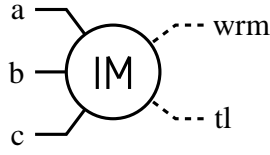


rt_indmc.ece



Attributes

```

mainnodes: a b c
main_var: wrm tl
iparms: poles=4
rparms:
+   rs=0.435 lls=0.002 lm=0.0693 llr=0.002 rr=0.816
+   j=0.089  wref=0

```

Description

rt_indmc.ece is an induction machine with terminals **a**, **b**, **c**. The integer and real parameters and main variables (**tem** and **tl**) are used to evaluate the model equations given below.

$$\begin{aligned}
 i_{ds} &= \frac{l_r}{l_m l_e} \psi_{ds} - \frac{1}{l_e} \psi_{dr} , \\
 i_{dr} &= \frac{1}{l_m} \psi_{ds} - \left(\frac{l_{ls}}{l_m} + 1 \right) i_{ds} , \\
 i_{qs} &= \frac{l_r}{l_m l_e} \psi_{qs} - \frac{1}{l_e} \psi_{qr} , \\
 i_{qr} &= \frac{1}{l_m} \psi_{qs} - \left(\frac{l_{ls}}{l_m} + 1 \right) i_{qs} , \\
 T_{em} &= \frac{3}{4} l_m = (i_{qs} i_{dr} + i_{ds} i_{qr}) , \\
 \omega_r &= \frac{P}{2} \omega_{rm} , \\
 \dot{\psi}_{ds} &= v_{ds} - r_s i_{ds} , \\
 \dot{\psi}_{qs} &= v_{qs} - r_s i_{qs} , \\
 \dot{\psi}_{dr} &= -\omega_r \psi_{qr} - r_r i_{dr} , \\
 \dot{\psi}_{qr} &= \omega_r \psi_{dr} - r_r i_{qr} , \\
 \dot{\omega}_r &= \frac{P}{2} \frac{T_{em} - T_L}{J} .
 \end{aligned}$$