



GE Type IP Transformers . . . performance, reliability, and service life



Choosing a brand of dry-type core and coil transformer for your electrical equipment is an important decision. You need a transformer that will perform to your customers' expectations and last longer than the equipment itself. That's why original equipment manufacturers have turned to GE specialty transformers since 1928. From its manufacturing plant in Fort Wayne, Indiana, GE supplies small core and coil transformers that are designed for peak performance, reliability, and service life.

Type IP core and coil transformers are made from high quality, grainoriented electrical steel and magnetic wire using GE proprietary processes. Coils are automatically wound by numerically-controlled machines and core and coil assemblies are vacuum impregnated to ensure long life and protect the insulation system. All products are assembled by a skilled workforce that averages over 20 years experience; every transformer is proudly tagged with the assembler's name. Each unit is 100% tested per NEMA and ANSI standards using a custom-made automated test equipment system. It's no wonder that in survey after survey, people equate the GE name with quality.

In an increasingly competitive world market, it is essential to have equipment designed for world-class quality requirements and systems integration. That's why in addition to complete UL listing and CSA certification on all Type IP ratings, GE has a library of ratings that comply with nondomestic standards. Consult your local GE sales office for availability. And because system compatibility is important in today's complex control schemes, Type IP appearance and performance characteristics are the perfect link in an integrated control system that utilizes GE world-class circuit breakers and controls.

New features include:

- *Top-mounted primary and secondary fuse blocks.* The new designs meet all UL and CSA requirements for control transformer protection including the recently adopted UL 508 and 845 standards. The new integral fuse blocks allow panel builders to save valuable panel space and have flexibility to provide several secondary fuse options. Additionally, the primary fuse block accepts Type CC current-limiting fuses for the best protection available against short circuit faults.
- *Easy-to-read labels*. New designs feature easy-to-read computer-generated labels that clearly display the wiring diagram and voltage ratings.
- *Cleaner looks.* The terminal boards, clamps, and insulation material now have a neater, streamlined construction to improve the overall appearance of your equipment.
- "Jumper links." Now standard for all units.
- "Quick connect" spade terminals. Available as an option for several ratings.





Application Guide

Type IP transformers are core and coil units designed for use in machine tool, industrial control, panelboard, and general purpose applications. Several types of terminations are available to simplify installation. These include low profile terminal boards, primary and secondary leads out, coil face terminations, integral fuse, and spade type terminals. Top-mounted terminal boards are also offered for complex multiple primaries, secondaries and other special applications. Consult your local *GE* Electrical Distribution & Control sales office for complete technical applications data.

Standards — Type IP units conform to ANSI C89.2. They are UL Listed under UL-506, File E2739 and CSA certified under C22.2, Number 66, File 3272.

Insulation classes — Generally 150 VA and below are 105°C insulation class, 55°C rise. 200 VA and above are 185°C (NEMA), 180°C (UL) insulation class, 115°C rise. Maximum surface temperature is 65°C.

Frequency — 60 Hertz is standard, 50 Hertz is available as an option.

Voltage regulation — All designs 2.0 kVA and below are compensated for voltage drop. Generally this compensation ranges from 7% in the smallest rating to 3% for the 2 kVA. Regulation curves meeting NEMA ST-1 for machine tool applications are available upon request. All machine tool designs meet or exceed the regulation requirements of NMTBA.

Series-multiple connections — Transformers rated 240/480V, or 120/240V primary may be series-multiple connected. Those with 120/240V secondaries may be connected for 120V, 240V, or 240/120V three-wire.

Overcurrent protection — Type IP transformers are low impedance transformers and should be protected for overcurrent in the equipment application. Optional Type IP constructions provide for integral primary and/or secondary fusing.

Mounting dimensions — Type IP transformers are light-weight, small and designed for minimum mounting dimensions. Mountings will interchange with many competitive units. Units can be provided with mounting dimensions to meet unique customer requirements.





