Types MTE and MTK

Type AP

7.1 Transformers

Learn Online

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Control Power Transformers

Contents

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	Insulation System Temp/°C	kVA Single-Phase	kVA Three-Phase	Applicable IEC Standard
Control Power Transformer							
MTE	5085	E46323	702X	105	0.05–1.5	N/A	61558
MTK	5085	E46323	702X	180	2–5	N/A	61558
Encapsulated Transformer							
AP	5085	E10156	591H	180	3–10	N/A	61558
AP	1561	E78389	591H	180	15	N/A	61558

Note

① UL 508 replaces UL 506.

Catalog Number Selection

Control Power Transformers—Example: C0250E2AFB ①

C 0250 E 2A FB

Type
C = Control power transformer

VA Rating		
0050 = 50	**0500** = 500	**Type AP Only:**
0075 = 75	**0750** = 750	**0003** = 3000
0100 = 100	**1000** = 1000	**0005** = 5000
0150 = 150	**1500** = 1500	**0007** = 7500
0200 = 200	**2000** = 2000	**0010** = 10000
0250 = 250	**3000** = 3000	**0015** = 15000
0300 = 300	**4000** = 4000	
0350 = 350	**5000** = 5000	

Transformer Design
E = MTE
K = MTK
P = AP

Voltage		
	Primary	**Secondary**
1B =	120 x 240	24
2A =	240 x 480, 230 x 460, 220 x 440	120/115/110
3A =	208/277	120
5E =	200/220/440, 208/230/460, 240/480	23/110, 24/115, 25/120
6U =	240/416/480/600, 230/400/460/575, 220/380/440/550, 208/500	99/120/130, 95/115/125, 91/110/120, 85/100/110
7G (Type AP only) =	240 x 480	120/240

Modifications
Type MTE/MTK
FB = Factory-mounted two-pole primary fuse block for rejection type fuses
Type AP
B = Bottom mounted
S = Side/wall mounted
ES = Electrostatic shield
CU = Copper windings

Notes

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

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

Contents

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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
- 50–1500 VA ratings
- Molded-in terminals for maximum durability

Standards and Certifications

- UL listed
- cUL listed
- RoHS compliant

Listed Listed RoHS COMPLIANT

Industry Standards

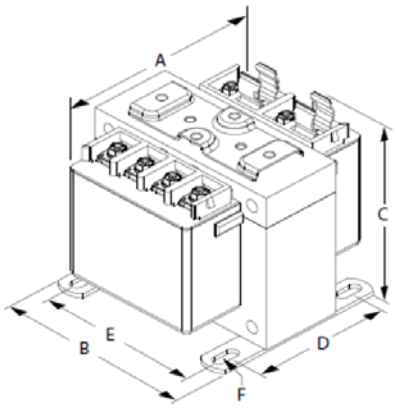
All Eaton dry-type distribution and control transformers are built and tested in accordance with applicable NEMA, ANSI and IEEE Standards. All 600 V class transformers are UL listed unless otherwise noted.

