

ZVC SERIES



AC/DC Single Output: 25 - 70 Watts



Features

- Universal input 90~264VAC.
- High power density, 8 watts per cubic inch
- Ultra miniature package
- Light weight
- Meets international EMC standards
- CE marked and EMC approved
- Meets international safety standards IEC950, EN60950, UL1950, AS60950
- Field proven design topology
- Quality components, high MTBF >100,000 hrs
- OVP and overload protection
- Convection cooled

Applications

- Point of sale equipment
- Computer peripherals
- Touch screen displays
- Data networking equipment
- Telecommunications
- Industrial control
- Medical equipment

Specifications

INPUT VOLTAGE:	110~240 VAC Auto select, FS & SG 90~264VAC NS & NT
EFFICIENCY:	Model dependent typically 85-90%
FREQUENCY:	47~63Hz
OUTPUT V/A:	Refer to table
OUTPUT POWER:	25 - 70 watts
HOLD UP TIME:	Typically 10ms at full load and 115VAC
LINE REGULATION:	1.0% over input range
LOAD REGULATION:	3% with minimum load and standard cord
MINIMUM LOAD:	No minimum load required for operation, but a minimum load of 10% is required to meet regulation specifications.
OVP:	Yes. FS, SG only
OVERLOAD PROTECTION:	Yes - hiccup mode
RIPPLE & NOISE:	250 - 500mV model dependent
OUTPUT RISE TIME:	Typically <50ms
OPERATING TEMP:	0°C to 40°C at rated power. Derate 2.5% per °C from 40-70°C
HUMIDITY:	5 - 95% non-condensing
COOLING:	Convection cooled
EMI/RFI:	EN55022, class B, EN50082-1
SAFETY:	IEC950, EN60950, UL1950 approved.
MTBF:	>100,000 hours
INPUT CONNECTOR: (Optional)	International IEC320, C8 type two pin, interchangeable with cords for world wide operation.
OUTPUT CORD: (Standard)	Right angle hollow co-axial plug, 2.54mm ID, 5.49mm OD, 9.6mm length. Centre positive. Cord length: 1 metre

DIMENSIONS:	Series	L	W	H
		mm	mm	mm
	FS	89	45	24
	SG	107	44	28.5
	NS	133	58	29.2
NT	115	60.5	29.2	



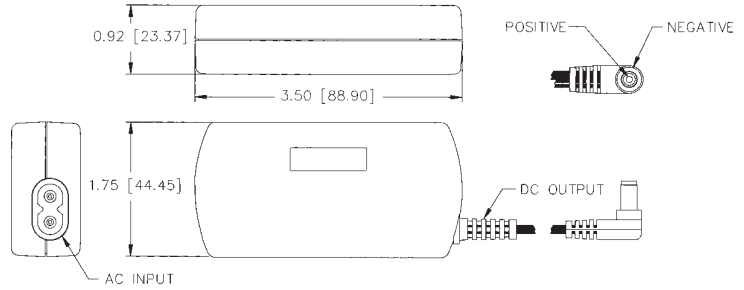
ZVC SERIES



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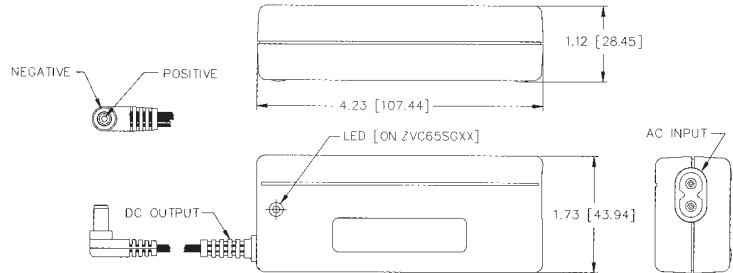
MODEL FS	Output		Power W
	V	A	
ZVC25FS - 09E	9V	2.77A	25W
ZVC36FS - 12E	12V	3.0A	36W
ZVC36FS - 15E	15V	2.4A	36W
ZVC36FS - 19E	19V	1.9A	36W
ZVC36FS - 24E	24V	1.5A	36W
ZVC45FS - 19E	19V	2.36A	45W
ZVC45FS - 24E	24V	1.9A	45W

