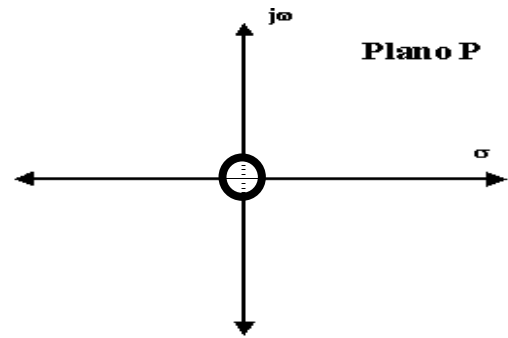


## CERO AL ORIGEN

$$F_{(P)} = P \rightarrow F_{(j\omega)} = j\omega$$



MÓDULO  $|M| = 20 \text{ Log } (\omega)$

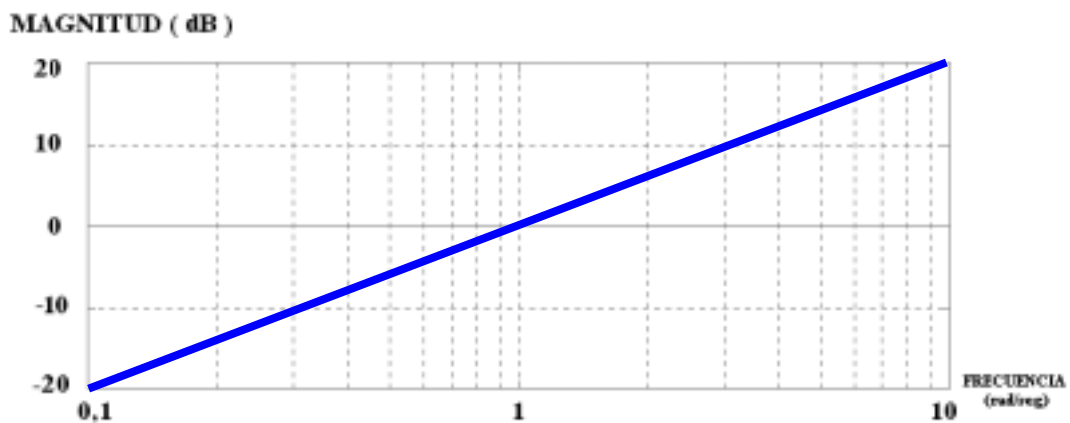
$$\omega = 100 \rightarrow |M| = 20 \text{ Log } (100) = +40 \text{ dB}$$

$$\omega = 10 \rightarrow |M| = 20 \text{ Log } (10) = +20 \text{ dB}$$

$$\omega = 1 \rightarrow |M| = 20 \text{ Log } (1) = 0 \text{ dB}$$

$$\omega = 0.1 \rightarrow |M| = 20 \text{ Log } (0.1) = -20 \text{ dB}$$

$$\omega = 0.01 \rightarrow |M| = 20 \text{ Log } (0.01) = -40 \text{ dB}$$



FASE  $\varphi = \text{tg}^{-1} \text{ Im} / \text{Re}$

$$\omega = 100 \rightarrow \varphi = \text{tg}^{-1} 100/0 = +90^\circ$$

$$\omega = 10 \rightarrow \varphi = \text{tg}^{-1} 10/0 = +90^\circ$$

$$\omega = 1 \rightarrow \varphi = \text{tg}^{-1} 1/0 = +90^\circ$$

$$\omega = 0.1 \rightarrow \varphi = \text{tg}^{-1} 0.1/0 = +90^\circ$$

$$\omega = 0.01 \rightarrow \varphi = \text{tg}^{-1} 0.01/0 = +90^\circ$$

