Signal Transformer

Power Transformers & High Frequency Magnetics

Your one source for all your magnetics needs!

Audio • Battery Chargers • Communication • Dental Equipment • Elevator Controls • Fire & Safety
Gaming • HVAC • Industrial Controls • Lighting • Medical • Motion Controls • Power Supplies
Security • Test & Measurement • Ultrasonic Products • Welding Equipment • X-Ray Equipment

Toll Free 1 866 239 5777 • 516 239 5777 • Fax 516 239 7208
www.signaltransformer.com • sales@signaltransformer.com

Signal Transformer: Your ONE SOURCE for ALL your Magnetics needs.

The largest product offering for Standard and Custom Power Transformers and High Frequency Magnetics.

Signal Transformer has designed and manufactured standard and custom power transformers and magnetics since our founding in 1959 in Brooklyn, NY. Utilizing our global manufacturing, engineering, and logistics capabilities and the resources of our parent company **Bel Fuse Inc.** (NASDAQ: **BELFA & BELFB**), **Signal Transformer** is positioned to support your needs wherever you are located. At **Signal Transformer**, we are committed to providing the highest grade magnetics for customers who demand total reliability, on-time delivery, and competitive pricing. Year after year, engineers and buyers consistently choose **Signal Transformer** as their preferred source for magnetics. Since 1959, we've led the magnetics industry with innovation, creativity, and reliability by:

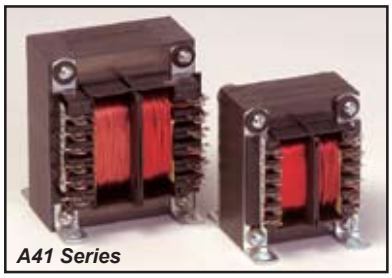
- Pioneering and perfecting direct sales of off-the-shelf transformers and chokes to the user
- Maintaining a large inventory — over 1,000 different models of chokes and transformers in stock from 1 VA to 10 KVA, available off-the-shelf or PRONTO™ shipment any time / every time
- Offering customized Stocking Programs, VMI and JIT
- Providing annual contract programs with competitive volume pricing
- Speedy service in obtaining the latest safety agency certifications including UL, CSA, VDE, IEC, EN, TUV, BSI, and CE for special customer needs
- **Signal Transformer** maintains an in-house I**SO 17025** certified lab that enables us to participate in the CSA "shared certification" program. This program makes possible to certify and use the **CSA** / c**CSA**us mark on new designs within days.

PRONTO™ 24-Hour Shipment

Our PRONTO shipment program is simple. We ship off-the-shelf products within 24 hours and, in most cases, the same day! **Signal** maintains an extensive finished goods inventory that enables us to ship small volume orders from stock within 24 hours. We are able to make this commitment because we constantly replenish our inventory through a computerized MRP system that computes inventory/production schedules to match our customer's requirements. Large production orders are conservatively scheduled to ensure meeting JIT or any delivery requirement, even those with tight lead times. In fact, each year over 20,000 orders are shipped to satisfied customers — on time, every time.

Design and Construction

Because we pride ourselves on listening to what our customers say, we at **Signal** have always been able to develop innovative, quality products to meet changing requirements. Our success has been built by continuously addressing all major concerns such as RoHS, flammability, voltage breakdown, high temperature materials, as well as design criteria such as:



A41 Series

- Smaller size and weight per VA (See our **MPI, SHE, HPI & M4L** series)
- Better performance through improved volumetric efficiency
- Superior suppression of radiated magnetic field (See our **STP, IF, LPI** series)
- Large VA, 3 Phase Transformers, Buck Boost / Isolation transformers in NEMA 3R enclosure (See our **3PH & ICT** series)
- High Frequency Magnetics designed for your specific application (see our **H** series)

Technical Support

Signal's staff of application engineers is one of the largest in the industry. Their extensive knowledge of regulatory and safety agency requirements insures expeditious handling of complex certification issues. Using the latest SPICE and CAD/CAM software, the Signal team stands ready to respond quickly to your unique, design and application needs. You can reach them for a consultation, or a request for quotation, by calling Toll Free (866) 239-5777, or (516) 239-5777. Fax requests should be sent to (516) 239-7208. The team can be emailed @ techhelp@signaltransformer.com.

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Order
Simply call 516-239-5777 to speak with a customer service representative who is eager to answer your inquiry. If you wish, you may fax your order to our 24-hour fax line 516-239-7208 or mail your purchase order to 500 Bayview Avenue, Inwood, New York, 11096. When faxing or mailing your order, please be certain to include your phone number and/or email address so you can be reached if questions arise.

Terms of Sale
Net 30 days to firms with acceptable D&B rating. Unrated firms, please submit bank and contact information, as well as three major trade references. Other methods are: C.O.D. for any of our stock transformers, or cash in advance for non-stock or custom transformers. We also accept credit cards (details below).

Credit Cards
We accept Mastercard, Visa, American Express, and Pay Pal.

Prices are subject to change without notice.

Extra Charges
All non-stock and custom transformer orders are subject to a set-up charge. Such items are considered to be “NCNR” items.

Freight Policy
Orders are shipped Ex Works (EXW), point of origin. All UPS shipments are prepaid and freight charges are added to your invoice unless you provide a UPS account number for direct billing. Shipments via all other carriers are freight collect unless we are otherwise instructed.

Damaged Shipment
Transformers shipped by Signal are carefully packed in compliance with carrier requirements. Claims for loss or damage in transit must be made with the carrier by the customer within 15 days of delivery. All shipments should be unpacked and inspected immediately upon receipt. If damage does not become apparent until shipment is unpacked, make a request within 72 hours for inspection by the carrier's agent and file with the carrier. Any evidence of damage to packaging must be noted on the freight bill or carrier's receipt and duly signed off by the carrier's agent. Failure to do this will result in the carrier refusing to honor the claim.

Return Policy
Be assured that products purchased from Signal Transformer have been manufactured to give you the highest level of quality. Our goal has always been to make sure you are completely satisfied every time you do business with us. If a qualified reason exists, a Return Material Authorization (RMA) will be provided promptly and a replacement order will be processed at the time of your call.

Warranty
Signal products are warranteed to be free of defects in materials and workmanship when operated within specified operating conditions. Contact Signal for specific warranty terms and conditions.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Product Selector Guide

Find the Right Transformer for your Application

Chassis Mount

Power Range (VA)	Secondary Voltage Range	Agency Approvals	Description	Product Family	Page Number
250 - 2,500	115V - 230V	UL	Super High Efficiency	SHE	4
1,250 - 3,500	115V - 230V	UL, CSA, VDE, TUV, CE	High Power International	HPI	5
200 - 900	5V - 230VCT	UL, CSA, TUV, CE	Mulit Purpose International	MPI	6-7
100 - 2,000	5V - 230VCT (2 x 115V)	UL	Toroidal Power Transformers	STP	8
300 - 1,000	115V	UL, CSA, VDE, CE	High Performance in Less Space	M4L	9
25 - 175	5V - 230VCT	UL, CSA, VDE, CE	International Series	A41	10-11
25 - 175	5V - 230VCT	UL, CSA, VDE, CE	International Series with Lead Wires	A41-L	See website
25 - 80*	5VDC & ±12VDC or ±15VDC	UL, CSA, VDE, CE	International Series Triple Output	A41*	12-13
25 - 80	12V - 24V	UL 5085-3, Class 2	Class 2	CL2	14-15
2.4 - 100	10VCT - 120VCT	UL, CSA	Split Bobbin Transformer	241 & DP-241	16-17
2.4 - 100	10VCT - 120VCT	UL, CSA	Split Bobbin with Lead Wires	241-L & DP-241-L	See website
30 - 100*	5VDC & ±12VDC or ±15VDC	UL, CSA	Split Bobbin Triple Output	MT & DMT*	18-19

* Triple Output transformers are suitable for microprocessor and regulated power supply applications.

Printed Circuit Mount

Power Range (VA)	Secondary Voltage Range	Agency Approvals	Description	Product Family	Page Number
2.5 - 56	5V - 36VCT	UL, CSA, VDE, CE	International Series	14A	20-21
20 - 56*	5VDC & ±12VDC or ±15VDC	UL, CSA, VDE, CE	International Series Triple Output	14A*	22-23
2.5 - 50	12V - 24V	UL 5085-3, Class 2	Class 2	CL2	24-25
2.0 - 48	5V - 230VCT	UL, CSA	Low Profile	LP	26-27
6.0 - 12*	5VDC & ±12VDC or ±15VDC	UL, CSA	Low Profile Triple Output	MPL*	28-29
2.0 - 30	5V - 230VCT	UL, CSA, VDE, CE	International Encapsulated Transformer	IF	30-31
2.5 - 18	5V - 230VCT	UL, CSA, VDE, CE	International Encapsulated Low Profile Transformer	LPI	32-33
1.1 - 36	5V - 120VCT	UL, CSA	Split Bobbin Transformer	ST/DST	34-35
1.0 - 24	5V - 120VCT	UL, CSA	Miniature Transformer	PC/DPC	36-37
10 - 24*	5VDC & ±12VDC or ±15VDC	UL, CSA	Miniature Triple Output	MPC/DMPC*	38-39

* Triple Output transformers are suitable for microprocessor and regulated power supply applications.

Supplemental Magnetics, Chokes, Rectifiers, Auto Transformers, Industrial Control, Three Phase & High Frequency Magnetics

Power Range (VA)	Secondary Voltage Range	Description	Product Family	Page Number
10 - 2,000	5VCT - 80VCT	Rectifiers - Power Transformers	DL	40-44
100 - 2,000	115VCT - 230VCT	Auto Transformers	EB & OF	45
200 - 900	.12mH - 1000mH (1A - 200A)	Filters and Chokes	CH & CL	46-47
250 - 10,000	12V - 480V	Step-Up / Step-Down Transformers	DU & SU	48-49
500 - 3,600	12V - 480V	Industrial Control, Buck Boost, & Isolation in NEMA 3R Enclosure	ICT	50-51
100 - 45,000	5V - 4000V	Three Phase Transformers	3PH	52
—	—	High Frequency Transformers	H	53
—	—	Transformer Accessories and Connectors	—	54-55

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Super High Efficiency Transformers

High Reliability with Clean Efficient Power Transfer for Optimal Performance

The **SHE** series of Super High Efficiency transformers are specifically designed to reduce power operational costs. By utilizing optimal quality core and conductor materials, SHE transformers achieve superior ratings which address the overall trend to go "green" with cleaner, more efficient use of power.

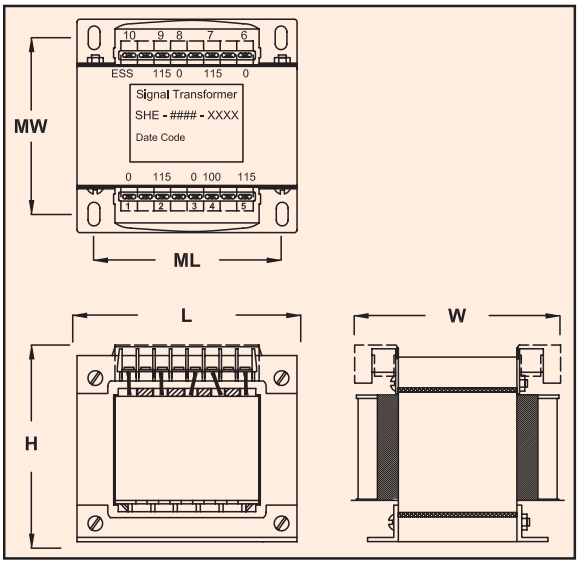
General Specifications

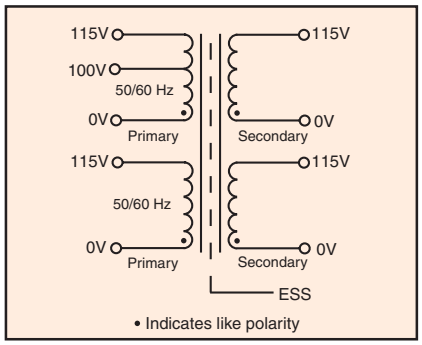
- Power - 250 VA to 2500 VA
- Dielectric Strength - 4000 Vrms Hipot
- Input - Dual / tapped windings - Parallel connection 100 V, 115 V
  - Series connection 215 V, 230 V
- Output - Dual windings - Parallel connection 115 V
  - Series connection 230 V
- Regulation 2.5% maximum
- Efficiency 97.5% minimum
- Temperature rise 60º C maximum
- Electrostatic Shield - Solid copper full width foil
- Touch-Safe terminals (IP20 type) offer a screw/binding clamp for hard wiring and a 3/16" & 1/4" Fast-On connection.
- Leakage Current @ <50 micro Amps
- Insulation System - Class H, 180º C
- Clean power with distortion free output

Agency Certifications

- UL 1446, File # E66312
- Compliant with the following domestic and international standards:
  - UL506 / UL5085
  - CSA C22.2, No. 66.2-06
  - VDE 0805 and VDE 0550
  - IEC / EN61558

97.5% Efficiency Rating —minimum—





Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
SHE-250	250	230V @ 1.1A	115V @ 2.2A
SHE-500	500	230V @ 2.2A	115V @ 4.4A
SHE-750	750	230V @ 3.3A	115V @ 6.6A
SHE-1000	1000	230V @ 4.3A	115V @ 8.7A
SHE-1500	1500	230V @ 6.5A	115V @ 13.0A
SHE-2000	2000	230V @ 8.7A	115V @ 17.4
SHE-2500	2500	230V @ 10.9A	115V @ 21.8A

Part Number	VA	Mechanical Dimensions					
		L	W	H	ML	MW	Weight
	Size	Inches (mm)					lbs (kg)
SHE-250	250	5.40 (137.2)	4.00 (101.6)	4.75 (120.7)	4.50 (114.3)	2.88 (73.2)	11.75 (5.33)
SHE-500	500	5.40 (137.2)	5.00 (127.0)	4.75 (120.7)	4.50 (114.3)	3.88 (98.6)	17.56 (7.97)
SHE-750	750	5.40 (137.2)	6.00 (152.4)	4.75 (120.7)	4.50 (114.3)	4.88 (124.0)	22.62 (10.26)
SHE-1000	1000	7.70 (195.6)	5.50 (139.7)	6.63 (168.4)	5.75 (146.1)	4.38 (111.3)	34.80 (15.79)
SHE-1500	1500	7.70 (195.6)	6.00 (152.4)	6.63 (168.4)	5.75 (146.1)	4.75 (120.7)	41.50 (18.82)
SHE-2000	2000	7.70 (195.6)	6.50 (165.1)	6.63 (168.4)	5.75 (146.1)	5.25 (133.4)	48.02 (21.78)
SHE-2500	2500	7.70 (195.6)	7.00 (177.8)	6.63 (168.4)	5.75 (146.1)	5.75 (146.1)	56.54 (25.65)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

High Power International Transformers

Greater Performance in Less Space and Weight

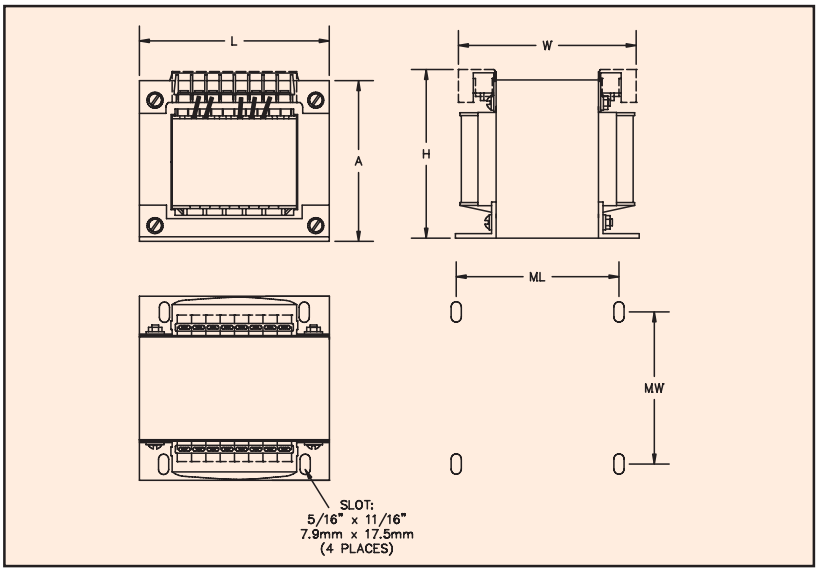
Constructed on a concentric platform, Signal's HPI series provides reinforced insulation while maintaining superior volumetric efficiency.

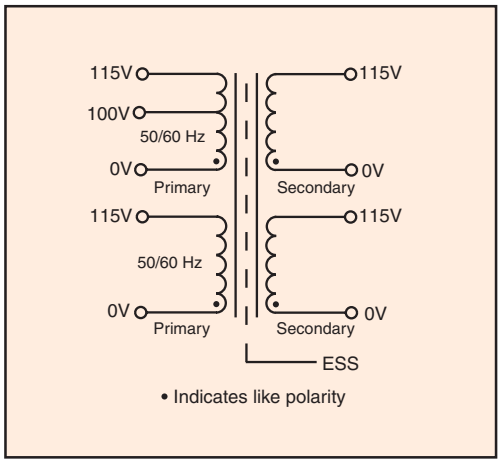
General Specifications

- Power - 1250, 1500, 1750, 2000, 2750 and 3500 VA ratings
- Dielectric Strength - 4.0Kv
- Available Input Voltage - 100V, 115V, 215V, 230V, 50/60Hz
- Output Voltage - 115/230V
- Touch-Safe terminals (IP20 type) offer a screw/binding clamp for hard wiring and a 3/16" & 1/4" Fast-On connection.
- Leakage Current @ <50 micro Amps
- Insulation System - UL Recognized Class H (180º C)
- Flammability Rating - UL 94-V0

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829, meets UL60601-1 construction
- CSA certified to C22.2 #66.1, File # 221070
- UL Insulation Systems 1446, E66312
- IEC / EN Standards IEC / EN 61558, VDE 0550, License # 2994
- TUV Rheinland Certified IEC / EN 60950, License # R9373110.2
- CE Compliance VDE Declaration of Conformity 73/23/EEC





Part Number	Mechanical Dimensions						
	L	W	H	A	ML	MW	Weight
	Inches (mm)						lbs (kg)
HPI-12*	7.06 (179.3)	5.1 (129.6)	6.10 (154.9)	6.03 (153.2)	5.50 (139.7)	3.69 (93.7)	31.0 (14.07)
HPI-15*	7.06 (179.3)	5.5 (139.7)	6.10 (154.9)	6.03 (153.2)	5.50 (139.7)	4.03 (103.0)	35.75 (16.23)
HPI-17*	7.06 (179.3)	5.89 (149.7)	6.10 (154.9)	6.03 (153.2)	5.50 (139.7)	4.48 (113.3)	38.50 (17.50)
HPI-20	7.50 (190.5)	5.26 (133.7)	6.56 (166.5)	6.25 (158.8)	5.75 (146.1)	4.35 (110.5)	40.1 (18.16)
HPI-27	7.50 (190.5)	5.89 (149.7)	6.56 (166.5)	6.25 (158.8)	5.75 (146.1)	4.98 (126.5)	48.0 (21.77)
HPI-35	7.50 (190.5)	6.99 (177.6)	6.56 (166.5)	6.25 (158.8)	5.75 (146.1)	6.08 (154.4)	62.4 (28.30)

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
HPI-12*	1250	230V @ 5.4A	115V @ 10.9A
HPI-15*	1500	230V @ 6.5A	115V @ 13.0A
HPI-17*	1750	230V @ 7.6A	115V @ 15.2A
HPI-20	2000	230V @ 8.7A	115V @ 17.4A
HPI-27	2750	230V @ 12.0A	115V @ 24.0A
HPI-35	3500	230V @ 15.2A	115V @ 30.4A

* All models have UL, CSA, TUV and VDE agency approvals except those marked with * which have TUV instead of VDE.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Multi-Purpose International Transformers

High Performance with Greater Volumetric Efficiency

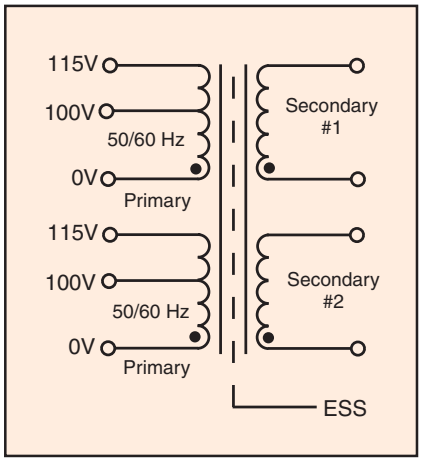
Signal's MPI transformers feature higher volumetric efficiency for improved performance compared with conventional 50/60Hz transformers. They also incorporate international safety features making them ideal for worldwide applications.

General Specifications

- Power - 200 VA to 900 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual / tapped primaries 100 V, 115 V, 200 V, 215 V, 230 V - 50/60Hz
- Dual Secondaries - Series or parallel
- Electrostatic Shield - Solid copper full width foil
- Touch-Safe terminals (IP20 type) offer a screw/binding clamp for hard wiring and a 3/16" & 1/4" Fast-On connection.
- Leakage Current @ <100 micro Amps
- Insulation System - Class F, 155º C

Agency Certifications

- UL 1446, File # E66312
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 No. 66.1, File # 221070
- Designed to meet VDE 0805 and VDE 0550
- TUV Rheinland certified to IEC EN61558-2-4 and EN61558-2-6, License # R72042497



Part Number	Secondary		Part Number	Secondary	
	Series	Parallel		Series	Parallel
MPI-200-10	10 VCT @ 20.0 A	5 V @ 40.0 A	MPI-200-28	28 VCT @ 7.1 A	14 V @ 14.2 A
MPI-250-10	10 VCT @ 25.0 A	5 V @ 50.0 A	MPI-250-28	28 VCT @ 8.9 A	14 V @ 17.9 A
MPI-300-10	10 VCT @ 30.0 A	5 V @ 60.0 A	MPI-300-28	28 VCT @ 10.7 A	14 V @ 21.4 A
MPI-400-10	10 VCT @ 40.0 A	5 V @ 80.0 A	MPI-400-28	28 VCT @ 14.3 A	14 V @ 28.6 A
MPI-650-10	10 VCT @ 65.0 A	5 V @ 130.0 A	MPI-650-28	28 VCT @ 23.2 A	14 V @ 46.4 A
MPI-900-10	10 VCT @ 90.0 A	5 V @ 180.0 A	MPI-900-28	28 VCT @ 32.1 A	14 V @ 64.2 A
MPI-200-12	12 VCT @ 16.7 A	6 V @ 33.3 A	MPI-200-36	36 VCT @ 5.6 A	18 V @ 11.2 A
MPI-250-12	12 VCT @ 20.8 A	6 V @ 41.7 A	MPI-250-36	36 VCT @ 6.9 A	18 V @ 13.8 A
MPI-300-12	12 VCT @ 25.0 A	6 V @ 50.0 A	MPI-300-36	36 VCT @ 8.3 A	18 V @ 16.7 A
MPI-400-12	12 VCT @ 33.3 A	6 V @ 66.6 A	MPI-400-36	36 VCT @ 11.1 A	18 V @ 22.2 A
MPI-650-12	12 VCT @ 54.2 A	6 V @ 108.4 A	MPI-650-36	36 VCT @ 18.1 A	18 V @ 36.2 A
MPI-900-12	12 VCT @ 75.0 A	6 V @ 150.0 A	MPI-900-36	36 VCT @ 25.0 A	18 V @ 50.0 A
MPI-200-16	16 VCT @ 12.5 A	8 V @ 25.0 A	MPI-200-40	40 VCT @ 5.0 A	20 V @ 10.0 A
MPI-250-16	16 VCT @ 15.6 A	8 V @ 31.2 A	MPI-250-40	40 VCT @ 6.3 A	20 V @ 12.6 A
MPI-300-16	16 VCT @ 18.8 A	8 V @ 37.6 A	MPI-300-40	40 VCT @ 7.5 A	20 V @ 15.0 A
MPI-400-16	16 VCT @ 25.0 A	8 V @ 50.0 A	MPI-400-40	40 VCT @ 10.0 A	20 V @ 20.0 A
MPI-650-16	16 VCT @ 40.6 A	8 V @ 81.2 A	MPI-650-40	40 VCT @ 16.3 A	20 V @ 32.6 A
MPI-900-16	16 VCT @ 56.3 A	8 V @ 112.5 A	MPI-900-40	40 VCT @ 22.5 A	20 V @ 45.0 A
MPI-200-20	20 VCT @ 10.0 A	10 V @ 20.0 A	MPI-200-48	48 VCT @ 4.2 A	24 V @ 8.3 A
MPI-250-20	20 VCT @ 12.5 A	10 V @ 25.0 A	MPI-250-48	48 VCT @ 5.2 A	24 V @ 10.4 A
MPI-300-20	20 VCT @ 15.0 A	10 V @ 30.0 A	MPI-300-48	48 VCT @ 6.3 A	24 V @ 12.6 A
MPI-400-20	20 VCT @ 20.0 A	10 V @ 40.0 A	MPI-400-48	48 VCT @ 8.3 A	24 V @ 16.7 A
MPI-650-20	20 VCT @ 32.5 A	10 V @ 65.0 A	MPI-650-48	48 VCT @ 13.5 A	24 V @ 27.1 A
MPI-900-20	20 VCT @ 45.0 A	10 V @ 90.0 A	MPI-900-48	48 VCT @ 18.8 A	24 V @ 37.5 A
MPI-200-24	24 VCT @ 8.3 A	12 V @ 16.7 A	MPI-200-230	230 VCT @ 0.87 A	115 V @ 1.7 A
MPI-250-24	24 VCT @ 10.4 A	12 V @ 20.8 A	MPI-250-230	230 VCT @ 1.1 A	115 V @ 2.2 A
MPI-300-24	24 VCT @ 12.5 A	12 V @ 25.0 A	MPI-300-230	230 VCT @ 1.3 A	115 V @ 2.6 A
MPI-400-24	24 VCT @ 16.7 A	12 V @ 33.3 A	MPI-400-230	230 VCT @ 1.7 A	115 V @ 3.4 A
MPI-650-24	24 VCT @ 27.1 A	12 V @ 54.2 A	MPI-650-230	230 VCT @ 2.8 A	115 V @ 5.6 A
MPI-900-24	24 VCT @ 37.5 A	12 V @ 75.0 A	MPI-900-230	230 VCT @ 3.9 A	115 V @ 7.8 A

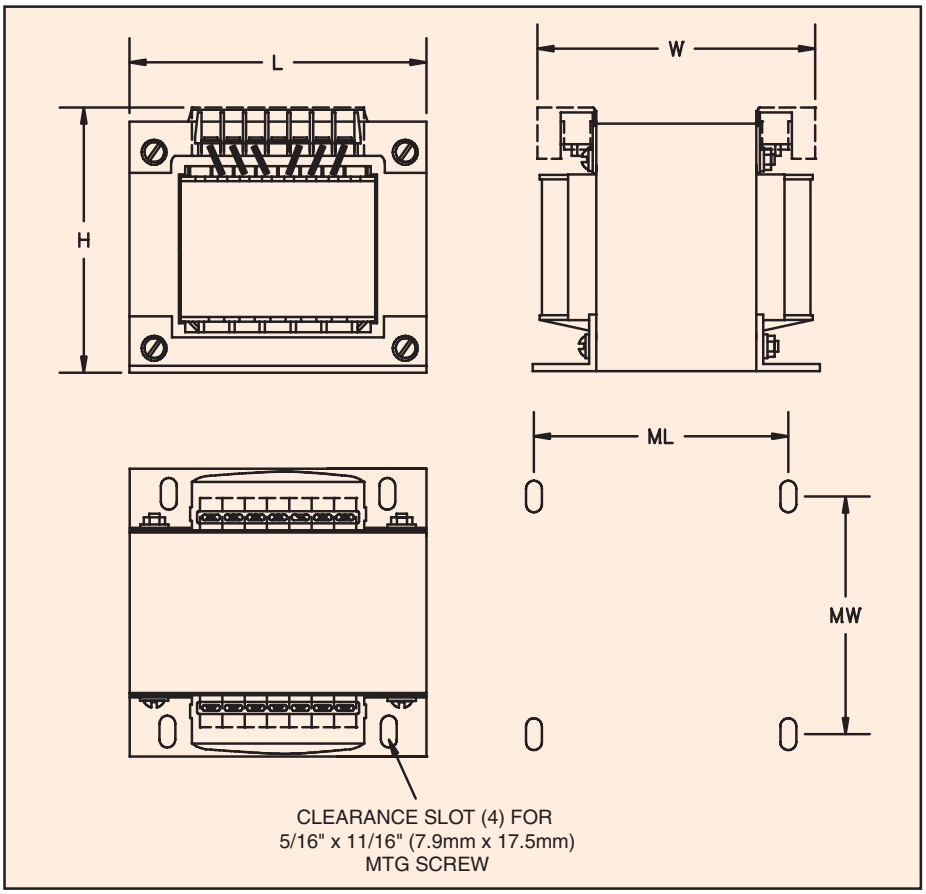
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Multi-Purpose International Transformers

High Performance with Greater Volumetric Efficiency



VA	Mechanical Dimensions					
	L	W	H	ML	MW	Weight
Size	Inches (mm)					lbs (kg)
200	3.75 (95.3)	4.46 (113.3)	3.66 (93.1)	3.25 (82.6)	2.80 (71.1)	6.22 (2.82)
250	4.12 (104.8)	4.13 (104.9)	3.86 (98.2)	3.62 (92.1)	2.60 (66.1)	6.76 (3.07)
300	4.12 (104.8)	4.45 (113.1)	3.86 (98.2)	3.62 (92.1)	2.91 (74.0)	7.80 (3.54)
400	4.12 (104.8)	5.04 (128.1)	3.86 (98.2)	3.62 (92.1)	3.50 (89.0)	9.82 (4.46)
650	5.25 (133.3)	4.70 (119.4)	4.63 (117.8)	4.50 (114.3)	3.41 (86.7)	14.83 (6.73)
900	5.25 (133.3)	5.50 (139.7)	4.63 (117.8)	4.50 (114.3)	4.20 (106.8)	19.84 (9.01)

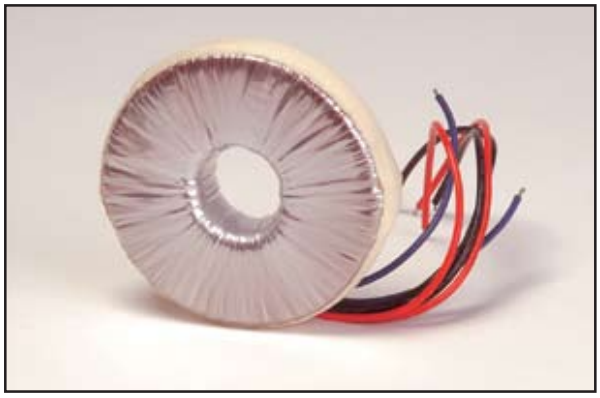
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Signal Toroidal Power Transformers

Power in the Round 100 VA to 2000 VA



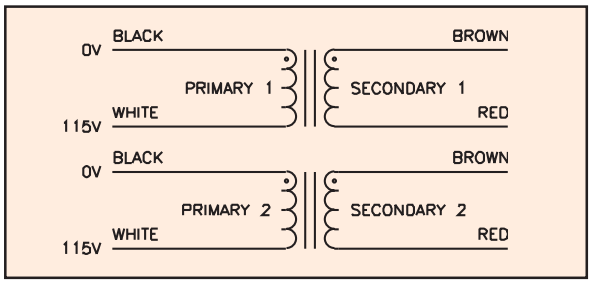
The STP series of transformers offer VA power ranges from 100 VA to 2000 VA inclusive. These standard transformer products share common lead lengths, colors, mounting configurations and more, The STP series are designed to comply with international safety standards.

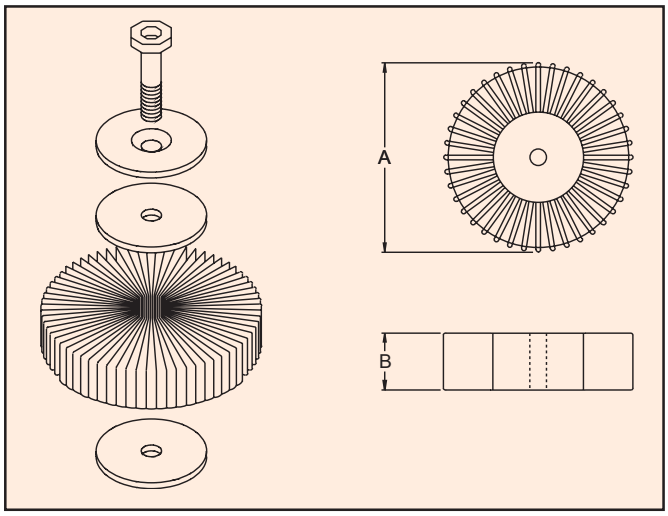
Benefits

- Minimal core losses
- Low profile
- Power/mass efficient
- Reduced EMI
- Low dB
- RoHS compliant

General Specifications

- Power - 100 VA to 2000 VA
- Dual Primaries - 2 x 115 V - 50/400 Hz
- Dual Secondaries - Standard outputs 2 x 115V with multiple output configurations available
- Connections: 12.0" color-coded stranded leads
- Supplied with mounting hardware set; screw, nut, top plate and 2 rubber pads.
- Insulation System - Class B, 130° C
- Component certifications for North American and IEC/EN standards available on request
- UL recognized to UL 506 / UL 5085, File # E63829
- Custom designs available on request





Part Number[1]	Power Range	Dimensions[2] Inches (mm)		Weight	Recommended Fastener Size
	VA	A	B	lbs (kg)	
STP-0100-2115	100	4.2 (105)	1.4 (35)	2.86 (1.3)	#8
STP-0150-2115	150	4.6 (116)	1.7 (42)	4.40 (2.0)	#10
STP-0200-2115	200	4.8 (120)	1.9 (48)	5.30 (2.4)	1/4"
STP-0250-2115	250	5.0 (127)	2.0 (50)	6.40 (2.9)	1/4"
STP-0300-2115	300	5.1 (128)	2.2 (55)	7.0 (3.2)	1/4"
STP-0400-2115	400	5.3 (133)	2.8 (70)	10.3 (4.7)	5/16"
STP-0500-2115	500	5.6 (140)	2.9 (72)	12.1 (5.5)	3/8"
STP-0600-2115	600	6.1 (155)	2.9 (72)	14.8 (6.7)	3/8"
STP-0800-2115	800	6.7 (170)	2.9 (72)	18.0 (8.2)	3/8"
STP-1000-2115	1000	7.1 (180)	3.1 (78)	22.1 (10.0)	3/8"
STP-1200-2115	1200	7.8 (198)	3.2 (80)	29.5 (13.4)	3/8"
STP-1600-2115	1600	8.3 (210)	3.4 (86)	35.3 (16.0)	1/2"
STP-2000-2115	2000	9.2 (232)	3.6 (90)	44.1 (20.0)	1/2"
	TBD	TBD	TBD	TBD	Custom per customer spec

Notes:

1. STP transformers having dual secondary windings may be ordered by specifying the power range, output voltage and current requirements. (A 250VA transformer with two 24V secondary windings = STP-0250-2024. A 1200 VA transformer with two 120V windings = STP-1200-2120.) Where dissimilar or multiple output configurations are required, please contact Customer Service for additional information. In all cases, a serialized part number will be assigned to the final product label.
2. The dimension profiles depicted for each VA range are for standard transformers with 2 x 115V output configurations. Dimensions of transformers with multiple outputs, dissimilar outputs or ELV outputs may vary.

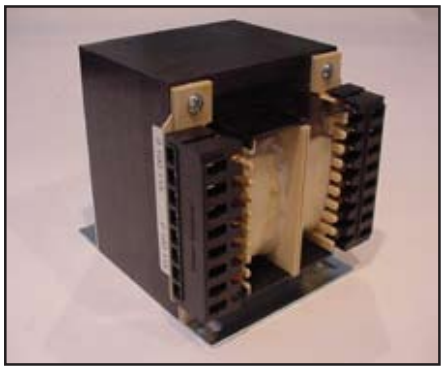
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

More-4-Less™ International Transformers

Greater Performance in Less Space



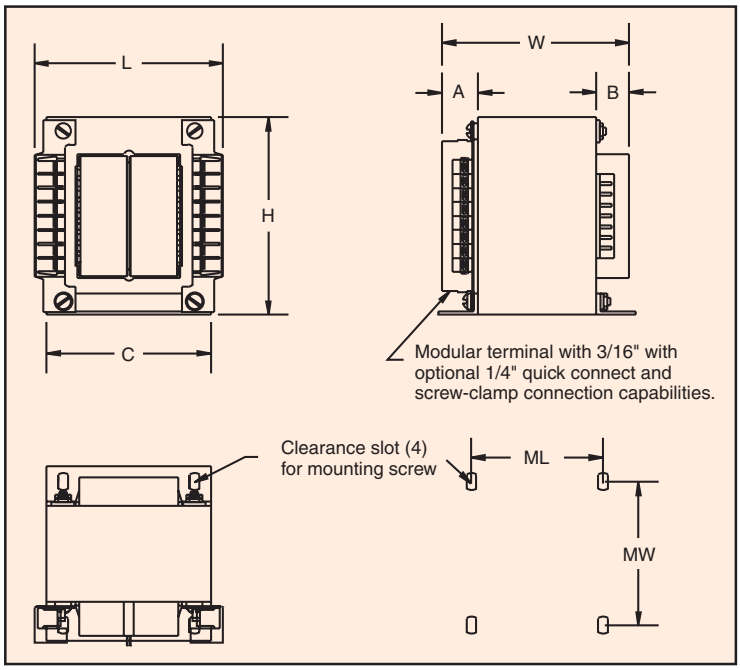
Designed to provide superior isolation, the M4L series of transformers provide more than 12mm creepage distance between the input and output windings. The materials utilized in M4L construction support high ambient temperature environments while minimizing energy losses.

