

Industrial Control Transformers



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Standards and Certifications

Eaton dry-type distribution transformers are approved, listed, recognized or may comply with the following standards.

Engineering Standards

Catalog Product Name	UL Standard ①	UL/cUL File Number	UL Listed Control Number	cUL Energy Efficiency File Number	CSA File Number	Insulation System Temp/°C	kVA Single-Phase	kVA Three-Phase	Applicable IEC Standard
Industrial Control Transformer									
MTE	5085	E46323	702X	—	—	105	0.025–1.5	N/A	61558
MTK	5085	E46323	702X	—	—	180	0.05–5	N/A	61558
Encapsulated Transformer									
AP	5085	E10156	591H	—	—	180	3–10	N/A	61558
AP	1561	E78389	591H	—	—	180	15	N/A	61558
EP	5085	E10156	591H	—	LR60545	180	0.05–10	N/A	61558
EP	1561	E78389	591H	EV157 ②	LR60545 ③	180	15–50	N/A	61558 ④ / 726 ⑤
EPT	5085	E10156	591H	—	LR60545	180	N/A	3–9	61558 ⑥ / 726 ⑦
EPT	1561	E78389	591H	EV157 ⑧	LR60545 ⑨	180	N/A	15–75	726
MPC	1062	E53449	591H	—	LR60546	180	3–25	15–30	—
Ventilated Transformer									
DS-3	1561	E78389	591H	—	—	220	15–167	N/A	60726
DT-3	1561	E78389	591H	—	—	220	N/A	15–750	60726
KT	1561	E78389	591H	—	—	220	N/A	9–500	N/A

Notes

- ① UL 5085 replaces UL 506.
- ② Applies to 25–50 kVA.
- ③ Applies to 25 kVA.
- ④ Applies to 15–25 kVA.
- ⑤ Applies to 37.5 kVA.
- ⑥ Applies to 3 kVA.
- ⑦ Applies to 5–9 kVA.
- ⑧ Applies to 30–75 kVA.
- ⑨ Applies to 30 kVA.

In addition to the above standards, Eaton dry-type distribution transformers are also manufactured in compliance with the applicable standards listed below.

Not all of the following standards apply to every transformer.

- NEC:** National Electrical Code®
- NEMA ST-1:** Specialty Transformers (C89.1) (control transformers).
- NEMA ST-20:** General-Purpose Transformers.
- NEMA 250:** Enclosures for Electrical Equipment (1000 volts maximum).
- IEEE C57.12.01:** General Requirements for Dry-Type Distribution and Power Transformers (including those with solid-cast and/or resin-encapsulated windings).

ANSI C57.12.70: Terminal Markings and Connections for Distribution and Power Transformers.

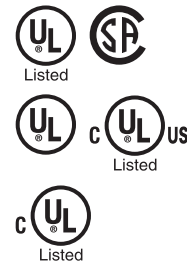
ANSI C57.12.91: Standard Test Code for Dry-Type Distribution and Power Transformers.

CSA C22 No. 47-M90: Air-Cooled Transformers (Dry-Type).

CSA C9-M1981: Dry-Type Transformers.

