Bulletin 1497A — Machine Tool Transformers

Bulletin 1497A Machine Tool Transformers are designed to reduce supply voltages to control circuits. The complete line of transformers is available with optional factory-installed or panel-mount primary and secondary fuse block/clip.

- 50…3000VA (50/60 Hz)
- RoHS compliant
- Single phase
- Epoxy encapsulated

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Standards Compliance

UL 5085-1, UL 5085-2

CSA C22.2 No. 66.1

Certifications

cULus Listed (File No. E52057; Guide No. XPTQ, XPTQ7)

Catalog Number Explanation

Bulletin 1497A Machine Tool Transformers

1497A – A1 – M6 – 0 – N
a b c d

a

VA Rating	
Code	Description [VA]
A1	50
A2	75
A3	100
A4	150
A5	200
A6	250
A7	300
A8	350
A9	500
A10	750
A11	1000
A12	1500
A13	2000
A14	3000

b

Primary and Secondary Voltage		
Code	Primary	Secondary
M6	220X440V, 230X460V, 240X480V	110, 115, 120V (50/60 Hz)
M7	230/460/575V	115/95V (50/60 Hz)
M8	208/277/380V	115/95V (50/60 Hz)
M18	208/230/480V (50/60 Hz)	120/24V (50/60 Hz)
M19	240X480V (50/60 Hz)	48V (50/60 Hz)

c

Fuse Block Options❄	
Code	Block Options
0	0 Primary, 0 Secondary
1	0 Primary, 1 Secondary
3	2 Primary, 1 Secondary

d

Factory Installed Options	
Code	Description
N	No Taps

Note: For complete list of valid transformer configurations, see Product Selection.
❄ Transformers rated 350VA and below use secondary fuse clips. Transformers rated 500VA and above use secondary fuse blocks.

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Selecting a Machine Tool Transformer

Selection Process

- Total steady-state (sealed) VA is the volt-amperes that the transformer must deliver to the load circuit for an extended period of time — the amount of current required to hold the contact in the circuit.
- Total inrush VA is the volt amperes that the transformer must deliver upon initial energization of the control circuit. Energization of electromagnetic devices takes 30…50 milliseconds. During this inrush period, the electromagnetic control devices draw many times normal current — 3…10 times normal is typical.
- Inrush load power factor is difficult to determine without detailed vector analysis of all the load components. Such an analysis is generally not feasible. Therefore, a safe assumption is 40% power factor.

For proper transformer selection, three characteristics of the load circuit must be determined in addition to the minimum voltage required to operate the circuit. These are total steady-state (sealed) VA, total inrush VA, and inrush load power factor.

- Total steady-state (sealed) VA is the volt-amperes that the transformer must deliver to the load circuit for an extended period of time — the amount of current required to hold the contact in the circuit.
- Total inrush VA is the volt amperes that the transformer must deliver upon initial energization of the control circuit. Energization of electromagnetic devices takes 30…50 milliseconds. During this inrush period, the electromagnetic control devices draw many times normal current — 3…10 times normal is typical.
- Inrush load power factor is difficult to determine without detailed vector analysis of all the load components. Such an analysis is generally not feasible. Therefore, a safe assumption is 40% power factor.

1. Determine the total inrush VA of the control circuits from the table below. Do not neglect the current requirements of indicating lights and other devices that do not have an inrush VA but are re-energized at the same time as the other components in the circuit. Their total VA should be added to the total inrush VA.
2. Refer to the table below, *Regulation Data — Inrush VA*. If the supply circuit voltage (Step 1) is reasonably stable and fluctuates not more than ± 5%, refer to the 90% secondary voltage column. If it fluctuates as much as ± 10%, refer to the 95% secondary voltage column. Go down the column selected until at the inrush VA closest to, but not less than, the inrush VA of the control circuit.
3. Read to the far left side of the chart. The transformer's continuous nominal VA rating is now selected. The secondary voltage that will be delivered under inrush conditions will be either 85%, 90%, or 95% of the rated secondary voltage, depending on the column selected from the table below, *Regulation Data — Inrush VA*. The total sealed VA of the control circuit must not exceed the nominal VA rating of the transformer selected from the table below.
4. Refer to the specification tables on the following pages to select a transformer according to the required continuous nominal VA, and primary and secondary voltage combinations.

Regulation Data — Inrush VA

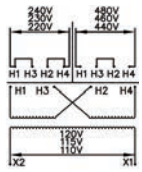
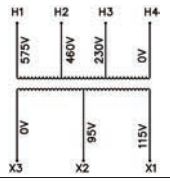
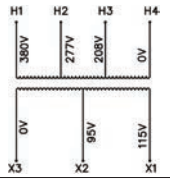
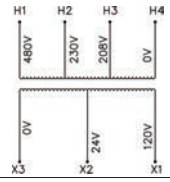
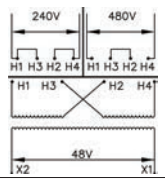
Inrush VA at 40% Power Factor				Power Factor Adjustments	
Nominal VA Rating	85%	90%	95%	Power Factor	Multiply By
50	158	139	116	100%	0.63
75	242	213	177	90%	0.65
100	346	302	249	80%	0.70
150	528	461	379	70%	0.75
200	869	743	585	60%	0.82
250	1057	904	719	50%	0.90
300	1418	1200	937	40%	1.00
350	1620	1361	1047	30%	1.12
500	2681	2221	1648	20%	1.27
750	4560	3718	2700	10%	1.45
1000	7568	6118	4185	—	—
1500	15724	12423	8203	—	—
2000	16941	13660	9484	—	—
3000	25680	20180	13797	—	—

