



# LZS/SE Series

## Single Output Industrial Power Supplies



- ◆ -40°C to +71°C operation
- ◆ MIL-STD-810E Vibration / Shock
- ◆ Input transient protected
- ◆ Wide range output adjustment
- ◆ Single wire current share
- ◆ Conducted EMI Class B
- ◆ 5 Year Warranty

### Key Market Segments & Applications

Factory Automation      Process Control, NC-Machining,  
Automotive, Packaging Equipment,  
Materials Handling,  
Chemical Processing, Robots

### Features and Benefits

#### Feature

- ◆ Rugged mechanical design
- ◆ Superior thermal design
- ◆ Wide range adjustment of output
- ◆ Input voltage transient protected

#### Benefit

- ◆ High reliability in harsh conditions
- ◆ Longer life even at 71°C operation
- ◆ Reduces need for custom outputs
- ◆ Reduced system filtering

### Specifications

| ITEMS                         | MODELS | 5V Output Models (-1)  |  |                      | 12V Output Models (-2)         |                       | 24V Output Models (-3) |  |
|-------------------------------|--------|--|--|----------------------|--------------------------------|-----------------------|------------------------|--|
|                               |        | LZS: 85-132 / 170-265VAC Auto select, SE: 105-140VAC (170VAC for 1min.)                  |  |                      | LZS: 47 - 440Hz, SE: 47 - 63Hz |                       | LZS: 220 - 380VDC      |  |
| AC Input Voltage              | -      |  |  |                      |                                |                       |                        |  |
| AC Input Frequency            | -      |  |  |                      |                                |                       |                        |  |
| DC Input Voltage Range        | -      |  |  |                      |                                |                       |                        |  |
| Inrush Current (110 / 220VAC) | A      | 250W & 500W: 20 / 40A. 750W, 1000W & 1500W: 40 / 80A                                     |  |                      |                                |                       |                        |  |
| Efficiency (typical)          | %      | 75%, (72% on 250W models)  |  |                      |                                |                       |                        |  |
| Ripple & Noise                | -      | 10mV RMS, 35mV Pk-Pk   |  | 10mV RMS, 50mV Pk-Pk |                                | 10mV RMS, 100mV Pk-Pk |                        |  |
| Line Regulation               | %      | 0.1% from low AC line to high AC line  |  |                      |                                |                       |                        |  |
| Load Regulation               | %      | 0.1% from no load to full load   |  |                      |                                |                       |                        |  |
| Transient Response            | -      | Recovers to within 50ms, max deviation 7.5% -1 models, 5% -2 & -3 models                 |  |                      |                                |                       |                        |  |
| Overcurrent Protection        | -      | ~ 110% of rated current, auto recovery   |  |                      |                                |                       |                        |  |
| Overvoltage Protection        | V      | User adjustable from front panel   |  |                      |                                |                       |                        |  |
| Thermal Protection            | -      | Internal thermostat. Recycle AC to reset   |  |                      |                                |                       |                        |  |
| Hold Up Time (Typical)        | ms     | 26ms (at 115VAC)   |  |                      |                                |                       |                        |  |
| Remote Sense                  | -      | Compensates for a total of 1.0V cable drop   |  |                      |                                |                       |                        |  |
| Remote Adjust                 | -      | Using front panel potentiometer, Resistance (1k/V), or Voltage (1V/V)                    |  |                      |                                |                       |                        |  |
| Remote On / Off               | -      | TTL compatible, active high  |  |                      |                                |                       |                        |  |
| Signals                       | -      | Optocoupled transistor for AC Fail, DC Good, Inverter OK                                 |  |                      |                                |                       |                        |  |
| Indicators                    | -      | Green LED indicates output good, red LED indicates overvoltage or over temperature       |  |                      |                                |                       |                        |  |
| Parallel Connection           | -      | Single wire current share  |  |                      |                                |                       |                        |  |
| Operating Temperature         | °C     | -40~+71°C, derate as shown in model selector, 20 minute warm up period needed for <-30°C |  |                      |                                |                       |                        |  |
| Storage Temperature           | °C     | -55 to +85°C   |  |                      |                                |                       |                        |  |
| Temperature Coefficient       | -      | 0.025%/°C  |  |                      |                                |                       |                        |  |
| Humidity (non condensing)     | %RH    | 5 - 95%RH  |  |                      |                                |                       |                        |  |
| Cooling                       | -      | Internal fan   |  |                      |                                |                       |                        |  |
| Withstand Voltage             | -      | Input - Ground 1.5kVAC, Input - Output 3kVAC, Output - Ground 500VAC                     |  |                      |                                |                       |                        |  |
| Vibration                     | -      | MIL-STD-810E, Method 516.4 Proc. I, II, IV, VI   |  |                      |                                |                       |                        |  |
| Shock                         | -      | MIL-STD-810E, Method 514.4, Category 1, 9  |  |                      |                                |                       |                        |  |
| Safety Agency Approvals       | -      | UL60950, CSA60950, EN60950, & CE Mark (LVD)  |  |                      |                                |                       |                        |  |
| Conducted & Radiated EMI      | -      | VDE0871 Curve B, FCC Part 15, subpart J, Class B, MIL-STD-461D, CE102                    |  |                      |                                |                       |                        |  |
| Weight (Net / Shipping)       | lbs    | 250: 7/9; 500: 10/12; 750: 11/14; 1000: 15.5/19.5; 1500: 22/26                           |  |                      |                                |                       |                        |  |
| Size (WxHxD)                  | -      | See outline drawings   |  |                      |                                |                       |                        |  |
| Warranty                      | -      | 5 years  |  |                      |                                |                       |                        |  |

