L inductor

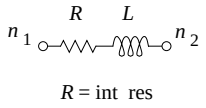

Figure 1: L — Inductor Element.

Form:
`l:`⟨`instance name`⟩ n_1 n_2 ⟨`parameter list`⟩
n_1 is the positive element node,
n_2 is the negative element node.

Parameters:

Parameter	Type	Default value	Required?
l: Inductance value (H)	DOUBLE	N/A	yes
int_res: Internal resistance value (ohms)	DOUBLE	1e-08	no
time_d: Flag, if true, calculate in the time domain as if a nonlinear element.	BOOLEAN	false	no

Example:

```
l:l3 5 8 1mH
l:l1 1 2 l=1e-9 time_d=0
```

Notes:
This is the `L` element in the SPICE compatible netlist.

This is a linear element and is normally calculated as a linear element in time- and frequency-domain analyses.

The parameter `time_d` indicates that the element should be treated as if it were a nonlinear element in transient analysis. Normally a linear element (as when `time_d = false`) is calculated in the time-domain by filling a MNAM for the entire linear partition. This is done just once. With `time_d = true` the element is calculated as it would be in Spice.

The internal resistance `int_res` is required to improve the conditioning of the MNAM in transient analysis.

Version:
2008.04.05

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