

110 Watts

- Complete AC/DC Power Supply
- No Extra Components Required
- Base Plate Cooled
- -40 to +85 °C Base Plate Temperature
- Low Profile in Full Brick Package
- High Efficiency - Up to 91%
- Universal Input
- <0.3 W No Load Input Power
- Optional Heatsink Available
- Over Current, Over Voltage and Over Temperature Protection
- 3 Year Warranty



Dimensions:

ASB110:
4.40 x 2.40 x 0.67" (110.8 x 61.0 x 17.0 mm)

The ASB110 series is a range of complete low profile, full brick, base-plate cooled AC-DC power supplies which require no external components. The series includes a complete built in EMC filter and AC Fuse as well as bulk storage capacitor providing a complete AC-DC power solution ready for installation into end applications. The ASB110 offers high efficiency to minimise waste heat and heat sinking requirements and operates from -40 °C to +85 °C on the module base-plate.

Models & Ratings

| Output Power | Output Voltage | Output Current | Noise and Ripple | Efficiency ⁽¹⁾ | Model Number ⁽²⁾ |
|--------------|----------------|----------------|------------------|---------------------------|-----------------------------|
| 110 W | 12.0V | 9.17 A | 120 mV | 90.0% | ASB110PS12 |
| | 15.0V | 7.33 A | 150 mV | 90.0% | ASB110PS15 |
| | 24.0V | 4.58 A | 240 mV | 91.0% | ASB110PS24 |
| | 28.0V | 3.93 A | 280 mV | 91.0% | ASB110PS28 |
| | 36.0V | 3.06 A | 360 mV | 91.0% | ASB110PS36 |
| | 48.0V | 2.29 A | 480 mV | 90.5% | ASB110PS48 |

Notes

1. Typical efficiency with 230 VAC input and full load.
2. Add suffix '-HK-' to receive with optional heat-sink fitted.

Input

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|--|---------|---------|-------|--|
| Input Voltage | 85 | | 264 | VAC | Derate linearly from 100% load at 90 VAC to 90% load at 85 VAC |
| Input Frequency | 47 | | 63 | Hz | |
| Input Current | | 1.1/0.6 | | A | 115 VAC/Measured at 230 VAC |
| Inrush Current | | | 70 | A | 230 VAC, cold start at 25 °C |
| Power Factor | | >0.9 | | | Full load |
| Earth Leakage Current | | | 500 | µA | 264 VAC, 60 Hz |
| No Load Input Power | | | 0.3 | W | |
| Input Protection | Internal T3.15A/250 VAC fitted in line | | | | |

General

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|---|---------|----------------|---------|-------------------|------------------------------|
| Efficiency | | 90 | | % | See Models and Ratings table |
| Isolation: Input to Output Input to Ground Output to Ground | | | 3000 | VAC | |
| | | | 1500 | VAC | |
| | | | 500 | VDC | |
| Switching Frequency | | 70-130 / 50-90 | | kHz | PFC / PWM |
| Power Density | | 14.8 | | W/in ³ | |
| Mean Time Between Failure | | >300 | | kHrs | MIL-HDBK-217F at 25 °C GB |
| Weight | | 0.51 (230) | | lb (g) | |

Output

| Characteristic | Min. | Typ. | Max. | Units | Notes & Conditions |
|--------------------------|---|------|------|---------|--|
| Output Voltage | 12 | | 48 | VDC | See Models and Ratings table |
| Initial Set Accuracy | | 1 | | % | At 60% load |
| Minimum Load | | | | | No minimum load required |
| Start Up Delay | | | 1.3 | s | |
| Start Up Rise Time | | | 20 | ms | |
| Hold Up Time | 10 | | | ms | Full load and 115 VAC |
| Line Regulation | | | ±0.5 | % | |
| Load Regulation | | | ±0.5 | % | |
| Transient Response | | | 2 | % | Maximum deviation, recovering to less than 1% within 300 µs for 25% step load |
| Ripple and Noise | | | 1 | % pk-pk | 20 MHz bandwidth, measured with 20 MHz Bandwidth and 10 µF electrolytic in parallel with 0.1 µF ceramic capacitor. |
| Overload Protection | 130 | | 210 | % | |
| Overvoltage Protection | 110 | | 140 | % | Recycle mains to reset |
| Short Circuit Protection | Trip and restart (hiccup), auto resetting | | | | |
| Thermal Protection | Measured internally, auto resetting | | | | |
| Temperature Coefficient | | 0.02 | | %/°C | |

