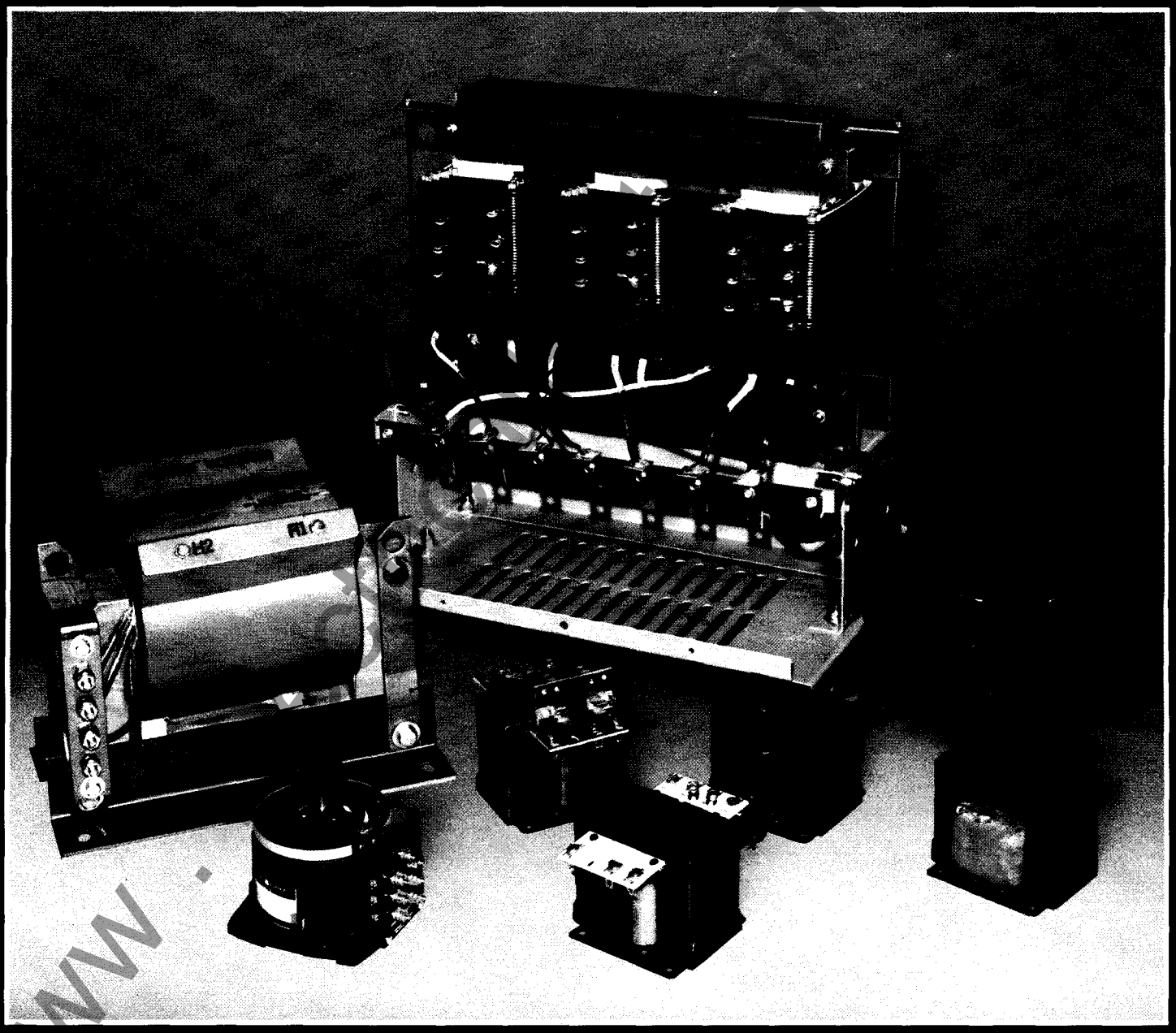
GEA-9955D

OEM buyer's guide

Core-and-Coil Dry-type Transformers

for power and control applications



GENERAL ELECTRIC

CORE-AND-COIL TRANSFORMERS

QHT Core-and-Coil Transformers offer maximum flexibility

Broad Selection for Power and Control Applications

General Electric offers a complete line of open, dry-type, core-and-coil transformers 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. In addition, General Electric has combined the inherent advantages of dry-type transformers—light weight, compact size, fire resistance—with a broad range of construction types and termination arrangements. This provides added flexibility for application within the customers' equipment. In larger ratings, many preferred modifications and accessories are offered.

Characteristics

• SOUND LEVELS

Core-and-coil sound levels when mounted in a suitable enclosure

kVA	1.2 kV	Above 1.2 kV
0-9	40	45
10-50	45	50
51-150	50	55
151-300	55	58
301-500	60	60

*Measured per ANSI-C89.1 1961-2.7.3-4, NEMA ST-20 1972

• OVERLOAD CAPABILITY (For transformers 5 kVA and larger)

General Electric dry-type transformers rated 5 kVA and larger have inherent overload capability to be used without affecting normal life expectancy. Transformers below 5 kVA should not be overloaded, since their compact size does not provide the mass necessary to dissipate additional heat created by overloads.

Transformers are capable of long service life if loaded in accordance with the ANSI loading guide shown in the following table.

Permissible once daily overloads with normal life maintained

	90% NPR	70% NPR	50% NPR
½	162% NPR	185% NPR	200% NPR
1	138% NPR	148% NPR	152% NPR
2	123% NPR	128% NPR	133% NPR
4	113% NPR	115% NPR	118% NPR
8	106% NPR	107% NPR	108% NPR

NPR: Nameplate rating.

• TEMPERATURE CLASS

Insulation systems used in General Electric QHT transformers are specifically designed to optimize size, weight, performance and reliability.

The design life of transformers having different insulation systems is the same, since the allowable temperature rise of any insulation system is predicated on providing long life. The lower temperature systems are designed for the same long life as higher temperature systems. Type IP units below 250 VA have a 105 C insulation system, 250 VA and above utilize a 185 C system.

Industry standards classify insulation systems in accordance with the rating system as follows:

INSULATION SYSTEM CLASSIFICATION

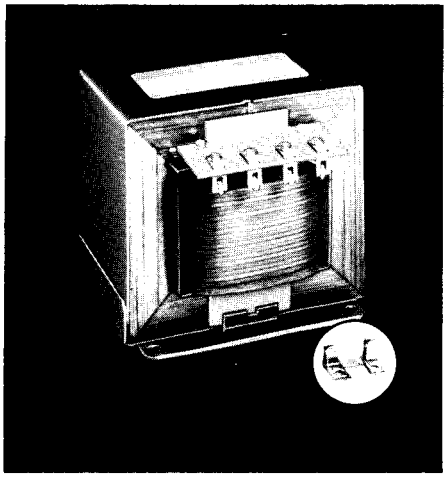
Industry Standards

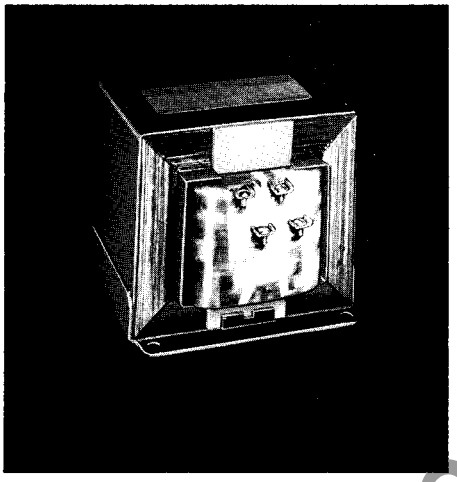
General Electric QHT dry-type core-and-coil transformers meet applicable UL, CSA, NEMA, ANSI and IEEE standards.

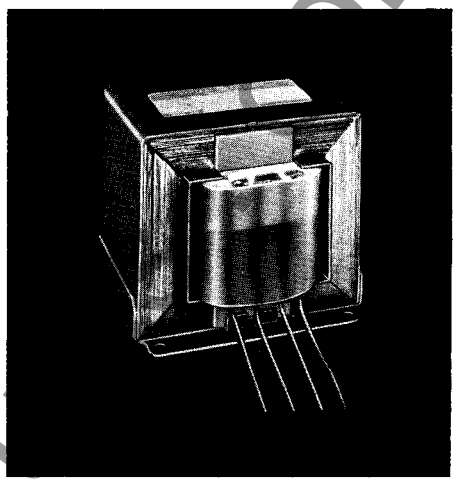
Type IP transformers are UL Listed (File E2739) through 5 kVA and have CSA component certification (File 3272) through 3 kVA. Others are UL component recognized and CSA component certified. With considerable emphasis being placed on transformer applications by the Federal Occupational Safety and Health Act (OSHA), UL Listing and recognition is especially significant.

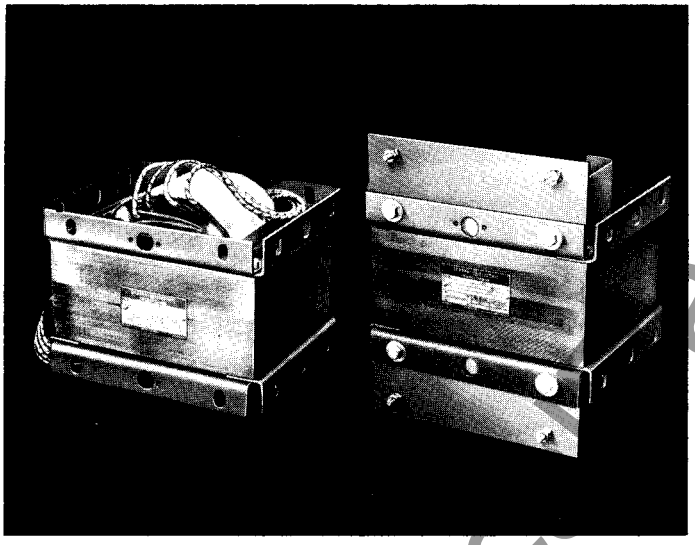
Industrial Control Transformers, Type IP for Machine Tool and Control Applications

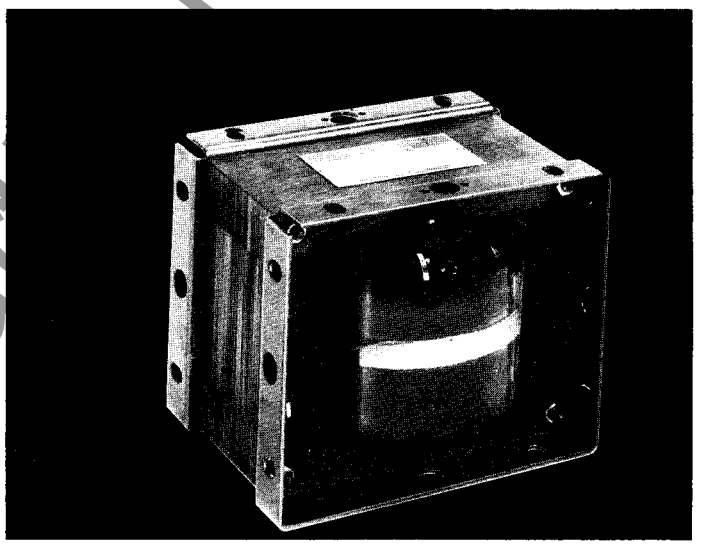
600 volts and below, 50 VA-5kVA — UL Listed (File E2739) and CSA Component Certified (File 3272)

