

BUYLOG SECTION 5

# Transformers - low voltage, dry type





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# Table of contents

## ReliaGear® XFMR

Overview	5-4
General purpose	5-7
Factory installed infrared viewing windows	5-15
Guard I™ noise isolation transformer	5-19
Guard II™ electrostatic shielded transformers	5-22
Guard III™ harmonic mitigating	5-25
K-Factor	5-27
Low noise	5-38
Midtapped	5-42
Drive isolation transformer	5-46
Totally enclosed, non-ventilated (TENV)	5-49
Servicenter™ integrated transformer and load center	5-52
Accessories and lugs	5-55
Enclosure parts	5-58
BABA compliant	5-60

**Overview**



		Low Voltage Dry Type Vented Transformers				
		General Purpose 1 Phase	General Purpose 3 Phase	Guard I™	Guard II™	Guard III™
Application		General purpose lighting and electrical installations, Motors, Resistance heating, Motor generators (without solid state drives), Airports, EV charging	General purpose lighting and electrical installations, Motors, Resistance heating, Motor generators (without solid state drives), Airports, EV charging	Data centers, Critical care, Office buildings, Lighting circuits	Data centers, Critical care, Hospitals	Data centers, Critical care, Hospitals, Schools, Museums, Casinos, Gaming facilities
Electrostatic shields		-	-	■	■	■
Noise isolation		-	-	■	■	-
Harmonic mitigating		-	-	-	-	■
Surge suppression		-	-	-	■	-
Integrated load center and circuit breakers		-	-	-	-	-
Phase	1	■	-	-	-	-
	3	-	■	■	■	■
kVA, max		100	750	750	112.5	300
Primary voltage		240 x 480	480	480	480	480
Secondary voltage, 3-wire		120/240 V	208Y/120 V	208Y/120 V	208Y/120 V	208Y/120 V
Frequency		60 Hz	60 Hz	60 Hz	60 Hz	60 Hz
Windings	Aluminum (AL)	■	■	■	■	-
	Copper (CU)	■	■	■	■	■
Temperature rise		150 °C	80 °C, 115 °C, 150 °C	80 °C, 115 °C, 150 °C	80 °C, 115 °C, 150 °C	150 °C
Audible sound level (dB) NEMA ST-20 std		Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20
Seismic qualification		CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2021
Enclosure	NEMA 2	■	■	■	■	■
	Optional rain shield kit: NEMA 3R	■	■	■	■	■
Accessible mounting feet		■	■	■	■	-

■ Applicable  
- N/A



		Low Voltage Dry Type Vented Transformers			
		K-Factor	Low audible noise	Midtapped	Drive Isolation
Application		Non-linear loads, Motors	Office buildings, Hospitals, Schools, Museums, Libraries	Office buildings	Silicon controlled rectified (SCR) control circuitry in adjustable speed drives, Elevators, Escalators, People movers
Electrostatic shields		■	-	-	-
Noise isolation		-	-	-	-
Harmonic mitigating		-	-	-	-
Surge suppression		-	-	-	-
Integrated load center and circuit breakers		-	-	-	-
Phase	1	-	-	-	-
	3	■	■	■	■
kVA, max		500	500	500	220
Primary voltage		480	480	480	575
Secondary voltage, 3-wire		208Y/120 V	208Y/120 V	240/120 V	460Y/266 V <sup>2</sup>
Frequency		60 Hz	60 Hz	60 Hz	60 Hz
Windings	Aluminum (AL)	■	■	■	■
	Copper (CU)	■	■	■	-
Temperature rise		80 °C, 115 °C, 150 °C	80 °C, 115 °C, 150 °C	80 °C, 115 °C, 150 °C	150 °C
Audible sound level (dB) NEMA ST-20 std		Meets or exceeds NEMA ST-20	Exceeds NEMA ST-20	Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20
Seismic qualification		CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2021
Enclosure	NEMA 2	■	■	■	■
	Optional rain shield kit: NEMA 3R	■	■	■	■
Accessible mounting feet		■	■	■	■

\*See product pages for additional list of voltage variations

■ Applicable  
- N/A



	Low Voltage Dry Type Non-Ventilated Transformers		Servicenter™ Integrated Transformer and Load Center		Low Voltage Dry Type Transformers
	Totally Enclosed, Non-Ventilated (TENV)		Three Phase Servicenter™ Integrated Transformer and Distribution Panel	Single Phase Servicenter™ Integrated Transformer and Distribution Panel	General Purpose Three Phase BABA Compliant
Application	Textile, Automotive		Industrial, remote installation sites, Office buildings, Parking lots, Assembly lines	Industrial, remote installation sites, Office buildings, Parking lots, Assembly lines	General purpose lighting and electrical installations, Motors, Resistance heating, Motor generators (without solid state drives), Airports, EV charging
Electrostatic shields	-		-	-	-
Noise isolation	-		-	-	-
Harmonic mitigating	-		-	-	-
Surge suppression	-		-	-	-
Integrated load center and circuit breakers	-		■	■	-
Phase	1	-	-	■	-
	3	■	■	-	■
kVA, max	75		30	25	500
Primary voltage	480		480	480	480
Secondary voltage, 3-wire	208Y/120 V		208Y/120 V	208Y/120 V	208Y/120
Frequency	60 Hz		60 Hz	60 Hz	60 Hz
Windings	Aluminum (AL)	■	■	■	■
	Copper (CU)	■	■	-	■
Temperature rise	80 °C, 115 °C, 150 °C		150 °C	115 °C	150 °C
Audible sound level (dB) NEMA ST-20 std	Meets or exceeds NEMA ST-20		Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20	Meets or exceeds NEMA ST-20
Seismic qualification	CBC 2022 and IBC 2021		CBC 2022 and IBC 2021	CBC 2022 and IBC 2021	CBC 2022 and IBC 2019
Enclosure	NEMA 2	-	■	■	■
	Optional rain shield kit	-	■	-	■
	NEMA 3R	■	■	■	■
Accessible mounting feet	■		■	-	-

■ Applicable  
- N/A

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## General purpose

### Table of contents

<b>General purpose</b>	
Product overview - one phase	5-8
Aluminum windings	5-9
Copper windings	5-9
Product overview - three phase	5-10
Ordering code construction	5-10
Common voltages	5-11
Aluminum coil	5-12
Copper coil	5-14

## General purpose

### Product overview - one phase



Type QL Transformer

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.

#### Features

- Connection: 3-wire or 2-wire secondaries
- Voltages: (P) 240x480 (S) 120/240
- Temperature rise: 150 °C; 220 (R) 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 2022 and IBC 2021; ASCE 7.05-2016
- UL 1561
- UL & cUL listed (XQNX, XQNX7:E323777)
- 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)

## General purpose



### Aluminum windings 150 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	15	(-4,+2: 2.5%)	320	YX171	9T33A2670
		25	(-4,+2: 2.5%)	320	YX171	9T33A2671
		37.5	(-4,+2: 2.5%)	460	YX172	9T33A2672
		50	(-4,+2: 2.5%)	490	XV173	9T33A2673
		75	(-4,+2: 2.5%)	600	YX174	9T33A2674
		100	(-4,+2: 2.5%)	950	YX175	9T33A2675

### Copper windings 150 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	15	(-4,+2: 2.5%)	350	YX171	9T33C2670
		25	(-4,+2: 2.5%)	350	YX171	9T33C2671
		37.5	(-4,+2: 2.5%)	510	YX172	9T33C2672
		50	(-4,+2: 2.5%)	500	XV173	9T33C2673
		75	(-4,+2: 2.5%)	750	YX174	9T33C2674

### Aluminum windings single-phase 115 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	25	(+2,-4; 2.5%)	320	YX171	9T33A2671G15
		50	(+2,-4; 2.1%)	600	YX174	9T33A2673G15

### Aluminum windings single-phase 80 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	75	(+2,-4; 2.3%)	950	YX175	9T33A2674G80

### Aluminum windings electrostatic shield -3dB single-phase 115 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	37.5	(+2,-4; 2.5%)	460	YX172	9T33A2672G14

### Copper windings single-phase 115 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	15	(+2,-4; 2.5%)	350	YX171	9T33C2670G15
		25	(+2,-4; 2.3%)	510	YX172	9T33C2671G15
		37.5	(+2,-4; 2.7%)	500	XV173	9T33C2672G15
		50	(+2,-4; 2.7%)	500	XV173	9T33C2673G15

### Copper windings electrostatic shield single-phase 115 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	25	(+2,-4; 2.5%)	510	YX172	9T33C2671G13
		50	(+2,-4; 2.5%)	500	XV173	9T33C2673G13

### Copper windings electrostatic shield single-phase 80 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	25	(+2,-4; 2.30%)	510	YX172	9T33C2671G80

### Copper windings electrostatic shield single-phase 150 °C rise Core & coil

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	120 / 240 Volts	37.5	(+2,-4; 2.70%)	500	XV173	9T33V2672G80

### Copper windings single-phase 150 °C rise NEMA 2

Primary voltage	Secondary voltage	kVA	Taps (FCBN,FCAN; %)	Product net weight (lbs.)	Frame size	Ordering code
240 x 480 Volts	300 / 600 Volts	15	(+2,-4; 2.50%)	350	YX171	9T33C2300
		37.5	(+2,-4; 2.50%)	510	YX172	9T33C2302

# General purpose

## Product overview - three-phase



Type QF Transformer

ABB low voltage dry type transformers are designed to give you what you want, when you want it. These transformers have outward facing feet for faster installation, easy off front and back panel for rapid service access, and ground and lug kits included on most units up to 150 kVA; more value for your money.

### Features

- Unique core and coil design using grain-oriented, annealed (non-aging) silicon steel
- Core and coil assemblies mounted on neoprene isolation pads
- Single piece front/back
- Outward-facing feet
- Lifting eyes provided in top core clamp
- Lug kit included with most units up through 150 kVA
- Copper ground bar kit included with most units up through 150 kVA
- Flexible copper ground strap (Type QL)
- Transformers with IR viewing windows available, see page 5-15

### Ordering code construction

**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
- B<sup>1</sup> = Aluminum C&C (no enclosure)
- C = Copper coil
- S = AL stainless steel enclosure
- V<sup>1</sup> = Copper C&C (no enclosure)
- Z = CU stainless steel enclosure
- Y = Accessories

<sup>1</sup>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

Note: 750 kVA available

**Voltage series**

See voltage chart on the next page

**Catalog no. suffix codes**

**Core & coil temp rise**

	150 °C	115 °C	80 °C
<b>Temp rise rating only</b>	G01 or blank	G31	G61
<b>-3 dB noise reduction</b>	G02	G32	G62
<b>Electrostatic shield*</b>	G03	G33	G63
<b>-3 dB noise reduction + electrostatic shield</b>	G04	G34	G64
<b>-5 dB noise reduction</b>	G05	G35	G65
<b>-5 dB noise reduction + electrostatic shield</b>	G06	G36	G66

Core & coil characteristics

\* 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).

**Please Note:** This Ordering code nomenclature is for illustrative purposes only. Not all Ordering code combinations are available for production. Please reference the ordering tables beginning on page 5-12 for Three-phase DOE 2016 Efficiency transformers currently available for ordering. For additional assistance, please contact your ABB account manager.

# General purpose

## Three-phase

Three-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

Three-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

Three-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

### 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.

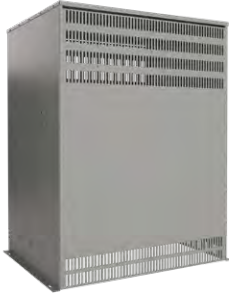
If lower sound levels are needed or desired, -3 dB and -5 dB options are available for most models.