Machine Tool Transformers

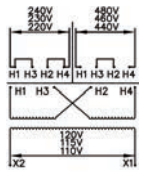
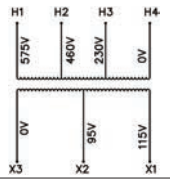
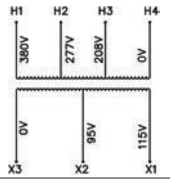
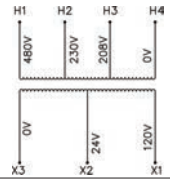
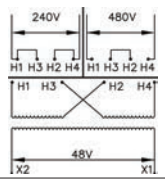
Product Selection

Note: Refer to 8-47 for information on how to select a machine tool transformer.

Transformer without Primary or Secondary Fuse Block/Clip‡

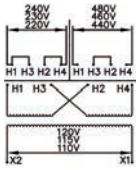
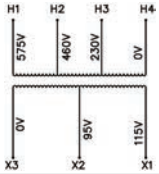
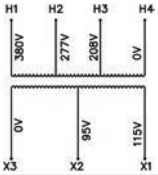
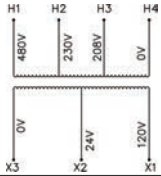
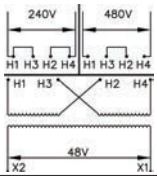
	Cat. Nos.				
	Primary 220x440V, 230x460V, 240x480V (50/60 Hz) 	Primary 230/460/575V (50/60 Hz) 	Primary 208/277/380V (50/60 Hz) 	Primary 208/230/480V (50/60 Hz) 	Primary 240X480V (50/60 Hz) 
Continuous VA	Secondary 110, 115, 120V	Secondary 115/95V	Secondary 115/95V	Secondary 120/24V	Secondary 48V
50	1497A-A1-M6-0-N	1497A-A1-M7-0-N	1497A-A1-M8-0-N	1497A-A1-M18-0-N	1497A-A1-M19-0-N
75	1497A-A2-M6-0-N	1497A-A2-M7-0-N	1497A-A2-M8-0-N	1497A-A2-M18-0-N	1497A-A2-M19-0-N
100	1497A-A3-M6-0-N	1497A-A3-M7-0-N	1497A-A3-M8-0-N	**1497A-A3-M18-0-N**	1497A-A3-M19-0-N
150	**1497A-A4-M6-0-N**	1497A-A4-M7-0-N	1497A-A4-M8-0-N	1497A-A4-M18-0-N	1497A-A4-M19-0-N
200	1497A-A5-M6-0-N	1497A-A5-M7-0-N	1497A-A5-M8-0-N	1497A-A5-M18-0-N	**1497A-A5-M19-0-N**
250	1497A-A6-M6-0-N	1497A-A6-M7-0-N	1497A-A6-M8-0-N	1497A-A6-M18-0-N	1497A-A6-M19-0-N
300	1497A-A7-M6-0-N	1497A-A7-M7-0-N	1497A-A7-M8-0-N	1497A-A7-M18-0-N	**1497A-A7-M19-0-N**
350	1497A-A8-M6-0-N	1497A-A8-M7-0-N	1497A-A8-M8-0-N	1497A-A8-M18-0-N	1497A-A8-M19-0-N
500	**1497A-A9-M6-0-N**	1497A-A9-M7-0-N	1497A-A9-M8-0-N	—	1497A-A9-M19-0-N
750	1497A-A10-M6-0-N	1497A-A10-M7-0-N	1497A-A10-M8-0-N	—	**1497A-A10-M19-0-N**
1000	**1497A-A11-M6-0-N**	1497A-A11-M7-0-N	1497A-A11-M8-0-N	—	1497A-A11-M19-0-N
1500	1497A-A12-M6-0-N	1497A-A12-M7-0-N	1497A-A12-M8-0-N	—	—
2000	**1497A-A13-M6-0-N**	1497A-A13-M7-0-N	1497A-A13-M8-0-N	—	—
3000	**1497A-A14-M6-0-N**	—	—	—	—

