

Electrical installation solutions for buildings

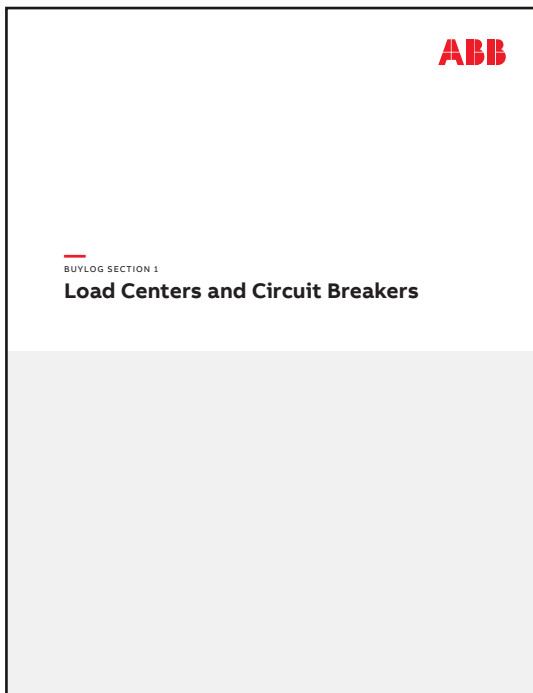
NEMA Standard Products

Index

NEMA Flow Goods products	27/2
Residential Surge Protection	27/3
- Externally Mounted Surge Devices	27/4
- Internally Mounted Surge Devices	27/7
Low voltage general purpose	
dry type transformers	27/11
Small & large power transformers	27/12
General purpose	27/14
K-factor	27/21
- Low noise (-3 dB below NEMA ST-20 standard)	27/27
Noise isolation — Guard I™	27/33
Noise isolation — Guard II™	27/35
Harmonic mitigating — Guard III™	27/37
Servicenter™ mini-unit substations	27/38
Totally enclosed, nonventilated	27/41
Midtapped	27/43
Drive isolation	27/46
Accessories and lugs	27/48
Enclosure parts	27/50
Wiring diagrams	27/51
Dimensions	27/53
General purpose encapsulated	27/56
Buck-Boost	27/59
Open core and coil transformers	27/62

NEMA Flow Goods products

Thank you for your interest in NEMA Flow Goods products! Our offering consists of load centers, circuits breakers, surge protection devices and modular metering, which are sold primarily in the United States. In order to provide you with the most accurate and up to date information, we have provided the links below to our US catalog



US Catalog
Load Centers, Circuit Breakers
and Surge Protection



Visit our website



US Catalog
Modular Metering



Visit our website

Residential Surge Protection

Externally Mounted Surge Devices and Internally Mounted Surge Devices

Introduction

ABB offers a series of residential surge protection devices that can be installed inside or outside of the home's electrical panel and offer superior protection for sensitive electronics.

All residential surge protection devices are UL listed, designed for 120/240V applications and meet the NEC 2020 requirements.



THOMESURGE

The THOMESURGE is a Type 1 SPD designed for service entrance or subpanel locations and provides surge protection for the entire home or office. The THOMESURGE is a cost effective surge solution that can be installed with any manufacturer's panel.



Visit our website

<https://new.abb.com/low-voltage/products/surge-protective-devices/thomesurge>



OVRHR361202S

The OVRHR361202S is a Type 1 SPD designed for service entrance or subpanel locations and provides surge protection for the entire home or office. The OVRHR361202S is a cost effective surge solution that can be installed with any manufacturer's panel.



Visit our website

<https://new.abb.com/low-voltage/products/surge-protective-devices/ovrhr361202s>



THQLSURGE

The THQLSURGE is a Type 1 SPD designed for service entrance or subpanel locations and provides surge protection for the entire home or office. The THQLSURGE conveniently connects inside the GE/ABB PowerMark Pro load center, providing surge protection for the entire panel and all attached loads.



Visit our website

<https://new.abb.com/low-voltage/products/surge-protective-devices/thqlsurge>

THOMESURGE(P)

Residential Surge Protection Device

Features:

- 36 kA per Phase
- UL 1449 Listed
- 10 kA I-nominal Rating
- 200 kA SCCR
- Meets NEC 2020 Requirements



Product Specifications

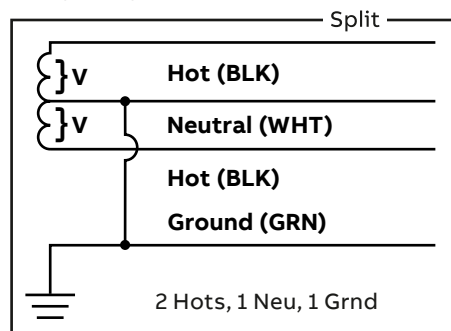
General Specifications	
Maximum Surge Current	36 kA per Phase
UL Type Designation	Type 1
UL 1449 I-nominal Rating	10 kA
UL 1449 Short Circuit Current Rating	65 kA
Design Specifications	
Custom MOV design for High Energy Handling in Category C locations	
Thermally Protected MOVs	
External Parallel Connected for Mounting next to Electrical Gear	
Reduced Mode of Protection (L1-N, L2-N)	
Diagnostic & Status Monitoring Specifications	
LED Protection Status Monitoring (Single LED Standard)	

Enclosure	
Polycarbonate 4.25" × 2.41" × 2.75"	
Lid ultrasonically sealed	
NEMA 4X	
1/2 inch NPT Side Mount Nipple	
Filtering	
NO	
Technical data	
Humidity Range	0 – 95% non-condensing
Operating Frequency	50 – 60 Hz
Operating Temperature	–35°C to +85°C
Typical Connection	18" #12 AWG (pre-wired pig tails)
UL 1449 Performance Data	
System Voltage	L-N L-G N-G L-L SCCR MCOV
240/120V Split Ø	700 – – 1200 200 kA 180

Standards Compliance & Certifications

UL 1449 5th Edition: 2021, cULus, (UL File: VZCA.E316468), ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, NEC Article 285
 ISO 9001: 2014 Quality Management System, ISO 17025:2007 Laboratory Certification (UL DAP Program)
 Compliance with RoHS, REACH & California Prop 65.
 100% Quality Tested prior to shipping

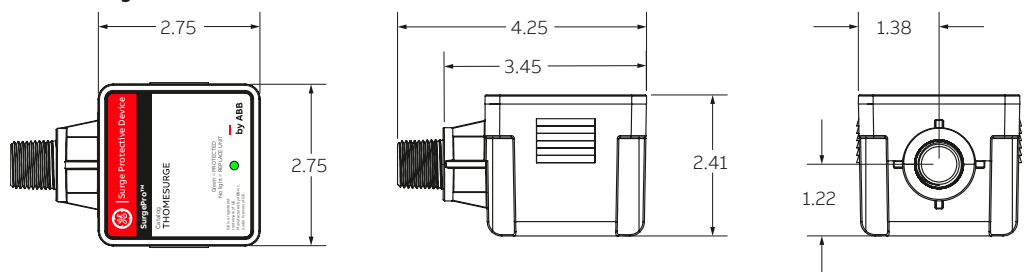
Wiring Configuration



Size and Mechanical Specifications

Dimensions	4.25" × 2.41" × 2.75"
Weight	0.46 lbs
Enclosure Type	Polycarbonate NEMA 4X
Installation Type	Indoor / Outdoor
Mounting Method	Flush / Flange / Through-hole

Product Diagram



SurgePro™

Surge Protective Device (SPD)

This surge protective device is designed to be used on electrical systems that are 120/240 or 120/208 V AC.

WARNING

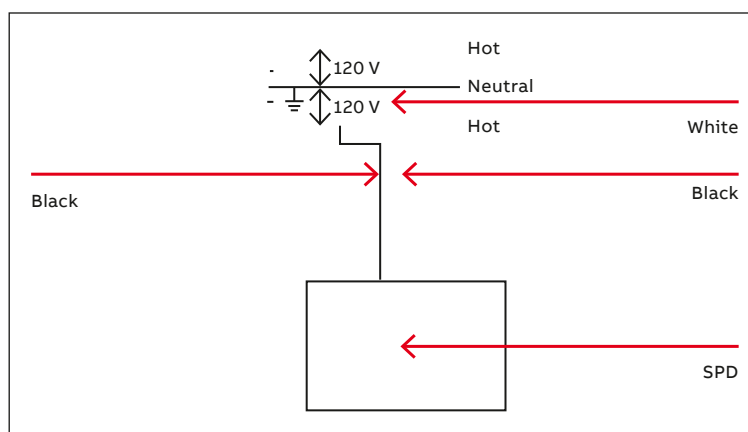
- Risk of shock, disconnect power before installation.
 - SPD should be installed by a qualified electrician in accordance with national and local electrical codes.
 - Hazardous voltages exist within SPDs when energized — SPDs should never be installed or serviced when energized.
- During installation into an electrical system, the SPD must not be energized until the electrical system is completely installed, inspected and tested.
- Use appropriate safety precautions including personal protection equipment.
 - Do not HIPOT the SPD unit or the electrical system in which the SPD unit is connected without disconnecting the SPD unit's conductors, including phase, neutral and ground.
 - Cannot be used on ungrounded systems.
 - The voltage rating of the SPD and system must be verified before energizing the SPD.
 - Failure to follow these instructions can result in death, serious injury and/or equipment damage.
 - This manual shall be read in its entirety prior to installing.

Pre-plan your installation

- Meet all national and local codes. (NEC Article 242 addresses SPDs.)
- Mount SPD as close to panel or equipment as possible to keep leads short. Ensure leads are as short and straight as possible, including neutral and ground.
- Consider a breaker position that is closest to the SPD and the panel's neutral and ground.
- Suggested breaker size is 20 A 2-pole breaker.
- Short circuit current rating (SCCR) 200 kA.
- Make sure system is grounded per NEC and clear of faults before energizing SPD.

Installation instructions

1. Use a voltmeter to check all voltages to ensure compatibility with SPD.
2. Remove power from panel. Confirm panel is de-energized by using a voltmeter.
3. Identify connection/breaker location and SPD location.
4. Remove an appropriately sized knockout from panel.
5. Mount SPD. Connect to equipment using an approved wiring method, including seals appropriate for the enclosure rating.
6. Connect conductors as appropriate — short and straight as possible.
7. Label or mark conductors as appropriate — energized — black: neutral — white.
8. Make sure system is bonded per NEC and is clear of hazards or faults before energizing (N-G bonding not per NEC is the #1 cause of SPD failures).
9. Apply power to the panel.
10. Verify that the status indication light on the face of the SPD is illuminated. If the light is not on, remove the power supplying the panel and review all the previous installation procedures.



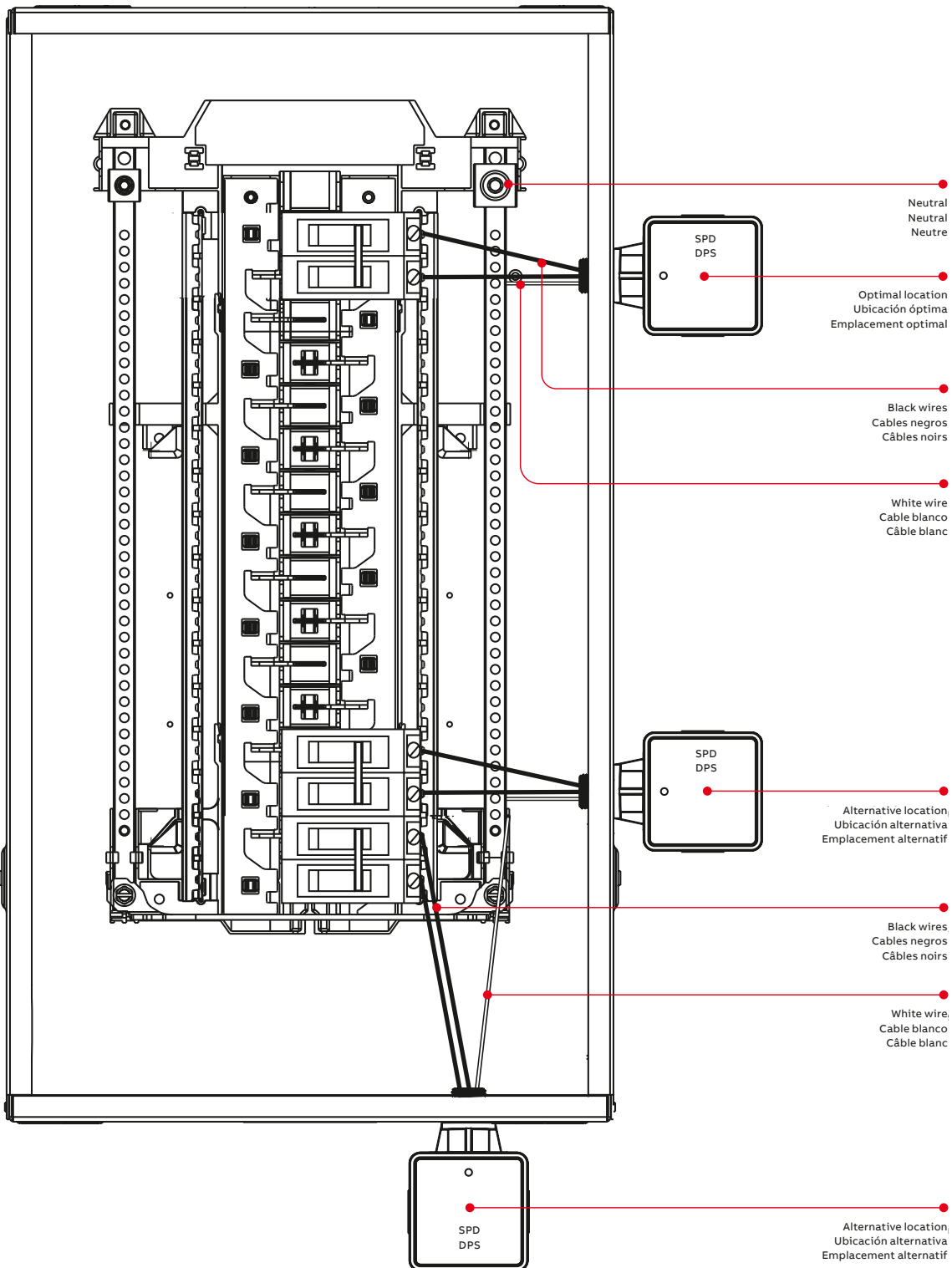
SurgePro™

Surge Protective Device (SPD)

The above picture is an example of a typical load center, the location of the neutral bar may vary.

The unit contains no serviceable parts.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation operation or maintenance. Should further information be desired, or should problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to ABB Inc.



OVRHR361202S

Residential Surge Protection Device

Features:

- 36 kA per Phase
- UL 1449 Listed
- 10 kA I-nominal Rating
- 200 kA SCCR
- Meets NEC 2020 Requirements



Product Specifications

General Specifications

Maximum Surge Current	36 kA per Phase
UL Type Designation	Type 1
UL 1449 I-nominal Rating	10 kA
UL 1449 Short Circuit Current Rating	65 kA

Design Specifications

Custom MOV design for High Energy Handling in Category C locations

Thermally Protected MOVs

External Parallel Connected for Mounting next to Electrical Gear

Reduced Mode of Protection (L1-N, L2-N)

Diagnostic & Status Monitoring Specifications

LED Protection Status Monitoring (Single LED Standard)

Enclosure

Polycarbonate 4.25" × 2.41" × 2.75"

Lid ultrasonically sealed

NEMA 4X

1/2 inch NPT Side Mount Nipple

Filtering

NO

Technical data

Humidity Range 0 – 95% non-condensing

Operating Frequency 50 – 60 Hz

Operating Temperature –35°C to +85°C

Typical Connection 18" #12 AWG (pre-wired pig tails)

UL 1449 Performance Data

System Voltage	L-N	L-G	N-G	L-L	SCCR	MCOV
240/120V Split Ø	700	-	-	1200	200 kA	180

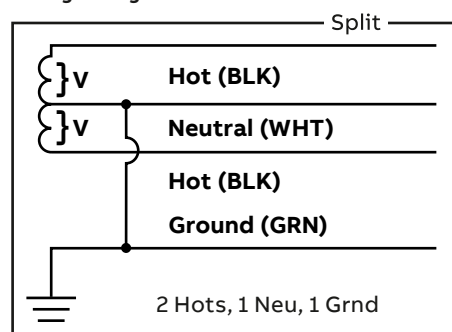
Standards Compliance & Certifications

UL 1449 5th Edition: 2021, cULus, (UL File: VZCA.E316468), ANSI/IEEE C62.41.1-2002, C62.41.2-2002, C62.45-2002, NEC Article 285

ISO 9001: 2014 Quality Management System, ISO 17025:2007 Laboratory Certification (UL DAP Program) Compliance with RoHS, REACH & California Prop 65.

100% Quality Tested prior to shipping

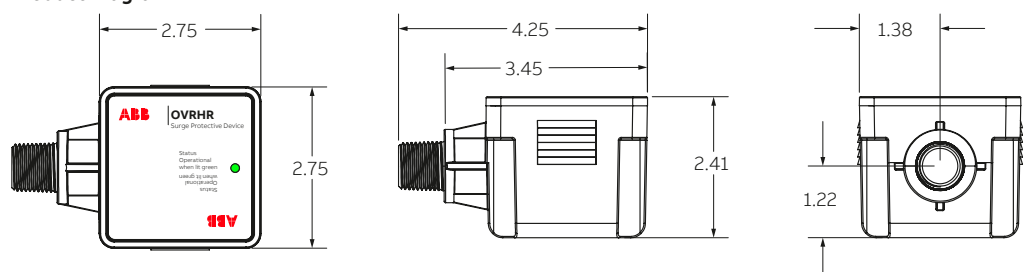
Wiring Configuration



Size and Mechanical Specifications

Dimensions	4.25" × 2.41" × 2.75"
Weight	0.46 lbs
Enclosure Type	Polycarbonate NEMA 4X
Installation Type	Indoor / Outdoor
Mounting Method	Flush / Flange / Through-hole

Product Diagram



OVRHR

Surge Protective Device (SPD)

This surge protective device is designed to be used on electrical systems that are 120/240 or 120/208 V AC.

WARNING

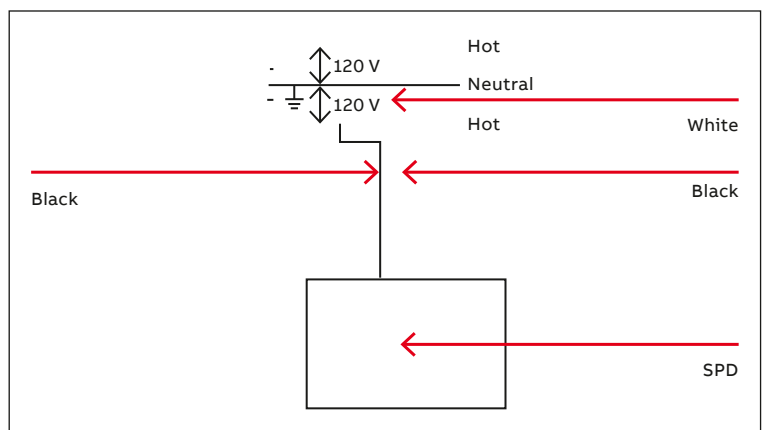
- Risk of shock, disconnect power before installation.
- SPD should be installed by a qualified electrician in accordance with national and local electrical codes.
- Hazardous voltages exist within SPDs when energized — SPDs should never be installed or serviced when energized. During installation into an electrical system, the SPD must not be energized until the electrical system is completely installed, inspected and tested.
- Use appropriate safety precautions including personal protection equipment.
- Do not HIPOT the SPD unit or the electrical system in which the SPD unit is connected without disconnecting the SPD unit's conductors, including phase, neutral and ground.
- Cannot be used on ungrounded systems.
- The voltage rating of the SPD and system must be verified before energizing the SPD.
- Failure to follow these instructions can result in death, serious injury and/or equipment damage.
- This manual shall be read in its entirety prior to installing.

Pre-plan your installation

- Meet all national and local codes. (NEC Article 242 addresses SPDs.)
- Mount SPD as close to panel or equipment as possible to keep leads short. Ensure leads are as short and straight as possible, including neutral and ground.
- Consider a breaker position that is closest to the SPD and the panel's neutral and ground.
- Suggested breaker size is 20 A 2-pole breaker.
- Short circuit current rating (SCCR) 200 kA.
- Make sure system is grounded per NEC and clear of faults before energizing SPD.

Installation instructions

1. Use a voltmeter to check all voltages to ensure compatibility with SPD.
2. Remove power from panel. Confirm panel is de-energized by using a voltmeter.
3. Identify connection/breaker location and SPD location.
4. Remove an appropriately sized knockout from panel.
5. Mount SPD. Connect to equipment using an approved wiring method, including seals appropriate for the enclosure rating.
6. Connect conductors as appropriate — short and straight as possible.
7. Label or mark conductors as appropriate — energized — black: neutral — white.
8. Make sure system is bonded per NEC and is clear of hazards or faults before energizing (N-G bonding not per NEC is the #1 cause of SPD failures).
9. Apply power to the panel.
10. Verify that the status indication light on the face of the SPD is illuminated. If the light is not on, remove the power supplying the panel and review all the previous installation procedures.



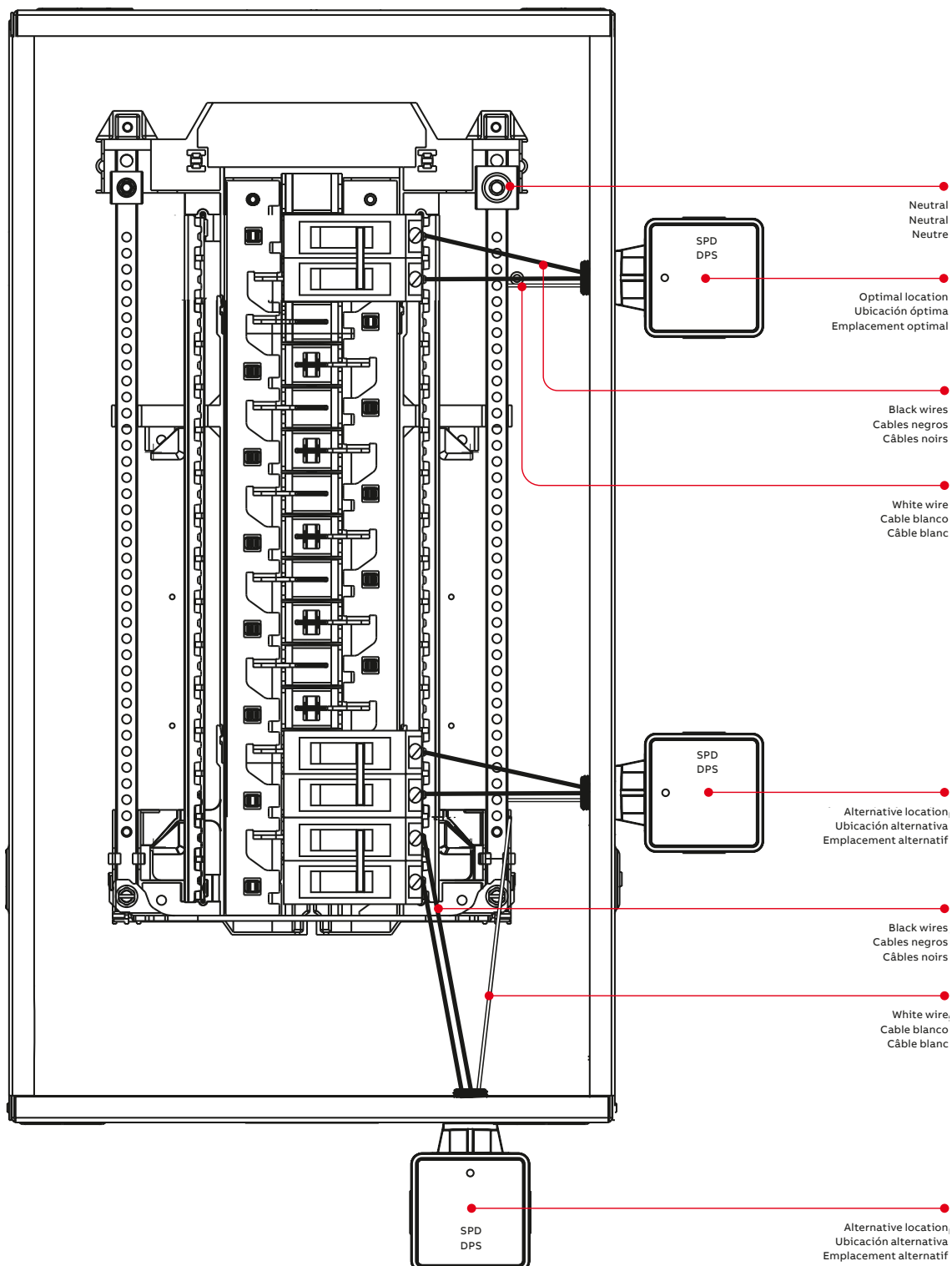
OVRHR

Surge Protective Device (SPD)

The above picture is an example of a typical load center, the location of the neutral bar may vary.

