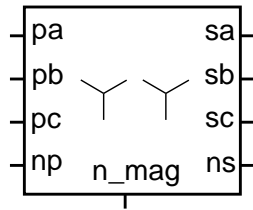


xfmr_level4_3ph_y_y.ece



Attributes

mainnodes: pa pb pc sa sb sc np ns n_mag

outvar:

```
+ ip_a=cur(p)_of_rpa
+ ip_b=cur(p)_of_rpb
+ ip_c=cur(p)_of_rpc
+ is_a=cur(p)_of_rsa
+ is_b=cur(p)_of_rsb
+ is_c=cur(p)_of_rsc
+ phi_a=phi_of_gfa
+ phi_b=phi_of_gfb
+ phi_c=phi_of_gfc
+ phi_d=v1_of_rd
+ h_a=v1_of_gfa
+ h_b=v1_of_gfb
+ h_c=v1_of_gfc
+ h_d=v1_of_rd
```

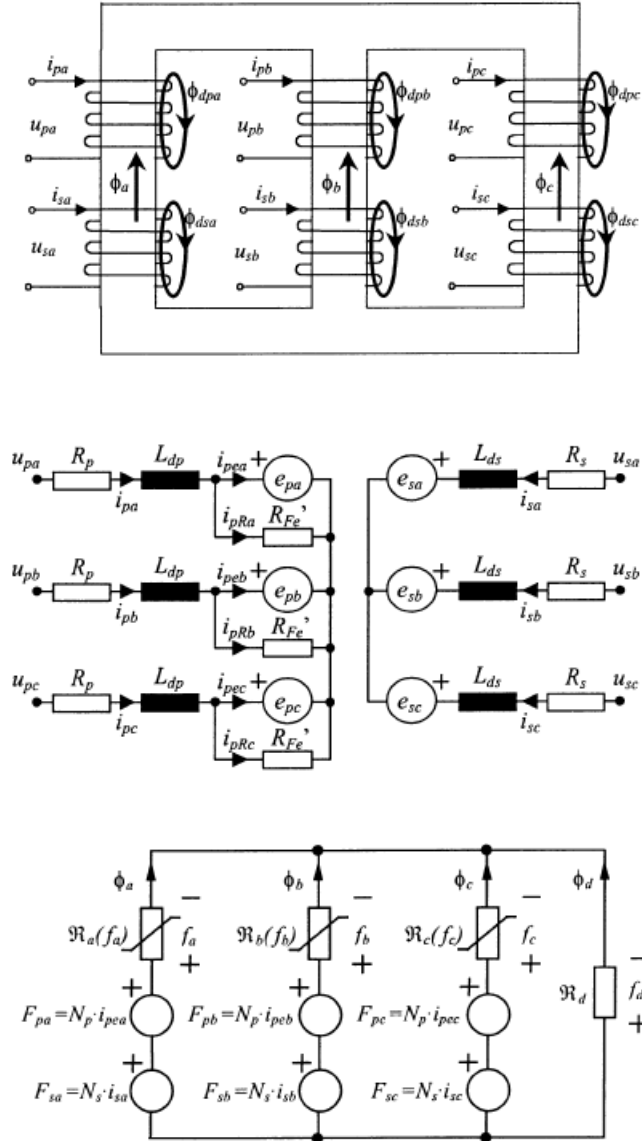
rparms:

```
+ np0=1
+ ns0=0.58
+ rp=0.0036
+ rs=0.001206
+ ldp=0.1524m
+ lds=0.0511m
+ rfe=277
+ rd=1300
+ k1a=0.3333
+ k1b=1.4444
+ k1c=0.3333
+ k2a=0.0001
+ k2b=0.0002
+ k2c=0.0001
+ f0a=4
+ f0b=1
+ f0c=4
```

+ p0a=0.9
+ p0b=0.9
+ p0c=0.9

Description

xfmr_level4_3ph_y_y.ece is a Y-Y connected transformer model which accounts for saturation and hysteresis. The details of the model are described in [1]. The following figures (reproduced from [1]) describe the transformer geometry, and the electrical and magnetic equivalent circuits in the model.



AC behaviour is not implemented.

References:

1. J. Pedra *et al*, “PSPICE computer model of a nonlinear three-phase three-legged transformer,” *IEEE Trans. Power Delivery*, vol. 19, no. 1, January, 2004, pp. 200-207.