Transformer with 1 Secondary Fuse Block/Clip‡

	Cat. Nos.				
	Primary 220x440V, 230x460V, 240x480V (50/60 Hz) 	Primary 230/460/575V (50/60 Hz) 	Primary 208/277/380V (50/60 Hz) 	Primary 208/230/480V (50/60 Hz) 	Primary 240X480V (50/60 Hz) 
Continuous VA	Secondary 110, 115, 120V	Secondary 115/95V	Secondary 115/95V	Secondary 120/24V	Secondary 48V
50	1497A-A1-M6-1-N	1497A-A1-M7-1-N	1497A-A1-M8-1-N	1497A-A1-M18-1-N	1497A-A1-M19-1-N
75	1497A-A2-M6-1-N	1497A-A2-M7-1-N	1497A-A2-M8-1-N	1497A-A2-M18-1-N	1497A-A2-M19-1-N
100	1497A-A3-M6-1-N	1497A-A3-M7-1-N	1497A-A3-M8-1-N	1497A-A3-M18-1-N	1497A-A3-M19-1-N
150	1497A-A4-M6-1-N	1497A-A4-M7-1-N	1497A-A4-M8-1-N	1497A-A4-M18-1-N	1497A-A4-M19-1-N
200	1497A-A5-M6-1-N	1497A-A5-M7-1-N	1497A-A5-M8-1-N	1497A-A5-M18-1-N	1497A-A5-M19-1-N
250	1497A-A6-M6-1-N	1497A-A6-M7-1-N	1497A-A6-M8-1-N	1497A-A6-M18-1-N	1497A-A6-M19-1-N
300	1497A-A7-M6-1-N	1497A-A7-M7-1-N	1497A-A7-M8-1-N	1497A-A7-M18-1-N	1497A-A7-M19-1-N
350	1497A-A8-M6-1-N	1497A-A8-M7-1-N	1497A-A8-M8-1-N	1497A-A8-M18-1-N	1497A-A8-M19-1-N
500	**1497A-A9-M6-1-N**	1497A-A9-M7-1-N	1497A-A9-M8-1-N	—	1497A-A9-M19-1-N
750	**1497A-A10-M6-1-N**	1497A-A10-M7-1-N	1497A-A10-M8-1-N	—	1497A-A10-M19-1-N
1000	1497A-A11-M6-1-N	1497A-A11-M7-1-N	1497A-A11-M8-1-N	—	1497A-A11-M19-1-N
1500	**1497A-A12-M6-1-N**	1497A-A12-M7-1-N	1497A-A12-M8-1-N	—	—
2000	1497A-A13-M6-1-N	1497A-A13-M7-1-N	1497A-A13-M8-1-N	—	—
3000	1497A-A14-M6-1-N	—	—	—	—

‡ Secondary Fuse Block/Clip: Transformers rated 350VA and below use secondary fuse clips. Transformers rated 500VA and above use secondary fuse blocks.

Transformer with 2 Primary and 1 Secondary Fuse Block/Clip‡

	Cat. Nos.				
	Primary 220x440V, 230x460V, 240x480V (50/60 Hz) 	Primary 230/460/575V (50/60 Hz) 	Primary 208/277/380V (50/60 Hz) 	Primary 208/230/480V (50/60 Hz) 	Primary 240X480V (50/60 Hz) 
Continuous VA	Secondary 110, 115, 120V	Secondary 115/95V	Secondary 115/95V	Secondary 120/24V	Secondary 48V
50	**1497A-A1-M6-3-N**	1497A-A1-M7-3-N	1497A-A1-M8-3-N	1497A-A1-M18-3-N	1497A-A1-M19-3-N
75	1497A-A2-M6-3-N	1497A-A2-M7-3-N	1497A-A2-M8-3-N	1497A-A2-M18-3-N	1497A-A2-M19-3-N
100	**1497A-A3-M6-3-N**	1497A-A3-M7-3-N	1497A-A3-M8-3-N	1497A-A3-M18-3-N	1497A-A3-M19-3-N
150	**1497A-A4-M6-3-N**	1497A-A4-M7-3-N	1497A-A4-M8-3-N	1497A-A4-M18-3-N	1497A-A4-M19-3-N
200	**1497A-A5-M6-3-N**	1497A-A5-M7-3-N	1497A-A5-M8-3-N	1497A-A5-M18-3-N	1497A-A5-M19-3-N
250	**1497A-A6-M6-3-N**	1497A-A6-M7-3-N	1497A-A6-M8-3-N	1497A-A6-M18-3-N	1497A-A6-M19-3-N
300	1497A-A7-M6-3-N	1497A-A7-M7-3-N	1497A-A7-M8-3-N	1497A-A7-M18-3-N	1497A-A7-M19-3-N
350	**1497A-A8-M6-3-N**	1497A-A8-M7-3-N	1497A-A8-M8-3-N	1497A-A8-M18-3-N	1497A-A8-M19-3-N
500	**1497A-A9-M6-3-N**	1497A-A9-M7-3-N	1497A-A9-M8-3-N	—	1497A-A9-M19-3-N
750	**1497A-A10-M6-3-N**	1497A-A10-M7-3-N	1497A-A10-M8-3-N	—	1497A-A10-M19-3-N
1000	1497A-A11-M6-3-N	**1497A-A11-M7-3-N**	1497A-A11-M8-3-N	—	1497A-A11-M19-3-N
1500	1497A-A12-M6-3-N	1497A-A12-M7-3-N	1497A-A12-M8-3-N	—	—
2000	1497A-A13-M6-3-N	1497A-A13-M7-3-N	1497A-A13-M8-3-N	—	—
3000	**1497A-A14-M6-3-N**	—	—	—	—

‡ Secondary Fuse Block/Clip: Transformers rated 350VA and below use secondary fuse clips. Transformers rated 500VA and above use secondary fuse blocks.

Fuse Sizing Charts

Important: Select the fuse to protect the control circuit conductors in accordance with the National Electrical Code.

