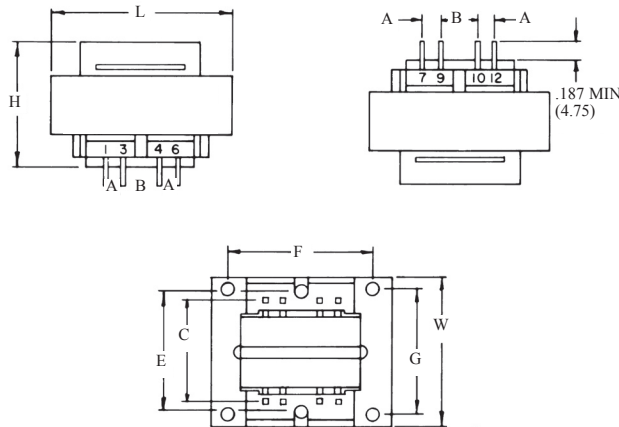
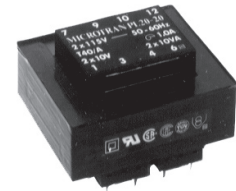


# International Laminated Power Transformers

www.tamuracorp.com

- 115V/230V Dual Primary
- Class B (130°C) File No. E92957
- 3500Vrms HiPot (Pri:Sec)
- UL94V-0 Flammability
- UL506 File No. E79781
- Non-Inherently Limited
- Power 2.5VA to 56VA
- TUV File No. 20650818 (EN61558-1,-2 -6)
- UL1411 File NO. E138028 (Construction Only)
- RoHS Compliant



Dimensions Inches (mm)

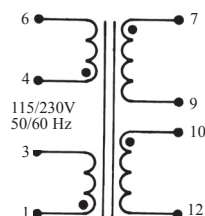
| VA<br>(SIZE) | L               | W               | H               | A              | B              | C               | MOUNTING        |                |                | MTG<br>SCREWS   | PIN<br>SQUARE  | LBS<br>(KG.)  |
|--------------|-----------------|-----------------|-----------------|----------------|----------------|-----------------|-----------------|----------------|----------------|-----------------|----------------|---------------|
|              |                 |                 |                 |                |                |                 | E               | F              | G              |                 |                |               |
| 2.5          | 1.625<br>(41.3) | 1.43<br>(36.3)  | 1.125<br>(28.6) | .200<br>(5.1)  | .250<br>(6.4)  | 1.000<br>(25.4) | 1.063<br>(27.0) | —              | —              | 2X#4<br>(2X M3) | .025<br>(.635) | .25<br>(.11)  |
| 5.0          | 1.625<br>(41.3) | 1.43<br>(36.3)  | 1.375<br>(34.9) | .200<br>(5.1)  | .400<br>(10.2) | 1.000<br>(25.4) | 1.063<br>(27.0) | —              | —              | 2X#4<br>(2X M3) | .025<br>(.635) | .37<br>(.17)  |
| 10.0         | 1.875<br>(47.6) | 1.563<br>(39.7) | 1.42<br>(36.1)  | .200<br>(5.1)  | .400<br>(10.2) | 1.140<br>(29.0) | 1.250<br>(31.8) | —              | —              | 2X#4<br>(2X M3) | .036<br>(.914) | .53<br>(.24)  |
| 20.0         | 2.250<br>(57.2) | 1.875<br>(47.6) | 1.625<br>(41.3) | .400<br>(10.2) | .400<br>(10.2) | 1.460<br>(37.1) | 1.500<br>(38.1) | —              | —              | 2X#4<br>(2X M3) | .036<br>(.914) | .90<br>(.41)  |
| 30.0         | 2.625<br>(66.7) | 2.188<br>(55.6) | 1.563<br>(39.7) | .550<br>(14.0) | .275<br>(7.0)  | 1.680<br>(42.7) | —               | 2.19<br>(55.6) | 1.75<br>(44.5) | 4X#4<br>(4X M3) | .045<br>(1.14) | 1.15<br>(.52) |
| 56.0         | 3.000<br>(76.2) | 2.50<br>(63.5)  | 1.845<br>(46.9) | .600<br>(15.2) | .300<br>(7.6)  | 1.900<br>(48.3) | —               | 2.50<br>(63.5) | 2.00<br>(50.8) | 4X#6<br>(4X M5) | .045<br>(1.14) | 1.70<br>(.77) |