Catalog Number Selection

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

Product Selection

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



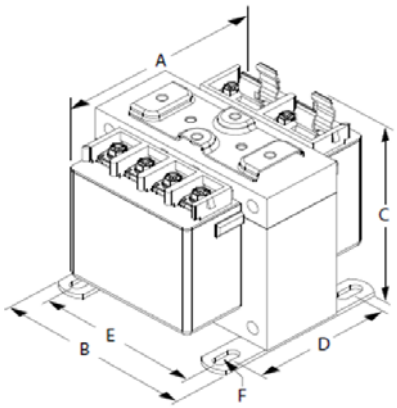
Type MTE

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	Dimensions in Inches A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes F.L.A. ②	Weight Lb (kg)	Style Number
Transformers without Primary Fuse Block										
50	1	3.61	3.00	3.26	1.96	2.50	0.2 x 0.46	0.43	2.6 (1.2)	**C0050E2A** ③
75	1	3.86	3.00	3.26	2.42	2.50	0.2 x 0.46	0.65	3.5 (1.6)	**C0075E2A** ③
100	1	3.49	3.38	3.36	2.42	2.81	0.2 x 0.46	0.87	4.2 (1.9)	**C0100E2A** ③③
150	1	3.88	3.75	3.74	2.82	3.13	0.2 x 0.46	1.30	6.7 (3.0)	**C0150E2A**
200	1	4.18	4.50	4.22	2.42	3.75	0.2 x 0.46	1.74	8.5 (3.9)	**C0200E2A**
250	1	4.18	4.50	4.22	2.82	3.75	0.2 x 0.46	2.17	10.0 (4.5)	**C0250E2A**
300	1	4.56	4.50	4.22	3.18	3.75	0.2 x 0.46	2.61	11.3 (5.1)	**C0300E2A**
350	1	4.56	4.50	4.22	3.74	3.75	0.2 x 0.46	3.04	13.6 (6.2)	**C0350E2A**
500	1	6.11	5.25	5.14	3.88	4.38	0.31 x 1.06	4.35	19.2 (8.7)	**C0500E2A**
750	1	7.61	5.25	5.14	5.38	4.38	0.31 x 1.06	6.52	28.1 (12.8)	**C0750E2A**
1000	1	6.11	6.75	6.30	3.91	6.13	0.31 x 1.09	8.70	29.5 (13.4)	**C1000E2A**
1500	1	7.50	7.50	6.28	4.00	5.63	0.38 x 0.75	13.04	40.0 (18.1)	**C1500E2A**
Transformers with Primary Fuse Block										
50	1	3.61	3.00	4.04	1.96	2.50	0.2 x 0.46	0.43	2.8 (1.3)	**C0050E2AFB** ③
75	1	3.86	3.00	4.04	2.42	2.50	0.2 x 0.46	0.65	3.7 (1.7)	**C0075E2AFB** ③
100	1	3.49	3.38	4.35	2.42	2.81	0.2 x 0.46	0.87	4.4 (2.0)	**C0100E2AFB** ③
150	1	3.88	3.75	4.67	2.82	3.13	0.2 x 0.46	1.30	6.9 (3.1)	**C0150E2AFB**
200	1	4.18	4.50	5.29	2.42	3.75	0.2 x 0.46	1.74	8.7 (3.9)	**C0200E2AFB**
250	1	4.18	4.50	5.29	2.82	3.75	0.2 x 0.46	2.17	10.2 (4.6)	**C0250E2AFB**
300	1	4.56	4.50	5.29	3.18	3.75	0.2 x 0.46	2.61	11.5 (5.2)	**C0300E2AFB**
350	1	4.56	4.50	5.29	3.74	3.75	0.2 x 0.46	3.04	13.8 (6.3)	**C0350E2AFB**
500	1	6.11	5.25	6.52	3.88	4.38	0.31 x 1.06	4.35	19.4 (8.8)	**C0500E2AFB**
750	1	7.61	5.25	6.52	5.38	4.38	0.31 x 1.06	6.52	28.3 (12.8)	**C0750E2AFB**
1000	1	6.11	6.75	7.19	3.91	6.13	0.31 x 1.09	8.70	29.7 (13.4)	**C1000E2AFB**
1500	1	7.50	7.50	6.28	4.00	5.63	0.38 x 0.75	13.04	40.2 (18.1)	**C1500E2AFB**

Notes

① See **Page V7-T7-14** for wiring diagrams.
② Multiple FLA indicates multiple outputs.
③ 105 °C insulation system.

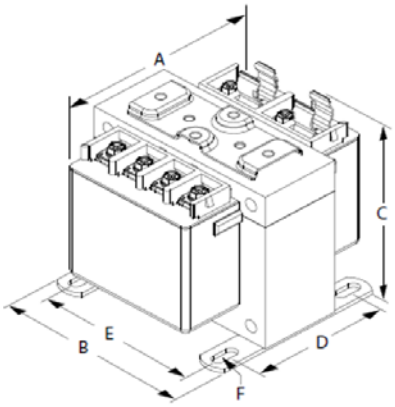


Primary: 120 x 240 with Jumpers
Secondary: 24 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Dimensions in Inches A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes F.L.A. ②	Weight Lb (kg)	Style Number
Transformers without Primary Fuse Block										
50	2	3.36	3.00	3.26	1.96	2.50	0.2 x 0.46	2.08	2.6 (1.2)	**C0050E1B** ③
75	2	3.86	3.00	3.26	2.42	2.50	0.2 x 0.46	3.13	3.6 (1.6)	**C0075E1B** ③
100	2	3.49	3.38	3.36	2.42	2.81	0.2 x 0.46	4.17	4.4 (2.0)	**C0100E1B** ③
150	2	3.88	3.75	3.74	2.82	3.13	0.2 x 0.46	6.25	6.7 (3.0)	**C0150E1B**
200	2	3.81	4.50	4.22	2.42	3.75	0.2 x 0.46	8.33	8.3 (3.8)	**C0200E1B**
250	2	3.80	4.50	4.22	2.82	3.75	0.2 x 0.46	10.42	10.1 (4.6)	**C0250E1B**
300	2	4.56	4.50	4.22	3.18	3.75	0.2 x 0.46	12.50	11.2 (5.1)	**C0300E1B**
350	2	4.56	4.50	4.21	3.74	3.75	0.2 x 0.46	14.58	13.2 (6.0)	**C0350E1B**
500	2	6.11	5.25	5.14	3.88	4.38	0.31 x 1.06	20.83	17.5 (7.9)	**C0500E1B**
Transformers with Primary Fuse Block										
50	2	3.36	3.00	4.04	1.96	2.50	0.2 x 0.46	2.08	2.8 (1.3)	**C0050E1BFB** ③
75	2	3.86	3.00	4.04	2.42	2.50	0.2 x 0.46	3.13	3.8 (1.7)	**C0075E1BFB** ③
100	2	3.49	3.38	4.35	2.42	2.81	0.2 x 0.46	4.17	4.6 (2.1)	**C0100E1BFB** ③
150	2	3.88	3.75	4.67	2.82	3.13	0.2 x 0.46	6.25	6.9 (3.1)	**C0150E1BFB**
200	2	3.81	4.50	5.29	2.42	3.75	0.2 x 0.46	8.33	8.5 (3.9)	**C0200E1BFB**
250	2	3.80	4.50	5.29	2.82	3.75	0.2 x 0.46	10.42	10.3 (4.7)	**C0250E1BFB**
300	2	4.56	4.50	5.29	3.18	3.75	0.2 x 0.46	12.50	11.4 (5.2)	**C0300E1BFB**
350	2	4.56	4.50	5.29	3.74	3.75	0.2 x 0.46	14.58	13.4 (6.1)	**C0350E1BFB**
500	2	6.11	5.25	6.52	3.88	4.38	0.31 x 1.06	20.83	17.7 (8.0)	**C0500E1BFB**