The unit contains no serviceable parts.

These instructions do not purport to cover all details or variations in equipment nor to provide for every possible contingency to be met in connection with installation operation or maintenance. Should further information be desired, or should problems arise which are not covered sufficiently for the purchaser's purpose, the matter should be referred to ABB Inc.



SurgePro™

AC power surge protective device



Benefits

- AC power surge protective device for the entire home or office – computers, TV, appliances and all other sensitive electronic equipment
- Mitigates against surge damage caused by lightning and utility switching events
- Installs in your GE PowerMark™ load center (the best location for protecting all AC circuits in your home) directly onto the bus
- Up to 50,000 amps of surge protective strength
- Meets newest UL 1449 4th edition surge protection requirements
- 3-year, \$15,000 connected equipment warranty (from date of purchase) when installed according to NEC electrical and safety codes on cULus approved equipment
- Can be installed to meet NEC 2020 Art. 230.67 SPD requirements for dwelling units at or adjacent to service entrances.

Product features

- Single phase, three wire, 120/240 VAC, 50 kA rated
- UL 1449 4th edition listed (VZCA:E316636 and VZCA7:E316636) as a Type 1 SPD with a 100 kA SCCR rating
- Monolithic, high energy metal oxide varistors per mode with integral thermal and overcurrent protection
- Illuminated LED indicates proper function of protective elements

Technical data

The THQLSURGE is designed for service entrance or subpanel locations. It provides small, easy to install surge protection for the entire home or office. The surge protective device consists of monolithic, high energy metal oxide varistors per mode with integral thermal and overcurrent protection. An illuminated LED indicates the proper function of the protective elements. The THQLSURGE conveniently connects inside the GE PowerMark load center, directly onto the bus, like a circuit breaker, providing surge protective elements for the entire panel and all attached loads.

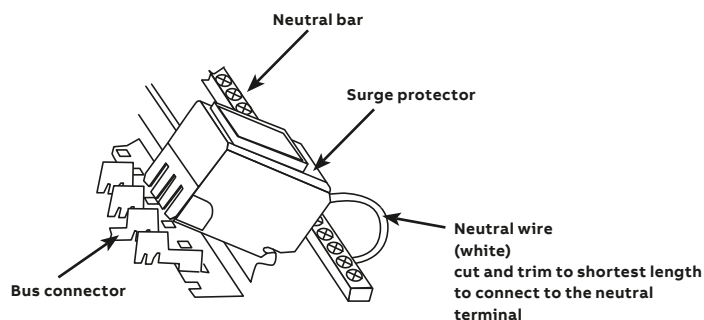
Catalog number	Total surge current rating ¹	Per mode surge current rating ²	System voltage 50/60 Hz	Transient energy rating, 10/1000 μ S, total	Nominal discharge current I _n	Configuration	UL 1449 4th edition Voltage Protection Rating (VPR)			
							L-N	N-G	L-G	L-L
THQLSURGE	50 kA	25 kA	120/240 V	1520 J	10 kA	1 ph 3 wire	500 V	–	–	900 V

¹ Total surge rating is defined as the maximum surge current in the entire device for a single pulse 8/20 μ S

² Per mode defined as varistor surge current, single pulse 8/20 μ S

THQLSURGE

- Up to 225 amp load centers
- SCCR to 100 kA
- For use in GE load centers
- Can be used to meet NEC® 2020 Art. 230.67



Low voltage general purpose dry type transformers

Single phase and three phase; 600 volts and below



General and technical information

Small & large power transformers 600 volts and below

Introduction

ABB's comprehensive family of low voltage dry type transformers (LVDTT) provide long life, quiet, and reliable operation.

Type QL are ABB's large power transformers ranging from 15 kVA to 1000 kVA. The QL transformers come in standard NEMA 2 enclosures with rain shield kits available for NEMA 3R installations. Stainless steel enclosures are available as options as well. QL transformers are available in single or Three-phase configurations with either aluminum or copper windings. Type QL's are DOE 2016 compliant with models available for Canadian NRCan efficiency standards.

All of the LVDTTs through 1,000 kVA are UL listed under the requirements of Standard 5085 and/or 1561. In addition, each transformer meets the requirements of NEMA ST-20-2014.

General purpose transformers are rated 600 Volts and below for supplying appliances, lighting, and power loads from electrical distribution systems. Standard distribution voltages are 600, 480, and 240 Volts; standard load voltages are 480, 277, 240, 208, and 120 Volts. The transformer is used to obtain the load voltage from the distribution voltage while providing galvanic isolation. 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 – Type QL

Large power transformers

QL units come standard enclosed in a NEMA 2 drip-proof painted metal enclosure with natural draft ventilation. The core-and-coil assembly is mounted on rubber isolation pads to reduce noise generated by transformer vibration. Rain shield kits are available for conversion to a NEMA 3R enclosure suitable for outdoor service. Type QL transformers are UL Listed: XQNX:E79145; XQNX7:E79145; XQNX2:E79145 or XQNX8:E79145.

Coil construction, 3 phase general purpose, all 100% production tested

Coil material	kVA range	Coil temperature	Terminal connections	Windings ¹
AL	15 to 150	150	Bolted	Continuous
	225 to 500	150	Welded	
	15 to 112.5	115	Bolted	
	150 to 500	115	Welded	
	15 to 112.5	80	Bolted	
CU	150 to 300	80	Welded	Continuous
	15 to 150	150	Bolted	
	225 to 500	150	Welded	
	15 to 150	115	Bolted	
	225 to 500	115	Welded	
	15 to 112.5	80	Bolted	
	150 to 300	80	Welded	

¹Rarely a coil may have a welded internal connection. All transformers are 100% tested, assuring internal resistance and losses are within established standards, UL and NEMA requirements.

NEMA enclosure ratings

Type QL transformers are standard as NEMA 2 painted steel enclosures. NEMA 3R or NEMA 3R stainless steel (316) enclosures are available up to 150 kVA. NEMA 3R includes the rain shield kit (also 316 SS).

NEMA enclosure rating	Standard or optional	Installation location	Optional rain shield
NEMA 2 (ANSI 61 Painted)	Standard	Indoor	Not required
NEMA 2 (316 Stainless Steel) ²	Optional	Indoor	Not required
NEMA 3R (ANSI 61 painted)	Optional	Indoor or Outdoor	Required & painted
NEMA 3R (316 Stainless Steel) ²	Optional	Indoor or Outdoor	Required & 316 SS
NEMA 4X (316 Stainless Steel) ³	Optional	Indoor or Outdoor	Required & 316 SS

² Up to 150 kVA

³ Special order only, must be quoted and not available for all transformers

To specify a stainless-steel enclosure for an aluminum wound transformer, substitute the letter "S" in the fifth character of the ABB product number. For example, 9T10A1004 changes to 9T10S1004. For copper wound transformers substitute the letter "Z" in the fifth character of the ABB product number. For example, 9T10C1004 changes to 9T10Z1004. All QL model product numbers begin with 9T1, 9T6, 9T7 and 9T8.

Transformer taps

Transformer taps compensate for high or low line (supply) voltages. FCAN (full capacity above nominal) and FCBN (full capacity below nominal) are standard on Type QL transformers rated 15 kVA through 300 kVA and with a primary voltage of 240 V or higher. These have a total of six available voltage taps – four 2.5% taps (FCBN) below the nominal tap and two 2.5% taps above (FCAN) the nominal tap. This arrangement provides a 15% range of tap voltage adjustment. Transformers rated 500 kVA and higher have four available voltage taps – two 2.5% taps above (FCAN) the nominal tap and two 2.5% taps below (FCBN) the nominal tap.

Sound levels

All general purpose transformers are as quiet, or quieter than required by NEMA ST-20. Average sound levels are warranted not to exceed the values listed for each load rating shown in the below 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 concern, proper steps should be taken during installation to minimize audible noise transmission. Please refer to the installation manual for installation and operation recommended practices to minimize the audible sound of the transformer.

If lower sound levels are needed or desired, -3 dB and -5 dB options are available for most models.

Equivalent Winding kVA Range	Average Sound Level, Decibels Self cooled ventilated	
	A	B
	K-factor = 1 K-factor = 4	K-factor = 13 K-factor = 20
9.01 to 15.00	45	45
15.01 to 30.00	45	45
30.01 to 50.00	45	48
50.01 to 75.00	50	53
75.01 to 112.50	50	53
112.51 to 150.00	50	53
150.01 to 225.00	55	58
225.01 to 300.00	55	58
300.01 to 500.00	60	63
500.01 to 700.00	62	65
700.01 to 1000.00	64	67

General and technical information

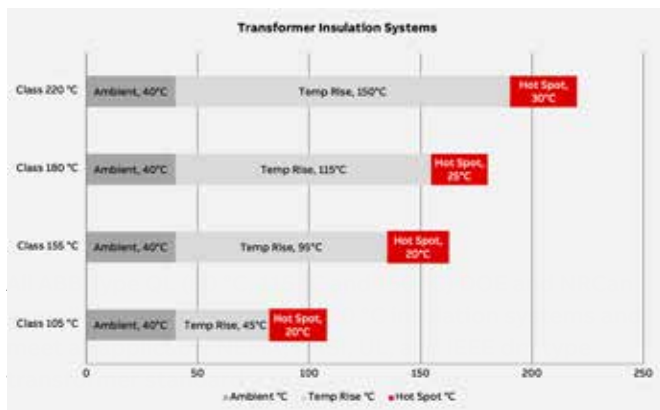
Small & large power transformers
600 volts and below

Insulation systems

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

Transformer insulation systems

Insulation Rating	Insulation Letter Class (NEMA/UL)	Ambient	+ Avg Coil Temp Rise	+ Hot Spot Temp Rise	= Max. Coil Temp
Class 105	A	40 °C	45 °C	20 °C	105 °C
Class 155	F	40 °C	95 °C	20 °C	155 °C
Class 180	H	40 °C	115 °C	25 °C	180 °C
Class 220	R	40 °C	150 °C	30 °C	220 °C



The design life of transformers that have 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.

Key to the chart

- All assume 40 °C ambient temperature.
- Coil temperature rating (Temp Rise) is a typical specification when choosing a transformer
- The Hot Spot is the buffer added for internal hot spots
- For large power transformers, an 80 °C temp rise will cost more than a 150 °C, and will likely last longer
- Designing for other ambient temperatures like 50 °C for use in desert regions will increase the cost
- Lower coil temp rise = higher price
- Higher ambient temp requirement = higher price

Type QL insulation system

- Insulation Class: 220 °C, UL recognized insulation system with a maximum of 150, 115 or 80 °C rise above 40 °C ambient temperature
- Temperature rise ratings are in accordance with UL 1561
- All ABB Type QL dry type transformers use a 220 °C insulation rating class

Construction – Type IP, QB and QMS

Small Power Transformers - Types QB and QMS

QB and QMS small power transformers come standard in NEMA 3R nonventilated weatherproof enclosures. Type QB and QMS units feature encapsulated copper core and coils with integrated junction boxes for easy wiring.

Types QB and QMS are UL and cUL Listed XPTQ.E323774 and XPTQ7.E323774.

Small Power Transformers - Type IP

Type IP small power transformers are broken down into two categories - Machine Tool and Control Power. All are manufactured using copper windings and are UL and cUL Listed. Machine Tool transformers are used when higher inrush currents are required to drive more peak power demanding loads.

Type IP transformers are UL and cUL listed XPTQ.E323774 and XPTQ7.E323774.

Termination

Improved termination spacing and wiring compartment room gives greater flexibility in selecting various UL listed connectors for either copper or aluminum cable.

Catalog Number Selection Instructions

1. Establish phase and frequency
2. Determine the primary voltage—the voltage presently available
3. Determine the secondary voltage—the voltage needed at the load
4. Determine the kVA load, allowing room for expansion
5. Using the facts determined in the four steps, locate the transformer model in the listings on the following pages.



Small Power: Type QB, .050 kVA-3 kVA, Single-Phase



Small Power: Type QMS, 5 kVA-25 kVA, Single-Phase



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

General purpose

Applicable standards

ABB dry type transformers conform to the standards as shown above and are in compliance with these standards below:

- ANSI/NFPA 70: National Electrical Code
- ANSI/IEEE C57.96, Distribution Transformers, Guide for Loading Dry Type appendix to ANSI C57.12 standards
- IEEE C57.12.01: General Requirements for Dry Type Distribution Transformers
- IEEE C57.12.91, Test Code for Dry Type Distribution Transformers
- NEMA ST-20: Dry Type Transformers for General Applications
- UL 1561, Dry Type General Purpose Power Transformer G. Efficiency level DOE 2016 by 10 CFR PART 431
- UL Energy Verification – for US and Canada (ZXPC: EV519886) (ZZED: EV23760)

ABB's dry type transformers are manufactured in an ISO 9001 certified plant.



General purpose

Single-phase DOE 2016 and NRCAN efficiency Common transformers

ABB's general purpose single-phase dry type transformers are step-down transformers designed for installations that require a 3-wire secondary voltage for 120/240 V systems. These units can also be used in 2-wire, 120x240 V applications. Their primary voltages are 240x480.

Optional wall mount brackets are available for most models. lug kit and copper ground bar are included.

Technical characteristics

- Connection: 3-wire or 2-wire secondaries
- Voltages: (P) 240x480 (S) 120/240
- Temperature rise: 150 °C; 220 °C insulation class; IEC 60085 Class R
- Frequency: 60 Hz
- Ambient temperature: 40 °C
- Standard single-phase tap arrangement
- Painted, ANSI #61 gray NEMA 2 enclosure
- Type QL
- Audible sound level: NEMA ST-20 Standard
- Seismic qualifications – CBC 2019 and IBC 2018; ASCE 7.05-2016
- UL 1561
- UL & cUL listed (XQNX, XQNX7:E79145)
- Energy efficiency: DOE 2016 (10 CFR Part 431)
- Energy efficiency: NRCAN (CSA 802.2)
- UL energy verification – for US and Canada (ZXPC:EV519886) (ZZED:EV23760)



Aluminum windings 150 °C Rise NEMA 2

Primary Voltage	Secondary Voltage	kVA	Taps (FCBN,FCAN; %)	Wiring Diagram ¹	Product Net Weight (lbs.)	Frame Size	Catalog Number
240 x 480 Volts	120 / 240 Volts	15	(-4,+2: 2.5%)	6	320	YX171	9T33A2670
		25	(-4,+2: 2.5%)	6	320	YX171	9T33A2671
		37.5	(-4,+2: 2.5%)	6	460	YX172	9T33A2672
		50	(-4,+2: 2.5%)	6	490	XV173	9T33A2673
		75	(-4,+2: 2.5%)	25	600	YX174	9T33A2674
		100	(-4,+2: 2.5%)	26	950	YX175	9T33A2675

Copper windings 150 °C Rise NEMA 2

Primary Voltage	Secondary Voltage	kVA	Taps (FCBN,FCAN; %)	Wiring Diagram ¹	Product Net Weight (lbs.)	Frame Size	Catalog Number
240 x 480 Volts	120 / 240 Volts	15	(-4,+2: 2.5%)	6	350	YX171	9T33C2670
		25	(-4,+2: 2.5%)	6	350	YX171	9T33C2671
		37.5	(-4,+2: 2.5%)	6	510	YX172	9T33C2672
		50	(-4,+2: 2.5%)	6	500	XV173	9T33C2673
		75	(-4,+2: 2.5%)	25	750	YX174	9T33C2674

¹ See page 10-45 and 10-46 for wiring diagrams.

General purpose

Three-phase DOE 2016 catalog number nomenclature

9T 1 0 A 100 1 G31

ABB Standard

1 = QL DOE 2016 Design

Transformer Type

- 0 = Standard, K1
- 1 = K13
- 2 = K20
- 4 = K4
- 7 = Guard II/Servicenter
- 8 = Spare Parts

Options

- A = Aluminum Coil
- B¹ = Aluminum C&C (no enclosure)
- C = Copper Coil
- S = AL Stainless Steel Enclosure
- V¹ = Copper C&C (no enclosure)
- Z = CU Stainless Steel Enclosure
- Y = Accessories

*These options are UL recognized components.

kVA Rating

- 1 = 15 kVA
- 2 = 30 kVA
- 3 = 45 kVA
- 4 = 75 kVA
- 5 = 112.5 kVA
- 6 = 150 kVA
- 7 = 225 kVA
- 8 = 300 kVA
- 9 = 500 kVA

Voltage Series
See Voltage Chart below

	Catalog No. Suffix Codes		
	Core & Coil Temp Rise		
	150 °C	115 °C	80 °C
Temp Rise Rating Only	G01 or blank	G31	G61
-3 dB noise reduction	G02	G32	G62
Electrostatic Shield*	G03	G33	G63
-3 dB noise reduction + Electrostatic Shield	G04	G34	G64
-5 dB noise reduction	G05	G35	G65
-5 dB noise reduction + Electrostatic Shield	G06	G36	G66

* An Electrostatic Shield (a Guard I transformer) is bonded to the ground terminal and is a copper barrier between the primary and secondary windings to reduce electrical noise. All K-factor transformers come standard with an Electrostatic Shield (K4, K13, K20).

3-Phase Common Voltages

Series	Primary Voltage	Secondary Voltage
100	480	208Y/120
101	480	220
102	480	220Y/127
103	480	208
104	480	230Y/133
105	480	240Y/139
106	480	380
107	480	380Y/219
108	480	400Y/231
109	480	415Y/240
110	480	480
111	480	575
112	480	600
113	480	440Y/254
114	480	600Y/346
115	480	440
116	480	230/115
117	480	480Y/277
118	480	240/120
119	480	240
121	480	220/110
123	480	400
124	480	460
125	480	420
126	480	230
127	480	575Y/332
129	480	460Y/266
131	208	240
132	208	240/120
133	208	480
134	208	480Y/277
135	208	380Y/219
136	208	230
137	208	575
138	208	460
139	208	400Y/231
140	208	208
141	208	230Y/133
142	208	380
143	208	220/110
144	208	220Y/127
145	208	208Y/120
146	208	400
147	208	315
148	208	600
149	208	460Y/266
150	208	220
151	208	230/115
152	208	415Y/240
153	240	480Y/277
154	240	480
155	240	400Y/231

3-Phase Common Voltages

Series	Primary Voltage	Secondary Voltage
157	240	575
158	240	460Y/266
159	240	240Y/139
160	240	600
161	240	208Y/120
162	240	380
163	240	440
164	240	240/120
165	240	380Y/219
166	220	380Y/219
167	220	400Y/231
168	220	240Y/139
169	220	220
170	220	208Y/120
171	220	480Y/277
172	220	440Y/254
173	220	480/240
174	220	480
175	220	415Y/240
176	380	220Y/127
177	380	480
178	380	220
179	380	208Y/120
180	380	415Y/240
181	380	240/120
184	380	480Y/277
185	380	380Y/219
186	380	230Y/133
187	380	240
188	440	220Y/127
189	440	480
190	440	208Y/120
191	440	380
192	440	380Y/219
193	440	400Y/231
194	440	575Y/332
195	440	240/120
196	440	480Y/277
197	440	240
198	230	460
199	230	400Y/231
200	230	400
201	230	480Y/277
202	230	208Y/120
203	230	480
204	400	230Y/133
205	400	380Y/219
206	400	480
207	400	220Y/127
209	400	400Y/231
210	400	208Y/120
211	400	208Y/120

3-Phase Common Voltages

Series	Primary Voltage	Secondary Voltage
212	400	480Y/277
213	415	208Y/120
214	415	460
215	415	220Y/127
216	416	208Y/120
217	416	480Y/277
218	460	208Y/120
219	460	220
221	460	400Y/231
222	460	220Y/127
223	460	230
224	460	575Y/332
225	460	230Y/133
226	460	460Y/266
227	550	208Y/120
228	550	480Y/277
229	575	208Y/120
230	575	480Y/277
231	575	240Y/139
232	575	460
233	575	480
234	575	230Y/133
235	575	230
236	600	240/120
237	600	480
238	600	480Y/277
239	600	240
240	600	208Y/120
241	600	230Y/133
242	600	240Y/139
243	600	208
244	600	600Y/346
245	690	400Y/231
246	690	208Y/120
247	277	415Y/240
248	315	208Y/120
249	320	480Y/277
250	420	480Y/277
251	490	480Y/277
252	500	480Y/277

General purpose

Three-phase DOE 2016 efficiency

Advantages

- Quiet performance
- No-weld design
- IEEE and NEMA factory testing assures quality
- Accessible mounting foot design speeds installation
- Lug kit and ground bar kit included up through 150 kVA
- ABB's exclusive wood crate packaging (up to 150 kVA) helps reduce shipping damage

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 audible noise
- 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 drip-proof enclosure is standard. Paint color is ANSI #61 gray. Rain shield kits are available to convert standard NEMA 2 transformers to NEMA 3R for outdoor installations.