MMA

Ordering specialty transformers from GE has never been simpler. You'll avoid using manufacturer's reps and other methods that could slow down your order. Simply choose the appropriate transformer catalog number for your application from the rating tables on the next two pages. Then phone in your order to your local GE authorized electrical distributor. State the GE catalog numbers, quantities, and ship dates required. If a model is not in distributor stock, your GE distributor can call our National Service Center for immediate ordering. Our modern on-line order/ship/bill system will confirm availability and lead time.

If your application requires a transformer that is not within the rating tables presented here, contact the nearest GE Electrical Distribution & Control sales office. A GE sales engineer will help you obtain technical information, drawings and pricing data.

Machine Tool Applications

Single-Phase

	-					
	kVA	Frame Size	Rated Amps at	Output Cha with 90% Ra Voltage	Catalog Number with Terminal Boards 1	
	120 V		Sec 100 V inrush Sec 90 V inrush		•	
	220/440,	220/440, 230/460, 240/480 Volts Primary — 110, 115, 120 Volts S		15, 120 Volts Seco	ndary — 60 Hertz	
ł	050	611	42	1.0		0750842
	.050	612	.42	27	2.1	9150042
	100	811	.03	4.2	5.9	9158B43
	.150	813	1.25	6.4	9.4	9T58B45
ł						
	.200	814	1.67	8.6	11.5	9158B46
	250	815	2.08	9.8	14.3	9158847
	.300	817	2.50	13.8	21.0	9158B48
ļ	.375	817	3.12	17.5	26.0	9158849
	.500	1016	4.16	19.8	29.0	9T58B50
	.750	1216	6.25	34.0	50.0	9T58B51
	1.0	1219	8.33	46.0	72.0	9T58B52
	1.5	1416	12.5	73.0	118.0	9T58B53
Ì	2.0	1419	16.6	103.0	175 0	9T58B54
	3.0	1422	25.0	150.0	250.0	9T58B55
	230/460/	30/460/575 Volts Primary - 115/95 Volts Secondary - 50/60 Her		dary — 50/60 Hertz	2	
	.050	613	.43	2.0	2.9	9T58B62
	.075	811	.65	3.0	4.1	9T58B63
	.100	813	.87	3.8	5.4	9T58B64
	.150	815	1.30	7.3	10.7	9T58B65
	200	815	174	7.6	10.8	9T58B66
1	250	817	2 17	83	12.2	9T58B67
	300	1016	2.61	10.4	14.9	9T58B68
	.375	1016	3.26	14.0	21.0	9T58B69
1	500	1016	4.35	17.4	27.0	9T58B70
	750	1219	6.5	43.0	74.0	9T58B71
	10	1416	87	517	82.6	9T58B72
	1.5	1419	13.0	75.4	124.0	9T58B73
		1400	17.4	150.0	222.0	0750074
4	2.0	1422	26.1	219.0	233.0	9158D74 9T58B75
4	5.0	1422	20.1	210.0	002.0	0100070
	208/277/3	380 Volts P	rimary — '	115/95 Volts Secon	dary — 50/60 Hertz	
	.050	613	.43	2.0	2.9	9T58B82
	.075	811	.65	3.0	4.1	9T58B83
	.100	813	.87	3.8	5.4	9158B84
	.150	815	1.30	7.3	10.7	9158885
	.200	815	1.74	7.6	10.8	9T58B86
	.250	817	2.17	8.3	12.2	9T58B87
	.300	1016	2.61	10.4	14.9	9T58B88
	.375	1016	3.26	14.0	21.0	9T58B89
	.500	1016	4.35	17.4	27.0	9⊺58B90
	.750	1219	6.5	43.0	74.0	9T58B91
	1.0	1416	8.7	51.7	82.6	9T58B92
	1.5	1419	13.0	75.4	124.0	9T58B93
	2.0	1422	17.4	153.0	233.0	9T58B94
	3.0	1422	26.1	219.0	352.0	9T58B95

 \oplus For transformer with terminal boards and two-fuse secondary kit, add -G5 suffix. For transformer with terminals on coil, add -G8 suffix.