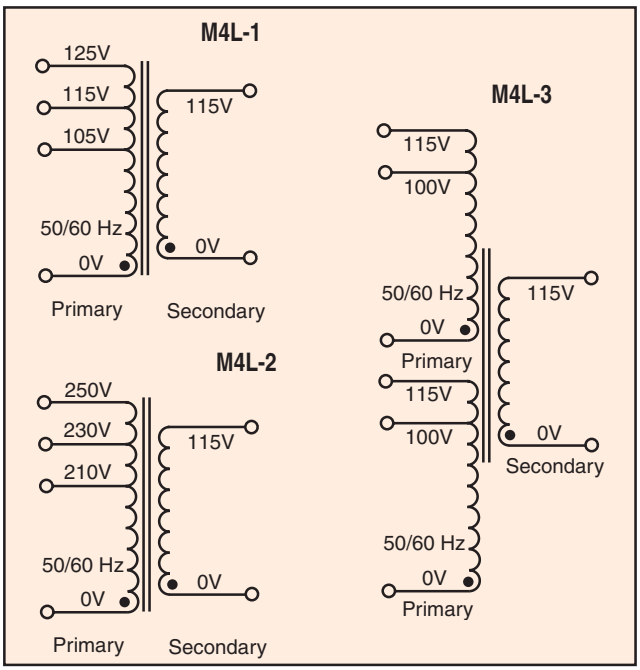
General Specifications

- Power - 300, 450, 600 and 1000VA ratings
- Dielectric Strength - 4.0Kv
- Available Input Voltage - 100V, 105V, 115V, 125V, 200V, 210V, 230V, 250V 50/60Hz
- Output voltage - 115V
- Touch-Safe terminals (IP20 type) offer a screw/binding clamp for hard wiring and a 3/16" & 1/4" Fast-On connection.
- Insulation System - UL Recognized Class F (155º C)
- Leakage Current - agency tested @ <30 micro Amps
- Flame Rating - UL 94-V0

Agency Certifications

- UL Standards - UL 506 / UL 5085-2, UL 544, UL 60601-1
- UL Insulation Systems - 1446, Class F, E66312
- CSA Standards - 22.2 #66.1, File # 221070
- IEC / EN Standards - IEC / EN 60950, (VDE License 1447)
- CE Compliance - VDE Declaration of Conformity 73/23/EEC





Part Number			VA Size	Sec RMS Rating	L	W	H	A	B	C	ML	MW	Mounting Screw	Weight lbs (kg)
					Inches (mm)									
M4L-1-3	M4L-2-3	M4L-3-3	300	115V @ 2.6A	4.20 (106.68)	4.08 (103.51)	3.75 (95.3)	1.33 (33.8)	0.62 (15.9)	3.12 (79.4)	2.50 (63.5)	3.12 (79.4)	#10	7.0 (3.18)
M4L-1-4	M4L-2-4	M4L-3-4	450	115V @ 3.9A	4.46 (113.28)	4.33 (110)	4.50 (114.3)	1.33 (33.8)	0.75 (19.1)	3.75 (95.3)	3.00 (76.2)	3.25 (82.6)	#10	11.0 (5)
M4L-1-6	M4L-2-6	M4L-3-6	600	115V @ 5.2A	4.46 (113.28)	5.08 (129.03)	4.50 (114.3)	1.33 (33.8)	0.75 (19.1)	3.75 (95.3)	3.00 (76.2)	4.06 (103.2)	#10	14.3 (6.49)
M4L-1-10	M4L-2-10	M4L-3-10	1000	115V @ 8.7A	4.89 (124.20)	5.70 (144.78)	5.25 (133.4)	1.33 (33.8)	0.87 (22.2)	4.37 (111.1)	3.50 (88.9)	4.68 (119.1)	1/4	22.0 (10.0)

Custom versions available upon request.

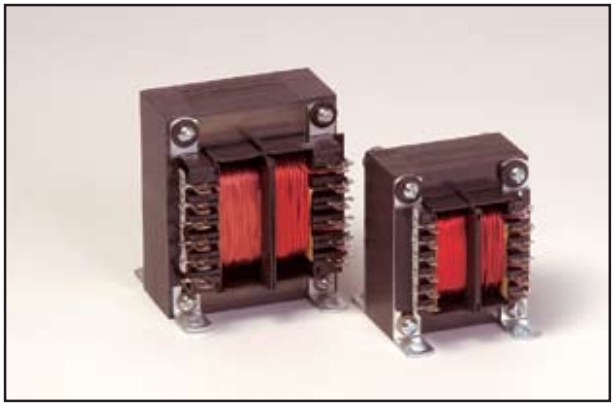
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Transformers
Chassis Mount

BUY DIRECT 24 HOUR PRONTO SHIPMENT
TEL: (516) 239-5777
FAX: (516) 239-7208

International Standards at Lower Cost and Better Performance



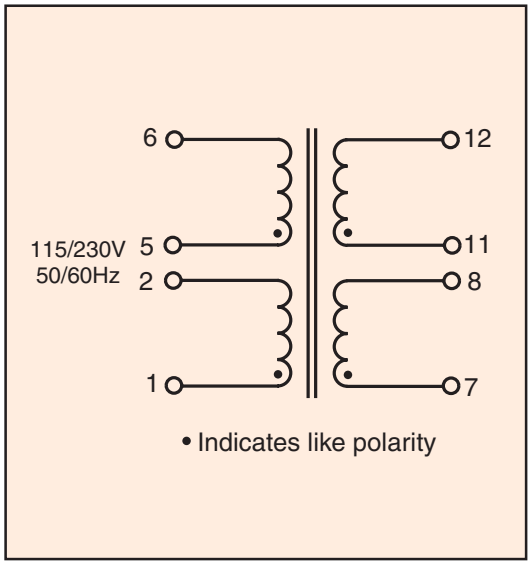
Designed to provide the high isolation, creepage and clearance necessary to comply with international safety standards.

General Specifications

- Power - 25 VA to 175 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual primaries (115/230 V - 50/60 Hz)
- Dual Secondaries - Series or parallel
- Terminals - Solder lug / quick connect type terminals
- Leakage - Current meets UL 60601-1, IEC/EN 60601-1
- Insulation - Class F (155º C)
- Flammability Rating - Bobbin and shroud material meet UL 94-V0

Agency Certifications

- UL 1446 E66312
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 No 66.1, File # 221070
- VDE certified to VDE 0805 / EN 60950, File # 1448



Note: VDE certified A41 Series transformers with standard length and color lead wires are readily available. See website for our A41-L product series.

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
A41-25-10	25	10.0 VCT @ 2.5A	5.0V @ 5.0A
A41-43-10	43	10.0 VCT @ 4.3A	5.0V @ 8.6A
A41-80-10	80	10.0 VCT @ 8.0A	5.0V @ 16.0A
A41-130-10	130	10.0 VCT @ 13.0A	5.0V @ 26.0A
A41-175-10	175	10.0 VCT @ 17.5A	5.0V @ 35.0A
A41-25-12	25	12.6 VCT @ 2.0A	6.3V @ 4.0A
A41-43-12	43	12.6 VCT @ 3.4A	6.3V @ 6.8A
A41-80-12	80	12.6 VCT @ 6.3A	6.3V @ 12.6A
A41-130-12	130	12.6 VCT @ 10.3A	6.3V @ 20.6A
A41-175-12	175	12.6 VCT @ 14.0A	6.3V @ 28.0A
A41-25-16	25	16.0 VCT @ 1.6A	8.0V @ 3.2A
A41-43-16	43	16.0 VCT @ 2.7A	8.0V @ 5.4A
A41-80-16	80	16.0 VCT @ 5.0A	8.0V @ 10.0A
A41-130-16	130	16.0 VCT @ 8.1A	8.0V @ 16.2A
A41-175-16	175	16.0 VCT @ 11.0A	8.0V @ 22.0A
A41-25-20	25	20.0 VCT @ 1.25A	10 V @ 2.5A
A41-43-20	43	20.0 VCT @ 2.2A	10 V @ 4.4A
A41-80-20	80	20.0 VCT @ 4.0A	10 V @ 8.0A
A41-130-20	130	20.0 VCT @ 6.5A	10 V @ 13.0A
A41-175-20	175	20.0 VCT @ 8.8A	10 V @ 17.6A
A41-25-24	25	24.0 VCT @ 1.0A	12 V @ 2.0A
A41-43-24	43	24.0 VCT @ 1.8A	12 V @ 3.6A
A41-80-24	80	24.0 VCT @ 3.3A	12 V @ 6.6A
A41-130-24	130	24.0 VCT @ 5.4A	12 V @ 10.8A
A41-175-24	175	24.0 VCT @ 7.3A	12 V @ 14.6A
A41-25-28	25	28.0 VCT @ 0.9A	14 V @ 1.86A
A41-43-28	43	28.0 VCT @ 1.5A	14 V @ 3.0A
A41-80-28	80	28.0 VCT @ 2.8A	14 V @ 5.6A
A41-130-28	130	28.0 VCT @ 4.6A	14 V @ 9.2A
A41-175-28	175	28.0 VCT @ 6.25A	14 V @ 12.5A
A41-25-36	25	36.0 VCT @ 0.7A	18 V @ 1.4A
A41-43-36	43	36.0 VCT @ 1.2A	18 V @ 2.4A
A41-80-36	80	36.0 VCT @ 2.2A	18 V @ 4.4A
A41-130-36	130	36.0 VCT @ 3.6A	18 V @ 7.2A
A41-175-36	175	36.0 VCT @ 4.8A	18 V @ 9.6A
A41-25-230	25	230 VCT @ 0.11A	115V @ 0.22A
A41-43-230	43	230 VCT @ 0.19A	115V @ 0.38A
A41-80-230	80	230 VCT @ 0.35A	115V @ 0.7A
A41-130-230	130	230 VCT @ 0.57A	115V @ 1.14A
A41-175-230	175	230 VCT @ 0.76A	115V @ 1.52A

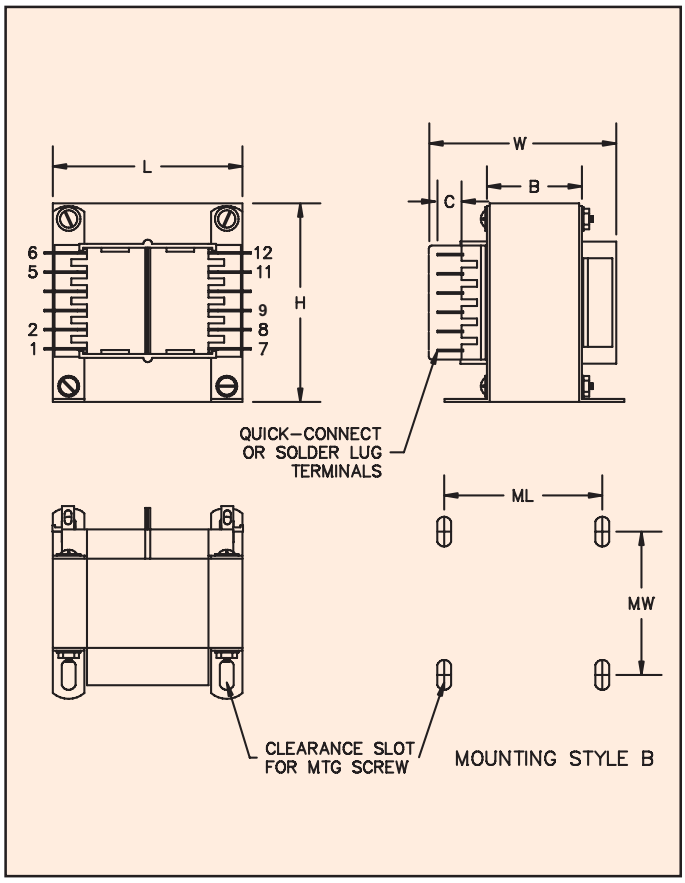
Custom versions available upon request.

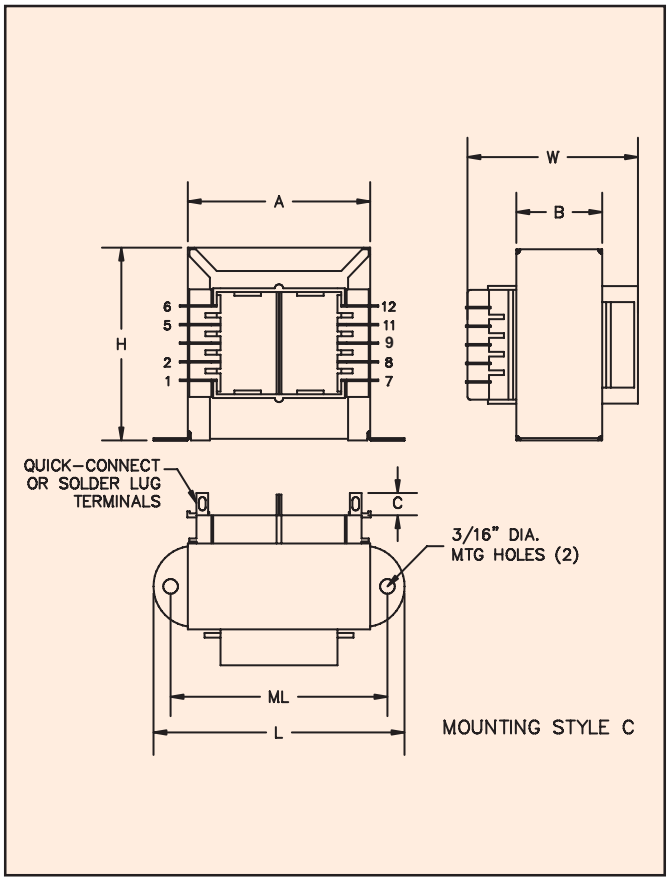
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Transformers
Chassis Mount

International Standards at Lower Cost and Better Performance





VA	Dimensions						Terminals	Mounting Style	Mounting Dimensions		Mounting Screw	Weight
	L	W	H	A	B	C	Inches (mm)		ML	MW		lbs (kg)
Size	Inches (mm)											
25	2.81 (71.4)	2.14 (54.4)	2.31 (58.7)	2.00 (50.8)	1.12 (28.6)	.31 (7.9)	.187 (4.75)	C	2.37 (60.3)	–	#6	1.25 lbs (0.57)
43	3.12 (79.4)	2.14 (54.4)	2.68 (68.2)	2.25 (57.2)	1.12 (28.6)	.31 7.9)	.187 (4.75)	C	2.81 (71.4)	–	#6	1.6 lbs (0.73)
80	2.50 (63.5)	2.52 (64.3)	3.00 (76.2)	–	1.37 (35.0)	.31 (7.9)	.187 (4.75)	B	2.00 (50.8)	2.18 (55.5)	#6	2.8 lbs (1.27)
130	2.81 (71.4)	3.00 (76.2)	3.37 (85.7)	–	1.62 (41.3)	.37 (9.5)	0.25 (6.35)	B	2.25 (57.2)	2.50 (63.5)	#8	4.1 lbs (1.86)
175	3.12 (79.4)	3.14 (79.7)	3.75 (95.3)	–	1.62 (41.3)	.37 (9.5)	0.25 (6.35)	B	2.50 (63.5)	2.50 (63.5)	#8	5.5 lbs (2.49)

Custom versions available upon request.

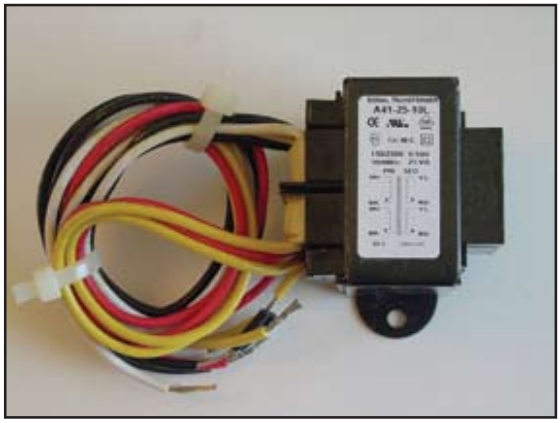
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Transformers
Chassis Mount with Lead Wires

BUY DIRECT 24 HOUR PRONTO SHIPMENT
TEL: (516) 239-5777
FAX: (516) 239-7208

International Standards at Lower Cost and Better Performance



Designed to provide the high isolation, creepage and clearance necessary to comply with international safety standards.

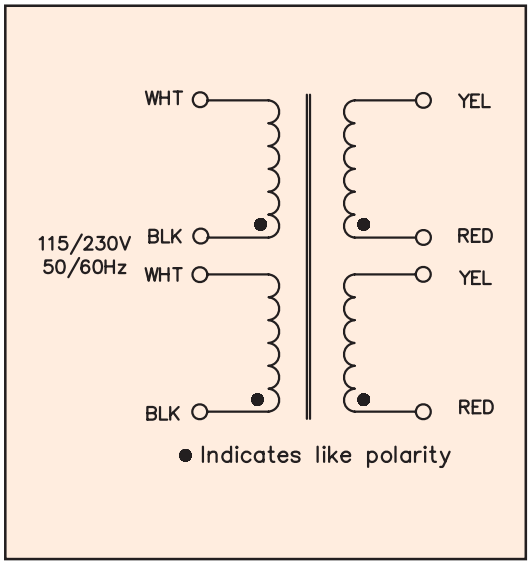
General Specifications

- Power - 25 VA to 175 VA
- Dielectric Strength - 4000 VRMS Hipot
- Primaries - Dual primaries (115/230 V - 50/60 Hz)
- Dual Secondaries - Series or parallel
- Leakage - Current meets UL 60601-1, IEC/EN 60601-1
- Insulation - Class F (155º C)
- Flammability Rating - Bobbin and shroud material meet UL 94-V0

Agency Certifications

- UL 1446 E66312
- Recognized to UL 506 / UL 5085-2, CSA 22.2, No. 66-1 / 5085 File # E63829
- VDE certified to VDE 0805 / EN 60950, Reg-Nr-1448

RoHS 2002/95/EC



Part Number	VA	Secondary RMS Rating		Lead Wire Gauge
	Size	Series	Parallel	Secondary
A41-25-10L	25	10.0 VCT @ 2.5A	5.0V @ 5.0A	18AWG
A41-43-10L	43	10.0 VCT @ 4.3A	5.0V @ 8.6A	18AWG
A41-80-10L	80	10.0 VCT @ 8.0A	5.0V @ 16.0A	18AWG
A41-130-10L	130	10.0 VCT @ 13.0A	5.0V @ 26.0A	16AWG
A41-175-10L	175	10.0 VCT @ 17.5A	5.0V @ 35.0A	16AWG
A41-25-12L	25	12.6 VCT @ 2.0A	6.3V @ 4.0A	18AWG
A41-43-12L	43	12.6 VCT @ 3.4A	6.3V @ 6.8A	18AWG
A41-80-12L	80	12.6 VCT @ 6.3A	6.3V @ 12.6A	18AWG
A41-130-12L	130	12.6 VCT @ 10.3A	6.3V @ 20.6A	16AWG
A41-175-12L	175	12.6 VCT @ 14.0A	6.3V @ 28.0A	16AWG
A41-25-16L	25	16.0 VCT @ 1.6A	8.0V @ 3.2A	18AWG
A41-43-16L	43	16.0 VCT @ 2.7A	8.0V @ 5.4A	18AWG
A41-80-16L	80	16.0 VCT @ 5.0A	8.0V @ 10.0A	18AWG
A41-130-16L	130	16.0 VCT @ 8.1A	8.0V @ 16.2A	16AWG
A41-175-16L	175	16.0 VCT @ 11.0A	8.0V @ 22.0A	16AWG
A41-25-20L	25	20.0 VCT @ 1.25A	10 V @ 2.5A	18AWG
A41-43-20L	43	20.0 VCT @ 2.2A	10 V @ 4.4A	18AWG
A41-80-20L	80	20.0 VCT @ 4.0A	10 V @ 8.0A	18AWG
A41-130-20L	130	20.0 VCT @ 6.5A	10 V @ 13.0A	16AWG
A41-175-20L	175	20.0 VCT @ 8.8A	10 V @ 17.6A	16AWG
A41-25-24L	25	24.0 VCT @ 1.0A	12 V @ 2.0A	18AWG
A41-43-24L	43	24.0 VCT @ 1.8A	12 V @ 3.6A	18AWG
A41-80-24L	80	24.0 VCT @ 3.3A	12 V @ 6.6A	18AWG
A41-130-24L	130	24.0 VCT @ 5.4A	12 V @ 10.8A	18AWG
A41-175-24L	175	24.0 VCT @ 7.3A	12 V @ 14.6A	18AWG
A41-25-28L	25	28.0 VCT @ 0.9A	14 V @ 1.86A	18AWG
A41-43-28L	43	28.0 VCT @ 1.5A	14 V @ 3.0A	18AWG
A41-80-28L	80	28.0 VCT @ 2.8A	14 V @ 5.6A	18AWG
A41-130-28L	130	28.0 VCT @ 4.6A	14 V @ 9.2A	18AWG
A41-175-28L	175	28.0 VCT @ 6.25A	14 V @ 12.5A	18AWG
A41-25-36L	25	36.0 VCT @ 0.7A	18 V @ 1.4A	18AWG
A41-43-36L	43	36.0 VCT @ 1.2A	18 V @ 2.4A	18AWG
A41-80-36L	80	36.0 VCT @ 2.2A	18 V @ 4.4A	18AWG
A41-130-36L	130	36.0 VCT @ 3.6A	18 V @ 7.2A	18AWG
A41-175-36L	175	36.0 VCT @ 4.8A	18 V @ 9.6A	18AWG
A41-25-230L	25	230 VCT @ 0.11A	115V @ 0.22A	18AWG
A41-43-230L	43	230 VCT @ 0.19A	115V @ 0.38A	18AWG
A41-80-230L	80	230 VCT @ 0.35A	115V @ 0.7A	18AWG
A41-130-230L	130	230 VCT @ 0.57A	115V @ 1.14A	18AWG
A41-175-230L	175	230 VCT @ 0.76A	115V @ 1.52A	18AWG

Lead Wires

- Hook up lead wire style UL1015, CSA TEW
- Rated 600V -40° to +105° C
- Passes UL VW-1 (flame test)
- All primary lead wires are 18AWG UL 1015
- All lead wires are 12" in length

Custom versions available upon request.

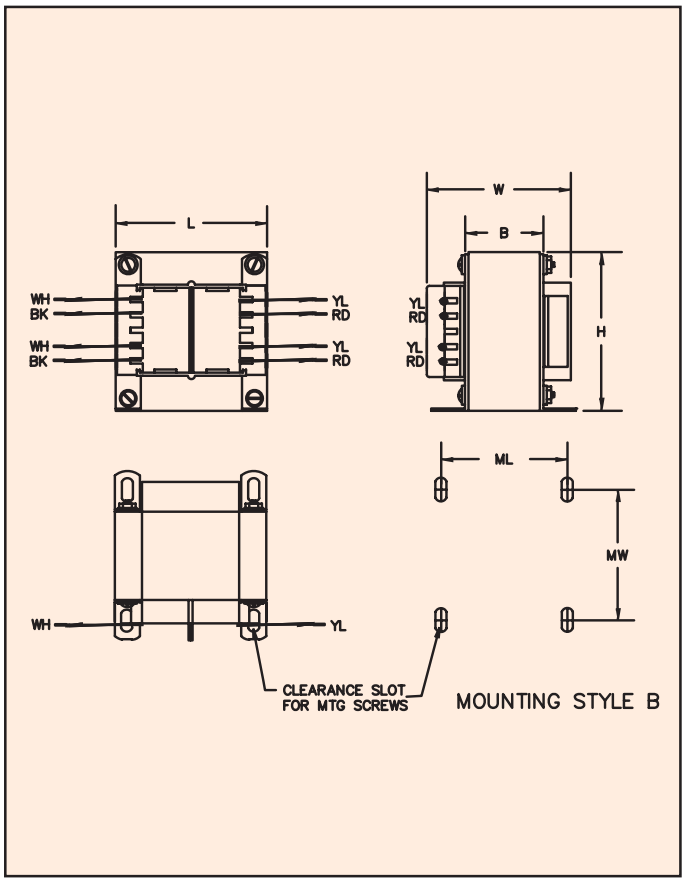
Signal Transformer
www.signaltransformer.com

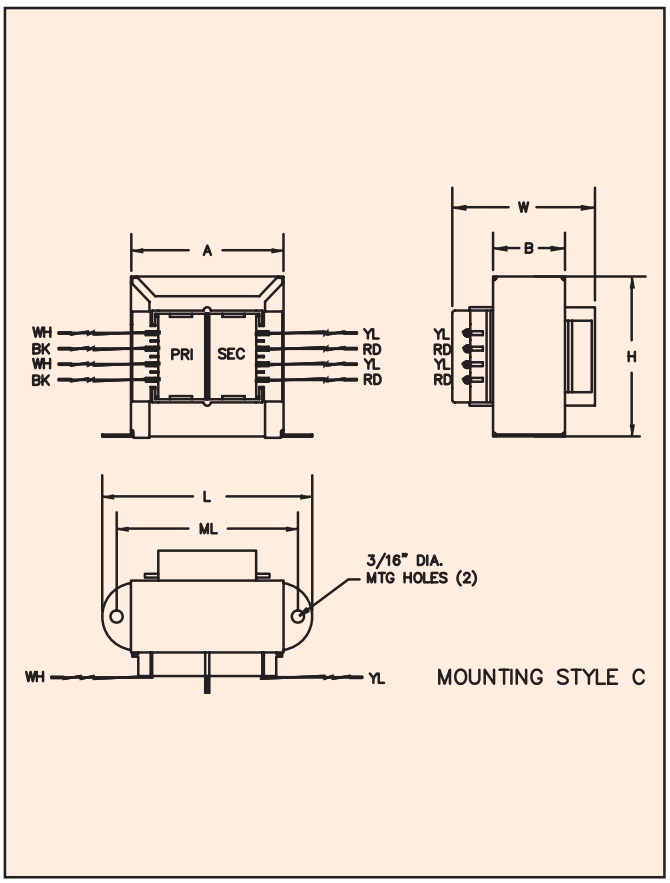
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Transformers
Chassis Mount with Lead Wires

International Standards at Lower Cost and Better Performance

RoHS 2002/95/EC





VA	Dimensions					Lead Wire Length	Mounting Style	Mounting Dimensions		Mounting Screw	Weight
	L	W	H	A	B	Inches (mm) Standard		ML	MW		lbs (kg)
Size	Inches (mm)										
25	2.81 (71.4)	2.14 (54.4)	2.31 (58.7)	2.00 (50.8)	1.12 (28.6)	12.0 (304.80)	C	2.37 (60.3)	–	#6	1.25 lbs (0.57)
43	3.12 (79.4)	2.14 (54.4)	2.68 (68.2)	2.25 (57.2)	1.12 (28.6)	12.0 (304.80)	C	2.81 (71.4)	–	#6	1.6 lbs (0.73)
80	2.50 (63.5)	2.52 (64.3)	3.00 (76.2)	–	1.37 (35.0)	12.0 (304.80)	B	2.00 (50.8)	2.18 (55.5)	#6	2.8 lbs (1.27)
130	2.81 (71.4)	3.00 (76.2)	3.37 (85.7)	–	1.62 (41.3)	12.0 (304.80)	B	2.25 (57.2)	2.50 (63.5)	#8	4.1 lbs (1.86)
175	3.12 (79.4)	3.14 (79.7)	3.75 (95.3)	–	1.62 (41.3)	12.0 (304.80)	B	2.50 (63.5)	2.50 (63.5)	#8	5.5 lbs (2.49)

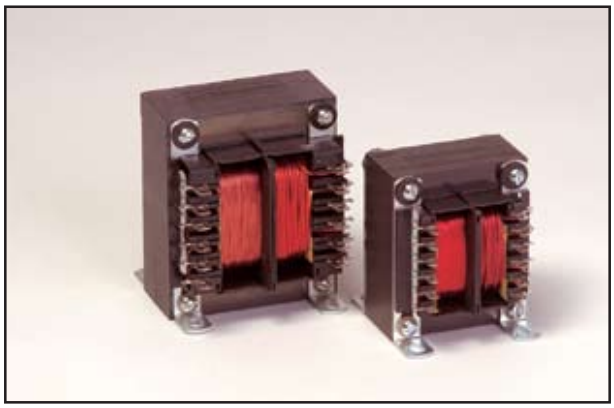
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Triple Output Transformers - Chassis Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies Requiring International Safety Certification



Triple output transformers with chassis mount capability plus all of the performance features of our split bobbin A41 series.

General Specifications

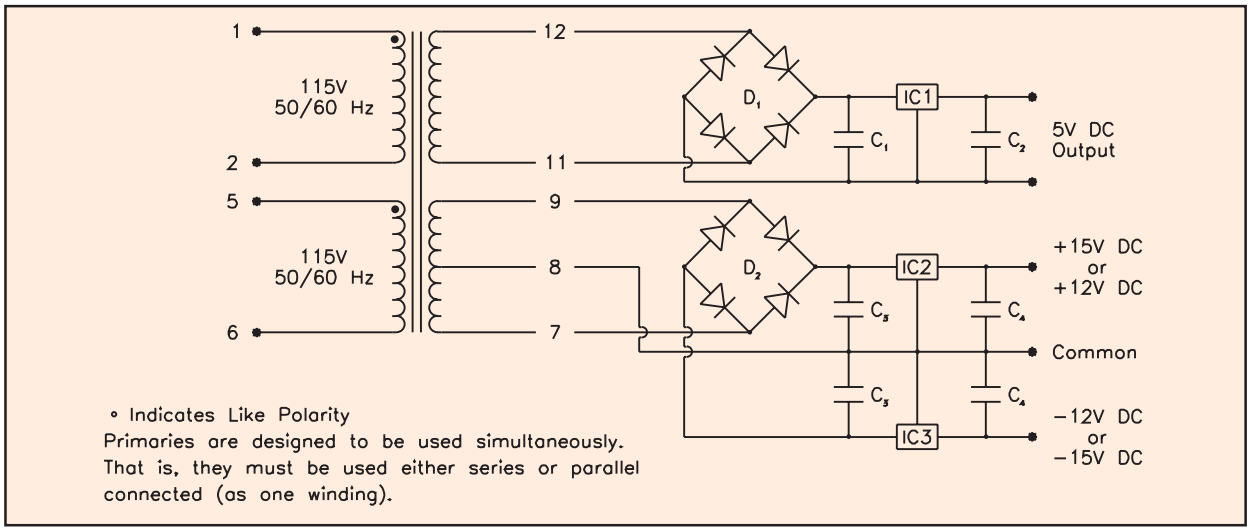
- Power - 25 VA to 80 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual primaries (115/230V - 50/60 Hz)
- Secondaries - Dual complementary outputs (5 VDC with ±12 VDC or 5 VDC with ±15 VDC)
- Terminals - Solder lug / quick connect type terminals
- Leakage - Current meets UL 60601-1, IEC/EN 60601-1
- Insulation - Class F (155° C)
- Flammability Rating - Bobbin and shroud material meet UL 94-V0

Agency Certifications

- UL 1446 E66312
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 No. 66.1, File # 221070
- VDE certified to VDE 0805 / EN 60950 (File # 1448)

Part Number	VA	DC Output		Suggested Components (C_2 and C_4 See Note 1)						
	Size	Regulator I	Regulator II	C_1	C_3	IC1[1]	IC2[2]	IC3[3]	D1[4]	D2[4]
A41-25-512	25	5V @ 1.25A	±12V @ 150mA	4.1 KMFD @15 VDC	600 MFD @50 VDC	LM-323K-5	LM-340K-12	LM-320K-12	PE20	PF20
A41-25-515	25	5V @ 1.25A	±15V @ 130mA			LM-323K-5	LM-340K-15	LM-320K-15	PE20	PF20
A41-43-512	43	5V @ 2A	±12V @ 300mA	8 KMFD @15 VDC	1.1 KMFD @ 50 VDC	LM-323K-5	LM-340K-12	LM-320K-12	PE20	PF20
A41-43-515	43	5V @ 2A	±15V @ 250mA			LM-323K-5	LM-340K-15	LM-320K-15	PE20	PF20
A41-80-512	80	5V @ 3.5A	±12V @ 600mA	10 KMFD @15 VDC	2.1 KMFD @ 50 VDC	LM-338[2]	LM-340K-12	LM-320K-12	PP20	PF20
A41-80-515	80	5V @ 3.5A	±15V @ 500mA			LM-338[2]	LM-340K-15	LM-320K-15	PP20	PF20

Note 1: Output capacitors C2 and C4 are required to stabilize regulators. Values can be 1 MFD min. tantalum or 10 MFD min. electrolytic, 20V min.
Note 2: LM-338 is an adjustable regulator and MFR's specifications (National Semiconductor) should be consulted for values of external components.
Note 3: All IC's are National Semiconductor types.
Note 4: All bridges are EDI types.



Note: VDE certified A41 Series transformers with standard length and color lead wires are readily available. Contact Customer Service for more information.

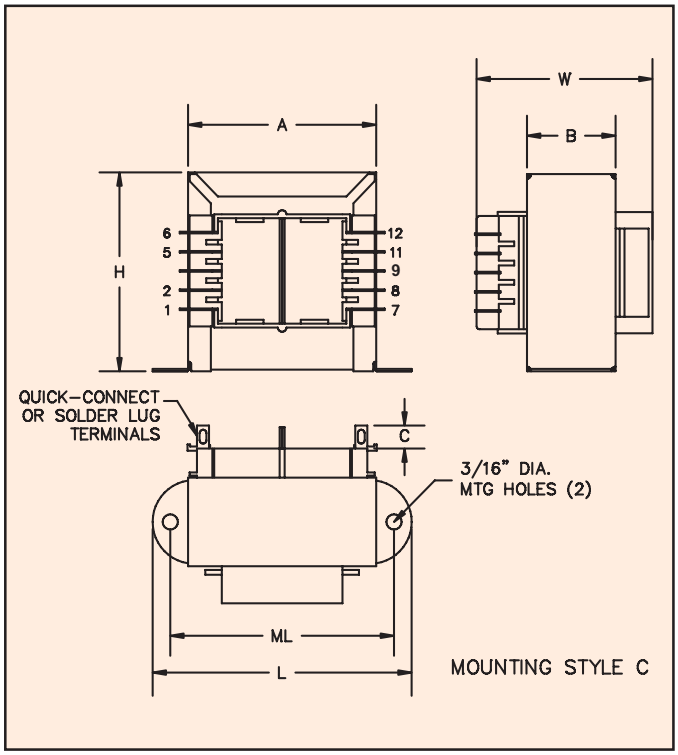
Custom versions available upon request.

