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| --- | --- | --- | --- | --- |
| **Info type** | **P Controller** | **PI Controller** | **PID Controller** | **PIDF Controller** |
| Rise Time | 0.0589 | 0.0382 | 0.1089 | 0.0776 |
| Settling Time | 0.5734 | 0.2161 | 0.7404 | 0.3370 |
| Settling Min | 0.5432 | 0.6730 | 0.8407 | 0.9218 |
| Settling Max | 0.8939 | 0.9250 | 0.9993 | 0.9997 |
| Overshoot | 37.1986 | 24.5415 | 0 | 0 |
| Undershoot | 0 | 0 | 0 | 0 |
| Peak | 0.8939 | 0.9250 | 0.9993 | 0.9997 |
| Peak Time | 0.1508 | 0.0900 | 1.5326 | 0.8487 |
| Umax | 437.7165 | Inf | 320.6729 | Inf |
| EssStep | 0.3485 | 0.2572 | 0 | 0 |
| EssRamp | Inf | Inf | -0.1377 | -0.0684 |
| Gain margin in dB (Gm) | 9.8811 | Inf | 11.1795 | Inf |
| Phase margin in degrees (Pm) | 60.0521 | 60.0086 | 70.0006 | 69.0232 |
| Gain crossover frequency in rad/s (Wcg) | 34.4987 | Inf | 30.1628 | Inf |
| Phase crossover frequency in rad/s (Wcp) | 18.3519 | 30.8153 | 12.0367 | 19.6941 |
| Vector margin (Vm) | 0.5344 | 0.6921 | 0.5937 | 0.7349 |
| Vector margin frequency (Wvm) | 26.5172 | 46.2437 | 21.2805 | 35.7598 |
| Peak sensitivity (Smax) | 1.8712 | 1.4449 | 1.6843 | 1.3608 |

* Rise Time --> Time it takes the system to rise from 10% to 90% of the final value.
* Settling Time --> Time it takes the system to settle to within 2% of the final value.
* Settling Min --> Minimum value of output once the response has risen.
* Settling Max --> Maximum value of output once the response has risen.
* Overshoot --> Percent overshoot relative to the final value.
* Undershoot --> Percent undershoot
* Peak --> Peak absolute value of output.
* Peak Time --> Time where Peak occurs.
* Umax --> Peak control effort for unit step input
* EssStep --> Steady state error for a unit step input
* EssRamp --> Steady state error for a unit ramp input