Notes

① See **Page V7-T7-14** for wiring diagrams.
② Multiple FLA indicates multiple outputs.
③ 105 °C insulation system.

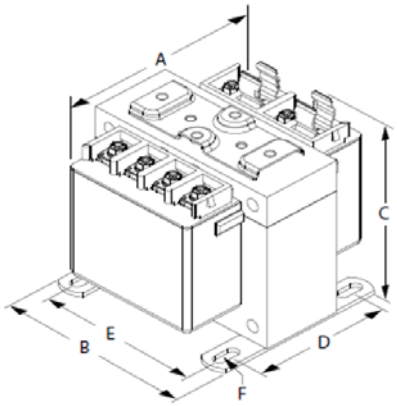


Primary: 208/277
Secondary: 120 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Dimensions in Inches A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes F.L.A. ②	Weight Lb (kg)	Style Number
Transformers without Primary Fuse Block										
50	3	3.61	3.00	3.26	1.96	2.50	0.2 x 0.46	0.42	2.9 (1.3)	**C0050E3A** ③
75	3	3.86	3.00	3.26	2.42	2.50	0.2 x 0.46	0.63	3.8 (1.7)	**C0075E3A** ③
100	3	3.49	3.38	3.36	2.42	2.81	0.2 x 0.46	0.83	4.5 (2.0)	**C0100E3A** ③
150	3	3.88	3.75	3.74	2.82	3.13	0.2 x 0.46	1.25	6.9 (3.1)	**C0150E3A**
200	3	4.18	4.50	4.22	2.62	3.75	0.2 x 0.46	1.67	8.7 (3.9)	**C0200E3A**
250	3	4.18	4.50	4.22	2.82	3.75	0.2 x 0.46	2.08	10.2 (4.6)	**C0250E3A**
300	3	4.56	4.50	4.21	3.18	3.75	0.2 x 0.46	2.50	11.4 (5.2)	**C0300E3A**
350	3	4.56	4.50	4.21	3.74	3.75	0.2 x 0.46	2.92	13.7 (6.2)	**C0350E3A**
500	3	6.11	5.25	5.14	3.88	4.38	0.31 x 1.06	4.17	17.2 (7.8)	**C0500E3A**
750	3	7.61	5.25	5.14	5.38	4.38	0.31 x 1.06	6.25	25.7 (11.7)	**C0750E3A**
Transformers with Primary Fuse Block										
50	3	3.61	3.00	4.04	1.96	2.50	0.2 x 0.46	0.42	3.1 (1.4)	**C0050E3AFB** ③
75	3	3.86	3.00	4.04	2.42	2.50	0.2 x 0.46	0.63	4.0 (1.8)	**C0075E3AFB** ③
100	3	3.49	3.38	4.35	2.42	2.81	0.2 x 0.46	0.83	4.7 (2.1)	**C0100E3AFB** ③
150	3	3.88	3.75	4.67	2.82	3.13	0.2 x 0.46	1.25	7.1 (3.2)	**C0150E3AFB**
200	3	4.18	4.50	5.29	2.62	3.75	0.2 x 0.46	1.67	8.9 (4.0)	**C0200E3AFB**
250	3	4.18	4.50	5.29	2.82	3.75	0.2 x 0.46	2.08	10.4 (4.7)	**C0250E3AFB**
300	3	4.56	4.50	5.29	3.18	3.75	0.2 x 0.46	2.50	11.6 (5.3)	**C0300E3AFB**
350	3	4.56	4.50	5.29	3.74	3.75	0.2 x 0.46	2.92	13.9 (6.3)	**C0350E3AFB**
500	3	6.11	5.25	6.52	3.88	4.38	0.31 x 1.06	4.17	17.4 (7.9)	**C0500E3AFB**
750	3	7.61	5.25	6.52	5.38	4.38	0.31 x 1.06	6.25	26.5 (12.0)	**C0750E3AFB**

Notes

① See **Page V7-T7-14** for wiring diagrams.
② Multiple FLA indicates multiple outputs.
③ 105 °C insulation system.