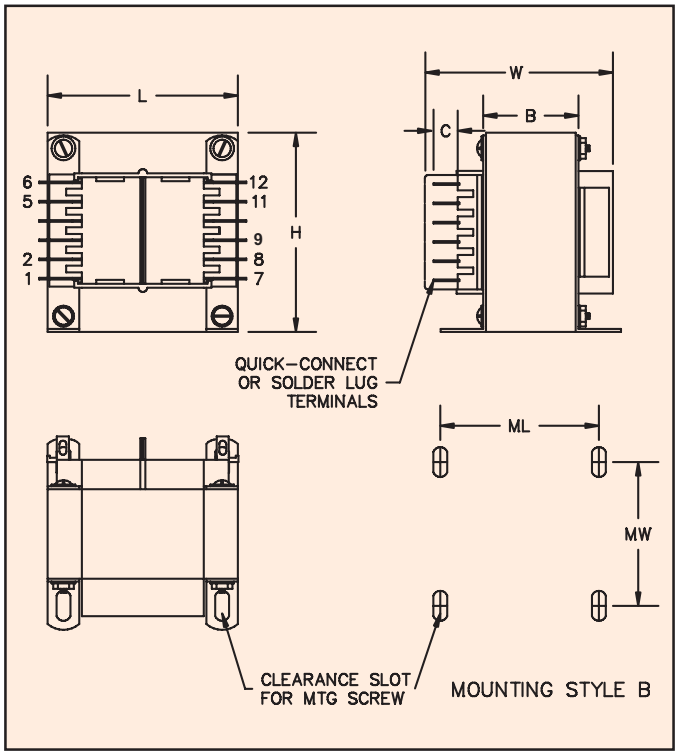
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

All-4-One™ International Triple Output Transformers - Chassis Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies Requiring International Safety Certification





Dimensions							Terminal	Mounting Style	Mounting Dimensions		Mounting Screw	Weight
VA	L	W	H	A	B	C			ML	MW		
Size	Inches (mm)						Inches (mm)					lbs (kg)
25	2.81 (71.4)	2.14 (54.4)	2.31 (58.7)	2.00 (50.8)	1.12 (28.6)	0.31 (7.9)	0.18 (4.75)	C	2.37 (60.3)	–	#6	1.25 (0.57)
43	3.12 (79.4)	2.14 (54.4)	2.68 (68.2)	2.25 (57.2)	1.12 (28.6)	0.31 (7.9)	0.18 (4.75)	C	2.81 (71.4)	–	#6	1.6 (0.73)
80	2.50 (63.5)	2.53 (64.3)	3.00 (76.2)	–	1.37 (34.9)	0.31 (7.9)	0.18 (4.75)	B	2.00 (50.8)	2.18 (55.5)	#6	2.8 (1.27)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Class 2 Transformers designed for Chassis Mounting

Inherently or Non-Inherently Limited

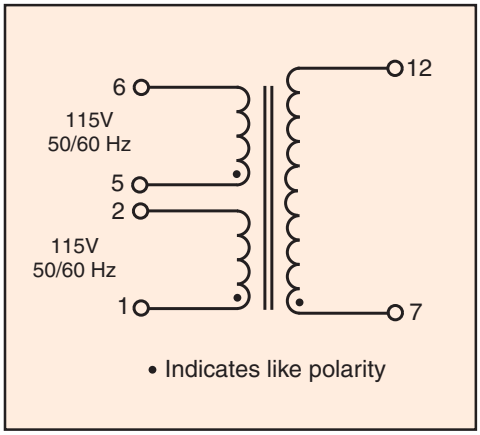
Signal's CL2 transformers are available in printed circuit and chassis mount versions. They are supplied as inherently or non-inherently limited units that are UL 1585 / UL 5085 recognized.

General Specifications

- Power - 25 VA to 80 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual primaries, 115/230 V, 50/60 Hz,
- Secondaries - Single secondary
- Class 2 Rating - Inherently or non-inherently limited (secondary fuse requirements below)
- Electrostatic Shield - Not necessary, split or dual bobbin construction
- Terminals - Solder lug/quick connect type terminals
- Insulation System - Class F insulation, 155º C
- Flammability Rating - Bobbin and shroud material meet UL 94V0

Agency Certifications

- UL recognized to UL 1585 / UL 5085-3, File # E116583
- CSA certified to C22.2 #66.1



Primaries are designed to be used simultaneously. That is, they must be used either series or parallel connected (as one winding).

Part Number	SecondaryRMS Rating	Secondary Fuse Required
CL2-25-12	12V @ 2.10A	2.5A*
CL2-25-24	24V @ 1.05A	1.5A*
CL2-40-12	12V @ 3.33A	4.0A*
CL2-40-24	24V @ 1.66A	2.0A*
CL2-80-24	24V @ 3.33A	3.5A*

* Non-inherently limited
Maximum secondary fuse value specified
All primaries are 115/230 V, 50/60 Hz

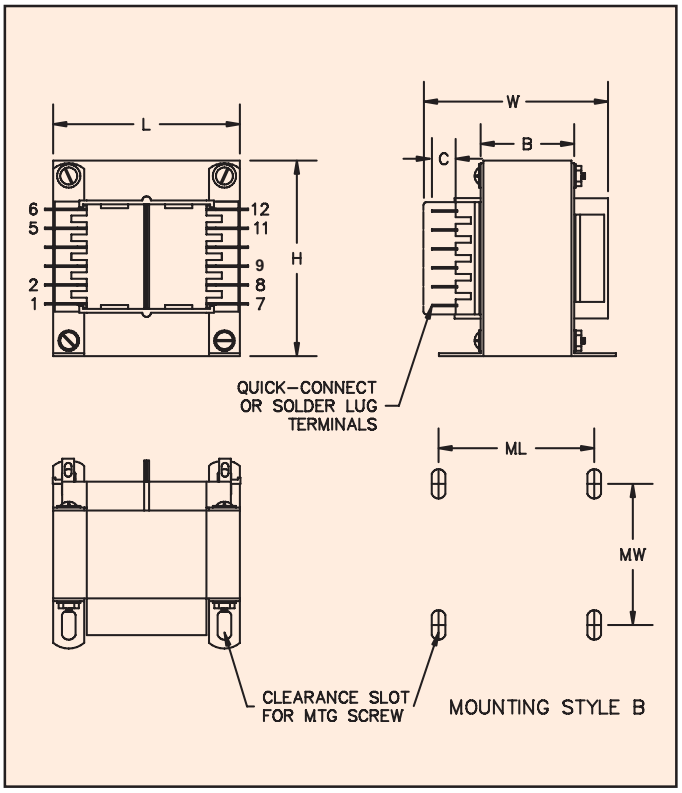
Custom versions available upon request.

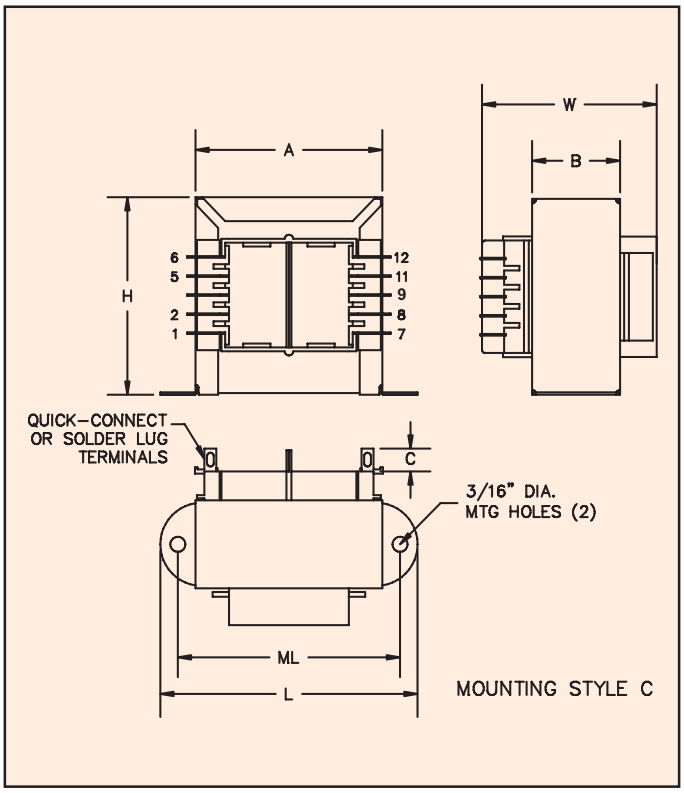
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Class 2 Transformers designed for Chassis Mounting

Inherently or Non-Inherently Limited





VA	Dimensions						Terminals	Mounting Style	Mounting Dimensions		Mounting Screw	Weight
	L	W	H	A	B	C			ML	MW		
Size	Inches (mm)								Inches (mm)			lbs (kg)
25	2.81 (71.4)	2.14 (54.4)	2.31 (58.7)	2.00 (50.8)	1.12 (28.6)	.31 (7.92)	.18 (4.75)	C	2.37 (60.3)	—	#6	1.25 (0.57)
40	3.12 (79.4)	2.14 (54.4)	2.68 (68.2)	2.25 (57.2)	1.12 (28.6)	.31 (7.92)	.18 (4.75)	C	2.81 (71.4)	—	#6	1.6 (0.73)
80	2.50 (63.5)	2.53 (64.3)	3.00 (76.2)	—	1.37 (34.9)	.31 (7.92)	.18 (4.75)	B	2.00 (50.8)	2.18 (55.5)	#6	2.8 (1.27)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Two-4-One™ Power Transformers
Chassis Mount

BUY DIRECT 24 HOUR PRONTO SHIPMENT
TEL: (516) 239-5777
FAX: (516) 239-7208

Split Bobbin Construction Providing Superior Isolation.

Signal's 241 transformers use a split bobbin construction that provides superior isolation and low capacitive coupling.

General Specifications

- Power - 2.4 VA to 100 VA
- Dielectric Strength - 2500 Vrms Hipot
- Primaries - Single or dual primaries (115V or 115/230 V - 50/60 Hz)
- Secondary - Single center tapped secondary
- Terminals - Solder lug / quick connect type terminals
- Insulation - Class B (130º C) UL 1446 E66312

Agency Certifications

- UL recognized to UL 506 / UL 5085-1, File # E63829
- CSA certified to C22.2 #66.1, File # 221070

RoHS 2002/95/EC

Part Number		Secondary RMS Rating	Part Number		Secondary RMS Rating
Single 115V	Dual 115/230V		Single 115V	Dual 115/230V	
241-3-10	Not Available	10.0 VCT @ 0.25A	241-3-28	Not Available	28 VCT @ 0.085A
241-4-10	DP-241-4-10	10.0 VCT @ 0.60A	241-4-28	DP-241-4-28	28 VCT @ 0.20A
241-5-10	DP-241-5-10	10.0 VCT @ 1.2A	241-5-28	DP-241-5-28	28 VCT @ 0.42A
241-6-10	DP-241-6-10	10.0 VCT @ 3.0A	241-6-28	DP-241-6-28	28 VCT @ 1.1A
241-7-10	DP-241-7-10	10.0 VCT @ 5.0A	241-7-28	DP-241-7-28	28 VCT @ 2.0A
241-8-10	DP-241-8-10	10.0 VCT @ 10A	241-8-28	DP-241-8-28	28 VCT @ 3.6A
241-3-12	Not Available	12.6 VCT @ 0.20A	241-3-36	Not Available	36 VCT @ 0.065A
241-4-12	DP-241-4-12	12.6 VCT @ 0.50A	241-4-36	DP-241-4-36	36 VCT @ 0.17A
241-5-12	DP-241-5-12	12.6 VCT @ 1.0A	241-5-36	DP-241-5-36	36 VCT @ 0.35A
241-6-12	DP-241-6-12	12.6 VCT @ 2.5A	241-6-36	DP-241-6-36	36 VCT @ 0.85A
241-7-12	DP-241-7-12	12.6 VCT @ 4.0A	241-7-36	DP-241-7-36	36 VCT @ 1.5A
241-8-12	DP-241-8-12	12.6 VCT @ 8.0A	241-8-36	DP-241-8-36	36 VCT @ 2.8A
241-3-16	Not Available	16.0 VCT @ 0.15A	241-3-48	Not Available	48 VCT @ 0.05A
241-4-16	DP-241-4-16	16.0 VCT @ 0.40A	241-4-48	DP-241-4-48	48 VCT @ 0.125A
241-5-16	DP-241-5-16	16.0 VCT @ 0.80A	241-5-48	DP-241-5-48	48 VCT @ 0.25A
241-6-16	DP-241-6-16	16.0 VCT @ 2.0A	241-6-48	DP-241-6-48	48 VCT @ 0.63A
241-7-16	DP-241-7-16	16.0 VCT @ 3.5A	241-7-48	DP-241-7-48	48 VCT @ 1.2A
241-8-16	DP-241-8-16	16.0 VCT @ 6.25A	241-8-48	DP-241-8-48	48 VCT @ 2.0A
241-3-20	Not Available	20.0 VCT @ 0.12A	241-3-56	Not Available	56 VCT @ 0.045A
241-4-20	DP-241-4-20	20.0 VCT @ 0.30A	241-4-56	DP-241-4-56	56 VCT @ 0.11A
241-5-20	DP-241-5-20	20.0 VCT @ 0.60A	241-5-56	DP-241-5-56	56 VCT @ 0.22A
241-6-20	DP-241-6-20	20.0 VCT @ 1.5A	241-6-56	DP-241-6-56	56 VCT @ 0.54A
241-7-20	DP-241-7-20	20.0 VCT @ 2.8A	241-7-56	DP-241-7-56	56 VCT @ 1.00A
241-8-20	DP-241-8-20	20.0 VCT @ 5.0A	241-8-56	DP-241-8-56	56 VCT @ 1.8A
241-3-24	Not Available	24.0 VCT @ 0.10A	241-3-120	Not Available	120VCT @ 0.02A
241-4-24	DP-241-4-24	24.0 VCT @ 0.25A	241-4-120	DP-241-4-120	120VCT @ 0.05A
241-5-24	DP-241-5-24	24.0 VCT @ 0.50A	241-5-120	DP-241-5-120	120VCT @ 0.10A
241-6-24	DP-241-6-24	24.0 VCT @ 1.25A	241-6-120	DP-241-6-120	120VCT @ 0.25A
241-7-24	DP-241-7-24	24.0 VCT @ 2.4A	241-7-120	DP-241-7-120	120VCT @ 0.50A
241-8-24	DP-241-8-24	24.0 VCT @ 4.0A	241-8-120	DP-241-8-120	120VCT @ 0.85A

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

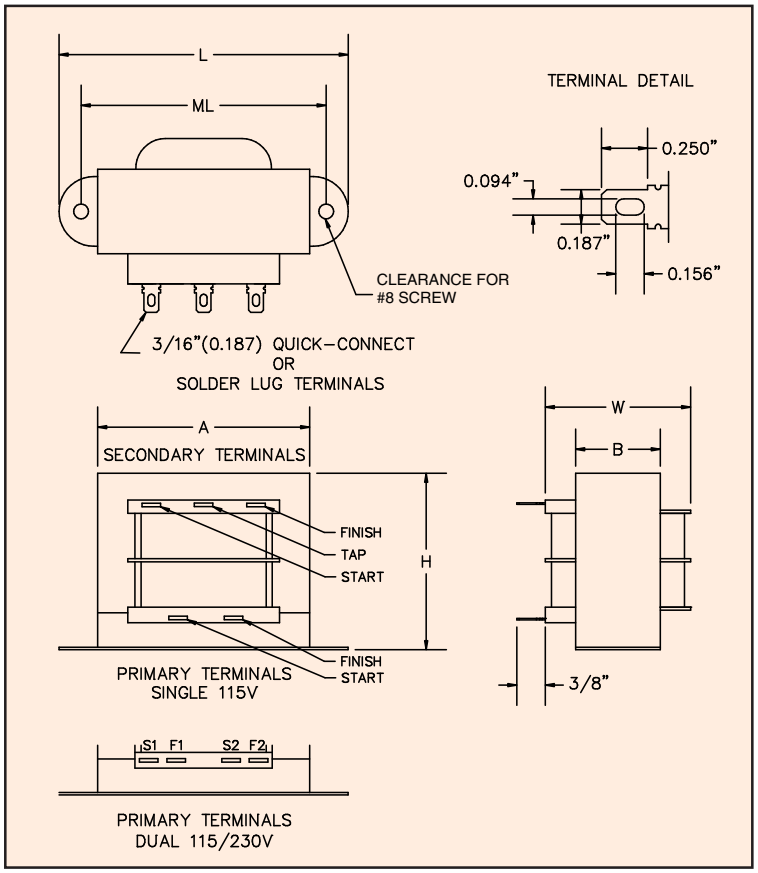
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

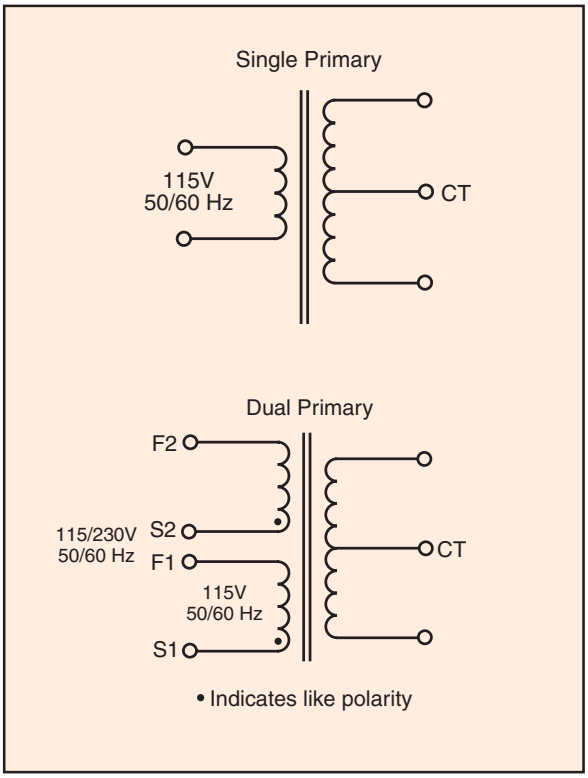
Two-4-One™ Power Transformers
Chassis Mount

BUY DIRECT 24 HOUR PRONTO™ SHIPMENT TEL: (516) 239-5777 FAX: (516) 239-7208

Split Bobbin with High Isolation

RoHS 2002/95/EC





Note: Agency certified 241 Series transformers with standard length and color lead wires are readily available. See website for 241-L product series.

Size	VA	Dimensions						Weight
		L	W	H	A	B	ML typ	
		Inches (mm)						lbs (kg)
3	2.4	2.07 (52.6)	1.17 (29.6)	1.23 (31.2)	1.62 (41.3)	0.59 (15)	1.75 (44.5)	0.25 (0.11)
4	6	2.37 (60.3)	1.31 (33.3)	1.43 (36.2)	1.71 (43.4)	0.72 (18.3)	2.00 (50.8)	0.44 (0.20)
5	12	2.81 (71.4)	1.43 (36.3)	1.69 (42.8)	1.97 (49.9)	0.89 (22.6)	2.37 (60.3)	0.7 (0.32)
6	30	3.25 (82.6)	1.74 (44.3)	1.96 (49.8)	2.35 (59.3)	1.14 (28.9)	2.81 (71.4)	1.1 (0.50)
7	56	3.68 (93.7)	1.94 (49.2)	2.28 (57.8)	2.70 (68.4)	1.14 (28.9)	3.12 (79.4)	1.7 (0.77)
8	100	4.03 (102.4)	2.30 (58.5)	2.67 (67.7)	3.08 (78.2)	1.43 (36.2)	3.6 (91.4)	2.75 (1.25)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Two-4-One™ Power Transformers
Chassis Mount with Lead Wires

Split Bobbin with High Isolation

Signal's 241-L transformers use a split bobbin that provides superior isolation and low capacitive coupling.

General Specifications
- Power - 2.4 VA to 100 VA
- Dielectric Strength - 2500 Vrms Hipot
- Primaries - Single or dual primaries (115V or 115/230 V - 50/60 Hz)
- Secondary - Single center tapped secondary
- Insulation - Class B (130º C) UL 1446 E66312

Compliant With
- UL 506 / UL 5085, CSA 22.2, #66.1

Lead Wires
- Hook up lead wire style UL1015, CSA TEW
- Rated 600V -40° to +105° C
- Passes UL VW-1 (flame test)
- All primary and secondary lead wires are 18AWG UL 1015
- All lead wires are 12" in length

Part Number		Secondary RMS Rating	Part Number		Secondary RMS Rating
Single 115V	Dual 115/230V		Single 115V	Dual 115/230V	
241-3-10L	Not Available	10.0 VCT @ 0.25A	241-3-28L	Not Available	28 VCT @ 0.085A
241-4-10L	DP-241-4-10L	10.0 VCT @ 0.60A	241-4-28L	DP-241-4-28L	28 VCT @ 0.20A
241-5-10L	DP-241-5-10L	10.0 VCT @ 1.2A	241-5-28L	DP-241-5-28L	28 VCT @ 0.42A
241-6-10L	DP-241-6-10L	10.0 VCT @ 3.0A	241-6-28L	DP-241-6-28L	28 VCT @ 1.1A
241-7-10L	DP-241-7-10L	10.0 VCT @ 5.0A	241-7-28L	DP-241-7-28L	28 VCT @ 2.0A
241-8-10L	DP-241-8-10L	10.0 VCT @ 10A	241-8-28L	DP-241-8-28L	28 VCT @ 3.6A
241-3-12L	Not Available	12.6 VCT @ 0.20A	241-3-36L	Not Available	36 VCT @ 0.065A
241-4-12L	DP-241-4-12L	12.6 VCT @ 0.50A	241-4-36L	DP-241-4-36L	36 VCT @ 0.17A
241-5-12L	DP-241-5-12L	12.6 VCT @ 1.0A	241-5-36L	DP-241-5-36L	36 VCT @ 0.35A
241-6-12L	DP-241-6-12L	12.6 VCT @ 2.5A	241-6-36L	DP-241-6-36L	36 VCT @ 0.85A
241-7-12L	DP-241-7-12L	12.6 VCT @ 4.0A	241-7-36L	DP-241-7-36L	36 VCT @ 1.5A
241-8-12L	DP-241-8-12L	12.6 VCT @ 8.0A	241-8-36L	DP-241-8-36L	36 VCT @ 2.8A
241-3-16L	Not Available	16.0 VCT @ 0.15A	241-3-48L	Not Available	48 VCT @ 0.05A
241-4-16L	DP-241-4-16L	16.0 VCT @ 0.40A	241-4-48L	DP-241-4-48L	48 VCT @ 0.125A
241-5-16L	DP-241-5-16L	16.0 VCT @ 0.80A	241-5-48L	DP-241-5-48L	48 VCT @ 0.25A
241-6-16L	DP-241-6-16L	16.0 VCT @ 2.0A	241-6-48L	DP-241-6-48L	48 VCT @ 0.63A
241-7-16L	DP-241-7-16L	16.0 VCT @ 3.5A	241-7-48L	DP-241-7-48L	48 VCT @ 1.2A
241-8-16L	DP-241-8-16L	16.0 VCT @ 6.25A	241-8-48L	DP-241-8-48L	48 VCT @ 2.0A
241-3-20L	Not Available	20.0 VCT @ 0.12A	241-3-56	Not Available	56 VCT @ 0.045A
241-4-20L	DP-241-4-20L	20.0 VCT @ 0.30A	241-4-56L	DP-241-4-56L	56 VCT @ 0.11A
241-5-20L	DP-241-5-20L	20.0 VCT @ 0.60A	241-5-56L	DP-241-5-56L	56 VCT @ 0.22A
241-6-20L	DP-241-6-20L	20.0 VCT @ 1.5A	241-6-56L	DP-241-6-56L	56 VCT @ 0.54A
241-7-20L	DP-241-7-20L	20.0 VCT @ 2.8A	241-7-56L	DP-241-7-56L	56 VCT @ 1.00A
241-8-20L	DP-241-8-20L	20.0 VCT @ 5.0A	241-8-56L	DP-241-8-56L	56 VCT @ 1.8A
241-3-24L	Not Available	24.0 VCT @ 0.10A	241-3-120L	Not Available	120VCT @ 0.02A
241-4-24L	DP-241-4-24L	24.0 VCT @ 0.25A	241-4-120L	DP-241-4-120L	120VCT @ 0.05A
241-5-24L	DP-241-5-24L	24.0 VCT @ 0.50A	241-5-120L	DP-241-5-120L	120VCT @ 0.10A
241-6-24L	DP-241-6-24L	24.0 VCT @ 1.25A	241-6-120L	DP-241-6-120L	120VCT @ 0.25A
241-7-24L	DP-241-7-24L	24.0 VCT @ 2.4A	241-7-120L	DP-241-7-120L	120VCT @ 0.50A
241-8-24L	DP-241-8-24L	24.0 VCT @ 4.0A	241-8-120L	DP-241-8-120L	120VCT @ 0.85A

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

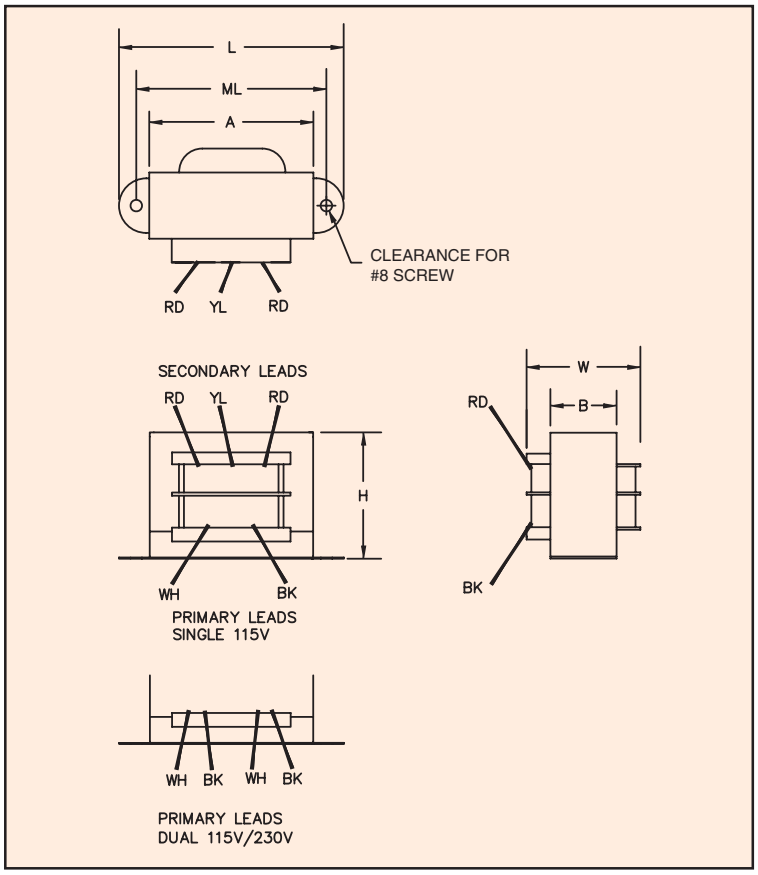
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

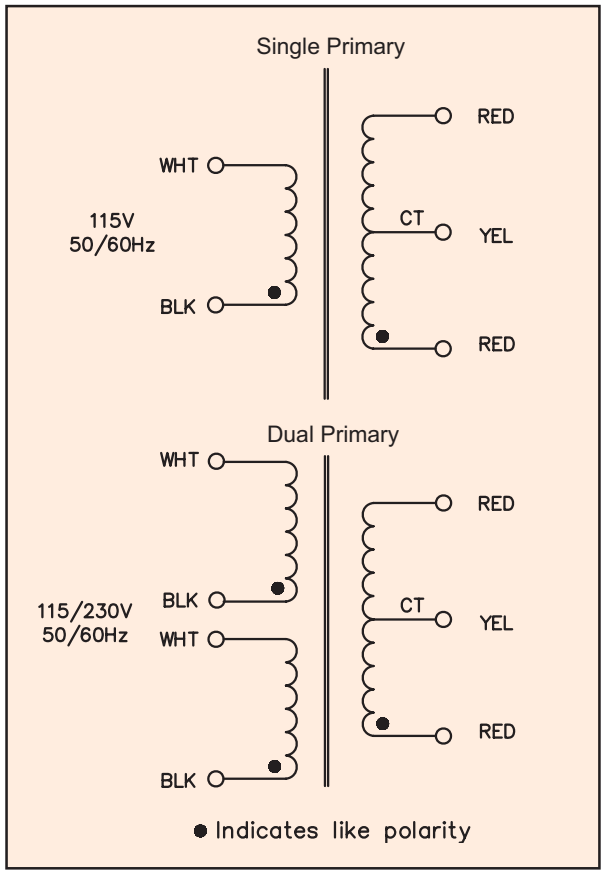
Two-4-One™ Power Transformers
Chassis Mount with Lead Wires

BUY DIRECT 24 HOUR PRONTO™ SHIPMENT TEL: (516) 239-5777 FAX: (516) 239-7208

Split Bobbin with High Isolation

RoHS 2002/95/EC





Size	VA	Dimensions						Weight
		L	W	H	A	B	ML typ	
		Inches (mm)						lbs (kg)
3	2.4	2.07 (52.6)	1.17 (29.6)	1.23 (31.2)	1.62 (41.3)	0.59 (15)	1.75 (44.5)	0.25 (0.11)
4	6	2.37 (60.3)	1.31 (33.3)	1.43 (36.2)	1.71 (43.4)	0.72 (18.3)	2.00 (50.8)	0.44 (0.20)
5	12	2.81 (71.4)	1.43 (36.3)	1.69 (42.8)	1.97 (49.9)	0.89 (22.6)	2.37 (60.3)	0.7 (0.32)
6	30	3.25 (82.6)	1.74 (44.3)	1.96 (49.8)	2.35 (59.3)	1.14 (28.9)	2.81 (71.4)	1.1 (0.50)
7	56	3.68 (93.7)	1.94 (49.2)	2.28 (57.8)	2.70 (68.4)	1.14 (28.9)	3.12 (79.4)	1.7 (0.77)
8	100	4.03 (102.4)	2.30 (58.5)	2.67 (67.7)	3.08 (78.2)	1.43 (36.2)	3.6 (91.4)	2.75 (1.25)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Two-4-One™ Triple Output Transformers Chassis Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies

Signal's MT and DMT transformers have all of the performance features of our 241 series.

General Specifications

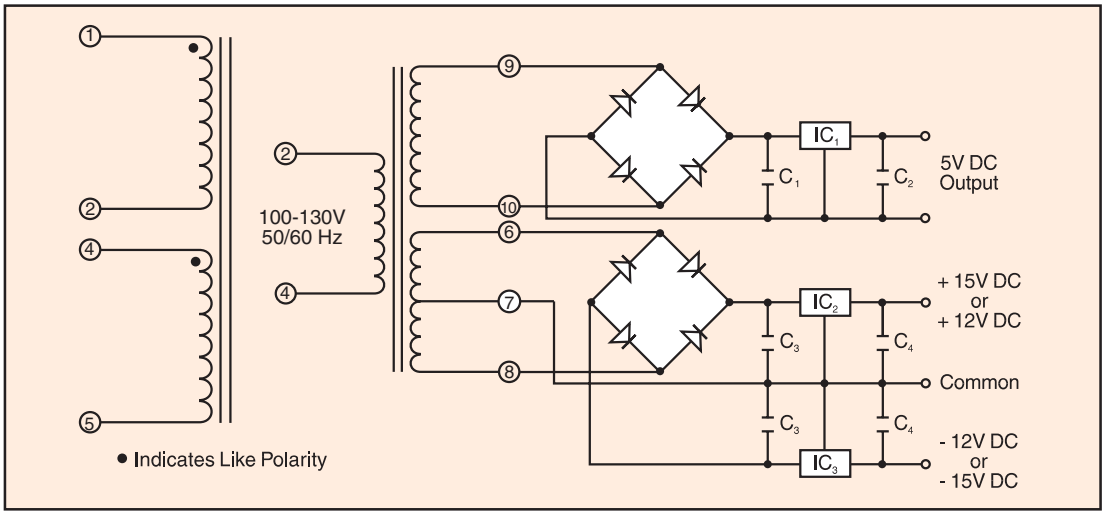
- Power - 30 VA, 56 VA and 100 VA
- Dielectric Strength - 2500 Vrms Hipot
- Primaries - Single or dual primaries 115V or 115/230V nominal - 50/60 Hz
  Input range 100 V to 130 V or 200V to 260 V - 50/60 Hz
- Secondaries - Dual complementary outputs (5 VDC with ±12 VDC or 5 VDC with ±15 VDC
- Terminals - Solder lug / quick connect type terminals
- Insulation - Class B (130° C) UL E66312
- RoHS compliant

Agency Certifications

- UL 1446 E66312
- UL recognized to UL 506 / UL5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070

Part Number Primary 50/60 Hz		DC Output		Size	Suggested Components (C_2 and C_4 See Note 1)						
115V	115/230V	Regulator I	Regulator II		C_1	C_3	$IC1_3$	$IC2_3$	$IC3_3$	$D1_4$	$D2_4$
MT-6-12	DMT-6-12	5V @ 1.75A	±12V @ 210mA	6	10 KMFD @ 20 VDC	1.5 KMFD @ 50 VDC	LM-323K-5	LM-340K-12	LM-320K-12	3N253	3N247
MT-6-15	DMT-6-15	5V @ 1.75A	±15V @ 175mA	6			LM-323K-5	LM-340K-15	LM-320K-15	3N253	3N247
MT-7-12	DMT-7-12	5V @ 2.8A	±12V @ 350mA	7	15 KMFD @ 20 VDC	2 KMFD @ 50 VDC	LM-323K-5	LM-340K-12	LM-320K-12	MDA-400	3N247
MT-7-15	DMT-7-15	5V @ 2.8A	±15V @ 280mA	7			LM-323K-5	LM-340K-15	LM-320K-15	MDA-400	3N247
MT-8-12	DMT-8-12	5V @ 4A	±12V @ 600mA	8	26 KMFD @ 20 VDC	3.1 KMFD @ 50 VDC	LM-338[2]	LM-340K-12	LM-320K-12	MDA-800	3N247
MT-8-15	DMT-8-15	5V @ 4A	±15V @ 500mA	8			LM-338[2]	LM-340K-15	LM-320K-15	MDA-800	3N247

Note 1: Output capacitors C_2 and C_4 are required to stabilize regulators. Values can be 1 MFD min. tantalum or 10 MFD min. electrolytic, 20V min.
Note 2: LM-338 is an adjustable regulator and Mfr's specifications (National Semiconductor) should be consulted for values of external components.
Note 3: All IC's are National Semiconductor types.
Note 4: All diodes are Motorola types.



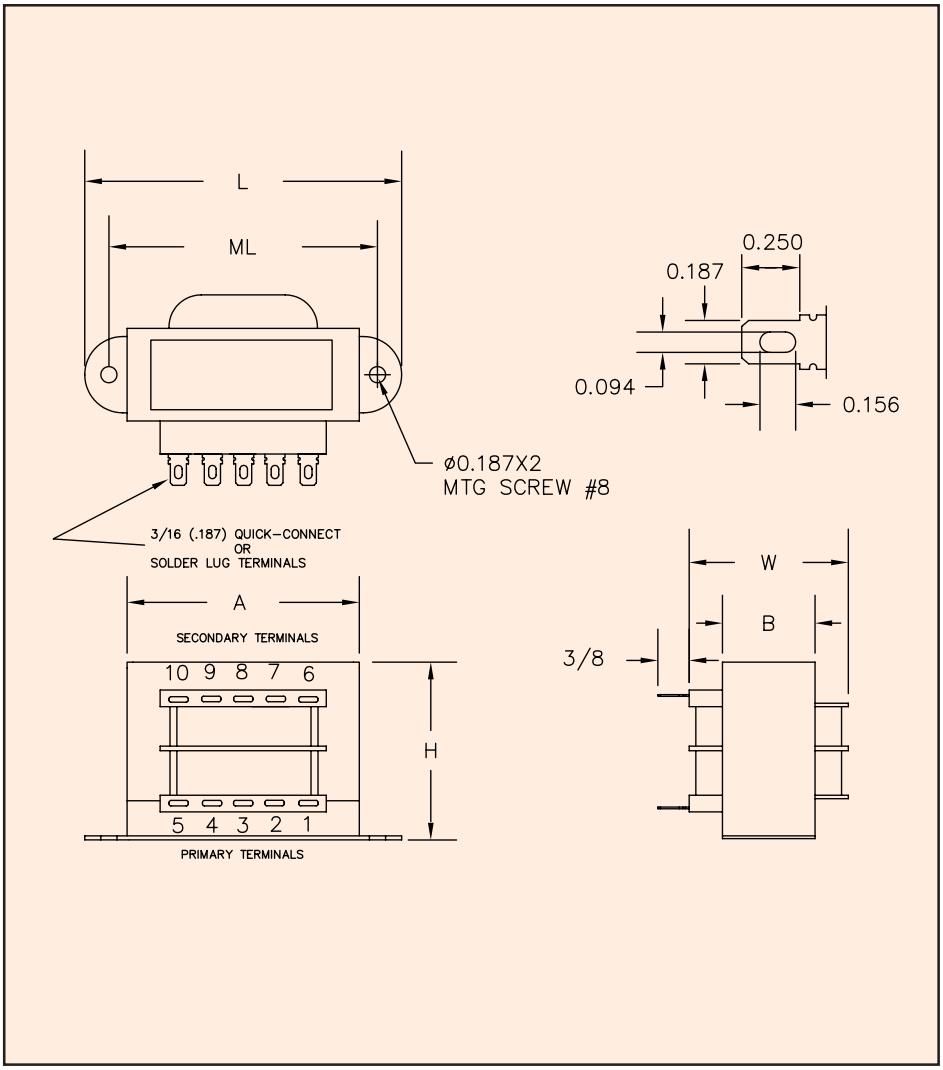
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Two-4-One™ Triple Output Transformers
Chassis Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies



VA	Dimensions						Weight
	L	W	H	A	B	ML	
Size	Inches (mm)						lbs (kg)
6	3.25 (82.6)	1.74 (44.3)	1.96 (49.8)	2.35 (59.3)	1.14 (28.9)	2.81 (71.4)	1.1 (0.50)
7	3.68 (93.7)	1.94 (49.2)	2.28 (57.8)	2.70 (68.4)	1.14 (28.9)	3.12 (79.4)	1.7 (0.77)
8	4.03 (102.4)	2.30 (58.5)	2.67 (67.7)	3.08 (78.2)	1.43 (36.2)	3.6 (91.4)	2.75 (1.25)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

One-4-All™ International Transformers
Printed Circuit Mount

International Standards at Lower Cost with Better Performance

Signal's 14A transformers are used in low power applications and provide the high isolation, creepage and clearance necessary to comply with international safety standards.