	Average sound level, decibels	
	Self cooled ventilated	
	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

**Note 1:** Consult factory for non-linear requirements exceeding a K-factor rating of 20.

**Note 2:** Sound levels are measured using the A-weighted scale (dB [A])

## General purpose



Type QF Transformer

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001
		30	(+2, -4: 2.5%)	330	UY22A	9T10A1002
		45	(+2, -4: 2.5%)	444	UY03A	9T10A1003
		75	(+2, -4: 2.5%)	561	UY24A	9T10A1004
		112.5	(+2, -4: 2.5%)	680	DY05A	9T10A1005
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1006
		225	(+2, -4: 2.5%)	1450	DY17A	9T10A1007
		300	(+2, -4: 2.5%)	1670	DY08A	9T10A1008
		500	(+2, -2: 2.5%)	2900	DY79A	9T10A1009
		750	(+2, -2: 2.5%)	4292	DY67A	9T10A1302

**K = 1 115°C Rise NEMA 2 aluminum coil three-phase**

Input Voltage	Output Voltage	kVA	Taps	Approx. Net Weight (Lbs)	Frame Size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001G31
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1002G31
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1003G31
		75	(+2, -4: 2.5%)	603	UX74A	9T10A1004G31
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1005G31
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1006G31
		225	(+2, -4: 2.5%)	1670	DX77A	9T10A1007G31
		300	(+2, -4: 2.5%)	1985	DX78A	9T10A1008G31
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1009G31

**K = 1 80°C Rise NEMA 2 aluminum coil three-phase**

Input Voltage	Output Voltage	kVA	Taps	Approx. Net Weight (Lbs)	Frame Size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	330	UY72A	9T10A1001G61
		30	(+2, -4: 2.5%)	444	UY03A	9T10A1002G61
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1003G61
		75	(+2, -4: 2.5%)	680	DY05A	9T10A1004G61
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T10A1005G61
		150	(+2, -4: 2.5%)	1450	DY17A	9T10A1006G61
		225	(+2, -4: 2.5%)	1985	DX78A	9T10A1007G61
		300	(+2, -2: 2.5%)	2900	DY79A	9T10A1008G61
		500	(+2, -2: 2.5%)	-	DX67A	9T10A1009G61

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input Voltage	Output Voltage	kVA	Taps	Approx. Net Weight (Lbs)	Frame Size	Ordering code
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1451
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1452
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1453
		75	(+2, -4: 2.5%)	680	DY75A	9T10A1454
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T10A1455
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1456
		225	(+2, -4: 2.5%)	1670	DY78A	9T10A1457
		300	(+2, -2: 2.5%)	2900	DX79A	9T10A1458

## General purpose



Type QF Transformer

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1341
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1342
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1343
		75	(+2, -4: 2.5%)	680	UY74A	9T10A1344
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T10A1345
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1346
		225	(+2, -4: 2.5%)	1670	DY78A	9T10A1347
		300	(+2, -2: 2.5%)	2900	DX79A	9T10A1348

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
240 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1611
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1612
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1613
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1614
		112.5	(+2, -4: 2.5%)	680	DY75A	9T10A1615
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1616
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1617
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1618
500	(+2, -2: 2.5%)	2900	DX79A	9T10A1619		

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
240 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1531
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1532
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1533
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1534
		112.5	(+2, -4: 2.5%)	680	DY75A	9T10A1535
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1536
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1537
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1538
500	(+2, -2: 2.5%)	2900	DX79A	9T10A1539		

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	240/120 Volts	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		

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	480Y/277 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1171
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1172
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1173
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1174
		112.5	(+2, -4: 2.5%)	680	DY75A	9T10A1175
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1176
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1177
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1178
500	(+2, -2: 2.5%)	2900	DX79A	9T10A1179		

# General purpose



Type QF Transformer

**K = 1 150°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	240 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1191
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1192
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1193
		75	(+2, -4: 2.5%)	661	UY74C	9T10C1194
		112.5	(+2, -4: 2.5%)	790	DY75C	9T10C1195
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C1196
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1197
		300	(+2, -4: 2.5%)	1970	DY78C	9T10C1198

**K = 1 150°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
600 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C2401
		30	(+2, -4: 2.5%)	353	UX72C	9T10C2402
		45	(+2, -4: 2.5%)	480	UX73C	9T10C2403
		75	(+2, -4: 2.5%)	661	UY74C	9T10C2404
		112.5	(+2, -4: 2.5%)	790	DY75C	9T10C2405
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C2406

**K = 1 150°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001
		30	(+2, -4: 2.5%)	353	UX02C	9T10C1002
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003
		75	(+2, -4: 2.5%)	661	UY14C	9T10C1004
		112.5	(+2, -4: 2.5%)	790	DY05C	9T10C1005
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C1006
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1007
		300	(+2, -4: 2.5%)	1970	DY78C	9T10C1008
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1009

**K = 1 115°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001G31
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1002G31
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003G31
		75	(+2, -4: 2.5%)	748	DX74C	9T10C1004G31
		112.5	(+2, -4: 2.5%)	900	DX75C	9T10C1005G31
		150	(+2, -4: 2.5%)	1240	DX76C	9T10C1006G31
		225	(+2, -4: 2.5%)	1847	DX77C	9T10C1007G31
		300	(+2, -4: 2.5%)	2150	DX78C	9T10C1008G31

**K = 1 80°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T10C1001G61
		30	(+2, -4: 2.5%)	480	UX73C	9T10C1002G61
		45	(+2, -4: 2.5%)	661	UY74C	9T10C1003G61
		75	(+2, -4: 2.5%)	790	DY05C	9T10C1004G61
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T10C1005G61
		150	(+2, -4: 2.5%)	1610	DY77C	9T10C1006G61
		225	(+2, -4: 2.5%)	2150	DX78C	9T10C1007G61
		300	(+2, -2: 2.5%)	3720	DX79C	9T10C1008G61

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## Factory installed infrared viewing windows

### Table of contents

<b>Factory installed infrared viewing windows</b>	
Product overview - three phase	5-16
Aluminum coil	5-17
Copper coil	5-17

## Factory installed infrared viewing windows

### Product overview



Transformer with IR window  
30-45 kVA window closed



Transformer with IR window  
30-45 kVA window open



Transformer with IR window  
500 kVA window closed



Transformer with IR window  
500 kVA window open

ReliaGear® XFMR low voltage dry type transformers with factory-installed infrared (IR) viewing windows allow for safe thermographic testing of energized units.

Thermographic testing, also known as thermal imaging, involves using an infrared camera to detect and measure the heat emitted by objects. This technology is widely used in various fields, including electrical systems, medical diagnostics and building inspections.

Incorporating all of the same technical specifications and certifications of the ReliaGear XFMR product line with the added feature of the IR viewing window — providing easier maintenance and improved system reliability.

#### Standards supporting the use of IR windows

- NFPA 70E Standard for Electrical Safety in the Workplace
- NETA Standard for Maintenance Testing Specifications for Electrical Power Equipment and Systems, ANSI/NETAMTS-2023 Section 7.2.1.1

#### Factory installation is beneficial in two ways

- Front cover paint is uncompromised
- Ensures adequate thermographic imaging coverage of terminals and coils
- Cost and time savings

#### IR window features and benefits

##### Well known brand: IRISS® Poly-View System™ windows

- Large viewing area
- Visually clear IR transmissive viewing area to view all terminals
- Wide field of view (FOV) angle assures better image capture and test results
- Enables undisturbed monitoring inside energized transformer
- Compatible with visual, UV, shortwave, midwave and longwave IR spectrums
- Helps alleviate most NEC 70E PPE requirements for transformer inspections
- Locking covers help protect viewing windows from impact, flying debris and dust

The number of factory installed IR windows varies by transformer size.

kVA	No. of IR windows
15	1
30-45	1
75	2
112.5	2
150	2
225	2
300	2
500	2
750	2

## Factory installed infrared viewing windows



75 kVA window closed



750 kVA window closed

**K = 1 150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	No. of factory installed IR windows	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	232	UX71A	1	9T10A9991
		30	(+2, -4: 2.4%)	301	UY22A	1	9T10A9992
		45	(+2, -4: 2.5%)	361	UY03A	1	9T10A9993
		75	(+2, -4: 2.5%)	513	UY24A	2	9T10A9994
		112.5	(+2, -4: 2.5%)	703	DY05A	2	9T10A9995
		150	(+2, -4: 2.4%)	1031	DY76A	2	9T10A9996
		225	(+2, -4: 2.5%)	1190	DY17A	2	9T10A9997
		300	(+2, -4: 2.5%)	1665	DY08A	2	9T10A9998
		500	(+2, -2: 2.5%)	2714	DY79A	2	9T10A9999
750	(+2, -2: 2.5%)	4293	DY67A	2	9T10A9990		

**K = 1 150°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	No. of factory installed IR windows	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	331	UX72A	1	9T10A9992G03
		45	(+2, -4: 2.4%)	445	UX73A	1	9T10A9993G03

**K = 1 115°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	No. of factory installed IR windows	Ordering code
480 Volts Delta	208Y/120 Volts	75	(+2, -4: 2.4%)	605	UX74A	2	9T10A9994G33
		112.5	(+2, -4: 2.5%)	830	DX75A	2	9T10A9995G33
		150	(+2, -4: 2.5%)	1250	DX76A	2	9T10A9996G33
		225	(+2, -4: 2.5%)	1670	DX77A	2	9T10A9997G33
		300	(+2, -4: 2.5%)	1984	DX78A	2	9T10A9998G33
		500	(+2, -2: 2.5%)	2901	DX79A	2	9T10A9999G33

**K = 1 150°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	No. of factory installed IR windows	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71C	1	9T10C9991
		30	(+2, -4: 2.5%)	272	UX02C	1	9T10C9992
		45	(+2, -4: 2.4%)	481	UX73C	1	9T10C9993
		75	(+2, -4: 2.5%)	568	UY14C	2	9T10C9994
		112.5	(+2, -4: 2.5%)	837	DY05C	2	9T10C9995
		150	(+2, -4: 2.5%)	1086	DY76C	2	9T10C9996
		225	(+2, -4: 2.5%)	1610	DY77C	2	9T10C9997
		300	(+2, -4: 2.5%)	1969	DY78C	2	9T10C9998
		500	(+2, -2: 2.1%)	3721	DX79C	2	9T10C9999

**K = 1 115°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	No. of factory installed IR windows	Ordering code
480 Volts Delta	208Y/120 Volts	75	(+2, -4: 2.6%)	750	UX74C	2	9T10C9994G33
		112.5	(+2, -4: 2.5%)	900	DX75C	2	9T10C9995G33
		150	(+2, -4: 2.6%)	1241	DX76C	2	9T10C9996G33
		225	(+2, -4: 2.6%)	1847	DX77C	2	9T10C9997G33
		300	(+2, -4: 2.5%)	2149	DX78C	2	9T10C9998G33

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## Noise isolation

### Table of contents

<b>Noise isolation</b>	
Product overview - Guard I™	5-19
Aluminum coil	5-20
Copper coil	5-21
Product overview - Guard II™	5-22
Aluminum coil	5-23
Copper coil	5-24
Product overview - Guard III™	5-25
Copper coil	5-26

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## Noise isolation — Guard I™

### Product overview



—  
Guard I™ Transformer  
Shown with optional rain shield

Guard I™ noise isolation transformers provide common mode noise reduction between neutral and ground and provides transverse mode noise reduction between the primary and secondary coils. Common causes of electrical noise are electromagnetic interference, radio frequency interference and ground loops.

