



## Bourns Releases New Planar Transformers

### Model PLN0xx-ER20 Series

Riverside, California – February 21, 2024 – Bourns Magnetics Product Line is pleased to introduce the new [Model PLN0xx-ER20 Series Planar Transformers](#). These new planar transformers are a perfect solution for high power PoE applications from 60 to 71 watts requiring a low profile and high power density.

The new Model PLN0xx-ER20 Series Planar Transformers are flyback converter transformers operating at a switching frequency of 200 kHz with low leakage inductance at 0.5  $\mu\text{H}$ . The available output voltages are from 3.3 to 24 V with output current from 2.4 to 21 A, all of which can withstand Hi-Pot at 1500  $V_{\text{rms}}$ . The operating temperature range is from -40 °C to +125 °C for these low profile, RoHS compliant\*, surface mount components.

The PLNxxx-ER20 Series has high efficiency with excellent DCR, and it is suitable to be used in various applications, including flyback transformers for high power PoE applications, industrial power systems, Switched-Mode Power Supplies (SMPS), LED lighting, and Battery Management Systems (BMS).

### Characteristics:

| Bourns Part Number | Primary Inductance <sup>1</sup> ( $\mu\text{H}$ ) | Leakage Inductance <sup>2</sup> ( $\mu\text{H}$ ) max. | DCR max. (m $\Omega$ ) |      |      | Turns ratio |       |       | Hi - Pot <sup>3</sup> | Main Output  |
|--------------------|---|--|------------------------|------|------|-------------|-------|-------|-----------------------|--------------|
|                    |   |  | pri.                   | sec. | aux. | pri.        | sec.  | aux.  |                       |              |
| PLN060-ER20A03S    | 21 $\pm$ 10 %                                     | 0.5  | 90                     | 11.0 | 220  | 1           | 0.166 | 0.666 | 1500 $V_{\text{rms}}$ | 3.3 V / 18 A |
| PLN060-ER20A05S    |   |  | 40                     | 8.0  |      |             | 0.25  | 0.5   |                       | 5.0 V / 12 A |
| PLN060-ER20A12S    |   |  | 40                     | 14.0 |      |             | 0.5   | 0.5   |                       | 12 V / 5.0 A |
| PLN060-ER20A24S    |   |  | 40                     | 33.0 |      |             | 1     | 0.5   |                       | 24 V / 2.4 A |
| PLN071-ER20A03S    | 18 $\pm$ 10 %                                     |  | 90                     | 9.0  |      |             | 0.166 | 0.666 |                       | 3.3 V / 21 A |
| PLN071-ER20A05S    |   |  | 40                     | 8.0  |      |             | 0.25  | 0.5   |                       | 5.0 V / 14 A |
| PLN071-ER20A12S    |   |  | 40                     | 14.0 |      |             | 0.5   | 0.5   |                       | 12 V / 5.9 A |
| PLN071-ER20A24S    |   |  | 40                     | 33.0 |      |             | 1     | 0.5   |                       | 24 V / 2.9 A |

Notes:

1. Measuring conditions 100 kHz, 1 V @ 25 °C.
2. Leakage inductance is for the primary and is measured with the secondary winding shorted.
3. DC current at 25 °C that causes an inductance drop of <15 % from its value without current.
4. HI-POT: Pri-Sec: 1500 VAC / 2 mA / 5 S, Pri, Sec-Core: 500 VAC / 2 mA / 5 S.
5. Output is for the secondary. Output of the aux winding is 12 V, 30 mA.

\* RoHS Directive 2015/863, Mar 31, 2015 and Annex.

Samples and production quantities are now available.

For additional details on Bourns® Planar Transformers, visit the Bourns website at [www.bourns.com/products/magnetic-products/transformers-planar](http://www.bourns.com/products/magnetic-products/transformers-planar). Visit the [Bourns® Magnetics Technical Library](#) for additional application documents.

If you have questions or need additional information, please feel free to contact [Bourns Customer Service/ Inside Sales](#).

### Features

- DC-DC transformer: 60 to 71 watts
- Flyback converter topology
- Low leakage inductance
- Low profile component
- Surface mount
- Operating temperature: -40 °C to +125 °C
- RoHS compliant\*

### Applications

- High power PoE applications
- Industrial power systems
- Switched-Mode Power Supplies (SMPS)
- LED lighting
- Battery Management Systems (BMS)