

Model No	Outline	Phase	Freq	% Impedance	KVA	Voltage	Primary Rating	Secondary Rating	Ambient Temp	Temp Rise	Temp Class	Insulation System	Conductor Matl	Frame	Electro Static Shield?	Net Wgt
9T83B3852	303B900AAP003	3	60	5.6	30	480 480Y/277	480(+2,-4 2.4%)	480Y/277	40	150	220	IS-19C	AL	EE72	N	375
9T83B3853	303B401AAP073	3	60	5.7	45	480 480Y/277	480(+2,-4 2.3%)	480Y/277	40	150	220	IS-19C	AL	EE73	N	430
9T83B3853G80	303B900AAP007	3	60	3.3	45	480 480Y/277	480(+2,-4 2.6%)	480Y/277	40	80	220	IS-19C	AL	EE74	N	600
9T83B3854	303B900AAP007	3	60	5.6	75	480 480Y/277	480(+2,-4 2.6%)	480Y/277	40	150	220	IS-19C	AL	EE74	N	600
9T83B3854G80	303B900AAP009	3	60	3.7	75	480 480Y/277	480(+2,-4 2.4%)	480Y/277	40	80	220	IS-19C	AL	EE75	N	760
9T83B3855	303B401AAP075	3	60	5.9	112.5	480 480Y/277	480(+2,-4 2.4%)	480Y/277	40	150	220	IS-19C	AL	EE75	N	760
9T83B3857	303B919AAP077	3	60	4.9	225	480 480Y/277	480(+2,-4 2.6%)	480Y/277	40	150	220	IS-19C	AL	FC79	N	1585
9T83B3858	303B900AAP015	3	60	6.4	300	480 480Y/277	480(+2,-4 2.4%)	480Y/277	40	150	220	IS-19C	AL	EE78	N	1486
9T83B3871	303B401AAP071	3	60	5.7	15	480 208Y/120	480(+2,-4 2.6%)	208Y/120	40	150	220	IS-19C	AL	EE71	N	265
9T83B3871G03	303B401AAP071	3	60	5.7	15	480 208Y/120	480(+2,-4 2.6%)	208Y/120	40	150	220	IS-19C	AL	EE71	Y	265
9T83B3871G13	303B900AAP001	3	60	5.7	15	480 208Y/120	480(+2,-4 2.6%)	208Y/120	40	115	220	IS-19C	AL	EE71	Y	265
9T83B3871G15	303B401AAP071	3	60	5.7	15	480 208Y/120	480(+2,-4 2.6%)	208Y/120	40	115	220	IS-19C	AL	EE71	N	265
9T83B3871G80	303B401AAP071	3	60	5.7	15	480 208Y/120	480(+2,-4 2.6%)	208Y/120	40	80	220	IS-19C	AL	EE71	N	265
9T83B3871G83	303B900AAP003	3	60	4.1	15	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	80	220	IS-19C	AL	EE72	Y	375
9T83B3872	303B401AAP072	3	60	5.6	30	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	150	220	IS-19C	AL	EE72	N	375
9T83B3872G03	303B401AAP072	3	60	5.6	30	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	150	220	IS-19C	AL	EE72	Y	375
9T83B3872G13	303B900AAP003	3	60	5.6	30	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	115	220	IS-19C	AL	EE72	Y	375
9T83B3872G15	303B401AAP072	3	60	5.6	30	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	115	220	IS-19C	AL	EE72	N	375
9T83B3872G33	303B403AAP072	3	60	5.6	30	480 208Y/120	480(+2,-4 2.5%)	208Y/120	40	150	220	IS-19C	AL	EE72	Y	375

To search this document by catalog number, press Ctrl-F and enter all or part of the catalog number.



# Transformers

## General Information

Types QB, QMS, QL, and TransforMore®  
600 Volts and Below

### General Information

The complete family of transformers from GE provide quiet, reliable transformer operation.