#### Features

- Grounded full width copper electrostatic shield between primary and secondary windings
- Up to 120 dB common mode noise attenuation
- Up to 30 dB transverse mode noise attenuation
- Rain shields available for field installation converting the enclosure to NEMA 3R
- NEMA 3R stainless steel (316) available through 150 kVA 150° C rise

## Noise isolation — Guard I™



Shown with optional rain shield

**150°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001G03
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1002G03
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1003G03
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1004G03
		112.5	(+2, -4: 2.5%)	680	DY75A	9T10A1005G03
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1006G03
		225	(+2, -4: 2.5%)	1450	DY77A	9T10A1007G03
		300	(+2, -4: 2.5%)	1670	DY78A	9T10A1008G03
		500	(+2, -2: 2.5%)	2900	DY79A	9T10A1009G03
		750	(+2, -2: 2.5%)	4292	DX67A	9T10A1302G03

**115°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001G33
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1002G33
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1003G33
		75	(+2, -4: 2.5%)	603	UX74A	9T10A1004G33
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1005G33
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1006G33
		225	(+2, -4: 2.5%)	1670	DX77A	9T10A1007G33
		300	(+2, -4: 2.5%)	1985	DX78A	9T10A1008G33
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1009G33

**80°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	330	UX72A	9T10A1001G63
		30	(+2, -4: 2.5%)	444	UX73A	9T10A1002G63
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1003G63
		75	(+2, -4: 2.5%)	680	DY75A	9T10A1004G63
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T10A1005G63
		150	(+2, -4: 2.5%)	1450	DY77A	9T10A1006G63
		225	(+2, -4: 2.5%)	1985	DX78A	9T10A1007G63
		300	(+2, -2: 2.5%)	2900	DX79A	9T10A1008G63

**Noise isolation — Guard I™**



Shown with optional rain shield

**150°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001G03
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1002G03
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003G03
		75	(+2, -4: 2.5%)	661	UY74C	9T10C1004G03
		112.5	(+2, -4: 2.5%)	790	DY75C	9T10C1005G03
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C1006G03
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1007G03
		300	(+2, -4: 2.5%)	1970	DY78C	9T10C1008G03
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1009G03

**115°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001G33
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1002G33
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003G33
		75	(+2, -4: 2.5%)	748	UX74C	9T10C1004G33
		112.5	(+2, -4: 2.5%)	900	DX75C	9T10C1005G33
		150	(+2, -4: 2.5%)	1240	DX76C	9T10C1006G33
		225	(+2, -4: 2.5%)	1847	DX77C	9T10C1007G33
		300	(+2, -4: 2.5%)	2150	DX78C	9T10C1008G33
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1009G33

**80°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T10C1001G63
		30	(+2, -4: 2.5%)	480	UX73C	9T10C1002G63
		45	(+2, -4: 2.5%)	661	UY74C	9T10C1003G63
		75	(+2, -4: 2.5%)	790	DY75C	9T10C1004G63
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T10C1005G63
		150	(+2, -4: 2.5%)	1610	DY77C	9T10C1006G63
		225	(+2, -4: 2.5%)	2150	DX78C	9T10C1007G63
		300	(+2, -2: 2.5%)	3720	DX79C	9T10C1008G63

## Noise isolation — Guard II™

### Product overview

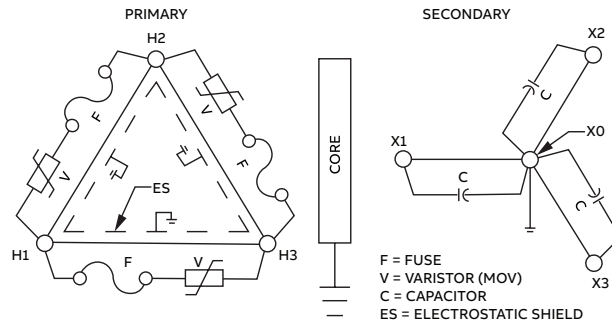


Guard II™ Transformer  
Shown with optional rain shield

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.

#### Features

- Built-in electrical noise filters and spike/surge suppressor components
- Grounded full width copper electrostatic shield between primary and secondary windings
- Up to 120 dB common mode noise attenuation
- Up to 60 dB transverse mode noise attenuation
- Rain shields available for field installation converting the enclosure to NEMA 3R
- NEMA 3R stainless steel (316) available through 150 kVA 150° C rise



## Noise isolation — Guard II™



Shown with optional rain shield

**150°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	260	XV371	9T17A1001G03
		30	(+2, -4: 2.5%)	370	XV372	9T17A1002G03
		45	(+2, -4: 2.5%)	460	XV373	9T17A1003G03
		75	(+2, -4: 2.5%)	680	XV374	9T17A1004G03
		112.5	(+2, -4: 2.5%)	830	XV375	9T17A1005G03

**115°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	260	XV371	9T17A1001G33 <sup>1</sup>
		30	(+2, -4: 2.5%)	370	XV372	9T17A1002G33
		45	(+2, -4: 2.5%)	460	XV373	9T17A1003G33 <sup>1</sup>

**80°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	680	XV374	9T17A1003G63 <sup>1</sup>
		75	(+2, -4: 2.5%)	830	XV375	9T17A1004G63 <sup>1</sup>

**150°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	260	XV371	9T17A1451G03
		30	(+2, -4: 2.5%)	370	XV372	9T17A1452G03
		45	(+2, -4: 2.5%)	460	XV373	9T17A1453G03
		75	(+2, -4: 2.5%)	680	XV374	9T17A1454G03
		112.5	(+2, -4: 2.5%)	830	XV375	9T17A1455G03 <sup>1</sup>

**115°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	260	XV371	9T17A1451G33
		30	(+2, -4: 2.5%)	370	XV372	9T17A1452G33 <sup>1</sup>
		45	(+2, -4: 2.5%)	460	XV373	9T17A1453G33 <sup>1</sup>
		75	(+2, -4: 2.5%)	680	XV374	9T17A1454G33 <sup>1</sup>

**80°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	208Y/120 Volts	75	(+2, -4: 2.5%)	830	XV375	9T17A1454G63 <sup>1</sup>

<sup>1</sup>Request quote

## Noise isolation — Guard II™



Shown with optional rain shield

**150°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	270	XV371	9T17C1001G03
		30	(+2, -4: 2.5%)	420	XV372	9T17C1002G03 <sup>1</sup>
		45	(+2, -4: 2.5%)	540	XV373	9T17C1003G03
		75	(+2, -4: 2.5%)	770	XV374	9T17C1004G03
		112.5	(+2, -4: 2.5%)	1010	XV375	9T17C1005G03 <sup>1</sup>

**115°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	270	XV371	9T17C1001G33 <sup>1</sup>
		30	(+2, -4: 2.5%)	420	XV372	9T17C1002G33 <sup>1</sup>
		45	(+2, -4: 2.5%)	540	XV373	9T17C1003G33 <sup>1</sup>
		75	(+2, -4: 2.5%)	770	XV374	9T17C1004G33 <sup>1</sup>
		112.5	(+2, -4: 2.5%)	1010	XV375	9T17C1005G33 <sup>1</sup>

**80°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	420	XV372	9T17C1001G63 <sup>1</sup>
		30	(+2, -4: 2.5%)	540	XV373	9T17C1002G63 <sup>1</sup>
		45	(+2, -4: 2.5%)	770	XV374	9T17C1003G63
		75	(+2, -4: 2.5%)	1010	XV375	9T17C1004G63 <sup>1</sup>

**150°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	270	XV371	9T17C1451G03 <sup>1</sup>
		30	(+2, -4: 2.5%)	420	XV372	9T17C1452G03
		45	(+2, -4: 2.5%)	540	XV373	9T17C1453G03 <sup>1</sup>

**115°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	270	XV371	9T17C1451G33 <sup>1</sup>
		30	(+2, -4: 2.5%)	420	XV372	9T17C1452G33 <sup>1</sup>
		45	(+2, -4: 2.5%)	540	XV373	9T17C1453G33 <sup>1</sup>
		75	(+2, -4: 2.5%)	770	XV374	9T17C1454G33 <sup>1</sup>

<sup>1</sup>Request quote

## Harmonic mitigating — Guard III™

### Product overview



—  
Guard III™ Transformer  
Shown with optional rain shield

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.

#### Features

- 0° Phase shift; +15° Phase Shift; -15° Phase Shift or -30° Phase Shift
- Grounded full width copper electrostatic shield between primary and secondary windings
- Secondary windings have the zigzag configuration
- Up to 120 dB common mode noise attenuation
- Up to 30 dB transverse mode noise attenuation
- 200% rated neutral bar
- Rain shields available for field installation converting the enclosure to NEMA 3R
- NEMA 3R stainless steel (316) available through 150 kVA 150° C rise



## Harmonic mitigating — Guard III™



Shown with optional rain shield

**115°C Rise NEMA 2, 0° phase shift copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	318	H371C	9T76H9871G13
		30	552	H372C	9T76H9872G13
		45	643	H373C	9T76H9873G13
		75	1053	H374C	9T76H9874G13
		150	2125	H376C	9T76H9876G13

**115°C Rise NEMA 2, -30° phase shift copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Wye	208Y/120 Volts	30	552	H372C	9T77H9872G13
		45	643	H373C	9T77H9873G13
		75	1053	H374C	9T77H9874G13

**115°C Rise NEMA 2, 0° phase shift copper coil electrostatic shield three-phase sound level -3dB**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	552	H372C	9T76H9872G23
		45	643	H373C	9T76H9873G23
		75	1053	H374C	9T76H9874G23

**115°C Rise NEMA 2, -30° phase shift copper coil electrostatic shield three-phase sound level -3dB**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Wye	208Y/120 Volts	75	1053	H374C	9T77H9874G23

**150°C Rise NEMA 2, 0° phase shift copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
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 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Wye	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 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	112.5	1980	H375C	9T79H9875G03

**150°C Rise NEMA 2, -15° phase shift copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	112.5	1980	H375C	9T78H9875G03

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## K-factor

### Table of contents

<b>K-factor</b>	
Product overview	5-28
Aluminum coil	5-29
Copper coil	5-31
Low noise, aluminum coil	5-34
Low noise, copper coil	5-36

# K-factor

## Product overview



Type QL, UL K-factor Transformer

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 full load 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 up to 120 dB, and transverse mode noise attenuation averages up to 30 dB.

