

PID Optimization Results

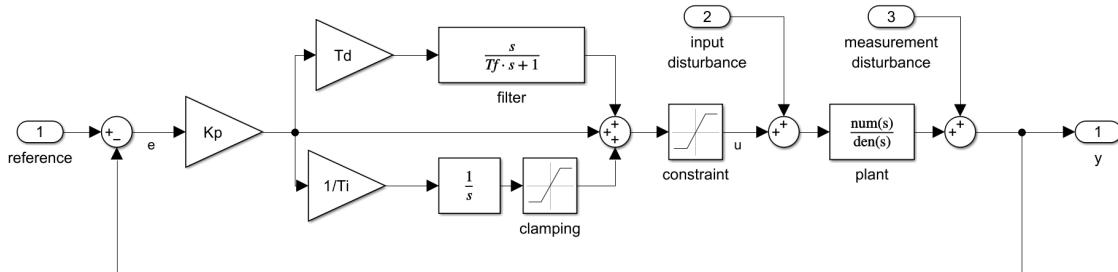
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Information

PRELIMINARY – results have not been fully validated and the application is still under development

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enjoy tuning and leave us some feedback: bhir@zhaw.ch



Plant Model

Numerator: [23040]

Denominator: [1, 9.6, 2304]

Best Found Parameters

$$K_p = 7.6346$$

$$T_i = 0.2618$$

$$T_d = 0.0053$$

Best ITAE = 0.000024

Recommended Filter Time Constant (T_f)

$T_{f,\max} = 1.3719 \times 10^{-5}$ s (upper limit imposed by the crossover frequency)

To implement this filter digitally, the sampling frequency f_s should be at least 232025 Hz.

For the generated plots, the filter time constant was set to $T_{f,\max}$.

Simulation Settings

Start time: 0

End time: 1

Mode: fixed

Time step: 0.0001

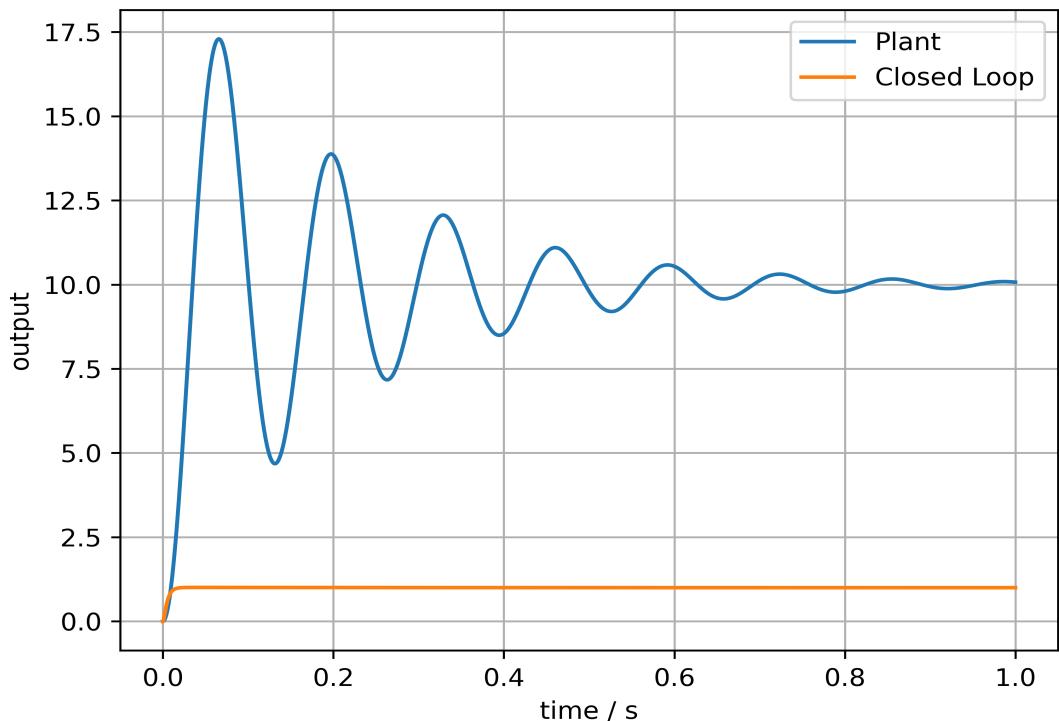
Excitation target: reference

Anti-windup-method: clamping

Control output upper limit: 4

Control output lower limit: -4

Step Response



Bode Diagramm

