

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

Type			Transformer Design			Voltage			Modifications		
C = Industrial control transformer CE = CE Marked control transformer			A = MTA C = MTC E = MTE K = MTK P = AP			Primary			Type MTE/MTK CE = CE Marked control transformer FB = Factory-mounted two-pole primary fuse block for rejection type fuses FBN = Factory-mounted two-pole primary fuse block for non-rejection-type fuses Q = Secondary fuse clips for 1/4 x 1-1/4 inch fuses ② XX = No secondary fuse clips RT = Ring type terminals for connection to fuse block ES = Electrostatic shield FS = Factory-mounted finger-safe terminal shields		
VA Rating						Secondary			Type AP B = Bottom mounted S = Side/wall mounted ES = Electrostatic shield CU = Copper windings		
0025 = 25	0350 = 350	Type AP Only:							Type MTA/MTC FB = Factory-mounted three-pole fuse block (two-pole primary rejection type with single-pole secondary non-rejection type) ES = Electrostatic shield L = Lead terminations		
0050 = 50	0500 = 500	0003 = 3000									
0075 = 75	0750 = 750	0005 = 5000									
0100 = 100	1000 = 1000	0007 = 7500									
0150 = 150	1500 = 1500	0010 = 10000									
0200 = 200	2000 = 2000	0015 = 15000									
0250 = 250	3000 = 3000										
0300 = 300	5000 = 5000										

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.

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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**.

**Primary: 380/400/415 with Two-Pole
Primary Fuse Block for Rejection-Type Fuses
Secondary: 110 x 220 with Jumpers;
Fuse Clips Not Available**

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	6	3.2 (1.5)	C0050E4DFB ②
75	6	4.2 (1.9)	C0075E4DFB ②
100	6	5.4 (2.5)	C0100E4DFB ②
150	6	7.2 (3.3)	C0150E4DFB
200	6	8.9 (4.0)	C0200E4DFB
250	6	10.4 (4.7)	C0250E4DFB
300	6	11.2 (5.1)	C0300E4DFB
350	6	13.2 (6.0)	C0350E4DFB
500	6	20.2 (9.2)	C0500E4DFB

**Primary: 200/220/440, 208/230/460, 240/480 with
Two-Pole Primary Fuse Block for Rejection-Type Fuses
Secondary: 23/110, 24/115, 25/120 with Fuse Clips
for 13/32 x 1-1/2 Fuses**

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	7	3.6 (1.6)	C0050E5EFB ②
75	7	5.0 (2.3)	C0075E5EFB ②
100	7	6.1 (2.8)	C0100E5EFB ②
150	7	8.1 (3.7)	C0150E5EFB
200	7	10.8 (4.9)	C0200E5EFB
250	7	14.1 (6.4)	C0250E5EFB
300	7	15.7 (7.1)	C0300E5EFB
350	7	17.0 (7.7)	C0350E5EFB
500	7	23.6 (10.7)	C0500E5EFB

**Universal Design (MTE Epoxy Encapsulated)
Primary: 240/416/480/600, 230/400/460/575,
220/380/440/550, 208/500 with Two-Pole
Primary Fuse Block for Rejection-Type Fuses
Secondary: 99/120/130, 95/115/125, 91/110/120,
85/100/110 with Fuse Clips for 13/32 x 1-1/2 Fuses**

VA	Wiring Diagram ①	Weight Lbs (kg)	Style Number
50	8	4.2 (1.9)	C0050E6UFB ②③
100	8	6.8 (3.1)	C0100E6UFB ②③
150	8	9.0 (4.1)	C0150E6UFB ②④
250	8	14.9 (6.8)	C0250E6UFB ②④
350	8	18.8 (8.5)	C0350E6UFB ②④
500	8	25.8 (11.7)	C0500E6UFB ②④

Notes

- ① See Page V7-T7-11 for wiring diagrams.
- ② 105°C insulation system.
- ③ Type MTG open core-coil universal design has been superseded by Type MTE epoxy encapsulated universal design with no changes to form, fit or function.
- ④ Type MTE epoxy encapsulated universal design.

Wiring Diagrams

Diagram 1

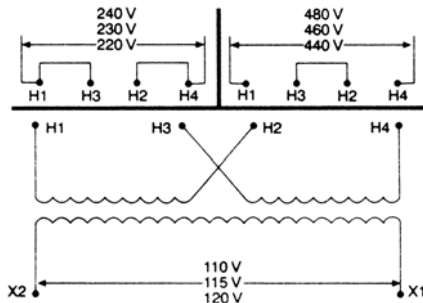


Diagram 2

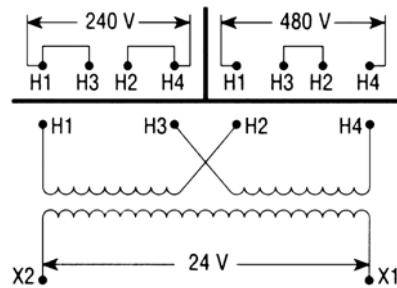


Diagram 3

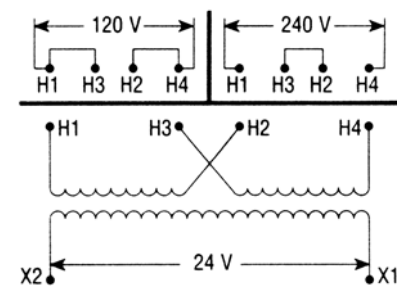


Diagram 4

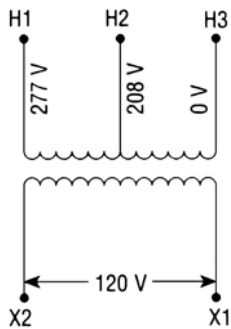


Diagram 5

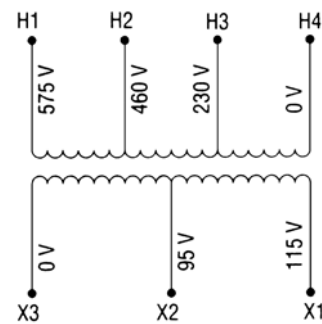


Diagram 6

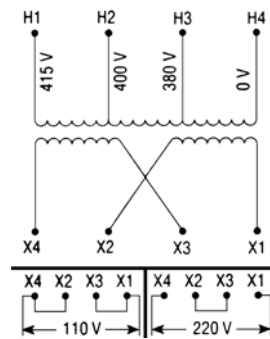


Diagram 7

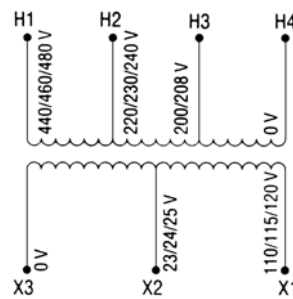


Diagram 8