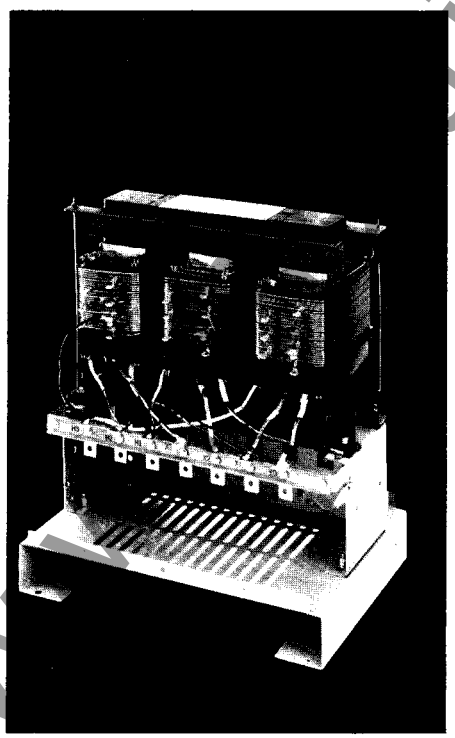


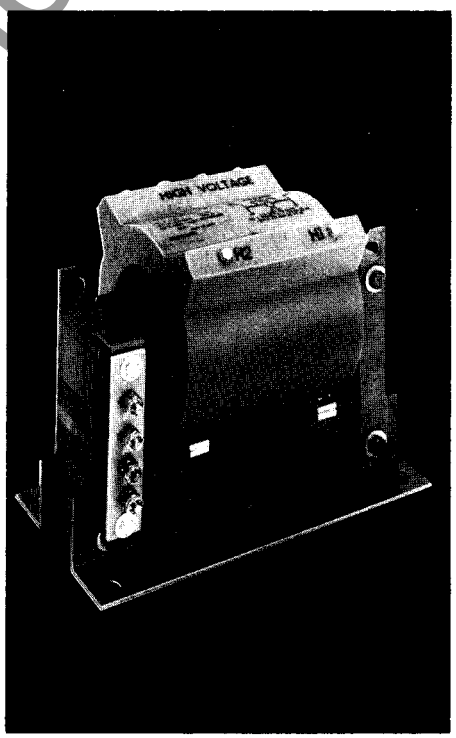


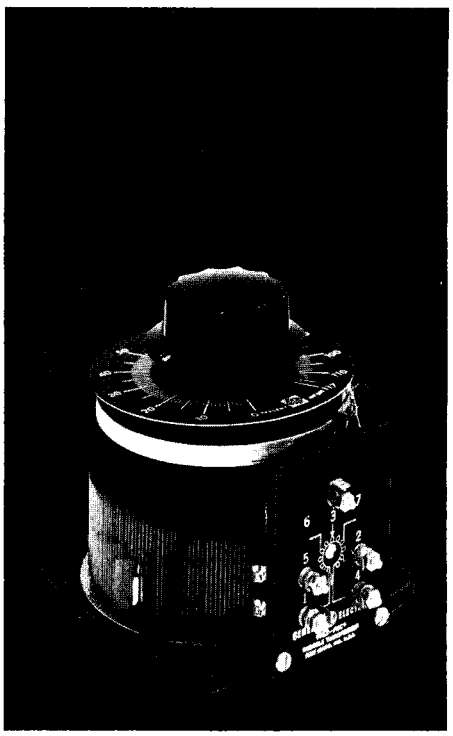












CORE-AND-COIL TRANSFORMERS

Type IP Industrial Control Core-and-Coil Transformers

FOR MACHINE TOOL APPLICATIONS

Single-phase, 600 Volts and Below, 50 VA — 5 kVA
UL Listed (File E2739)—CSA Component Certified (File 3272)

Description

Core-and-coil transformers for machine tools are used to provide voltage to control devices in applications where regulation and minimum panel space are important. Four different terminal arrangements are available:

1. Basic model transformers with terminal boards.
2. Basic model with secondary fuse kit shipped separately and installed by customer.
3. Basic model transformers with two-fuse board option.
4. Transformers with terminals on coil.

Designs comply with the electrical requirements of ANSI C89.1/NEMA ST 1-4 for machine tool transformers. All Type IP models are UL Listed (File E2739) and CSA Component Certified (File 3272), except the G5 terminal arrangement.

Type IP units below 250 VA have a 105 C insulation system, 250 VA and above utilize a 185 C system.

Installation flexibility, light weight and compact size provide added flexibility of application. The General Electric Type IP transformer offers designers a broad selection for control applications.

Selection

It is important that full consideration be given to the continuous and overload characteristics of relay coils, solenoid coils, starter coils, and all other types of components in the system. Complete information of this type will assist the designer in selecting the smallest and least expensive transformer for the application.

First, determine the primary and secondary voltages and frequency needed. **Second,** calculate the maximum continuous current required to power the load. **Third,** calculate the maximum inrush current caused by the load. **Fourth,** from the tables on pages 5, locate the lowest kVA rated transformer that will supply the inrush and continuous current.

For those applications where specific regulation requirements must be met, regulation curves for selected Type IP models are shown on Pages 8 and 9.

How to Order

To determine complete model number:

First, select the basic model number. For example, specify model 9T58B50 if you want a unit with a 230/460 volt primary, 115 volt secondary, operating at 60 hertz and rated .500 kVA.

Second, select the terminal arrangement desired. Assuming the transformers you need are rated 230/460 volts primary, 115 volts secondary, 60 hertz, .500 kVA; here's how you differentiate between the various terminal arrangements that are available:

- Basic model transformer with terminal board — order by model number, i.e. 9T58B50.
- Basic model transformer with terminal boards and a secondary fuse kit — order the basic model number and the corresponding fuse kit number as follows: for kVA ratings from .050 thru 1.5, order 9T58P1; for 2, 3 kVA units, order 9T58P2. (Note: fuses not included)
- Basic model with terminal boards and two-fuse board — add -G5 suffix to the basic model number, i.e., 9T58B50G5.
- Transformer with terminals on coil — add -G8 suffix to the basic model number, i.e., 9T58B50G8.

Copper Windings

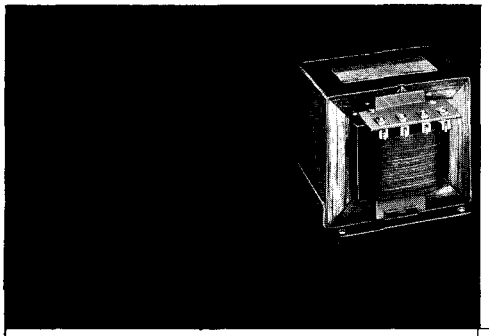
In a number of applications and industries today, there are requirements for industrial control transformers with copper windings.

General Electric's current published line of core-and-coil transformers are built with copper or aluminum windings as specified by the design engineer to provide a product with the optimum combination of cost, weight, electrical and thermal characteristics for economical and reliable service in the broadest range of applications.

For those applications where copper is mandatory, General Electric now offers a new line of all-copper winding models. (See page 5). For special requirements, forward your complete specifications and needs to the nearest General Electric sales office for a prompt response.

Dimensions and Weights

Dimensions and weights of all Type IP units listed in this publication are given on page 7. To find specific dimensions and weights, note frame size of selected model and refer to page 7.



Type IP Industrial Control Core-and-Coil Transformers

FOR MACHINE TOOL APPLICATIONS

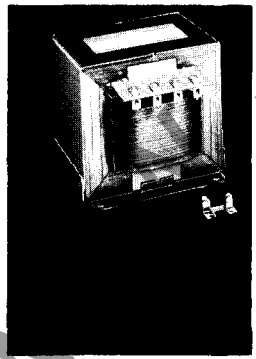
Single-phase, 600 Volts and Below, 50 VA—5 kVA
UL Listed (File E2739) —
CSA Component Certified (File 3272)

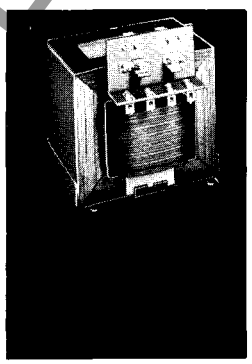
Standard Windings

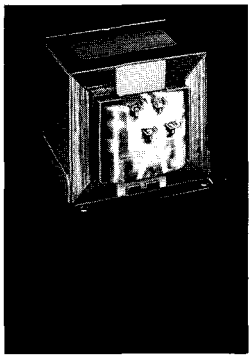
kVA	Frame Size	Wiring Diagram Page 7	Basic model transformer with terminal boards	Rated Amps at Highest Sec. Voltage	Output Characteristics with 90% Rated Primary Voltage Applied — Load Amps at 20% PF — Sec. 100 V Inrush	Sec. 90 V Inrush
220/440, 230/460, 240/480 VOLTS PRIMARY — 110, 115, 120 VOLTS SECONDARY — 60 Hz						
.050	611	1	9T58B42 ▲	.42	1.6	2.1
.075	612	1	9T58B43 ▲	.63	2.7	3.6
.100	811	1	9T58B44 ▲	.83	4.2	5.9
.150	813	1	9T58B45 ▲	1.25	6.4	9.4
.200	814	1	9T58B46 ▲	1.67	8.6	11.5
.250	815	1	9T58B47 ▲	2.08	9.8	14.3
.300	817	1	9T58B48 ▲	2.50	13.8	21.0
.375	817	1	9T58B49 ▲	3.12	17.5	26.0
.500	1016	1	9T58B50 ▲	4.16	19.8	29.0
.750	1216	1	9T58B51 ▲	6.25	34.0	50.0
1.0	1219	1	9T58B52 ▲	8.33	46.0	72.0
1.5	1416	1	9T58B53 ▲	12.5	73.0	118.0
2.0	1419	1	9T58B54 ▲	16.6	103.0	175.0
3.0	1422	1	9T58B55 ▲	25.0	150.0	250.0
5.0	1621	1	9T22B4056* ▲	41.6	150.0	330.0
230/460/575 VOLTS PRIMARY — 115/95 VOLTS SECONDARY — 50/60 Hz						
.050	613	2	9T58B62 ▲	.43	2.0	2.9
.075	811	2	9T58B63 ▲	.65	3.0	4.1
.100	813	2	9T58B64 ▲	.87	3.8	5.4
.150	815	2	9T58B65 ▲	1.30	7.3	10.7
.200	815	2	9T58B66 ▲	1.74	7.6	10.8
.250	817	2	9T58B67 ▲	2.17	8.3	12.2
.300	1016	2	9T58B68 ▲	2.61	10.4	14.9
.375	1016	2	9T58B69 ▲	3.26	14.0	21.0
.500	1016	2	9T58B70 ▲	4.35	17.4	27.0
.750	1219	2	9T58B71 ▲	6.5	43.0	74.0
1.0	1416	2	9T58B72 ▲	8.7	51.7	82.6
1.5	1419	2	9T58B73 ▲	13.0	75.4	124.0
2.0	1422	2	9T58B74 ▲	17.4	153.0	233.0
3.0	1422	2	9T58B75 ▲	26.1	219.0	352.0
5.0	1621	2	9T22B4076*	43.5	192.0	400.0
208/277/380 VOLTS PRIMARY — 115/95 VOLTS SECONDARY — 50/60 Hz						
.050	613	2	9T58B82 ▲	.43	2.0	2.9
.075	811	2	9T58B83	.65	3.0	4.1
.100	813	2	9T58B84 ▲	.87	3.8	5.4
.150	815	2	9T58B85 ▲	1.30	7.3	10.7
.200	815	2	9T58B86 ▲	1.74	7.6	10.8
.250	817	2	9T58B87 ▲	2.17	8.3	12.2
.300	1016	2	9T58B88 ▲	2.61	10.4	14.9
.375	1016	2	9T58B89 ▲	3.26	14.0	21.0
.500	1016	2	9T58B90 ▲	4.35	17.4	27.0
.750	1219	2	9T58B91 ▲	6.5	43.0	74.0
1.0	1416	2	9T58B92 ▲	8.7	51.7	82.6
1.5	1419	2	9T58B93 ▲	13.0	75.4	124.0
2.0	1422	2	9T58B94 ▲	17.4	153.0	233.0
3.0	1422	2	9T58B95 ▲	26.1	219.0	352.0

*Type ML-C Construction ▲Normally in Factory Stock.