Packaging:

| Size | Tube | Box |
|------|------|-----|
| 2.5  | 10   | 40  |
| 5.0  | 9    | 54  |
| 10.0 | 8    | 40  |

| Size | Box |
|------|-----|
| 20.0 | 20  |
| 30.0 | 20  |
| 56.0 | 10  |

## Schematics



| PART<br>NUMBER                | VA<br>(SIZE) | SECONDARY RMS RATING |       |                  |      |
|-------------------------------|--------------|----------------------|-------|------------------|------|
|                               |              | PARALLEL CONNECTED   |       | SERIES CONNECTED |      |
|                               |              | VOLTS                | AMPS  | VOLTS            | AMPS |
| <a href="#">PL2.5-10-130B</a> | 2.5          | 5.0                  | 0.50  | 10.0 CT          | 0.25 |
| <a href="#">PL5.0-10-130B</a> | 5.0          | 5.0                  | 1.00  | 10.0 CT          | 0.50 |
| <a href="#">PL10-10-130B</a>  | 10.0         | 5.0                  | 2.00  | 10.0 CT          | 1.00 |
| <a href="#">PL20-10-130B</a>  | 20.0         | 5.0                  | 4.00  | 10.0 CT          | 2.00 |
| <a href="#">PL30-10-130B</a>  | 30.0         | 5.0                  | 6.00  | 10.0 CT          | 3.00 |
| <a href="#">PL56-10-130B</a>  | 56.0         | 5.0                  | 11.20 | 10.0 CT          | 5.60 |
| <a href="#">PL2.5-12-130B</a> | 2.5          | 6.3                  | 0.40  | 12.6 CT          | 0.20 |
| <a href="#">PL5.0-12-130B</a> | 5.0          | 6.3                  | 0.80  | 12.6 CT          | 0.40 |
| <a href="#">PL10-12-130B</a>  | 10.0         | 6.3                  | 1.60  | 12.6 CT          | 0.80 |
| <a href="#">PL20-12-130B</a>  | 20.0         | 6.3                  | 3.20  | 12.6 CT          | 1.60 |
| <a href="#">PL30-12-130B</a>  | 30.0         | 6.3                  | 4.80  | 12.6 CT          | 2.40 |
| <a href="#">PL56-12-130B</a>  | 56.0         | 6.3                  | 8.80  | 12.6 CT          | 4.40 |
| <a href="#">PL2.5-16-130B</a> | 2.5          | 8.0                  | 0.30  | 16.0 CT          | 0.15 |
| <a href="#">PL5.0-16-130B</a> | 5.0          | 8.0                  | 0.62  | 16.0 CT          | 0.31 |
| <a href="#">PL10-16-130B</a>  | 10.0         | 8.0                  | 1.25  | 16.0 CT          | 0.62 |
| <a href="#">PL20-16-130B</a>  | 20.0         | 8.0                  | 2.50  | 16.0 CT          | 1.25 |
| <a href="#">PL30-16-130B</a>  | 30.0         | 8.0                  | 3.80  | 16.0 CT          | 1.90 |
| <a href="#">PL56-16-130B</a>  | 56.0         | 8.0                  | 7.00  | 16.0 CT          | 3.50 |
| <a href="#">PL2.5-20-130B</a> | 2.5          | 10.0                 | 0.24  | 20.0 CT          | 0.12 |
| <a href="#">PL5.0-20-130B</a> | 5.0          | 10.0                 | 0.50  | 20.0 CT          | 0.25 |
| <a href="#">PL10-20-130B</a>  | 10.0         | 10.0                 | 1.00  | 20.0 CT          | 0.50 |
| <a href="#">PL20-20-130B</a>  | 20.0         | 10.0                 | 2.00  | 20.0 CT          | 1.00 |
| <a href="#">PL30-20-130B</a>  | 30.0         | 10.0                 | 3.00  | 20.0 CT          | 1.50 |
| <a href="#">PL56-20-130B</a>  | 56.0         | 10.0                 | 5.60  | 20.0 CT          | 2.80 |
| <a href="#">PL2.5-24-130B</a> | 2.5          | 12.0                 | 0.20  | 24.0 CT          | 0.10 |
| <a href="#">PL5.0-24-130B</a> | 5.0          | 12.0                 | 0.42  | 24.0 CT          | 0.21 |
| <a href="#">PL10-24-130B</a>  | 10.0         | 12.0                 | 0.84  | 24.0 CT          | 0.42 |
| <a href="#">PL20-24-130B</a>  | 20.0         | 12.0                 | 1.66  | 24.0 CT          | 0.83 |
| <a href="#">PL30-24-130B</a>  | 30.0         | 12.0                 | 2.50  | 24.0 CT          | 1.25 |
| <a href="#">PL56-24-130B</a>  | 56.0         | 12.0                 | 4.66  | 24.0 CT          | 2.33 |
| <a href="#">PL2.5-28-130B</a> | 2.5          | 14.0                 | 0.18  | 28.0 CT          | 0.09 |
| <a href="#">PL5.0-28-130B</a> | 5.0          | 14.0                 | 0.36  | 28.0 CT          | 0.18 |
| <a href="#">PL10-28-130B</a>  | 10.0         | 14.0                 | 0.72  | 28.0 CT          | 0.36 |
| <a href="#">PL20-28-130B</a>  | 20.0         | 14.0                 | 1.44  | 28.0 CT          | 0.72 |
| <a href="#">PL30-28-130B</a>  | 30.0         | 14.0                 | 2.12  | 28.0 CT          | 1.06 |
| <a href="#">PL56-28-130B</a>  | 56.0         | 14.0                 | 4.00  | 28.0 CT          | 2.00 |
| <a href="#">PL2.5-36-130B</a> | 2.5          | 18.0                 | 0.14  | 36.0 CT          | 0.07 |
| <a href="#">PL5.0-36-130B</a> | 5.0          | 18.0                 | 0.28  | 36.0 CT          | 0.14 |
| <a href="#">PL10-36-130B</a>  | 10.0         | 18.0                 | 0.56  | 36.0 CT          | 0.28 |
| <a href="#">PL20-36-130B</a>  | 20.0         | 18.0                 | 1.12  | 36.0 CT          | 0.56 |
| <a href="#">PL30-36-130B</a>  | 30.0         | 18.0                 | 1.64  | 36.0 CT          | 0.82 |
| <a href="#">PL56-36-130B</a>  | 56.0         | 18.0                 | 3.12  | 36.0 CT          | 1.56 |

