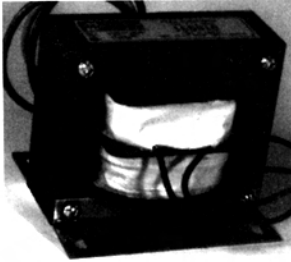


165 SERIES HIGH CURRENT - OPEN FRAME FILAMENT & L.V. RECTIFIER USE TRANSFORMERS



- Primary 115 VAC, 60 Hz.
- All secondaries center tapped, VAC (RMS)
- Open style, 4 hole frame chassis mount
- Minimum 6" long leads or copper tabs with holes
- Dual bobbin design - no electrostatic shield required
- Class A insulation (105 degrees, C)
- Hi-Pot test of 2,000V RMS
- UL listed (#E50394) & CSA certified (#LR3902)

Mfr No	Secondary Volts		Secondary Amps	Dimension Code
	Full Load	No Load		
165Z3	3.0ct	3.12	50	H10
165X5	5.0ct	5.30	30	H9
165V7	5ct	8.00	21	H9
165V10	10.0ct	10.70	20	H10
165U11	11.0ct	11.70	15	H9
165S12	12.5ct	13.20	10	H7
165V12	12.5ct	13.00	20	H12
165S18	18.0ct	18.80	10	H10
165U18	18.0ct	18.80	15	H16
165V18	18.0ct	18.50	20	H18
165I22	22.0ct	22.30	12	H16
165V22	22.0ct	22.50	20	H19
165P25	25.0ct	27.20	5	H7
165S25	25.0ct	26.10	10	H12
165P30	30.0ct	31.40	5	H7
165S30	30.0ct	31.40	10	H16
165P60	60.0ct	62.00	5	H23

165 SERIES DIMENSION TABLE

Mtg Style	Dimensions						Mtg Slo.
	A	B	C	D	E	F	
H7	3.00	3.25	2.56	2.50	3.25	4.00	22X 56
H9	3.75	2.63	3.13	3.13	2.50	3.25	22X 56
H10	3.75	3.13	3.13	3.13	2.75	3.50	22X 56
H12	3.75	3.63	3.13	3.13	3.25	4.00	22X 56
H16	4.50	3.88	3.75	3.75	2.75	3.50	28X 56
H18	4.50	4.38	3.75	3.75	3.25	4.00	28X 56
H19	4.50	4.38	3.75	3.75	3.75	4.50	28X 56

166 SERIES OPEN STYLE FILAMENT & L.V. RECTIFIER USE TRANSFORMER



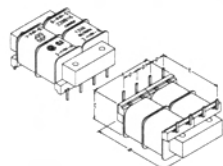
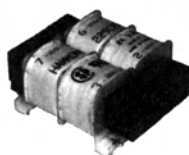
166 SERIES DIMENSION TABLE

Mtg Style	Dimensions				Mtg Hole
	A	B	C	D	
C0H	1.35	0.69	0.69	1.06	0.125
C1H	1.63	0.88	0.81	1.38	0.125
C2H	2.06	1.25	1.19	1.75	0.187
C3H	2.06	1.38	1.19	1.75	0.187
C4H	2.38	1.38	1.38	2.00	0.187
C5H	2.38	1.50	1.38	2.00	0.187
C6H	2.81	1.50	1.69	2.38	0.187
C7H	2.81	1.63	1.69	2.38	0.187
C8H	3.25	1.63	2.00	2.81	0.187
C9H	3.25	1.75	2.00	2.81	0.187
C10H	3.25	2.00	2.00	2.81	0.187
C11H	3.69	1.88	2.31	3.13	0.187
C12H	3.69	2.00	2.31	3.13	0.187
C13H	3.69	2.13	2.31	3.13	0.187
C14H	4.03	2.25	2.63	3.56	0.187
C15H	4.03	2.50	2.63	3.56	0.187
C16H	4.50	2.50	2.88	4.00	0.203

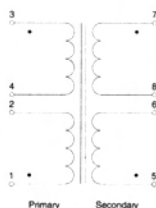
- Primary 115 VAC, 60 Hz.
- All secondaries center tapped, VAC (RMS)
- Open style, channel bracket, two hole chassis mount
- Minimum 6" long leads
- Dual bobbin design - no electrostatic shield required
- Class A insulation (105 degrees, C)
- Hi-Pot test of 2,000V RMS
- UL listed (#E50394) & CSA certified (#LR3902)