Termination Options —







kVA	Frame Size	Wiring Diagram Page 7	Basic model transformer with terminal boards
220/440, 230/460, 240/480 VOLTS PRIMARY — 110, 115, 120 VOLTS SECONDARY — 60 Hz			
.050	611	1	9T58B142
.075	612	1	9T58B143
.100	811	1	9T58B144
.150	813	1	9T58B145
.200	814	1	9T58B146
.250	815	1	9T58B147
.300	817	1	9T58B148
.375	817	1	9T58B149
.500	1016	1	9T58B150 ▲
.750	1216	1	9T58B151
1.0	1219	1	9T58B152 ▲
1.5	1416	1	9T58B153 ▲
2.0	1419	1	9T58B154 ▲
3.0	1422	1	9T58B155 ▲

- Meets the copper winding specification in the automotive, chemical, and oil refining industries.
- Listed by UL, and CSA Component Certified.
- Complies with applicable ANSI and NEMA industry standards.
- Meets the voltage regulation requirements of NMTBA.
- Offers excellent thermal, efficiency and regulation performance.
- Available with standard optional accessories except -G8.
- Other ratings available for special application. Contact the nearest General Electric sales office for further information.

Ordering Information — Copper Windings

Transformers with **all-copper windings** are available with various termination options as shown on this page; i.e., (1) basic model with terminal boards, (2) fuse kit option*, (3) -G5 with terminal boards and two-fuse board option*. However, note that the -G8 option is not available for copper-wound models.

See page 4 for "How To Order." Simply use the basic model number for copper-wound units and add the suffix as required. For the fuse kit option, you must order the appropriate kit separately.

Other ratings are available for special applications. Contact the nearest General Electric sales office for further information.

*Fuses not included

Ordering Information — Standard Windings

Transformers with **standard windings** are available with various termination options as shown on this page; i.e., (1) basic model with terminal board, (2) fuse kit option,* (3) -G5 with terminal boards and two-fuse board option,* (4) and -G8 with primary and secondary terminals on the coil.

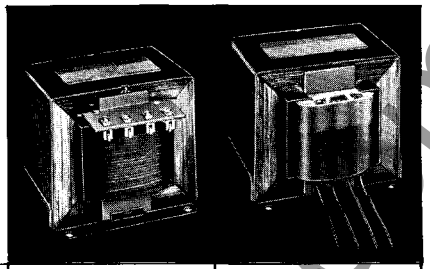
See page 4 for "How To Order." Simply use the basic model for standard-wound units and add the suffix as required. For the fuse kit options, you must order the appropriate kit separately.

*Fuses not included

CORE-AND-COIL TRANSFORMERS

Type IP Industrial Control Core-and-Coil Transformers

FOR CONTROL AND POWER APPLICATIONS
Single-Phase, 600 Volts and Below
25 VA — 3 kVA
UL Component Recognized (File E2739)



DESCRIPTION

General Electric control transformers for panelboard applications have the same basic construction as the machine tool transformers described on previous pages of this bulletin. However, they do not have the same regulation characteristics. They *do* meet NEMA specifications for specialty transformers.

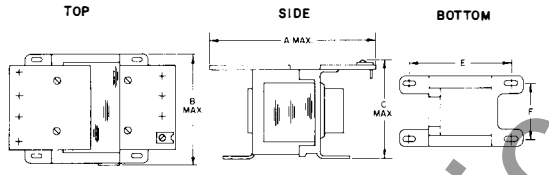
Panelboard transformers are available with two types of terminal arrangements — ''leads out,'' and ''terminal board.'' Leads-out construction is designed for use in equipment where limited space is a problem. All leads are permanently identified and are located as shown on the nameplate wiring diagram. Terminal board construction is designed for panel wiring. Here too, terminals are identified and located in accordance with the diagram stamped on the terminal board.

Unlike machine tool transformers, panelboard transformer secondaries ***can*** be hooked up in series-multiple connections. Transformers rated 120/240 volts can be connected for 120 volts, 240 volts, or 240/120 volts, three-wire.

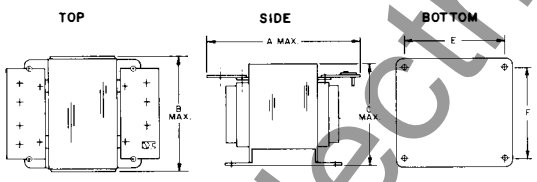
Ordering Information

To specify the terminal arrangement you want, simply order by model number. The 9T58B—''2000 Series'' identifies the basic model number with terminal boards, while the 9T58B—''1000 Series'' identifies units having primary and secondary leads out.

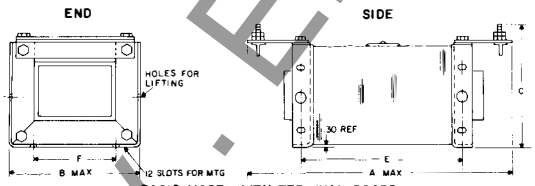
Outline Drawings



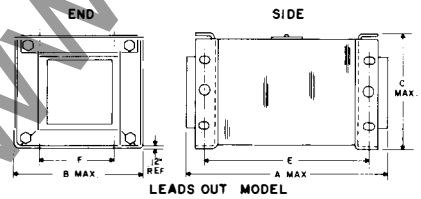
For Frame Sizes 609, 611, 612, 613, 811, 813, 814, 815, 817



For Frame Sizes 1016, 1216, 1219, 1416, 1419, 1422



BASIC MODEL WITH TERMINAL BOARD



LEADS OUT MODEL

For Frame Size 1621

kVA	Frame Size	Wiring Diagram No. Page 7	Basic model transformer with terminal boards	Transformer with primary and secondary lead outs
240/480 VOLTS PRIMARY — 120/240 VOLTS SECONDARY — 60 HERTZ				
.025	609	3	9T58B2800 ▲	9T58B1800
.050	611	3	9T58B2802 ▲	9T58B1802 ▲
.075	612	3	9T58B2803 ▲	9T58B1803 ▲
.100	811	3	9T58B2804 ▲	9T58B1804 ▲
.150	813	3	9T58B2805 ▲	9T58B1805 ▲
.200	814	3	9T58B2806 ▲	9T58B1806 ▲
.250	815	3	9T58B2807 ▲	9T58B1807 ▲
.300	815	3	9T58B2808 ▲	9T58B1808 ▲
.375	817	3	9T58B2809 ▲	9T58B1809 ▲
.500	1016	3	9T58B2810 ▲	9T58B1810 ▲
.750	1216	3	9T58B2811 ▲	9T58B1811
1.0	1219	3	9T58B2812 ▲	9T58B1812 ▲
1.5	1416	3	9T58B2813 ▲	9T58B1813 ▲
2.0	1419	3	9T58B2814 ▲	9T58B1814 ▲
3.0	1422	3	9T58B2815 ▲	9T58B1815 ▲
5.0	1621	3	9T22B4311 ▲	9T22B4211 ▲
7.5	1625	3	9T22B4312 ▲	9T22B4212 ▲
10.0	1922	3	9T22B4313 ▲	9T22B4213 ▲
15.0	1926	3	9T22B4314 ▲	9T22B4214 ▲
25.0	1932	3	9T22B4315 ▲	9T22B4215 ▲
600 VOLTS PRIMARY — 120/240 VOLTS SECONDARY — 60 HERTZ				
.100	811	5	9T58B2824 ▲	
.200	814	5	9T58B2826 ▲	
.300	815	5	9T58B2828 ▲	
.500	1016	5	9T58B2830 ▲	
1.0	1219	5	9T58B2832 ▲	
2.0	1419	5	9T58B2834 ▲	
3.0	1422	5	9T58B2835 ▲	
5.0	1621	5	9T22B4341	
120/240 VOLTS PRIMARY — 120/240 VOLTS SECONDARY — 60 HERTZ				
.100	811	3	9T58B2907 ▲	
.200	814	3	9T58B2909 ▲	
.300	815	3	9T58B2911 ▲	
.500	1016	3	9T58B2913	
.750	1216	3	9T58B2914	
1.0	1219	3	9T58B2915 ▲	
2.0	1419	3	9T58B2917 ▲	
3.0	1422	3	9T58B2918	
120/240 VOLTS PRIMARY — 12/24 VOLTS SECONDARY — 60 HERTZ				
.050	611	3	9T58B2873 ▲	
.075	612	3	9T58B2874 ▲	
.100	811	3	9T58B2875 ▲	
.150	813	3	9T58B2876 ▲	
.200	814	3	9T58B2877 ▲	
.250	815	3	9T58B2878 ▲	
.300	815	3	9T58B2879 ▲	
.500	1016	3	9T58B2881 ▲	
.750	1216	3	9T58B2882 ▲	
1.0	1219	3	9T58B2883 ▲	
240/480 VOLTS PRIMARY — 120/240 VOLTS SECONDARY — 50/60 HERTZ				
.500	1016	3	9T58B2930 ▲	
.750	1219	3	9T58B2931 ▲	
1.0	1416	3	9T58B2932 ▲	
1.5	1419	3	9T58B2933	
2.0	1422	3	9T58B2934 ▲	
3.0	1422	3	9T58B2935	
380/400/416 VOLTS PRIMARY — 115/230 VOLTS SECONDARY — 50/60 HERTZ				
.500	1016	4	9T58B2978 ▲	
.750	1219	4	9T58B2979 ▲	
1.0	1416	4	9T58B2980 ▲	
1.5	1419	4	9T58B2981 ▲	
2.0	1422	4	9T58B2982 ▲	
3.0	1422	4	9T58B2983 ▲	
380/400/416 VOLTS PRIMARY — 110/220 VOLTS SECONDARY — 50/60 HERTZ				
5.0	1622	4	9T22B4366 ▲	
7.5	1626	4	9T22B4367	
10.0	1922	4	9T22B4368	
208, 220, 380, 440, 550, 230, 400, 460, 575 240, 416, 480, 600 VOLTS PRIMARY—			**100, 110, 85* 110, 120, 91* 115, 125, 95* 120, 130, 99* VOLTS SECONDARY 50/60 HERTZ**	
.050	811	6	9T58B3520	
.150	815	6	9T58B3521	
.250	1016	6	9T58B3715 ▲	
.350	1016	6	9T58B3716	
.500	1216	6	9T58B3717 ▲	
.750	1416	6	9T58B3718 ▲	
1.0	1416	6	9T58B3719	
1.5	1419	6	9T58B3720	
2.0	1422	6	9T58B3721 ▲	
3.0	1622	6	9T22B4021G03	
5.0	1922	6	9T22B4025G16	

▲Normally in Factory Stock.

