

## Low Power Through-Hole Transformer Dual Primary - Dual Secondary 115 V / 230 V

### PL-22, PL-23, PL-24



### PL-42, PL-43, PL-44

### FEATURES

- PC pin mounting
- Provides isolation from power line
- Dual Primary for operation at 115 V or 230 V, 50 Hz / 60 Hz
- Dual Secondary for **series connection** obtains twice winding voltage with center tap or for **parallel connection** obtains twice winding current rating
- Modification to these standard items are available as specialty products
- Laminated construction for low-cost industrial applications, including power supplies, controls and instrumentation
- Mounting brackets and bobbin standoff are available
- **PL-22, PL-23, PL-24:** Concentric windings for increased coupling, decreased leakage reactance and improved regulation
- **PL-42, PL-43, PL-44:** Split-section winding for increased dielectric strength between primary and secondary windings plus reduced interwinding capacitance
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)


**RoHS**  
COMPLIANT

**parallel**

### ELECTRICAL SPECIFICATIONS

**Input voltage:** 115 V 60 Hz or 230 V 50 Hz to 60 Hz

#### Output power rating:

PL-22, PL-42 = 1.5 VA

PL-23, PL-43 = 4.5 VA

PL-24, PL-44 = 10.0 VA

**Dielectric strength:** between primary windings and secondary windings and core:

PL-22, PL-23, PL-24 = 1500 V

PL-42, PL-43, PL-44 = 2500 V

Between secondary windings to core: All units = 1000 V

From primary to primary windings: All units = 500 V

From secondary to secondary windings: All units = 500 V

### MECHANICAL SPECIFICATIONS

#### Temperature class:

PL22, PL-23, PL-24: insulation class A, 105 °C

PL-42, PL43, PL-44: insulation class B, 130 °C

A UL approved class B insulation system can be furnished on request.

**Terminals:** brass, solder coated

#### Weight: (reference)

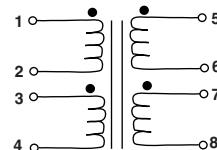
PL-22, PL-42 = 100 g

PL-23, PL-43 = 160 g

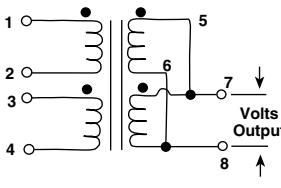
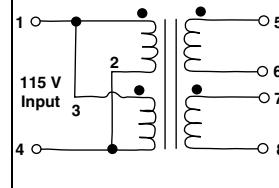
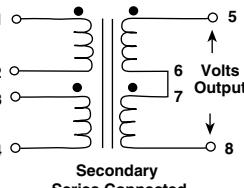
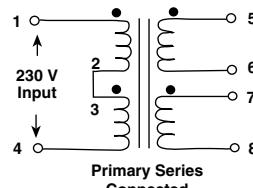
PL-24, PL-44 = 240 g