Primary Fuse Sizing Chart (When only primary protection is used)

Maximum Amp Rating for Current Limiting Class C Fuses Based on Transformer Primary Voltage and the National Electrical Code

VA	115V	120V	200V	208V	220V	230V	240V	277V	380V	400V	415V	440V	460V	480V	500V	550V	575V	600V
50	1.25	1.25	0.75	0.6	0.6	0.6	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.25	0.25	0.25
75	1.8	1.8	1.125	1	1	0.75	0.75	0.75	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
100	2.5	2.5	1.5	1.4	1.25	1.25	1.25	1	0.75	0.75	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
150	3.5	3.5	2.25	2	2	1.8	1.8	1.6	1.125	1.125	1	1	0.75	0.75	0.75	0.75	0.75	0.75
200	5	5	3	2.8	2.5	2.5	2.5	2	1.5	1.5	1.4	1.25	1.25	1.25	1.125	1	1	1
250	3.5	3.2	3.5	3.5	3.2	3.2	3	2.5	1.8	1.8	1.8	1.6	1.6	1.5	1.5	1.25	1.25	1.25
300	4	4	4.5	4	4	3.5	3.5	3.2	2.25	2.25	2	2	1.8	1.8	1.8	1.6	1.5	1.5
350	5	4.5	5	5	4.5	4.5	4	3.5	2.5	2.5	2.5	2.25	2.25	2	2	1.8	1.8	1.6
500	7	6.25	4	4	3.5	3.5	3.2	5	3.5	3.5	3.5	3.2	3.2	3	3	2.5	2.5	2.5
750	10	10	6.25	6	5.6	5	5	4.5	5.6	5.6	5	5	4.5	4.5	4.5	4	3.5	3.5
1000	12	12	8	8	7	7	6.25	6	4	4	4	3.5	3.5	3.2	3.2	5	5	5
1500	20	15	12	12	10	10	10	9	6.25	6.25	6	5.6	5	5	5	4.5	4	4
2000	20	20	12	12	10	12	12	12	8	8	8	7	7	6.25	6.25	6	5.6	5
3000	30	30	15	15	15	15	15	12	12	12	12	10	10	10	10	9	8	8

Fuse Sizing Charts

Important: Select the fuse to protect the control circuit conductors in accordance with the National Electrical Code.

Primary Fuse Sizing Chart (When only primary protection is used)

Maximum Amp rating for current limiting Class C fuses based on transformer primary voltage and the National Electrical Code

VA	115V	120V	200V	208V	220V	230V	240V	277V	380V	400V	415V	440V	460V	480V	500V	550V	575V	600V
50	1.25	1.25	0.75	0.6	0.6	0.6	0.6	0.5	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.25	0.25	0.25
75	1.8	1.8	1.125	1	1	0.75	0.75	0.75	0.5	0.5	0.5	0.5	0.4	0.4	0.4	0.4	0.3	0.3
100	2.5	2.5	1.5	1.4	1.25	1.25	1.25	1	0.75	0.75	0.6	0.6	0.6	0.6	0.6	0.5	0.5	0.5
150	3.5	3.5	2.25	2	2	1.8	1.8	1.6	1.125	1.125	1	1	0.75	0.75	0.75	0.75	0.75	0.75
200	5	5	3	2.8	2.5	2.5	2.5	2	1.5	1.5	1.4	1.25	1.25	1.25	1.125	1	1	1
250	3.5	3.2	3.5	3.5	3.2	3.2	3	2.5	1.8	1.8	1.8	1.6	1.6	1.5	1.5	1.25	1.25	1.25
300	4	4	4.5	4	4	3.5	3.5	3.2	2.25	2.25	2	2	1.8	1.8	1.8	1.6	1.5	1.5
350	5	4.5	5	5	4.5	4.5	4	3.5	2.5	2.5	2.5	2.25	2.25	2	2	1.8	1.8	1.6
500	7	6.25	4	4	3.5	3.5	3.2	5	3.5	3.5	3.5	3.2	3.2	3	3	2.5	2.5	2.5
750	10	10	6.25	6	5.6	5	5	4.5	5.6	5.6	5	5	4.5	4.5	4.5	4	3.5	3.5
1000	12	12	8	8	7	7	6.25	6	4	4	4	3.5	3.5	3.2	3.2	5	5	5
1500	20	15	12	12	10	10	10	9	6.25	6.25	6	5.6	5	5	5	4.5	4	4
2000	20	20	12	12	10	12	12	12	8	8	8	7	7	6.25	6.25	6	5.6	5
3000	30	30	15	15	15	15	15	12	12	12	12	10	10	10	10	9	8	8

Primary Fuse Sizing Chart (When primary and secondary protection is used)

Maximum Amp rating for current limiting fuses based on transformer primary voltage and the National Electrical Code