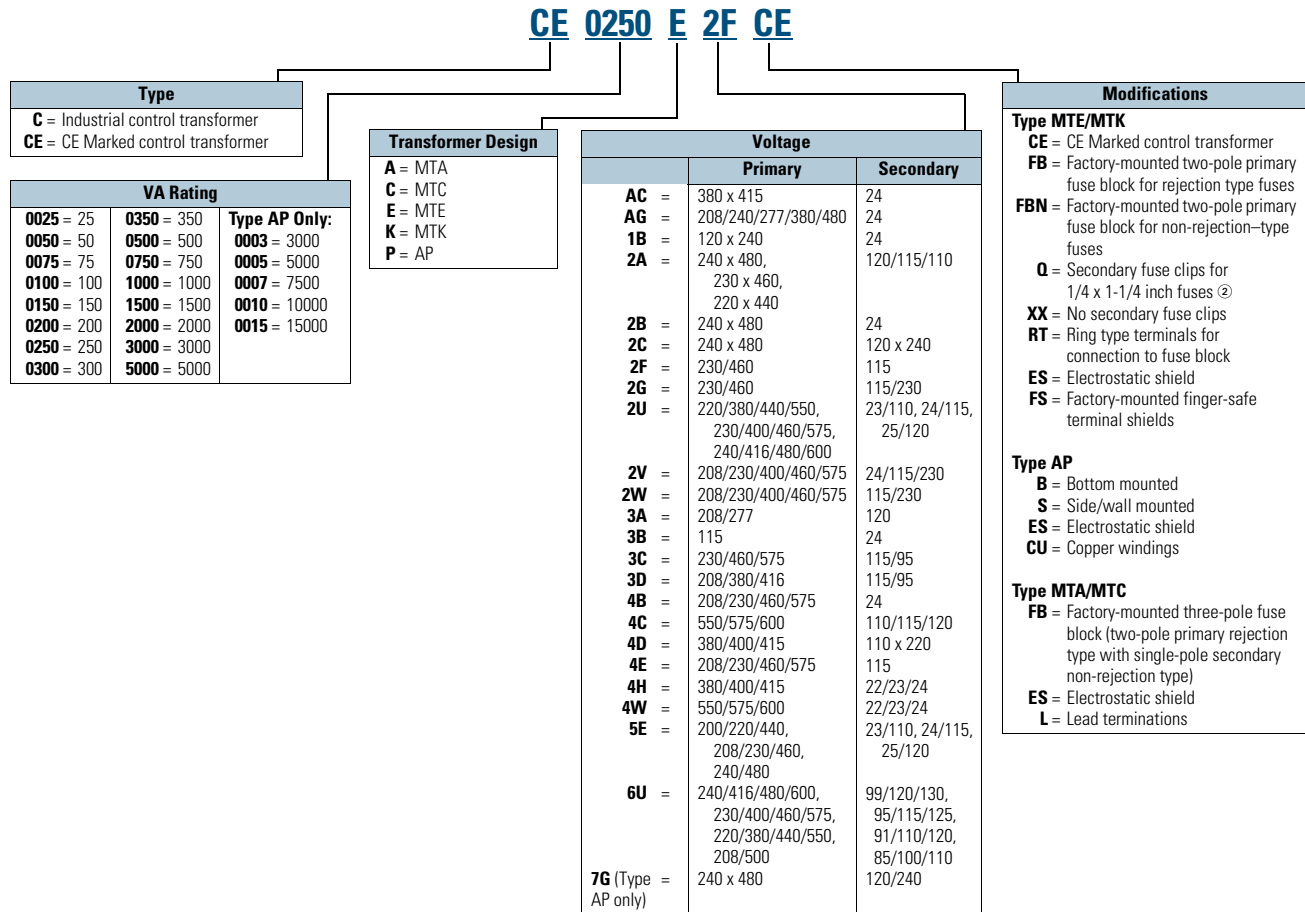
CSA C22.2 No. 66: Specialty Transformers.

CSA 802-94: Maximum Losses for Distribution, Power and Dry-Type Transformers.



Catalog Number Selection

Industrial Control Transformers, CE Marked Control Transformers—Example: CE0250E2FCE ^①



Notes

^① For Eaton's dry-type transformers catalog number selection, see Volume 2, **CA08100003E**.

^② Fuse clip covers not available with this option.

Contact your local Eaton sales office for voltage combinations not shown. Use table for catalog number breakdown only. Do not use to create catalog numbers because all combinations may not be valid.

Type MTE Transformer



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Type MTE

Product Description

Note: The following pages provide listings for most standard transformer ratings and styles. For other ratings or styles not shown, or for special enclosure types (including stainless steel), refer to Eaton.

- Epoxy-encapsulated coils

Application Description

Transformers provide stepped-down voltages to machine tool control devices, enabling control circuits to be isolated from all power and lighting circuits. This allows the use of grounded or ungrounded circuits that are independent of the power or lighting grounds; thus, greater safety is afforded the operator. The control transformer line is particularly adaptable on applications where compact construction is demanded.

Note: The MTG “open core-coil design” has been superseded by the epoxy-encapsulated core-coil design MTE with no change to dimensions or functionality.

Features, Benefits and Functions

- Epoxy encapsulated
- Laminations of high-quality silicon steel to minimize core losses and optimize performance
- Copper magnet wire for high-quality, efficient operation
- Secondary fuse clips where applicable
- Optional primary fusing
- Molded-in terminals
- 50/60 Hz operation
- 130°C insulation system standard
- Performance meets/exceeds requirements of ANSI/NEMA ST-1
- Regulation exceeds ANSI/NEMA requirements for all ratings
- 25–1500 VA ratings
- Molded-in terminals for maximum durability

Standards and Certifications

- UL listed
- cUL listed
- RoHS compliant



Industry Standards

All Eaton dry-type distribution and control transformers are built and tested in accordance with applicable NEMA, ANSI and IEEE Standards. All 600 volt class transformers are UL listed unless otherwise noted.