## TAMURA CORPORATION

43352 Business Park Drive. | P.O. Box 892230 Temecula, CA 92589-2230 | www.tamuracorp.com

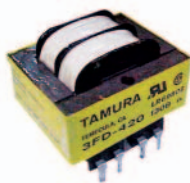
USA  
Tel: 800-472-6624  
Fax: 951-676-9482

Japan  
Tel: 81 (0)3 3978-2111  
Fax: 81 (0)3 3923-0230

United Kingdom  
Tel: 44 (0) 1380 731 700  
Fax: 44 (0) 1380 731 702

Hong Kong  
Tel: 852-2389-4321  
Fax: 852-2341-9689

# Laminated Power Transformers



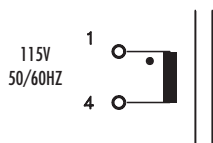
- 115V Single Primary
- 115/230 Dual Primary
- Class B (130°C) Insulation
- 2,500 Vrms Hi-Pot (Pri:Sec)
- 500 & 1KVrms Hi-Pot (Sec:Sec)
- UL94V-0 Flammability
- Recognized Insulation System for custom designs.
- 1.1VA to 12VA
- Inherently and Non-inherently Limited Product
- Class II & III Product
- UL1585 (E96720/E95844)
- UL506 (E79781/E91239)