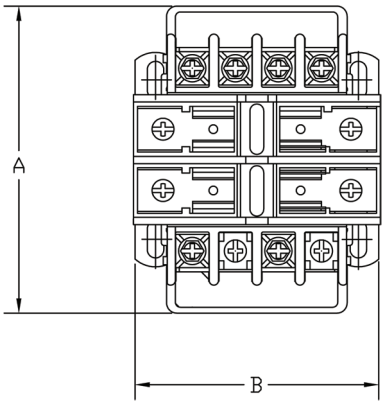
VA	115V	120V	200V	208V	220V	230V	240V	277V	380V	400V	415V	440V	460V	480V	500V	550V	575V	600V
50	1	1	0.6	0.6	0.5	0.5	0.5	0.4	0.3	0.3	0.3	0.25	0.25	0.25	0.25	0.2	0.2	0.2
75	1.6	1.5	0.75	0.75	0.75	0.75	0.75	0.6	0.4	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.3	0.3
100	2	2	1.25	1.125	1.125	1	1	0.75	0.6	0.6	0.6	0.5	0.5	0.5	0.5	0.4	0.4	0.4
150	3.2	3	1.8	1.8	1.6	1.6	1.5	1.25	0.75	0.75	0.75	0.75	0.75	0.75	0.75	0.6	0.6	0.6
200	4	4	2.5	2.25	2	2	2	1.8	1.25	1.25	1.125	1.125	1	1	1	0.75	0.75	0.75
250	5	5	3	3	2.8	2.5	2.5	2.25	1.6	1.5	1.5	1.4	1.25	1.25	1.25	1.125	1	1
300	6.25	6.25	3.5	3.5	3.2	3.2	3	2.5	1.8	1.8	1.8	1.6	1.6	1.5	1.5	1.25	1.25	1.25
350	7	7	4	4	3.5	3.5	3.5	3	2.25	2	2	1.8	1.8	1.8	1.6	1.5	1.5	1.4
500	10	10	6.25	6	5.6	5	5	4.5	3.2	3	3	2.8	2.5	2.5	2.5	2.25	2	2
750	15	15	9	9	8	8	7	6.25	4.5	4.5	4.5	4	4	3.5	3.5	3.2	3.2	3
1000	20	20	12	12	10	10	10	9	6.25	6.25	6	5.6	5	5	5	4.5	4	4
1500	30	30	15	15	15	15	15	12	9	9	9	8	8	7	7	6.25	6.25	6.25
2000	40	40	25	20	20	20	20	15	12	12	12	10	10	10	10	9	8	8
3000	45	45	35	35	30	30	30	25	15	15	15	15	15	15	15	12	12	12

Secondary Fuse Sizing Chart

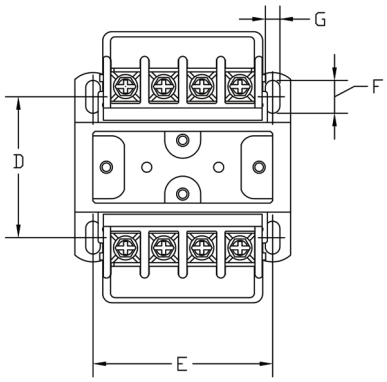
Maximum Amp rating for current limiting midget fuses based on the National Electrical Code

VA	23V	24V	25V	85V	90V	95V	100V	110V	115V	120V	125V	130V	220V	230V	240V
50	3.5	3.2	3.2	0.75	0.75	0.75	0.75	0.75	0.6	0.6	0.6	0.6	0.3	0.3	0.3
75	5	5	5	1.4	1.25	1.25	1.25	1.125	1	1	1	0.75	0.5	0.5	0.5
100	7	6.25	6.25	1.8	1.8	1.6	1.6	1.5	1.4	1.25	1.25	1.25	0.75	0.6	0.6
150	10	10	10	2.8	2.5	2.5	2.5	2.25	2	2	2	1.8	1.125	1	1
200	12	12	12	3.5	3.5	3.5	3.2	3	2.8	2.5	2.5	2.5	1.5	1.4	1.25
250	15	15	15	4.5	4.5	4	4	3.5	3.5	3.2	3.2	3.2	1.8	1.8	1.6
300	20	20	20	5.6	5	5	5	4.5	4	4	4	3.5	2.25	2	2
350	20	20	20	6.25	6.25	6	5.6	5	5	4.5	4.5	4	2.5	2.5	2.25
500	—	—	—	9	9	8	8	7	7	6.25	6.25	6.25	3.5	3.5	3.2
750	—	—	—	12	12	12	12	10	10	10	10	9	5.6	5	5
1000	—	—	—	15	15	15	15	15	12	12	12	12	7	7	6.25
1500	—	—	—	25	25	25	25	20	20	20	20	15	10	10	10
2000	—	—	—	35	35	35	30	30	25	25	25	25	15	12	12
3000	—	—	—	—	—	—	—	45	40	40	40	35	20	20	20

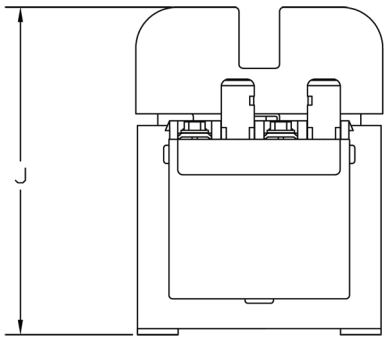
Dimensions are shown in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.



