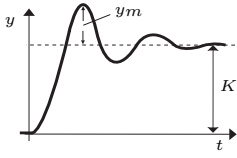
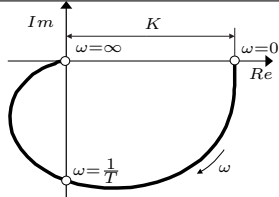
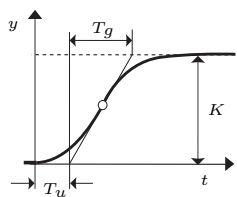
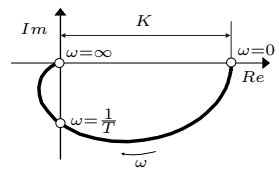
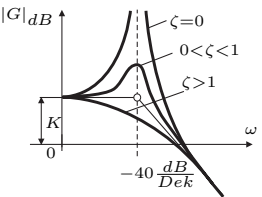
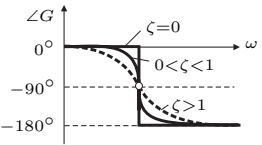
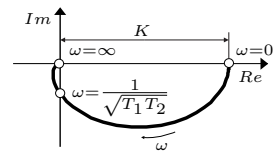


| Typ | Differentialgleichung | Frequenzgang $G(j\omega)$ | Schrittantwort $u(t) = \varepsilon(t)$ | Nyquistdiagramm (Ortskurve) | Bodediagramm (dB $\hat{=}$ $20 \cdot \log_{10}$) |
|-----------------|---|--|--|---|--|
| PT ₂ | allgemein: $T^2 \ddot{y}(t) + 2\zeta T \dot{y}(t) + y(t) = Ku(t)$ | $\frac{K}{(j\omega)^2 T^2 + 2j\omega \zeta T + 1}$ | | | |
| | $0 < \zeta < 1$ unterkritisch gedämpft, periodisch | $\frac{K}{(j\omega)^2 T^2 + 2j\omega \zeta T + 1}$ (nicht reell faktorisierbar) |  |  | |
| | $\zeta = 1$ kritisch gedämpft, aperiodisch ($\hat{=}$ zwei identische PT ₁ -Glieder in Serie) | $\frac{K}{(j\omega T + 1)^2}$ |  |  |   |
| | $\zeta > 1$ überkritisch gedämpft, aperiodisch ($\hat{=}$ zwei PT ₁ -Glieder in Serie) | $\frac{K}{(j\omega T_1 + 1)(j\omega T_2 + 1)}$ $T_{1,2} = T(\zeta \pm \sqrt{\zeta^2 - 1})$ $T = \sqrt{T_1 T_2}$ $\zeta = \frac{T_1 + T_2}{2\sqrt{T_1 T_2}}$ | Ersatzmodell: $\frac{K}{1 + j\omega T_g} \cdot e^{-j\omega T_u}$ |  | |