- Does not reduce current harmonics.
- Withstands the mechanical stresses caused by harmonic content
- Addresses temp rise issues when supplying non-linear loads
- Non-phase shifting

### Features

- Grounded full width copper electrostatic shield between primary and secondary windings
- Unique core and coil design using grain-oriented, annealed (non-aging) silicon steel
- Core and coil assemblies mounted on neoprene isolation pads
- Lifting eyes provided in top core clamp
- Flexible copper ground strap (Type QL)
- Lug kit included on most units up through 150kVA
- Copper ground bar kit included in most units up through 150kVA

**Table 1: General K-factor rating guidelines**

K-factor	Description	Harmonic activity guide
K4	Induction heating, SCR drives, AC drives	Up to 50% of loads generate harmonics
K13	Institutional electronically controlled lighting, schools, hospitals, etc.	100% of loads generate harmonics
K20	Special applications to include data processing equipment, computer server loads, critical care facilities and hospital operating rooms	60–100% of loads generate harmonics

For more information, see our technical paper "[What is a transformer K-factor rating?](#)"

**K-factor**



**K=4 150°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T14A1001G03
		30	(+2, -4: 2.5%)	444	UX73A	9T14A1002G03
		45	(+2, -4: 2.5%)	444	UX73A	9T14A1003G03
		75	(+2, -4: 2.5%)	680	DY75A	9T14A1004G03
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T14A1005G03
		150	(+2, -4: 2.5%)	1250	DX76A	9T14A1006G03
		225	(+2, -4: 2.5%)	1670	DY78A	9T14A1007G03
		300	(+2, -2: 2.5%)	2900	DY79A	9T14A1008G03

**K=4 115°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T14A1001G33
		30	(+2, -4: 2.5%)	444	UX73A	9T14A1002G33
		45	(+2, -4: 2.5%)	561	UY74A	9T14A1003G33
		75	(+2, -4: 2.5%)	680	DY75A	9T14A1004G33
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T14A1005G33
		150	(+2, -4: 2.5%)	1250	DX76A	9T14A1006G33
		225	(+2, -4: 2.5%)	1670	DY78A	9T14A1007G33
		300	(+2, -2: 2.5%)	2900	DY79A	9T14A1008G33

**K=4 80°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	444	UX73A	9T14A1002G63
		45	(+2, -4: 2.5%)	561	UY74A	9T14A1003G63
		75	(+2, -4: 2.5%)	830	DX75A	9T14A1004G63
		112.5	(+2, -4: 2.5%)	1250	DX76A	9T14A1005G63

**K=13 150°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	444	UX73A	9T11A1003G03
		75	(+2, -4: 2.5%)	603	DY75A	9T11A1004G03
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T11A1005G03
		150	(+2, -4: 2.5%)	1250	DX76A	9T11A1006G03
		225	(+2, -4: 2.5%)	1670	DY78A	9T11A1007G03
		300	(+2, -2: 2.5%)	2900	DY79A	9T11A1008G03

**K=13 115°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	444	UX73A	9T11A1002G33
		75	(+2, -4: 2.5%)	680	DY75A	9T11A1004G33
		112.5	(+2, -4: 2.5%)	1250	DX76A	9T11A1005G33
		150	(+2, -4: 2.5%)	1450	DY77A	9T11A1006G33
		225	(+2, -4: 2.5%)	1670	DY78A	9T11A1007G33
		300	(+2, -2: 2.5%)	2900	DY79A	9T11A1008G33

**K=13 80°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	561	UX73A	9T11A1002G63
		45	(+2, -4: 2.5%)	561	UY74A	9T11A1003G63
		75	(+2, -4: 2.5%)	830	DX75A	9T11A1004G63
		112.5	(+2, -4: 2.5%)	1670	DX77A	9T11A1005G63
		150	(+2, -4: 2.5%)	1670	DX77A	9T11A1006G63
		225	(+2, -2: 2.5%)	2900	DX79A	9T11A1007G63

**K=13 150°C rise NEMA 2 aluminum windings electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
208	480-277	150	(+2,-4 2.50%)	1250	DX76A	9T11A1346G03

**K=13 150°C rise NEMA 2 aluminum windings electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480	415	150	(+2,-4 2.50%)	1250	DX76A	9T11A1096G03

**K-factor**



**K=20 150°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	45	(+2, -4: 2.5%)	561	UY74A	9T12A1003G03
		75	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1004G03
		112.5	(+2, -4: 2.5%)	1250	DX76A	9T12A1005G03
		150	(+2, -4: 2.5%)	1450	DY77A	9T12A1006G03
		225	(+2, -4: 2.5%)	1670	DY78A	9T12A1007G03

**K=20 115°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	561	UY74A	9T12A1003G33
		75	(+2, -4: 2.5%)	680	DY75A	9T12A1004G33
		112.5	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1005G33
		150	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1006G33
		225	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1007G33
		300	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1008G33

**K=20 80°C Rise NEMA 2 aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1002G63
		45	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1003G63
		75	(+2, -4: 2.5%)	830	DX75A	9T12A1004G63
		112.5	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1005G63
		150	(+2, -4: 2.5%)	1670	DX77A	9T12A1006G63
		225	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1007G63
		300	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12A1008G63

<sup>1</sup>Request quote

**K-factor**



**K=4 150°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T14C1001G03
		30	(+2, -4: 2.5%)	353	UX72C	9T14C1002G03
		45	(+2, -4: 2.5%)	480	UX73C	9T14C1003G03
		75	(+2, -4: 2.5%)	661	UY74C	9T14C1004G03
		112.5	(+2, -4: 2.5%)	790	DY75C	9T14C1005G03
		150	(+2, -4: 2.5%)	1610	DY77C	9T14C1006G03
		225	(+2, -4: 2.5%)	1847	DX77C	9T14C1007G03
		300	(+2, -2: 2.5%)	3720	DX78C	9T14C1008G03

**K=4 115°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T14C1001G33
		30	(+2, -4: 2.5%)	480	UX73C	9T14C1002G33
		45	(+2, -4: 2.5%)	661	UY74C	9T14C1003G33
		75	(+2, -4: 2.5%)	748	UX74C	9T14C1004G33
		112.5	(+2, -4: 2.5%)	900	DX75C	9T14C1005G33
		150	(+2, -4: 2.5%)	1610	DY77C	9T14C1006G33
		225	(+2, -4: 2.5%)	2150	DX78C	9T14C1007G33
		300	(+2, -2: 2.5%)	3720	DX79C	9T14C1008G33

**K=4 80°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T14C1001G63
		30	(+2, -4: 2.5%)	480	UX73C	9T14C1002G63
		45	(+2, -4: 2.5%)	661	UY74C	9T14C1003G63
		75	(+2, -4: 2.5%)	790	DY75C	9T14C1004G63
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T14C1005G63
		150	(+2, -4: 2.5%)	1610	DY77C	9T14C1006G63
		225	(+2, -4: 2.5%)	2150	DX78C	9T14C1007G63
		300	(+2, -2: 2.5%)	3720	DX79C	9T14C1008G63

# K-factor



**K=13 150°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T11C1001G03
		30	(+2, -4: 2.5%)	353	UX72C	9T11C1002G03
		45	(+2, -4: 2.5%)	480	UX73C	9T11C1003G03
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G03
		112.5	(+2, -4: 2.5%)	790	DY75C	9T11C1005G03
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G03
		225	(+2, -4: 2.5%)	2150	DX78C	9T11C1007G03
		300	(+2, -2: 2.5%)	3720	DX79C	9T11C1008G03

**K=13 115°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T11C1001G33
		30	(+2, -4: 2.5%)	480	UX73C	9T11C1002G33
		45	(+2, -4: 2.5%)	661	UY74C	9T11C1003G33
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G33
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T11C1005G33
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G33
		225	(+2, -4: 2.5%)	3720	DX78C	9T11C1007G33
		300	(+2, -2: 2.5%)	3720	DX79C	9T11C1008G33
		500	(+2, -2: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T11C1009G33

**K=13 80°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T11C1001G63
		30	(+2, -4: 2.5%)	480	UX73C	9T11C1002G63
		45	(+2, -4: 2.5%)	661	UY74C	9T11C1003G63
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G63
		112.5	(+2, -4: 2.5%)	1085	DY77C	9T11C1005G63
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G63
		225	(+2, -2: 2.5%)	3720	DX79C	9T11C1007G63
		300	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T11C1008G63

<sup>1</sup>Request quote

**K-factor**



**K=20 150°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T12C1001G03
		30	(+2, -4: 2.5%)	480	UX73C	9T12C1002G03
		45	(+2, -4: 2.5%)	661	UY74C	9T12C1003G03
		75	(+2, -4: 2.5%)	790	DY75C	9T12C1004G03
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T12C1005G03
		150	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1006G03
		225	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1007G03
		300	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1008G03

**K=20 115°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T12C1001G33
		30	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1002G33
		45	(+2, -4: 2.5%)	661	UY74C	9T12C1003G33
		75	(+2, -4: 2.5%)	790	DY75C	9T12C1004G33
		112.5	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1005G33
		150	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1006G33
		225	(+2, -4: 2.5%)	2150	DX78C	9T12C1007G33
		300	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1008G33

**K=20 80°C Rise NEMA 2 copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1001G63
		30	(+2, -4: 2.5%)	480	UX73C	9T12C1002G63
		45	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1003G63
		75	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1004G63
		112.5	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1005G63
		150	(+2, -4: 2.5%)	<sup>1</sup>	<sup>1</sup>	9T12C1006G63

<sup>1</sup>Request quote

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



**K=4 150°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T14A1001G04
		30	(+2, -4: 2.5%)	444	UX73A	9T14A1002G04
		45	(+2, -4: 2.5%)	444	UX73A	9T14A1003G04
		75	(+2, -4: 2.5%)	603	DY75A	9T14A1004G04
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T14A1005G04
		150	(+2, -4: 2.5%)	1250	DX76A	9T14A1006G04
		225	(+2, -4: 2.5%)	1670	DY78A	9T14A1007G04
		300	(+2, -2: 2.5%)	2900	DY79A	9T14A1008G04

**K=4 115°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T14A1001G34
		30	(+2, -4: 2.5%)	444	UX73A	9T14A1002G34
		45	(+2, -4: 2.5%)	561	UY74A	9T14A1003G34
		75	(+2, -4: 2.5%)	680	DY75A	9T14A1004G34
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T14A1005G34
		150	(+2, -4: 2.5%)	1250	DX76A	9T14A1006G34
		225	(+2, -4: 2.5%)	1670	DY78A	9T14A1007G34
		300	(+2, -2: 2.5%)	2900	DY79A	9T14A1008G34

**K=4 80°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	112.5	(+2, -4: 2.5%)	1250	DX76A	9T14A1005G64
		150	(+2, -4: 2.5%)	1670	DX77A	9T14A1006G64

**K=13 150°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T11A1001G04
		30	(+2, -4: 2.5%)	444	UX73A	9T11A1002G04
		45	(+2, -4: 2.5%)	444	UX73A	9T11A1003G04
		75	(+2, -4: 2.5%)	603	DY75A	9T11A1004G04
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T11A1005G04
		150	(+2, -4: 2.5%)	1250	DX76A	9T11A1006G04
		225	(+2, -4: 2.5%)	1670	DY78A	9T11A1007G04
		300	(+2, -2: 2.5%)	2900	DY79A	9T11A1008G04

**K=13 115°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T11A1001G34
		30	(+2, -4: 2.5%)	444	UX73A	9T11A1002G34
		45	(+2, -4: 2.5%)	561	UY74A	9T11A1003G34
		75	(+2, -4: 2.5%)	680	DY75A	9T11A1004G34
		112.5	(+2, -4: 2.5%)	1250	DX76A	9T11A1005G34
		150	(+2, -4: 2.5%)	1450	DY77A	9T11A1006G34
		225	(+2, -4: 2.5%)	1670	DY78A	9T11A1007G34
		300	(+2, -2: 2.5%)	2900	DY79A	9T11A1008G34

**K=13 80°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	30	(+2, -4: 2.5%)	561	UX73A	9T11A1002G64
		45	(+2, -4: 2.5%)	561	UY74A	9T11A1003G64
		75	(+2, -4: 2.5%)	680	DY75A	9T11A1004G64
		112.5	(+2, -4: 2.5%)	1670	DX77A	9T11A1005G64

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



**K=20 150°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	1	1	9T12A1001G04
		30	(+2, -4: 2.5%)	1	1	9T12A1002G04
		45	(+2, -4: 2.5%)	1	1	9T12A1003G04
		75	(+2, -4: 2.5%)	1	1	9T12A1004G04
		112.5	(+2, -4: 2.5%)	1	1	9T12A1005G04
		150	(+2, -4: 2.5%)	1	1	9T12A1006G04
		225	(+2, -4: 2.5%)	1	1	9T12A1007G04

**K=20 115°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	1	1	9T12A1001G34
		30	(+2, -4: 2.5%)	1	1	9T12A1002G34
		45	(+2, -4: 2.5%)	1	1	9T12A1003G34
		75	(+2, -4: 2.5%)	1	1	9T12A1004G34
		112.5	(+2, -4: 2.5%)	1	1	9T12A1005G34