All of the dry-type transformers through 1,000 kVA are UL listed under the requirements of Standard 506 and 1561. In addition, each transformer meets the requirements of NEMA ST-20, 1992. Type QB and QMS models are C-UL listed.

General-purpose transformers are rated 600 Volts and below for supplying appliance, lighting, and power loads from electrical distribution systems. Standard distribution voltages are 600, 480, and 240 Volts; standard load voltages are 480, 240, 208, and 120 Volts. The transformer is used to obtain the load voltage from the distribution voltage. Since no vaults are required for installation, these transformers can be located right at the load to provide the correct voltage for the application. This eliminates the need for long, costly, low-voltage feeders.

### Construction

#### Types QB and QMS

Core and coils are contained within a NEMA 3R nonventilated weatherproof enclosure. Type QB and QMS units feature encapsulated core and coils.

#### Type QL

Units are enclosed in a NEMA 2 drip-proof metal enclosure with natural-draft ventilation. Core-and-coil assembly is mounted on rubber isolation pads to reduce noise. Weathershield kits are available for conversion to a NEMA 3R enclosure suitable for outdoor service. NEMA 3R stainless steel (Type 316) enclosure is available up to 150kVA. To specify a stainless steel enclosure, substitute an "S" in the fifth character in the GE product number. Example: 9T83B3874 changes to 9T83S3874. **All QL TP-1 model part numbers begin with 9T6, 9T7, 9T8, or 9T9.**

#### TransforMore®

Units utilize fan assisted cooling to achieve reduced size and improved efficiency. These units incorporate an audible alarm and shunt activated disconnect switch for improved safety. Weathershields are available to convert to NEMA 3R enclosure for outdoor service. **All TransforMore® TP-1 model part numbers begin with 9T4.**

#### Voltage Tap Arrangement

Transformer taps compensate for high or low line voltages. Standard NEMA, ANSI three-phase taps are two 5 percent taps below normal on transformers smaller than 30 kVA. This arrangement provides a 10 percent range of tap voltage adjustment.

Most standard QL units rated 15 through 500 kVA have available six universal voltage taps—four 2 1/2 percent below normal, and two 2 1/2 percent above normal. This arrangement provides a 15 percent range of tap voltage adjustment.

### Temperature Class

Industry standards classify insulation systems in accordance with the rating system shown below.

Insulation System Classification			
Ambient	+ Winding Rise	+ Hot Spot	= Temp. Class
40°C	55°C	10°C	105°C
40°C	80°C	30°C	150°C
40°C	115°C	25°C	180°C
40°C	150°C	30°C	220°C

All standard, general-purpose, GE transformers meet all applicable NEMA, ANSI, UL, and IEEE standards.

The design life of transformers having different insulation systems is the same, since the allowable temperature rise of an insulation material system is predicated on a specified life for all insulation. The lower temperature systems are designed for the same life as higher temperature systems.

### Sound Levels

All general-purpose transformers are as quiet, or quieter than the 1986 ANSI and NEMA Standards for sound levels. Average sound levels are warranted not to exceed the values listed for each load rating shown in the adjacent table. Sound characteristics vary between transformers of identical voltage and kVA rating. The range of variation may be 4 to 8 decibels.

These values apply only to specified test conditions because the characteristic of the installation can cause them to be higher under operating conditions. Where acoustical noise is deemed to be of unusual concern, proper steps should be taken during installation to minimize audible noise transmission.

TransforMore® sound levels are 54 dB when fans are off and operating at less than 50% rated load, and 65 dB when fans are operating.

#### Sound Levels (Decibels)<sup>1</sup> for 150°C Rise Models

kVA	Sound Levels
0 - 9	40
10 - 50	45
51 - 150	50
151 - 300	55
301 - 500	60

<sup>1</sup>Measured per ANSI C89.2-1986.