General Specifications

- Power - 2.5 VA to 56 VA
- Dielectric Strength - 4000 Vrms Hipot
- Dual Primaries - 115/230 V - 50/60 Hz
- Dual Secondaries - Series or parallel
- Insulation System - Class F, 155° C, UL 1446 (E66312)
- Flammability Rating - Bobbin and shroud material meet UL 94-V0

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 No. 66.1, File # 221070
- VDE certified to VDE 0805 / EN 60950, File # 1446

Part Number	VA Size	Secondary RMS Rating	
		Series	Parallel
14A-2.5R-10	2.5	10.0 VCT @ 0.25A	5.0V @ 0.50A
14A-5.0R-10	5.0	10.0 VCT @ 0.50A	5.0V @ 1.00A
14A-10R-10	10.0	10.0 VCT @ 1.00A	5.0V @ 2.00A
14A-2.5R-12	2.5	12.6 VCT @ 0.20A	6.3V @ 0.40A
14A-5.0R-12	5.0	12.6 VCT @ 0.40A	6.3V @ 0.80A
14A-10R-12	10.0	12.6VCT @ 0.80A	6.3V @ 1.60A
14A-2.5R-16	2.5	16.0 VCT @ 0.15A	8.0V @ 0.30A
14A-5.0R-16	5.0	16.0 VCT @ 0.31A	8.0V @ 0.62A
14A-10R-16	10.0	16.0 VCT @ 0.62A	8.0V @ 1.25A
14A-2.5R-20	2.5	20.0 VCT @ 0.12A	10V @ 0.24A
14A-5.0R-20	5.0	20.0 VCT @ 0.25A	10V @ 0.50A
14A-10R-20	10.0	20.0 VCT @ 0.50A	10V @ 1.00A
14A-2.5R-24	2.5	24.0 VCT @ 0.10A	12V @ 0.20A
14A-5.0R-24	5.0	24.0 VCT @ 0.21A	12V @ 0.42A
14A-10R-24	10.0	24.0 VCT @ 0.42A	12V @ 0.84A
14A-2.5R-28	2.5	28.0 VCT @ 0.09A	14V @ 0.18A
14A-5.0R-28	5.0	28.0 VCT @ 0.18A	14V @ 0.36A
14A-10R-28	10.0	28.0 VCT @ 0.36A	14V @ 0.72A
14A-2.5R-36	2.5	36.0 VCT @ 0.07A	18V @ 0.14A
14A-5.0R-36	5.0	36.0 VCT @ 0.14A	18V @ 0.28A
14A-10R-36	10.0	36.0 VCT @ 0.28A	18V @ 0.56A

Part Number	VA Size	Secondary RMS Rating	
		Series	Parallel
14A-20-10	20	10.0 VCT @ 2.0A	5.0V @ 4.0A
14A-30-10	30	10.0 VCT @ 3.0A	5.0V @ 6.0A
14A-56-10	56	10.0 VCT @ 5.6A	5.0V @ 11.2A
14A-20-12	20	12.6 VCT @ 1.6A	6.3V @ 3.2A
14A-30-12	30	12.6 VCT @ 2.4A	6.3V @ 4.8A
14A-56-12	56	12.6 VCT @ 4.4A	6.3V @ 8.8A
14A-20-16	20	16.0 VCT @ 1.25A	8.0V @ 2.5A
14A-30-16	30	16.0 VCT @ 1.9A	8.0V @ 3.8A
14A-56-16	56	16.0 VCT @ 3.5A	8.0V @ 7.0A
14A-20-20	20	20.0 VCT @ 1.0A	10V @ 2.0A
14A-30-20	30	20.0 VCT @ 1.5A	10V @ 3.0A
14A-56-20	56	20.0 VCT @ 2.8A	10V @ 5.6A
14A-20-24	20	24.0 VCT @ 0.83A	12V @ 1.66A
14A-30-24	30	24.0 VCT @ 1.25A	12V @ 2.50A
14A-56-24	56	24.0 VCT @ 2.33 A	12V @ 4.66A
14A-20-28	20	28.0 VCT @ 0.72A	14V @ 1.44A
14A-30-28	30	28.0 VCT @ 1.06A	14V @ 2.12A
14A-56-28	56	28.0 VCT @ 2.0A	14V @ 4.0A
14A-20-36	20	36.0 VCT @ 0.56A	18V @ 1.12A
14A-30-36	30	36.0 VCT @ 0.82A	18V @ 1.64A
14A-56-36	56	36.0 VCT @ 1.56A	18V @ 3.12A

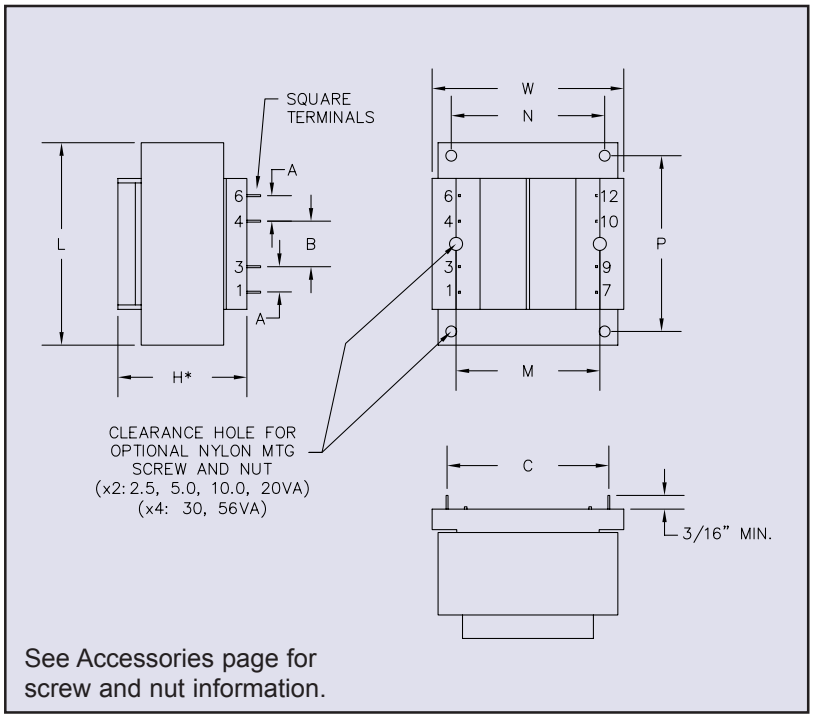
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

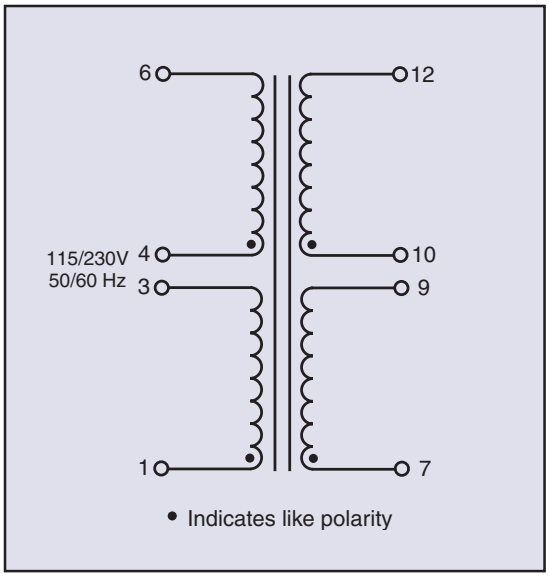
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

One-4-All™ International Transformers
Printed Circuit Mount

International Standards at Lower Cost with Better Performance



See Accessories page for screw and nut information.



VA	Mechanical Dimensions						Sq. Pin Dimensions	Mounting Dimensions			Mounting Screw		Weight
	L	W	H*	A	B	C		M	N	P			
Size	Inches (mm)										Size	Qty	lbs (kg)
2.5	1.62 (41.3)	1.43 (36.5)	1.12 (28.6)	0.20 (5.08)	0.25 (6.35)	1.00 (25.4)	0.02 (0.635)	1.06 (26.9)	-	-	#4	2	0.25 (0.113)
5	1.62 (41.3)	1.43 (36.5)	1.37 (34.9)	0.20 (5.08)	0.40 (10.16)	1.00 (25.4)	0.02 (0.635)	1.06 (26.9)	-	-	#4	2	0.37 (0.168)
10	1.87 (47.6)	1.56 (39.7)	1.37 (34.9)	0.20 (5.08)	0.40 (10.16)	1.14 (29.0)	0.03 (0.965)	1.25 (31.7)	-	-	#4	2	0.53 (0.240)
20	2.25 (57.2)	1.87 (47.6)	1.62 (41.3)	0.40 (10.2)	0.40 (10.2)	1.46 (37.1)	0.03 (0.97)	1.50 (38.1)	-	-	#4	2	0.90 (0.41)
30	2.62 (66.7)	2.18 (55.5)	1.56 (39.7)	0.55 (13.9)	0.27 (7.0)	1.68 (42.7)	0.04 (1.14)	-	1.75 (44.4)	2.18 (55.5)	#6	4	1.15 (0.52)
56	3.00 (76.2)	2.50 (63.5)	1.81 (46.0)	0.60 (15.2)	0.30 (7.6)	1.90 (48.3)	0.04 (1.14)	-	2.00 (50.8)	2.50 (6.35)	#6	4	1.70 (0.77)

*Note: Dimension H represents the total distance from the seating plane to the uppermost surface, stand offs and/or risers inclusive.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

One-4-All™ International Triple Output Transformers • Printed Circuit Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supllies Requiring International Safety Certification

Signal's 14A triple output transformers have PC board mounting capability plus all of the performance features of our split bobbin 14A series.

General Specifications

- Power - 20 VA to 56 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual 115/230 V, 50/60 Hz
- Secondaries - Dual complementary outputs
- Insulation System - Class F, 155° C, UL 1446 (E66312)
- Flammability Rating - Bobbin and shroud material meet UL 94-V0

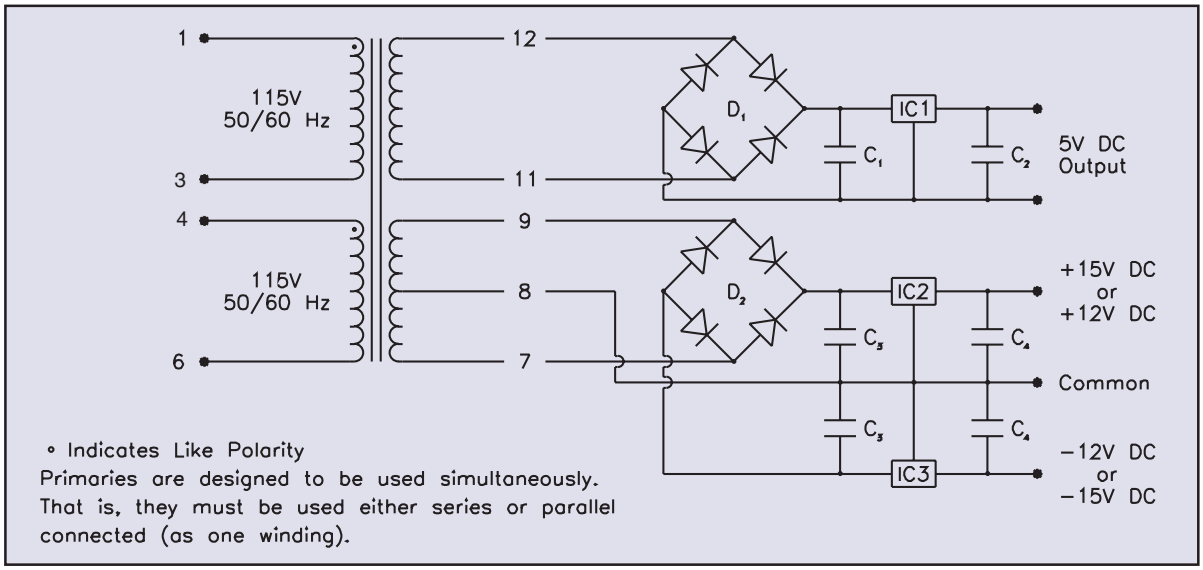
Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 No. 66.1, File # 221070
- VDE certified to VDE 0805 / EN 60950, File # 1446

RoHS 2002/95/EC

Part Number	VA	DC Output		Suggested Components (C_2 and C_4 See Note 1)					
	Size	Regulator I	Regulator II	C_1	IC1[3]	IC2[3]	IC3[3]	D1[4]	D2[4]
14A-20-512	20	5V @ 750mA	±12V @ 200mA	2.3 KMFD @ 50 VDC	LM-323K-5	LM-340K-12	LM-320K-12	PE20	PF20
14A-20-515	20	5V @ 750mA	±15V @ 175mA		LM-323K-5	LM-340K-15	LM-320K-15	PE20	PF20
14A-30-512	30	5V @ 1.25A	±12V @ 250mA	4.1 KMFD @ 15VDC	LM-323K-5	LM-340K-12	LM-320K-12	PE20	PF20
14A-30-515	30	5V @ 1.25A	±15V @ 200mA		LM-323K-5	LM-340K-15	LM-320K-15	PE20	PF20
14A-56-512	56	5V @ 3A	±12V @ 300mA	10.0 KMFD @ 15 VDC	LM-338[2]	LM-340K-12	LM-320K-12	PP20	PF20
14A-56-515	56	5V @ 3A	±15V @ 250mA		LM-338[2]	LM-340K-15	LM-320K-15	PP20	PF20

Note 1: Output capacitors C_2 and C_4 are required to stabilize regulators. Values can be 1 MFD min. tantalum or 10 MFD min. electrolytic, 20V min.
Note 2: LM-338 is an adjustable regulator and MFR's specifications (National Semiconductor) should be consulted for values of external components.
Note 3: All ICs are National Semiconductor types.
Note 4: All bridges are EDI types.



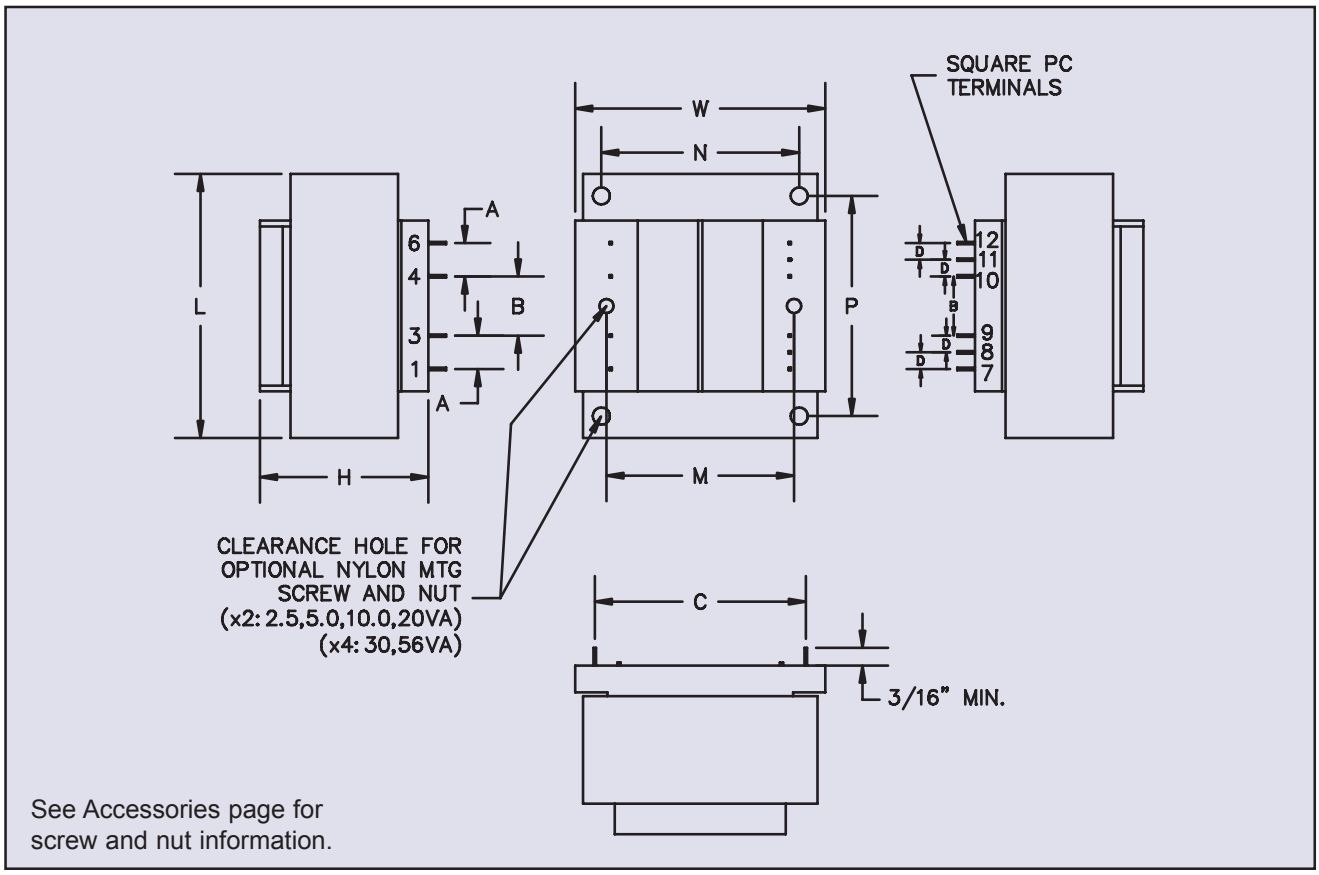
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

One-4-All™ International Triple Output Transformers • Printed Circuit Mount

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supllies Requiring International Safety Certification



See Accessories page for screw and nut information.

VA	Dimensions							Square Pin Dimensions	Mounting Dimensions			Mouinting Screw		Weight
	L	W	H*	A	B	C	D		M	N	P			
Size	Inches (mm)											Size	Qty	lbs (kg)
20	2.25 (57.2)	1.87 (47.6)	1.62 (41.3)	0.40 (10.2)	0.40 (10.2)	1.46 (37.1)	0.20 (5.1)	0.03 (0.97)	1.50 (38.1)	–	–	#4	2	0.90 (0.41)
30	2.62 (66.7)	2.18 (55.5)	1.56 (39.7)	0.55 (13.9)	0.27 (7.0)	1.68 (42.7)	0.27 (7.0)	0.04 (1.14)	–	1.75 (44.5)	2.18 (55.4)	#6	4	1.15 (0.52)
56	3.00 (76.2)	2.50 (63.5)	1.81 (46.0)	0.60 (15.2)	0.30 (7.6)	1.90 (48.3)	0.30 (7.6)	0.04 (1.14)	–	2.00 (50.8)	2.50 (63.5)	#6	4	1.70 (0.77)

*Note: Dimension H represents the total distance from the seating plane to the uppermost surface, stand offs and/or risers inclusive.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Class 2 Transformers designed for Printed Circuit Mounting

Inherently or Non-Inherently Limited

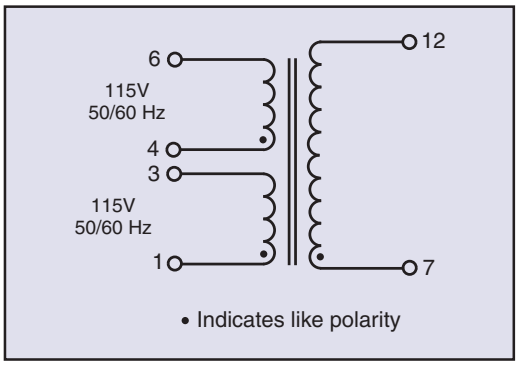
Signal's CL2 transformers are available in printed circuit and chassis mount versions. They are supplied as inherently or non-inherently limited units that are UL 1585 / UL 5085 recognized.

General Specifications

- Power - 2.5 VA to 50 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual primaries, 115/230 V, 50/60 Hz,
- Secondaries - Single secondary
- Class 2 Rating - inherently or non-inherently limited (secondary fuse requirements below)
- Electrostatic Shield - Not necessary, split or dual bobbin construction
- Insulation System - Class F insulation, 155° C
- Flammability Rating - Bobbin and shroud material meet UL 94V0

Agency Certifications

- UL recognized to UL 1585 / UL 5085-3 Class 2, File # E116583
- CSA certified to C22.2 #66.1



Primaries are designed to be used simultaneously. That is, they must be used either series or parallel connected (as one winding).

Part Number	Secondary RMS Rating	Secondary Fuse Required
CL2-2.5R-12	12V @ 0.20A	N/A*
CL2-2.5R-24	24V @ 0.10A	N/A*
CL2-5.0R-12	12V @ 0.42A	N/A*
CL2-5.0R-24	24V @ 0.20A	N/A*
CL2-10R-12	12V @ 0.83A	N/A*
CL2-10R-24	24V @ 0.42A	N/A*
CL2-20-12	12V @ 1.66A	N/A*
CL2-20-24	24V @ 0.833A	N/A*
CL2-30-12	12V @ 2.50A	3.0A**
CL2-30-24	24V @ 1.25A	1.75A**
CL2-50-12	12V @ 4.20A	5.0A**
CL2-50-24	24V @ 2.10A	2.5A**

* Inherently limited
** Non-inherently limited
Maximum secondary fuse value specified
All primaries are 115/230 V, 50/60 Hz

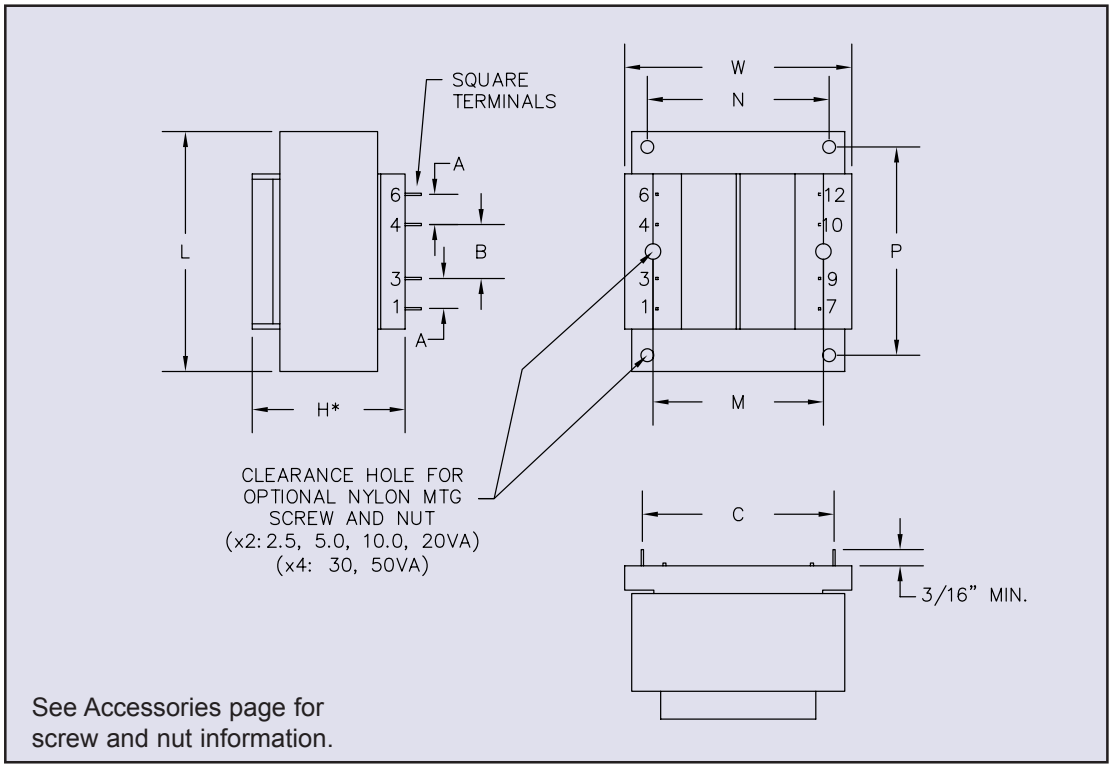
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Class 2 Transformers designed for Printed Circuit Mounting

Inherently or Non-Inherently Limited



VA	Dimensions						Sq. Pin Dimension	Mounting Dimensions			Mounting Screw		Weight
	L	W	H*	A	B	C		Inches (mm)					
Size	Inches (mm)							M	N	P	Size	Qty	lbs (kg)
2.5	1.62 (41.3)	1.43 (36.5)	1.12 (28.6)	.20 (5.1)	.25 (6.4)	1.00 (25.4)	0.02 (0.64)	1.06 (26.9)	–	–	#4	2	0.25 (0.11)
5.0	1.62 (41.3)	1.43 (36.5)	1.37 (34.9)	.20 (5.1)	.40 (10.2)	1.00 (25.4)	0.02 (0.64)	1.06 (26.9)	–	–	#4	2	0.37 (0.17)
10.0	1.87 (47.6)	1.56 (39.7)	1.37 (34.9)	.20 (5.1)	.40 (10.2)	1.14 (29.0)	0.03 (0.97)	1.25 (31.8)	–	–	#4	2	0.53 (0.24)
20.0	2.25 (57.2)	1.87 (47.6)	1.62 (41.3)	.40 (10.2)	.40 (10.2)	1.46 (37.1)	0.03 (0.97)	1.50 (38.1)	–	–	#4	2	0.90 (0.41)
30.0	2.62 (66.7)	2.18 (55.5)	1.56 (39.7)	.55 (14.0)	.27 (7.0)	1.68 (42.7)	0.04 (1.02)	–	1.75 (44.5)	2.18 (55.5)	#6	4	1.15 (0.52)
50.0	3.00 (76.2)	2.50 (63.5)	1.81 (46.0)	.60 (15.2)	.30 (7.6)	1.90 (48.3)	0.04 (1.02)	–	2.00 (50.8)	2.50 (63.5)	#6	4	1.70 (0.77)

*Note: Dimension H represents the total distance from the seating plane to the uppermost surface, stand offs and/or risers inclusive.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Flathead™ Low Profile Transformers
Printed Circuit Mount

For Low Power and Critical Height Applications

Signal's LP transformers use hum-bucking (semi-toroidal) construction that minimizes radiated magnetic fields. These transformers are ideal for critical low-height PC board applications.

General Specifications

- Power - 2 VA to 48 VA
- Dielectric Strength - 1500 Vrms Hipot
- Primaries - Dual primaries, 115/230 V - 50/60Hz
- Secondaries - Series or parallel
- Height - 0.65" to 1.375" (16.5 mm to 34.9 mm)
- Insulation System - Class B, 130° C, UL 1446, E66312

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA - NRTL/C22.2 #66.1, File # 221070

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
LP-10-250	2	10VCT @ 250mA	5V @ 500mA
LP-10-600	6	10VCT @ 600mA	5V @ 1.2A
LP-10-1200	12	10VCT @ 1200mA	5V @ 2.4A
LP-10-2400	24	10VCT @ 2.40A	5V @ 4.80A
LP-10-4800	48	10VCT @ 4.80A	5V @ 9.60A
LP-12-200	2	12.6VCT @ 200mA	6.3V @ 400mA
LP-12-450	6	12.6VCT @ 450mA	6.3V @ 900mA
LP-12-900	12	12.6VCT @ 900mA	6.3V @ 1.8A
LP-12-1900	24	12.6VCT @ 1.90A	6.3V @ 3.80A
LP-12-3800	48	12.6VCT @ 3.80A	6.3V @ 7.60A
LP-16-150	2	16VCT @ 150mA	8V @ 300mA
LP-16-350	6	16VCT @ 350mA	8V @ 700mA
LP-16-700	12	16VCT @ 700mA	8V @ 1.4A
LP-16-1500	24	16VCT @ 1.50A	8V @ 3.00A
LP-16-3000	48	16VCT @ 3.00A	8V @ 6.00A
LP-20-125	2	20VCT @ 125mA	10V @ 250mA
LP-20-300	6	20VCT @ 300mA	10V @ 600mA
LP-20-600	12	20VCT @ 600mA	10V @ 1.2A
LP-20-1200	24	20VCT @ 1.20A	10V @ 2.40A
LP-20-2400	48	20VCT @ 2.40A	10V @ 4.80A
LP-24-100	2	24VCT @ 100mA	12V @ 200mA
LP-24-250	6	24VCT @ 250mA	12V @ 500mA
LP-24-500	12	24VCT @ 500mA	12V @ 1.00A
LP-24-1000	24	24VCT @ 1.00A	12V @ 2.00A
LP-24-2000	48	24VCT @ 2.00A	12V @ 4.00A

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
LP-30-85	2	30VCT @ 85mA	15V @ 170mA
LP-30-200	6	30VCT @ 200mA	15V @ 400mA
LP-30-400	12	30VCT @ 400mA	15V @ 800mA
LP-30-800	24	30VCT @ 800mA	15V @ 1.60A
LP-30-1600	48	30VCT @ 1.60A	15V @ 3.20A
LP-34-75	2	34VCT @ 75mA	17V @ 150mA
LP-34-170	6	34VCT @ 170mA	17V @ 340mA
LP-34-340	12	34VCT @ 340mA	17V @ 680mA
LP-34-700	24	34VCT @ 700mA	17V @ 1.40A
LP-34-1400	48	34VCT @ 1.40A	17V @ 2.80A
LP-40-60	2	40VCT @ 60mA	20V @ 120mA
LP-40-150	6	40VCT @ 150mA	20V @ 300mA
LP-40-300	12	40VCT @ 300mA	20V @ 600mA
LP-40-600	24	40VCT @ 600mA	20V @ 1.20A
LP-40-1200	48	40VCT @ 1.20A	20V @ 2.40A
LP-56-45	2	56VCT @ 45mA	28V @ 90mA
LP-56-100	6	56VCT @ 100mA	28V @ 200mA
LP-56-200	12	56VCT @ 200mA	28V @ 400mA
LP-56-425	24	56VCT @ 425mA	28V @ 850mA
LP-56-850	48	56VCT @ 850mA	28V @ 1.70A
LP-88-28	2	88VCT @ 28mA	44V @ 56mA
LP-88-65	6	88VCT @ 65mA	44V @ 130mA
LP-88-130	12	88VCT @ 130mA	44V @ 260mA
LP-120-20	2	120VCT @ 20mA	60V @ 40mA
LP-120-50	6	120VCT @ 50mA	60V @ 100mA
LP-120-100	12	120VCT @ 100mA	60V @ 200mA
LP-230-10	2	230VCT @ 10mA	115V @ 20mA
LP-230-25	6	230VCT @ 25mA	115V @ 50mA
LP-230-50	12	230VCT @ 50mA	115V @ 100mA

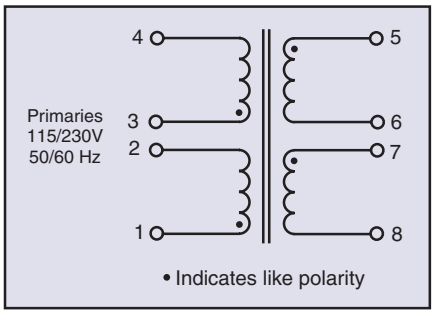
Custom versions available upon request.

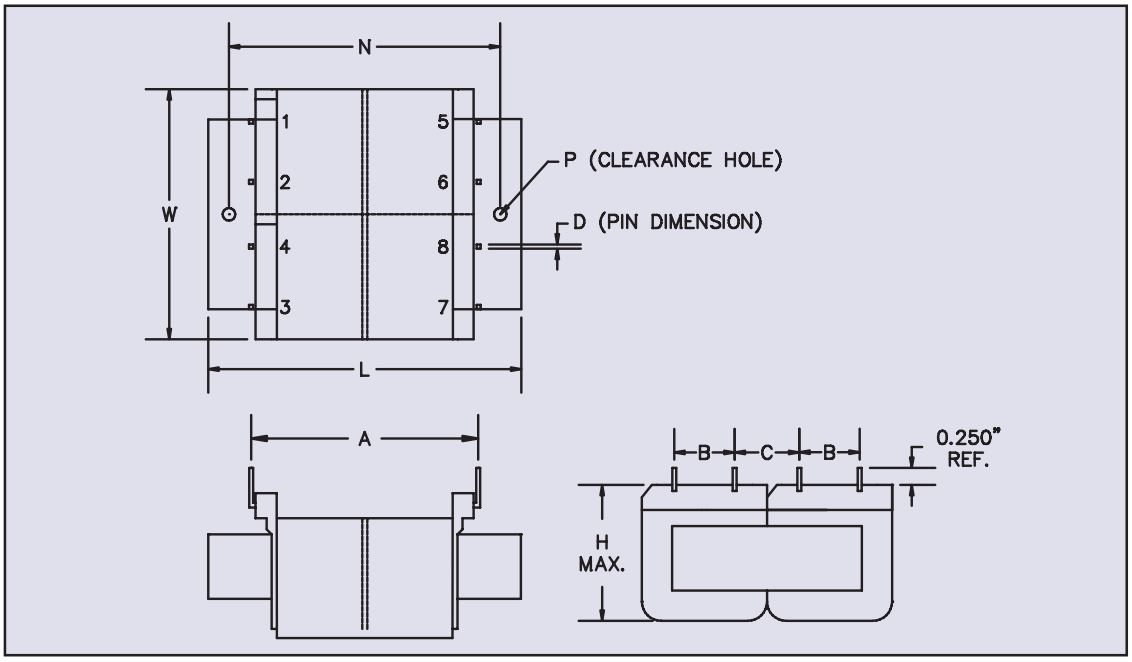
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Flathead™ Low Profile Transformers
Printed Circuit Mount

For Low Power and Critical Height Applications





VA	Dimensions									Weight
	A	B	C	L	W	H	N	D	P	
Size	Inches (mm)									oz (kg)
2	1.60 (40.6)	0.37 (9.5)	0.37 (9.5)	1.87 (47.5)	1.56 (39.6)	0.65 (16.5)	–	.041 x .020 (1.04 x 0.51)	–	5 (0.14)
6	1.60 (40.6)	0.37 (9.5)	0.37 (9.5)	1.87 (47.5)	1.56 (39.6)	0.85 (21.6)	–	.041 x .020 (1.04 x 0.51)	–	7 (0.20)
12	2.00 (50.8)	0.50 (12.7)	0.50 (12.7)	2.50 (63.5)	2.00 (50.8)	1.06 (27.1)	–	.041 x .020 (1.04 x 0.51)	–	11 (0.31)
24	1.90 (48.3)	0.60 (15.2)	0.53 (13.5)	2.87 (72.9)	2.25 (57.2)	1.25 (31.8)	2.41 (61.2)	.041 SQ pin (1.04 SQ mm)	Clearance Hole for #4 Screw	15 (0.43)
48	2.18 (55.4)	0.60 (15.2)	0.66 (16.8)	3.12 (79.2)	2.50 (63.5)	1.37 (34.9)	2.62 (66.5)	.041 SQ pin (1.04 SQ mm)	Clearance Hole for #6 Screw	21 (0.60)

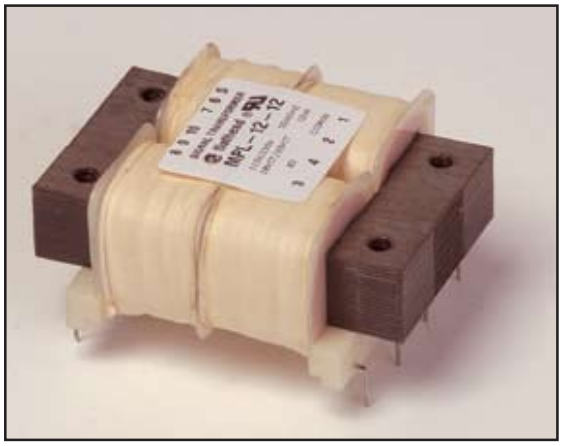
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Low Profile Printed Circuit Mount Triple Output Transformers