**K=20 80°C Rise aluminum coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	1	1	9T12A1001G64
		30	(+2, -4: 2.5%)	1	1	9T12A1002G64
		45	(+2, -4: 2.5%)	1	1	9T12A1003G64
		75	(+2, -4: 2.5%)	1	1	9T12A1004G64
		112.5	(+2, -4: 2.5%)	1	1	9T12A1005G64

<sup>1</sup>Request quote

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



**K=4 150°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T14C1001G04
		30	(+2, -4: 2.5%)	353	UX72C	9T14C1002G04
		45	(+2, -4: 2.5%)	480	UX73C	9T14C1003G04
		75	(+2, -4: 2.5%)	661	UY74C	9T14C1004G04
		112.5	(+2, -4: 2.5%)	790	DY75C	9T14C1005G04
		150	(+2, -4: 2.5%)	1610	DY77C	9T14C1006G04
		225	(+2, -4: 2.5%)	1970	DX77C	9T14C1007G04
		300	(+2, -2: 2.5%)	3720	DX78C	9T14C1008G04

**K=4 115°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T14C1001G34
		30	(+2, -4: 2.5%)	353	UX73C	9T14C1002G34
		45	(+2, -4: 2.5%)	661	UY74C	9T14C1003G34
		75	(+2, -4: 2.5%)	790	UX74C	9T14C1004G34
		112.5	(+2, -4: 2.5%)	900	DX75C	9T14C1005G34
		150	(+2, -4: 2.5%)	1610	DY77C	9T14C1006G34
		225	(+2, -4: 2.5%)	2150	DX78C	9T14C1007G34
		300	(+2, -2: 2.5%)	3720	DX79C	9T14C1008G34

**K=4 80°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T14C1001G64
		30	(+2, -4: 2.5%)	480	UX73C	9T14C1002G64
		45	(+2, -4: 2.5%)	661	UY74C	9T14C1003G64
		75	(+2, -4: 2.5%)	790	DY75C	9T14C1004G64
		112.5	(+2, -4: 2.5%)	1240	DY76C	9T14C1005G64

**K=13 150°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T11C1001G04
		30	(+2, -4: 2.5%)	353	UX72C	9T11C1002G04
		45	(+2, -4: 2.5%)	480	UX73C	9T11C1003G04
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G04
		112.5	(+2, -4: 2.5%)	790	DY75C	9T11C1005G04
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G04
		225	(+2, -4: 2.5%)	1970	DX78C	9T11C1007G04
		300	(+2, -2: 2.5%)	3720	DX79C	9T11C1008G04

**K=13 115°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T11C1001G34
		30	(+2, -4: 2.5%)	480	UX73C	9T11C1002G34
		45	(+2, -4: 2.5%)	661	UY74C	9T11C1003G34
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G34
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T11C1005G34
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G34
		225	(+2, -2: 2.5%)	3720	DX78C	9T11C1007G34
		300	(+2, -2: 2.5%)	3720	DX79C	9T11C1008G34

**K=13 80°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T11C1001G64
		30	(+2, -4: 2.5%)	661	UX73C	9T11C1002G64
		45	(+2, -4: 2.5%)	661	UY74C	9T11C1003G64
		75	(+2, -4: 2.5%)	790	DY75C	9T11C1004G64
		112.5	(+2, -4: 2.5%)	1240	DX76C	9T11C1005G64
		150	(+2, -4: 2.5%)	1610	DY77C	9T11C1006G64
		225	(+2, -2: 2.5%)	3720	DX79C	9T11C1007G64

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



**K=20 150°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	1	1	9T12C1001G04
		30	(+2, -4: 2.5%)	1	1	9T12C1002G04
		45	(+2, -4: 2.5%)	1	1	9T12C1003G04
		75	(+2, -4: 2.5%)	1	1	9T12C1004G04
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T12C1005G04
		150	(+2, -4: 2.5%)	1	1	9T12C1006G04

**K=20 115°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T12C1001G34
		30	(+2, -4: 2.5%)	1	1	9T12C1002G34
		45	(+2, -4: 2.5%)	1	1	9T12C1003G34
		75	(+2, -4: 2.5%)	1	1	9T12C1004G34
		112.5	(+2, -4: 2.5%)	1	1	9T12C1005G34
		150	(+2, -4: 2.5%)	1	1	9T12C1006G34

**K=20 80°C Rise copper coil electrostatic shield three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	1	1	9T12C1001G64
		30	(+2, -4: 2.5%)	1	1	9T12C1002G64
		45	(+2, -4: 2.5%)	1	1	9T12C1003G64
		75	(+2, -4: 2.5%)	1	1	9T12C1004G64
		112.5	(+2, -4: 2.5%)	1	1	9T12C1005G64
		150	(+2, -4: 2.5%)	1	1	9T12C1006G64

<sup>1</sup>Request quote

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

### Table of contents

<b>Low noise (-3 dB below NEMA ST-20 standard)</b>	
Product overview	5-39
Aluminum coil	5-40
Copper coil	5-41

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

### Product overview



Type QL Low Noise Transformer

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 3dB less than NEMA/ANSI ST-20 standards per kVA.

Although they are quieter, installation can greatly influence their noise level. Closets and corners should be avoided as they act as megaphones by seemingly increasing noise levels. Care should be taken in following acoustical principles and proper installation procedures.

#### Features

- Unique core and coil design using grain-oriented, annealed (non-aging) silicon steel
- Core and coil assemblies mounted on neoprene isolation pads
- Lifting eyes provided in top core clamp
- Flexible copper ground strap (Type QL)
- Lug kit included on most units up through 150kVA
- Copper ground bar kit included in most units up through 150kVA

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



**150°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001G02
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1002G02
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1003G02
		75	(+2, -4: 2.5%)	561	UY74A	9T10A1004G02
		112.5	(+2, -4: 2.5%)	680	DY05A	9T10A1005G02
		150	(+2, -4: 2.5%)	1030	DY76A	9T10A1006G02
		225	(+2, -4: 2.5%)	1450	DY17A	9T10A1007G02
		300	(+2, -4: 2.5%)	1670	DY08A	9T10A1008G02
		500	(+2, -2: 2.5%)	2900	DY79A	9T10A1009G02

**115°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	231	UX71A	9T10A1001G32
		30	(+2, -4: 2.5%)	330	UX72A	9T10A1002G32
		45	(+2, -4: 2.5%)	444	UX73A	9T10A1003G32
		75	(+2, -4: 2.5%)	603	UX74C	9T10A1004G32
		112.5	(+2, -4: 2.5%)	830	DX75A	9T10A1005G32
		150	(+2, -4: 2.5%)	1250	DX76A	9T10A1006G32
		225	(+2, -4: 2.5%)	1670	DX77A	9T10A1007G32
		300	(+2, -4: 2.5%)	1985	DX78A	9T10A1008G32
		500	(+2, -2: 2.5%)	2900	DX79A	9T10A1009G32

**80°C Rise NEMA 2 aluminum coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	330	UX72A	9T10A1001G62
		30	(+2, -4: 2.5%)	444	UX73A	9T10A1002G62
		45	(+2, -4: 2.5%)	561	UY74A	9T10A1003G62
		75	(+2, -4: 2.5%)	680	DY05A	9T10A1004G62
		112.5	(+2, -4: 2.5%)	1030	DY76A	9T10A1005G62
		150	(+2, -4: 2.5%)	1450	DY17A	9T10A1006G62
		225	(+2, -4: 2.5%)	1985	DX78A	9T10A1007G62
		300	(+2, -2: 2.5%)	2900	DY79A	9T10A1008G62

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



**150°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001G02
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1002G02
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003G02
		75	(+2, -4: 2.5%)	661	UY74C	9T10C1004G02
		112.5	(+2, -4: 2.5%)	790	DY05C	9T10C1005G02
		150	(+2, -4: 2.5%)	1085	DY76C	9T10C1006G02
		225	(+2, -4: 2.5%)	1610	DY77C	9T10C1007G02
		300	(+2, -4: 2.5%)	1970	DY78C	9T10C1008G02
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1009G02

**115°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	230	UX71C	9T10C1001G32
		30	(+2, -4: 2.5%)	353	UX72C	9T10C1002G32
		45	(+2, -4: 2.5%)	480	UX73C	9T10C1003G32
		75	(+2, -4: 2.5%)	748	DX74C	9T10C1004G32
		112.5	(+2, -4: 2.5%)	900	DX75C	9T10C1005G32
		150	(+2, -4: 2.5%)	1240	DX76C	9T10C1006G32
		225	(+2, -4: 2.5%)	1847	DX77C	9T10C1007G32
		300	(+2, -4: 2.5%)	2150	DX78C	9T10C1008G32
		500	(+2, -2: 2.5%)	3720	DX79C	9T10C1009G32

**80°C Rise NEMA 2 copper coil three-phase**

Input voltage	Output voltage	kVA	Taps	Approx. net weight (Lbs)	Frame size	Ordering code
480 Volts Delta	208Y/120 Volts	15	(+2, -4: 2.5%)	353	UX72C	9T10C1001G62
		30	(+2, -4: 2.5%)	480	UX73C	9T10C1002G62
		45	(+2, -4: 2.5%)	661	UY74C	9T10C1003G62
		75	(+2, -4: 2.5%)	790	DY05C	9T10C1004G62
		112.5	(+2, -4: 2.5%)	1085	DY76C	9T10C1005G62
		150	(+2, -4: 2.5%)	1610	DY77C	9T10C1006G62
		225	(+2, -4: 2.5%)	2150	DX78C	9T10C1007G62
		300	(+2, -2: 2.5%)	3720	DX79C	9T10C1008G62

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## Midtapped

### Table of contents

<b>Midtapped</b>	
Product overview	5-43
Aluminum	5-44
Copper	5-45

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## Midtapped

### Product overview



Type QL Midtapped Transformer

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.

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.

# Midtapped



**150°C Rise 60Hz aluminum three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 aluminum three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 aluminum three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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

**150°C Rise 60Hz Low Noise (-3dB) aluminum three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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) aluminum three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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



**150°C Rise 60Hz copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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) copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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) copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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) copper three-phase**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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

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## Drive isolation

Table of contents

<b>Drive isolation</b>	
Product overview	5-47
Aluminum	5-48

## Drive isolation

Product overview



— Drive isolation

The use of thyristor control circuitry with adjustable-speed drives has resulted in a need for a line of isolation transformers specifically designed to meet the demanding power supply requirements of thyristor controlled drives. Symmetrically placed taps and added coil bracing minimize mechanical forces caused by the often severe thyristor drive duty cycles. These reinforcing features also help protect the transformer from the regenerative duty cycles and more frequent temporary short-circuits associated with thyristor drives.

Isolation transformers also reduce line-pollution feedback resulting from thyristor 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.

The enclosed drive isolation transformers are UL listed and are excluded from the DOE 2016 regulations.