# Transformers

## General Purpose

### Aluminum

#### Three-Phase TP-1

#### Advantages

- Quiet performance
- No-weld design – an industry first
- Comprehensive factory testing assures quality
- Easy, fast installation saves time
- Clear, comprehensive documentation and labeling enhance safety

#### Key Features

- Unique core and coil design makes QL transformers among the quietest available
- Core and coil assemblies are mounted on rubber isolation pads to reduce noise
- Bolted coil terminations are more reliable than welded terminations, and they eliminate weld failures and problems associated with welding and weld splatter
- Single-piece front/back is easily removable for service
- Accessible mounting flanges with front/back slotted mounting holes make installation easier
- 100% factory tested for shorts and coil integrity, current and loss, voltage, impedance and noise.
- NEMA 2 powder-coat drip-proof enclosure is standard. Weathershield kit is available for conversion to NEMA 3R outdoor.
- NEMA 3R stainless steel enclosure is available up to 150kVA. To specify a stainless steel enclosure, substitute an “S” in the fifth character in the GE catalog number. Example: 9T83B3874 changes to 9T83S3874.



Type QL Transformer

- Seismic qualified to the requirements of ASCE 7.05, IEEE-693-2005 and IBC-2006
- Copper or aluminum windings
- Copper ground strap
- Robust packaging with top and side protection protects against shipping damage
- American Bureau of Shipping (ABS) Type Approved

#### Applications

- Commercial
- Industrial
- Motors
- Incandescent lighting
- Resistance heating
- Motor generators (without solid state drives)
- Marine and Offshore - ABS Classed Vessels

#### Transformer Selection Guide

	Standard	Guard I	Guard II	Guard III	K-Factor (K=4)	K-Factor (K=13)	K-Factor (K=20)	K-Factor (K=50)	DIT	Service Center	TENV	Stainless Steel (Type 316) Enclosure
Motors	X	X			X							
Incandescent Lighting	X	X			X							
Resistance Heating	X	X			X							
Motor Generators (without solid state drives)	X	X			X							
HID Lighting					X							
Induction Heaters					X							
Welders					X							
UPS with optional input filtering					X							
PLC & Solid state controls					X							
Multiple receptacle circuits in health care facilities						X						
UPS without optional input filtering						X						
Production or assembly line equipment						X						
Schools & Classroom facilities						X						
Surge Suppression				X								
Office Buildings		X	X	X		X						
SCR Variable Speed Drives							X	X				
Circuits with exclusive data processing equipment			X	X		X	X					
Critical Care facilities			X	X		X	X					
Hospital Operating Rooms			X	X		X	X					
X-ray equipment			X	X		X	X					
Computer Installations			X	X		X	X					
Programmable Controllers			X	X		X	X					
Instrumentation			X	X		X	X					
AC or DC Variable Speed Drives									X			
Rectifier outputs									X			
Temporary Power										X		
Airborne contaminants or dust-laden environments (indoor and outdoor)											X	
Corrosive environments including water/wastewater and salt spray												X



# Transformers

## General Purpose

### Aluminum

Three-Phase TP-1



Type QL Transformer  
(Front Panel Removed)

### 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. <sup>1</sup>	Approx. Net Weight (Lbs)	Frame Size	Product Number
480 Volts	208Y/120 V	15	(+2,-4 2.4%)	12	240	EE71	9T83B3871
480 Volts	208Y/120 V	30	(+2,-4 2.5%)	12	334	EE72	9T83B3872
480 Volts	208Y/120 V	45	(+2,-4 2.5%)	12	415	EE73	9T83B3873
480 Volts	208Y/120 V	75	(+2,-4 2.5%)	12	620	EE74	9T83B3874
480 Volts	208Y/120 V	112.5	(+2,-4 2.5%)	12	765	EE75	9T83B3875
480 Volts	208Y/120 V	150	(+2,-4 2.5%)	12	1070	EE76	9T83B3876
480 Volts	208Y/120 V	225	(+2,-4 2.7%)	12	1205	EE77	9T83B3877
480 Volts	208Y/120 V	300	(+2,-4 2.6%)	12	1470	EE78	9T83B3878
480 Volts	208Y/120 V	500	(+2,-4 2.3%)	12	2265	EE79	9T83B3879
480 Volts	208Y/120 V	750	(+2,-4 3.1%)	12	4000	EE67	9T83B3867
480 Volts	208Y/120 V	1000	(+2,-4 2.5%)	12	3250	FC68	9T40G0011