- NEMA 3R stainless steel enclosure is available up to 150 kVA. To specify a stainless steel enclosure, substitute the fifth character in the ABB catalog number per the following examples:
 - For Aluminum coil: 9T10A1004 changes to 9T10S1004
 - For Copper coil: 9T10C1004 changes to 9T10Z1004
- Seismic qualified to the requirements of ASCE 7-16, IEEE-693-2005 and IBC-2018/CBC-2019
- Copper or aluminum windings
- Copper ground strap
- Optional Individualized Test Reports available for IEEE performance and/or NEMA ST-20 Audible Sound Levels

Applications

- Commercial
- Industrial
- Motors
- Incandescent lighting
- Resistance heating
- Motor generators (without solid state drives)
- Galvanic isolation
- Power supply network conversion

QL Transformer Selection Guide

	Standard	Guard I™ Electrostatic Shield	Guard II™ (filtering & surge protection)	Guard III™ Harmonic Mitigating (HMT)	K-factor (K=4)	K-factor (K=13)	K-factor (K=20)	Drive Isolation	Servicenter™	TENV
Motors	•	•			•					
Incandescent Lighting	•	•			•					
Resistance Heating	•	•			•					
Motor Generators (without solid state drives)	•	•			•					
HID Lighting					•					
Induction Heaters					•					
Welders					•					
UPS with optional input filtering					•					
PLC & Solid state controls					•					
Multiple receptacle circuits in health care facilities						•				
UPS without optional input filtering						•				
Production or assembly line equipment						•				
Schools & Classroom facilities						•				
Surge Supression			•							
Office Buildings		•	•	•		•				
SCR Variable Speed Drives							•			
Circuits with exclusive data processing equipment			•	•			•			
Critical Care facilities			•	•			•			
Hospital Operating Rooms			•	•			•			
X-ray equipment			•	•			•			
Computer Installations			•	•			•			
Programmable Controllers			•	•			•			
Instrumentation			•	•			•			
AC or DC Variable Speed Drives								•		
Rectifier outputs								•		
Temporary Power									•	
Airborne contaminants or dust-laden environments (indoor and outdoor)										•

General purpose

Aluminum coil

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1004
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1005
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1006
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1007
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1008
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009

K = 1 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001G31
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002G31
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003G31
		75	(+2, -4: 2.5%)	12	603	UX74A	9T10A1004G31
		112.5	(+2, -4: 2.5%)	12	830	DX75A	9T10A1005G31
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T10A1006G31
		225	(+2, -4: 2.5%)	12	1670	DX77A	9T10A1007G31
		300	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1008G31
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009G31

K = 1 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	330	UX72A	9T10A1001G61
		30	(+2, -4: 2.5%)	12	444	UX73A	9T10A1002G61
		45	(+2, -4: 2.5%)	12	561	UY74A	9T10A1003G61
		75	(+2, -4: 2.5%)	12	680	DY75A	9T10A1004G61
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1005G61
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1006G61
		225	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1007G61
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1008G61
		500	(+2, -2: 2.5%)	12	-	DX67A	9T10A1009G61

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1451
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1452
		45	(+2, -4: 2.5%)	12	561	UY74A	9T10A1453
		75	(+2, -4: 2.5%)	12	680	DY75A	9T10A1454
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1455
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T10A1456
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1457
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1458

¹ See page 10-45 and 10-46 for wiring diagrams.

General purpose

Aluminum coil

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1341
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1342
		45	(+2, -4: 2.5%)	12	561	UY74A	9T10A1343
		75	(+2, -4: 2.5%)	12	680	UY74A	9T10A1344
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1345
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T10A1346
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1347
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1348

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
240 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1611
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1612
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1613
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1614
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1615
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1616
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1617
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1618
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1619

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
240 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1531
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1532
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1533
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1534
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1535
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1536
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1537
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1538
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1539

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	240/120 Volts	15	(+2, -4: 2.5%)	19	231	UX71A	9T10A1181
		30	(+2, -4: 2.5%)	19	330	UX72A	9T10A1182
		45	(+2, -4: 2.5%)	19	444	UX73A	9T10A1183
		75	(+2, -4: 2.5%)	19	561	UY74A	9T10A1184
		112.5	(+2, -4: 2.5%)	19	830	DX75A	9T10A1185
		150	(+2, -4: 2.5%)	19	1030	DY76A	9T10A1186
		225	(+2, -4: 2.5%)	19	1450	DY77A	9T10A1187
		300	(+2, -4: 2.5%)	19	1670	DY78A	9T10A1188
		500	(+2, -2: 2.5%)	19	2900	DX79A	9T10A1189

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1171
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1172
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1173
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1174
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1175
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1176
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1177
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1178
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1179

¹ See page 10-45 and 10-46 for wiring diagrams.

General purpose

Copper coil

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	240 Volts	15	(+2, -4: 2.5%)	13	230	UX71C	9T10C1191
		30	(+2, -4: 2.5%)	13	353	UX72C	9T10C1192
		45	(+2, -4: 2.5%)	13	480	UX73C	9T10C1193
		75	(+2, -4: 2.5%)	13	661	UY74C	9T10C1194
		112.5	(+2, -4: 2.5%)	13	790	DY75C	9T10C1195
		150	(+2, -4: 2.5%)	13	1085	DY76C	9T10C1196
		225	(+2, -4: 2.5%)	13	1610	DY77C	9T10C1197
		300	(+2, -4: 2.5%)	13	1970	DY78C	9T10C1198

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
600 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C2401
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C2402
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C2403
		75	(+2, -4: 2.5%)	12	661	UY74C	9T10C2404
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T10C2405
		150	(+2, -4: 2.5%)	12	1085	DY76C	9T10C2406

K = 1 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003
		75	(+2, -4: 2.5%)	12	661	UY74C	9T10C1004
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T10C1005
		150	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1006
		225	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1007
		300	(+2, -4: 2.5%)	12	1970	DY78C	9T10C1008
		500	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1009

K = 1 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001G31
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002G31
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003G31
		75	(+2, -4: 2.5%)	12	748	UX74C	9T10C1004G31
		112.5	(+2, -4: 2.5%)	12	900	DX75C	9T10C1005G31
		150	(+2, -4: 2.5%)	12	1240	DX76C	9T10C1006G31
		225	(+2, -4: 2.5%)	12	1847	DX77C	9T10C1007G31
		300	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1008G31

K = 1 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T10C1001G61
		30	(+2, -4: 2.5%)	12	480	UX73C	9T10C1002G61
		45	(+2, -4: 2.5%)	12	661	UY74C	9T10C1003G61
		75	(+2, -4: 2.5%)	12	790	DY75C	9T10C1004G61
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1005G61
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1006G61
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1007G61
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1008G61

¹ See page 10-45 and 10-46 for wiring diagrams.

K-factor

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield

Product Description

K-factor is a standardized way to indicate the ability of a transformer to withstand harmonics. These units shall not exceed rated winding temperature rise at full load and rated K-factor. Neutrals and lugs are capable of handling 200% of rated secondary phase current.

Full-width copper electrostatic shielding is standard on all ABB K-factor rated transformers. Effective coupling capacitance is 30 pf. Common mode noise attenuation averages 120 dB, and transverse mode noise attenuation averages 30 dB.

Applications

For commercial applications with significant nonlinear electronic loading, use K=4 for systems with 50% connected nonlinear electronic loads; K=13 for systems with 100% connected nonlinear electronic loads.

Higher K-factor rated units are available for unique applications.



Type QL, UL K-factor Transformer

K=4 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T14A1001G03
		30	(+2, -4: 2.5%)	12	444	UX73A	9T14A1002G03
		45	(+2, -4: 2.5%)	12	444	UX73A	9T14A1003G03
		75	(+2, -4: 2.5%)	12	680	DY75A	9T14A1004G03
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T14A1005G03
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1006G03
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T14A1007G03
300	(+2, -2: 2.5%)	12	2900	DX79A	9T14A1008G03		

K=4 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T14A1001G33
		30	(+2, -4: 2.5%)	12	444	UX73A	9T14A1002G33
		45	(+2, -4: 2.5%)	12	561	UY74A	9T14A1003G33
		75	(+2, -4: 2.5%)	12	680	DY75A	9T14A1004G33
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T14A1005G33
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1006G33
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T14A1007G33
300	(+2, -2: 2.5%)	12	2900	DX79A	9T14A1008G33		

K=4 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	444	UX73A	9T14A1002G63
		45	(+2, -4: 2.5%)	12	561	UY74A	9T14A1003G63
		75	(+2, -4: 2.5%)	12	830	DX75A	9T14A1004G63
		112.5	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1005G63

¹ See page 10-45 and 10-46 for wiring diagrams.

K-factor

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor
Transformer

K=13 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	12	444	UX73A	9T11A1003G03
		75	(+2, -4: 2.5%)	12	603	UX74A	9T11A1004G03
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T11A1005G03
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T11A1006G03
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T11A1007G03
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T11A1008G03

K=13 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	444	UX73A	9T11A1002G33
		75	(+2, -4: 2.5%)	12	680	DY75A	9T11A1004G33
		112.5	(+2, -4: 2.5%)	12	1250	DX76A	9T11A1005G33
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T11A1006G33
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T11A1007G33
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T11A1008G33

K=13 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	561	UY74A	9T11A1002G63
		45	(+2, -4: 2.5%)	12	561	UY74A	9T11A1003G63
		75	(+2, -4: 2.5%)	12	830	DX75A	9T11A1004G63
		112.5	(+2, -4: 2.5%)	12	1670	DX77A	9T11A1005G63
		150	(+2, -4: 2.5%)	12	1670	DY78A	9T11A1006G63
		225	(+2, -2: 2.5%)	12	2900	DX79A	9T11A1007G63

¹ See page 10-45 and 10-46 for wiring diagrams.

K-factor

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor
Transformer

K=20 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	12	561	UY74A	9T12A1003G03
		75	(+2, -4: 2.5%)	12	²	²	9T12A1004G03
		112.5	(+2, -4: 2.5%)	12	1250	DX76A	9T12A1005G03
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T12A1006G03
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T12A1007G03

K=20 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	561	UY74A	9T12A1003G33
		75	(+2, -4: 2.5%)	12	680	DY75A	9T12A1004G33
		112.5	(+2, -4: 2.5%)	12	²	²	9T12A1005G33
		150	(+2, -4: 2.5%)	12	²	²	9T12A1006G33
		225	(+2, -4: 2.5%)	12	²	²	9T12A1007G33
		300	(+2, -4: 2.5%)	12	²	²	9T12A1008G33

K=20 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	²	²	9T12A1002G63
		45	(+2, -4: 2.5%)	12	²	²	9T12A1003G63
		75	(+2, -4: 2.5%)	12	830	DX75A	9T12A1004G63
		112.5	(+2, -4: 2.5%)	12	²	²	9T12A1005G63
		150	(+2, -4: 2.5%)	12	1670	DX77A	9T12A1006G63
		225	(+2, -4: 2.5%)	12	²	²	9T12A1007G63
		300	(+2, -4: 2.5%)	12	²	²	9T12A1008G63

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

K-factor

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=4 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T14C1001G03
		30	(+2, -4: 2.5%)	12	353	UX72C	9T14C1002G03
		45	(+2, -4: 2.5%)	12	480	UX73C	9T14C1003G03
		75	(+2, -4: 2.5%)	12	661	UY74C	9T14C1004G03
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T14C1005G03
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T14C1006G03
		225	(+2, -4: 2.5%)	12	1847	DX77C	9T14C1007G03
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T14C1008G03

K=4 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T14C1001G33
		30	(+2, -4: 2.5%)	12	480	UX73C	9T14C1002G33
		45	(+2, -4: 2.5%)	12	661	UY74C	9T14C1003G33
		75	(+2, -4: 2.5%)	12	748	UX74C	9T14C1004G33
		112.5	(+2, -4: 2.5%)	12	900	DX75C	9T14C1005G33
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T14C1006G33
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T14C1007G33
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T14C1008G33
500	(+2, -2: 2.5%)	12	²	²	9T14C1009G33		

K=4 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T14C1001G63
		30	(+2, -4: 2.5%)	12	480	UX73C	9T14C1002G63
		45	(+2, -4: 2.5%)	12	661	UY74C	9T14C1003G63
		75	(+2, -4: 2.5%)	12	790	DY75C	9T14C1004G63
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T14C1005G63
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T14C1006G63
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T14C1007G63
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T14C1008G63

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

K-factor

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor
Transformer

K=13 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T11C1001G03
		30	(+2, -4: 2.5%)	12	353	UX72C	9T11C1002G03
		45	(+2, -4: 2.5%)	12	480	UX73C	9T11C1003G03
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G03
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T11C1005G03
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G03
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T11C1007G03
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1008G03

K=13 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T11C1001G33
		30	(+2, -4: 2.5%)	12	480	UX73C	9T11C1002G33
		45	(+2, -4: 2.5%)	12	661	UY74C	9T11C1003G33
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G33
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T11C1005G33
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G33
		225	(+2, -4: 2.5%)	12	3720	DX79C	9T11C1007G33
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1008G33
		500	(+2, -2: 2.5%)	12	²	²	9T11C1009G33

K=13 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T11C1001G63
		30	(+2, -4: 2.5%)	12	480	UX73C	9T11C1002G63
		45	(+2, -4: 2.5%)	12	661	UY74C	9T11C1003G63
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G63
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T11C1005G63
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G63
		225	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1007G63
		300	(+2, -4: 2.5%)	12	²	²	9T11C1008G63

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

K-factor

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=20 150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T12C1001G03
		30	(+2, -4: 2.5%)	12	480	UX73C	9T12C1002G03
		45	(+2, -4: 2.5%)	12	661	UY74C	9T12C1003G03
		75	(+2, -4: 2.5%)	12	790	DY75C	9T12C1004G03
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T12C1005G03
		150	(+2, -4: 2.5%)	12	²	²	9T12C1006G03
		225	(+2, -4: 2.5%)	12	²	²	9T12C1007G03
300	(+2, -4: 2.5%)	12	²	²	9T12C1008G03		

K=20 115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T12C1001G33
		30	(+2, -4: 2.5%)	12	²	²	9T12C1002G33
		45	(+2, -4: 2.5%)	12	661	UY74C	9T12C1003G33
		75	(+2, -4: 2.5%)	12	790	DY75C	9T12C1004G33
		112.5	(+2, -4: 2.5%)	12	²	²	9T12C1005G33
		150	(+2, -4: 2.5%)	12	²	²	9T12C1006G33
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T12C1007G33
300	(+2, -4: 2.5%)	12	²	²	9T12C1008G33		

K=20 80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12C1001G63
		30	(+2, -4: 2.5%)	12	480	UX73C	9T12C1002G63
		45	(+2, -4: 2.5%)	12	²	²	9T12C1003G63
		75	(+2, -4: 2.5%)	12	²	²	9T12C1004G63
		112.5	(+2, -4: 2.5%)	12	²	²	9T12C1005G63
150	(+2, -4: 2.5%)	12	²	²	9T12C1006G63		

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

K-factor low noise (-3 dB below NEMA ST-20 standard)

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=4 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T14A1001G04
		30	(+2, -4: 2.5%)	12	444	UX73A	9T14A1002G04
		45	(+2, -4: 2.5%)	12	444	UX73A	9T14A1003G04
		75	(+2, -4: 2.5%)	12	603	UX74A	9T14A1004G04
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T14A1005G04
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1006G04
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T14A1007G04
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T14A1008G04

K=4 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T14A1001G34
		30	(+2, -4: 2.5%)	12	444	UX73A	9T14A1002G34
		45	(+2, -4: 2.5%)	12	561	UY74A	9T14A1003G34
		75	(+2, -4: 2.5%)	12	680	DY75A	9T14A1004G34
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T14A1005G34
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1006G34
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T14A1007G34
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T14A1008G34

K=4 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	112.5	(+2, -4: 2.5%)	12	1250	DX76A	9T14A1005G64
		150	(+2, -4: 2.5%)	12	1670	DX77A	9T14A1006G64

K=13 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T11A1001G04
		30	(+2, -4: 2.5%)	12	444	UX73A	9T11A1002G04
		45	(+2, -4: 2.5%)	12	444	UX73A	9T11A1003G04
		75	(+2, -4: 2.5%)	12	603	UX74A	9T11A1004G04
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T11A1005G04
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T11A1006G04
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T11A1007G04
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T11A1008G04

K=13 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T11A1001G34
		30	(+2, -4: 2.5%)	12	444	UX73A	9T11A1002G34
		45	(+2, -4: 2.5%)	12	561	UY74A	9T11A1003G34
		75	(+2, -4: 2.5%)	12	680	DY75A	9T11A1004G34
		112.5	(+2, -4: 2.5%)	12	1250	DX76A	9T11A1005G34
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T11A1006G34
		225	(+2, -4: 2.5%)	12	1670	DY78A	9T11A1007G34
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T11A1008G34

K=13 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	12	561	UY74A	9T11A1002G64
		45	(+2, -4: 2.5%)	12	561	UY74A	9T11A1003G64
		75	(+2, -4: 2.5%)	12	680	DY75A	9T11A1004G64
		112.5	(+2, -4: 2.5%)	12	1670	DX77A	9T11A1005G64

¹ See page 10-45 and 10-46 for wiring diagrams.

K-factor low noise (-3 dB below NEMA ST-20 standard)

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=20 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12A1001G04
		30	(+2, -4: 2.5%)	12	²	²	9T12A1002G04
		45	(+2, -4: 2.5%)	12	²	²	9T12A1003G04
		75	(+2, -4: 2.5%)	12	²	²	9T12A1004G04
		112.5	(+2, -4: 2.5%)	12	²	²	9T12A1005G04
		150	(+2, -4: 2.5%)	12	²	²	9T12A1006G04
		225	(+2, -4: 2.5%)	12	²	²	9T12A1007G04

K=20 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12A1001G34
		30	(+2, -4: 2.5%)	12	²	²	9T12A1002G34
		45	(+2, -4: 2.5%)	12	²	²	9T12A1003G34
		75	(+2, -4: 2.5%)	12	²	²	9T12A1004G34
		112.5	(+2, -4: 2.5%)	12	²	²	9T12A1005G34

K=20 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12A1001G64
		30	(+2, -4: 2.5%)	12	²	²	9T12A1002G64
		45	(+2, -4: 2.5%)	12	²	²	9T12A1003G64
		75	(+2, -4: 2.5%)	12	²	²	9T12A1004G64
		112.5	(+2, -4: 2.5%)	12	²	²	9T12A1005G64

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

K-factor low noise (-3 dB below NEMA ST-20 standard)

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=4 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T14C1001G04
		30	(+2, -4: 2.5%)	12	353	UX72C	9T14C1002G04
		45	(+2, -4: 2.5%)	12	480	UX73C	9T14C1003G04
		75	(+2, -4: 2.5%)	12	661	UY74C	9T14C1004G04
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T14C1005G04
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T14C1006G04
		225	(+2, -4: 2.5%)	12	1970	DY78C	9T14C1007G04
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T14C1008G04

K=4 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T14C1001G34
		30	(+2, -4: 2.5%)	12	353	UX72C	9T14C1002G34
		45	(+2, -4: 2.5%)	12	661	UY74C	9T14C1003G34
		75	(+2, -4: 2.5%)	12	790	DY75C	9T14C1004G34
		112.5	(+2, -4: 2.5%)	12	900	DX75C	9T14C1005G34
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T14C1006G34
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T14C1007G34
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T14C1008G34

K=4 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T14C1001G64
		30	(+2, -4: 2.5%)	12	480	UX73C	9T14C1002G64
		45	(+2, -4: 2.5%)	12	661	UY74C	9T14C1003G64
		75	(+2, -4: 2.5%)	12	790	DY75C	9T14C1004G64
		112.5	(+2, -4: 2.5%)	12	1240	DX76C	9T14C1005G64

K=13 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T11C1001G04
		30	(+2, -4: 2.5%)	12	353	UX72C	9T11C1002G04
		45	(+2, -4: 2.5%)	12	480	UX73C	9T11C1003G04
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G04
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T11C1005G04
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G04
		225	(+2, -4: 2.5%)	12	1970	DY78C	9T11C1007G04
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1008G04

K=13 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T11C1001G34
		30	(+2, -4: 2.5%)	12	480	UX73C	9T11C1002G34
		45	(+2, -4: 2.5%)	12	661	UY74C	9T11C1003G34
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G34
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T11C1005G34
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G34
		225	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1007G34
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1008G34

K=13 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T11C1001G64
		30	(+2, -4: 2.5%)	12	661	UY74C	9T11C1002G64
		45	(+2, -4: 2.5%)	12	661	UY74C	9T11C1003G64
		75	(+2, -4: 2.5%)	12	790	DY75C	9T11C1004G64
		112.5	(+2, -4: 2.5%)	12	1240	DX76C	9T11C1005G64
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T11C1006G64
		225	(+2, -2: 2.5%)	12	3720	DX79C	9T11C1007G64

¹ See page 10-45 and 10-46 for wiring diagrams.

K-factor low noise (-3 dB below NEMA ST-20 standard)

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Type QL, UL K-factor Transformer

K=20 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12C1001G04
		30	(+2, -4: 2.5%)	12	²	²	9T12C1002G04
		45	(+2, -4: 2.5%)	12	²	²	9T12C1003G04
		75	(+2, -4: 2.5%)	12	²	²	9T12C1004G04
		112.5	(+2, -4: 2.5%)	12	²	²	9T12C1005G04
		150	(+2, -4: 2.5%)	12	²	²	9T12C1006G04

K=20 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12C1001G34
		30	(+2, -4: 2.5%)	12	²	²	9T12C1002G34
		45	(+2, -4: 2.5%)	12	²	²	9T12C1003G34
		75	(+2, -4: 2.5%)	12	²	²	9T12C1004G34
		112.5	(+2, -4: 2.5%)	12	²	²	9T12C1005G34
		150	(+2, -4: 2.5%)	12	²	²	9T12C1006G34

K=20 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	²	²	9T12C1001G64
		30	(+2, -4: 2.5%)	12	²	²	9T12C1002G64
		45	(+2, -4: 2.5%)	12	²	²	9T12C1003G64
		75	(+2, -4: 2.5%)	12	²	²	9T12C1004G64
		112.5	(+2, -4: 2.5%)	12	²	²	9T12C1005G64
		150	(+2, -4: 2.5%)	12	²	²	9T12C1006G64

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

Low noise (-3 dB below NEMA ST-20 standard)

Aluminum coil

Three-phase DOE 2016 efficiency

Product Description

These low noise transformers are designed to operate at reduced noise levels. The vibrations within the magnetic steel core have been greatly reduced, thus lowering the humming of the transformer 3 dB less (1/2 of the sound energy) than NEMA/ANSI standards. Available in Aluminum or Copper windings, with either a 150°C, 115°C or 80°C rise.

Applications

Type QL low noise transformers are ideal when quiet operation is required such as near offices, in school buildings, or hospitals. Although they are inherently quieter, installation can greatly influence their noise level and therefore care should be taken in following acoustical principles as well as proper installation procedures. Closets and corners should be avoided as they act as megaphones by seemingly increasing noise levels.



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001G02
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002G02
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003G02
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1004G02
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1005G02
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1006G02
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1007G02
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1008G02
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009G02

115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001G32
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002G32
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003G32
		75	(+2, -4: 2.5%)	12	603	UX74A	9T10A1004G32
		112.5	(+2, -4: 2.5%)	12	830	DX75A	9T10A1005G32
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T10A1006G32
		225	(+2, -4: 2.5%)	12	1670	DX77A	9T10A1007G32
		300	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1008G32
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009G32

80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	330	UX72A	9T10A1001G62
		30	(+2, -4: 2.5%)	12	444	UX73A	9T10A1002G62
		45	(+2, -4: 2.5%)	12	561	UY74A	9T10A1003G62
		75	(+2, -4: 2.5%)	12	680	DY75A	9T10A1004G62
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1005G62
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1006G62
		225	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1007G62
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1008G62

¹ See page 10-45 and 10-46 for wiring diagrams.

Low noise (-3 dB below NEMA ST-20 standard)

Copper coil

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001G02
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002G02
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003G02
		75	(+2, -4: 2.5%)	12	661	UY74C	9T10C1004G02
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T10C1005G02
		150	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1006G02
		225	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1007G02
		300	(+2, -4: 2.5%)	12	1970	DY78C	9T10C1008G02
		500	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1009G02

115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001G32
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002G32
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003G32
		75	(+2, -4: 2.5%)	12	748	UX74C	9T10C1004G32
		112.5	(+2, -4: 2.5%)	12	900	DX75C	9T10C1005G32
		150	(+2, -4: 2.5%)	12	1240	DX76C	9T10C1006G32
		225	(+2, -4: 2.5%)	12	1847	DX77C	9T10C1007G32
		300	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1008G32
		500	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1009G32

80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T10C1001G62
		30	(+2, -4: 2.5%)	12	480	UX73C	9T10C1002G62
		45	(+2, -4: 2.5%)	12	661	UY74C	9T10C1003G62
		75	(+2, -4: 2.5%)	12	790	DY75C	9T10C1004G62
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1005G62
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1006G62
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1007G62
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1008G62

¹ See page 10-45 and 10-46 for wiring diagrams.

Noise isolation — Guard I™

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

Guard I™ Noise Isolation Transformers provide common mode noise signal between neutral and ground and transverse mode noise protection. Common mode noise is caused by electromagnetic interference, radio interference and ground loops.