Catalog Number Selection

Please refer to **Page V7-T7-3**.

Product Selection

Additional Product Selection information is available in Volume 2, **CA08100003E**.

Type MTE

Primary: 240 x 480, 230 x 460, 220 x 440 with Jumpers
Secondary: 120/115/110 with Fuse Clips for
13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
25	1	1.7 (0.8)	C0025E2A ②
50	1	2.6 (1.2)	C0050E2A ②
75	1	3.5 (1.6)	C0075E2A ②
100	1	4.2 (1.9)	C0100E2A ②
150	1	6.7 (3.0)	C0150E2A
200	1	8.5 (3.9)	C0200E2A
250	1	10.0 (4.5)	C0250E2A
300	1	11.3 (5.1)	C0300E2A
350	1	13.6 (6.2)	C0350E2A
500	1	19.2 (8.7)	C0500E2A
750	1	28.1 (12.8)	C0750E2A
1000	1	29.5 (13.4)	C1000E2A
1500	1	40.0 (18.1)	C1500E2A

Primary: 240 x 480 with Jumpers
Secondary: 24 with Fuse Clips for 13/32 x 1-1/2 Fuses
(through 500 VA)

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	2	2.7 (1.2)	C0050E2B ②
75	2	3.5 (1.6)	C0075E2B ②
100	2	4.2 (1.9)	C0100E2B ②
150	2	6.7 (3.0)	C0150E2B
200	2	8.5 (3.9)	C0200E2B
250	2	10.1 (4.6)	C0250E2B
300	2	11.4 (5.2)	C0300E2B
350	2	13.4 (6.1)	C0350E2B
500	2	17.5 (7.9)	C0500E2B
750	2	28.1 (12.8)	C0750E2B

Primary: 120 X 240 with Jumpers
Secondary: 24 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	3	2.6 (1.2)	C0050E1B ②
75	3	3.6 (1.6)	C0075E1B ②
100	3	4.4 (2.0)	C0100E1B ②
150	3	6.7 (3.0)	C0150E1B
200	3	8.3 (3.8)	C0200E1B
250	3	10.1 (4.6)	C0250E1B
300	3	11.2 (5.1)	C0300E1B
350	3	13.2 (6.0)	C0350E1B
500	3	17.5 (7.9)	C0500E1B

Primary: 208/277
Secondary: 120 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	4	2.9 (1.3)	C0050E3A ②
75	4	3.8 (1.7)	C0075E3A ②
100	4	4.5 (2.0)	C0100E3A ②
150	4	6.9 (3.1)	C0150E3A
200	4	8.7 (3.9)	C0200E3A
250	4	10.2 (4.6)	C0250E3A
300	4	11.4 (5.2)	C0300E3A
350	4	13.7 (6.2)	C0350E3A
500	4	17.2 (7.8)	C0500E3A
750	4	25.7 (11.7)	C0750E3A

Notes

- ① See Page V7-T7-11 for wiring diagrams.
 ② 105°C insulation system.

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Primary: 120 x 240 with Jumpers and Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 24 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	3	2.8 (1.3)	C0050E1BFB ②
75	3	3.8 (1.7)	C0075E1BFB ②
100	3	4.6 (2.1)	C0100E1BFB ②
150	3	6.9 (3.1)	C0150E1BFB
200	3	8.5 (3.9)	C0200E1BFB
250	3	10.3 (4.7)	C0250E1BFB
300	3	11.4 (5.2)	C0300E1BFB
350	3	13.4 (6.1)	C0350E1BFB
500	3	17.7 (8.0)	C0500E1BFB

Primary: 208/277 with Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 120 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	4	3.1 (1.4)	C0050E3AFB ②
75	4	4.0 (1.8)	C0075E3AFB ②
100	4	4.7 (2.1)	C0100E3AFB ②
150	4	7.1 (3.2)	C0150E3AFB
200	4	8.9 (4.0)	C0200E3AFB
250	4	10.4 (4.7)	C0250E3AFB
300	4	11.6 (5.3)	C0300E3AFB
350	4	13.9 (6.3)	C0350E3AFB
500	4	17.4 (7.9)	C0500E3AFB

Primary: 550/575/600 with Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 110/115/120 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	10	2.9 (1.3)	C0050E4CFB ②
75	10	3.8 (1.7)	C0075E4CFB ②
100	10	4.4 (2.0)	C0100E4CFB ②
150	10	7.0 (3.2)	C0150E4CFB
200	10	8.6 (3.9)	C0200E4CFB
250	10	10.2 (4.6)	C0250E4CFB
300	10	11.5 (5.2)	C0300E4CFB
350	10	13.8 (6.3)	C0350E4CFB
500	10	17.0 (7.7)	C0500E4CFB
750	10	25.9 (11.8)	C0750E4CFB