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies



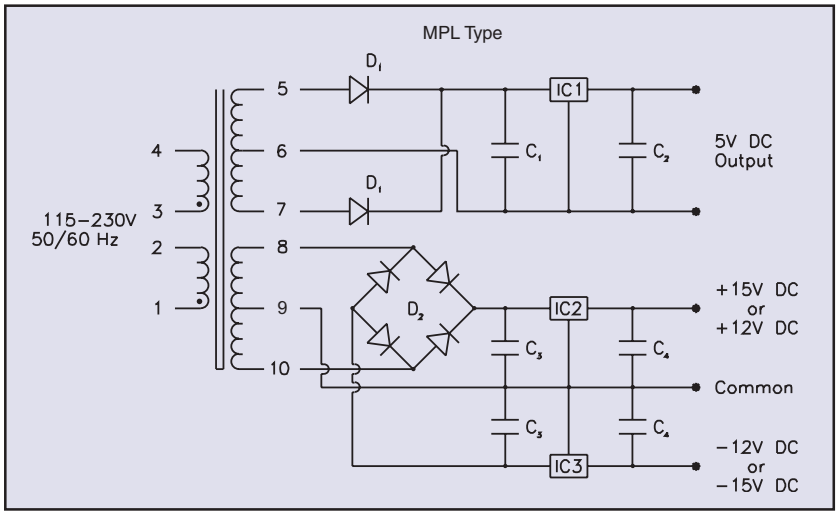
MPL Series

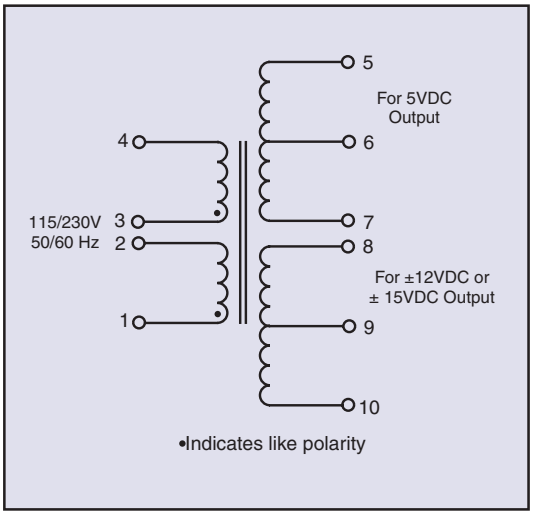
General Specifications

- Power - 6 VA and 12 VA
- Dielectric Strength - 1500 Vrms Hipot
- Primaries - Dual primaries, 115/230 V nominal, 50/60 Hz, input range 100 V to 130 V or 200 V to 260 V
- Secondaries - Dual complementary outputs, 5 VDC with ±12 VDC or 5 VDC with ±15 VDC
- Electrostatic shield - not necessary due to split bobbin construction
- Reduced magnetic radiation
- Height - 0.85" and 1.065" high
- Insulation System - Class B, 130° C, UL 1446 E66312

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070





Part Number	DC Output		VA Size	Suggested Components							
Primary 50/60 Hz	Regulator I	Regulator II		C_1	C_2	C_3	C_4	D_1(2)	D_2(4)	IC_1*	IC_2*
MPL-6-12	5 VDC 135mA	±12 VDC 40mA	6	1000MFD 20V	2.7MFD 20V	150MFD 50V	10MFD 20V	1N4001	1N4002	LM342P-5.0	LM326N
MPL-6-15	5 VDC 135mA	±15 VDC 35mA	6	1000MFD 20V	2.7MFD 20V	150MFD 50V	10MFD 20V	1N4001	1N4002	LM342P-5.0	LM325N
MPL-12-12	5 VDC 270mA	±12 VDC 85mA	12	2100MFD 30V	2.7MFD 20V	250MFD 50V	10MFD 20V	1N4001	1N4002	LM341P-5.0	LM326N
MPL-12-15	5 VDC 270mA	±15 VDC 70mA	12	2100MFD 30V	2.7MFD 20V	250MFD 50V	10MFD 20V	1N4001	1N4002	LM341P-5.0	LM325N

* National Semiconductor

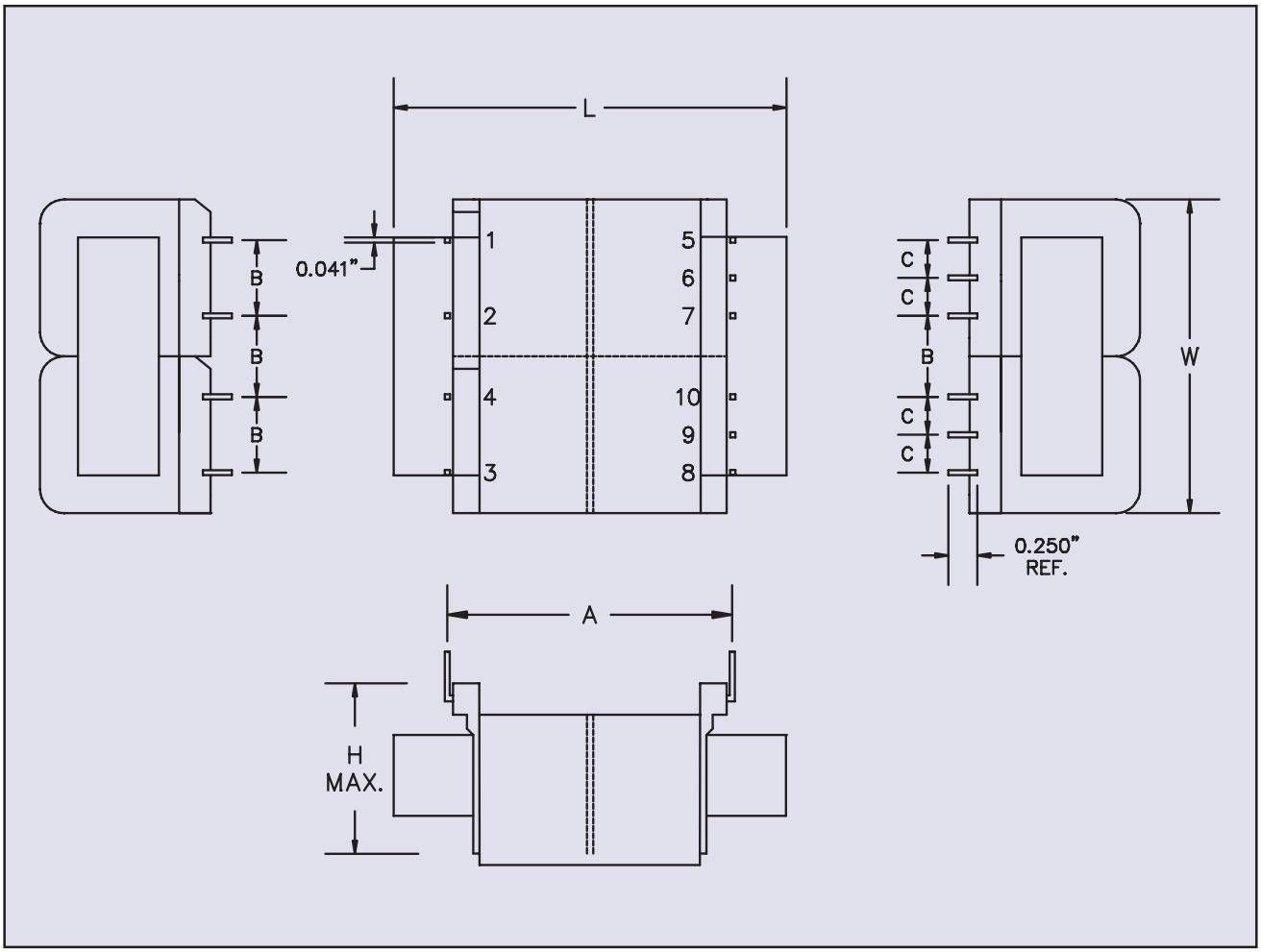
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Low Profile Printed Circuit Mount Triple Output Transformers

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies



VA	Dimensions						Weight
	L	W	H	A	B	C	
Size	Inches (mm)						lbs (kg)
6	1.87 (47.6)	1.56 (39.7)	0.85 (21.6)	1.60 (40.6)	0.37 (9.5)	0.18 (4.7)	0.43 (0.20)
12	2.50 (63.5)	2.00 (50.8)	1.06 (27.1)	2.00 (50.8)	0.50 (12.7)	0.25 (6.4)	0.68 (0.31)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

International Flathead™ Low Profile Transformers • Printed Circuit Mount

For Critical Height and International Safety Requirements

Signal's IF transformers utilize unique insulating techniques including full encapsulation to meet international safety requirements. These transformers are ideal for low power applications where minimum height and reduced magnetic radiation are required.

General Specifications

- Power - 2 VA to 30 VA
- Dielectric Strength - 4000 Vrms Hipot
- Dual Primaries - 115/230 V, 50/60 Hz
- Dual Secondaries - Series or parallel
- Height - 0.69" to 1.39" (17.5 mm to 35.3 mm) height
- Insulation System - Class B, 130º C

Agency Certifications

- UL 1446 (E66312)
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070
- VDE certified to VDE 0805 / EN 60950, File # 8325

RoHS 2002/95/EC

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
IF-2-10	2	10VCT @ 200mA	5V @ 400mA
IF-2-12	2	12VCT @ 170mA	6V @ 340mA
IF-2-16	2	16VCT @ 125mA	8V @ 250mA
IF-2-20	2	20VCT @ 100mA	10V @ 200mA
IF-2-24	2	24VCT @ 85mA	12V @ 170mA
IF-2-30	2	30VCT @ 70mA	15V @ 140mA
IF-2-34	2	34VCT @ 60mA	17V @ 120mA
IF-2-40	2	40VCT @ 50mA	20V @ 100mA
IF-2-56	2	56VCT @ 40mA	28V @ 80mA
IF-2-230	2	230VCT @ 9 mA	115V @ 18mA
IF-4-10	4	10VCT @ 400 mA	5V @ 800mA
IF-4-12	4	12VCT @ 335mA	6V @ 670mA
IF-4-16	4	16VCT @ 250mA	8V @ 500mA
IF-4-20	4	20VCT @ 200mA	10V @ 400mA
IF-4-24	4	24VCT @ 170mA	12V @ 340mA
IF-4-30	4	30VCT @ 135mA	15V @ 270mA
IF-4-34	4	34VCT @ 120mA	17V @ 240mA
IF-4-40	4	40VCT @ 100mA	20V @ 200mA
IF-4-56	4	56VCT @ 70mA	28V @ 140mA
IF-4-230	4	230VCT @ 18mA	115V @ 36mA
IF-6-10	6	10VCT @ 600mA	5V @ 1.20A
IF-6-12	6	12VCT @ 500mA	6V @ 1.00A
IF-6-16	6	16VCT @ 375mA	8V @ 750mA
IF-6-20	6	20VCT @ 300mA	10V @ 600mA
IF-6-24	6	24VCT @ 250mA	12V @ 500mA
IF-6-30	6	30VCT @ 200mA	15V @ 400mA
IF-6-34	6	34VCT @ 180mA	17V @ 360mA
IF-6-40	6	40VCT @ 150mA	20V @ 300mA
IF-6-56	6	56VCT @ 110mA	28V @ 220mA
IF-6-230	6	230VCT @ 25mA	115V @ 50mA
IF-10-10	10	10VCT @ 1.00A	5V @ 2.00A
IF-10-12	10	12VCT @ 835mA	6V @ 1.67A
IF-10-16	10	16VCT @ 625mA	8V @ 1.25A
IF-10-20	10	20VCT @ 500mA	10V @ 1.00A
IF-10-24	10	24VCT @ 420mA	12V @ 840mA
IF-10-30	10	30VCT @ 335mA	15V @ 670mA
IF-10-34	10	34VCT @ 300mA	17V @ 600mA
IF-10-40	10	40VCT @ 250mA	20V @ 500mA
IF-10-56	10	56VCT @ 180mA	28V @ 360mA
IF-10-230	10	230VCT @ 45mA	115V @ 90mA

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
IF-14-10	14	10VCT @ 1.40A	5V @ 2.80A
IF-14-12	14	12VCT @ 1.20A	6V @ 2.40A
IF-14-16	14	16VCT @ 875mA	8V @ 1.75A
IF-14-20	14	20VCT @ 700mA	10V @ 1.40A
IF-14-24	14	24VCT @ 600mA	12V @ 1.20A
IF-14-30	14	30VCT @ 470mA	15V @ 940mA
IF-14-34	14	34VCT @ 415mA	17V @ 830mA
IF-14-40	14	40VCT @ 350mA	20V @ 700mA
IF-14-56	14	56VCT @ 250mA	28V @ 500mA
IF-14-230	14	230VCT @ 60mA	115V @ 120mA
IF-18-10	18	10VCT @ 1.80A	5V @ 3.60A
IF-18-12	18	12VCT @ 1.50A	6V @ 3.00A
IF-18-16	18	16VCT @ 1.15A	8V @ 2.30A
IF-18-20	18	20VCT @ 900mA	10V @ 1.80A
IF-18-24	18	24VCT @ 750mA	12V @ 1.50A
IF-18-30	18	30VCT @ 600mA	15V @ 1.20A
IF-18-34	18	34VCT @ 530mA	17V @ 1.06A
IF-18-40	18	40VCT @ 450mA	20V @ 900mA
IF-18-56	18	56VCT @ 320mA	28V @ 640mA
IF-18-230	18	230VCT @ 80mA	115V @ 160mA
IF-24-10	24	10VCT @ 2.40A	5V @ 4.80A
IF-24-12	24	12VCT @ 2.00A	6V @ 4.00A
IF-24-16	24	16VCT @ 1.50A	8V @ 3.00A
IF-24-20	24	20VCT @ 1.20A	10V @ 2.40A
IF-24-24	24	24VCT @ 1.00A	12V @ 2.00A
IF-24-30	24	30VCT @ 800mA	15V @ 1.60A
IF-24-34	24	34VCT @ 700mA	17V @ 1.40A
IF-24-40	24	40VCT @ 600mA	20V @ 1.20A
IF-24-56	24	56VCT @ 430mA	28V @ 860mA
IF-24-230	24	230VCT @ 105mA	115V @ 210mA
IF-30-10	30	10VCT @ 3.00A	5V @ 6.00A
IF-30-12	30	12VCT @ 2.50A	6V @ 5.00A
IF-30-16	30	16VCT @ 1.90A	8V @ 3.80A
IF-30-20	30	20VCT @ 1.50A	10V @ 3.00A
IF-30-24	30	24VCT @ 1.25A	12V @ 2.50A
IF-30-30	30	30VCT @ 1.00A	15V @ 2.00A
IF-30-34	30	34VCT @ 900mA	17V @ 1.80A
IF-30-40	30	40VCT @ 750mA	20V @ 1.50A
IF-30-56	30	56VCT @ 550mA	28V @ 1.10A
IF-30-230	30	230VCT @ 130mA	115V @ 260mA

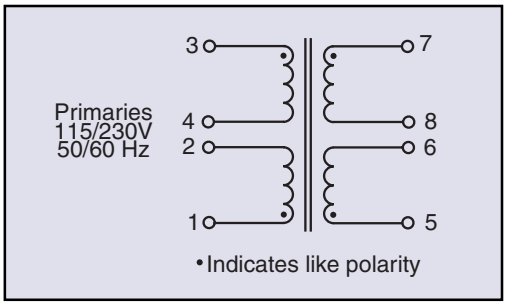
Custom versions available upon request.

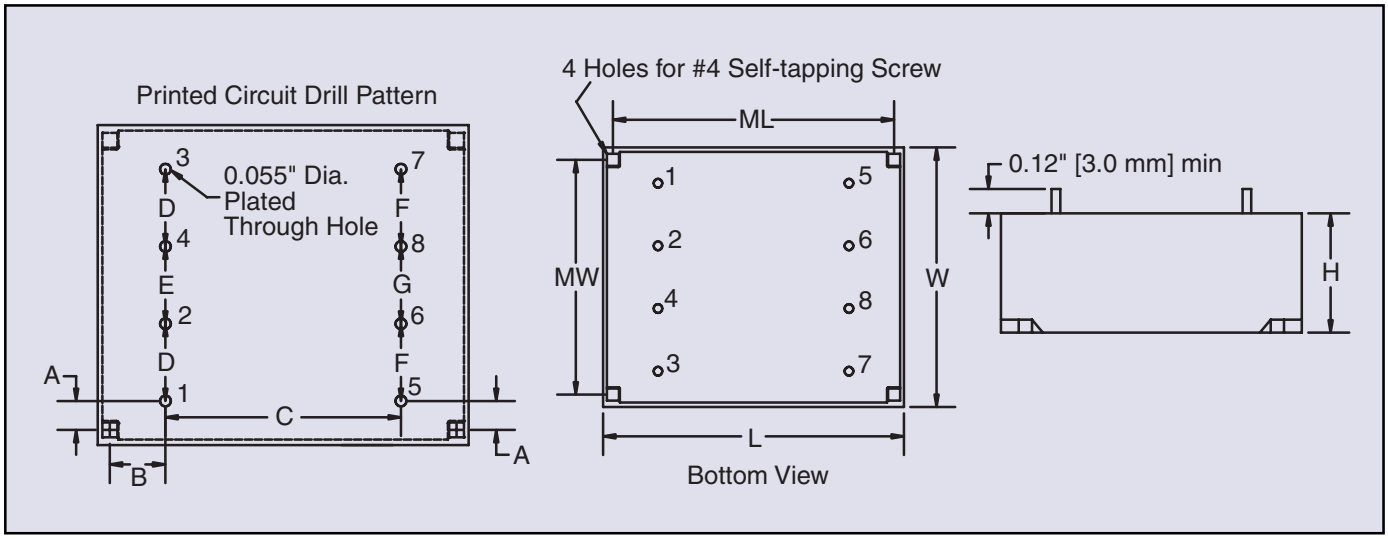
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

International Flathead™ Low Profile Transformers • Printed Circuit Mount

For Critical Height and International Safety Requirements





VA	L	W	H	ML	MW	A	B	C	D	E	F	G	Weight
Size	Inches (mm)												oz (kg)
2	2.09 (53.0)	1.73 (44.0)	0.69 (17.6)	1.87 (47.5)	1.48 (37.5)	0.05 (1.3)	0.25 (6.3)	1.38 (35.0)	0.39 (10.0)	0.39 (10.0)	0.59 (15.0)	0.19 (5.0)	4.6 (0.13)
4	2.09 (53.0)	1.73 (44.0)	0.77 (19.6)	1.87 (47.5)	1.48 (37.5)	0.05 (1.3)	0.25 (6.3)	1.38 (35.0)	0.39 (10.0)	0.39 (10.0)	0.59 (15.0)	0.19 (5.0)	5.4 (0.15)
6	2.09 (53.0)	1.73 (44.0)	0.89 (22.6)	1.87 (47.5)	1.48 (37.5)	0.05 (1.3)	0.25 (6.3)	1.38 (35.0)	0.39 (10.0)	0.39 (10.0)	0.59 (15.0)	0.19 (5.0)	6.9 (0.20)
10	2.66 (67.6)	2.24 (57.0)	0.89 (22.6)	2.46 (62.5)	1.97 (50.0)	0.28 (7.1)	0.34 (8.8)	1.77 (45.0)	0.59 (15.0)	0.43 (10.9)	0.39 (10.0)	0.63 (15.9)	10.3 (0.29)
14	2.66 (67.6)	2.24 (57.0)	0.96 (24.3)	2.46 (62.5)	1.97 (50.0)	0.28 (7.1)	0.34 (8.8)	1.77 (45.0)	0.59 (15.0)	0.43 (10.9)	0.39 (10.0)	0.63 (15.9)	11.9 (0.34)
18	2.66 (67.6)	2.24 (57.0)	1.09 (27.6)	2.46 (62.5)	1.97 (50.0)	0.28 (7.1)	0.34 (8.8)	1.77 (45.0)	0.59 (15.0)	0.43 (10.9)	0.39 (10.0)	0.63 (15.9)	14.1 (0.40)
24	2.68 (68.0)	2.26 (57.5)	1.23 (31.3)	2.46 (62.5)	1.97 (50.0)	0.28 (7.2)	0.34 (8.8)	1.77 (45.0)	0.59 (15.0)	0.43 (10.9)	0.39 (10.0)	0.63 (15.9)	16.5 (0.47)
30	2.68 (68.0)	2.26 (57.5)	1.39 (35.3)	2.46 (62.5)	1.97 (50.0)	0.28 (7.2)	0.34 (8.8)	1.77 (45.0)	0.59 (15.0)	0.43 (10.9)	0.39 (10.0)	0.63 (15.9)	19.7 (0.58)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Low Profile International Transformers
Printed Circuit Mount Encapsulated

Direct Plug-in Replacement for Original FlatHead™ Design Low Profile Transformers

Features and Benefits
- Encapsulated in order to meet harsh environmental conditions
- Rigid pin construction for easier board insertion and higher reliability
- Mounting holes provided for greater resistance to shock and vibration
- Improved electrical characteristics - regulation, temperature rise, efficiency, etc.
- Reduced magnetic radiation

General Specifications
- Power - 2.5 VA to 18 VA
- Dielectric Strength - 4000 Vrms Hipot
- Primaries - Dual primaries, 115/230 V - 50/60Hz
- Secondaries - Series or parallel
- Height - 1.050" to 1.22"
- Insulation System - Class B, 130° C

Agency Certifications
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070
- TUV Rheinland Certified IEC / EN 60950, License # 744985

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
10-250-LPI	2.5	10 VCT @ 250 mA	5V @ 500 mA
12-200-LPI	2.5	12.6VCT@ 200 mA	6.3V@ 400 mA
16-150-LPI	2.5	16 VCT @ 150 mA	8V @ 300 mA
20-125-LPI	2.5	20 VCT @ 125 mA	10V @ 250 mA
24-100-LPI	2.5	24 VCT @ 100 mA	12V @ 200 mA
30-85-LPI	2.5	30 VCT @ 85 mA	15V @ 170 mA
34-75-LPI	2.5	34 VCT @ 75 mA	17V @ 150 mA
40-60-LPI	2.5	40 VCT @ 60 mA	20V @ 120 mA
56-45-LPI	2.5	56 VCT @ 45 mA	28V @ 90 mA
230-10-LPI	2.5	230VCT @ 10 mA	115V@ 20 mA
10-600-LPI	6	10 VCT @ 600 mA	5V @ 1.2 A
12-450-LPI	6	12.6VCT@ 450 mA	6.3V@ 900 mA
16-350-LPI	6	16 VCT @ 350 mA	8V @ 700 mA
20-300-LPI	6	20 VCT @ 300 mA	10V @ 600 mA
24-250-LPI	6	24 VCT @ 250 mA	12V @ 500 mA
30-200-LPI	6	30 VCT @ 200 mA	15V @ 400 mA
34-170-LPI	6	34 VCT @ 170 mA	17V @ 340 mA
40-150-LPI	6	40 VCT @ 150 mA	20V @ 300 mA
56-100-LPI	6	56 VCT @ 100 mA	28V @ 200 mA
230-25-LPI	6	230VCT @ 25 mA	115V@ 50 mA
10-900-LPI	9	10 VCT @ 900 mA	5V @ 1.8 A
12-725-LPI	9	12.6VCT@ 725 mA	6.3V @ 1.45 A
16-560-LPI	9	16 VCT @ 560 mA	8V @ 1.12 A
20-450-LPI	9	20 VCT @ 450 mA	10V @ 900 mA
24-375-LPI	9	24 VCT @ 375 mA	12V @ 750 mA

Part Number	VA	Secondary RMS Rating	
	Size	Series	Parallel
30-300-LPI	9	30 VCT @ 300 mA	15V @ 600 mA
34-265-LPI	9	34 VCT @ 265 mA	17V @ 530 mA
40-225-LPI	9	40 VCT @ 225 mA	20V @ 450 mA
56-160-LPI	9	56 VCT @ 160mA	28V @ 320mA
230-40-LPI	9	230VCT @ 40mA	115V@ 80mA
10-1200-LPI	12	10 VCT @ 1.2 A	5V @ 2.4 A
12-900-LPI	12	12.6VCT @ 900 mA	6.3V @ 1.8 A
16-700-LPI	12	16 VCT @ 700 mA	8V @ 1.4 A
20-600-LPI	12	20 VTC @ 600 mA	10V @ 1.2 A
24-500-LPI	12	24 VCT @ 500 mA	12V @ 1 A
30-400-LPI	12	30 VCT @ 400 mA	15V @ 800 mA
34-340-LPI	12	34 VCT @ 340 mA	17V @ 680 mA
40-300-LPI	12	40 VCT @ 300 mA	20V @ 600 mA
56-200-LPI	12	56 VCT @ 200 mA	28V @ 400 mA
230-50-LPI	12	230VCT @ 50 mA	115V@ 100 mA
10-1800-LPI	18	10 VCT @ 1.8 A	5V @ 3.6 A
12-1500-LPI	18	12.6VCT @ 1.5 A	6.3V @ 3 A
16-1100-LPI	18	16 VCT @ 1.1 A	8V @ 2.2 A
20-900-LPI	18	20 VCT @ 900 mA	10V @ 1.8 A
24-750-LPI	18	24 VCT @ 750 mA	12V @ 1.5 A
30-600-LPI	18	30 VCT @ 600 mA	15V @ 1.2 A
34-500-LPI	18	34 VCT @ 500 mA	17V @ 1 A
40-450-LPI	18	40 VCT @ 450 mA	20V @ 900 mA
56-320-LPI	18	56 VCT @ 320 mA	28V @ 640 mA
230-75-LPI	18	230VCT @ 75 mA	115V@ 150 mA

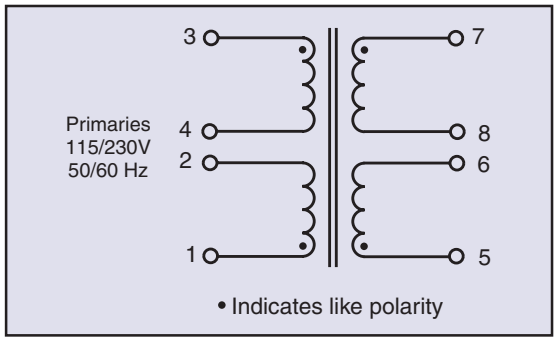
Custom versions available upon request.

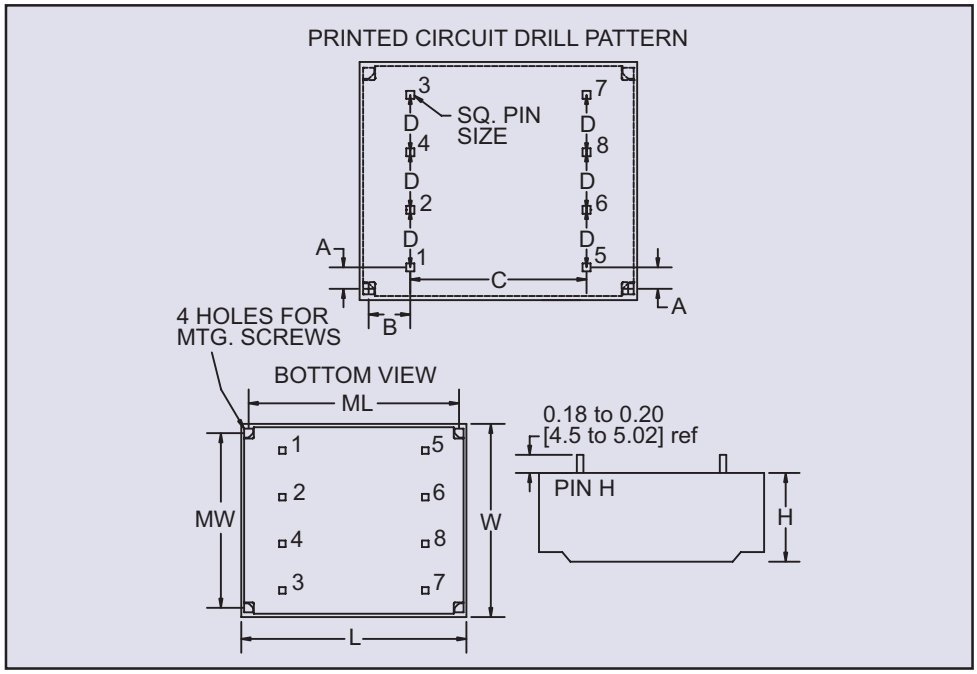
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Low Profile International Transformers
Printed Circuit Mount Encapsulated

Direct Plug-in Replacement for Original FlatHead™Design
Low Profile Transformers





VA	Dimensions									Weight	Self Tap Screw Size	Pin Size
	A	B	C	D	L	W	H	ML	MW			
Size	Inches (mm)									lbs (kg)		Inches (mm)
2.5	0.19 (4.8)	0.29 (7.2)	1.61 (40.9)	0.37 (9.4)	2.37 (60.2)	1.65 (42.1)	0.72 (18.3)	2.19 (55.6)	1.50 (38.1)	0.27 (0.12)	#4	.025 (.635)
6	0.19 (4.8)	0.29 (7.2)	1.61 (40.9)	0.37 (9.4)	2.37 (60.2)	1.65 (42.1)	0.89 (22.7)	2.19 (55.6)	1.50 (38.1)	0.39 (0.17)	#4	.025 (.635)
9	0.19 (4.8)	0.29 (7.2)	1.61 (40.9)	0.37 (9.4)	2.37 (60.2)	1.65 (42.1)	1.08 (27.4)	2.19 (55.6)	1.50 (38.1)	0.51 (0.23)	#4	.025 (.635)
12	0.22 (5.6)	0.20 (5.1)	2.02 (51.3)	0.50 (12.7)	2.63 (66.8)	2.19 (55.6)	1.06 (26.6)	2.38 (60.4)	1.94 (49.2)	0.75 (0.34)	#6	.036 (.914)
18	0.22 (5.6)	0.20 (5.1)	2.02 (51.3)	0.50 (12.7)	2.63 (66.8)	2.19 (55.6)	1.18 (30.0)	2.38 (60.4)	1.94 (49.2)	0.95 (0.43)	#46	.036 (.914)

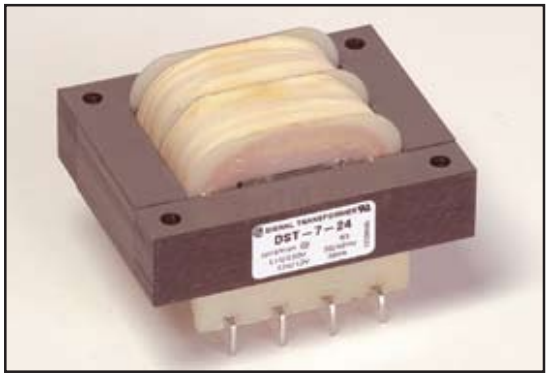
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Split/Tran™ Low Power Transformers

Printed Circuit Mount - Split Bobbin with High Isolation



Signal's ST and DST transformers utilize split bobbin construction that provides superior isolation and low capacitive coupling.

General Specifications

- Power - 1.1 VA to 36 VA
- Dielectric Strength - 2500 Vrms Hipot
- Primaries - Single or dual primaries, 115 V or 115/230 V, 50/60 Hz
- Secondaries - Series or parallel
- Electrostatic Shield - Not necessay, split bobbin construction
- Insulation System - Class B, 130° C
- Mounting Hardware - see chart

Agency Certifications

- UL 1446 (E66312)
- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070

RoHS 2002/95/EC

Part Number		Secondary RMS Rating	
Single 115V 6 Pin	Dual 115/230V 8 Pin	Series	Parallel
ST-2-10	DST-2-10	10VCT @ 0.11A	5V @ 0.22A
ST-3-10	DST-3-10	10VCT @ 0.25A	5V @ 0.5A
ST-4-10	DST-4-10	10VCT @ 0.6A	5V @ 1.2A
ST-5-10	DST-5-10	10VCT @ 1.2A	5V @ 2.4A
ST-6-10	DST-6-10	10VCT @ 2.0A	5V @ 4.0A
ST-7-10	DST-7-10	10VCT @ 3.6A	5V @ 7.2A
ST-2-12	DST-2-12	12.6VCT @ 0.09A	6.3V @ 0.18A
ST-3-12	DST-3-12	12.6VCT @ 0.2A	6.3V @ 0.4A
ST-4-12	DST-4-12	12.6VCT @ 0.5A	6.3V @ 1.0A
ST-5-12	DST-5-12	12.6VCT @ 1.0A	6.3V @ 2.0A
ST-6-12	DST-6-12	12.6VCT @ 1.6A	6.3V @ 3.2A
ST-7-12	DST-7-12	12.6VCT @ 2.85A	6.3V @ 5.7A
ST-2-16	DST-2-16	16VCT @ 0.07A	8V @ 0.14A
ST-3-16	DST-3-16	16VCT @ 0.15A	8V @ 0.3A
ST-4-16	DST-4-16	16VCT @ 0.4A	8V @ 0.8A
ST-5-16	DST-5-16	16VCT @ 0.8A	8V @ 1.6A
ST-6-16	DST-6-16	16VCT @ 1.25A	8V @ 2.5A
ST-7-16	DST-7-16	16VCT @ 2.25A	8V @ 4.5A
ST-2-20	DST-2-20	20VCT @ 0.055A	10V @ 0.11A
ST-3-20	DST-3-20	20VCT @ 0.12A	10V @ 0.24A
ST-4-20	DST-4-20	20VCT @ 0.3A	10V @ 0.6A
ST-5-20	DST-5-20	20VCT @ 0.6A	10V @ 1.2A
ST-6-20	DST-6-20	20VCT @ 1.0A	10V @ 2.0A
ST-7-20	DST-7-20	20VCT @ 1.8A	10V @ 3.6A
ST-2-24	DST-2-24	24VCT @ 0.045A	12V @ 0.09A
ST-3-24	DST-3-24	24VCT @ 0.1A	12V @ 0.2A
ST-4-24	DST-4-24	24VCT @ 0.25A	12V @ 0.5A
ST-5-24	DST-5-24	24VCT @ 0.5A	12V @ 1.0A
ST-6-24	DST-6-24	24VCT @ 0.8A	12V @ 1.6A
ST-7-24	DST-7-24	24VCT @ 1.5A	12V @ 3.0A

Part Number		Secondary RMS Rating	
Single 115V 6 Pin	Dual 115/230V 8 Pin	Series	Parallel
ST-2-28	DST-2-28	28VCT @ 0.04A	14V @ 0.08A
ST-3-28	DST-3-28	28VCT @ 0.085A	14V @ 0.17A
ST-4-28	DST-4-28	28VCT @ 0.2A	14V @ 0.4A
ST-5-28	DST-5-28	28VCT @ 0.42A	14V @ 0.84A
ST-6-28	DST-6-28	28VCT @ 0.7A	14V @ 1.4A
ST-7-28	DST-7-28	28VCT @ 1.3A	14V @ 2.6A
ST-2-36	DST-2-36	36VCT @ 0.03A	18V @ 0.06A
ST-3-36	DST-3-36	36VCT @ 0.065A	18V @ 0.13A
ST-4-36	DST-4-36	36VCT @ 0.17A	18V @ 0.34A
ST-5-36	DST-5-36	36VCT @ 0.35A	18V @ 0.7A
ST-6-36	DST-6-36	36VCT @ 0.55A	18V @ 1.1A
ST-7-36	DST-7-36	36VCT @ 1.0A	18V @ 2.0A
ST-2-48	DST-2-48	48VCT @ 0.023A	24V @ 0.046A
ST-3-48	DST-3-48	48VCT @ 0.05A	24V @ 0.1A
ST-4-48	DST-4-48	48VCT @ 0.125A	24V @ 0.25A
ST-5-48	DST-5-48	48VCT @ 0.25A	24V @ 0.5A
ST-6-48	DST-6-48	48VCT @ 0.4A	24V @ 0.8A
ST-7-48	DST-7-48	48VCT @ 0.75A	24V @ 1.5A
ST-2-56	DST-2-56	56VCT @ 0.02A	28V @ 0.04A
ST-3-56	DST-3-56	56VCT @ 0.045A	28V @ 0.09A
ST-4-56	DST-4-56	56VCT @ 0.11A	28V @ 0.22A
ST-5-56	DST-5-56	56VCT @ 0.22A	28V @ 0.44A
ST-6-56	DST-6-56	56VCT @ 0.35A	28V @ 0.7A
ST-7-56	DST-7-56	56VCT @ 0.65A	28V @ 1.3A
ST-2-120	DST-2-120	120VCT @ 0.01A	60V @ 0.02A
ST-3-120	DST-3-120	120VCT @ 0.02A	60V @ 0.04A
ST-4-120	DST-4-120	120VCT @ 0.05A	60V @ 0.1A
ST-5-120	DST-5-120	120VCT @ 0.1A	60V @ 0.2A
ST-6-120	DST-6-120	120VCT @ 0.16A	60V @ 0.32A
ST-7-120	DST-7-120	120VCT @ 0.3A	60V @ 0.6A

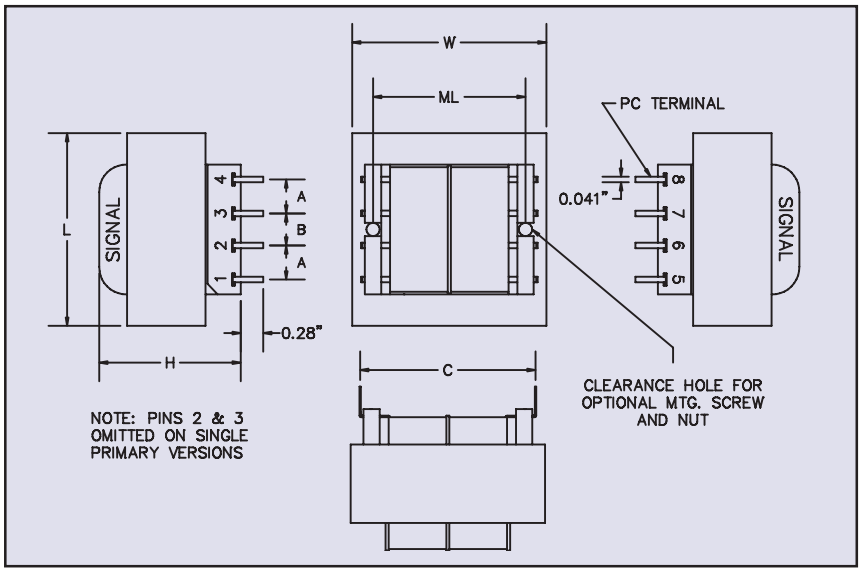
Custom versions available upon request.