| TAMURA PART NUMBER      |                         | SECONDARY RMS RATING |       |                  |       | SIZE | CLASS |
|-------------------------|-------------------------|----------------------|-------|------------------|-------|------|-------|
| Single 115V             | Dual 115/230V           | PARALLEL CONNECTED   |       | SERIES CONNECTED |       |      |       |
|                         |                         | AC                   | RMS   | AC               | RMS   |      |       |
| <a href="#">3FS-210</a> | <a href="#">3FD-210</a> | 5.0                  | 0.220 | 10.0 CT          | 0.110 | 2    | II    |
| <a href="#">3FS-310</a> | <a href="#">3FD-310</a> | 5.0                  | 0.500 | 10.0 CT          | 0.250 | 3    | II    |
| <a href="#">3FS-410</a> | <a href="#">3FD-410</a> | 5.0                  | 1.200 | 10.0 CT          | 0.600 | 4    | II    |
| <a href="#">3FS-510</a> | <a href="#">3FD-510</a> | 5.0                  | 2.400 | 10.0 CT          | 1.200 | 5    | II    |
| <a href="#">3FS-212</a> | <a href="#">3FD-212</a> | 6.3                  | 0.180 | 12.6 CT          | 0.090 | 2    | II    |
| <a href="#">3FS-312</a> | <a href="#">3FD-312</a> | 6.3                  | 0.400 | 12.6 CT          | 0.200 | 3    | II    |
| <a href="#">3FS-412</a> | <a href="#">3FD-412</a> | 6.3                  | 1.000 | 12.6 CT          | 0.500 | 4    | II    |
| <a href="#">3FS-512</a> | <a href="#">3FD-512</a> | 6.3                  | 2.000 | 12.6 CT          | 1.000 | 5    | II    |
| <a href="#">3FS-216</a> | <a href="#">3FD-216</a> | 8.0                  | 0.140 | 16.0 CT          | 0.070 | 2    | II    |
| <a href="#">3FS-316</a> | <a href="#">3FD-316</a> | 8.0                  | 0.300 | 16.0 CT          | 0.150 | 3    | II    |
| <a href="#">3FS-416</a> | <a href="#">3FD-416</a> | 8.0                  | 0.800 | 16.0 CT          | 0.400 | 4    | II    |
| <a href="#">3FS-516</a> | <a href="#">3FD-516</a> | 8.0                  | 1.600 | 16.0 CT          | 0.800 | 5    | II    |
| <a href="#">3FS-220</a> | <a href="#">3FD-220</a> | 10.0                 | 0.110 | 20.0 CT          | 0.055 | 2    | II    |
| <a href="#">3FS-320</a> | <a href="#">3FD-320</a> | 10.0                 | 0.240 | 20.0 CT          | 0.120 | 3    | II    |
| <a href="#">3FS-420</a> | <a href="#">3FD-420</a> | 10.0                 | 0.600 | 20.0 CT          | 0.300 | 4    | II    |
| <a href="#">3FS-520</a> | <a href="#">3FD-520</a> | 10.0                 | 1.200 | 20.0 CT          | 0.600 | 5    | II    |
| <a href="#">3FS-224</a> | <a href="#">3FD-224</a> | 12.0                 | 0.090 | 24.0 CT          | 0.045 | 2    | II    |
| <a href="#">3FS-324</a> | <a href="#">3FD-324</a> | 12.0                 | 0.200 | 24.0 CT          | 0.100 | 3    | II    |
| <a href="#">3FS-424</a> | <a href="#">3FD-424</a> | 12.0                 | 0.500 | 24.0 CT          | 0.250 | 4    | II    |
| <a href="#">3FS-524</a> | <a href="#">3FD-524</a> | 12.0                 | 1.000 | 24.0 CT          | 0.500 | 5    | II    |
| <a href="#">3FS-228</a> | <a href="#">3FD-228</a> | 14.0                 | 0.080 | 28.0 CT          | 0.040 | 2    | II    |
| <a href="#">3FS-328</a> | <a href="#">3FD-328</a> | 14.0                 | 0.170 | 28.0 CT          | 0.085 | 3    | II    |
| <a href="#">3FS-428</a> | <a href="#">3FD-428</a> | 14.0                 | 0.400 | 28.0 CT          | 0.200 | 4    | II    |
| <a href="#">3FS-528</a> | <a href="#">3FD-528</a> | 14.0                 | 0.840 | 28.0 CT          | 0.420 | 5    | II    |
| <a href="#">3FS-236</a> | <a href="#">3FD-236</a> | 18.0                 | 0.060 | 36.0 CT          | 0.030 | 2    | III   |
| <a href="#">3FS-336</a> | <a href="#">3FD-336</a> | 18.0                 | 0.130 | 36.0 CT          | 0.065 | 3    | III   |
| <a href="#">3FS-436</a> | <a href="#">3FD-436</a> | 18.0                 | 0.340 | 36.0 CT          | 0.170 | 4    | III   |
| <a href="#">3FS-536</a> | <a href="#">3FD-536</a> | 18.0                 | 0.700 | 36.0 CT          | 0.350 | 5    | III   |
| <a href="#">3FS-248</a> | <a href="#">3FD-248</a> | 24.0                 | 0.046 | 48.0 CT          | 0.023 | 2    | III   |
| <a href="#">3FS-348</a> | <a href="#">3FD-348</a> | 24.0                 | 0.100 | 48.0 CT          | 0.050 | 3    | III   |
| <a href="#">3FS-448</a> | <a href="#">3FD-448</a> | 24.0                 | 0.250 | 48.0 CT          | 0.125 | 4    | III   |
| <a href="#">3FS-548</a> | <a href="#">3FD-548</a> | 24.0                 | 0.500 | 48.0 CT          | 0.250 | 5    | III   |