Notes: (Consult Installation Manual for detailed specifications, test methods and application notes)

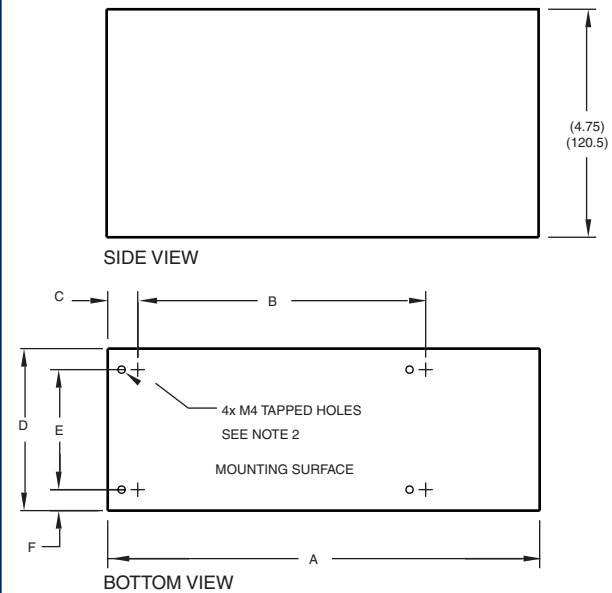
## Output Ratings

| Model     | Nominal Voltage (V) |            | Adjustment Range (V) |       | Maximum Current (A) |      |      |      |
|-----------|---------------------|------------|----------------------|-------|---------------------|------|------|------|
|           |                     |            |                      |       | 40°C                | 50°C | 60°C | 71°C |
| LZS250-1  | 5                   | 4.5 - 6.3  | 50                   | 45    | 40                  | 30   |      |      |
| LZS500-1  | 5                   | 4.5 - 6.3  | 100                  | 90    | 80                  | 60   |      |      |
| LZS750-1  | 5                   | 4.5 - 6.3  | 150                  | 135   | 120                 | 90   |      |      |
| LZS1000-1 | 5                   | 4.5 - 6.3  | 200                  | 190   | 160                 | 120  |      |      |
| LZS1500-1 | 5                   | 4.5 - 6.3  | 300                  | 270   | 240                 | 180  |      |      |
| LZS250-2  | 12                  | 10 - 15.75 | 21                   | 18.9  | 16.8                | 12.6 |      |      |
| LZS500-2  | 12                  | 10 - 15.75 | 42                   | 37.5  | 33.5                | 27   |      |      |
| LZS750-2  | 12                  | 10 - 15.75 | 63                   | 56.5  | 50                  | 37.5 |      |      |
| LZS1000-2 | 12                  | 10 - 15.75 | 83                   | 80    | 67                  | 50   |      |      |
| LZS1500-2 | 12                  | 10 - 15.75 | 125                  | 112.5 | 100                 | 75   |      |      |
| LZS250-3  | 24                  | 18 - 29.4  | 12.5                 | 11.3  | 10                  | 7.5  |      |      |
| SE250-3   | 24                  | 18 - 29.4  | 12.5                 | 11.3  | 10                  | 7.5  |      |      |
| LZS500-3  | 24                  | 18 - 29.4  | 25                   | 22.5  | 20                  | 16.5 |      |      |
| SE500-3   | 24                  | 18 - 29.4  | 25                   | 22.5  | 20                  | 16.5 |      |      |
| LZS750-3  | 24                  | 18 - 29.4  | 37.5                 | 33.5  | 30                  | 22.5 |      |      |
