KalmanFilter operator

This operator uses a [Kalman Filter](#) to produce a statistically optimal estimate of the underlying system state.

Parameter

- Variables: The name of the variables
- Attributes: The attributes to feed the filter
- Transition: The transition matrix 'A'
- ProcessNoise: The process noise matrix 'Q'
- Measurement: The measurement matrix 'H'
- MeasurementNoise: The measurement noise matrix 'R'
- InitialState: The initial state vector 'x' (optional)
- InitialError: The initial error matrix 'P' (optional)
- Control: The control matrix 'B' (optional)

Example

```
out = KALMAN({
            VARIABLES = ['x'],
            ATTRIBUTES = ['m'],
            TRANSITION = '[1.0]',
            PROCESSNOISE = '[2.0]',
            MEASUREMENT = '[1.0]',
            MEASUREMENTNOISE = '[4.0]'},
          in)
```

```
out = KALMAN({
            VARIABLES = ['x','y','dx','dy'],
            ATTRIBUTES = ['vx','vy'],
            INITIALSTATE = '[0.0, 0.0, 0.0, 0.0]',
            INITIALERROR = '[1.0,0.0,0.0,0.0;0.0,1.0,0.0,0.0;0.0,0.0,1.0,0.0;0.0,0.0,0.0,1.0]',
            TRANSITION = '[1.0,0.0,1.0,0.0;0.0,1.0,0.0,1.0;0.0,0.0,1.0,0.0;0.0,0.0,0.0,1.0]',
            PROCESSNOISE = '[1/4, 1/4, 1/2, 1/2;1/4, 1/4, 1/2, 1/2; 1/2, 1/2, 1, 1; 1/2, 1/2, 1, 1]',
            MEASUREMENT = '[0.0,0.0,1.0,0.0;0.0,0.0,0.0,1.0]',
            MEASUREMENTNOISE = '[10.0,0.0;0.0,10.0]'},
          in)
```