ZVCF S



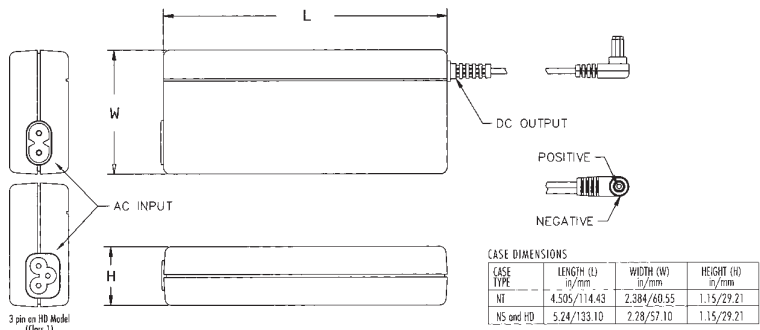
MODEL SG	Output		Power W
	V	A	
ZVC25SG - 05E	5V	5.0A	20W
ZVC45SG - 12E	12V	3.75A	45W
ZVC55SG - 15E	15V	3.66A	55W
ZVC65SG - 19E	19V	3.15A	60W
ZVC65SG - 24E	24V	2.7A	65W
ZVC65SG - 48E	48V	1.35A	65W

ZVCSG



MODEL NS, NT	Output		Power W
	V	A	
ZVC60NT - 12E	12V	5.0A	60W
ZVC60NT - 15E	15V	4.0A	60W
ZVC70NS - 19E	19V	3.5A	66W
ZVC70NS - 24E	24V	2.9A	70W

ZVC NS, NT

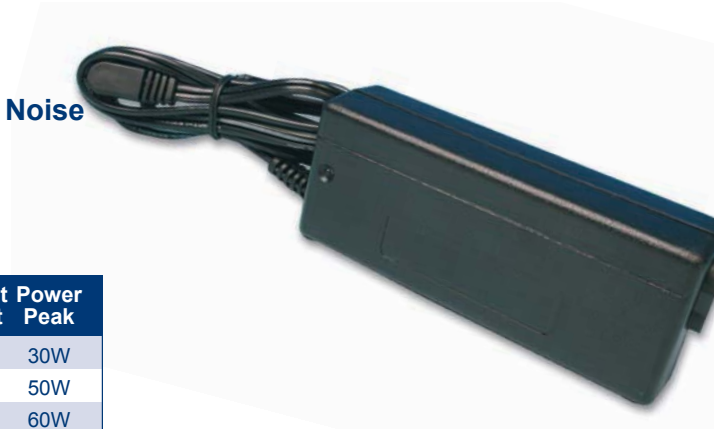


(Dimensions in inches)

ZVC65 SG Series

Single output 25W to 65W AC/DC External Adapters

- High power density to 8w/in³
- Efficiency to 90%
- Smallest 65W adapter
- EN55022-B, FCC Part 15 Level B Noise
- Class 2 safety approvals



Model Number	Case Type	Voltage/Current	Min Current Limit Point	Power Peak
ZVC25SG05E	SG	5V@5.00A	6.30A	30W
ZVC45SG12E	SG	12V@3.75A	4.50A	50W
ZVC55SG15E	SG	15V@3.66A	4.60A	60W
ZVC65SG19E	SG	19V@3.15A	3.63A	65W
ZVC65SG24E	SG	24V@2.70A	3.11A	70W
ZVC65SG48E	SG	48V@1.35A	1.55A	70W

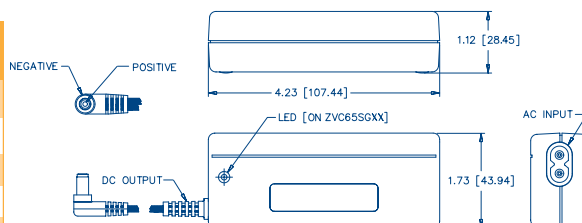
INPUT SPECIFICATIONS		
AC Input	Auto-ranging	90 to 132V 180 to 264V
Efficiency	5V Model Other Models	82% >88%
Input Frequency		47–63 Hz
Input Current	Full load at low line	1.5Arms, max
Inrush Current	High line, cold start	40A, max
Leakage Current		<250µA

EMC AND SAFETY SPECIFICATIONS	
CE Mark	Complies with the Low Voltage and EMC Directives
EMC	EN55022-B, CISPR22-B, FCC Part 15 Class B, EN50082-1
Agency Approvals SG Case	VDE, UL, c-UL, Fimko, Nemko, QAS, EZU, SIQ, Semko, EZU, Demko, CCIB, KETI, GOST, IRAM, MITI, PCB
Agency Approvals LT Case	VDE, UL, c-UL, Fimko, Nemko, Semko, Demko, MITI
Safety Standards	IEC950, CSA C22.2 No. 950, EN60950, UL1950 Class 2 SELV
Safety File numbers	VDE: 18934-3336

ENVIRONMENTAL SPECIFICATIONS		
Operating Temperature		0 to 40°C
Storage Temperature		-40 to 85°C
Cooling		Convection
Relative Humidity	Non condensing	95%, max
MTBF	MIL-HDBK-217F	>100,000 hrs

