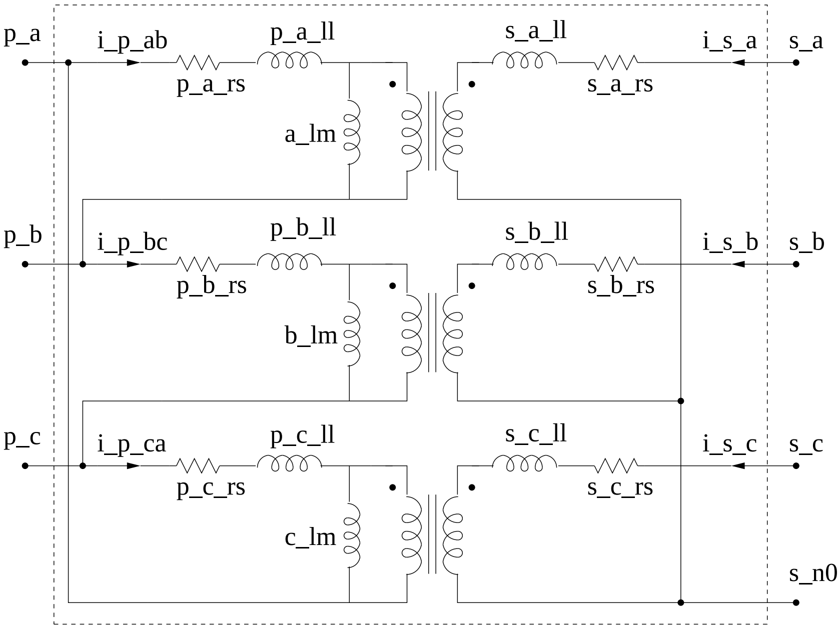
xfmr_level2_3ph_d_y.ece



Attributes

```
  mainnodes:
+   p_a p_b p_c
+   s_a s_b s_c s_n0
  outvar:
+   i_p_ab=cur(p)_of_p_a_r1
+   i_p_bc=cur(p)_of_p_b_r1
+   i_p_ca=cur(p)_of_p_c_r1
+   i_s_a=cur(p)_of_s_a_r1
+   i_s_b=cur(p)_of_s_b_r1
+   i_s_c=cur(p)_of_s_c_r1
  rparms:
+   p_a_turns=1
+   p_b_turns=1
+   p_c_turns=1
+   s_a_turns=1
+   s_b_turns=1
+   s_c_turns=1
+   a_lm=100m
+   b_lm=100m
+   c_lm=100m
+   p_a_rs=1m
+   p_b_rs=1m
+   p_c_rs=1m
```

```
+    s_a_rs=1m
+    s_b_rs=1m
+    s_c_rs=1m
+    p_a_ll=1n
+    p_b_ll=1n
+    p_c_ll=1n
+    s_a_ll=1n
+    s_b_ll=1n
+    s_c_ll=1n
```

Description

`xfmr_level2_3ph_d_y.ece` is a Δ-Y transformer model. It includes ideal transformer models with the magnetizing inductance, coil series resistances, and leakage inductances taken outside (see figure). `p_a_xxx` and `s_a_xxx` are used to denote node and parameter names for the `a` phase of the primary and secondary side, respectively, and so on. Currents shown in the figure are made available as output variables. The model equations incorporated for each of the three ideal transformers are:

$$\begin{aligned} \frac{V_p}{N_p} &= \frac{V_s}{N_s}\,, \\ N_p\, i_p + N_s\, i_s &= 0\,. \end{aligned}$$

Note that, by assiging suitably small values to the coil series resistances and leakage inductances, and suitably large values to the magnetizing inductances, this element can be used as an ideal Δ-Y transformer.

As with other transformer elements, the user should make sure that there is a "dummy" connection between the secondary side and the primary side so that all node voltages get defined with respect to the same reference node (see comments in the help file for `xfmr_level2_1ph.ece`, for example).

AC behaviour is not implemented.