Environmental

| Characteristic | Minimum | Typical | Maximum | Units | Notes & Conditions |
|-----------------------|---|---------|---------|-------|---|
| Operating Temperature | -40 | | +85 | °C | Baseplate Temperature, see derating curve |
| Cooling | Conduction Cooled via Baseplate | | | | |
| Operating Humidity | 5 | | 90 | %RH | Non-condensing |
| Storage Temperature | -40 | | +85 | °C | |
| Operating Altitude | | | 3048 | m | |
| Shock | IEC68-2-27, 30 g, 11 ms half sine, 3 times in each of 6 axes | | | | |
| Vibration | IEC68-2-6, 10-500 Hz, 2 g 10 mins/sweep, 60 mins for each of 3 axes | | | | |

EMC: Emissions

| Phenomenon | Standard | Test Level | Notes & Conditions |
|------------------|-------------|-------------------|----------------------|
| Emissions | EN55022 | Level B / Level A | Conducted / Radiated |
| Harmonic Current | EN61000-3-2 | Class A | |
| Voltage Flicker | EN61000-3-3 | | |

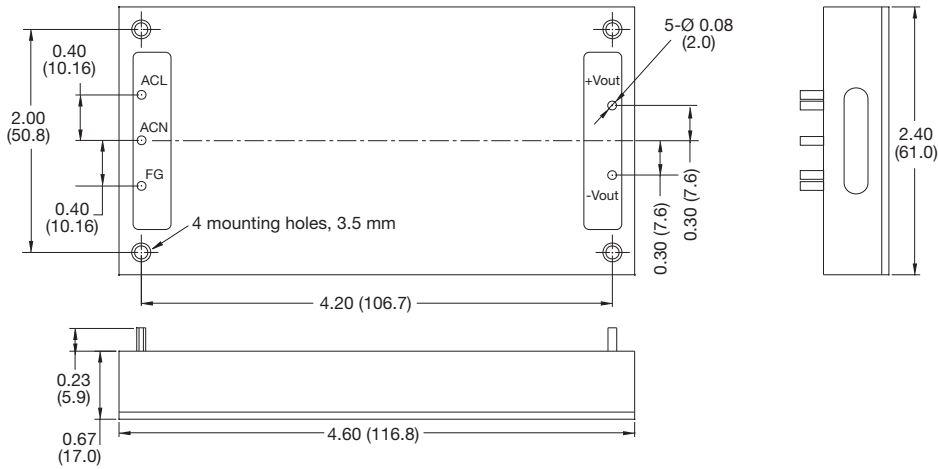
EMC: Immunity

| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|------------------------|--------------|----------------------|----------|-------------------------|
| ESD | EN61000-4-2 | 3/2 | A | ±8 kV air/±4 kV contact |
| Radiated | EN61000-4-3 | 3 V/m | A | |
| EFT/Burst | EN61000-4-4 | 3 | A | |
| Surge | EN61000-4-5 | Installation Class 3 | A | |
| Conducted | EN61000-4-6 | 3 V | A | |
| Dips and Interruptions | EN61000-4-11 | Dip: 100% 10 ms | A | |
| | | Dip: 30% 500 ms | A/B | High Line/Low Line |
| | | Int:100% 5000 ms | B | |

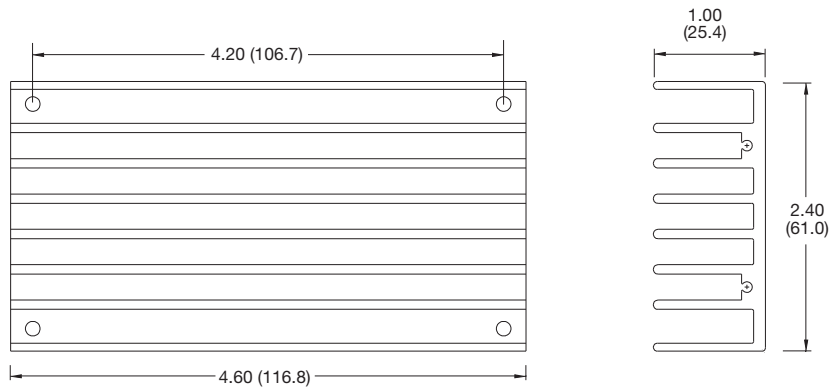
Safety Approvals

| Safety Agency | Safety Standard | Notes & Conditions |
|---------------|-----------------|--------------------|
| UL | UL60950-1 | |
| TUV | EN60950-1 | |
| CB | IEC60950-1 | |

Mechanical Details



Optional Heatsink (IFH HEATSINK)