Key features

- 120 db common mode noise protection
- 30 db transverse mode noise protection
- NEMA 1 and/or 2 drip-proof enclosure
- Rain shield available for field conversion to NEMA 3R
- NEMA 3R stainless steel (Type 316) available through 150 kVA

150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001G03
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002G03
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003G03
		75	(+2, -4: 2.5%)	12	561	UY74A	9T10A1004G03
		112.5	(+2, -4: 2.5%)	12	680	DY75A	9T10A1005G03
		150	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1006G03
		225	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1007G03
		300	(+2, -4: 2.5%)	12	1670	DY78A	9T10A1008G03
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009G03
		750	(+2, -2: 2.5%)	12	²	DX67A	9T10A1302G03

115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	231	UX71A	9T10A1001G33
		30	(+2, -4: 2.5%)	12	330	UX72A	9T10A1002G33
		45	(+2, -4: 2.5%)	12	444	UX73A	9T10A1003G33
		75	(+2, -4: 2.5%)	12	603	UX74A	9T10A1004G33
		112.5	(+2, -4: 2.5%)	12	830	DX75A	9T10A1005G33
		150	(+2, -4: 2.5%)	12	1250	DX76A	9T10A1006G33
		225	(+2, -4: 2.5%)	12	1670	DX77A	9T10A1007G33
		300	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1008G33
		500	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1009G33
		750	(+2, -2: 2.5%)	12	²	DX67A	9T10A1302G33

80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	330	UX72A	9T10A1001G63
		30	(+2, -4: 2.5%)	12	444	UX73A	9T10A1002G63
		45	(+2, -4: 2.5%)	12	561	UY74A	9T10A1003G63
		75	(+2, -4: 2.5%)	12	680	DY75A	9T10A1004G63
		112.5	(+2, -4: 2.5%)	12	1030	DY76A	9T10A1005G63
		150	(+2, -4: 2.5%)	12	1450	DY77A	9T10A1006G63
		225	(+2, -4: 2.5%)	12	1985	DX78A	9T10A1007G63
		300	(+2, -2: 2.5%)	12	2900	DX79A	9T10A1008G63

¹ See page 10-45 and 10-46 for wiring diagrams.

² Contact Customer Service for more information on these transformers.

Noise isolation — Guard I™

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

150°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001G03
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002G03
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003G03
		75	(+2, -4: 2.5%)	12	661	UY74C	9T10C1004G03
		112.5	(+2, -4: 2.5%)	12	790	DY75C	9T10C1005G03
		150	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1006G03
		225	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1007G03
		300	(+2, -4: 2.5%)	12	1970	DY78C	9T10C1008G03
		500	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1009G03

115°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	230	UX71C	9T10C1001G33
		30	(+2, -4: 2.5%)	12	353	UX72C	9T10C1002G33
		45	(+2, -4: 2.5%)	12	480	UX73C	9T10C1003G33
		75	(+2, -4: 2.5%)	12	748	UX74C	9T10C1004G33
		112.5	(+2, -4: 2.5%)	12	900	DX75C	9T10C1005G33
		150	(+2, -4: 2.5%)	12	1240	DX76C	9T10C1006G33
		225	(+2, -4: 2.5%)	12	1847	DX77C	9T10C1007G33
		300	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1008G33
		500	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1009G33

80°C Rise NEMA 2

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	353	UX72C	9T10C1001G63
		30	(+2, -4: 2.5%)	12	480	UX73C	9T10C1002G63
		45	(+2, -4: 2.5%)	12	661	UY74C	9T10C1003G63
		75	(+2, -4: 2.5%)	12	790	DY75C	9T10C1004G63
		112.5	(+2, -4: 2.5%)	12	1085	DY76C	9T10C1005G63
		150	(+2, -4: 2.5%)	12	1610	DY77C	9T10C1006G63
		225	(+2, -4: 2.5%)	12	2150	DX78C	9T10C1007G63
		300	(+2, -2: 2.5%)	12	3720	DX79C	9T10C1008G63

¹ See page 10-45 and 10-46 for wiring diagrams.

Noise isolation — Guard II™

Aluminum coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Guard II™ Transformer,
(front panel removed)

Guard II™ noise isolation transformers provide common mode noise attenuation plus an enhanced level of transverse mode noise attenuation for increased protection of sensitive electronic equipment.

Key Features

- Grounded copper electrostatic shield between primary and secondary windings
- Noise suppressors and spike/surge suppressors
- 120dB common mode noise rejection
- 60dB transverse mode noise rejection
- Compliance with ANSI and NEMA standards
- Sound levels below NEMA ST-20 limits
- UL Listed
- NEMA 2 enclosure

150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	260	XV371	9T17A1001G03
		30	(+2, -4: 2.5%)	12	370	XV372	9T17A1002G03
		45	(+2, -4: 2.5%)	12	460	XV373	9T17A1003G03
		75	(+2, -4: 2.5%)	12	680	XV374	9T17A1004G03
		112.5	(+2, -4: 2.5%)	12	830	XV375	9T17A1005G03

115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	260	XV371	9T17A1001G33
		30	(+2, -4: 2.5%)	12	370	XV372	9T17A1002G33
		45	(+2, -4: 2.5%)	12	460	XV373	9T17A1003G33

80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	12	680	XV374	9T17A1003G63
		75	(+2, -4: 2.5%)	12	830	XV375	9T17A1004G63

150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	260	XV371	9T17A1451G03
		30	(+2, -4: 2.5%)	12	370	XV372	9T17A1452G03
		45	(+2, -4: 2.5%)	12	460	XV373	9T17A1453G03
		75	(+2, -4: 2.5%)	12	680	XV374	9T17A1454G03
		112.5	(+2, -4: 2.5%)	12	830	XV375	9T17A1455G03

115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	260	XV371	9T17A1451G33
		30	(+2, -4: 2.5%)	12	370	XV372	9T17A1452G33
		45	(+2, -4: 2.5%)	12	460	XV373	9T17A1453G33
		75	(+2, -4: 2.5%)	12	680	XV374	9T17A1454G33

80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	75	(+2, -4: 2.5%)	12	830	XV375	9T17A1454G63

¹ See page 10-45 and 10-46 for wiring diagrams.

Noise isolation — Guard II™

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Guard II™ Transformer, (front panel removed)

150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	270	XV371	9T17C1001G03
		30	(+2, -4: 2.5%)	12	420	XV372	9T17C1002G03
		45	(+2, -4: 2.5%)	12	540	XV373	9T17C1003G03
		75	(+2, -4: 2.5%)	12	770	XV374	9T17C1004G03
		112.5	(+2, -4: 2.5%)	12	1010	XV375	9T17C1005G03

115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	270	XV371	9T17C1001G33
		30	(+2, -4: 2.5%)	12	420	XV372	9T17C1002G33
		45	(+2, -4: 2.5%)	12	540	XV373	9T17C1003G33
		75	(+2, -4: 2.5%)	12	770	XV374	9T17C1004G33
		112.5	(+2, -4: 2.5%)	12	1010	XV375	9T17C1005G33

80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	420	XV372	9T17C1001G63
		30	(+2, -4: 2.5%)	12	540	XV373	9T17C1002G63
		45	(+2, -4: 2.5%)	12	770	XV374	9T17C1003G63
		75	(+2, -4: 2.5%)	12	1010	XV375	9T17C1004G63

150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	270	XV371	9T17C1451G03
		30	(+2, -4: 2.5%)	12	420	XV372	9T17C1452G03
		45	(+2, -4: 2.5%)	12	540	XV373	9T17C1453G03

115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Wiring Diagram No. ¹	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	12	270	XV371	9T17C1451G33
		30	(+2, -4: 2.5%)	12	420	XV372	9T17C1452G33
		45	(+2, -4: 2.5%)	12	540	XV373	9T17C1453G33
		75	(+2, -4: 2.5%)	12	770	XV374	9T17C1454G33

¹ See page 10-45 and 10-46 for wiring diagrams.

Harmonic mitigating — Guard III™

Copper coil

Three-phase DOE 2016 efficiency

Electrostatic shield



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

Guard III™ Harmonic Mitigating Transformers help eliminate harmonics, improve power quality, and help save energy by reducing the energy (heating) losses. They maintain DOE 2016 energy efficiency even when harmonics are present.

Power supplies that convert AC to DC current – for plant floor equipment, computers, copiers, electronic ballasts, and others – generate harmonics that create an irregular current waveform. These harmonics, in turn, create power quality problems such as overheated transformers, motors and neutral wires; nuisance breaker trips; and electronic equipment malfunction and failure.

Key Features

- 0° Phase shift; +15° Phase Shift; -15° Phase Shift or -30° Phase Shift
- Copper windings
- K-factor load profile of 20
- Crest factor load profile of 5
- NEMA 1 and/or 2 drip-proof enclosure
- Rain shield available for field conversion to NEMA 3R
- NEMA 3R stainless steel (Type 316) up through 150 kVA

150°C Rise NEMA 2, 0° Phase Shift

Input Voltage	Output Voltage	kVA	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	318	H371C	9T76H9871G03
		30	552	H372C	9T76H9872G03
		45	643	H373C	9T76H9873G03
		75	1053	H374C	9T76H9874G03
		112.5	1980	H375C	9T76H9875G03
		150	2125	H376C	9T76H9876G03
		300	3170	YF378	9T76H9878G03

150°C Rise NEMA 2, -30° Phase Shift

Input Voltage	Output Voltage	kVA	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	15	318	H371C	9T77H9871G03
		30	552	H372C	9T77H9872G03
		45	643	H373C	9T77H9873G03
		75	1053	H374C	9T77H9874G03
		112.5	1980	H375C	9T77H9875G03
		150	2125	H376C	9T77H9876G03
		300	3170	YF378	9T77H9878G03

150° C Rise NEMA 2, +15° Phase Shift

Input Voltage	Output Voltage	kVA	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	112.5	1980	H375C	9T79H9875G03

150° C Rise NEMA 2, -15° Phase Shift

Input Voltage	Output Voltage	kVA	Approx. Net Weight (Lbs)	Frame Size	Catalog Number
480 Volts Delta	208Y/120 Volts	112.5	1980	H375C	9T78H9875G03

Servicenter™ mini-unit substations

Integral transformer and distribution center

Product Description

This easily installed and serviceable unit incorporates a Type QMS transformer (single-phase) or a Type QL transformer (three-phase), a primary main circuit breaker, a secondary main circuit breaker, and a load-center-design breaker panel. Since these components don't have to be installed and interconnected separately, the contractor or user can reduce installation time and costs. Because of the single-unit concept, only one, handy Servicenter™ needs to be mounted.

Available in single-phase, 5 through 25 kVA, and in three-phase, 15 through 30 kVA, 600 Volt class ratings, the ABB Servicenter™ is a convenient, economical way to meet your industrial and temporary power requirements.

The Transformer—The Servicenter™ utilizes ABB transformer design which has twenty years of field-proven experience behind it and a long track record for assuring consistent, reliable performance. Type QMS transformers employ a 180°C UL Recognized insulation system with a 115°C rise. Type QL transformers employ a 220°C UL Recognized insulation system with a 150°C rise.

The Panel—The panel assembly includes the rugged ABB PowerMark Plus™ circuit breaker load center interior, E-frame primary breakers, and E-frame or Q Line secondary breakers. The load center will accept one-, two-, or three-pole (three-phase) common trip circuit breakers and ground fault breakers. All Servicenters™ come equipped with the properly sized primary main and secondary main circuit breakers installed and prewired. Branch breakers are not included. The load center is rated at 10 kAIC SCCR.

Advantages

- Transformer, load center and breakers are all designed, built and assembled by ABB
- Saves time and money - pre-assembled, pre-wired unit saves time on the job
- High reliability – assembled and tested in our UL approved factory to assure consistency and quality
- Available ABB ground-fault breakers ensure electrical safety around construction sites or wherever water may be present

Key Features

- Keyhole mounting flange facilitates easy mounting
- Indoor and outdoor use
- Front-accessible, hinged or removable panel door is safe and convenient
- Heat barrier under core and coil provides electrical and thermal isolation for wiring compartment
- High-efficiency core construction results in quiet transformer operation and low no-load losses
- Factory installed and wired ABB main and secondary main circuit breakers

Application

The single-phase Servicenter™ can be used wherever 480 Volt power is available and 120 or 240 Volt branch circuits are required. The three-phase Servicenter™ can be used wherever 240 Volt, 480 Volt or 600 Volt primary is available and 208Y/120 Volt secondary circuits are required. The unit can be used in such applications as vending machine areas, construction laboratory test areas, general construction sites where temporary or quickly obtained power is required, or where future expansion of branch circuits is planned.

- Vending or concession areas
- Office buildings
- Assembly lines
- Mining applications
- Parking lots
- Light industrial areas
- Warehouses
- Construction sites
-

NEC Requirements

The Servicenter™ conforms with Article 450-3 of the National Electric Code regarding overcurrent protection requirements for transformers and are UL listed to UL 1062, YEFR:E75204.



Single-Phase Servicenter™,
Hinged Door Removed



Three-Phase Servicenter™, Closed View

Servicenter™ mini-unit substations

Integral transformer and distribution center

Single-phase and three-phase DOE 2016 efficiency



Three-Phase Servicenter™

Single-Phase Indoor/Outdoor 60 Hz 115°C Winding Temperature

Input Voltage	Output Voltage	kVA	Max. Branch Spaces 1 THQL, 1-pole	Max. Branch Spaces 1 THQL, 2-pole	Total 1-pole Spaces	Breaker Rating-Primary Main	Breaker Rating-Secondary Main	Catalog Number
480 Volts Delta	120/240 Volts	5	8	4	12	25A	30A	9T21S1050
		7.5	8	4	12	35A	40A	9T21S1070
		10	12	6	16	50A	50A	9T21S1100
		15	12	6	24	60A	70A	9T21S1150
		25	20	10	24	100A	150A	9T21S1250

Three-Phase² Indoor/Outdoor 60 Hz¹ 150°C DOE 2016 Efficiency Aluminum Transformer Windings

Input Voltage	Output Voltage	kVA	Max. Branch Spaces, 1-pole	Max. Branch Spaces 3-pole	Total 1-pole Spaces	Breaker Rating-Primary Main	Breaker Rating-Secondary Main	Catalog Number
240 Volts Delta	208Y/120 Volts	15	12	4	12	100A	50A	9T17A0001
		30	24	8	24	100A	100A	9T17A0003
480 Volts Delta	208Y/120 Volts	15	12	4	12	40A	50A	9T17A0011
		22.5	18	6	18	70A	70A	9T17A0012
600 Volts Delta	208Y/120 Volts	30	24	8	24	90A	100A	9T17A0013
		15	12	4	12	40A	50A	9T17A0021
		30	24	8	24	40A	100A	9T17A0023

Three-Phase² Indoor/Outdoor 60 Hz¹ 150°C DOE 2016 Efficiency Copper Transformer Windings

Input Voltage	Output Voltage	kVA	Max. Branch Spaces, 1-pole	Max. Branch Spaces 3-pole	Total 1-pole Spaces	Breaker Rating-Primary Main	Breaker Rating-Secondary Main	Catalog Number
240 Volts Delta	208Y/120 Volts	15	12	4	12	100A	50A	9T17C0004
480 Volts Delta	208Y/120 Volts	15	12	4	12	40A	50A	9T17C0014
		22.5	18	6	18	70A	70A	9T17C0015
		30	24	8	24	90A	100A	9T17C0016

¹ (3) 5% taps 1 above and 2 below rated primary volts.

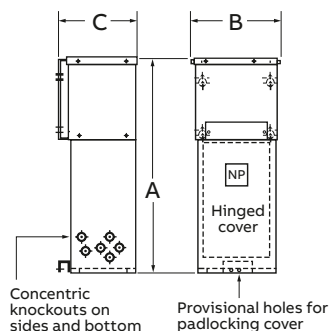
² Stainless steel (Type 316) enclosures are available as an engineered made to order item.



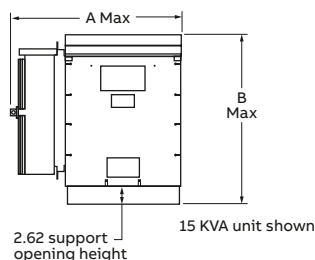
Single-Phase Servicenter™

Servicenter™ mini-unit substations

Integral transformer and distribution center
 Outlines, dimensions and wiring diagrams



Dimensions Single-Phase



Dimensions Three-Phase

Single-Phase

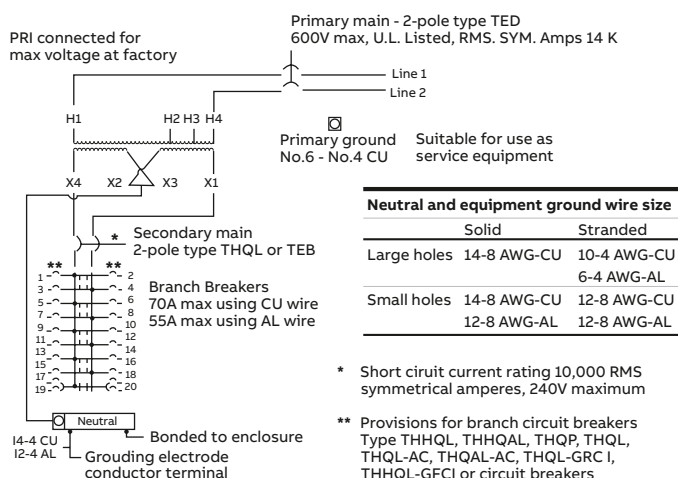
kVA	Catalog Number	Approx. Net Weight (Lbs.)	"A" Height (in.)	"B" Width (in.)	"C" Depth (in.)	Frame Size
5	9T21S1050	103	32.5	10.75	11.12	16350
7.5	9T21S1070	147	32.5	10.75	11.12	16600
10	9T21S1100	198	35	12.62	12.62	19400
15	9T21S1150	220	35	12.62	12.62	19500
25	9T21S1250	388	44.75	16.75	16	50500

Three-Phase DOE 2016 Efficiency Aluminum

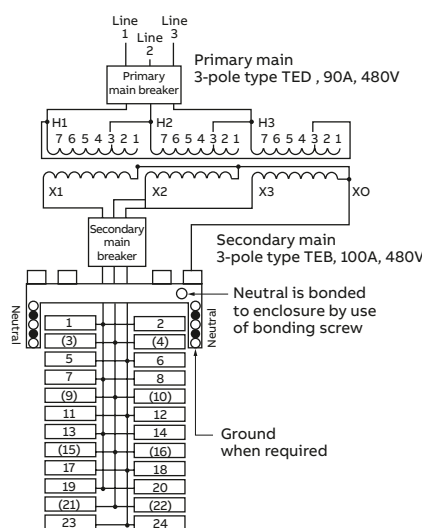
kVA	Catalog Number	Approx. Net Weight (Lbs.)	"A" Height (in.)	"B" Width (in.)	"C" Depth (in.)	Frame Size
15	9T17A0001	280	27.3	27.4	16.9	UX71A
30	9T17A0003	450	32.2	34.5	24	UX72A
15	9T17A0011	280	27.3	27.4	16.9	UX71A
22.5	9T17A0012	450	32.2	34.5	24	UX72A
30	9T17A0013	450	32.2	34.5	24	UX72A
15	9T17A0021	280	27.3	27.4	16.9	UX71A
30	9T17A0023	450	32.2	34.5	24	UX72A

Three-Phase DOE 2016 Efficiency Copper

kVA	Catalog Number	Approx. Net Weight (Lbs.)	"A" Height (in.)	"B" Width (in.)	"C" Depth (in.)	Frame Size
15	9T17C0004	290	27.3	27.4	16.9	UX71C
15	9T17C0014	290	27.3	27.4	16.9	UX71C
22.5	9T17C0015	460	32.2	34.5	24	UX72C
30	9T17C0016	460	32.2	34.5	24	UX72C



Typical Wiring Diagram Single-Phase



Typical Wiring Diagram Three-Phase¹

¹For 22.5 and 15 kVA three-phase Servicers™, secondary main breaker is a backfed plug-in type with positive retainers.

Totally enclosed, nonventilated

TENV

15-75kVA, three-phase, NEMA TP-1 efficiency



TENV Transformer

Totally enclosed nonventilated (TENV) transformers are an excellent choice for applications where dry-type transformer benefits are desired but the standard enclosure openings are unacceptable because of adverse atmospheric conditions. TENV transformers are recommended where dust, dirt or lint may be present or where transformers are subject to sprays or controlled wash-down conditions. They are UL Listed through 75kVA for indoor or protected outdoor applications.

Advantages

- Dry-type transformer is housed in an enclosed NEMA 3R (IP32) non-ventilated compartment
- Convenient wiring compartment is located beneath the transformer and has removable front and rear covers
- Copper bus bars are located at the front of the wiring compartment and are clearly labeled
- All electrical connections between the transformer and bus bars are factory wired
- Quiet performance – meets NEMA ST-20
- No-weld coil termination design
- Comprehensive factory testing assures quality

Features

- Quiet design - unique core and coil design makes ABB TENV transformers among the quietest available
- Core and coil assembly mounted on rubber isolation pads to reduce noise
- 100% factory tested for shorts and coil integrity, current and loss, voltage, impedance and noise
- Qualified to the seismic requirements of IEEE-693-2005 and IBC-2018/CBC-2019
- Copper ground strap
- Copper or aluminum windings available
- Available in 150°C, 115°C, and 80°C rise models
- Indoor or outdoor use

Applications

- Textile
- Automotive
- Foundry
- Paper mills
- Wash-down areas

Totally enclosed, nonventilated

TENV

Three-phase NEMA TP-1 efficiency



TENV Transformer

Aluminum 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	15	(+2, -4: 2.5%)	370	XV372	9T85B3871
		30	(+2, -4: 2.5%)	450	XV373	9T85B3872
		45	(+2, -4: 2.5%)	670	XV374	9T85B3873
		75	(+2, -4: 2.5%)	815	XV375	9T85B3874

Aluminum 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	15	(+2, -4: 2.5%)	370	XV372	9T85B3871G15
		30	(+2, -4: 2.5%)	450	XV373	9T85B3872G15
		45	(+2, -4: 2.5%)	670	XV374	9T85B3873G15
		75	(+2, -4: 2.5%)	815	XV375	9T85B3874G15

Aluminum 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	30	(+2, -4: 2.5%)	670	XV374	9T85B3872G80

Copper 150°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	15	(+2, -4: 2.5%)	410	XV372	9T85C9871
		30	(+2, -4: 2.5%)	525	XV373	9T85C9872
		45	(+2, -4: 2.5%)	760	XV374	9T85C9873
		75	(+2, -4: 2.5%)	1000	XV375	9T85C9874

Copper 115°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	15	(+2, -4: 2.5%)	410	XV372	9T85C9871G15
		30	(+2, -4: 2.5%)	525	XV373	9T85C9872G15
		45	(+2, -4: 2.5%)	760	XV374	9T85C9873G15
		75	(+2, -4: 2.5%)	1000	XV375	9T85C9874G15

Copper 80°C Rise

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	208Y/120	15	(+2, -4: 2.5%)	410	XV372	9T85C9871G80
		45	(+2, -4: 2.5%)	760	XV374	9T85C9873G80

Midtapped

Aluminum

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

ABB Type QL midtapped transformer enables the user to transform three-phase power from 480 Volts primary to 240 Volts secondary and have 120 Volt, reduced capacity tap (RCT) single-phase capability as well. This is because a single-phase midtap is brought out of one coil of the unit's three-phase secondary winding. These transformers are UL listed, File E-79145.

Application

The Type QL midtapped design can be used wherever there is 480 Volt, three-phase supply available and the load is primarily 240 Volt three-phase with a nominal amount of 120 Volt, single-phase power required. Normally, in this instance, a small single-phase as well as a three-phase transformer would be required to provide the necessary transformation.