*These voltages at reduced capacity

Type IP Core-and-Coil Transformers

Wiring Diagrams

Dimensions and Weights

609	Basic model	3 7/8	3 3/16	3	2 5/32	2 1/2	2.0
	Basic model with fuse kit	3 7/8	3 3/16	3 1/2	2 5/32	2 1/2	2.0
	Leads outs	2 15/16	3 3/16	2 3/4	2 5/32	2 1/2	2.0
611	Basic model	4 1/8	3 3/16	3	2 13/32	2 1/2	2.5
	Basic model with fuse kit	4 1/8	3 3/16	3 1/2	2 13/32	2 1/2	2.5
	G5 with TB and two-fuse board	4 1/8	3 3/16	4 13/16	2 13/32	2 1/2	2.5
	G8 terminals on coil	3 5/8	3 3/16	2 3/4	2 13/32	2 1/2	2.5
	Leads out	3 3/16	3 3/16	2 3/4	2 13/32	2 1/2	2.5
612	Basic model	4 3/8	3 3/16	3	2 21/32	2 1/2	3.0
	Basic model with fuse kit	4 3/8	3 3/16	3 1/2	2 21/32	2 1/2	3.0
	G5 with TB and two-fuse board	4 3/8	3 3/16	4 13/16	2 21/32	2 1/2	3.0
	G8 terminals on coil	3 7/8	3 3/16	2 3/4	2 21/32	2 1/2	3.0
	Leads out	3 7/16	3 3/16	2 3/4	2 21/32	2 1/2	3.0
613	Basic model	4 5/8	3 3/16	3	2 29/32	2 1/2	3.5
	Basic model with fuse kit	4 5/8	3 3/16	3 1/2	2 29/32	2 1/2	3.5
	G5 with TB and two-fuse board	4 5/8	3 3/16	4 13/16	2 29/32	2 1/2	3.5
	G8 terminals on coil	4 1/8	3 3/16	2 3/4	2 29/32	2 1/2	3.5
811	Basic model	4 1/8	3 15/16	3 5/8	2 3/8	3 1/8	4.1
	Basic model with fuse kit	4 1/8	3 15/16	4 1/8	2 3/8	3 1/8	4.1
	G5 with TB and two-fuse board	4 1/8	3 15/16	5 7/16	2 3/8	3 1/8	4.1
	G8 terminals on coil	3 7/8	3 15/16	3 3/8	2 3/8	3 1/8	4.1
	Leads out	3 1/4	3 15/16	3 3/8	2 3/8	3 1/8	4.1
813	Basic model	4 5/8	3 15/16	3 5/8	2 7/8	3 1/8	5.5
	Basic model with fuse kit	4 5/8	3 15/16	4 1/8	2 7/8	3 1/8	5.5
	G5 with TB and two-fuse board	4 5/8	3 15/16	5 7/16	2 7/8	3 1/8	5.5
	G8 terminals on coil	4 3/8	3 15/16	3 3/8	2 7/8	3 1/8	5.5
	Leads out	3 3/4	3 15/16	3 3/8	2 7/8	3 1/8	5.5
814	Basic model	4 7/8	3 15/16	3 5/8	3 1/8	3 1/8	6.3
	Basic model with fuse kit	4 7/8	3 15/16	4 1/8	3 1/8	3 1/8	6.3
	G5 with TB and two-fuse board	4 7/8	3 15/16	5 7/16	3 1/8	3 1/8	6.3
	G8 terminals on coil	4 5/8	3 15/16	3 3/8	3 1/8	3 1/8	6.3
	Leads out	4	3 15/16	3 3/8	3 1/8	3 1/8	6.3
815	Basic model	5 1/8	3 15/16	3 5/8	3 3/8	3 1/8	7.0
	Basic model with fuse kit	5 1/8	3 15/16	4 1/8	3 3/8	3 1/8	7.0
	G5 with TB and two-fuse board	5 1/8	3 15/16	5 7/16	3 3/8	3 1/8	7.0
	G8 terminals on coil	4 7/8	3 15/16	3 3/8	3 3/8	3 1/8	7.0
	Leads out	4 1/4	3 15/16	3 3/8	3 3/8	3 1/8	7.0
817	Basic model	5 5/8	3 15/16	3 5/8	3 7/8	3 1/8	8.3
	Basic model with fuse kit	5 5/8	3 15/16	4 1/8	3 7/8	3 1/8	8.3
	G5 with TB and two-fuse board	5 5/8	3 15/16	5 7/16	3 7/8	3 1/8	8.3
	G8 terminals on coil	5 3/8	3 15/16	3 3/8	3 7/8	3 1/8	8.3
	Leads out	4 3/4	3 15/16	3 3/8	3 7/8	3 1/8	8.3

*Type ML-C Construction

1016	Basic model	6 1/2	4 3/4	4	3 1/4	3 1/2	11.5
	Basic model with fuse kit	6 1/2	4 3/4	4 1/4	3 1/4	3 1/2	11.5
	G5 with TB and two-fuse board	6 1/2	4 3/4	5 7/8	3 1/4	3 1/2	11.5
	G8 terminals on coil	5 3/4	4 3/4	3 15/16	3 1/4	3 1/2	11.5
	Lead outs	5	4 3/4	3 15/16	3 1/4	3 1/2	11.5
1216	Basic model	6 1/2	5 1/2	4 5/8	3 1/4	4	15.5
	Basic model with fuse kit	6 1/2	5 1/2	4 5/8	3 1/4	4	15.5
	G5 with TB and two-fuse board	6 1/2	5 1/2	6 1/2	3 1/4	4	15.5
	G8 terminals on coil	6	5 1/2	4 9/16	3 1/4	4	15.5
	Leads out	5 1/4	5 1/2	4 9/16	3 1/4	4	15.5
1219	Basic model	7 1/4	5 1/2	4 5/8	4	4	18.5
	Basic model with fuse kit	7 1/4	5 1/2	4 5/8	4	4	18.5
	G5 with TB and two-fuse board	7 1/4	5 1/2	6 1/2	4	4	18.5
	G8 terminals on coil	6 3/4	5 1/2	4 9/16	4	4	18.5
	Leads out	6	5 1/2	4 9/16	4	4	18.5
1416	Basic model	6 1/2	7	5 7/8	3 1/4	5 1/2	27.5
	Basic model with fuse kit	6 1/2	7	5 7/8	3 1/4	5 1/2	27.5
	G5 with TB and two-fuse board	6 1/2	7	7 3/4	3 1/4	5 1/2	27.5
	G8 terminals on coil	6 1/4	7	5 13/16	3 1/4	5 1/2	27.5
	Leads out	5 3/4	7	5 13/16	3 1/4	5 1/2	27.5
1419	Basic model	7 1/4	7	5 7/8	4	5 1/2	33.5
	Basic model with fuse kit	7 1/4	7	6 1/2	4	5 1/2	33.5
	G5 with TB and two-fuse board	7 1/4	7	7 3/4	4	5 1/2	33.5
	G8 terminals on coil	7	7	5 13/16	4	5 1/2	33.5
	Leads out	6 1/2	7	5 13/16	4	5 1/2	33.5
1422	Basic Model	9	7	5 7/8	5 3/4	5 1/2	45.0
	Basic Model with fuse kit	9	7	6 1/2	5 3/4	5 1/2	45.0
	G5 with TB and two-fuse board	9	7	7 3/4	5 3/4	5 1/2	45.0
	G8 terminals on coil	8 3/4	7	5 13/16	5 3/4	5 1/2	45.0
	Leads out	8 1/2	7	5 13/16	5 3/4	5 1/2	45.0
1621	Basic model with terminal boards *	11 5/8	9 5/16	9 1/4	5 13/16	6 1/4	73
	Leads out	8 1/2	9 5/16	7 15/16	5 13/16	6 1/4	73

H1-H2	H1-H3	H1-H4	H1-H5	X1-X2	X1-X3	X1-X4
208			500	85	100	110
220	380	440	550	91	110	120
230	400	460	575	95	115	125
240	416	480	600	99	120	130

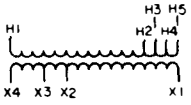


Diagram 6

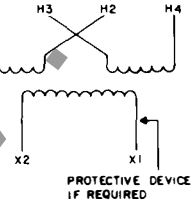


Diagram 1

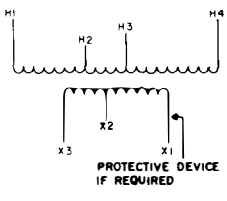


Diagram 2

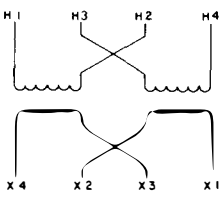


Diagram 3

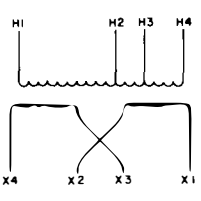


Diagram 4

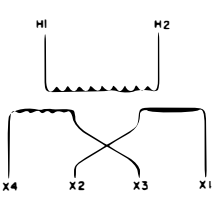


Diagram 5

CORE-AND-COIL TRANSFORMERS

Industrial Control Transformers Type IP

REGULATION CURVES

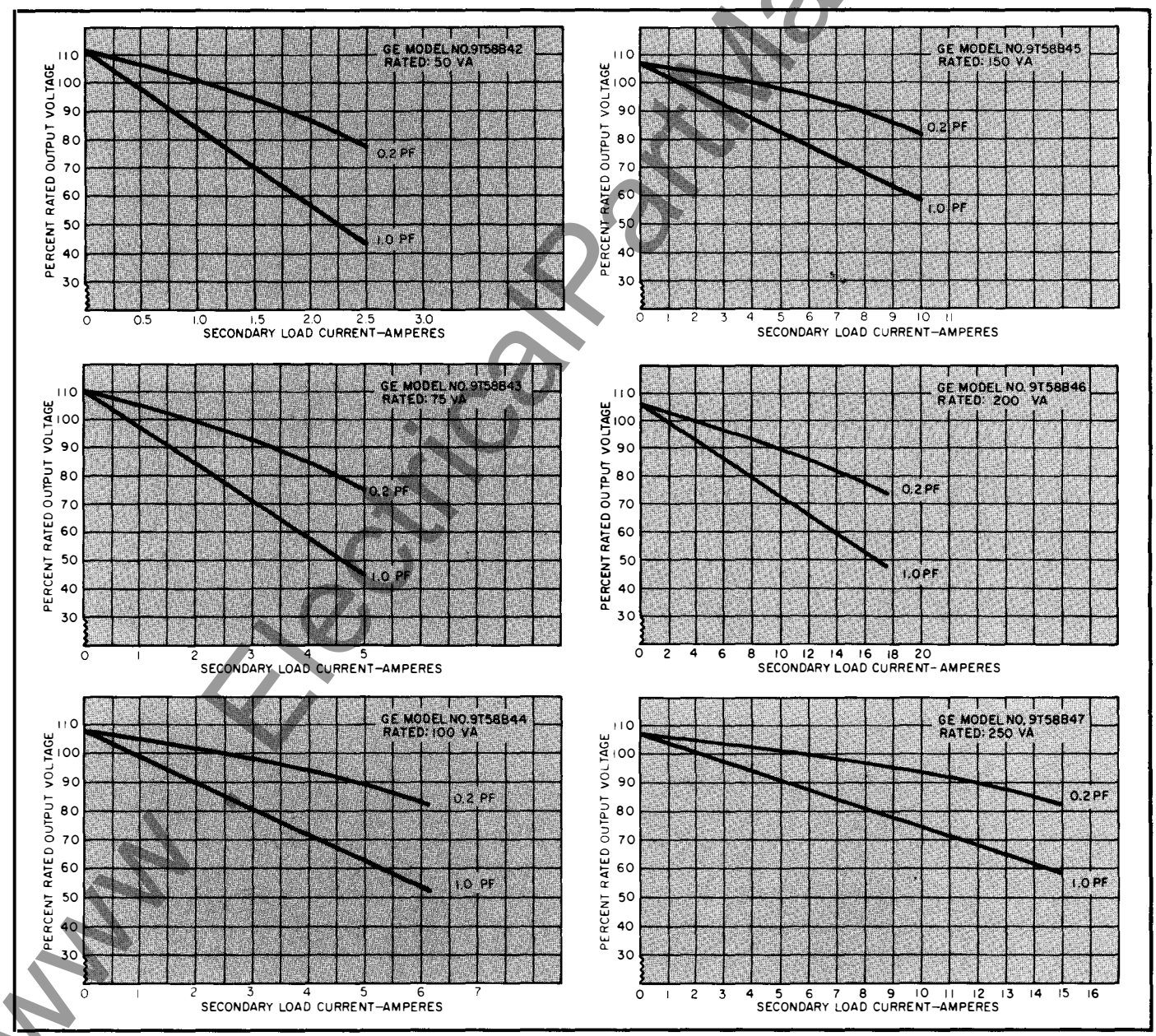
How to Use Regulation Curves to Make A Proper Transformer Selection