### SCHEMATICS

#### Basic Style



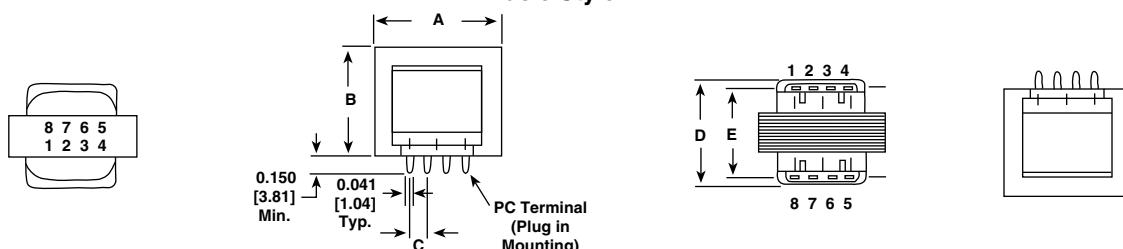
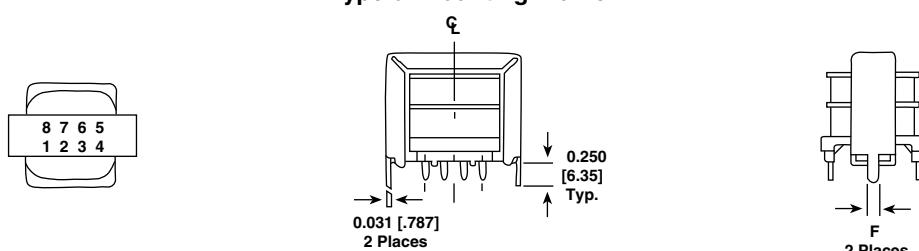
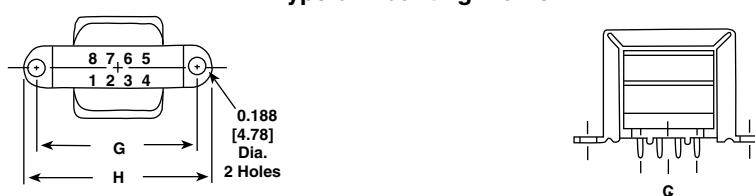
#### Options





| OUTPUT VOLTAGE TABLE |                        |                |          |                     |          |
|----------------------|------------------------|----------------|----------|---------------------|----------|
| MODEL                |                        | OUTPUT VOLTAGE |          | OUTPUT CURRENT (mA) |          |
| CONCENTRIC WINDINGS  | SPLIT-SECTION WINDINGS | SERIES         | PARALLEL | SERIES              | PARALLEL |
| PL-22-01             | PL-42-01               |                |          | 188                 | 376      |
| PL-23-01             | PL-43-01               | 8 VCT          | 4 V      | 562                 | 1124     |
| PL-24-01             | PL-44-01               |                |          | 940                 | 1880     |
| PL-22-02             | PL-42-02               |                |          | 120                 | 240      |
| PL-23-02             | PL-43-02               | 10 VCT         | 5 V      | 440                 | 880      |
| PL-24-02             | PL-44-02               |                |          | 1000                | 2000     |
| PL-22-03             | PL-42-03               |                |          | 100                 | 200      |
| PL-23-03             | PL-43-03               | 12.6 VCT       | 6.3 V    | 350                 | 700      |
| PL-24-03             | PL-44-03               |                |          | 800                 | 1600     |
| PL-22-04             | PL-42-04               |                |          | 100                 | 200      |
| PL-23-04             | PL-43-04               | 15 VCT         | 7.5 V    | 300                 | 600      |
| PL-24-04             | PL-44-04               |                |          | 500                 | 1000     |
| PL-22-05             | PL-42-05               |                |          | 75                  | 150      |
| PL-23-05             | PL-43-05               | 16 VCT         | 8 V      | 260                 | 520      |
| PL-24-05             | PL-44-05               |                |          | 640                 | 1280     |
| PL-22-06             | PL-42-06               |                |          | 60                  | 120      |
| PL-23-06             | PL-43-06               | 20 VCT         | 10 V     | 220                 | 440      |
| PL-24-06             | PL-44-06               |                |          | 500                 | 1000     |
| PL-22-07             | PL-42-07               |                |          | 50                  | 100      |
| PL-23-07             | PL-43-07               | 24 VCT         | 12 V     | 180                 | 360      |
| PL-24-07             | PL-44-07               |                |          | 450                 | 900      |
| PL-22-08             | PL-42-08               |                |          | 50                  | 100      |
| PL-23-08             | PL-43-08               | 30 VCT         | 15 V     | 150                 | 300      |
| PL-24-08             | PL-44-08               |                |          | 250                 | 500      |
| PL-22-09             | PL-42-09               |                |          | 35                  | 70       |
| PL-23-09             | PL-43-09               | 34 VCT         | 17 V     | 125                 | 250      |
| PL-24-09             | PL-44-09               |                |          | 300                 | 600      |
| PL-22-10             | PL-42-10               |                |          | 30                  | 60       |
| PL-23-10             | PL-43-10               | 40 VCT         | 20 V     | 110                 | 220      |
| PL-24-10             | PL-44-10               |                |          | 250                 | 500      |
| PL-22-11             | PL-42-11               |                |          | 28                  | 56       |
| PL-23-11             | PL-43-11               | 54 VCT         | 27 V     | 84                  | 168      |
| PL-24-11             | PL-44-11               |                |          | 140                 | 280      |
| PL-22-12             | PL-42-12               |                |          | 20                  | 40       |
| PL-23-12             | PL-43-12               | 56 VCT         | 28 V     | 80                  | 160      |
| PL-24-12             | PL-44-12               |                |          | 180                 | 360      |
| PL-22-13             | PL-42-13               |                |          | 20                  | 40       |
| PL-23-13             | PL-43-13               | 76 VCT         | 38 V     | 60                  | 120      |
| PL-24-13             | PL-44-13               |                |          | 100                 | 200      |
| PL-22-14             | PL-42-14               |                |          | 15                  | 30       |
| PL-23-14             | PL-43-14               | 88 VCT         | 44 V     | 20                  | 100      |
| PL-24-14             | PL-44-14               |                |          | 120                 | 240      |
| PL-22-15             | PL-42-15               |                |          | 10                  | 20       |
| PL-23-15             | PL-43-15               | 120 VCT        | 60 V     | 35                  | 70       |
| PL-24-15             | PL-44-15               |                |          | 85                  | 170      |
| PL-22-16             | PL-42-16               |                |          | 6                   | 12       |
| PL-23-16             | PL-43-16               | 180 VCT        | 90 V     | 24                  | 48       |
| PL-24-16             | PL-44-16               |                |          | 55                  | 110      |
| PL-22-17             | PL-42-17               |                |          | 5                   | 10       |
| PL-23-17             | PL-43-17               | 230 VCT        | 115 V    | 20                  | 40       |
| PL-24-17             | PL-44-17               |                |          | 40                  | 80       |