Caution: When utilizing the 120 Volt midtap for single-phase applications, the single-phase load should not exceed 5 percent of the three-phase kVA rating. The three-phase kVA load must be reduced by the same percentage as that added by the single-phase load. Additional loading beyond 5 percent may cause the transformer to overheat and fail. If the single-phase load is in excess of 5 percent, it is recommended that a separate single-phase unit be used to handle the load.

150°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	231	UX71A	9T10A1181
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1182
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1183
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1184
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1185
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1186
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1187
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1188
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1189

115°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	231	UX71A	9T10A1181G31
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1182G31
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1183G31
		75	(+2, -4: 2.5%)	603	UX74A	9T10A1184G31
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1185G31
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1186G31
		225	(+2, -4: 2.5%)	1670	DX77A	9T10A1187G31
		300	(+2, -4: 2.5%)	1985	DX78A	9T10A1188G31
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1189G31

80°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	330	UX72A	9T10A1181G61
		30	(+2, -4: 2.5%)	444	UX73A	9T10A1182G61
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1183G61
		75	(+2, -4: 2.5%)	680	DY75A	9T10A1184G61
		150	(+2, -4: 2.5%)	1450	DY77A	9T10A1186G61
		225	(+2, -4: 2.5%)	1985	DX78A	9T10A1187G61

Midtapped

Aluminum

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15
kVA-250 kVA, Single-Phase,
DOE 2016 Efficiency, 15
kVA-500 kVA, Three-Phase,
DOE 2016 Efficiency

150°C Rise 60Hz Low Noise (-3dB)

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	231	UX71A	9T10A1181G02
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1182G02
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1183G02
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1184G02
		112.5	(+2, -4: 2.5%)	680	DX75A	9T10A1185G02
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1186G02
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1187G02
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1188G02
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1189G02

115°C Rise 60Hz Low Noise (-3dB)

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	231	UX71A	9T10A1181G32
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1182G32
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1183G32
		75	(+2, -4: 2.5%)	603	UX74A	9T10A1184G32
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1185G32
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1186G32
		225	(+2, -4: 2.5%)	1670	DX77A	9T10A1187G32
		300	(+2, -4: 2.5%)	1985	DX78A	9T10A1188G32
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1189G32

Midtapped

Copper

Three-phase DOE 2016 efficiency



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

150°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	230	UX71C	9T10C1181
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1182
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1183
		75	(+2, -4: 2.5%)	661	UY74C	9T10C1184
		112.5	(+2, -4: 2.5%)	790	DY75C	9T10C1185
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C1186
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1187
		300	(+2, -4: 2.5%)	1970	DY78C	9T10C1188
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1189

115°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	230	UX71C	9T10C1181G31
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1182G31
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1183G31
		75	(+2, -4: 2.5%)	748	UX74C	9T10C1184G31
		112.5	(+2, -4: 2.5%)	900	DX75C	9T10C1185G31
		150	(+2, -4: 2.5%)	1240	DX76C	9T10C1186G31
		300	(+2, -4: 2.5%)	2150	DX78C	9T10C1188G31
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1189G31

80°C Rise 60Hz

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	353	UX72C	9T10C1181G61
		30	(+2, -4: 2.5%)	480	UX73C	9T10C1182G61
		45	(+2, -4: 2.5%)	661	UY74C	9T10C1183G61
		75	(+2, -4: 2.5%)	790	DY75C	9T10C1184G61
		225	(+2, -4: 2.5%)	2150	DX78C	9T10C1187G61

150°C Rise 60Hz Low Noise (-3dB)

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	230	UX71C	9T10C1181G02
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1182G02
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1183G02
		75	(+2, -4: 2.5%)	661	UY74C	9T10C1184G02
		112.5	(+2, -4: 2.5%)	790	DY75C	9T10C1185G02
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1187G02

115°C Rise 60Hz Low Noise (-3dB)

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	75	(+2, -4: 2.5%)	748	UX74C	9T10C1184G32
		112.5	(+2, -4: 2.5%)	900	DX75C	9T10C1185G32

80°C Rise 60Hz Low Noise (-3dB)

Input Voltage	Output Voltage	kVA	Taps	Net Weight (Lbs)	Frame Size	Catalog Number
480	240/120	15	(+2, -4: 2.5%)	353	UX72C	9T10C1181G62
		30	(+2, -4: 2.5%)	480	UX73C	9T10C1182G62
		75	(+2, -4: 2.5%)	790	DY75C	9T10C1184G62
		150	(+2, -4: 2.5%)	1610	DY77C	9T10C1186G62

Drive isolation

Aluminum

Three-phase

Application

The use of SCR control circuitry with adjustable-speed drives has resulted in a need for a line of isolation transformers specifically designed to meet the demanding requirements of SCR drives.

Symmetrically placed taps and added coil bracing minimize mechanical forces caused by the often severe SCR drive duty cycles.

These features also help protect the transformer from the

regenerative duty and more frequent short-circuits associated with SCR drives. Isolation transformers also reduce line-pollution feedback resulting from SCR firing circuits. The ABB delta-wye designs meet the NEC requirements for grounded secondary neutrals that isolate primary distribution systems. kVA ratings of the DIT line cover most dc motor requirements from 3 to 1000 hp.

Enclosed drive isolation transformers are UL listed.



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

15 - 220 kVA Indoor Type QL UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
230 Volts Delta	230Y/133 Volts	15	60Hz	16	240	XV371	9T83B4000G29
		20	60Hz	16	334	XV372	9T83B4001G29
		27	60Hz	16	334	XV372	9T83B4002G29
		34	60Hz	16	334	XV372	9T83B4003G29
		40	60Hz	16	415	XV373	9T83B4004G29
		51	60Hz	16	415	XV373	9T83B4005G29
		75	60Hz	16	620	XV374	9T83B4007G29
		93	60Hz	16	765	XV375	9T83B4008G29
		118	60Hz	16	1070	XV376	9T83B4009G29
		230 Volts Delta	460Y/266 Volts	15	60Hz	16	240
20	60Hz			16	334	XV372	9T83B4001G28
27	60Hz			16	334	XV372	9T83B4002G28
34	60Hz			16	334	XV372	9T83B4003G28
63	60Hz			16	620	XV374	9T83B4006G28
93	60Hz			16	765	XV375	9T83B4008G28
118	60Hz			16	1070	XV376	9T83B4009G28
145	60Hz			16	1070	XV376	9T83B4010G28
175	60Hz			16	1590	XV377	9T83B4011G28

¹ See page 10-45 and 10-46 for wiring diagrams.

Drive isolation

Aluminum

Three-phase



Large Power: Type QL, 15 kVA-250 kVA, Single-Phase, DOE 2016 Efficiency, 15 kVA-500 kVA, Three-Phase, DOE 2016 Efficiency

15 - 220 kVA Indoor Type QL UL Listed (continued)

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
460 Volts Delta	230Y/133	15	60 Hz	16	240	XV371	9T83B4000G23
		20	60 Hz	16	334	XV372	9T83B4001G23
		27	60 Hz	16	334	XV372	9T83B4002G23
		34	60 Hz	16	334	XV372	9T83B4003G23
		40	60 Hz	16	415	XV373	9T83B4004G23
		51	60 Hz	16	415	XV373	9T83B4005G23
		63	60 Hz	16	620	XV374	9T83B4006G23
		75	60 Hz	16	620	XV374	9T83B4007G23
		93	60 Hz	16	765	XV375	9T83B4008G23
		118	60 Hz	16	1070	XV376	9T83B4009G23
		145	60 Hz	16	1070	XV376	9T83B4010G23
		220	60 Hz	16	1590	XV377	9T83B4012G23
460 Volts Delta	460Y/266	15	60 Hz	16	240	XV371	9T83B4000G22
		20	60 Hz	16	334	XV372	9T83B4001G22
		27	60 Hz	16	334	XV372	9T83B4002G22
		34	60 Hz	16	334	XV372	9T83B4003G22
		40	60 Hz	16	415	XV373	9T83B4004G22
		51	60 Hz	16	415	XV373	9T83B4005G22
		63	60 Hz	16	620	XV374	9T83B4006G22
		75	60 Hz	16	620	XV374	9T83B4007G22
		93	60 Hz	16	765	XV375	9T83B4008G22
		118	60 Hz	16	1070	XV376	9T83B4009G22
		145	60 Hz	16	1070	XV376	9T83B4010G22
		175	60 Hz	16	1590	XV377	9T83B4011G22
220	60 Hz	16	1590	XV377	9T83B4012G22		
575 Volts Delta	230Y/133	20	60 Hz	16	334	XV372	9T83B4001G27
		63	60 Hz	16	620	XV374	9T83B4006G27
		75	60 Hz	16	620	XV374	9T83B4007G27
575 Volts Delta	460Y/266	118	60 Hz	16	1070	XV376	9T83B4009G27
		15	60 Hz	16	240	XV371	9T83B4000G26
		27	60 Hz	16	334	XV372	9T83B4002G26
		34	60 Hz	16	334	XV372	9T83B4003G26
		51	60 Hz	16	415	XV373	9T83B4005G26
		145	60 Hz	16	1070	XV376	9T83B4010G26
		175	60 Hz	16	1590	XV377	9T83B4011G26
		220	60 Hz	16	1590	XV377	9T83B4012G26

¹ See page 10-45 and 10-46 for wiring diagrams.

NOTE: Full capacity symmetrical taps (1) +5% and (1) -5%, in primary windings for 230 and 460 Y thru 550 kVA; (1) +6.2% and (1) -6.2% at 750 kVA; (1) +6.4% and (1) -6.4% at 1000 kVA. With 575 V primary, symmetrical 5% taps apply thru 750 kVA; at 1000 kVA, (1) +5.1% and (1) -5.1%. For ratings less than 15 kV contact ABB Sales Office.

Accessories and lugs

Single-phase and three-phase

Wall mount bracket

Frame Size	Catalog Number
UX71A	9T18Y1071G07
UX71C	9T18Y1071G07
UX72A	9T18Y1071G07
UX72C	9T18Y1071G07
UX73A	9T18Y1071G07
UX73C	9T18Y1071G07
UX74A	9T18Y1074G07
UX74C	9T18Y1074G07
UY04A	9T18Y1074G07
UY74A	9T18Y1074G07
UY74C	9T18Y1074G07
DX75C	9T18Y1074G07
DY75A	9T18Y1074G07
DY75C	9T18Y1074G07
YF171	9T18Y5042
YF172	9T18Y5043
YF174	9T18Y5043
YF175	Not available
YF176	Not available
YF177	Not available
YX171	9T18Y1071G07
YX172	9T18Y1074G07
XV173	9T18Y1074G07
YX174	9T18Y1074G07
YX175	Not available

Bottom pan

Frame Size	Catalog Number
DY08A	9T18Y1078G09
DX76A	9T18Y1077G09
DX77A	9T18Y1077G09
DX77C	9T18Y1077G09
DY77A	9T18Y1077G09
DY77C	9T18Y1077G09
DX78A	9T18Y1078G09
DX78C	9T18Y1078G09
DY78A	9T18Y1078G09
DY78C	9T18Y1078G09
DX79A	9T18Y1079G09
DY79A	9T18Y1079G09
DY79C	9T18Y1079G09
DX79C	9T18Y1079G09
YF175	9T18Y4504G77
YF176	9T18Y4504G79
YF177	9T18Y4504G79

316 stainless steel rain shield kit

Frame Size	Catalog Number
UX71A	9T18Y1171G06
UX71C	9T18Y1171G06
UX72A	9T18Y1172G06
UX73A	9T18Y1172G06
UX72C	9T18Y1172G06
UX73C	9T18Y1172G06
UY74A	9T18Y1174G06
UX74A	9T18Y1174G06
UY74C	9T18Y1174G06
UX74C	9T18Y1174G06
DY75A	9T18Y1174G06
DY75C	9T18Y1174G06
DX75C	9T18Y1174G06
DY76A	9T18Y1176G06
DY76C	9T18Y1176G06
DX75A	9T18Y1176G06
DX76C	9T18Y1176G06

Ground bar kit

Frame Size	Catalog Number
UY04A	9T18Y1074G11
UX71A	9T18Y1071G11
UX71C	9T18Y1071G11
UX72A	9T18Y1071G11
UX73A	9T18Y1071G11
UX72C	9T18Y1071G11
UX73C	9T18Y1071G11
UY74A	9T18Y1074G11
UX74A	9T18Y1074G11
UY74C	9T18Y1074G11
UX74C	9T18Y1074G11
DY75A	9T18Y1074G11
DY76A	9T18Y1074G11
DY75C	9T18Y1074G11
DY76C	9T18Y1074G11
DX75A	9T18Y1074G11
DX75C	9T18Y1074G11
DX76C	9T18Y1074G11

Rain shield kit

Frame Size	Catalog Number
UY04A	9T18Y1074G06
UX71A	9T18Y1071G06
UX71C	9T18Y1071G06
UX72A	9T18Y1072G06
UX72C	9T18Y1072G06
UX73A	9T18Y1072G06
UX73C	9T18Y1072G06
UY74A	9T18Y1074G06
UX74A	9T18Y1074G06
UY74C	9T18Y1074G06
UX74C	9T18Y1074G06
DY08A	9T18Y1077G06
DY75A	9T18Y1074G06
DY75C	9T18Y1074G06
DX75A	9T18Y1076G06
DX75C	9T18Y1074G06
DY76A	9T18Y1076G06
DY76C	9T18Y1076G06
DX76A	9T18Y1077G06
DX76C	9T18Y1076G06
DX77A	9T18Y1077G06
DX77C	9T18Y1077G06
DY77A	9T18Y1077G06
DY77C	9T18Y1077G06
DY78C	9T18Y1077G06
DY78A	9T18Y1077G06
DX78A	9T18Y1077G06
DX78C	9T18Y1077G06
DX79A	9T18Y1079G06
DX79C	9T18Y1079G06
DY79A	9T18Y1079G06
DY79C	9T18Y1079G06
YF171	9T18Y4317G05
YF172	9T18Y4317G06
YF173	9T18Y4317G06
YF174	9T18Y1074G06
YF175	9Y18Y4322G77
YF176	9T18Y4322G88
YF177	9T18Y4322G88
YX171	9T18Y1072G06
YX172	9T18Y1074G06
XV173	9T18Y1074G06
YX174	9T18Y1074G06
YX175	9T18Y1077G06

Lug kits for QL transformers

Frame Size	Catalog Number
UY04A	9T18Y1074G10
UX71A	9T18Y1071G10
UX71C	9T18Y1071G10
UX72A	9T18Y1072G10
UX73A	9T18Y1072G10
UX72C	9T18Y1072G10
UX73C	9T18Y1072G10
UY74A	9T18Y1074G10
UX74A	9T18Y1074G10
UY74C	9T18Y1074G10
UX74C	9T18Y1074G10
DY08A	9T18Y1078G10
DY75A	9T18Y1075G10
DY75C	9T18Y1075G10
DX75C	9T18Y1075G10
DY76A	9T18Y1076G10
DY76C	9T18Y1076G10
DX75A	9T18Y1076G10
DX76C	9T18Y1076G10
DY77A	9T18Y1077G10
DY77C	9T18Y1077G10
DX76A	9T18Y1077G10
DX77A	9T18Y1077G10
DX77C	9T18Y1077G10
DY78A	9T18Y1078G10
DY78C	9T18Y1078G10
DX78A	9T18Y1078G10
DX78C	9T18Y1078G10
DX79A	9T18Y1079G10
DX79C	9T18Y1079G10
DY79A	9T18Y1079G10
DY79C	9T18Y1079G10
YF171	9T18Y7240G02
YF172	9T18Y7241G03
YF174	9T18Y7240G03
YF175	9T18Y7242G07
YF176	9T18Y7242G05
YF177	9T18Y7242G05

Accessories and lugs

Single-phase and three-phase

Single-phase lug kits

Coil Material	Temp Rise	kVA	Frame Size	Primary Bus Bar Holes (Qty/Size)	Secondary Bus Bar Holes (Qty/Size)	Lug Kit	Cable Size	Stud Diameter	Lug	Qty
Aluminum/ Copper	115 or 150	15/25 37.5	YF171	(2) .406 dia	(2) .406 dia	9T18Y7240G02	250MCM-6	(1) 21/64	P250	8
		50	YF172	(2) .406 dia	(2) .406 dia	9T18Y7241G03	250MCM-6 350MCM-6	(1) 21/64 (1) 13/32	P250 P350	4
		75	YF174	(2) .406 dia	(2) .406 dia	9T18Y7240G03	250MCM-6	(1) 21/64	P250	12
		100	YF175	(2) .406 dia	(2) .406 dia	9T18Y7242G07	350MCM-6	(1) 13/32	P350	12
	150	167	YF176	(2) .406 dia	(2) .406 dia	9T18Y7242G05	350MCM-6	(1) 13/32	P350	8
							500MCM-4	(1) 13/32	P500	12

Three-phase lug kits

Coil Material	Temp Rise	kVA	Frame Size	Primary Bus Bar Holes (Qty/Size)	Secondary Bus Bar Holes (Qty/Size)	Lug Kit	Cable Size	Stud Diameter	Lug	Qty
Aluminum	115 or 150	15	UX71A	(2) .406 dia	(2) .406 dia	9T18Y1071G10	1/0-14	(1) 17/64	P125	7
		30	UX72A	(2) .406 dia	(2) .406 dia	9T18Y1072G10	250MCM-6	(1) 21/64	P250	7
		45	UX73A	(2) .406 dia	(2) .406 dia	9T18Y1072G10	250MCM-6	(1) 21/64	P250	7
		500	DX79A	(4) .563 dia	(6) .563 dia	9T18Y1079G10	350MCM-6 500MCM-4	(1) 13/32 (1) 13/32	P350 P500	9 24
	150	75	UY74A UY04A	(2) .406 dia	(2) .406 dia	9T18Y1074G10	250MCM-6	(1) 21/64	P250	3
							350MCM-6	(1) 13/32	P350	4
	115	75	UX74A	(2) .406 dia	(2) .406 dia	9T18Y1074G10	250MCM-6	(1) 21/64	P250	3
							350MCM-6	(1) 13/32	P350	4
	150	112.5	DY75A	(1) .563 dia	(2) .563 dia	9T18Y1075G10	350MCM-6	(1) 13/32	P350	7
							500MCM-4	(1) 13/32	P350	3
		150	DY76A	(1) .563 dia	(2) .563 dia	9T18Y1076G10	500MCM-4	(1) 13/32	P500	4
							350MCM-6	(1) 13/32	P350	6
		225	DY77A	(2) .563 dia	(4) .563 dia	9T18Y1077G10	500MCM-4	(1) 13/32	P500	8
							350MCM-6	(1) 13/32	P350	6
		300	DY78A DY08A	(4) .563 dia	(6) .563 dia	9T18Y1078G10	500MCM-4	(1) 13/32	P500	2
							600MCM-2	(1) 13/32	P600	6
	500	DY79A	(4) .563 dia	(6) .563 dia	9T18Y1079G10	350MCM-6	(1) 13/32	P350	9	
						500MCM-4	(1) 13/32	P500	24	
	115	112.5	DX75A	(1) .563 dia	(2) .563 dia	9T18Y1076G10	350MCM-6	(1) 13/32	P350	3
							500MCM-4	(1) 13/32	P500	4
		150	DX76A	(2) .563 dia	(4) .563 dia	9T18Y1077G10	350MCM-6	(1) 13/32	P350	6
							500MCM-4	(1) 13/32	P500	8
	225	DX77A	(2) .563 dia	(4) .563 dia	9T18Y1077G10	350MCM-6	(1) 13/32	P350	6	
						500MCM-4	(1) 13/32	P500	8	
300	DX78A	(2) .563 dia	(4) .563 dia	9T18Y1078G10	350MCM-6	(1) 13/32	P350	6		
					500MCM-4	(1) 13/32	P500	2		
Copper	150 or 115	15	UX71C	(2) .406 dia	(2) .406 dia	9T18Y1071G10	1/0-14	(1) 17/64	P125	7
		30	UX72C	(2) .406 dia	(2) .406 dia	9T18Y1072G10	250MCM-6	(1) 21/64	P250	7
		45	UX73C	(2) .406 dia	(2) .406 dia	9T18Y1072G10	250MCM-6	(1) 21/64	P250	7
	150	75	UY74C	(2) .406 dia	(2) .406 dia	9T18Y1074G10	250MCM-6	(1) 21/64	P250	3
							350MCM-6	(1) 13/32	P350	4
	115	75	UX74C	(2) .406 dia	(2) .406 dia	9T18Y1074G10	250MCM-6	(1) 21/64	P250	3
							350MCM-6	(1) 13/32	P350	4
	150	112.5	DY75C	(1) .563 dia	(2) .563 dia	9T18Y1075G10	350MCM-6	(1) 13/32	P350	7
							500MCM-4	(1) 13/32	P350	3
		150	DY76C	(1) .563 dia	(2) .563 dia	9T18Y1076G10	500MCM-4	(1) 13/32	P500	4
							350MCM-6	(1) 13/32	P350	6
		225	DY77C	(2) .563 dia	(4) .563 dia	9T18Y1077G10	500MCM-4	(1) 13/32	P500	8
							350MCM-6	(1) 13/32	P350	6
		300	DY78C	(4) .563 dia	(6) .563 dia	9T18Y1078G10	500MCM-4	(1) 13/32	P500	2
							600MCM-2	(1) 13/32	P600	6
	500	DY79C	(4) .563 dia	(6) .563 dia	9T18Y1079G10	350MCM-6	(1) 13/32	P350	9	
						500MCM-4	(1) 13/32	P500	24	
	115	112.5	DX75C	(1) .563 dia	(2) .563 dia	9T18Y1075G10	350MCM-6	(1) 13/32	P350	7
							500MCM-4	(1) 13/32	P350	3
		150	DX76C	(1) .563 dia	(2) .563 dia	9T18Y1076G10	500MCM-4	(1) 13/32	P500	4
							350MCM-6	(1) 13/32	P350	6
	225	DX77C	(2) .563 dia	(4) .563 dia	9T18Y1077G10	350MCM-6	(1) 13/32	P350	6	
						500MCM-4	(1) 13/32	P500	8	
	300	DX78C	(2) .563 dia	(4) .563 dia	9T18Y1078G10	350MCM-6	(1) 13/32	P350	6	
500MCM-4						(1) 13/32	P500	2		
600MCM-2	(1) 13/32	P600	6							

Enclosure parts

Enclosure kits

Frame Size	Catalog Number
UY04A	9T18Y1074G01
UX71A	9T18Y1071
UX71C	9T18Y1071
UX72A	9T18Y1072
UX73A	9T18Y1072
UX72C	9T18Y1072
UX73C	9T18Y1072
UY74A	9T18Y1074
UX74A	9T18Y1074
UY74C	9T18Y1074
UX74C	9T18Y1074
DY08A	9T18Y1078G01
DY75A	9T18Y1075
DY75C	9T18Y1075
DX75C	9T18Y1075
DY76A	9T18Y1076
DY76C	9T18Y1076
DX75A	9T18Y1076
DX76C	9T18Y1076
DY77A	9T18Y1077
DY77C	9T18Y1077
DX76A	9T18Y1077
DX77A	9T18Y1077
DX77C	9T18Y1077
DY78A	9T18Y1078
DY78C	9T18Y1078
DX78A	9T18Y1078
DX78C	9T18Y1078
DX79A	9T18Y1079
DY79A	9T18Y1009G01
DY79C	9T18Y1079

