



2"W x 4"L x 1.17"H

- Up to 40W Output Power
- Universal 90-264VAC Input
- Single Outputs from 5VDC to 48VDC
- High Efficiency up to 85%
- 3000V Isolation
- 1U Compatible Height



| Model Number | Output Voltage | Max. O/P Amps | Min. O/P Amps | Efficiency | R&N p-p max. | Capacitive Load |
|----------------------|----------------|---------------|---------------|------------|--------------|-----------------|
| SINGLE OUTPUT | | | | | | |
| BSL40-5-A | 5VDC | 8 | 0 | 80% | 100mV | 23,000uF |
| BSL40-9-A | 9VDC | 4.4 | 0 | 80% | 120mV | 10,200uF |
| BSL40-12-A | 12VDC | 3.33 | 0 | 83% | 150mV | 4,000uF |
| BSL40-15-A | 15VDC | 2.66 | 0 | 83% | 150mV | 5,500uF |
| BSL40-24-A | 24VDC | 1.66 | 0 | 83% | 240mV | 1,300uF |
| BSL40-36-A | 36VDC | 1.1 | 0 | 83% | 360mV | 600uF |
| BSL40-48-A | 48VDC | 0.83 | 0 | 85% | 400mV | 270uF |

**INPUT SPECIFICATIONS**

| | |
|--------------------------------|---------------------|
| Input Voltage Range | 90-264 VAC |
| Frequency Range | 47-63 Hz |
| Input Current (90 / 264 Vin) | 1A / 0.4A |
| Inrush Current (115 / 230 Vin) | 30A / 60A typical * |
| Leakage Current (264V / 50Hz) | <0.25mA |

OUTPUT SPECIFICATIONS

| | |
|--------------------------------|--------------------------|
| Voltage and Current (Note 3) | See Selection Chart |
| Turn On Delay Time | <1S |
| Rise Time | <30mS |
| Load Regulation (20%-FL) | ± 1% max |
| Line Regulation (LL-HL) | ± 1% max |
| Preset Accuracy (FL, 115Vin) | 1% |
| Transient Response | See Page 3 |
| Over-Shoot and Under-Shoot | <10% of O/P Voltage |
| Ripple/Noise (Note 1 & 4) | See Selection Chart |
| Over Voltage Protection | Latching re-power |
| Current Limit, Self Recovering | 150% max., hiccup mode * |
| Short Circuit Protection | Latching, Auto Recover * |
| Hold Up Time (115V / 60Hz) | 8 mS, typ. |
| Capacitive Loading (Note 5) | See Selection Chart |

PHYSICAL SPECIFICATIONS

| | |
|--------------------|---------------------------------------|
| Size (Inches / mm) | 2" x 4" x 1.17" / 50.8 x 101.6 x 29.6 |
| Construction | Open Frame |
| Weight | 5.61oz (157.2g) |

All specifications are typical at nominal input, full load, and 25°C unless otherwise noted

* These are stress ratings. Exposure of the devices to any of these conditions may adversely affect long term reliability. Proper operation under conditions other than the standard operating conditions is neither warranted nor implied.

Astrodyne products are not authorized or warranted for use as critical components in life support systems, equipment used in hazardous environments, nuclear controls systems, or other mission-critical applications.

GENERAL SPECIFICATIONS

| | |
|-----------------------|--|
| Input-Out Isolation | 3000VAC |
| Insulation Resistance | ≥20MΩ; 500VDC, 1S I/P-O/P |
| Efficiency | See Selection Chart |
| Switching Frequency | 65Khz, (fixed, typical) |
| Safety | UL/cUL: UL60950-1, Class II TUV: EN60950-1, Class II CE: EN60601-1-2, Class II CB: IEC60950-1, Class II CSA: C22.2 60950.1, Class II |

ENVIRONMENTAL SPECIFICATIONS

| | |
|----------------------------|-----------------------------------|
| Oper. Temperature (Note 2) | -10 to +70°C, See Derate |
| Storage Temperature | -25 to +85°C * |
| Relative Humidity | 0-95% * |
| ESD | IEC61000-4-2 |
| RS | IEC61000-4-3 |
| EFT | IEC61000-4-4 |
| Surge | IEC61000-4-5 |
| CS | IEC61000-4-6 |
| DIPS | IEC61000-4-11 |
| EMI | EN55022B / CISPR 11 B |
| MTBF | 196,000 Hrs Mil Std 217, 25°C |
| Vibration | 2G Peak, 10-500Hz, 3 Axis, 30 min |
| Drop Test | 70 cm Height |

NOTES

1. Make all measurements directly at the pins of the supply
2. Specified for free air convection cooling
3. 115Vin minimum required for full load start up
4. Measured by paralleling 47uF/EC and 0.1uF ceramic capacitors on the output at a 20MHz band-width
5. The power supply should start up and operate normally into these capacitive loads within specified input voltage and output current ranges over the specified operating temperature range and according to Derate.

Dynamic load/Transient Response

All output voltages shall remain within regulation limits for transient/step loading and capacitive loads conditions specified in Table 1.

Dynamic load transient repetition rate shall be tested between 50Hz - 5KHz at duty cycle ranging from 10 - 90%. The Δ step load may occur anywhere within the min. load to max. load shown in Table 1.

Table 1

| Output | 5V | | 9V | | 12V | | 15V | |
|---|-----|------|------|------|-----|------|-----|------|
| Δ Step load (A) | 60% | 100% | 60% | 100% | 60% | 100% | 60% | 100% |
| | 4.8 | 8 | 2.64 | 4.4 | 2 | 3.33 | 1.6 | 2.66 |
| Load slew rate (A/ μ sec.) | 1 | | 1 | | 1 | | 1 | |
| Transient voltage response time (msec.) | 10 | | 10 | | 10 | | 10 | |

| Output | 24V | | 36V | | 48V | |
|---|-----|------|------|------|-----|------|
| Δ Step load (A) | 60% | 100% | 60% | 100% | 60% | 100% |
| | 1 | 1.66 | 0.66 | 1.1 | 0.5 | 0.83 |
| Load slew rate (A/ μ sec.) | 1 | | 1 | | 1 | |
| Transient voltage response time (msec.) | 10 | | 10 | | 10 | |

Derating Curve



