

Open Frame Type Switching Power Supply

FEATURES

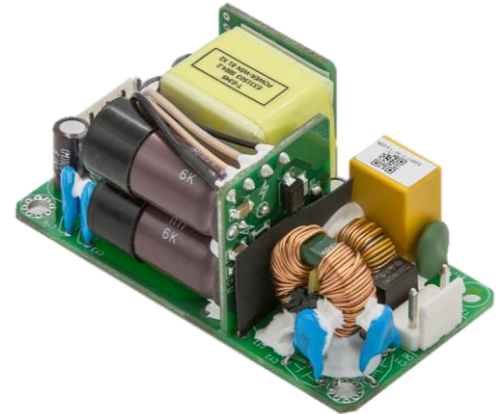
- Compact, High Power density, 85W/50W in 1.5" x 3" footprint
- Meet US DOE level VI & EU ErP requirements.
- Less than 150mW no-load power consumption.
- Suitable for both Class I and Class II application(Refer to note 2. at mechanical specification)
- 3 year warranty

ELECTRICAL SPECIFICATIONS

- Input range : 90 - 264VAC
- Frequency : 47 - 63Hz
- Inrush current : < 50A peak @115VAC; < 100A peak @230VAC cold start @25°C(Except 5V model)
< 65A peak @115VAC; < 130A peak @230VAC cold start @25°C(5V model)
- Input current (rms) : 2A @115VAC; 1A @230VAC max.
- Efficiency : > 90% & +5V > 88% @Full load & 230VAC input.
- Maximum output power (Po) : 85Watts/50Watts by 10CFM Forced Air
- Hold-up time : > 8ms typical @115VAC, 70% of 85Watt load, +5V@50W load.
- Short circuit protection : Auto-recovery
- Over load protection : 105% to 160% maximum rating, Auto-recovery
- Over voltage protection : Latch off
- Over temperature protection : Latch off

ENVIRONMENTAL

- Operating temperature : -20 to +70°C (Refer to derating curve)
- Storage temperature: -20°C to +85°C
- Operating Humidity: 10% to 95%, non-condensing
- Storage Humidity: 0% to 95%, non-condensing
- MTBF : > 450,000 hours @full load and 25°C ambient temperature per Telcordia(Bellcore TR-332).



RoHS compliant

Dimension : L76.2 x W38.1 x H32mm (3" x 1.5" x 1.26")
Weight : 0.1 kgs. (0.22 lbs.)

SAFETY STANDARDS

UL/c-UL UL62368-1
TUV EN62368-1
CB IEC 62368-1

EMC STANDARDS

FCC Part 15 Class B
EN (BS EN) 55032 Class B
EN (BS EN) 55035
ICES-003
CE

DC OUTPUT & FEATURES

Model No.	Output Voltage	Maximum Load		Output Regulation	Ripple & Noise	Convection Total Power	10 CFM Forced Air Total Power	Efficiency Level
		Convection	10 CFM Forced Air					
B13085-05	+5V	8.00A	10.0A	±3%	50mV	40W	50W	VI
B13085-12	+12V	5.00A	7.10A	±3%	120mV	60W	85W	VI
B13085-15	+15V	4.00A	5.67A	±3%	150mV	60W	85W	VI
B13085-18	+18V	3.62A	4.73A	±3%	150mV	65W	85W	VI
B13085-24	+24V	2.71A	3.54A	±3%	150mV	65W	85W	VI
B13085-28	+28V	2.33A	3.04A	±3%	150mV	65W	85W	VI
B13085-36	+36V	1.81A	2.36A	±3%	200mV	65W	85W	VI
B13085-48	+48V	1.36A	1.78A	±3%	200mV	65W	85W	VI

Note:

1. Ripple and noise are measured under typical rated input voltage and at oscilloscope 20MHz bandwidth by a 100uF electrolytic capacitor and a 0.1uF ceramic capacitor in parallel at output connector.
2. At 25°C including initial tolerance, line voltage, load currents and output voltages adjusted to factory settings.
3. The switching frequency of this series is set within 50KHz to 100KHz at full load.
4. 28V & 36V UL/c-UL Pending.