**Features**

- Unique core and coil design using grain-oriented, annealed (non-aging) silicon steel
- Core and coil assemblies mounted on neoprene isolation pads
- Lifting eyes provided in top core clamp
- Flexible copper ground strap (Type QL)
- Lug kit included on most units up through 150kVA
- Copper ground bar kit included in most units up through 150kVA

**150°C Rise 60Hz copper three-phase**

Input voltage	Output voltage	kVA	Frequency (Hz)	Approx. net weight (lbs)	Frame Size	Ordering code
208	480	20	60	334	XV372	9T83B4001G09
230	208Y/120	63	60	620	XV374	9T83B4006G39
460	380Y/219	220	60	1590	XV377	9T83B4012G51
	270Y	145	60	1590	XV377	9T83B4010G70
	270Y/156	93	60	765	XV375	9T83B4008G70

## Drive isolation



15 - 220 kVA Indoor Type QL UL Listed aluminum three-phase

Input voltage	Output voltage	kVA	Frequency (Hz)	Weight (Lbs)	Frame size	Ordering code
230 Volts Delta	230Y/133 Volts	15	60Hz	240	XV371	9T83B4000G29
		20	60Hz	334	XV372	9T83B4001G29
		27	60Hz	334	XV372	9T83B4002G29
		34	60Hz	334	XV373	9T83B4003G29
		40	60Hz	415	XV373	9T83B4004G29
		51	60Hz	415	XV373	9T83B4005G29
		75	60Hz	620	XV374	9T83B4007G29
		93	60Hz	765	XV375	9T83B4008G29
230 Volts Delta	460Y/266 Volts	118	60Hz	1070	XV376	9T83B4009G29
		15	60Hz	240	XV371	9T83B4000G28
		20	60Hz	334	XV372	9T83B4001G28
		27	60Hz	334	XV372	9T83B4002G28
		34	60Hz	334	XV372	9T83B4003G28
		63	60Hz	620	XV374	9T83B4006G28
		93	60Hz	765	XV375	9T83B4008G28
		118	60Hz	1070	XV376	9T83B4009G28
460 Volts Delta	230Y/133	145	60Hz	1070	XV376	9T83B4010G28
		175	60Hz	1590	XV377	9T83B4011G28
		15	60 Hz	240	XV371	9T83B4000G23
		20	60 Hz	334	XV372	9T83B4001G23
		27	60 Hz	334	XV372	9T83B4002G23
		34	60 Hz	415	XV373	9T83B4003G23
		40	60 Hz	415	XV373	9T83B4004G23
		51	60 Hz	415	XV373	9T83B4005G23
460 Volts Delta	460Y/266	63	60 Hz	620	XV374	9T83B4006G23
		75	60 Hz	620	XV374	9T83B4007G23
		93	60 Hz	765	XV375	9T83B4008G23
		118	60 Hz	1070	XV376	9T83B4009G23
		145	60 Hz	1070	XV376	9T83B4010G23
		220	60 Hz	1590	XV377	9T83B4012G23
		15	60 Hz	240	XV371	9T83B4000G22
		20	60 Hz	334	XV372	9T83B4001G22
460 Volts Delta	460Y/266	27	60 Hz	334	XV372	9T83B4002G22
		34	60 Hz	415	XV373	9T83B4003G22
		40	60 Hz	415	XV373	9T83B4004G22
		51	60 Hz	415	XV373	9T83B4005G22
		63	60 Hz	620	XV374	9T83B4006G22
		75	60 Hz	620	XV374	9T83B4007G22
		93	60 Hz	765	XV375	9T83B4008G22
		118	60 Hz	1070	XV376	9T83B4009G22
575 Volts Delta	230Y/133	145	60 Hz	1070	XV376	9T83B4010G22
		175	60 Hz	1590	XV377	9T83B4011G22
		220	60 Hz	1590	XV377	9T83B4012G22
		20	60 Hz	334	XV372	9T83B4001G27
575 Volts Delta	460Y/266	63	60 Hz	620	XV374	9T83B4006G27
		75	60 Hz	620	XV374	9T83B4007G27
		118	60 Hz	1070	XV376	9T83B4009G27
		15	60 Hz	240	XV371	9T83B4000G26
575 Volts Delta	460Y/266	27	60 Hz	324	XV372	9T83B4002G26
		34	60 Hz	415	XV373	9T83B4003G26
		51	60 Hz	620	XV374	9T83B4005G26
		145	60 Hz	1070	XV376	9T83B4010G26
		175	60 Hz	1590	XV377	9T83B4011G26
		220	60 Hz	1590	XV377	9T83B4012G26

**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.

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## Totally enclosed, nonventilated (TENV)

### Table of contents

<b>Totally enclosed, nonventilated (TENV)</b>	
Product overview	5-50
Aluminum	5-51
Copper	5-51

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## Totally enclosed, nonventilated (TENV)

### Product overview



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 75 kVA for indoor or protected outdoor applications. TENV are excluded from DOE 2016 regulations.

#### Features

- Unique core and coil design using grain-oriented, annealed (non-aging) silicon steel
- Core and coil assemblies mounted on neoprene isolation pads
- Lifting eyes provided in top core clamp
- Flexible copper ground strap (Type QL)
- Lug kit included on most units up through 150kVA
- Copper ground bar kit included in most units up through 150kVA
- Indoor or outdoor use
- NEMA 3R enclosure

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TENV Transformer



**Totally enclosed, nonventilated (TENV)**



**Aluminum 150°C Rise three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
480	208Y/120	30	(+2, -4: 2.5%)	670	XV374	9T85B3872G80

**Copper 150°C Rise three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
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 three-phase NEMA TP-1 efficiency**

Input voltage	Output voltage	kVA	Taps	Net weight (Lbs)	Frame size	Ordering code
480	208Y/120	15	(+2, -4: 2.5%)	410	XV372	9T85C9871G80
		45	(+2, -4: 2.5%)	760	XV374	9T85C9873G80

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## Servicenter™ integrated transformer and load center

### Table of contents

<b>Servicenter™ integrated transformer and load center</b>	
Product overview	5-53
Single-phase	5-54
Three-phase	5-54

## Servicenter™ integrated transformer and load center

### Product overview



Single-Phase Servicenter™ (QMS)



Three-Phase Servicenter™ (QL)

#### 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 many 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 Class 220 (R) UL recognized insulation system with a 150°C rise.

**The load center**—The load center assembly includes the rugged ABB ReliaHome™ circuit breaker load center interior, primary breaker, and secondary breaker. 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.

#### Advantages

- Transformer, distribution 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 (QMS)
- 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
- Load centers have 10 kAIC rating
- Load centers have copper bus
- Three-phase Servicenters ship with rain shield kit for field installation

#### 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.

# Servicenter™ integrated transformer and load center



Single-Phase Servicenter™

### Single-Phase Indoor/Outdoor 60 Hz 115°C

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	Ordering code
480 Volts Delta	120/240 Volts	5	6	3	6	25A	30A	9T21S1050
		7.5	6	3	6	35A	40A	9T21S1070
		10	12	6	12	50A	50A	9T21S1100
		15	12	6	12	60A	70A	9T21S1150
		25	20	10	20	100A	150A	9T21S1250



Three-Phase Servicenter™

### Three-Phase<sup>2</sup> Indoor/Outdoor 60 Hz<sup>1</sup> 150°C DOE 2016 Efficiency Aluminum Transformer Windings

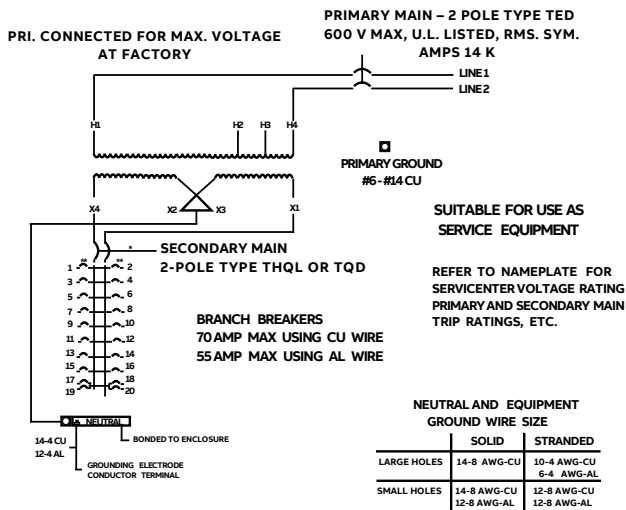
Input voltage	Output voltage	kVA	Max. branch spaces 1 THQL, 1-pole	Max. branch spaces 1 THQL, 2-pole	Total 1-pole spaces	Breaker rating-primary main	Breaker rating-secondary main	Ordering code
240 Volts Delta	208Y/120 Volts	15	12	4	12	100A	50A	9T17A0001
		30	24	8	24	100A	100A	9T17A0003
480 Volts Delta	208Y/120 Volts	15	12	4	12	40A	50A	9T17A0011
		22.5	18	6	18	70A	70A	9T17A0012
		30	24	8	24	90A	100A	9T17A0013
600 Volts Delta	208Y/120 Volts	15	12	4	12	40A	50A	9T17A0021
		30	24	8	24	40A	100A	9T17A0023

### Three-Phase<sup>2</sup> Indoor/Outdoor 60 Hz<sup>1</sup> 150°C DOE 2016 Efficiency Copper Transformer Windings

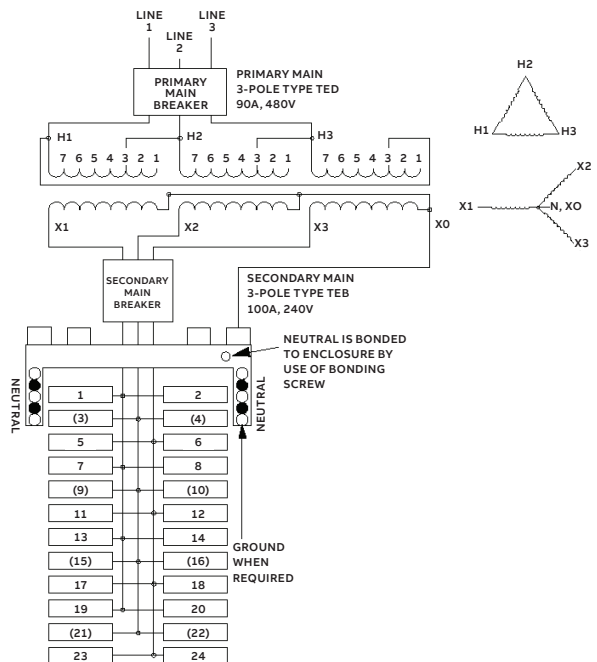
Input voltage	Output voltage	kVA	Max. branch spaces 1 THQL, 1-pole	Max. branch spaces 1 THQL, 2-pole	Total 1-pole spaces	Breaker rating-primary main	Breaker rating-secondary main	Ordering code
240 Volts Delta	208Y/120 Volts	15	12	4	12	100A	50A	9T17C0004
480 Volts Delta	208Y/120 Volts	15	12	4	12	40A	50A	9T17C0014
		22.5	18	6	18	70A	70A	9T17C0015
		30	24	8	24	90A	100A	9T17C0016

<sup>1</sup> (3) 5% taps 1 above and 2 below rated primary volts.

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



Typical Wiring Diagram Single-Phase



Typical Wiring Diagram Three-Phase<sup>3</sup>

<sup>3</sup> For 22.5 and 15 kVA three-phase Servicenters™, secondary main breaker is a backfed plug-in type with positive retainers.