Front/back panel

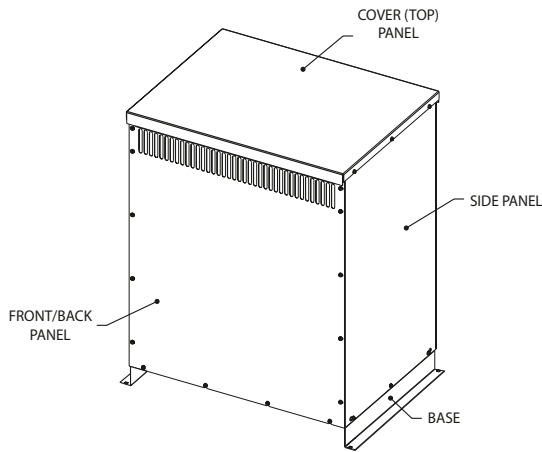
Frame Size	Catalog Number
UY04A	9T18Y1074G03
UX71A	9T18Y1071G03
UX71C	9T18Y1071G03
UX72A	9T18Y1072G03
UX73A	9T18Y1072G03
UX72C	9T18Y1072G03
UX73C	9T18Y1072G03
UY74A	9T18Y1074G03
UX74A	9T18Y1074G03
UY74C	9T18Y1074G03
UX74C	9T18Y1074G03
DY08A	9T18Y1078G03
DY75A	9T18Y1075G03
DY75C	9T18Y1075G03
DX75C	9T18Y1075G03
DY76A	9T18Y1076G03
DY76C	9T18Y1076G03
DX75A	9T18Y1076G03
DX76C	9T18Y1076G03
DY77A	9T18Y1077G03
DY77C	9T18Y1077G03
DX76A	9T18Y1077G03
DX77A	9T18Y1077G03
DX77C	9T18Y1077G03
DY78A	9T18Y1078G03
DY78C	9T18Y1078G03
DX78A	9T18Y1078G03
DX78C	9T18Y1078G03
DX79A	9T18Y1079G03
DY79A	9T18Y1079G03
DY79C	9T18Y1079G03

Side panel

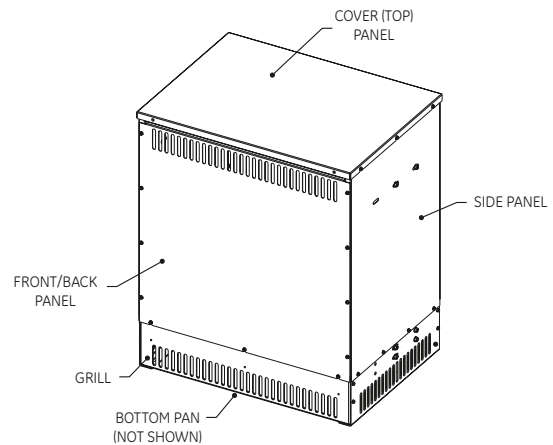
Frame Size	Catalog Number
UY04A	9T18Y1074G04
UX71A	9T18Y1071G04
UX71C	9T18Y1071G04
UX72A	9T18Y1072G04
UX73A	9T18Y1072G04
UX72C	9T18Y1072G04
UX73C	9T18Y1072G04
UY74A	9T18Y1074G04
UX74A	9T18Y1074G04
UY74C	9T18Y1074G04
UX74C	9T18Y1074G04
DY08A	9T18Y1078G04
DY75A	9T18Y1075G04
DY75C	9T18Y1075G04
DX75C	9T18Y1075G04
DY76A	9T18Y1076G04
DY76C	9T18Y1076G04
DX75A	9T18Y1076G04
DX76C	9T18Y1076G04
DY77A	9T18Y1077G04
DY77C	9T18Y1077G04
DX76A	9T18Y1077G04
DX77A	9T18Y1077G04
DX77C	9T18Y1077G04
DY78A	9T18Y1078G04
DY78C	9T18Y1078G04
DX78A	9T18Y1078G04
DX78C	9T18Y1078G04
DX79A	9T18Y1079G04
DY79A	9T18Y1009G04
DY79C	9T18Y1079G04

Cover (top) panel

Frame Size	Catalog Number
UY04A	9T18Y1074G05
UX71A	9T18Y1071G05
UX71C	9T18Y1071G05
UX72A	9T18Y1072G05
UX73A	9T18Y1072G05
UX72C	9T18Y1072G05
UX73C	9T18Y1072G05
UY74A	9T18Y1074G05
UX74A	9T18Y1074G05
UY74C	9T18Y1074G05
UX74C	9T18Y1074G05
DY08A	9T18Y1078G05
DY75A	9T18Y1074G05
DY75C	9T18Y1074G05
DX75C	9T18Y1074G05
DY76A	9T18Y1076G05
DY76C	9T18Y1076G05
DX75A	9T18Y1076G05
DX76C	9T18Y1076G05
DY77A	9T18Y1077G05
DY77C	9T18Y1077G05
DX76A	9T18Y1077G05
DX77A	9T18Y1077G05
DX77C	9T18Y1077G05
DY78A	9T18Y1078G05
DY78C	9T18Y1078G05
DX78A	9T18Y1078G05
DX78C	9T18Y1078G05
DX79A	9T18Y1079G05
DY79A	9T18Y1079G05
DY79C	9T18Y1079G05



ENCLOSURE KIT: 1 COVER + 2 SIDES + 2 FRONTS



ENCLOSURE KIT: 1 COVER + 2 SIDES + 2 FRONTS

This style enclosure is used with the following frames:

Frame Size	Frame Size
UX71A	UY74C
UX71C	UX74C
UX72A	DY75A
UX72C	DY75C
UX73A	DX75A
UX73C	DX75C
UY74A	DY76A
UX74A	DY76C

This style enclosure is used with the following frames:

Frame Size	Frame Size
DX76A	DX79A
DX76C	DX79C
DX77A	YF171
DX77C	YF172
DY77A	YF173
DY77C	YF174
DY78C	YF175
DY78A	YF176
DX78A	YF177
DX78C	-

Wiring diagrams

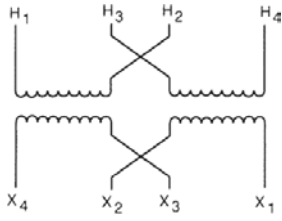


Diagram 1

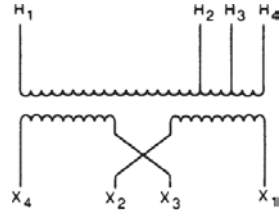


Diagram 2

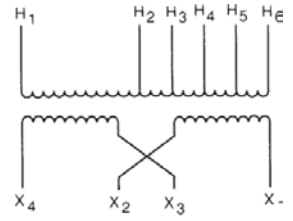


Diagram 3

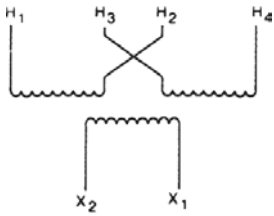


Diagram 4

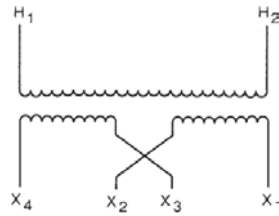


Diagram 5

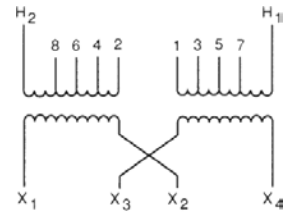


Diagram 6

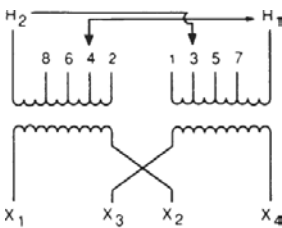


Diagram 7

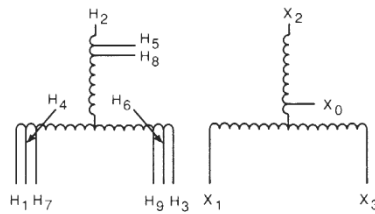


Diagram 8

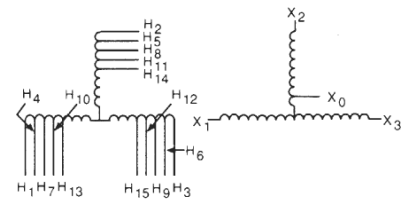


Diagram 9

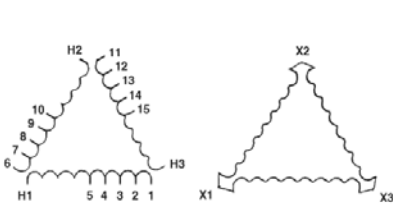


Diagram 10

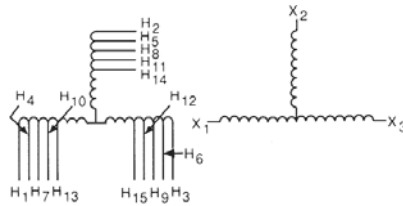


Diagram 11

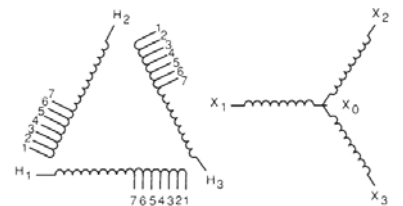


Diagram 12

Wiring diagrams

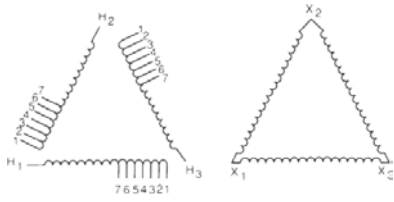


Diagram 13

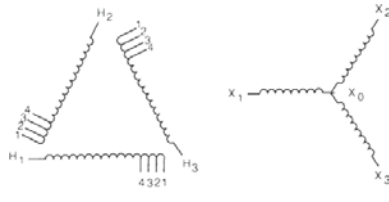


Diagram 14

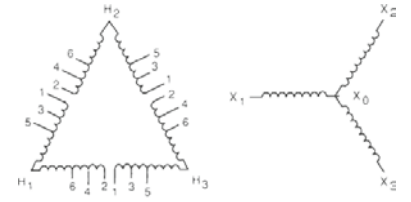


Diagram 15

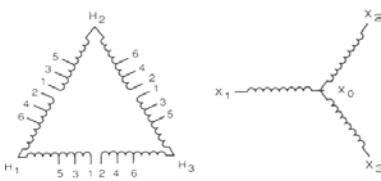


Diagram 16

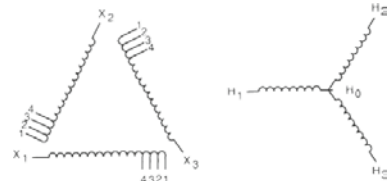


Diagram 17

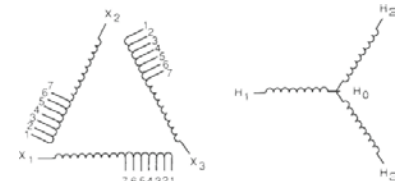


Diagram 18

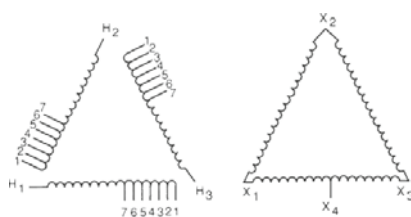


Diagram 19

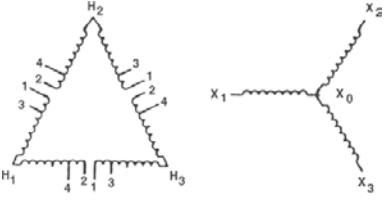


Diagram 20

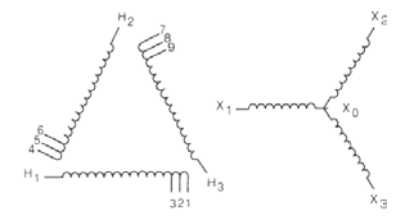


Diagram 21

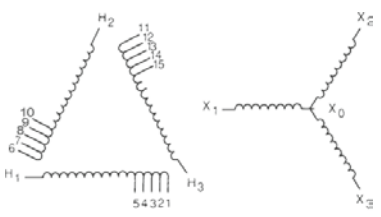


Diagram 22

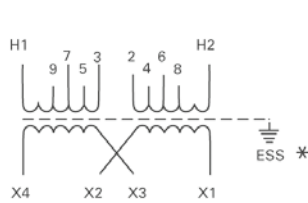


Diagram 23

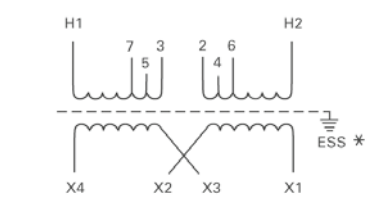


Diagram 24

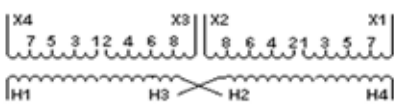


Diagram 25

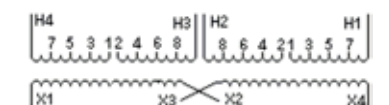


Diagram 26

Dimensions



Single-phase vented QL transformers

Product Weights and Dimensions		Weight (Lb)		Enclosure Dimensions (In)					Mounting Feet Dimensions	
Frame Size	Outline Drawing No.	AL	CU	Height (In.)	Width (In.)	Depth (In.)	Minimum Installation Clearance (4 sides) (in.)	Minimum Installation Clearance (Top) (in.)	Width (in.)	Depth (in.)
YF171	303B406AAP071	320	350	32.1	23.8	18.4	6.0	12.0	-	-
YF172	303B406AAP072	400	500	35.7	31.8	24	6.0	12.0	-	-
XV173	303B406AAP073	500	520	35.7	31.8	24	6.0	12.0	-	-
YF174	303B406AAP074	510	625	39.9	31.8	24	6.0	12.0	-	-
YF175	303B932AAP075	900	1050	37.4	29.5	28.5	6.0	12.0	-	-
YF176	303B932AAP076	1360	1675	45.5	38.5	33	6.0	12.0	-	-
YF177	303B932AAP077	1700	1960	45.5	38.5	33	6.0	12.0	-	-
YX171	303B409CAP071	320	350	18.4	26.2	34.7	6.0	12.0	25.1	15.3
YX172	303B409CAP072	460	510	24	34.3	35.7	6.0	12.0	33.1	21.0
XV173	303B409CAP073	490	520	24	34.3	35.7	6.0	12.0	33.1	21.0
YX174	303B409CAP074	600	750	24	34.3	42.2	6.0	12.0	33.1	21.0
YX175	303B409CAP075	950	N/A	28.5	32.4	37.4	6.0	12.0	30.6	23.0



QL Transformer (Front Panel Removed)

Three-phase, vented QL transformers

Includes General Purpose, K-factor, K-factor Low Noise, Low Noise, Guard I™, Midtapped, Drive Isolation

Product Weights and Dimensions		Enclosure Dimensions			Mounting Feet Dimensions			Weight
Frame Size	Outline Drawing No.	Width (in.)	Depth (in.)	Height (in.)	Width (in.)	Depth (in.)	Painted (lbs.)	316 Stainless Steel (lbs.)
UX71A	303B111GEUXP71A	18.7	16.9	29.3	21.2	15.1	231	251
UX71C	303B111GEUXP71C	18.7	16.9	29.3	21.2	15.1	230	250
UX72A	303B111GEUXP72A	23.8	18.4	34.7	26.2	16.6	330	350
UX72C	303B111GEUXP72C	23.8	18.4	34.7	26.2	16.6	353	373
UX73A	303B111GEUXP73A	23.8	18.4	34.7	26.2	16.6	444	464
UY72A	303B111GEUYP72A	23.8	18.4	34.7	26.2	16.6	297	317
UY73A	303B111GEUYP73A	23.8	18.4	34.7	26.2	16.6	363	383
UX73C	303B111GEUXP73C	23.8	18.4	34.7	26.2	16.6	480	500
UY74A	303B111GEUYP74A	31.8	24	35.7	34.3	22.3	561	581
UY04C	303B111GEUYP04C	31.8	24	35.7	22.3	34.3	503	523
UY74C	303B111GEUYP74C	31.8	24	35.7	34.3	22.3	661	681
UX74A	303B111GEUXP74A	31.8	24	35.7	34.3	22.3	603	623
UX74C	303B111GEUXP74C	31.8	24	35.7	34.3	22.3	748	768
DY75A	303B111GEDYP75A	31.8	24	42.2	34.3	22.3	680	760
DY75C	303B111GEDYP75C	31.8	24	42.2	34.3	22.3	790	870
DX75A	303B111GEDXP75A	34.8	24	45.8	37.3	22.3	830	850
DX75C	303B111GEDXP75C	31.8	24	42.2	34.3	22.3	900	980
DY76A	303B111GEDYP76A	34.8	24	45.8	37.3	22.3	1030	1050
DY76C	303B111GEDYP76C	34.8	24	45.8	37.3	22.3	1085	1105
DX76A	303B112GEDXP76A	38.4	33	47.4	41.1	32	1250	NA
DX76C	303B111GEDXP76C	34.8	24	45.8	37.3	22.3	1240	1260
DY77A	303B112GEDYP77A	38.4	33	47.4	41.4	32	1450	NA
DY77C	303B112GEDYP77C	38.4	33	47.4	41.4	32	1610	NA
DX77A	303B112GEDXP77A	38.4	33	47.4	41.4	32	1670	NA
DY78A	303B112GEDYP78A	38.4	33	57.1	41.4	32	1670	NA
DX77C	303B112GEDXP77C	38.4	33	47.4	41.4	32	1847	NA
DY78C	303B112GEDYP78C	38.4	33	57.1	41.4	32	1970	NA
DX78A	303B112GEDXP78A	38.4	33	57.1	41.4	32	1985	NA
DX78C	303B112GEDXP78C	38.4	33	57.1	41.4	32	2150	NA
DX79A	303B112GEDXP79A	46.5	37.8	65.7	50.1	37	2900	NA
DX79C	303B112GEDXP79C	46.5	37.8	65.7	50.1	37	3720	NA
DY79A	303B112GEDYP79A	46.8	38.0	65.7	50.1	37.0	2713	NA

Dimensions



QL Transformer
(Front Panel Removed)

Single-phase vented QL transformers

Package Weights and Dimensions		Weight (Lb)		Dimensions (In)		
Frame Size	Outline Drawing No.	AL	CU	Height (in)	Width (in.)	Depth (in.)
YF171	303B406AAP071	362	392	38.13	27	30.25
YF172	303B406AAP072	448	548	41.63	30.25	34.75
XV173	303B406AAP073	548	568	41.63	30.25	34.75
YF174	303B406AAP074	741	673	46	30.25	34.75
YF175	303B932AAP075	925	1075	43.78	30	32
YF176	303B932AAP076	1415	1730	52.88	41.5	47.75
YF177	303B932AAP077	1755	2015	52.88	41.5	47.75
YX171	303B409CAP071	367	397	40.73	30.25	30.5
YX172	303B409CAP072	511	561	41.63	30.25	38.25
XV173	303B409CAP073	541	551	41.63	30.25	38.25
YX174	303B409CAP074	650	800	48.38	30.25	38.25
YX175	303B409CAP075	TBD	NA	TBD	TBD	TBD



QL Transformer
(Front Panel Removed)

Three-phase vented QL transformers

Package Weights and Dimensions		Weight (Lb)				Dimensions (In)		
Frame Size	Outline Drawing No.	AL	AL-SS	CU	CU-SS	Height (in)	Width (in.)	Depth (in.)
UX71A	303B111GEUXP71A	268	288	NA	NA	35.00	25.50	30.50
UX71C	303B111GEUXP71C	NA	NA	267	287	35.00	25.50	30.50
UX72A	303B111GEUXP72A	377	397	NA	NA	40.73	30.25	30.50
UX72C	303B111GEUXP72C	NA	NA	400	420	40.73	30.25	30.50
UX73A	303B111GEUXP73A	491	511	NA	NA	40.73	30.25	30.50
UY72A	303B111GEUYP72A	344	364	NA	NA	40.73	30.25	30.50
UY73A	303B111GEUYP73A	410	430	NA	NA	40.73	30.25	30.5
UX73C	303B111GEUXP73C	NA	NA	527	547	40.73	30.25	30.50
UY74A	303B111GEUYP74A	598	618	NA	NA	35.00	25.50	30.50
UY04C	303B111GEUYP04C	NA	NA	554	574	41.63	30.25	38.25
UY74C	303B111GEUYP74C	NA	NA	712	732	41.63	30.25	38.25
UX74A	303B111GEUXP74A	654	674	NA	NA	41.63	30.25	38.25
UX74C	303B111GEUXP74C	NA	NA	799	819	41.63	30.25	38.25
DY75A	303B111GEDYP75A	730	810	NA	NA	48.38	30.25	38.25
DY75C	303B111GEDYP75C	NA	NA	840	920	48.38	30.25	38.25
DX75A	303B111GEDXP75A	888	NA	NA	908	51.88	30.00	41.00
DX75C	303B111GEDXP75C	NA	NA	950	1030	48.38	30.25	38.25
DY76A	303B111GEDYP76A	1088	1108	NA	NA	51.88	30.00	41.00
DY76C	303B111GEDYP76C	NA	NA	1143	1163	51.88	30.00	41.00
DX76A	303B112GEDXP76A	1305	NA	NA	NA	52.78	41.50	47.75
DX76C	303B111GEDXP76C	NA	NA	1298	1318	51.88	30.00	41.00
DX77A	303B112GEDXP77A	1725	NA	NA	NA	52.78	41.50	47.75
DY77C	303B112GEDYP77C	NA	NA	1665	NA	52.78	41.50	47.75
DX77A	303B112GEDXP77A	1655	NA	NA	NA	40.28	41.50	47.75
DY78A	303B112GEDYP78A	1725	NA	NA	NA	62.48	41.50	47.75
DX77C	303B112GEDXP77C	NA	NA	1902	NA	52.78	41.5	47.7
DY78C	303B112GEDYP78C	NA	NA	2025	NA	62.48	41.50	47.75
DX78A	303B112GEDXP78A	2040	NA	NA	NA	62.48	41.50	47.75
DX78C	303B112GEDXP78C	NA	NA	2205	NA	62.48	41.50	47.75
DX79A	303B112GEDXP79A	2964	NA	NA	NA	72.20	43.00	56.00
DX79C	303B112GEDXP79C	NA	NA	3784	NA	72.20	43.00	56.00
DY79A	303B112GEDYP79A	2777	NA	NA	NA	72.20	43.00	56.00

Dimensions

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
XV371	303B404AAP015	27.3	27.4	16.9
XV372	303B404AAP022	32.2	34.5	24
XV372	303B404AAP030	32.2	34.5	24
Y371C	303B404AAP015	27.3	27.4	16.9
Y372C	303B404AAP022	32.2	34.5	24
Y372C	303B404AAP030	32.2	34.5	24

Guard II™ transformers

Frame Size	Outline Drawing No.	Height (In.)	Width (In.)	Depth (In.)
XV371	303B403AAP071	34.5	18.7	16.9
XV372	303B403AAP072	41.3	23.8	18.4
XV373	303B403AAP073	41.3	23.8	18.4
XV374	303B403AAP074	44.8	31.8	24
XV375	303B403AAP075	49.1	31.8	24

Guard III™ harmonic mitigating transformers

Frame Size	Outline Drawing No.	Height (In.)	Width (In.)	Depth (In.)
H371C	303B431SLP071	32.3	23.8	18.4
H372C	303B431SLP072	35.7	31.8	24
H373C	303B431SLP073	35.7	31.8	24
H374C	303B431SLP074	39.9	31.8	24
H375C	303B931SLP075	45.5	38.6	33
H376C	303B931SLP076	45.4	38.5	33
YF378	303B931SLP078	57.0	38.5	33

TENV transformers

Frame Size	Outline Drawing No.	Height (In.)	Width (In.)	Depth (In.)
XV372	303B405AAP072	41.3	23.8	18.4
XV373	303B405AAP073	41.3	23.8	18.4
XV374	303B405AAP074	44.8	31.8	24
XV375	303B405AAP075	49.1	31.8	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