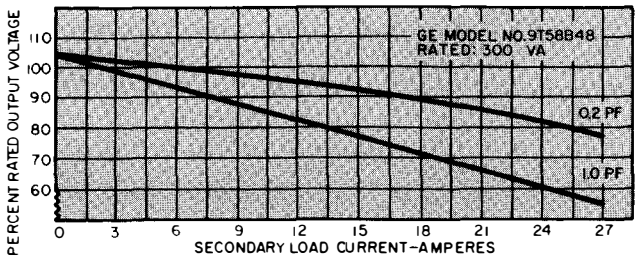
1. Calculate the maximum steady state or continuous volt-ampere load to be connected to the transformer secondary.
2. Calculate the maximum inrush volt-amperes of the load to be connected to the transformer secondary.
3. Add the results of Step 1 and Step 2 vectorially;

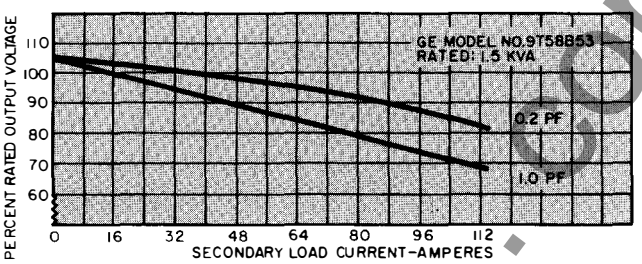
$$\text{Transformer nameplate VA} = \sqrt{(\text{VA-steady state})^2 + (\text{VA-inrush})^2}$$

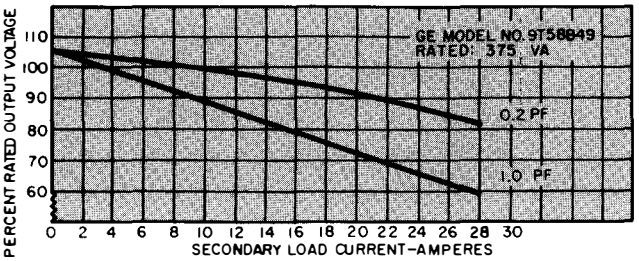
Steps 1 and 2 can be added arithmetically, but the transformer rating may be slightly larger than actually required.

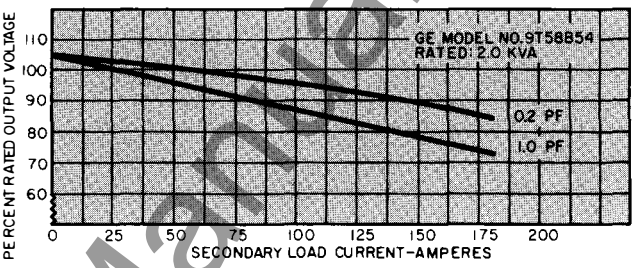
4. Determine the power factor of the load condition calculated in Step 3. A 20% power factor is a good rule of thumb for contactors and other magnetic devices.
5. Select the regulation curve which corresponds to the VA rating selected as a result of Step 3. These curves depict the effect on transformer output voltage as secondary amperes are increased. Curves depict this situation for 20% and unity power factor. NEMA Standards require most magnetic devices to operate at 85% of rated voltage. The location where the power factor curve intersects the 85% output point is the maximum ampere value allowed for the condition calculated in Step 3.

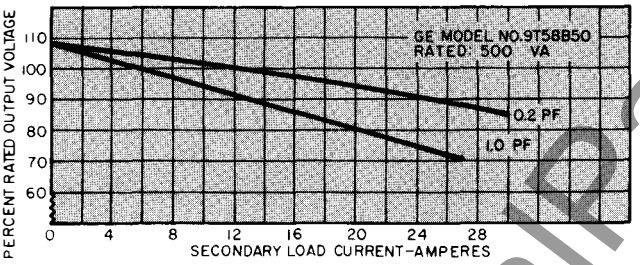


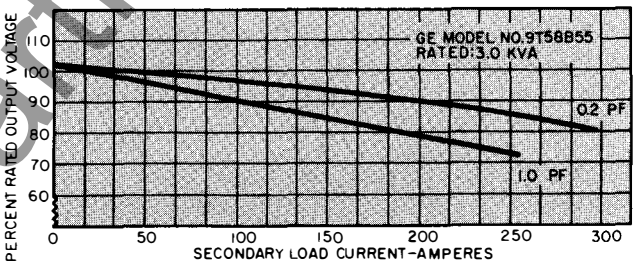


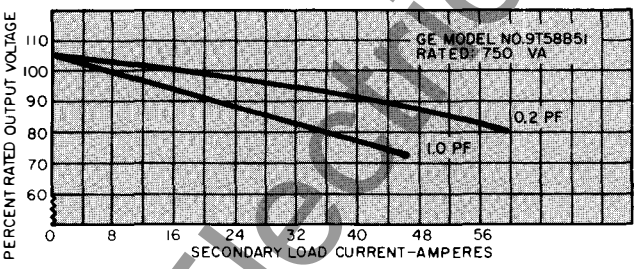


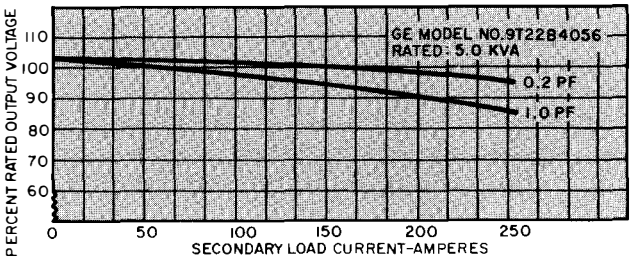


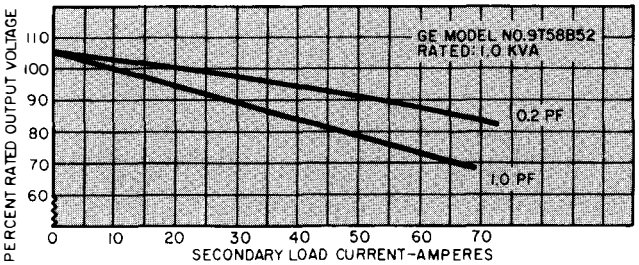












CORE-AND-COIL TRANSFORMERS

Type ML-C Industrial Control Core-and-Coil Transformers

FOR CONTROL AND POWER APPLICATIONS

Single Phase, 600 Volts and Below, 5.0—25 kVA

UL Component Recognized (File E2739 — and E79145)

Description

Core-and-coil Transformers of the ML-C construction type for control and power applications are designed with kVA and voltage ratings to tie in with system and equipment ratings.

All units meet the requirements of ANSI/NEMA specifications for specialty transformers.

The ML-C frames are designed for universal mounting; any side of the transformer can be mounted on a floor, wall, or ceiling.

The leads out construction is designed for panel wiring use in equipment where limited space is a problem. All leads are identified in accordance with the nameplate wiring diagram.

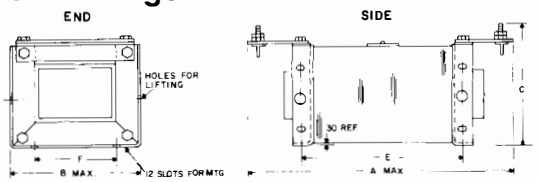
240/480 VOLTS PRIMARY—120/240 VOLTS SECONDARY—60 HERTZ				
5.0	1621	3	9T22B4311 ▲	9T22B4211 ▲
7.5	1625	3	9T22B4312 ▲	9T22B4212 ▲
10.0	1922	3	9T22B4313 ▲	9T22B4213 ▲
15.0	1926	3	9T22B4314 ▲	9T22B4214
25.0	1932	3	9T22B4315 ▲	9T22B4215 ▲
380/400/416 VOLTS PRIMARY—110/220 VOLTS SECONDARY—50/60 HERTZ				
5.0	1622	4	9T22B4366 ▲	.....
7.5	1626	4	9T22B4367	.....
10.0	1922	4	9T22B4368	.....

▲Normally in Factory Stock.

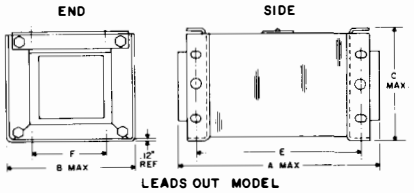
Dimensions and Weights

1621	Basic model with terminal board	11 5/8	9 5/16	9 1/4	5 13/16	6 1/4	73
	Leads out	8 1/2	9 5/16	7 15/16	5 13/16	6 1/4	73
1622	Basic model with terminal board	12 3/16	9 5/16	8 13/16	6 5/16	6 1/4	80
1625	Basic model with terminal board	13 5/8	9 5/16	9 1/4	7 13/16	6 1/4	102
	Leads out	10 5/8	9 5/16	7 15/16	7 13/16	6 1/4	102
1626	Basic model with terminal board	14 3/16	9 5/16	8 13/16	8 5/16	6 1/4	109
1922	Basic model Basic model board	12 5/8	11 15/16	11 7/16	6 3/4	8 1/2	142
	Leads out	9 3/4	11 15/16	10 1/8	6 3/4	8 1/2	142
1926	Basic model with terminal board	14 5/8	11 15/16	11 7/16	8 3/4	8 1/2	190
	Leads out	12 3/8	11 15/16	10 1/8	8 3/4	8 1/2	190
1932	Basic model with terminal board	20 5/8	11 15/16	11 7/16	14 1/4	8 1/2	327
	Leads out	17 1/2	11 15/16	10 1/8	14 1/4	8 1/2	327

Outline Drawings



BASIC MODEL WITH TERMINAL BOARD



LEADS OUT MODEL

For Frame Sizes 1621, 1622, 1625, 1626, 1922, 1926, 1932

Wiring Diagrams

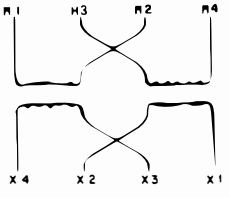


Diagram 3

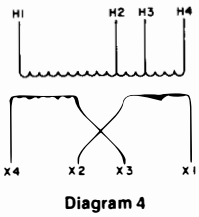


Diagram 4

Series Multiple Connection

Transformers rated 120/240 volts can be connected for 120 volts, 240 volts, or 120/240 volts three wire. Units rated 240/480 volts can be connected for 240 volts or 480 volts.