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SAFETY AGENCY CERTIFICATIONS

SAFETY AND EMC PERFORMANCE

Description	Safety	EMC
Audio / Video, ITE equipment	IEC 62368-1 : 2018 EN IEC 62368-1:2020+A11:2020 UL 62368-1, 3rd Edition CAN/CSA C22.2 No. 62368-1:19, 3rd Edition	EN (BS EN) 55032:2015+A11:2020 EN (BS EN) 55035:2017+A11:2020 FCC 47 CFR Part 15B (*) ICES-003 Issue 7

Tests for conformance to this requirement will be performed with final system

(*) FCC PART 15 compliance information and warnings :

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions :

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

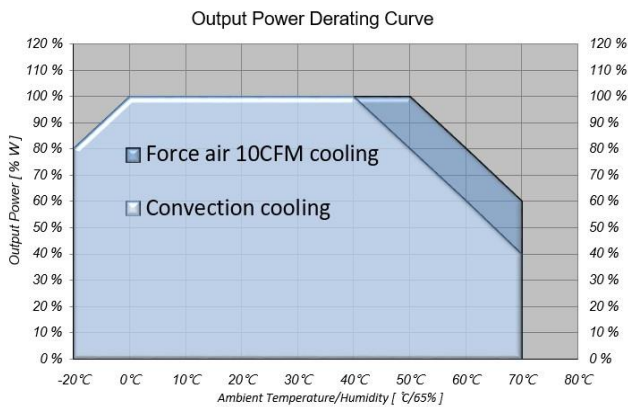
INSULATION LEVEL AND DIELECTRIC WITHSTAND (HI-POT)

Audio / video, ITE equipment	Isolation voltage	Grade insulation
Primary to Secondary	4242Vdc (3000Vac)	Reinforced
Primary to Ground (Mounting holes or Frame GND)	2121Vdc (1500Vac)	Basic
Secondary circuits to earth ground	500Vdc	Basic

※ HI-POT Testing in Production uses a DC voltage test for 4 Sec.