### 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. <sup>1</sup>	Approx. Net Weight (Lbs)	Frame Size	Product Number
480 Volts	208Y/120 V	15	(+2,-4 2.6%)	12	265	EE71	9T83B3871G15
480 Volts	208Y/120 V	30	(+2,-4 2.5%)	12	375	EE72	9T83B3872G15
480 Volts	208Y/120 V	45	(+2,-4 2.3%)	12	430	EE73	9T83B3873G15
480 Volts	208Y/120 V	50	(+2,-4 2.5%)	12	600	EE74	9T83B3864G15
480 Volts	208Y/120 V	75	(+2,-4 2.5%)	12	600	EE74	9T83B3874G15
480 Volts	208Y/120 V	112.5	(+2,-4 2.6%)	12	760	EE75	9T83B3875G15
480 Volts	208Y/120 V	150	(+2,-4 2.6%)	12	1585	EE77	9T83B3876G15
480 Volts	208Y/120 V	225	(+2,-4 2.6%)	12	1020	FC78	9T40G0007G51
480 Volts	208Y/120 V	300	(+2,-4 1.8%)	12	1585	FC79	9T40G0008G51
480 Volts	208Y/120 V	400	(+2,-4 1.8%)	12	1585	FC79	9T40G0089G51
480 Volts	208Y/120 V	500	(+2,-4 2.5%)	12	3250	FC67	9T40G0009G51
480 Volts	208Y/120 V	750	(+2,-4 2.6%)	12	3250	FC78	9T40G0010G51

### 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. <sup>1</sup>	Approx. Net Weight (Lbs)	Frame Size	Product Number
480 Volts	208Y/120 V	15	(+2,-4 2.6%)	12	265	EE71	9T83B3871G80
480 Volts	208Y/120 V	30	(+2,-4 2.3%)	12	430	EE73	9T83B3872G80
480 Volts	208Y/120 V	45	(+2,-4 2.4%)	12	600	EE74	9T83B3873G80
480 Volts	208Y/120 V	75	(+2,-4 2.6%)	12	760	EE75	9T83B3874G80
480 Volts	208Y/120 V	112.5	(+2,-4 2.4%)	12	845	FC77	9T40G0005G81
480 Volts	208Y/120 V	150	(+2,-4 2.4%)	12	845	FC77	9T40G0006G81
480 Volts	208Y/120 V	225	(+2,-4 2.6%)	12	1020	FC78	9T40G0007G81
480 Volts	208Y/120 V	300	(+2,-4 1.8%)	12	1585	FC79	9T40G0008G81
480 Volts	208Y/120 V	500	(+2,-4 2.5%)	12	3250	FC68	9T40G0009G81
480 Volts	208Y/120 V	750	(+2,-4 2.5%)	12	3250	FC67	9T40G0010G81

<sup>1</sup>See page 8-47 for wiring diagrams.



## 1-Phase Vented QL Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
E171	303B406AAP071	32.1	23.8	18.4
E172	303B406AAP072	35.7	31.8	24
E173	303B406AAP073	35.7	31.8	24
E174	303B406AAP074	39.9	31.8	24
E175	303B406AAP075	37.4	29.5	28.5
E176	303B406AAP076	45.5	38.5	33
E177	303B406AAP077	45.5	38.5	33

## 3-Phase, Vented, Non-Fan Cooled QL Transformers (9T8 and 9T7 models)

Includes General Purpose, K-Factor, K-Factor Low Noise, Low Noise, Guard I, Midtapped, Drive Isolation and Ultra Efficient