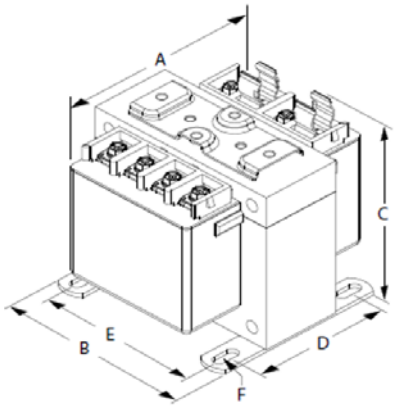


Primary: 200/220/440, 208/230/460, 240/480
Secondary: 23/110, 24/115, 25/120 with Fuse Clips for 13/32 x 1-1/2 Fuses

VA	Wiring Diagram ①	Dimensions in Inches A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes F.L.A. ②	Weight Lb (kg)	Style Number
Transformers without Primary Fuse Block										
50	4	3.86	3.00	3.26	2.21	2.50	0.2 x 0.46	2.08/0.44	3.4 (1.5)	**C0050E5E** ③
75	4	3.49	3.38	3.36	2.42	2.81	0.2 x 0.46	3.13/0.65	4.8 (2.2)	**C0075E5E** ③
100	4	3.88	3.75	3.74	2.42	3.13	0.2 x 0.46	4.17/0.87	5.9 (2.7)	**C0100E5E** ③
150	4	4.25	3.75	3.74	3.18	3.13	0.2 x 0.46	6.25/1.30	7.9 (3.6)	**C0150E5E**
200	4	4.18	4.50	4.21	2.99	3.75	0.2 x 0.46	8.33/1.74	10.6 (4.8)	**C0200E5E**
250	4	5.06	4.50	4.21	3.75	3.75	0.2 x 0.46	10.42/2.17	13.9 (6.3)	**C0250E5E**
300	4	5.50	5.25	4.75	3.88	4.38	0.31 x 1.06	12.50/2.61	15.5 (7.0)	**C0300E5E**
350	4	5.50	5.25	4.75	3.88	4.38	0.31 x 1.06	14.58/3.04	16.8 (7.6)	**C0350E5E**
500	4	6.96	5.25	4.65	5.37	4.38	0.31 x 1.06	20.84/4.35	23.4 (10.6)	**C0500E5E**
Transformers with Primary Fuse Block										
50	4	3.86	3.00	4.04	2.21	2.50	0.2 x 0.46	2.08/0.44	3.6 (1.6)	**C0050E5EFB** ③
75	4	3.49	3.38	4.35	2.42	2.81	0.2 x 0.46	3.13/0.65	5.0 (2.3)	**C0075E5EFB** ③
100	4	3.88	3.75	4.67	2.42	3.13	0.2 x 0.46	4.17/0.87	6.1 (2.8)	**C0100E5EFB** ③
150	4	4.25	3.75	4.67	3.18	3.13	0.2 x 0.46	6.25/1.30	8.1 (3.7)	**C0150E5EFB**
200	4	4.18	4.50	5.29	2.99	3.75	0.2 x 0.46	8.33/1.74	10.8 (4.9)	**C0200E5EFB**
250	4	5.06	4.50	5.29	3.75	3.75	0.2 x 0.46	10.42/2.17	14.1 (6.4)	**C0250E5EFB**
300	4	5.50	5.25	5.88	3.88	4.38	0.31 x 1.06	12.50/2.61	15.7 (7.1)	**C0300E5EFB**
350	4	5.50	5.25	5.88	3.88	4.38	0.31 x 1.06	14.58/3.04	17.0 (7.7)	**C0350E5EFB**
500	4	6.96	5.25	4.65	5.37	4.38	0.31 x 1.06	20.84/4.35	23.6 (10.7)	**C0500E5EFB**

Notes

① See **Page V7-T7-14** for wiring diagrams.
② Multiple FLA indicates multiple outputs.
③ 105 °C insulation system.



Universal Design (MTE Epoxy Encapsulated)
Primary: 240/416/480/600, 230/400/460/575, 220/380/440/550, 208/500
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	Dimensions in Inches A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes F.L.A. ②	Weight Lb (kg)	Style Number
Transformers without Primary Fuse Block										
50	5	3.43	3.88	3.36	2.42	2.81	0.2 x 0.46	0.38	4.0 (1.8)	**C0050E6U** ③④
100	5	4.24	3.75	3.74	3.00	3.13	0.2 x 0.46	0.77	6.6 (3.0)	**C0100E6U** ③④
150	5	4.24	4.50	4.23	2.82	3.75	0.2 x 0.46	1.15	8.8 (4.0)	**C0150E6U** ③⑤
250	5	5.75	4.50	4.11	4.72	3.75	0.2 x 0.84	1.92	14.7 (6.7)	**C0250E6U** ③⑤
350	5	5.69	5.25	4.95	4.37	4.38	0.31 x 1.06	2.69	18.6 (8.4)	**C0350E6U** ③⑤
500	5	7.19	5.25	4.95	5.87	4.38	0.31 x 1.06	3.85	25.6 (11.6)	**C0500E6U** ③⑤
Transformers with Primary Fuse Block										
50	5	3.43	3.88	4.18	2.42	2.81	0.2 x 0.46	0.38	4.2 (1.9)	**C0050E6UFB** ③④
100	5	4.24	3.75	4.67	3.00	3.13	0.2 x 0.46	0.77	6.8 (3.1)	**C0100E6UFB** ③④
150	5	4.24	4.50	5.29	2.82	3.75	0.2 x 0.46	1.15	9.0 (4.1)	**C0150E6UFB** ③⑤
250	5	5.75	4.50	5.27	4.72	3.75	0.2 x 0.84	1.92	14.9 (6.8)	**C0250E6UFB** ③⑤
350	5	5.69	5.25	5.93	4.37	4.38	0.31 x 1.06	2.69	18.8 (8.5)	**C0350E6UFB** ③⑤
500	5	7.19	5.25	5.92	5.87	4.38	0.31 x 1.06	3.85	25.8 (11.7)	**C0500E6UFB** ③⑤