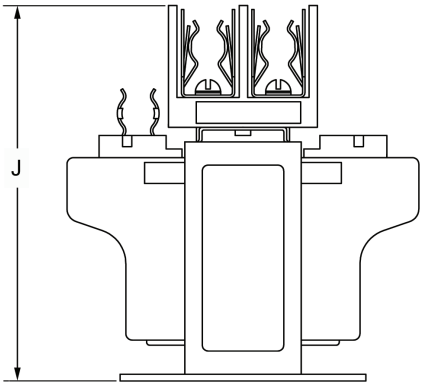
Transformer with 2 Primary Fuse Blocks and 0 or 1 Secondary Fuse Block/Clip (Top View)



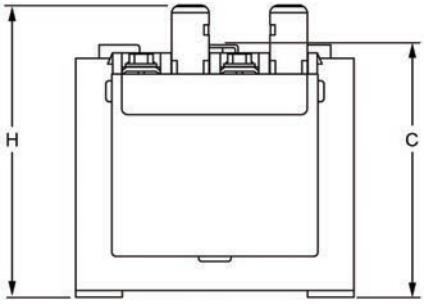
Transformer with 0 Primary Fuse Blocks and 0 or 1 Secondary Fuse Block/Clip (Top View)



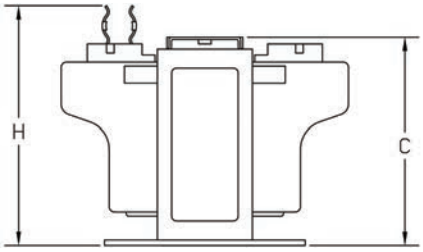
Transformer with 2 Primary Fuse Blocks and 1 Secondary Fuse Block/Clip (Side View)



Transformer with 2 Primary Fuse Blocks and 1 Secondary Fuse Block/Clip (Side View)



Transformer with 0 Primary Fuse Block and Secondary Fuse Block/Clip (Side View)



Transformer with 0 Primary Fuse Blocks and 1 Secondary Fuse Block/Clip (Side View)

VA	Cat. No.	A	B	C	D	E	F	G	H	J	Approx. Shipping Wt. lb (kg)
50	1497A-A1-M6-__-N	3-25/32 (96)	3 (76)	2-23/32 (69)	1-31/32 (50)	2-1/2 (64)	15/32 (12)	1/5 (5)	3-9/64 (80)	4-1/32 (102)	3 (1.4)
	1497A-A1-M7-__-N	4-1/32 (102)			2-1/5 (56)						4 (1.8)
	1497A-A1-M8-__-N										
	1497A-A1-M18-__-N	4-17/32 (115)			2-53/64 (72)						4 (1.8)
	1497A-A1-M19-__-N	3-25/32 (96)			1-31/32 (50)						4 (1.8)
75	1497A-A2-M6-__-N	4-1/32 (102)	3 (76)	2-23/32 (69)	2-27/64 (61)	2-1/2 (64)	15/32 (12)	1/5 (5)	3-9/64 (80)	4-1/32 (102)	4 (1.8)
	1497A-A2-M7-__-N	4-17/32 (115)			2-5/8 (67)						5 (2.3)
	1497A-A2-M8-__-N										
	1497A-A2-M18-__-N		3-3/8 (86)	3-3/64 (77)	3 (76)	2-13/16 (71)			3-15/32 (88)	4-23/64 (110)	5 (2.3)
	1497A-A2-M19-__-N	4-1/32 (102)	3 (76)	2-23/32 (69)	2-27/64 (61)	2-1/2 (64)			3-9/64 (80)	4-1/32 (102)	5 (2.3)
100	1497A-A3-M6-__-N	4 (102)	3-3/8 (86)	3-3/64 (77)	2-27/64 (61)	2-13/16 (71)	15/32 (12)	1/5 (5)	3-15/32 (88)	4-23/64 (110)	5 (2.3)
	1497A-A3-M7-__-N	4-1/16 (103)	3-3/4 (95)	3-23/64 (85)	2-13/16 (71)	3-5/16 (80)			3-49/64 (96)	4-21/32 (118)	6 (2.7)
	1497A-A3-M8-__-N										
	1497A-A3-M18-__-N	4-17/32 (115)			3 (76)						6 (2.7)
	1497A-A3-M19-__-N	4 (102)	3-3/8 (86)	3-3/64 (77)	2-27/64 (61)	2-13/16 (71)			3-15/32 (88)	4-23/64 (110)	6 (2.7)