## Accessories and lugs

Single-phase and three-phase

### Painted parts

Frame size	Rain shield kit	Lug kit	Ground kit	Wall mount bracket	Bottom pan
	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code
DX74C	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
DX75A	9T18Y1076G06	9T18Y1076G10	9T18Y1074G11	-	-
DX75C	9T18Y1074G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DX76A	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DX76C	9T18Y1076G06	9T18Y1076G10	9T18Y1074G11	-	-
DX77A	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DX77C	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DX78A	9T18Y1077G06	9T18Y1078G10	9T18Y1077G11	-	9T18Y1078G09
DX78C	9T18Y1077G06	9T18Y1078G10	9T18Y1077G11	-	9T18Y1078G09
DX79A	9T18Y1079G06	9T18Y1079G10	9T18Y1077G11	-	9T18Y1079G09
DX79C	9T18Y1079G06	9T18Y1079G10	9T18Y1077G11	-	9T18Y1079G09
DY05A	9T18Y1074G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DY05C	9T18Y1074G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DY08A	9T18Y1077G06	9T18Y1078G10	9T18Y1077G11	-	9T18Y1078G09
DY17A	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DY67A	9T18Y1067G06	9T18Y1067G10	9T18Y1077G11	-	9T18Y1067G09
DY75A	9T18Y1074G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DY75C	9T18Y1074G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DY76A	9T18Y1076G06	9T18Y1076G10	9T18Y1074G11	-	-
DY76C	9T18Y1076G06	9T18Y1076G10	9T18Y1074G11	-	-
DY77A	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DY77C	9T18Y1077G06	9T18Y1077G10	9T18Y1077G11	-	9T18Y1077G09
DY78A	9T18Y1077G06	9T18Y1078G10	9T18Y1077G11	-	9T18Y1078G09
DY78C	9T18Y1077G06	9T18Y1078G10	9T18Y1077G11	-	9T18Y1078G09
DY79A	9T18Y1079G06	9T18Y1079G10	9T18Y1077G11	-	9T18Y1079G09
H371C	9T18Y4317G05	-	9T18Y1077G11	-	-
H372C	9T18Y4317G06	-	9T18Y1077G11	-	-
H373C	9T18Y4317G06	-	9T18Y1077G11	-	-
H374C	9T18Y4317G06	-	9T18Y1077G11	-	-
H375C	9T18Y4322G88	-	-	-	9T18Y4504G79
H376C	9T18Y4322G88	-	9T18Y1077G11	-	9T18Y4504G79
UX02C	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX71A	9T18Y1071G06	9T18Y1071G10	9T18Y1071G11	9T18Y1071G07	-
UX71C	9T18Y1071G06	9T18Y1071G10	9T18Y1071G11	9T18Y1071G07	-
UX72A	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX72C	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX73A	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX73C	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX74A	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UX74C	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY03A	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UY14C	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY22A	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UY24A	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY72A	9T18Y1072G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UY74A	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY74C	9T18Y1074G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
XV173	9T18Y1074G06	9T18Y7241G03	-	-	-
XV371	9T18Y4317G11	9T18Y7327	-	-	-
XV372	9T18Y4317G05	9T18Y7240	-	-	-
XV373	9T18Y4317G05	9T18Y7240	-	-	-
XV374	9T18Y4317G06	9T18Y7241	-	-	-
XV375	9T18Y4317G06	9T18Y7242	-	-	-
XV376	9T18Y4317G07	9T18Y7242G03	-	-	-
XV377	9T18Y4322G88	9T18Y7242G02	9T18Y1077G11	-	9T18Y4504G79
YF378	9T18Y4322G88	-	9T18Y1077G11	-	9T18Y4504G79
YX171	9T18Y1072G06	9T18Y7240G02	-	9T18Y1071G07	-
YX172	9T18Y1074G06	9T18Y7240G02	-	9T18Y1074G07	-
YX174	9T18Y1074G06	9T18Y7241G03	-	9T18Y1074G07	-
YX175	9T18Y4322G77	9T18Y7240G03	-	-	9T18Y4504G77

## Accessories and lugs

Single-phase and three-phase

### Stainless steel parts

Frame size	Rain shield kit	Lug kit	Ground kit	Wall mount bracket	Bottom pan
	Ordering code	Ordering code	Ordering code	Ordering code	Ordering code
DX74C	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	-	-
DX75A	9T18Y1176G06	9T18Y1076G10	9T18Y1074G11	-	-
DX75C	9T18Y1174G06	9T18Y1075G10	9T18Y1074G11	9T18Y1074G07	-
DX76C	9T18Y1176G06	9T18Y1076G10	9T18Y1074G11	-	-
DY05C	9T18Y1174G06	9T18Y1075G10	9T18Y1074G11	-	-
DY75A	9T18Y1174G06	9T18Y1075G10	9T18Y1074G11	-	-
DY75C	9T18Y1174G06	9T18Y1075G10	9T18Y1074G11	-	-
DY76A	9T18Y1176G06	9T18Y1076G10	9T18Y1074G11	-	-
DY76C	9T18Y1176G06	9T18Y1076G10	9T18Y1074G11	-	-
UX71A	9T18Y1171G06	9T18Y1071G10	9T18Y1071G11	-	-
UX71C	9T18Y1171G06	9T18Y1071G10	9T18Y1071G11	-	-
UX72A	9T18Y1172G06	9T18Y1072G10	9T18Y1071G11	9T18Y1071G07	-
UX72C	9T18Y1172G06	9T18Y1072G10	9T18Y1071G11	-	-
UX73A	9T18Y1172G06	9T18Y1072G10	9T18Y1071G11	-	-
UX73C	9T18Y1172G06	9T18Y1072G10	9T18Y1071G11	-	-
UX74A	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UX74C	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY14A	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	-	-
UY14C	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	-	-
UY72A	9T18Y1172G06	9T18Y1072G10	9T18Y1071G11	-	-
UY74A	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	9T18Y1074G07	-
UY74C	9T18Y1174G06	9T18Y1074G10	9T18Y1074G11	-	-

## Lug kit details

### Single-phase and three-phase

Lug connector kits are readily available and can be ordered through the sales office, through the distributor, or can be purchased commercially. Lug kit and ground bar kits are included in most units up through 150 kVA.

Frame size	Bus bar holes		Kit number	Lug size #1 (primary)			Lug size #2 (secondary)			Specified lug kit			Notes
	Primary (available hole) and size	Secondary (available hole) and size		Qty	Conductor size <sup>1</sup>	Stud hole size <sup>2</sup> (in.)	Qty	Conductor size <sup>1</sup>	Stud hole size <sup>2</sup> (in.)	Lug size #3 (X0)			
										Qty	Conductor size <sup>1</sup>	Stud hole size <sup>2</sup> (in.)	
DX75A	(1) .563 dia	(2) .563 dia	9T18Y1075G10	3	6 awg to 350 mcm	3/8	9	6 awg to 350 mcm	3/8	2	6 awg to 350 mcm	3/8	
DX76A	(4) .563 dia	(4) .563 dia	9T18Y1077G10	6	6 awg to 350 mcm	3/8	12	4 awg to 500 mcm	3/8	3	4 awg to 500 mcm	3/8	
DX77A	(4) .563 dia	(4) .563 dia	9T18Y1077G10	6	6 awg to 350 mcm	3/8	12	4 awg to 500 mcm	3/8	3	4 awg to 500 mcm	3/8	
DX78A	(4) .563 dia	(4) .563 dia	9T18Y1078G10	6	6 awg to 350 mcm	3/8	12	2 awg to 600 mcm	3/8	3	4 awg to 500 mcm	3/8	
DX79A	(4) .563 dia	(6) .563 dia	9T18Y1079G10	12	6 awg to 350 mcm	3/8	24	4 awg to 500 mcm	3/8	5	4 awg to 500 mcm	3/8	
DY05A or C	(1) .563 dia	(2) .563 dia	9T18Y1075G10	3	6 awg to 350 mcm	3/8	9	6 awg to 350 mcm	3/8	2	6 awg to 350 mcm	3/8	
DY17A	(4) .563 dia	(4) .563 dia	9T18Y1077G10	6	6 awg to 350 mcm	3/8	12	4 awg to 500 mcm	3/8	3	4 awg to 500 mcm	3/8	
DY67A	(6) .563 dia	(6) .563 dia	9T18Y1067G10	12	4 awg to 500 mcm	3/8	33	4 awg to 500 mcm	3/8	14	4 awg to 500 mcm	3/8	
DY75A or C	(1) .563 dia	(2) .563 dia	9T18Y1075G10	3	6 awg to 350 mcm	3/8	9	6 awg to 350 mcm	3/8	2	6 awg to 350 mcm	3/8	
DY76A or C	(1) .563 dia	(2) .563 dia	9T18Y1076G10	3	6 awg to 350 mcm	3/8	9	4 awg to 500 mcm	3/8	2	4 awg to 500 mcm	3/8	
DY77A or C	(4) .563 dia	(4) .563 dia	9T18Y1077G10	6	6 awg to 350 mcm	3/8	12	4 awg to 500 mcm	3/8	3	4 awg to 500 mcm	3/8	
DY78A or C	(4) .563 dia	(4) .563 dia	9T18Y1078G10	6	6 awg to 350 mcm	3/8	12	2 awg to 600 mcm	3/8	3	4 awg to 500 mcm	3/8	
DY79A	(4) .563 dia	(6) .563 dia	9T18Y1079G10	12	6 awg to 350 mcm	3/8	24	4 awg to 500 mcm	3/8	5	4 awg to 500 mcm	3/8	
UX02C	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UX71A or C	(1) .400 dia	(1) .400 dia	9T18Y1071G10	3	14 awg to 1/0 awg	1/4	3	14 awg to 1/0 awg	1/4	1	14 awg to 1/0 awg	1/4	<sup>1</sup>
UX72A or C	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UX73A or C	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UX74A or C	(2) .400 dia	(2) .400 dia	9T18Y1074G10	3	6 awg to 250 mcm	5/16	6	6 awg to 350 mcm	3/8	2	6 awg to 250 mcm	5/16	
UY03A	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UY14C	(2) .400 dia	(2) .400 dia	9T18Y1074G10	3	6 awg to 250 mcm	5/16	6	6 awg to 350 mcm	3/8	2	6 awg to 250 mcm	5/16	
UY22A	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UY24A	(2) .400 dia	(2) .400 dia	9T18Y1074G10	3	6 awg to 250 mcm	5/16	6	6 awg to 350 mcm	3/8	2	6 awg to 250 mcm	5/16	
UY72A	(1) .400 dia	(1) .400 dia	9T18Y1072G10	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
UY74A or C	(2) .400 dia	(2) .400 dia	9T18Y1074G10	3	6 awg to 250 mcm	5/16	6	6 awg to 350 mcm	3/8	2	6 awg to 250 mcm	5/16	
XV371	(1) .400 dia	(1) .400 dia	9T18Y7327	3	14 awg to 1/0 awg	1/4	3	14 awg to 1/0 awg	1/4	1	14 awg to 1/0 awg	1/4	<sup>1</sup>
XV372	(1) .400 dia	(1) .400 dia	9T18Y7240	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
XV373	(1) .400 dia	(1) .400 dia	9T18Y7240	3	6 awg to 250 mcm	5/16	3	6 awg to 250 mcm	5/16	1	6 awg to 250 mcm	5/16	<sup>1</sup>
XV374	(2) .400 dia	(2) .400 dia	9T18Y7241	3	6 awg to 250 mcm	3/8	6	6 awg to 350 mcm	3/8	2	6 awg to 350 mcm	3/8	
XV375	(1) .563 dia	(2) .563 dia	9T18Y7243	3	6 awg to 350 mcm	3/8	3	2 awg to 600 mcm	3/8	1	2 awg to 600 mcm	3/8	
XV376	(1) .563 dia	(2) .563 dia	9T18Y7242G03	3	6 awg to 350 mcm	3/8	6	4 awg to 500 mcm	3/8	2	4 awg to 500 mcm	3/8	
XV377	(2) .563 dia	(4) .563 dia	9T18Y7242G02	6	6 awg to 350 mcm	3/8	12	6 awg to 350 mcm	3/8	4	6 awg to 350 mcm	3/8	

<sup>1</sup> Recommended maximum cable range

<sup>2</sup> Screws: 1/4" = 1" long; 5/16" = 1", long; 3/8" = 1-1/2", 1-3/4", 2", 2-1/4", long.