**DIMENSIONAL CONFIGURATIONS** (Reference) [Numbers in brackets indicate millimeters]

**Basic Style**

**"A" Type of Mounting Frame**

**"B" Type of Mounting Frame**


| MODEL | A       | B       | C      | D       | E       | F      | G       | H       |
|-------|---------|---------|--------|---------|---------|--------|---------|---------|
| PL-22 | 1.43    | 1.20    | 0.200  | 1.19    | 1.0     | 0.125  | 1.75    | 2.12    |
| PL-42 | [36.32] | [30.48] | [5.08] | [30.23] | [25.40] | [3.18] | [44.45] | [53.85] |
| PL-23 | 1.68    | 1.38    | 0.250  | 1.30    | 1.10    | 0.125  | 2.0     | 2.44    |
| PL-43 | [42.67] | [35.05] | [6.35] | [33.02] | [27.94] | [3.18] | [50.80] | [61.98] |
| PL-24 | 1.93    | 1.64    | 0.250  | 1.48    | 1.30    | 0.188  | 2.38    | 2.88    |
| PL-44 | [49.02] | [41.66] | [6.35] | [37.59] | [33.02] | [4.78] | [60.45] | [73.15] |

**PART MARKING**

- Vishay Dale
- Model
- Date code

**ORDERING INFORMATION**

| PL-22 | 01                         | A   | S   | EB           | e2                             |
|-------|----------------------------|---|---|--------------|--------------------------------|
| MODEL | OUTPUT VOLTAGE AND CURRENT | MOUNTING FRAME (if not required, leave blank) | BOBBIN STANOFF (if not required, leave blank) | PACKAGE CODE | JEDEC® LEAD (Pb)-FREE STANDARD |

**GLOBAL PART NUMBER**

**P** **L** **2** **2**

MODEL

**0** **1**

OUTPUT VOLTAGE AND CURRENT

**A**

MOUNTING FRAME  
(If not required, leave blank)

**S**

BOBBIN STANOFF  
(If not required, leave blank)

**E** **B**

PACKAGE CODE

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