

Insertion loss is the term used to measure the power or signal lost when the transformer is inserted into an impedance matched transmission circuit. **Designers** of transformers calculate the theoretical maximum power available through the transformer when inserted into a given impedance load.

Insertion loss is affected by non-ideal impedance's of the transformer windings as well as winding and core losses.

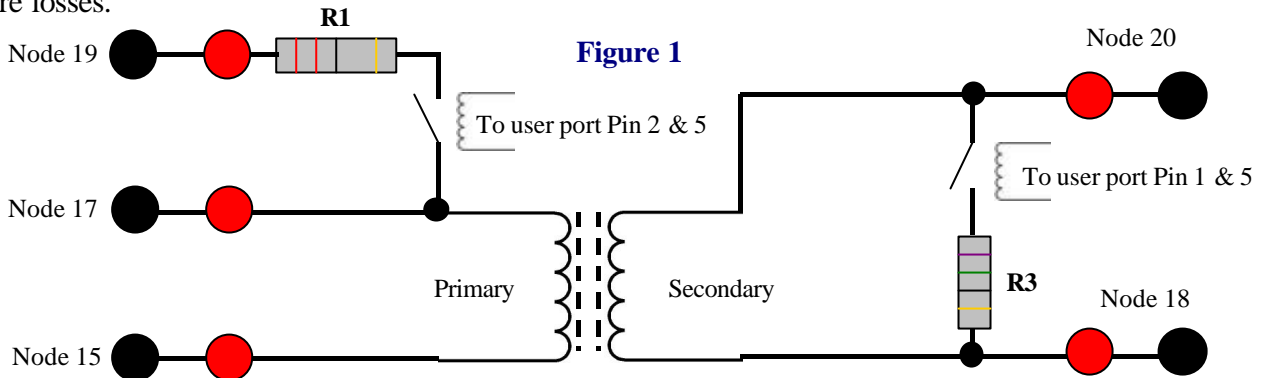


Figure 1

In **Figure 1** R1 is selected to be equal to the input line impedance of the intended circuit. R3 is selected to be equal to the output line impedance of the circuit.

Figure 2

PIN	SIGNAL NAME	PIN	SIGNAL NAME
1	O/P USER RELAY DRIVE 0	6	O/P USER RELAY DRIVE 1
2	O/P USER RELAY DRIVE 2	7	O/P USER RELAY DRIVE 3
3	O/P USER RELAY DRIVE 4	8	O/P USER RELAY DRIVE 5
5	O/P +12V	4 & 9	I/P DO NOT USE

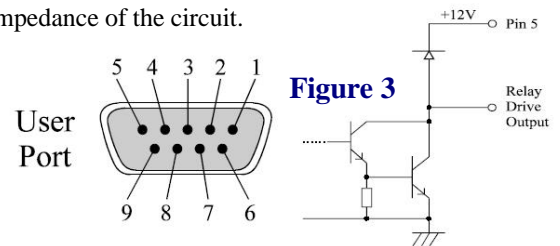


Figure 3

Parts required: -

- 2 * 10KV standoff relays, VPN: 33-004.
- 1 * 9-way D type connector.
- 2 * ¼ or ½Watt resistors to match circuit line impedance.

When testing Insertion Loss (ILOS) nodes 19 and 15 are used with the relay energised (Primary) and nodes 20 and 18 are used again with the relay energised (Secondary) through the OUT test. **A** program structure example follows: -

1. OUT 0 & 2 on.
2. ILOS test.
3. OUT 0 & 2 off.
4. Other tests such as Inductance (LS), Resistance (DCR) etc using nodes 17, 15, 20 & 18.

Figure 2 shows the pin configuration of the user port and **Figure 3** shows the 9-way D and output circuitry.

When using the Editor software the ILOS test calls for two parameters called 'Source Resistance' and 'Load Resistance'. **Source** = (R1 value) and Load = (R3 value).



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