Notes

① See **Page V7-T7-14** for wiring diagrams.
② Multiple FLA indicates multiple outputs.
③ 105 °C insulation system.
④ 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.
⑤ Type MTE epoxy encapsulated universal design.

Accessories

Primary Fuse Kit

The primary fuse kit includes a two-pole class CC fuse block, instructions, and all associated mounting and wiring hardware. Fuses are not included. When installed, the primary fuse kit will add a maximum of 11/16 inch to the transformer depth and 1-15/16 inches to the transformer height.

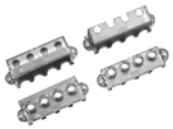
Primary Fuse Kit

Description	Catalog Number
Primary fuse kit	**PFK1**

Finger-Safe Terminal Covers (Optional)

- Fits MTE designs 0.50–750 VA

Finger-Safe Terminal Covers

	Description	Catalog Number
FSK4	Four terminal transformers	**FSK4**
		
	Four terminal Series 2 transformers only	**FSK4S2**
FSK6	Six terminal transformers	**FSK6**
		

Finger-Safe Primary Fuse Block Covers

- Fits two-pole primary fuse blocks on MTE designs
- No fuse block covers are available for transformers with suffix "FBQ"

Finger-Safe Primary Fuse Block Covers

	Description	Catalog Number
FSKFB	Primary fuse block covers	**FSKFB**
		

Secondary Fuse Clip

Secondary Fuse Clip

Description	Catalog Number
Fits 500 VA and smaller models	**SFCS**
Fits models greater than 500 VA	**SFCL**

Technical Data and Specifications

Insulation System and Temperature Rise

Industry standards classify insulation systems and rise as shown below:

Insulation System Classification

Ambient	+ Winding Rise	+ Hot Spot	= Temp. Class
40 °C	55 °C	10 °C	105 °C
40 °C	80 °C	30 °C	150 °C
25 °C	135 °C	20 °C	180 °C
40 °C	115 °C	30 °C	185 °C
40 °C	150 °C	30 °C	220 °C

The design life of transformers having different insulation systems is the same—the lower-temperature systems are designed for the same life as the higher-temperature systems.

Series-Multiple Windings

Series-multiple windings consist of two similar coils in each winding that can be connected in series or parallel (multiple). Transformers with series-multiple windings are designated with an "x" or "/" between the voltage ratings, such as voltages of "120/240" or "240 x 480." If the series-multiple winding is designated by an "x," the winding can be connected only for a series or parallel. With the "/" designation, a mid-point also becomes available in addition to the series or parallel connection. As an example, a 120 x 240 winding can be connected for either 120 (parallel) or 240 (series), but a 120/240 winding can be connected for 120 (parallel), 240 (series) or 240 with a 120 mid-point.

For additional information, please refer to Volume 2, **CA08100003E**.