Mfr No	Secondary Volts		Secondary Amps	Dimension Code
	Full Load	No Load		
166F2	2.5ct	3.37	0.25	C2H
166G2	2.5ct	3.09	0.50	C2H
166I2	2.5ct	3.10	1.00	C3H
166K2	2.5ct	3.20	1.50	C4H
166L2	2.5ct	2.90	2.50	C11H
166F5	5.0ct	6.11	0.25	C2H
166G5	5.0ct	5.83	0.50	C3H
166J5	5.0ct	6.17	1.00	C5H
166L5	5.0ct	5.50	2.00	C7H
166E6	6.3ct	7.45	0.15	C2H
166F6	6.3ct	7.10	0.30	C3H
166G6	6.3ct	7.80	0.60	C4H
166J6	6.3ct	7.10	1.00	C6H
166K6	6.3ct	7.25	1.20	C6H
166L6	6.3ct	7.14	2.00	C7H
166N6	6.3ct	6.90	4.00	C8H
166G7	7.0ct	8.30	0.70	C5H
166G8	8.0ct	9.52	0.50	C4H
166L8	8.5ct	9.60	2.00	C8H
166M8	8.5ct	9.50	3.00	C9H
166N8	8.5ct	9.04	4.00	C10H
166G9	9.0ct	10.90	0.50	C4H
166I10	10.0ct	12.40	0.30	C3H
166J10	10.0ct	11.00	0.50	C5H
166L10	10.0ct	11.00	1.00	C7H
166L10	10.0ct	10.80	2.00	C9H
166M10	10.0ct	10.50	3.00	C10H
166L12	6.3/12.6ct	7/14	1/05	C2H
166I12	12.6ct	15.70	0.30	C4H
166G12	12.6ct	14.50	0.50	C6H
166J12	12.6ct	14.30	1.00	C7H
166L12	12.6ct	13.80	2.50	C10H
166N12	12.6ct	13.40	4.00	C13H
166E14	14.0ct	17.50	0.15	C3H
166G14	14.0ct	16.10	0.50	C6H
166J14	14.0ct	16.00	1.00	C7H
166L14	14.0ct	16.00	2.00	C10H
166F16	16.0ct	18.60	0.25	C4H
166G16	16.0ct	18.00	0.50	C6H
166J16	16.0ct	17.60	1.00	C6H
166L16	16.0ct	17.00	2.20	C10H
166M16	16.0ct	17.40	3.00	C13H
166B18	9.0/18.0ct	10/20	06/03	C2H
166A18	18.0ct	19.60	1.50	C9H
166D20	20.0ct	24.60	0.10	C3H
166E20	20.0ct	23.50	0.15	C3H
166F20	20.0ct	22.80	0.30	C5H
166G20	20.0ct	22.00	0.50	C7H
166J20	20.0ct	22.00	1.00	C9H
166L20	20.0ct	21.40	2.00	C11H
166A24	12.6/25.2ct	14/28	05/025	C2H
166J25	25.0ct	28.80	0.10	C3H
166E25	25.0ct	30.80	0.15	C4H
166F25	25.0ct	29.00	0.30	C6H
166G25	25.0ct	28.00	0.50	C7H
166J25	25.0ct	27.50	1.00	C9H
166K25	25.0ct	26.80	1.50	C11H
166F28	28.0ct	31.70	0.25	C6H
166G28	28.0ct	32.00	0.50	C7H
166J28	28.0ct	30.80	1.00	C10H
166E30	30.0ct	37.40	0.15	C4H
166F30	30.0ct	36.10	0.25	C6H
166G30	30.0ct	34.20	0.50	C8H
166J33	33.0ct	35.00	1.00	C10H
166E36	36.0ct	40.70	0.15	C5H
166F36	36.0ct	39.40	0.30	C7H
166G36	36.0ct	40.00	0.50	C8H
166J36	36.0ct	39.50	1.00	C11H
166E44	44.0ct	51.60	0.15	C6H
166F44	44.0ct	50.60	0.25	C7H
166G44	44.0ct	48.10	0.50	C9H
166J44	44.0ct	47.40	1.00	C12H
166L50	50.0ct	62.00	0.08	C4H
166G50	50.0ct	57.00	0.30	C6H
166J50	50.0ct	55.00	0.50	C9H
166G50	50.0ct	54.50	1.00	C13H
166J50	60.0ct	65.20	0.50	C10H
166G80	80.0ct	85.50	0.50	C11H
166L120	120.0ct	129.20	0.30	C11H

