dq0_to_abc_2.xbe

Attributes

```
xbe name=dq0_to_abc_2 evaluate=yes
Jacobian: variable
input_vars: xd xq x0 theta
output_vars: xa xb xc
aux_vars: c s
iparms:
sparms:
rparms:
stparms:
igparms:
outparms: xd xq x0 xa xb xc
```

Description

`dq0_to_abc_2.xbe` employs the following equations to relate `xd`, `xq`, `x0`, `theta` to `xa`, `xb`, `xc`:

$$\begin{bmatrix} x_a \\ x_b \\ x_c \end{bmatrix} = \begin{bmatrix} \cos\theta & \sin\theta & 1 \\ \cos(\theta - 2\pi/3) & \sin(\theta - 2\pi/3) & 1 \\ \cos(\theta + 2\pi/3) & \sin(\theta + 2\pi/3) & 1 \end{bmatrix} \begin{bmatrix} x_d \\ x_q \\ x_0 \end{bmatrix}.$$