



Industrial



# SL POWER PW180KB SERIES

15.4 Watts Single Output  
Industrial Grade

Advanced Energy's SL Power PW180KB AC-DC power supplies are available with a nominal main output 48 V, which have self contained midspan power injector and support power over ethernet up to 15.4 Watts. PW180KB series has 90 VAC to 265 VAC input voltage range and regulated output with low ripple, which is IEEE802.3af compliant.

## AT A GLANCE

### Total Power

15.4 Watts

### Input Voltage

90 to 265 VAC

### # of Outputs

Single

## SPECIAL FEATURES

- Power over Ethernet (PoE)
- Self Contained Midspan Power Injector
- 90 to 265 VAC Input Range
- Desktop Style
- Single Output up to 15.4 Watts
- Regulated Output with Low Ripple
- Complies with EMI/RFI Regulations
- IEEE802.3af Compliant
- CE Compliant
- Impact Resistant Polycarbonate Enclosure
- Private Label Marking and Custom Designs Available
- 3 Years Warranty

## SAFETY

- UL/EN/IEC/CSA62368-1



## ELECTRICAL SPECIFICATIONS

| Input              |   |            |             |                   |             |                    |             |                  |             |
|--------------------|---|------------|-------------|-------------------|-------------|--------------------|-------------|------------------|-------------|
| Input Range        | 90 to 265 VAC, 47 to 63 Hz, 1Ø  |            |             |                   |             |                    |             |                  |             |
| Input Current      | 0.5A max at 90 VAC  |            |             |                   |             |                    |             |                  |             |
| Protection         | Internal primary current fuse, inrush limiting  |            |             |                   |             |                    |             |                  |             |
| Inrush Current     | 450 mA max  |            |             |                   |             |                    |             |                  |             |
| Leakage Current    | Less than 0.75 mA at 265 VAC 50 Hz  |            |             |                   |             |                    |             |                  |             |
| Output             |   |            |             |                   |             |                    |             |                  |             |
| Output Voltage     | 48 VDC typical, 44 VDC to 57 VDC  |            |             |                   |             |                    |             |                  |             |
| Ripple and Noise   | <table border="0"> <tr> <td>f &lt; 500 Hz</td> <td>500 mVpk-pk</td> </tr> <tr> <td>500 Hz to 150 kHz</td> <td>200 mVpk-pk</td> </tr> <tr> <td>150 kHz to 500 kHz</td> <td>150 mVpk-pk</td> </tr> <tr> <td>500 kHz to 1 MHz</td> <td>100 mVpk-pk</td> </tr> </table> | f < 500 Hz | 500 mVpk-pk | 500 Hz to 150 kHz | 200 mVpk-pk | 150 kHz to 500 kHz | 150 mVpk-pk | 500 kHz to 1 MHz | 100 mVpk-pk |
| f < 500 Hz         | 500 mVpk-pk   |            |             |                   |             |                    |             |                  |             |
| 500 Hz to 150 kHz  | 200 mVpk-pk   |            |             |                   |             |                    |             |                  |             |
| 150 kHz to 500 kHz | 150 mVpk-pk   |            |             |                   |             |                    |             |                  |             |
| 500 kHz to 1 MHz   | 100 mVpk-pk   |            |             |                   |             |                    |             |                  |             |
| Load Regulation    | ±4% ( Maximum deviation from nominal voltage for all loading conditions)  |            |             |                   |             |                    |             |                  |             |
| Transient Response | 500 µs response time for return to within 0.5% of final value for a 50% load step change  |            |             |                   |             |                    |             |                  |             |
| Output Current     | 0.35 A max.   |            |             |                   |             |                    |             |                  |             |

## SAFETY

|                      |  |
|----------------------|--|
| EN/IEC/UL            | EN/IEC/UL 60950-1                          |
| CE Mark              | Yes  |
| Dielectric Withstand | 3,000 VAC or 4250 VDC primary to secondary |
| EMC                  | EN55022/55024/61000                        |

## PROTECTION

|                            |                                |
|----------------------------|--------------------------------|
| Overload Current Detection | (15.4W/Vport) min./ 400mA max. |
| Overload Time Limit        | 50 to 75 mS                    |
| Short Circuit Protection   | 400 to 450 mA max.             |