Machine Tool Transformers

Approximate Dimensions

VA	Cat. No.	A	B	C	D	E	F	G	H	J	Approx. Shipping Wt. lb (kg)
150	1497A-A4-M6-__-N	4-1/16 (103)	3-3/4 (95)	3-23/64 (85)	2-13/16 (71)	3-5/16 (80)	15/32 (12)	1/5 (5)	3-49/64 (96)	4-21/32 (118)	6 (2.7)
	1497A-A4-M7-__-N	4-17/32 (115)			3-3/16 (81)				3-25/32 (96)		7 (3.2)
	1497A-A4-M8-__-N										
	1497A-A4-M18-__-N	5-1/16 (129)							3-49/64 (96)		7 (3.2)
	1497A-A4-M19-__-N	4-1/16 (103)			2-13/16 (71)						7 (3.2)
200	1497A-A5-M6-__-N	4-3/8 (111)	4-1/2 (114)	3-31/32 (101)	2-5/8 (67)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	10 (4.5)
	1497A-A5-M7-__-N										
	1497A-A5-M8-__-N										
	1497A-A5-M18-__-N				2-63/64 (76)						10 (4.5)
	1497A-A5-M19-__-N				2-5/8 (67)						10 (4.5)
250	1497A-A6-M6-__-N	4-3/8 (111)	4-1/2 (114)	3-31/32 (101)	2-53/64 (72)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	10 (4.5)
	1497A-A6-M7-__-N										
	1497A-A6-M8-__-N										
	1497A-A6-M18-__-N	4-3/4 (120)			3-15/32 (88)						10 (4.5)
	1497A-A6-M19-__-N	4-3/8 (111)			2-53/64 (72)						10 (4.5)
300	1497A-A7-M6-__-N	4-3/4 (120)	4-1/2 (114)	3-31/32 (101)	3-3/16 (81)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	12 (5.4)
	1497A-A7-M7-__-N										
	1497A-A7-M8-__-N										
	1497A-A7-M18-__-N	6-7/64 (155)	5-1/4 (133)	4-5/8 (118)	3-7/8 (98)	4-3/8 (111)	1-1/16 (27)	5/16 (8)	4-2/5 (112)	5-15/16 (151)	12 (5.4)
	1497A-A7-M19-__-N	4-3/4 (120)	4-1/2 (114)	3-31/32 (101)	3-3/16 (81)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	12 (5.4)
350	1497A-A8-M6-__-N	4-3/4 (120)	4-1/2 (114)	3-31/32 (101)	3-3/16 (81)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	12 (5.4)
	1497A-A8-M7-__-N	4-63/64 (128)			3-3/4 (95)						14 (6.4)
	1497A-A8-M8-__-N										
	1497A-A8-M18-__-N	6-7/64 (155)	5-1/4 (133)	4-5/8 (118)	3-7/8 (98)	4-3/8 (111)	1-1/16 (27)	5/16 (8)	4-2/5 (112)	5-15/16 (151)	14 (6.4)
	1497A-A8-M19-__-N	4-3/4 (120)	4-1/2 (114)	3-31/32 (101)	3-3/16 (81)	3-3/4 (95)	15/32 (12)	1/5 (5)	4-2/5 (112)	5-9/32 (134)	14 (6.4)
500	1497A-A9-M6-__-N	6-7/64 (155)	5-1/4 (133)	4-5/8 (118)	3-7/8 (98)	4-3/8 (111)	1-1/16 (27)	5/16 (8)	4-2/5 (112)	5-15/16 (151)	19 (8.6)
	1497A-A9-M7-__-N										
	1497A-A9-M8-__-N										18 (8.2)
	1497A-A9-M19-__-N										18 (8.2)
750	1497A-A10-M6-__-N	7-39/64 (193)	5-1/4 (133)	4-5/8 (118)	5-7/8 (149)	4-3/8 (111)	1-1/16 (27)	5/16 (8)	4-2/5 (112)	5-15/16 (151)	28 (12.7)
	1497A-A10-M7-__-N	8-7/64 (206)									32 (14.5)
	1497A-A10-M8-__-N										31 (14.1)
	1497A-A10-M19-__-N	7-39/64 (193)									31 (14.1)
1000	1497A-A11-M6-__-N	7-7/64 (181)	6-3/4 (171)	5-55/64 (149)	4-31/32 (126)	6-1/8 (155)	9/10 (23)	5/16 (8)	4-2/5 (112)	7-3/16 (183)	40 (18.1)
	1497A-A11-M7-__-N										42 (19.1)
	1497A-A11-M8-__-N										41 (18.6)
	1497A-A11-M19-__-N										41 (18.6)
1500	1497A-A12-M6-__-N	8-7/64 (206)	6-3/4 (171)	5-55/64 (149)	6-1/8 (155)	6-1/8 (155)	7/8 (22)	5/16 (8)	4-2/5 (112)	7-3/16 (183)	53 (24)
	1497A-A12-M7-__-N										55 (24.9)
	1497A-A12-M8-__-N										54 (24.5)
2000	1497A-A13-M6-__-N	8-7/64 (206)	6-3/4 (171)	5-55/64 (149)	6-1/8 (155)	6-1/8 (155)	7/8 (22)	5/16 (8)	4-2/5 (112)	7-3/16 (183)	53 (24)
	1497A-A13-M7-__-N	9 (229)									61 (27.7)
	1497A-A13-M8-__-N										58 (26.3)
3000	1497A-A14-M6-__-N	8 (203)	9 (229)	7-41/64 (194)	5-1/4 (133)	7-1/2 (191)	9/10 (23)	7/16 (11)	4-2/5 (112)	8-61/64 (227)	72 (32.7)

Fuse Block Kits — For Use when Fuse Block is Not Integrated with the Transformer

Cat. No. 1491-R165
1-Pole Fuse Block

Cat. No. 1491-R167
2-Pole Fuse Block

Cat. No. 1491-R171
3-Pole Fuse Block

Cat. No. 1491-R169
3-Pole Fuse Block

Cat. No. 1491-R150
Fuse Cover without Fuse

8

These control circuit fusing kits are intended to be used for control circuit transformer protection and protection of control circuits capable of delivering no more than 200 000 RMS symmetrical amps, 600V maximum.

