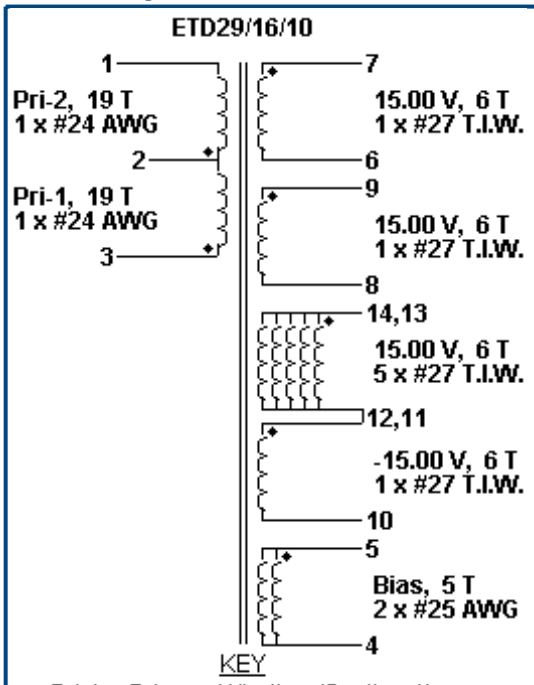
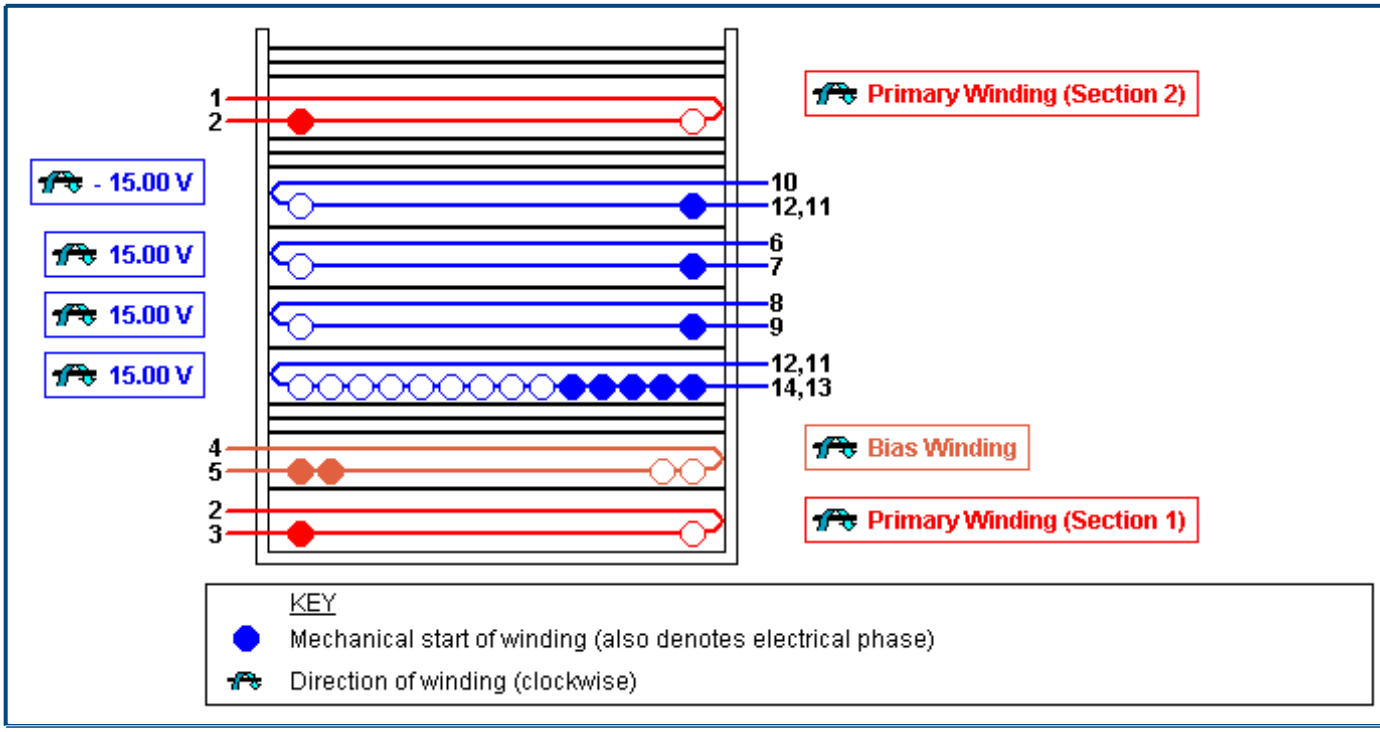
Electrical Diagram