CORE-AND-COIL TRANSFORMERS

Type HV High Voltage Core-and-Coil Control Transformers

FOR CONTROL AND POWER APPLICATIONS

Single-Phase, 2300 Volts and Above, 1 kVA—5 kVA

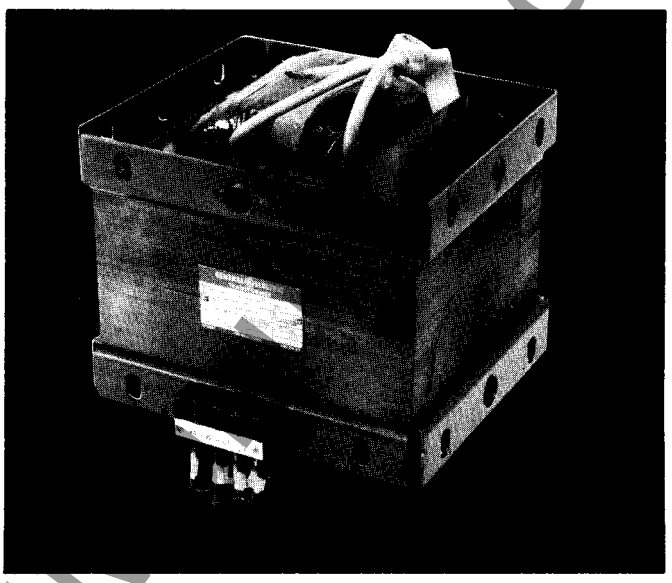
Description

These high-voltage control transformers feature core-and-coil construction and are used to step down the circuit voltage to control voltages for control and power applications.

All units meet ANSI and NEMA specifications for specialty transformers.

The transformer frames are specially designed for universal mounting; any side of the transformer can be mounted on a floor, wall, ceiling or panel.

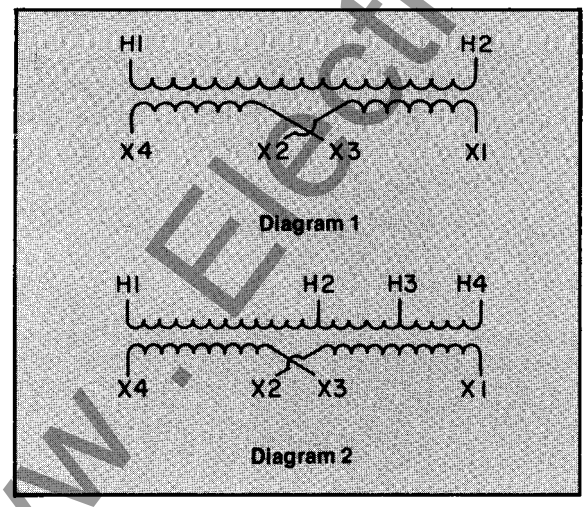
Terminations consist of leads-out (ten inches min.) on the high voltage terminations, and a terminal block on the low-voltage terminations. All leads are identified with metal tags and are in accordance with the nameplate wiring diagram.



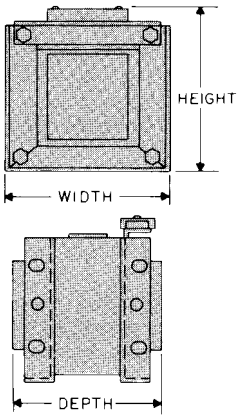
Dimensions and Data

60	1	2300	115/230	9T28B9710G11	8½	5¾	6½	30	1
60	1	4160	115/230	9T28B9710G12	8½	5¾	8	30	1
60	2	2300	115/230	9T28B9702G11	8½	5¾	8	43	1
60	2	4160	115/230	9T28B9702G12	8½	5¾	8	43	1
60	3	2300	115/230	9T28B9703G11	9	9½	6¼	56	1
60	3	4160	115/230	9T28B9703G12	9	9½	6¼	56	1
60	5	2300	115/230	9T28B9704G11	9	9½	7¾	75	1
60	5	4160	115/230	9T28B9704G12	9	9½	7¾	75	1
50/60	3	3000/3300/3500	115/230	9T28B9703G2	9	9½	8¼	71	2

Wiring Diagrams



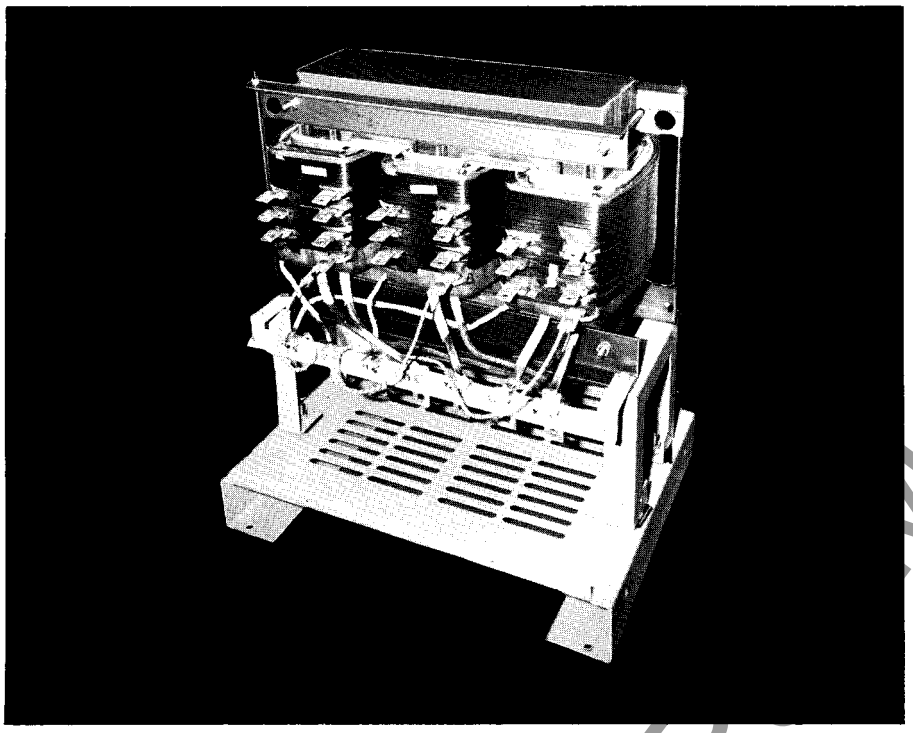
Outline Drawings



CORE-AND-COIL TRANSFORMERS

Type QL-C Core-and-Coil Power Transformers

FOR POWER APPLICATIONS
Three-Phase, 600 Volts and Below 30-500 kVA
UL Component Recognized



Ratings and Data

60 hertz, 480V - 208Y/120 — (6) 2½% taps, 2 above and 4 below 480 volts

30	9T24B3872	1
45	9T24B3873	1
50	9T24B3864	1
75	9T24B3874	3
112.5	9T24B3875	3
150	9T24B3876	3
225	9T24B3877	3
300	9T24B3878	3
400	9T24B3866	3
500	9T24B3879	3

60 hertz, 480V - 240V — (6) 2½% taps, 2 above and 4 below 480 volts

30	9T24B3882	2
45	9T24B3883	2
75	9T24B3884	4
112.5	9T24B3885	4
150	9T24B3886	4
225	9T24B3887	4
300	9T24B3888	4
500	9T24B3889	4

60 hertz, 600V - 208Y/120 — (6) 2½% taps, 2 above and 4 below 600 volts

30	9T24B3892	1
45	9T24B3893	1
75	9T24B3894	3
112.5	9T24B3895	3
150	9T24B3896	3

Application

General Electric's Type QL-C core-and-coil power transformer has all-purpose application as a source of distribution power, lighting, or step-down voltage for indoor and outdoor switchboards, panels, or motor control centers. This core-and-coil is intended to be mounted within a suitable enclosure for use in convection-cooled or forced air cooled equipment.

Electrical clearance around the core-and-coil transformer must be in accordance with NEC 373-11. Free circulation of air is essential for the proper operation of all dry-type transformers. Provisions for the entrance of cooling air should be below the lowest part of the core, and provisions for the egress of the heated air should be above the highest part of the core. For each 100 kVA of transformer rating, the inlet and outlet opening should each have a net clear area of one square foot, except that each net area shall never be less than one-half square foot for 50 kVA and below.

Features

All QL-C core-and-coil power transformers are recognized under the component program of Underwriter Laboratories, Inc. With considerable emphasis being placed on transformer application by the Federal Occupational Safety and Health Act (OSHA), UL recognition is especially desirable.

These three-phase units are available in ratings from 30 kVA through 500 kVA. Units are rated 60 hertz and are available in the most popular voltages required by equipment manufacturers.

UL Listed 220 C insulation system (150C rise).

High temperature insulation materials with proven reliability through life testing per Standard IEEE-259.

Meets UL thermal overload test of 200 percent of rated current for one-half hour. Meets ANSI C57.12 loading guide.

Termination location and spacing are convenient for cable connection and permit use of low-temperature cable.

Provided with rigid base to facilitate easy handling of unit.

Universal taps: (4) 2½ percent below normal and (2) 2½ percent above normal.

Special Voltage

In addition to the three-phase voltage ratings listed under Ratings and Data, other ratings are available as follows:

480V primary—480Y/277V secondary
240V primary—208Y/120V secondary
208V primary—480Y/277V secondary

Single-phase transformers are available in ratings from 37.5 through 167 kVA; with 240 x 480- or 600-volt primary, and 120/240-volt secondary.

Performance Data

THREE-PHASE				
30	45	4.9	4.3	4.9
45	45	4.3	3.2	4.3
50	45	3.7	2.9	3.7
75	50	5.2	3.7	5.1
112.5	50	5.0	3.2	4.9
150	50	4.6	2.8	4.4
225	55	5.4	2.4	4.8
300	55	6.2	2.7	5.0
400	60	5.4	2.5	4.7
500	60	5.3	2.3	4.3

*Design sound level in a suitable enclosure.