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
EE71	303B401AAP071	27.3	18.7	16.9
EE72	303B401AAP072	32.1	23.8	18.4
EE73	303B401AAP073	32.2	23.8	18.4
EE74	303B401AAP074	35.7	31.8	24
EE75	303B401AAP075	39.9	31.8	24
EE76	303B401AAP076	45.9	34.8	24
EE77	303B919AAP077	45.5	38.5	33
EE78	303B919AAP178	57.1	38.5	33
EE79	303B919AAP179	65.7	47.3	38

## 3-Phase Fan-Cooled TransforMore® Transformers (9T4-models)

Includes General Purpose, K-Factor, K-Factor Low Noise, Low Noise, Guard I, Midtapped, and Drive Isolation

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
FC77	303B899AAP077	37.3	29.5	28.5
FC78	303B899AAP078	40.9	34.8	25.6
FC79	303B899AAP079	45.4	38.5	33.6
FC67	303B899AAP067	57.5	47.5	40
FC68	303B899AAP068	57.5	47.5	40

## Servicenter Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
16350	303B915AAP005	32.5	10.75	11.12
16600	303B915AAP007	32.5	10.75	11.12
19400	303B915AAP010	35	12.62	12.62
19500	303B915AAP015	35	12.62	12.62
50500	303B915AAP025	44.75	16.75	16
EE71	303B404AAP015	27.3	27.4	16.9
EE72	303B404AAP022	32.2	34.5	24
EE72	303B404AAP030	32.2	34.5	24

## QMS Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
16350	303B923AAP005	14.5	10.62	11
16400	303B923AAP005	14.5	10.62	11
16450	303B923AAP005	14.5	10.62	11
16600	303B923AAP007	17.06	10.62	11
19400	303B923AAP010	17.06	12.5	12.5
19450	303B923AAP010	17.06	12.5	12.5
19500	303B915AAP015	35	12.62	12.62
1619	303B922AAP001	14.50	10.75	11.12
1620	303B922AAP001	14.50	10.75	11.12
1921	303B922AAP003	17.12	12.62	12.75
1923	303B922AAP004	18.81	14.75	14.53
50500	303B915AAP025	44.75	16.75	16



QL Transformer  
(Front Panel Removed)



TransforMore® Transformer

## Guard II Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
EE71	303B403AAP071	34.5	18.7	16.9
EE72	303B403AAP072	41.3	23.8	18.4
EE73	303B403AAP073	41.3	23.8	18.4
EE74	303B403AAP074	44.8	31.8	24
EE75	303B403AAP075	49.1	31.8	24

## TENV Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
EE72	303B405AAP072	41.3	23.8	18.4
EE73	303B405AAP073	41.3	23.8	18.4
EE74	303B405AAP074	44.8	31.8	24
EE75	303B405AAP075	49.1	31.8	24

## QB Transformers

Frame Size	Outline Drawing No.	Height (in.)	Width (in.)	Depth (in.)
6100	303B920AAP001	6.38	5.12	3.25
6150	303B920AAP001	6.38	5.12	3.25
6200	303B920AAP001	6.38	5.12	3.25
8175	303B920AAP002	7.38	6.12	4.25
8200	303B920AAP002	7.38	6.12	4.25
10200	303B920AAP003	8.38	6.88	4.88
10225	303B920AAP003	8.38	6.88	4.88
12200	303B920AAP004	9.62	7.88	5.5
12225	303B920AAP004	9.62	7.88	5.5
12275	303B920AAP004	9.62	7.88	5.5
12300	303B920AAP004	9.62	7.88	5.5
14200	303B920AAP005	11.12	9.38	6.72
14225	303B920AAP005	11.12	9.38	6.72
14250	303B920AAP005	11.12	9.38	6.72
14300	303B920AAP005	11.12	9.38	6.72
14350	303B920AAP005	11.12	9.38	6.72
14400	303B920AAP005	11.12	9.38	6.72