Mechanical Diagram



Winding Instruction

Primary Winding (Section 1)

Start on pin(s) 3 and wind 19 turns (x 1 filar) of item [5]. in 1 layer(s) from left to right. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 2.

Add 1 layer of tape, item [3], for insulation.

Bias Winding

Start on pin(s) 5 and wind 5 turns (x 2 filar) of item [6]. Wind in same rotational direction as primary winding. Spread the winding evenly across entire bobbin. Finish this winding on pin(s) 4.

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

Secondary Winding

Start on pin(s) 14,13 and wind 6 turns (x 5 filar) of item [7]. Spread the winding evenly across entire bobbin. Wind in same rotational direction as primary winding. Finish this winding on pin(s) 12,11.

Add 1 layer of tape, item [3], for insulation.

Start on pin(s) 9 and wind 6 turns (x 1 filar) of item [7]. Spread the winding evenly across entire bobbin. Wind in same rotational direction as primary winding. Finish this winding on pin(s) 8.

Add 1 layer of tape, item [3], for insulation.

Start on pin(s) 7 and wind 6 turns (x 1 filar) of item [7]. Spread the winding evenly across entire bobbin. Wind in same rotational direction as primary winding. Finish this winding on pin(s) 6.
Add 1 layer of tape, item [3], for insulation.
Start on pin(s) 12,11 and wind 6 turns (x 1 filar) of item [7]. Spread the winding evenly across entire bobbin. Finish this winding on pin(s) 10.
Add 3 layers of tape, item [3], for insulation.
Primary Winding (Section 2)
Start on pin(s) 2 and wind 19 turns (x 1 filar) of item [5]. in 1 layer(s) from left to right. On the final layer, spread the winding evenly across entire bobbin. Finish this winding on pin(s) 1.
Add 3 layers of tape, item [3], for insulation.
Core Assembly
Assemble and secure core halves. Item [1].
Varnish
Dip varnish uniformly in item [4]. Do not vacuum impregnate.

Comments

1. Pins 13 and 14 are electrically shorted to each other on the PCB via a copper trace.
2. Pins 11 and 12 are electrically shorted to each other on the PCB via a copper trace.
3. Use of a grounded flux-band around the core may improve the EMI performance.
4. For non margin wound transformers use triple insulated wire for all secondary windings.

Materials

Item	*Description*
[1]	**Core: ETD29/16/10, NC-2H (Nicera) or Equivalent, gapped for ALG of 243 nH/T²**
[2]	**Bobbin: Generic, 7 pri. + 7 sec.**
[3]	**Barrier Tape: Polyester film [1 mil (25 µm) base thickness], 19.40 mm wide**
[4]	**Varnish**
[5]	**Magnet Wire: 24 AWG, Solderable Double Coated**
[6]	**Magnet Wire: 25 AWG, Solderable Double Coated**
[7]	**Triple Insulated Wire: 27 AWG**

Electrical Test Specifications

Parameter	*Condition*	*Spec*
Electrical Strength, VAC	**60 Hz 1 second, from pins 1,2,3,4,5 to pins 6,7,8,9,10,11,12,13,14.**	**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.**	**385**
Tolerance, ±%	**Tolerance of Primary Inductance**	**10.0**
Maximum Primary Leakage, µH	**Measured between Pin 1 to Pin 3, with all other Windings shorted.**	**9.61**