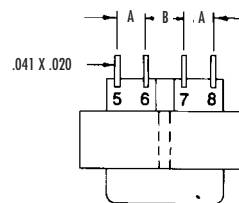
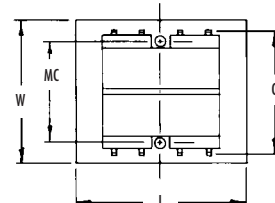
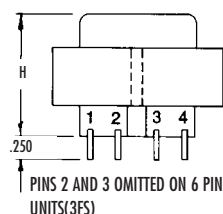
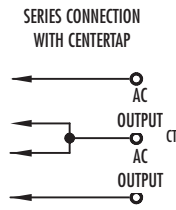
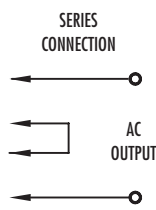
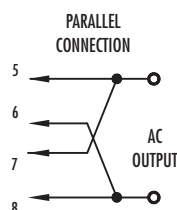
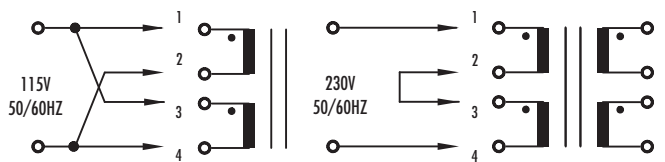
1. -TF suffix for inherently limited product version  
2. -1 suffix for 1kV Sec:Sec isolation product version

## Schematics

### 3FS PRIMARY INPUT CONNECTIONS



### 3FD PRIMARY INPUT CONNECTIONS



## Dimensions Inches (mm)

| SIZE | VA <sup>2</sup> | L               | W               | H               | MC                             | A              | B               | C                | LB.  |
|------|-----------------|-----------------|-----------------|-----------------|--------------------------------|----------------|-----------------|------------------|------|
| 2    | 1.1             | 1.44<br>(36.57) | 1.23<br>(31.24) | 1.00<br>(25.40) | —                              | .250<br>(6.35) | .250<br>(6.35)  | 1.200<br>(30.48) | 0.17 |
| 3    | 2.4             | 1.44<br>(36.57) | 1.23<br>(31.24) | 1.26<br>(32.00) | —                              | .250<br>(6.35) | .250<br>(6.35)  | 1.200<br>(30.48) | 0.25 |
| 4    | 6               | 6<br>(152.4)    | 1.69<br>(42.93) | 1.36<br>(34.54) | 1.0625 <sup>1</sup><br>(26.92) | .250<br>(6.35) | .350<br>(8.89)  | 1.280<br>(32.51) | 0.44 |
| 5    | 12              | 12<br>(304.8)   | 1.97<br>(50.04) | 1.63<br>(41.40) | 1.5 <sup>1</sup><br>(38.10)    | .300<br>(7.62) | .400<br>(10.16) | 1.41<br>(35.81)  | 0.70 |

Note 1: Clearance hole for 4-40 x 1 3/8" nylon mtg. screws.

Note 2: Ratings based on 115V nominal input.

All dimensions are ± 0.02 (0.50) unless otherwise noted.

## Packaging:

| Size | Tube | Tray | Size | Tube | Tray |
|------|------|------|------|------|------|
| 2    | 10   | 80   | 4    | 10   | 50   |
| 3    | 10   | 60   | 5    | 10   | 50   |

## TAMURA CORPORATION

43352 Business Park Drive. | P.O. Box 892230 Temecula, CA 92589-2230 | www.tamuracorp.com

USA  
Tel: 800-872-6624  
Fax: 909-676-9482

Japan  
Tel: 81 (0)3 3978-2111  
Fax: 81 (0)3 3923-0230

United Kingdom  
Tel: 44 (0) 1380 731 700  
Fax: 44 (0) 1380 731 702

Hong Kong  
Tel: 852-2389-4321  
Fax: 852-2341-9689