② At 50 Hertz ratings. Do not operate transformer above rated voltages.

③ Fuses not included.



General Purpose Applications (Meets Machine Tool Regulation Requirements)

Single-Phase, All Copper, 55°C Rise

	Frame	Rated ame Amps Size at 120 V	Output Cha with 90% Ra Voltage	Catalog	
KVA	Size		Load Amp	Terminal Boards	
			Sec 100 V inrush	Sec 90 V inrush	
220/440,	230/460, 2	40/480 Vo	lts Primary — 110, 1	15, 120 Volts Seco	ndary — 60 Hertz
.050	611	.42	1.6	2.1	9T58B142
.075	612	.63	2.7	3.6	9T58B143
.100	613	.83	4.2	5.9	9T58B144
.150	811	1.25	6.4	9.4	9T58B3138
.200	813	1.67	8.6	11.5	9T58B146
.250	814	2.08	9.8	14.3	9T58B3135
.300	815	2.50	13.8	21.0	9T58B3331
.375	817	3.12	17.5	26.0	9T58B3332
.500	1016	4.16	19.8	29.0	9T58B3301
.750	1216	6.25	34.0	50.0	9T58B3302
1.0	1219	8.33	46.0	72.0	9T58B3303
1.5	1416	12.50	73.0	118.0	9T58B3304
2.0	1419	16.60	103.0	175.0	9T58B3172

Single-Phase, Integral Fuse Block (Fuse Not Included) ①

	Frame	Rated	Output Cha with 90% Ra Voltage	Catalog Number with		
kVA	Size	at	Load Amp	Load Amps at 20% PF		
		120 V	Sec 100 V inrush	Sec 90 V inrush	Fuse Block	
480 Volts	s Primary –	– 120 Volts	s Secondary — 60 H	lertz	I	
050	611	12	16	2 1	97588500640	
075	612	63	27	3.6	9T58B502G40	
100	613	83	4.2	5.0	9T58B503G40	
150	811	1.25	6.4	9.4	9T58B504G40	
200	813	1.67	86	11.5	9T58B505G40	
.250	814	2.08	9.8	14.3	9T58B506G40	
.300	815	2.50	13.8	21.0	9T58B507G40	
.500	1016	4,16	19.8	29.0	9T58B509G40	
.750	1216	6.25	34.0	50.0	9T58B907G40	
1.0	1219	8.33	46.0	72.0	9T58B908G40	
240 Volt	s Primary -	– 120 Volt	s Secondary — 60 H	lertz		
050	611	12	1.6	2.1	97588560640	
075	612	.42	27	2.1	91588562G40	
100	613	83	4.2	5.0	97588563G40	
150	811	1 25	6.4	94	9T58B564G40	
.200	813	1.67	8.6	11.5	9T58B565G40	
.250	814	2.08	9.8	14.3	9T58B566G40	
.300	815	2.50	13.8	21.0	9T58B567G40	
.500	1016	4.16	19.8	29.0	9T58B569G40	
.750	1216	6.25	34.0	50.0	9T58B903G40	
1.0	1219	8.33	46.0	72.0	9T58B904G40	
208 Volts	Primary –	– 120 Volts	s Secondary — 60 H	ertz	I	
050	611	42	16	21	9T58B510G40	
075	612	63	27	36	9T58B512G40	
100	613	83	4.2	5.9	9T58B513G40	
150	811	1 25	64	9.4	9T58B514G40	
.200	813	1.67	8.6	11.5	9T58B515G40	
.250	814	2.08	9.8	14.3	9T58B516G40	
.300	815	2.50	13.8	21.0	9T58B517G40	
.500	1016	4.16	19.8	29.0	9T58B519G40	
.750	1216	6.25	34.0	50.0	9T58B901G40	
1.0	1219	8.33	46.0	72.0	9T58B902G40	