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

General purpose encapsulated Single-phase NEMA 3R

.050 - 3 kVA Indoor/Outdoor Type QB UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number		
240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts 240 x 480 Volts, 480 Volts 240 x 480 Volts	120/240 Volts	0.05	60 Hz	No Taps	1	6	6100	9T51B0002		
		0.05	50 Hz	No Taps	1	6	6100	9T51B0502		
		0.075	60 Hz	No Taps	1	6	6200	9T51B0003		
		0.075	50 Hz	No Taps	1	6	6200	9T51B0503		
		0.1	60 Hz	No Taps	1	6	6200	9T51B0004		
		0.1	50 Hz	No Taps	1	6	6200	9T51B0504		
		0.15	60 Hz	No Taps	1	10	8175	9T51B0005		
		0.15	50 Hz	No Taps	1	10	8175	9T51B0505		
		0.25	60 Hz	No Taps	1	10	8175	9T51B0007		
		0.25	50 Hz	No Taps	1	10	8200	9T51B0507		
		0.5	60 Hz	No Taps	1	16	10200	9T51B0008		
		0.5	50 Hz	No Taps	1	20	10225	9T51B0508		
		0.75	60 Hz	No Taps	1	25	12200	9T51B0009		
		0.75	50 Hz	No Taps	1	25	12225	9T51B0509		
		1	60 Hz	No Taps	1	25	12225	9T51B0010		
		1	50 Hz	No Taps	1	30	12275	9T51B0510		
		1.5	60 Hz	No Taps	1	40	14200	9T51B0011		
		1.5	50 Hz	No Taps	1	40	14225	9T51B0511		
		2	60 Hz	No Taps	1	45	14250	9T51B0012		
		2	50 Hz	No Taps	1	50	14300	9T51B0512		
		3	60 Hz	No Taps	1	55	14350	9T51B0013		
		3	50 Hz	No Taps	1	60	14400	9T51B0513		
		480 Volts	120/240 Volts	0.5	50 Hz	(-2: 5.0%)	2	20	10225	9T51B0548
				0.75	50 Hz	(-2: 5.0%)	2	25	12200	9T51B0549
1	60 Hz			(-2: 5.0%)	2	25	12225	9T51B0050		
1	50 Hz			(-2: 5.0%)	2	30	12275	9T51B0550		
1.5	60 Hz			(-2: 5.0%)	2	40	14200	9T51B0051		
1.5	50 Hz			(-2: 5.0%)	2	40	14225	9T51B0551		
2	60 Hz			(-2: 5.0%)	2	45	14250	9T51B0052		
2	50 Hz			(-2: 5.0%)	2	50	14300	9T51B0552		
3	60 Hz			(-2: 5.0%)	2	55	14350	9T51B0053		
3	60 Hz			(+2, -2: 2.5%)	3	55	14350	9T51B0135		
3	50 Hz			(-2: 5.0%)	2	60	14400	9T51B0553		
600 Volts	120/240 Volts			0.05	60 Hz	No Taps	5	6	6100	9T51B0082
		0.075	60 Hz	No Taps	5	6	6200	9T51B0083		
		0.1	60 Hz	No Taps	5	6	6200	9T51B0084		
		0.1	50 Hz	No Taps	5	6	6200	9T51B0584		
		0.15	60 Hz	No Taps	5	10	8175	9T51B0085		
		0.25	60 Hz	No Taps	5	10	8175	9T51B0087		
		0.25	50 Hz	No Taps	5	10	8200	9T51B0587		
		0.5	60 Hz	No Taps	5	16	10200	9T51B0088		
		0.5	50 Hz	(-2: 5.0%)	2	20	10225	9T51B0568		
		0.75	60 Hz	No Taps	5	25	12200	9T51B0089		
		0.75	50 Hz	(-2: 5.0%)	2	25	12200	9T51B0569		
		1	60 Hz	(-2: 5.0%)	2	25	12225	9T51B0070		
		1	60 Hz	No Taps	5	25	12225	9T51B0090		
		1	50 Hz	(-2: 5.0%)	2	30	12275	9T51B0570		
		1.5	60 Hz	(-2: 5.0%)	2	40	14200	9T51B0071		
		1.5	60 Hz	No Taps	5	40	14200	9T51B0091		
		1.5	50 Hz	(-2: 5.0%)	2	40	14225	9T51B0571		
		2	60 Hz	(-2: 5.0%)	2	45	14250	9T51B0072		
		2	60 Hz	No Taps	5	45	14250	9T51B0092		
		2	50 Hz	(-2: 5.0%)	2	50	14300	9T51B0572		
		2	50 Hz	No Taps	-	50	14300	9T51B0592		
		3	60 Hz	(-2: 5.0%)	2	55	14350	9T51B0073		
		3	60 Hz	No Taps	5	55	14350	9T51B0093		
		3	50 Hz	(-2: 5.0%)	2	60	14400	9T51B0573		
		3	50 Hz	No Taps	-	60	14400	9T51B0593		

¹ See page 10-45 and 10-46 for wiring diagrams.

General purpose encapsulated

Single-phase NEMA 3R



.050 - 3 kVA Indoor/
Outdoor Type QB UL
Listed C-UL Listed

.050 - 3 kVA Indoor/Outdoor Type QB UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
120 x 240 Volts	120/240 Volts	0.05	60 Hz	No Taps	1	6	6100	9T51B0022
		0.1	60 Hz	No Taps	1	6	6200	9T51B0024
		0.15	60 Hz	No Taps	1	10	8175	9T51B0025
		0.25	60 Hz	No Taps	1	10	8175	9T51B0027
		0.5	60 Hz	No Taps	1	16	10200	9T51B0028
		0.75	60 Hz	No Taps	1	25	12200	9T51B0029
		1	60 Hz	No Taps	1	25	12225	9T51B0030
		1.5	60 Hz	No Taps	1	40	14200	9T51B0031
		2	60 Hz	No Taps	1	45	14250	9T51B0032
		3	60 Hz	No Taps	1	60	14400	9T51B0033
208 Volts	120/240 Volts	0.5	60 Hz	No Taps	4	16	10200	9T51B0158
		0.75	60 Hz	No Taps	4	25	12200	9T51B0159
		1	60 Hz	No Taps	4	25	12225	9T51B0160
		2	60 Hz	No Taps	4	45	14250	9T51B0156
		3	60 Hz	No Taps	4	55	14350	9T51B0157

.050 - 3 kVA Indoor/Outdoor Type QB UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
277 Volts	120/240 Volts	0.25	60 Hz	(-2: 5.1%)	2	10	8175	9T51B0187
		0.5	60 Hz	(-2: 5.1%)	2	16	10200	9T51B0188
		0.75	60 Hz	(-2: 5.1%)	2	25	12200	9T51B0189
		1	60 Hz	(-2: 5.1%)	2	30	12275	9T51B0190
		1.5	60 Hz	(-2: 5.1%)	2	40	14200	9T51B0191
		2	60 Hz	(-2: 5.1%)	2	45	14250	9T51B0192
		3	60 Hz	(-2: 5.1%)	2	55	14350	9T51B0193
380/400/416 Volts	120/240 Volts	0.05	50 Hz	No Taps	2	6	6150	9T51B0162
		0.15	50 Hz	No Taps	2	10	8175	9T51B0165
		0.25	50 Hz	No Taps	2	10	8200	9T51B0167
		0.5	50 Hz	No Taps	2	20	10225	9T51B0168
		0.75	50 Hz	No Taps	2	25	12200	9T51B0169
		1	50 Hz	No Taps	2	30	12275	9T51B0170
		1.5	50 Hz	No Taps	2	40	14225	9T51B0171
		2	50 Hz	No Taps	2	50	14300	9T51B0172
		3	50 Hz	No Taps	2	60	14400	9T51B0173

¹ See page 10-45 and 10-46 for wiring diagrams.

General purpose encapsulated

Single-phase NEMA 3R



5 - 25 kVA Indoor/Outdoor
Type QMS 115°C Rise UL
Listed C-UL Listed

5 - 25 kVA Indoor/Outdoor Type QMS 115°C Rise UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
120 x 240 Volts	120/240 Volts	5	60 Hz	No Taps	1	103	16350	9T21B1001G02
		7.5	60 Hz	No Taps	1	147	16600	9T21B1002G02
		10	60 Hz	No Taps	1	198	19400	9T21B1003G02
		10	60 Hz	No Taps	1	198	19400	9T21B1054G02
		15	60 Hz	No Taps	1	220	19500	9T21B9101
		15	60 Hz	No Taps	1	233	19550	9T21B9131
208 Volts	120/240 Volts	25	60 Hz	No Taps	1	233	19550	9T21B9102
		5	60 Hz	No Taps	4	103	16350	9T21B1028G02
		7.5	60 Hz	No Taps	4	147	16600	9T21B1029G02
		10	60 Hz	No Taps	4	198	19400	9T21B1030G02
		15	60 Hz	No Taps	4	220	19500	9T21B9119
		25	60 Hz	No Taps	4	388	50500	9T21B9120

¹ See page 10-45 and 10-46 for wiring diagrams.

² For Outdoor NEMA 3R Enclosure add suffix G62 to Catalog Number.

5 - 25 kVA Indoor/Outdoor Type QMS 115°C Rise UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
277 Volts	120/240 Volts	5	60 Hz	(-2: 5.1%)	2	103	16350	9T21B1046G02
		5	60 Hz	(-2: 2.5%)	2	103	16350	9T21B1265G02
		7.5	60 Hz	(-2: 5.1%)	2	147	16600	9T21B1047G02
		10	60 Hz	(-2: 5.1%)	2	198	19400	9T21B1048G02
		10	60 Hz	(-2 2.5%)	2	198	19400	9T21B1266G02
		15	60 Hz	(-2: 5.1%)	2	220	19500	9T21B9143
		25	60 Hz	(-2: 4.7%)	2	388	50500	9T21B9144

¹ See page 10-45 and 10-46 for wiring diagrams.

5 - 25 kVA Indoor/Outdoor Type QMS 115°C Rise UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Frequency (Hz)	Taps	Wiring Diagram No. ¹	Weight (Lbs)	Frame Size	Catalog Number
240 x 480 Volts	120/240 Volts	5	60	No Taps	1	103	16350	9T21B1004G02
		5	50	No Taps	1	115	16400	9T21B1055G02
		7.5	60	No Taps	1	147	16600	9T21B1005G02
		7.5	50	No Taps	1	174	16600	9T21B1056G02
		10	60	No Taps	1	198	19400	9T21B1006G02
		10	50	No Taps	1	198	19400	9T21B1057G02
		15	60	No Taps	1	220	19500	9T21B9103
		15	50	No Taps	1	233	19550	9T21B9133
		25	60	No Taps	1	388	50500	9T21B9104
		25	50	No Taps	1	428	50600	9T21B9134
480 Volts	120/240 Volts	5	60	(-2: 5.0%)	2	103	16350	9T21B1007G02
		5	60	(+2, -2: 2.5%)	3	103	16350	9T21B1013G02
		7.5	60	(-2: 5.0%)	2	147	16600	9T21B1008G02
		7.5	60	(+2, -2: 2.5%)	3	147	16600	9T21B1014G02
		10	60	(-2: 4.9%)	2	198	19400	9T21B1009G02
		10	60	(+2, -2: 2.6%)	3	198	19400	9T21B1015G02
		15	60	(-2: 5.0%)	2	220	19500	9T21B9105
		15	60	(+2, -2: 2.5%)	3	220	19500	9T21B9109
600 Volts	120/240 Volts	25	60	(-2: 5.0%)	2	388	50500	9T21B9106
		25	60	(+2, -2: 2.5%)	3	388	50500	9T21B9110
		5	60	No Taps	5	103	16350	9T21B1016G02
		5	60	(-2: 5.0%)	2	103	16350	9T21B1019G02
		5	60	(+2, -2: 2.5%)	-	107	16350	9T21B1025G02
		7.5	60	(-2: 5.0%)	2	147	16600	9T21B1020G02
		10	60	(-2: 4.9%)	2	198	19400	9T21B1021G02
		15	60	No Taps	5	220	19500	9T21B9111
600 Volts	120/240 Volts	15	60	(-2: 4.8%)	2	220	19500	9T21B9113
		25	60	(-2: 5.0%)	2	388	50500	9T21B9114

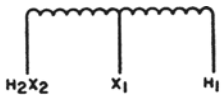
¹ See page 10-45 and 10-46 for wiring diagrams.

Buck-Boost

Encapsulated

Autotransformers

For bucking and boosting voltage



Wiring Diagram: Single-Phase

Application

For General Lighting and Power Service

Autotransformers are more economical than isolation transformers designed to carry the same load. Within their voltage limitations, they will perform the same function as transformers with the exception of insulating two circuits. You can use these autotransformers to obtain 120 Volts from a 240 Volt circuit, to derive a neutral on a 240 Volt, two-wire circuit, or to balance a 120/240 Volt, three-wire circuit. They also may be used in banks on polyphase circuits. See footnotes below.



Wiring Diagram: Three-Phase

For Bucking or Boosting Voltage of Single-Phase Indoor/Outdoor Type QB 60 Hz UL Listed CSA Certified¹

Input Voltage	Output Voltage	kVA ²	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240/120 Volts	120 or 240/120 Volts (Three-Wire)	0.5	7.38	6.13	4.25	10	8175	9T51B0136
		0.75	8.38	6.88	4.88	16	10200	9T51B0137
		1	8.38	6.88	4.88	16	10200	9T51B0138
		1.5	9.63	7.88	5.5	25	12200	9T51B0139
		2	9.63	7.88	5.5	25	12225	9T51B0140
		3	11.13	9.38	6.75	40	14200	9T51B0141
		5	11.13	9.38	6.75	60	14400	9T51B0142

¹ Through 3 kVA

For Bucking or Boosting Voltage of Single-Phase Indoor/Outdoor Type QMS 60 Hz UL Listed CSA Certified

Input Voltage	Output Voltage	kVA ²	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240/120 Volts	120 or 240/120 Volts (Three-Wire)	10	14.50	10.62	11.00	103	16350	9T21B4553G02
		15	17.06	10.62	11.00	147	16600	9T21B9201
		25	17.06	12.50	12.50	220	19500	9T21B9202

² kVA output at 120 Volts, two-wire, or allowable unbalance at 240/120 Volts, three-wire.

For Boosting Voltage of Three-Phase Indoor/Outdoor Type QB 60 Hz UL Listed

Input Voltage	Output Voltage	kVA ²	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
208Y/120 Volts	230/133 Volts	6	7.38	6.13	4.25	10	8175	9T51B0143
		9	8.38	6.88	4.88	16	10200	9T51B0144
		15	8.38	6.88	4.88	20	10225	9T51B0145
		30	9.63	7.88	5.50	30	12275	9T51B0146
		45	11.13	9.38	6.75	40	14200	9T51B0147
		75	11.13	9.38	6.75	60	14400	9T51B0148
		6	7.38	6.13	4.25	10	8175	9T51B0150
		15	9.63	7.88	5.50	25	12200	9T51B0152
		30	11.13	9.38	6.75	40	14200	9T51B0153

³ Bank of three single-phase autotransformers to be connected wye. Dimensions and weights are for each unit in bank. Each single autotransformer is rated 1/3 of the bank kVA rating. Order three single-phase transformers for each three-phase bank.

Conversion Chart

Decimal	Fraction
.13	1/8
.38	3/8
.63	5/8
.88	7/8

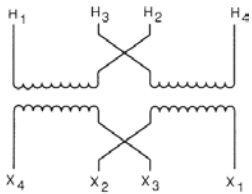
Buck-Boost

Encapsulated

For bucking and boosting voltage



**Indoor/Outdoor Type QB Transformer;
Single-Phase**



Wiring Diagram for Low Voltage Loads

Product Description

Buck boost transformers are small, single-phase, dry type distribution transformers designed and shipped as insulating/isolating transformers. They have a dual voltage primary and a dual voltage secondary. These transformers can be connected for a wide range of voltage combinations. The most common use is to buck (lower) or boost (raise) the supply voltage a small amount, usually 5 to 27%. Buck boost transformers comply with NEC Article 210-9, Exception 1, when field connected as an autotransformer.

ABB bucking and boosting transformers provide an economical and convenient means for bucking or boosting voltage, usually no more than $\pm 20\%$ on single- and three-phase circuits. They are compact, relatively light in weight, and can be easily installed for indoor or outdoor service.

Buck-boost transformers are employed primarily for boosting single- and three-phase circuits by connecting them as autotransformers. When connected as an autotransformer, only the low-voltage, high-current capacity secondary windings are required to carry the load. Because this load is only transformed over a small change in voltage, the buck-boost transformer can handle loads many times its nameplate kVA rating.

The transformers with series-multiple 12/24, 24/48, or 16/32 Volt secondary windings are suitable for a wide variety of applications. Two or more units can be used in various combinations to obtain many other special voltages.

Advantages

- Efficient insulating materials permit compact size and light weight
- Dual voltage primary and dual voltage secondary for maximum versatility
- Large, front-accessible wiring compartment permits fast, easy wiring
- Convenient conduit knockouts located on side, bottom and back of wiring compartment
- ABB Buck-Boost Transformer Selector makes selection fast and easy
- Many ABB buck-boost transformers fit competitor mounting footprints
- Indoor or outdoor service

Key Features

- Convenient and least expensive method of matching line voltage with equipment voltage
- More efficient than equivalent isolation transformers
- Ability to handle loads up to 20 times nameplate rating when connected as an autotransformer
- Ideal for changing line voltages by small amounts
- Primary voltages include 120V, 240V and 480V
- Secondary voltages include 12V, 16V, 24V, 32V, 48V
- UL and cUL Listed
- Qualified to the seismic requirements of IEEE-693-1997 and IBC-2018

Applications

- International voltage adaptation
- Commercial and industrial air conditioning
- Heating systems
- Induction motors
- Voltage line drop correction
- Landscape lighting
- Low-voltage lighting

Efficient operation of electrical equipment requires that line voltage be at or near the nameplate rating of the equipment. In order to match available line voltage (whether it be too high or low) with equipment voltage, buck-boost transformers provide the most convenient and least expensive method.

Do not use buck-boost transformers to solve a fluctuating voltage problem. They should be used to compensate for high- or low voltage conditions only when the available line voltage is reasonably constant.

Buck-Boost

Encapsulated

For bucking and boosting voltage



Single-Phase Indoor/
Outdoor Type QB 60 Hz
UL Listed C-UL Listed

Single-Phase Indoor/Outdoor Type QB 60 Hz UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number		
120/240 Volts	12/24 Volts	0.05	6.38	5.12	3.25	6	6100	9T51B0102		
		0.075	6.38	5.12	3.25	6	6200	9T51B0103		
		0.1	6.38	5.12	3.25	6	6200	9T51B0104		
		0.15	7.38	6.12	4.25	10	8175	9T51B0105		
		0.25	7.38	6.12	4.25	10	8175	9T51B0107		
		0.5	8.38	6.88	4.88	20	10225	9T51B0108		
		0.75	9.62	7.88	5.50	25	12200	9T51B0109		
		1	9.62	7.88	5.50	25	12225	9T51B0110		
		1.5	11.12	9.38	6.72	40	14200	9T51B0111		
		2	11.12	9.38	6.72	50	14300	9T51B0112		
		3	-	9.38	6.72	55	14350	9T51B0113		
		120/240 Volts	16/32 Volts	0.05	6.38	5.12	3.25	6	6100	9T51B0122
				0.075	6.38	5.12	3.25	6	6200	9T51B0123
0.1	6.38			5.12	3.25	6	6200	9T51B0124		
0.15	7.38			6.12	4.25	10	8175	9T51B0125		
0.25	7.38			6.12	4.25	10	8175	9T51B0127		
0.5	8.38			6.88	4.88	20	10225	9T51B0128		
0.75	9.62			7.88	5.50	25	12200	9T51B0129		
1	9.62			7.88	5.50	30	12300	9T51B0130		
1.5	11.12			9.38	6.72	40	14200	9T51B0131		
2	11.12			9.38	6.72	50	14300	9T51B0132		
3	-			9.38	6.72	55	14350	9T51B0133		
240/480 Volts	24/48 Volts			0.05	6.38	5.12	3.25	6	6100	9T51B0202
				0.075	6.38	5.12	3.25	6	6200	9T51B0203
		0.1	6.38	5.12	3.25	6	6200	9T51B0204		
		0.15	7.38	6.12	4.25	10	8175	9T51B0205		
		0.25	7.38	6.12	4.25	10	8175	9T51B0207		
		0.5	8.38	6.88	4.88	20	10225	9T51B0208		
		0.75	9.62	7.88	5.50	25	12200	9T51B0209		
		1	9.62	7.88	5.50	30	12275	9T51B0210		
		1.5	11.12	9.38	6.72	40	14200	9T51B0211		
		2	11.12	9.38	6.72	50	14300	9T51B0212		
		3	11.12	9.38	6.72	55	14350	9T51B0213		

Single-Phase Indoor/Outdoor Type QMS 60 Hz UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
120/240 Volts	12/24 Volts	5	14.5	10.62	11	103	16350	9T21B1037G02
	16/32 Volts	5	14.5	10.62	11	115	16400	9T21B1040G02

Single-Phase Indoor/Outdoor Type QMS 50 Hz UL Listed C-UL Listed

Input Voltage	Output Voltage	kVA	Height (in)	Width (in)	Depth (in)	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
120/240 Volts	12/24 Volts	5	14.5	10.62	11	115	16400	9T21B1061G02
	16/32 Volts	5	14.5	10.62	11	127	16450	9T21B1064G02

NOTE: In addition to bucking or boosting low circuit voltages to related value, these transformers can be used as two winding transformers to supply the rated nameplate low voltages, 12 to 48 Volts, two-wire or 12/24 to 24/48 Volts, three-wire. Also available in 50/60 Hz ratings.

Open core and coil transformers

Machine tool and control power



Core and Coil Transformer Leads Out Connection



Core and Coil Transformer Terminal Block

Product Description

Core and coil transformers for machine tools are used to provide voltage to control devices in applications where regulation and minimum space are important. Welded cores provide the highest quality electrical performance and quiet operation.

Standards: Type IP transformers conform to NEMA ST20

Listings: UL listed under UL-5085, File E323774
CSA Certified under C22.2, Number 66, File E323774

Insulation Classes: 150VA and below: 105°C insulation class, 55°C Rise
200VA and above: 185°C (NEMA) 180°C (UL) insulation class, 115°C Rise

Frequency: 60 Hz standard; 50 Hz optional.

Voltage Regulation: All designs 2.0 kVA and below are compensated for voltage drop. Compensation ranges from 10% in the smallest rating to 3% for the largest. All machine tool designs meet or exceed NMTBA regulation requirements.

Series-Multiple Secondary Connections: Transformers with 120/240 V secondaries (series-multiple) may be connected for 120 V, 240 V or 240/120 V three-wire. Jumpers are provided.

Overcurrent Protection: Type IP transformers are low impedance transformers that require overcurrent protection for most applications. They provide for optional integral primary and/or secondary fusing.

Mounting Dimensions: Type IP transformers are lightweight, small, and designed for minimum mounting dimensions. Many units will fit competitors mounting footprints.

Advantages

- Finger-safe terminals offer added protection and safety
- Pressure plate terminals ensure secure connections
- Wide variety of fusing options. See page 10-60.