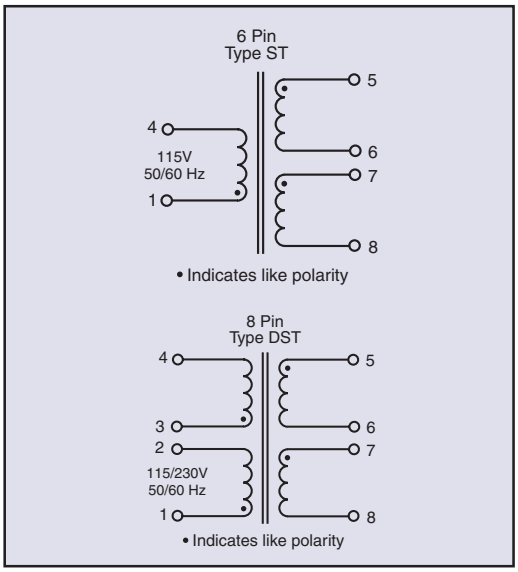
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Split/Tran™ Low Power Transformers

Printed Circuit Mount - Split Bobbin with High Isolation





Size	VA	L	W	H	ML	A	B	C	Optional Mounting Screw & Nut*	Weight
		Inches (mm)								lbs (kg)
2	1.1	1.37 (34.9)	1.12 (28.6)	0.97 (24.6)	-	0.25 (6.4)	0.25 (6.4)	1.20 (30.5)	-	0.17 (0.08)
3	2.4	1.37 (34.9)	1.12 (28.6)	1.21 (30.8)	-	0.25 (6.4)	0.25 (6.4)	1.20 (30.5)	-	0.25 (0.11)
4	6	1.62 (41.3)	1.31 (33.3)	1.31 (33.3)	1.06 (26.9)	0.25 (6.4)	0.35 (8.9)	1.25 (32.5)	Nylon 4-40 x 1.37 (4-40 x 34.9)	0.44 (0.20)
5	12	1.91 (48.4)	1.59 (40.4)	1.45 (36.9)	1.25 (31.8)	0.30 (7.6)	0.40 (10.2)	1.41 (35.8)	Nylon 4-40 x 1.37 (4-40 x 34.9)	0.70 (0.32)
6	20	2.25 (57.2)	1.88 (47.8)	1.45 (36.9)	1.50 (38.1)	0.30 (7.6)	0.40 (10.2)	1.60 (40.6)	Nylon 4-40 x 1.37 (4-40 x 34.9)	0.80 (0.36)
7	36	2.62 (66.7)	2.18 (55.5)	1.59 (40.4)	†	0.40 (10.2)	0.40 (10.2)	1.85 (47.0)	†	1.1 (0.50)

* Available from Signal, part numbers ST-MS (screw) and ST-MN (nut).
† Size 7 has 4 mounting holes on 2.18 x 1.75 centers for #6 screws.

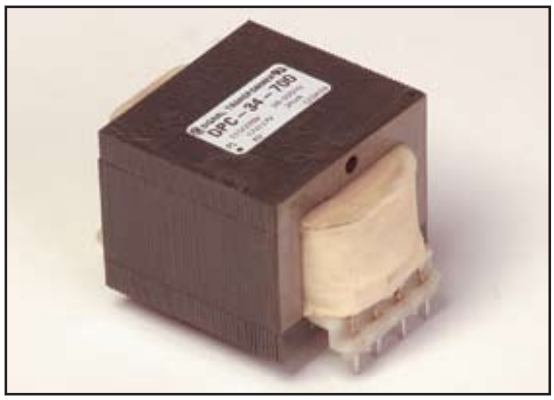
See Accessories page for mounting screw information.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Printed Circuit Mount Power Transformers

Miniature Low Power Transformers



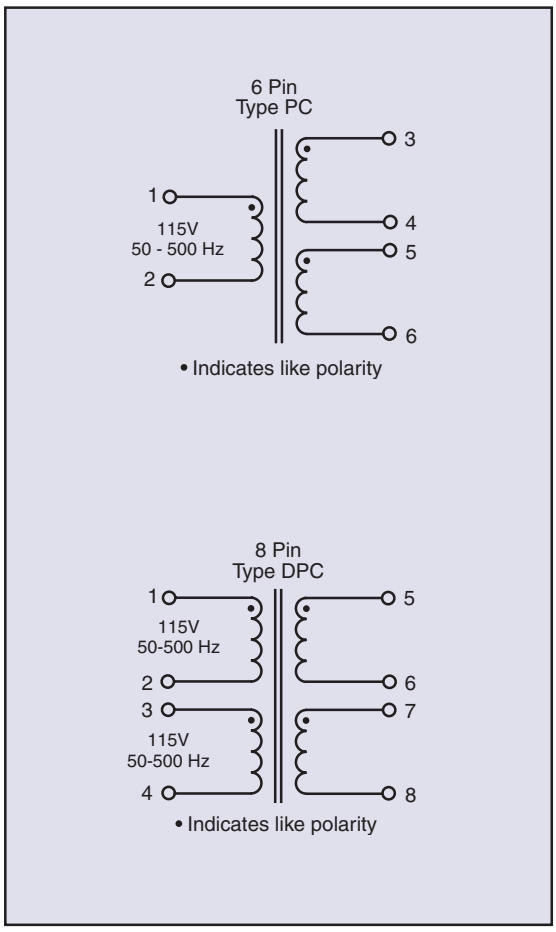
Signal's PC low power transformers are designed to operate between 50 Hz and 500 Hz without any degradation in output voltage.

General Specifications

- Power - 1.0 VA to 24 VA
- Dielectric Strength - 1500 Vrms Hipot
- Primaries - Single or dual primaries, 115 V or 115/230 V, 50-500 Hz
- Dual Secondaries - Series or parallel
- Insulation System - Class B, 130° C, UL 1446 E66312
- Mounting Brackets - see chart

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070



Primary 50/500 Hz		VA	Secondary RMS Rating	
Single 115V 6 Pin	Dual 115/230V 8 Pin	Size	Series	Parallel
PC-10-90	DPC-10-90	1.0	10VCT @ 90mA	5V @ 180mA
PC-10-120	DPC-10-120	1.2	10VCT @ 120mA	5V @ 240mA
PC-10-440	DPC-10-440	4.4	10VCT @ 440mA	5V @ 880mA
PC-10-1000	DPC-10-1000	10.0	10VCT @ 1.0A	5V @ 2.0A
PC-10-2400	DPC-10-2400	24.0	10VCT @ 2.4A	5V @ 4.8A
PC-12-70	DPC-12-70	1.0	12.6VCT @ 70mA	6.3V @ 140mA
PC-12-100	DPC-12-100	1.2	12.6VCT @ 100mA	6.3V @ 200mA
PC-12-350	DPC-12-350	4.4	12.6VCT @ 350mA	6.3V @ 700mA
PC-12-800	DPC-12-800	10.0	12.6VCT @ 800mA	6.3V @ 1.6A
PC-12-2000	DPC-12-2000	24.0	12.6VCT @ 2.0A	6.3V @ 4.0A
PC-16-55	DPC-16-55	1.0	16VCT @ 55mA	8V @110mA
PC-16-75	DPC-16-75	1.2	16VCT @ 75mA	8V @150mA
PC-16-260	DPC-16-260	4.4	16VCT @ 260mA	8V @ 520mA
PC-16-640	DPC-16-640	10.0	16VCT @ 640mA	8V @ 1.28A
PC-16-1500	DPC-16-1500	24.0	16VCT @ 1.50A	8V @ 3.0A
PC-20-45	DPC-20-45	1.0	20VCT @ 45mA	10V @ 90mA
PC-20-60	DPC-20-60	1.2	20VCT @ 60mA	10V @ 120mA
PC-20-220	DPC-20-220	4.4	20VCT @ 220mA	10V @ 440mA
PC-20-500	DPC-20-500	10.0	20VCT @ 500mA	10V @ 1.0A
PC-20-1200	DPC-20-1200	24.0	20VCT @ 1.20A	10V @ 2.40A
PC-24-35	DPC-24-35	1.0	24VCT @ 35mA	12V @ 70mA
PC-24-50	DPC-24-50	1.2	24VCT @ 50mA	12V @ 100mA
PC-24-180	DPC-24-180	4.4	24VCT @ 180mA	12V @ 360mA
PC-24-450	DPC-24-450	10.0	24VCT @ 450mA	12V @ 900mA
PC-24-1000	DPC-24-1000	24.0	24VCT @ 1.0A	12V @ 2.0A
PC-28-30	DPC-28-30	1.0	28VCT @ 30mA	14V @ 60mA
PC-28-40	DPC-28-40	1.2	28VCT @ 40mA	14V @ 80mA
PC-28-160	DPC-28-160	4.4	28VCT @ 160mA	14V @ 320mA
PC-28-360	DPC-28-360	10.0	28VCT @ 360mA	14V @ 720mA
PC-28-800	DPC-28-800	24.0	28VCT @ 800mA	14V @ 1.60A
PC-34-25	DPC-34-25	1.0	34VCT @ 25mA	17V @ 50mA
PC-34-35	DPC-34-35	1.2	34VCT @ 35mA	17V @ 70mA
PC-34-125	DPC-34-125	4.4	34VCT @ 125mA	17V @ 250mA
PC-34-300	DPC-34-300	10.0	34VCT @ 300mA	17V @ 600mA
PC-34-700	DPC-34-700	24.0	34VCT @ 700mA	17V @ 1.40A
PC-40-20	DPC-40-20	1.0	40VCT @ 20mA	20V @ 40mA
PC-40-30	DPC-40-30	1.2	40VCT @ 30mA	20V @ 60mA
PC-40-110	DPC-40-110	4.4	40VCT @ 110mA	20V @ 220mA
PC-40-250	DPC-40-250	10.0	40VCT @ 250mA	20V @ 500mA
PC-40-600	DPC-40-600	24.0	40VCT @ 600mA	20V @ 1.20A
PC-56-15	DPC-56-15	1.0	56VCT @ 15mA	28V @ 30mA
PC-56-20	DPC-56-20	1.2	56VCT @ 20mA	28V @ 40mA
PC-56-80	DPC-56-80	4.4	56VCT @ 80mA	28V @ 160mA
PC-56-180	DPC-56-180	10.0	56VCT @ 180mA	28V @ 360mA
PC-56-420	DPC-56-420	24.0	56VCT @ 420mA	28V @ 840mA
PC-120-8	DPC-120-8	1.0	120VCT @ 8mA	60V @ 16mA
PC-120-10	DPC-120-10	1.2	120VCT @ 10mA	60V @ 20mA
PC-120-35	DPC-120-35	4.4	120VCT @ 35mA	60V @ 70mA
PC-120-85	DPC-120-85	10.0	120VCT @ 85mA	60V @ 170mA
PC-120-200	DPC-120-200	24.0	120VCT @ 200mA	60V @ 400mA

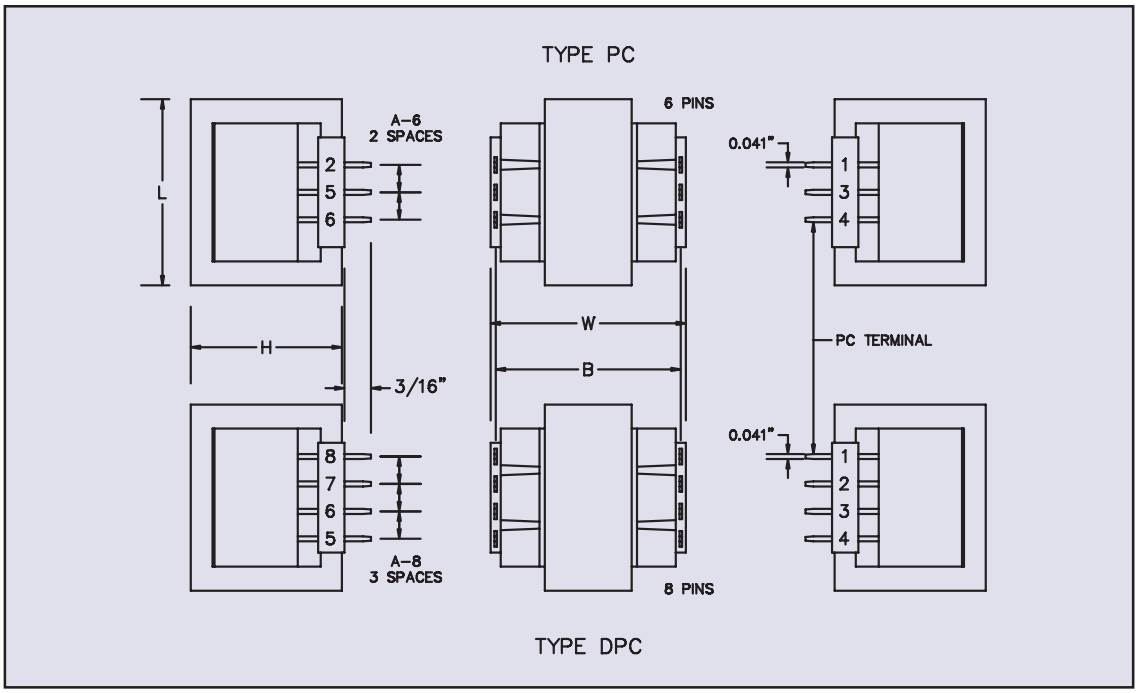
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Printed Circuit Mount Power Transformers

Miniature Low Power Transformers



VA	L	W	H	A-6	A-8	B	Weight	Optional Bracket*		
				6 Pin	8 Pin			Number	MW	MD
Size	Inches (mm)						oz (kg)		Inches (mm)	
1.0	1.00 (25.4)	1.37 (34.92)	0.83 (21.08)	0.25 (6.35)	0.20 (5.08)	1.23 (31.2)	2.5 (0.07)	–	–	–
1.2	1.37 (34.9)	1.12 (28.6)	1.18 (30.15)	0.31 (7.92)	0.20 (5.08)	1.03 (26.2)	3 (0.08)	–	–	–
4.4	1.62 (41.3)	1.25 (31.8)	1.37 (34.92)	0.40 (10.16)	0.25 (6.35)	1.13 (28.7)	5 (0.14)	–	–	–
10.0	1.87 (47.6)	1.43 (36.5)	1.62 (41.27)	0.40 (10.16)	0.25 (6.35)	1.33 (33.7)	9 (0.23)	10-BR	1.64 (41.7)	1.12 (28.6)
24.0	1.62 (41.3)	2.25 (57.2)	1.37 (34.93)	0.40 (10.16)	0.25 (6.35)	2.13 (54.1)	12 (0.34)	24-BR	1.37 (34.9)	2.00 (50.8)

*An optional slide on mounting bracket is available for sizes 10 & 24. These brackets do not consume any additional board space but add 1/32" to the transformer's height.

See Accessories page for mounting brackets.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Printed Circuit Mount Triple Output Transformers

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies

Signal's MPC and DMPC transformers have all of the performance features of our PC and DPC series.

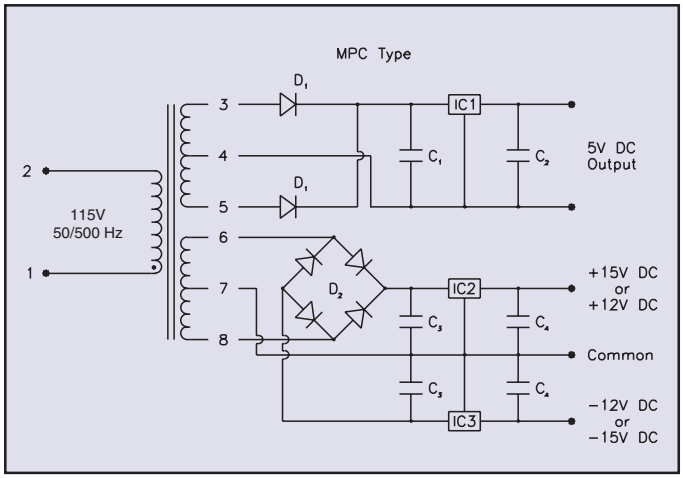
General Specifications

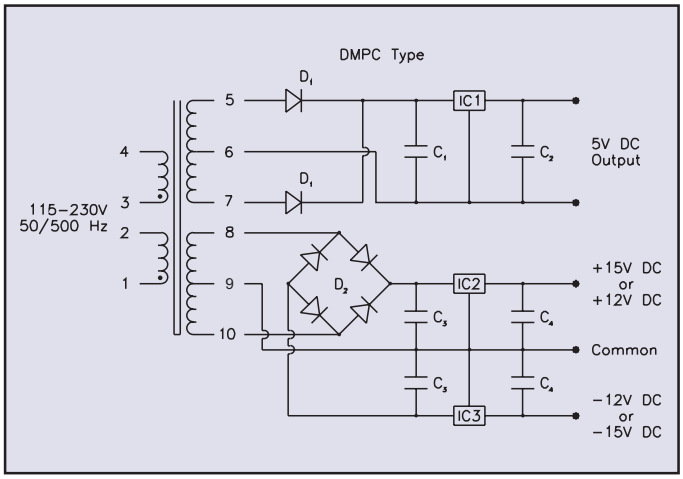
- Power - 10 VA and 24 VA
- Dielectric Strength - 1500 Vrms Hipot
- Primaries - Single or dual primaries, 115 V or 115/230 V, 50-500 Hz
- Secondaries - Dual complementary outputs, 5 VDC with ±12 VDC or 5 VDC with ±15 VDC
- Insulation System - Class B, 130° C, UL 1446 E66312
- Mounting Brackets - Available for 10 & 24 VA sizes, part numbers 10-BR and 24-BR, respectively

Agency Certifications

- UL recognized to UL 506 / UL 5085-2, File # E63829
- CSA certified to C22.2 #66.1, File # 221070

RoHS 2002/95/EC





Part Number Primary 50/500 Hz		DC Output		Size	Suggested Components							
115V 8 Pin	115/230V 10 Pin	Regulator I	Regulator II		C_1	C_2	C_3	C_4	D_1(2)	D_2(4)	IC_1*	IC_2*
MPC-X-12	DMPC-X-12	5 VDC 360mA	±12 VDC 60mA	X	2100MFD 30V	2.7MFD 20V	250MFD 50V	10MFD 20V	1N4001	1N4002	LM341P-5.0	LM326N
MPC-X-15	DMPC-X-15	5 VDC 360mA	±15 VDC 50mA	X	2100MFD 30V	2.7MFD 20V	250MFD 50V	10MFD 20V	1N4001	1N4002	LM341P-5.0	LM325N
MPC-Y-12	DMPC-Y-12	5 VDC 835mA	±12 VDC 150mA	Y	4000MFD 20V	2.7MFD 20V	1000MFD 50V	2.7MFD 20V	1N4001	1N4002	LM340K-5.0	LM326N
MPC-Y-15	DMPC-Y-15	5 VDC 835mA	±15 VDC 130mA	Y	4000MFD 20V	2.7MFD 20V	1000MFD 50V	2.7MFD 20V	1N4001	1N4002	LM340K-5.0	LM325N

* National Semiconductor

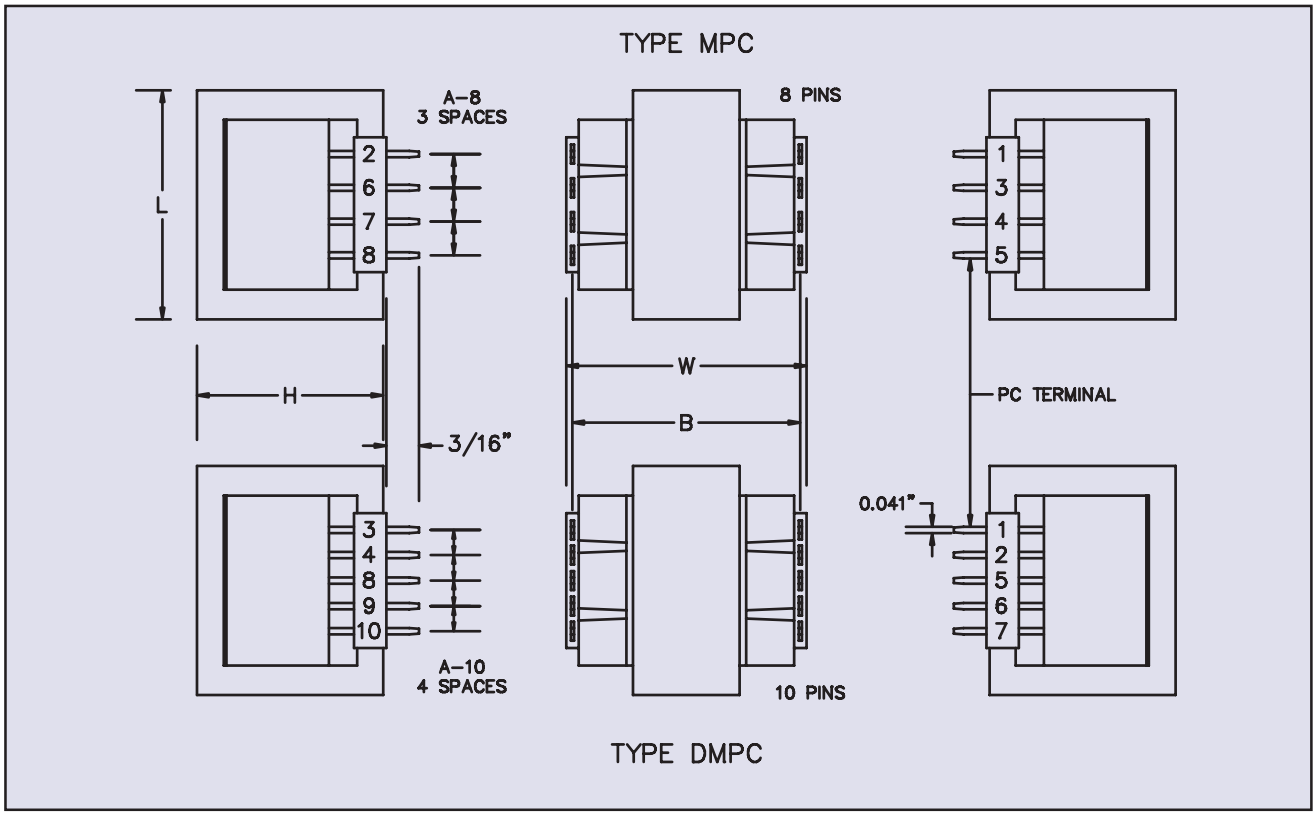
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Printed Circuit Mount Triple Output Transformers

For 5 VDC and ±12 VDC or ±15 VDC Regulated Power Supplies



Size	L	W	H	A-8 8 Pin	A-10 10 Pin	B	Weight	Optional Bracket		
								Number	MW	MD
	Inches (mm)						lbs (kg)		Inches (mm)	
X	1.87 (47.6)	1.43 (36.5)	1.64 (41.7)	.25 (6.4)	.20 (5.1)	1.30 (33.0)	0.56 (0.25)	10-BR	1.64 (41.6)	1.12 (28.6)
Y	1.62 (41.3)	2.25 (57.2)	1.37 (34.9)	.25 (6.4)	.20 (5.1)	2.10 (53.3)	0.75 (0.34)	24-BR	1.37 (34.9)	2.00 (50.8)

* An optional slide on mounting bracket is available for sizes 10 & 24. These brackets do not consume any additional board space but add 1/32" to the transformer's height.

See Accessories page for mounting brackets.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

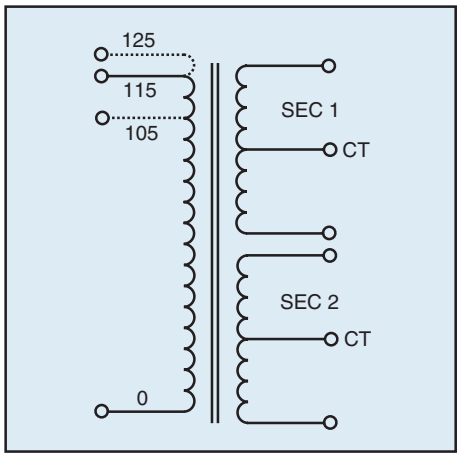
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

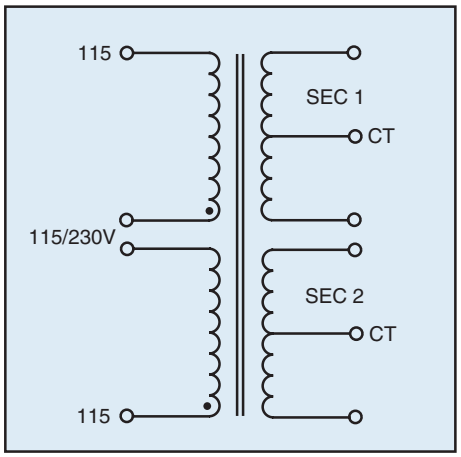
Conventional Rectifier Power Transformers
Chassis Mount

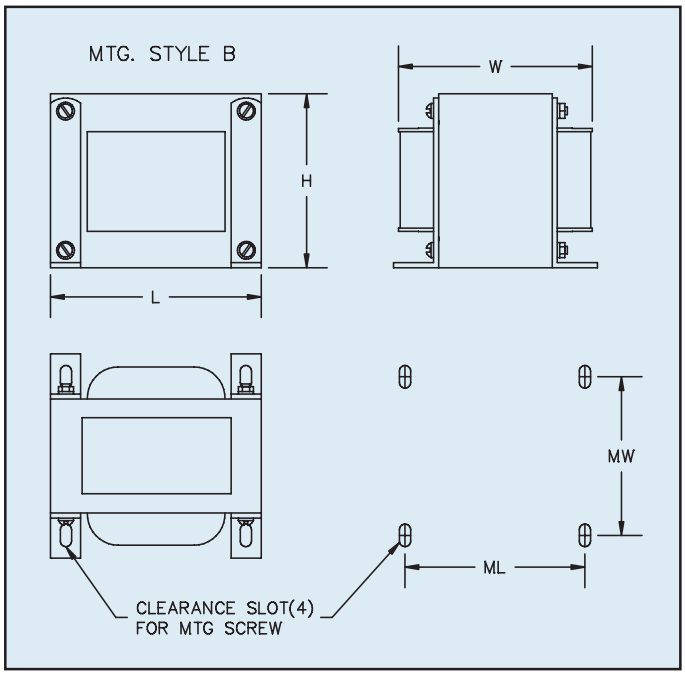
Signal's rectifier power transformers provide a wide variety of outputs. This series of conservatively designed transformers is manufactured using traditional materials and layer wound techniques.

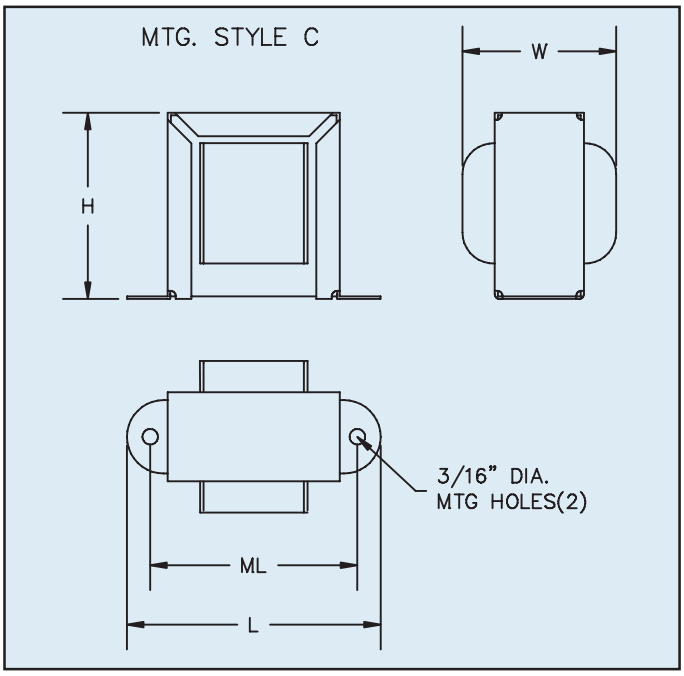
General Specifications

- Power - 10 VA to 2800 VA
- Dielectric Strength - 1500 Vrms Hipot
- Primaries - Single, tapped or dual primaries, 105V, 115V, 125V, 230V - 50/60 Hz
- Secondaries - Dual center tapped windings may be connected in series or parallel
- Insulation System - Class B insulation, 130° C









Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Conventional Rectifier Power Transformers
Chassis Mount

Primary 50/60 Hz		Second RMS Rating		Mtg Style	Dimensions					Mtg Screw	Weight
Single 115V	Dual 115/230V	Series	Parallel		L	W	H	ML	MW		
					Inches (mm)						lbs (kg)
10-1	DL-10-1	10VCT @ 1A	5VCT @ 2A	C	2.87 (73.0)	1.75 (44.5)	2.31 (58.7)	2.37 (60.3)	–	#8	1.0 (.45)
10-2	DL-10-2	10VCT @ 2A	5VCT @ 4A	C	3.12 (79.4)	2.12 (53.9)	2.75 (69.9)	2.81 (71.4)	–	#8	1.5 (.68)
10-4	DL-10-4	10VCT @ 4A	5VCT @ 8A	C	3.56 (90.5)	2.37 (60.3)	3.06 (77.7)	3.12 (79.4)	–	#8	2.3 (1.04)
10-6	DL-10-6	10VCT @ 6A	5VCT @ 12A	B	3.37 (85.7)	2.75 (69.9)	2.81 (71.4)	2.81 (71.4)	2.12 (53.9)	#8	3.3 (1.50)
10-8	DL-10-8	10VCT @ 8A	5VCT @ 16A	B	3.37 (85.7)	3.12 (79.4)	2.81 (71.4)	2.81 (71.4)	2.50 (63.5)	#8	4.01 (1.81)
10-12	DL-10-12	10VCT @ 12A	5VCT @ 24A	B	3.75 (95.3)	3.25 (82.6)	3.12 (79.4)	3.12 (79.4)	2.50 (63.5)	#8	5.0 (2.27)
10-25	DL-10-25	10VCT @ 25A	5VCT @ 50A	B	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.75 (95.3)	2.75 (69.9)	#10	8.7 (3.95)
10-50‡	DL-10-50	10VCT @ 50A	5VCT @ 100A	B	5.35 (133.4)	5.50 (139.7)	4.37 (111.1)	4.37 (111.1)	3.62 (92.1)	1/4	17.0 (7.71)
10-100‡	DL-10-100	10VCT @ 100A	5VCT @ 200A	B	6.37 (162.0)	7.25 (184.2)	5.31 (134.9)	5.31 (134.9)	4.37 (111.1)	1/4	34.5 (15.65)
12.8-1	DL-12.8-1	12.8VCT @ 1A	6.4VCT @ 2A	C	2.87 (73.0)	2.00 (50.8)	2.31 (58.7)	2.31 (58.7)	–	#8	1.2 (.54)
12.8-2	DL-12.8-2	12.8VCT @ 2A	6.4VCT @ 4A	B	3.00 (76.2)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	2.00 (50.8)	#8	2.3 (1.04)
12.8-4	DL-12.8-4	12.8VCT @ 4A	6.4VCT @ 8A	B	3.00 (76.2)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	2.37 (60.3)	#8	2.8 (1.27)
12.8-6	DL-12.8-6	12.8VCT @ 6A	6.4VCT @ 12A	B	3.37 (85.7)	3.06 (77.7)	2.81 (71.4)	2.81 (71.4)	2.50 (63.5)	#8	4.0 (1.81)
12.8-8	DL-12.8-8	12.8VCT @ 8A	6.4VCT @ 16A	B	3.75 (95.3)	3.12 (79.4)	3.12 (79.4)	3.12 (79.4)	2.25 (57.2)	#8	4.5 (2.04)
12.8-12‡	DL-12.8-12	12.8VCT @ 12A	6.4VCT @ 24A	B	4.12 (104.8)	3.25 (82.6)	3.43 (87.3)	3.43 (87.3)	2.37 (60.3)	#10	6.0 (2.72)
12.8-25‡	DL-12.8-25	12.8VCT @ 25A	6.4VCT @ 50A	B	5.25 (133.4)	4.25 (108.0)	4.37 (111.1)	4.37 (111.1)	2.87 (73.0)	#10	12.5 (5.69)
12.8-50‡	DL-12.8-50	12.8VCT @ 50A	6.4VCT @ 100A	B	5.25 (133.4)	6.00 (152.4)	4.37 (111.1)	4.37 (111.1)	4.12 (104.8)	1/4	20.7 (9.39)
12.8-100‡	DL-12.8-100	12.8VCT @ 100A	6.4VCT @ 200A	B	6.37 (162.0)	7.25 (184.2)	5.31 (134.9)	5.31 (134.9)	4.37 (111.1)	1/4	34.5 (15.65)

‡ Nominal 115V primary has added taps, i.e., 105/115/125V; Dual (DL) version is 115/230V only.
† Available with dual primary only. Therefore, prefix DL is not required.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Conventional Rectifier Power Transformers
Chassis Mount

Primary 50/60 Hz		Second RMS Rating		Mtg Style	Dimensions					Mtg Screw	Weight
Single 115V	Dual 115/230V	Series	Parallel		L	W	H	ML	MW		
					Inches (mm)						lbs (kg)
16-1	DL-16-1	16VCT @ 1A	8VCT @ 2A	C	2.87 (73.0)	2.00 (50.8)	2.31 (58.7)	2.37 (60.3)	–	#8	1.2 (.54)
16-2	DL-16-2	16VCT @ 2A	8VCT @ 4A	C	3.12 (79.4)	2.25 (57.2)	2.75 (69.9)	2.81 (71.4)	–	#8	1.7 (.77)
16-4	DL-16-4	16VCT @ 4A	8VCT @ 8A	B	3.37 (85.7)	2.75 (69.9)	2.81 (71.4)	2.81 (71.4)	2.12 (53.9)	#8	3.3 (1.50)
16-6	DL-16-6	16VCT @ 6A	8VCT @ 12A	B	3.75 (95.3)	3.12 (79.4)	3.12 (79.4)	3.12 (79.4)	2.25 (57.2)	#10	4.5 (2.04)
16-8	DL-16-8	16VCT @ 8A	8VCT @ 16A	B	3.75 (95.3)	3.50 (89.0)	3.12 (79.4)	3.12 (79.4)	2.62 (66.7)	#10	5.4 (2.45)
16-12	DL-16-12	16VCT @ 12A	8VCT @ 24A	B	4.12 (104.8)	3.87 (98.4)	3.43 (87.3)	3.43 (87.3)	3.00 (76.2)	#10	7.9 (3.58)
16-25	DL-16-25	16VCT @ 25A	8VCT @ 50A	B	4.50 (114.3)	5.37 (136.5)	3.75 (95.3)	3.75 (95.3)	4.00 (101.6)	#10	14.5 (6.58)
16-50‡	DL-16-50	16VCT @ 50A	8VCT @ 100A	B	6.37 (162.0)	5.70 (146.1)	5.31 (134.9)	5.31 (134.9)	3.75 (95.3)	1/4	26.5 (12.02)
16-100‡	DL-16-100	16VCT @ 100A	8VCT @ 200A	B	7.50 (190.5)	7.50 (190.5)	6.37 (162.0)	6.75 (171.5)	4.62 (117.5)	1/4	50.0 (22.68)
24-1	DL-24-1	24VCT @ 1A	12VCT @ 2A	B	3.00 (76.2)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	2.00 (50.8)	#8	2.3 (1.04)
24-2	DL-24-2	24VCT @ 2A	12VCT @ 4A	B	3.00 (76.2)	2.87 (73.0)	2.50 (63.5)	2.50 (63.5)	2.37 (60.3)	#8	2.9 (1.32)
24-4	DL-24-4	24VCT @ 4A	12VCT @ 8A	B	3.75 (95.3)	3.12 (79.4)	3.12 (79.4)	3.12 (79.4)	2.25 (57.2)	#8	4.5 (2.04)
24-6	DL-24-6	24VCT @ 6A	12VCT @ 12A	B	4.12 (104.8)	3.25 (82.6)	3.43 (87.3)	3.43 (87.3)	2.37 (60.3)	#10	5.8 (2.63)
24-8	DL-24-8	24VCT @ 8A	12VCT @ 16A	B	4.12 (104.8)	3.87 (98.4)	3.43 (87.3)	3.43 (87.3)	3.00 (76.2)	#10	7.9 (3.58)
24-12‡	DL-24-12	24VCT @ 12A	12VCT @ 24A	B	4.50 (114.3)	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.37 (85.7)	#10	11.0 (4.99)
24-20‡	DL-24-20	24VCT @ 20A	12VCT @ 40A	B	5.25 (133.4)	4.75 (120.7)	4.37 (111.1)	4.37 (111.1)	3.37 (85.7)	1/4	15.3 (6.95)
24-25‡	DL-24-25	24VCT @ 25A	12VCT @ 50A	B	5.25 (133.4)	5.62 (142.9)	4.37 (111.1)	4.37 (111.1)	4.12 (104.8)	1/4	19.5 (8.85)
24-50‡	DL-24-50	24VCT @ 50A	12VCT @ 100A	B	6.37 (162.0)	6.25 (158.8)	5.31 (134.9)	5.31 (134.9)	4.37 (111.1)	1/4	31.3 (14.20)
—	24-100†	24VCT @ 100A	12VCT @ 200A	B	7.50 (190.5)	7.00 (177.8)	6.37 (162.0)	6.75 (171.45)	4.12 (104.8)	1/4	43.0 (19.5)