Control Power Applications

Single-Phase

			Catalog Number					
	kVA	Frame		With Primary and				
		5124,	Terminal Board	Secondary Leads Out				
	240/480 Volt	ts Primary — 1	120/240 Volts Secondary —	60 Hertz				
	025	609	975882800	9T58B1800				
	.050	611	9T58B2802	9T58B1802				
	.075	612	9T58B2803	9T58B1803				
	.100	811	9T58B2804	9T58B1804				
	.150	813	9T58B2805	9T58B1805				
	.200	814	9T58B2806	9T58B1806				
	.250	815	9T58B2807	9T58B1807				
	.300	815	9158B2808	9158B1808				
	.375	817	915882809	915881809				
	.500	1016	915882810	915881810				
	.750	1210	015002011	915001011				
	1.0	1/16	975882813	975881813				
	20	1419	915882814	9758B1814				
	3.0	1422	9T58B2815	9T58B1815				
	600 Volts Pri	imary — 120/2	240 Volts Secondary — 60 H	ertz				
	.100	811	9T58B2824	9T58B1824				
	200	814	9158B2826	9158B1826				
	.300	815	9158B2828	9158B1828				
	.500	1210	915862830	915881830				
	1.0	1410	913002032	9150B1052 0TE9P1924				
	3.0	1413	9T58B2835	9T58B1835				
	310 1422 9156B2835 9156B1835							
1	120/240 Volt	ts Primary — 1	20/240 Volts Secondary —	60 Hertz				
	.100	811	9T58B2907	9T58B1907				
	.200	814	9T58B2909	9T58B1909				
	.300	815	9T58B2911	9T58B1911				
	.500	1016	9T58B2913	9T58B1913				
	.750	1216	9T58B2914	9T58B1914				
	1.0	1219	9158B2915	9158B1915				
	2.0	1419	915882917	9156B1917				
	3.0	1422	915602916	313001310				
	120/240 Volts Primary — 12/24 Volts Secondary — 60 Hertz							
	.050	611	9T58B2873	9T58B1873				
	.075	612	9T58B2874	9T58B1874				
	.100	811	9T58B2875	9T58B1875				
	.150	813	9T58B2876	9T58B1876				
	.200	814	9158B2877	9158B1877				
	.250	815	915882878	9156B1878				
	.300	1016	915062079	9150B1679 0T59B1991				
	.500	1216	975882882	9T58B1882				
	1.0	1219	9T58B2883	9T58B1883				
	240/480 Volt	e Primary — 1	20/240 Volte Secondary -	50/60 Hertz				
	240,400 101	Strining 1						
	.500	1016	9T58B2930	9T58B1930				
	.750	1219	9158B2931	9158B1931				
	1.0	1416	915882932	9158B1932				
	2.0	1419	9158B2933 9T58B2934	91000 1933 975881934				
	3.0	1422	9T58B2935	9T58B1935				
	380/400/416 Volts Primary — 115/230 Volts Secondary — 50/60 Hertz							
	500	1016	9T58B2978	9T58B1978				
	.300	1219	9T58B2979	9T58B1979				
	1.0	1416	9T58B2980	9T58B1980				
	1.5	1419	9T58B2981	9T58B1981				
	2.0	1422	9T58B2982	9T58B1982				
	3.0	1422	9T58B2983	9T58B1983				

The set of the set of

Basic Control Power

Integral Fuse Block



① Fusing not available.



Terminal Boards



All terminals use 8-32 screws.