## GENERAL SPECIFICATIONS

|                             |  |       |                          |       |                                     |
|-----------------------------|--|-------|--------------------------|-------|-------------------------------------|
| Topology                    | Switching-fixed Frequency Flyback  |       |                          |       |                                     |
| Dimensions (L x W x H)      | 3.98 x 2.40 x 1.35 (in), 101.0 x 61.5 x 34.2 (mm)  |       |                          |       |                                     |
| Weight                      | 5.95 ounces, 170 g   |       |                          |       |                                     |
| Spacing                     | 6.4mm primary to secondary   |       |                          |       |                                     |
| Case                        | Desktop type   |       |                          |       |                                     |
| Case Material               | Black 94V0 polycarbonate   |       |                          |       |                                     |
| Cord and Connectors         | Dual RJ45 Jacks built into the enclosure   |       |                          |       |                                     |
| Power Mode LED (Two Colors) | <table border="0"> <tr> <td>Amber</td> <td>Power on, detection mode</td> </tr> <tr> <td>Green</td> <td>Injecting full power, power up mode</td> </tr> </table> | Amber | Power on, detection mode | Green | Injecting full power, power up mode |
| Amber                       | Power on, detection mode   |       |                          |       |                                     |
| Green                       | Injecting full power, power up mode  |       |                          |       |                                     |

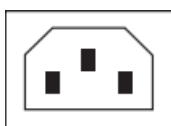
### ORDERING INFORMATION TABLE 1

| Model Number   | Output Voltage | Output Current |        | Max Watts | Ripple & Noise |
|----------------|----------------|----------------|--------|-----------|----------------|
|                |                | min            | max    |           |                |
| PW180KB4800_01 | 48 V           | 0.00 A         | 0.35 A | 15.4 W    | 480 mVpk-pk    |

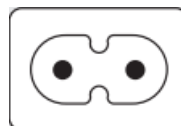
### ORDERING INFORMATION TABLE 2

|                     |                        |                         |            |                  |   |   |
|---------------------|------------------------|-------------------------|------------|------------------|---|---|
| PW180               | K                      | B                       | 48         | 00               | -   | 01  |
| Product Family Name | Manufacturing Location | Design Revision Changes | Voltage DC | Connector Number | Input Configuration/Model Type<br>F: IEC320 with ground C14<br>N: Shaver C8 | Standard<br>(no modifications or special packaging) |

### INPUT CONFIGURATION



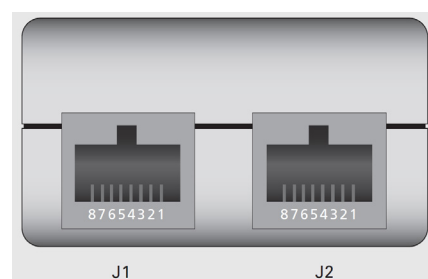
IEC320 w/ground C14 (F)



Shaver C8 (N)

### PIN ASSIGNMENTS

| Connector | PW180KB |               |
|-----------|---------|---------------|
| J1        | PIN 1   | Data Pair 1   |
|           | PIN 2   | Data Pair 1   |
|           | PIN 3   | Data Pair 2   |
|           | PIN 4   | + VDC         |
|           | PIN 5   | + VDC         |
|           | PIN 6   | Data Pair 2   |
|           | PIN 7   | - VDC         |
|           | PIN 8   | - VDC         |
| J2        | PIN 1   | Data Pair 1   |
|           | PIN 2   | Data Pair 1   |
|           | PIN 3   | Data Pair 2   |
|           | PIN 4   | No Connection |
|           | PIN 5   | No Connection |
|           | PIN 6   | Data Pair 2   |
|           | PIN 7   | No Connection |
|           | PIN 8   | No Connection |





For international contact information,  
visit [advancedenergy.com](https://www.advancedenergy.com).

[powersales@aei.com](mailto:powersales@aei.com) (Sales Support)  
[productsupport.ep@aei.com](mailto:productsupport.ep@aei.com) (Technical Support)  
+1 888 412 7832

## ABOUT ADVANCED ENERGY

Advanced Energy (AE) has devoted more than three decades to perfecting power for its global customers. AE designs and manufactures highly engineered, precision power conversion, measurement and control solutions for mission-critical applications and processes.

Our products enable customer innovation in complex applications for a wide range of industries including semiconductor equipment, industrial, manufacturing, telecommunications, data center computing, and medical. With deep applications know-how and responsive service and support across the globe, we build collaborative partnerships to meet rapid technological developments, propel growth for our customers, and innovate the future of power.

**PRECISION | POWER | PERFORMANCE | TRUST**

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