Description✶	Cat. No.
Fuse cover — per pole	**1491-R150**
One-pole kit — panel-mounted (midget fuse)❄	**1491-R165**
Two-pole kit — panel-mounted (two Class CC fuses)❄	**1491-R162**
Two-pole kit — panel-mounted (two midget fuses)❄	1491-R167
Three-pole kit — panel-mounted (one midget fuse/two Class CC fuses)❄	1491-R169
Three-pole kit — panel-mounted (three Class CC fuses)❄	**1491-R171**
Single-pole kit — Bulletin 500 line controller mounted (Class CC fuses)‡	**599-FR04**
One-pole kit — panel-mounted (31…60 A Class J fuse)	1491-R173
One-pole kit — panel-mounted (61…100 A Class J fuse)	1491-R175

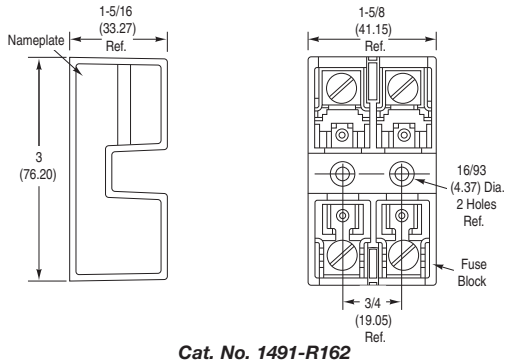
✶ For control circuit transformers with a 350VA or larger rating, it is recommended that Bussmann Type FNQ-R, Ferraz-Shawmut Type ATDR, Littelfuse Type KLDR time delay fuses, or equivalent be used for primary fusing.

❄ These kits use only Class CC or Midget fuses (rated 0.5…30 A) such as those offered by the following manufacturers:
- Bussmann KTK-R
- Ferraz-Shawmut ATM R
- Littelfuse KLK

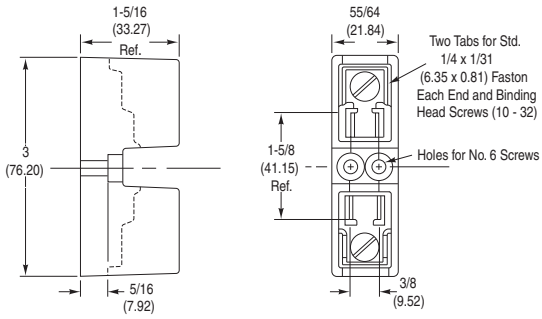
‡ Cat. No. 599-FR04 is rated for 6 A fuse maximum. Controller mounting applies to size 0…5 devices only.

Dimensions are shown in inches (millimeters). Dimensions are not intended to be used for manufacturing purposes.

Note: Electrical clearance required to top of fuse block.



Cat. No. 1491-R162
Cat. No. 1491-R167



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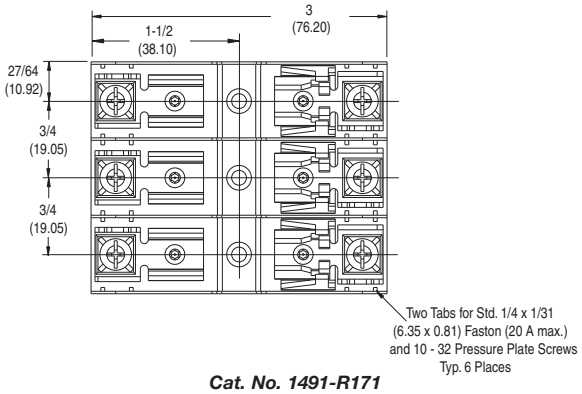

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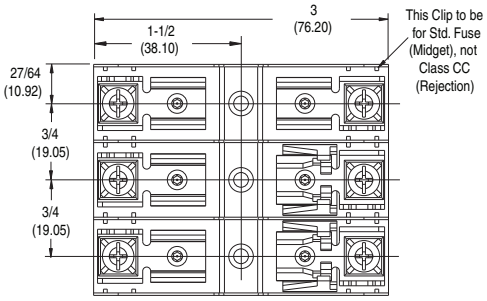

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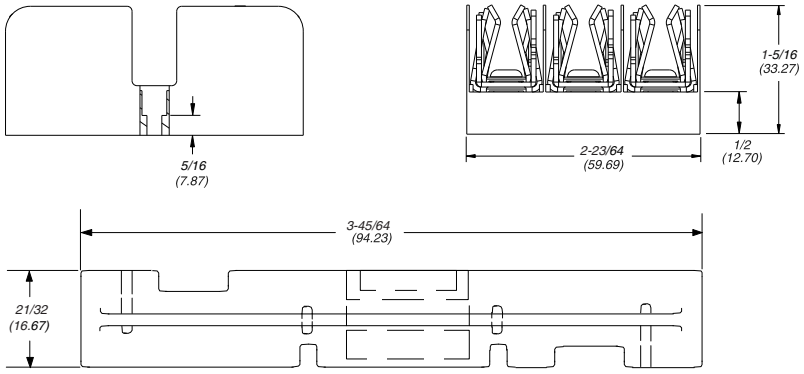

Cat. No. 1491-R150