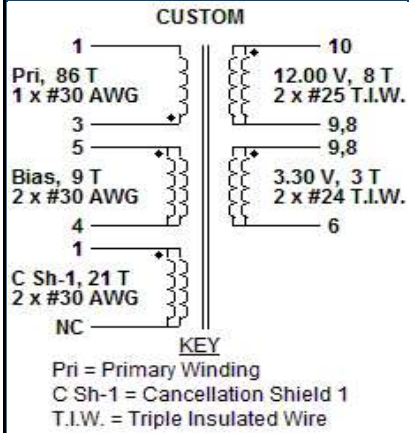
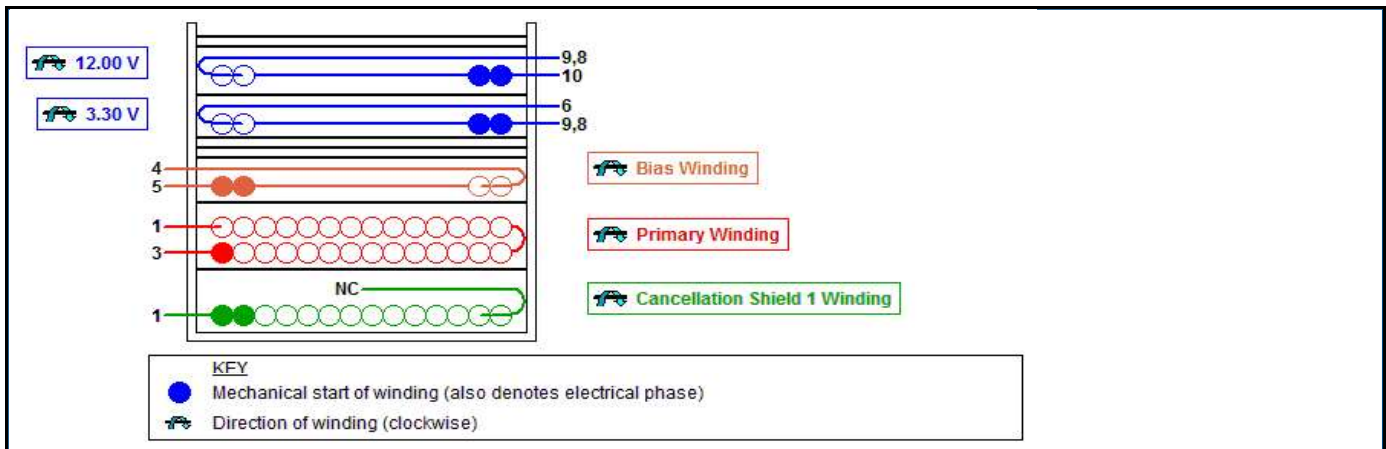


### Electrical Diagram



### Mechanical Diagram



### Winding Instruction

#### Cancellation Shield 1 Winding

Start on pin(s) 1 and wind 21 turns (x 2 filar) of item [5] from left to right in exactly 1 layer. Winding direction is clockwise. Leave this end of cancellation shield winding not connected. Bend the end 90 deg and cut the wire in the middle of the bobbin.

Add 1 layer of tape, item [3], to secure the winding in place.

#### Primary Winding

Start on pin(s) 3 and wind 86 turns (x 1 filar) of item [5]. 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.

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

#### Bias Winding

Start on pin(s) 5 and wind 9 turns (x 2 filar) of item [5]. Winding direction is clockwise. 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) 9,8 and wind 3 turns (x 2 filar) of item [6]. Spread the winding evenly across entire bobbin. Winding direction is clockwise. Finish this winding on pin(s) 6.  
 Add 1 layer of tape, item [3], for insulation.  
 Start on pin(s) 10 and wind 8 turns (x 2 filar) of item [7]. Spread the winding evenly across entire bobbin. Winding direction is clockwise. Finish this winding on pin(s) 9,8.  
 Add 2 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 8 and 9 are electrically shorted to each other on the PCB via a copper trace.
2. For non margin wound transformers use triple insulated wire for all secondary windings.

**Materials**

<i>Item</i>	<i>Description</i>
[1]	Core: EFD20, 3F3, gapped for ALG of 120 nH/T <sup>2</sup>
[2]	Bobbin: Generic, 5 pri. + 5 sec.
[3]	Barrier Tape: Polyester film [1 mil (25 µm) base thickness], 13.20 mm wide
[4]	Varnish
[5]	Magnet Wire: 30 AWG, Solderable Double Coated
[6]	Triple Insulated Wire: 24 AWG
[7]	Triple Insulated Wire: 25 AWG

**Electrical Test Specifications**

<i>Parameter</i>	<i>Condition</i>	<i>Spec</i>
Electrical Strength, VAC	60 Hz 1 second, from pins 1,3,4,5 to pins 6,8,9,10.	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.	887
Tolerance, ±%	Tolerance of Primary Inductance	5.0
Maximum Primary Leakage, µH	Measured between Pin 1 to Pin 3, with all other Windings	26.61