

Transfer Function

$$H(s) = \frac{2.0934 \times 10^7}{s^2 + 9.1644 \times 10^3 s + 2.0934 \times 10^7} \mathbf{B}$$

where \mathbf{B} is:

$$\mathbf{B} = \begin{pmatrix} 0.2360 & -0.0051 & -0.0401 & -0.0218 & -0.0208 & -0.0394 \\ -0.0135 & 0.2333 & -0.0321 & -0.0536 & -0.0595 & -0.0259 \\ -0.0404 & -0.0187 & 0.2295 & -0.0053 & -0.0146 & -0.0370 \\ -0.0201 & -0.0633 & -0.0154 & 0.1931 & -0.0570 & -0.0208 \\ -0.0270 & -0.0628 & -0.0203 & -0.0575 & 0.1956 & -0.0135 \\ -0.0285 & -0.0188 & -0.0301 & -0.0152 & -0.0010 & 0.1928 \end{pmatrix}$$

- $\omega_n = \sqrt{2.0934 \times 10^7} \approx 4575.0 \text{ rad/s}$
- $\zeta \approx 1.0015$