OUTPUT SPECIFICATIONS		
Output Power		25 to 65W
Minimum Load	5V Other Outputs	1.0A 0.0A
Hold-Up Time		15ms
Set Point Accuracy		<5%
Line Regulation	Low Line to High Line	<0.5%
Load Regulation	Min to Full Load	<5%
Transient Response	10% to Full Load Voltage Deviation Recovery Time	<5% <3ms
OVP		Yes
Overload Protection		Yes
Short Circuit Protection	Auto Recovery <3s	Short Term
Ripple and Noise		<1.5%
Output Rise Time		<10ms

MECHANICAL SPECIFICATIONS	
Input Connector	IEC320 C8
Output Connector	Right angle, hollow coax plug 0.10" (2.54mm) inside and 0.21" (5.49mm) outside diameter. Center positive polarity
Size	1.73x4.23x1.12" (43.9x107.4x28.5mm)
Weight	7oz (200g)



ZVC90 Series

Single output 80W to 90W AC/DC External Adapters



- 12V at 6.6A and 15V at 5.3A models
- Efficiency to 92%
- Universal input
- EN55022-B, FCC Part 15 Level B Noise
- Class 2 safety approvals



Model Number	Case Type	Output Voltage	Output Current	Peak Current	OCP Limit
ZVC90NS12E	NS	12V	6.66A	7.5A	9.5A
ZVC90NS15E	NS	15V	5.33A	6.0A	8.0A
ZVC90NS19E	NS	19V	4.7A	5.0A	6.5A
ZVC90NS24E	NS	24V	3.75A	3.75A	5.6A
ZVC90NS48E	NS	48V	1.87A	1.87A	2.8A

INPUT SPECIFICATIONS

AC Input	Universal	90 to 264V
Efficiency		92%
Input Frequency		47-63 Hz
Input Current	Full load at low line	1.3Arms, max
Inrush Current	High line, cold start	50A, max
Leakage Current		<100µA
Harmonic Currents	EN61000-3-2	Class A & D

OUTPUT SPECIFICATIONS

Output Power		80 to 90W
Minimum Load		0.0A
Hold-Up Time		30ms
Set Point Accuracy		+5%
Line Regulation	Low line to high line	<0.5%
Load Regulation	Min to full load	<5.0%
Transient Response	50% to Full Load	
	Voltage Deviation	<3%
	Recovery Time	<5ms
Ripple and Noise	Peak to peak	<1.5%
Overshoot		<10%
Output Rise Time	10% to 90% Load	<50ms
Turn-on Delay		<2s
OVP		Yes
Overload Protection		Yes
Short Circuit Protection	Auto Recovery <10s	<0.5A

ENVIRONMENTAL SPECIFICATIONS

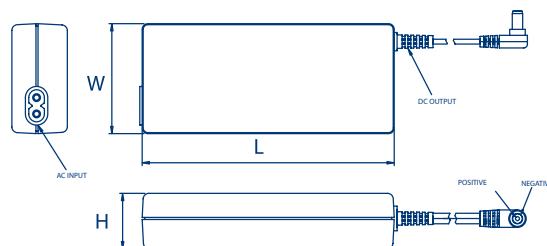
Operating Temperature	Full load	0 to 35°C
	Derate power by 25%	35 to 45°C
Storage Temperature		-40 to 85°C
Cooling		Convection
Relative Humidity	Non condensing	95%, max
MTBF	MIL-HDBK-217F	>100,000 hrs

EMC AND SAFETY SPECIFICATIONS

CE Mark	Complies with the LVD and EMC Directives
EMC - Emissions	EN55022-B, CISPR22-B, FCC Part 15 Class B, EN50082-1
EMC - Susceptibility	EN61000-4-2 (level 3), -4 (level 2), -5 (level 2)
Agency Approvals	VDE, UL, c-UL, Semko, Demko, CCIB, Fimko, Nemko, QAS, GOST, MITI,
Safety Standards	IEC950 CSA C22.2 No. 950, EN60950, UL1950 class 2 SELV
Safety File numbers	VDE: 18934-3336 UL: E150565

MECHANICAL SPECIFICATIONS

Input Connector	IEC320 C8
Output Connector	Right angle, hollow coax plug 0.10" (2.54mm) inside and 0.21" (5.49mm) outside diameter. Center positive polarity
Size	2.28x5.24x1.15" (57.9x133.1x29.2mm)
Weight	10oz (290g)



ALL DIMENSIONS ARE IN INCH
GENERAL TOLERANCE: ±0.004

Case Type	Length (L) in/mm	Width (W) in/mm	Height (H) in/mm	Input Connector
NS	5.24/133.1	2.28/57.1	1.15/29.2	IEC320 C8