

Concept Question 9-9: What does the term standard form of a transfer function refer to, and what purpose does it serve?

In the standard form of a transfer function, each term involving ω is written such that its real part is unity and the coefficient of ω in the imaginary part is defined as the reciprocal of an angular frequency (ω_z or ω_p). Examples are:

$$A_2 = 1 + j\omega/\omega_z,$$

$$A_3 = \frac{1}{1 + j\omega/\omega_p}.$$

The purpose of structuring the transfer function in standard form is to facilitate plotting of its frequency response.