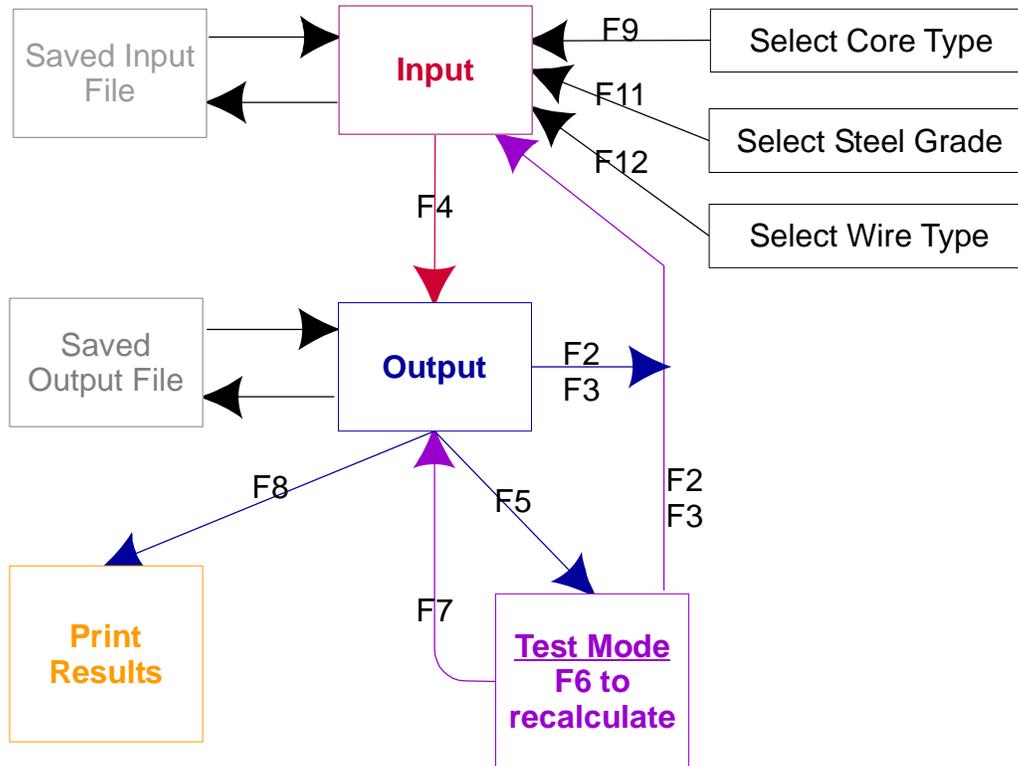


RALE Design System



Function Keys – Program Shortcuts

F1	On-Line Help
F2	Load the core selected in a previous run into the current design
F3	Load the standard input file
F4	Calculate using the current set of input data
F5	Switch to parametric test mode after a calculation has been performed
F6	Calculate under test conditions
F7	View the calculated data
F8	Print the calculated data
F9	Select the type of core to be used
Ctrl-Shift-F12	Exit the program
F11	Select the grade of steel to be used
F12	Select the type of wire to be used
Ctrl-F1	Help on using the on-line help system
Ctrl-Z	Undo changes made to the current field
Ctrl-X	Store all data on a secondary winding in memory
Ctrl-C	Overwrite the secondary winding at the position of the cursor with a winding currently saved in memory
Ctrl-V	Insert the secondary winding at the position of the cursor with a winding currently saved in memory Note: When using Ctrl-V the eighth winding listed is removed from the list.

Designing a Transformer

1. When you first open the program, you are at the Input Screen. All the values on the Input Screen default to their most common values. Only 3 inputs are *required* for any given design run: Primary Voltage, Output Voltage and Output Current. Any values other than the 3 required that are not defined when a calculation is run will use the default values.
2. Press <F4> to start the design Calculations.
3. The program will select a core, if the user has not already selected one. The transformer design is then optimized based on Temperature Rise or Regulation. (The “Criterion” field on the Input Screen specifies which variable will control the optimization process.) After the transformer is optimized, the final design values are calculated and the output of the calculations is displayed on the Output Screen. (To view the various Output Screen pages, scroll using PgUp, PgDn, ←, →, etc.)
4. To Print the Output, press <F8>

Parametric Testing of a Transformer

1. After a design calculation has been performed, parametric testing may be done by varying the values of critical design inputs. To enter Parametric Test Mode press <F5>.
2. Change values in the white parts of the screen to simulate different transformer designs. (For example, note the values of Usec, U0sec, and Isec for the initial transformer design, and then change the number of turns in the Primary and press ↓.)
Note: Error checking is done when as input value is changed and the cursor moves to another field. If the entered value exceeds the minimum or maximum allowed value for the field an error message will appear.
3. Run the test calculation by pressing <F6>.
4. After the test run is complete, the values in the gray shaded areas will update. (If you changed the Primary in step 2, take a look at the new values for Usec, U0sec and Isec.)
5. Press <F7> to view the Output Screen for a test calculation run. Once you are viewing the Output Screen, <F8> will print the Output on the printer.