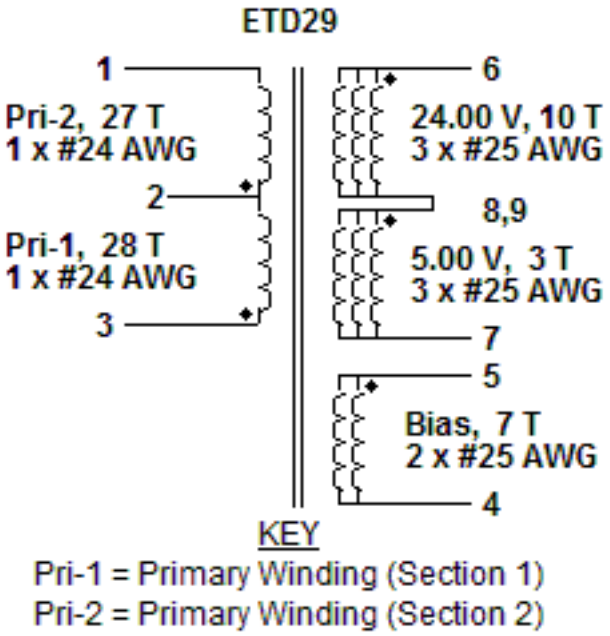
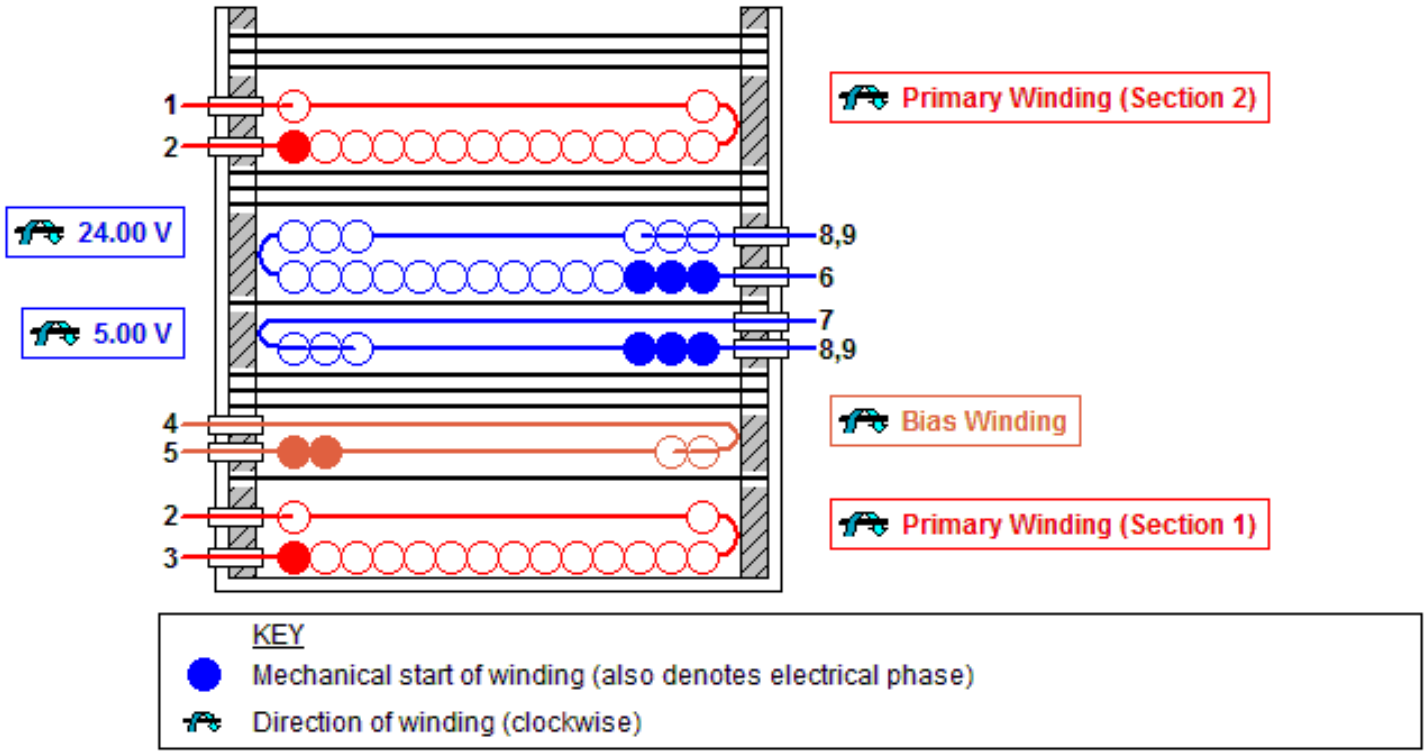
Electrical Diagram