Height "C" Depth "A" Width "B" Weight lbs. kVA Frame 2⁵/8 2⁵/8 2.5 611 612 0.050 4³/8 3¹/16 **4**⁵/8 0.075 31/16 3 3¹/16 3¹³/16 **4**⁷/8 25/8 3.5 0.100 613 811 **4**³/8 3¹/4 0.150 0.200 0.250 4.1 813 313/16 31/4 ٠ 5.5 4⁷/8 814 51/8 313/16 31/4 6.3 0.300 815 5³/8 313/16 31/4 7.0 3¹³/16 4¹³/16 5¹/2 3¹/4 3¹⁵/16 4⁹/16 8.3 11.5 0.375 817 57/8 61/16 0.500 1016 0.750 1.0 1.5 6¹/16 6¹³/16 6¹/16 1216 1219 15.5 18.5 49/16 5¹/2 5⁷/8 5⁷/8 27.5 1416 2.0 1419 6¹³/16 33.5 4 3.0 1422 89/16 5⁷/8 45.0

Width "B"

3¹/₁₆

3¹/16

3¹/16 3¹³/16 3¹³/16

313/16

3¹³/16

3¹³/16

4³/4

51/2

51/2

7

7

7

Height "C"

2⁵/8

2⁵/8 2⁵/8 2⁵/8 3¹/4 3¹/4

31/4

3¹/4

3¹/₄

3¹⁵/16 4⁹/16

4⁹/16

5⁷/8

5⁷/8

5⁷/8

Weight Ibs.

2.5 3.0 3.5 4.1 5.5 6.3 7.0

8.3

11.5 15.5 18.5

27.5

33.5

45.0

Depth "A"

37/16

3¹¹/16

3¹⁵/16 3¹³/16

45/16

4⁹/16

4¹³/16

5⁵/16 5³/4 6

6³/4

6¹/4

7

8³/4

Terminals on Coil



Typical G8 construction using coil face terminations.

Primary and Secondary Leads Out



kVA	Frame	Depth "A"	Width "B"	Height "C"	Weight Ibs.
0.050	611	3 ¹ /4	3 ¹ /16	2 ⁵ /8	2.5
0.075	612	3 ¹ /2	3 ¹ /16	2 ⁵ /8	3.0
0.100	613	3 ³ /4	3 ¹ /16	2 ⁵ /8	3.5
0.150	811	3 ¹ /4	3 ¹³ /16	3 ¹ /4	4.1
0.200	813	3 ³ /4	3 ¹³ /16	3 ¹ /4	5.5
0.250	814	4	3 ¹³ /16	31/4	6.3
0.300	815	41/4	3 ¹³ /16	3 ¹ /4	7.0
0.375	817	4 ³ / ₄	3 ¹³ /16	3 ¹ /4	8.3
0.500	1016	5	4 ³ /4	3 ¹⁵ /16	11.5
0.750	1216	5 ¹ /4	5 ¹ /2	4 ⁹ /16	15.5
1.0	1219	6	5 ¹ /2	4 ⁹ /16	18.5
1.5	1416	5 ³ /4	7	5 ⁷ /8	27.5
2.0	1419	6 ¹ /2	7	5 ⁷ /8	33.5
3.0	1422	8 ¹ / ₂	7	5 ⁷ /8	45.0

Mounting Dimensions

(For All Terminal Configurations)

⁷ /32" x ³ /4" 600-800 frame	Frame	Depth "E"	Width "F"
⁵ / ₁₅ " x ⁹ / ₁₅ " 1000-1400 frame	611	2 ³ /16	2 ¹ / ₂
for 1/4" mounting hardware	612	2 ³ /8	2 ¹ / ₂
4	613	2 ¹¹ /16	2 ¹ / ₂
	811	2 ³ /16	3 ¹ /8
	813	2 ¹¹ /16	3 ¹ /8
	814	2 ¹⁵ /16	3 ¹ /8
F ± 1/32"	815	3 ³ /16	3¹/8
mounting	817	3 ¹¹ /16	3¹/8
	1016	3 ⁵ / ₁₆	3¹/2
	1216	3 ⁵ /16	4
	1219	4 ¹ / ₁₆	4
E ± 1/16"	1416	35/16	5 ¹ /2
mounting	1419	4 ¹ /16	5 ¹ /2
Bottom	1422	5 ¹³ /16	5 ¹ /2
	L	1	

