

The Simulink model illustrates a closed-loop control system for a motor speed. The reference voltage is 10V. The system includes a summing junction, proportional (Kp), integral (Ki), and derivative (Kd) gains, a transfer function block, and a feedback path with a tachometer. The output is speed in rad/s.

**Control Loop Components:**

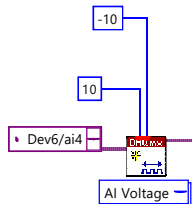
- Reference Voltage:** 10V (Analog DBL 1Chan 1Samp)
- Summing Junction:** Summation 2 (Error signal)
- Proportional Gain (Kp):** 1.23 (Gain 2)
- Integral Gain (Ki):** 1.23 (Gain 3)
- Derivative Gain (Kd):** 0.43 (Gain)
- Transfer Function:**  $\frac{25}{s+7.5}$
- Integrator:**  $\frac{1}{s}$
- Feedback Path:** Tachometer (Speed /Radian) with gain 2987

**System Parameters and Constants:**

- Gain 2:** 1.23
- Gain 3:** 1.23
- Gain:** 0.43
- Constant 1:** 2
- Constant 2:** 60
- Constant 3:** 600
- Constant 4:** 2987
- Constant 5:** 2987

**Outputs:**

- Speed /Radian:** Motor speed output
- TF Response:** Transfer function response plot



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