**Note Number 1:** Proximity of bus bars would prohibit dual lugs per bus bar

## Enclosure parts

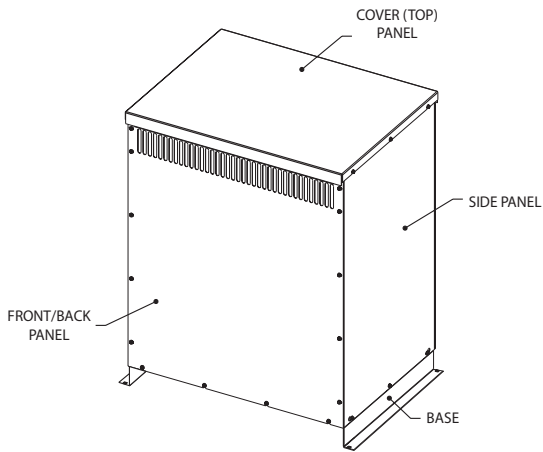
Frame size	Enclosure kits	Front/back panel	Side panel	Cover (top)
	Ordering code	Ordering code	Ordering code	Ordering code
DX74C	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
DX75A	9T18Y1076	9T18Y1076G03	9T18Y1076G04	9T18Y1076G05
DX75C	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
DX76A	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DX76C	9T18Y1076	9T18Y1076G03	9T18Y1076G04	9T18Y1076G05
DX77A	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DX77C	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DX78A	9T18Y1078	9T18Y1078G03	9T18Y1078G04	9T18Y1078G05
DX78C	9T18Y1078	9T18Y1078G03	9T18Y1078G04	9T18Y1078G05
DX79A	9T18Y1079	9T18Y1079G03	9T18Y1079G04	9T18Y1079G05
DX79C	9T18Y1079	9T18Y1079G03	9T18Y1079G04	9T18Y1079G05
DY05A	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
DY05C	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
DY08A	9T18Y1078	9T18Y1078G03	9T18Y1078G04	9T18Y1078G05
DY17A	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DY67A	-	9T18Y1067G03	9T18Y1067G04	9T18Y1067G05
DY75A	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
DY75C	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
DY76A	9T18Y1076	9T18Y1076G03	9T18Y1076G04	9T18Y1076G05
DY76C	9T18Y1076	9T18Y1076G03	9T18Y1076G04	9T18Y1076G05
DY77A	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DY77C	9T18Y1077	9T18Y1077G03	9T18Y1077G04	9T18Y1077G05
DY78A	9T18Y1078	9T18Y1078G03	9T18Y1078G04	9T18Y1078G05
DY78C	9T18Y1078	9T18Y1078G03	9T18Y1078G04	9T18Y1078G05
DY79A	9T18Y1079	9T18Y1079G03	9T18Y1079G04	9T18Y1079G05
H371C	9T18Y4412	9T18Y4412G03	9T18Y4412G04	9T18Y4412G05
H372C	9T18Y4413	9T18Y4413G03	9T18Y4413G04	9T18Y4413G05
H373C	9T18Y4413	9T18Y4413G03	9T18Y4413G04	9T18Y4413G05
H374C	9T18Y4414	9T18Y4414G03	9T18Y4414G04	9T18Y4413G05
H375C	9T18Y4506G79	9T18Y4502G79	9T18Y4505G79	9T18Y4501G79
H376C	9T18Y4506G79	9T18Y4502G79	9T18Y4505G79	9T18Y4501G79
UX02C	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UX71A	9T18Y1071	9T18Y1071G03	9T18Y1071G04	9T18Y1071G05
UX71C	9T18Y1071	9T18Y1071G03	9T18Y1071G04	9T18Y1071G05
UX72A	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UX72C	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UX73A	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UX73C	-	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UX74A	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
UX74C	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
UY03A	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UY14C	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
UY22A	9T18Y1072G01	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UY24A	-	-	9T18Y1074G04	9T18Y1074G05
UY72A	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
UY74A	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
UY74C	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
XV173	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
XV371	9T18Y4421	9T18Y4421G03	9T18Y4421G04	9T18Y4421G05
XV372	9T18Y4412	9T18Y4412G03	9T18Y4412G04	9T18Y4412G05
XV373	9T18Y4412	9T18Y4412G03	9T18Y4412G04	9T18Y4412G05
XV374	9T18Y4413	9T18Y4413G03	9T18Y4413G04	9T18Y4413G05
XV375	9T18Y4414	9T18Y4414G03	9T18Y4414G04	9T18Y4413G05
XV376	9T18Y4415	9T18Y4415G03	9T18Y4415G04	9T18Y4415G06
XV377	9T18Y4506G79	9T18Y4502G79	9T18Y4505G79	9T18Y4501G79
YF378	9T18Y4506G88	9T18Y4502G88	9T18Y4505G88	9T18Y4501G79
YX171	9T18Y1072	9T18Y1072G03	9T18Y1072G04	9T18Y1072G05
YX172	9T18Y1074	9T18Y1074G03	9T18Y1074G04	9T18Y1074G05
YX174	9T18Y1075	9T18Y1075G03	9T18Y1075G04	9T18Y1074G05
YX175	9T18Y4506G77	9T18Y4502G77	9T18Y4505G77	9T18Y4501G77

Note: Enclosure kits and front kits are not available for transformers with factory-installed IR windows

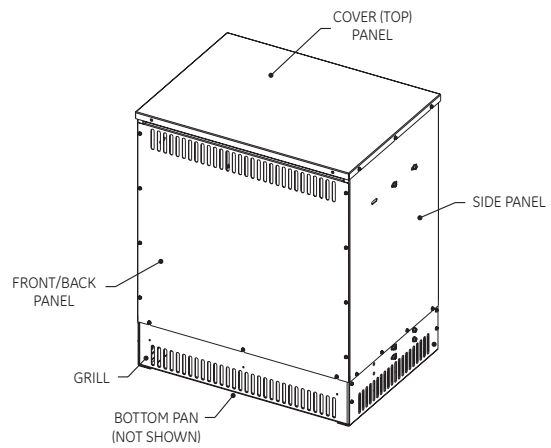
## Enclosure parts

### Totally enclosed non-ventilated

Frame size	Enclosure kits	Front/back panel	Side panel	Cover (top)
	Ordering code	Ordering code	Ordering code	Ordering code
XV372	9T18Y4772	9T18Y4772G03	9T18Y4412G04	9T18Y4412G05
XV373	9T18Y4772	9T18Y4772G03	9T18Y4412G04	9T18Y4412G05
XV374	9T18Y4774	9T18Y4774G03	9T18Y4413G04	9T18Y4413G05
XV375	9T18Y4775	9T18Y4775G03	9T18Y4414G04	9T18Y4413G05



ENCLOSURE KIT: 1 COVER + 2 SIDES + 2 FRONTS (QL)



ENCLOSURE KIT: 1 COVER + 2 SIDES + 2 FRONTS (QF)

#### 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	-

**Note:** Bottom pan is optional on type QF units.

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## BABA compliant

### Table of contents

<b>BABA compliant</b>	
Product overview	5-61
Aluminum coil	5-62
Copper coil	5-62
BABA accessories	5-62

## BABA compliant

### Product overview



BABA compliant transformer

In alignment with the Build America, Buy America Act (BABA), our BABA compliant transformers are manufactured and assembled in the United States.

#### What does it mean to comply with BABA?

The Build America, Buy America Act was enacted as part of the Infrastructure Investment and Jobs Act on November 15, 2021 (Pub. L. 117-58) Its primary objective is to establish a minimum domestic content procurement preference for all federally financial assisted United States infrastructure projects utilizing funds obligated after May 14, 2022.

The BABA is implemented at 2 CFR Part 184 and requires all of the iron, steel construction materials and manufactured products incorporated into the project are produced in the United States.

#### Certifications and standards

- [BABA compliant](#) (Build America, Buy America Act)
- NEMA ST-20 - Dry Type Transformers for General Purpose Applications
- UL 1561 - Dry Type General Purpose Power Transformers
- DOE 2016 Efficiency compliance - as specified in 10 CFR Part 431, Subpart K
- Designed and tested in accordance with CBC 2022, IBC 2019, ASCE 7.05-2016, and certified under OSHPD standards.

#### Features

- BABA compliant design: Fully designed, manufactured and assembled in the U.S. to meet Buy America, Build America (BABA) requirements
- Efficiency: Meets DOE 2016 efficiency standards, ensuring lower energy losses and optimized performance
- Available from 15 kVA to 500 kVA
- Standard NEMA 3R enclosure up to 150 kVA for indoor/outdoor use; optional available rain shield kit for units 225 kVA and higher
- Offered with aluminum or copper windings to suit performance and budget needs
- Accessory options: Rodent screen, wall-mount brackets, and lug kits available for added installation flexibility and protection

#### Benefits

- Eligibility for federal projects: Enables participation in federally funded U.S. infrastructure projects
- Grant accessibility: Simplifies qualification for government agency grants and funding programs
- Certified compliance: Verified BABA documentation provides peace of mind for contractors and end users
- Localized supply chain: U.S. based sourcing and manufacturing reduce lead time and logistic risks
- Support domestic manufacturing: Strengthens U.S. industry and job creation
- Economic resilience: Promotes regional growth and supply chain stability

## BABA compliant



### Additional specifications

- NEMA 3R enclosure standard up through 150 kVA
- Wall mount up to 75 kVA
- Sound level: Standard
- Frequency: 60 Hz
- Taps (+2, -4: 2.5%)
- Ambient Temperature: 40° C
- Insulation Class: 220° C
- Paint: ANSI 61 Gray
- HV-KV BIL: 10
- LV-KV BIL: 10

### K = 1 150°C Rise aluminum coil three-phase

Input voltage	Output voltage	kVA	Approx. net weight (Lbs)	Ordering code
480	208Y/120	15	230	9T03A0001
		30	360	9T03A0002
		45	400	9T03A0003
		75	570	9T03A0004
		112.5	760	9T03A0005
		150	1005	9T03A0006
		225	1445	9T03A0007
		300	1650	9T03A0008
		500	2750	9T03A0009

### K = 1 150°C Rise copper coil three-phase

Input voltage	Output voltage	kVA	Net weight (Lbs)	Ordering code
480	208Y/120	30	250	9T03C0002
		45	455	9T03C0003
		75	645	9T03C0004
		112.5	840	9T03C0005

### BABA accessories

BABA accessories	Rainshield kit	Rodent/bird screen	Wall mount bracket	Lug kit	Outline drawing
	Ordering code	Ordering code	Ordering code	Ordering code	
9T03A0001	Included	9T03Y1071G09	9T03Y1071G07	9T03Y1071G10	9T03A0001 Drawing
9T03A0002	Included	9T03Y1072G09	9T03Y1071G07	9T03Y1071G10	9T03A0002 Drawing
9T03A0003	Included	9T03Y1072G09	9T03Y1071G07	9T03Y1071G10	9T03A0003 Drawing
9T03A0004	Included	9T03Y1074G09	9T03Y1074G07	9T03Y1074G10	9T03A0004 Drawing
9T03A0005	Included	9T03Y1075G09	-	9T03Y1074G10	9T03A0005 Drawing
9T03A0006	Included	9T03Y1076G09	-	9T03Y1076G10	9T03A0006 Drawing
9T03A0007	9T03Y1077G06	9T03Y1077G09	-	9T03Y1076G10	9T03A0007 Drawing
9T03A0008	9T03Y1077G06	9T03Y1077G09	-	9T03Y1076G10	9T03A0008 Drawing
9T03A0009	9T03Y1079G06	9T03Y1079G09	-	9T03Y1079G10	9T03A0009 Drawing
9T03C0002	Included	9T03Y1072G09	9T03Y1071G07	9T03Y1071G10	9T03C0002 Drawing
9T03C0003	Included	9T03Y1072G09	9T03Y1071G07	9T03Y1071G10	9T03C0003 Drawing
9T03C0004	Included	9T03Y1074G09	9T03Y1074G07	9T03Y1074G10	9T03C0004 Drawing
9T03C0005	Included	9T03Y1075G09	-	9T03Y1074G10	9T03C0005 Drawing