‡ Nominal 115V primary has added taps, i.e., 105/115/125V; Dual (DL) version is 115/230V only.
† Available with dual primary only. Therefore, prefix DL is not required.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Conventional Rectifier Power Transformers
Chassis Mount

Primary 50/60 Hz		Second RMS Rating		Mtg Style	Dimensions					Mtg Screw	Weight
Single 115V	Dual 115/230V	Series	Parallel		L	W	H	ML	MW		
					Inches (mm)						lbs (kg)
36-1	DL-36-1	36VCT @ 1A	18VCT @ 2A	B	3.00 (76.2)	2.75 (69.9)	2.50 (63.5)	2.50 (63.5)	2.25 (57.2)	#8	2.6 (1.18)
36-2	DL-36-2	36VCT @ 2A	18VCT @ 4A	B	3.37 (85.7)	2.93 (74.6)	2.81 (71.4)	2.81 (71.4)	2.37 (60.3)	#8	3.8 (1.72)
36-4	DL-36-4	36VCT @ 4A	18VCT @ 8A	B	4.12 (104.8)	3.37 (85.7)	3.43 (87.3)	3.43 (87.3)	2.62 (66.7)	#10	6.8 (3.08)
36-6	DL-36-6	36VCT @ 6A	18VCT @ 12A	B	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.75 (95.3)	2.75 (69.9)	#10	8.7 (3.95)
36-8‡	DL-36-8	36VCT @ 8A	18VCT @ 16A	B	4.50 (114.3)	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.37 (85.7)	#10	11.0 (4.99)
36-12‡	DL-36-12	36VCT @ 12A	18VCT @ 24A	B	5.25 (133.4)	5.00 (127.0)	4.37 (111.1)	4.37 (111.1)	3.37 (85.7)	1/4	15.0 (6.80)
36-20‡	DL-36-20	36VCT @ 20A	18VCT @ 40A	B	6.37 (162.0)	5.37 (136.5)	5.31 (134.9)	5.31 (134.9)	3.37 (85.7)	1/4	22.8 (10.34)
36-25‡	DL-36-25	36VCT @ 25A	18VCT @ 50A	B	6.37 (162.0)	5.75 (146.1)	5.31 (134.9)	5.31 (134.9)	3.75 (95.3)	1/4	26.5 (12.02)
36-30‡	DL-36-30	36VCT @ 30A	18VCT @ 60A	B	6.37 (162.0)	6.00 (152.4)	5.31 (134.9)	5.31 (134.9)	4.37 (111.1)	1/4	31.5 (14.28)
—	36-50†	36VCT @ 50A	18VCT @ 100A	B	6.37 (162.0)	7.25 (184.2)	5.31 (134.9)	5.31 (134.9)	5.12 (130.2)	1/4	40.0 (18.14)
56-1	DL-56-1	56VCT @ 1A	28VCT @ 2A	B	3.37 (85.7)	2.87 (73.0)	2.81 (71.4)	2.81 (71.4)	2.25 (57.2)	#8	3.5 (1.59)
56-2	DL-56-2	56VCT @ 2A	28 VCT @ 4A	B	3.75 (95.3)	3.25 (82.6)	3.12 (79.4)	3.12 (79.4)	2.50 (63.5)	#8	5.0 (2.27)
56-4	DL-56-4	56VCT @ 4A	28VCT @ 8A	B	4.12 (104.8)	3.75 (95.3)	3.43 (87.3)	3.43 (87.3)	3.00 (76.2)	#10	7.7 (3.49)
56-6	DL-56-6	56VCT @ 6A	28VCT @ 12A	B	5.25 (133.4)	4.25 (108.0)	4.37 (111.1)	4.37 (111.1)	2.87 (73.0)	#10	12.0 (5.44)
56-8‡	DL-56-8	56VCT @ 8A	28VCT @ 16A	B	5.25 (133.4)	5.00 (127.0)	4.37 (111.1)	4.37 (111.1)	3.62 (92.1)	#1/4	17.0 (7.71)
56-12‡	DL-56-12	56VCT @ 12A	28VCT @ 24A	B	6.37 (162.0)	5.25 (133.4)	5.31 (134.9)	5.31 (134.9)	3.37 (85.7)	1/4	22.0 (9.98)
56-25‡	DL-56-25	56VCT @ 25A	28VCT @ 50A	B	6.37 (162.0)	7.12 (181.0)	5.31 (134.9)	5.31 (134.9)	5.12 (130.2)	1/4	38.0 (17.24)
—	56-50†	56VCT @ 50A	28VCT @ 100A	B	7.50 (190.5)	7.50 (190.5)	6.24 (158.8)	6.75 (171.5)	4.87 (123.8)	1/4	56.3 (25.54)

‡ Nominal 115V primary has added taps, i.e., 105/115/125V; Dual (DL) version is 115/230V only.
† Available with dual primary only. Therefore, prefix DL is not required.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Conventional Rectifier Power Transformers
Chassis Mount

Primary 50/60 Hz		Second RMS Rating		Mtg Style	Dimensions					Mtg Screw	Weight
Single 115V	Dual 115/230V	Series	Parallel		L	W	H	ML	MW		
					Inches (mm)						lbs (kg)
68-1	DL-68-1	68VCT @ 1A	34VCT @ 2A	B	3.37 (85.7)	2.93 (74.6)	2.81 (71.4)	2.81 (71.4)	2.37 (60.3)	#8	3.8 (1.72)
68-2	DL-68-2	68VCT @ 2A	34VCT @ 4A	B	4.12 (104.8)	3.37 (85.7)	3.43 (87.3)	3.43 (87.3)	2.62 (66.7)	#10	6.8 (3.08)
68-4	DL-68-4	68VCT @ 4A	34VCT @ 8A	B	4.50 (114.3)	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.37 (85.7)	#10	11.5 (5.22)
68-6‡	DL-68-6	68VCT @ 6A	34VCT @ 12A	B	5.25 (133.4)	5.00 (127.0)	4.37 (111.1)	4.37 (111.1)	3.37 (85.7)	1/4	15.0 (6.80)
68-8‡	DL-68-8	68VCT @ 8A	34VCT @ 16A	B	5.25 (133.4)	5.50 (139.7)	4.37 (111.1)	4.37 (111.1)	3.87 (98.4)	1/4	19.0 (8.62)
68-12‡	DL-68-12	68VCT @ 12A	34VCT @ 24A	B	6.37 (162.0)	5.75 (146.1)	5.31 (134.9)	5.31 (134.9)	3.75 (95.3)	1/4	26.5 (12.02)
—	68-25†	68VCT @ 25A	34VCT @ 50A	B	6.37 (162.0)	7.25 (184.2)	5.31 (134.9)	5.31 (134.9)	5.12 (130.2)	1/4	39.7 (18.01)
80-1	DL-80-1	80VCT @ 1A	40VCT @ 2A	B	3.37 (85.7)	3.06 (77.7)	2.81 (71.4)	2.81 (71.4)	2.50 (63.5)	#8	4.0 (1.81)
80-2	DL-80-2	80VCT @ 2A	40VCT @ 4A	B	4.12 (104.8)	3.37 (85.7)	3.43 (87.3)	3.43 (87.3)	2.62 (66.7)	#10	6.8 (3.08)
80-4	DL-80-4	80VCT @ 4A	40VCT @ 8A	B	5.25 (133.4)	4.25 (108.0)	4.37 (111.1)	4.37 (111.1)	2.87 (73.0)	1/4	12.3 (5.58)
80-6‡	DL-80-6	80VCT @ 6A	40VCT @ 12A	B	5.25 (133.4)	5.50 (139.7)	4.37 (111.1)	4.37 (111.1)	3.87 (98.4)	1/4	19.0 (8.62)
80-8‡	DL-80-8	80VCT @ 8A	40VCT @ 16A	B	6.37 (162.0)	5.25 (133.4)	5.31 (134.9)	5.31 (134.9)	3.25 (82.6)	1/4	20.5 (9.30)
80-12‡	DL-80-12	80VCT @ 12A	40VCT @ 24A	B	6.37 (162.0)	6.00 (152.4)	5.31 (134.9)	5.31 (134.9)	4.12 (104.8)	1/4	29.0 (13.15)
—	80-25†	80VCT @ 25A	40VCT @ 50A	B	7.50 (190.5)	6.50 (165.1)	6.25 (158.8)	6.75 (171.5)	3.87 (98.4)	1/4	40.3 (18.28)

‡ Nominal 115V primary has added taps, i.e., 105/115/125V; Dual (DL) version is 115/230V only.
† Available with dual primary only. Therefore, prefix DL is not required.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

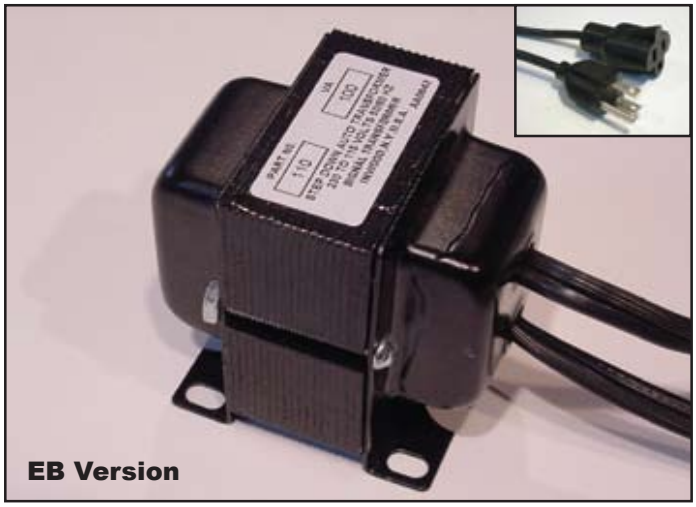
Step Down Auto Transformers - Chassis Mount

Available with Receptacle and Line Cord or Leads

Signal's auto transformers provide the user the capability of adapting voltages for worldwide applications.

General Specifications

- Power - 100 VA to 2000 VA
- Voltage - EB version: 230V to 115V, 50/60Hz
  OF version: 230V to 115V or 115V to 230V, 50/60Hz
- Connections - EB version: Line cord and receptacle NEMA 5-15 style
  OF version: 8" leads
- Insulation System - Class B, 130° C
- Higher insulation class available



EB Version

OF Version

Part Number	VA	Dimensions			Mounting Centers	Weight
		Width	Depth	Height		
	Size	Inches (mm)			Inches (mm)	lbs (kg)
110	100	1.87 (47.6)	2.37 (60.3)	2.50 (63.5)	1.50 x 1.68 (38.1 x 42.8)	1.5 (0.68)
112	120	2.87 (73.0)	2.12 (54.0)	3.50 (88.9)	2.25 x 1.75 (57.2 x 44.5)	3.0 (1.36)
115	150	2.87 (73.0)	3.37 (85.7)	3.50 (88.9)	2.25 x 2.00 (57.2 x 50.8)	3.5 (1.59)
120	200	2.87 (73.0)	3.50 (88.9)	3.50 (88.9)	2.25 x 2.12 (57.2 x 54.0)	4.0 (1.81)
125	250	2.87 (73.0)	3.87 (98.4)	3.50 (88.9)	2.25 x 2.50 (57.2 x 63.5)	4.8 (2.18)
130	300	3.25 (82.6)	3.87 (98.4)	3.87 (98.4)	2.50 x 2.43 (63.5 x 61.9)	5.5 (2.49)
150	500	3.25 (82.6)	4.87 (123.8)	3.87 (98.4)	2.50 x 3.43 (63.5 x 87.3)	8 (3.63)
175	750	3.25 (82.6)	5.87 (149.2)	3.87 (98.4)	2.50 x 4.43 (63.5 x 112.7)	11 (5.00)
1100	1000	4.50 (114.3)	5.12 (130.2)	5.50 (139.7)	3.50 x 3.50 (88.9 x 88.9)	14 (6.35)
1150	1500	4.50 (114.3)	6.12 (155.6)	5.50 (139.7)	3.50 x 4.50 (88.9 x 114.3)	20 (9.07)
1200	2000	4.50 (114.3)	7.12 (181.0)	5.50 (139.7)	3.50 x 5.50 (88.9 x 139.7)	26 (11.79)

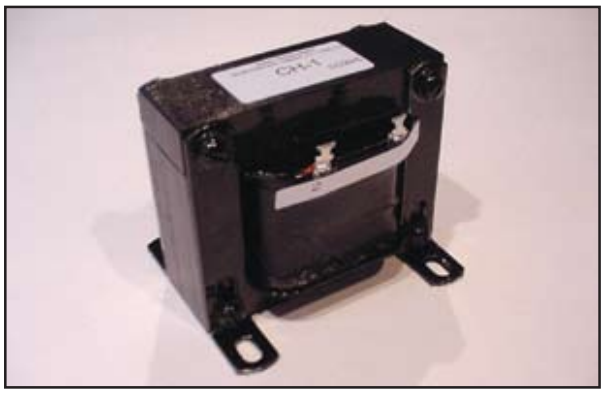
Part Number	VA	Dimensions			Mounting Centers	Weight
		Width	Depth	Height		
	Size	Inches (mm)			Inches (mm)	lbs (kg)
110-OF	100	2.25 (57.2)	2.00 (50.8)	1.93 (49.2)	2.81 (71.4)	1.3 (0.59)
112-OF	120	3.37 (85.7)	2.50 (63.5)	2.87 (73.0)	2.81 x 1.87 (71.4 x 47.6)	2.5 (1.13)
115-OF	150	3.37 (85.7)	2.75 (69.9)	2.87 (73.0)	2.81 x 2.12 (71.4 x 54.0)	3.0 (1.36)
120-OF	200	3.37 (85.7)	2.87 (73.0)	2.87 (73.0)	2.81 x 2.25 (71.4 x 57.2)	3.5 (1.59)
125-OF	250	3.37 (85.7)	3.25 (82.6)	2.87 (73.0)	2.81 x 2.62 (71.4 x 66.7)	4.2 (1.90)
130-OF	300	3.75 (95.3)	3.25 (82.6)	3.12 (79.4)	3.12 x 2.50 (79.4 x 63.5)	5.0 (2.27)
150-OF	500	3.75 (95.3)	4.25 (107.9)	3.12 (79.4)	3.12 x 3.50 (79.4 x 88.9)	8.0 (3.63)
175-OF	750	3.75 (95.3)	5.25 (133.4)	3.12 (79.4)	3.12 x 4.50 (79.4 x 114.3)	11 (5.00)
1100-OF	1000	5.25 (133.4)	4.50 (114.3)	4.37 (111.1)	4.37 x 3.12 (111.1 x 79.4)	14 (6.35)
1150-OF	1500	5.25 (133.4)	5.50 (139.7)	4.37 (111.1)	4.37 x 4.12 (111.1 x 104.8)	19 (8.62)
1200-OF	2000	5.25 (133.4)	6.50 (165.1)	4.37 (111.1)	4.37 x 5.12 (111.1 x 130.2)	25 (11.34)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

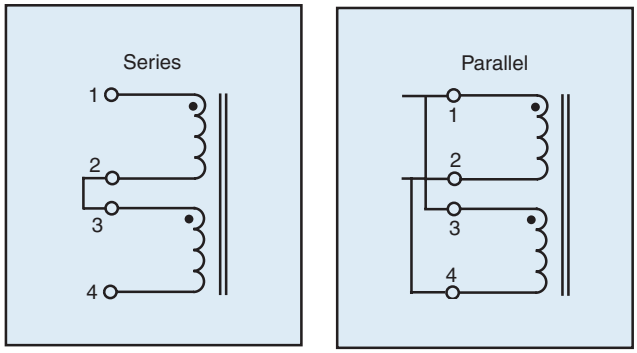
Filter and Dual Chokes
Chassis Mount



Signal's CH and CL chokes are designed to complement the rectifier power transformers so that a set may be specified for DC power supplies using inductive filters.

General Specifications

- Inductance - 0.12 MHY to 100 MHY
- DC Current - 1.0 ADC to 200 ADC
- Insulation System - Class B insulation, 130° C



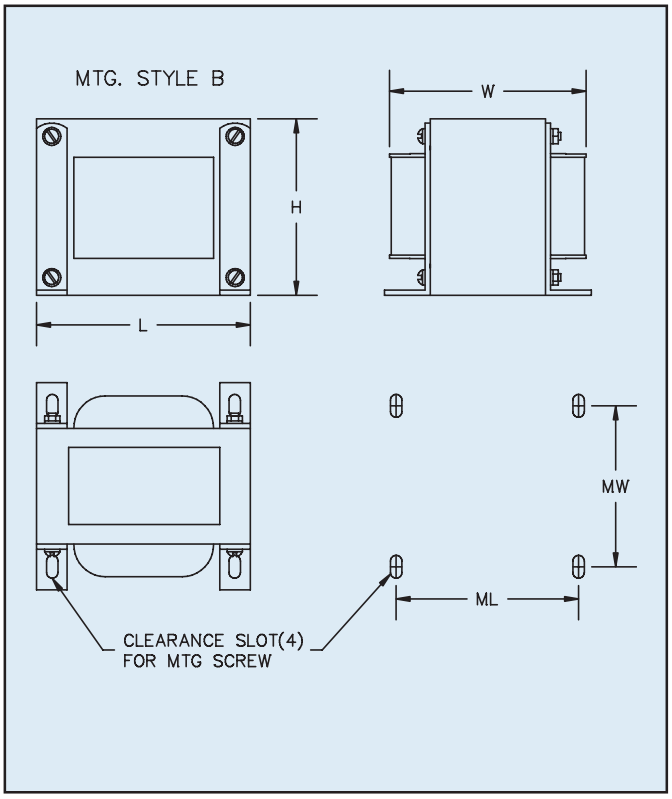
Part Number	Inductance	Current	Resistance	Mounting Style	Dimensions					Mounting Screw	Weight
					L	W	H	ML	MW		
	MHY	Amps	Ohms		Inches (mm)						lbs (kg)
CH-1	100	1	1.5	B	3.00 (76.2)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	2.00 (50.8)	#8	2.3 (1.04)
CH-2	70	2	0.9	B	3.37 (85.7)	2.75 (69.9)	2.87 (73.0)	2.81 (71.4)	2.12 (53.9)	#8	3.2 (1.45)
CH-4	70	4	0.6	B	3.75 (95.3)	3.12 (79.4)	3.25 (82.6)	3.12 (79.4)	2.50 (63.5)	#8	5.3 (2.40)
CH-6	40	6	0.4	B	3.75 (95.3)	3.62 (92.1)	3.25 (82.6)	3.12 (79.4)	3.00 (76.2)	#8	6.5 (2.95)
CH-8	30	8	0.3	B	4.12 (104.8)	3.62 (92.1)	3.50 (88.9)	3.43 (87.3)	3.00 (76.2)	#10	8 (3.63)
CH-12	15	12	0.1	B	5.25 (133.4)	4.00 (101.6)	4.43 (112.7)	4.37 (111.1)	3.12 (79.4)	#10	13.7 (6.21)
CH-16	15	16	0.08	B	5.25 (133.4)	4.62 (117.5)	4.43 (112.7)	4.37 (111.1)	3.62 (92.0)	#10	17.5 (7.94)
CH-20	7	20	0.05	B	5.25 (133.4)	4.00 (101.6)	4.43 (112.7)	4.37 (111.1)	3.12 (79.4)	#10	13.3 (6.03)
CH-25	5	25	0.025	B	5.25 (133.4)	4.75 (120.7)	4.43 (112.7)	4.37 (111.1)	3.87 (98.4)	#10	17.8 (8.07)
CH-30	4	30	0.01	B	6.37 (161.9)	5.00 (127.0)	5.37 (136.5)	5.31 (134.9)	3.37 (85.7)	1/4	24.4 (11.07)
CH-50	1.4	50	0.01	B	6.37 (161.9)	5.25 (133.4)	5.37 (136.5)	5.31 (134.9)	3.75 (95.3)	1/4	26.7 (12.11)
CH-100	0.5	100	0.005	B	6.37 (161.9)	6.25 (158.8)	5.37 (136.5)	5.31 (134.9)	4.12 (104.8)	1/4	31.4 (14.24)
CH-200	0.3	200	0.001	B	7.50 (190.5)	7.50 (190.5)	6.25 (158.8)	6.75 (171.5)	4.12 (104.8)	1/4	48.0 (21.77)

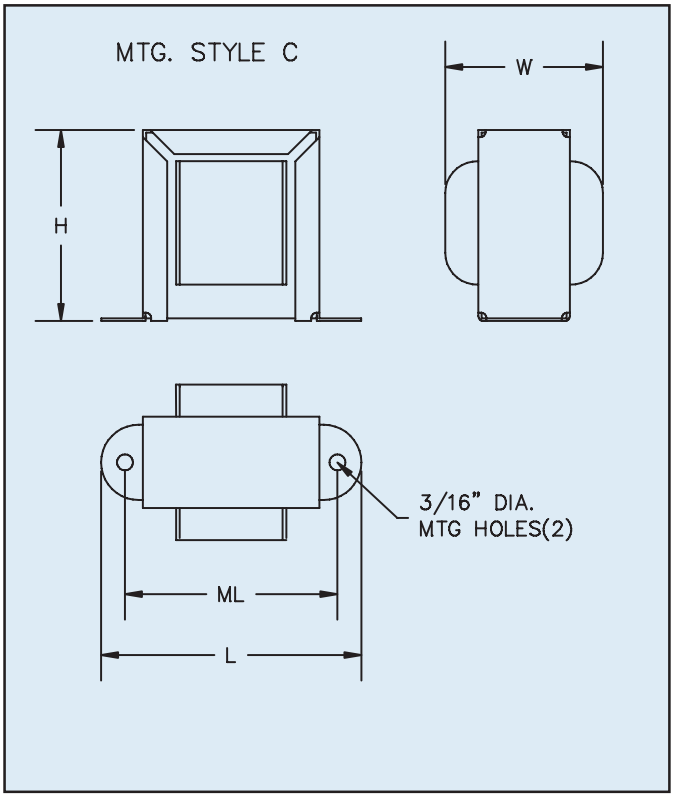
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Filter and Dual Chokes
Chassis Mount





Part Number	Series Connected			Parallel Connected			Mounting Style	Dimensions					Mounting Screw	Weight
	Ind.	Curr.	Res.	Ind.	Curr.	Res.		L	W	H	ML	MW		
	MHY	Amps	Ohms	MHY	Amps	Ohms		Inches (mm)						lbs (kg)
CL-1-2	72	1	1.4	18	2	0.35	C	2.87 (73.0)	1.75 (44.5)	2.31 (58.7)	2.37 (60.3	—	#8	0.9 (0.41)
CL-2-4	40	2	0.7	10	4	0.18	C	3.12 (79.4)	2.12 (53.9)	2.75 (69.9)	2.81 (71.4)	—	#8	1.5 (0.68)
CL-4-8	20	4	0.3	5	8	0.075	B	3.00 (76.2)	2.87 (73.0)	2.50 (63.5)	2.50 (63.5)	2.50 (63.5)	#8	3.0 (1.36)
CL-6-12	12	6	0.15	3	12	0.038	B	3.37 (85.7)	3.06 (77.7)	2.81 (71.4)	2.81 (71.4)	2.50 (63.5)	#8	4.0 (1.81)
CL-12-24	4.8	12	0.052	1.2	24	0.013	B	3.37 (85.7)	3.56 (90.5)	2.81 (71.4)	2.81 (71.4)	3.00 (76.2)	#8	5.3 (2.40)
CL-25-50	1.2	25	0.012	0.3	50	0.003	B	3.75 (98.3)	3.37 (85.7)	3.37 (85.7)	3.12 (79.4)	2.75 (69.9)	#8	6.0 (2.72)
CL-50-100	0.5	50	0.0043	0.12	100	0.0011	B	4.50 (114.3)	3.75 (95.3)	3.75 (95.3)	3.75 (95.3)	2.50 (63.5)	#8	8.0 (3.63)

Signal's dual chokes are supplied with 2 windings which may be series or parallel connected with rating shown on chart. This line is designed for applications requiring lower inductance value at high currents such as low voltage, DC supplies or SCR filters.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Power Isolation Transformers

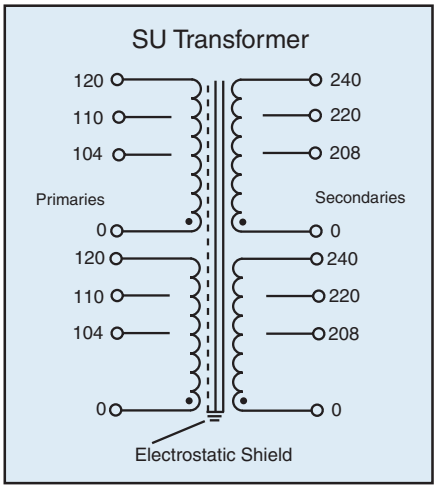
Industrial Grade Step-Up or Step-Down Transformers

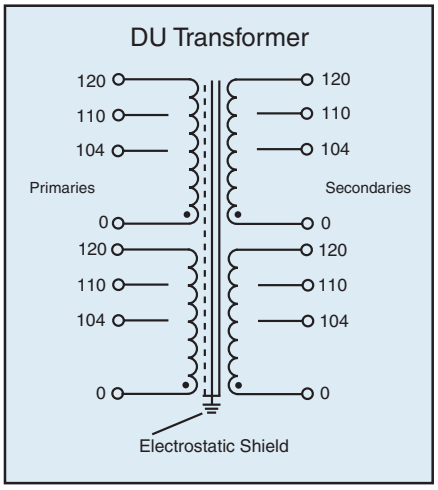
Signal's DU and SU transformers have been designed to provide a multitude of step-up or step-down voltages to accommodate various input voltages available throughout the world.

General Specifications

- Power - 250 VA to 10 KVA (500 VA to 20 KVA possible if used as auto-transformer)
- Dielectric Strength - 2500 Vrms Hipot
- Primaries - Dual/tapped primaries: Parallel connected (104V, 110V, 120V - 50-500 Hz) Series connected (208V, 220V, 230V, 240V)
- Secondaries - Dual/tapped secondaries:
  DU Series - Parallel connected (104V, 110V, 120V - 50-500 Hz)
  Series connected (208V, 220V, 230V, 240V - 50-500 Hz)
  SU Series - Parallel connected (208V, 220V, 240V - 50-500 Hz)
  Series connected (416V, 440V, 460V, 480V - 50-500 Hz)
- Electrostatic Shield - Solid copper foil connected to ground. The connection may be opened if an un-grounded shield is desired.
- Terminals - Plated brass screw-type terminals
- Insulation System - Class B, 130° C
- Higher insulation classes available

RoHS 2002/95/EC





As shown on the schematic diagram the DU line incorporates dual primaries and secondaries. All four windings are identically rated at 0/104/110/120V. This permits series or parallel connections on either primary or secondary. Therefore, a nominal 110V to 110V, 220V to 220V, 110V to 220V, or 220V to 110V transformer can be configured. The winding tap permits intermediate series ratings such as 208V, 214V, or 230V. It is also possible to make auto-transformer connections by connecting a primary group in series with a secondary group. Such nominal ratings as 440V to 220V or 220V to 440V can be configured in addition to the standard ratings described above. A further advantage to auto-transformer connection is the fact that the KVA rating of a particular type is doubled.

Part Number	KVA	Series Secondaries		Parallel Secondaries	
		Volts	Max Amps	Volts	Max Amps
DU-1/4	1/4	0/208/220/240	1.1	0/104/110/120	2.2
DU-1/2	1/2	0/208/220/240	2.3	0/104/110/120	4.6
DU-1	1	0/208/220/240	4.5	0/104/110/120	9
DU-2	2	0/208/220/240	9	0/104/110/120	18
DU-3	3	0/208/220/240	14	0/104/110/120	28
DU-5	5	0/208/220/240	23	0/104/110/120	46
DU-7.5	7.5	0/208/220/240	31	0/104/110/120	62
DU-10	10	0/208/220/240	41	0/104/110/120	82

Part Number	KVA	Series Secondaries		Parallel Secondaries	
		Volts	Max Amps	Volts	Max Amps
SU-1/4	1/4	0/416/440/480	0.55	0/208/220/240	1.1
SU-1/2	1/2	0/416/440/480	1.15	0/208/220/240	2.3
SU-1	1	0/416/440/480	2.25	0/208/220/240	4.5
SU-2	2	0/416/440/480	4.5	0/208/220/240	9
SU-3	3	0/416/440/480	7	0/208/220/240	14
SU-5	5	0/416/440/480	11.5	0/208/220/240	23
SU-7.5	7.5	0/416/440/480	15.5	0/208/220/240	31
SU-10	10	0/416/440/480	20.5	0/208/220/240	41

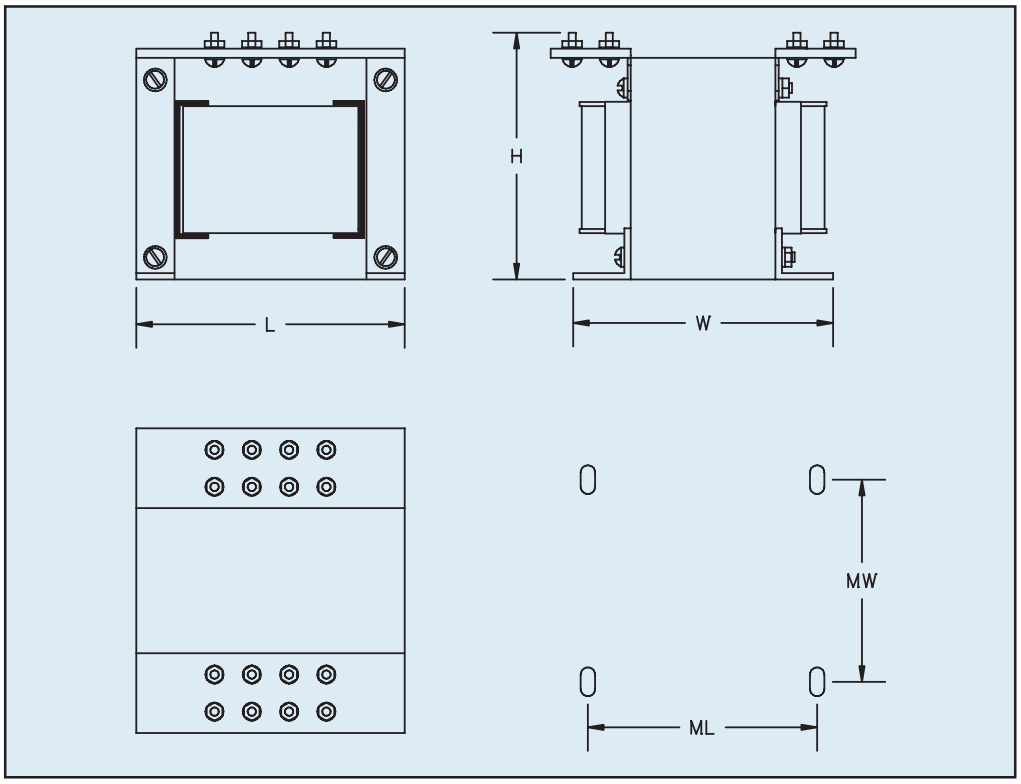
Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Power Isolation Transformers

Industrial Grade Step-Up or Step-Down Transformers



Part Number		Dimensions					Mtg. & Term. Screw	Weight
		L*	W*	H*	ML†	MW‡		
		Inches (mm)						lbs (kg)
DU-1/4	SU-1/4	5.31 (134.9)	4.25 (107.9)	5.25 (133.4)	4.37 (111.1)	2.50 (63.5)	#10	12 (5.44)
DU-1/2	SU-1/2	5.31 (134.9)	5.31 (134.9)	5.25 (133.4)	4.37 (111.1)	3.62 (92.1)	#10	18 (8.16)
DU-1	SU-1	7.56 (192.1)	6.25 (158.8)	7.37 (187.3)	6.75 (171.5)	4.12 (104.8)	1/4	33 (14.97)
DU-2	SU-2	7.56 (192.1)	8.25 (209.6)	7.37 (187.3)	6.75 (171.5)	6.00 (152.4)	1/4	56 (25.40)
DU-3	SU-3	7.56 (192.1)	9.25 (234.9)	7.37 (187.3)	6.75 (171.5)	7.00 (177.8)	1/4	70 (31.75)
DU-5	SU-5	7.56 (192.1)	10.75 (273.1)	7.37 (187.3)	6.75 (171.5)	8.50 (215.9)	1/4	89 (40.37)
DU-7.5	SU-7.5	9.00 (228.6)	10.75 (273.1)	8.00 (203.2)	7.50 (190.5)	6.50 (165.1)	1/4	105 (47.63)
DU-10	SU-10	9.00 (228.6)	13.00 (330.2)	8.00 (203.2)	7.50 (190.5)	9.00 (228.6)	1/4	150 (68.04)

*Maximum
† ± 0.6 (1.6mm)
‡ ± 0.12 (3.2mm)

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Industrial Control Transformers

Isolation and Buck Boost in a NEMA 3R Compliant Enclosure

The **ICT** series is designed with flexibility to support both isolation and/or buck boost severe duty applications while offering many standard features.

Features

- Epoxy encapsulated, impervious to atmospheric conditions
- Incorporates Class H 180.0C, UL 1446 insulation systems
- Powder-coated, NEMA 3R-compliant steel case
- Line isolation and stray field filtering
- Bottom and/or side conduit access
- Convenient side or top mounting offers easy access
- Available with optional NEMA cord set and outlet
- Suitable for both indoor and outdoor applications
- Standard input voltage: 115, 230, and 480
- Standard available outputs: 12, 16, 20, 24, and 115
- Electrostatic screen (ESS) terminal
- Conforms to UL 506, 508, and 5085-2

RoHS 2002/95/EC

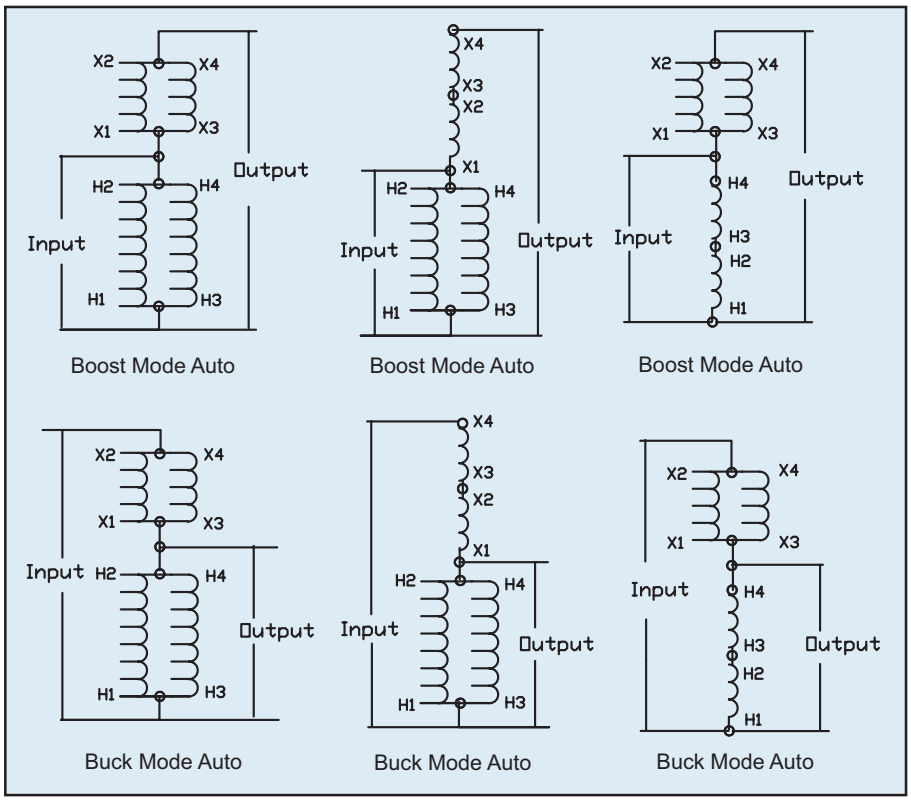
Part Number Configuration
Based on the case size, input voltage, and output voltage required.

