

# Dry Type Transformers

## Open Core and Coil Transformers

### Machine Tool and Control Power

## Section 10

#### Product Description

Core and coil transformers for machine tools are used to provide voltage to control devices in applications where regulation and minimum space are important. Welded cores provide the highest quality electrical performance and quiet operation.

**Standards:** Type IP transformers conform to NEMA ST20

**Listings:** UL listed under UL-5085, File E2739  
CSA Certified under C22.2, Number 66, File 3272

**Insulation Classes:** 150VA and below: 105°C insulation class,  
55°C Rise

200VA and above: 185°C (NEMA)  
180°C (UL) insulation class, 115°C Rise

**Frequency:** 60 Hz standard; 50 Hz optional.

**Voltage Regulation:** All designs 2.0 kVA and below are compensated for voltage drop. Compensation ranges from 10% in the smallest rating to 3% for the largest. All machine tool designs meet or exceed NMTBA regulation requirements.

**Series-Multiple Secondary Connections:** Transformers with 120/240 V secondaries (series-multiple) may be connected for 120 V, 240 V or 240/120 V three-wire. Jumpers are provided.

**Overcurrent Protection:** Type IP transformers are low impedance transformers that require overcurrent protection for most applications. They provide for optional integral primary and/or secondary fusing.

**Mounting Dimensions:** Type IP transformers are lightweight, small, and designed for minimum mounting dimensions. Many units will fit competitors mounting footprints.



Core and Coil Transformer  
Terminal Board Connection



Core and Coil Transformer  
Leads Out Connection

#### Advantages

- Finger-safe terminals offer added protection and safety
- Pressure plate terminals ensure secure connections
- Wide variety of fusing options. See page 10-66.

#### Key Features—Terminal Board Connection

- Rugged, high-impact plastic terminal board
- Full head #8 brass screws assure quick, easy terminations with maximum connection integrity
- Copper windings
- Flexible design allows input or output voltage to match any application
- CUL, CE, UL approvals
- Available fuse-blocks offer simple, low-cost fusing

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### Machine Tool Applications

Single-Phase, Fully-encapsulated Design

## Section 10

### 60 Hz Terminal Board Connection

Input Voltage	Output Voltage	kVA	Wiring Diagram No. <sup>1</sup>	Approx. Net Weight (Lbs)	Frame Size	Product Number
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.05	1	2.4	6100	9T58K0042
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.08	1	2.8	6125	9T58K0043
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.10	1	3.6	8100	9T58K0044
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.15	1	5.1	8150	9T58K0045
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.20	1	5.8	8175	9T58K0046
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.25	1	6.5	8200	9T58K0047
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.30	1	7.6	8250	9T58K0048
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.38	1	7.6	8250	9T58K0049
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.50	1	10.7	10225	9T58K0050
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	0.75	1	12	12225	9T58K0051
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	1	1	16.1	12300	9T58K0052
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	2	1	26.7	14225	9T58K0053
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	2	1	32.7	14300	9T58K0054
220x440, 230x460, 240x480 Volts	110, 115, 120 Volts	3	1	47.4	14475	9T58K0055

### 50/60 Hz Terminal Board Connection

Input Voltage	Output Voltage	kVA	Wiring Diagram No. <sup>1</sup>	Approx. Net Weight (Lbs)	Frame Size	Product Number
230/460/575 Volts	115/95 Volts	0.05	2	3.1	6150	9T58K0062
230/460/575 Volts	115/95 Volts	0.08	2	3.6	8100	9T58K0063
230/460/575 Volts	115/95 Volts	0.10	2	5.1	8150	9T58K0064
230/460/575 Volts	115/95 Volts	0.15	2	6.5	8200	9T58K0065
230/460/575 Volts	115/95 Volts	0.20	2	6.5	8200	9T58K0066
230/460/575 Volts	115/95 Volts	0.25	2	7.6	8250	9T58K0067
230/460/575 Volts	115/95 Volts	0.30	2	10.7	10225	9T58K0068
230/460/575 Volts	115/95 Volts	0.38	2	10.7	10225	9T58K0069
230/460/575 Volts	115/95 Volts	0.50	2	10.7	10225	9T58K0070
230/460/575 Volts	115/95 Volts	0.75	2	16.1	12300	9T58K0071
230/460/575 Volts	115/95 Volts	1	2	26.7	14225	9T58K0072
230/460/575 Volts	115/95 Volts	1.5	2	32.7	14300	9T58K0073
230/460/575 Volts	115/95 Volts	2	2	47.4	14475	9T58K0074
208/277/380 Volts	115/95 Volts	0.05	3	3.1	6150	9T58K0082
208/277/380 Volts	115/95 Volts	0.08	3	3.6	8100	9T58K0083
208/277/380 Volts	115/95 Volts	0.10	3	5.1	8150	9T58K0084
208/277/380 Volts	115/95 Volts	0.15	3	6.5	8200	9T58K0085
208/277/380 Volts	115/95 Volts	0.20	3	6.5	8200	9T58K0086
208/277/380 Volts	115/95 Volts	0.25	3	7.6	8250	9T58K0087
208/277/380 Volts	115/95 Volts	0.30	3	10.7	10225	9T58K0088
208/277/380 Volts	115/95 Volts	0.38	3	10.7	10225	9T58K0089
208/277/380 Volts	115/95 Volts	0.50	3	10.7	10225	9T58K0090
208/277/380 Volts	115/95 Volts	0.75	3	16.1	12300	9T58K0091
208/277/380 Volts	115/95 Volts	1	3	26.7	14225	9T58K0092
208/277/380 Volts	115/95 Volts	1.5	3	32.7	14300	9T58K0093
208/277/380 Volts	115/95 Volts	2	3	47.4	14475	9T58K0094

<sup>1</sup>See page 10-67 for wiring diagrams.

### Factory- or Field-Installed Options

**Secondary Fusing**—Factory- or field-installed secondary fuse clips are available. They are restricted to units with terminal strips and a single secondary voltage or secondary with one tap.

**Dual Primary and Secondary Fusing**—Factory- or field-installed dual primary and secondary fuse clips are available on all units.