Accessories

Catalog Numbers	Series 3	Series 2	Series 1 (Legacy)	Number of Terminals (Total)	Primary Fuse Kit (PFK1)	Finger-Safe Terminal Covers	Finger-Safe Primary Fuse Block Covers (FSKFB)	Secondary Fuse Clip (Replacement Only)
C0050E2A	X			8	PFK1	FSK4		SFCS
C0050E2AFB	X			8		FSK4	FSKFB	SFCS
C0075E2A	X			8	PFK1	FSK4		SFCS
C0075E2AFB	X			8		FSK4	FSKFB	SFCS
C0100E2A	X			8	PFK1	FSK4		SFCS
C0100E2AFB	X			8		FSK4	FSKFB	SFCS
C0150E2A	X			8	PFK1	FSK4		SFCS
C0150E2AFB	X			8		FSK4	FSKFB	SFCS
C0200E2A	X			8	PFK1	FSK4		SFCS
C0200E2AFB	X			8		FSK4	FSKFB	SFCS
C0250E2A	X			8	PFK1	FSK4		SFCS
C0250E2AFB	X			8		FSK4	FSKFB	SFCS
C0300E2A	X			8	PFK1	FSK4		SFCS
C0300E2AFB	X			8		FSK4	FSKFB	SFCS
C0350E2A	X			8	PFK1	FSK4		SFCS
C0350E2AFB	X			8		FSK4	FSKFB	SFCS
C0500E2A		X		12	PFK1	FSK6		SFCL
C0500E2AFB		X		12		FSK6	FSKFB	SFCL
C0750E2A		X		12	PFK1	FSK6		SFCL
C0750E2AFB		X		12		FSK6	FSKFB	SFCL
C1000E2A		X		12	PFK1	FSK6		SFCL
C1000E2AFB		X		12		FSK6	FSKFB	SFCL
C1500E2A			X	8	PFK1	FSK4		SFCS
C1500E2AFB			X	8		FSK4	FSKFB	SFCS
C0050E5E	X			8	PFK1	FSK4		SFCS
C0050E5EFB	X			8		FSK4	FSKFB	SFCS
C0075E5E	X			8	PFK1	FSK4		SFCS
C0075E5EFB	X			8		FSK4	FSKFB	SFCS
C0100E5E	X			8	PFK1	FSK4		SFCS
C0100E5EFB	X			8		FSK4	FSKFB	SFCS
C0150E5E	X			8	PFK1	FSK4		SFCS
C0150E5EFB	X			8		FSK4	FSKFB	SFCS
C0200E5E	X			8	PFK1	FSK4		SFCS
C0200E5EFB	X			8		FSK4	FSKFB	SFCS
C0250E5E	X			8	PFK1	FSK4		SFCS
C0250E5EFB	X			8		FSK4	FSKFB	SFCS
C0300E5E			X	8	PFK1	FSK4		SFCS
C0300E5EFB			X	8		FSK4	FSKFB	SFCS
C0350E5E			X	8	PFK1	FSK4		SFCS
C0350E5EFB			X	8		FSK4	FSKFB	SFCS
C0500E5E			X	8	PFK1	FSK4		SFCS
C0500E5EFB			X	8		FSK4	FSKFB	SFCS

Accessories (Continued)

Catalog Numbers	Series 3	Series 2	Series 1 (Legacy)	Number of Terminals (Total)	Primary Fuse Kit (PFK1)	Finger-Safe Terminal Covers	Finger-Safe Primary Fuse Block Covers (FSKFB)	Secondary Fuse Clip (Replacement Only)
C0050E3A	X			8	PFK1	FSK4		SFCS
C0050E3AFB	X			8		FSK4	FSKFB	SFCS
C0075E3A	X			8	PFK1	FSK4		SFCS
C0075E3AFB	X			8		FSK4	FSKFB	SFCS
C0100E3A	X			8	PFK1	FSK4		SFCS
C0100E3AFB	X			8		FSK4	FSKFB	SFCS
C0150E3A	X			8	PFK1	FSK4		SFCS
C0150E3AFB	X			8		FSK4	FSKFB	SFCS
C0200E3A	X			8	PFK1	FSK4		SFCS
C0200E3AFB	X			8		FSK4	FSKFB	SFCS
C0250E3A	X			8	PFK1	FSK4		SFCS
C0250E3AFB	X			8		FSK4	FSKFB	SFCS
C0300E3A	X			8	PFK1	FSK4		SFCS
C0300E3AFB	X			8		FSK4	FSKFB	SFCS
C0350E3A	X			8	PFK1	FSK4		SFCS
C0350E3AFB	X			8		FSK4	FSKFB	SFCS
C0500E3A		X		12	PFK1	FSK6		SFCL
C0500E3AFB		X		12		FSK6	FSKFB	SFCL
C0750E3A		X		12	PFK1	FSK6		SFCL
C0750E3AFB		X		12		FSK6	FSKFB	SFCL
C0050E6U			X	12	PFK1	FSK6		SFCS
C0050E6UFB			X	12		FSK6	FSKFB	SFCS
C0100E6U	X			12	PFK1	FSK6		SFCS
C0100E6UFB	X			12		FSK6	FSKFB	SFCS
C0150E6U	X			12	PFK1	FSK6		SFCS
C0150E6UFB	X			12		FSK6	FSKFB	SFCS
C0250E6U	X			12	PFK1	FSK6		SFCS
C0250E6UFB	X			12		FSK6	FSKFB	SFCS
C0350E6U			X	12	PFK1	FSK6		SFCS
C0350E6UFB			X	12		FSK6	FSKFB	SFCS
C0500E6U			X	12	PFK1	FSK6		SFCS
C0500E6UFB			X	12		FSK6	FSKFB	SFCS

Accessories (Continued)