Dimensions

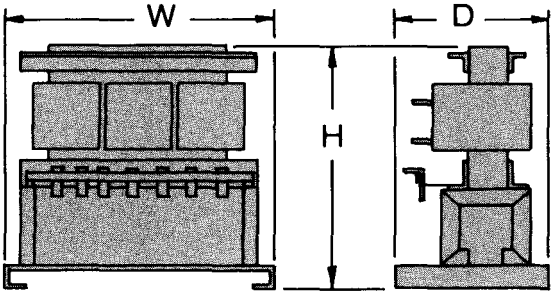


Fig. 1 — Units rated 30-50 kVA

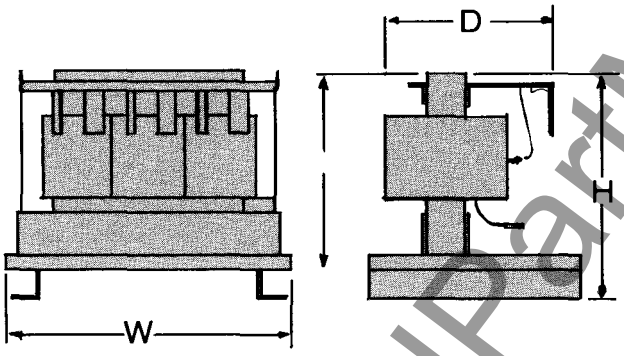
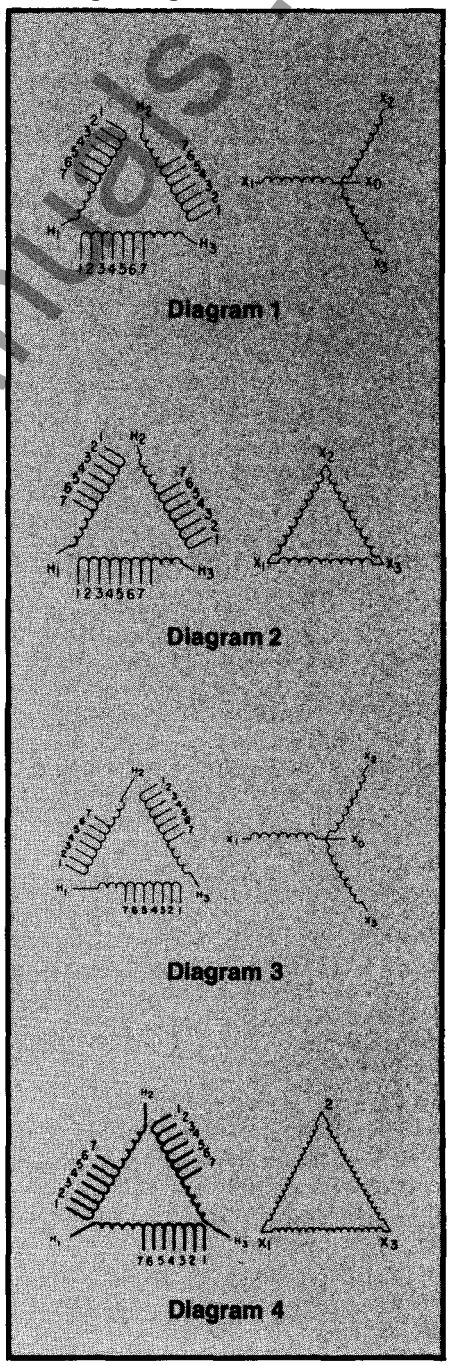


Fig. 2 — Units rated 75kVA and above

Dimensions and Data, Three-Phase, 60 Hertz

30	9T24B3872	9T24B3882	9T24B3892	26	23	15¼	280	45
45	9T24B3873	9T24B3883	9T24B3893	27	23	16¾	360	45
50	9T24B3864	.....	.....	27	23	16¾	370	45
75	9T24B3874	9T24B3884	9T24B3894	23½	31¼	22⅞	395	50
112.5	9T24B3875	9T24B3885	9T24B3895	28	31¼	22⅞	540	50
150	9T24B3876	9T24B3886	9T24B3896	27	34¼	22⅞	680	50
225	9T24B3877	9T24B3887	9T24B3897	28¾	37¾	28⅛	915	55
300	9T24B3878	9T24B3888	9T24B3898	36¾	41⅜	29⅜	1220	55
400	9T24B3866	.....	.....	41⅞	46⅝	33⅞	1600	60
500	9T24B3879	9T24B3889	9T24B3899	46¾	46⅝	33⅞	1800	60

Wiring Diagrams



CORE-AND-COIL TRANSFORMERS

Type V-8 Core-and-Coil Epoxy-cast Transformers

FOR CONTROL APPLICATIONS

Single-Phase, 2400 Volts and Above, 5 kVA—50 kVA

Applications

General Electric's unique line of epoxy-cast transformers is designed to provide control power for circuit breakers and accessories in switchboard and switchgear applications.

Epoxy-cast transformers feature full-wave basic impulse levels from 60 to 95 kV and match the standard full-wave test levels of liquid-filled transformers (see BIL comparison table). As a result, they deliver reliable performance in spite of switching and line surges. They maintain the high-impulse level of medium-voltage circuits up to 15,000 volts.

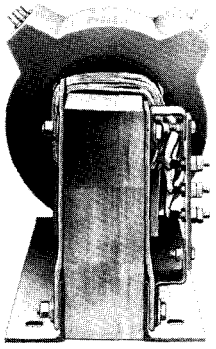
GE epoxy-cast transformers are rated for single-phase, 60-hertz operation, 2400 volts and above, 5 kVA through 50 kVA.

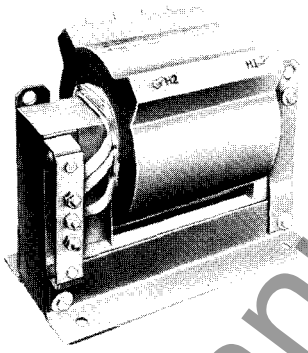
Features

Epoxy-cast construction of these General Electric transformers means you receive a unit that is compact yet offers a high degree of reliability. By combining the lightweight advantages of dry-type transformers with a unit that has the high BIL levels equivalent to the ANSI-C57-12 Standard for oil-immersed transformers . . . you get the ideal solution for your switching and surge applications.

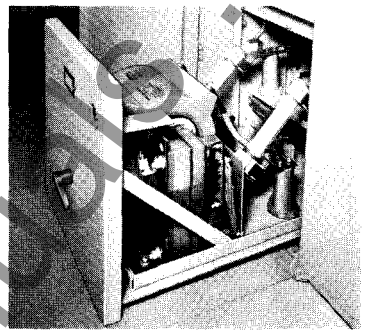
Compactness mean versatility of mounting locations too. Draw-out mounting . . . simplified stationary mounting . . . no matter how you mount it, there is a minimum space tie-up for transformer components. Additional features include:

- The specially treated low-voltage coil is surrounded, and therefore protected, by the high-voltage epoxy-cast-coil. This design results in a unit resistant to adverse environmental conditions and improves the transformer's ability to withstand mechanical short-circuit stresses.
- The special maintenance considerations involved with liquid-filled transformers are eliminated.
- All models have readily accessible stud-type terminals which accept bolt-on connectors.
- Primary voltage taps—that are easy-to-reach—are also provided, thus making it easy to adjust the primary windings within a range of up to 15 percent to match a variety of line voltages. For HV taps available, see table on page 15.





Epoxy-cast, core-and-coil control transformer



General Electric's epoxy-cast control power transformer is compact . . . permits mounting in draw-out enclosure for easy accessibility and maintenance.

- Transformer high-voltage coils are vacuum cast in epoxy resin to provide a hermetically sealed coil.
- Voltage adjustments are easily made through the use of a connecting strap between the tap lugs.

Special Models

(Consult your GE Sales Representative for a quotation.)

There are a variety of other ratings available that can be supplied to satisfy special customer application needs. These special ratings are available within the range of product characteristics described below.

- Frequency: 60 Hz (or) 50/60 Hz
- kVA Ratings:
  Single-phase—5, 10, 15, 25, 37.5 and 50 kVA
- High Voltage Ratings:
  (1) Voltage Range:
  2400-14,400 volts line-to-line for 60 Hz
  2400-13,800 volts line-to-line for 50/60 Hz
  (2) Tap Range:
  15% with maximum of 2 tap voltages
  10% with maximum of 4 tap voltages
- Low Voltage Ratings:
  (1) Voltage Range:
  115 to 600 volts for single voltages (or)
  115/230-300/600 volts series-multiple
  (2) Taps:
  No taps provided on series-multiple ratings. On single-voltage ratings, up to two reduced capacity taps below highest voltage can be provided for non-simultaneous loading.

Bil Comparison

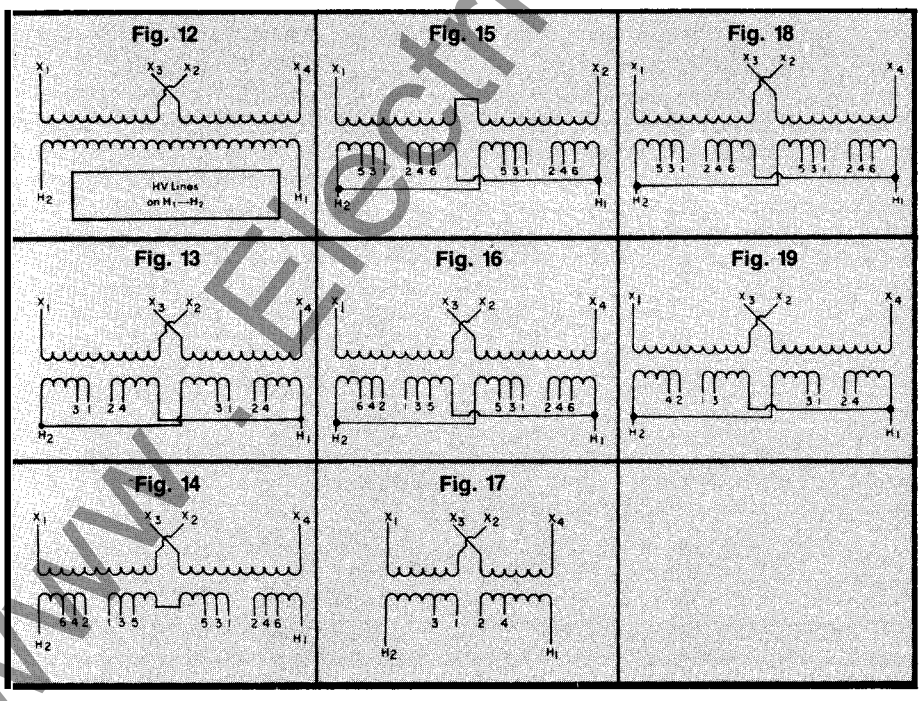
System Insulation Class (kV)						
	Full Wave Test	Chopped Wave Test	Full Wave Test	Chopped Wave Test	Full Wave Test	Chopped Wave Test
5	60	60	25	25	60	69
8.66	75	75	35	35	75	88
15	95	95	50	50	95	110

