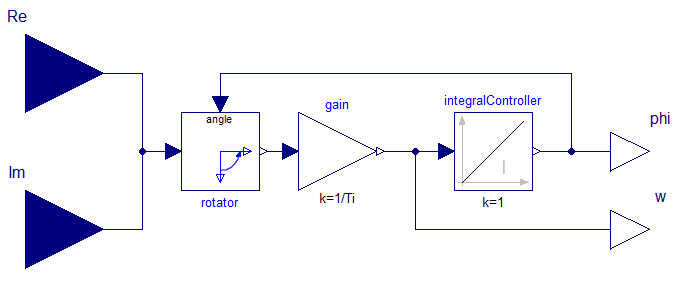
The **Angle Tracking Observer** is a robust method to determine the angle of a space phasor or the rotor position from the signal of a sin/cos-resolver.



Turning a phasor by an angle :

The controller drives the imaginary part of the rotated phasor to zero:

Linearization for small deviations (control error):

Transfer function of the closed loop using an integral controller:

Additionally the phasor’s angular velocity is determined at the integral controller’s input.