

dq_to_abc_2.xbe

Attributes

```
xbe name=dq_to_abc_2 evaluate=yes
Jacobian: variable
input_vars: xd xq theta
output_vars: xa xb xc
aux_vars: c s
iparms:
sparms:
rparms:
stparms:
igparms:
outparms: xd xq xa xb xc
```

Description

dq_to_abc_2.xbe employs the following equations to relate x_d , x_q , θ to x_a , x_b , x_c :

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