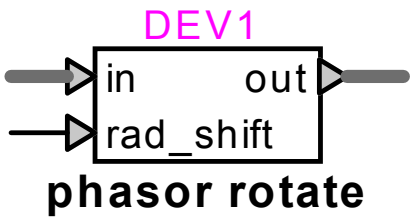
Phasor operation : phasor rotate



Phasor operation : phasor rotate 1
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1 Description

This device rotates a vector or phasor represented by a 2-signal bundle of its polar coordinates.

1.1 Pins

This device has three pins:

pin	*type*	*description*	*units*
in	2-signal bundle	input magnitude	any
		input angle	rad
rad_shift	input pin	rotation angle	rad
out	2-signal bundle	output magnitude	same as in_mag
		output angle	rad

1.2 Parameters

No parameters are required for this device.

1.3 Input

The input pins may be connected to any control signals.

1.4 Output

The outputs are the polar coordinates of the input vector rotated by a variable angle.
The operation is immediate, and is calculated as follows:

$$\begin{aligned} \text{out\_mag} &= \text{in\_mag} \\ \text{out\_rad} &= \text{in\_rad} + \theta \end{aligned} \qquad (1)$$

where θ is the rotation angle