229 SERIES LOW VOLTAGE - P.C. BOARD LOW PROFILE



- Low profile mounting, dual - split bobbin design
- Low primary to secondary coupling, balanced windings, no electrostatic shield required and low EMF radiation due to semi-toroidal design
- Universal dual primary 115/230V - 50/60 Hz.
- High insulation - Hipot of 1,750 RMS
- Class B insulation - 130 degrees C.
- CSA certified (File #LR3902) and UL recognized (File #E50394)



Mfr No	Series	(RMS)	
		Series	Parallel
229A10	5	10V ct @ 600ma	5V @ 1.2A
229B10	12	10V ct @ 1.2A	5V @ 2.4A
229C10	24	10V ct @ 2.4A	5V @ 4.8A
229D10	48	10V ct @ 4.8A	5V @ 9.6A
229E12	2	12.6V ct @ 200ma	6.3V @ 400ma
229A12	5	12.6V ct @ 450ma	6.3V @ 900ma
229B12	12	12.6V ct @ 900ma	6.3V @ 1.8A
229C12	24	12.6V ct @ 1.8A	6.3V @ 3.6A
229D12	48	12.6V ct @ 3.6A	6.3V @ 7.2A
229E16	2	16V ct @ 150ma	8V @ 300ma
229A16	5	16V ct @ 350ma	8V @ 700ma
229B16	12	16V ct @ 700ma	8V @ 1.4A
229C16	24	16V ct @ 1.4A	8V @ 2.8A
229D16	48	16V ct @ 2.8A	8V @ 5.6A
229E20	2	20V ct @ 125ma	10V @ 250ma
229A20	5	20V ct @ 300ma	10V @ 600ma
229B20	12	20V ct @ 600ma	10V @ 1.2A
229C20	24	20V ct @ 1.2A	10V @ 2.4A
229D20	48	20V ct @ 2.4A	10V @ 4.8A
229E24	2	24V ct @ 100ma	12V @ 200ma
229A24	5	24V ct @ 250ma	12V @ 500ma
229B24	12	24V ct @ 500ma	12V @ 1A
229C24	24	24V ct @ 1A	12V @ 2A
229D24	48	24V ct @ 2A	12V @ 4A
229E30	2	30V ct @ 85ma	15V @ 170ma
229A30	5	30V ct @ 200ma	15V @ 400ma
229B30	12	30V ct @ 400ma	15V @ 800ma
229C30	24	30V ct @ 800ma	15V @ 1.6A
229D30	48	30V ct @ 1.6A	15V @ 3.2A
229E34	2	34V ct @ 75ma	17V @ 150ma
229A34	5	34V ct @ 170ma	17V @ 340ma
229B34	12	34V ct @ 340ma	17V @ 680ma
229C34	24	34V ct @ 700ma	17V @ 1.4A
229D34	48	34V ct @ 1.4A	17V @ 2.8A
229E40	2	40V ct @ 60ma	20V @ 120ma
229A40	5	40V ct @ 150ma	20V @ 300ma
229B40	12	40V ct @ 300ma	20V @ 600ma
229C40	24	40V ct @ 600ma	20V @ 1.2A
229D40	48	40V ct @ 1.2A	20V @ 2.4A
229E56	2	56V ct @ 45ma	28V @ 90ma
229A56	5	56V ct @ 100ma	28V @ 200ma
229B56	12	56V ct @ 200ma	28V @ 400ma
229C56	24	56V ct @ 425ma	28V @ 850ma
229D56	48	56V ct @ 850ma	28V @ 1.7A
229E88	2	88V ct @ 28ma	44V @ 56ma
229A88	5	88V ct @ 60ma	44V @ 120ma
229B88	12	88V ct @ 120ma	44V @ 240ma
229E120	2	120V ct @ 20ma	60V @ 40ma
229A120	5	120V ct @ 50ma	60V @ 100ma
229B120	12	120V ct @ 100ma	60V @ 200ma
229E230	2	230V ct @ 10ma	115V @ 20ma
229A230	5	230V ct @ 25ma	115V @ 50ma
229B230	12	230V ct @ 50ma	115V @ 100ma

229 SERIES DIMENSION TABLE

		A	B	C	D	D1	E
6	30%	1.00	1	1			160
12	20%	1.25					
24	15%	1.50					180
48	15%	1.50			0		18

185 SERIES POWER TRANSFORMERS

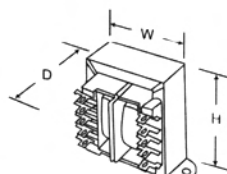


Figure A

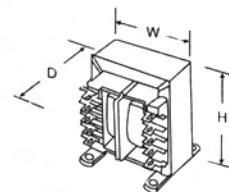


Figure B

- Dual primary 115/230 VAC
- 50/60 Hz. operation
- Dual secondaries for series or parallel connections
- 4,000 V RMS Hipot test
- Chassis mount
- 5 different VA sizes to choose from
- Dual bobbin construction
- Dual use terminals (solder lug or quick connect)
- UL recognized to UL506
- CSA certified to C22.2 #66
- CE certified to IEC 950