Primary: 380/400/415 with Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 22/23/24 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	13	2.6 (1.2)	C0050E4HFB ②
75	13	3.7 (1.7)	C0075E4HFB ②
100	13	4.2 (1.9)	C0100E4HFB ②
150	13	6.7 (3.0)	C0150E4HFB
200	13	8.4 (3.8)	C0200E4HFB
250	13	10.2 (4.6)	C0250E4HFB

Primary: 550/575/600 with Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 22/23/24 with Fuse Clips for 13/32 x 11/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	12	2.7 (1.2)	C0050E4WFB ②
75	12	3.7 (1.7)	C0075E4WFB ②
100	12	4.2 (1.9)	C0100E4WFB ②
150	12	6.7 (3.0)	C0150E4WFB
200	12	8.4 (3.8)	C0200E4WFB
250	12	10.2 (4.6)	C0250E4WFB

Primary: 230/460/575 with Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 115/95 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	5	3.7 (1.7)	C0050E3CFB ②
75	5	4.7 (2.1)	C0075E3CFB ②
100	5	6.2 (2.8)	C0100E3CFB ②
150	5	7.9 (3.6)	C0150E3CFB
200	5	9.2 (4.2)	C0200E3CFB
250	5	9.9 (4.5)	C0250E3CFB
300	5	11.9 (5.4)	C0300E3CFB
350	5	16.7 (7.6)	C0350E3CFB
500	5	21.7 (9.9)	C0500E3CFB

Notes

- ① See Page V7-T7-11 for wiring diagrams.
- ② 105°C insulation system.

Wiring Diagrams

Diagram 1

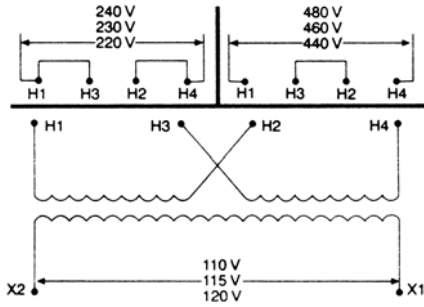


Diagram 5

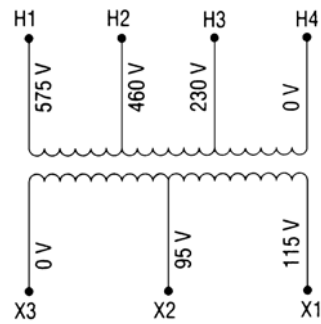


Diagram 2

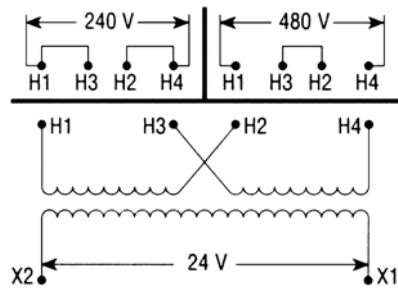


Diagram 6

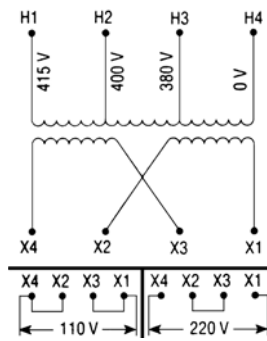


Diagram 3

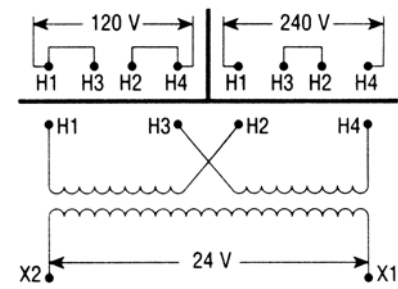


Diagram 7

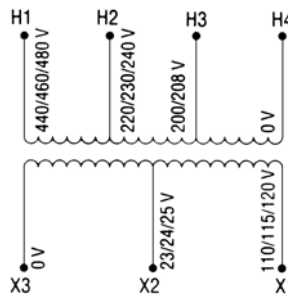


Diagram 4

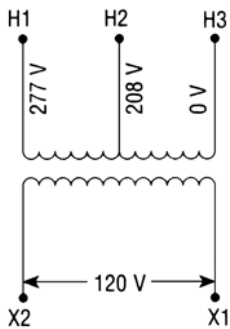


Diagram 8