ENVIRONMENTAL

DERATING CURVE

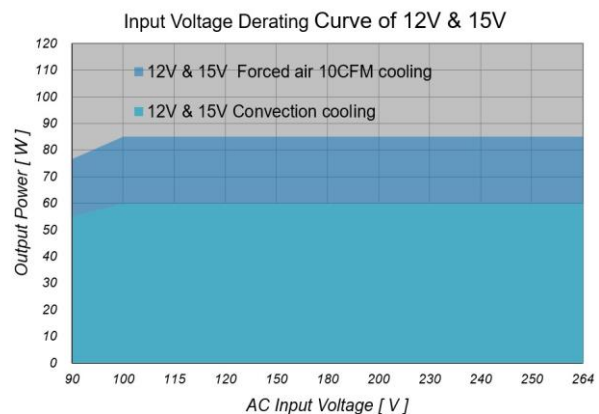


85W/50W Force air 10CFM cooling

Derate linearly 2% per °C from 51 to 70°C & -1% per °C from -1 to -20°C

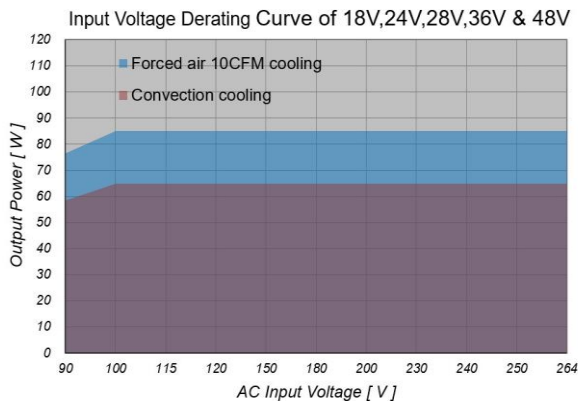
65W/60W/40W Convection cooling

Derate linearly 2% per °C from 41 to 70°C & -1% per °C from -1 to -20°C



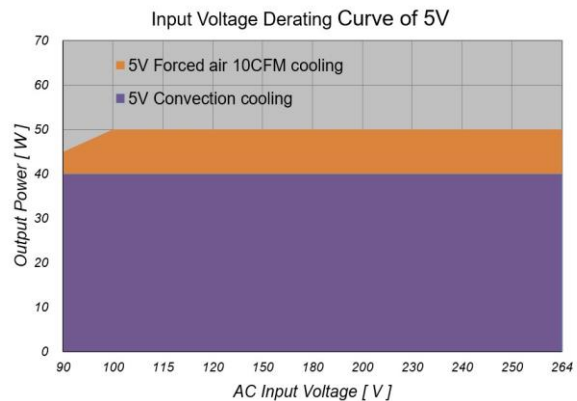
85W Force air 10CFM & 60W Convection cooling of +12V & +15V

Derate linearly 1% per Vac from 100Vac



85W Force air 10CFM & 65W Convection cooling of +18V to 48V

Derate linearly 1% per Vac from 100Vac

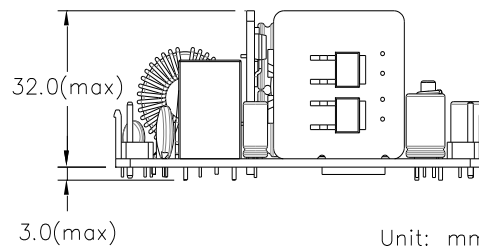
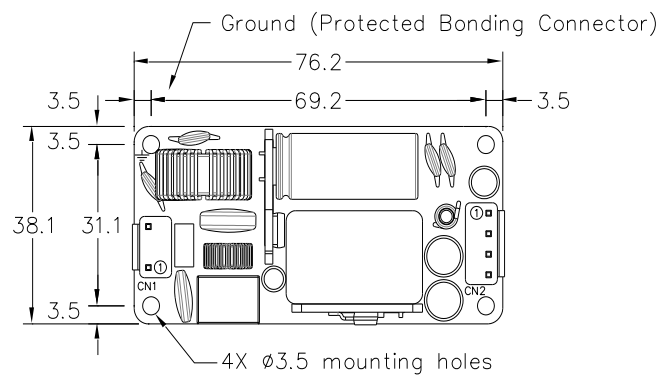
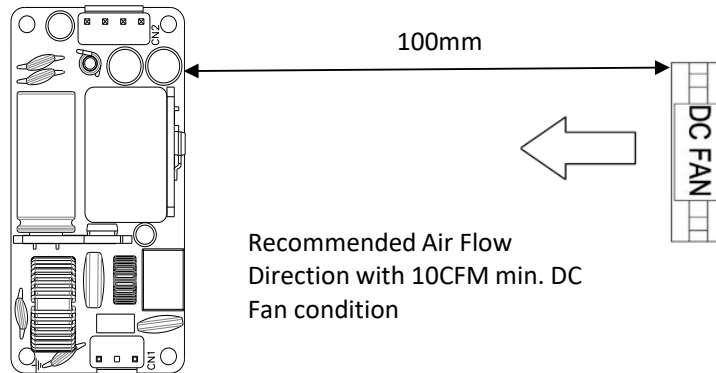


50W Force air 10CFM & 40W Convection cooling of +5V

Derate linearly 1% per Vac from 100Vac



MECHANICAL SPECIFICATION



Unit: mm Tolerance : ±0.5mm

- Note: 1. For Class I applications, 4 Positions of mounting holes must be securely connected to protective earth ground in the final system assembly for optimum SAFETY and EMI performance.
2. For Class II applications, 4 Positions of mounting holes can't be connected together, All mounting holes are should be fixed to the Chassis by insulated spacer.
3. B13085 series can additional clamp core (KING CORE:KCF-100-B) 1 turn on AC input to get better EMI performance when test condition is Class II.

MATCHING CONNECTORS

CN1: Input Connector

JST B2P3-VH pitch: 7.92mm or equivalent, mates with JST VHR-3N or equivalent

Pin #	Signal
1	AC Neutral
2	AC Line

CN2: Main Output Connector

JST B4P-VH-B pitch: 3.96mm or equivalent, mates with JST VHR-4N or equivalent

Pin #	Signal
1	+Vo
2	+Vo
3	GND
4	GND