Catalog Numbers	Series 3	Series 2	Series 1 (Legacy)	Number of Terminals (Total)	Primary Fuse Kit (PFK1)	Finger-Safe Terminal Covers	Finger-Safe Primary Fuse Block Covers (FSKFB)	Secondary Fuse Clip (Replacement Only)
C0050E1B	X			8	PFK1	FSK4		SFCS
C0050E1BFB	X			8		FSK4	FSKFB	SFCS
C0075E1B	X			8	PFK1	FSK4		SFCS
C0075E1BFB	X			8		FSK4	FSKFB	SFCS
C0100E1B	X			8	PFK1	FSK4		SFCS
C0100E1BFB	X			8		FSK4	FSKFB	SFCS
C0150E1B	X			8	PFK1	FSK4		SFCS
C0150E1BFB	X			8		FSK4	FSKFB	SFCS
C0200E1B	X			8	PFK1	FSK4		SFCS
C0200E1BFB	X			8		FSK4	FSKFB	SFCS
C0250E1B	X			8	PFK1	FSK4		SFCS
C0250E1BFB	X			8		FSK4	FSKFB	SFCS
C0300E1B	X			8	PFK1	FSK4		SFCS
C0300E1BFB	X			8		FSK4	FSKFB	SFCS
C0350E1B	X			8	PFK1	FSK4		SFCS
C0350E1BFB	X			8		FSK4	FSKFB	SFCS
C0500E1B		X		12	PFK1	FSK6		SFCL
C0500E1BFB		X		12		FSK6	FSKFB	SFCL

Wiring Diagrams

Diagram 1

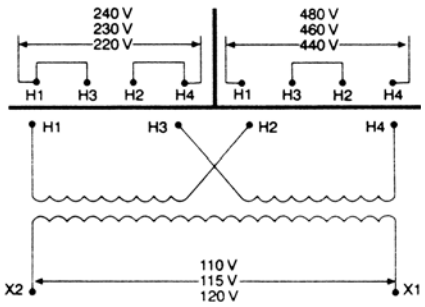


Diagram 2

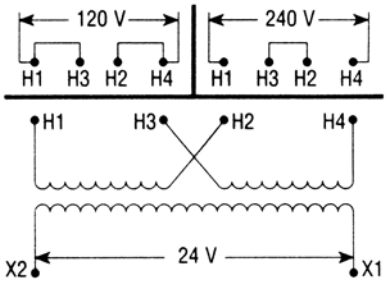


Diagram 3

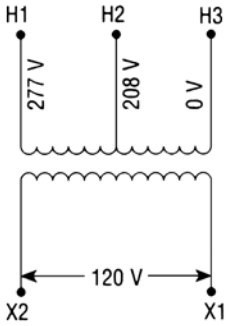


Diagram 4

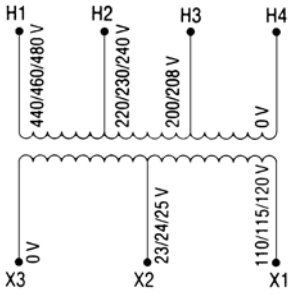
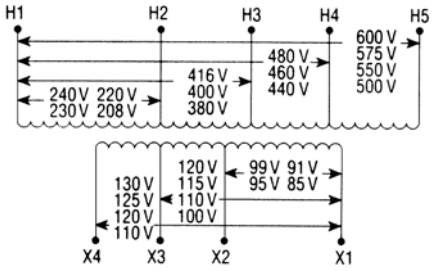


Diagram 5



Type MTK Transformer

Contents

Type MTK

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 resin-impregnated coil
- Economical solution for high inrush applications

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.

Features, Benefits and Functions

- Epoxy resin impregnated coil design
- Copper magnet wire for high-quality, efficient operation
- 50/60 Hz operation
- 180 °C insulation system
- Performance meets/ exceeds requirements of ANSI/NEMA ST-1
- Regulation exceeds ANSI/NEMA requirements for all ratings
- 2000–5000 VA ratings

Standards and Certifications

- UL listed
- cUL listed
- RoHS compliant

Listed 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 V class transformers are UL listed unless otherwise noted.

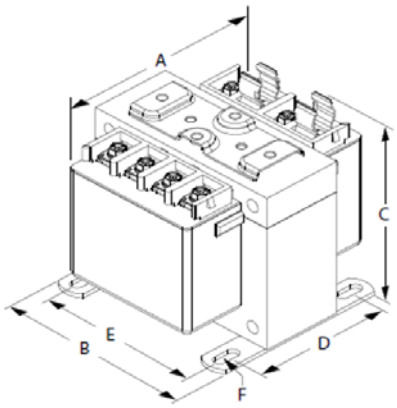
Catalog Number Selection

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

Product Selection

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

Type MTK



Primary: 240 x 480, 230 x 460, 220 x 440
Secondary: 120/115/110

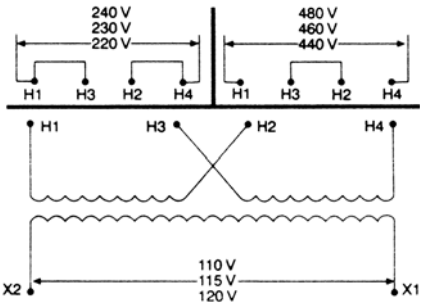
		Dimensions in Inches								
VA	Wiring Diagram ①	A	B	C	D	E	F Mounting Holes	Transformer Full Load Amperes ②	Weight Lb (kg)	Style Number
2000	1	7.75	6.75	5.73	4.97	6.13	0.31 x 0.91	17.39	38.0 (17.3)	**C2000K2A**
3000	1	7.12	9.00	7.50	4.28	6.50	0.44 x 0.88	26.09	53.0 (24.1)	**C3000K2A** ③
4000	1	8.75	9.00	7.50	5.90	6.50	0.44 x 0.88	34.78	92.8 (42.09)	**C4000K2A** ③
5000	1	9.00	9.00	7.50	6.15	6.50	0.44 x 0.88	43.48	89.0 (40.5)	**C5000K2A** ③

Notes

① See wiring diagram below.
② Multiple FLA indicates multiple outputs.
③ Open core and coil dip varnished.