Mechanical Diagram



Winding Instruction

Use 3.00 mm margin (item [3]) on the left side. Use 3.00 mm margin (item [3]) on the right side.

Primary Winding (Section 1)

Start on pin(s) 3 using item [5] at the start leads and wind 28 turns (x 1 filar) of item [7]. in 2 layer(s) from left to right. Winding direction is clockwise. At the end of 1st layer, continue to wind the next layer from right to left. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 2 using item [5] at the finish leads.

Add 1 layer of tape, item [4], for insulation.

Bias Winding

Start on pin(s) 5 using item [5] at the start leads and wind 7 turns (x 2 filar) of item [8]. Winding direction is clockwise. Spread the winding evenly across entire bobbin. Finish this winding on pin(s) 4 using item [5] at the finish leads.

Add 3 layers of tape, item [4], for insulation.

Secondary Winding

Start on pin(s) 8,9 using item [5] at the start leads and wind 3 turns (x 3 filar) of item [8]. Spread the winding evenly across entire bobbin. Winding direction is clockwise. Finish this winding on pin(s) 7 using item [5] at the finish leads.

Add 1 layer of tape, item [4], for insulation.

Start on pin(s) 6 using item [5] at the start leads and wind 10 turns (x 3 filar) of item [8]. Spread the winding evenly across entire bobbin. Winding direction is clockwise. Finish this winding on pin(s) 8,9 using item [5] at the finish leads.

Add 3 layers of tape, item [4], for insulation.

Primary Winding (Section 2)

Start on pin(s) 2 using item [5] at the start leads and wind 27 turns (x 1 filar) of item [7]. in 2 layer(s) from left to right. Winding direction is clockwise. At the end of 1st layer, continue to wind the next layer from right to left. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 1 using item [5] at the finish leads.

Add 3 layers of tape, item [4], for insulation.

Core Assembly

Assemble and secure core halves. Item [1].

Varnish

Dip varnish uniformly in item [6]. Do not vacuum impregnate.

Comments

1. Pins 8 and 9 are electrically shorted to each other on the PCB via a copper trace.
2. Use of a grounded flux-band around the core may improve the EMI performance.

Materials

Item	*Description*
[1]	**Core: ETD29, PC95, gapped for ALG of 133 nH/T²**
[2]	**Bobbin: Generic, 5 pri. + 4 sec.**
[3]	**Tape: Polyester web 3.00 mm wide**
[4]	**Barrier Tape: Polyester film [1 mil (25 µm) base thickness], 19.40 mm wide**
[5]	**Teflon Tubing # 22**
[6]	**Varnish**
[7]	**Magnet Wire: 24 AWG, Solderable Double Coated**
[8]	**Magnet Wire: 25 AWG, Solderable Double Coated**

Electrical Test Specifications

Parameter	*Condition*	*Spec*
Electrical Strength, VAC	**60 Hz 1 second, from pins 1,2,3,4,5 to pins 6,7,8,9.**	**3000**
Nominal Primary Inductance, µH	**Measured at 1 V pk-pk, typical switching frequency, between pin 1 to pin 3, with all other Windings open.**	**394**
Tolerance, ±%	**Tolerance of Primary Inductance**	**10.0**
Maximum Primary Leakage, µH	**Measured between Pin 1 to Pin 3, with all other Windings shorted.**	**5.91**

Although the design of the software considered safety guidelines, it is the user's responsibility to ensure that the user's power supply design meets all applicable safety requirements of user's product.