s_vsrc_ac_3ph (subcircuit)

Attributes

```
inputs:
outputs:
e_left_nodes:
e_right_nodes: a b c
e_top_nodes:
e_bottom_nodes: n
b_left_nodes:
b_right_nodes:
b_top_nodes:
b_bottom_nodes:
parameters:
  f_hz: 50
  phi_a_deg: 0
  phi_b_deg: -120
  phi_c_deg: -240
  v_a: 1
  v_b: 1
  v_c: 1
```

Description

s_vsrc_ac_3ph is a 3-phase AC source, with outputs given by,

$$\begin{aligned} V_{an}(t) &= V_a \sin(2\pi f t + \phi_a), \\ V_{bn}(t) &= V_b \sin(2\pi f t + \phi_b), \\ V_{cn}(t) &= V_c \sin(2\pi f t + \phi_c), \end{aligned}$$

where V_a, V_b, V_c, f, ϕ_a, ϕ_b, ϕ_c are given by the parameters, v_a, v_b, v_c, f_hz, phi_a_deg, phi_b_deg, phi_c_deg, respectively. Note that phi_a_deg, phi_b_deg, phi_c_deg need to be supplied in degrees. They are internally converted to radians.

The source currents are made available as output variables i_a, i_b, i_c.