Upon request, Type IP transformers can be supplied to meet special mounting dimensions and configuration requirements.

kVA

0.050

0.075

0.100

0.150

0.200

0.250 0.300

0.375 0.500 0.750 1.0 1.5

2.0

3.0

Frame

611

612

613 811 813

814 815 817

1016 1216

1219

1416 1419

1422

Integral Fuse Configuration



Note: • Primary fuseholder Bussman BC6032-P, USD CC60030, or Gould 30322R two-pole for 600 volt class CC fuses • Secondary fuseholder for type FRN fuses rated 0-30

amps

Mounting Dimensions



VA	Frame	Depth "A"	Width "B"	Height "C"	"H"	"J"	"K"	Weight Ibs.
50	611	3 ¹ / ₂	3 ¹ /16	4	11/16	1 ¹ / ₁₆	"/a	2.5
75	612	31/2	3 ¹ /16	4	7/8	¹¹ / ₁₆	7/8	3.0
100	811	3 ¹ / ₂	3 ¹³ /16	4 ⁵ /8	7/8	3/4	1	4.1
150	813	3 ³ /4	3 ¹³ /16	4 ⁵ /8	7/8	3/4	1 '	5.5
200	814	4	3 ¹³ /16	4 ⁵ /8	⁷ /8	3/4	1	6.3
250	815	4 ¹ /4	3 ¹³ /16	4 ⁵ /8	7/8	3/4	1	7.0
300	817	4 ³ / ₄	31 3/16	4 ⁵ /8	∕ ∕/8	3/4	1	8.3
500	1016	4 ¹¹ / ₁₆	4 ⁹ /16	5 ¹ /4	7/8	1.	1 ¹ /4	11.5

Consult local GE sales office for sizes not listed.



General Purpose Transformers

GE enclosed general purpose transformers are used in matching load voltage requirements to distribution voltages. They are rated 600 volts and below, and up to 1500 kva for supplying appliance, lighting, and power loads from electrical distribution systems. GE general purpose transformers are UL listed and CSA certified (unless otherwise specified). In addition, each transformer meets the requirements of ANSI C89.2 and NEMA ST-20.

Power Conditioning Equipment

GE offers a full range of products to safeguard sensitive equipment against the damaging effects of voltage dips, surges, and static interference. Products include Guard I[™] and Guard II[™] noise isolation transformers, Stabilitron[™] voltage stabilizers, and line conditioners that provide both voltage regulation and excellent noise attenuation.

Uni-Center[™] Integral Distribution Centers

GE Uni-Center[™] integral distribution centers provide a single integrated unit for transforming and switching power from primary feeders at utility voltage levels to in-plant utilization voltage requirements. Ratings are available from 112.5 to 1000 kva, 1.2 kv class and 112.5 to 500 kva, 5.0 – 15.0 kv class. Uni-Center[™] integral distribution centers are available in indoor and outdoor NEMA 3R enclosures.

Volt-Pac[®] Variable Autotransformers

Volt-Pac[•] autotransformers offer continuously adjustable voltage with no wave-form distortion over ranges of 0-100% or 0-117% of line voltage. Suitable for many electronic and electrical applications, its simple operation is based on autotransformer action. Available models include manual, automatic or motor-operated designs, and are either cased or uncased.

Core and Coil Transformers

GE offers a complete line of low and medium voltage core and coil transformers up to 500 kva and 15 kv for a wide range of power and control applications. Installation flexibility is provided by a choice of mounting types. Units are available for mounting either integrally within equipment cabinets or separately in individual enclosures. Cast coil construction is available for some ratings.

GEA-10548A 0589



GE Electrical Distribution & Control

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