Mfr No	Size	Secondary VAC (RMS)	
		Series	Parallel
185D10	43	10V ct @ 4.3A	5V @ 8.6A
185E10	80	10V ct @ 8.0A	5V @ 16.0A
185F10	130	10V ct @ 13.0A	5V @ 26.0A
185G10	170	10V ct @ 17.0A	5V @ 34.0A
185C12	25	12.6V ct @ 2.0A	6.3V @ 4.0A
185D12	43	12.6V ct @ 3.4A	6.3V @ 6.8A
185E12	80	12.6V ct @ 6.3A	6.3V @ 12.6A
185F12	130	12.6V ct @ 10.3A	6.3V @ 20.6A
185G12	170	12.6V ct @ 14.0A	6.3V @ 28.0A
185C16	43	16V ct @ 1.6A	8V @ 3.2A
185D16	80	16V ct @ 2.7A	8V @ 5.4A
185E16	130	16V ct @ 5.0A	8V @ 10.0A
185F16	170	16V ct @ 8.0A	8V @ 16.0A
185G16	220	16V ct @ 11.0A	8V @ 22.0A
185D20	43	20V ct @ 1.2A	10V @ 2.4A
185E20	80	20V ct @ 2.4A	10V @ 4.8A
185F20	130	20V ct @ 4.0A	10V @ 8.0A
185G20	170	20V ct @ 6.5A	10V @ 13.0A
185C24	25	24V ct @ 0.8A	12V @ 1.6A
185D24	43	24V ct @ 1.6A	12V @ 3.2A
185E24	80	24V ct @ 3.2A	12V @ 6.4A
185F24	130	24V ct @ 5.0A	12V @ 10.0A
185G24	170	24V ct @ 7.5A	12V @ 15.0A
185C28	25	28V ct @ 0.9A	14V @ 1.8A
185D28	43	28V ct @ 1.8A	14V @ 3.6A
185E28	80	28V ct @ 3.6A	14V @ 7.2A
185F28	130	28V ct @ 6.0A	14V @ 12.0A
185G28	170	28V ct @ 9.0A	14V @ 18.0A
185C36	25	36V ct @ 0.7A	18V @ 1.4A
185D36	43	36V ct @ 1.4A	18V @ 2.8A
185E36	80	36V ct @ 2.8A	18V @ 5.6A
185F36	130	36V ct @ 4.5A	18V @ 9.0A
185G36	170	36V ct @ 6.8A	18V @ 13.6A
185C48	25	48V ct @ 0.5A	24V @ 1.0A
185D48	43	48V ct @ 1.0A	24V @ 2.0A
185E48	80	48V ct @ 2.0A	24V @ 4.0A
185F48	130	48V ct @ 3.0A	24V @ 6.0A
185G48	170	48V ct @ 4.5A	24V @ 9.0A
185C60	25	60V ct @ 0.4A	30V @ 0.8A
185D60	43	60V ct @ 0.8A	30V @ 1.6A
185E60	80	60V ct @ 1.6A	30V @ 3.2A
185F60	130	60V ct @ 2.4A	30V @ 4.8A
185G60	170	60V ct @ 3.6A	30V @ 7.2A
185C72	25	72V ct @ 0.3A	36V @ 0.6A
185D72	43	72V ct @ 0.6A	36V @ 1.2A
185E72	80	72V ct @ 1.2A	36V @ 2.4A
185F72	130	72V ct @ 1.8A	36V @ 3.6A
185G72	170	72V ct @ 2.7A	36V @ 5.4A
185C96	25	96V ct @ 0.2A	48V @ 0.4A
185D96	43	96V ct @ 0.4A	48V @ 0.8A
185E96	80	96V ct @ 0.8A	48V @ 1.6A
185F96	130	96V ct @ 1.2A	48V @ 2.4A
185G96	170	96V ct @ 1.8A	48V @ 3.6A
185C120	25	120V ct @ 0.1A	60V @ 0.2A
185D120	43	120V ct @ 0.2A	60V @ 0.4A
185E120	80	120V ct @ 0.4A	60V @ 0.8A
185F120	130	120V ct @ 0.6A	60V @ 1.2A
185G120	170	120V ct @ 0.9A	60V @ 1.8A