

## Example: Type 1 and Type 2 Factors

$$KG(s) = \frac{2000(s + 0.5)}{s(s + 10)(s + 50)}$$

Convert to Bode form:

$$\begin{aligned} KG(j\omega) &= \frac{2000 \cdot 0.5 \cdot \left(\frac{j\omega}{0.5} + 1\right)}{10 \cdot 50 \cdot j\omega \left(\frac{j\omega}{10} + 1\right) \left(\frac{j\omega}{50} + 1\right)} \\ &= \frac{2}{j\omega} \cdot \left(\frac{j\omega}{0.5} + 1\right) \cdot \frac{1}{\left(\frac{j\omega}{10} + 1\right) \left(\frac{j\omega}{50} + 1\right)} \end{aligned}$$