Key Features—Terminal Block

- Rugged, high-impact plastic terminal block
- Full head #8 brass screws assure quick, easy terminations with maximum connection integrity
- Copper windings
- Flexible design allows input or output voltage to match any application
- CUL, CE, UL approvals
- Available fuse-blocks offer simple, low-cost fusing

Open core and coil transformers

Machine tool applications

Single-phase, fully-encapsulated design



60 Hz - Terminal Block

60 Hz Terminal Block

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.05	1	2.4	6100	9T58K0042
		0.08	1	2.8	6125	9T58K0043
		0.10	1	3.6	8100	9T58K0044
		0.15	1	5.1	8150	9T58K0045
		0.20	1	5.8	8175	9T58K0046
		0.25	1	6.5	8200	9T58K0047
		0.30	1	7.6	8250	9T58K0048
		0.38	1	7.6	8250	9T58K0049
		0.50	1	10.7	10225	9T58K0050
		0.75	1	12	12225	9T58K0051
		1	1	16.1	12300	9T58K0052
		2	1	26.7	14225	9T58K0053
		2	1	32.7	14300	9T58K0054
		3	1	47.4	14475	9T58K0055

50/60 Hz Terminal Block

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
230/460/575 Volts	115/95 Volts	0.05	2	3.1	6150	9T58K0062
		0.08	2	3.6	8100	9T58K0063
		0.10	2	5.1	8150	9T58K0064
		0.15	2	6.5	8200	9T58K0065
		0.20	2	6.5	8200	9T58K0066
		0.25	2	7.6	8250	9T58K0067
		0.30	2	10.7	10225	9T58K0068
		0.38	2	10.7	10225	9T58K0069
		0.50	2	10.7	10225	9T58K0070
		0.75	2	16.1	12300	9T58K0071
		1	2	26.7	14225	9T58K0072
		1.5	2	32.7	14300	9T58K0073
		2	2	47.4	14475	9T58K0074
		208/277/380 Volts	115/95 Volts	0.05	3	3.1
0.08	3			3.6	8100	9T58K0083
0.10	3			5.1	8150	9T58K0084
0.15	3			6.5	8200	9T58K0085
0.20	3			6.5	8200	9T58K0086
0.25	3			7.6	8250	9T58K0087
0.30	3			10.7	10225	9T58K0088
0.38	3			10.7	10225	9T58K0089
0.50	3			10.7	10225	9T58K0090
0.75	3			16.1	12300	9T58K0091
1	3			26.7	14225	9T58K0092
1.5	3			32.7	14300	9T58K0093
2	3			47.4	14475	9T58K0094

¹ See page 10-61 for wiring diagrams.



Factory- or Field-Installed Options

Secondary Fusing—Factory- or field-installed secondary fuse clips are available. They are restricted to units with terminal strips and a single secondary voltage or secondary with one tap.

Dual Primary and Secondary Fusing—Factory- or field-installed dual primary and secondary fuse clips are available on all units.

Open core and coil transformers

Control

Single-phase, fully-encapsulated design



60 Hz - Terminal Block

60 Hz Terminal Block

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240x480 Volts	120/240 Volts	0.05	4	2.4	6100	9T58K2802
		0.08	4	2.8	6125	9T58K2803
		0.10	4	3.6	8100	9T58K2804
		0.15	4	5.1	8150	9T58K2805
		0.20	4	5.8	8175	9T58K2806
		0.25	4	6.5	8200	9T58K2807
		0.30	4	6.5	8200	9T58K2808
		0.38	4	7.6	8250	9T58K2809
		0.50	4	10.7	10225	9T58K2810
		0.75	4	12	12225	9T58K2811
		1	4	16.1	12300	9T58K2812
		1.5	4	26.7	14225	9T58K2813
		2	4	32.7	14300	9T58K2814
3	4	47.4	14475	9T58K2815		
600 Volts	120/240 Volts	0.08	5	2.8	6125	9T58K2823
		0.10	5	3.6	8100	9T58K2824
		0.20	5	5.8	8175	9T58K2826
		0.25	5	6.5	8200	9T58K2827
		0.30	5	6.5	8200	9T58K2828
		0.50	5	10.7	10225	9T58K2830
		0.75	5	12	12225	9T58K2831
		1	5	16.1	12300	9T58K2832
		1.5	5	26.7	14225	9T58K2833
		2	5	32.7	14300	9T58K2834
3	5	47.4	14475	9T58K2835		
120x240 Volts	120/240 Volts	0.10	6	3.6	8100	9T58K2907
		0.20	6	5.8	8175	9T58K2909
		0.30	6	6.5	8200	9T58K2911
		0.50	6	10.7	10225	9T58K2913
		0.75	6	12	12225	9T58K2914
		1	6	16.1	12300	9T58K2915
		2	6	32.7	14300	9T58K2917
3	6	47.4	14475	9T58K2918		

60 Hz Terminal Block

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
120 x 240 Volts	12/24 Volts	0.05	7	2.4	6100	9T58K2873
		0.075	7	2.8	6125	9T58K2874
		0.10	7	3.6	8100	9T58K2875
		0.15	7	5.1	8150	9T58K2876
		0.20	7	5.8	8175	9T58K2877
		0.25	7	6.5	8200	9T58K2878
		0.30	7	6.5	8200	9T58K2879
240 x 480 Volts	12/24 Volts	0.25	-	6.5	8200	9T58K3024
		0.05	-	2.4	6100	9T58K3164
		0.10	-	3.6	8100	9T58K4132
208 x 240 Volts	12/24 Volts	0.15	-	5.1	8150	9T58K4133
		0.05	-	2.4	6100	9T58K4050
		0.10	-	3.6	8100	9T58K4051
		0.15	-	5.1	8150	9T58K4052
0.25	-	6.5	8200	9T58K4053		

50/60 Hz Terminal Block

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240 x 480 Volts	120/240 Volts	0.50	4	10.7	10225	9T58K2930
		0.75	4	16.1	12300	9T58K2931
		1	4	26.7	14225	9T58K2932
		1.5	4	32.7	14300	9T58K2933
		2	4	47.4	14475	9T58K2934
		3	4	47.4	14475	9T58K2935
		0.25	8	6.5	8200	9T58K2975
380/400/416 Volts	115/230 Volts	0.50	8	10.7	10225	9T58K2978
		0.75	8	16.1	12300	9T58K2979
		1	8	26.7	14225	9T58K2980
		1.5	8	32.7	14300	9T58K2981
		2	8	47.4	14475	9T58K2982
		3	8	47.4	14475	9T58K2983

¹ See page 10-61 for wiring diagrams.

² Secondary fusing not available.

Open core and coil transformers

Control

Single-phase, fully-encapsulated design



60 Hz - Leads Out Connection²

60 Hz Leads Out Connection²

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
120x240 Volts	12/24 Volts	0.05	7	2.4	6100	9T58K1873G07
		0.075	7	2.8	6125	9T58K1874G07
		0.10	7	3.6	8100	9T58K1875G07
		0.15	7	5.1	8150	9T58K1876G07
		0.20	7	5.8	8175	9T58K1877G07
		0.25	7	6.5	8200	9T58K1878G07
		0.30	7	6.5	8200	9T58K1879G07
		0.50	7	10.7	10225	9T58K1881G07
		0.75	7	12	12225	9T58K1882G07
		1	7	26.7	14225	9T58K1883G07

60 Hz Leads Out Connection²

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240 x 480 Volts	120/240 Volts	0.05	4	2.4	6100	9T58K1802G07
		0.075	4	2.8	6125	9T58K1803G07
		0.10	4	3.6	8100	9T58K1804G07
		0.15	4	5.1	8150	9T58K1805G07
		0.20	4	5.8	8175	9T58K1806G07
		0.25	4	6.5	8200	9T58K1807G07
		0.30	4	6.5	8200	9T58K1808G07
		0.375	4	7.6	8250	9T58K1809G07
		0.50	4	10.7	10225	9T58K1810G07
		0.75	4	12	12225	9T58K1811G07
		1	4	16.1	12300	9T58K1812G07
		1.5	4	26.7	14225	9T58K1813G07
		2	4	32.7	14300	9T58K1814G07
		3	4	47.4	14475	9T58K1815G07
		600 Volts	120/240 Volts	0.10	5	3.6
0.20	5			5.8	8175	9T58K1826G07
0.30	5			6.5	8200	9T58K1828G07
0.50	5			10.7	10225	9T58K1830G07
1	5			26.7	14225	9T58K1832G07
2	5			32.7	14300	9T58K1834G07
3	5			47.4	14475	9T58K1835G07

50/60 Hz Leads Out Connection²

Input Voltage	Output Voltage	kVA	Wiring Diagram No. ¹	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number
240x480 Volts	120/240 Volts	0.25	4	6.5	8200	9T58K1927G07
		0.30	4	7.6	8250	9T58K1928G07
		0.50	4	10.7	10225	9T58K1930G07
		0.75	4	16.1	12300	9T58K1931G07
		1.5	4	32.7	14300	9T58K1933G07
		3	4	47.4	14475	9T58K1935G07
380/400/416 Volts	115/230 Volts	0.50	8	10.7	10225	9T58K1978G07
		0.75	8	16.1	12300	9T58K1979G07
		1	8	26.7	14225	9T58K1980G07
		1.5	8	32.7	14300	9T58K1981G07

¹ See page 10-61 for wiring diagrams.

² Secondary fusing not available.

50/60 Hz Universal Voltage/Multitap Terminal Strip Connection

kVA	Frame Size	Catalog Number
0.25	10225	9T58K3715
0.35	10225	9T58K3716
0.50	12225	9T58K3717
0.75	12300	9T58K3718
1	14225	9T58K3719
1.5	14300	9T58K3720
2	14475	9T58K3721


Voltage Table




Incoming Voltage				Output Voltage		
H1 H2	H1 H3	H1 H4	H1 H5	X1 X2	X1 X3	X1 X4
208	-	-	500	85	100	110
-	-	415	-	86	104	113
220	380	440	550	91	110	120
230	40	460	575	95	115	125
240	416	480	600	99	120	130

Open core and coil transformers

Options and fusing guide

Transformer Fusing Options

Accessory Description	Catalog Number
(1) Quarter-Inch Fuseholder	9T58K0000G24 
(1) Midget Fuseholder	9T58K0000G42 
(1) H/K Fuseholder	9T58K0000G10 
(2) CC Fuseholder	9T58K0000G43 
(2) H/K Fuseholder	9T58K0000G05 

Accessory Description	Catalog Number
(2) CC + (1) Quarter-Inch Fuseholder	9T58K0000G48 
(2) CC + (1) Midget Fuseholder	9T58K0000G38 
(2) CC + (1) H/K Fuseholder	9T58K0000G18 
(2) CC Fuseholder	9T58E0000G46
(2) CC + (1) Midget Fuseholder	9T58E0000G47
Jumper Links	9T58K0000G01

Fuse Guide

Midget Class CC Rejection Fuse

Primary Voltage	Transformer Continuous Power Rating (VA)									
	50	75	100	150	200	250	300	375	500	
	Fuse Rating (Amperes)									
100	1.50	2.00	3.00	4.00	3.00	4.00	5.00	6.00	8.00	
110	1.25	2.00	2.50	4.00	5.00	3.00	4.00	5.00	7.00	
120	1.25	1.60	2.50	3.00	5.00	3.00	4.00	5.00	6.00	
200	0.75	1.00	1.50	2.00	3.00	3.00	4.00	5.00	4.00	
208	0.60	1.00	1.25	2.00	2.50	3.00	4.00	5.00	4.00	
220	0.60	1.00	1.25	2.00	2.50	3.00	4.00	5.00	3.00	
230	0.60	0.80	1.25	1.60	2.50	3.00	3.00	4.00	3.00	
240	0.60	0.80	1.25	1.60	2.50	3.00	3.00	4.00	3.00	
277	0.50	0.80	1.00	1.60	2.00	2.50	3.00	4.00	5.00	
380	0.30	0.50	0.75	1.00	1.50	1.60	2.00	2.50	3.00	
400	0.30	0.50	0.75	1.00	1.50	1.60	2.00	2.50	3.00	
416	0.30	0.50	0.60	1.00	1.25	1.60	2.00	2.50	3.00	
440	0.30	0.50	0.60	1.00	1.25	1.60	2.00	2.50	3.00	
460	0.30	0.40	0.60	0.80	1.25	1.60	1.60	2.00	3.00	
480	0.30	0.40	0.60	0.80	1.25	1.50	1.60	2.00	3.00	
550	0.25	0.40	0.50	0.80	1.00	1.25	1.60	2.00	2.50	
575	0.25	0.30	0.50	0.75	1.00	1.25	1.50	1.60	2.50	
600	0.25	0.30	0.50	0.75	1.00	1.25	1.50	1.60	2.50	

For motor control circuits fusing, refer to NEC 430-72.

Secondary Fuse Selection

Glass Fuse

Secondary Voltage	Transformer Continuous Power Rating (VA)													
	50	75	100	150	200	250	300	375	500	750	1000	1500	2000	3000
	Fuse Rating (Amperes)													
12	6.00	10.00	12.00	15.00	20.00	25.00	30.00	-	-	-	-	-	-	-
24	3.00	5.00	6.00	10.00	12.00	12.00	15.00	-	25.00	-	-	-	-	-
36	2.00	3.00	4.00	6.00	8.00	10.00	12.00	-	15.00	-	-	-	-	-
48	1.50	2.50	3.00	5.00	6.00	8.00	10.00	12.00	12.00	-	-	-	-	-
95	0.80	1.25	1.60	2.50	3.00	4.00	5.00	6.00	8.00	12.00	15.00	20.00	25.00	-
110	0.75	1.00	1.50	2.00	3.00	3.00	4.00	5.00	7.00	10.00	12.00	20.00	25.00	30.00
115	0.60	1.00	1.25	2.00	2.50	3.00	4.00	5.00	7.00	10.00	12.00	20.00	20.00	30.00
120	0.60	1.00	1.25	2.00	2.50	3.00	4.00	5.00	6.00	10.00	12.00	15.00	20.00	30.00
208	0.40	0.60	0.80	1.00	1.60	2.00	2.00	3.00	4.00	6.00	8.00	12.00	15.00	20.00
220	0.30	0.50	0.75	1.00	1.50	1.60	2.00	2.50	3.00	5.00	7.00	10.00	12.00	20.00
230	0.30	0.50	0.60	1.00	1.25	1.60	2.00	2.50	3.00	5.00	7.00	10.00	12.00	20.00
240	0.30	0.50	0.60	1.00	1.25	1.60	2.00	2.50	3.00	5.00	6.00	10.00	12.00	15.00

Open core and coil transformers

Machine tool applications

Control

Wiring diagrams

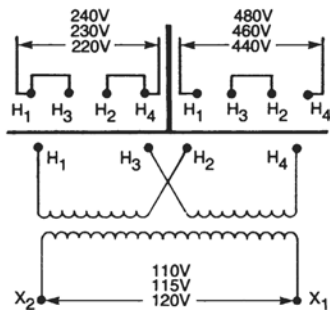


Diagram 1

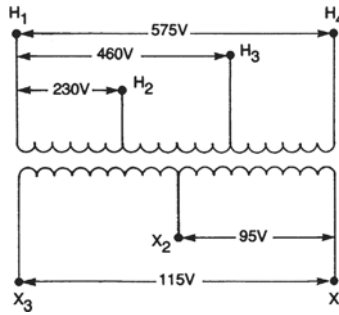


Diagram 2

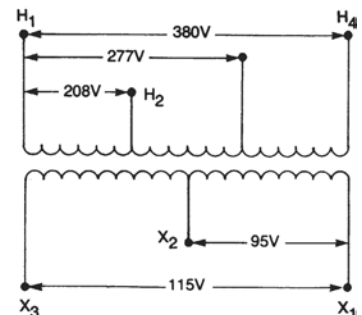


Diagram 3

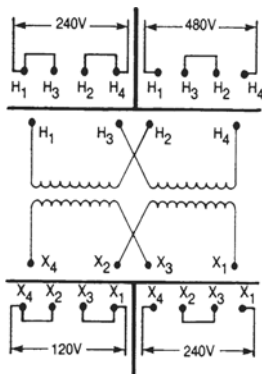


Diagram 4

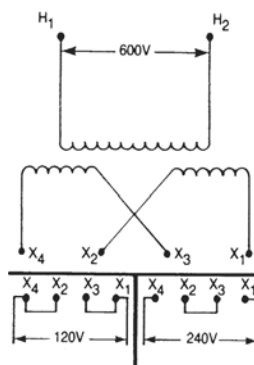


Diagram 5

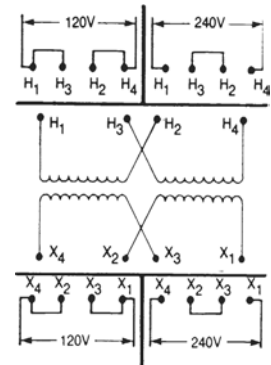


Diagram 6

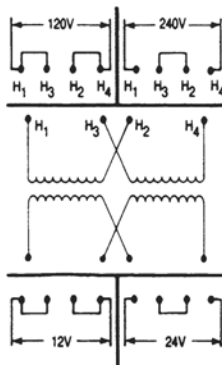


Diagram 7

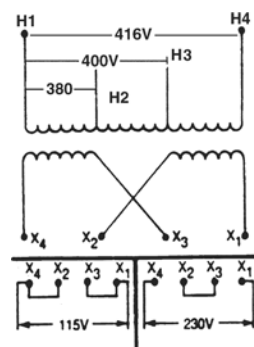


Diagram 8

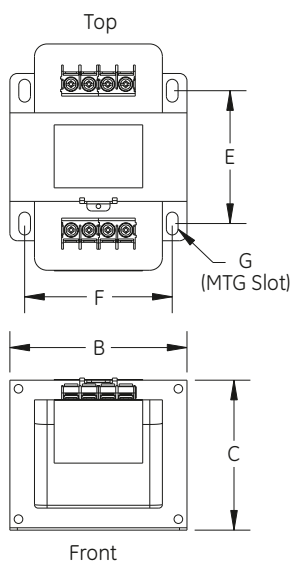
Open core and coil transformers

Outlines and dimensions

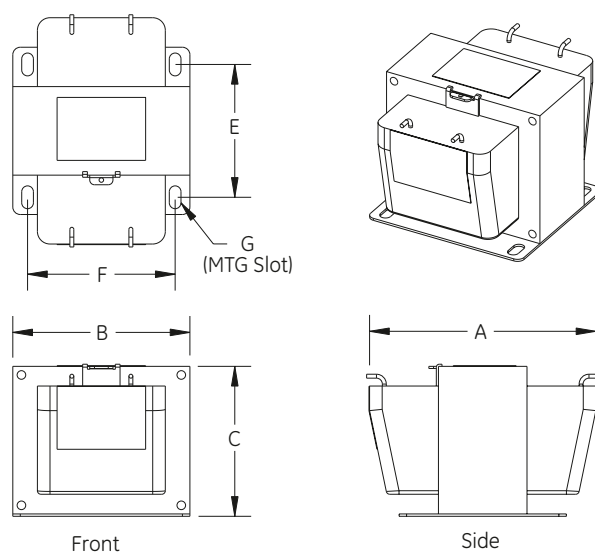
6, 8, 10, 12 And 14 frames

Terminal Block and Leads Out Connection Style

Frame Size	Style	Outline Drawing	Net Weight (lbs.)	A Depth (in.)	B Width (in.)	C Width (in.)	E Mounting Depth (in.)	F Mounting Width (in.)	Mounting Slot In (in.)
6100	AA	303B947	2.6	4	3.06	2.68	2.16	2.5	0.219x0.750
	AB			3.25					
6125	AA	303B947	3	4.25	3.06	2.68	2.41	2.5	0.219x0.750
	AB			3.5					
6150	AA	303B947	3.4	4.5	3.06	2.68	2.66	2.5	0.219x0.750
	AB			3.75					
8100	AA	303B947	3.9	4.12	3.81	3.28	2.16	3.12	0.219x0.750
	AB			3.42					
8150	AA	303B947	5.5	4.62	3.81	3.28	2.66	3.12	0.219x0.750
	AB			3.92					
8175	AA	303B947	6.3	4.88	3.81	3.28	2.91	3.12	0.219x0.750
	AB			4.18					
8200	AA	303B947	7	5.12	3.81	3.28	3.16	3.12	0.219x0.750
	AB			4.42					
8250	AA	303B947	8.3	5.62	3.81	3.28	3.66	3.12	0.219x0.750
	AB			4.92					
10225	AA/AB	303B947	11.6	5.62	4.56	3.9	3.38	3.75	0.297x0.580
12225	AA/AB	303B947	13	5.88	5.31	4.56	3.38	4	0.297x0.580
12300	AA/AB	303B947	17.5	6.62	5.31	4.56	4.13	4	0.297x0.580
14225	AA/AB	303B947	29	6.5	6.81	5.81	3.38	5.5	0.297x0.580
14300	AA/AB	303B947	35.5	7.25	6.81	5.78	4.13	5.5	0.297x0.580
14475	AA/AB	303B947	51.5	9	6.81	5.81	5.88	5.5	0.297x0.580



Style AA (Terminal Blocks)



Style AB (Leads Out)

Open core and coil transformers

CE-rated



Application

Application

This product is designed to be incorporated into equipment manufactured for sale in the European Community. This product is in conformity with the Low Voltage Directive 2014/35/EU of 06 JUN 2018 per the provisions of the following standard: IEC 61558-2-6:2009-02 Edition 2.0; Safety of transformers, reactors, power supply units and similar products for supply voltages..

The Type “IP” C offering utilizes all copper windings, which are encapsulated in a hardened epoxy, making the winding impervious to the elements. These designs are rated at 55° C rise with a 40° C ambient. Standard on these designs are terminal block covers. These provide added protection from current carrying terminals. These designs incorporate customer friendly connection on rugged high-impact molded terminal blocks.

Factory- or Field-Installed Options

Available as an option are two fuse blocks that have fuse covers that provide the touch safety like the terminal blocks. These can be ordered factory-installed or as kits.

In kit form order:

Fuse block for 2 class CC fuses is 9T58E0000G46. Fuse block for 2 class CC and 1 Midget fuse is 9T58E0000G47. See page 65 for fuse block kits..

For factory installation add the G46 or G47 suffix to the transformer Catalog Number (example 9T58E0020G47).

Besides being C rated, these designs are both UL and C-UL listed.



Factory- or Field-Installed Options

50/60 Hz

Input Voltage	Output Voltage	kVA	Approx. Net Weight (Lbs.)	Frame Size	Catalog Number	
230/400 Volts	12/24 Volts	0.025	3	6100	9T58E0020	
		0.05	4	6150	9T58E0021	
		0.075	4	8100	9T58E0023	
		0.1	5	8150	9T58E0024	
		0.15	7	8200	9T58E0025	
		0.2	12	10225	9T58E0026	
	24/48 Volts	0.25	12	10225	9T58E0027	
		0.3	12	10225	9T58E0028	
		0.375	16	12225	9T58E0029	
		0.05	4	6150	9T58E0061	
		0.075	4	8100	9T58E0063	
		0.1	5	8150	9T58E0064	
220/380, 230/400, 240/415 Volts	110/220, 115/230, 120/240 Volts	0.15	7	8200	9T58E0065	
		0.2	12	10225	9T58E0066	
		0.5	19	12300	9T58E0071	
	200/400/480 Volts	120 Volts	0.75	28	14225	9T58E0073
			0.025	3	6100	9T58E0150
			0.05	4	6150	9T58E0151
			0.075	4	8100	9T58E0153
			0.1	5	8150	9T58E0154
			0.15	7	8200	9T58E0155
			0.2	12	10225	9T58E0156
			0.25	12	10225	9T58E0157
			0.3	12	10225	9T58E0158
			0.375	16	12225	9T58E0159
			0.5	19	12300	9T58E0161
			0.75	28	14225	9T58E0163
400/480 Volts	120/200 Volts	1	34	14300	9T58E0164	
		1.5	45	14475	9T58E0165	
		0.25	12	10225	9T58E0506	
380/400/415/480/528 Volts	24/48 Volts	0.3	12	10225	9T58E0507	
		0.5	6	8175	9T58E2000	
200/208/220/230/240 Volts	24/48 Volts	0.5	6	8175	9T58E2001	
		0.3	12	10225	9T58E2002	