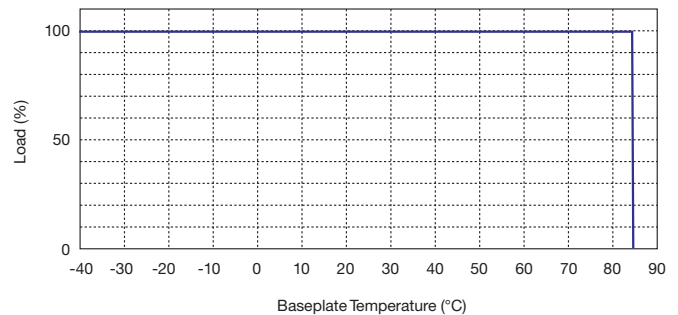
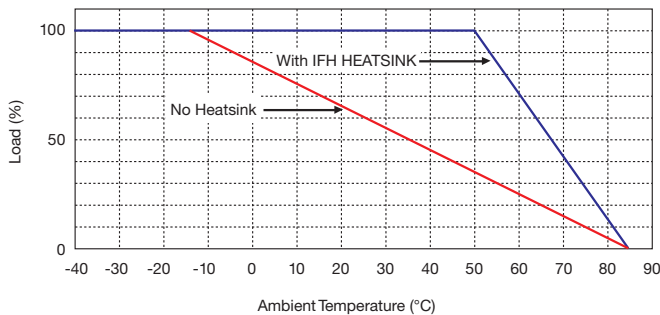


Notes

1. Dimensions shown in inches (mm).
2. Weight: 0.51 lb (230 g)
3. Pin diameter: 0.04 ± 0.002 (1.0 ± 0.05)
4. Pin pitch tolerance: ± 0.014 (± 0.35)
5. Case tolerance: ± 0.02 (± 0.5)
6. Baseplate is connected to FG Pin

Application Notes

Derating Curve



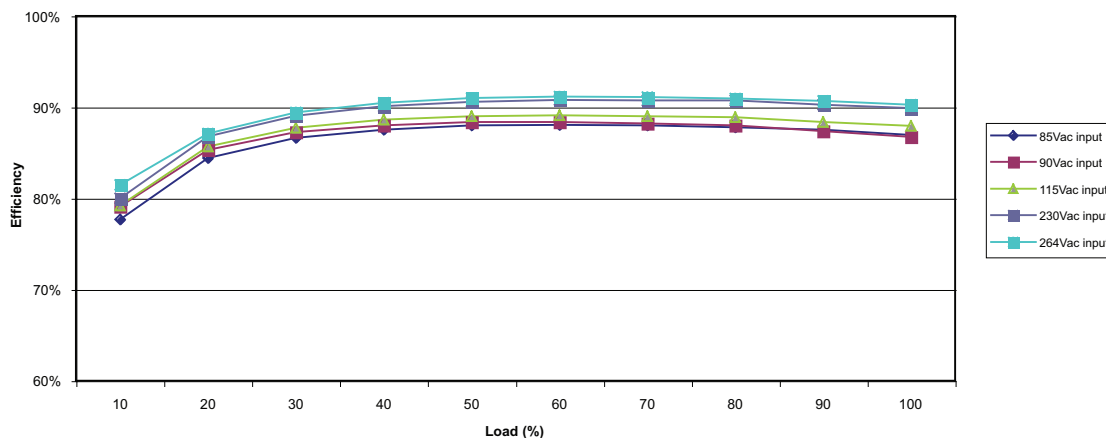
Notes

When ASB110 is fitted with IFH HEATSINK and mounted in horizontal position with heatsink upper most, the base plate temperature will typically be 85 °C in an ambient of 50 °C.

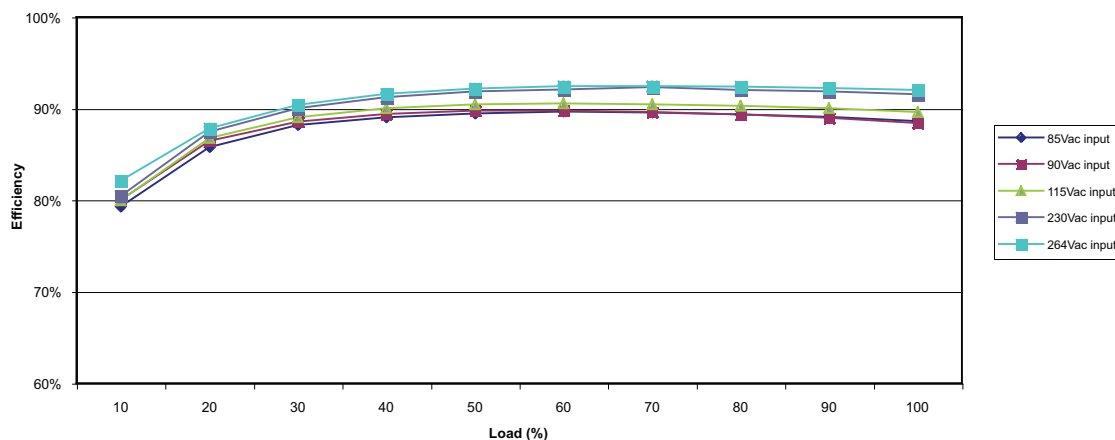
Application Notes

Efficiency Curves

ASB110PS12



ASB110PS24



Lifetime

