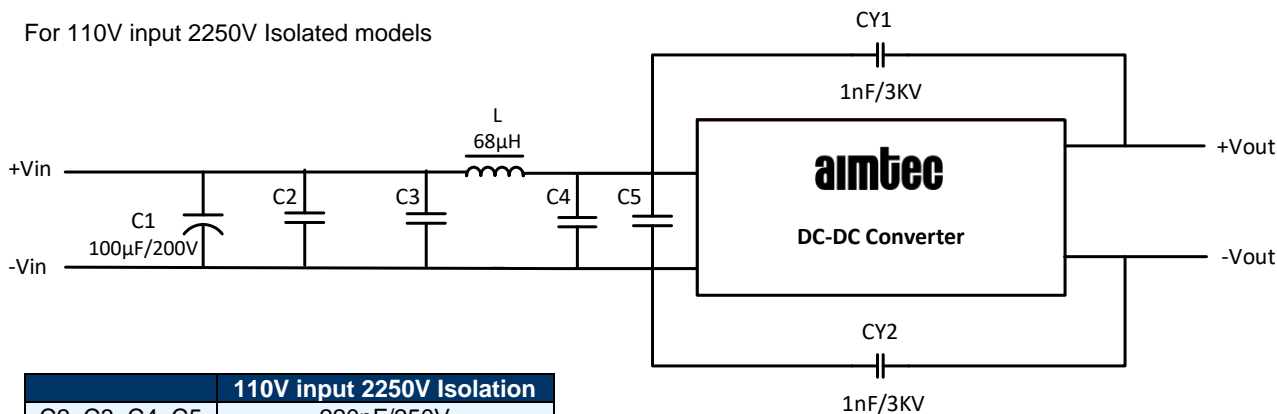


For 24V and 48V Input models



	24V input	48V input
MOV	S14K35	S14K60
C1	330µF/50V	330µF/100V
C2	1µF/50V	1µF/100V
C3	10µF/50V	10µF/100V

For 110V input 2250V Isolated models



	110V input 2250V Isolation
C2, C3, C4, C5	220nF/250V

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