| SE750-3   | 24                  | 18 - 29.4  | 37.5                 | 33.5  | 30                  | 22.5 |      |      |
| LZS1000-3 | 24                  | 18 - 29.4  | 50                   | 48    | 40                  | 30   |      |      |
| SE1000-3  | 24                  | 18 - 29.4  | 50                   | 48    | 40                  | 30   |      |      |
| LZS1500-3 | 24                  | 18 - 29.4  | 75                   | 67.5  | 60                  | 45   |      |      |
| SE1500-3  | 24                  | 18 - 29.4  | 75                   | 67.5  | 60                  | 45   |      |      |

## Other Lambda Industrial Products

|               |                                   |
|---------------|-----------------------------------|
| LZSa          | 500W to 1500W RoHS compliant      |
| HWS           | 15W to 1500W Single output        |
| JFS           | 500W to 2000W Single output       |
| DPP, DLP, DHP | 15 to 960W DIN Rail single output |

## Outline Drawings



### DIMENSIONS:

| MODEL      | A                | B                | C             | D               | E               | F              |
|------------|------------------|------------------|---------------|-----------------|-----------------|----------------|
| LZS,SE250  | 9.00<br>(228.6)  | 6.000<br>(152.4) | .62<br>(15.8) | 3.37<br>(85.7)  | 2.500<br>(63.5) | .43<br>(11.0)  |
| LZS,SE500  | 10.25<br>(260.3) | 6.500<br>(165.1) | .62<br>(15.8) | 4.25<br>(107.9) | 3.000<br>(76.2) | .62<br>(15.8)  |
| LZS,SE750  | 10.37<br>(263.5) | 7.000<br>(177.8) | .62<br>(15.8) | 5.00<br>(127.0) | 3.500<br>(88.9) | .62<br>(15.8)  |
| LZS,SE1000 | 10.50<br>(266.7) | 8.500<br>(215.9) | .75<br>(19.0) | 5.62<br>(142.8) | 3.500<br>(88.9) | 1.06<br>(26.9) |
| LZS,SE1500 | 11.00<br>(279.4) | 8.000<br>(203.2) | .75<br>(19.0) | 8.00<br>(203.2) | 3.500<br>(88.9) | 2.12<br>(54.0) |

### WEIGHT:

| MODEL      | NET LBS | SHIP LBS |
|------------|---------|----------|
| LZS,SE250  | 7.0     | 9.0      |
| LZS,SE500  | 10.0    | 12.0     |
| LZS,SE750  | 11.0    | 14.0     |
| LZS,SE1000 | 15.5    | 19.5     |
| LZS,SE1500 | 22.0    | 26.0     |

### NOTE:

1. DIMENSIONS ARE IN INCHES EXCEPT DIMENSIONS ( ) ARE IN MM.
2. 4 x M4 TAPPED HOLES FOR CUSTOMER MTG. SCREWS MUST NOT PROTRUDE INTO POWER SUPPLY BY MORE THAN .25 (6.3).
3. CUSTOMER MUST PROVIDE CLEARANCE AROUND VENT HOLES TO ALLOW FOR AIR FLOW.