Input Voltages	
S	2 x 115V
H	2 x 240V

Output Voltages	
12	2 x 12V
16	2 x 16V
20	2 x 20V
24	2 x 24V
115	2 x 115V

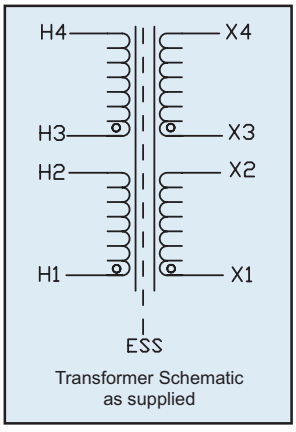
ICT-	X-	Y-	Z-	P
Series Designation	Input Voltage S H	Case Size A B C	Output Voltage 12 16 20 24 115	Plug/ Recept. Option*

ICT Series Part Number Logic
P(*) - Configured for 115 V Single Output



Case Size	Isolation Mode	Buck Boost Mode
	VA (max)	
A	500	1000
B	1000	2000
C	1800	3600

Case Size Selection
When configured in buck or boost modes, the ICT transformer's maximum VA rating exceeds the VA rating listing for isolation mode. The maximum VA ratings are contingent on the actual configuration. Please consult Signal for specific application requirements.



Transformer Schematic as supplied

Notes:
1. Units with optional line cords are for indoor use only.
2. Contact Signal for compliance services.

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

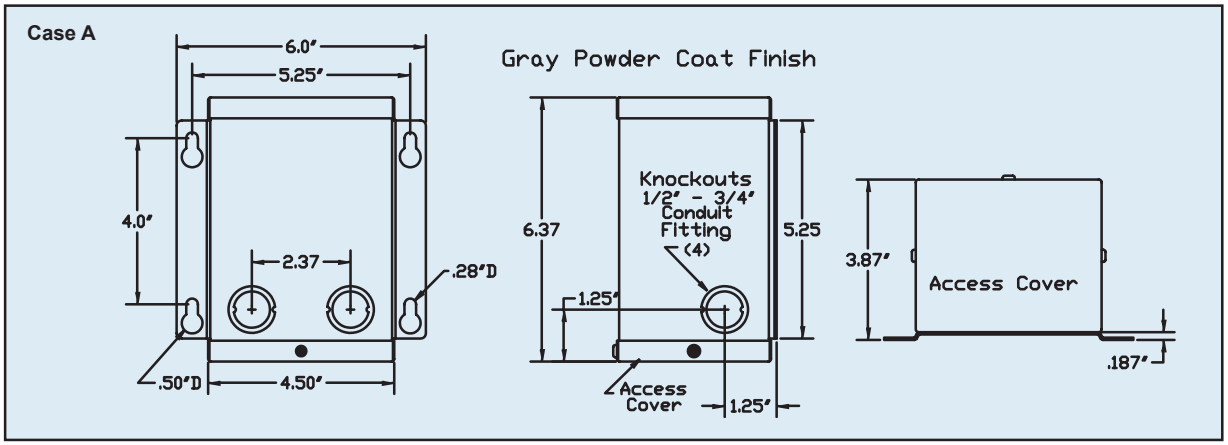
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Industrial Control Transformers

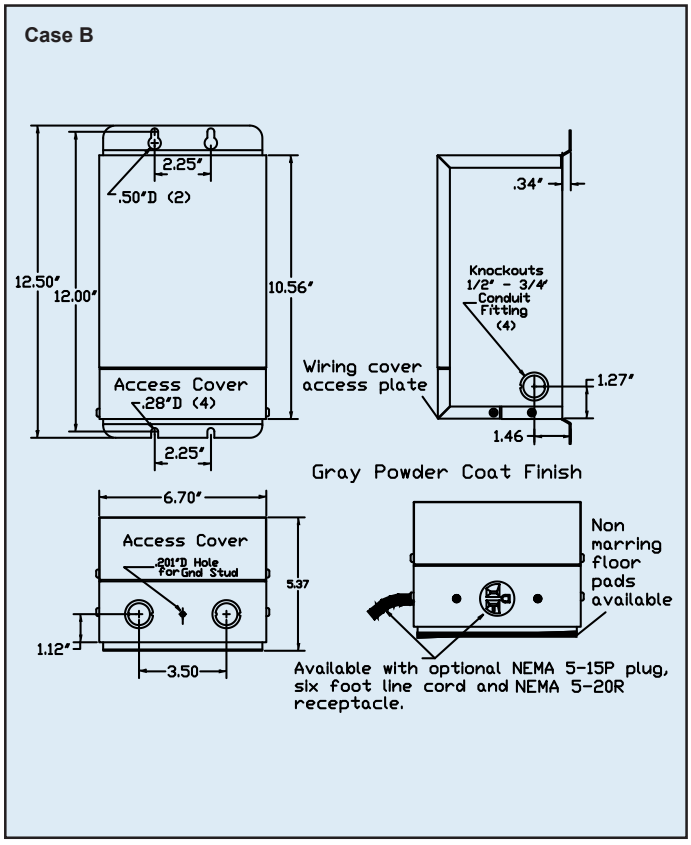
Isolation and Buck Boost in a NEMA 3R Compliant Enclosure

RoHS 2002/95/EC

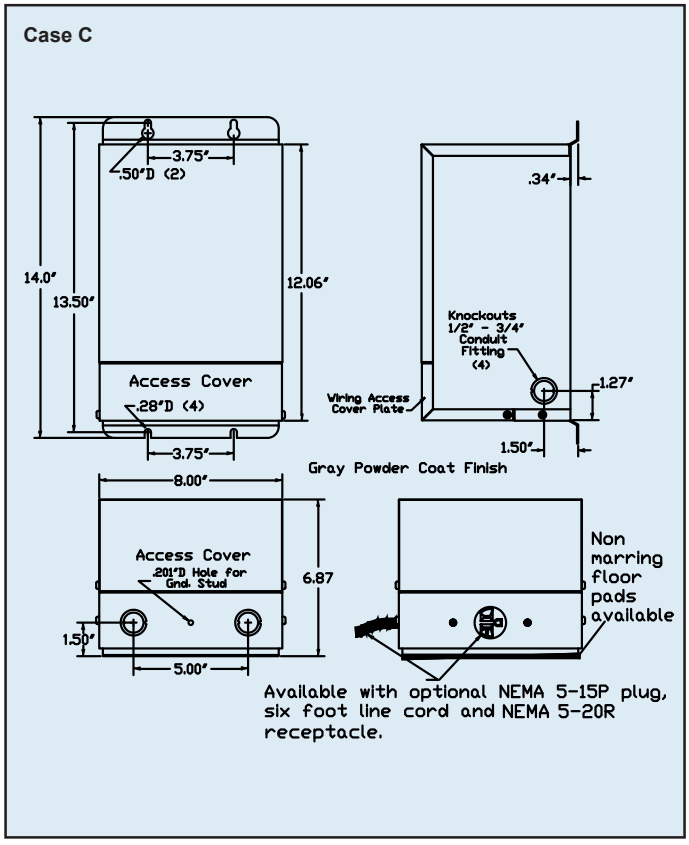
Case A



Case B



Case C



Custom versions available upon request.

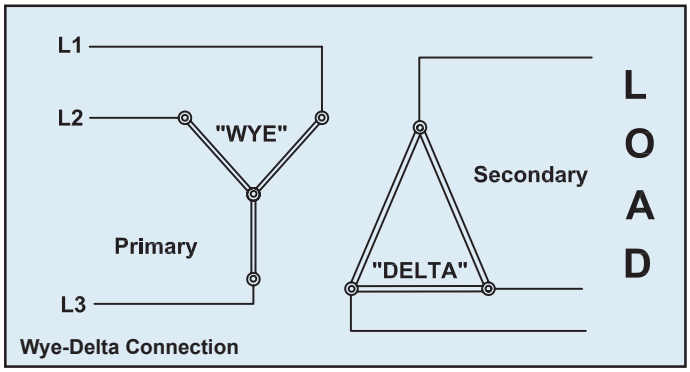
Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

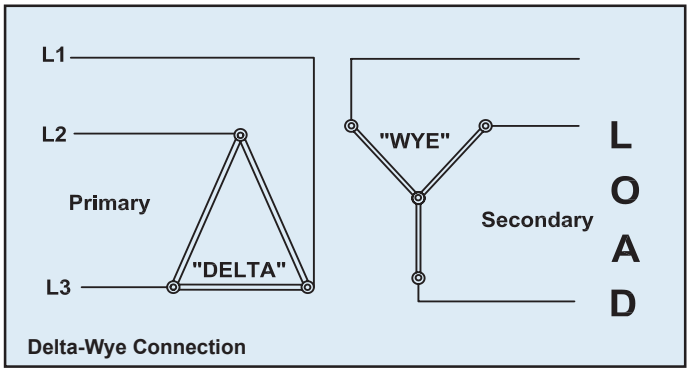
Three Phase Transformers

Custom Designs to Meet Your Requirements
Available with UL Recognition

Signal's Three Phase transformers support power distribution, as well as low or high voltages and currents.



Wye-Delta Connection



Delta-Wye Connection

Capabilities
From small PC mount 100 VA devices to large 45 KVA designs, we tailor these transformers to your specific needs. Our Three Phase transformers are designed to cover a frequency range of 50 to 400 Hz, can be shielded or unshielded, and are suitable for a wide variety of applications from medical equipment to avionics systems.

Agency Approvals
With our vast experience and multiple designs already registered and agency approved, Signal can expeditiously process your UL/CSA or any other certification and approval that you require.

Configurations
Transformers can be supplied prewired for D (Delta) or Y (Wye) configurations for your specific installation requirements. Transformers are available with multiple taps, fuses, thermal cut-off, and multiple hardware and termination schemes. Our miniature Three Phase transformers are available for through hole, printed circuit board mounting.

Materials
Signal's Three Phase Transformers are constructed with copper windings and grain-oriented silicon core materials assuring extremely high efficiency and the lowest loss possible. We manufacture using only the highest grade electrical insulation materials in order to meet the most demanding isolating applications and temperature requirements.

Fast Response and Delivery
For most designs, we'll provide a quote within 48 hours and deliveries follow within a few weeks.

Request a Quote
Let us quote your existing requirements or your new design. You'll be glad that you called Signal.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

High Frequency Custom Transformers

Custom Designs To Meet Your Requirements

- Transformers for switch-mode power supplies
- Telecom coupling transformers
- Common mode chokes
- Current sensing transformers
- Surface mount or through hole packaging
- Platforms Available
  - EE/EI/UI core
  - RM core
  - PQ core
  - U core
  - EP core
  - ETD/EFD core
  - Toroidal - powder iron or ferrite
- Agency certifications available upon request
- Call or email with specific requirements

Custom versions available upon request.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

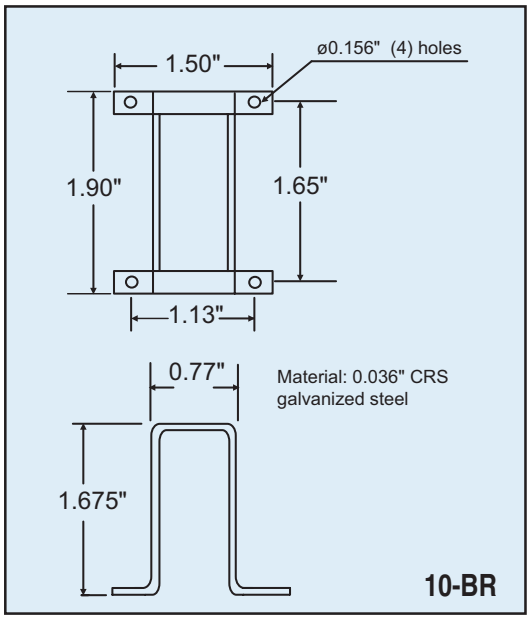
Accessories

Mounting Hardware | TransPort™ Connectors

RoHS 2002/95/EC

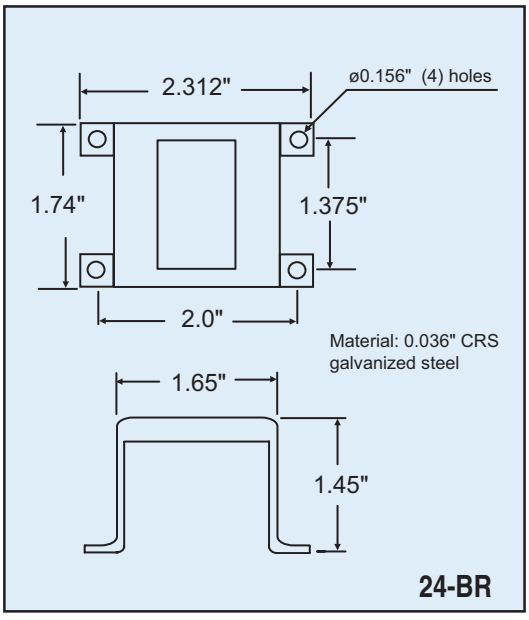
- Signal's accessory products include brackets, screws and TransPort™ connectors to be used in conjunction with a variety of our power transformers.

Brackets

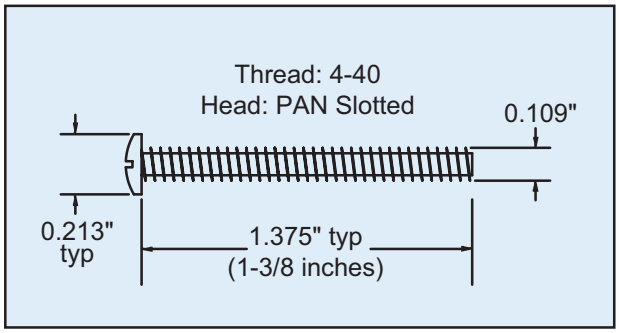


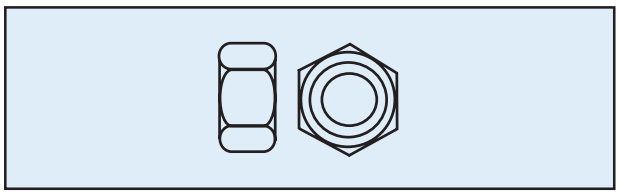
Bracket Number	MW	MD
	Inches (mm)	
10-BR	1.65 (41.9)	1.13 (28.7)
24-BR	1.37 (34.9)	2.00 (50.8)

- 10-BR bracket for use with Signal's 10VA size PC, DPC, MPC, and DMPC series transformers
- 24-BR bracket for use with Signal's 24VA size PC, DPC, MPC, and DMPC series transformers
- Please refer to transformer data sheets for details on bracket compatibility and transformer part numbers



Screws





Part Number	Description
ST-MS*	Slotted pan screw 4-40, 1 3/8" long, plastic
ST-MN*	Hex nut 4-40, plastic
250-FO-SL*	1/4" Fast-on spade lug (used with TransPort™ connectors)

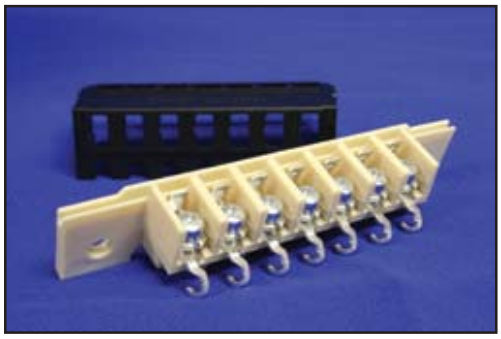
* Sold in bags of 100 only.

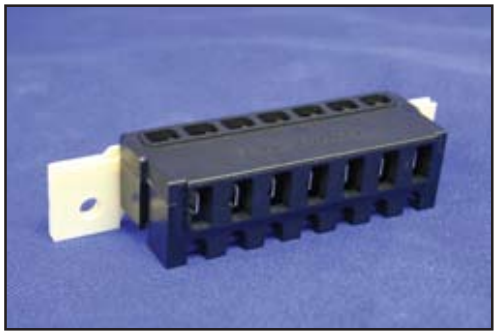
- For use with Signal's 14A, ST, DST, LP, and MPL series transformers
- Slotted pan screw 4-40 x 1 3/8" thread size (part number ST-MS)
- Compatible with 4-40 hex nut (part number ST-MN)

Signal Transformer
www.signaltransformer.com
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Accessories

Mounting Hardware | TransPort™ Connectors





TransPort™ Connectors

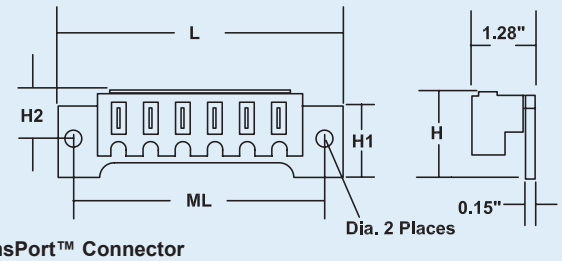
- Provides touch safe terminations and conforms to IEC60529 / IP20 requirements
- Designed to support multiple connection schemes
- For use on power transformers, inductors, and reactors with EI core assemblies
- VDE certified to EN 60998-2-1 (VDE 0613), rated at 450V, 41A, Reg-Nr B503
- CSA certifed to CAN/CSA C22.2 (# 0-M91, 158-1987), Certificate # 1803371
- Certifed to UL 1059, UL 310 and UL 486E
- RoHS compliant

TransPort™ connectors provide touch safe electrical terminations for power transformers, inductors, and reactors with EI-type core assemblies. The connectors may also be attached to bulkheads and chassis where touch safe terminations are required.

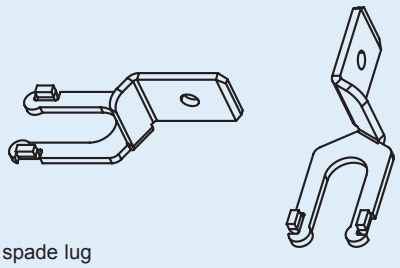
The connectors' modular design provides superior strength and rigidity over singular terminal components while minimizing handling and storage issues. This series offers multiple connection schemes in one compact package including 3/16" and 1/4" Fast-On as well as screw/binding clamp for hard wiring. Integral mounting holes provide secure attachment with no need for additional insulating hardware.

Note: The 1/4" Fast-On spade lug P/N 250-FO-SL can also be purchased separately.

TransPort™'s unique modular design supports multiple connection schemes.



TransPort™ Connector



250-FO-SL
1/4" Fast-on spade lug

Part Number	Positions	Diameter	L	ML	H	H1	H2
TB-1-1/4-6	6	0.224	3.5	3.12	1.08	0.81	0.86
TB-1-3/8-7	7	0.224	4.1	3.45	1.18	0.91	0.92
TB-1-1/2-7	7	0.224	4.2	3.75	1.08	0.81	0.78
TB-1-3/4-8	8	0.312	5.0	4.39	1.08	0.81	0.73
TB-2-1/8-8	8	0.312	6.2	5.33	1.08	0.81	0.73
TB-2-1/4-8	8	0.312	6.9	5.84	1.08	0.81	0.73
TB-2-1/2-8	8	0.312	7.4	6.68	1.08	0.81	0.73

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

The following sections present a practical guide for the selection of power supply transformers, rectification schemes and filter components. A number of basic assumptions have been made to allow focusing on the basics of the presentation. For those interested in a rigorous theoretical analysis, there are a number of fine references available (a few are listed further along). Additionally, circuit analysis using appropriate analytical software (SPICE or its equivalent) is recommended in the uncommon instance where better understanding of a particularly complex application is needed, or when it becomes necessary to optimize some secondary aspect of a design. Computer analysis has proven to be particularly useful in understanding areas that are difficult to quantify using traditional circuit analysis methods; areas such as capacitor RMS ripple current.

Specifying Power transformer parameters for a particular DC power Supply is something almost all designers confront at some point. Proper specifications will vary and are subject to both the rectifier configuration and the filtering schemes selected. Therefore, for the sake of clarity, it is useful to employ some simplifying assumptions. That said, the results obtained from the simplified formulas that follow should still prove to be valid in 99% of mainstream applications. This workup also presents some useful rules of thumb, biased toward ensuring conservative designs.

Filters

Choke input filters are very much out of favor due to the weight and cost of the chokes and the improved ability of regulators to provide ripple reduction superior to that of the typical L-C network. For these reasons, this discussion deals exclusively with capacitor input filters. Additionally, it should be noted that modern regulators excel at overcoming the acknowledged poor output voltage regulation associated with capacitive input filters.

Another noteworthy disadvantage of the capacitive input filter is the discontinuous secondary current flow (high peak-to-average ratio of forward diode current). Current is drawn in short, high amplitude pulses to replace the charge of the filter's input capacitor which discharges into the load during diode off-time. This results in higher effective RMS values of transformer secondary current. However, the transformer's average VA rating is the same as one feeding a choke input filter because the higher DC output voltage obtained at the capacitor compensates for this effect. In addition, except for some supplies handling very high currents, average semiconductor diodes can now easily meet the typical peak or surge current requirements imposed by capacitive input filters

Rectifier Circuit

1. **Half Wave (single diode)**
   The only advantages of the half-wave rectifier are its simplicity and the savings in cost of one diode. Its disadvantages are many:

   1. Extremely high current spikes are drawn during the capacitor charging interval (only one current surge per cycle). This current is limited only by the effective transformer and rectifier series impedances, but it must not be too high or it will result in rectifier damage. The short, once-per-cycle, current spike also results in very high secondary RMS currents.

   2. The unidirectional DC current in the transformer secondary biases the transformer core with a component of DC flux density. As a result, more "iron" is needed to avoid core saturation. About the only time it would pay to consider using a half-wave rectifier is at very low DC power levels of about 1 watt or less. At these levels a power transformer cannot be reduced very much in size (at reasonable cost) and a small filter capacitor will be large enough for adequate DC smoothing.

   The remaining single-phase rectifier circuits are of the "full-wave" type. Secondary current surges occur twice per cycle so that they are of smaller magnitude and the fundamental ripple frequency is double the supply frequency (i.e., 120 Hz rather than the 60 Hz of a half-wave circuit). All full-wave rectifiers apply the same basic rectified waveform to the filter's input capacitor.

2. **Full-Wave Center-Tap**
   Uses 1/2 of secondary winding at a time Requires a center-tapped winding and the use of 2 diodes

Signal Transformer
www.signaltransformer.com

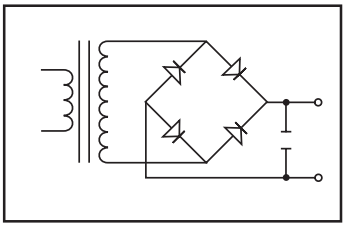
500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

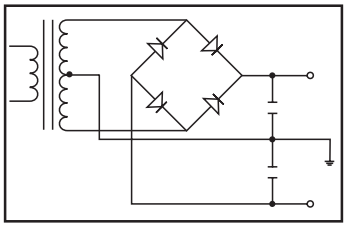
3. Full-Wave Bridge

Uses full secondary winding continuously with no requirement for center-tap. This bridge requires 4 diodes. As can be seen above, the choice between FWCT and bridge configurations is a tradeoff. The bridge rectifier has the best transformer utilization but requires the use of 4 diodes. The extra diodes result in twice the diode voltage drop of a FWCT circuit so that the FWCT is usually preferable in low voltage supplies.

The remaining choice is that of a rectifier circuit configuration. The most common single phase circuits are:



Full-Wave Bridge

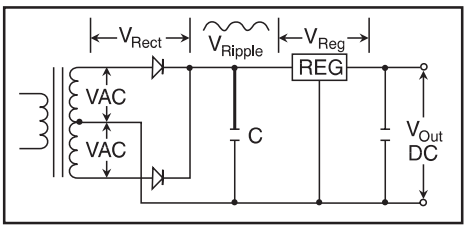


Dual Complementary Rectifier

4. Dual Complementary Configuration (full wave center tap with 4 diodes)

The dual complementary rectifier circuit is the combination of two FWCT circuits and offers a very efficient way of obtaining two identical outputs of reversed polarity sharing a common ground. It is also termed a "center-tapped bridge rectifier."

The diagram below represents a full wave center-tapped Rectifier using a capacitive filter. This represents the most common choice for moderate power, regulated DC supplies.



Full Wave Center Tap

The following assumptions can safely be made:
1. VREG is approximately 3 volts DC or greater
2. VRECT is about 1.25 volts DC.
3. VRIPPLE is about 10% VDC peak.

The following formula may be used to determine transformer secondary voltage:

$$V_{AC=} \frac{V_{Out} + V_{Reg} + V_{Rect} + V_{Ripple}}{0.9} \times \frac{V_{Nom}}{V_{Lowline}} \times \frac{1}{\sqrt{2}}$$

where: 0.9 = rectifier efficiency (typical)

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

VNOM divided by VLOWLINE is the ratio of nominal AC line voltage to the specified low line conditions.

A sample calculation appears below for a supply requiring an output of 5V DC at 2A with a minimum input voltage specification of 95V RMS.

V_{OUT} = 5V
V_{REG} = 3V
V_{RECT} = 1.25V
V_{RIPPLE} = 0.5 ($1V_{PP}$)

$$V_{AC} = \frac{9.75}{0.9} \times \frac{115}{95} \times \frac{1}{\sqrt{2}} = 9.27\ V_{AC}$$

As a result VAC would be reformulated as:

$$V_{AC} = \frac{11}{0.9} \times \frac{115}{95} \times \frac{1}{\sqrt{2}} = 10.46\ V_{AC}$$

so that the transformer's secondary voltage now computes to approximately 10.5V.

Transformer Secondary Current

It remains to determine the transformer's required RMS secondary current. This can only be precisely determined by complex analysis. However, for practical engineering purposes the following chart may be used:

Rectifier Type	Filter Type*	Required RMS Secondary Current Rating
Full-Wave Center-Tap	Choke Input	0.7 x DC Current
Full-Wave Center-Tap	Capacitor Input	1.2 x DC Current
Full-Wave Bridge	Choke Input	DC Current
Full-Wave Bridge	Capacitor Input	1.8 x DC Current

**Even though choke input filters were excluded from this discussion, they are included for reference.*

For instance, in the example above (5 V, 2A DC supply) the transformer RMS current would be:
1.2 x 2 = 2.4 A for a FWCT configuration or…
1.8 x 2 = 3.6 A for a Bridge configuration

The total transformer specification would then be:

Circuit	Secondary Rating	Possible "Signal" Parts
FWCT	18.5 CT @ 2.4A RMS = 43.2 VA	241-7-20, 36-1
bridge	10.5 @ 3.6A RMS = 36 VA	ST-7-10, 241-6 or 7-10, 10-4

Dual Complementary Supply

One more common example is as follows; a dual complementary supply for +/- 15 V @ 100 mA DC.

$$V_{AC} = \frac{(15 + 3 + 1.25 + 0.75)}{0.9} \times \frac{115}{95} \times \frac{1}{\sqrt{2}} = 19V$$

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

The transformer secondary rating is 38 V CT @ 180 mA RMS. Possible Signal parts for this application would be ST-4-36, PC-34-300, PC-40-250. However, a cautionary calculation must be made. This is computing the increase in voltage at the filter capacitor (into the regulator) caused by a high line condition. If we assume the highest line voltage to be 130 V AC then the transformer output (compared to low line) would rise by the ratio 130/95.

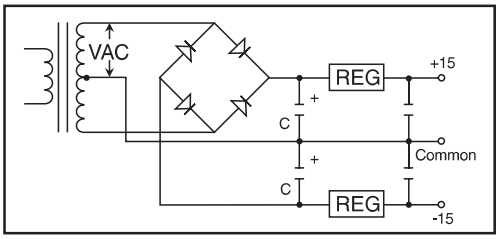
For the 5V supply, for instance, the rise would be expressed as:

$$V_{AC} = \frac{130}{95} \times 9.27 = 12.7V$$

For the dual complementary +/-15 V supply:

$$V_{AC} = \frac{130}{95} \times 19 = 26V$$

This increase in output must be absorbed by the regulator, which mandates a higher level of regulator power dissipation. The above values are safe for a typical IC regulator but this parameter should be checked for your specific application.



ADDITIONAL FACTORS TO BE CONSIDERED IN TRANSFORMER SELECTION

Load Regulation

It has been assumed up to now that changes in transformer secondary voltage due to line voltage fluctuation have had no effect on load current. Therefore the transformer would appear to be “ideal” and the transformer secondary voltage (VAC) would always remain the same. Actually, all the calculated voltages are assumed to be present under full load conditions.

Since transformers are not ideal and have an internal impedance or “regulation” characteristic, variations in load current may cause a problem. If the load should be light at “high line,” then there will be an additional rise in secondary voltage, beyond that due to the rising line voltage. This effect is caused by the decreasing voltage drop in the transformer’s windings.

Most smaller VA transformers (<10 VA) have a load regulation of 20% or higher. This means that the transformer’s no-load voltage will be 20% or more above its rated full-load voltage. This must be taken into account when calculating maximum VAC (and DC voltage into regulator) under low load current conditions.

Due to inherent characteristics of transformers, “regulation” will vary inversely with size (VA rating). In larger transformers, size is dictated primarily by the heat resulting from internal losses. In smaller transformers, (low VA rating) size is determined by the allowable level of no-load to full-load regulation. Curiously, even though this is an important design consideration, most transformer manufacturers do not publish load regulation data. The chart below tabulates load regulation for Signal’s standard transformer series’.

It is possible to estimate the output voltage at intermediate loads since load regulation varies in an almost linear fashion.

For example, the 241-8-16 has a full load rating of 16 V @ 6.25 A and a regulation of 10%. Its no-load output would be 10% more than 16 or 17.6 V. At half load (3.12 A) its output would be 5% more than 16 or 16.8 V. Similar estimates can be made for any percentage of full load. Another fact to bear in mind is that it is possible to safely exceed the VA rating of many small power transformers. If the added regulation (drop in output voltage) is acceptable; an “overload” condition may be permissible because the design is regulation-limited rather than heat rise-limited. If this approach is being considered, the decision should be reviewed by Signal’s Engineering Dept.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

Signal Transformer - % Load Regulation of Standard Transformers		
Family or Series	Size or VA Rating	Approx. % Regulation
14A & 14A-R	2.5, 5.0, 10VA	30
	20, 30 & 56 VA	20
IF (International Flathead)	2VA-18VA	21-27
	24VA & 30VA	20
A41	25VA	20
	43VA	15
	80 & 130VA	10
	175VA	8
MPI	200VA-900VA	4-10
HPI	2KVA-3.5KVA	2-4
M4L	3, 6, 10	8
ST & DST SPLIT TRAN	ST-2	30
	ST, 3, 4, 5, 6 & 7	20
PC & DPC	ALL	20
LP (Flathead)	2.5 & 6VA	30
	12, 24 & 48VA	20
241 & DP241	2.4 TO 12VA SIZES 3, 4, 5	20
	30 & 56VA SIZES 6 & 7	15
	100VA SIZE 8	10
RECTIFIER TYPES	1 TO 100VA	10
	100 TO 350VA	8
	500VA OR OVER	5% OR LESS

% load regulation is defined as: $\frac{V_{nl} - V_{fl}}{V_{fl}} \times 100\ \%$

or the % rise in output voltage at no load as compared to full load.

Temperature Rise

In power transformers over 25VA, temperature rise becomes a factor. The transformer may be constructed with materials capable of withstanding higher temperatures and may represent a perfectly valid design yet extra power dissipation may cause heating of nearby components and will certainly increase the temperature in the transformer's vicinity.

The real problem is not the internal temperature of the transformer, so much as the actual increase in watts lost as heat to its surroundings.

Shielding

Certain AC power line noise and transients can pass through to the transformer's secondary because of inter-winding capacitance. This is a "design specific" problem and is very difficult to analyze.

Whether or not it represents a problem in a particular application can be best determined using empirical methods. If such feed through is a problem, the most common first step is to select a transformer incorporating an electrostatic shield between the primary and secondary windings. This effectively reduces the inter-winding capacitance. An equal and sometimes superior approach is to choose transformers with non-concentric windings. i.e. with primary and secondary wound side by side rather than one over the other. Both these techniques result in at least an order of magnitude reduction in capacitive coupling. The "non-concentric" approach however gives superior reductions. It also results in high insulation resistance, making it simpler to survive higher insulation test voltages. Certain types of transient feed through cannot be inhibited by transformer design parameters so other approaches such as; line filters, "MOV's, or ZNRs (transient surge suppressors) may need to be considered.

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

Summary

The preceding has been an attempt to provide a simple, practical method of specifying transformers for main stream applications. Certain simplifying assumptions were made so this work-up does not represent a rigorous academic analysis. For those who wish to utilize more detail in their analyses, materials are readily available in the literature (see below).

References:

For more detailed theoretical analysis the following sources are recommended:

Source 1	Source 2	Source 3
Reuben Lee	EE Staff - MIT	O.H. Schade
Electronic Transformers and Circuits	Magnetic Circuits and Transformers	Proc. IRE, Volume 31, page 356
1947, John Wiley & Sons	1943, John Wiley & Sons	1943

COMMENTS ON CAPACITOR & DIODE SELECTION

Capacitor Selection

For low current supplies ($I_{OUT}<IA$) capacitor selection is relatively straight-forward, Capacitance is found by the simple formula:

$$C = \frac{1L \times 6 \times 10^{-3}}{\Delta V}$$

Where: 1 L = DC load current

ΔV = peak-to-peak ripple voltage ripple frequency = 120 Hz.

This yields 2000µ F/amp for 3V p-p ripple. At DC currents below I amp, capacitor heating is usually not a problem and peak-to-peak ripple voltage is the determining factor in capacitor size. At higher values of capacitance, where the ratio of capacitor outside surface area to volume is significantly lower, internal heating becomes a problem. Ripple current rating may be a determining factor in capacitor selection, rather than ripple voltage. In many cases, capacitor size will have to be increased to prevent excessive internal heating. Manufacturers' data sheets should be consulted (after an initial selection is made) to ensure that capacitor ripple current ratings are met. Remember that the RMS ripple current ratings shown on capacitor data sheets are not the same as DC load current. RMS ripple current in a capacitor input filter is 2 to 3 times the load current. In addition, the time-to-failure used to rate capacitors on data sheets is often 10,000 hours. For five-year life (40,000 hours), ambient temperature may have to be derated 30°C from the data sheet rating. Capacitor life roughly doubles for each 15°C reduction in operating temperature. The following calculations illustrate a typical design example:

Assume 1L = 3A, AV = 4V p-p,
VDC = 12V

$$C = \frac{(6 \times l0^{-3})\ (3A)}{4V} = 4{,}500\mu F$$

Manufacturer's rating on a 4,600µ F/20V capacitor @ TA = 65°C is 3.1 A RMS. Dividing by 2.5 to convert from RMS ripple current to output current yields a maximum DC load current of 1.24 amps. Obviously either a large capacitor is required or ambient temperature must be reduced.

As a final note, be sure to check whether the data sheet ratings are for still or forced air. Computer grade capacitors are often rated only for forced air. Other types may be rated for still air and are, therefore, actually more conservatively rated.

Remember that capacitors are the number one cause of power supply failure. Don't let your supplies dominate the statistics column!

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

How to Specify Power Transformer & Filter Parameters

Diode Selection

True RMS value of the current flowing into a capacitor Input filter is 2 to 3 times the DC output current because the current is delivered in short pulses. Assuming a full wave center-tap or bridge, this means that although each diode is conducting only on alternate half cycles, it should be rated for at least the full output current. To ensure adequate surge capability during turn-on, a diode rating of at least twice the output current is recommended, especially for higher current supplies where the ratio of filter capacitance to output current is somewhat higher. Keep in mind that axial lead diodes achieve most of their heat sinking through the leads. Short leads soldered to large area standoffs or printed circuit pads are definitely recommended.

For “short circuit proof” IC regulated supplies using three-terminal regulators, an additional diode derating may have to be used. Long-term output shorts do not harm the regulator, which goes into a current limit or thermal limit mode to protect itself. The diodes, however, may experience a substantial current increase during the short.
Regulator data sheets should be consulted for current limit values, keeping in mind that current limit is a function of input-output voltage differential. At high input voltages, the short circuit current of IC regulators is often less than full load current, tending to alleviate this problem.

METHOD OF DETERMINING SECONDARY CURRENT RATINGS

The secondary currents shown in the tables are RMS ratings. Depending upon rectifier circuit configurations, the RMS secondary current is different from the DC output current. This is indicated in the chart below:
For example, in a F.W. Bridge circuit with a capacitive filter, if the load is 1 Amp DC, the RMS Secondary current is 1.6 to 1.8 Amp RMS.

Rectifier Type	Filter Type	RMS Secondary Current is
Full-Wave Center-Tap	Choke Input	= 0.7 x DC Amps
Full-Wave Center-Tap	Capacitor Input	= 1 to 1.2 x DC Amps
Full-Wave Bridge	Choke Input	= DC Amps
Full-Wave Bridge	Capacitor Input	= 1.6 to 1.8 x DC Amps

Signal Transformer
www.signaltransformer.com

500 Bayview Avenue, Inwood, NY 11096
Toll Free 866-239-5777 • Tel 516-239-5777 • Fax 516-239-7208
sales@signaltransformer.com • techhelp@signaltransformer.com

Signal Transformer

Signal Transformer

500 Bayview Avenue
Inwood, NY 11096-1792
Phone: 516 239 5777
Fax: 516 239 7208
sales@signaltransformer.com
techhelp@signaltransformer.com
www.signaltransformer.com