Wiring Diagram

Diagram 1



Accessories

Catalog Numbers	Series 3	Series 2	Series 1 (Legacy)	Number of Terminals (Total)	Primary Fuse Kit (PFK1)	Finger-Safe Terminal Covers	Secondary Fuse Clip (Replacement Only)
C2000K2A			X	12	PFK1	FSK6	SFCS
C3000K2A ①			X	8	PFK1	FSK4	SFCS
C4000K2A ①			X	8	PFK1	FSK4	SFCS
C5000K2A ①			X	8	PFK1	FSK4	SFCS

Note

① Open core and coil dip varnished.

Type AP Transformer

Contents

Type AP

Product Description

- Encapsulated designs

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.

Features, Benefits and Functions

- Resin encapsulated
- 60 Hz operation
- 180 °C insulation system
- 115 °C rise standard; 80 °C rise optional
- Convenient screw-type terminal board
- Bottom or side/wall-mounting designs
- Performance meets/exceeds requirements of ANSI/NEMA ST-1
- Regulation exceeds ANSI/NEMA requirements for all ratings

Standards and Certifications

- UL recognized

Industry Standards

All Eaton dry-type distribution and control transformers are built and tested in accordance with applicable NEMA, ANSI and IEEE Standards.

Catalog Number Selection

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

Product Selection

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

240/480 Volts to 120/240 Volts, 60 Hz

kVA	Mounting	Frame	Wiring Diagram ①	Weight Lb (kg)	Style Number
3	Bottom	FR133	1	65 (29.5)	**C0003P7GB**
5	Bottom	FR99	1	104 (47.2)	**C0005P7GB**
7.5	Bottom	FR100	1	129 (58.6)	**C0007P7GB**
10	Bottom	FR101	1	148 (67.2)	**C0010P7GB**
15	Bottom	FR134	1	197 (89.4)	**C0015P7GB**
3	Side/Wall	FR292	1	65 (29.5)	**C0003P7GS**
5	Side/Wall	FR256	1	104 (47.2)	**C0005P7GS**
7.5	Side/Wall	FR257	1	129 (58.6)	**C0007P7GS**
10	Side/Wall	FR258	1	148 (67.2)	**C0010P7GS**
15	Side/Wall	FR259	1	197 (89.4)	**C0015P7GS**

Note

① See wiring diagram below.

Technical Data and Specifications

Overload Capability

Short-term overload is designed into transformers as required by ANSI. Dry-type distribution transformers will deliver 200% nameplate load for one-half hour, 150% load for one hour and 125% load for four hours without being damaged, provided that a constant 50% load precedes and follows the overload. See ANSI C57.96-01.250 for additional limitations.

Continuous overload capacity is not deliberately designed into a transformer because the design objective is to be within the allowed winding temperature rise with nameplate loading.

Insulation System and Temperature Rise

Industry standards classify insulation systems and rise as shown below:

Insulation System Classification

Ambient	+ Winding Rise	+ Hot Spot	= Temp. Class
40 °C	55 °C	10 °C	105 °C
40 °C	80 °C	30 °C	150 °C
25 °C	135 °C	20 °C	180 °C
40 °C	115 °C	30 °C	185 °C
40 °C	150 °C	30 °C	220 °C

The design life of transformers having different insulation systems is the same—the lower-temperature systems are designed for the same life as the higher-temperature systems.

Sound Levels

All Eaton 600 V class general-purpose dry-type distribution transformers are designed to meet NEMA ST-20 levels.

Winding Terminations

Eaton recommends external cables be rated 90 °C (sized at 75 °C ampacity) for encapsulated designs.

Series-Multiple Windings

Series-multiple windings consist of two similar coils in each winding that can be connected in series or parallel (multiple). Transformers with series-multiple windings are designated with an "x" or "/" between the voltage ratings, such as voltages of "120/240" or "240 x 480." If the series-multiple winding is designated by an "x," the winding can be connected only for a series or parallel.

With the "/" designation, a mid-point also becomes available in addition to the series or parallel connection. As an example, a 120 x 240 winding can be connected for either 120 (parallel) or 240 (series), but a 120/240 winding can be connected for 120 (parallel), 240 (series) or 240 with a 120 mid-point.

For additional information, please refer to Volume 2, **CA08100003E**.

Note: For additional information, refer to Eaton's Industrial Control Transformer Binder B1228A. For other ratings or styles not shown, or for special enclosure types (including stainless steel), refer to Eaton.

Wiring Diagram

Diagram 1