Mechanical and Electrical Data

SINGLE-PHASE, 60 Hertz, 120/240V secondary									
5 kVA, see figure number 20									
2400/4160	9T28Y5600 ▲	1 ± 7½	5	60	13⅜	16⁹⁄₁₆	10¼	165	17
4160	9T28Y5601 ▲	1 ± 7½	5	60	13⅜	16⁹⁄₁₆	10¼	165	17
4160*	9T28Y1021G99	1 ± 7½	5	60	15⅛	17⅝	11⅝	235	17
4800	9T28Y5602	1 ± 7½	5	60	13⅜	16⁹⁄₁₆	10¼	165	17
7200	9T28Y5603	1 ± 7½	8.66	75	13⅜	16⁹⁄₁₆	10¼	165	17
4800	9T28Y1040G20	1 ± 7½	5	95	13⅜	16⁹⁄₁₆	10¼	165	17
7200	9T28Y1040G21	1 ± 7½	8.66	95	13⅜	16⁹⁄₁₆	10¼	165	17
12000	9T28Y5604 ▲	1 ± 7½	15	95	13⅜	16⁹⁄₁₆	10¼	165	17
13300	9T28Y5605 ▲	1 ± 7½	15	95	13⅜	16⁹⁄₁₆	10¼	165	17
10 kVA, see figure number 21									
2400/4160	9T28Y5610 ▲	1 ± 7½	5	60	15⅛	17⅝	11⅝	235	17
4160	9T28Y5611 ▲	1 ± 7½	5	60	15⅛	17⅝	11⅝	235	17
4800	9T28Y5612	1 ± 7½	5	60	15⅛	17⅝	11⅝	235	17
7200	9T28Y5617	1 ± 7½	8.66	75	15⅛	17⅝	11⅝	235	17
4800	9T28Y1041G20	1 ± 7½	5	95	15⅛	17⅝	11⅝	235	17
7200	9T28Y1041G21 ▲	1 ± 7½	8.66	95	15⅛	17⅝	11⅝	235	17
12000	9T28Y5614 ▲	1 ± 7½	15	95	15⅛	17⅝	11⅝	235	17
13300	9T28Y5615 ▲	1 ± 7½	15	95	15⅛	17⅝	11⅝	235	17
15 kVA, see figure number 21									
2400/4160	9T28Y5620 ▲	1 ± 7½	5	60	15⅛	17⅝	11⅝	280	17
4160	9T28Y5621 ▲	1 ± 7½	5	60	15⅛	17⅝	11⅝	280	17
4800	9T28Y5622	1 ± 7½	5	60	15⅛	17⅝	11⅝	280	17
7200	9T28Y5623 ▲	1 ± 7½	8.66	75	15⅛	17⅝	11⅝	280	17
4800	9T28Y1042G20	1 ± 7½	5	95	15⅛	17⅝	11⅝	280	17
7200	9T28Y1042G21 ▲	1 ± 7½	8.66	95	15⅛	17⅝	11⅝	280	17
12000	9T28Y5624 ▲	1 ± 7½	15	95	15⅛	17⅝	11⅝	280	17
13300	9T28Y5625 ▲	1 ± 7½	15	95	15⅛	17⅝	11⅝	280	17
13800	9T28Y1042G11 ▲	1 ± 7½	15	95	15⅛	17⅝	11⅝	280	17
25 kVA, see figure number 22									
2400/4160	9T28Y5430	1 ± 7½	5	60	18¾	22¾	11⅞	410	13
4160	9T28Y5431	1 ± 7½	5	60	18¾	22¾	11⅞	410	13
4800	9T28Y5432	1 ± 7½	5	60	18¾	22¾	11⅞	410	13
7200	9T28Y5433	1 ± 7½	8.66	75	18¾	22¾	11⅞	410	13
4800	9T28Y1242G20	1 ± 7½	5	95	18¾	22¾	11⅞	410	13
7200	9T28Y1242G21 ▲	1 ± 7½	8.66	95	18¾	22¾	11⅞	410	13
8400	9T28Y1242G22	1 ± 7½	8.66	95	18¾	22¾	11⅞	410	13
7620	9T28Y1242G23	2 ± 2½	8.66	95	18¾	22¾	11⅞	410	18
12000	9T28Y5434	1 ± 7½	15	95	18¾	22¾	11⅞	410	13
13300	9T28Y5435	1 ± 7½	15	95	18¾	22¾	11⅞	410	13
13800	9T28Y1242G10	2 ± 2½	15	95	18¾	22¾	11⅞	410	18
13800*	9T28Y1242G11	2 ± 2½	15	95	18¾	22¾	11⅞	410	15
37.5 kVA, see figure number 23									
4160	9T28Y1223G02	1 ± 7½	5	60	34¾	26⅜	20¹¹⁄₁₆	670	19
7200	9T28Y1233	1 ± 7½	8.66	75	34¾	26⅜	20¹¹⁄₁₆	670	19
12470	9T28Y1243G02	2 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	14
13200	9T28Y1243G03	2 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	14
13800	9T28Y1243G04	2 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	14
14400	9T28Y1243G10	4 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	16
14400	9T28Y1243G11	None	15	95	34¾	26⅜	20¹¹⁄₁₆	670	12
50 kVA, see figure number 23									
13300	9T28Y1243G12	2 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	14
13800	9T28Y1243G13	2 ± 2½	15	95	34¾	26⅜	20¹¹⁄₁₆	670	14

* 50/60 hertz—see Fig. 21. ▲Normally in Factory Stock.
* 277 volts—refer to factory for outline dimensions.
** See table for HV tap connections.

Wiring Diagrams



Dimensions

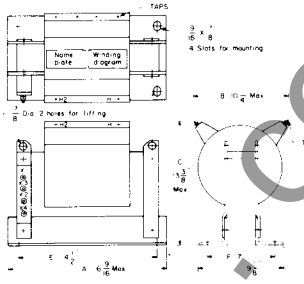


Fig. 20
5 kVA, single-phase

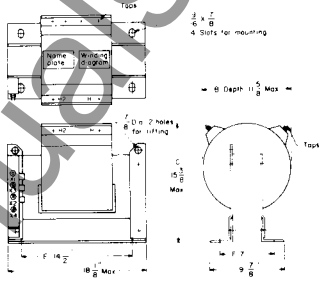


Fig. 21
10, 15 kVA, single-phase

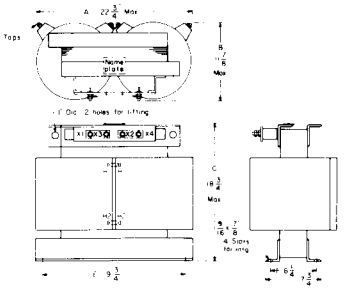


Fig. 22
25 kVA single-phase

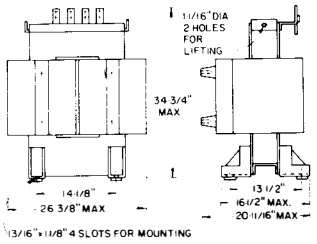
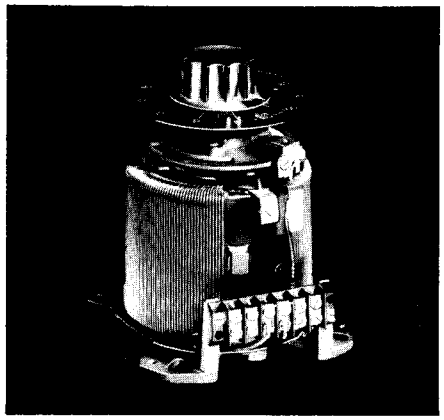


Fig. 23
37.5, 50 kVA single-phase

		CONNECT
(1) ±7½	+7½% NOMINAL −7½%	1 — 2 2 — 3 3 — 4
(2) ±2½	+5% +2½% NOMINAL −2½% −5%	1 — 2 2 — 3 3 — 4 4 — 5 5 — 6
(4) −2½	NOMINAL −2½% −5% −7½% −10%	1 — 2 2 — 3 3 — 4 4 — 5 5 — 6



Volt-pac® Variable Autotransformers

Manual, Single–Phase, 560 Volts and Below

General Electric's manual Volt-pac transformer is one of many types of variable transformers offered. It is a device to provide continuous adjustable voltage to an electrical load from a fixed line voltage. Operation is simple and is based on autotransformer action.

Three-phase ratings for 240-volt and 480-volt, line-to-line input are also available.

For complete application information on Volt-pac variable transformers, single- and three-phase, motor-operated and encased models, contact your General Electric sales representative or refer to publication GEA-8110.

120 VOLT INPUT: OUTPUT 0-120 VOLT (LINE VOLTAGE CONN.)

12.0	14.5	60	1-60	9T92A10¶△ϕ▲
15.0	19.0	50/60	1-75	9T92A27†ϕ ▲
18.0	21.7	50/60	1-75	9T92A28†ϕ ▲
30.0	34.0	50/60	1-85	9T92A37†ϕ ▲
150.0	165.0	50/60	3-95	9T92A55
200.0	220.0	50/60	4-95	9T92A56
250.0	275.0	50/60	5-95	9T92A57
300.0	330.0	50/60	6-95	9T92A58

240 VOLT INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.) OR 120 VOLT INPUT: OUTPUT 0-280 VOLTS

12.0	14.5	60	2-60	9T92A23
14.0	14.0	50/60	1-85	9T92A39†
16.0	16.0	50/60	1-85	9T92A40† ▲
30.0	33.0	50/60	1-95	9T92A51 ▲

480 VOLT INPUT: OUTPUT 0-480 VOLT (LINE VOLTAGE CONN.) OR 240 VOLT INPUT: OUTPUT 0-560 VOLTS

14.0	14.0	50/60	2-85	9T92A2†
16.0	16.0	50/60	2-85	9T92A43†
30.0	33.0	50/60	2-95	9T92A67
60.0	66.0	50/60	4-95	9T92A69
90.0	99.0	50/60	6-95	9T92A71

240 VOLT LINE TO LINE INPUT: OUTPUT 0-240 VOLT (LINE VOLTAGE CONN.) 0-280 VOLT (OVERVOLTAGE CONN.) (WYE CONN.)

12.0	14.5	60	3-60	9T92A22¶
15.0	19.0	50/60	3-75	9T92A33†
18.0	21.7	50/60	3-75	9T92A34† ▲
30.0	34.0	50/60	3-85	9T92A44†

480 VOLT LINE TO LINE INPUT: OUTPUT 0-480 VOLT (LINE VOLTAGE CONN.) 0-560 VOLT (OVERVOLTAGE CONN.) (WYE CONN.) OR 240 VOLT INPUT: OUTPUT 0-560 VOLTS

14.0	14.0	50/60	3-85	9T92A46†
16.0	16.0	50/60	3-85	9T92A47† ▲
30.0	33.0	50/60	3-95	9T92A76†
60.0	66.0	50/60	6-95	9T92A80†

240 VOLT LINE TO LINE INPUT: OUTPUT 0-240 VOLTS (LINE VOLTAGE CONN.) 0-280 VOLT (OVERVOLTAGE CONN.) (OPEN DELTA CONN.)

14.0	14.0	50/60	2-85	9T92A42†
16.0	16.0	50/60	2-85	9T92A43†
30.0	33.0	50/60	2-95	9T92A67
60.0	66.0	50/60	4-95	9T92A69
90.0	99.0	50/60	6-95	9T92A71

* When overvoltage connection is used, rated current should not be exceeded.
† When using extended tap connections, operation is for 60-hertz per second only.
‡ Output at overvoltage connection is 0-110% of input voltage.
§ When operated with this input voltage, rated current must be reduced (per bulletin GEA-8110) when output voltage exceeds 140 percent of input voltage.
¶ For line-voltage connection only—no overvoltage connection provided.
△ UL Component Recognized.
ϕ CSA Component Recognized.
▲ Normally in Factory Stock

For further information, call or write your local General Electric Sales Office or...

General Electric Company
Construction Equipment Business Operation
Specialty Transformer Operation
P.O. Box 1701, Fort Wayne, IN 46801

Outside the U.S. and Canada, write: Export Sales and Trading, 570 Lexington Avenue, New York, NY 10022

GENERAL ELECTRIC

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